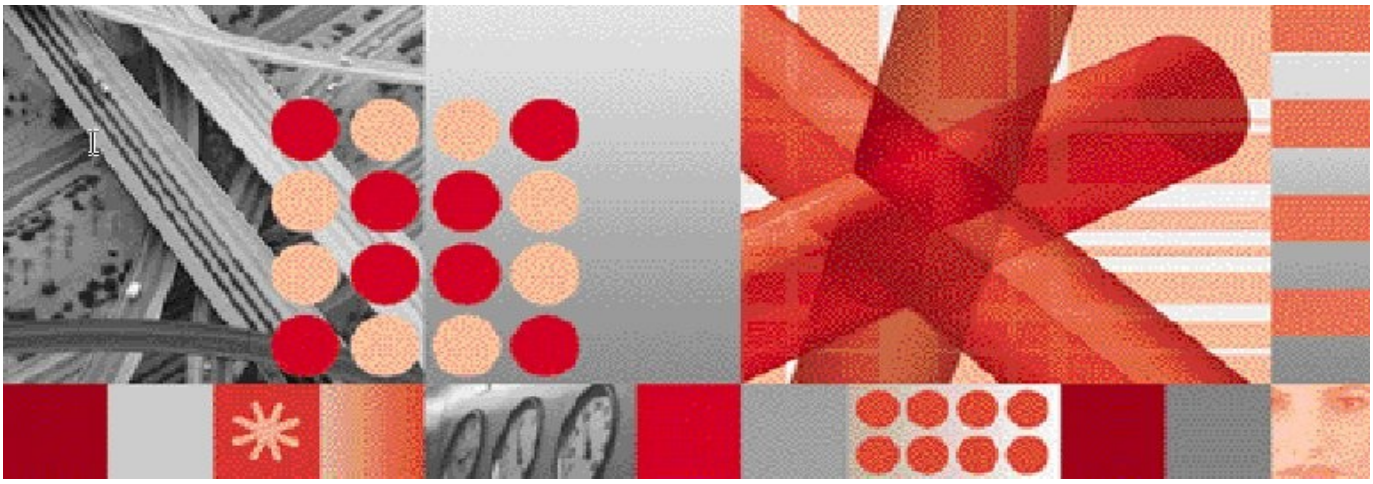
Tivoli. Netcool® Performance Manager for Wireless

IBM



UMTS Nokia UTRAN RU10 Product Requirements

Table of Contents

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

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1 Change History

Issue	Date	Author	Comments
1.0	15 March 2010	IBM	Final Release Build 1

2 Outstanding Issues

Number	Date	Description	Planned Resolution
None			

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3 Vendor Measurement Scope

The table below lists the vendor OM groups that are in scope for this tech pack module, broken down by network element, together with their corresponding tech pack KPI group.

Vendor Measurement	Tech Pack KPI Group
AGPS_IF - Mapped with PMMOResult_LCS_AGPS.RNC & "/" & AGPS_IF	
PMMOResult_LCS_AGPS	AGPS_IF.Nokia.UMTS.agps_measurements
ASSOIND - Mapped with PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME & "/" & ASSIND	
PMMOResult_M3UA_Association_Set	ASSOIND.Nokia.UMTS.m3ua_assoc_stats
ATM_Route - Mapped with PMMOResult_ATM_route_load.RNC & "/" & ROUTE_ID	
PMMOResult_ATM_route_load	ATM_Route.Nokia.UMTS.aal2_connections
ATM_VCC - Mapped with PMMOResult_ATM_virtual_channel.RNC & "/" & INTERFACE_ID & "/" & VPI & "/" & VCI	
PMMOResult_AAL2_At_UNI_new	ATM_VCC.Nokia.UMTS.aal2_signalling
PMMOResult_AAL2_CAC_resource	ATM_VCC.Nokia.UMTS.cac_resource
PMMOResult_AAL2_resource_res	ATM_VCC.Nokia.UMTS.resource_reservation
PMMOResult_AAL2_sched_perf_new	ATM_VCC.Nokia.UMTS.aal2_packet_queue
PMMOResult_ATM_virtual_channel	ATM_VCC.Nokia.UMTS.RAN_Usage.Transport_Network
PMMOResult_ATM_virtual_channel	ATM_VCC.Nokia.UMTS.vcc_measurement

PMMOResult_SAAL_At_UNI	ATM_VCC.Nokia.UMTS.saal
ATM_VPC - Mapped with PMMOResult_ATM_VPC.RNC & "/" & INTERFACE_ID & "/" & VPI	
PMMOResult_ATM_VPC	ATM_VPC.Nokia.UMTS.vpc_measurement
Cell - Mapped with PMMOResult_Traffic.WBTS & "/" & CELLID	
PMMOResult_AutoDef_SHO_DSR	Cell.Nokia.UMTS.soft_handovers_dsr
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.avail_cell
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.bts_hw
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.ce_capacity
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.code_blocking
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.code_downgrade
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.code_occupancy
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.code_request
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.code_reservation
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.dedicated_meas
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.downlink_code_load
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.edch_macd_flow
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.hsdpa_users
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.hsdsch_macd_flow
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.hsupa_users
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.iub_downlink_tx_load
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.lrt_est
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.prxtotal
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.ptx_est
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.ptxtargetps

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PMMOResult_Cell_Resource	Cell.Nokia.UMTS.ptxtotal
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.rach
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.radio_bearer
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.radio_downgrade_release_due_to_congestion
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.radio_link
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.RAN_Usage.Service_Level
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.sccpch
PMMOResult_Cell_Resource	Cell.Nokia.UMTS.tx_power
PMMOResult_Cell_thrput	Cell.Nokia.UMTS.cell_data_transfer
PMMOResult_Cell_Thrput_WBTS	Cell.Nokia.UMTS.cell_thruput
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.edpcch_ttis
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.hspdsch_power_class
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_fractional_load
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_hsdsch_credit
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_ue_nonserving_power
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_ue_serving_power
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn.hs_users
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn.hsupa_power
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn.hsupa_thput
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn.mac_e_transmit
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.buffer_delay

PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.cqi
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.discarded_mac
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.hsscch_power
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.idle_time
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.mac_d_pdu
PMMOResult_HSDPA_WBTS	Cell.Nokia.UMTS.wbts_wn3.mac_hs_transmit
PMMOResult_Inter_System_Handover	Cell.Nokia.UMTS.intersys_hho_amr
PMMOResult_Inter_System_Handover	Cell.Nokia.UMTS.intersys_hho_nrt
PMMOResult_Inter_System_Handover	Cell.Nokia.UMTS.intersys_hho_rt
PMMOResult_Inter_System_Handover	Cell.Nokia.UMTS.RAN_Mobility.InterSystem_Handover
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hho_inter_nrt
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hho_inter_rt
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hho_intra_nrt
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hho_intra_rt
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hho_rejected_relocations
PMMOResult_Intra_System_	Cell.Nokia.UMTS.intrasys_hho_scc

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Handover	
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.intrasys_hspa_ifho_meas
PMMOResult_Intra_System_Handover	Cell.Nokia.UMTS.RAN_Mobility.IntraSystem_HardHandover
PMMOResult_L3Iub	Cell.Nokia.UMTS.macd_setup_hsdpa
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.block_resource
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.common_measurement
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.compressed_mode_command
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.dedicated_measurement_procedures
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.error_indication
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.iub_dl_powcon
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_addition
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.drnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.srnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_forced_ho
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_reconfig_commit_cancel
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.drnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.srnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_reconfig_prep
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_restoration
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_setup_failures_3gpp_nbap
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_setup_failures_first_rl
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.drnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.srnc
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.radio_link_setup_successes
PMMOResult_L3Iub	Cell.Nokia.UMTS.nbap.reset_procedures
PMMOResult_Packet_call	Cell.Nokia.UMTS.dch_reconfiguration_failure
PMMOResult_Packet_call	Cell.Nokia.UMTS.nrt_dch_allocation

PMMOResult_Packet_call	Cell.Nokia.UMTS.nrt_dch_request
PMMOResult_Packet_call	Cell.Nokia.UMTS.nrt_dch_upgrade
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.allocation
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.call_release
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.congestion_control
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.setup_failures
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.setup
PMMOResult_Packet_call	Cell.Nokia.UMTS.packet_call.switching
PMMOResult_RCPM_OLPC	Cell.Nokia.UMTS.olpc_measurement
PMMOResult_RCPM_OLPC _WCEL	Cell.Nokia.UMTS.wcel_olpc_measurement
PMMOResult_RCPM_RLC	Cell.Nokia.UMTS.RAN_Usage.RCPM
PMMOResult_RCPM_RLC	Cell.Nokia.UMTS.rcpm.dl_pdcp_sdu_pdu_rlc
PMMOResult_RCPM_RLC	Cell.Nokia.UMTS.rcpm.ul_am_rlc
PMMOResult_RCPM_RLC	Cell.Nokia.UMTS.rcpm.ul_pdcp_sdu_pdu_rlc
PMMOResult_RCPM_RLC_ WCEL	Cell.Nokia.UMTS.rlc_retransmission_wcel
PMMOResult_RCPM_RLC_ WCEL	Cell.Nokia.UMTS.user_throughput_wcel
PMMOResult_RCPM_RLC_ WCEL	Cell.Nokia.UMTS.wcel_rlc_measurement
PMMOResult_RCPM_UEQ	Cell.Nokia.UMTS.ue_quality_measurement
PMMOResult_RRC	Cell.Nokia.UMTS.prach_prop_delay
PMMOResult_RRC	Cell.Nokia.UMTS.rab.control_procedures
PMMOResult_RRC	Cell.Nokia.UMTS.rrc.connection_mobility_procedures
PMMOResult_RRC	Cell.Nokia.UMTS.rrc.radio_bearer_setup
PMMOResult_RRC	Cell.Nokia.UMTS.signalling_paging_message

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PMMOResult_RRC	Cell.Nokia.UMTS.signalling_rrc.connection_setup_requests
PMMOResult_RRC	Cell.Nokia.UMTS.signalling_rrc.connection_status
PMMOResult_RRC	Cell.Nokia.UMTS.signalling_rrc.measurement_report
PMMOResult_RRC	Cell.Nokia.UMTS.signalling_rrc.signalling_protocol_states
PMMOResult_Service_Level	Cell.Nokia.UMTS.incoming_handovers_relocations
PMMOResult_Service_Level	Cell.Nokia.UMTS.multirab.access_complete
PMMOResult_Service_Level	Cell.Nokia.UMTS.multirab.active_complete
PMMOResult_Service_Level	Cell.Nokia.UMTS.multirab.active_failure
PMMOResult_Service_Level	Cell.Nokia.UMTS.multirab.setup_attempts
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.access_complete
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_complete_cs_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_complete_ps_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_failure_cs_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_failure_cs_voice
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_failure_ps_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_failures_ps
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_release_cs_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_release_cs_voice
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.active_release_ps_data
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.connections_in_cs
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.connections_in_ps
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.connections_out_cs
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.connections_out_ps
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.holding_times
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.reconfigurations
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_access_complete
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_access_failure
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_attempts
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_complete

PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_failure_cs
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_failure_ps
PMMOResult_Service_Level	Cell.Nokia.UMTS.rab.setup_time
PMMOResult_Service_Level	Cell.Nokia.UMTS.RAN_Accessibility.Service_Level
PMMOResult_Service_Level	Cell.Nokia.UMTS.RAN_Retainability.Service_Level
PMMOResult_Service_Level	Cell.Nokia.UMTS.RAN_Usage.Cell_Usage
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.connection_access
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.connection_active
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.connection_setup
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.connections
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.establishment_per_ue_capability
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_call_reestablish
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_detach
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_emergency
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_high_priority_sig
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_intr_rat
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_intrregistration
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_low_priority_sig
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_mobile_orig
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_mobile_term
PMMOResult_Service_Level	Cell.Nokia.UMTS.rrc.setup_causes_term_unknown
PMMOResult_Soft_Handover	Cell.Nokia.UMTS.RAN_Mobility.Soft_Handover
PMMOResult_Soft_Handover	Cell.Nokia.UMTS.soft_handover.nrt
PMMOResult_Soft_Handover	Cell.Nokia.UMTS.soft_handover.rt

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PMMOResult_Soft_Handover	Cell.Nokia.UMTS.soft_handover
PMMOResult_Traffic	Cell.Nokia.UMTS.cell_busy_hour_kpi
PMMOResult_Traffic	Cell.Nokia.UMTS.RAN_Accessibility.Traffic
PMMOResult_Traffic	Cell.Nokia.UMTS.RAN_Usage.Traffic
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic_dch_requests_cs_data_calls_srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.allocations_compressed_mode.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.amr_codec_mode
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.amr_hspa_allocation
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.compressed_mode_hsdpa_users
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_cs_data_calls.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_data_calls.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_signalling_links.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_allocations_streaming_class
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_duration_data_calls_dl.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_duration_data_calls_ul.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_request_hsdsch
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_data_calls.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_ps_calls_handover.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_ps_calls.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.dch_requests_signalling_links.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.edch_allocation_release
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.edch_allocation

PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.edsch_setup_failures
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.hsdsch_allocation_release
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.hsdsch_allocation
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.hsdsch_request
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.hsdsch_setup_failures
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.multirab.background_connections
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.multirab.interactive_connections
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.multirab.streaming_connections
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_backg_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_intera_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_reconfiguration
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.nrt_dch_setup_reject
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.requests_and_allocations_for_compressed_mode.drnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.requests_and_allocations_for_signalling_links.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.requests_compressed_mode.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_conv_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_stream_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_conv_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_stream_class.srnc
PMMOResult_Traffic	Cell.Nokia.UMTS.traffic.wamr

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Computer_Unit - Mapped with PMMOResult_Unit_Load.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX	
PMMOResult_AAL5MeaChorus	Computer_Unit.Nokia.UMTS.aal5_measurement_chorus
PMMOResult_AAL5MeaDMX	Computer_Unit.Nokia.UMTS.aal5_measurement_dmx
PMMOResult_ATM_layer_perf	Computer_Unit.Nokia.UMTS.atm_performance
PMMOResult_Availability	Computer_Unit.Nokia.UMTS.availability
PMMOResult_DSP_Load	Computer_Unit.Nokia.UMTS.dsp_load
PMMOResult_DSP_State_Changes	Computer_Unit.Nokia.UMTS.dsp_state_change
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.associations
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv4
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv6
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv4
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv6
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.sctp
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.tcp
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv4
PMMOResult_TCPIP_Meas	Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv6
PMMOResult_Unit_Load	Computer_Unit.Nokia.UMTS.unit_load
DSP_Pool - Mapped with PMMOResult_DSP_Resource_Utilization.RNC & "/" & DSP_Pool	
PMMOResult_DSP_Resource_Utilization	DSP_Pool.Nokia.UMTS.dsp_resource_util
Ethernet_IF - Mapped with PMMOResult_Ethernet_Interface_Perf.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & ETH_IF	
PMMOResult_Ethernet_Interface_Perf	Ethernet_IF.Nokia.UMTS.ethernet_if_perf
Exchange_Terminal - Mapped with PMMOResult_PDH_Statistics.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX	
PMMOResult_PDH_Statistic	Exchange_Terminal.Nokia.UMTS.crc_measurement

s	
PMMOResult_PDH_Statistics	Exchange_Terminal.Nokia.UMTS.disturbance_stats_limit
PMMOResult_PDH_Statistics	Exchange_Terminal.Nokia.UMTS.frame_alignment_loss
PMMOResult_PDH_Statistics	Exchange_Terminal.Nokia.UMTS.pdh_error_code
FTM_AAL2 - Mapped with PMMOResult_AAL2_Sched_Perf_BTS.RNC & "/" & WBTS & "/" & FTM & "/" & A2NE & "/" & A2ST & "/" & A2UT	
PMMOResult_AAL2_Sched_Perf_BTS	FTM_AAL2.Nokia.UMTS.aal2_priority_queue_bts
FTM_ATM_IF - Mapped with PMMOResult_FTM_ATM_if.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT	
PMMOResult_FTM_ATM_if	FTM_ATM_IF.Nokia.UMTS.interface_measurement
FTM_ATM_VC - Mapped with PMMOResult_FTM_ATM_VC.RNC & "/" & WBTS & "/" & FTM & "/" & VPTT & "/" & VCCT	
PMMOResult_FTM_ATM_VC	FTM_ATM_VC.Nokia.UMTS.interface_measurement
FTM_ATM_VP - Mapped with PMMOResult_FTM_ATM_VP.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT & "/" & VPCT	
PMMOResult_FTM_ATM_VP	FTM_ATM_VP.Nokia.UMTS.interface_measurement
FTM_Ethernet_Link - Mapped with PMMOResult_FTM_ethernet_link.RNC & "/" & WBTS & "/" & FTM & "/" & ETHLK	
PMMOResult_FTM_ethernet_link	FTM_Ethernet_Link.Nokia.UMTS.interface_measurement
FTM_IP - Mapped with PMMOResult_FTM_Timing_Packet.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & TOPIK or PMMOResult_FTM_IP_Statistics.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & IPPM	
PMMOResult_FTM_IP_Statistics	FTM_IP.Nokia.UMTS.ftm_ip_stats

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

PMMOResult_FTM_Timing_Packet	FTM_IP.Nokia.UMTS.ftm_timing
FTM_PDH_IF - Mapped with PMMOResult_FTM_PDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & PPTT	
PMMOResult_FTM_PDH_if	FTM_PDH_IF.Nokia.UMTS.interface_measurement
FTM_PHB - Mapped with PMMOResult_FTM_PHB_Statistics.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & PHBPM	
PMMOResult_FTM_PHB_Statistics	FTM_PHB.Nokia.UMTS.ftm_phb_stats
FTM_PSN_IP - Mapped with PMMOResult_FTM_PSN_IP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWTIP	
PMMOResult_FTM_PSN_IP	FTM_PSN_IP.Nokia.UMTS.interface_measurement
FTM_PWMP_IF - Mapped with PMMOResult_PWMP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWMP	
PMMOResult_PWMP	FTM_PWMP_IF.Nokia.UMTS.interface_measurement
FTM_SDH_IF - Mapped with PMMOResult_FTM_SDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & SVTT	
PMMOResult_FTM_SDH_if	FTM_SDH_IF.Nokia.UMTS.interface_measurement
IMA_Group - Mapped with PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.RNC & "/" & IMA_GROUP_ID	
PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF	IMA_Group.Nokia.UMTS.logical_interface_ima
Interface - Mapped with PMMOResult_STM_1_IF.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX or PMMOResult_ATM_interface.RNC & "/" & INTERFACE_ID	
PMMOResult_ATM_interface	Interface.Nokia.UMTS.interface_measurement_atm
PMMOResult_STM_1_IF	Interface.Nokia.UMTS.interface_measurement_stm1
IP_IF - Mapped with PMMOResult_IP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_IP_QOS_Meas.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_UDP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF	
PMMOResult_IP_Meas_IP_Interface	IP_IF.Nokia.UMTS.ipv4_datagrams
PMMOResult_IP_Meas_IP_Interface	IP_IF.Nokia.UMTS.ipv6_datagrams

PMMOResult_IP_QOS_Meas	IP_IF.Nokia.UMTS.ip_qos_meas
PMMOResult_UDP_Meas_IP_Interface	IP_IF.Nokia.UMTS.udp_meas_ip_interface
IP_Route - Mapped with PMMOResult_RNC_RTP_RTCP.RNC & "/" & IP_ROUTE_ID	
PMMOResult_RNC_RTP_RTCP	IP_Route.Nokia.UMTS.rnc_rtp_rtcp_measurement
IP_Route_BTS - Mapped with PMMOResult_IP_Based_Route.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID or PMMOResult_RNC_IP_CAC.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID	
PMMOResult_IP_Based_Route	IP_Route_BTS.Nokia.UMTS.ip_route_measurements
PMMOResult_RNC_IP_CAC	IP_Route_BTS.Nokia.UMTS.ip_transport_resource_reservations
IuPC_IF - Mapped with PMMOResult_IuPC_interface.RNC & "/" & SAS	
PMMOResult_IuPC_interface	IuPC_IF.Nokia.UMTS.sas_performance
IuPS_IF - Mapped with PMMOResult_IU_PS_performance.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX	
PMMOResult_IU_PS_performance	IuPS_IF.Nokia.UMTS.iups_interface
LCG - Mapped with PMMOResult_WBTS_HW.RNC & "/" & WBTS & "/" & LCG	
PMMOResult_Frame_Protocol_WBTS	LCG.Nokia.UMTS.frame_protocol
PMMOResult_WBTS_HW	LCG.Nokia.UMTS.wbts_pool_ce_resources
Neighbour - Mapped with PMMOResult_AutoDef_IFHO.AWBTS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_SHO.AWBTS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_ISHO.AWBTS & "/" & AWCEL & "-" & LAC & "/" & CI	
PMMOResult_AutoDef_IFHO	Neighbour.Nokia.UMTS.inter_frequency_ho
PMMOResult_AutoDef_ISHO	Neighbour.Nokia.UMTS.hard_handovers

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PMMOResult_AutoDef_SHO	Neighbour.Nokia.UMTS.soft_handovers
Neighbour_RNC - Mapped with PMMOResult_L3Iur.RNC & "/" & RRNC	
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.macd_pdu_data_stats
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.nrt_dch_failure_stats
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.RAN_Usage.Service_Level
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.compressed_mode_command
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_dedicated_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_addition_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_failures_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_fail_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_misc_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_fail_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_setup_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.global_iur
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.iur_avail
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.iur_com_meas
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.rnsap.iur_dl_powcon
PMMOResult_L3Iur	Neighbour_RNC.Nokia.UMTS.sho_branch_failure
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.cswitch.iurelreq
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.cswitch.relocation.source
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.cswitch.relocation.target
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.forward

PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.source
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.target
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.relocation.cancel
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.relocation.misc
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.relocation.source
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.relocation.target
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.interrnc.relocation
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.pswitch
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.source
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.target
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.allocation
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_cn
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_msc
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.misc_target
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation.preparation
PMMOResult_L3Reloc	Neighbour_RNC.Nokia.UMTS.rnsap.relocation
NodeB - Mapped with PMMOResult_Traffic.WBTS	
PMMOResult_L3Iub_0	NodeB.Nokia.UMTS.nbap_reset_procedures
PMMOResult_Traffic	NodeB.Nokia.UMTS.bts_hw
PMMOResult_Traffic	NodeB.Nokia.UMTS.radio_link
Physical_Layer_Term_Point - Mapped with PMMOResult_Interface_TC.RNC & "/" & PHYTTP	
PMMOResult_Interface_TC	Physical_Layer_Term_Point.Nokia.UMTS.interface_specific
RNC - Mapped with PMMOResult_L3Iu.RNC	
PMMOResult_DSP_Meas	RNC.Nokia.UMTS.dsp_performance

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

PMMOResult_DSP_Service_Statistics	RNC.Nokia.UMTS.dsp_service
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.anchoring.intrasys_hho_scc
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.hspa_ifho_meas
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.intrasys_hho_inter_nrt
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.intrasys_hho_inter_rt
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.intrasys_hho_intra_nrt
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.intrasys_hho_intra_rt
PMMOResult_Intra_System_HHO_RNC	RNC.Nokia.UMTS.intrasys_hho_rejected_relocations
PMMOResult_L3Iu	RNC.Nokia.UMTS.ranap_stats
PMMOResult_L3Iu	RNC.Nokia.UMTS.rnap_stats
PMMOResult_RCPM_OLPC_RNC	RNC.Nokia.UMTS.rnc_olpc_measurement
PMMOResult_RCPM_RLC_RNC	RNC.Nokia.UMTS.rlc_retransmission
PMMOResult_RCPM_RLC_RNC	RNC.Nokia.UMTS.rnc_rlc_measurement
PMMOResult_RCPM_RLC_RNC	RNC.Nokia.UMTS.user_throughput
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.cswitch.iurelreq
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.cswitch.relocation.source
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.cswitch.relocation.target
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.forward
PMMOResult_Relocation_IS	RNC.Nokia.UMTS.interrnc.iurelreq.source

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PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.iurelreq.target
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.relocation.cancel
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.relocation.misc
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.relocation.source
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.relocation.target
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.interrnc.relocation
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.pswitch
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.iu_release_request.source
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.iu_release_request.target
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.allocation
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.cancel_cn
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.cancel_msc
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.misc_target
PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation.preparation

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PMMOResult_Relocation_ISHO	RNC.Nokia.UMTS.rnsap.relocation
PMMOResult_RNC_Accum_Location_Services	RNC.Nokia.UMTS.location_services_agps
PMMOResult_RNC_Accum_Location_Services	RNC.Nokia.UMTS.location_services
PMMOResult_RNC_Capacity_Usage	RNC.Nokia.UMTS.rnc_capacity_usage
PMMOResult_RNC_Service_Area_Broadcast	RNC.Nokia.UMTS.sabp_measurements
PMMOResult_RNC_Traffic	RNC.Nokia.UMTS.rnc_busy_hour_kpi
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.prach_prop_delay
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.rab.control_procedures
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.rrc.connection_mobility_procedures
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.rrc.radio_bearer_setup
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.signalling_paging_message
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_setup_requests
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_status
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.signalling_rrc.measurement_report
PMMOResult_RRC_0	RNC.Nokia.UMTS.anchoring.signalling_rrc.signalling_protocol_states
PMMOResult_SCCP_Single_Meters	RNC.Nokia.UMTS.sccp_single_meters
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.incoming_handovers_relocations
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.multirab.access_complete
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.multirab.active_complete
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.multirab.active_failure
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.multirab.setup_attempts

PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.access_complete
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_complete_cs_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_complete_ps_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_voice
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_failure_ps_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_failures_ps
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_release_cs_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_release_cs_voice
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.active_release_ps_data
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.connections_in_cs
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.connections_in_ps
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.connections_out_cs
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.connections_out_ps
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.holding_times
PMMOResult_Service_Level	RNC.Nokia.UMTS.anchoring.rab.reconfigurations

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

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PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_access_complete
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_access_failure
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_attempts
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_complete
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_failure_cs
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_failure_ps
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rab.setup_time
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.connection_access
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.connection_active
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.connection_setup
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.connections
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.establishment_per_ue_capability
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_call_reestablish
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_detach
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_emergency
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_high_priority_sig
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intr_rat

PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intrregistration
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_low_priority_sig
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_orig
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_term
PMMOResult_Service_Level_0	RNC.Nokia.UMTS.anchoring.rrc.setup_causes_term_unknown
PMMOResult_Soft_Handover_RNC	RNC.Nokia.UMTS.anchoring_soft_handover
PMMOResult_Soft_Handover_RNC	RNC.Nokia.UMTS.RAN_Mobility.Soft_Handover
PMMOResult_Soft_Handover_RNC	RNC.Nokia.UMTS.soft_handover.nrt
PMMOResult_Soft_Handover_RNC	RNC.Nokia.UMTS.soft_handover.rt
SCCP - Mapped with PMMOResult_SCCP_Local_Subsystem_Availability.RNC & "/" & SNET	
PMMOResult_SCCP_Local_Subsystem_Availability	SCCP.Nokia.UMTS.sccp_local_subsystem_availability
SCCP_Subsystem - Mapped with PMMOResult_SCCP_Subsystem.RNC & "/" & SNET & "/" & SSN & "/" & SS	
PMMOResult_SCCP_Subsystem	SCCP_Subsystem.Nokia.UMTS.sccp_subsystem
SDH_Exchange_Terminal - Mapped with PMMOResult_Sonet_SDH.RNC & "/" & GROUP_ID	
PMMOResult_Sonet_SDH	SDH_Exchange_Terminal.Nokia.UMTS.protection_group
PMMOResult_UNIT_INDEX_STM_0_IF	SDH_Exchange_Terminal.Nokia.UMTS.interface_measurement_stm0
Signalling_Link - Mapped with PMMOResult_MTP_Sig_Link_Availability.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or	

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PMMOResult_MTP_Sig_Link_Performance.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or PMMOResult_MTP_Sig_Link_Utilization.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN	
PMMOResult_AAL2_At_UNI	Signalling_Link.Nokia.UMTS.aal2_signalling
PMMOResult_MTP_Sig_Link_Availability	Signalling_Link.Nokia.UMTS.mtp_signalling_link_availability
PMMOResult_MTP_Sig_Link_Performance	Signalling_Link.Nokia.UMTS.mtp_signalling_link_performance
PMMOResult_MTP_Sig_Link_Utilization	Signalling_Link.Nokia.UMTS.mtp_signalling_link_utilization
PMMOResult_SAAL_At_UNI	Signalling_Link.Nokia.UMTS.saal
Signalling_LinkSet - Mapped with PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC &"/"& SNET&"/" & SPCD &"/" & SLSN	
PMMOResult_MTP_Sig_Linkset_RouteSet_Availability	Signalling_LinkSet.Nokia.UMTS.mtp_sig_lset_routeset_avail
Signalling_Point - Mapped with PMMOResult_AAL2_At_NNI_new.RNC & "/" & NETCODE & "/" & SPCODE or PMMOResult_MTP_Matrix_Sig_Traffic.RNC & "/" & SNET & "/" & SIO or PMMOResult_MTP_Sig_Point_Status.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_SP.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_UserParts.RNC & "/" & SNET & "/" & SIO or PMMOResult_SCCP_Sig_Point.RNC & "/" & SNET & "/" & SPCD	
PMMOResult_AAL2_At_NNI_new	Signalling_Point.Nokia.UMTS.aal2_signalling_nni
PMMOResult_MTP_Matrix_Sig_Traffic	Signalling_Point.Nokia.UMTS.mtp_matrix_signalling_traff
PMMOResult_MTP_Sig_Point_Status	Signalling_Point.Nokia.UMTS.mtp_signalling_point_status
PMMOResult_MTP_Sig_Traffic_Report_SP	Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_sp
PMMOResult_MTP_Sig_Traffic_Report_UserParts	Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_userparts
PMMOResult_NET_CODE_AAL2_AT_NNI	Signalling_Point.Nokia.UMTS.aal2_signalling
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.routing_error

PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_signalling_messages
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem1_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem10_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem11_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem12_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem13_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem14_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem15_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem16_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem17_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem18_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem19_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem2_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem20_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem3_msgs
PMMOResult_SCCP_Sig_Po	Signalling_Point.Nokia.UMTS.sccp_subsystem4_msgs

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PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem5_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem6_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem7_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem8_msgs
PMMOResult_SCCP_Sig_Point	Signalling_Point.Nokia.UMTS.sccp_subsystem9_msgs
WAC_Unit - Mapped with PMMOResult_Overload_WAC.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & WAC_USER	
PMMOResult_Overload_WAC	WAC_Unit.Nokia.UMTS.wac_overload_control

4 Tech Pack Prerequisites

This section lists the Tech Pack modules that the current Tech Pack is dependent on.

- Neutral Core GOM
- Neutral GPRS BSS GOM
- Neutral GPRS/UMTS CN GOM
- Neutral GSM BSS/NSS GOM
- Neutral UMTS UTRAN GOM
- VNL GOMlet
- NOK GOMlet
- Neutral UMTS UTRAN Ext GOM

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5 Network Model

This section describes any network objects that are defined in this technology pack module, in terms of their configuration attributes.

5.1 AGPS_IF details

In the network hierarchy, the immediate parent of the AGPS_IF object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
AGPS_IF_Id	The unique identifier for the AGPS interface.	Y		PMMOResult_LCS_AGPS.RNC & "/" & AGPS_IF
Relationship Attributes				
RNC_Id	The RNC associated with the AGPS_IF	Y	Y	PMMOResult_LCS_AGPS.RNC
Region_Id	The region associated with the AGPS_IF.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_LCS_AGPS.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the AGPS_IF.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_LCS_AGPS.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
AGPS_IF_Name	The user-friendly name preferably unique for the AGPS interface.			PMMOResult_LCS_AGPS.RNC & "/" & AGPS_IF
Node_Id	A unique identifier for the Node.			PMMOResult_LCS_AGPS.RNC

Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_LCS_AGPS.RNC
Node_Type	Type of Node.			PMMOResult_LCS_AGPS."RNC"
Version	The hardware/software version of the equipment that handles the AGPS interface.			PMMOResult_LCS_AGPS."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_LCS_AGPS."UMTS"
Vendor	Manufacturer of the AGPS_IF			"Nokia"

5.2 ASSOIND details

In the network hierarchy, the immediate parent of the ASSOIND object is ASSOSET.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping
Primary Identifier				
ASSOIND_Id	A unique identifier for the Association Index.	Y		PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME & "/" & ASSIND
Relationship Attributes				
ASSOSET_Id	The ASSOSET to which the ASSOIND belongs.	Y	Y	PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME
RNC_Id	The RNC to which the ASSOIND belongs.	Y	Y	PMMOResult_M3UA_Association_Set.RNC
Region_Id	Region associated with the ASSOIND.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_M3UA_Association_Set.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)

Network_Id	Network associated with the ASSOIND.	Y	Y	lookup("nc_bsc","NETWORK_ID", utime(PMMOResult_M3UA_Association_Set.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
ASSOIND_Name	A user friendly name preferably unique for the ASSOIND.			PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME & "/" & ASSIND
Node_Id	Node associated with the ASSOIND			PMMOResult_M3UA_Association_Set.RNC
Node_Type	Node type of the ASSOIND			"RNC"
ASSOIND_Version	Hardware/Software version of the ASSOIND.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the ASSOIND			"Nokia"

5.3 ASSOSET details

In the network hierarchy, the immediate parent of the ASSOSET object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
ASSOSET_Id	A unique identifier for the Association Set.	Y		PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME
Relationship Attributes				
RNC_Id	The RNC to which the ASSOSET belongs.	Y	Y	PMMOResult_M3UA_Association_Set.RNC
Region_Id	Region associated with the ASSOSET.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_M3UA_Association_Set.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	Network associated with the	Y	Y	lookup("nc_bsc","NETWORK_ID",

	ASSOSET.			utime(PMMOResult_M3UA_Association_Set.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
ASSOSET_Name	A user friendly name preferably unique for the ASSOSET.			PMMOResult_M3UA_Association_Set.RNC & "/" & ASSNAME
Node_Id	Identifier for the node of the ASSOSET			PMMOResult_M3UA_Association_Set.RNC
Node_Type	Node Type for the ASSOSET.			"RNC"
ASSOSET_Version	Hardware/Software version of the ASSOSET.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the ASSOSET			"Nokia"

5.4 ATM_Route details

In the network hierarchy, the immediate parent of the ATM_Route object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
ATM_Route_Id	The unique identifier for the ATM Route.	Y		PMMOResult_ATM_route_load.RNC & "/" & ROUTE_ID
Relationship Attributes				
RNC_Id	The reporting side of the RNC associated with the ATM Route.	Y	Y	PMMOResult_ATM_route_load.RNC

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Region_Id	The region associated with the ATM Route.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_ATM_route_load.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the ATM Route.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_ATM_route_load.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
ATM_Route_Name	The user-friendly name preferably unique for the ATM Route.			PMMOResult_ATM_route_load.RNC & "/" & ROUTE_ID
Node_Id	A unique identifier for the Node.			PMMOResult_ATM_route_load.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_ATM_route_load.RNC
Node_Type	Type of Node.			PMMOResult_ATM_route_load."RNC"
Version	The hardware/software version of the equipment that handles the ATM Route.			PMMOResult_ATM_route_load."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_ATM_route_load."UMTS"
Vendor	Manufacturer of the ATM_Route			"Nokia"

5.5 ATM_VCC details

In the network hierarchy, the immediate parent of the ATM_VCC object is ATM_VPC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
ATM_VCC_Id	The unique identifier for the ATM VCC.	Y		PMMOResult_ATM_virtual_channel.RNC & "/" & INTERFACE_ID & "/" & VPI & "/" & VCI

Relationship Attributes				
ATM_VPC_Id	The ATM VPC associated with the VCC.	Y	Y	PMMOResult_ATM_virtual_channel.RNC & "/" & INTERFACE_ID & "/" & VPI
Region_Id	The region associated with the VCC.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_ATM_virtual_channel.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the VCC.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_ATM_virtual_channel.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
ATM_VCC_Name	The user-friendly name preferably unique for the ATM VCC.			PMMOResult_ATM_virtual_channel.RNC & "/" & INTERFACE_ID & "/" & VPI & "/" & VCI
Node_Id	A unique identifier for the Node.			PMMOResult_ATM_virtual_channel.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_ATM_virtual_channel.RNC
Node_Type	Type of Node.			PMMOResult_ATM_virtual_channel."RNC"
Version	The hardware/software version of the ATM switch that handles the VCC.			PMMOResult_ATM_virtual_channel."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_ATM_virtual_channel."UMTS"
AAL_Id	Unique identifier for the AAL link.			No mapping
AAL_Name	A user friendly name for the AAL link.			No mapping

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NodeB_Id	Identifier of the NodeB.			No mapping
NodeB_Name	Meaningful name of the NodeB.			No mapping
AAL_Type	Type of the AAL link (e.g. AAL1, AAL2, AAL5).			No mapping
Vendor	Manufacturer of the ATM_VCC			"Nokia"

5.6 ATM_VPC details

In the network hierarchy, the immediate parent of the ATM_VPC object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
ATM_VPC_Id	The unique identifier for the ATM VPC	Y		PMMOResult_ATM_VPC.RNC & "/" & INTERFACE_ID & "/" & VPI
Relationship Attributes				
Region_Id	The region associated with the ATM VPC.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_ATM_VPC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the ATM VPC.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_ATM_VPC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
ATM_VPC_Name	The user-friendly name preferably unique for the ATM VPC			PMMOResult_ATM_VPC.RNC & "/" & INTERFACE_ID & "/" & VPI
Node_Id	A unique identifier for the Node.			PMMOResult_ATM_VPC.RNC
Node_Name	A user friendly name preferably unique for Node.			PMMOResult_ATM_VPC.RNC
Node_Type	Type of Node.			PMMOResult_ATM_VPC."RNC"
Version	The hardware/software			PMMOResult_ATM_VPC."RU10"

	version of the ATM switch that handles the VPC.			
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_ATM_VPC."UMTS"
Vendor	Manufacturer of the ATM_VPC			"Nokia"

5.7 Cell details

In the network hierarchy, the immediate parents of the Cell object are: BS, LAC, PCU, Registration_Area, Routing_Area and NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Cell_Id	A unique identifier for the Cell.	Y		PMMOResult_Traffic.WBTS & "/" & CELLID
Relationship Attributes				
BSC_Id	A unique identifier for the BSC.	Y	Y	PMMOResult_Traffic.RNC
BS_Id	A unique identifier for the BS at which the Cell is located. The BS at which the cell is located.	Y	Y	PMMOResult_Traffic.WBTS
GPRS_Cell_Id	A unique identifier for the Cell.	Y	Y	PMMOResult_Traffic."Populated by customer"
LAC_Id	The Location Area Code encompassing the Cell.	Y	Y	PMMOResult_Traffic.LACID
MSC_Id	A unique identifier for the MSC.	Y	Y	PMMOResult_Traffic."Populated by customer"
NSVC_Id	A unique identifier for the	Y	Y	PMMOResult_Traffic."Populated

	NSVC.			by customer"
Network_Id	Network associated with the Cell.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
PCU_Id	A unique identifier for the PCU.	Y	Y	PMMOResult_Traffic."Populated by customer"
Region_Id	Region associated with the Cell.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Registration_Area_Id	A unique identifier for the Registration_Area.	Y	Y	PMMOResult_Traffic."Populated by customer"
Routing_Area_Id	A unique identifier for the Routing_Area.	Y	Y	PMMOResult_Traffic.RACID
SGSN_Id	A unique identifier for the SGSN.	Y	Y	No Mapping
UMTS_Cell_Id	A unique identifier for the Cell.	Y	Y	PMMOResult_Traffic."Populated by customer"
RNC_Id				
NodeB_Id		Y	Y	
Configuration Attributes				
Cell_Name	A user friendly name preferably unique for the Cell.			PMMOResult_Traffic.CELLNAME
BCH_Power	Broadcast channel power.			PMMOResult_Traffic."Populated by customer"
BVC_Id	A unique identifier for the BVC.			PMMOResult_Traffic."Populated by customer"
Cell_Description	Description of Cell.			PMMOResult_Traffic."Populated by customer"
Cell_Type	Is the cell omni_directional, or a sector, or micro/pico/macro/umbrella cell, etc.			PMMOResult_Traffic."Populated by customer"
Cell_Version	Hardware/Software version			PMMOResult_Traffic."RU10"

	of the Cell.			
Dedicated_PDCH	Dedicated Packet Data Channel.			PMMOResult_Traffic."Populated by customer"
Defined_CCH	Number of defined CCH channels for the Cell.			PMMOResult_Traffic."Populated by customer"
Defined_PDCH	Designated Packet Data Channel.			PMMOResult_Traffic."Populated by customer"
Defined_TCH	Number of defined TCH channels of the Cell.			PMMOResult_Traffic."Populated by customer"
Defined_TRX	Number of defined TRX belonging to the cell.			PMMOResult_Traffic."Populated by customer"
Max_Power	The bs_tx_pwr_max configuration attribute.			PMMOResult_Traffic."Populated by customer"
NSVC_CN_Id	A unique identifier for the NSVC CN.			PMMOResult_Traffic."Populated by customer"
Primary_Common_Pilot_Ch_Power	Primary CPICH channel power.			PMMOResult_Traffic."Populated by customer"
Primary_Scrambling_Code	Primary DL scrambling code.			PMMOResult_Traffic."Populated by customer"
Primary_Sync_Ch_Power	Primary synchronisation channel power, DL.			PMMOResult_Traffic."Populated by customer"
Secondary_Sync_Ch_Power	Secondary synchronisation channel power, DL.			PMMOResult_Traffic."Populated by customer"
Segment_Id	A unique identifier for the Segment.			PMMOResult_Traffic."Populated by customer"
Technology	Technology of the network/ element (e.g. GSM, GPRS, UMTS).			PMMOResult_Traffic."UMTS"
UTRAN_Absolute_Radio_Freq_DL	DL UTRAN absolute Radio Frequency Channel number.			PMMOResult_Traffic."Populated by customer"

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UTRAN_Absolute_Radio_Freq_UL	UL UTRAN absolute Radio Frequency Channel number.			PMMOResult_Traffic."Populated by customer"
UARFCNUL	UL UTRAN absolute Radio Frequency Channel number			PMMOResult_Traffic."Populated by customer"
UARFCNDL	DLL UTRA absolute Radio Frequency Channel number			PMMOResult_Traffic."Populated by customer"
PRIMSCRMBLCD	Primary DL scrambling code			PMMOResult_Traffic."Populated by customer"
PRIMCPICHPWR	Primary CPICH channel power			PMMOResult_Traffic."Populated by customer"
PRIMSCHPWR	Primary synchronisation channel power, DL			PMMOResult_Traffic."Populated by customer"
SECSCHPWR	Secondary synchronisation channel power, DL			PMMOResult_Traffic."Populated by customer"
BCHPOWER	Broadcast channel power			PMMOResult_Traffic."Populated by customer"
Vendor	Manufacturer of the Cell			"Nokia"

5.8 Computer_Unit details

In the network hierarchy, the immediate parent of the Computer_Unit object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Computer_Unit_Id	Computer Unit id	Y		PMMOResult_Unit_Load.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX
Relationship Attributes				
Region_Id	The region associated with the computer unit.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Unit_Load.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the computer unit.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Unit_Load.star

				tDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Computer_Unit_Name	Computer Unit name			PMMOResult_Unit_Load.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX
Computer_Unit_Type	Type of Computer Unit			PMMOResult_Unit_Load.UNIT_TYPE
Version	The hardware/software version for the computer unit.			PMMOResult_Unit_Load."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_Unit_Load."UMTS"
Node_Id	Identifier of the Node (e.g. MGW, RNC).			PMMOResult_Unit_Load.RNC
Node_Name	Meaningful name of the Node.			PMMOResult_Unit_Load.RNC
Node_Type	Type of the Node (cf. MGW, RNC).			PMMOResult_Unit_Load."RNC"
Vendor	Manufacturer of the Computer_Unit			"Nokia"

5.9 Destination_Point details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Destination_Point_Id	The unique identifier for the Destination Point	Y		PMMOResult_MTP_Matrix_Sig_Traffic.DSPC
Relationship Attributes				

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Region_Id	The region associated with the Destination Point.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_MTP_Matrix_Sig_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the Destination Point.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_MTP_Matrix_Sig_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Destination_Point_Name	The user-friendly name preferably unique for the Destination Point.			PMMOResult_MTP_Matrix_Sig_Traffic.DSPC
Node_Id	A unique identifier for the Node.			PMMOResult_MTP_Matrix_Sig_Traffic.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_MTP_Matrix_Sig_Traffic.RNC
Node_Type	Type of Node.			"RNC"
Version	The hardware/software version of the equipment that handles the Destination Point.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the Destination_Point			"Nokia"

5.10 DSP_Pool details

In the network hierarchy, the immediate parent of the DSP_Pool object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
DSP_Pool_Id	The unique identifier for the DSP Pool.	Y		PMMOResult_DSP_Resource_Utilization.RNC & "/" & DSP_Pool

Relationship Attributes				
RNC_Id	The RNC associated with the WBTS which supports the DSP Pool.	Y	Y	PMMOResult_DSP_Resource_Utilization.RNC
Region_Id	The region associated with the DSP Pool.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_DSP_Resource_Utilization.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the DSP Pool.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_DSP_Resource_Utilization.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
DSP_Pool_Name	The user-friendly name preferably unique for the DSP Pool.			PMMOResult_DSP_Resource_Utilization.RNC & "/" & DSP_Pool
Version	The hardware/software version of the equipment that handles the DSP Pool.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the DSP_Pool			"Nokia"

5.11 DSP_Service_Type details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
DSP_Service_Type_Id	The unique identifier of the DSP Service Type	Y		PMMOResult_DSP_Service_Statistics.SERV_TYPE

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Configuration Attributes				
DSP_Service_Type_Name	A user-friendly name for the DSP Service Type			PMMOResult_DSP_Service_Statistics.SERV_TYPE
Vendor	Manufacturer of the DSP_Service_Type			"Nokia"

5.12 Ethernet_IF details

In the network hierarchy, the immediate parent of the Ethernet_IF object is RNC.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping
Primary Identifier				
Ethernet_IF_Id	The unique identifier for the Ethernet Interface.	Y		PMMOResult_Ethernet_Interface_Perf.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & ETH_IF
Relationship Attributes				
RNC_Id	The RNC which supports the Ethernet Interface.	Y	Y	PMMOResult_Ethernet_Interface_Perf.RNC
Region_Id	The region associated with the Ethernet Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Ethernet_Interface_Perf.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the Ethernet Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Ethernet_Interface_Perf.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Ethernet_IF_Name	The user-friendly name preferably unique for the Ethernet Interface.			PMMOResult_Ethernet_Interface_Perf.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & ETH_IF
Node_Id	A unique identifier for the Node.			PMMOResult_Ethernet_Interface_Perf.RNC
Node_Name	A user friendly name preferably unique for the			PMMOResult_Ethernet_Interface_Perf.RNC

	Node.			
Node_Type	Type of Node.			"RNC"
Version	The hardware/software version of the equipment that handles the Ethernet Interface.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the Ethernet_IF			"Nokia"

5.13 Exchange_Terminal details

In the network hierarchy, the immediate parent of the Exchange_Terminal object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Exchange_Terminal_Id	The unique identifier of the Exchange_Terminal	Y		PMMOResult_PDH_Statistics.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX
Relationship Attributes				
Region_Id	Region associated with the Exchange_Terminal	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_PDH_Statistics.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The Network associated with the Exchange_Terminal	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_PDH_Statistics.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Exchange_Ter	A user-friendly name for the			PMMOResult_PDH_Statistics.RNC

minal_Name	Exchange_Terminal			& "/" & UNIT_TYPE & "/" & UNIT_INDEX
ET_Unit_Type	The exchange terminal unit type		Y	PMMOResult_PDH_Statistics.UNIT_TYPE
ET_Unit_Index	The exchange terminal unit index			PMMOResult_PDH_Statistics.UNIT_INDEX
Node_Id	The name of the node associated with the object			PMMOResult_PDH_Statistics.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_PDH_Statistics.RNC
Node_Type	The type node associated with the object			"RNC"
Vendor	Manufacturer of the Exchange_Terminal			"Nokia"

5.14 FTM_AAL2 details

In the network hierarchy, the immediate parent of the FTM_AAL2 object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_AAL2_Id	The unique identifier for the FTM AAL2.	Y		PMMOResult_AAL2_Sched_Perf_BTS.RNC & "/" & WBTS & "/" & FTM & "/" & A2NE & "/" & A2ST & "/" & A2UT
Relationship Attributes				
NodeB_Id	The reporting side of the WBTS associated with the FTM AAL2.	Y	Y	PMMOResult_AAL2_Sched_Perf_BTS.WBTS
RNC_Id	The reporting side of the RNC associated with the FTM AAL2.	Y	Y	PMMOResult_AAL2_Sched_Perf_BTS.RNC
Region_Id	The region associated with the FTM AAL2.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_AAL2_Sched_Perf_BTS.startDate & " " &

				startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM AAL2.	Y	Y	lookup("nc_bsc","NETWORK_ID", utime(PMMOResult_AAL2_Sched_Perf_BTS.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_AAL2_Name	The user-friendly name preferably unique for the FTM AAL2.			PMMOResult_AAL2_Sched_Perf_BTS.RNC & "/" & WBTS & "/" & FTM & "/" & A2NE & "/" & A2ST & "/" & A2UT
Node_Id	A unique identifier for the Node.			PMMOResult_AAL2_Sched_Perf_BTS.WBTS
Node_Name	A user friendly name preferably unique for the Node.			"WBTS"
Node_Type	Type of Node.			"WBTS"
Version	The hardware/software version of the equipment that handles the FTM AAL2.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the FTM_AAL2			"Nokia"

5.15 FTM_ATM_IF details

In the network hierarchy, the immediate parent of the FTM_ATM_IF object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_ATM_IF	The unique identifier for the	Y		PMMOResult_FTM_ATM_if.RNC

_Id	FTM ATM Interface.			& "/" & WBTS & "/" & FTM & "/" & TCTT
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM ATM Interface.	Y	Y	PMMOResult_FTM_ATM_if.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM ATM Interface.	Y	Y	PMMOResult_FTM_ATM_if.RNC
Region_Id	The region associated with the FTM ATM Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_ATM_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM ATM Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_ATM_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_ATM_IF_Name	The user-friendly name preferably unique for the FTM ATM Interface.			PMMOResult_FTM_ATM_if.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_ATM_if.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_ATM_if.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_ATM_if."WBTS"
Version	The hardware/software version of the equipment that handles the FTM ATM Interface.			PMMOResult_FTM_ATM_if."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_ATM_if."UMTS"
Vendor	Manufacturer of the FTM_ATM_IF			"Nokia"

5.16 FTM_ATM_VC details

In the network hierarchy, the immediate parent of the FTM_ATM_VC object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_ATM_VC_Id	The unique identifier for the FTM ATM Virtual Channel.	Y		PMMOResult_FTM_ATM_VC.RNC & "/" & WBTS & "/" & FTM & "/" & VPTT & "/" & VCCT
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM ATM Virtual Channel.	Y	Y	PMMOResult_FTM_ATM_VC.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM ATM Virtual Channel.	Y	Y	PMMOResult_FTM_ATM_VC.RNC
Region_Id	The region associated with the FTM ATM Virtual Channel.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_ATM_VC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM ATM Virtual Channel.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_ATM_VC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_ATM_VC_Name	The user-friendly name preferably unique for the FTM ATM Virtual Channel.			PMMOResult_FTM_ATM_VC.RNC & "/" & WBTS & "/" & FTM & "/" & VPTT & "/" & VCCT
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_ATM_VC.WBTS
Node_Name	A user friendly name preferably unique for the			PMMOResult_FTM_ATM_VC.WBTS

	Node.			
Node_Type	Type of Node.			PMMOResult_FTM_ATM_VC."WBTS"
Version	The hardware/software version of the equipment that handles the FTM ATM Virtual Channel.			PMMOResult_FTM_ATM_VC."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_ATM_VC."UMTS"
Vendor	Manufacturer of the FTM_ATM_VC			"Nokia"

5.17 FTM_ATM_VP details

In the network hierarchy, the immediate parent of the FTM_ATM_VP object is FTM_ATM_IF.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_ATM_VP_Id	The unique identifier for the FTM ATM Virtual Path.	Y		PMMOResult_FTM_ATM_VP.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT & "/" & VPCT
Relationship Attributes				
FTM_ATM_IF_Id	The WBTS associated with the FTM ATM Virtual Path.	Y	Y	PMMOResult_FTM_ATM_VP.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT
NodeB_Id	The ATM interface associated with the FTM ATM Virtual Path.	Y	Y	PMMOResult_FTM_ATM_VP.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM ATM Virtual Path.	Y	Y	PMMOResult_FTM_ATM_VP.RNC
Region_Id	The region associated with the FTM ATM Virtual Path.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_ATM_VP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)

Network_Id	The network associated with the FTM ATM Virtual Path.	Y	Y	lookup("nc_bsc","NETWORK_ID", utime(PMMOResult_FTM_ATM_VP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_ATM_VP_Name	The user-friendly name preferably unique for the FTM ATM Virtual Path.			PMMOResult_FTM_ATM_VP.RNC & "/" & WBTS & "/" & FTM & "/" & TCTT & "/" & VPCT
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_ATM_VP.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_ATM_VP.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_ATM_VP."WBTS"
Version	The hardware/software version of the equipment that handles the FTM ATM Virtual Path.			PMMOResult_FTM_ATM_VP."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_ATM_VP."UMTS"
Vendor	Manufacturer of the FTM_ATM_VP			"Nokia"

5.18 FTM_Ethernet_Link details

In the network hierarchy, the immediate parent of the FTM_Ethernet_Link object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_Etherlink	The unique identifier for the	Y		PMMOResult_FTM_ethernet_link.

_Id	FTM Ethernet Link.			RNC & "/" & WBTS & "/" & FTM & "/" & ETHLK
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM Ethernet Link.	Y	Y	PMMOResult_FTM_ethernet_link.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM Ethernet Link.	Y	Y	PMMOResult_FTM_ethernet_link.RNC
Region_Id	The region associated with the FTM Ethernet Link.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_ethernet_link.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM Ethernet Link.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_ethernet_link.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_Etherlink_Name	The user-friendly name preferably unique for the FTM Ethernet Link.			PMMOResult_FTM_ethernet_link.RNC & "/" & WBTS & "/" & FTM & "/" & ETHLK
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_ethernet_link.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_ethernet_link.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_ethernet_link."WBTS"
Version	The hardware/software version of the equipment that handles the FTM Ethernet Link.			PMMOResult_FTM_ethernet_link."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_ethernet_link."UMTS"
Vendor	Manufacturer of the FTM_Ethernet_Link			"Nokia"

5.19 FTM_IP details

In the network hierarchy, the immediate parent of the FTM_IP object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_IP_Id	The unique identifier for the FTM IP.	Y		PMMOResult_FTM_Timing_Packet.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & TOPIK or PMMOResult_FTM_IP_Statistics.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & IPPM
Relationship Attributes				
NodeB_Id	The reporting side of the WBTS associated with the FTM IP.	Y	Y	PMMOResult_FTM_Timing_Packet.WBTS or PMMOResult_FTM_IP_Statistics.WBTS
RNC_Id	The reporting side of the RNC associated with the FTM IP.	Y	Y	PMMOResult_FTM_Timing_Packet.RNC or PMMOResult_FTM_IP_Statistics.RNC
Region_Id	The region associated with the FTM IP.	Y	Y	lookup("nc_bsc","REGION_ID",utime(startDate & " " & startTime,"%Y-%m-%d %R"),PMMOResult_FTM_Timing_Packet.RNC) or lookup("nc_bsc","REGION_ID",utime(startDate & " " & startTime,"%Y-%m-%d %R"),PMMOResult_FTM_IP_Statistics.RNC)
Network_Id	The network associated with the FTM IP.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(startDate & " " & startTime,"%Y-%m-%d %R"),PMMOResult_FTM_Timing_

				Packet.RNC) or lookup("nc_bsc","NETWORK_ID", utime(startDate & " " & startTime,"%Y-%m-%d %R"),PMMOResult_FTM_IP_Statistics.RNC)
Configuration Attributes				
FTM_IP_Name	The user-friendly name preferably unique for the FTM IP.			PMMOResult_FTM_Timing_Packet.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & TOPIK or PMMOResult_FTM_IP_Statistics.RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & IPPM
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_Timing_Packet.WBTS or PMMOResult_FTM_IP_Statistics.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_Timing_Packet."WBTS" or PMMOResult_FTM_IP_Statistics."WBTS"
Node_Type	Type of Node.			PMMOResult_FTM_Timing_Packet."WBTS" or PMMOResult_FTM_IP_Statistics."WBTS"
Version	The hardware/software version of the equipment that handles the FTM IP.			PMMOResult_FTM_Timing_Packet."RU10" or PMMOResult_FTM_IP_Statistics."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_Timing_Packet."UMTS" or PMMOResult_FTM_IP_Statistics."UMTS"
Vendor	Manufacturer of the FTM_IP			"Nokia"

5.20 FTM_PDH_IF details

In the network hierarchy, the immediate parent of the FTM_PDH_IF object is NodeB.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping

Primary Identifier				
FTM_PDH_IF_Id	The unique identInterface.ier for the FTM PDH Interface.	Y		PMMOResult_FTM_PDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & PPTT
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM PDH Interface.	Y	Y	PMMOResult_FTM_PDH_if.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM PDH Interface.	Y	Y	PMMOResult_FTM_PDH_if.RNC
Region_Id	The region associated with the FTM PDH Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_PDH_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM PDH Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_PDH_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_PDH_IF_Name	The user-friendly name preferably unique for the FTM PDH Interface.			PMMOResult_FTM_PDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & PPTT
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_PDH_if.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_PDH_if.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_PDH_if."WBTS"
Version	The hardware/software version of the equipment that handles the FTM PDH Interface.			PMMOResult_FTM_PDH_if."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_PDH_if."UMTS"
Vendor	Manufacturer of the			"Nokia"

	FTM_PDH_IF			

5.21 FTM_PHB details

In the network hierarchy, the immediate parent of the FTM_PHB object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_PHB_Id	The unique identifier for the FTM PHB.	Y		PMMOResult_FTM_PHB_Statistics .RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & PHBPM
Relationship Attributes				
NodeB_Id	The reporting side of the WBTS associated with the FTM PHB.	Y	Y	PMMOResult_FTM_PHB_Statistics .WBTS
RNC_Id	The reporting side of the RNC associated with the FTM PHB.	Y	Y	PMMOResult_FTM_PHB_Statistics .RNC
Region_Id	The region associated with the FTM PHB.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_PHB_Statistics.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM PHB.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_PHB_Statistics.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_PHB_Name	The user-friendly name preferably unique for the FTM PHB.			PMMOResult_FTM_PHB_Statistics .RNC & "/" & WBTS & "/" & FTM & "/" & IPNO & "/" & IEIF & "/" & PHBPM

Node_Id	A unique identifier for the Node.			PMMOResult_FTM_PHB_Statistics .WBTS
Node_Name	A user friendly name preferably unique for the Node.			"WBTS"
Node_Type	Type of Node.			"WBTS"
Version	The hardware/software version of the equipment that handles the FTM PHB.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the FTM_PHB			"Nokia"

5.22 FTM_PSN_IP details

In the network hierarchy, the immediate parent of the FTM_PSN_IP object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_PSN_IP_Id	The unique identifier for the FTM PSN IP Interface.	Y		PMMOResult_FTM_PSN_IP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWTIP
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM PSN IP Interface.	Y	Y	PMMOResult_FTM_PSN_IP.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM PSN IP Interface.	Y	Y	PMMOResult_FTM_PSN_IP.RNC
Region_Id	The region associated with the FTM PSN IP Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_PSN_IP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM PSN IP Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_PSN_IP.

				startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_PSN_IP_Name	The user-friendly name preferably unique for the FTM PSN IP Interface.			PMMOResult_FTM_PSN_IP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWTIP
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_PSN_IP.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_PSN_IP.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_PSN_IP."WBTS"
Version	The hardware/software version of the equipment that handles the FTM PSN IP Interface.			PMMOResult_FTM_PSN_IP."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_PSN_IP."UMTS"
Vendor	Manufacturer of the FTM_PSN_IP			"Nokia"

5.23 FTM_PWMP_IF details

In the network hierarchy, the immediate parent of the FTM_PWMP_IF object is NodeB.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping
Primary Identifier				
FTM_PWMP_IF_Id	The unique identifier for the FTM SDH VCX Interface.	Y		PMMOResult_PWMP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWMP

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Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM SDH VCX Interface.	Y	Y	PMMOResult_PWMP.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM SDH VCX Interface.	Y	Y	PMMOResult_PWMP.RNC
Region_Id	The region associated with the FTM SDH VCX Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_PWMP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM SDH VCX Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_PWMP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_PWMP_IF_Name	The user-friendly name preferably unique for the FTM SDH VCX Interface.			PMMOResult_PWMP.RNC & "/" & WBTS & "/" & FTM & "/" & PWNE & "/" & PWMP
Node_Id	A unique identifier for the Node.			PMMOResult_PWMP.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_PWMP.WBTS
Node_Type	Type of Node.			PMMOResult_PWMP."WBTS"
Version	The hardware/software version of the equipment that handles the FTM SDH VCX Interface.			PMMOResult_PWMP."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_PWMP."UMTS"
Vendor	Manufacturer of the FTM_PWMP_IF			"Nokia"

5.24 FTM_SDH_IF details

In the network hierarchy, the immediate parent of the FTM_SDH_IF object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
FTM_SDH_IF_Id	The unique identifier for the FTM SDH link Interface.	Y		PMMOResult_FTM_SDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & SVTT
Relationship Attributes				
NodeB_Id	The WBTS associated with the FTM SDH link Interface.	Y	Y	PMMOResult_FTM_SDH_if.WBTS
RNC_Id	The RNC associated with the WBTS which supports the FTM SDH link Interface.	Y	Y	PMMOResult_FTM_SDH_if.RNC
Region_Id	The region associated with the FTM SDH link Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_FTM_SDH_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the FTM SDH link Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_FTM_SDH_if.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
FTM_SDH_IF_Name	The user-friendly name preferably unique for the FTM SDH link Interface.			PMMOResult_FTM_SDH_if.RNC & "/" & WBTS & "/" & FTM & "/" & SVTT
Node_Id	A unique identifier for the Node.			PMMOResult_FTM_SDH_if.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_FTM_SDH_if.WBTS
Node_Type	Type of Node.			PMMOResult_FTM_SDH_if."WBT

				S"
Version	The hardware/software version of the equipment that handles the FTM SDH link Interface.			PMMOResult_FTM_SDH_if."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_FTM_SDH_if."UMTS"
Vendor	Manufacturer of the FTM_SDH_IF			"Nokia"

5.25 IMA_Group details

In the network hierarchy, the immediate parents of the IMA_Group object are: NodeB and RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
IMA_Group_Id	A unique identifier for the IMA Group.	Y		PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.RNC & "/" & IMA_GROUP_ID
Relationship Attributes				
Region_Id	The region associated with the IMA Group.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IMA Group.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
NodeB_Id	A unique identifier for the NodeB.	Y	Y	No mapping
RNC_Id	A unique identifier for the RNC.	Y	Y	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.RNC
Configuration Attributes				

IMA_Group_Name	A user friendly name for the IMA Group.			PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.RNC & "/" & IMA_GROUP_ID
Node_Id	A unique identifier for the Node.			PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.RNC
Node_Type	Type of Node.			PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF."RNC"
Version	The hardware/software version for the ATM equipment that manage the IMA Group circuit.			PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF."UMTS"
IMA_Group_Type	Type or Information about the IMA Group.			No mapping
Vendor	Manufacturer of the IMA_Group			"Nokia"

5.26 Interface details

In the network hierarchy, the immediate parent of the Interface object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Iface_Id	Identifier for the Interface.	Y		PMMOResult_STM_1_IF.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX or PMMOResult_ATM_interface.RNC & "/" & INTERFACE_ID
Relationship Attributes				
Region_Id	The region associated with	Y	Y	lookup("nc_bsc","REGION_ID",uti

	the STM equipment			me(PMMOResult_STM_1_IF.startDate & " " & startTime,"%Y-%m-%d %R"),RNC) or lookup("nc_bsc","REGION_ID",utime(PMMOResult_ATM_interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the STM equipment	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_STM_1_IF.startDate & " " & startTime,"%Y-%m-%d %R"),RNC) or lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_ATM_interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Iface_Name	Meaningful name for the Interface.			PMMOResult_STM_1_IF.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX or PMMOResult_ATM_interface.RNC & "/" & INTERFACE_ID
Exchange_Terminal_Type	Type of SDH Exchange terminal			PMMOResult_STM_1_IF.UNIT_TYPE or PMMOResult_ATM_interface.UNIT_TYPE
Version	The hardware/software version of the STM equipment			PMMOResult_STM_1_IF."RU10" or PMMOResult_ATM_interface."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_STM_1_IF."UMTS" or PMMOResult_ATM_interface."UMTS"
Node_Id	Identifier of the interface parents (e.g. SGSN, GGSN, ROUTER)			PMMOResult_STM_1_IF.RNC or PMMOResult_ATM_interface.RNC
Node_Type	Type of the interface parent (e.g. SGSN, GGSN)			PMMOResult_STM_1_IF."RNC" or PMMOResult_ATM_interface."RNC"
Iface_Type	Type of the interface (e.g.			PMMOResult_STM_1_IF."STM1"

	ATM, FR, IP)			or PMMOResult_ATM_interface."ATM"
Mag_Id	Magazin identifier			No mapping
Slot_Id	Slot identifier			No mapping
Iface_Direction	Interface direction and/or traffic type (e.g. Simplex, Half-duplex, Full-Duplex, Incoming, Outgoing)			No mapping
Vendor	Manufacturer of the Interface			"Nokia"

5.27 IP_IF details

In the network hierarchy, the immediate parent of the IP_IF object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
IP_IF_Id	The unique identifier for the IP Interface.	Y		PMMOResult_IP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_IP_QOS_Meas.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_UDP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF
Relationship Attributes				
RNC_Id	The RNC which supports the IP Interface.	Y	Y	PMMOResult_IP_Meas_IP_Interface.RNC or PMMOResult_IP_QOS_Meas.RNC or PMMOResult_UDP_Meas_IP_Inter

				face.RNC
Region_Id	The region associated with the IP Interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_IP_Meas_IP_Interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IP Interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_IP_Meas_IP_Interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
IP_IF_Name	The user-friendly name preferably unique for the IP Interface.			PMMOResult_IP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_IP_QOS_Meas.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF or PMMOResult_UDP_Meas_IP_Interface.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & IP_IF
Node_Id	A unique identifier for the Node.			PMMOResult_IP_Meas_IP_Interface.RNC or PMMOResult_IP_QOS_Meas.RNC or PMMOResult_UDP_Meas_IP_Interface.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_IP_Meas_IP_Interface.RNC or PMMOResult_IP_QOS_Meas.RNC or PMMOResult_UDP_Meas_IP_Interface.RNC
Node_Type	Type of Node.			"RNC"
Version	The hardware/software version of the equipment that handles the IP Interface.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the IP_IF			"Nokia"

5.28 IP_PHB details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
IP_PHB_Id	The unique identifier of Per Hop Behaviour (PHB)	Y		PMMOResult_IP_QOS_Meas.PHB
Configuration Attributes				
IP_PHB_Name	A user-friendly name for Per Hop Behaviour (PHB)			PMMOResult_IP_QOS_Meas.PHB
Vendor	Manufacturer of the IP_PHB			"Nokia"

5.29 IP_Route_BTS details

In the network hierarchy, the immediate parent of the IP_Route_BTS object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
IP_Route_BTS_Id	The unique identifier for the IP Route BTS.	Y		PMMOResult_IP_Based_Route.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID or PMMOResult_RNC_IP_CAC.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID
Relationship Attributes				
NodeB_Id	The reporting side of the WBTS associated with the IP Route BTS.	Y	Y	PMMOResult_IP_Based_Route.RWBTS or PMMOResult_RNC_IP_CAC.RWBTS
RNC_Id	The reporting side of the RNC associated with the IP Route BTS	Y	Y	PMMOResult_IP_Based_Route.RNC or PMMOResult_RNC_IP_CAC.RNC

Region_Id	The region associated with the IP Route BTS	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_IP_Based_Route.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IP Route BTS.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_IP_Based_Route.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
IP_Route_BTS_Name	The user-friendly name preferably unique for the IP Route BTS.			PMMOResult_IP_Based_Route.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID or PMMOResult_RNC_IP_CAC.RNC & "/" & RWBTS & "/" & IP_ROUTE_ID
Node_Id	A unique identifier for the Node.			PMMOResult_IP_Based_Route.RWBTS or PMMOResult_RNC_IP_CAC.RWBTS
Node_Name	A user friendly name preferably unique for the Node.			"WBTS"
Node_Type	Type of Node.			"WBTS"
Version	The hardware/software version of the equipment that handles the IP Route BTS.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the IP_Route_BTS			"Nokia"

5.30 IP_Route details

In the network hierarchy, the immediate parent of the IP_Route object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping

Primary Identifier				
IP_Route_Id	The unique identifier for the IP Route.	Y		PMMOResult_RNC_RTP_RTCP.RNC & "/" & IP_ROUTE_ID
Relationship Attributes				
RNC_Id	The reporting side of the RNC associated with the IP Route.	Y	Y	PMMOResult_RNC_RTP_RTCP.RNC
Region_Id	The region associated with the IP Route.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_RNC_RTP_RTCP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IP Route.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_RNC_RTP_RTCP.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
IP_Route_Name	The user-friendly name preferably unique for the IP Route.			PMMOResult_RNC_RTP_RTCP.RNC & "/" & IP_ROUTE_ID
Node_Id	A unique identifier for the Node.			PMMOResult_RNC_RTP_RTCP.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_RNC_RTP_RTCP.RNC
Node_Type	Type of Node.			"RNC"
Version	The hardware/software version of the equipment that handles the IP Route.			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the IP_Route			"Nokia"

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5.31 IuPC_IF details

In the network hierarchy, the immediate parent of the IuPC_IF object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
IuPC_IF_Id	The unique identifier for the IuPC interface.	Y		PMMOResult_IuPC_interface.RNC & "/" & SAS
Relationship Attributes				
RNC_Id	The reporting side of the RNC associated with the IuPC interface.	Y	Y	PMMOResult_IuPC_interface.RNC
Region_Id	The region associated with the IuPC interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_IuPC_interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IuPC interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_IuPC_interface.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
IuPC_IF_Name	The user-friendly name preferably unique for the IuPC interface.			PMMOResult_IuPC_interface.RNC & "/" & SAS
Node_Id	A unique identifier for the Node.			PMMOResult_IuPC_interface.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_IuPC_interface.RNC
Node_Type	Type of Node.			PMMOResult_IuPC_interface."RNC"
Version	The hardware/software version of the equipment that handles the IuPC interface.			PMMOResult_IuPC_interface."RU10"

Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_IuPC_interface."UMTS"
Vendor	Manufacturer of the IuPC_IF			"Nokia"

5.32 IuPS_IF details

In the network hierarchy, the immediate parent of the IuPS_IF object is RNC.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping
Primary Identifier				
IuPS_IF_Id	The unique identifier for the IuPS interface.	Y		PMMOResult_IU_PS_performance.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX
Relationship Attributes				
RNC_Id	The reporting side of the RNC associated with the IuPS interface.	Y	Y	PMMOResult_IU_PS_performance.RNC
Region_Id	The region associated with the IuPS interface.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_IU_PS_performance.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the IuPS interface.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_IU_PS_performance.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
IuPS_IF_Name	The user-friendly name preferably unique for the IuPS interface.			PMMOResult_IU_PS_performance.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX
Node_Id	A unique identifier for the Node.			PMMOResult_IU_PS_performance.RNC

Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_IU_PS_performance.RNC
Node_Type	Type of Node.			PMMOResult_IU_PS_performance."RNC"
Version	The hardware/software version of the equipment that handles the IuPS interface.			PMMOResult_IU_PS_performance."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_IU_PS_performance."UMTS"
Vendor	Manufacturer of the IuPS_IF			"Nokia"

5.33 LCG details

In the network hierarchy, the immediate parent of the LCG object is NodeB.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
LCG_Id	The unique identifier for the LCG.	Y		PMMOResult_WBTS_HW.RNC & "/" & WBTS & "/" & LCG
Relationship Attributes				
NodeB_Id	The WBTS associated with the LCG.	Y	Y	PMMOResult_WBTS_HW.WBTS
RNC_Id	The RNC associated with the WBTS which supports the LCG.	Y	Y	PMMOResult_WBTS_HW.RNC
Region_Id	The region associated with the LCG.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_WBTS_HW.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the LCG.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_WBTS_HW.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)

Configuration Attributes				
LCG_Name	The user-friendly name preferably unique for the LCG.			PMMOResult_WBTS_HW.RNC & "/" & WBTS & "/" & LCG
Node_Id	A unique identifier for the Node.			PMMOResult_WBTS_HW.WBTS
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_WBTS_HW.WBTS
Node_Type	Type of Node.			PMMOResult_WBTS_HW."WBTS"
Version	The hardware/software version of the equipment that handles the LCG.			PMMOResult_WBTS_HW."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_WBTS_HW."UMTS"
Vendor	Manufacturer of the LCG			"Nokia"

5.34 Neighbour_RNC details

In the network hierarchy, the immediate parent of the Neighbour_RNC object is RNC.

Attribute Name	Description	Read-Only?	Time-Tracked?	Mapping
Primary Identifier				
RNC_Neighbour_Id	A unique identifier for the RNC.	Y		PMMOResult_L3Iur.RNC & "/" & RRNC
Relationship Attributes				
Source_RNC_Id	A unique identifier for the Source RNC.	Y	Y	PMMOResult_L3Iur.RNC
Configuration Attributes				

RNC_Neighbour_Name	A user friendly name preferably unique for the RNC.			PMMOResult_L3Iur.RNC & "/" & RRNC
Source_RNC_Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Source_RNC_Type	Type of Source RNC.			"UMTS"
Source_RNC_Vendor	Manufacturer of the Source RNC.			"Nokia"
Source_RNC_Version	Hardware/Software version of the Source RNC.			"RU10"
Target_RNC_Id	A unique identifier for the Target RNC.			PMMOResult_L3Iur.RRNC
Target_RNC_Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Target_RNC_Type	Type of Target RNC.			"UMTS"
Target_RNC_Vendor	Manufacturer of the Target RNC.			"Nokia"
Target_RNC_Version	Hardware/Software version of the Target RNC.			"RU10"
Vendor	Manufacturer of the Neighbour_RNC			"Nokia"

5.35 Neighbour details

In the network hierarchy, the immediate parent of the Neighbour object is Cell.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Neighbour_Id	A unique identifier for the Neighbour.	Y		PMMOResult_AutoDef_IFHO.AWBTS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_SHO.AWB

				TS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_ISHO.AWBTS & "/" & AWCEL & "-" & LAC & "/" & CI
Relationship Attributes				
Source_Cell_Id	A unique identifier for the Cell_Id of the Cell that is handling calls.	Y	Y	PMMOResult_AutoDef_IFHO.AWBTS & "/" & AWCEL or PMMOResult_AutoDef_SHO.AWBTS & "/" & AWCEL or PMMOResult_AutoDef_ISHO.AWBTS & "/" & AWCEL
Configuration Attributes				
Neighbour_Name	A user friendly name preferably unique for the Neighbour.			PMMOResult_AutoDef_IFHO.AWBTS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_SHO.AWBTS & "/" & AWCEL & "-" & WBTS & "/" & WCEL or PMMOResult_AutoDef_ISHO.AWBTS & "/" & AWCEL & "-" & LAC & "/" & CI
Source_Cell_Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_AutoDef_IFHO."UMTS" or PMMOResult_AutoDef_SHO."UMTS" or PMMOResult_AutoDef_ISHO."UMTS"
Source_Cell_Type	Type of Source Cell.			PMMOResult_AutoDef_IFHO."UMTS" or PMMOResult_AutoDef_SHO."UMTS" or PMMOResult_AutoDef_ISHO."UMTS"
Source_Cell_Vendor	Manufacturer of the Source Cell.			PMMOResult_AutoDef_IFHO."Nokia" or

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				PMMOResult_AutoDef_SHO."Nokia" or PMMOResult_AutoDef_ISHO."Nokia"
Source_Cell_Version	Hardware/Software version of the Source Cell.			PMMOResult_AutoDef_IFHO."RU10" or PMMOResult_AutoDef_SHO."RU10" or PMMOResult_AutoDef_ISHO."RU10"
Target_Cell_Id	A unique identifier for the Cell_Id of the Cell that is receiving handed-over calls.			PMMOResult_AutoDef_IFHO.WBTS & "/" & WCEL or PMMOResult_AutoDef_SHO.WBTS & "/" & WCEL or PMMOResult_AutoDef_ISHO.LAC & "/" & CI
Target_Cell_Position	Position of Target Cell.			No mapping
Target_Cell_Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_AutoDef_IFHO."UMTS" or PMMOResult_AutoDef_SHO."UMTS" or PMMOResult_AutoDef_ISHO."GSM"
Target_Cell_Type	Type of Target Cell.			PMMOResult_AutoDef_IFHO."UMTS" or PMMOResult_AutoDef_SHO."UMTS" or PMMOResult_AutoDef_ISHO."GSM"
Target_Cell_Vendor	Manufacturer of the Target Cell.			PMMOResult_AutoDef_IFHO."Nokia" or PMMOResult_AutoDef_SHO."Nokia" or PMMOResult_AutoDef_ISHO."Nokia"
Target_Cell_Version	Hardware/Software version of the Target Cell.			PMMOResult_AutoDef_IFHO."RU10" or PMMOResult_AutoDef_SHO."RU10" or PMMOResult_AutoDef_ISHO."RU

				10"
Vendor	Manufacturer of the Neighbour			"Nokia"

5.36 Network details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Network_Id	A unique identifier for the Network.	Y		PMMOResult_L3Iu.NETWORK_ID
Configuration Attributes				
Network_Name	A user friendly name preferably unique for the Network.			PMMOResult_L3Iu.NETWORK_ID
Default_Link_Speed	The default speed of SS7 Signalling Links in this network.			"Populated by customer"
Network_Type	Type of Network (e.g. GSM-900, GSM-1800 or GSM-1900).			"UMTS"
Vendor	Manufacturer of the Network			"Nokia"

5.37 NodeB details

In the network hierarchy, the immediate parent of the NodeB object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				

NodeB_Id	A unique identifier for the NodeB.	Y		PMMOResult_Traffic.WBTS
Relationship Attributes				
MSC_Id	A unique identifier for the MSC.	Y	Y	PMMOResult_Traffic."Populated by customer"
Network_Id	Network associated with the NodeB.	Y	Y	lookup("nc_bsc","NETWORK_ID", utime(PMMOResult_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
RNC_Id	The RNC that controls this NodeB.	Y	Y	PMMOResult_Traffic.RNC
Region_Id	Region associated with the NodeB.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Traffic.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
SGSN_Id	A unique identifier for the SGSN.	Y	Y	No mapping
Configuration Attributes				
NodeB_Name	A user friendly name preferably unique for the NodeB (site).			PMMOResult_Traffic.WBTS
NodeB_Version	Hardware/Software version of the NodeB.			PMMOResult_Traffic."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_Traffic."UMTS"
Vendor	Manufacturer of the NodeB			"Nokia"

5.38 Originating_Point details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Originating_Point_Id	The unique identifier of the originating point	Y		PMMOResult_MTP_Matrix_Sig_Traffic.OPC

Configuration Attributes				
Originating_Point_Name	A user-friendly name for the originating point			PMMOResult_MTP_Matrix_Sig_Traffic.OPC
Vendor	Manufacturer of the Originating_Point			"Nokia"

5.39 Physical_Layer_Term_Point details

In the network hierarchy, the immediate parent of the Physical_Layer_Term_Point object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Termination_Point_Id	termination point id for the physical layer	Y		PMMOResult_Interface_TC.RNC & "/" & PHYTTP
Relationship Attributes				
RNC_Id	The RNC associated with the termination point.	Y	Y	PMMOResult_Interface_TC.RNC
Region_Id	The region associated with the termination point	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Interface_TC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the termination point.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Interface_TC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
Termination_Point_Name	termination point name			PMMOResult_Interface_TC.RNC & "/" & PHYTTP
Version	The hardware/software version of the termination point equipment.			PMMOResult_Interface_TC."RU10"

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Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_Interface_TC."UMTS"
Vendor	Manufacturer of the Physical_Layer_Term_Point			"Nokia"

5.40 Radio_Connection_Type details

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Radio_Connection_Type_Id	A unique identifier for the Radio Connection Type (which consists of RC type components)	Y		PMMOResult_RCPM_RLC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_UEQ.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_OLPC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_OLPC_RNC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR or PMMOResult_RCPM_RLC_RNC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR or PMMOResult_RCPM_OLPC_WCEL.TR_CLASS or PMMOResult_RCPM_RLC_WCEL.TR_CLASS
Configuration Attributes				
Radio_Connection_Type_Name	A unique identifier for the Radio Connection Type (which consists of RC type components)			PMMOResult_RCPM_RLC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_UEQ.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_OLPC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR & ":" & BER_SDU or PMMOResult_RCPM_OLPC_RNC

				.TR_CLASS & ":" & RAB_BR & ":" & RB_BR or PMMOResult_RCPM_RLC_RNC.TR_CLASS & ":" & RAB_BR & ":" & RB_BR or PMMOResult_RCPM_OLPC_WCEL.TR_CLASS or PMMOResult_RCPM_RLC_WCEL.TR_CLASS
Traffic_Class	Type of traffic class			PMMOResult_RCPM_RLC.TR_CLASS or PMMOResult_RCPM_UEQ.TR_CLASS or PMMOResult_RCPM_OLPC.TR_CLASS or PMMOResult_RCPM_OLPC_RNC.TR_CLASS or PMMOResult_RCPM_RLC_RNC.TR_CLASS or PMMOResult_RCPM_OLPC_WCEL.TR_CLASS or PMMOResult_RCPM_RLC_WCEL.TR_CLASS
RAB_Bit_Rate	The bit rate for the Radio Access Bearer			PMMOResult_RCPM_RLC.RAB_BR or PMMOResult_RCPM_UEQ.RAB_BR or PMMOResult_RCPM_OLPC.RAB_BR or PMMOResult_RCPM_OLPC_RNC.RAB_BR or PMMOResult_RCPM_RLC_RNC.RAB_BR
RB_Bit_Rate	The bit rate for the Radio Bearer (RB)			PMMOResult_RCPM_RLC.RB_BR or PMMOResult_RCPM_UEQ.RB_BR or PMMOResult_RCPM_OLPC.RB_BR or

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				PMMOResult_RCPM_OLPC_RNC.RB_BR or PMMOResult_RCPM_RLC_RNC.RB_BR
BER_SDU_Ratio	The BER/SDU error ratio used as a RAB quality target			PMMOResult_RCPM_RLC.BER_SDU or PMMOResult_RCPM_UEQ.BER_SDU or PMMOResult_RCPM_OLPC.BER_SDU
Vendor	Manufacturer of the Radio_Connection_Type			"Nokia"

5.41 Region details

In the network hierarchy, the immediate parent of the Region object is Network.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
Region_Id	Region associated with the network object.	Y		PMMOResult_L3Iu.REGION_ID
Relationship Attributes				
Network_Id	Network associated with the Region.	Y	Y	PMMOResult_L3Iu.NETWORK_ID
Configuration Attributes				
Region_Name	A user friendly name preferably unique for the Region.			PMMOResult_L3Iu.REGION_ID
Vendor	Manufacturer of the Region			"Nokia"

5.42 RNC details

In the network hierarchy, the immediate parent of the RNC object is SGSN.

This object is used for Data Availability tracking

Attribute Name	Description	Read-Only	Time-Tracke	Mapping

		?	d?	
Primary Identifier				
RNC_Id	A unique identifier for the RNC.	Y		PMMOResult_L3Iu.RNC
Relationship Attributes				
MSC_Id	The MSC to which this RNC is connected.	Y	Y	PMMOResult_L3Iu."Populated by customer"
Network_Id	Network associated with the RNC.	Y	Y	PMMOResult_L3Iu.NETWORK_ID
Region_Id	Region associated with the RNC.	Y	Y	PMMOResult_L3Iu.REGION_ID
SGSN_Id	A unique identifier for the SGSN.	Y	Y	No mapping
Configuration Attributes				
RNC_Name	A user friendly name preferably unique for the RNC.			PMMOResult_L3Iu.RNC
RNC_Version	Hardware/Software version of the RNC.			PMMOResult_L3Iu."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_L3Iu."UMTS"
Vendor	Manufacturer of the RNC			"Nokia"

5.43 SCCP_Subsystem details

In the network hierarchy, the immediate parent of the SCCP_Subsystem object is SCCP.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				

SCCP_Subsystem_Id	Primary identifier of the SCCP Subsystem	Y		PMMOResult_SCCP_Subsystem.RNC & "/" & SNET & "/" & SSN & "/" & SS
Relationship Attributes				
SCCP_Id	Identifier of SCCP	Y	Y	PMMOResult_SCCP_Subsystem.RNC & "/" & SNET
RNC_Id	Identifier for the RNC.	Y	Y	PMMOResult_SCCP_Subsystem.RNC
Region_Id	The region of the SCCP Subsystem	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_SCCP_Subsystem.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	Network associated with the SCCP Subsystem	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_SCCP_Subsystem.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
SCCP_Subsystem_Name	Meaningful name of the SCCP Subsystem			PMMOResult_SCCP_Subsystem.RNC & "/" & SNET & "/" & SSN & "/" & SS
Version	Hardware/Software version of the SCCP Subsystem			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the SCCP_Subsystem			"Nokia"

5.44 SCCP details

In the network hierarchy, the immediate parent of the SCCP object is RNC.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
SCCP_Id	Primary identifier of the SCCP	Y		PMMOResult_SCCP_Local_Subsystem_Availability.RNC & "/" &

				SNET
Relationship Attributes				
RNC_Id	Identifier for the RNC.	Y	Y	PMMOResult_SCCP_Local_Subsystem_Availability.RNC
Region_Id	The region of the SCCP / RNC	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_SCCP_Local_Subsystem_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	Network associated with the SCCP / RNC	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_SCCP_Local_Subsystem_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
MGW_Id	Primary Identifier of MGW	Y	Y	No mapping
Configuration Attributes				
SCCP_Name	Meaningful name of the SCCP			PMMOResult_SCCP_Local_Subsystem_Availability.RNC & "/" & SNET
Version	Hardware/Software version of the SCCP / RNC			"RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the SCCP			"Nokia"

5.45 SDH_Exchange_Terminal details

In the network hierarchy, the immediate parent of the SDH_Exchange_Terminal object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				

SDH_Exch_Term_Id	SDH Exchange Terminal id	Y		PMMOResult_Sonet_SDH.RNC & "/" & GROUP_ID
Relationship Attributes				
Region_Id	The region associated with the SDH Exchange Terminal	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Sonet_SDH.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the SDH Exchange Terminal	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Sonet_SDH.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
SDH_Exch_Term_Name	SDH Exchange Terminal name			PMMOResult_Sonet_SDH.RNC & "/" & GROUP_ID
Version	The hardware/software version of the SDH Exchange Equipment			PMMOResult_Sonet_SDH."RU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_Sonet_SDH."UMTS"
SDH_Exch_Term_Type	Type of SDH Exchange terminal			PMMOResult_Sonet_SDH.UNIT_TYPE
Node_Id	Identifier of the Node parent of the SDH Exchange Terminal (e.g. MGW, RNC).			PMMOResult_Sonet_SDH.RNC
Node_Name	Meaningful name for the Node.			PMMOResult_Sonet_SDH.RNC
Node_Type	Type of the Node parent of the SDH Exchange Terminal (e.g. MGW, RNC).			PMMOResult_Sonet_SDH."RNC"
Vendor	Manufacturer of the SDH_Exchange_Terminal			"Nokia"

5.46 Signalling_LinkSet details

In the network hierarchy, the immediate parent of the Signalling_LinkSet object is Signalling_Point.

Attribute	Description	Read-	Time-	Mapping

Name		Only ?	Tracked?	
Primary Identifier				
SS7_LinkSet_Id	A unique identifier for the SS7 LinkSet.	Y		PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC &"/"& SNET&"/" & SPCD &"/" & SLSN
Relationship Attributes				
Network_Id	Network associated with the SS7 LinkSet.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Region_Id	Region associated with the SS7 LinkSet.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
SS7_Point_Id	The SS7 Point to which this SS7 LinkSet is connected to (at this end).	Y	Y	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC &"/"& SNET &"/" & SPCD
Configuration Attributes				
SS7_LinkSet_Name	A user friendly name preferably unique for the SS7 LinkSet.			PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC &"/"& SNET&"/" & SPCD &"/" & SLSN
Adjacent_Node_Id	The Adjacent Node that this SS7 LinkSet is connected from (at the other end).			No Mapping
Data_Rate	The total of all the individual SS7 Link speeds (aggregated over all SS7 Links in the SS7 LinkSet) in bits per second (bit/s).			No Mapping
Designed_Link_Failures	The number of SS7 Link failures permitted on the			No Mapping

	SS7 LinkSet while still keeping the SS7 LinkSet up to its designed capacity.			
Node_Id	The Node (MSC or HLR) that this SS7 LinkSet is connected to (at this end).			PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC
Node_Name	Name of the node that this SS7 LinkSet is connected to (at this end).			PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.RNC
Node_Type	The type of the network element that the SS7 LinkSet is connected to (at this end).			"RNC"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the Signalling_LinkSet			"Nokia"

5.47 Signalling_Link details

In the network hierarchy, the immediate parent of the Signalling_Link object is Signalling_LinkSet.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
SS7_Link_Id	A unique identifier for the SS7 Link.	Y		PMMOResult_MTP_Sig_Link_Availability.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or PMMOResult_MTP_Sig_Link_Performance.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or PMMOResult_MTP_Sig_Link_Utilization.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN
Relationship Attributes				

Network_Id	Network associated with the SS7 Link.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_MTP_Sig_Link_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Region_Id	Region associated with the SS7 Link.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_MTP_Sig_Link_Availability.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
SS7_LinkSet_Id	The Node (MSC or HLR) that this SS7 Link is connected to (at this end).	Y	Y	PMMOResult_MTP_Sig_Link_Availability.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN or PMMOResult_MTP_Sig_Link_Performance.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN or PMMOResult_MTP_Sig_Link_Utilization.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN
SS7_Point_Id	A unique identifier for the SS7 Point.	Y	Y	PMMOResult_MTP_Sig_Link_Availability.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Link_Performance.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Link_Utilization.RNC & "/" & SNET & "/" & SPCD
Configuration Attributes				
SS7_Link_Name	A user friendly name preferably unique for the SS7 Link.			PMMOResult_MTP_Sig_Link_Availability.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or PMMOResult_MTP_Sig_Link_Performance.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" & SL_TYPE & "/" & SLN or PMMOResult_MTP_Sig_Link_Utilization.RNC & "/" & SNET & "/" & SPCD & "/" & SLSN & "/" &

				SL_TYPE & "/" & SLN
Adjacent_Node_Id	The Adjacent Node that this SS7 Link is connected from (at the other end).			"Populated by customer"
Data_Rate	The SS7 Link speed in bits per second (bit/s).			No mapping
Node_Id	The Node (MSC or HLR) that this SS7 Link is connected to (at this end).			PMMOResult_MTP_Sig_Link_Availability.RNC or PMMOResult_MTP_Sig_Link_Performance.RNC or PMMOResult_MTP_Sig_Link_Utilization.RNC
Node_Name	The name for the network element that the SS7 Link is connected to (at this end).			PMMOResult_MTP_Sig_Link_Availability.RNC or PMMOResult_MTP_Sig_Link_Performance.RNC or PMMOResult_MTP_Sig_Link_Utilization.RNC
Node_Type	The type of the network element that the SS7 Link is connected to at this end.			"RNC"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"
Vendor	Manufacturer of the Signalling_Link			"Nokia"

5.48 Signalling_Point details

In the network hierarchy, the immediate parent of the Signalling_Point object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
SS7_Point_Id	A unique identifier for the SS7 Point.	Y		PMMOResult_AAL2_At_NNI_new.RNC & "/" & NETCODE & "/" & SPCODE or PMMOResult_MTP_Matrix_Sig_Traffic.RNC & "/" & SNET & "/" &

				SIO or PMMOResult_MTP_Sig_Point_Status.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_SP.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_UserParts.RNC & "/" & SNET & "/" & SIO or PMMOResult_SCCP_Sig_Point.RNC & "/" & SNET & "/" & SPCD
Relationship Attributes				
Network_Id	Network associated with the SS7 Point.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_AAL2_At_NNI_new.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Region_Id	Region associated with the SS7 Point. SS7_Point - the default value is derived via the Node.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_AAL2_At_NNI_new.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
SS7_Point_Name	A user friendly name preferably unique for the SS7 Point.			PMMOResult_AAL2_At_NNI_new.RNC & "/" & NETCODE & "/" & SPCODE or PMMOResult_MTP_Matrix_Sig_Traffic.RNC & "/" & SNET & "/" & SIO or PMMOResult_MTP_Sig_Point_Status.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_SP.RNC & "/" & SNET & "/" & SPCD or PMMOResult_MTP_Sig_Traffic_Report_UserParts.RNC & "/" & SNET & "/" & SIO or PMMOResult_SCCP_Sig_Point.RN

				C & "/" & SNET & "/" & SPCD
Adjacent_Node_Id	A unique identifier for the Adjacent Node.			"Populated by customer"
Node_Id	A unique identifier for the Node.			PMMOResult_AAL2_At_NNI_new.RNC or PMMOResult_MTP_Matrix_Sig_Traffic.RNC or PMMOResult_MTP_Sig_Point_Status.RNC or PMMOResult_MTP_Sig_Traffic_Report_SP.RNC or PMMOResult_MTP_Sig_Traffic_Report_UserParts.RNC or PMMOResult_SCCP_Sig_Point.RNC
Node_Name	A user friendly name preferably unique for the Node.			PMMOResult_AAL2_At_NNI_new.RNC or PMMOResult_MTP_Matrix_Sig_Traffic.RNC or PMMOResult_MTP_Sig_Point_Status.RNC or PMMOResult_MTP_Sig_Traffic_Report_SP.RNC or PMMOResult_MTP_Sig_Traffic_Report_UserParts.RNC or PMMOResult_SCCP_Sig_Point.RNC
Node_Type	Type of Node.			PMMOResult_AAL2_At_NNI_new."RNC" or PMMOResult_MTP_Matrix_Sig_Traffic."RNC" or PMMOResult_MTP_Sig_Point_Status."RNC" or PMMOResult_MTP_Sig_Traffic_Report_SP."RNC" or PMMOResult_MTP_Sig_Traffic_Report_UserParts."RNC" or PMMOResult_SCCP_Sig_Point."RNC"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			"UMTS"

Vendor	Manufacturer of the Signalling_Point			"Nokia"

5.49 WAC_Unit details

In the network hierarchy, the immediate parent of the WAC_Unit object is Region.

Attribute Name	Description	Read-Only ?	Time-Tracked?	Mapping
Primary Identifier				
WAC_Unit_Id	The unique identifier for the Window Access Control Unit (WAC)	Y		PMMOResult_Overload_WAC.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & WAC_USER
Relationship Attributes				
Region_Id	The region associated with the WAC unit function.	Y	Y	lookup("nc_bsc","REGION_ID",utime(PMMOResult_Overload_WAC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Network_Id	The network associated with the WAC unit function.	Y	Y	lookup("nc_bsc","NETWORK_ID",utime(PMMOResult_Overload_WAC.startDate & " " & startTime,"%Y-%m-%d %R"),RNC)
Configuration Attributes				
WAC_Unit_Name	The user-friendly name preferably unique for WAC Unit.			PMMOResult_Overload_WAC.RNC & "/" & UNIT_TYPE & "/" & UNIT_INDEX & "/" & WAC_USER
WAC_Unit_Type	Function type of WAC Unit			PMMOResult_Overload_WAC.UNIT_TYPE
Node_Id	A unique identifier for the Node.			PMMOResult_Overload_WAC.RNC
Node_Name	A user friendly name			PMMOResult_Overload_WAC.RN

	preferably unique for the Node.			C
Node_Type	Type of Node.			PMMOResult_Overload_WAC."RNC"
Version	The hardware/software version of the equipment that manage the WAC unit.			PMMOResult_Overload_WAC."RAU10"
Technology	Technology of the network/element (e.g. GSM, GPRS, UMTS).			PMMOResult_Overload_WAC."UMTS"
Vendor	Manufacturer of the WAC_Unit			"Nokia"

6 Busy Hours

This section lists the busy hours which are defined for the technology pack module.

Each of the busy hours listed can be referenced within this document by way of a busy hour acronymn, which is included in the table below.

Object	Busy Hour	Defining KPI	Acronym
ATM_VCC	Nokia_ATM_VCC_AAL2_Connection_Busy_Hour	ATM_VCC.Nokia.cac_resource.avg_aal2_connections	nkavcacbh
ATM_VCC	Nokia_ATM_VCC_Total_MSU_Busy_Hour	ATM_VCC.Nokia.saal.tot_bothway_msus	nkavctmbh
Cell	Nokia_Cell_total_traffic_Busy_Hour	Cell.Nokia.cell_busy_hour_kpi.total_traffic	nkcttbh
Computer_Unit	Nokia_Computer_Unit_Mean_Load_Busy_Hour	Computer_Unit.Nokia.unit_load.average_load	nkcuavlbh
RNC	Nokia_RNC_total_traffic_Busy_Hour	RNC.Nokia.rnc_busy_hour_kpi.total_traffic	nkrttbh
Signalling_Link	Nokia_Signalling_Link_Total_MSU_Busy_Hour	Signalling_Link.Nokia.saal.tot_bothway_msus	nksltmbh
Signalling_Point	Nokia_Signalling_Point_AAL2_Connections_Busy_Hour	Signalling_Point.Nokia.aal2_signalling_nni.common_at_nni	nkspacbh

7 Performance Indicators

This section describes the performance indicators (both one-to-one counter mappings, and complex KPIs) that are defined in this technology pack module, grouped by the network object to which they relate, as follows:

- RNC performance indicators.
- SCCP performance indicators.
- SCCP_Subsystem performance indicators.
- SDH_Exchange_Terminal performance indicators.
- Signalling_Link performance indicators.
- Signalling_LinkSet performance indicators.
- Signalling_Point performance indicators.
- WAC_Unit performance indicators.

7.1 AGPS_IF Performance Indicators

This section shows the key performance indicators and other counters for the AGPS_IF object, divided into the following sub-sections:

- AGPS_IF.Nokia.UMTS.agps_measurements

7.1.1 AGPS_IF.Nokia.UMTS.agps_measurements

AGPS Server connection statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_connections_to_agps_server	PERCENTAGE	FLOAT	The percentage of successfully established TCP connections to AGPS server.	100 * {successful_connections_to_agps_server}/({successful_connections_to_agps_server}+{unsuccessful_connections_to_agps_server}+{lost_connection_to_agps_server})	Average, avg, nkrttbh
_%_successful_data_requests_from_agps_server	PERCENTAGE	FLOAT	The percentage number of successfully served AGPS data requests from AGPS server.	100 * {successful_data_requests_from_agps_server}/({successful_data_requests_from_agps_server}+{unsuccessful_data_requests_from_agps_serve	Average, avg, nkrttbh

				r})	
lost_connection_to_agps_server	ACCUMULATION	INTEGER	The number of lost TCP connections to AGPS server.	PMMOResult_LCS_AGPS.M1020C4	Sum, nkrttbh, tot
successful_connections_to_agps_server	ACCUMULATION	INTEGER	The number of successfully established TCP connections to AGPS server.	PMMOResult_LCS_AGPS.M1020C2	Sum, nkrttbh, tot
successful_data_requests_from_agps_server	ACCUMULATION	INTEGER	The total number of successfully served AGPS data requests from AGPS server.	PMMOResult_LCS_AGPS.M1020C0	Sum, nkrttbh, tot
successful_position_calculations_using_agps_server	ACCUMULATION	INTEGER	-Obsolete in RN3.0-The number of successful position calculations using the AGPS server.	PMMOResult_LCS_AGPS.M1020C5	Sum, nkrttbh, tot
unsuccessful_connections_to_agps_server	ACCUMULATION	INTEGER	The number of unsuccessful TCP connection establishments to AGPS server.	PMMOResult_LCS_AGPS.M1020C3	Sum, nkrttbh, tot
unsuccessful_data_requests_from_agps_server	ACCUMULATION	INTEGER	The number of unsuccessfully served AGPS data requests from AGPS server. At least one of requested AGPS data sets is missing.	PMMOResult_LCS_AGPS.M1020C1	Sum, nkrttbh, tot
unsuccessful_position_calculations_using_agps_server	ACCUMULATION	INTEGER	-Obsolete in RN3.0-The number of unsuccessful position calculations using the AGPS server.	PMMOResult_LCS_AGPS.M1020C6	Sum, nkrttbh, tot

7.2 ASSOIND Performance Indicators

This section shows the key performance indicators and other counters for the ASSOIND object, divided into the following sub-sections:

- ASSOIND.Nokia.UMTS.m3ua_assoc_stats

7.2.1 ASSOIND.Nokia.UMTS.m3ua_assoc_stats

M3UA association statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
m3ua_asso_set_unavailable_time	ACCUMULATION	INTEGER	Association set unavailability in seconds. This calculates cumulative duration of unavailability of the association set.	PMMOResult_M3UA_Association_Set.M661C1	Sum, nkrttbh, tot
m3ua_asso_set_unavailable	ACCUMULATION	INTEGER	The number of times the association set has become unavailable.	PMMOResult_M3UA_Association_Set.M661C2	Sum, nkrttbh, tot
m3ua_cumul_unavailable_time	ACCUMULATION	INTEGER	Association unavailability in seconds. This calculates cumulative duration of unavailability of a single association.	PMMOResult_M3UA_Association_Set.M661C3	Sum, nkrttbh, tot
m3ua_messages_received	ACCUMULATION	INTEGER	The number of received messages on the M3UA association. This	PMMOResult_M3UA_Association_Set.M661C5	Sum, nkrttbh, tot

			includes all the received messages of M3UA.		
m3ua_messages_sent	ACCUMULATION	INTEGER	The number of sent messages on the M3UA association. This includes all the sent messages of M3UA.	PMMOResult_M3UA_Association_Set.M661C6	Sum, nkrttbh, tot
m3ua_octets_received	ACCUMULATION	INTEGER	The number of octets received on the M3UA association. This counter calculates the number of bytes received in M3UA messages.	PMMOResult_M3UA_Association_Set.M661C7	Sum, nkrttbh, tot
m3ua_octets_sent	ACCUMULATION	INTEGER	The number of octets sent on the M3UA association. This counter calculates the number of bytes sent in M3UA messages.	PMMOResult_M3UA_Association_Set.M661C8	Sum, nkrttbh, tot
m3ua_sctp_duplicated_tsn	ACCUMULATION	INTEGER	The number of duplicated TSNs received on SCTP per M3UA association.	PMMOResult_M3UA_Association_Set.M661C14	Sum, nkrttbh, tot
m3ua_sctp_octets_received	ACCUMULATION	INTEGER	The number of octets received on SCTP per M3UA association. This counter calculates the number of bytes sent in SCTP packets.	PMMOResult_M3UA_Association_Set.M661C11	Sum, nkrttbh, tot
m3ua_sctp_octets_sent	ACCUMULATION	INTEGER	The number of octets sent on SCTP per M3UA	PMMOResult_M3UA_Association_Set.M661C12	Sum, nkrttbh, tot

			association. This counter calculates the number of bytes sent in SCTP packets.		
m3ua_sctp_packets_received	ACCUMULATION	INTEGER	The number of data packets received on SCTP per M3UA association, excluding SCTP control packets.	PMMOResult_M3UA_Association_Set.M661C9	Sum, nkrttbh, tot
m3ua_sctp_packets_retransmit	ACCUMULATION	INTEGER	The number of packets re-transmitted on SCTP per M3UA association.	PMMOResult_M3UA_Association_Set.M661C13	Sum, nkrttbh, tot
m3ua_sctp_packets_sent	ACCUMULATION	INTEGER	The number of data packets sent on SCTP per M3UA association, excluding SCTP control packets.	PMMOResult_M3UA_Association_Set.M661C10	Sum, nkrttbh, tot
m3ua_unavailable	ACCUMULATION	INTEGER	The number of times the association set has become unavailable.	PMMOResult_M3UA_Association_Set.M661C4	Sum, nkrttbh, tot

7.3 ATM_Route Performance Indicators

This section shows the key performance indicators and other counters for the ATM_Route object, divided into the following sub-sections:

- ATM_Route.Nokia.UMTS.aal2_connections

7.3.1 ATM_Route.Nokia.UMTS.aal2_connections

AAL2 connection statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
aal2_reject_by_cac	ACCUMULATION	INTEGER	The number of AAL2 crossconnections rejected by CAC, including HSDPA connections.	PMMOResult_ATM_route_load.M531C11	Sum, nkrttbh, tot
aal2_reject_by_hw	ACCUMULATION	INTEGER	The number of AAL2 crossconnections rejected by hardware, including HSDPA connections.	PMMOResult_ATM_route_load.M531C12	Sum, nkrttbh, tot
active_aal2_conn_avg	INTENSITY	INTEGER	The average number of active AAL2 cross-connections including HSDPA connections.	PMMOResult_ATM_route_load.M531C9	Average, avg, max, min, nkrttbh, tot
active_aal2_conn_max	INTENSITY	INTEGER	The maximum number of active AAL2 cross-connections including HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C7	Constant, avg, max, min, nkrttbh, tot
active_aal2_conn_min	INTENSITY	INTEGER	The minimum number of active AAL2 cross-connections including HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C8	Minimum, avg, max, min, nkrttbh, tot
active_hsdpa_conn_avg	INTENSITY	INTEGER	The average number of active	PMMOResult_ATM_route_load.M531C15	Average, avg, max,

			HSDPA connections.		min, nkrttbh, tot
active_hsdpa_conn_max	INTENSITY	INTEGER	The maximum number of active HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C13	Constant, avg, max, min, nkrttbh, tot
active_hsdpa_conn_min	INTENSITY	INTEGER	The minimum number of active HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C14	Minimum, avg, max, min, nkrttbh, tot
grt_cell_rate	INTENSITY	INTEGER	The guaranteed cell rate for the ATM route.	PMMOResult_ATM_route_load.M531C0	Average, avg, max, min, nkrttbh, tot
hsdpa_cell_rate_avg	INTENSITY	INTEGER	The average HSDPA shared AAL2 allocation reserved cell rate.	PMMOResult_ATM_route_load.M531C3	Average, avg, max, min, nkrttbh, tot
hsdpa_cell_rate_max	INTENSITY	INTEGER	The maximum HSDPA shared AAL2 allocation reserved cell rate during the measurement period.	PMMOResult_ATM_route_load.M531C1	Constant, avg, max, min, nkrttbh, tot
hsdpa_cell_rate_min	INTENSITY	INTEGER	The minimum HSDPA shared AAL2 allocation reserved cell rate during the	PMMOResult_ATM_route_load.M531C2	Minimum, avg, max, min, nkrttbh, tot

			measurement period.		
hsdpa_reject_by_cac	ACCUMULATION	INTEGER	The number of HSDPA connections rejected by CAC.	PMMOResult_ATM_route_load.M531C17	Sum, nkrttbh, tot
hsdpa_reject_by_hw	ACCUMULATION	INTEGER	The number of HSDPA connections rejected by hardware.	PMMOResult_ATM_route_load.M531C18	Sum, nkrttbh, tot
res_cell_rate_avg	INTENSITY	INTEGER	The average reserved cell rate for non-HSDPA connections and HSDPA connections.	PMMOResult_ATM_route_load.M531C6	Average, avg, max, min, nkrttbh, tot
res_cell_rate_max	INTENSITY	INTEGER	The maximum reserved cell rate for non-HSDPA connections and HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C4	Constant, avg, max, min, nkrttbh, tot
res_cell_rate_min	INTENSITY	INTEGER	The minimum reserved cell rate for non-HSDPA connections and HSDPA connections during the measurement period.	PMMOResult_ATM_route_load.M531C5	Minimum, avg, max, min, nkrttbh, tot
succ_aal2_conn	ACCUMULATION	INTEGER	The number of successful AAL2 cross-connections including HSDPA connections.	PMMOResult_ATM_route_load.M531C10	Sum, nkrttbh, tot
succ_hsdpa_conn	ACCUMULATION	INTEGER	The number of successful HSDPA connections.	PMMOResult_ATM_route_load.M531C16	Sum, nkrttbh, tot

7.4 ATM_VCC Performance Indicators

This section shows the key performance indicators and other counters for the ATM_VCC object, divided into the following sub-sections:

- ATM_VCC.Nokia.UMTS.aal2_packet_queue
- ATM_VCC.Nokia.UMTS.aal2_signalling
- ATM_VCC.Nokia.UMTS.cac_resource
- ATM_VCC.Nokia.UMTS.RAN_Accessibility.Transport_Network_Resource
- ATM_VCC.Nokia.UMTS.RAN_Usage.Transport_Network
- ATM_VCC.Nokia.UMTS.resource_reservation
- ATM_VCC.Nokia.UMTS.saal
- ATM_VCC.Nokia.UMTS.vcc_measurement

7.4.1 ATM_VCC.Nokia.UMTS.aal2_packet_queue

AAL2 message queueing and forwarding statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
aal2_path_que_down_msgs	ACCUMULATION	INT8	The number of "slow down" messages sent to the MAC layer in AAL2 path.	PMMOResult_AAL2_sched_perf_new.M553C38	Sum, nkavcacbh, tot
aal2_path_que_full_msgs	ACCUMULATION	INT8	The number of "full rate" messages sent to the MAC layer in AAL2 path.	PMMOResult_AAL2_sched_perf_new.M553C41	Sum, nkavcacbh, tot
aal2_path_que_half_msgs	ACCUMULATION	INT8	The number of "half rate" messages sent to the MAC layer in AAL2 path.	PMMOResult_AAL2_sched_perf_new.M553C42	Sum, nkavcacbh, tot
aal2_path_que_stop_msgs	ACCUMULATION	INT8	The number of "full stop" messages sent to	PMMOResult_AAL2_sched_perf_new.M553C40	Sum, nkavcacbh, tot

			the MAC layer in AAL2 path.		
aal2_path_que_up_msgs	ACCUMULATION	INT8	The number of "speed up" messages sent to the MAC layer in AAL2 path.	PMMOResult_AAL2_sched_perf_new.M553C39	Sum, nkavcacbh, tot
be_que_delay_peak	INTENSITY	INTEGER	Peak value of delay caused by AAL2 layer buffering in best effort queue.	PMMOResult_AAL2_sched_perf_new.M553C3	Constant, avg, max, min, nkavcacbh, tot
be_que_delay_samples	ACCUMULATION	INTEGER	The number of sampled delay values in best effort queue.	PMMOResult_AAL2_sched_perf_new.M553C5	Sum, nkavcacbh, tot
be_que_delay_sum	ACCUMULATION	INTEGER	Sum of delay values of AAL2 layer buffering in best effort queue during measurement period.	PMMOResult_AAL2_sched_perf_new.M553C4	Sum, nkavcacbh, tot
be_que_down_msgs	ACCUMULATION	INTEGER	The number of -slow down- messages sent to MAC layer.	PMMOResult_AAL2_sched_perf_new.M553C6	Sum, nkavcacbh, tot
be_que_drp_events	ACCUMULATION	INTEGER	The number of events when packets were dropped from best effort queue.	PMMOResult_AAL2_sched_perf_new.M553C9	Sum, nkavcacbh, tot
be_que_peak	INTENSITY	INTEGER	Peak amount of sent AAL2 CPS packets in best effort queue during measurement period.	PMMOResult_AAL2_sched_perf_new.M553C0	Constant, avg, max, min, nkavcacbh, tot
be_que_samples	ACCUMULATION	INTEGER	The number of best effort queue samples during	PMMOResult_AAL2_sched_perf_new.M553C2	Sum, nkavcacbh, tot

			measurement period.		
be_que_stop_msgs	ACCUMULATION	INTEGER	The number of -full stop- messages sent to MAC layer.	PMMOResult_AAL2_sched_perf_new.M553C8	Sum, nkavcacbh, tot
be_que_sum	ACCUMULATION	INT8	The sum of sent AAL2 CPS packets in best effort queue during measurement period.	PMMOResult_AAL2_sched_perf_new.M553C1	Sum, nkavcacbh, tot
be_que_up_msgs	ACCUMULATION	INTEGER	The number of -speed up- messages sent to MAC layer	PMMOResult_AAL2_sched_perf_new.M553C7	Sum, nkavcacbh, tot
q1_que_delay_peak	INTENSITY	INT8	The peak value of delay caused by AAL2 layer buffering in the scheduling queue1.	PMMOResult_AAL2_sched_perf_new.M553C13	Constant, avg, max, min, nkavcacbh, tot
q1_que_delay_samples	ACCUMULATION	INT8	The number of sampled delay values in the scheduling queue1.	PMMOResult_AAL2_sched_perf_new.M553C15	Sum, nkavcacbh, tot
q1_que_delay_sum	ACCUMULATION	INT8	The sum of delay values of AAL2 layer buffering in the scheduling queue1 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C14	Sum, nkavcacbh, tot
q1_que_drp_events	ACCUMULATION	INT8	This counter indicates that packets were dropped from the	PMMOResult_AAL2_sched_perf_new.M553C16	Sum, nkavcacbh, tot

			scheduling queue1.		
q1_que_packets_sum	ACCUMULATION	INT8	The sum of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue1 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C11	Sum, nkavcacbh, tot
q1_que_samples	ACCUMULATION	INT8	The sum of delay values of AAL2 layer buffering in the scheduling queue1 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C12	Sum, nkavcacbh, tot
q1_que_usage_peak	INTENSITY	INT8	The peak amount of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue1 during the measurement period	PMMOResult_AAL2_sched_perf_new.M553C10	Constant, avg, max, min, nkavcacbh, tot
q2_que_delay_peak	INTENSITY	INT8	The peak value of delay caused by AAL2 layer buffering in the scheduling queue2.	PMMOResult_AAL2_sched_perf_new.M553C20	Constant, avg, max, min, nkavcacbh, tot
q2_que_delay_samples	ACCUMULATION	INT8	The number of sampled delay values in the scheduling queue2.	PMMOResult_AAL2_sched_perf_new.M553C22	Sum, nkavcacbh, tot
q2_que_delay_sum	ACCUMULATION	INT8	The sum of delay values of AAL2 layer buffering in the scheduling queue2 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C21	Sum, nkavcacbh, tot
q2_que_drp_event	ACCUMULA	INT8	This counter	PMMOResult_AAL2_s	Sum,

s	TION		indicates that packets were dropped from the scheduling queue2.	ched_perf_new.M553C23	nkavcacbh, tot
q2_que_packets_sum	ACCUMULATION	INT8	The sum of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue2 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C18	Sum, nkavcacbh, tot
q2_que_samples	ACCUMULATION	INT8	The number of scheduling queue2 samples during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C19	Sum, nkavcacbh, tot
q2_que_usage_peak	INTENSITY	INT8	The peak amount of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue2 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C17	Constant, avg, max, min, nkavcacbh, tot
q3_que_delay_peak	INTENSITY	INT8	The peak value of delay caused by AAL2 layer buffering in the scheduling queue3	PMMOResult_AAL2_sched_perf_new.M553C27	Constant, avg, max, min, nkavcacbh, tot
q3_que_delay_samples	ACCUMULATION	INT8	The number of sampled delay values in the scheduling queue3.	PMMOResult_AAL2_sched_perf_new.M553C29	Sum, nkavcacbh, tot
q3_que_delay_sum	ACCUMULATION	INT8	The sum of delay values of AAL2 layer buffering in	PMMOResult_AAL2_sched_perf_new.M553C28	Sum, nkavcacbh, tot

			the scheduling queue3 during the measurement period.		
q3_que_drp_events	ACCUMULATION	INT8	This counter indicates that packets were dropped from the scheduling queue3.	PMMOResult_AAL2_sched_perf_new.M553C30	Sum, nkavcacbh, tot
q3_que_packets_sum	ACCUMULATION	INT8	The sum of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue3 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C25	Sum, nkavcacbh, tot
q3_que_samples	ACCUMULATION	INT8	The number of scheduling queue3 samples during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C26	Sum, nkavcacbh, tot
q3_que_usage_peak	INTENSITY	INT8	The peak amount of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue3 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C24	Constant, avg, max, min, nkavcacbh, tot
q4_que_delay_peak	INTENSITY	INT8	The peak value of delay caused by AAL2 layer buffering in the scheduling queue4	PMMOResult_AAL2_sched_perf_new.M553C34	Constant, avg, max, min, nkavcacbh, tot
q4_que_delay_samples	ACCUMULATION	INT8	The number of sampled delay values in the scheduling queue4.	PMMOResult_AAL2_sched_perf_new.M553C36	Sum, nkavcacbh, tot
q4_que_delay_sum	ACCUMULATION	INT8	The sum of delay values of AAL2	PMMOResult_AAL2_sched_perf_new.M553C	Sum, nkavcacbh

			layer buffering in the scheduling queue4 during the measurement period.	35	, tot
q4_que_drp_events	ACCUMULATION	INT8	This counter indicates that packets were dropped from the scheduling queue4.	PMMOResult_AAL2_sched_perf_new.M553C37	Sum, nkavcacbh, tot
q4_que_packets_sum	ACCUMULATION	INT8	The sum of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue4 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C32	Sum, nkavcacbh, tot
q4_que_samples	ACCUMULATION	INT8	The number of scheduling queue4 samples during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C33	Sum, nkavcacbh, tot
q4_que_usage_peak	INTENSITY	INT8	The peak amount of sent AAL2 CPS packets (A2SP) or ATM cells (NPS1) in the scheduling queue4 during the measurement period.	PMMOResult_AAL2_sched_perf_new.M553C31	Constant, avg, max, min, nkavcacbh, tot

7.4.2 ATM_VCC.Nokia.UMTS.aal2_signalling

AAL2 related signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

aal_para	ACCUMULATION	INTEGER	AAL parameters can not be supported (No.93).This parameter provides the number of connections terminated to CauseNo. 93. This cause is used to indicate that the requested AAL parameters	PMMOResult_AAL2_At_UNI_new.M548C6	Sum, nkavctmbh, tot
aal2pi_verif	ACCUMULATION	INTEGER	The AAL type 2 ID verification/allocation failure.The requested AAL type 2 Path Identifier was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI_new.M548C20	Sum, nkavctmbh, tot
adj_node_not_avail	ACCUMULATION	INTEGER	Adjacent node not available. The connection establishment is rejected since the signalling relation into the adjacent AAL type 2 node was not available. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI_new.M548C23	Sum, nkavctmbh, tot
binding_id_verif	ACCUMULATION	INTEGER	Binding ID verification failure.The requested Binding Identifier was not available at the destination AALtype 2 node. Internal	PMMOResult_AAL2_At_UNI_new.M548C21	Sum, nkavctmbh, tot

			(nonprotocol) error.		
cid_verif	ACCUMULATION	INTEGER	The CID verification/allocation failure.The requested AAL type 2 channel (CID) was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI_new.M548C19	Sum, nkavctmbh, tot
common	ACCUMULATION	INTEGER	Successful connection establishments.The amount of started connection events in the AAL2 signalling. The successful cases refer to attempts stated in the program block operation state and stage which can still fail at a later stage.	PMMOResult_AAL2_At_UNI_new.M548C24	Sum, nkavctmbh, tot
congestion	ACCUMULATION	INTEGER	Switching equipment congestion (No.42).This parameter provides the number of connections terminated to CauseNo. 42. The cause code indicates that the switching	PMMOResult_AAL2_At_UNI_new.M548C3	Sum, nkavctmbh, tot

			equipment generating this cause is experiencing a period of high traffic.		
in_erq_attempt	ACCUMULATION	INTEGER	The number of incoming AAL2 connection establishment requests.	PMMOResult_AAL2_At_UNI_new.M548C27	Sum, nkavctmbh, tot
in_erq_success	ACCUMULATION	INTEGER	The number of successful incoming AAL2 connection establishment.	PMMOResult_AAL2_At_UNI_new.M548C28	Sum, nkavctmbh, tot
in_mod_attempt	ACCUMULATION	INTEGER	The number of incoming AAL2 connection modification requests.	PMMOResult_AAL2_At_UNI_new.M548C31	Sum, nkavctmbh, tot
in_mod_success	ACCUMULATION	INTEGER	The number of successful incoming AAL2 connection modifications.	PMMOResult_AAL2_At_UNI_new.M548C32	Sum, nkavctmbh, tot
info_not_impl	ACCUMULATION	INTEGER	Information element non existent or not implemented (No.99).This parameter provides the number of connections terminated to CauseNo. 99. It indicates that the equipment sending this cause has received a message which includes information elements/parameter	PMMOResult_AAL2_At_UNI_new.M548C10	Sum, nkavctmbh, tot

			s not recognized because the information element identifiers/ parameter names are not defined or are defined but not implemented by the equipment sending the cause. This cause indicates that the information elements/parameter s were discarded. However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.		
invalid_info	ACCUMULATION	INTEGER	Invalid information element contents (No.100).This parameter provides the number of connections terminated to CauseNo. 100. This cause indicates that the equipment sending this cause has received an information element which it has implemented; however, one or	PMMOResult_AAL2_At_UNI_new.M548C11	Sum, nkavctmbh, tot

			more fields in the information element are coded in a way that has not been implemented by the equipment sending this cause.		
invalid_msg	ACCUMULATION	INTEGER	Invalid message (No.95).This parameter provides the number of connections terminated to CauseNo. 95. This cause is used to report an invalid message event only when no other cause in the invalid message class applies.	PMMOResult_AAL2_At_UNI_new.M548C7	Sum, nkavctmbh, tot
link_char_verif	ACCUMULATION	INTEGER	Required traffic characterization unavailable.The requested traffic characterization was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI_new.M548C22	Sum, nkavctmbh, tot
mandat_info	ACCUMULATION	INTEGER	Mandatory information element is missing (No.96).This parameter provides the number of connections terminated to CauseNo. 96. This cause indicates that the equipment sending this cause	PMMOResult_AAL2_At_UNI_new.M548C8	Sum, nkavctmbh, tot

			has received a message which is missing an information element which must be present in the message before that message can be processed.		
mod_fail_coll	ACCUMULATION	INTEGER	The number of failed AAL2 connection modifications because of collision.	PMMOResult_AAL2_At_UNI_new.M548C35	Sum, nkavctmbh, tot
mod_fail_int	ACCUMULATION	INTEGER	The number of failed AAL2 connection modifications because of internal error.	PMMOResult_AAL2_At_UNI_new.M548C34	Sum, nkavctmbh, tot
mod_fail_rem	ACCUMULATION	INTEGER	The number of failed AAL2 connection modifications because of failed remote.	PMMOResult_AAL2_At_UNI_new.M548C36	Sum, nkavctmbh, tot
mod_fail_res	ACCUMULATION	INTEGER	The number of failed AAL2 connection modifications because of resource unavailable.	PMMOResult_AAL2_At_UNI_new.M548C33	Sum, nkavctmbh, tot
msg_not_impl	ACCUMULATION	INTEGER	Message type non existent or not implemented (No.97).This parameter provides	PMMOResult_AAL2_At_UNI_new.M548C9	Sum, nkavctmbh, tot

			the number of connections terminated to CauseNo. 97. This cause Indicates that the equipment sending the cause has received a message with a message type it does not recognize either because this is a message not defined or defined but not implemented by the equipment sending this cause.		
msg_unrecog	ACCUMULATION	INTEGER	Message with unrecognized parameter, discarded (No.110).This parameter provides the number of connections terminated to CauseNo. 110. This cause indicates that the equipment sending this cause has discarded a received message which includes a parameter that is not recognized.	PMMOResult_AAL2_At_UNI_new.M548C17	Sum, nkavctmbh, tot
net_out	ACCUMULATION	INTEGER	Network out of order (No.38).This parameter provides the number of connections terminated to CauseNo. 38. It indicates that the network is not	PMMOResult_AAL2_At_UNI_new.M548C1	Sum, nkavctmbh, tot

			functioning correctly and that the condition is likely to last a relatively long period of time; for example, immediately attempting the call again is not likely to be successful.		
out_erq_attempt	ACCUMULATION	INTEGER	The number of outgoing AAL2 connection establishment requests.	PMMOResult_AAL2_At_UNI_new.M548C25	Sum, nkavctmbh, tot
out_erq_success	ACCUMULATION	INTEGER	The number of successful outgoing AAL2 connection establishment.	PMMOResult_AAL2_At_UNI_new.M548C26	Sum, nkavctmbh, tot
out_mod_attempt	ACCUMULATION	INTEGER	The number of outgoing AAL2 connection modification requests.	PMMOResult_AAL2_At_UNI_new.M548C29	Sum, nkavctmbh, tot
out_mod_success	ACCUMULATION	INTEGER	The number of successful outgoing AAL2 connection modifications.	PMMOResult_AAL2_At_UNI_new.M548C30	Sum, nkavctmbh, tot
req_chan	ACCUMULATION	INTEGER	Requested circuit/channel not available (No.44).This parameter provides the number of connections terminated to CauseNo. 44. This	PMMOResult_AAL2_At_UNI_new.M548C4	Sum, nkavctmbh, tot

			cause is returned when the circuit or channel indicated by there questing entity cannot be provided by the other side of the interface.		
res_unavail	ACCUMULATION	INTEGER	Resource unavailable unspecified (No.47).This parameter provides the number of connections terminated to CauseNo. 47. This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.	PMMOResult_AAL2_At_UNI_new.M548C5	Sum, nkavctmbh, tot
sai_alloc	ACCUMULATION	INTEGER	OSAI allocation failure.This is the same as the hand process reservation failure. Internal (nonprotocol) error.	PMMOResult_AAL2_At_UNI_new.M548C18	Sum, nkavctmbh, tot
temp_fail	ACCUMULATION	INTEGER	Temporary failure (No.41).This parameter provides the number of connections terminated to CauseNo. 41. The cause code indicates that the network is not functioning correctly and that the condition is not	PMMOResult_AAL2_At_UNI_new.M548C2	Sum, nkavctmbh, tot

			likely to last a long period of time; for example, the user may wish to try another call almost immediately.		
timer_exp_blo	ACCUMULATION	INTEGER	Recovery on BLO_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 block request. The block request is a Primitive to request the AAL type 2 signalling entity to locally block a particular, unblocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_AAL2_At_UNI_new.M548C15	Sum, nkavctmbh, tot
timer_exp_erq	ACCUMULATION	INTEGER	Recovery on ERQ timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 establish request. Establish request Primitive is used by the AALtype 2 served user to initiate the	PMMOResult_AAL2_At_UNI_new.M548C12	Sum, nkavctmbh, tot

			establishment of a new AAL type 2connection.		
timer_exp_mod	ACCUMULATION	INTEGER	The number of failed AAL2 connection modifications because timer waiting for Modify Acknowledge message expires.	PMMOResult_AAL2_At_UNI_new.M548C37	Sum, nkavctmbh, tot
timer_exp_rel	ACCUMULATION	INTEGER	Recovery on REL_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 release request. Release request Primitive is used by the AAL type2 served user to initiate the clearing of an AAL type 2 connection.	PMMOResult_AAL2_At_UNI_new.M548C13	Sum, nkavctmbh, tot
timer_exp_res	ACCUMULATION	INTEGER	Recovery on RES_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 reset request. Reset request is a Primitive to request the AAL type2 signalling entity to reset a particular channel, all channels on a particular AAL	PMMOResult_AAL2_At_UNI_new.M548C14	Sum, nkavctmbh, tot

			type 2 path, or all channels on all AAL type 2 paths between two nodes to the "Idle" state and to indicate this to the peer AAL type 2 signalling entity.		
timer_exp_ubl	ACCUMULATION	INTEGER	Recovery on UBL_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 unblock request. Unblock request is a Primitive to request the AALtype 2 signalling entity to locally unblock a particular, blocked AAL type 2path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_AAL2_At_UNI_new.M548C16	Sum, nkavctmbh, tot

7.4.3 ATM_VCC.Nokia.UMTS.cac_resource

AAL2 path Connection Admission Control (CAC) resource statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
aal2_cac_rejected_hsdpa	ACCUMULATION	INT8	The number of times AAL2	PMMOResult_AAL2_CAC_resource.M550C1	Sum, nkavcacb

			resource reservations for HSDPA connection have been rejected by AAL2 CAC. Shared HSDPA AAL2 allocation reservations are not included. This value stays 0 in MGW.	4	h, tot
aal2_cac_rejected	ACCUMULATION	INT8	The total number of rejected connections due to CAC.	PMMOResult_AAL2_CAC_resource.M550C9	Sum, nkavcacbh, tot
aal2_hw_rejected_hsdpa	ACCUMULATION	INT8	- Obsolete in RN2.2 -The number of times AAL2 resource reservation for HSDPA connection was rejected by HW. Shared HSDPA AAL2 allocation reservations are not included here. This value stays 0 in MGW.	PMMOResult_AAL2_CAC_resource.M550C15	Sum, nkavcacbh, tot
aal2_hw_rejected	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of connection establishments, which are rejected due to failed HW request. This failure can occur after successful CAC resource reservation.	PMMOResult_AAL2_CAC_resource.M550C10	Sum, nkavcacbh, tot
aal2_path_guar_ce	INTENSITY	INT8	The guaranteed	PMMOResult_AAL2_	Average,

ll_rate			cell rate for AAL2 path. This is the maximum configured value for AAL2 path traffic.	CAC_resource.M550C0	avg, max, min, nkavcacbh, tot
aal2_rm_succeeded_hsdpa	ACCUMULATION	INT8	The number of times downlink AAL2 resources have been successfully reserved for HSDPA MAC-D flow connections. This indicates that ATM resources were successfully reserved in RNC, but the connection may still fail in the AAL2 signalling with BTS. Shared HSDPA AAL2 allocation reservations are not included here. This value stays 0 in MGW.	PMMOResult_AAL2_CAC_resource.M550C17	Sum, nkavcacbh, tot
aal2_rm_succeeded	ACCUMULATION	INT8	The total number of successful AAL2 resource reservations. The connection has successfully passed the RNC ATM resource reservation stage, but may still fail in the signalling phase.	PMMOResult_AAL2_CAC_resource.M550C8	Sum, nkavcacbh, tot

avg_aal2_connections_hsdpa	INTENSITY	FLOAT	Average number of HSDPA connections.	{sum_aal2_connections_hsdpa}/{nbr_samples}	Average, avg, max, min, nkavcacbh, tot
avg_aal2_connections	INTENSITY	FLOAT	Average values for the number of AAL2 connection during the measurement period.	if M550C7 = 0 then 0 else (PMMOResult_AAL2_CAC_resource.M550C4/M550C7)	Average, avg, max, min, nkavcacbh, tot
avg_reserved_cell_rate	INTENSITY	FLOAT	Average reserved cell rate	{sum_reserved_cell_rate}/{nbr_samples}	Average, avg, max, min, nkavcacbh, tot
avg_shared_hsdpa_aal2_allocation	INTENSITY	FLOAT	Average cell rate of shared HSDPA AAL2 allocation, during measurement period.	{shared_hsdpa_aal2_allocation}/{nbr_samples}	Average, avg, max, min, nkavcacbh, tot
max_aal2_connections_hsdpa	INTENSITY	INT8	The maximum number of simultaneous HSDPA connections during the measurement period. This represents the highest value of samples taken. The shared HSDPA AAL2 allocation reservations are not included here. This value stays 0 in MGW.	PMMOResult_AAL2_CAC_resource.M550C13	Constant, avg, max, min, nkavcacbh, tot
max_aal2_connections	INTENSITY	INT8	The maximum number of connections in AAL2 path during measurement	PMMOResult_AAL2_CAC_resource.M550C6	Constant, avg, max, min, nkavcacbh, tot

			period.		
max_reserved_cell_rate	INTENSITY	FLOAT	The maximum reserved cell rate of AAL2 path during measurement interval.	PMMOResult_AAL2_CAC_resource.M550C3	Constant, avg, max, min, nkavcacbh, tot
max_shared_hsdpa_aal2_alloc	INTENSITY	FLOAT	The maximum size of shared HSDPA AAL2 allocation during the measurement period.	PMMOResult_AAL2_CAC_resource.M550C19	Constant, avg, max, min, nkavcacbh, tot
min_aal2_connection_hsdpa	INTENSITY	INT8	The minimum number of HSDPA connections during the measurement period. Shared HSDPA AAL2 allocation reservations are not included. This value stays 0 in MGW.	PMMOResult_AAL2_CAC_resource.M550C12	Minimum, avg, max, min, nkavcacbh, tot
min_aal2_connections	INTENSITY	INT8	The minimum number of simultaneously active connections in AAL2 path during measurement interval.	PMMOResult_AAL2_CAC_resource.M550C5	Minimum, avg, max, min, nkavcacbh, tot
min_reserved_cell_rate	INTENSITY	FLOAT	The minimum reserved cell rate of AAL2 path during measurement interval.	PMMOResult_AAL2_CAC_resource.M550C2	Minimum, avg, max, min, nkavcacbh, tot

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min_shared_hsdpa_aal2_alloc	INTENSITY	FLOAT	The minimum size of shared HSDPA AAL2 allocation during the measurement period.	PMMOResult_AAL2_CAC_resource.M550C18	Minimum, avg, max, min, nkavcacbh, tot
nbr_samples	ACCUMULATION	INT8	The number of samples that can be used to calculate average values for AAL2 connections, HSDPA connections as well as the average allocation for HSDPA.	PMMOResult_AAL2_CAC_resource.M550C7	Sum, nkavcacbh, tot
shared_hsdpa_aal2_allocation	ACCUMULATION	INT8	The sum of sampled values for the cell rate of shared HSDPA AAL2 allocation, during measurement period. When divided by M550C7, it produces the average shared allocation bandwidth. This value stays 0 in MGW.	PMMOResult_AAL2_CAC_resource.M550C16	Sum, nkavcacbh, tot
sum_aal2_connections_hsdpa	ACCUMULATION	INT8	The sum of sampled values for the number AAL2 connections used by HSDPA, during measurement period. When divided by M550C7, it produces the average number of	PMMOResult_AAL2_CAC_resource.M550C11	Sum, nkavcacbh, tot

			HSDPA connections. Shared HSDPA AAL2 allocation reservations are not included. This value stays 0 in MGW.		
sum_aal2_connections	ACCUMULATION	INT8	The sum of sampled values for the number of AAL2 connection during the measurement period. When divided by M550C7, it produces the average number of AAL2 connections.	PMMOResult_AAL2_CAC_resource.M550C4	Sum, nkavcacbh, tot
sum_reserved_cell_rate	ACCUMULATION	INT8	The sum of reserved cell rate samples taken during measurement period. When divided by M550C7, it produces the average reserved cell rate.	PMMOResult_AAL2_CAC_resource.M550C1	Sum, nkavcacbh, tot

7.4.4 ATM_VCC.Nokia.UMTS.RAN_Accessibility.Transport_Network_Resource

WCDMA RAN KPI Accessibility:Service Level related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

_%_aal2_resources_availability	PERCENTAGE	FLOAT	The transport resource request success ratio [%]. This KPI describes the average success rate of the transport resource reservation attempts for AAL2 type connections. The low success rate increases the number of unsuccessful RAB setups and requires further troubleshooting in transport layer. This KPI is based on AAL2 Resource Reservation measurement in RNC Counters - Transport and HW part in Nokia WCDMA RNC Product Documentation.	100 * ({Nokia.resource_reservation.aal2_succeeded})/ ({Nokia.resource_reservation.aal2_succeeded} + {Nokia.resource_reservation.aal2_rejected} + {Nokia.resource_reservation.res_ext_cap} + {Nokia.resource_reservation.res_int_cap} + {Nokia.resource_reservation.res_other})	Average, avg, nkavcacbh

7.4.5 ATM_VCC.Nokia.UMTS.RAN_Usage.Transport_Network

WCDMA RAN KPI Usage:Transport Network related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_aal2_path_average_reserved_bandwidth	PERCENTAGE	FLOAT	The ratio between average reserved bandwidth and total bandwidth of AAL2 path estimated by CAC during measurement period. The AAL2 path is an ATM VCC between two AAL type 2 entities.	100 * {Nokia.cac_resource.sum_reserved_cell_rate}/ ({Nokia.cac_resource.aal2_path_guar_cell_rate} * {Nokia.cac_resource.nbr_samples})	Average, avg, nkavcacbh

			The high reservation level may cause blocking of radio bearer setup. This KPI is based on AAL2 Path CAC Resource measurement in RNC Counters - Transport and HW part in Nokia WCDMA RNC Product Documentation.		
available_iub_transport_capacity_hsdpa_connection	INTENSITY	FLOAT	The AAL2 transport capacity available per HSDPA connection during measurement period in Iub. This KPI is based on AAL2 Path CAC Resource measurement in RNC Counters - Transport and HW part in Nokia WCDMA RNC Product Documentation.	({Nokia.cac_resource.aal2_path_guar_cell_rate} - ({Nokia.cac_resource.sum_reserved_cell_rate} - {Nokia.cac_resource.shared_hsdpa_aal2_allocation})) / {Nokia.cac_resource.nbr_samples}	Average, avg, max, min, nkavcacbh, tot
hsdpa_atm_vcc_traffic_load_iub_downlink	INTENSITY	FLOAT	ATM VCC traffic load in downlink (RNC egress). This KPI shows the ATM layer throughput for single ATM VC connection. The selected configuration determines, which	if interval = 0 then 0 else (PMMOResult_ATM_virtual_channel.M530C1 / (interval*60))	Average, avg, max, min, nkavcacbh, tot

			traffic type utilises one VCC, This KPI is relevant only if dedicated VCC is used for HSDPA traffic (route selection feature). [cell/s]. [RAN_KPI_0054]		

7.4.6 ATM_VCC.Nokia.UMTS.resource_reservation

AAL2 resource reservation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_aal2_succeeded_hsdpa	PERCENTAGE	FLOAT	Success rate of shared HSDPA AAL2 allocation	100 * {aal2_succeeded_hsdpa}/ ({aal2_succeeded_hsdpa} + {transport_rejected_ext_hsdpa} + {transport_rejected_int_hsdpa} + {other_rejected_hsdpa} + {reject_hsdpa_too_many_users})	Average, avg, nkavcacbh
_%_aal2_succeeded	PERCENTAGE	FLOAT	Success Rate of AAL2 signalling requests which have been successfully executed in A2SP	100 * {aal2_succeeded} / ({aal2_succeeded} + {aal2_rejected})	Average, avg, nkavcacbh
_%_res_succeeded	PERCENTAGE	FLOAT	Success rate of AAL2 resource requests that are successfully reserved to RNC	100 * {res_succeeded}/ ({res_succeeded} +{res_ext_cap}+ {res_int_cap}+ {res_other})	Average, avg, nkavcacbh
aal2_rejected	ACCUMULATION	INT8	The number of AAL2 signalling requests which have	PMMOResult_AAL2_resource_re	Sum, nkavcacb

			failed for any reason.	s.M800C5	h, tot
aal2_succeeded_hsdpa	ACCUMULATION	INT8	The number of successfully signalled shared HSDPA AAL2 transport resource allocations.	PMMOResult_AAL2_resource_res.M800C6	Sum, nkavcacbh, tot
aal2_succeeded	ACCUMULATION	INT8	The number of AAL2 signalling requests which have been successfully executed in A2SP.	PMMOResult_AAL2_resource_res.M800C4	Sum, nkavcacbh, tot
active_hsdpa_res_time	ACCUMULATION	INT8	The sum of durations when at least one HSDPA user was utilising the shared HSDPA AAL2 allocation.	PMMOResult_AAL2_resource_res.M800C10	Sum, nkavcacbh, tot
active_time_cumulative	ACCUMULATION	INT8	The cumulative sum of durations when at least one HSDPA user has utilised the shared HSDPA AAL2 allocation during the measurement period.	PMMOResult_AAL2_resource_res.M800C17	Sum, nkavcacbh, tot
other_rejected_hsdpa	ACCUMULATION	INT8	The number of shared HSDPA AAL2 allocation attempts that were rejected because of any other reason than internal or external Connection Admission Control, or too many users without AAL2 reservation.	PMMOResult_AAL2_resource_res.M800C9	Sum, nkavcacbh, tot
reject_hsdpa_too_many_users	ACCUMULATION	INT8	The number of HSDPA AAL2 reservations rejected because of too many users. This includes occurrences where transport resource reservation for HSDPA MAC-d flow has been rejected because of too many users. This is related to the case where the shared HSDPA AAL2 allocation has failed and the number of users	PMMOResult_AAL2_resource_res.M800C19	Sum, nkavcacbh, tot

			is limited to the number given by parameter "NbrOfOverbookedHSDPAUsers".		
release_timer_length	INTENSITY	INT8	Value of the shared HSDPA AAL2 allocation reservation release timer, "ReleaseTimerForSharedHSDPAallocation", at the end of the measurement interval. This counter is not valid and not updated for RNC-level sum because the release timer can be configured separately for each BTS.	PMMOResult_AAL2_resource_res.M800C12	Average, avg, max, min, nkavcacbh, tot
res_ext_cap	ACCUMULATION	INT8	The number of transport resource reservations rejected because of the lack of RNC-external AAL2 resources. This is the number of transport resources requests which are rejected by CAC since there is not enough capacity in the external AAL2 path.	PMMOResult_AAL2_resource_res.M800C1	Sum, nkavcacbh, tot
res_int_cap	ACCUMULATION	INT8	The number of transport resource reservations rejected because of the lack of RNC-internal capacity. This is the number of resource reservations which are rejected by CAC since there are no RNC-internal AAL2 processing resources available.	PMMOResult_AAL2_resource_res.M800C2	Sum, nkavcacbh, tot
res_other	ACCUMULATION	INT8	The number of AAL2 resource reservations which have failed for any other reason than CAC or signalling (for example route analysis, parameter or DSP resource allocation problem).	PMMOResult_AAL2_resource_res.M800C3	Sum, nkavcacbh, tot
res_succeeded	ACCUMULATION	INT8	The number of AAL2 resource requests that are successfully reserved to RNC, but still need	PMMOResult_AAL2_resource_res.M800C0	Sum, nkavcacbh, tot

			to be signalled using AAL2 signalling protocol to be operational.		
reserv_rel_due_to_other	ACCUMULATION	INT8	The number of times when the shared HSDPA AAL2 allocation was released because of other reason than release timer expiry. This can happen, for example, because of ATM network failure or BTS reset.	PMMOResult_AAL2_resource_res.M800C16	Sum, nkavcacbh, tot
reserv_rel_due_to_timer	ACCUMULATION	INT8	The number of times when the shared HSDPA AAL2 allocation was released because the release timer expired. This counter is also updated if the release timer value is zero and the reservation is released after the last user leaves the cell.	PMMOResult_AAL2_resource_res.M800C13	Sum, nkavcacbh, tot
reserv_rel_timer_started	ACCUMULATION	INT8	The number of times when release timer for shared HSDPA AAL2 allocation, defined by parameter "ReleaseTimerForSharedHSDPAallocation", was started because there were no active AAL2 connections for HSDPA.	PMMOResult_AAL2_resource_res.M800C14	Sum, nkavcacbh, tot
reserv_rel_timer_stopped	ACCUMULATION	INT8	The number of times when release timer for shared HSDPA AAL2 allocation, defined by parameter "ReleaseTimerForSharedHSDPAallocation", was stopped because a HSDPA user entered the cell.	PMMOResult_AAL2_resource_res.M800C15	Sum, nkavcacbh, tot
transport_rejected_ext_hsdpa	ACCUMULATION	INT8	The number of shared HSDPA AAL2 allocation attempts that were rejected because of	PMMOResult_AAL2_resource_res.M800C7	Sum, nkavcacbh, tot

			external Connection Admission Control.		
transport_rejected_int_hsdpa	ACCUMULATION	INT8	The number of shared HSDPA AAL2 allocation attempts that were rejected because of the lack of RNC-internal AAL2 resources.	PMMOResult_AAL2_resource_res.M800C8	Sum, nkavcacbh, tot
waiting_hsdpa_res_time	ACCUMULATION	INT8	The sum of durations when the shared HSDPA AAL2 path was allocated, but there were no HSDPA users utilising it.	PMMOResult_AAL2_resource_res.M800C11	Sum, nkavcacbh, tot
waiting_time_cumulative	ACCUMULATION	INT8	The cumulative sum of durations when there have been no HSDPA connections, but the shared HSDPA AAL2 allocation has been reserved because of the release timer period.	PMMOResult_AAL2_resource_res.M800C18	Sum, nkavcacbh, tot

7.4.7 ATM_VCC.Nokia.UMTS.saal

SAAL Data related messages.

KPI	Type	Data Type	Description	Derivation	Aggregation
abort_det	ACCUMULATION	INTEGER	The number of AAL5 CPCS PDUs whose sending has been aborted. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following check: If the LENGTH field in the trailer of the AAL5 PDU is zero, the ABORT bit in the status queue entry is set to a logic high.	PMMOResult_SAAL_At_UNI.M546C42	Sum, nkavctmbh, tot

ba_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs whose total PDU length is over the maximum allowable PDU length. SAR Reassembly status. During reassembly maximum SDU delivery length (including trailer and pad) is checked to ensure that the PDU under reassembly does not exceed the maximum SDU delivery length.	PMMOResult_SAAL_At_UNI.M546C35	Sum, nkavctmbh, tot
cpi_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs whose CPI has been invalid. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following check. If the CPI field in the AAL5 trailer is not at zero, the CPI_ERROR bit in the status queue entry is set to a logic high.	PMMOResult_SAAL_At_UNI.M546C37	Sum, nkavctmbh, tot
crc_err	ACCUMULATION	INTEGER	The number of reassembled AAL5	PMMOResult_SAAL_At_UNI.M546C36	Sum, nkavctmb

			CPCS PDUs whose CRC 32 has been violated. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor compares the calculated CRCREM value to the CRC 32 value in the trailer of the AAL5 PDU. If they are different, the reassembly coprocessor sets the CRC_ERROR bit in the status queue entry to a logic high.		h, tot
crc_pad_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs in which either CRC 32 has been violated or PAD field length has been invalid. SAR Reassembly status. See PAD_ERR M546C39 and CRC_ERR M546C36.	PMMOResult_SAAL_At_UNI.M546C40	Sum, nkavctmbh, tot
early_disc	ACCUMULATION	INTEGER	The number of AAL5 CPCS PDUs which have been discarded because free Rx buffers have not been available. SAR Reassembly status. Early Packet Discard occurred. A partially	PMMOResult_SAAL_At_UNI.M546C43	Sum, nkavctmbh, tot

			reassembled CPCS PDU has been discarded due to firewall, buffer underflow, LI_EPD, SN_EPD, ST_EPD, CLP discard or Max PDU length exceeded.		
error_code_a	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Sequenced Data (SD PDU). SD PDU is received in a SSCOP connection state where it should not be received (Q.2110). SD PDU is used to transfer, across an SSCOP connection, sequentially numbered PDUs containing information fields provided by the SSCOP user.	PMMOResult_SAAL_At_UNI.M546C6	Sum, nkavctmbh, tot
error_code_b	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Begin (BGN PDU). BGN PDU is received in a SSCOP connection state where it should not be received (Q.2110). Begin (BGN PDU) is used to establish	PMMOResult_SAAL_At_UNI.M546C7	Sum, nkavctmbh, tot

			an SSCOP connection between two peer entities. The BGN PDU requests the clearing of the peers transmitter and receiver buffers, and the initialization of the peers transmitter and receiver state variables.		
error_code_c	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Begin Acknowledge (BGAK PDU).BGAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). Begin Acknowledge (BGAK PDU) is used to confirm the establishment of an SSCOP connection between two peer entities.	PMMOResult_SAAL_At_UNI.M546C8	Sum, nkavctmbh, tot
error_code_del	ACCUMULATION	INTEGER	SD PDUs must be deleted. The SSCOP transmitter has discarded an AA DATA request from the user because it can not store it into its transmit buffer. This can happen if the SSCOP receiver closes the credit window and	PMMOResult_SAAL_At_UNI.M546C31	Sum, nkavctmbh, tot

			SSCOP transmitter can not send SD PDUs and has to store them into the transmit buffer. Also if there is congestion in the lower layers the SD PDUs can not be sent (Q.2110).		
error_code_d	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Begin Reject (BGREJ PDU). BGREJ PDU is received in a SSCOP connection state where it should not be received (Q.2110). The BGREJ PDU is used to reject the connection request of the peer SSCOP entity.	PMMOResult_SAAL_At_UNI.M546C9	Sum, nkavctmbh, tot
error_code_e	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP End (END PDU).END PDU is received in a SSCOP connection state where it should not be received (Q.2110). The END PDU is used to release an SSCOP connection between two peer entities.	PMMOResult_SAAL_At_UNI.M546C10	Sum, nkavctmbh, tot

error_code_f	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP End Acknowledge (ENDAK PDU).ENDAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). The ENDAK PDU is used to confirm the release of an SSCOP connection.	PMMOResult_SAAL_At_UNI.M546C11	Sum, nkavctmbh, tot
error_code_g	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Polling (POLL PDU). POLL PDU is received in a SSCOP connection state where it should not be received (Q.2110). The POLL PDU is used to request, across an SSCOP connection, status information about the peer SSCOP entity.	PMMOResult_SAAL_At_UNI.M546C12	Sum, nkavctmbh, tot
error_code_h	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Status (STAT PDU). STAT PDU is received in a SSCOP connection state where it should not be received (Q.2110). The STAT PDU is used to respond to a status request (POLL PDU) received from a	PMMOResult_SAAL_At_UNI.M546C13	Sum, nkavctmbh, tot

			peer SSCOP entity. It contains information regarding the reception status of SD PDUs, credit information for the peer transmitter, and the sequence number [N(PS)] of the POLL PDU to which it is in response.		
error_code_i	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Unsolicited Status Response (USTAT PDU). USTAT PDU is received in a SSCOP connection state where it should not be received (Q.2110). The USTAT PDU is used to respond to a detection of one or more new missing SD PDUs, based on the examination of the sequence numbering of the SD PDU. It contains information regarding the reception status of SD PDUs and credit information for the peer	PMMOResult_SAAL_At_UNI.M546C14	Sum, nkavctmbh, tot

			transmitter		
error_code_j	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Resynchronization (RS PDU).RS PDU is received in a SSCOP connection state where it should not be received (Q.2110). The RS PDU is used to re synchronise the buffers and data transfer state variables.	PMMOResult_SAAL_At_UNI.M546C15	Sum, nkavctmbh, tot
error_code_k	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Resynchronization Acknowledge (RSAK PDU).RSAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). The RSAK PDU is used to acknowledge the acceptance of a re synchronisation requested by the peer SSCOP entity.	PMMOResult_SAAL_At_UNI.M546C16	Sum, nkavctmbh, tot
error_code_l	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Error Recovery (ER PDU). ER PDU is received in a SSCOP connection state where it should not be received (Q.2110). The ER	PMMOResult_SAAL_At_UNI.M546C17	Sum, nkavctmbh, tot

			PDU is used to recover from protocol errors.		
error_code_lw	ACCUMULATION	INTEGER	Local credit window closed. This error counter is increased in the SSCOP receiver when it can not accept any new SD PDUs. This can happen when the receive buffer is full.	PMMOResult_SAAL_At_UNI.M546C29	Sum, nkavctmbh, tot
error_code_lx	ACCUMULATION	INTEGER	Local credit window opened. This error counter is increased in the SSCOP receiver when it can again accept new SD PDUs.	PMMOResult_SAAL_At_UNI.M546C30	Sum, nkavctmbh, tot
error_code_m	ACCUMULATION	INTEGER	Receipt of unsolicited SSCOP Error Recovery Acknowledge (ERAK PDU).ERAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). The ERAK PDU is used to acknowledge the recovery from protocol error.	PMMOResult_SAAL_At_UNI.M546C18	Sum, nkavctmbh, tot

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error_code_o	ACCUMULATION	INTEGER	Unsuccessful retransmission. The number of transmissions of BGN, END, ER, or RS PDU (SSCOP state variable VT(CC)) has reached the maximum value of retransmissions (SSCOP parameter MaxCC) (Q.2110). When BGN, END, ER, or RS PDU is sent a timer is set (TimerCC) to wait for the acknowledge and variable VT(CC) is set to 1. If the acknowledge is not received the PDU is retransmitted and TimerCC is set again and VT(CC) is increased. If the VT(CC) reaches the value of MaxCC the PDU is no longer retransmitted.	PMMOResult_SAAL_At_UNI.M546C19	Sum, nkavctmbh, tot
error_code_p	ACCUMULATION	INTEGER	Timer_NO_RESPONSE expiry. SSCOP connection has been released (Q.2110). The Timer_NORESPONSE is set when POLL PDU is sent to peer SSCOP entity. When peer acknowledges with STAT PDU the Timer_NORESPO	PMMOResult_SAAL_At_UNI.M546C20	Sum, nkavctmbh, tot

			NSE is reset. If peer does not send STAT PDU and the Timer_NO_RESPONSE expires the SSCOP connection is released by SSCOP.		
error_code_q	ACCUMULATION	INTEGER	SD or POLL, N(S) error. SD or POLL PDU sequence number (N(S)) error (Q.2110). SD or POLL PDU is received and the N(S) parameter is not valid. Either SD PDU with N(S) that is in SSCOP receive buffer is received or POLL PDU contains N(S) that is greater than the highest expected sequence number (SSCOP variable VR(H)).	PMMOResult_SAAL_At_UNI.M546C21	Sum, nkavctmbh, tot
error_code_r	ACCUMULATION	INTEGER	STAT N(PS) error.A STAT PDU is received for a POLL PDU that has not been sent (Q.2110). When POLL PDU is sent, the polling sequence number (SSCOP variable N(PS)) is increased and sent in the PDU. The peer	PMMOResult_SAAL_At_UNI.M546C22	Sum, nkavctmbh, tot

			SSCOP entity copies this value from POLL PDU into the appropriate STAT PDU. This error code is increased when STAT PDU with N(PS) that has not been sent in any POLL PDU is received.		
error_code_s	ACCUMULATION	INTEGER	USTAT N(R) or list elements error. A STAT PDU is received with invalid data. The N(R) parameter in STAT PDU tells the sequence number of SD PDU that the sender of STAT PDU is waiting to be received next. This error counter is increased when the N(R) is greater than the next sequence number to be sent (SSCOP variable VT(S)), or the acknowledgement for that SD PDU has already been received in an earlier STAT or USTAT PDU. The list elements in STAT PDU are used to request retransmission of SD PDUs. This error counter is increased, if such	PMMOResult_SAAL_At_UNI.M546C23	Sum, nkavctmbh, tot

			SD PDUs that are not sent or have been acknowledged to be received by the peer SSCOP entity, are requested to be retransmitted.		
error_code_t	ACCUMULATION	INTEGER	USTAT (N(R) or list elements error. An USTAT PDU is received with invalid data (Q.2110). The N(R) parameter in STAT PDU tells the sequence number of SD PDU that the sender of STAT PDU is waiting to be received next. This error counter is increased when the N(R) is greater than the next sequence number to be sent (SSCOP variable VT(S)), or the acknowledgement for that SD PDU has already been received in an earlier STAT or USTAT PDU. The list elements in USTAT PDU are used to request retransmission of SD PDUs. This	PMMOResult_SAAL_At_UNI.M546C24	Sum, nkavctmbh, tot

			error counter is increased, if such SD PDUs that are not sent or have been acknowledged to be received by the peer SSCOP entity, are requested to be retransmitted		
error_code_u	ACCUMULATION	INTEGER	PDU length violation. If the length of a PDU is not between the minimum and maximum length of the PDU or the PDU length is not 32 bit aligned (Q.2110).	PMMOResult_SAAL_At_UNI.M546C25	Sum, nkavctmbh, tot
error_code_v	ACCUMULATION	INTEGER	SD PDUs must be retransmitted (Q.2110). If SD PDUs have been lost the peer SSCOP entity can request them to be retransmitted with USTAT PDU or STAT PDU.	PMMOResult_SAAL_At_UNI.M546C26	Sum, nkavctmbh, tot
error_code_w	ACCUMULATION	INTEGER	Lack of credit (Q.2110). Number of times when the SSCOP is not allowed to transmit data PDUs to peer node. Also the times when SSCOP receiver doesn't accept any data PDUs sent by peer node are counted. Credit is granted by the SSCOP receiver	PMMOResult_SAAL_At_UNI.M546C27	Sum, nkavctmbh, tot

			to allow the peer SSCOP transmitter to transmit new SD PDUs. The credit value is conveyed to the transmitter in the (N(MR) field of each BGN, BGAK, RS, RSAK, ER, ERAK, STAT and USTAT PDU sent by the receiver. The credit value sent to the transmitter is the sequence number of the first SD PDU that the receiver will not accept. The credit is assigned the value "No" when the SSCOP transmitter can not send any SD PDUs because the receiver will not accept them.		
error_code_x	ACCUMULATION	INTEGER	Local credit window closed. This error counter is increased in the SSCOP receiver when it can not accept any new SD PDUs. This can happen when the receive buffer is full.	PMMOResult_SAAL_At_UNI.M546C28	Sum, nkavctmbh, tot
fbq_underf	ACCUMULATION	INTEGER	The number of AAL5 CPCS PDUs	PMMOResult_SAAL_At_UNI.M546C46	Sum, nkavctmb

			which have been discarded because of free buffer queue underflows. SAR Reassembly status. An underflow condition occurs when the SAR attempts to retrieve a queue entry and the host has not yet supplied this entry. This condition only happens on the free buffer queues. The SAR detects this condition by checking the queue entry VLD bit. Once detected, the SAR enters an Underflow Detected state on this queue only. Since this signifies that no data buffers are available for reassembly, the SAR initiates EPD on all channels assigned to this queue.		h, tot
len_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs whose length has been violated. SAR Reassembly status. During reassembly maximum SDU delivery length (including trailer and pad) is checked to ensure that the PDU under	PMMOResult_SAAL_At_UNI.M546C38	Sum, nkavctmbh, tot

			reassembly does not exceed the maximum SDU delivery length.		
msus_received	ACCUMULATION	INTEGER	Number of received signalling data messages from Layer 3.The amount of assured signalling data (AAL data) messages received from the users of Layer 3 (NBAP or AAL2 signalling) via AAL SAP of SSCFUNI.	PMMOResult_SAAL_At_UNI.M546C0	Sum, nkavctmbh, tot
msus_transmitted	ACCUMULATION	INTEGER	Number of transmitted signalling data messages from Layer 3.Number of transmitted signalling data messages sent to Layer 3 by the user of the counterpart Layer 3	PMMOResult_SAAL_At_UNI.M546C3	Sum, nkavctmbh, tot
no_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs which have not been errored. SAR Reassembly status.	PMMOResult_SAAL_At_UNI.M546C33	Sum, nkavctmbh, tot
octets_received	ACCUMULATION	INTEGER	Number of received octets from Layer 3. The amount of the assured	PMMOResult_SAAL_At_UNI.M546C1	Sum, nkavctmbh, tot

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			signalling data (AAL data) message octets received from the users of Layer 3 (NBAP or AAL2 signalling) via AALSAP of SSCF UNI.		
octets_transmitted	ACCUMULATION	INTEGER	Number of transmitted octets from Layer 3.The number of transmitted signalling data message octets sent to Layer 3 by the user of the counterpart Layer 3.	PMMOResult_SAAL_At_UNI.M546C4	Sum, nkavctmbh, tot
pad_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs whose Pad field length is incorrect. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following checks: Compares the value collected in the Length Counter to the value in the LENGTH field in the trailer of the AAL5 PDU. If the number of Pad bytes is less than zero or greater than 47, the PAD_ERROR bit in the status queue	PMMOResult_SAAL_At_UNI.M546C39	Sum, nkavctmbh, tot

			entry is set to a logic high.		
rsm_timeout	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs whose reassembly timer has expired. SAR Reassembly status. The RS8234 automatically detects active CPCSPDU time out for reassembly channels. A PDU time out occurs when a partially received PDU does not complete within a set time period. When it detects this timeout condition, the RS8234 provides a status queue indication to the host. This indication allows the host to recover the buffers held by the partially completed PDU. The RS8234 supports up to eight reassembly time out periods.	PMMOResult_SAAL_At_UNI.M546C41	Sum, nkavctmbh, tot
rx_err	ACCUMULATION	INTEGER	The total sum of received errors. This counter is updated each time when SAR reassembles a	PMMOResult_SAAL_At_UNI.M546C32	Sum, nkavctmbh, tot

			received AAL5 CPCS PDU and some of the following errors are reported by SAR chip (SAR reassembly status) unexp_err, ba_err, crc_err, cpi_err, len_err, pad_err, crc_pad_err, rsm_timeout, abort_det, early_disc, status_qf, vcc_fw, fbq_underf, stat_q_overf		
rx_pdu	ACCUMULATION	INTEGER	The number of received error free AAL5 CPCS PDUs.	PMMOResult_SAAL_At_UNI.M546C50	Sum, nkavctmbh, tot
rx_size	ACCUMULATION	INTEGER	The number of bytes of reassembled error free AAL5 CPCS PDUs.	PMMOResult_SAAL_At_UNI.M546C51	Sum, nkavctmbh, tot
sig_commands_received	ACCUMULATION	INTEGER	ED Number of received signalling command messages from Layer 3.The signalling commands are channel activation (AAL_establish) and channel release (AAL_release). The counter indicates the reliability of the link used by AAL2.	PMMOResult_SAAL_At_UNI.M546C2	Sum, nkavctmbh, tot
sig_notices_transmitted	ACCUMULATION	INTEGER	TED Number of transmitted signalling	PMMOResult_SAAL_At_UNI.M546C5	Sum, nkavctmbh, tot

			command messages from Layer 3.Signalling commands are channel activation (AAL_establish) and channel release (AAL release). These commands are sent by the user of counterpart Layer 3.		
stat_q_overf	ACCUMULATION	INTEGER	The number of AAL5 CPCS PDUs which have been discarded because status queue of the Rx buffers is full. SAR Reassembly status. See STATUS_QF M546C44.	PMMOResult_SAAL_At_UNI.M546C47	Sum, nkavctmbh, tot
status_qf	ACCUMULATION	INTEGER	The number of status queue fulfillments. SAR Reassembly status. A status queue overflow or full condition is entered when the last available status queue entry is written. The reassembly coprocessor detects the condition by comparing the WRITE and READ_UD index pointers in the	PMMOResult_SAAL_At_UNI.M546C44	Sum, nkavctmbh, tot

			corresponding status queue base table. Upon detecting a status overflow condition, the Rsm coprocessor sets the internal OVFL bit in the last status queue entry written to a logic high, to indicate the condition. The Rsm coprocessor also sets to one either the RSM_HS_FULL bit in the HOST_ISTAT1 register, or the RSM_LS_FULL bit in the LP_ISTAT1 register, to prompt an interrupt. While the reassembly coprocessor is in status full condition, it discards all cells		
tot_bothway_msus	ACCUMULATION	INT8	Bothway total (received & transmit) number of received signalling data messages from Layer 3.	PMMOResult_SAAL_At_UNI.M546C3 + M546C0	Sum, nkavctmbh, tot
unexp_err	ACCUMULATION	INTEGER	The number of reassembled AAL5 CPCS PDUs which have contained unexpected errors. SAR Reassembly status.	PMMOResult_SAAL_At_UNI.M546C34	Sum, nkavctmbh, tot
vcc_fw	ACCUMULA	INTEG	The number of	PMMOResult_SAAL_	Sum,

	TION	ER	AAL5 CPCS PDUs which have been discarded because vcc firewall is crossed. SAR Reassembly status. Implementation of multiple free buffer queues and EPD performs a firewall functionality on a group basis. The user can also set up per VCC a firewall on a channel bychannel basis. The firewall mechanism allows the user to allocate buffer credits on a perchannel basis. During reassembly on a channel enabled for firewall processing, whenever a buffer is taken off free buffer queues 0 through 15, the Rsm coprocessor decrements the RX_COUNTER[15.0] in the Rsm VCC Table entry for that channel. This allows COM buffers to be placed on queues 16 through 31 and not be stopped by the firewall. If the	At_UNI.M546C45	nkavctmbh, tot

			RX_COUNTER[15.0] for a channel is zero when a buffer is required, then the Rsm coprocessor declares a firewall condition.		
vcc_rele	ACCUMULATION	INTEGER	The number of illegal vcc releasing attempts. The counter is incremented if vcc reserved by another client is tried to release	PMMOResult_SAAL_At_UNI.M546C49	Sum, nkavctmbh, tot
vcc_rese	ACCUMULATION	INTEGER	The number of vcc re reservations. The counter is incremented if an already reserved vcc is tried to obtained by another client.	PMMOResult_SAAL_At_UNI.M546C48	Sum, nkavctmbh, tot

7.4.8 ATM_VCC.Nokia.UMTS.vcc_measurement

VCC cell ingress/egress performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
eg_cap_vc	INTENSITY	INTEGER	The configured egress bandwidth for the virtual channel connection.	PMMOResult_ATM_virtual_channel.M530C7	Average, avg, max, min, nkavcacbh, tot
eg_queued_cells_vc	ACCUMULATION	INTEGER	The number of egress cells in virtual channel connection level queue(s).	PMMOResult_ATM_virtual_channel.M530C6	Sum, nkavcacbh, tot
eg_rec_cells_vc	ACCUMULATION	INTEGER	The number of egress cells	PMMOResult_ATM_virtual_channel.M530C5	Sum, nkavcacbh

			received from a virtual channel connection.		, tot
eg_tot_cells_vc	ACCUMULATION	INT8	The number of egress cells transmitted to a virtual channel connection.	PMMOResult_ATM_virtual_channel.M530C1	Sum, nkavcacbh, tot
in_cap_vc	INTENSITY	INTEGER	The configured ingress bandwidth for the virtual channel connection.	PMMOResult_ATM_virtual_channel.M530C4	Average, avg, max, min, nkavcacbh, tot
in_queued_cells_vc	ACCUMULATION	INTEGER	The number of ingress cells in virtual channel connection level queue(s).	PMMOResult_ATM_virtual_channel.M530C3	Sum, nkavcacbh, tot
in_rec_cells_vc	ACCUMULATION	INTEGER	The number of ingress cells received from a virtual channel connection.	PMMOResult_ATM_virtual_channel.M530C2	Sum, nkavcacbh, tot
n_tot_cells_vc	ACCUMULATION	INT8	The number of ingress cells received from a virtual channel connection.	PMMOResult_ATM_virtual_channel.M530C0	Sum, nkavcacbh, tot

7.5 ATM_VPC Performance Indicators

This section shows the key performance indicators and other counters for the ATM_VPC object, divided into the following sub-sections:

- ATM_VPC.Nokia.UMTS.vpc_measurement

7.5.1 ATM_VPC.Nokia.UMTS.vpc_measurement

VPC cell ingress/egress performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
eg_cap_vp	INTENSITY	INTEGER	The configured egress bandwidth for the virtual path connection.	PMMOResult_ATM_VPC.M529C7	Average, avg, max, min, tot
eg_queued_cells_vp	ACCUMULATION	INTEGER	The number of egress cells in virtual path connection level queue(s).	PMMOResult_ATM_VPC.M529C6	Sum, tot
eg_rec_cells_vp	ACCUMULATION	INTEGER	The number of egress cells received from a virtual path connection.	PMMOResult_ATM_VPC.M529C5	Sum, tot
eg_tot_cells_vp	ACCUMULATION	INT8	The number of egress cells transmitted to a virtual path connection.	PMMOResult_ATM_VPC.M529C1	Sum, tot
in_cap_vp	INTENSITY	INTEGER	The configured ingress bandwidth for the virtual path connection.	PMMOResult_ATM_VPC.M529C4	Average, avg, max, min, tot
in_queued_cells_vp	ACCUMULATION	INTEGER	The number of ingress cells in virtual path connection level queue(s).	PMMOResult_ATM_VPC.M529C3	Sum, tot
in_rec_cells_vp	ACCUMULATION	INTEGER	The number of ingress cells received from a virtual path connection.	PMMOResult_ATM_VPC.M529C2	Sum, tot
in_tot_cells_vp	ACCUMULATION	INT8	The number of ingress cells received from a	PMMOResult_ATM_VPC.M529C0	Sum, tot

			virtual path connection.		

7.6 Cell Performance Indicators

This section shows the key performance indicators and other counters for the Cell object, divided into the following sub-sections:

- Cell.Nokia.UMTS.avail_cell
- Cell.Nokia.UMTS.bts_hw
- Cell.Nokia.UMTS.ce_capacity
- Cell.Nokia.UMTS.cell_busy_hour_kpi
- Cell.Nokia.UMTS.cell_data_transfer
- Cell.Nokia.UMTS.cell_thruput
- Cell.Nokia.UMTS.code_blocking
- Cell.Nokia.UMTS.code_downgrade
- Cell.Nokia.UMTS.code_occupancy
- Cell.Nokia.UMTS.code_request
- Cell.Nokia.UMTS.code_reservation
- Cell.Nokia.UMTS.dch_reconfiguration_failure
- Cell.Nokia.UMTS.dedicated_meas
- Cell.Nokia.UMTS.downlink_code_load
- Cell.Nokia.UMTS.edch_macd_flow
- Cell.Nokia.UMTS.edpcch_ttis
- Cell.Nokia.UMTS.hsdpa_users
- Cell.Nokia.UMTS.hsdsch_macd_flow
- Cell.Nokia.UMTS.hspdsch_power_class
- Cell.Nokia.UMTS.hsupa_users
- Cell.Nokia.UMTS.incoming_handovers_relocations
- Cell.Nokia.UMTS.intersys_hho_amr
- Cell.Nokia.UMTS.intersys_hho_nrt
- Cell.Nokia.UMTS.intersys_hho_rt
- Cell.Nokia.UMTS.intrasys_hho_inter_nrt
- Cell.Nokia.UMTS.intrasys_hho_inter_rt
- Cell.Nokia.UMTS.intrasys_hho_intra_nrt
- Cell.Nokia.UMTS.intrasys_hho_intra_rt
- Cell.Nokia.UMTS.intrasys_hho_rejected_relocations
- Cell.Nokia.UMTS.intrasys_hho_scc
- Cell.Nokia.UMTS.intrasys_hspa_ifho_meas
- Cell.Nokia.UMTS.iub_downlink_tx_load
- Cell.Nokia.UMTS.lrt_est

- Cell.Nokia.UMTS.macd_setup_hsdpa
- Cell.Nokia.UMTS.multirab.access_complete
- Cell.Nokia.UMTS.multirab.active_complete
- Cell.Nokia.UMTS.multirab.active_failure
- Cell.Nokia.UMTS.multirab.setup_attempts
- Cell.Nokia.UMTS.nbap.block_resource
- Cell.Nokia.UMTS.nbap.common_measurement
- Cell.Nokia.UMTS.nbap.compressed_mode_command
- Cell.Nokia.UMTS.nbap.dedicated_measurement_procedures
- Cell.Nokia.UMTS.nbap.error_indication
- Cell.Nokia.UMTS.nbap.iub_dl_powcon
- Cell.Nokia.UMTS.nbap.radio_link_addition
- Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.drnc
- Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.srnc
- Cell.Nokia.UMTS.nbap.radio_link_forced_ho
- Cell.Nokia.UMTS.nbap.radio_link_reconfig_commit_cancel
- Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.drnc
- Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.srnc
- Cell.Nokia.UMTS.nbap.radio_link_reconfig_prep
- Cell.Nokia.UMTS.nbap.radio_link_restoration
- Cell.Nokia.UMTS.nbap.radio_link_setup_failures_3gpp_nbap
- Cell.Nokia.UMTS.nbap.radio_link_setup_failures_first_rl
- Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.drnc
- Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.srnc
- Cell.Nokia.UMTS.nbap.radio_link_setup_successes
- Cell.Nokia.UMTS.nbap.reset_procedures
- Cell.Nokia.UMTS.nrt_dch_allocation
- Cell.Nokia.UMTS.nrt_dch_request
- Cell.Nokia.UMTS.nrt_dch_upgrade
- Cell.Nokia.UMTS.olpc_measurement
- Cell.Nokia.UMTS.packet_call.allocation
- Cell.Nokia.UMTS.packet_call.call_release
- Cell.Nokia.UMTS.packet_call.congestion_control
- Cell.Nokia.UMTS.packet_call.setup_failures
- Cell.Nokia.UMTS.packet_call.setup
- Cell.Nokia.UMTS.packet_call.switching
- Cell.Nokia.UMTS.prach_prop_delay
- Cell.Nokia.UMTS.prxtotal
- Cell.Nokia.UMTS.ptx_est
- Cell.Nokia.UMTS.ptxtargetps
- Cell.Nokia.UMTS.ptxtotal
- Cell.Nokia.UMTS.rab.access_complete
- Cell.Nokia.UMTS.rab.active_complete_cs_data
- Cell.Nokia.UMTS.rab.active_complete_ps_data
- Cell.Nokia.UMTS.rab.active_failure_cs_data
- Cell.Nokia.UMTS.rab.active_failure_cs_voice

- Cell.Nokia.UMTS.rab.active_failure_ps_data
- Cell.Nokia.UMTS.rab.active_failures_ps
- Cell.Nokia.UMTS.rab.active_release_cs_data
- Cell.Nokia.UMTS.rab.active_release_cs_voice
- Cell.Nokia.UMTS.rab.active_release_ps_data
- Cell.Nokia.UMTS.rab.connections_in_cs
- Cell.Nokia.UMTS.rab.connections_in_ps
- Cell.Nokia.UMTS.rab.connections_out_cs
- Cell.Nokia.UMTS.rab.connections_out_ps
- Cell.Nokia.UMTS.rab.control_procedures
- Cell.Nokia.UMTS.rab.holding_times
- Cell.Nokia.UMTS.rab.reconfigurations
- Cell.Nokia.UMTS.rab.setup_access_complete
- Cell.Nokia.UMTS.rab.setup_access_failure
- Cell.Nokia.UMTS.rab.setup_attempts
- Cell.Nokia.UMTS.rab.setup_complete
- Cell.Nokia.UMTS.rab.setup_failure_cs
- Cell.Nokia.UMTS.rab.setup_failure_ps
- Cell.Nokia.UMTS.rab.setup_time
- Cell.Nokia.UMTS.rach
- Cell.Nokia.UMTS.radio_bearer
- Cell.Nokia.UMTS.radio_downgrade_release_due_to_congestion
- Cell.Nokia.UMTS.radio_link
- Cell.Nokia.UMTS.RAN_Accessibility.Service_Level
- Cell.Nokia.UMTS.RAN_Accessibility.Traffic
- Cell.Nokia.UMTS.RAN_Integrity.RCPM
- Cell.Nokia.UMTS.RAN_Mobility.InterSystem_Handover
- Cell.Nokia.UMTS.RAN_Mobility.IntraSystem_HardHandover
- Cell.Nokia.UMTS.RAN_Mobility.Soft_Handover
- Cell.Nokia.UMTS.RAN_Retainability.Service_Level
- Cell.Nokia.UMTS.RAN_Retainability.Traffic
- Cell.Nokia.UMTS.RAN_Usage.Cell_Resource
- Cell.Nokia.UMTS.RAN_Usage.Cell_Usage
- Cell.Nokia.UMTS.RAN_Usage.RCPM
- Cell.Nokia.UMTS.RAN_Usage.Service_Level
- Cell.Nokia.UMTS.RAN_Usage.Traffic
- Cell.Nokia.UMTS.rcpm.dl_pdcp_sdu_pdu_rlc
- Cell.Nokia.UMTS.rcpm.ul_am_rlc
- Cell.Nokia.UMTS.rcpm.ul_pdcp_sdu_pdu_rlc
- Cell.Nokia.UMTS.rlc_retransmission_wcel
- Cell.Nokia.UMTS.rrc.connection_access

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- Cell.Nokia.UMTS.rrc.connection_active
- Cell.Nokia.UMTS.rrc.connection_mobility_procedures
- Cell.Nokia.UMTS.rrc.connection_setup
- Cell.Nokia.UMTS.rrc.connections
- Cell.Nokia.UMTS.rrc.establishment_per_ue_capability
- Cell.Nokia.UMTS.rrc.radio_bearer_setup
- Cell.Nokia.UMTS.rrc.setup_causes_call_reestablish
- Cell.Nokia.UMTS.rrc.setup_causes_detach
- Cell.Nokia.UMTS.rrc.setup_causes_emergency
- Cell.Nokia.UMTS.rrc.setup_causes_high_priority_sig
- Cell.Nokia.UMTS.rrc.setup_causes_intr_rat
- Cell.Nokia.UMTS.rrc.setup_causes_intrregistration
- Cell.Nokia.UMTS.rrc.setup_causes_low_priority_sig
- Cell.Nokia.UMTS.rrc.setup_causes_mobile_orig
- Cell.Nokia.UMTS.rrc.setup_causes_mobile_term
- Cell.Nokia.UMTS.rrc.setup_causes_term_unknown
- Cell.Nokia.UMTS.sccpch
- Cell.Nokia.UMTS.signalling_paging_message
- Cell.Nokia.UMTS.signalling_rrc.connection_setup_requests
- Cell.Nokia.UMTS.signalling_rrc.connection_status
- Cell.Nokia.UMTS.signalling_rrc.measurement_report
- Cell.Nokia.UMTS.signalling_rrc.signalling_protocol_states
- Cell.Nokia.UMTS.soft_handover.nrt
- Cell.Nokia.UMTS.soft_handover.rt
- Cell.Nokia.UMTS.soft_handovers_dsr
- Cell.Nokia.UMTS.soft_handover
- Cell.Nokia.UMTS.traffic_dch_requests_cs_data_calls_srnc
- Cell.Nokia.UMTS.traffic.allocations_compressed_mode.srnc
- Cell.Nokia.UMTS.traffic.amr_codec_mode
- Cell.Nokia.UMTS.traffic.amr_hspa_allocation
- Cell.Nokia.UMTS.traffic.compressed_mode_hsdpa_users
- Cell.Nokia.UMTS.traffic.dch_allocations_cs_data_calls.srnc
- Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.drnc
- Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.srnc
- Cell.Nokia.UMTS.traffic.dch_allocations_data_calls.drnc
- Cell.Nokia.UMTS.traffic.dch_allocations_signalling_links.drnc
- Cell.Nokia.UMTS.traffic.dch_allocations_streaming_class
- Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.drnc
- Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.srnc
- Cell.Nokia.UMTS.traffic.dch_duration_data_calls_dl.drnc
- Cell.Nokia.UMTS.traffic.dch_duration_data_calls_ul.drnc
- Cell.Nokia.UMTS.traffic.dch_request_hsdsch
- Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.drnc
- Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.srnc
- Cell.Nokia.UMTS.traffic.dch_requests_data_calls.drnc
- Cell.Nokia.UMTS.traffic.dch_requests_ps_calls_handover.srnc

- Cell.Nokia.UMTS.traffic.dch_requests_ps_calls.srnc
- Cell.Nokia.UMTS.traffic.dch_requests_signalling_links.drnc
- Cell.Nokia.UMTS.traffic.edch_allocation_release
- Cell.Nokia.UMTS.traffic.edch_allocation
- Cell.Nokia.UMTS.traffic.edsch_setup_failures
- Cell.Nokia.UMTS.traffic.hsdsch_allocation_release
- Cell.Nokia.UMTS.traffic.hsdsch_allocation
- Cell.Nokia.UMTS.traffic.hsdsch_request
- Cell.Nokia.UMTS.traffic.hsdsch_setup_failures
- Cell.Nokia.UMTS.traffic.multirab.background_connections
- Cell.Nokia.UMTS.traffic.multirab.interactive_connections
- Cell.Nokia.UMTS.traffic.multirab.streaming_connections
- Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc
- Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc
- Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_backg_class.srnc
- Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_intera_class.srnc
- Cell.Nokia.UMTS.traffic.nrt_dch_reconfiguration
- Cell.Nokia.UMTS.traffic.nrt_dch_setup_reject
- Cell.Nokia.UMTS.traffic.requests_and_allocations_for_compressed_mode.drnc
- Cell.Nokia.UMTS.traffic.requests_and_allocations_for_signalling_links.srnc
- Cell.Nokia.UMTS.traffic.requests_compressed_mode.srnc
- Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_conv_class.srnc
- Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_stream_class.srnc
- Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_conv_class.srnc
- Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_stream_class.srnc
- Cell.Nokia.UMTS.traffic.wamr
- Cell.Nokia.UMTS.tx_power
- Cell.Nokia.UMTS.ue_quality_measurement
- Cell.Nokia.UMTS.user_throughput_wcel
- Cell.Nokia.UMTS.wbts_fractional_load
- Cell.Nokia.UMTS.wbts_hsdsch_credit
- Cell.Nokia.UMTS.wbts_ue_nonserving_power
- Cell.Nokia.UMTS.wbts_ue_serving_power
- Cell.Nokia.UMTS.wbts_wn.hs_users
- Cell.Nokia.UMTS.wbts_wn.hsupa_power
- Cell.Nokia.UMTS.wbts_wn.hsupa_thput
- Cell.Nokia.UMTS.wbts_wn.mac_e_transmit
- Cell.Nokia.UMTS.wbts_wn3.buffer_delay
- Cell.Nokia.UMTS.wbts_wn3.cqi
- Cell.Nokia.UMTS.wbts_wn3.discarded_mac
- Cell.Nokia.UMTS.wbts_wn3.hsscch_power

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- Cell.Nokia.UMTS.wbts_wn3.idle_time
- Cell.Nokia.UMTS.wbts_wn3.mac_d_pdu
- Cell.Nokia.UMTS.wbts_wn3.mac_hs_transmit
- Cell.Nokia.UMTS.wcel_olpc_measurement
- Cell.Nokia.UMTS.wcel_rlc_measurement

7.6.1 Cell.Nokia.UMTS.avail_cell

Cell availability measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_time_wcell_in_blocked_by_user_state	PERCENTAGE	FLOAT	% Time WCEL is in Blocked-by-user state.	100 * {Nokia.avail_cell.availability_wcell_blocked_by_user}/ {Nokia.avail_cell.availability_wcell_exists_in_rnw_database}	Average, avg, nkcttbh, nkrttbh
_%_time_wcell_in_working_state	PERCENTAGE	FLOAT	% Time WCEL in Working State.	100 * {Nokia.avail_cell.availability_wcell_in_working_state}/ {Nokia.avail_cell.availability_wcell_exists_in_rnw_database}	Average, avg, nkcttbh, nkrttbh
availability_wcell_blocked_by_user	ACCUMULATION	INTEGER	The number of samples when WCEL is in Blocked-by-user state. Counter M1000C180 is always updated along with this counter.	PMMOResult_Cell_Resource.M1000C179	Sum, nkcttbh, nkrttbh, tot
availability_wcell_exists_in_rnw_database	ACCUMULATION	INTEGER	The number of samples when WCEL is configured in the database. This counter is used as a denominator for cell availability	PMMOResult_Cell_Resource.M1000C180	Sum, nkcttbh, nkrttbh, tot

			calculation.		
availability_wcell_in_working_state	ACCUMULATION	INTEGER	The number of samples when WCEL is in Working state. Counter M1000C180 is always updated along with this counter.	PMMOResult_Cell_Resource.M1000C178	Sum, nkcttbh, nkrttbh, tot

7.6.2 Cell.Nokia.UMTS.bts_hw

BTS hardware usage statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_avail_pool_capa_dl	INTENSITY	FLOAT	Obsolete since RN4.0: Average DSP processing capacity available for processing downlink physical channels in a pool of cells. (Available bit rate for this pool). Measured in units of 10kb/s	PMMOResult_Cell_Resource.M1000C84	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_avail_pool_capa_ul	INTENSITY	FLOAT	Obsolete since RN4.0: Average DSP processing capacity available for processing uplink physical channels in a pool of cells. (Available bit rate for this pool).	PMMOResult_Cell_Resource.M1000C86	Average, avg, max, min, nkcttbh, nkrttbh, tot

			Measured in units of 10kb/s		
average_avail_pool_capa_dl	INTENSITY	FLOAT	Calculation for average DSP processing capacity for downlink	{ave_avail_pool_capa_dl} / {nbr_of_pool_rep_dl}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_avail_pool_capa_ul	INTENSITY	FLOAT	Calculation for average DSP processing capacity for uplink	{ave_avail_pool_capa_ul} / {nbr_of_pool_rep_ul}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_available_percentage_pool_capacity_dl	INTENSITY	FLOAT	Obsolete since RN4.0: The average percentage DSP processing capacity available for processing downlink physical channels. The capacity is calculated based on initial capacity credits received in the NBAP:AUDIT RESPONSE message, and on updated capacity credits received in the NBAP:RESOURCE STATUS INDICATION message. This counter is updated only for base stations using 3GPP Iub.	PMMOResult_Cell_Resource.M1000C134	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_available_percentage_pool	INTENSITY	FLOAT	Obsolete since RN4.0: The	PMMOResult_Cell_Resource.M1000C135	Average, avg, max,

_capacity_ul			average percentage DSP processing capacity available for processing uplink physical channels. The capacity is calculated based on initial capacity credits received in the NBAP:AUDIT RESPONSE message, and on updated capacity credits received in the NBAP:RESOURCE STATUS INDICATION message. This counter is updated only for base stations using 3GPP Iub.		min, nkcttbh, nkrttbh, tot
bts_hsupa_hw_limited_duration	ACCUMULATION	INTEGER	This counter indicates how long time the BTS local cell group HW pool where this cell belongs, is in HSUPA HW limited state during the measurement period. In this state RNC will setup E-DCH but the BTS HW shortage may	PMMOResult_Cell_Resource.M1000C269	Sum, nkcttbh, nkrttbh, tot

			cause lower than expected throughput. The same counter value is updated for all HSUPA enabled cells in the local cell group.		
bts_hsupa_hw_no_capacity_duration	ACCUMULATION	INTEGER	This counter indicates how long time the BTS local cell group HW pool where this cell belongs, is in HSUPA HW limited state during the measurement period. In this state RNC will not setup E-DCH. The same counter value is updated for all HSUPA enabled cells in the local cell group.	PMMOResult_Cell_Resource.M1000C270	Sum, nkcttbh, nkrttbh, tot
bts_hsupa_not_hw_limited_duration	ACCUMULATION	INTEGER	This counter indicates how long time the BTS local cell group HW pool where this cell belongs, is in HSUPA HW not-limited state during the measurement period. In this state the BTS HW does not limit the HSUPA throughput. The same counter value is updated	PMMOResult_Cell_Resource.M1000C268	Sum, nkcttbh, nkrttbh, tot

			for all HSUPA enabled cells in the local cell group.		
bts_hw_capacity_dl_denominator	ACCUMULATION	INT8	Obsolete since RN4.0: The denominator for downlink DSP processing capacity counter.	PMMOResult_Cell_Resource.M1000C136	Sum, nkcttbh, nkrttbh, tot
bts_hw_capacity_ul_denominator	ACCUMULATION	INT8	Obsolete since RN4.0: The denominator for uplink DSP processing capacity counter.	PMMOResult_Cell_Resource.M1000C137	Sum, nkcttbh, nkrttbh, tot
nbr_of_cells	INTENSITY	INTEGER	Obsolete since RN4.0: Number of cells belonging to the pool	PMMOResult_Cell_Resource.M1000C88	Average, avg, max, min, nkcttbh, nkrttbh, tot
nbr_of_pool_rep_dl	ACCUMULATION	INT8	Obsolete since RN4.0: Number of radio resource indication reports containing pool capacity information for DL	PMMOResult_Cell_Resource.M1000C85	Sum, nkcttbh, nkrttbh, tot
nbr_of_pool_rep_ul	ACCUMULATION	INT8	Obsolete since RN4.0: Number of radio resource indication reports containing pool capacity information for UL	PMMOResult_Cell_Resource.M1000C87	Sum, nkcttbh, nkrttbh, tot

7.6.3 Cell.Nokia.UMTS.ce_capacity

Channel element measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
average_used_ce_for_amr_allocations	INTENSITY	FLOAT	Average number of used CE for AMR allocations.	PMMOResult_Cell_Resource.M1000C182	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_cs_conversational_64_kbps	INTENSITY	FLOAT	Average number of used CE for Transparent 64 kbps CS Data Calls with Conversational class.	PMMOResult_Cell_Resource.M1000C183	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_cs_streaming_144_kbps	INTENSITY	FLOAT	Average number of used CE for Non-Transparent 14.4 kbps CS Data Calls with Streaming class.	PMMOResult_Cell_Resource.M1000C184	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_cs_streaming_576_kbps	INTENSITY	FLOAT	Average number of used CE for Non-Transparent 57.6 kbps CS Data Calls with Streaming class.	PMMOResult_Cell_Resource.M1000C185	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C223	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_128_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C216	Average, avg, max, min, nkcttbh, nkrttbh,

					tot
average_used_ce_for_ps_background_16_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C220	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C213	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C224	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_256_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C217	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C221	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_32_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C214	Average, avg, max, min, nkcttbh, nkrttbh, tot

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average_used_ce_for_ps_background_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C225	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_384_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C218	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C222	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C215	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Background class in DL.	PMMOResult_Cell_Resource.M1000C219	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_background_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Background class in UL.	PMMOResult_Cell_Resource.M1000C212	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C209	Average, avg, max, min, nkcttbh, nkrttbh, tot

average_used_ce_for_ps_interactive_128_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C202	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_16_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C206	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C199	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C210	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_256_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C203	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C207	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_	INTENSITY	FLOA	Average number	PMMOResult_Cell_Res	Average,

for_ps_interactive_32_kbps_ul		T	of used CE for 32 kbps PS call with Interactive class in UL.	ource.M1000C200	avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C211	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_384_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C204	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C208	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C201	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Interactive class in DL.	PMMOResult_Cell_Resource.M1000C205	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_interactive_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Interactive class in UL.	PMMOResult_Cell_Resource.M1000C198	Average, avg, max, min, nkcttbh, nkrttbh, tot

average_used_ce_for_ps_streaming_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C195	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_128_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Streaming class in UL.	PMMOResult_Cell_Resource.M1000C190	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_16_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C192	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Streaming class in UL.	PMMOResult_Cell_Resource.M1000C187	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C196	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C193	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_	INTENSITY	FLOA	Average number	PMMOResult_Cell_Res	Average,

for_ps_streaming_32_kbps_ul		T	of used CE for 32 kbps PS call with Streaming class in UL.	ource.M1000C188	avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C197	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C194	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Streaming class in UL.	PMMOResult_Cell_Resource.M1000C189	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Streaming class in DL.	PMMOResult_Cell_Resource.M1000C191	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_used_ce_for_ps_streaming_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Streaming class in UL.	PMMOResult_Cell_Resource.M1000C186	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_amr_allocations	INTENSITY	FLOAT	Average number of used CE for AMR allocations.	{average_used_ce_for_amr_allocations} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot

Avg_used_ce_cs_conversational_64_kbps	INTENSITY	FLOAT	Average number of used CE for Transparent 64 kbps CS Data Calls with Conversational class.	{average_used_ce_for_cs_conversational_64_kbps} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_cs_streaming_144_kbps	INTENSITY	FLOAT	Average number of used CE for Non-Transparent 14.4 kbps CS Data Calls with Streaming class.	{average_used_ce_for_cs_streaming_144_kbps} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_cs_streaming_576_kbps	INTENSITY	FLOAT	Average number of used CE for Non-Transparent 57.6 kbps CS Data Calls with Streaming class.	{average_used_ce_for_cs_streaming_576_kbps} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_128_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_128_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_128_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_16_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_16_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

Avg_used_ce_ps_background_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_16_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_256_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_256_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_256_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_32_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_32_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_32_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_384_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_384_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_384_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot

Avg_used_ce_ps_background_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_64_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_64_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Background class in DL.	{average_used_ce_for_ps_background_8_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_background_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Background class in UL.	{average_used_ce_for_ps_background_8_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_128_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_128_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_128_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_i	INTENSITY	FLOA	Average number	{average_used_ce_for_	Average,

nteractive_16_kbps_dl		T	of used CE for 16 kbps PS call with Interactive class in DL.	ps_interactive_16_kbps_dl} / {number_of_samples_for_ce_calculation}	avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_16_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_256_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_256_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_256_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_32_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_32_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_32_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_384_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot

Avg_used_ce_ps_interactive_384_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_384_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_64_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_64_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Interactive class in DL.	{average_used_ce_for_ps_interactive_8_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_interactive_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Interactive class in UL.	{average_used_ce_for_ps_interactive_8_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_128_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 128 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_128_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_	INTENSITY	FLOA	Average number	{average_used_ce_for_	Average,

streaming_128_kbps_ul		T	of used CE for 128 kbps PS call with Streaming class in UL.	ps_streaming_128_kbps_ul} / {number_of_samples_for_ce_calculation}	avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_16_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_16_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_16_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 16 kbps PS call with Streaming class in UL.	{average_used_ce_for_ps_streaming_16_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_256_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 256 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_256_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_32_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_32_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_32_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 32 kbps PS call with Streaming class in UL.	{average_used_ce_for_ps_streaming_32_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_384_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 384 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_384_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot

Avg_used_ce_ps_streaming_64_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_64_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_64_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 64 kbps PS call with Streaming class in UL.	{average_used_ce_for_ps_streaming_64_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_8_kbps_dl	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Streaming class in DL.	{average_used_ce_for_ps_streaming_8_kbps_dl} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_used_ce_ps_streaming_8_kbps_ul	INTENSITY	FLOAT	Average number of used CE for 8 kbps PS call with Streaming class in UL.	{average_used_ce_for_ps_streaming_8_kbps_ul} / {number_of_samples_for_ce_calculation}	Average, avg, max, min, nkcttbh, nkrttbh, tot
number_of_samples_for_ce_calculation	ACCUMULATION	INTEGER	The number of channel element capacity samples (common denominator for counters M1000C182-M1000C225).	PMMOResult_Cell_Resource.M1000C181	Sum, avg, max, min, nkcttbh, nkrttbh, tot

7.6.4 Cell.Nokia.UMTS.cell_busy_hour_kpi

Cell total traffic busy hour

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
total_traffic	ACCUMULATION	INT8	Value for the busy hour	PMMOResult_Traffic.c_ulcsamrth + PMMOResult_Traffic.c_ul_non_trans_cs_data_th + PMMOResult_Traffic.c_dl_non_trans_cs_data_th + PMMOResult_Traffic.c_ul_cs_amr_th + PMMOResult_Traffic.c_dl_cs_amr_th + PMMOResult_Traffic.c_ul_ps_data_back_cl_th + PMMOResult_Traffic.c_dl_ps_data_back_cl_th + PMMOResult_Traffic.c_ul_ps_data_int_cl_th + PMMOResult_Traffic.c_dl_ps_data_int_cl_th + PMMOResult_Traffic.c_ul_ps_data_conv_cl_th + PMMOResult_Traffic.c_dl_ps_data_conv_cl_th + PMMOResult_Traffic.c_ul_ps_data_stream_cl_th + PMMOResult_Traffic.c_dl_ps_data_stream_cl_th + PMMOResult_Traffic.c_hsdsch_th_interac + PMMOResult_Traffic.c_hsdsch_th_back	Sum, nkcttbh, nkrttbh, tot

7.6.5 Cell.Nokia.UMTS.cell_data_transfer

MAC-d PDU data transfer statistics for the type of connection.

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
amr_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU AMR data in SRNC in the downlink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C12	Sum, nkcttbh, nkrttbh, tot
amr_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU AMR data transferred in SRNC in the uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C11	Sum, nkcttbh, nkrttbh, tot
bgr_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU background data in SRNC in downlink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C22	Sum, nkcttbh, nkrttbh, tot
bgr_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU Background data in SRNC in uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C21	Sum, nkcttbh, nkrttbh, tot
cs_conv_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU CS conversational data in SRNC in the	PMMOResult_Cell_throput.M1023C14	Sum, nkcttbh, nkrttbh, tot

			downlink direction measured during the measurement interval.		
cs_conv_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU CS conversational data in SRNC in the uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C13	Sum, nkcttbh, nkrttbh, tot
cs_strea_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU CS streaming data in SRNC in the uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C16	Sum, nkcttbh, nkrttbh, tot
cs_strea_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU CS streaming data in SRNC in the uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C15	Sum, nkcttbh, nkrttbh, tot
intera_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU Interactive data in SRNC in downlink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C20	Sum, nkcttbh, nkrttbh, tot
intera_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU Interactive data in SRNC in uplink direction measured during the measurement	PMMOResult_Cell_throput.M1023C19	Sum, nkcttbh, nkrttbh, tot

			interval.		
ps_strea_dl_data	ACCUMULATION	INT8	The amount of MAC-d PDU PS streaming data in SRNC in the downlink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C18	Sum, nkcttbh, nkrttbh, tot
ps_strea_ul_data	ACCUMULATION	INT8	The amount of MAC-d PDU PS streaming data in SRNC in the uplink direction measured during the measurement interval.	PMMOResult_Cell_throput.M1023C17	Sum, nkcttbh, nkrttbh, tot
rt_dch_hsdpa_ul_strea_data	ACCUMULATION	INT8	The amount of MAC-d PDU Streaming data for HSDPA UL return channel DCH.	PMMOResult_Cell_throput.M1023C24	Sum, nkcttbh, nkrttbh, tot
rt_e_dch_ul_strea_data	ACCUMULATION	INT8	The amount of MAC-d PDU Streaming call data for RT E-DCH UL.	PMMOResult_Cell_throput.M1023C23	Sum, nkcttbh, nkrttbh, tot
rt_hs_dsch_dl_strea_data	ACCUMULATION	INT8	The amount of MAC-d PDU Streaming data for RT HS-DSCH DL.	PMMOResult_Cell_throput.M1023C25	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_cs_call_dch_dl	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the CS Call DCH in the downlink direction during the measurement	PMMOResult_Cell_throput.M1023C3	Sum, nkcttbh, nkrttbh, tot

			interval.		
transferred_data_for_cs_call_dch_ul	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the CS Call DCH in the uplink direction during the measurement interval. This counter includes AMR, CS Streaming, and CS Conversational calls.	PMMOResult_Cell_thrput.M1023C2	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_hsdsch	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred with the HS-DSCH in the downlink direction during the measurement interval.	PMMOResult_Cell_thrput.M1023C8	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_nrt_dch_dl	ACCUMULATION	INT8	The amount of data transferred in the NRT DCH in the downlink direction during the measurement interval.	PMMOResult_Cell_thrput.M1023C7	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_nrt_dch_for_hsdpa_return_channel_ul	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the NRT DCH in the uplink direction during the measurement interval, including only the HS-DSCH return channels.	PMMOResult_Cell_thrput.M1023C9	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_nrt_dch_ul	ACCUMULATION	INT8	The amount of data transferred in the NRT DCH in the uplink direction	PMMOResult_Cell_thrput.M1023C6	Sum, nkcttbh, nkrttbh, tot

			during the measurement interval, excluding HS-DSCH return channels.		
transferred_data_for_nrt_edch	ACCUMULATION	INT8	The amount of MAC-es PDU data transferred in the E-DCH in the uplink direction during the measurement interval. The MACes PDU includes MAC-d PDU data and the 6 bits MAC-es header.	PMMOResult_Cell_thrput.M1023C10	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_ps_rt_dch_dl	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the RT PS DCH in the downlink direction during the measurement interval.	PMMOResult_Cell_thrput.M1023C5	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_ps_rt_dch_ul	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the RT PS DCH in the uplink direction during the measurement interval.	PMMOResult_Cell_thrput.M1023C4	Sum, nkcttbh, nkrttbh, tot
transferred_data_for_signalling_rb_dch_dl	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the signalling radio	PMMOResult_Cell_thrput.M1023C1	Sum, nkcttbh, nkrttbh, tot

			bearer in the downlink direction during the measurement interval.		
transferred_data_for_signalling_rb_dch_ul	ACCUMULATION	INT8	The amount of MAC-d PDU data transferred in the signalling radio bearer in the uplink direction during the measurement interval.	PMMOResult_Cell_thrput.M1023C0	Sum, nkcttbh, nkrttbh, tot

7.6.6 Cell.Nokia.UMTS.cell_thruput

Cell throughput statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cch_data_cell_dl	ACCUMULATION	INT8	Amount of data transferred in PCH and FACH in the downlink direction during the measurement interval.	PMMOResult_Cell_Thrput_WBTS.M5002C1	Sum, nkcttbh, nkrttbh, tot
cch_data_cell_ul	ACCUMULATION	INT8	Amount of data transferred in RACH in the uplink direction during the measurement interval.	PMMOResult_Cell_Thrput_WBTS.M5002C0	Sum, nkcttbh, nkrttbh, tot
edch_data_nsc_ns_edch_ul	ACCUMULATION	INT8	Amount of MAC-es PDU data transferred in the E-DCH non-serving cell in the non-serving radiolink set in the uplink direction during the	PMMOResult_Cell_Thrput_WBTS.M5002C4	Sum, nkcttbh, nkrttbh, tot

			measurement interval.		
edch_data_nsc_s_edch_ul	ACCUMULATION	INT8	Amount of MAC-es PDU data transferred in the E-DCH non-serving cell in the serving radiolink set in the uplink direction during the measurement interval.	PMMOResult_Cell_Thrput_WBTS.M5002C3	Sum, nkcttbh, nkrttbh, tot
edch_data_scell_ul	ACCUMULATION	INT8	Amount of MAC-es PDU data transferred in the E-DCH serving cell in the uplink direction during the measurement interval.	PMMOResult_Cell_Thrput_WBTS.M5002C2	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_0	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 0.	PMMOResult_Cell_Thrput_WBTS.M5002C5	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_10	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 10.	PMMOResult_Cell_Thrput_WBTS.M5002C15	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_11	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 11.	PMMOResult_Cell_Thrput_WBTS.M5002C16	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_12	ACCUMULATION	INT8	Total data amount sent on MAC-hs	PMMOResult_Cell_Thrput_WBTS.M5002C17	Sum, nkcttbh,

			PDUs positively acknowledged for SPI class 12.		nkrttbh, tot
hs_data_ack_spi_13	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 13.	PMMOResult_Cell_Thrput_WBTS.M5002C18	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_14	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 14.	PMMOResult_Cell_Thrput_WBTS.M5002C19	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_15	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 15.	PMMOResult_Cell_Thrput_WBTS.M5002C20	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_1	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 1.	PMMOResult_Cell_Thrput_WBTS.M5002C6	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_2	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 2.	PMMOResult_Cell_Thrput_WBTS.M5002C7	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_3	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 3.	PMMOResult_Cell_Thrput_WBTS.M5002C8	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_4	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 4.	PMMOResult_Cell_Thrput_WBTS.M5002C9	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_5	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively	PMMOResult_Cell_Thrput_WBTS.M5002C10	Sum, nkcttbh, nkrttbh,

			acknowledged for SPI class 5.		tot
hs_data_ack_spi_6	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 6.	PMMOResult_Cell_Thrput_WBTS.M5002C11	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_7	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 7.	PMMOResult_Cell_Thrput_WBTS.M5002C12	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_8	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 8.	PMMOResult_Cell_Thrput_WBTS.M5002C13	Sum, nkcttbh, nkrttbh, tot
hs_data_ack_spi_9	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs positively acknowledged for SPI class 9.	PMMOResult_Cell_Thrput_WBTS.M5002C14	Sum, nkcttbh, nkrttbh, tot
hs_total_data	ACCUMULATION	INT8	Total data amount sent on MAC-hs PDUs including both new and retransmissions.	PMMOResult_Cell_Thrput_WBTS.M5002C21	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_0	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 0.	PMMOResult_Cell_Thrput_WBTS.M5002C22	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_10	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for	PMMOResult_Cell_Thrput_WBTS.M5002C32	Sum, nkcttbh, nkrttbh, tot

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			SPI class 10.		
hsupa_data_spi_11	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 11.	PMMOResult_Cell_Thrput_WBTS.M5002C33	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_12	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 12.	PMMOResult_Cell_Thrput_WBTS.M5002C34	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_13	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 13.	PMMOResult_Cell_Thrput_WBTS.M5002C35	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_14	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 14.	PMMOResult_Cell_Thrput_WBTS.M5002C36	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_15	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 15.	PMMOResult_Cell_Thrput_WBTS.M5002C37	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_1	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 1.	PMMOResult_Cell_Thrput_WBTS.M5002C23	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_2	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 2.	PMMOResult_Cell_Thrput_WBTS.M5002C24	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_3	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 3.	PMMOResult_Cell_Thrput_WBTS.M5002C25	Sum, nkcttbh, nkrttbh, tot

hsupa_data_spi_4	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 4.	PMMOResult_Cell_Thrput_WBTS.M5002C26	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_5	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 5.	PMMOResult_Cell_Thrput_WBTS.M5002C27	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_6	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 6.	PMMOResult_Cell_Thrput_WBTS.M5002C28	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_7	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 7.	PMMOResult_Cell_Thrput_WBTS.M5002C29	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_8	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 8.	PMMOResult_Cell_Thrput_WBTS.M5002C30	Sum, nkcttbh, nkrttbh, tot
hsupa_data_spi_9	ACCUMULATION	INT8	Total data volume successfully received in MAC-e PDUs in bytes for SPI class 9.	PMMOResult_Cell_Thrput_WBTS.M5002C31	Sum, nkcttbh, nkrttbh, tot

7.6.7 Cell.Nokia.UMTS.code_blocking

Code utilisation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

no_codes_available_sf128	ACCUMULATION	INT8	Number of times when no SF152 codes were available	PMMOResult_Cell_Resource.M1000C81	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf16	ACCUMULATION	INT8	Number of times when no SF16 codes were available	PMMOResult_Cell_Resource.M1000C78	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf256	ACCUMULATION	INT8	Number of times when no SF256 codes were available	PMMOResult_Cell_Resource.M1000C82	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf32	ACCUMULATION	INT8	Number of times when no SF32 codes were available	PMMOResult_Cell_Resource.M1000C79	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf4	ACCUMULATION	INT8	Number of times when no SF4 codes were available	PMMOResult_Cell_Resource.M1000C76	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf64	ACCUMULATION	INT8	Number of times when no SF64 codes were available	PMMOResult_Cell_Resource.M1000C80	Sum, nkcttbh, nkrttbh, tot
no_codes_available_sf8	ACCUMULATION	INT8	Number of times when no SF8 codes were available	PMMOResult_Cell_Resource.M1000C77	Sum, nkcttbh, nkrttbh, tot
the_nbr_of_succ_code_tree_allo	ACCUMULATION	INT8	The number of successful code tree allocations	PMMOResult_Cell_Resource.M1000C83	Sum, nkcttbh, nkrttbh, tot

7.6.8 Cell.Nokia.UMTS.code_downgrade

Channelization code downgrades due to congestion statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
hsdpa_ch_code_downgrade_due_to	ACCUMULATION	INTEGER	The number of HSDPA	PMMOResult_Cell_Resource.M1000C267	Sum, nkcttbh,

_nrt_dch			channelization code downgrades due to congestion of NRT DCH requests.		nkrttbh, tot
hsdpa_ch_code_downgrade_due_to_rt	ACCUMULATION	INTEGER	The number of HSDPA channelization code downgrades due to congestion of RT DCH requests.	PMMOResult_Cell_Resource.M1000C266	Sum, nkcttbh, nkrttbh, tot

7.6.9 Cell.Nokia.UMTS.code_occupancy

Code usage statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
average_usage_of_code_capacity	INTENSITY	FLOAT	Average code usage in percentage	PMMOResult_Cell_Resource.M1000C72	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_usage_of_code_capacity	INTENSITY	FLOAT	Calculation for average code percentage	{average_usage_of_code_capacity} / {denominator_for_average_usage_of_code_capacity}	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_average_usage_of_code_capacity	ACCUMULATION	INT8	Denominator for average code usage	PMMOResult_Cell_Resource.M1000C73	Sum, avg, max, min, nkcttbh, nkrttbh, tot
max_code_occupa	INTENSITY	FLOA	Maximum code	PMMOResult_Cell_Res	Constant,

ncy_percentage		T	usage (in percentage) during a measurement period	ource.M1000C75	avg, max, min, nkcttbh, nkrttbh, tot
minimum_code_occupancy_percentage	INTENSITY	FLOAT	Minimum code usage (in percentage) during a measurement period.	PMMOResult_Cell_Resource.M1000C74	Minimum, avg, max, min, nkcttbh, nkrttbh, tot

7.6.10 Cell.Nokia.UMTS.code_request

SF code request by type statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
channelization_code_sf128_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF128 is requested.	PMMOResult_Cell_Resource.M1000C264	Sum, nkcttbh, nkrttbh, tot
channelization_code_sf16_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF16 is requested.	PMMOResult_Cell_Resource.M1000C261	Sum, nkcttbh, nkrttbh, tot
channelization_code_sf256_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF256 is requested.	PMMOResult_Cell_Resource.M1000C265	Sum, nkcttbh, nkrttbh, tot
channelization_code_sf32_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF32 is requested.	PMMOResult_Cell_Resource.M1000C262	Sum, nkcttbh, nkrttbh, tot

channelization_code_sf4_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF4 is requested.	PMMOResult_Cell_Resource.M1000C259	Sum, nkcttbh, nkrttbh, tot
channelization_code_sf64_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF64 is requested.	PMMOResult_Cell_Resource.M1000C263	Sum, nkcttbh, nkrttbh, tot
channelization_code_sf8_requested	ACCUMULATION	INTEGER	The counter indicates how many times the channelization code for SF8 is requested.	PMMOResult_Cell_Resource.M1000C260	Sum, nkcttbh, nkrttbh, tot

7.6.11 Cell.Nokia.UMTS.code_reservation

Channelization code reservation duration statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
duration_of_hsdpa_10_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 10 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C253	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_11_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 11 channelization	PMMOResult_Cell_Resource.M1000C254	Sum, nkcttbh, nkrttbh, tot

			codes have been reserved for HSDPA during the measurement period.		
duration_of_hsdpa_12_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 12 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C255	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_13_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 13 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C256	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_14_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 14 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C257	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_15_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 15 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C258	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_5_codes_reserv	ACCUMULATION	INTEGER	The counter indicates how long	PMMOResult_Cell_Resource.M1000C248	Sum, nkcttbh,

ation			time 5 channelization codes have been reserved for HSDPA during the measurement period.		nkrttbh, tot
duration_of_hsdpa_6_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 6 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C249	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_7_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 7 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C250	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_8_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 8 channelization codes have been reserved for HSDPA during the measurement period.	PMMOResult_Cell_Resource.M1000C251	Sum, nkcttbh, nkrttbh, tot
duration_of_hsdpa_9_codes_reservation	ACCUMULATION	INTEGER	The counter indicates how long time 9 channelization	PMMOResult_Cell_Resource.M1000C252	Sum, nkcttbh, nkrttbh, tot

			codes have been reserved for HSDPA during the measurement period.		

7.6.12 Cell.Nokia.UMTS.dch_reconfiguration_failure

DCH reconfiguration failure statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fail_rec_bgr_dch_dl_ac	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to Admission Control in SRNC in DL.	PMMOResult_Packet_call.M1022C142	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_dl_bts	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to BTS reasons in SRNC in DL.	PMMOResult_Packet_call.M1022C138	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_dl_oth	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to other reasons in SRNC in DL.	PMMOResult_Packet_call.M1022C146	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_dl_trans	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to transport resources in SRNC	PMMOResult_Packet_call.M1022C134	Sum, nkcttbh, nkrttbh, tot

			in DL.		
fail_rec_bgr_dch_ul_ac	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to Admission Control in SRNC in UL.	PMMOResult_Packet_call.M1022C140	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_ul_bts	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to BTS reasons in SRNC in UL. Note: If IP-based Iub transmission is used, uplink transport congestion is seen in this counter.	PMMOResult_Packet_call.M1022C136	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_ul_oth	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to other reasons in SRNC in UL.	PMMOResult_Packet_call.M1022C144	Sum, nkcttbh, nkrttbh, tot
fail_rec_bgr_dch_ul_trans	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for background NRT RB due to transport resources in SRNC	PMMOResult_Packet_call.M1022C132	Sum, nkcttbh, nkrttbh, tot

			in UL.		
fail_rec_intera_dch_dl_ac	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to Admission Control in SRNC in DL.	PMMOResult_Packet_call.M1022C141	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dch_dl_bts	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to BTS reasons in SRNC in DL.	PMMOResult_Packet_call.M1022C137	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dch_dl_oth	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to other reasons in SRNC in DL.	PMMOResult_Packet_call.M1022C145	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dch_dl_trans	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to transport resources in SRNC in DL.	PMMOResult_Packet_call.M1022C133	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dch_ul_ac	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to Admission Control in SRNC in UL.	PMMOResult_Packet_call.M1022C139	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dc	ACCUMULA	INTEG	The number of	PMMOResult_Packet_c	Sum,

h_ul_bts	TION	ER	DCH reconfiguration failures for interactive NRT RB due to BTS reasons in SRNC in UL. Note: If IP-based Iub transmission is used, uplink transport congestion is seen in this counter.	all.M1022C135	nkcttbh, nkrttbh, tot
fail_rec_intera_dch_ul_oth	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to other reasons in SRNC in UL.	PMMOResult_Packet_call.M1022C143	Sum, nkcttbh, nkrttbh, tot
fail_rec_intera_dch_ul_trans	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for interactive NRT RB due to transport resources in SRNC in UL. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C131	Sum, nkcttbh, nkrttbh, tot

7.6.13 Cell.Nokia.UMTS.dedicated_meas

Dedicated measurement reports statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

tx_code_pwr_class_0	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 0 range.	PMMOResult_Cell_Resource.M1000C353	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_1	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 1 range.	PMMOResult_Cell_Resource.M1000C354	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_2	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 2 range.	PMMOResult_Cell_Resource.M1000C355	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_3	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 3 range.	PMMOResult_Cell_Resource.M1000C356	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_4	ACCUMULATION	INTEGER	The number of received Dedicated Measurement	PMMOResult_Cell_Resource.M1000C357	Sum, nkcttbh, nkrttbh,

			Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 4 range.		tot
tx_code_pwr_class_5	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 5 range.	PMMOResult_Cell_Resource.M1000C358	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_6	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 6 range.	PMMOResult_Cell_Resource.M1000C359	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_class_7	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 7 range.	PMMOResult_Cell_Resource.M1000C360	Sum, nkcttbh, nkrttbh, tot
tx_code_pwr_cla	ACCUMULA	INTEG	The number of	PMMOResult_Cell_Res	Sum,

ss_8	TION	ER	received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 8 range.	ource.M1000C361	nkcttbh, nkrttbh, tot
tx_code_pwr_class_9	ACCUMULATION	INTEGER	The number of received Dedicated Measurement Reports received from the WBTS in which the Transmitted Code Power (TxCdPwr) value is inside Class 9 range.	PMMOResult_Cell_Resource.M1000C362	Sum, nkcttbh, nkrttbh, tot

7.6.14 Cell.Nokia.UMTS.downlink_code_load

Downlink spreading code load statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_code_load_below_target	ACCUMULATION	INTEGER	The number of times when (downlink spreading code load on SF128 level) < (target load threshold AMRTargetSC).	PMMOResult_Cell_Resource.M1000C293	Sum, nkcttbh, nkrttbh, tot
amr_code_load_over_target	ACCUMULATION	INTEGER	The number of times when (downlink spreading code load on SF128 level) >= (target load threshold AMRTargetSC) .	PMMOResult_Cell_Resource.M1000C294	Sum, nkcttbh, nkrttbh, tot
amr_code_load_o	ACCUMULA	INTEG	The number of	PMMOResult_Cell_Res	Sum,

verload	TION	ER	times when (downlink spreading code load on SF128 level) >= (over load threshold AMROverSC).	ource.M1000C295	nkcttbh, nkrttbh, tot
amr_code_load_underload	ACCUMULATION	INTEGER	The number of times when (downlink spreading code load on SF128 level) < (under load threshold AMRUnderSC).	PMMOResult_Cell_Resource.M1000C292	Sum, nkcttbh, nkrttbh, tot

7.6.15 Cell.Nokia.UMTS.edch_macd_flow

E-DCH MAC-d flows statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
denom_edch_macd_bgr	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C310, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C311	Sum, nkcttbh, nkrttbh, tot
denom_edch_macd_intera	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C308, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C309	Sum, nkcttbh, nkrttbh, tot
denom_edch_macd_strea	ACCUMULATION	INTEGER	The number of samples taken for	PMMOResult_Cell_Resource.M1000C307	Sum, nkcttbh,

			counter M1000C306, used as a denominator for average calculation.		nkrttbh, tot
sum_edch_macd_bgr	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous E-DCH MAC-d flows per cell for background traffic class.	PMMOResult_Cell_Resource.M1000C310	Sum, nkcttbh, nkrttbh, tot
sum_edch_macd_intera	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous E-DCH MAC-d flows per cell for interactive traffic class.	PMMOResult_Cell_Resource.M1000C308	Sum, nkcttbh, nkrttbh, tot
sum_edch_macd_strea	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous E-DCH MAC-d flows per cell for streaming traffic class.	PMMOResult_Cell_Resource.M1000C306	Sum, nkcttbh, nkrttbh, tot

7.6.16 Cell.Nokia.UMTS.edpcch_ttis

E-DPCCH TTI statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hsupa_number_of_happy_bits	ACCUMULATION	INTEGER	Number of TTIs that the UE has indicated with the Happy Bit in E-DPCCH that it is happy for the current allocation.	PMMOResult_HSDPA_WBTS.M5000C266	Sum, nkcttbh, nkrttbh, tot

hsupa_number_of_unhappy_bits	ACCUMULATION	INTEGER	Number of TTIs that the UE has indicated with the Happy Bit in E-DPCCH that it is unhappy for the current allocation.	PMMOResult_HSDPA_WBTS.M5000C267	Sum, nkcttbh, nkrttbh, tot

7.6.17 Cell.Nokia.UMTS.hsdpa_users

HSDPA Users related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_time_active_hsdpa_users	INTENSITY	FLOAT	Percentage of time where HSDPA users are allocated during the measurement period. The counter is not updated if HSDPA is disabled for the cell.	100 * (1-({duration_of_no_active_hsdpa_users}/{measurement_seconds}))	Average, avg, max, min, nkcttbh, nkrttbh, tot
denom_hsdpa_users_per_cell	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C284, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C285	Sum, nkcttbh, nkrttbh, tot
dura_hsdpa_users_1	ACCUMULATION	INTEGER	This counter indicates the amount of time that 1 active HSDPA user is simultaneously allocated during the measurement	PMMOResult_Cell_Resource.M1000C312	Sum, nkcttbh, nkrttbh, tot

			period.		
dura_hsdpa_users_3	ACCUMULATION	INTEGER	This counter indicates the amount of time that 3 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C313	Sum, nkcttbh, nkrttbh, tot
dura_hsdpa_users_49_to_52	ACCUMULATION	INTEGER	This counter indicates the amount of time that 49 to 52 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C314	Sum, nkcttbh, nkrttbh, tot
dura_hsdpa_users_53_to_56	ACCUMULATION	INTEGER	This counter indicates the amount of time that 53 to 56 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C315	Sum, nkcttbh, nkrttbh, tot
dura_hsdpa_users_57_to_60	ACCUMULATION	INTEGER	This counter indicates the amount of time that 57 to 60 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C316	Sum, nkcttbh, nkrttbh, tot
dura_hsdpa_users_61_to_64	ACCUMULATION	INTEGER	This counter indicates the amount of time	PMMOResult_Cell_Resource.M1000C317	Sum, nkcttbh, nkrttbh,

			that 61 to 64 active HSDPA users are simultaneously allocated during the measurement period.		tot
duration_of_active_hsdpa_users_1_or_2_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 1 or 2 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C168	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_11_or_12_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 11 or 12 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C173	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_13_or_14_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 13 or 14 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C174	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_15_or_16_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 15 or 16 active HSDPA users are	PMMOResult_Cell_Resource.M1000C175	Sum, nkcttbh, nkrttbh, tot

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			simultaneously allocated during the measurement period.		
duration_of_active_hsdpa_users_17_to_20_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 17 to 20 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C240	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_21_to_24_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 21 to 24 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C241	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_25_to_28_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 25 to 28 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C242	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_29_to_32_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 29 to 32 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C243	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_3_or_4_simultaneous	ACCUMULATION	INT8	This counter indicates how long time 3 or 4 active	PMMOResult_Cell_Resource.M1000C169	Sum, nkcttbh, nkrttbh,

_users			HSDPA users are simultaneously allocated during the measurement period.		tot
duration_of_active_hsdpa_users_33_to_36_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 33 to 36 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C244	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_37_to_40_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 37 to 40 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C245	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_41_to_44_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 41 to 44 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C246	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_45_to_48_simultaneous_users	ACCUMULATION	INTEGER	The counter indicates how long time 45 to 48 active HSDPA users are simultaneously	PMMOResult_Cell_Resource.M1000C247	Sum, nkcttbh, nkrttbh, tot

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			allocated during the measurement period.		
duration_of_active_hsdpa_users_5_or_6_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 5 or 6 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C170	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_7_or_8_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 7 or 8 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C171	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsdpa_users_9_or_10_simultaneous_users	ACCUMULATION	INT8	This counter indicates how long time 9 or 10 active HSDPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C172	Sum, nkcttbh, nkrttbh, tot
duration_of_no_active_hsdpa_users	ACCUMULATION	INT8	This counter indicates how long time no HSDPA users are allocated during the measurement period. The counter is not updated if HSDPA is disabled for the cell.	PMMOResult_Cell_Resource.M1000C167	Sum, nkcttbh, nkrttbh, tot
max_hsdpa_users_in_cell	INTENSITY	INTEGER	The maximum number of simultaneous HSDPA users per cell.	PMMOResult_Cell_Resource.M1000C282	Constant, avg, max, min, nkcttbh, nkrttbh,

					tot
sum_hsdpa_users_in_cell	ACCUMULATION	INTEGER	The sum of sampled values for measuring the number of simultaneous HSDPA users in the cell.	PMMOResult_Cell_Resource.M1000C284	Sum, nkcttbh, nkrttbh, tot
tot_duration_active_hsdpa_users	ACCUMULATION	INT8	Total duration of all HSDPA-user allocated (1-16) during the observation period	({duration_of_active_hsdpa_users_1_or_2_simultaneous_users}+ {duration_of_active_hsdpa_users_3_or_4_simultaneous_users}+ {duration_of_active_hsdpa_users_5_or_6_simultaneous_users}+ {duration_of_active_hsdpa_users_7_or_8_simultaneous_users}+ {duration_of_active_hsdpa_users_9_or_10_simultaneous_users}+ {duration_of_active_hsdpa_users_11_or_12_simultaneous_users}+ {duration_of_active_hsdpa_users_13_or_14_simultaneous_users}+ {duration_of_active_hsdpa_users_15_or_16_simultaneous_users}+ {duration_of_active_hsdpa_users_17_to_20_simultaneous_users}+ {duration_of_active_hsdpa_users_21_to_24_simultaneous_users}+ {duration_of_active_hsdpa_users_25_to_28_si	Sum, nkcttbh, nkrttbh, tot

				multaneous_users}+ {duration_of_active_hsdpa_users_29_to_32_simultaneous_users}+ {duration_of_active_hsdpa_users_33_to_36_simultaneous_users}+ {duration_of_active_hsdpa_users_37_to_40_simultaneous_users}+ {duration_of_active_hsdpa_users_41_to_44_simultaneous_users}+ {duration_of_active_hsdpa_users_45_to_48_simultaneous_users})	

7.6.18 Cell.Nokia.UMTS.hsdsch_macd_flow

HS-DSCH MAC-d flows statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
denom_hsdsch_macd_bgr	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C304, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C305	Sum, nkcttbh, nkrttbh, tot
denom_hsdsch_macd_intera	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C302, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C303	Sum, nkcttbh, nkrttbh, tot
denom_hsdsch_macd_strea	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C300, used as a denominator for average calculation.	PMMOResult_Cell_Resource.M1000C301	Sum, nkcttbh, nkrttbh, tot

sum_hsdsch_macd_bgr	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous HS-DSCH MAC-d flows per cell for background traffic class.	PMMOResult_Cell_Resource.M1000C304	Sum, nkcttbh, nkrttbh, tot
sum_hsdsch_macd_intera	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous HS-DSCH MAC-d flows per cell for interactive traffic class.	PMMOResult_Cell_Resource.M1000C302	Sum, nkcttbh, nkrttbh, tot
sum_hsdsch_macd_strea	ACCUMULATION	INTEGER	Sum of samples for calculating average number of simultaneous HS-DSCH MAC-d flows per cell for streaming traffic class.	PMMOResult_Cell_Resource.M1000C300	Sum, nkcttbh, nkrttbh, tot

7.6.19 Cell.Nokia.UMTS.hspdsch_power_class

HS-PDSCH power class statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
sample_hs_pdsch_pwr_class_01	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 01 (HS-PDSCH trx pwr <= 10 %).	PMMOResult_HSDPA_WBTS.M5000C268	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch	ACCUMULA	INTEG	Number of	PMMOResult_HSDPA_	Sum,

_pwr_class_02	TION	ER	samples in HS-PDSCH within the limits of class 02 (10 % < HS-PDSCH trx pwr <= 20 %).	WBTS.M5000C269	nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_03	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 03 (20 % < HS-PDSCH trx pwr <= 30 %).	PMMOResult_HSDPA_WBTS.M5000C270	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_04	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 04 (30 % < HS-PDSCH trx pwr <= 40 %).	PMMOResult_HSDPA_WBTS.M5000C271	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_05	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 05 (40 % < HS-PDSCH trx pwr <= 50 %).	PMMOResult_HSDPA_WBTS.M5000C272	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_06	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 06 (50 % < HS-PDSCH trx pwr <= 60 %).	PMMOResult_HSDPA_WBTS.M5000C273	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_07	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 07 (60 % < HS-PDSCH trx pwr <= 70 %).	PMMOResult_HSDPA_WBTS.M5000C274	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch	ACCUMULA	INTEG	Number of	PMMOResult_HSDPA_	Sum,

_pwr_class_08	TION	ER	samples in HS-PDSCH within the limits of class 08 (70 % < HS-PDSCH trx pwr <= 80 %).	WBTS.M5000C275	nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_09	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 09 (80 % < HS-PDSCH trx pwr <= 90 %).	PMMOResult_HSDPA_WBTS.M5000C276	Sum, nkcttbh, nkrttbh, tot
sample_hs_pdsch_pwr_class_10	ACCUMULATION	INTEGER	Number of samples in HS-PDSCH within the limits of class 10 (90 % < HS-PDSCH trx pwr <= 100 %).	PMMOResult_HSDPA_WBTS.M5000C277	Sum, nkcttbh, nkrttbh, tot

7.6.20 Cell.Nokia.UMTS.hsupa_users

HSUPA Users related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_time_active_hsupa_users	INTENSITY	FLOAT	Percentage of time where HSUPA users are allocated during the measurement period	100 * (1-({duration_of_no_active_hsupa_users}/{measurement_seconds}))	Average, avg, max, min, nkcttbh, nkrttbh, tot
denom_hsupa_users_per_cell	ACCUMULATION	INTEGER	The number of samples taken for counter M1000C286, used as a denominator	PMMOResult_Cell_Resource.M1000C287	Sum, nkcttbh, nkrttbh, tot

			for average calculation.		
dur_hsupa_users_1	ACCUMULATION	INTEGER	This counter indicates the amount of time that 1 active HSUPA user is simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C318	Sum, nkcttbh, nkrttbh, tot
dur_hsupa_users_3	ACCUMULATION	INTEGER	This counter indicates the amount of time that 3 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C319	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_1_or_2_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 1 or 2 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C272	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_11_or_12_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 11 or 12 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C277	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_13_or_14_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 13 or 14 active HSUPA users are simultaneously	PMMOResult_Cell_Resource.M1000C278	Sum, nkcttbh, nkrttbh, tot

			allocated during the measurement period.		
duration_of_active_hsupa_users_15_or_16_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 15 or 16 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C279	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_17_or_18_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 17 or 18 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C280	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_19_or_20_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 19 or 20 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C281	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_3_or_4_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 3 or 4 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C273	Sum, nkcttbh, nkrttbh, tot

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duration_of_active_hsupa_users_5_or_6_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 5 or 6 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C274	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_7_or_8_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 7 or 8 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C275	Sum, nkcttbh, nkrttbh, tot
duration_of_active_hsupa_users_9_or_10_simultaneous_users	ACCUMULATION	INTEGER	This counter indicates how long time 9 or 10 active HSUPA users are simultaneously allocated during the measurement period.	PMMOResult_Cell_Resource.M1000C276	Sum, nkcttbh, nkrttbh, tot
duration_of_no_active_hsupa_users	ACCUMULATION	INTEGER	This counter indicates how long time no HSUPA users are allocated during the measurement period. The counter is not updated if HSUPA is disabled for the cell.	PMMOResult_Cell_Resource.M1000C271	Sum, nkcttbh, nkrttbh, tot
max_hsupa_users_in_cell	INTENSITY	INTEGER	The maximum number of simultaneous HSUPA users per cell.	PMMOResult_Cell_Resource.M1000C283	Constant, avg, max, min, nkcttbh, nkrttbh, tot
sum_hsupa_users_in_cell	ACCUMULATION	INTEGER	The sum of sampled values for	PMMOResult_Cell_Resource.M1000C286	Sum, nkcttbh,

			measuring the number of simultaneous HSUPA users in the cell.		nkrttbh, tot
tot_time_active_hsupa_users	ACCUMULATION	INTEGER	This counter indicates how long time HSUPA users are allocated during the measurement period. This counter is not updated if HSUPA is disabled for the cell.	({measurement_seconds}-{duration_of_no_active_hsupa_users})	Sum, nkcttbh, nkrttbh, tot

7.6.21 Cell.Nokia.UMTS.incoming_handovers_relocations

Incoming handover and relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
number_of_int_rnc_inter_freq_hho_attempts	ACCUMULATION	INT8	A number of inter RNC inter frequency hard handover attempts	PMMOResult_Service_Level.M1001C217	Sum, nkcttbh, nkrttbh, tot
number_of_inter_rnc_intra_freq_hho_attempts	ACCUMULATION	INT8	A number of inter RNC intra frequency hard handover attempts	PMMOResult_Service_Level.M1001C64	Sum, nkcttbh, nkrttbh, tot
number_of_inter_sys_hho_attempts	ACCUMULATION	INT8	A number of inter system hard handover attempts	PMMOResult_Service_Level.M1001C219	Sum, nkcttbh, nkrttbh, tot
number_of_srnc_relocation_attempts	ACCUMULATION	INT8	A number of SRNC relocation	PMMOResult_Service_Level.M1001C62	Sum, nkcttbh,

			attempts		nkrttbh, tot
number_of_unsuccessful_int_rnc_inter_freq_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter RNC inter frequency hard handover attempts	PMMOResult_Service_Level.M1001C218	Sum, nkcttbh, nkrttbh, tot
number_of_unsuccessful_inter_rnc_intra_freq_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter RNC intra frequency hard handover attempts	PMMOResult_Service_Level.M1001C65	Sum, nkcttbh, nkrttbh, tot
number_of_unsuccessful_inter_sys_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter system hard handover attempts	PMMOResult_Service_Level.M1001C220	Sum, nkcttbh, nkrttbh, tot
number_of_unsuccessful_srnc_relocation_attempts	ACCUMULATION	INT8	A number of unsuccessful SRNC relocation attempts	PMMOResult_Service_Level.M1001C63	Sum, nkcttbh, nkrttbh, tot

7.6.22 Cell.Nokia.UMTS.intersys_hho_amr

AMR call handovers statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
att_ganho_amr_rt	ACCUMULATION	INTEGER	The number of attempted AMR call handovers to GAN.	PMMOResult_Inter_System_Handover.M1010C219	Sum, nkcttbh, nkrttbh, tot
con_drps_ganho_amr_rt	ACCUMULATION	INTEGER	The number of failed AMR call handovers to GAN because the UE is lost during the handover procedure.	PMMOResult_Inter_System_Handover.M1010C222	Sum, nkcttbh, nkrttbh, tot
con_drps_is_hho_dr_amr_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during inter-	PMMOResult_Inter_System_Handover.M1010C218	Sum, nkcttbh, nkrttbh,

			system handover caused by Directed Retry for AMR calls.		tot
is_hho_att_dr_amr_rt	ACCUMULATION	INTEGER	The number of inter-system handover attempts caused by Directed Retry for AMR calls.	PMMOResult_Inter_System_Handover.M1010C215	Sum, nkcttbh, nkrttbh, tot
succ_ganho_amr_rt	ACCUMULATION	INTEGER	The number of successful AMR call handovers to GAN.	PMMOResult_Inter_System_Handover.M1010C220	Sum, nkcttbh, nkrttbh, tot
succ_is_hho_dr_amr_rt	ACCUMULATION	INTEGER	The number of successful inter-system handovers caused by Directed Retry for AMR calls.	PMMOResult_Inter_System_Handover.M1010C216	Sum, nkcttbh, nkrttbh, tot
unsucc_ganho_amr_rt	ACCUMULATION	INTEGER	The number of failed AMR call handovers to GAN because the relocation preparation fails or the UE is not able to perform the handover and reverts back to the old configuration.	PMMOResult_Inter_System_Handover.M1010C221	Sum, nkcttbh, nkrttbh, tot
unsucc_is_hho_dr_amr_rt	ACCUMULATION	INTEGER	The number of unsuccessful inter-system handovers caused by Directed Retry for AMR calls.	PMMOResult_Inter_System_Handover.M1010C217	Sum, nkcttbh, nkrttbh, tot

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7.6.23 Cell.Nokia.UMTS.intersys_hho_nrt

NRT inter-system handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_inter_system_handovers_caused_by_imsi_for_nrt	PERCENTAGE	FLOAT	Success rate for inter-system handovers caused by IMSI for NRT.	100 * {successful_inter_system_handovers_caused_by_imsi_for_nrt}/ {inter_system_ho_attempts_caused_by_imsi_for_nrt}	Average, avg, nkcttbh, nkrttbh
canc_isho_add_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to Active Set Update caused by Cell Addition for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C213	Sum, nkcttbh, nkrttbh, tot
canc_isho_cpich_ecno_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to CPICH EcNo for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C209	Sum, nkcttbh, nkrttbh, tot
canc_isho_cpich_rscp_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to CPICH RSCP for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C210	Sum, nkcttbh, nkrttbh, tot
canc_isho_dl_dpch_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to DL DPCH Power for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C212	Sum, nkcttbh, nkrttbh, tot

canc_isho_repl_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to Active Set Update caused by Cell Replacement for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C214	Sum, nkcttbh, nkrttbh, tot
canc_isho_tx_pwr_nrt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to UE Tx Power for UEs with only NRT connection.	PMMOResult_Inter_System_Handover.M1010C211	Sum, nkcttbh, nkrttbh, tot
inter_system_compr_mode_start_not_possible_for_nrt	ACCUMULATION	INT8	Compressed mode start not possible for NRT. When an inter system HHO measurement cant be activated because compressed mode cant be started.	PMMOResult_Inter_System_Handover.M1010C40	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Inter system HHO attempts caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Inter_System_Handover.M1010C72	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Inter system HHO attempts caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Inter_System_Handover.M1010C68	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Inter system HHO attempts caused by DL DPCH approaching	PMMOResult_Inter_System_Handover.M1010C64	Sum, nkcttbh, nkrttbh, tot

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			maximum power capability for NRT.		
inter_system_ho_attempts_caused_by_imsi_for_nrt	ACCUMULATION	INT8	Number of inter-system handover attempts caused by IMSI for NRT.	PMMOResult_Inter_System_Handover.M1010C83	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Inter system HHO attempts caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C60	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Inter system HHO attempts caused by UL DCH quality deterioration for NRT.	PMMOResult_Inter_System_Handover.M1010C56	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C145	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C144	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C147	Sum, nkcttbh, nkrttbh, tot

load_based_isho_attempts_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C142	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C143	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C146	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C109	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_cap	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after	PMMOResult_Inter_System_Handover.M1010C108	Sum, nkcttbh, nkrttbh,

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a_rejection_ul_for_nrt			measuring with compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.		tot
load_based_isho_meas_with_com_mod_due_to_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C111	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C106	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C107	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to	PMMOResult_Inter_System_Handover.M1010C110	Sum, nkcttbh, nkrttbh, tot

			ReservationRateSC > LHOresRateSC - by UEs with NRT connection.		
load_based_isho_meas_without_com_mod_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C121	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C120	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C123	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after	PMMOResult_Inter_System_Handover.M1010C118	Sum, nkcttbh, nkrttbh,

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prxtotal_for_nrt			measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.		tot
load_based_isho_meas_without_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C119	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C122	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for NRT, and the inter frequency measurement was triggered due to low measured CPICH Ec/No.	PMMOResult_Inter_System_Handover.M1010C55	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for NRT, and the inter frequency	PMMOResult_Inter_System_Handover.M1010C54	Sum, nkcttbh, nkrttbh, tot

			measurement was triggered due to low measured CPICH RSCP.		
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_dl_dpch_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for NRT, and the inter frequency measurement was triggered due to DL DPCH.	PMMOResult_Inter_System_Handover.M1010C53	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with an NRT connection.	PMMOResult_Inter_System_Handover.M1010C89	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_ue_tx_pwr_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for NRT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.	PMMOResult_Inter_System_Handover.M1010C52	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_i	ACCUMULA	INT8	When no	PMMOResult_Inter_S	Sum,

nter_syst_hho_bec_of_no_cell_good_enough_due_to_ul_dch_qual_for_nrt	TION		neighbouring cell is good enough for inter system HHO for NRT, and the inter frequency measurement was triggered by a quality deterioration report from outer loop power control.	ystem_Handover.M1010C51	nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-system HHO decisions after measuring with compressed mode due to IMSI - by UEs with NRT connection. HC triggers the start of inter-system measurements for a UE due to the fact that Immediate IMSI based handover cause has triggered. The measurement is enabled by the parameter IMSIbasedGsmHo. For more information on the parameter, see WCDMA RAS05 Parameter Dictionary.	PMMOResult_Inter_System_Handover.M1010C87	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for NRT.	PMMOResult_Inter_System_Handover.M1010C45	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_me	ACCUMULATION	INT8	Number of started inter system HHO	PMMOResult_Inter_System_Handover.M10	Sum, nkcttbh,

as_with_com_mod_due_to_cpich_rscp_for_nrt			measurements with compressed mode due to low measured CPICH RSCP by the UEs for NRT.	10C44	nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_dl_dpch_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to DL DPCH by the UEs for NRT.	PMMOResult_Inter_System_Handover.M10 10C43	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_ue_tx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Inter_System_Handover.M10 10C42	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	PMMOResult_Inter_System_Handover.M10 10C41	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to low measured CPICH Ec/No by the UEs for NRT.	PMMOResult_Inter_System_Handover.M10 10C50	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_in	ACCUMULA	INT8	Number of started	PMMOResult_Inter_S	Sum,

ter_syst_hho_meas_without_com_mod_due_to_cpich_rscp_for_nrt	TION		inter system HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for NRT.	ystem_Handover.M1010C49	nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_dl_dpch_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to DL DPCH by the UEs for NRT.	PMMOResult_Inter_System_Handover.M1010C48	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-system HHO decisions after measuring without compressed mode due to IMSI - by UEs with NRT connection. HC triggers the start of inter-system measurements for a UE due to the fact that Immediate IMSI based handover cause has triggered. The measurement is enabled by the parameter IMSIbasedGsmHo. For more information on the parameter, see WCDMA RAS05 Parameter Dictionary.	PMMOResult_Inter_System_Handover.M1010C88	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_ue_tx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE	PMMOResult_Inter_System_Handover.M1010C47	Sum, nkcttbh, nkrttbh, tot

			transmission power approaches its maximum power capability.		
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	PMMOResult_Inter_System_Handover.M1010C46	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason CapaReqRejRateDL > LHOcapaReqRejRateDL ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C133	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason CapaReqRejRateUL > LHOcapaReqRejRat	PMMOResult_Inter_System_Handover.M1010C132	Sum, nkcttbh, nkrttbh, tot

			eUL ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.		
not_started_load_based_isho_because_no_cell_good_enough_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason PrxTotal > PrxTarget + LHOpwrOffsetUL ends without making an inter- system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C130	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter- system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C131	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to	PMMOResult_Inter_System_Handover.M1010C134	Sum, nkcttbh, nkrttbh, tot

_to_reservation_rate_sc_for_nrt			Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.		
not_started_load_based_isho_no_cell_good_enough_due_hw_or_logical_resource_limit_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason HW or logical resource limitation ends without making an inter- system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C135	Sum, nkcttbh, nkrttbh, tot
not_started_service_based_isho_because_no_cell_good_enough_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Service Based ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C136	Sum, nkcttbh, nkrttbh, tot

rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Inter_System_Handover.M1010C75	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Inter_System_Handover.M1010C71	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C67	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_imsi_for_nrt	ACCUMULATION	INT8	Number of RRC connection drops during inter- system handover caused by IMSI for NRT.	PMMOResult_Inter_System_Handover.M1010C86	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C63	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Inter_System_Handover.M1010C59	Sum, nkcttbh, nkrttbh, tot

rrc_connection_drops_during_isho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C183	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_isho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C182	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_isho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C178	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_isho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C179	Sum, nkcttbh, nkrttbh, tot
rrc_connection_d	ACCUMULA	INTEG	The number of RRC	PMMOResult_Inter_S	Sum,

rops_during_service_based_isho_for_nrt	TION	ER	connection drops during Service Based inter-system handover - by UEs with NRT connection.	ystem_Handover.M1010C184	nkcttbh, nkrttbh, tot
rrc_connection_drops_isho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C181	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_isho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C180	Sum, nkcttbh, nkrttbh, tot
service_based_isho_attempts_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-system handover attempts - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C148	Sum, nkcttbh, nkrttbh, tot
service_based_isho_meas_with_com_mod_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-system HHO decisions after measuring with compressed mode - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C112	Sum, nkcttbh, nkrttbh, tot
service_based_isho_meas_without_com_mod_for_n	ACCUMULATION	INTEGER	The number of Service Based inter-system HHO	PMMOResult_Inter_System_Handover.M1010C124	Sum, nkcttbh, nkrttbh,

rt			decisions after measuring without compressed mode - by UEs with NRT connection.		tot
successful_inter_system_handovers_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Successful inter system hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Inter_System_Handover.M1010C73	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Successful inter system hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Inter_System_Handover.M1010C69	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Successful inter system hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C65	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	Number of successful inter-system handovers caused by IMSI for NRT.	PMMOResult_Inter_System_Handover.M1010C84	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Successful inter system hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C61	Sum, nkcttbh, nkrttbh, tot
successful_inter_	ACCUMULA	INT8	Successful inter	PMMOResult_Inter_S	Sum,

system_handovers_caused_by_ul_dch_qual_for_nrt	TION		system hard handovers caused by UL DCH quality deterioration for NRT.	ystem_Handover.M1010C57	nkcttbh, nkrttbh, tot
successful_isho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C157	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C156	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C159	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C158	Sum, nkcttbh, nkrttbh, tot
successful_load_based_isho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to	PMMOResult_Inter_System_Handover.M1010C154	Sum, nkcttbh, nkrttbh, tot

			PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.		
successful_load_based_isho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C155	Sum, nkcttbh, nkrttbh, tot
successful_service_based_isho_for_nrt	ACCUMULATION	INTEGER	The number of successful Service Based inter-system handover - by UEs with NRT connection.	PMMOResult_Inter_System_Handover.M1010C160	Sum, nkcttbh, nkrttbh, tot
ue_is_not_able_to_execute_inter_system_hho_for_nrt	ACCUMULATION	INT8	UE is not able to execute an inter system HHO for NRT.	PMMOResult_Inter_System_Handover.M1010C39	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Inter_System_Handover.M1010C74	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Inter_System_Handover.M1010C70	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handov	ACCUMULATION	INT8	Unsuccessful inter frequency hard	PMMOResult_Inter_System_Handover.M10	Sum, nkcttbh,

ers_caused_by_dl_dpch_pwr_for_nrt			handovers caused by DL DPCH approaching maximum power capability for NRT.	10C66	nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	Number of unsuccessful inter-system handovers caused by IMSI for NRT. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C85	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Inter_System_Handover.M1010C62	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Inter_System_Handover.M1010C58	Sum, nkcttbh, nkrttbh, tot

unsuccessful_ishо_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C169	Sum, nkcttbh, nkrttbh, tot
unsuccessful_ishо_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection. --- If the UE fails to	PMMOResult_Inter_System_Handover.M1010C168	Sum, nkcttbh, nkrttbh, tot

			establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_isho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to HW or logical resource limitation - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the	PMMOResult_Inter_System_Handover.M1010C171	Sum, nkcttbh, nkrttbh, tot

			normal operation as if no hard handover attempt had occurred.		
unsuccessful_isho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C170	Sum, nkcttbh, nkrttbh, tot
unsuccessful_load_based_isho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to PrxTotal > PrxTarget + LHOpwrOffsetUL -	PMMOResult_Inter_System_Handover.M1010C166	Sum, nkcttbh, nkrttbh, tot

			by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_load_based_isho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The	PMMOResult_Inter_System_Handover.M1010C167	Sum, nkcttbh, nkrttbh, tot

			hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_service_based_isho_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-system handovers - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C172	Sum, nkcttbh, nkrttbh, tot

7.6.24 Cell.Nokia.UMTS.intersys_hho_rt

RT inter-system handover statistics

KPI	Type	Data	Description	Derivation	Aggregat

		Type			ion
_%_inter_system_hho_cs_rt_success	PERCENTAGE	FLOAT	Success rate for inter-system handovers for calls with CS RT RABs.	100 * {inter_system_hho_cs_rt_success}/ {inter_system_hho_cs_rt_attempts}	Average, avg, nkcttbh, nkrttbh
_%_inter_system_hho_ps_rt_success	PERCENTAGE	FLOAT	Success rate for inter-system handovers for calls with PS RT RABs.	100 * {inter_system_hho_ps_rt_success}/ {inter_system_hho_ps_rt_attempts}	Average, avg, nkcttbh, nkrttbh
_%_inter_system_hho_rt_dropped	PERCENTAGE	FLOAT	Percentage number of inter system handover which results in call dropped for rt service connection.	100 * {tot_inter_system_hho_rt_dropped}/ {tot_inter_system_hho_rt_attempts}	Average, avg, nkcttbh, nkrttbh
_%_inter_system_hho_rt_success	PERCENTAGE	FLOAT	Percentage number of inter system handover successful for rt service connection.	100 * {tot_inter_system_hho_rt_success}/ {tot_inter_system_hho_rt_attempts}	Average, avg, nkcttbh, nkrttbh
_%_inter_system_hho_rt_unsuccess	PERCENTAGE	FLOAT	Percentage number of inter system handover not successful for rt service connection.	100 * {tot_inter_system_hho_rt_unsuccess}/ {tot_inter_system_hho_rt_attempts}	Average, avg, nkcttbh, nkrttbh
_%_successful_inter_syst_hard_handovers_caused_by_directed_emergency_call	PERCENTAGE	FLOAT	Success rate for Directed Emergency Call inter-system handovers.	100 * {successful_inter_syst_hard_handovers_caused_by_directed_emergency_call}/ {inter_syst_hho_attempts_caused_by_directed_emergency_call}	Average, avg, nkcttbh, nkrttbh
_%_successful_inter_system_handovers_caused_by_imsi_for_rt	PERCENTAGE	FLOAT	Success rate for inter-system handovers caused by IMSI for RT.	100 * {successful_inter_system_handovers_caused_by_imsi_for_rt}/ {inter_system_ho_attempts_caused_by_imsi_	Average, avg, nkcttbh, nkrttbh

				for_rt}	
_%_successful_inter_system_handovers_caused_by_wps_for_rt	PERCENTAGE	FLOAT	The percentage of successful inter-system handovers caused by Wireless Priority Service.	100 * {successful_inter_system_handovers_caused_by_wps_for_rt}/ {inter_system_ho_attempts_caused_by_wps_for_rt}	Average, avg, nkcttbh, nkrttbh
_%_successful_isho_caused_by_capa_rejection_dl_for_rt	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-system handovers due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.	100 * {successful_isho_caused_by_capa_rejection_dl_for_rt}/ {load_based_isho_attempts_caused_by_capa_rejection_dl_for_rt}	Average, avg, nkcttbh, nkrttbh
_%_successful_isho_caused_by_capa_rejection_ul_for_rt	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-system handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	100 * {successful_isho_caused_by_capa_rejection_ul_for_rt}/ {load_based_isho_attempts_caused_by_capa_rejection_ul_for_rt}	Average, avg, nkcttbh, nkrttbh
canc_isho_add_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to Active Set Update caused by Cell Addition for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C207	Sum, nkcttbh, nkrttbh, tot
canc_isho_cpich_ecno_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to	PMMOResult_Inter_System_Handover.M1010C203	Sum, nkcttbh, nkrttbh, tot

			CPICH EcNo for UEs with RT connection.		
canc_isho_cpich_rscp_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to CPICH RSCP for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C204	Sum, nkcttbh, nkrttbh, tot
canc_isho_dl_dpch_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to DL DPCH Power for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C206	Sum, nkcttbh, nkrttbh, tot
canc_isho_repl_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to Active Set Update caused by Cell Replacement for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C208	Sum, nkcttbh, nkrttbh, tot
canc_isho_tx_pwr_rt	ACCUMULATION	INTEGER	The number of inter-system HHO measurements cancelled due to UE Tx Power for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C205	Sum, nkcttbh, nkrttbh, tot
inter_syst_hho_attempts_caused_by_directed_emergency_call	ACCUMULATION	INT8	Number of Directed Emergency Call inter-system handover attempts.	PMMOResult_Inter_System_Handover.M1010C97	Sum, nkcttbh, nkrttbh, tot
inter_system_compr_mode_start_not_possible_for_rt	ACCUMULATION	INT8	Compressed mode start not possible for RT. When an inter system HHO measurement can't be activated because	PMMOResult_Inter_System_Handover.M1010C2	Sum, nkcttbh, nkrttbh, tot

			compressed mode can't be started.		
inter_system_hho_cs_rt_attempts	ACCUMULATION	INT8	Number of inter-system HHO attempts for calls with CS RT RABs. Only the SRNC can update the counter. This counter is updated in the cell that is the best cell in the active set on the SRNC side when the RNC starts the HHO attempt.	PMMOResult_Inter_System_Handover.M1010C90	Sum, nkcttbh, nkrttbh, tot
inter_system_hho_cs_rt_success	ACCUMULATION	INT8	Number of successful inter-system handovers for calls with CS RT RABs. Only the SRNC can update the counter. This counter is updated in the cell that is the best cell in the active set on the SRNC side when the RNC starts the HHO attempt.	PMMOResult_Inter_System_Handover.M1010C92	Sum, nkcttbh, nkrttbh, tot
inter_system_hho_ps_rt_attempts	ACCUMULATION	INT8	Number of inter-system HHO attempts for calls with PS RT RABs. Only the SRNC can update the counter. This counter is updated in the cell that is the best cell in the active set on	PMMOResult_Inter_System_Handover.M1010C91	Sum, nkcttbh, nkrttbh, tot

			the SRNC side when the RNC starts the HHO attempt.		
inter_system_hho_ps_rt_success	ACCUMULATION	INT8	Number of successful inter-system handovers for calls with PS RT RABs. Only the SRNC can update the counter. This counter is updated in the cell that is the best cell in the active set on the SRNC side when the RNC starts the HHO attempt.	PMMOResult_Inter_System_Handover.M1010C93	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Inter system HHO attempts caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Inter_System_Handover.M1010C34	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Inter system HHO attempts caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Inter_System_Handover.M1010C30	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Inter system HHO attempts caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C26	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_imsi_for_rt	ACCUMULATION	INT8	Number of inter-system handover attempts caused by IMSI for RT.	PMMOResult_Inter_System_Handover.M1010C76	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Inter system HHO attempts caused by UE transmission power approaching maximum power	PMMOResult_Inter_System_Handover.M1010C22	Sum, nkcttbh, nkrttbh, tot

			capability for RT.		
inter_system_ho_attempts_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Inter system HHO attempts caused by UL DCH quality deterioration for RT.	PMMOResult_Inter_System_Handover.M1010C18	Sum, nkcttbh, nkrttbh, tot
inter_system_ho_attempts_caused_by_wps_for_rt	ACCUMULATION	INTEGER	The number of inter-system handover attempts caused by Wireless Priority Service.	PMMOResult_Inter_System_Handover.M1010C185	Sum, nkcttbh, nkrttbh, tot
isho_decisions_after_comp_mode_meas_due_to_emergency_call	ACCUMULATION	INT8	The number of inter-system HHO decisions after measurements with the compressed mode due to an emergency call - by UEs with the RT connection.	PMMOResult_Inter_System_Handover.M1010C94	Sum, nkcttbh, nkrttbh, tot
isho_decisions_after_meas_without_comp_mode_due_to_emergency_call	ACCUMULATION	INT8	The number of inter-system HHO decisions after measuring without compressed mode due to emergency call - by UEs with an RT connection.	PMMOResult_Inter_System_Handover.M1010C95	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C196	Sum, nkcttbh, nkrttbh, tot
load_based_isho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Inter_S	Sum,

attempts_caused_by_capa_rejection_ul_for_rt	TION	ER	Based inter-system handover attempts due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	ystem_Handover.M1010C195	nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C140	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C137	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C138	Sum, nkcttbh, nkrttbh, tot
load_based_isho_attempts_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C139	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_capa_rejection_dl_fo	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with	PMMOResult_Inter_System_Handover.M1010C190	Sum, nkcttbh, nkrttbh, tot

r_rt			compressed mode due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.		
load_based_isho_meas_with_com_mod_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C189	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C104	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C101	Sum, nkcttbh, nkrttbh, tot
load_based_isho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Inter_S	Sum,

meas_with_com_mod_due_to_ptxtotal_for_rt	TION	ER	Based inter-system HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	ystem_Handover.M1010C102	nkcttbh, nkrttbh, tot
load_based_isho_meas_with_com_mod_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring with compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C103	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C192	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C191	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_co	ACCUMULATION	INTEGER	The number of Load Based inter-system	PMMOResult_Inter_System_Handover.M101	Sum, nkcttbh,

m_mod_due_to_hw_or_logical_resource_limitation_for_rt			HHO decisions after measuring without compressed mode due to HW or logical resource limitation - by UEs with RT connection.	0C116	nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C113	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C114	Sum, nkcttbh, nkrttbh, tot
load_based_isho_meas_without_com_mod_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-system HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C115	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_i	ACCUMULA	INT8	When no	PMMOResult_Inter_S	Sum,

nter_syst_hho_bec_of_no_cell_good_enough_due_to_cpich_ecno_for_rt	TION		neighbouring cell is good enough for inter system HHO for RT, and the inter frequency measurement was triggered due to low measured CPICH Ec/No.	ystem_Handover.M1010C17	nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for RT, and the inter frequency measurement was triggered due to low measured CPICH RSCP.	PMMOResult_Inter_System_Handover.M1010C16	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_dl_dpch_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for RT, and the inter frequency measurement was triggered due to DL DPCH.	PMMOResult_Inter_System_Handover.M1010C15	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with an RT connection.	PMMOResult_Inter_System_Handover.M1010C82	Sum, nkcttbh, nkrttbh, tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_goo	ACCUMULATION	INT8	When no neighbouring cell is good enough for	PMMOResult_Inter_System_Handover.M1010C14	Sum, nkcttbh, nkrttbh,

d_enough_due_to_ue_trx_pwr_for_rt			inter system HHO for RT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.		tot
nbr_of_not_sta_inter_syst_hho_bec_of_no_cell_good_enough_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter system HHO for RT, and the inter frequency measurement was triggered by a quality deterioration report from outer loop power control.	PMMOResult_Inter_System_Handover.M1010C13	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C7	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to low measured CPICH RSCP by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C6	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_dl_dpch	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode	PMMOResult_Inter_System_Handover.M1010C5	Sum, nkcttbh, nkrttbh, tot

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

_for_rt			due to DL DPCH by the UEs for RT.		
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of inter-system HHO decisions after measuring with compressed mode due to IMSI - by UEs with RT connection. HC triggers the start of inter-system measurements for a UE due to the fact that Immediate IMSI based handover cause has triggered. The measurement is enabled by the parameter IMSIbasedGsmHo. For more information on the parameter, see WCDMA RAS05 Parameter Dictionary.	PMMOResult_Inter_System_Handover.M1010C80	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_ue_tx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Inter_System_Handover.M1010C4	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_with_com_mod_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements with compressed mode due to quality deterioration report from outer loop	PMMOResult_Inter_System_Handover.M1010C3	Sum, nkcttbh, nkrttbh, tot

			power control by the UEs for RT.		
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C12	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C11	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_dl_dpch_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to DL DPCH by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C10	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of inter-system HHO decisions after measuring without compressed mode due to IMSI - by UEs with RT connection. HC triggers the start of inter-system measurements for a UE due to the fact that Immediate	PMMOResult_Inter_System_Handover.M1010C81	Sum, nkcttbh, nkrttbh, tot

			IMSI based handover cause has triggered. The measurement is enabled by the parameter IMSIbasedGsmHo. For more information on the parameter, see WCDMA RAS05 Parameter Dictionary.		
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_ue_tx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Inter_System_Handover.M1010C9	Sum, nkcttbh, nkrttbh, tot
nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter system HHO measurements without compressed mode due to quality deterioration report from outer loop power control by the UEs for RT.	PMMOResult_Inter_System_Handover.M1010C8	Sum, nkcttbh, nkrttbh, tot
not_started_inter_syst_hho_bec_of_no_cell_good_enough_due_to_emergency_call	ACCUMULATION	INT8	The number of occasions when no neighbouring cell is good enough for inter-system HHO for RT and the inter-system measurement was triggered due to emergency call.	PMMOResult_Inter_System_Handover.M1010C96	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_becau	ACCUMULATION	INTEGER	The number of times that an inter-	PMMOResult_Inter_System_Handover.M101	Sum, nkcttbh,

se_no_cell_good_enough_due_to_capa_rejection_dl_for_rt			system HHO measurement due to Load Based HO reason CapaReqRejRateDL more than LHOCapaReqRejRateDL ends without making an intersystem HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.	0C194	nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of times that an inter-system HHO measurement due to Load Based HO reason CapaReqRejRateUL more than LHOcapaReqRejRateUL ends without making an intersystem HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C193	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason PrxTotal > PrxTarget + LHOpwrOffsetUL	PMMOResult_Inter_System_Handover.M1010C125	Sum, nkcttbh, nkrttbh, tot

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			ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.		
not_started_load_based_isho_because_no_cell_good_enough_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C126	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_because_no_cell_good_enough_due_to_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C127	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_isho_no_cell_good_enough_due_hw_or_logi	ACCUMULATION	INTEGER	[not_started_load_based_isho_because_no_cell_good_enough_due_to_hw_or_l	PMMOResult_Inter_System_Handover.M1010C128	Sum, nkcttbh, nkrttbh, tot

cal_resource_limit_for_rt			ogical_resource_limitation_for_rt] - The number of times when an inter-system HHO measurement due to Load Based HO reason HW or logical resource limitation ends without making an inter- system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.		
not_started_service_based_isho_because_no_cell_good_enough_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-system HHO measurement due to Service Based ends without making an inter-system HHO attempt, because no cell is good enough for inter-system HHO - for UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C129	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_hho_caused_by_directed_emergency_call	ACCUMULATION	INT8	Number of RRC connection drops during Directed Emergency Call handover.Number of RRC connection drops during Directed Emergency Call handover.	PMMOResult_Inter_System_Handover.M1010C100	Sum, nkcttbh, nkrttbh, tot
rrc_connection_d	ACCUMULA	INT8	RRC connection	PMMOResult_Inter_S	Sum,

rops_during_inter_syst_ho_caused_by_cpich_ecno_for_rt	TION		drops during inter system hard handovers caused by low measured absolute CPICH Ec/No for RT.	ystem_Handover.M1010C37	nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Inter_System_Handover.M1010C33	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C29	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_imsi_for_rt	ACCUMULATION	INT8	Number of RRC connection drops during inter- system handover caused by IMSI for RT.	PMMOResult_Inter_System_Handover.M1010C79	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C25	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_syst_ho_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	RRC connection drops during inter system hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Inter_System_Handover.M1010C21	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter	ACCUMULATION	INTEGER	The number of RRC connection drops	PMMOResult_Inter_System_Handover.M101	Sum, nkcttbh,

_syst_ho_caused_by_wps_for_rt			during intersystem handover caused by Wireless Priority Service.	0C188	nkrttbh, tot
rrc_connection_drops_during_isho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C176	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_isho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C175	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_isho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C173	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_isho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to PtxTotal >	PMMOResult_Inter_System_Handover.M1010C174	Sum, nkcttbh, nkrttbh, tot

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

			PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.		
rrc_connection_drops_during_service_based_isho_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Service Based inter-system handover - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C177	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_isho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C202	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_isho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter-system handover due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C201	Sum, nkcttbh, nkrttbh, tot
service_based_isho_attempts_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-system handover attempts - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C141	Sum, nkcttbh, nkrttbh, tot
service_based_isho_meas_with_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-system HHO decisions after measuring with compressed mode - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C105	Sum, nkcttbh, nkrttbh, tot

service_based_isho_meas_without_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-system HHO decisions after measuring without compressed mode - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C117	Sum, nkcttbh, nkrttbh, tot
successful_inter_syst_hard_handovers_caused_by_directed_emergency_call	ACCUMULATION	INT8	Number of successful Directed Emergency Call inter-system handovers.	PMMOResult_Inter_System_Handover.M1010C98	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Successful inter system hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Inter_System_Handover.M1010C35	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Successful inter system hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Inter_System_Handover.M1010C31	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Successful inter system hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C27	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	Number of successful inter-system handovers caused by IMSI for RT.	PMMOResult_Inter_System_Handover.M1010C77	Sum, nkcttbh, nkrttbh, tot

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successful_inter_system_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Successful inter system hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C23	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Successful inter system hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Inter_System_Handover.M1010C19	Sum, nkcttbh, nkrttbh, tot
successful_inter_system_handovers_caused_by_wps_for_rt	ACCUMULATION	INTEGER	The number of successful inter-system handovers caused by Wireless Priority Service.	PMMOResult_Inter_System_Handover.M1010C186	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handovers due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C198	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C197	Sum, nkcttbh, nkrttbh, tot
successful_isho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C152	Sum, nkcttbh, nkrttbh, tot

successful_isho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C151	Sum, nkcttbh, nkrttbh, tot
successful_load_based_isho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C149	Sum, nkcttbh, nkrttbh, tot
successful_load_based_isho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-system handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C150	Sum, nkcttbh, nkrttbh, tot
successful_service_based_isho_for_rt	ACCUMULATION	INTEGER	The number of successful Service Based inter-system handover - by UEs with RT connection.	PMMOResult_Inter_System_Handover.M1010C153	Sum, nkcttbh, nkrttbh, tot
tot_inter_system_hho_rt_attempts	ACCUMULATION	INT8	Total number of inter system handover attempts for rt service connection.	({inter_system_ho_attempts_caused_by_ul_dch_qual_for_rt}+ {inter_system_ho_attempts_caused_by_ue_trx_pwr_for_rt}+ {inter_system_ho_atte	Sum, nkcttbh, nkrttbh, tot

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				mpts_caused_by_dl_dpch_pwr_for_rt}+ {inter_system_ho_attempts_caused_by_cpich_rscp_for_rt}+ {inter_system_ho_attempts_caused_by_cpich_ecno_for_rt}+ {inter_system_ho_attempts_caused_by_imsi_for_rt})	
tot_inter_system_hho_rt_dropped	ACCUMULATION	INT8	Total number of inter system handover which results in call dropped for rt service connection.	({rrc_connection_drops_during_inter_syst_ho_caused_by_ul_dch_qual_for_rt}+ {rrc_connection_drops_during_inter_syst_ho_caused_by_ue_trx_pwr_for_rt}+ {rrc_connection_drops_during_inter_syst_ho_caused_by_dl_dpch_pwr_for_rt}+ {rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_rscp_for_rt}+ {rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_ecno_for_rt}+ {rrc_connection_drops_during_inter_syst_ho_caused_by_imsi_for_rt})	Sum, nkcttbh, nkrttbh, tot
tot_inter_system_hho_rt_success	ACCUMULATION	INT8	Total number of inter system handover successful for rt service connection.	({successful_inter_system_handovers_caused_by_ul_dch_qual_for_rt}+ {successful_inter_system_handovers_caused_by_ue_trx_pwr_for_rt}+ {successful_inter_system_handovers_caused_	Sum, nkcttbh, nkrttbh, tot

				by_dl_dpch_pwr_for_rt}+ {successful_inter_system_handovers_caused_by_cpich_rscp_for_rt} + {successful_inter_system_handovers_caused_by_cpich_ecno_for_rt} + {successful_inter_system_handovers_caused_by_imsi_for_rt})	
tot_inter_system_hho_rt_unsuccess	ACCUMULATION	INT8	Total number of inter system handover not successful for rt service connection.	({unsuccessful_inter_system_handovers_caused_by_ul_dch_qual_for_rt}+ {unsuccessful_inter_system_handovers_caused_by_ue_trx_pwr_for_rt}+ {unsuccessful_inter_system_handovers_caused_by_dl_dpch_pwr_for_rt}+ {unsuccessful_inter_system_handovers_caused_by_cpich_rscp_for_rt}+ {unsuccessful_inter_system_handovers_caused_by_cpich_ecno_for_rt}+ {unsuccessful_inter_system_handovers_caused_by_imsi_for_rt}+ {utran_is_not_able_to_execute_inter_system_hho_for_rt}+ {ue_is_not_able_to_ex	Sum, nkcttbh, nkrttbh, tot

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

				ecute_inter_system_hho_for_rt})	
ue_is_not_able_to_execute_inter_system_hho_for_rt	ACCUMULATION	INT8	UE is not able to execute an inter system HHO for RT.	PMMOResult_Inter_System_Handover.M1010C1	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_syst_hard_handovers_caused_by_directed_emergency_call	ACCUMULATION	INT8	Number of unsuccessful Directed Emergency Call handovers, the UE reverts back to the configuration prior to the reception of the handover command.	PMMOResult_Inter_System_Handover.M1010C99	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Inter_System_Handover.M1010C36	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Inter_System_Handover.M1010C32	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C28	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	Number of unsuccessful inter-system handovers caused by IMSI for RT. --- If the UE fails to establish the physical channel(s) indicated in the	PMMOResult_Inter_System_Handover.M1010C78	Sum, nkcttbh, nkrttbh, tot

			handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_system_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Inter_System_Handover.M1010C24	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Unsuccessful inter system hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Inter_System_Handover.M1010C20	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_system_handovers_caused_by_wps_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful inter-system handovers caused by Wireless Priority Service. If the UE fails to establish the physical channel (s) indicated in the handover command,	PMMOResult_Inter_System_Handover.M1010C187	Sum, nkcttbh, nkrttbh, tot

			the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_isho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to CapaReqRejRateDL more than LHOCapaReqRejRateDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had	PMMOResult_Inter_System_Handover.M1010C200	Sum, nkcttbh, nkrttbh, tot

			occurred.		
unsuccessful_isho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C199	Sum, nkcttbh, nkrttbh, tot
unsuccessful_isho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to HW or logical resource limitation - by UEs with RT connection. --- If the UE fails to establish	PMMOResult_Inter_System_Handover.M1010C164	Sum, nkcttbh, nkrttbh, tot

			the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_isho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to ReservationRateSC > LHOresRateSC - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the	PMMOResult_Inter_System_Handover.M1010C163	Sum, nkcttbh, nkrttbh, tot

			normal operation as if no hard handover attempt had occurred.		
unsuccessful_load_based_isho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Inter_System_Handover.M1010C161	Sum, nkcttbh, nkrttbh, tot
unsuccessful_load_based_isho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-system handovers due to PtxTotal > PtxTarget +	PMMOResult_Inter_System_Handover.M1010C162	Sum, nkcttbh, nkrttbh, tot

			LHOpwrOffsetDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_service_based_isho_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-system handovers - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover	PMMOResult_Inter_System_Handover.M1010C165	Sum, nkcttbh, nkrttbh, tot

			procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
utran_is_not_able_to_execute_inter_system_hho_for_nrt	ACCUMULATION	INT8	UTRAN is not able to execute an inter system HHO for NRT.	PMMOResult_Inter_System_Handover.M1010C38	Sum, nkcttbh, nkrttbh, tot
utran_is_not_able_to_execute_inter_system_hho_for_rt	ACCUMULATION	INT8	UTRAN is not able to execute an inter system HHO for RT.	PMMOResult_Inter_System_Handover.M1010C0	Sum, nkcttbh, nkrttbh, tot

7.6.25 Cell.Nokia.UMTS.intrasys_hho_inter_nrt

NRT intra-system inter-frequency handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_inter_freq_handovers_caused_by_imsi_for_nrt	PERCENTAGE	FLOAT	Success rate for inter-frequency handover attempts caused by IMSI for NRT.	100 * {successful_inter_freq_handovers_caused_by_imsi_for_nrt}/ {inter_freq_ho_attempts_caused_by_imsi_for_nrt}	Average, avg, nkcttbh, nkrttbh
connection_drops_during_inter_rnc_hho_caused_by_hspa_scc	ACCUMULATION	INTEGER	The number of user plane drops during outgoing Inter-RNC Intrafrequency HHO triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO	PMMOResult_Intra_System_Handover.M1008C246	Sum, nkcttbh, nkrttbh, tot

			operation.		
ifho_because_no_cell_good_enough_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateDL > LHOcapaReqRejRateDL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C161	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_Handover.M1008C98	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_Handover.M1008C94	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C90	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency handover attempts caused by IMSI for NRT.	PMMOResult_Intra_System_Handover.M1008C122	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by	ACCUMULATION	INT8	Inter frequency HHO attempts	PMMOResult_Intra_System_Handover.M10	Sum, nkcttbh,

_ue_trx_pwr_for_nrt			caused by UE transmission power approaching maximum power capability for NRT.	08C86	nkrttbh, tot
inter_freq_ho_attempts_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_Handover.M1008C82	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C71	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH RSCP by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C70	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to DL DPCH by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C69	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring without compressed mode	PMMOResult_Intra_System_Handover.M1008C126	Sum, nkcttbh, nkrttbh, tot

			due to IMSI - for UEs with an NRT connection.		
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C68	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C67	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH Ec/No by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C76	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C75	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to DL DPCH by the UEs	PMMOResult_Intra_System_Handover.M1008C74	Sum, nkcttbh, nkrttbh, tot

			for NRT.		
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring without compressed mode due to IMSI - for UEs with an NRT connection.	PMMOResult_Intra_System_Handover.M1008C127	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C73	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	PMMOResult_Intra_System_Handover.M1008C72	Sum, nkcttbh, nkrttbh, tot
inter_rnc_inter_freq_ho_attempts_for_nrt	ACCUMULATION	INT8	Inter RNC inter BTS inter frequency HHO attempts for NRT.	PMMOResult_Intra_System_Handover.M1008C110	Sum, nkcttbh, nkrttbh, tot
intra_rnc_inter_bts_inter_freq_ho_attempts_for_nrt	ACCUMULATION	INT8	Intra RNC inter BTS inter frequency HHO attempts for NRT.	PMMOResult_Intra_System_Handover.M1008C106	Sum, nkcttbh, nkrttbh, tot
intra_rnc_intra_bts_inter_freq_ho_	ACCUMULATION	INT8	Intra RNC intra BTS inter frequency	PMMOResult_Intra_System_Handover.M10	Sum, nkcttbh,

attempts_for_nrt			HHO attempts for NRT.	08C102	nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C173	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C172	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C175	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C170	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL	PMMOResult_Intra_System_Handover.M1008C171	Sum, nkcttbh, nkrttbh, tot

			- by UEs with NRT connection.		
load_based_ifho_attempts_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C174	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C137	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C136	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_hw_or_logical_resour	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after	PMMOResult_Intra_System_Handover.M1008C139	Sum, nkcttbh, nkrttbh, tot

ce_limitation_for_nrt			measuring with compressed mode due to HW or logical resource limitation - by UEs with NRT connection.		
load_based_ifho_meas_with_com_mod_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C134	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C135	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C138	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_dl_	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after	PMMOResult_Intra_System_Handover.M1008C149	Sum, nkcttbh, nkrttbh, tot

for_nrt			measuring without compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.		
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C148	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C151	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL -	PMMOResult_Intra_System_Handover.M1008C146	Sum, nkcttbh, nkrttbh, tot

			by UEs with NRT connection.		
load_based_ifho_meas_without_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C147	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C150	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to low measured CPICH Ec/No.	PMMOResult_Intra_System_Handover.M1008C81	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to low measured CPICH	PMMOResult_Intra_System_Handover.M1008C80	Sum, nkcttbh, nkrttbh, tot

			RSCP.		
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to DL DPCH.	PMMOResult_Intra_System_Handover.M1008C79	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C128	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C78	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ul	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency	PMMOResult_Intra_System_Handover.M1008C77	Sum, nkcttbh, nkrttbh, tot

_dch_qual_for_nrt			HHO for NRT, and the inter frequency measurement was triggered by a quality deterioration report from outer loop power control.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateUL > LHOcapaReqRejRateUL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C160	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PrxTotal > PrxTarget + LHOpwrOffsetUL ends without making an inter- frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C158	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to	PMMOResult_Intra_System_Handover.M1008C159	Sum, nkcttbh, nkrttbh, tot

ptxtotal_for_nrt			Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter- frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C162	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_no_cell_good_enough_due_hw_or_logical_resource_limit_for_nrt	ACCUMULATION	INTEGER	[not_started_load_based_ifho_because_no_cell_good_enough_due_to_hw_or_logical_resource_limitation_for_nrt] - The number of times when an inter-frequency HHO measurement due to Load Based HO reason HW or	PMMOResult_Intra_System_Handover.M1008C163	Sum, nkcttbh, nkrttbh, tot

			logical resource limitation ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with NRT connection.		
not_started_service_based_ifho_because_no_cell_good_enough_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Service Based ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C164	Sum, nkcttbh, nkrttbh, tot
rrc_con_nection_drops_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C209	Sum, nkcttbh, nkrttbh, tot
rrc_conn_drops_during_inter_rnc_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter RNC inter BTS intra frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C113	Sum, nkcttbh, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C109	Sum, nkcttbh, nkrttbh, tot

rrc_conn_drops_during_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during intra RNC intra BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C105	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C211	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C210	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_Handover.M1008C101	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_Handover.M1008C97	Sum, nkcttbh, nkrttbh, tot
rrc_connection_d	ACCUMULA	INT8	RRC connection	PMMOResult_Intra_S	Sum,

rops_during_inter_freq_ho_caused_by_dl_dpch_pwr_for_nrt	TION		drops during inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	ystem_Handover.M1008C93	nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of RRC connection drops during inter-frequency handover caused by IMSI for NRT.	PMMOResult_Intra_System_Handover.M1008C125	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C89	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_Handover.M1008C85	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C206	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to	PMMOResult_Intra_System_Handover.M1008C207	Sum, nkcttbh, nkrttbh, tot

			PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.		
rrc_connection_drops_during_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Service Based inter-frequency handover - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C212	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_ifho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C208	Sum, nkcttbh, nkrttbh, tot
service_based_ifho_attempts_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency handover attempts - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C176	Sum, nkcttbh, nkrttbh, tot
service_based_ifho_meas_with_com_mod_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring with compressed mode - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C140	Sum, nkcttbh, nkrttbh, tot
service_based_ifho_meas_without_com_mod_for_nr	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO	PMMOResult_Intra_System_Handover.M1008C152	Sum, nkcttbh, nkrttbh,

t			decisions after measuring without compressed mode - by UEs with NRT connection.		tot
successful_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C185	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C184	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C187	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C186	Sum, nkcttbh, nkrttbh, tot
successful_inter_	ACCUMULA	INT8	Successful inter	PMMOResult_Intra_S	Sum,

freq_handovers_caused_by_cpich_ecno_for_nrt	TION		frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	ystem_Handover.M1008C99	nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_Handover.M1008C95	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C91	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of successful inter-frequency handovers caused by IMSI for NRT.	PMMOResult_Intra_System_Handover.M1008C123	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C87	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_Handover.M1008C83	Sum, nkcttbh, nkrttbh, tot
successful_inter_	ACCUMULA	INT8	Successful inter	PMMOResult_Intra_S	Sum,

rnc_inter_freq_ho_for_nrt	TION		RNC inter BTS inter frequency HHOs for NRT.	ystem_Handover.M1008C111	nkcttbh, nkrttbh, tot
successful_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C107	Sum, nkcttbh, nkrttbh, tot
successful_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C103	Sum, nkcttbh, nkrttbh, tot
successful_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C182	Sum, nkcttbh, nkrttbh, tot
successful_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C183	Sum, nkcttbh, nkrttbh, tot
successful_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of successful Service Based inter-frequency handover - by UEs with NRT connection.	PMMOResult_Intra_System_Handover.M1008C188	Sum, nkcttbh, nkrttbh, tot
unsuccessful_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateDL >	PMMOResult_Intra_System_Handover.M1008C197	Sum, nkcttbh, nkrttbh, tot

			LHOcapaReqRejRateDL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to	PMMOResult_Intra_System_Handover.M1008C196	Sum, nkcttbh, nkrttbh, tot

			the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to HW or logical resource limitation - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_Handover.M1008C199	Sum, nkcttbh, nkrttbh, tot
unsuccessful_ifho	ACCUMULA	INTEG	The number of	PMMOResult_Intra_S	Sum,

_caused_by_reservation_rate_sc_for_nrt	TION	ER	unsuccessful Load Based inter-frequency handovers due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	ystem_Handover.M1008C198	nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_Handover.M1008C100	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH	PMMOResult_Intra_System_Handover.M1008C96	Sum, nkcttbh, nkrttbh, tot

			RSCP for NRT.		
unsuccessful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C92	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of unsuccessful inter-frequency handovers caused by IMSI for NRT. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_Handover.M1008C124	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_Handover.M1008C88	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ul_d	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by	PMMOResult_Intra_System_Handover.M1008C84	Sum, nkcttbh, nkrttbh,

ch_qual_for_nrt			UL DCH quality deterioration for NRT.		tot
unsuccessful_inter_rnc_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful inter RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C112	Sum, nkcttbh, nkrttbh, tot
unsuccessful_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C108	Sum, nkcttbh, nkrttbh, tot
unsuccessful_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful intra RNC intra BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_Handover.M1008C104	Sum, nkcttbh, nkrttbh, tot
unsuccessful_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection. -- - If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The	PMMOResult_Intra_System_Handover.M1008C194	Sum, nkcttbh, nkrttbh, tot

			hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection. -- - If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_Handover.M1008C195	Sum, nkcttbh, nkrttbh, tot
unsuccessful_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-frequency handovers - by UEs with NRT connection. --- If the UE fails to establish the physical	PMMOResult_Intra_System_Handover.M1008C200	Sum, nkcttbh, nkrttbh, tot

			channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		

7.6.26 Cell.Nokia.UMTS.intrasys_hho_inter_rt

RT intra-system inter-frequency handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_ifho_caused_by_capa_rejection_dl_for_rt	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-frequency handovers due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	100 * {successful_ifho_caused_by_capa_rejection_dl_for_rt}/ {load_based_ifho_attempts_caused_by_capa_rejection_dl_for_rt}	Average, avg, nkcttbh, nkrttbh
_%_successful_ifho_caused_by_cap	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-	100 * {successful_ifho_caused_by_capa_rejection_u	Average, avg, nkcttbh,

a_rejection_ul_for_rt			frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	l_for_rt}/ {load_based_ifho_attempts_caused_by_capa_rejection_ul_for_rt}	nkrttbh
_%_successful_inter_freq_handovers_caused_by_imsi_for_rt	PERCENTAGE	FLOAT	Success rate for inter-frequency handover attempts caused by IMSI for RT.	100 * {successful_inter_freq_handovers_caused_by_imsi_for_rt}/ {inter_freq_ho_attempts_caused_by_imsi_for_rt}	Average, avg, nkcttbh, nkrttbh
inter_freq_ho_attempts_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_Handover.M1008C50	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_Handover.M1008C46	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C42	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of inter-frequency handover attempts caused by IMSI for RT.	PMMOResult_Intra_System_Handover.M1008C115	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_attempts_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UE transmission power approaching	PMMOResult_Intra_System_Handover.M1008C38	Sum, nkcttbh, nkrttbh, tot

			maximum power capability for RT.		
inter_freq_ho_attempts_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_Handover.M1008C34	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C23	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH RSCP by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C22	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to DL DPCH by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C21	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring with compressed mode due to IMSI - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C119	Sum, nkcttbh, nkrttbh, tot

inter_freq_ho_decisions_after_comp_mode_meas_due_to_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C20	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to quality deterioration report from outerloop power control by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C19	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C28	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C27	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to DL DPCH by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C26	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_mea	ACCUMULATION	INT8	The number of inter-frequency	PMMOResult_Intra_System_Handover.M100	Sum, nkcttbh,

s_without_comp_mode_due_to_imsi_for_rt			HHO decisions after measuring without compressed mode due to IMSI - for UEs with RT connection.	8C120	nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C25	Sum, nkcttbh, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to quality deterioration report from outerloop power control by the UEs for RT.	PMMOResult_Intra_System_Handover.M1008C24	Sum, nkcttbh, nkrttbh, tot
inter_rnc_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Inter RNC inter BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_Handover.M1008C62	Sum, nkcttbh, nkrttbh, tot
intra_rnc_inter_bts_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Intra RNC inter BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_Handover.M1008C58	Sum, nkcttbh, nkrttbh, tot
intra_rnc_intra_bts_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Intra RNC intra BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_Handover.M1008C54	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Intra_S	Sum,

attempts_caused_by_capa_rejection_dl_for_rt	TION	ER	Based inter-frequency handover attempts due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	ystem_Handover.M1008C232	nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C231	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C168	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C165	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_attempts_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C166	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Intra_S	Sum,

attempts_caused_by_reservation_rate_sc_for_rt	TION	ER	Based inter-frequency handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	ystem_Handover.M1008C167	nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C226	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C225	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to HW or logical resource	PMMOResult_Intra_System_Handover.M1008C132	Sum, nkcttbh, nkrttbh, tot

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			limitation - by UEs with RT connection.		
load_based_ifho_meas_with_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C129	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C130	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C131	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateDL	PMMOResult_Intra_System_Handover.M1008C228	Sum, nkcttbh, nkrttbh, tot

			more than LHOcapaReqRejRateDL - by UEs with RT connection.		
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C227	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C144	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C141	Sum, nkcttbh, nkrttbh, tot
load_based_ifho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Intra_S	Sum,

meas_without_com_mod_due_to_ptxtotal_for_rt	TION	ER	Based inter-frequency HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	ystem_Handover.M1008C142	nkcttbh, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C143	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to low measured CPICH Ec/No.	PMMOResult_Intra_System_Handover.M1008C33	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to low measured CPICH RSCP.	PMMOResult_Intra_System_Handover.M1008C32	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of	ACCUMULATION	INT8	When no neighbouring cell is	PMMOResult_Intra_System_Handover.M100	Sum, nkcttbh,

_no_cell_good_enough_due_to_dl_dpch_pwr_for_rt			good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to DL DPCH.	8C31	nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C121	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ue_trx_pwr_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_Handover.M1008C30	Sum, nkcttbh, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered by a	PMMOResult_Intra_System_Handover.M1008C29	Sum, nkcttbh, nkrttbh, tot

			quality deterioration report from outer loop power control.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of times that an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateDL more than LHOcapaReqRejRateDL ends without making an interfrequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C230	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of times that an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateUL more than LHOcapaReqRejRateUL ends without making an interfrequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C229	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PrxTotal > PrxTarget +	PMMOResult_Intra_System_Handover.M1008C153	Sum, nkcttbh, nkrttbh, tot

			LHOpwrOffsetUL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C154	Sum, nkcttbh, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with	PMMOResult_Intra_System_Handover.M1008C155	Sum, nkcttbh, nkrttbh, tot

			RT connection.		
not_started_load_based_ifho_no_cell_good_enough_due_hw_or_logical_resource_limit_for_rt	ACCUMULATION	INTEGER	[not_started_load_based_ifho_because_no_cell_good_enough_due_to_hw_or_logical_resource_limitation_for_rt] - The number of times when an inter-frequency HHO measurement due to Load Based HO reason HW or logical resource limitation ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C156	Sum, nkcttbh, nkrttbh, tot
not_started_service_based_ifho_because_no_cell_good_enough_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Service Based ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C157	Sum, nkcttbh, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	RRC connection drops during intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C61	Sum, nkcttbh, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_i	ACCUMULATION	INT8	RRC connection drops during intra	PMMOResult_Intra_System_Handover.M100	Sum, nkcttbh,

ntra_bts_inter_freq_ho_for_rt			RNC intra BTS inter frequency HHOs for RT.	8C57	nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C204	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C203	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_Handover.M1008C53	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_Handover.M1008C49	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused	ACCUMULATION	INT8	RRC connection drops during inter frequency hard	PMMOResult_Intra_System_Handover.M1008C45	Sum, nkcttbh, nkrttbh,

_by_dl_dpch_pwr_for_rt			handovers caused by DL DPCH approaching maximum power capability for RT.		tot
rrc_connection_drops_during_inter_freq_ho_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of RRC connection drops during inter-frequency handover caused by IMSI for RT.	PMMOResult_Intra_System_Handover.M1008C118	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C41	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_Handover.M1008C37	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_inter_rnc_int_freq_hho_for_rt	ACCUMULATION	INT8	RRC connection drops during inter RNC inter BTS intra frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C65	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C201	Sum, nkcttbh, nkrttbh, tot
rrc_connection_d	ACCUMULA	INTEG	The number of RRC	PMMOResult_Intra_S	Sum,

rops_during_load_based_ifho_caused_by_ptxtotal_for_rt	TION	ER	connection drops during Load Based inter- frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	ystem_Handover.M1008C202	nkcttbh, nkrttbh, tot
rrc_connection_drops_during_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Service Based inter-frequency handover - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C205	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_ifho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based interfrequency handover due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C238	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_ifho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based interfrequency handover due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C237	Sum, nkcttbh, nkrttbh, tot
service_based_ifho_attempts_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-	PMMOResult_Intra_System_Handover.M100	Sum, nkcttbh,

			frequency handover attempts - by UEs with RT connection.	8C169	nkrttbh, tot
service_based_ifho_meas_with_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring with compressed mode - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C133	Sum, nkcttbh, nkrttbh, tot
service_based_ifho_meas_without_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring without compressed mode - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C145	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handovers due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C234	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C233	Sum, nkcttbh, nkrttbh, tot
successful_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover	PMMOResult_Intra_System_Handover.M1008C180	Sum, nkcttbh, nkrttbh, tot

			due to HW or logical resource limitation - by UEs with RT connection.		
successful_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C179	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_Handover.M1008C51	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_Handover.M1008C47	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C43	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of successful inter-frequency handovers caused by IMSI for RT.	PMMOResult_Intra_System_Handover.M1008C116	Sum, nkcttbh, nkrttbh, tot

successful_inter_freq_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C39	Sum, nkcttbh, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_Handover.M1008C35	Sum, nkcttbh, nkrttbh, tot
successful_inter_rnc_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful inter RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C63	Sum, nkcttbh, nkrttbh, tot
successful_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C59	Sum, nkcttbh, nkrttbh, tot
successful_intra_rnc_intra_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C55	Sum, nkcttbh, nkrttbh, tot
successful_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C177	Sum, nkcttbh, nkrttbh, tot
successful_load_based_ifho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT	PMMOResult_Intra_System_Handover.M1008C178	Sum, nkcttbh, nkrttbh, tot

			connection.		
successful_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of successful Service Based inter-frequency handover - by UEs with RT connection.	PMMOResult_Intra_System_Handover.M1008C181	Sum, nkcttbh, nkrttbh, tot
unsuccessful_ifho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_Handover.M1008C236	Sum, nkcttbh, nkrttbh, tot
unsuccessful_ifho	ACCUMULA	INTEG	The number of	PMMOResult_Intra_S	Sum,

_caused_by_capa_rejection_ul_for_rt	TION	ER	unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	ystem_Handover.M1008C235	nkcttbh, nkrttbh, tot
unsuccessful_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to HW or logical resource limitation - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to	PMMOResult_Intra_System_Handover.M1008C192	Sum, nkcttbh, nkrttbh, tot

			the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to ReservationRateSC > LHOresRateSC - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and	PMMOResult_Intra_System_Handover.M1008C191	Sum, nkcttbh, nkrttbh, tot

			the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_freq_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_Handover.M1008C52	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_Handover.M1008C48	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C44	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of unsuccessful inter-frequency handovers caused by IMSI for RT. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC.	PMMOResult_Intra_System_Handover.M1008C117	Sum, nkcttbh, nkrttbh, tot

			The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_freq_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_Handover.M1008C40	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_Handover.M1008C36	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_rnc_inter_freq_ho_for_rt	ACCUMULATION	INT8	Unsuccessful inter RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C64	Sum, nkcttbh, nkrttbh, tot
unsuccessful_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Unsuccessful intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C60	Sum, nkcttbh, nkrttbh, tot
unsuccessful_intra_rnc_intra_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Unsuccessful intra RNC intra BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_Handover.M1008C56	Sum, nkcttbh, nkrttbh, tot
unsuccessful_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to	PMMOResult_Intra_System_Handover.M1008C189	Sum, nkcttbh, nkrttbh, tot

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			PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_load_based_ifho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the	PMMOResult_Intra_System_Handover.M1008C190	Sum, nkcttbh, nkrttbh, tot

			handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-frequency handovers - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_Handover.M1008C193	Sum, nkcttbh, nkrttbh, tot

7.6.27 Cell.Nokia.UMTS.intrasys_hho_intra_nrt

NRT intra-system handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cell_addition_failure_due_to_sho_incapability_for_nrt	ACCUMULATION	INT8	Cell addition failure caused by SHO in capability for NRT. When a UE sends an event 1 A triggered measurement report to the RNC in order to add a cell (which is controlled by another RNC than the local RNC) to the active set but the cell addition is either disabled with the parameter Enable Inter RNC Soft Handover or the inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.	PMMOResult_Intra_System_Handover.M1008C11	Sum, nkcttbh, nkrttbh, tot
cell_replacement_failure_due_to_sho_incapability_for_nrt	ACCUMULATION	INT8	Cell replacement failure caused by SHO incapability for NRT. When a UE sends an event 1C triggered measurement report to the RNC in order	PMMOResult_Intra_System_Handover.M1008C12	Sum, nkcttbh, nkrttbh, tot

			to replace a cell in the active set with a non active cell (which is controlled by another RNC than the local RNC), but the cell replacement is either disabled with the parameter Enable Inter RNC Soft Handover or the inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.		
inter_freq_compr_mode_start_not_possible_for_nrt	ACCUMULATION	INT8	Compressed mode start not possible for NRT.	PMMOResult_Intra_System_Handover.M1008C66	Sum, nkcttbh, nkrttbh, tot
nrt_hho_attempts_due_to_sho_incapability_and_ave_ecno	ACCUMULATION	INT8	HHO attempts caused by SHO incapability for NRT. When the serving RNC starts an inter RNC (intra frequency) hard handover attempt caused by SHO	PMMOResult_Intra_System_Handover.M1008C13	Sum, nkcttbh, nkrttbh, tot

			incapability. The parameter HHO Margin forAverage Ec No determines the margin by which the average downlink Ec/No of the target (neighbouring) cell must exceed the average Ec/No of the best active cell before an inter RNC hard handover is possible. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or event 1C triggered measurement report.		
nrt_hho_attempts_due_to_sho_incapability_and_peak_ecno	ACCUMULATION	INT8	Immediate HHO attempts caused by SHO incapability for NRT. When the serving RNC starts an immediate inter RNC (intra frequency) hard handover attempt caused by SHO incapability. An immediate HHO attempt is started if the downlink Ec/No of the neighbouring cell exceeds considerably the Ec/No of the best active cell even in one	PMMOResult_Intra_System_Handover.M1008C14	Sum, nkcttbh, nkrttbh, tot

			event triggered (event 1A or 1C) measurement report. The parameter HHO Margin for Peak Ec No determines the maximum allowed difference between the downlink Ec/No of the neighbouring cell and the Ec/No of the best active cell in situations when the RNC is not able to perform inter RNC soft handover between these cells. If the difference in downl ink Ec / No values exceeds the value of the parameter, the RNC must perform inter RNC hard handover immediately. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or event 1C triggered measurement report.		
rrc_connection_drops_during_hho_caused_by_sho_in	ACCUMULATION	INT8	RRC connection drops during HHO caused by SHO	PMMOResult_Intra_System_Handover.M1008C17	Sum, nkcttbh, nkrttbh,

capability_for_nrt			incapability for NRT. When the timer T358 expires on source RNC side. If the timer T358 expires and neither the target RNC has received the handover complete message, or the source RNC has received a failure message from the mobile station, the source and target RNCs may delete the old and new configurations, and the source RNC sends the IU RELEASE REQUEST (RANAP) message to the CN in order to release the IU connections.		tot
successful_hard_handovers_caused_by_sho_incapability_for_nrt	ACCUMULATION	INT8	Successful hard handovers caused by SHO incapability for NRT. When the CN (core network) initiates the release of the IU connections to the source RNC by sending the IU RELEASECOMMAND (RANAP) message indicating the cause value Successful relocation.	PMMOResult_Intra_System_Handover.M1008C15	Sum, nkcttbh, nkrttbh, tot
ue_is_not_able_to_execute_intra_system_hho_for_nrt	ACCUMULATION	INT8	UE is not able to execute HHO for NRT. When the	PMMOResult_Intra_System_Handover.M1008C10	Sum, nkcttbh, nkrttbh,

			source RNC receives a handover failure message from the mobile station with the failure cause value Configuration unacceptable. If the UTRAN instructs the mobile station to use a configuration that it does not support, the mobile station will transmit a handover failure on the DCCH to the source RNC. The hard handover procedure ends and the MS resumes the normal operation as if no hard handover attempt had occurred.		tot
unsuccessful_hard_handovers_caused_by_sho_incapability_for_nrt	ACCUMULATION	INT8	Unsuccessful hard handovers caused by SHO incapability for NRT. When the source RNC receives a failure message from the mobile station with the failure cause value Physical channel failure. If the UE fails to establish the physical channel(s) indicated in the handover command,	PMMOResult_Intra_System_Handover.M1008C16	Sum, nkcttbh, nkrttbh, tot

			the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message on the DCCH to the source RNC. The hard handover procedure ends and the UE resumes normal operation as if no hard handover attempt had occurred.		
utran_is_not_able_to_execute_intra_system_hho_for_nrt	ACCUMULATION	INT8	The number of intra-system hard handover failures due to UTRAN. --- The failure can occur, for example, due to the following reasons: radio resource congestion in the target cell, radio link setup/addition failure in the target BTS, relocation preparation procedure failure in the CN, or relocation resource allocation procedure failure in the target RNC.	PMMOResult_Intra_System_Handover.M1008C9	Sum, nkcttbh, nkrttbh, tot

7.6.28 Cell.Nokia.UMTS.intrasys_hho_intra_rt

RT intra-system handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

cell_addition_failure_due_to_sho_incapability_for_rt	ACCUMULATION	INT8	Cell addition failure caused by SHO incapability for RT. When a UE sends an event 1A triggered measurement report to the RNC in order to add a cell (which is controlled by some other RNC than the local RNC) to the active set, but the cell addition is either disabled with a parameter Enable Inter RNC Soft Handover or inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.	PMMOResult_Intra_System_Handover.M1008C2	Sum, nkcttbh, nkrttbh, tot
cell_replacement_failure_due_to_sho_incapability_for_rt	ACCUMULATION	INT8	Cell replacement failure caused by SHO incapability for RT. When a UE sends an event 1C triggered measurement report to the RNC in order to replace a cell in	PMMOResult_Intra_System_Handover.M1008C3	Sum, nkcttbh, nkrttbh, tot

			the active set with a non active cell (which is controlled by another RNC than the local RNC) but the cell replacement is either disabled with a parameter Enable Inter RNC Soft Handover or inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.		
inter_freq_compr_mode_start_not_possible_for_rt	ACCUMULATION	INT8	Compressed mode start not possible for RT. When an inter system (inter frequency) HHO measurement cant be activated because compressed mode cant be started.	PMMOResult_Intra_System_Handover.M1008C18	Sum, nkcttbh, nkrttbh, tot
rrc_connection_drops_during_hho_caused_by_sho_incapability_for_rt	ACCUMULATION	INT8	RRC connection drops during HHO caused by SHO incapability for RT. When the timer T358 expires on source RNC side. If the timer T358 expires and neither the target RNC has received the	PMMOResult_Intra_System_Handover.M1008C8	Sum, nkcttbh, nkrttbh, tot

			handover complete message or the source RNC has received a failure message from the mobile station, the source and target RNCs may delete the old and new configurations, and the source RNC sends the IU RELEASE REQUEST (RANAP) message to the CN in order to release the IU connections.		
rt_hho_attempts_due_to_sho_incapability_and_ave_ecno	ACCUMULATION	INT8	HHO attempts caused by SHO incapability for RT. When the serving RNC starts an inter RNC (intra frequency) hard handover attempt caused by SHO incapability. The parameter HHO Margin forAverage Ec No determines the margin by which the average downlink Ec/No of the target(neighbouring) cell must exceed the average Ec/No of the best active cell before inter RNC	PMMOResult_Intra_System_Handover.M1008C4	Sum, nkcttbh, nkrttbh, tot

			hard handover is possible. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or 1C triggered measurement report.		
rt_hho_attempts_due_to_sho_incapability_and_peak_ecno	ACCUMULATION	INT8	Immediate HHO attempts caused by SHO incapability for RT. When the serving RNC starts an immediate inter RNC (intra frequency) hard handover attempt caused by SHO incapability. An immediate HHO attempt is started if the downlink Ec/No of the neighbouring cell exceeds considerably the Ec/No of the best active cell even in one event triggered (event 1A or 1C) measurement report. The parameter HHO Margin for Peak Ec No determines the maximum allowed difference between the downlink Ec/No of the neighbouring cell and the Ec/No of the best active cell in situations when the RNC is	PMMOResult_Intra_System_Handover.M1008C5	Sum, nkcttbh, nkrttbh, tot

			not able to perform inter RNC soft handover between these cells. If the difference in downlink Ec/No values exceeds the value of the parameter, the RNC must perform inter RNC hard handover immediately. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or 1C triggered measurement report.		
successful_hard_handovers_caused_by_sho_incapability_for_rt	ACCUMULATION	INT8	Successful hard handovers caused by SHO incapability for RT. When the CN (core network) initiates the release of the IU connections to the source RNC by sending the IU RELEASECOMMAND (RANAP) message with the cause value Successful relocation .	PMMOResult_Intra_System_Handover.M1008C6	Sum, nkcttbh, nkrttbh, tot
ue_is_not_able_to_execute_intra_sy	ACCUMULATION	INT8	UE is not able to execute HHO for	PMMOResult_Intra_System_Handover.M1008	Sum, nkcttbh,

stem_hho_for_rt			RT. When the source RNC receives a handover failure from the mobile station with the failure cause value Configuration unacceptable . If the UTRAN instructs the mobile station to use a configuration that it does not support, the mobile station transmits a handover failure on the DCCH to the source RNC. The hard handover procedure ends and the MS resumes normal operation as if no hard handover attempt had occurred.	C1	nkrttbh, tot
unsuccessful_hard_handovers_caused_by_sho_incapability_for_rt	ACCUMULATION	INT8	Unsuccessful hard handovers caused by SHO incapability for RT. When the source RNC receives a failure message from the mobile station indicating the cause Physical channel failure. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration)	PMMOResult_Intra_System_Handover.M1008C7	Sum, nkcttbh, nkrttbh, tot

			and transmit a failure message on the DCCH to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
utran_is_not_able_to_execute_intra_system_hho_for_rt	ACCUMULATION	INT8	UTRAN is not able to execute HHO for RT. When the hard handover attempt fails before the serving RNC sends the handover command to the mobile station. The failure can't take place, for example, because of the following reasons, Radio resource congestion in the target cell Radio link setup/addition failure in Node B Failure occurs during the Relocation preparation procedure in the CN. Failure occurs during the Relocation resource allocation procedure in the target RNC.	PMMOResult_Intra_System_Handover.M1008C0	Sum, nkcttbh, nkrttbh, tot

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7.6.29 Cell.Nokia.UMTS.intrasys_hho_rejected_relocations

Intra-system handover rejected SRNS relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
number_of_rejected_srns_relocations	ACCUMULATION	INT8	Number of rejected relocations.Only recorded for Cell_DCH state UEs.	PMMOResult_Intra_System_Handover.M1008C114	Sum, nkcttbh, nkrttbh, tot

7.6.30 Cell.Nokia.UMTS.intrasys_hho_scc

HS-DSCH handover measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_unsuccessful_inter_rnc_hho_caused_by_hspa_scc	PERCENTAGE	FLOAT	The percentage of failed inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	100 * {unsuccessful_inter_rnc_hho_caused_by_hspa_scc}/ {inter_rnc_hho_attempts_due_to_hspa_scc }	Average, avg, nkcttbh, nkrttbh
edch_downgraded_to_dch_in_scc	ACCUMULATION	INTEGER	The number of successful HSDSCH serving cell changes where E-DCH uplink is downgraded to DCH.	PMMOResult_Intra_System_Handover.M1008C242	Sum, nkcttbh, nkrttbh, tot
edch_inter_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed inter-BTS E-DCH serving cell changes.	PMMOResult_Intra_System_Handover.M1008C241	Sum, nkcttbh, nkrttbh, tot
edch_intra_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed intra-BTS E-DCH serving cell changes.	PMMOResult_Intra_System_Handover.M1008C240	Sum, nkcttbh, nkrttbh, tot

edch_serving_cell_changes_started	ACCUMULATION	INTEGER	The number of E-DCH serving cell change attempts.	PMMOResult_Intra_System_Handover.M1008C239	Sum, nkcttbh, nkrttbh, tot
hs_dsch_inter_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed inter-BTS HS-DSCH serving cell changes.	PMMOResult_Intra_System_Handover.M1008C223	Sum, nkcttbh, nkrttbh, tot
hs_dsch_intra_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed intra-BTS HS-DSCH serving cell changes.	PMMOResult_Intra_System_Handover.M1008C222	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_ac	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to admission control, for example because the maximum number of HSDPA users were already allocated in the target cells.	PMMOResult_Intra_System_Handover.M1008C220	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_bts	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to BTS.	PMMOResult_Intra_System_Handover.M1008C218	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_other_reason	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to other reasons.	PMMOResult_Intra_System_Handover.M1008C221	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_transport	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to transport.	PMMOResult_Intra_System_Handover.M1008C219	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving	ACCUMULA	INTEG	The number of HS-	PMMOResult_Intra_	Sum,

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_cell_changes_failed_due_to_ue	TION	ER	DSCH serving cell change failures due to UE.	System_Handover.M1008C217	nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_prevented_due_to_timer	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell changes prevented due to timer HSDPACellChangeMinInterval for minimum interval between HS-DSCH serving cell changes.	PMMOResult_Intra_System_Handover.M1008C224	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_active_set_update	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to Active Set Update (1B/1C).	PMMOResult_Intra_System_Handover.M1008C215	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_cpich_ec_no	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to CPICH Ec/No.	PMMOResult_Intra_System_Handover.M1008C213	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_other_reason	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to other reason (e.g. due to RL failure / Rx-Tx time difference).	PMMOResult_Intra_System_Handover.M1008C216	Sum, nkcttbh, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_ul_sir_error	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to UL SIR error.	PMMOResult_Intra_System_Handover.M1008C214	Sum, nkcttbh, nkrttbh, tot
inter_rnc_hho_attempts_due_to_hspa_scc	ACCUMULATION	INTEGER	The number of inter-RNC hard handover attempts due to HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO	PMMOResult_Intra_System_Handover.M1008C243	Sum, nkcttbh, nkrttbh, tot

			operation.		
successful_inter_rnc_hho_due_to_hspa_scc	ACCUMULATION	INTEGER	The number of successful outgoing Inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_Handover.M1008C244	Sum, nkcttbh, nkrttbh, tot
unsuccessful_inter_rnc_hho_caused_by_hspa_scc	ACCUMULATION	INTEGER	The number of failed inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_Handover.M1008C245	Sum, nkcttbh, nkrttbh, tot

7.6.31 Cell.Nokia.UMTS.intrasys_hspa_ifho_meas

HSPA IFHO measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
att_hcap_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA capability based IFHO measurement start attempts.	PMMOResult_Intra_System_Handover.M1008C262	Sum, nkcttbh, tot
att_hcap_inter_ifho	ACCUMULATION	INTEGER	The number of Inter-RNC HSPA capability based IFHO attempts. This counter includes also	PMMOResult_Intra_System_Handover.M1008C266	Sum, nkcttbh, tot

			handover attempts to I-HSPA cells.		
att_hcap_intra_ifho	ACCUMULATION	INTEGER	The number of Intra-RNC HSPA capability based IFHO attempts.	PMMOResult_Intra_System_Handover.M1008C265	Sum, nkcttbh, tot
att_hspa_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA IFHO measurement start attempts.	PMMOResult_Intra_System_Handover.M1008C247	Sum, nkcttbh, tot
att_hspa_inter_ifho	ACCUMULATION	INTEGER	The number of Inter-RNC HSPA IFHO attempts.	PMMOResult_Intra_System_Handover.M1008C251	Sum, nkcttbh, tot
att_hspa_intra_ifho	ACCUMULATION	INTEGER	The number of Intra-RNC HSPA IFHO attempts.	PMMOResult_Intra_System_Handover.M1008C250	Sum, nkcttbh, tot
fail_hcap_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA capability based IFHO measurement start failures.	PMMOResult_Intra_System_Handover.M1008C263	Sum, nkcttbh, tot
fail_hcap_inter_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA capability based IFHOs due to UE being lost. This counter includes also failed handovers to I-HSPA cells.	PMMOResult_Intra_System_Handover.M1008C274	Sum, nkcttbh, tot
fail_hcap_inter_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA capability based IFHOs due to UE rejection. This counter includes also failed handovers to I-HSPA cells.	PMMOResult_Intra_System_Handover.M1008C272	Sum, nkcttbh, tot
fail_hcap_inter_ifho_utran	ACCUMULATION	INTEGER	The number of failed Inter-RNC	PMMOResult_Intra_System_Handover.M1008C	Sum, nkcttbh,

			HSPA capability based IFHOs due to UTRAN. This counter includes also failed handovers to I-HSPA cells.	270	tot
fail_hcap_intra_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UE being lost.	PMMOResult_Intra_System_Handover.M1008C273	Sum, nkcttbh, tot
fail_hcap_intra_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UE rejection.	PMMOResult_Intra_System_Handover.M1008C271	Sum, nkcttbh, tot
fail_hcap_intra_ifho_utran	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UTRAN.	PMMOResult_Intra_System_Handover.M1008C269	Sum, nkcttbh, tot
fail_hspa_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA IFHO measurement start failures.	PMMOResult_Intra_System_Handover.M1008C248	Sum, nkcttbh, tot
fail_hspa_inter_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA IFHOs due to UE being lost.	PMMOResult_Intra_System_Handover.M1008C261	Sum, nkcttbh, tot
fail_hspa_inter_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA IFHOs due to UE rejection.	PMMOResult_Intra_System_Handover.M1008C259	Sum, nkcttbh, tot
fail_hspa_inter_ifho_utran	ACCUMULATION	INTEGER	The number of failed Inter-RNC	PMMOResult_Intra_System_Handover.M1008C	Sum, nkcttbh,

			HSPA IFHOs due to UTRAN.	257	tot
fail_hspa_intra_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA IFHOs due to UE being lost.	PMMOResult_Intra_System_Handover.M1008C260	Sum, nkcttbh, tot
fail_hspa_intra_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA IFHOs due to UE rejection.	PMMOResult_Intra_System_Handover.M1008C258	Sum, nkcttbh, tot
fail_hspa_intra_ifho_utran	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA IFHOs due to UTRAN.	PMMOResult_Intra_System_Handover.M1008C256	Sum, nkcttbh, tot
not_start_hcap_ifho_no_cell	ACCUMULATION	INTEGER	The number of times when no cell good enough was found for HSPA capability based IFHO.	PMMOResult_Intra_System_Handover.M1008C264	Sum, nkcttbh, tot
not_start_hspa_ifho_no_cell	ACCUMULATION	INTEGER	The number of times when no cell good enough was found for HSPA IFHO.	PMMOResult_Intra_System_Handover.M1008C249	Sum, nkcttbh, tot
succ_hcap_inter_ifho	ACCUMULATION	INTEGER	The number of successful Inter-RNC HSPA capability based IFHOs. This counter includes also handovers to I-HSPA cells.	PMMOResult_Intra_System_Handover.M1008C268	Sum, nkcttbh, tot
succ_hcap_intra_ifho	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA capability based IFHOs.	PMMOResult_Intra_System_Handover.M1008C267	Sum, nkcttbh, tot
succ_hspa_inter_ifho	ACCUMULATION	INTEGER	The number of successful Inter-RNC HSPA	PMMOResult_Intra_System_Handover.M1008C255	Sum, nkcttbh, tot

			IFHOs.		
succ_hspa_intra_ifho_hsdpa	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA IFHOs with HS-DSCH/DCH allocated in the target cell.	PMMOResult_Intra_System_Handover.M1008C253	Sum, nkcttbh, tot
succ_hspa_intra_ifho_hsupa	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA IFHOs with HS-DSCH/E-DCH allocated in the target cell.	PMMOResult_Intra_System_Handover.M1008C254	Sum, nkcttbh, tot
succ_hspa_intra_ifho_rel99	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA IFHOs with Rel99 DCH allocated in the target cell.	PMMOResult_Intra_System_Handover.M1008C252	Sum, nkcttbh, tot

7.6.32 Cell.Nokia.UMTS.iub_downlink_tx_load

Iub downlink transmission load statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_transm_load_below_target	ACCUMULATION	INTEGER	The number of times when (Iub downlink transmission load) < (target load threshold AMRTargetTransmission).	PMMOResult_Cell_Resource.M1000C297	Sum, nkcttbh, nkrttbh, tot
amr_transm_load_over_target	ACCUMULATION	INTEGER	The number of times when (Iub downlink	PMMOResult_Cell_Resource.M1000C298	Sum, nkcttbh,

			transmission load) >= (target load threshold AMRTargetTransmission).		nkrttbh, tot
amr_transm_load_overload	ACCUMULATION	INTEGER	The number of times when (Iub downlink transmission load) >= (over load threshold AMROverTransmission).	PMMOResult_Cell_Resource.M1000C299	Sum, nkcttbh, nkrttbh, tot
amr_transm_load_underload	ACCUMULATION	INTEGER	The number of times when (Iub downlink transmission load) < (under load threshold AMRUnderTransmission).	PMMOResult_Cell_Resource.M1000C296	Sum, nkcttbh, nkrttbh, tot

7.6.33 Cell.Nokia.UMTS.lrt_est

LRT and LNRT estimation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_lnrt_class_0	INTENSITY	FLOAT	Estimated load factor for uplink NRT users on the cell for Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C34	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lnrt_class_1	INTENSITY	FLOAT	Estimated load factor for uplink NRT users on the cell for Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C36	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lnrt_class_2	INTENSITY	FLOAT	Estimated load factor for uplink NRT users on the cell for Class 2	PMMOResult_Cell_Resource.M1000C38	Average, avg, max, min, nkcttbh,

			(feasible load area 2)		nkrttbh, tot
ave_lnrt_class_3	INTENSITY	FLOAT	Estimated load factor for uplink NRT users on the cell for Class 3 (marginal load area)	PMMOResult_Cell_Resource.M1000C40	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lnrt_class_4	INTENSITY	FLOAT	Estimated load factor for uplink NRT users on the cell for Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C42	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lrt_class_0	INTENSITY	FLOAT	Estimated load factor for uplink RT users on the cell for Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C24	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lrt_class_1	INTENSITY	FLOAT	Estimated load factor for uplink RT users on the cell for Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C26	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lrt_class_2	INTENSITY	FLOAT	Estimated load factor for uplink RT users on the cell for Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C28	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_lrt_class_3	INTENSITY	FLOAT	Estimated load factor for uplink RT users on the cell for Class 3 (marginal load	PMMOResult_Cell_Resource.M1000C30	Average, avg, max, min, nkcttbh, nkrttbh,

			area)		tot
ave_lrt_class_4	INTENSITY	FLOAT	Estimated load factor for uplink RT users on the cell for Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C32	Average, avg, max, min, nkcttbh, nkrttbh, tot
lnrt_denom_0	ACCUMULATION	INT8	Denominator for LNRT Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C35	Sum, nkcttbh, nkrttbh, tot
lnrt_denom_1	ACCUMULATION	INT8	Denominator for LNRT Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C37	Sum, nkcttbh, nkrttbh, tot
lnrt_denom_2	ACCUMULATION	INT8	Denominator for LNRT Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C39	Sum, nkcttbh, nkrttbh, tot
lnrt_denom_3	ACCUMULATION	INT8	Denominator for LNRT Class 3 (marginal load area)	PMMOResult_Cell_Resource.M1000C41	Sum, nkcttbh, nkrttbh, tot
lnrt_denom_4	ACCUMULATION	INT8	Denominator for LNRT Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C43	Sum, nkcttbh, nkrttbh, tot
lrt_denom_0	ACCUMULATION	INT8	Denominator for LRT Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C25	Sum, nkcttbh, nkrttbh, tot
lrt_denom_1	ACCUMULATION	INT8	Denominator for LRT Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C27	Sum, nkcttbh, nkrttbh, tot
lrt_denom_2	ACCUMULATION	INT8	Denominator for LRT Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C29	Sum, nkcttbh, nkrttbh, tot
lrt_denom_3	ACCUMULA	INT8	Denominator for	PMMOResult_Cell_Res	Sum,

	TION		LRT Class 3 (marginal load area)	ource.M1000C31	nkcttbh, nkrttbh, tot
lrt_denom_4	ACCUMULATION	INT8	Denominator for LRT Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C33	Sum, nkcttbh, nkrttbh, tot

7.6.34 Cell.Nokia.UMTS.macd_setup_hsdpa

HS-DCH MAC-d setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
att_macd_setup_for_hsdpa	ACCUMULATION	INTEGER	The number of attempted radio link setups/reconfigurations for HSDPA MAC-d flow.	PMMOResult_L3Iub.M1005C241	Sum, nkcttbh, nkrttbh, tot
denom_time_aal2_setup	ACCUMULATION	INTEGER	Denominator for M1005C245, used for average calculation.	PMMOResult_L3Iub.M1005C246	Sum, nkcttbh, nkrttbh, tot
denom_time_rl_setup	ACCUMULATION	INTEGER	Denominator for M1005C243, used for average calculation.	PMMOResult_L3Iub.M1005C244	Sum, nkcttbh, nkrttbh, tot
fail_macd_setup_hsdpa_misc	ACCUMULATION	INTEGER	The number of failed HS-DSCH Mac-d flow setup failures due to miscellaneous cause.	PMMOResult_L3Iub.M1005C251	Sum, nkcttbh, nkrttbh, tot
fail_macd_setup_hsdpa_noresp	ACCUMULATION	INTEGER	The number of HS-DSCH Mac-d flow setup failures due	PMMOResult_L3Iub.M1005C247	Sum, nkcttbh, nkrttbh,

			to BTS not responding.		tot
fail_macd_setup_hsdpa_prot	ACCUMULATION	INTEGER	The number of failed HS-DSCH Mac-d flow setup failures due to protocol cause.	PMMOResult_L3Iub.M1005C250	Sum, nkcttbh, nkrttbh, tot
fail_macd_setup_hsdpa_rnl	ACCUMULATION	INTEGER	The number of failed HS-DSCH Mac-d flow setup failures due to radio network layer cause.	PMMOResult_L3Iub.M1005C248	Sum, nkcttbh, nkrttbh, tot
fail_macd_setup_hsdpa_tr	ACCUMULATION	INTEGER	The number of failed HS-DSCH Mac-d flow setup failures due to transport network layer cause.	PMMOResult_L3Iub.M1005C249	Sum, nkcttbh, nkrttbh, tot
succ_macd_setup_for_hsdpa	ACCUMULATION	INTEGER	The number of successful radio link setups/reconfigurations for HSDPA MAC-d flow.	PMMOResult_L3Iub.M1005C242	Sum, nkcttbh, nkrttbh, tot
sum_time_aal2_setup	ACCUMULATION	INTEGER	Sum of Iub AAL2 Setup time, defined as the difference between ALCAP: Establishment Request (ERQ) and ALCAP: Establishment Confirm (ECF).	PMMOResult_L3Iub.M1005C245	Sum, nkcttbh, nkrttbh, tot
sum_time_rl_setup	ACCUMULATION	INTEGER	Sum of radio link setup time, defined as the time between the messages NBAP:RADIO LINK SETUP and NBAP: RADIO	PMMOResult_L3Iub.M1005C243	Sum, nkcttbh, nkrttbh, tot

			LINK SETUP RESPONSE. This counter, divided by the denominator, provides the average resource allocation time.		

7.6.35 Cell.Nokia.UMTS.multirab.access_complete

Multi-RAB: Access completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_access_complete_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level.M1001C310	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C309	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (INTERACTIVE	PMMOResult_Service_Level.M1001C308	Sum, nkcttbh, nkrttbh, tot

			and INTERACTIVE)".		
rab_access_complete_3_ps_nrt	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "3 PS NRT".	PMMOResult_Service_Level.M1001C312	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+1PS NRT(64/128)".	PMMOResult_Service_Level.M1001C288	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination CS AMR 12.2 + 1PS NRT(64/384).	PMMOResult_Service_Level.M1001C441	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+1PS NRT(64/64)".	PMMOResult_Service_Level.M1001C287	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+2PS NRT(BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level.M1001C291	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_2_ps_nrt_interactive_and_backgrou	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB	PMMOResult_Service_Level.M1001C290	Sum, nkcttbh, nkrttbh, tot

nd			combination "CS AMR 12.2+2PS NRT(INTERACTIVE and BACKGROUND)".		
rab_access_complete_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+2PS NRT(INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C289	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2 + 3 PS NRT".	PMMOResult_Service_Level.M1001C292	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level.M1001C300	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_multimode_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".	PMMOResult_Service_Level.M1001C299	Sum, nkcttbh, nkrttbh, tot
rab_access_compl	ACCUMULA	INTEG	The number of	PMMOResult_Service	Sum,

ete_cs_amr_multimode_2_ps_nrt_background_and_background	TION	ER	RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND and BACKGROUND)".	_Level.M1001C303	nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C302	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C301	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 3 PS NRT".	PMMOResult_Service_Level.M1001C304	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_conversational_1_ps_nrt_64	ACCUMULATION	INT8	The number of RAB access completed for a	PMMOResult_Service_Level.M1001C329	Sum, nkcttbh, nkrttbh,

_128			multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 128)".		tot
rab_access_complete_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 384)".	PMMOResult_Service_Level.M1001C330	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 64)".	PMMOResult_Service_Level.M1001C328	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level.M1001C320	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS	PMMOResult_Service_Level.M1001C321	Sum, nkcttbh, nkrttbh, tot

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			Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".		
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level.M1001C319	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level.M1001C323	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".	PMMOResult_Service_Level.M1001C324	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_stream_gu	ACCUMULATION	INT8	The number of RAB access	PMMOResult_Service_Level.M1001C322	Sum, nkcttbh,

ar_less_than_max_1_ps_nrt_64_64			complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".		nkrttbh, tot

7.6.36 Cell.Nokia.UMTS.multirab.active_complete

Multi-RAB: Active failures, completions and releases statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_fail_for_multi_rab_with_amr_and_cs_conv_data	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with CS conversational data and PS NRT connections	PMMOResult_Service_Level.M1001C238	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_multi_rab_with_amr_and_cs_streaming_data	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with CS streaming data and PS NRT connections	PMMOResult_Service_Level.M1001C239	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_multi_rab_with_amr_and_nrt	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with AMR and PS NRT connections	PMMOResult_Service_Level.M1001C237	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_multi_rab_with_multiple_nrt	ACCUMULATION	INT8	Number of active failures for multi RAB with multiple PS NRT connections	PMMOResult_Service_Level.M1001C240	Sum, nkcttbh, nkrttbh, tot

rab_active_complete_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level.M1001C355	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C354	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C353	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_3_ps_nrt	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "3 PS NRT".	PMMOResult_Service_Level.M1001C356	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS	PMMOResult_Service_Level.M1001C342	Sum, nkcttbh, nkrttbh, tot

			AMR 12.2 + 1 PS NRT (64/128)".		
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination CS AMR 12.2 + 1 PS NRT (64/384).	PMMOResult_Service_Level.M1001C442	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 1 PS NRT (64/64)".	PMMOResult_Service_Level.M1001C341	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_12_2_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level.M1001C345	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_12_2_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE	PMMOResult_Service_Level.M1001C344	Sum, nkcttbh, nkrttbh, tot

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			and BACKGROUND)".		
rab_active_complete_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C343	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 3 PS NRT".	PMMOResult_Service_Level.M1001C346	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_multimo_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level.M1001C348	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_multimo_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".	PMMOResult_Service_Level.M1001C347	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_multimo_2_ps_nrt_background_and_bac	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for	PMMOResult_Service_Level.M1001C351	Sum, nkcttbh, nkrttbh, tot

kground			the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND and BACKGROUND)".		
rab_active_complete_cs_amr_multimo_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C350	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_multimo_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C349	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_amr_multimo_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR	PMMOResult_Service_Level.M1001C352	Sum, nkcttbh, nkrttbh, tot

			MULTIMODE + 3 PS NRT".		
rab_active_complete_cs_amr_multimode	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for CS AMR Multimode.	PMMOResult_Service_Level.M1001C331	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/128 kbps downlink)".	PMMOResult_Service_Level.M1001C364	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/384 kbps downlink)".	PMMOResult_Service_Level.M1001C365	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/64 kbps downlink)".	PMMOResult_Service_Level.M1001C363	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB	PMMOResult_Service_Level.M1001C358	Sum, nkcttbh, nkrttbh, tot

			combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB (64kbps uplink/128kbps downlink)".		
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB (64 kbps uplink/384kbps downlink)".	PMMOResult_Service_Level.M1001C359	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB(64 kbps uplink/64 kbps downlink)".	PMMOResult_Service_Level.M1001C357	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS	PMMOResult_Service_Level.M1001C361	Sum, nkcttbh, nkrttbh, tot

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			Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/128 kbps downlink)".		
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/384 kbps downlink)".	PMMOResult_Service_Level.M1001C362	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/64 kbps downlink)".	PMMOResult_Service_Level.M1001C360	Sum, nkcttbh, nkrttbh, tot

7.6.37 Cell.Nokia.UMTS.multirab.active_failure

Multi-RAB active failure measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_active_fail_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination	PMMOResult_Service_Level.M1001C528	Sum, nkcttbh, nkrttbh, tot

			2 PS NRT background class.		
rab_active_fail_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 1 PS NRT interactive class + 1 PS NRT background class.	PMMOResult_Service_Level.M1001C527	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 2 PS NRT interactive class.	PMMOResult_Service_Level.M1001C526	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 3 PS NRT.	PMMOResult_Service_Level.M1001C529	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level.M1001C504	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 384 kbit/s	PMMOResult_Service_Level.M1001C505	Sum, nkcttbh, nkrttbh, tot

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			downlink.		
rab_active_fail_cs_amr_122_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level.M1001C503	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 2 PS NRT background class.	PMMOResult_Service_Level.M1001C508	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 1 PS NRT interactive class + 1 PS NRT background class.	PMMOResult_Service_Level.M1001C507	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 2 PS NRT interactive class.	PMMOResult_Service_Level.M1001C506	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_122_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 3 PS NRT.	PMMOResult_Service_Level.M1001C509	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_multimode_	ACCUMULATION	INTEGER	The number of RAB active	PMMOResult_Service_Level.M1001C511	Sum, nkcttbh,

1_ps_nrt_64_128			failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.		nkrttbh, tot
rab_active_fail_cs_amr_multimode_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level.M1001C512	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_multimode_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level.M1001C510	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_multimode_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + 2 PS NRT background class.	PMMOResult_Service_Level.M1001C515	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR	PMMOResult_Service_Level.M1001C514	Sum, nkcttbh, nkrttbh, tot

			Multimode + 1 PS NRT interactive class + 1 PS NRT background class.		
rab_active_fail_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + 2 PS NRT interactive class.	PMMOResult_Service_Level.M1001C513	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination AMR Multimode + 3 PS NRT.	PMMOResult_Service_Level.M1001C516	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational class + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level.M1001C518	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational class + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level.M1001C519	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational class + PS NRT 64 kbit/s uplink and	PMMOResult_Service_Level.M1001C517	Sum, nkcttbh, nkrttbh, tot

			64 kbit/s downlink.		
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level.M1001C521	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level.M1001C522	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level.M1001C520	Sum, nkcttbh, nkrttbh, tot

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rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level.M1001C524	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level.M1001C525	Sum, nkcttbh, nkrttbh, tot
rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level.M1001C523	Sum, nkcttbh, nkrttbh, tot

7.6.38 Cell.Nokia.UMTS.multirab.setup_attempts

Multi-RAB: Setup attempts statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_attempt	ACCUMULA	INT8	The number of	PMMOResult_Service	Sum,

_2_ps_nrt_background_and_background	TION		RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	_Level.M1001C307	nkcttbh, nkrttbh, tot
rab_setup_attempt_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C306	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C305	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_3_ps_nrt	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "3 PS NRT".	PMMOResult_Service_Level.M1001C311	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 +	PMMOResult_Service_Level.M1001C282	Sum, nkcttbh, nkrttbh, tot

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			PS NRT (64/128)".		
rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination CS AMR 12.2 + PS NRT (64/384).	PMMOResult_Service_Level.M1001C440	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + PS NRT (64/64)".	PMMOResult_Service_Level.M1001C281	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level.M1001C285	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C284	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2 PS NRT	PMMOResult_Service_Level.M1001C283	Sum, nkcttbh, nkrttbh, tot

			(INTERACTIVE and INTERACTIVE)".		
rab_setup_attempt_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2+3PS NRT".	PMMOResult_Service_Level.M1001C286	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level.M1001C294	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".	PMMOResult_Service_Level.M1001C293	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND	PMMOResult_Service_Level.M1001C297	Sum, nkcttbh, nkrttbh, tot

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			and BACKGROUND)".		
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level.M1001C296	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level.M1001C295	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 3 PS NRT".	PMMOResult_Service_Level.M1001C298	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT	PMMOResult_Service_Level.M1001C326	Sum, nkcttbh, nkrttbh, tot

			(64/128)".		
rab_setup_attempt_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/384)".	PMMOResult_Service_Level.M1001C327	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/64)".	PMMOResult_Service_Level.M1001C325	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level.M1001C314	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate	PMMOResult_Service_Level.M1001C315	Sum, nkcttbh, nkrttbh, tot

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			the same as maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".		
rab_setup_attempt_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level.M1001C313	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level.M1001C317	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".	PMMOResult_Service_Level.M1001C318	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-	PMMOResult_Service_Level.M1001C316	Sum, nkcttbh, nkrttbh, tot

			RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".		

7.6.39 Cell.Nokia.UMTS.nbap.block_resource

NBAP - Block resource to/from BTS related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
block_resource_fail_to_bts	ACCUMULATION	INT8	The number of block resource failure messages sent to the BTS.	PMMOResult_L3Iub.M1005C169	Sum, nkcttbh, nkrttbh, tot
block_resource_from_bts_high_priority	ACCUMULATION	INT8	The number of block resource messages with high priority from the BTS.	PMMOResult_L3Iub.M1005C167	Sum, nkcttbh, nkrttbh, tot
block_resource_from_bts_normal_or_low_priority	ACCUMULATION	INT8	The number of block resource messages with normal or low priority from the BTS.	PMMOResult_L3Iub.M1005C168	Sum, nkcttbh, nkrttbh, tot

7.6.40 Cell.Nokia.UMTS.nbap.common_measurement

NBAP - Common measurements related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
common_meas_failure_indication	ACCUMULATION	INT8	The number of common	PMMOResult_L3Iub.M1005C166	Sum, nkcttbh,

			measurement failure indications.		nkrttbh, tot
common_meas_init_fail_due_to_meas_temporarily_not_available	ACCUMULATION	INT8	The number of common measurement initiation failures due to measurement temporarily not available.	PMMOResult_L3Iub.M1005C163	Sum, nkcttbh, nkrttbh, tot
common_meas_init_fail_due_to_not_support_for_the_obj	ACCUMULATION	INT8	The number of common measurement initiation failures due to measurement not supported for the object (3GPP Iub).	PMMOResult_L3Iub.M1005C162	Sum, nkcttbh, nkrttbh, tot
common_meas_init_requests	ACCUMULATION	INT8	The number of common measurement initiation requests (3GPP Iub).	PMMOResult_L3Iub.M1005C161	Sum, nkcttbh, nkrttbh, tot
common_meas_reports	ACCUMULATION	INT8	The number of received common measurement reports.	PMMOResult_L3Iub.M1005C164	Sum, nkcttbh, nkrttbh, tot
common_meas_terminations	ACCUMULATION	INT8	The number of common measurement terminations.	PMMOResult_L3Iub.M1005C165	Sum, nkcttbh, nkrttbh, tot

7.6.41 Cell.Nokia.UMTS.nbap.compressed_mode_command

NBAP - Compressed mode command statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_sent_comp_mode_cmds	ACCUMULATION	INT8	Number of sent Compressed Mode Commands to BTS.	PMMOResult_L3Iub.M1005C139	Sum, nkcttbh, nkrttbh, tot

7.6.42 Cell.Nokia.UMTS.nbap.dedicated_measurement_procedures

NBAP - Dedicated measurement procedures related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dedic_meas_fail_due_to_ctrl_proc_overload_or_not_enough_res	ACCUMULATION	INT8	The number of dedicated measurement failures due to control process overload or not enough user plane processing resource.	PMMOResult_L3Iub.M1005C155	Sum, nkcttbh, nkrttbh, tot
dedicated_meas_failure_indication	ACCUMULATION	INT8	The number of dedicated measurement failure indications received from the BTS.	PMMOResult_L3Iub.M1005C237	Sum, nkcttbh, nkrttbh, tot
dedicated_meas_init_fail_due_to_meas_temp_not_avail	ACCUMULATION	INT8	The number of Dedicated Measurement Initiation Failures due to measurement temporarily not available. This counter is supported only by 3GPP Iub.	PMMOResult_L3Iub.M1005C146	Sum, nkcttbh, nkrttbh, tot
dedicated_meas_init_fail_due_to_not_supported_for_the_object	ACCUMULATION	INT8	The number of Dedicated Measurement Initiation Failures due to operation not supported for	PMMOResult_L3Iub.M1005C147	Sum, nkcttbh, nkrttbh, tot

			the object. This counter is supported only by 3GPP Iub.		
dedicated_meas_terminations	ACCUMULATION	INT8	The number of dedicated measurement termination requests sent to a BTS.	PMMOResult_L3Iub.M1005C236	Sum, nkcttbh, nkrttbh, tot
dedicated_measurement_initiation_requests	ACCUMULATION	INT8	The number of sent Dedicated Measurement Initiation requests.	PMMOResult_L3Iub.M1005C144	Sum, nkcttbh, nkrttbh, tot
dedicated_measurement_initiation_response	ACCUMULATION	INT8	The number of received Dedicated Measurement Initiation responses.	PMMOResult_L3Iub.M1005C145	Sum, nkcttbh, nkrttbh, tot
dedicated_measurement_report	ACCUMULATION	INT8	The number of Dedicated Measurement Reports received. This counter is supported only by 3GPP Iub.	PMMOResult_L3Iub.M1005C148	Sum, nkcttbh, nkrttbh, tot

7.6.43 Cell.Nokia.UMTS.nbap.error_indication

NBAP - Error indication statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_rec_error_indications	ACCUMULATION	INT8	Number of received Error Indications from BTS.	PMMOResult_L3Iub.M1005C141	Sum, nkcttbh, nkrttbh, tot
nbr_of_sent_error_indications	ACCUMULATION	INT8	Number of sent Error Indications to BTS.	PMMOResult_L3Iub.M1005C140	Sum, nkcttbh, nkrttbh, tot

7.6.44 Cell.Nokia.UMTS.nbap.iub_dl_powcon

IuB power control measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
all_iub_dl_power_control_messages_in_drnc	ACCUMULATION	INTEGER	Number of all Iub Downlink Power Control Messages in DRNC.	PMMOResult_L3Iub.M1005C150	Sum, nkcttbh, nkrttbh, tot
all_iub_dl_power_control_messages_in_srnc	ACCUMULATION	INTEGER	Number of all Iub Downlink Power Control Messages in SRNC.	PMMOResult_L3Iub.M1005C149	Sum, nkcttbh, nkrttbh, tot
iub_dl_power_control_messages_for_power_update_in_drnc	ACCUMULATION	INTEGER	Number of Iub Downlink Power Control Messages for power update in DRNC.	PMMOResult_L3Iub.M1005C152	Sum, nkcttbh, nkrttbh, tot
iub_dl_power_control_messages_for_power_update_in_srnc	ACCUMULATION	INTEGER	Number of Iub Downlink Power Control Messages for power update in SRNC.	PMMOResult_L3Iub.M1005C151	Sum, nkcttbh, nkrttbh, tot

7.6.45 Cell.Nokia.UMTS.nbap.radio_link_addition

NBAP - Radio link addition statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rl_branch_add_fail_for_sho_on_drnc	PERCENTAGE	FLOAT	Percentage of radio link branch addition successes for softer HO on DRNC side.	100 * ({rl_branch_add_succ_for_sho_on_drnc}-{rl_branch_add_att_for_sho_on_drnc})/{rl_branch_add_att_for_sho_on_drnc}	Average, avg, nkcttbh, nkrttbh, tot

_%_rl_branch_add_fail_for_sho_on_srnc	PERCENTAGE	FLOAT	Percentage of radio link branch addition successes for softer HO on SRNC side.	100 * ({rl_branch_add_att_for_sho_on_srnc}-{rl_branch_add_succ_for_sho_on_srnc})/{rl_branch_add_att_for_sho_on_srnc}	Average, avg, nkcttbh, nkrttbh, tot
_%_rl_branch_add_succ_for_sho_on_drnc	PERCENTAGE	FLOAT	Percentage of radio link branch addition successes for softer HO on DRNC side.	100 * {rl_branch_add_succ_for_sho_on_drnc}/{rl_branch_add_att_for_sho_on_drnc}	Average, avg, nkcttbh, nkrttbh, tot
_%_rl_branch_add_succ_for_sho_on_srnc	PERCENTAGE	FLOAT	Percentage of radio link branch addition successes for softer HO on SRNC side.	100 * {rl_branch_add_succ_for_sho_on_srnc}/{rl_branch_add_att_for_sho_on_srnc}	Average, avg, nkcttbh, nkrttbh, tot
rl_branch_add_att_for_sho_on_drnc	ACCUMULATION	INT8	A number of radio link branch addition attempts for softer HO on DRNC side.	PMMOResult_L3Iub.M1005C43	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_att_for_sho_on_srnc	ACCUMULATION	INT8	A number of radio link branch addition attempts for softer HO on SRNC side.	PMMOResult_L3Iub.M1005C42	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C53	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side due to a general BTS reason. The general reason can	PMMOResult_L3Iub.M1005C57	Sum, nkcttbh, nkrttbh, tot

			be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		
rl_branch_add_fail_for_sho_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side because of the fact that a BTS is not responding.	PMMOResult_L3Iub.M1005C56	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side due to HW resource not available.	PMMOResult_L3Iub.M1005C54	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_misc	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on DRNC side due to miscellaneous cause.	PMMOResult_L3Iub.M1005C203	Sum, nkcttbh, nkrttbh, tot

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rl_branch_add_fail_for_sho_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side due to not enough resources.	PMMOResult_L3Iub.M1005C55	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on DRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C52	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_prot	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on DRNC side due to protocol cause.	PMMOResult_L3Iub.M1005C202	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_rnl	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on DRNC side due to radio network layer cause.	PMMOResult_L3Iub.M1005C200	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_drnc_due_to_trl	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on DRNC side due to transmission layer cause.	PMMOResult_L3Iub.M1005C201	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on SRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C47	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srn	ACCUMULATION	INT8	A number of radio link branch	PMMOResult_L3Iub.M1005C51	Sum, nkcttbh,

c_due_to_bts_gen_rea			addition failures for softer HO on SRNC side due to a general BTS reason. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on SRNC side because a BTS is not responding.	PMMOResult_L3Iub.M1005C50	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on the SRNC side due to resource not available.	PMMOResult_L3Iub.M1005C48	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srn	ACCUMULATION	INT8	The number of radio link branch	PMMOResult_L3Iub.M1005C199	Sum, nkcttbh,

c_due_to_misc			addition failures for softer HO on SRNC side due to miscellaneous cause.		nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on SRNC side due to not enough resources.	PMMOResult_L3Iub.M1005C49	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link branch addition failures for softer HO on SRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C46	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_prot	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on SRNC side due to protocol cause.	PMMOResult_L3Iub.M1005C198	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_rnl	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on SRNC side due to radio network layer cause.	PMMOResult_L3Iub.M1005C196	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_fail_for_sho_on_srnc_due_to_trl	ACCUMULATION	INT8	The number of radio link branch addition failures for softer HO on SRNC side due to transmission layer cause.	PMMOResult_L3Iub.M1005C197	Sum, nkcttbh, nkrttbh, tot
rl_branch_add_succ_for_sho_on_drnc	ACCUMULATION	INT8	A number of radio link branch addition successes for softer HO on	PMMOResult_L3Iub.M1005C45	Sum, nkcttbh, nkrttbh, tot

			DRNC side.		
rl_branch_add_succ_for_sho_on_srnc	ACCUMULATION	INT8	A number of radio link branch addition successes for softer HO on SRNC side.	PMMOResult_L3Iub.M1005C44	Sum, nkcttbh, nkrttbh, tot
tot_rl_branch_add_fail_for_sho_on_drnc	ACCUMULATION	INT8	Total radio link branch addition failure for all causes for softer HO on DRNC side.	({rl_branch_add_fail_for_sho_on_drnc_due_to_om_interv}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_already_activ}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_hw_res_not_avail}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_not_enough_res}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_bts_not_resp}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_bts_gen_rea}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_rnl}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_trl}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_prot}+ {rl_branch_add_fail_for_sho_on_drnc_due_to_misc})	Sum, nkcttbh, nkrttbh, tot
tot_rl_branch_add_fail_for_sho_on_srnc	ACCUMULATION	INT8	Total radio link branch addition failure for all	({rl_branch_add_fail_for_sho_on_srnc_due_to_om_interv}+	Sum, nkcttbh, nkrttbh,

			causes for softer HO on SRNC side.	{rl_branch_add_fail_for_sho_on_srnc_due_to_already_activ}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_hw_res_not_avail}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_not_enough_res}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_bts_not_resp}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_bts_gen_rea}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_rnl}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_trl}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_prot}+ {rl_branch_add_fail_for_sho_on_srnc_due_to_misc})	tot

7.6.46 Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.drnc

NBAP - Radio link failure statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_del_on_drnc_due_to_act_rl_syn_fail	ACCUMULATION	INT8	A number of radio link deletions on DRNC side due to an active radio link synchronisation failure. If a BTS loses synchronisation on an active RL and is not able tore establish	PMMOResult_L3Iub.M1005C74	Sum, nkcttbh, nkrttbh, tot

			synchronisation during the time defined by T_arlsyf.		
rl_del_on_drnc_due_to_bts_equip_fail	ACCUMULATION	INT8	A number of radio link deletions on DRNC side due to a BTS equipment failure. If a BTS reports on an equipment failure.	PMMOResult_L3Iub.M1005C76	Sum, nkcttbh, nkrttbh, tot
rl_del_on_drnc_due_to_bts_hw_overl	ACCUMULATION	INT8	A number of radio link deletions on DRNC side due to BTS HW overload. If a BTS reports on HW overload.	PMMOResult_L3Iub.M1005C75	Sum, nkcttbh, nkrttbh, tot
rl_del_on_drnc_due_to_ini_syn_fail	ACCUMULATION	INT8	A number of radio link deletions on DRNC side due to an initial synchronisation failure. If a BTS fails to establish synchronisation at L1 during the time defined by T_inisyf.	PMMOResult_L3Iub.M1005C73	Sum, nkcttbh, nkrttbh, tot
rl_del_on_drnc_due_to_norm_rel	ACCUMULATION	INT8	A number of radio link deletions on DRNC side due to a normal release.	PMMOResult_L3Iub.M1005C72	Sum, nkcttbh, nkrttbh, tot
rl_del_resp_on_drnc	ACCUMULATION	INT8	A number of Radio Link Deletion responses on the DRNC side.	PMMOResult_L3Iub.M1005C77	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_d	ACCUMULA	INT8	A number of radio	PMMOResult_L3Iub.M	Sum,

ue_to_bts_equip_fail	TION		link failures on DRNC side due to a BTS equipment failure. If a BTS reports on an equipment failure.	1005C65	nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_bts_hw_overl	ACCUMULATION	INT8	A number of radio link failures on DRNC side due to BTS HW overload. If a BTS reports a HW overload.	PMMOResult_L3Iub.M1005C64	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_ini_syn_fail	ACCUMULATION	INT8	A number of radio link failures on DRNC side due to an initial synchronisation failure. If a BTS fails to establish synchronisation at L1 during the time defined by T_inisyf.	PMMOResult_L3Iub.M1005C62	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link failures on DRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C211	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_prot_cause	ACCUMULATION	INT8	The number of radio link failures on DRNC due to protocol cause.	PMMOResult_L3Iub.M1005C210	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link failures on DRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C208	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_drnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link failures on DRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C209	Sum, nkcttbh, nkrttbh, tot

rl_failure_on_drnc_due_to_act_rl_syn_fail	ACCUMULATION	INT8	A number of radio link failures on DRNC side due to an active radio link synchronisation failure. If a BTS loses synchronisation on an active RL and is not able to re establish synchronisation during the time defined by T_arlsyf.	PMMOResult_L3Iub.M1005C63	Sum, nkcttbh, nkrttbh, tot

7.6.47 Cell.Nokia.UMTS.nbap.radio_link_failure_deletion.srnc

NBAP - Radio link failure deletion statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_del_on_srnc_due_to_act_rl_syn_fail	ACCUMULATION	INT8	A number of radio link deletions on SRNC side due to an active radio link synchronisation failure. If a BTS loses synchronisation on an active RL and is not able tore establish synchronisation during the time defined by T_arlsyf.	PMMOResult_L3Iub.M1005C68	Sum, nkcttbh, nkrttbh, tot
rl_del_on_srnc_due_to_bts_equip_	ACCUMULATION	INT8	A number of radio link deletions on	PMMOResult_L3Iub.M1005C70	Sum, nkcttbh,

fail			SRNC side due to a BTS equipment failure. If a BTS reports on an equipment failure.		nkrttbh, tot
rl_del_on_srnc_due_to_bts_hw_overl	ACCUMULATION	INT8	A number of radio link deletions on SRNC side due to BTS HW overload. If a BTS reports on HW overload.	PMMOResult_L3Iub.M1005C69	Sum, nkcttbh, nkrttbh, tot
rl_del_on_srnc_due_to_ini_syn_fail	ACCUMULATION	INT8	A number of radio link deletions on SRNC side due to an initial synchronisation failure. If a BTS fails to establish synchronisation at L1 during the time defined by T_inisyf.	PMMOResult_L3Iub.M1005C67	Sum, nkcttbh, nkrttbh, tot
rl_del_on_srnc_due_to_norm_rel	ACCUMULATION	INT8	A number of radio link deletions on SRNC side due to a normal release.	PMMOResult_L3Iub.M1005C66	Sum, nkcttbh, nkrttbh, tot
rl_del_resp_on_srnc	ACCUMULATION	INT8	A number of radio link deletion failures of a soft HO branch on SRNC side due to a BTS. If a BTS reports on an radio link deletion failure	PMMOResult_L3Iub.M1005C71	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_act_rl_syn_fail	ACCUMULATION	INT8	A number of radio link failures on SRNC side due to an active radio link synchronisation failure. If a BTS loses synchronisation on an active RL and is	PMMOResult_L3Iub.M1005C59	Sum, nkcttbh, nkrttbh, tot

			not able tore establish synchronisation during the time defined by T_arlsyf.		
rl_fail_on_srnc_due_to_bts_equip_fail	ACCUMULATION	INT8	A number of radio link failures on SRNC side due to a BTS equipment failure. If a BTS reports on an equipment failure.	PMMOResult_L3Iub.M1005C61	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_bts_hw_overl	ACCUMULATION	INT8	A number of radio link failures on SRNC side due to BTS HW overload. If a BTS reports a HW overload.	PMMOResult_L3Iub.M1005C60	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_ini_syn_fail	ACCUMULATION	INT8	A number of radio link failures on SRNC side due to an initial synchronisation failure. If a BTS fails to establish synchronisation at L1 during the time defined by T_inisyf.	PMMOResult_L3Iub.M1005C58	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link failures on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C207	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	The number of radio link failures on SRNC due to	PMMOResult_L3Iub.M1005C206	Sum, nkcttbh, nkrttbh,

			protocol cause.		tot
rl_fail_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link failures on SRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C204	Sum, nkcttbh, nkrttbh, tot
rl_fail_on_srnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link failures on SRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C205	Sum, nkcttbh, nkrttbh, tot

7.6.48 Cell.Nokia.UMTS.nbap.radio_link_forced_ho

NBAP - Forced handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ho_req_due_to_bts_req	ACCUMULATION	INT8	A number of handover requests due to a BTS request.	PMMOResult_L3Iub.M1005C40	Sum, nkcttbh, nkrttbh, tot
ho_resp_rej_due_to_bts_req	ACCUMULATION	INT8	A number of handover request (due to a BTS) responses rejecting the HO request.	PMMOResult_L3Iub.M1005C41	Sum, nkcttbh, nkrttbh, tot

7.6.49 Cell.Nokia.UMTS.nbap.radio_link_reconfig_commit_cancel

NBAP - Radio link reconfiguration commit statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_canc_synch_on_drnc_due_to_other_bts_not_ready	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfigurations on DRNC side because of the fact that other BTS(s)	PMMOResult_L3Iub.M1005C131	Sum, nkcttbh, nkrttbh, tot

			does not support a new configuration.		
rl_reconf_canc_synch_on_drnc_due_to_transmission_setup_fail	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfigurations on DRNC side due to a transmission setup failure.	PMMOResult_L3Iub.M1005C130	Sum, nkcttbh, nkrttbh, tot
rl_reconf_canc_synch_on_srnc_due_to_other_bts_not_ready	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfigurations on SRNC side due to the fact that other BTS(s)does not support a new configuration.	PMMOResult_L3Iub.M1005C129	Sum, nkcttbh, nkrttbh, tot
rl_reconf_canc_synch_on_srnc_due_to_transmission_setup_fail	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfigurations on SRNC side due to a transmission setup failure.	PMMOResult_L3Iub.M1005C128	Sum, nkcttbh, nkrttbh, tot
rl_reconf_comm_synch_on_drnc	ACCUMULATION	INT8	A number of committed synchronised radio link reconfigurations on DRNC side.	PMMOResult_L3Iub.M1005C127	Sum, nkcttbh, nkrttbh, tot
rl_reconf_comm_synch_on_srnc	ACCUMULATION	INT8	A number of committed synchronised radio link	PMMOResult_L3Iub.M1005C126	Sum, nkcttbh, nkrttbh, tot

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			reconfigurations DCH on SRNC side.		

7.6.50 Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.drnc

NBAP - Radio link reconfiguration failures statistics at DRNC

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_prep_synch_fail_on_drnc	ACCUMULATION	INT8	A number of unsuccessful synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C138	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C109	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough	PMMOResult_L3Iub.M1005C113	Sum, nkcttbh, nkrttbh, tot

			resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C112	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C110	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C111	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_om_interv	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on	PMMOResult_L3Iub.M1005C108	Sum, nkcttbh, nkrttbh, tot

			DRNC.		
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C121	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.	PMMOResult_L3Iub.M1005C125	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C124	Sum, nkcttbh, nkrttbh, tot

rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C122	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C123	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_om_interv	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C120	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C115	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration	PMMOResult_L3Iub.M1005C119	Sum, nkcttbh, nkrttbh, tot

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			preparations on DRNC. The general reason can be one of the following, Hardware overload Signalling bearer overflow Equipment failure Unspecified cell (no configuration) Not enough resources (BS resource manager rejection) Resource unavailable, unspecified BS capability failure.		
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C118	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C116	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C117	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_sy	ACCUMULA	INT8	A number of	PMMOResult_L3Iub.M	Sum,

nch_for_dch_mod_fail_on_drnc_due_to_om_interv	TION		unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	1005C114	nkcttbh, nkrttbh, tot

7.6.51 Cell.Nokia.UMTS.nbap.radio_link_reconfig_failures.srnc

NBAP - Radio link reconfiguration failures statistics at SRNC

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_prep_synch_fail_on_srnc	ACCUMULATION	INT8	A number of unsuccessful synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C137	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C91	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC. The general reason can be one of the following,	PMMOResult_L3Iub.M1005C95	Sum, nkcttbh, nkrttbh, tot

			Hardware overload Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C94	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C92	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C93	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of unsuccessful DCH additions for synchronised radio link	PMMOResult_L3Iub.M1005C90	Sum, nkcttbh, nkrttbh, tot

			reconfiguration preparations on SRNC.		
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C103	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.	PMMOResult_L3Iub.M1005C107	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for	PMMOResult_L3Iub.M1005C106	Sum, nkcttbh, nkrttbh,

to_bts_not_resp			synchronised radio link reconfiguration preparations on SRNC.		tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C104	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C105	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C102	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C97	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration	PMMOResult_L3Iub.M1005C101	Sum, nkcttbh, nkrttbh, tot

			preparations on SRNC. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C100	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C98	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_not_enough_r	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio	PMMOResult_L3Iub.M1005C99	Sum, nkcttbh, nkrttbh, tot

es			link reconfiguration preparations on SRNC.		
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C96	Sum, nkcttbh, nkrttbh, tot

7.6.52 Cell.Nokia.UMTS.nbap.radio_link_reconfig_prep

NBAP - Radio link reconfiguration preparation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C219	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC due to protocol cause.	PMMOResult_L3Iub.M1005C218	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link	PMMOResult_L3Iub.M1005C216	Sum, nkcttbh, nkrttbh, tot

			reconfiguration preparations on DRNC due to radio network layer cause.		
rl_reconf_prep_synch_for_dch_add_fail_on_drnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on DRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C217	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C215	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC due to protocol cause.	PMMOResult_L3Iub.M1005C214	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio	PMMOResult_L3Iub.M1005C212	Sum, nkcttbh, nkrttbh, tot

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			link reconfiguration preparations on SRNC due to radio network layer cause.		
rl_reconf_prep_synch_for_dch_add_fail_on_srnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH additions for synchronised radio link reconfiguration preparations on SRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C213	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C87	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_on_drnc	ACCUMULATION	INT8	A number of successful DCH additions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C81	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH additions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C84	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_add_on_srnc	ACCUMULATION	INT8	A number of successful DCH additions for	PMMOResult_L3Iub.M1005C78	Sum, nkcttbh, nkrttbh,

			synchronised radio link reconfiguration preparations on SRNC.		tot
rl_reconf_prep_synch_for_dch_del_due_dynamic_link_optimization	ACCUMULATION	INT8	The number of started DCH deletions for synchronised radio link reconfiguration preparations due to dynamic link optimisation (only SRNC).	PMMOResult_L3Iub.M1005C157	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_due_enhanced_overload_control	ACCUMULATION	INT8	The number of started DCH deletions for synchronised radio link reconfiguration preparations due to enhanced overload control (only SRNC).	PMMOResult_L3Iub.M1005C156	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_due_throughput_based_optimisation	ACCUMULATION	INTEGER	The number of started DCH deletions for synchronised radio link reconfiguration preparations due to Throughput Based Optimisation of the PS algorithm (only SRNC).	PMMOResult_L3Iub.M1005C240	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_	ACCUMULATION	INT8	The number of started DCH	PMMOResult_L3Iub.M1005C153	Sum, nkcttbh,

due_to_priority_based_scheduling			deletions with synchronised radio link reconfiguration preparation due to priority based scheduling (PBS) (only SRNC).		nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C235	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC due to protocol cause.	PMMOResult_L3Iub.M1005C234	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on DRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C232	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_drnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration	PMMOResult_L3Iub.M1005C233	Sum, nkcttbh, nkrttbh, tot

			preparations on DRNC due to transmission layer cause.		
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C231	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC due to protocol cause.	PMMOResult_L3Iub.M1005C230	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link reconfiguration preparations on SRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C228	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_fail_on_srnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH deletions for synchronised radio link	PMMOResult_L3Iub.M1005C229	Sum, nkcttbh, nkrttbh, tot

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			reconfiguration preparations on SRNC due to transmission layer cause.		
rl_reconf_prep_synch_for_dch_del_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C89	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_on_drnc	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C83	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C86	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_del_on_srnc	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C80	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_deletion_due_to_preemption	ACCUMULATION	INT8	The number of started DCH deletions with synchronised radio link reconfiguration	PMMOResult_L3Iub.M1005C154	Sum, nkcttbh, nkrttbh, tot

			preparation due to pre- emption (only SRNC).		
rl_reconf_prep_synch_for_dch_mod_due_enhanced_olc_downgrading	ACCUMULATION	INT8	The number of started DCH modifications for synchronised radio link reconfiguration preparations due to enhanced overload control downgrading (only SRNC).	PMMOResult_L3Iub.M1005C160	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_due_pbs_downgrading	ACCUMULATION	INT8	The number of started DCH modifications for synchronised radio link reconfiguration preparations due to priority based scheduling (PBS) downgrading (only SRNC).	PMMOResult_L3Iub.M1005C158	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_due_preemption_downgrading	ACCUMULATION	INT8	The number of started DCH modifications for synchronised radio link reconfiguration preparations due to pre- emption downgrading (only SRNC).	PMMOResult_L3Iub.M1005C159	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_due_throughput_	ACCUMULATION	INTEGER	The number of started DCH modifications for	PMMOResult_L3Iub.M1005C239	Sum, nkcttbh, nkrttbh,

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based_optimisation			synchronised radio link reconfiguration preparations due to Throughput Based Optimisation of the PS algorithm (only SRNC).		tot
rl_reconf_prep_synch_for_dch_mod_due_to_dyn_link_opt_on_srnc	ACCUMULATION	INT8	A number of started DCH modifications for synchronised radio link reconfiguration preparations due to Dynamic Link Optimisation on SRNC.	PMMOResult_L3Iub.M1005C133	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C227	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC due to protocol cause.	PMMOResult_L3Iub.M1005C226	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration	PMMOResult_L3Iub.M1005C224	Sum, nkcttbh, nkrttbh, tot

			preparations on DRNC due to radio network layer cause.		
rl_reconf_prep_synch_for_dch_mod_fail_on_drnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on DRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C225	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_cm	ACCUMULATION	INT8	The number of failed DCH modifications for synchronised radio link reconfiguration preparations on SRNC due to Compressed Mode.	PMMOResult_L3Iub.M1005C143	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_misc	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C223	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_prot	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio	PMMOResult_L3Iub.M1005C222	Sum, nkcttbh, nkrttbh, tot

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			link reconfiguration preparations on SRNC due to protocol cause.		
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_rnl	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C220	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_fail_on_srnc_due_to_trl	ACCUMULATION	INT8	The number of unsuccessful DCH modifications for synchronised radio link reconfiguration preparations on SRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C221	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C88	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_on_drnc	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C82	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod	ACCUMULATION	INT8	The number of started DCH	PMMOResult_L3Iub.M1005C142	Sum, nkcttbh,

_on_srnc_due_to_cm			modifications for synchronised radio link reconfiguration preparations on SRNC due to Compressed Mode.		nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C85	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_for_dch_mod_on_srnc	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations on SRNC	PMMOResult_L3Iub.M1005C79	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_on_drnc_ready	ACCUMULATION	INT8	A number of successful synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C136	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_on_drnc	ACCUMULATION	INT8	A number of started synchronised radio link reconfiguration preparations on DRNC.	PMMOResult_L3Iub.M1005C134	Sum, nkcttbh, nkrttbh, tot

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rl_reconf_prep_synch_on_srnc_ready	ACCUMULATION	INT8	A number of successful synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C135	Sum, nkcttbh, nkrttbh, tot
rl_reconf_prep_synch_on_srnc	ACCUMULATION	INT8	A number of started synchronised radio link reconfiguration preparations on SRNC.	PMMOResult_L3Iub.M1005C132	Sum, nkcttbh, nkrttbh, tot

7.6.53 Cell.Nokia.UMTS.nbap.radio_link_restoration

NBAP - Radio link restoration statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_restore_ind_sync_reachieved	ACCUMULATION	INT8	The number of radio link restoration indications that uplink synchronisation is reachieved after radio link failure but before RL deletion procedure is initiated by the RNC.	PMMOResult_L3Iub.M1005C238	Sum, nkcttbh, nkrttbh, tot

7.6.54 Cell.Nokia.UMTS.nbap.radio_link_setup_failures_3gpp_nbap

NBAP - Radio link setup failures (3GPP NBAP protocol) statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_setup_fail_for_first_rl_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link setup failures for the first radio link due to	PMMOResult_L3Iub.M1005C179	Sum, nkcttbh, nkrttbh, tot

			miscellaneous cause. The first link can be established either in RRC connection setup or state transition to CELL_DCH.		
rl_setup_fail_for_first_rl_due_to_prot_cause	ACCUMULATION	INT8	The number of radio link setup failures for the first radio link due to protocol cause. The first link can be established either in RRC connection setup or state transition to CELL_DCH.	PMMOResult_L3Iub.M1005C178	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for the first radio link due to RN layer cause. The first link can be established either in RRC connection setup or state transition to CELL_DCH.	PMMOResult_L3Iub.M1005C176	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for the first radio link due to transmission layer cause. The first link can be established either in RRC connection	PMMOResult_L3Iub.M1005C177	Sum, nkcttbh, nkrttbh, tot

			setup or state transition to CELL_DCH.		
tot_rl_setup_fail_3gpp_nbap	ACCUMULATION	INT8	Total number of radio link setup failures for the first radio link for all causes using 3GPP NBAP protocol.	({rl_setup_fail_for_first_rl_due_to_rn_layer_cause} + {rl_setup_fail_for_first_rl_due_to_tr_layer_cause} + {rl_setup_fail_for_first_rl_due_to_prot_cause} + {rl_setup_fail_for_first_rl_due_to_misc_cause})	Sum, nkcttbh, nkrttbh, tot

7.6.55 Cell.Nokia.UMTS.nbap.radio_link_setup_failures_first_rl

NBAP - Radio link setup failures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_setup_fail_for_first_rl_due_to_already_activ	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup due to a context that is already activated.	PMMOResult_L3Iub.M1005C11	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup due to a general reason caused by a BTS. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure Unspecified cell (no configuration), Not enough	PMMOResult_L3Iub.M1005C15	Sum, nkcttbh, nkrttbh, tot

			resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.		
rl_setup_fail_for_first_rl_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup because a BTS is not responding.	PMMOResult_L3Iub.M1005C14	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup because of not available HW resources.	PMMOResult_L3Iub.M1005C12	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup because there are not enough resources.	PMMOResult_L3Iub.M1005C13	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_first_rl_due_to_om_interv	ACCUMULATION	INT8	A number of radio link setup failures for an RRC connection setup due to OM intervention.	PMMOResult_L3Iub.M1005C10	Sum, nkcttbh, nkrttbh, tot
tot_rl_setup_fail_for_first_rl	ACCUMULATION	INT8	Total number of radio link setup failures for an RRC connection for first RL.	({rl_setup_fail_for_first_rl_due_to_om_interv} + {rl_setup_fail_for_first_rl_due_to_already_activ	Sum, nkcttbh, nkrttbh, tot

				}+ {rl_setup_fail_for_first_rl_due_to_hw_res_not_avail}+ {rl_setup_fail_for_first_rl_due_to_not_enough_res}+ {rl_setup_fail_for_first_rl_due_to_bts_not_resp}+ {rl_setup_fail_for_first_rl_due_to_bts_gen_rea})	

7.6.56 Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.drnc

NBAP - Radio link setup failures for soft handover at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_setup_fail_for_hho_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C35	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side due to a general reason of a BTS. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager	PMMOResult_L3Iub.M1005C39	Sum, nkcttbh, nkrttbh, tot

			rejection), Resource unavailable, unspecified BS capability failure.		
rl_setup_fail_for_hho_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side because the BTS is not responding.	PMMOResult_L3Iub.M1005C38	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side due to not available HW resources.	PMMOResult_L3Iub.M1005C36	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on DRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C195	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side because there are not enough resources.	PMMOResult_L3Iub.M1005C37	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on DRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C34	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_	ACCUMULA	INT8	The number of	PMMOResult_L3Iub.M	Sum,

hho_on_drnc_due_to_prot_cause	TION		radio link setup failures for hard handover on DRNC due to protocol cause.	1005C194	nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on DRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C192	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_drnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on DRNC due to transmission layer cause.	PMMOResult_L3Iub.M1005C193	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on DRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C29	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on the DRNC side due to a general reason caused by a BTS. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS	PMMOResult_L3Iub.M1005C33	Sum, nkcttbh, nkrttbh, tot

			resource manager rejection) Resource unavailable, unspecified BS capability failure.		
rl_setup_fail_for_sho_on_drnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on DRNC side because the BTS is not responding.	PMMOResult_L3Iub.M1005C32	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on DRNC side due to not available HW resources.	PMMOResult_L3Iub.M1005C30	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on DRNC side due to miscellaneous cause.	PMMOResult_L3Iub.M1005C191	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on DRNC side because there are not enough resources.	PMMOResult_L3Iub.M1005C31	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on DRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C28	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_	ACCUMULA	INT8	The number of	PMMOResult_L3Iub.M	Sum,

sho_on_drnc_due_to_prot_cause	TION		radio link setup failures for soft handover on DRNC side due to protocol cause.	1005C190	nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on DRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C188	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_drnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on DRNC side due to transmission layer cause.	PMMOResult_L3Iub.M1005C189	Sum, nkcttbh, nkrttbh, tot
tot_rl_setup_fail_for_hho_on_drnc	ACCUMULATION	INT8	Total number of radio link setup failures for an RRC connection for HHO on DRNC	({rl_setup_fail_for_hho_on_drnc_due_to_om_interv}+ {rl_setup_fail_for_hho_on_drnc_due_to_already_activ}+ {rl_setup_fail_for_hho_on_drnc_due_to_hw_res_not_avail}+ {rl_setup_fail_for_hho_on_drnc_due_to_not_enough_res}+ {rl_setup_fail_for_hho_on_drnc_due_to_bts_not_resp}+ {rl_setup_fail_for_hho_on_drnc_due_to_bts_gen_rea}+ {rl_setup_fail_for_hho_on_drnc_due_to_rn_layer_cause}+ {rl_setup_fail_for_hho_on_drnc_due_to_tr_layer_cause}+ {rl_setup_fail_for_hho_	Sum, nkcttbh, nkrttbh, tot

				on_drnc_due_to_prot_cause}+ {rl_setup_fail_for_hho_on_drnc_due_to_misc_cause})	
tot_rl_setup_fail_for_sho_on_drnc	ACCUMULATION	INT8	Total number of radio link setup failures for an RRC connection for SHO on DRNC	({rl_setup_fail_for_sho_on_drnc_due_to_om_interv}+ {rl_setup_fail_for_sho_on_drnc_due_to_already_activ}+ {rl_setup_fail_for_sho_on_drnc_due_to_hw_res_not_avail}+ {rl_setup_fail_for_sho_on_drnc_due_to_not_enough_res}+ {rl_setup_fail_for_sho_on_drnc_due_to_bts_not_resp}+ {rl_setup_fail_for_sho_on_drnc_due_to_bts_gen_rea}+ {rl_setup_fail_for_sho_on_drnc_due_to_rn_layer_cause}+ {rl_setup_fail_for_sho_on_drnc_due_to_tr_layer_cause}+ {rl_setup_fail_for_sho_on_drnc_due_to_prot_cause}+ {rl_setup_fail_for_sho_on_drnc_due_to_misc_cause})	Sum, nkcttbh, nkrttbh, tot

7.6.57 Cell.Nokia.UMTS.nbap.radio_link_setup_failures_ho.srnc

NBAP - Radio link setup failures for soft handover at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_setup_fail_for_hho_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on SRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C23	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on SRNC side due to a general reason caused by a BTS. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection) , Resource unavailable, unspecified BS capability failure	PMMOResult_L3Iub.M1005C27	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on SRNC side because a BTS is not responding.	PMMOResult_L3Iub.M1005C26	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on the SRNC side due to not available HW	PMMOResult_L3Iub.M1005C24	Sum, nkcttbh, nkrttbh, tot

			resources.		
rl_setup_fail_for_hho_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C187	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on the SRNC side because there are not enough resources.	PMMOResult_L3Iub.M1005C25	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link setup failures for hard HO on SRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C22	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on SRNC due to protocol cause.	PMMOResult_L3Iub.M1005C186	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on SRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C184	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_hho_on_srnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for hard handover on	PMMOResult_L3Iub.M1005C185	Sum, nkcttbh, nkrttbh, tot

			SRNC due to transmission layer cause.		
rl_setup_fail_for_sho_on_srnc_due_to_already_activ	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on the SRNC side due to a context that is already activated.	PMMOResult_L3Iub.M1005C17	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_bts_gen_rea	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on SRNC side due to a general reason of a BTS. The general reason can be one of the following, Hardware overload, Signalling bearer overflow, Equipment failure, Unspecified cell (no configuration), Not enough resources (BS resource manager rejection), Resource unavailable, unspecified BS capability failure.	PMMOResult_L3Iub.M1005C21	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_bts_not_resp	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on SRNC side because a BTS is not responding.	PMMOResult_L3Iub.M1005C20	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_hw_res_not_avail	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on SRNC side due to not available HW	PMMOResult_L3Iub.M1005C18	Sum, nkcttbh, nkrttbh, tot

			resources.		
rl_setup_fail_for_sho_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on SRNC due to miscellaneous cause.	PMMOResult_L3Iub.M1005C183	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_not_enough_res	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on SRNC side because there are not enough resources.	PMMOResult_L3Iub.M1005C19	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_om_interv	ACCUMULATION	INT8	A number of radio link setup failures for soft HO on the SRNC side due to OM intervention.	PMMOResult_L3Iub.M1005C16	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on SRNC due to protocol cause.	PMMOResult_L3Iub.M1005C182	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on SRNC due to radio network layer cause.	PMMOResult_L3Iub.M1005C180	Sum, nkcttbh, nkrttbh, tot
rl_setup_fail_for_sho_on_srnc_due_to_tr_layer_cause	ACCUMULATION	INT8	The number of radio link setup failures for soft handover on	PMMOResult_L3Iub.M1005C181	Sum, nkcttbh, nkrttbh, tot

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			SRNC due to transmission layer cause.		
tot_rl_setup_fail_for_hho_on_srnc	ACCUMULATION	INT8	Total number of radio link setup failures for an RRC connection for HHO on SRNC	({rl_setup_fail_for_hho_on_srnc_due_to_om_interv}+ {rl_setup_fail_for_hho_on_srnc_due_to_already_activ}+ {rl_setup_fail_for_hho_on_srnc_due_to_hw_res_not_avail}+ {rl_setup_fail_for_hho_on_srnc_due_to_not_enough_res}+ {rl_setup_fail_for_hho_on_srnc_due_to_bts_not_resp}+ {rl_setup_fail_for_hho_on_srnc_due_to_bts_gen_rea}+ {rl_setup_fail_for_hho_on_srnc_due_to_rn_layer_cause}+ {rl_setup_fail_for_hho_on_srnc_due_to_tr_layer_cause}+ {rl_setup_fail_for_hho_on_srnc_due_to_prot_cause}+ {rl_setup_fail_for_hho_on_srnc_due_to_misc_cause})	Sum, nkcttbh, nkrttbh, tot
tot_rl_setup_fail_for_sho_on_srnc	ACCUMULATION	INT8	Total number of radio link setup failures for an RRC connection for SHO on SRNC	({rl_setup_fail_for_sho_on_srnc_due_to_om_interv}+ {rl_setup_fail_for_sho_on_srnc_due_to_already_activ}+ {rl_setup_fail_for_sho_on_srnc_due_to_hw_res_not_avail}+ {rl_setup_fail_for_sho_on_srnc_due_to_not_enough_res}+	Sum, nkcttbh, nkrttbh, tot

				{rl_setup_fail_for_sho_on_srnc_due_to_bts_not_resp}+ {rl_setup_fail_for_sho_on_srnc_due_to_bts_gen_rea}+ {rl_setup_fail_for_sho_on_srnc_due_to_rn_layer_cause}+ {rl_setup_fail_for_sho_on_srnc_due_to_tr_layer_cause}+ {rl_setup_fail_for_sho_on_srnc_due_to_prot_cause}+ {rl_setup_fail_for_sho_on_srnc_due_to_misc_cause})	

7.6.58 Cell.Nokia.UMTS.nbap.radio_link_setup_successes

NBAP - Radio link setup attempts and success statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rl_setup_succ_for_first_rl	PERCENTAGE	FLOAT	Percentage for radio link setup successes for an RRC connection setup.	100 * {rl_setup_succ_for_first_rl}/ {rl_setup_att_for_first_rl}	Average, avg, nkcttbh, nkrttbh
_%_rl_setup_succ_for_hho_on_drnc	PERCENTAGE	FLOAT	Percentage for radio link setup successes for an RRC connection setup .	100 * {rl_setup_succ_for_hho_on_drnc}/ {rl_setup_att_for_hho_on_drnc}	Average, avg, nkcttbh, nkrttbh
_%_rl_setup_succ_for_hho_on_srnc	PERCENTAGE	FLOAT	Percentage for radio link setup successes for an RRC connection	100 * {rl_setup_succ_for_hho_on_srnc}/ {rl_setup_att_for_hho_	Average, avg, nkcttbh, nkrttbh

			setup .	on_srnc}	
_%_rl_setup_succ_for_sho_on_drnc	PERCENTAGE	FLOAT	Percentage for radio link setup successes for an RRC connection setup.	100 * {rl_setup_succ_for_sho_on_drnc}/ {rl_setup_att_for_sho_on_drnc}	Average, avg, nkcttbh, nkrttbh
_%_rl_setup_succ_for_sho_on_srnc	PERCENTAGE	FLOAT	Percentage for radio link setup successes for an RRC connection setup .	100 * {rl_setup_succ_for_sho_on_srnc}/ {rl_setup_att_for_sho_on_srnc}	Average, avg, nkcttbh, nkrttbh
rl_setup_att_for_first_rl	ACCUMULATION	INT8	A number of radio link setup attempts for an RRC connection setup.	PMMOResult_L3Iub.M1005C0	Sum, nkcttbh, nkrttbh, tot
rl_setup_att_for_hho_on_drnc	ACCUMULATION	INT8	A number of radio link setup attempts for hard HO on DRNC side.	PMMOResult_L3Iub.M1005C4	Sum, nkcttbh, nkrttbh, tot
rl_setup_att_for_hho_on_srnc	ACCUMULATION	INT8	A number of radio link setup attempts for hard HO on SRNC side.	PMMOResult_L3Iub.M1005C2	Sum, nkcttbh, nkrttbh, tot
rl_setup_att_for_sho_on_drnc	ACCUMULATION	INT8	A number of radio link setup attempts for soft HO on DRNC side.	PMMOResult_L3Iub.M1005C3	Sum, nkcttbh, nkrttbh, tot
rl_setup_att_for_sho_on_srnc	ACCUMULATION	INT8	A number of radio link setup attempts for soft HO on SRNC side.	PMMOResult_L3Iub.M1005C1	Sum, nkcttbh, nkrttbh, tot
rl_setup_succ_for_first_rl	ACCUMULATION	INT8	A number of radio link setup successes for an RRC connection setup.	PMMOResult_L3Iub.M1005C5	Sum, nkcttbh, nkrttbh, tot
rl_setup_succ_for_hho_on_drnc	ACCUMULATION	INT8	A number of radio link setup successes for an RRC connection	PMMOResult_L3Iub.M1005C9	Sum, nkcttbh, nkrttbh, tot

			setup .		
rl_setup_succ_for_hho_on_srnc	ACCUMULATION	INT8	A number of radio link setup successes for an RRC connection setup .	PMMOResult_L3Iub.M1005C7	Sum, nkcttbh, nkrttbh, tot
rl_setup_succ_for_sho_on_drnc	ACCUMULATION	INT8	A number of radio link setup successes for an RRC connection setup.	PMMOResult_L3Iub.M1005C8	Sum, nkcttbh, nkrttbh, tot
rl_setup_succ_for_sho_on_srnc	ACCUMULATION	INT8	A number of radio link setup successes for an RRC connection setup .	PMMOResult_L3Iub.M1005C6	Sum, nkcttbh, nkrttbh, tot

7.6.59 Cell.Nokia.UMTS.nbap.reset_procedures

NBAP - Reset procedures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
reset_request_received_with_ie_communication_context	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "communication context", meaning that the termination point for one UE is reset. NOTE: This counter is updated for the WBTS object. (WBTS/	PMMOResult_L3Iub.M1005C173	Sum, nkcttbh, nkrttbh, tot

			WCEL-300000000 in the XML measurement file created by NEMU)		
reset_request_received_with_ie_communication_control_port	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "communication control port", meaning that the termination points for one cell are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub.M1005C174	Sum, nkcttbh, nkrttbh, tot
reset_request_received_with_ie_node_b	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "Node B", meaning that all termination points of the BTS are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub.M1005C175	Sum, nkcttbh, nkrttbh, tot
reset_request_sent_with_ie_communication_context	ACCUMULATION	INT8	The number of reset request messages sent to	PMMOResult_L3Iub.M1005C170	Sum, nkcttbh, nkrttbh,

			the BTS with the information element "communication context", meaning that the termination point for one UE is reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)		tot
reset_request_sent_with_ie_communication_control_port	ACCUMULATION	INT8	The number of reset request messages sent to the BTS with the information element "communication control port", meaning that termination points for one cell are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub.M1005C171	Sum, nkcttbh, nkrttbh, tot
reset_request_sent_with_ie_node_b	ACCUMULATION	INT8	The number of reset request messages sent to	PMMOResult_L3Iub.M1005C172	Sum, nkcttbh, nkrttbh,

			the BTS with the information element "Node B", meaning that all termination points of the BTS are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-30 0000000 in the XML measurement file created by NEMU)		tot

7.6.60 Cell.Nokia.UMTS.nrt_dch_allocation

NRT DCH allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
succ_init_allo_128_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 128 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C102	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_128_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 128 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C101	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_256_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 256 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C104	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_25	ACCUMULA	INTEG	The number of	PMMOResult_Packet_c	Sum,

6_ul	TION	ER	successful NRT DCH initial allocations to 256 kbps uplink bitrate.	all.M1022C103	nkcttbh, nkrttbh, tot
succ_init_allo_384_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 384 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C106	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_384_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 384 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C105	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_64_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 64 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C100	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_64_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to 64 kbps or lower uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C99	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_req_128_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested	PMMOResult_Packet_call.M1022C110	Sum, nkcttbh, nkrttbh, tot

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			downlink bitrate of 128 kbps.		
succ_init_allo_req_128_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested uplink bitrate of 128 kbps. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C109	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_req_256_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested downlink bitrate of 256 kbps.	PMMOResult_Packet_call.M1022C112	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_req_256_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested uplink bitrate of 256 kbps.	PMMOResult_Packet_call.M1022C111	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_req_384_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested downlink bitrate of 384 kbps.	PMMOResult_Packet_call.M1022C114	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_req_384_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested uplink bitrate of 384 kbps. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C113	Sum, nkcttbh, nkrttbh, tot
succ_init_allo_re	ACCUMULA	INTEG	The number of	PMMOResult_Packet_c	Sum,

q_64_dl	TION	ER	successful NRT DCH initial allocations to the requested downlink bitrate that is equal to or smaller than 64 kbps.	all.M1022C108	nkcttbh, nkrttbh, tot
succ_init_allo_req_64_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH initial allocations to the requested uplink bitrate that is equal to or smaller than 64 kbps. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C107	Sum, nkcttbh, nkrttbh, tot

7.6.61 Cell.Nokia.UMTS.nrt_dch_request

NRT DCH request statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_upgr_req_128_dl	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 128 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C94	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_128_ul	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 128 kbps or lower uplink bitrate. Includes also HSDPA	PMMOResult_Packet_call.M1022C93	Sum, nkcttbh, nkrttbh, tot

			uplink return channel.		
dch_upgr_req_256_dl	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 256 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C96	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_256_ul	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 256 kbps or lower uplink bitrate.	PMMOResult_Packet_call.M1022C95	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_384_dl	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 384 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C98	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_384_ul	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 384 kbps or lower uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C97	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_64_dl	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 64 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C92	Sum, nkcttbh, nkrttbh, tot
dch_upgr_req_64_ul	ACCUMULATION	INTEGER	The number of NRT DCH upgrade requests to 64 kbps or lower uplink bitrate. Includes also HSDPA	PMMOResult_Packet_call.M1022C91	Sum, nkcttbh, nkrttbh, tot

			uplink return channel.		
init_dch_req_128_dl	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 128 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C86	Sum, nkcttbh, nkrttbh, tot
init_dch_req_128_ul	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 128 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C85	Sum, nkcttbh, nkrttbh, tot
init_dch_req_256_dl	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 256 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C88	Sum, nkcttbh, nkrttbh, tot
init_dch_req_256_ul	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 256 kbps uplink bitrate.	PMMOResult_Packet_call.M1022C87	Sum, nkcttbh, nkrttbh, tot
init_dch_req_384_dl	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 384 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C90	Sum, nkcttbh, nkrttbh, tot
init_dch_req_384_ul	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 384 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C89	Sum, nkcttbh, nkrttbh, tot
init_dch_req_64_	ACCUMULA	INTEG	The number of	PMMOResult_Packet_c	Sum,

dl	TION	ER	NRT DCH initial requests to 64 kbps or lower downlink bitrate.	all.M1022C84	nkcttbh, nkrttbh, tot
init_dch_req_64_ul	ACCUMULATION	INTEGER	The number of NRT DCH initial requests to 64 kbps or lower uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C83	Sum, nkcttbh, nkrttbh, tot

7.6.62 Cell.Nokia.UMTS.nrt_dch_upgrade

NRT DCH upgrade statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
succ_upg_nrt_dch_128_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 128 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C118	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_128_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 128 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C117	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_256_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 256 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C120	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_256_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 256 kbps uplink bitrate.	PMMOResult_Packet_call.M1022C119	Sum, nkcttbh, nkrttbh, tot

succ_upg_nrt_dch_384_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 384 kbps downlink bitrate.	PMMOResult_Packet_call.M1022C122	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_384_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 384 kbps uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C121	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_64_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 64 kbps or lower downlink bitrate.	PMMOResult_Packet_call.M1022C116	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_64_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to 64 kbps or lower uplink bitrate. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C115	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_128_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested downlink bitrate of 128 kbps.	PMMOResult_Packet_call.M1022C126	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_128_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested uplink bitrate of 128 kbps. Includes	PMMOResult_Packet_call.M1022C125	Sum, nkcttbh, nkrttbh, tot

			also HSDPA uplink return channel.		
succ_upg_nrt_dch_req_256_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested downlink bitrate of 256 kbps.	PMMOResult_Packet_call.M1022C128	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_256_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested uplink bitrate of 256 kbps.	PMMOResult_Packet_call.M1022C127	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_384_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested downlink bitrate of 384 kbps.	PMMOResult_Packet_call.M1022C130	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_384_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested uplink bitrate of 384 kbps. Includes also HSDPA uplink return channel.	PMMOResult_Packet_call.M1022C129	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_64_dl	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested downlink bitrate that is equal to or smaller than 64 kbps.	PMMOResult_Packet_call.M1022C124	Sum, nkcttbh, nkrttbh, tot
succ_upg_nrt_dch_req_64_ul	ACCUMULATION	INTEGER	The number of successful NRT DCH upgrades to the requested	PMMOResult_Packet_call.M1022C123	Sum, nkcttbh, nkrttbh, tot

			uplink bitrate that is equal to or smaller than 64 kbps. Includes also HSDPA uplink return channel.		

7.6.63 Cell.Nokia.UMTS.olpc_measurement

RCPM OLPC measurement block statistics.

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
average_radio_link_power_in_dl	INTENSITY	FLOAT	The average downlink transmission power of the radio links matching the RAB parameters of measurement object.	PMMOResult_RCPM_OLPC.M1016C15	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_ul_eb_no	INTENSITY	FLOAT	The average uplink Eb/No, calculated as a weighted average from Eb/No-values reported by OLPC.	PMMOResult_RCPM_OLPC.M1016C0	Average, avg, max, min, nkcttbh, nkrttbh, tot
Avg_radio_link_power_in_dl	INTENSITY	FLOAT	The average downlink transmission power of the radio links matching the RAB parameters of measurement object.	{average_radio_link_power_in_dl}/ {dl_radio_link_power_samples}	Average, avg, max, min, nkcttbh, nkrttbh, tot
bad_uplink_connections	ACCUMULATION	INTEGER	The number of bad uplink connections.	PMMOResult_RCPM_OLPC.M1016C12	Sum, nkcttbh, nkrttbh,

					tot
dl_radio_link_power_samples	ACCUMULATION	INTEGER	The number of samples for dedicated radio link power measurement counter M1016C15.	PMMOResult_RCPM_OLPC.M1016C17	Sum, nkcttbh, nkrttbh, tot
ideal_uplink_connections	ACCUMULATION	INTEGER	The number of ideal uplink connections.	PMMOResult_RCPM_OLPC.M1016C13	Sum, nkcttbh, nkrttbh, tot
rl_reports_with_maximum_power_value	ACCUMULATION	INTEGER	The number of dedicated radio link reports received where transmission power is at maximum value defined by parameters PtxDLAbsMax and CPICHtoRefRABoffset.	PMMOResult_RCPM_OLPC.M1016C18	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_bler_values	ACCUMULATION	FLOAT	Sum of squared BLER-values, calculated from UL BLER-values reported by OLPC.	PMMOResult_RCPM_OLPC.M1016C6	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_radio_link_power_values_in_dl	ACCUMULATION	FLOAT	Sum of squared radio link power values in DL.	PMMOResult_RCPM_OLPC.M1016C16	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_ul_ber_values	ACCUMULATION	FLOAT	Sum of squared UL BER-values calculated by OLPC-controller.	PMMOResult_RCPM_OLPC.M1016C10	Sum, nkcttbh, nkrttbh, tot
too_good_uplink_connections	ACCUMULATION	INTEGER	The number of too good uplink connections.	PMMOResult_RCPM_OLPC.M1016C14	Sum, nkcttbh, nkrttbh, tot
ul_average_ber_denominator	ACCUMULATION	INTEGER	The number of BER samples in Average BER counter.	PMMOResult_RCPM_OLPC.M1016C9	Sum, nkcttbh, nkrttbh,

					tot
ul_average_ber	INTENSITY	FLOAT	The average uplink BER, calculated as weighted average from UL BER values reported by OLPC-controller that gets the BER estimate from the WBTS in Frame Protocol data frame.	PMMOResult_RCPM_OLPC.M1016C8	Average, avg, max, min, nkcttbh, nkrttbh, tot
ul_average_eb_no_denominator	ACCUMULATION	INTEGER	The number of Eb/No samples in Average UL Eb/No-counter.	PMMOResult_RCPM_OLPC.M1016C1	Sum, nkcttbh, nkrttbh, tot
ul_edch_harq_retransmissions	ACCUMULATION	INTEGER	The number of HARQ retransmissions reported by BTS in E-DCH FP frames.	PMMOResult_RCPM_OLPC.M1016C19	Sum, nkcttbh, nkrttbh, tot
ul_number_of_received_bler_reports	ACCUMULATION	INTEGER	The number of received UL BLER reports from OLPC.	PMMOResult_RCPM_OLPC.M1016C7	Sum, nkcttbh, nkrttbh, tot
ul_number_of_received_eb_no_reports	ACCUMULATION	INTEGER	The UL Eb/No reports that L3 entity has received from OLPC Controller.	PMMOResult_RCPM_OLPC.M1016C3	Sum, nkcttbh, nkrttbh, tot
ul_number_of_received_ul_ber_reports	ACCUMULATION	INTEGER	The number of received UL BER reports from OLPC. Updated only when BER is used as a quality estimate for UL OLPC.	PMMOResult_RCPM_OLPC.M1016C11	Sum, nkcttbh, nkrttbh, tot

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ul_sum_of_squared_eb_no_values	ACCUMULATION	FLOAT	Sum of Squared linear Eb/No values, calculated from UL Eb/ No-values reported by OLPC.	PMMOResult_RCPM_OLPC.M1016C2	Sum, nkcttbh, nkrttbh, tot
uplink_crc_nok_blocks	ACCUMULATION	INTEGER	The number of received transport blocks with CRC NOK in uplink.	PMMOResult_RCPM_OLPC.M1016C5	Sum, nkcttbh, nkrttbh, tot
uplink_crc_ok_blocks	ACCUMULATION	INTEGER	The number of received transport blocks with CRC OK in uplink.	PMMOResult_RCPM_OLPC.M1016C4	Sum, nkcttbh, nkrttbh, tot

7.6.64 Cell.Nokia.UMTS.packet_call.allocation

Packet connection channel allocation statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_dch_allo_after_dch_dch_req_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after DCH/DCH request for background traffic class.	PMMOResult_Packet_call.M1022C32	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_dch_dch_req_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after DCH/DCH request for interactive traffic class.	PMMOResult_Packet_call.M1022C31	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_hsdsch_dch_hho_req	ACCUMULATION	INTEGER	The number of allocations for DCH/DCH after HS-DSCH/DCH request during incoming Inter-RNC HHO. Also the basic Packet Call Allocation counters are	PMMOResult_Packet_call.M1022C82	Sum, nkcttbh, nkrttbh, tot

			updated along with this counter.		
dch_dch_allo_after_hsdsch_dch_req_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after HS-DSCH/DCH request for background traffic class.	PMMOResult_Packet_call.M1022C30	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_hsdsch_dch_req_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after HS-DSCH/DCH request for interactive traffic class.	PMMOResult_Packet_call.M1022C29	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_hsdsch_edch_hho_req	ACCUMULATION	INTEGER	The number of allocations for DCH/DCH after HS-DSCH/EDCH request during incoming Inter-RNC HHO. Also the basic Packet Call Allocation counters are updated along with this counter.	PMMOResult_Packet_call.M1022C81	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_hsdsch_edch_req_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after HS-DSCH/EDCH request for background traffic class.	PMMOResult_Packet_call.M1022C28	Sum, nkcttbh, nkrttbh, tot
dch_dch_allo_after_hsdsch_edch_req_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after	PMMOResult_Packet_call.M1022C27	Sum, nkcttbh, nkrttbh,

			HS-DSCH/EDCH request for interactive traffic class.		tot
dl_packet_session_req	ACCUMULATION	INTEGER	The number of packet call resource allocation attempts caused by downlink capacity request.	PMMOResult_Packet_call.M1022C1	Sum, nkcttbh, nkrttbh, tot
hs_d_req_d_d_allo_bgr_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/DCH request for the background traffic class due to the cell not supporting HSDPA.	PMMOResult_Packet_call.M1022C221	Sum, nkcttbh, nkrttbh, tot
hs_d_req_d_d_allo_int_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/DCH request for the interactive traffic class due to the cell not supporting HSDPA.	PMMOResult_Packet_call.M1022C220	Sum, nkcttbh, nkrttbh, tot
hs_d_req_d_d_allo_str_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/DCH request for the streaming traffic class due to the cell not supporting HSDPA.	PMMOResult_Packet_call.M1022C222	Sum, nkcttbh, nkrttbh, tot
hs_e_req_d_d_allo_bgr_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/E-DCH request for the background traffic	PMMOResult_Packet_call.M1022C218	Sum, nkcttbh, nkrttbh, tot

			class due to the cell not supporting HSUPA and HSDPA.		
hs_e_req_d_d_allo_int_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/E-DCH request for the interactive traffic class due to the cell not supporting HSUPA and HSDPA.	PMMOResult_Packet_call.M1022C217	Sum, nkcttbh, nkrttbh, tot
hs_e_req_d_d_allo_str_cell	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DCSH/E-DCH request for the streaming traffic class due to the cell not supporting HSUPA and HSDPA.	PMMOResult_Packet_call.M1022C219	Sum, nkcttbh, nkrttbh, tot
hs_e_req_hs_d_allo_bgr_cell	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after an HS-DCSH/E-DCH request for the background traffic class due to the cell not supporting HSUPA.	PMMOResult_Packet_call.M1022C215	Sum, nkcttbh, nkrttbh, tot
hs_e_req_hs_d_allo_int_cell	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after an HS-DCSH/E-DCH request for the	PMMOResult_Packet_call.M1022C214	Sum, nkcttbh, nkrttbh, tot

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			interactive traffic class due to the cell not supporting HSUPA.		
hs_e_req_hs_d_allo_str_cell	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after an HS-DCSH/E-DCH request for the streaming traffic class due to the cell not supporting HSUPA.	PMMOResult_Packet_call.M1022C216	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_allo_after_hsdsch_dch_hho_req	ACCUMULATION	INTEGER	The number of allocations for HS-DSCH/DCH after HS-DSCH/DCH request during incoming Inter-RNC HHO. Also the basic Packet Call Allocation counters are updated along with this counter.	PMMOResult_Packet_call.M1022C80	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_allo_after_hsdsch_dch_req_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after HS-DSCH/DCH request for background traffic class.	PMMOResult_Packet_call.M1022C26	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_allo_after_hsdsch_dch_req_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after HS-DSCH/DCH request for interactive traffic class.	PMMOResult_Packet_call.M1022C25	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_allo_after_hsdsch_edch_hho_req	ACCUMULATION	INTEGER	The number of allocations for HS-DSCH/DCH after HS-DSCH/E-DCH	PMMOResult_Packet_call.M1022C79	Sum, nkcttbh, nkrttbh, tot

			request during incoming Inter-RNC HHO. Also the basic Packet Call Allocation counters are updated along with this counter.		
hsdsch_dch_allo_after_hsdsch_edch_req_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after HS-DCSH/EDCH request for background traffic class.	PMMOResult_Packet_call.M1022C24	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_allo_after_hsdsch_edch_req_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after HS-DCSH/EDCH request for interactive traffic class.	PMMOResult_Packet_call.M1022C23	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_allo_after_hsdsch_edch_hho_req	ACCUMULATION	INTEGER	The number of allocations for HS-DSCH/E-DCH after HSDSCH/E-DCH request during incoming Inter-RNC HHO. Also the basic Packet Call Allocation counters are updated along with this counter.	PMMOResult_Packet_call.M1022C78	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_allo_after_hsdsch_edch_req_for_backgro	ACCUMULATION	INTEGER	The number of allocations for HS-DSCH/E-DCH	PMMOResult_Packet_call.M1022C22	Sum, nkcttbh, nkrttbh,

und			after HSDSCH/E-DCH request for background traffic class.		tot
other_packet_session_req	ACCUMULATION	INTEGER	The number of packet call resource allocation attempts not caused by uplink or downlink capacity request.	PMMOResult_Packet_call.M1022C2	Sum, nkcttbh, nkrttbh, tot
ul_packet_session_req	ACCUMULATION	INTEGER	The number of packet call resource allocation attempts caused by uplink capacity request.	PMMOResult_Packet_call.M1022C0	Sum, nkcttbh, nkrttbh, tot

7.6.65 Cell.Nokia.UMTS.packet_call.call_release

Packet connection connection release statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdpa_setup_success_ratio_user_perspective	PERCENTAGE	FLOAT	HSDPA Setup Success Ratio from user perspective for RT [%]	100 * ({Nokia.packet_call.call_release.hs_e_req_hs_e_allo_stre}+ {Nokia.packet_call.call_release.hs_e_req_hs_d_allo_stre}+ {Nokia.packet_call.call_release.hs_d_req_hs_d_allo_stre})/ ({Nokia.packet_call.setup.ps_att_hsdsch_edch_stre}+ {Nokia.packet_call.setup.ps_att_hsdsch_dch_stre})	Average, nkcttbh, nkrttbh, tot
_%_hsdpa_success_ratio_user_perspe	INTENSITY	FLOAT	HSDPA Success Ratio from user perspective for RT	if (PMMOResult_Packet_call.M1022C208 +	Average, nkcttbh, nkrttbh,

ctive			[%]	M1022C209 + M1022C211 + M1022C212 + M1022C202 + M1022C203)=0 then 100 else 100 - 100 * ((M1022C208 + M1022C209 + M1022C211 + M1022C212) / (M1022C208 + M1022C209 + M1022C211 + M1022C212 + M1022C202 + M1022C203))	tot, min, max
_%_hsupa_setup_success_ratio_user_perspective	PERCENTAGE	FLOAT	HSUPA Setup Success Ratio from user perspective for RT [%]	100 * {Nokia.packet_call.call_release.hs_e_req_hs_e_allo_stre}/ {Nokia.packet_call.setup.ps_att_hsdsch_edch_stre}	Average, nkcttbh, nkrttbh, tot
_%_hsupa_success_ratio_user_perspective	INTENSITY	FLOAT	HSUPA Success Ratio from user perspective for RT [%]	100 - 100*(({ps_rel_rl_fail_hs_e_stre}+ {ps_rel_oth_fail_hs_e_stre})/ ({ps_rel_rl_fail_hs_e_stre}+ {ps_rel_oth_fail_hs_e_stre}+ {ps_rel_norm_hs_e_stre}))	Average, nkcttbh, nkrttbh, tot, min, max
_%_packet_session_success_ratio_rt	INTENSITY	FLOAT	Packet Session Success Ratio (SSR) for RT [%]	if (PMMOResult_Packet_call.M1022C208 + M1022C209 + M1022C210 +	Average, nkcttbh, nkrttbh, tot, min, max

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				M1022C211 + M1022C212 + M1022C213+ M1022C202 + M1022C203 + M1022C204)=0 then 100 else 100 - 100 * ((M1022C208 + M1022C209 + M1022C210 + M1022C211 + M1022C212 + M1022C213) / (M1022C208 + M1022C209 + M1022C210 + M1022C211 + M1022C212 + M1022C213+ M1022C202 + M1022C203 + M1022C204))	
_%_r99_setup_success_ratio_user_perspective	PERCENTAGE	FLOAT	R99 Setup Success Ratio from user perspective for RT [%]	100 * {Nokia.packet_call.call_release.d_d_req_d_d_allo_stre}/ {Nokia.packet_call.setup.ps_att_dch_dch_stre}	Average, nkcttbh, nkrttbh, tot
_%_r99_success_ratio_user_perspective	INTENSITY	FLOAT	R99 Success Ratio from user perspective for RT [%]	100 - 100*(({ps_rel_rl_fail_d_d_stre}+ {ps_rel_oth_fail_d_d_stre})/ ({ps_rel_rl_fail_d_d_stre}+ {ps_rel_oth_fail_d_d_stre}+ {ps_rel_norm_d_d_stre}))	Average, nkcttbh, nkrttbh, tot, min, max
d_d_req_d_d_allo_stre	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after a DCH/DCH request for the	PMMOResult_Packet_call.M1022C195	Sum, nkcttbh, nkrttbh, tot

			streaming traffic class.		
dch_dch_packet_call_norm_rel_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by pre-emption or RT over NRT for interactive traffic class.	PMMOResult_Packet_call.M1022C50	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_norm_rel_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH packet call normal releases for background traffic class.	PMMOResult_Packet_call.M1022C49	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_rel_due_to_other_fail_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by other failure reasons for background traffic class.	PMMOResult_Packet_call.M1022C68	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_rel_due_to_other_fail_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by for interactive traffic class.	PMMOResult_Packet_call.M1022C67	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_rel_due_to_preemp_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by preemption or RT over NRT for background traffic class.	PMMOResult_Packet_call.M1022C56	Sum, nkcttbh, nkrttbh, tot

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dch_dch_packet_call_rel_due_to_preemp_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by preemption or RT over NRT for interactive traffic class.	PMMOResult_Packet_call.M1022C55	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_rel_due_to_rl_fail_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by radio link failure for background traffic class.	PMMOResult_Packet_call.M1022C62	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_rel_due_to_rl_fail_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by radio link failure for interactive traffic class.	PMMOResult_Packet_call.M1022C61	Sum, nkcttbh, nkrttbh, tot
hs_d_req_d_d_allo_stre	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DSCH/DCH request for the streaming traffic class.	PMMOResult_Packet_call.M1022C194	Sum, nkcttbh, nkrttbh, tot
hs_d_req_hs_d_allo_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after an HS-DSCH/DCH request for the streaming traffic class.	PMMOResult_Packet_call.M1022C192	Sum, nkcttbh, nkrttbh, tot
hs_e_req_d_d_allo_stre	ACCUMULATION	INTEGER	The number of DCH/DCH allocations after an HS-DSCH/E-DCH request for	PMMOResult_Packet_call.M1022C193	Sum, nkcttbh, nkrttbh, tot

			the streaming traffic class.		
hs_e_req_hs_d_allo_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH allocations after an HS-DCSH/E-DCH request for the streaming traffic class.	PMMOResult_Packet_call.M1022C191	Sum, nkcttbh, nkrttbh, tot
hs_e_req_hs_e_allo_stre	ACCUMULATION	INTEGER	The number of allocations for the HS-DSCH/E-DCH after an HS-DSCH/E-DCH request for the streaming traffic class.	PMMOResult_Packet_call.M1022C190	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_norm_rel_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH packet call normal releases for interactive traffic class.	PMMOResult_Packet_call.M1022C48	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_norm_rel_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call normal releases for background traffic class.	PMMOResult_Packet_call.M1022C47	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_rel_due_to_other_fail_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by other failure reasons for background traffic class.	PMMOResult_Packet_call.M1022C66	Sum, nkcttbh, nkrttbh, tot

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hsdsch_dch_packet_call_rel_due_to_other_fail_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by other failure reasons for interactive traffic class.	PMMOResult_Packet_call.M1022C65	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_rel_due_to_preemp_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by pre-emption or RT over NRT for background traffic class.	PMMOResult_Packet_call.M1022C54	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_rel_due_to_preemp_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by pre-emption or RT over NRT for interactive traffic class.	PMMOResult_Packet_call.M1022C53	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_rel_due_to_rl_fail_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by radio link failure for background traffic class.	PMMOResult_Packet_call.M1022C60	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_rel_due_to_rl_fail_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by radio link failure for interactive traffic class.	PMMOResult_Packet_call.M1022C59	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_norm_rel_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call normal releases for interactive traffic	PMMOResult_Packet_call.M1022C46	Sum, nkcttbh, nkrttbh, tot

			class.		
hsdsch_edch_packet_call_norm_rel_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call normal releases for background traffic class.	PMMOResult_Packet_call.M1022C45	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_rel_due_to_other_fail_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by other failure reasons for background traffic class.	PMMOResult_Packet_call.M1022C64	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_rel_due_to_other_fail_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by other failure reasons for interactive traffic class.	PMMOResult_Packet_call.M1022C63	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_rel_due_to_preemp_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by pre-emption or RT over NRT for background traffic class.	PMMOResult_Packet_call.M1022C52	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_rel_due_to_preemp_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by pre-emption or RT over NRT for interactive traffic	PMMOResult_Packet_call.M1022C51	Sum, nkcttbh, nkrttbh, tot

			class.		
hsdsch_edch_packet_call_rel_due_to_rl_fail_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by radio link failure for background traffic class.	PMMOResult_Packet_call.M1022C58	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_rel_due_to_rl_fail_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by radio link failure for interactive traffic class.	PMMOResult_Packet_call.M1022C57	Sum, nkcttbh, nkrttbh, tot
ps_rel_norm_d_d_stre	ACCUMULATION	INTEGER	The number of DCH/DCH packet call normal releases for the streaming traffic class.	PMMOResult_Packet_call.M1022C204	Sum, nkcttbh, nkrttbh, tot
ps_rel_norm_hs_d_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call normal releases for the streaming traffic class.	PMMOResult_Packet_call.M1022C203	Sum, nkcttbh, nkrttbh, tot
ps_rel_norm_hs_e_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call normal releases for the streaming traffic class.	PMMOResult_Packet_call.M1022C202	Sum, nkcttbh, nkrttbh, tot
ps_rel_oth_fail_d_d_stre	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by other failure reasons than a radio link failure for the streaming traffic class.	PMMOResult_Packet_call.M1022C213	Sum, nkcttbh, nkrttbh, tot

ps_rel_oth_fail_hs_d_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by other failure reasons than a radio link failure for the streaming traffic class.	PMMOResult_Packet_call.M1022C212	Sum, nkcttbh, nkrttbh, tot
ps_rel_oth_fail_hs_e_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by other failure reasons than a radio link failure for the streaming traffic class.	PMMOResult_Packet_call.M1022C211	Sum, nkcttbh, nkrttbh, tot
ps_rel_pre_emp_d_d_stre	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by pre-emption or RT over NRT for the streaming traffic class.	PMMOResult_Packet_call.M1022C207	Sum, nkcttbh, nkrttbh, tot
ps_rel_pre_emp_hs_d_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by pre-emption for the streaming traffic class.	PMMOResult_Packet_call.M1022C206	Sum, nkcttbh, nkrttbh, tot
ps_rel_pre_emp_hs_e_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by pre-emption or RT	PMMOResult_Packet_call.M1022C205	Sum, nkcttbh, nkrttbh, tot

			over NRT for the streaming traffic class.		
ps_rel_rl_fail_d_d_stre	ACCUMULATION	INTEGER	The number of DCH/DCH packet call releases caused by radio link failures for the streaming traffic class.	PMMOResult_Packet_call.M1022C210	Sum, nkcttbh, nkrttbh, tot
ps_rel_rl_fail_hs_d_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call releases caused by radio link failures for the streaming traffic class.	PMMOResult_Packet_call.M1022C209	Sum, nkcttbh, nkrttbh, tot
ps_rel_rl_fail_hs_e_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call releases caused by radio link failures for the streaming traffic class.	PMMOResult_Packet_call.M1022C208	Sum, nkcttbh, nkrttbh, tot
swi_dch_dch_to_hsdsch_edch_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call normal releases for interactive traffic class.	PMMOResult_Packet_call.M1022C44	Sum, nkcttbh, nkrttbh, tot

7.6.66 Cell.Nokia.UMTS.packet_call.congestion_control

Packet connection connection congestion control statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
delay_buildup_indications_sent_due_to_hw_overload	ACCUMULATION	INTEGER	The number of -Congestion indication control frame - delay build up- sent to BTS due	PMMOResult_Packet_call.M1022C70	Sum, nkcttbh, nkrttbh, tot

			to RNC HW overload congestion control functionality.		
delay_buildup_indications_sent_due_to_iub_delay	ACCUMULATION	INTEGER	The number of -Congestion Indication control frame - delay build-up- sent to BTS due to Iub delay detected by Frame protocol.	PMMOResult_Packet_call.M1022C69	Sum, nkcttbh, nkrttbh, tot
delayed_edch_fp_frames	ACCUMULATION	INTEGER	The number of delayed E-DCH FP frames, this includes frames that are delayed over the trigger value used by congestion control algorithm (i.e. delay is above the DelayThresholdMin).	PMMOResult_Packet_call.M1022C76	Sum, nkcttbh, nkrttbh, tot
frame_loss_indications_sent_due_to_hw_overload	ACCUMULATION	INTEGER	The number of -Congestion indication control frame - frame loss- sent to BTS due to RNC HW overload.	PMMOResult_Packet_call.M1022C73	Sum, nkcttbh, nkrttbh, tot
frame_loss_indications_sent_due_to_iub_delay	ACCUMULATION	INTEGER	The number of -Congestion indication control frame - frame loss- sent to BTS due to Iub delay detected by Frame protocol.	PMMOResult_Packet_call.M1022C72	Sum, nkcttbh, nkrttbh, tot
frame_loss_indica	ACCUMULA	INTEG	The number of	PMMOResult_Packet_	Sum,

tions_sent_due_to_traffic_loss	TION	ER	-Congestion indication control frame - frame loss-sent to BTS due to Iub traffic loss detected by Frame protocol.	call.M1022C71	nkcttbh, nkrttbh, tot
missed_edch_fp_frames	ACCUMULATION	INTEGER	The number of E-DCH frames that that are not received at all or are discarded due to errors.	PMMOResult_Packet_call.M1022C75	Sum, nkcttbh, nkrttbh, tot
successful_edch_fp_branch_setup	ACCUMULATION	INTEGER	The number of successful E-DCH Iub Frame Protocol branch setups.	PMMOResult_Packet_call.M1022C74	Sum, nkcttbh, nkrttbh, tot
successful_ly_received_edch_fp_frames	ACCUMULATION	INTEGER	The number of successfully received E-DCH FP frames, including all other frames than the frames counted as missed or delayed.	PMMOResult_Packet_call.M1022C77	Sum, nkcttbh, nkrttbh, tot

7.6.67 Cell.Nokia.UMTS.packet_call.setup_failures

Packet connection connection setup failures statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
hsdsch_edch_allo_after_hsdsch_edch_req_for_interactive	ACCUMULATION	INTEGER	The number of allocations for HS-DSCH/E-DCH after HSDSCH/E-DCH request for interactive traffic class.	PMMOResult_Packet_call.M1022C21	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_dmcu_res_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to lack	PMMOResult_Packet_call.M1022C13	Sum, nkcttbh, nkrttbh,

			of DMCU resources for interactive traffic class.		tot
packet_call_setup_fail_due_to_ac_for_background	ACCUMULATION	INTEGER	The number of packet call setup failures due to admission control for background traffic class.	PMMOResult_Packet_call.M1022C10	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_ac_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to admission control for interactive traffic class.	PMMOResult_Packet_call.M1022C9	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_bts_for_background	ACCUMULATION	INTEGER	The number of packet call setup failures due to BTS for background traffic class.	PMMOResult_Packet_call.M1022C12	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_bts_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to BTS for interactive traffic class.	PMMOResult_Packet_call.M1022C11	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_dmcu_res_for_background	ACCUMULATION	INTEGER	The number of packet call setup failures due to lack of DMCU resources for background traffic class.	PMMOResult_Packet_call.M1022C14	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_other	ACCUMULATION	INTEGER	The number of packet call setup	PMMOResult_Packet_call.M1022C20	Sum, nkcttbh,

_reasons_for_background			failures due to other reasons for background traffic class.		nkrttbh, tot
packet_call_setup_fail_due_to_other_reasons_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to other reasons for interactive traffic class.	PMMOResult_Packet_call.M1022C19	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_transm_for_background	ACCUMULATION	INTEGER	The number of packet call setup failures due to transport for background traffic class.	PMMOResult_Packet_call.M1022C16	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_transm_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to transport for interactive traffic class.	PMMOResult_Packet_call.M1022C15	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_ue_for_background	ACCUMULATION	INTEGER	The number of packet call setup failures due to UE for background traffic class.	PMMOResult_Packet_call.M1022C18	Sum, nkcttbh, nkrttbh, tot
packet_call_setup_fail_due_to_ue_for_interactive	ACCUMULATION	INTEGER	The number of packet call setup failures due to UE for interactive traffic class.	PMMOResult_Packet_call.M1022C17	Sum, nkcttbh, nkrttbh, tot
ps_setup_fail_ac_stre	ACCUMULATION	INTEGER	The number of packet call setup failures due to the admission control for the streaming traffic class. Also rejections due to "frozen BTS" are included in this counter.	PMMOResult_Packet_call.M1022C184	Sum, nkcttbh, nkrttbh, tot

ps_setup_fail_bts_stre	ACCUMULATION	INTEGER	The number of packet call setup failures due to the BTS for the streaming traffic class.	PMMOResult_Packet_call.M1022C185	Sum, nkcttbh, nkrttbh, tot
ps_setup_fail_dmcu_stre	ACCUMULATION	INTEGER	The number of packet call setup failures due to the lack of DMCU resources for the streaming traffic class.	PMMOResult_Packet_call.M1022C186	Sum, nkcttbh, nkrttbh, tot
ps_setup_fail_other_stre	ACCUMULATION	INTEGER	The number of packet call setup failures for the streaming traffic class due to other reasons than those covered by the other failure counters.	PMMOResult_Packet_call.M1022C189	Sum, nkcttbh, nkrttbh, tot
ps_setup_fail_trans_stre	ACCUMULATION	INTEGER	The number of packet call setup failures due to transport for the streaming traffic class.	PMMOResult_Packet_call.M1022C187	Sum, nkcttbh, nkrttbh, tot
ps_setup_fail_ue_stre	ACCUMULATION	INTEGER	The number of packet call setup failures due to the UE for the streaming traffic class.	PMMOResult_Packet_call.M1022C188	Sum, nkcttbh, nkrttbh, tot
Tot_packet_call_setup_fail_background	ACCUMULATION	INTEGER	Total number of packet call setup failures for background traffic	{packet_call_setup_fail_due_to_ac_for_background}+ {packet_call_setup_fail	Sum, nkcttbh, nkrttbh, tot

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			due to various reasons	_due_to_bts_for_background}+ {packet_call_setup_fail_due_to_dmcu_res_for_background}+ {packet_call_setup_fail_due_to_transm_for_background}+ {packet_call_setup_fail_due_to_ue_for_background}	
Tot_packet_call_setup_fail_interactive	ACCUMULATION	INTEGER	Total number of packet call setup failures for interactive traffic due to various reasons	{packet_call_setup_fail_due_to_ac_for_interactive}+ {packet_call_setup_fail_due_to_bts_for_interactive}+ {packet_call_setup_fail_due_dmcu_res_for_interactive}+ {packet_call_setup_fail_due_to_transm_for_interactive}+ {packet_call_setup_fail_due_to_ue_for_interactive}+ {packet_call_setup_fail_due_to_other_reasons_for_interactive}	Sum, nkcttbh, nkrttbh, tot

7.6.68 Cell.Nokia.UMTS.packet_call.setup

Packet connection connection attempts statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_packet_session_setup_success_ratio_rt	INTENSITY	FLOAT	Packet Session Setup Success Ratio for RT [%]	if (PMMOResult_Packet_call.M1022C181 + M1022C182 + M1022C83)=0 then 0 else 100 * ((M1022C190 + M1022C191 +	Average, nkcttbh, nkrttbh, tot, min, max

				M1022C192 + M1022C193 + M1022C194 + M1022C195) / (M1022C181 + M1022C182 + M1022C183))	
dch_dch_packet_call_att_for_background	ACCUMULATION	INTEGER	The number of DCH/DCH packet call attempts for interactive traffic class.	PMMOResult_Packet_call.M1022C8	Sum, nkcttbh, nkrttbh, tot
dch_dch_packet_call_att_for_interactive	ACCUMULATION	INTEGER	The number of DCH/DCH packet call attempts for interactive traffic class.	PMMOResult_Packet_call.M1022C7	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_att_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call attempts for background traffic class.	PMMOResult_Packet_call.M1022C6	Sum, nkcttbh, nkrttbh, tot
hsdsch_dch_packet_call_att_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call attempts for interactive traffic class.	PMMOResult_Packet_call.M1022C5	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_att_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call attempts for background traffic class.	PMMOResult_Packet_call.M1022C4	Sum, nkcttbh, nkrttbh, tot
hsdsch_edch_packet_call_att_for_int	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH	PMMOResult_Packet_call.M1022C3	Sum, nkcttbh,

eractive			packet call attempts for interactive traffic class.		nkrttbh, tot
ps_att_dch_dch_stre	ACCUMULATION	INTEGER	The number of DCH/DCH packet call attempts for the streaming traffic class.	PMMOResult_Packet_call.M1022C183	Sum, nkcttbh, nkrttbh, tot
ps_att_hsdsch_dch_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/DCH packet call attempts for the streaming traffic class.	PMMOResult_Packet_call.M1022C182	Sum, nkcttbh, nkrttbh, tot
ps_att_hsdsch_edch_stre	ACCUMULATION	INTEGER	The number of HS-DSCH/E-DCH packet call attempts for the streaming traffic class.	PMMOResult_Packet_call.M1022C181	Sum, nkcttbh, nkrttbh, tot

7.6.69 Cell.Nokia.UMTS.packet_call.switching

Packet connection connection switching statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
att_chan_swi_dch_to_hs_dsch	ACCUMULATION	INTEGER	The number of attempted channel switches from DCH to HS-DSCH.	PMMOResult_Packet_call.M1022C147	Sum, nkcttbh, nkrttbh, tot
att_chan_swi_hs_dsch_to_dch	ACCUMULATION	INTEGER	The number of attempted channel switches from HS-DSCH to DCH.	PMMOResult_Packet_call.M1022C149	Sum, nkcttbh, nkrttbh, tot
denom_dur_edch_rb_bgr	ACCUMULATION	INTEGER	The number of updates done to counter M1022C179, used as a denominator	PMMOResult_Packet_call.M1022C180	Sum, nkcttbh, nkrttbh, tot

			for average calculation.		
denom_dur_edch_rb_intera	ACCUMULATION	INTEGER	The number of updates done to counter M1022C175, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C176	Sum, nkcttbh, nkrttbh, tot
denom_dur_edch_rb_strea	ACCUMULATION	INTEGER	The number of updates done to counter M1022C171, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C172	Sum, nkcttbh, nkrttbh, tot
denom_dur_hsdpa_user_conn	ACCUMULATION	INTEGER	The number of updates done to counter M1022C153, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C154	Sum, nkcttbh, nkrttbh, tot
denom_dur_hsdsch_rb_bgr	ACCUMULATION	INTEGER	The number of updates done to counter M1022C167, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C168	Sum, nkcttbh, nkrttbh, tot
denom_dur_hsdsch_rb_intera	ACCUMULATION	INTEGER	The number of updates done to counter M1022C163, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C164	Sum, nkcttbh, nkrttbh, tot

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denom_dur_hsdsch_rb_strea	ACCUMULATION	INTEGER	The number of updates done to counter M1022C159, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C160	Sum, nkcttbh, nkrttbh, tot
denom_dur_hsupa_user_conn	ACCUMULATION	INTEGER	The number of updates done to counter M1022C155, used as a denominator for average calculation.	PMMOResult_Packet_call.M1022C156	Sum, nkcttbh, nkrttbh, tot
max_dur_edch_rb_bgr	INTENSITY	INTEGER	The maximum E-DCH radio bearer duration for background.	PMMOResult_Packet_call.M1022C177	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_edch_rb_intera	INTENSITY	INTEGER	The maximum E-DCH radio bearer duration for interactive.	PMMOResult_Packet_call.M1022C173	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_edch_rb_strea	INTENSITY	INTEGER	The maximum E-DCH radio bearer duration for streaming.	PMMOResult_Packet_call.M1022C169	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_hsdpa_user_conn	INTENSITY	INTEGER	The maximum duration that a user has had HS-DSCH allocated. The whole duration is updated for the last HS-DSCH serving cell.	PMMOResult_Packet_call.M1022C151	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_hsdsch_rb_bgr	INTENSITY	INTEGER	The maximum HS-DSCH radio	PMMOResult_Packet_call.M1022C165	Constant, avg, max,

			bearer duration for background traffic class.		min, nkcttbh, nkrttbh, tot
max_dur_hsdsch_rb_intera	INTENSITY	INTEGER	The maximum HS-DSCH radio bearer duration for interactive traffic class.	PMMOResult_Packet_call.M1022C161	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_hsdsch_rb_strea	INTENSITY	INTEGER	The maximum HS-DSCH radio bearer duration for streaming.	PMMOResult_Packet_call.M1022C157	Constant, avg, max, min, nkcttbh, nkrttbh, tot
max_dur_hsupa_user_conn	INTENSITY	INTEGER	The maximum duration that a user has had E-DCH allocated. The whole duration is updated for the last E-DCH serving cell.	PMMOResult_Packet_call.M1022C152	Constant, avg, max, min, nkcttbh, nkrttbh, tot
min_dur_edch_rb_bgr	INTENSITY	INTEGER	The minimum E-DCH radio bearer duration for background.	PMMOResult_Packet_call.M1022C178	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
min_dur_edch_rb_intera	INTENSITY	INTEGER	The minimum E-DCH radio bearer duration for interactive.	PMMOResult_Packet_call.M1022C174	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
min_dur_edch_rb_	INTENSITY	INTEG	The minimum E-	PMMOResult_Packet_	Minimum,

strea		ER	DCH radio bearer duration for streaming.	call.M1022C170	avg, max, min, nkcttbh, nkrttbh, tot
min_dur_hsdsch_rb_bgr	INTENSITY	INTEGER	The minimum HS-DSCH radio bearer duration for background traffic class.	PMMOResult_Packet_call.M1022C166	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
min_dur_hsdsch_rb_intera	INTENSITY	INTEGER	The minimum HS-DSCH radio bearer duration for interactive traffic class.	PMMOResult_Packet_call.M1022C162	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
min_dur_hsdsch_rb_strea	INTENSITY	INTEGER	The minimum HS-DSCH radio bearer duration for streaming.	PMMOResult_Packet_call.M1022C158	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
ps_swi_d_d_to_hs_d_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the DCH/DCH (xx/yy) to the HS-DSCH/ DCH for the streaming traffic class.	PMMOResult_Packet_call.M1022C200	Sum, nkcttbh, nkrttbh, tot
ps_swi_d_d_to_hs_e_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the DCH/DCH (xx/yy) to the HS-DSCH/E-DCH for the streaming traffic class.	PMMOResult_Packet_call.M1022C201	Sum, nkcttbh, nkrttbh, tot
ps_swi_hs_d_to_d_d_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the	PMMOResult_Packet_call.M1022C198	Sum, nkcttbh, nkrttbh,

			HS-DSCH/DCH to the DCH/DCH (xx/yy) for the streaming traffic class.		tot
ps_swi_hs_d_to_hs_e_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the HS-DSCH/DCH to the HS-DSCH/E-DCH for the streaming traffic class.	PMMOResult_Packet_call.M1022C199	Sum, nkcttbh, nkrttbh, tot
ps_swi_hs_e_to_d_d_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the HS-DSCH/E-DCH to the DCH/DCH (xx/yy) for the streaming traffic class.	PMMOResult_Packet_call.M1022C197	Sum, nkcttbh, nkrttbh, tot
ps_swi_hs_e_to_hs_d_stre	ACCUMULATION	INTEGER	The number of packet call channel switches from the HS-DSCH/E-DCH to the HS-DSCH/DCH for the streaming traffic class.	PMMOResult_Packet_call.M1022C196	Sum, nkcttbh, nkrttbh, tot
succ_chan_swi_dch_to_hs_dsch	ACCUMULATION	INTEGER	The number of successful channel switches from DCH to HS-DSCH.	PMMOResult_Packet_call.M1022C148	Sum, nkcttbh, nkrttbh, tot
succ_chan_swi_hs_dsch_to_dch	ACCUMULATION	INTEGER	The number of successful channel switches from HS-DSCH to DCH.	PMMOResult_Packet_call.M1022C150	Sum, nkcttbh, nkrttbh, tot

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sum_dur_edch_rb_bgr	ACCUMULATION	INTEGER	The sum of the durations of the E-DCH radio bearer for background.	PMMOResult_Packet_call.M1022C179	Sum, nkcttbh, nkrttbh, tot
sum_dur_edch_rb_intera	ACCUMULATION	INTEGER	The sum of the durations of the E-DCH radio bearer for interactive.	PMMOResult_Packet_call.M1022C175	Sum, nkcttbh, nkrttbh, tot
sum_dur_edch_rb_strea	ACCUMULATION	INTEGER	The sum of the durations of the E-DCH radio bearer for streaming.	PMMOResult_Packet_call.M1022C171	Sum, nkcttbh, nkrttbh, tot
sum_dur_hsdpa_user_conn	ACCUMULATION	INTEGER	The sum of the durations of the HSDPA user connections. The whole duration is updated for the last HS-DSCH serving cell.	PMMOResult_Packet_call.M1022C153	Sum, nkcttbh, nkrttbh, tot
sum_dur_hsdsch_rb_bgr	ACCUMULATION	INTEGER	The sum of the durations of the HS-DSCH radio bearer for background traffic class.	PMMOResult_Packet_call.M1022C167	Sum, nkcttbh, nkrttbh, tot
sum_dur_hsdsch_rb_intera	ACCUMULATION	INTEGER	The sum of the durations of the HS-DSCH radio bearer for interactive traffic class.	PMMOResult_Packet_call.M1022C163	Sum, nkcttbh, nkrttbh, tot
sum_dur_hsdsch_rb_strea	ACCUMULATION	INTEGER	The sum of the durations of the HS-DSCH radio bearer for streaming.	PMMOResult_Packet_call.M1022C159	Sum, nkcttbh, nkrttbh, tot
sum_dur_hsupa_user_conn	ACCUMULATION	INTEGER	The sum of the durations of the HSUPA user connections. The	PMMOResult_Packet_call.M1022C155	Sum, nkcttbh, nkrttbh, tot

			whole duration is updated for the last E-DCH serving cell.		
swi_dch_dch_to_hsdsch_dch_for_background	ACCUMULATION	INTEGER	The number of packet call channel switches from DCH/DCH (xx/yy) to HS-DSCH/E-DCH for interactive traffic class.	PMMOResult_Packet_call.M1022C42	Sum, nkcttbh, nkrttbh, tot
swi_dch_dch_to_hsdsch_dch_for_interactive	ACCUMULATION	INTEGER	The number of packet call channel switches from DCH/DCH (xx/yy) to HS-DSCH/DCH for background traffic class.	PMMOResult_Packet_call.M1022C41	Sum, nkcttbh, nkrttbh, tot
swi_dch_dch_to_hsdsch_edch_for_interactive	ACCUMULATION	INTEGER	The number of packet call channel switches from DCH/DCH (xx/yy) to HS-DSCH/E-DCH for background traffic class.	PMMOResult_Packet_call.M1022C43	Sum, nkcttbh, nkrttbh, tot
swi_hsdcsh_dch_to_hsdsch_edch_for_background	ACCUMULATION	INTEGER	The number of packet call channel switches from DCH/DCH (xx/yy) to HS-DSCH/DCH for interactive traffic class.	PMMOResult_Packet_call.M1022C40	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_dch_to_dch_dch_for_ba	ACCUMULATION	INTEGER	The number of packet call channel	PMMOResult_Packet_call.M1022C38	Sum, nkcttbh,

ckground			switches from HS-DSCH/DCH to DCH/DCH (xx/yy) for background traffic class.		nkrttbh, tot
swi_hsdsch_dch_to_dch_dch_for_interactive	ACCUMULATION	INTEGER	The number of packet call channel switches from HS-DSCH/DCH to DCH/DCH (xx/yy) for interactive traffic class.	PMMOResult_Packet_call.M1022C37	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_dch_to_hsdsch_edch_for_interactive	ACCUMULATION	INTEGER	The number of packet call channel switches from HS-DSCH/DCH to HS-DSCH/E-DCH for interactive traffic class.	PMMOResult_Packet_call.M1022C39	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_edch_to_dch_dch_for_background	ACCUMULATION	INTEGER	The number of packet call channel switches from HS-DSCH/E-DCH to DCH/DCH (xx/yy) for background traffic class.	PMMOResult_Packet_call.M1022C36	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_edch_to_dch_dch_for_interactive	ACCUMULATION	INTEGER	The number of packet call channel switches from HS-DSCH/E-DCH to DCH/DCH (xx/yy) for interactive traffic class.	PMMOResult_Packet_call.M1022C35	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_edch_to_hsdsch_dch_for_background	ACCUMULATION	INTEGER	The number of packet call channel switches from HS-DSCH/E-DCH to HS-DSCH/DCH for background traffic class.	PMMOResult_Packet_call.M1022C34	Sum, nkcttbh, nkrttbh, tot
swi_hsdsch_edch_to_hsdsch_dch_for	ACCUMULATION	INTEGER	The number of packet call channel	PMMOResult_Packet_call.M1022C33	Sum, nkcttbh,

_interactive			switches from HS-DSCH/E-DCH to HS-DSCH/DCH for interactive traffic class.		nkrttbh, tot

7.6.70 Cell.Nokia.UMTS.prach_prop_delay

PRACH propagation delay statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
prach_propagation_delay_class_0	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_000 (3GPP TS 25.133). This corresponds approximately to the distance of 0...234 meters.	PMMOResult_RRC.M1006C128	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_10	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_026...PROP_DELAY_029 (3GPP TS 25.133). This corresponds the distance of 6084...7020 meters.	PMMOResult_RRC.M1006C138	Sum, nkcttbh, nkrttbh, tot

prach_propagation_delay_class_11	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_030...PROP_DELAY_033 (3GPP TS 25.133). This corresponds the distance of 7020...7956 meters.	PMMOResult_RRC.M1006C139	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_12	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_034...PROP_DELAY_042 (3GPP TS 25.133). This corresponds the distance of 7956...10062 meters.	PMMOResult_RRC.M1006C140	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_13	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_043...PROP_DELAY_063 (3GPP TS 25.133). This corresponds the distance of 10062...14976 meters.	PMMOResult_RRC.M1006C141	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_14	ACCUMULATION	INTEGER	The number of PRACH	PMMOResult_RRC.M1006C142	Sum, nkcttbh,

			Propagation Delay values reported by the WBTS with value PROP_DELAY_064...PROP_DELAY_084 (3GPP TS 25.133). This corresponds the distance of 14976...19890 meters.		nkrttbh, tot
prach_propagation_delay_class_15	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_085...PROP_DELAY_106 (3GPP TS 25.133). This corresponds the distance of 19890...25038 meters.	PMMOResult_RRC.M1006C143	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_16	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_107...PROP_DELAY_127 (3GPP TS 25.133). This corresponds the distance of 25038...29952 meters.	PMMOResult_RRC.M1006C144	Sum, nkcttbh, nkrttbh, tot

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prach_propagation_delay_class_17	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_128...PROP_DELAY_148 (3GPP TS 25.133). This corresponds the distance of 29952...34866 meters.	PMMOResult_RRC.M1006C145	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_18	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_149...PROP_DELAY_170 (3GPP TS 25.133). This corresponds the distance of 34866...40014 meters.	PMMOResult_RRC.M1006C146	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_19	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_171...PROP_DELAY_213 (3GPP TS 25.133). This corresponds the distance of 40014...50076 meters.	PMMOResult_RRC.M1006C147	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_1	ACCUMULATION	INTEGER	The number of PRACH	PMMOResult_RRC.M1006C129	Sum, nkcttbh,

			Propagation Delay values reported by the WBTS with value PROP_DELAY_001 (3GPP TS 25.133). This corresponds approximately to the distance of 234...468 meters.		nkrttbh, tot
prach_propagation_delay_class_20	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_214 or greater (3GPP TS 25.133). This corresponds the distance greater than 50076 meters.	PMMOResult_RRC.M1006C148	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_2	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_002...PROP_DELAY_003 (3GPP TS 25.133). This corresponds the distance of 468...936 meters.	PMMOResult_RRC.M1006C130	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_3	ACCUMULATION	INTEGER	The number of PRACH	PMMOResult_RRC.M1006C131	Sum, nkcttbh,

			Propagation Delay values reported by the WBTS with value PROP_DELAY_004 (3GPP TS 25.133). This corresponds the distance of 936...1170 meters.		nkrttbh, tot
prach_propagation_delay_class_4	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_005...PROP_DELAY_006 (3GPP TS 25.133). This corresponds the distance of 1170...1638 meters.	PMMOResult_RRC.M1006C132	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_5	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_007...PROP_DELAY_008 (3GPP TS 25.133). This corresponds the distance of 1638...2106 meters.	PMMOResult_RRC.M1006C133	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_6	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value	PMMOResult_RRC.M1006C134	Sum, nkcttbh, nkrttbh, tot

			PROP_DELAY_009...PROP_DELAY_012 (3GPP TS 25.133). This corresponds the distance of 2106...3042 meters.		
prach_propagation_delay_class_7	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_013...PROP_DELAY_016 (3GPP TS 25.133). This corresponds the distance of 3042...3978 meters.	PMMOResult_RRC.M1006C135	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_8	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_017...PROP_DELAY_020 (3GPP TS 25.133). This corresponds the distance of 3978...4914 meters.	PMMOResult_RRC.M1006C136	Sum, nkcttbh, nkrttbh, tot
prach_propagation_delay_class_9	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay	PMMOResult_RRC.M1006C137	Sum, nkcttbh, nkrttbh,

			values reported by the WBTS with value PROP_DELAY_021...PROP_DELAY_025 (3GPP TS 25.133). This corresponds the distance of 4914...6084 meters.		tot

7.6.71 Cell.Nokia.UMTS.prxtotal

PRXTotal measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_prx_noise	INTENSITY	FLOAT	Average PrxNoise threshold used	PMMOResult_Cell_Resource.M1000C10	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_prxtot_class_0	INTENSITY	FLOAT	Average PrxTotal in relation to the unloaded area	PMMOResult_Cell_Resource.M1000C0	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_prxtot_class_1	INTENSITY	FLOAT	Average PrxTotal in relation to the feasible load area 1	PMMOResult_Cell_Resource.M1000C2	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_prxtot_class_2	INTENSITY	FLOAT	Average PrxTotal in relation to the feasible load area 2	PMMOResult_Cell_Resource.M1000C4	Average, avg, max, min, nkcttbh, nkrttbh, tot

ave_prxtot_class_3	INTENSITY	FLOAT	Average PrxTotal in relation to the marginal load area	PMMOResult_Cell_Resource.M1000C6	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_prxtot_class_4	INTENSITY	FLOAT	Average PrxTotal in relation to the overload area	PMMOResult_Cell_Resource.M1000C8	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_uplink_load_dbm	INTENSITY	FLOAT	Average received uplink power [dBm] shows the uplink loading of a cell over the reporting period. This KPI is based on Cell Resource measurement where the total uplink interference (RSSI) of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Method: Convert all dbm values to mW before reconvert it back to dBm again. Note: This is based on Nokia WCDMA RAN KPI document. It has been decided to	PMMOResult_Cell_Resource.avg_uplink_load_dbm	Average, avg, max, min, nkcttbh, nkrttbh, tot

			put into the normal 1-2-1 KPI group due to lengthy reference names was used.		
lvl_ave_prx_noise	INTENSITY	FLOAT	Average PrxNoise threshold used in dBm.	{ave_prx_noise}/ (-100)	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_prxtot_class_0	INTENSITY	FLOAT	Average PrxTotal in relation to the unloaded area in dBm.	-112.1 + (0.1 * {ave_prxtot_class_0})	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_prxtot_class_1	INTENSITY	FLOAT	Average PrxTotal in relation to the feasible load area 1in dBm.	-112.1 + (0.1 * {ave_prxtot_class_1})	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_prxtot_class_2	INTENSITY	FLOAT	Average PrxTotal in relation to the feasible load area 2 in dBm.	-112.1 + (0.1 * {ave_prxtot_class_2})	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_prxtot_class_3	INTENSITY	FLOAT	Average PrxTotal in relation to the marginal load area in dBm.	-112.1 + (0.1 * {ave_prxtot_class_3})	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_prxtot_class_4	INTENSITY	FLOAT	Average PrxTotal in relation to the overload area in dBm.	-112.1 + (0.1 * {ave_prxtot_class_4})	Average, avg, max, min, nkcttbh, nkrttbh, tot

maximum_prx_noise_value	INTENSITY	FLOAT	Maximum PrxNoise threshold value	PMMOResult_Cell_Resource.M1000C12	Constant, avg, max, min, nkcttbh, nkrttbh, tot
maximum_prxtotal	INTENSITY	FLOAT	The maximum PrxTotal value during the measurement period.	PMMOResult_Cell_Resource.M1000C228	Constant, avg, max, min, nkcttbh, nkrttbh, tot
minimum_prx_noise_value	INTENSITY	FLOAT	Minimum PrxNoise threshold value	PMMOResult_Cell_Resource.M1000C13	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
minimum_prxtotal	INTENSITY	FLOAT	The minimum PrxTotal value during the measurement period.	PMMOResult_Cell_Resource.M1000C229	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
prx_noise_denom_1	ACCUMULATION	INT8	Denominator for the average PrxNoise used	PMMOResult_Cell_Resource.M1000C11	Sum, nkcttbh, nkrttbh, tot
prxtot_denom_0	ACCUMULATION	INT8	Denominator for PrxTotal Class 0	PMMOResult_Cell_Resource.M1000C1	Sum, nkcttbh, nkrttbh, tot
prxtot_denom_1	ACCUMULATION	INT8	Denominator for PrxTotal Class 1	PMMOResult_Cell_Resource.M1000C3	Sum, nkcttbh, nkrttbh, tot

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prxtot_denom_2	ACCUMULATION	INT8	Denominator for PrxTotal Class 2	PMMOResult_Cell_Resource.M1000C5	Sum, nkcttbh, nkrttbh, tot
prxtot_denom_3	ACCUMULATION	INT8	Denominator for PrxTotal Class 3	PMMOResult_Cell_Resource.M1000C7	Sum, nkcttbh, nkrttbh, tot
prxtot_denom_4	ACCUMULATION	INT8	Denominator for PrxTotal Class 4	PMMOResult_Cell_Resource.M1000C9	Sum, nkcttbh, nkrttbh, tot

7.6.72 Cell.Nokia.UMTS.ptx_est

PTX RT and NRT measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_ptx_nrt_class_0	INTENSITY	FLOAT	Estimated average transmitted power for downlink NRT users on the cell for Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C44	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_nrt_class_1	INTENSITY	FLOAT	Estimated average transmitted power for downlink NRT users on the cell for Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C46	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_nrt_class_2	INTENSITY	FLOAT	Estimated average transmitted power for downlink NRT users on the cell for Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C48	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_nrt_class_3	INTENSITY	FLOAT	Estimated average transmitted power for downlink NRT	PMMOResult_Cell_Resource.M1000C50	Average, avg, max, min,

			users on the cell for Class 3 (marginal load area)		nkcttbh, nkrttbh, tot
ave_ptx_nrt_class_4	INTENSITY	FLOAT	Estimated average transmitted power for downlink NRT users on the cell for Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C52	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_rt_class_0	INTENSITY	FLOAT	Estimated average transmitted power for downlink RT users on the cell for Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C93	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_rt_class_1	INTENSITY	FLOAT	Estimated average transmitted power for downlink RT users on the cell for Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C95	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_rt_class_2	INTENSITY	FLOAT	Estimated average transmitted power for downlink RT users on the cell for Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C97	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptx_rt_class_3	INTENSITY	FLOAT	Estimated average transmitted power for downlink RT users on the cell for Class 3 (marginal load area)	PMMOResult_Cell_Resource.M1000C99	Average, avg, max, min, nkcttbh, nkrttbh, tot

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ave_ptx_rt_class_4	INTENSITY	FLOAT	Estimated average transmitted power for downlink RT users on the cell for Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C101	Average, avg, max, min, nkcttbh, nkrttbh, tot
ptx_nrt_denom_0	ACCUMULATION	INT8	Denominator for PTX NRT Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C45	Sum, nkcttbh, nkrttbh, tot
ptx_nrt_denom_1	ACCUMULATION	INT8	Denominator for PTX NRT Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C47	Sum, nkcttbh, nkrttbh, tot
ptx_nrt_denom_2	ACCUMULATION	INT8	Denominator for PTX NRT Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C49	Sum, nkcttbh, nkrttbh, tot
ptx_nrt_denom_3	ACCUMULATION	INT8	Denominator for PTX NRT Class 3 (marginal load area)	PMMOResult_Cell_Resource.M1000C51	Sum, nkcttbh, nkrttbh, tot
ptx_nrt_denom_4	ACCUMULATION	INT8	Denominator for PTX NRT Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C53	Sum, nkcttbh, nkrttbh, tot
ptx_rt_denom_0	ACCUMULATION	INT8	Denominator for PTX RT Class 0 (unloaded area)	PMMOResult_Cell_Resource.M1000C94	Sum, nkcttbh, nkrttbh, tot
ptx_rt_denom_1	ACCUMULATION	INT8	Denominator for PTX RT Class 1 (feasible load area 1)	PMMOResult_Cell_Resource.M1000C96	Sum, nkcttbh, nkrttbh, tot
ptx_rt_denom_2	ACCUMULATION	INT8	Denominator for PTX RT Class 2 (feasible load area 2)	PMMOResult_Cell_Resource.M1000C98	Sum, nkcttbh, nkrttbh, tot
ptx_rt_denom_3	ACCUMULATION	INT8	Denominator for PTX RT Class 3	PMMOResult_Cell_Resource.M1000C100	Sum, nkcttbh,

			(marginal load area)		nkrttbh, tot
ptx_rt_denom_4	ACCUMULATION	INT8	Denominator for PTX RT Class 4 (overload area)	PMMOResult_Cell_Resource.M1000C102	Sum, nkcttbh, nkrttbh, tot

7.6.73 Cell.Nokia.UMTS.ptxtargetps

PTX Target PS statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
average_ptxtarg_etps	INTENSITY	FLOAT	The average target threshold PtxTargetPS value during the measurement period. The PtxTargetPS value is adjusted dynamically based on the measurement reports received from the BTS.	PMMOResult_Cell_Resource.M1000C234	Average, avg, max, min, nkcttbh, nkrttbh, tot
maximum_ptxtarg_etps	INTENSITY	FLOAT	The maximum target threshold PtxTargetPS value during the measurement period. The PtxTargetPS value is adjusted dynamically based on the measurement reports received from the BTS.	PMMOResult_Cell_Resource.M1000C233	Constant, avg, max, min, nkcttbh, nkrttbh, tot

minimum_ptxtarg_etps	INTENSITY	FLOAT	The minimum target threshold PtxTargetPS value during the measurement period. The PtxTargetPS value is adjusted dynamically based on the measurement reports received from the BTS.	PMMOResult_Cell_Resource.M1000C232	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
ptxtarg_etps_denom	ACCUMULATION	INTEGER	The number of samples for target threshold PtxTargetPS measurement.	PMMOResult_Cell_Resource.M1000C235	Sum, nkcttbh, nkrttbh, tot

7.6.74 Cell.Nokia.UMTS.ptxtotal

PTXTotal measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
active_non_hsdpa_power_denominator	ACCUMULATION	INT8	The denominator for the average active non-HSDPA power ratio.	PMMOResult_Cell_Resource.M1000C141	Sum, nkcttbh, nkrttbh, tot
ave_hspa_dl_power	INTENSITY	FLOAT	The average used HSPA power during the measurement period. The used HSPA power is calculated from the difference between PtxTotal and PtxNonHSPA (or PtxNonHSDPA) values.	PMMOResult_Cell_Resource.M1000C238	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptxtot_class_	INTENSITY	FLOA	Average PtxTotal	PMMOResult_Cell_Res	Average,

0		T	in relation to the unloaded area	ource.M1000C14	avg, max, min, nkcttbh, nkrttbh, tot
ave_ptxtot_class_1	INTENSITY	FLOAT	Average PtxTotal in relation to the feasible load area 1	PMMOResult_Cell_Resource.M1000C16	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptxtot_class_2	INTENSITY	FLOAT	Average PtxTotal in relation to the feasible load area 2	PMMOResult_Cell_Resource.M1000C18	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptxtot_class_3	INTENSITY	FLOAT	Average PtxTotal in relation to the marginal load area	PMMOResult_Cell_Resource.M1000C20	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_ptxtot_class_4	INTENSITY	FLOAT	Average PtxTotal in relation to the overload area	PMMOResult_Cell_Resource.M1000C22	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_ratio_between_non_hsdpa_power_and_the_maximum_power	INTENSITY	FLOAT	Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission is the ratio between the total transmitted power of all codes	PMMOResult_Cell_Resource.M1000C138	Average, avg, max, min, nkcttbh, nkrttbh, tot

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			not used for HS-PDSCH or HS-SCCH transmission on one DL carrier from one UTRAN access point, and the maximum transmission power possible to use on that DL carrier at that moment.		
average_ratio_for_active_non_hsdpa_power_and_the_maximum_power	INTENSITY	FLOAT	This counter gives the average active non- HSDPA power ratio. Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission is the ratio between the total transmitted power of all codes not used for HS-PDSCH or HS-SCCH transmission on one DL carrier from one UTRAN access point, and the maximum transmission power possible to use on that DL carrier at that moment.	PMMOResult_Cell_Resource.M1000C140	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_downlink_load_dbm	INTENSITY	FLOAT	Average transmitted downlink power [dBm] shows the downlink loading of a cell over the	PMMOResult_Cell_Resource.avg_downlink_load_dbm	Average, avg, max, min, nkcttbh, nkrttbh, tot

			reporting period. This measurement is based on Cell Resource measurement, where the total transmitted power of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Method: Convert all dbm values to mW before reconvert it back to dBm again. Note: This is based on Nokia WCDMA RAN KPI document. It has been decided to put into the normal 1-2-1 KPI group due to lengthy reference names was used.		
hspa_dl_power_samples	ACCUMULATION	INTEGER	The number of samples for the used HSPA power measurement.	PMMOResult_Cell_Resource.M1000C239	Sum, avg, max, min, nkcttbh, nkrttbh, tot
max_hspa_dl_power	INTENSITY	FLOAT	The maximum used HSPA power during the measurement period. The used HSPA power is	PMMOResult_Cell_Resource.M1000C237	Constant, avg, max, min, nkcttbh, nkrttbh, tot

			calculated from the difference between PtxTotal and PtxNonHSPA (or PtxNonHSDPA) values.		
maximum_ptxtotal	INTENSITY	FLOAT	The maximum PtxTotal value during the measurement period.	PMMOResult_Cell_Resource.M1000C230	Constant, avg, max, min, nkcttbh, nkrttbh, tot
min_hspa_dl_power	INTENSITY	FLOAT	The minimum used HSPA power during the measurement period. The used HSPA power is calculated from the difference between PtxTotal and PtxNonHSPA (or PtxNonHSDPA) values	PMMOResult_Cell_Resource.M1000C236	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
minimum_ptxtotal	INTENSITY	FLOAT	The minimum PtxTotal value during the measurement period.	PMMOResult_Cell_Resource.M1000C231	Minimum, avg, max, min, nkcttbh, nkrttbh, tot
non_hsdpa_power_denominator	ACCUMULATION	INT8	The denominator for the average non-HSDPA power ratio.	PMMOResult_Cell_Resource.M1000C139	Sum, nkcttbh, nkrttbh, tot
ptxtot_denom_0	ACCUMULATION	INT8	Denominator for PtxTotal Class 0	PMMOResult_Cell_Resource.M1000C15	Sum, nkcttbh, nkrttbh, tot
ptxtot_denom_1	ACCUMULATION	INT8	Denominator for PtxTotal Class 1	PMMOResult_Cell_Resource.M1000C17	Sum, nkcttbh, nkrttbh, tot

ptxtot_denom_2	ACCUMULATION	INT8	Denominator for PtxTotal Class 2	PMMOResult_Cell_Resource.M1000C19	Sum, nkcttbh, nkrttbh, tot
ptxtot_denom_3	ACCUMULATION	INT8	Denominator for PtxTotal Class 3	PMMOResult_Cell_Resource.M1000C21	Sum, nkcttbh, nkrttbh, tot
ptxtot_denom_4	ACCUMULATION	INT8	Denominator for PtxTotal Class 4	PMMOResult_Cell_Resource.M1000C23	Sum, nkcttbh, nkrttbh, tot

7.6.75 Cell.Nokia.UMTS.rab.access_complete

RAB access complete measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_access_complete_cs_amr_multimode	ACCUMULATION	INTEGER	Number of RAB access completions for CS AMR Multimode calls.	PMMOResult_Service_Level.M1001C262	Sum, nkcttbh, nkrttbh, tot

7.6.76 Cell.Nokia.UMTS.rab.active_complete_cs_data

RAB - Active completions for CS voice and data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_comp_for_cs_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB active completions for CS streaming calls in case resources for the RAB are reserved according	PMMOResult_Service_Level.M1001C418	Sum, nkcttbh, nkrttbh, tot

			to guaranteed bit rate DL defined in RAB parameters . Possible only for CS non-transparent data in streaming class.		
rab_act_comp_for_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB active completions for CS streaming calls in case resources for the RAB are reserved according to the guaranteed bit rate in uplink.	PMMOResult_Service_Level.M1001C417	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_conversational_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Conversational 64 kbps.	PMMOResult_Service_Level.M1001C332	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_streaming_14_4	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Streaming 14.4 kbps.	PMMOResult_Service_Level.M1001C333	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_cs_streaming_57_6	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Streaming 57.6 kbps.	PMMOResult_Service_Level.M1001C334	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active completions for CS data calls with conversational class	PMMOResult_Service_Level.M1001C137	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_cs_data_	ACCUMULATION	INT8	A number of RAB active completions	PMMOResult_Service_Level.M1001C138	Sum, nkcttbh,

stream			for CS data calls with streaming class		nkrttbh, tot
rab_active_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB active completions for CS voice calls	PMMOResult_Service_Level.M1001C136	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_data_conv	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS data conversational, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C249	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_data_stream	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS data streaming, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C250	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_voice	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS voice, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C248	Sum, nkcttbh, nkrttbh, tot

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7.6.77 Cell.Nokia.UMTS.rab.active_complete_ps_data

RAB - Active completions for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_comp_for_ps_call_using_iphc_conv_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - number of RAB active completions for the PS data calls with conversational class using RFC2507 IP header compression.	PMMOResult_Service_Level.M1001C243	Sum, nkcttbh, nkrttbh, tot
rab_act_comp_for_ps_call_using_iphc_stream_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with streaming class using RFC2507 IP header compression.	PMMOResult_Service_Level.M1001C244	Sum, nkcttbh, nkrttbh, tot
rab_act_comp_for_ps_call_using_rohc_conv_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with conversational class using ROHC IP header compression.	PMMOResult_Service_Level.M1001C245	Sum, nkcttbh, nkrttbh, tot
rab_act_comp_for_ps_call_using_rohc_stream_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with streaming class using ROHC IP	PMMOResult_Service_Level.M1001C246	Sum, nkcttbh, nkrttbh, tot

			header compression.		
rab_act_comp_for_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB active completions for PS streaming calls in which resources for the RAB are reserved according to the guaranteed bit rate in downlink. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level.M1001C420	Sum, nkcttbh, nkrttbh, tot
rab_act_comp_for_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB active completions for PS streaming calls in case resources for the RAB are reserved according to the guaranteed bit rate in uplink. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level.M1001C419	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 128 kbps downlink.	PMMOResult_Service_Level.M1001C385	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_128_256	ACCUMULATION	INTEGER	The number of RAB active completions and	PMMOResult_Service_Level.M1001C598	Sum, nkcttbh, nkrttbh,

			active releases for PS NRT RAB with a bitrate of 128 kbps uplink/ 256 kbps downlink.		tot
rab_active_complete_ps_nrt_128_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level.M1001C386	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 64 kbps downlink.	PMMOResult_Service_Level.M1001C384	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 384 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level.M1001C387	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 384 kbps uplink/ 64 kbps downlink.	PMMOResult_Service_Level.M1001C388	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 64	PMMOResult_Service_Level.M1001C338	Sum, nkcttbh, nkrttbh, tot

			kbps uplink/ 128 kbps downlink.		
rab_active_complete_ps_nrt_64_256	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 64 kbps uplink/ 256 kbps downlink.	PMMOResult_Service_Level.M1001C339	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of64 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level.M1001C340	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C337	Sum, nkcttbh, nkrttbh, tot
rab_active_complete_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and a guaranteed bit rate of 16 kbps uplink/64 kbps	PMMOResult_Service_Level.M1001C335	Sum, nkcttbh, nkrttbh, tot

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			downlink.		
rab_active_complete_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and a guaranteed bit rate of 8 kbps uplink/32 kbps downlink.	PMMOResult_Service_Level.M1001C336	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active completions for PS calls with background class	PMMOResult_Service_Level.M1001C142	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active completions for PS calls with conversational class	PMMOResult_Service_Level.M1001C139	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active completions for PS calls with interactive class	PMMOResult_Service_Level.M1001C141	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active completions for PS calls with streaming class	PMMOResult_Service_Level.M1001C140	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_backg	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data background, when the RAB is established and released in the	PMMOResult_Service_Level.M1001C254	Sum, nkcttbh, nkrttbh, tot

			same cell.		
rab_active_completions_in_same_cell_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of normal completions of RAB active phases for PS data conversational, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C251	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_intera	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data interactive, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C253	Sum, nkcttbh, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_stream	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data streaming, when the RAB is established and released in the same cell.	PMMOResult_Service_Level.M1001C252	Sum, nkcttbh, nkrttbh, tot

7.6.78 Cell.Nokia.UMTS.rab.active_failure_cs_data

RAB - Active failures for CS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

_%_rab_active_fail_cs_conv	PERCENTAGE	FLOAT	Percentage of RAB active failures for CS data calls with conversational class.	100 * {tot_rab_active_fail_cs_conv}/ {Nokia.rab.setup_access_complete.rab_access_completions_for_cs_data_conv}	Average, avg, nkcttbh, nkrttbh
_%_rab_active_fail_cs_stream	PERCENTAGE	FLOAT	Percentage of RAB active failures for CS data calls with streaming class.	100 * {tot_rab_active_fail_cs_stream}/ {Nokia.rab.setup_access_complete.rab_access_completions_for_cs_data_stream}	Average, avg, nkcttbh, nkrttbh
rab_act_fail_for_cs_data_call_stream_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by an integrity check failure	PMMOResult_Service_Level.M1001C165	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_cs_data_conv_class_call_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by an integrity check failure	PMMOResult_Service_Level.M1001C159	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conservational class caused by a BTS	PMMOResult_Service_Level.M1001C157	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by a BTS	PMMOResult_Service_Level.M1001C163	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iu_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with	PMMOResult_Service_Level.M1001C155	Sum, nkcttbh, nkrttbh,

			conversational class caused by the IU interface. When for example, the signalling connection between RNC and CN fails		tot
rab_active_failures_due_to_iu_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by the IU interface. When for example, the signalling connection between RNC and CN fails	PMMOResult_Service_Level.M1001C161	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by the IUR interface. When for example, the SRNC relocation procedure fails due to the IUR interface	PMMOResult_Service_Level.M1001C158	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by the IUR interface. When for example, the SRNC relocation	PMMOResult_Service_Level.M1001C164	Sum, nkcttbh, nkrttbh, tot

			procedure fails due to the IUR interface		
rab_active_failures_due_to_radio_int_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conservational class caused by the radio interface	PMMOResult_Service_Level.M1001C156	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by the radio interface	PMMOResult_Service_Level.M1001C162	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C160	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C166	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_data_conv	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS data conversational.	PMMOResult_Service_Level.M1001C393	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_data_stream	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS data streaming.	PMMOResult_Service_Level.M1001C394	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_fail_cs_conv	ACCUMULATION	INT8	Total number of RAB active failures for CS data calls with	({rab_active_failures_due_to_iu_for_cs_data_conv}+ {rab_active_failures_du	Sum, nkcttbh, nkrttbh, tot

			conversational class.	e_to_radio_int_for_cs_data_conv}+ {rab_active_failures_due_to_bts_for_cs_data_conv}+ {rab_active_failures_due_to_iur_for_cs_data_conv}+ {rab_act_fail_for_cs_data_conv_class_call_due_to_integrity_check}+ {rab_active_failures_due_to_ue_for_cs_data_conv}+ {rab_active_failures_due_to_rnc_for_cs_data_conv})	
tot_rab_active_fail_cs_stream	ACCUMULATION	INT8	Total number of RAB active failures for CS data calls with streaming class.	({rab_active_failures_due_to_iu_for_cs_data_stream}+ {rab_active_failures_due_to_radio_int_for_cs_data_stream}+ {rab_active_failures_due_to_bts_for_cs_data_stream}+ {rab_active_failures_due_to_iur_for_cs_data_stream}+ {rab_act_fail_for_cs_data_call_stream_class_due_to_integrity_check}+ {rab_active_failures_due_to_rnc_for_cs_data_stream}+ {rab_active_failures_due_to_ue_for_cs_data_stream})	Sum, nkcttbh, nkrttbh, tot

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7.6.79 Cell.Nokia.UMTS.rab.active_failure_cs_voice

RAB - Active failures for CS voice service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rab_active_fail_cs_voice	PERCENTAGE	FLOAT	Percentage of RAB active failures for CS voice calls.	100 * {tot_rab_active_fail_cs_voice}/ {Nokia.rab.setup_access_complete.rab_access_completions_for_cs_voice}	Average, avg, nkcttbh, nkrttbh
rab_act_fail_for_cs_voice_call_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by an integrity check failure	PMMOResult_Service_Level.M1001C149	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by a BTS	PMMOResult_Service_Level.M1001C147	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iu_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by the IU interface. When for example, the signalling connections between the RNC and CN fails	PMMOResult_Service_Level.M1001C145	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by the IUR interface. When for example, the SRNC relocation procedure fails because of the IUR interface	PMMOResult_Service_Level.M1001C148	Sum, nkcttbh, nkrttbh, tot

rab_active_failures_due_to_radio_int_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls due to the radio interface	PMMOResult_Service_Level.M1001C146	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by RNCs internal reasons. Includes also ciphering failures	PMMOResult_Service_Level.M1001C150	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_voice	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS voice.	PMMOResult_Service_Level.M1001C392	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_fail_cs_voice	ACCUMULATION	INT8	Total number of RAB active failures for CS voice calls.	({rab_active_failures_due_to_iu_for_cs_voice} + {rab_active_failures_due_to_radio_int_for_cs_voice}+ {rab_active_failures_due_to_bts_for_cs_voice} + {rab_active_failures_due_to_iur_for_cs_voice} + {rab_act_fail_for_cs_voice_call_due_to_integrity_check}+ {rab_active_failures_due_to_rnc_for_cs_voice} + {rab_active_failures_due_to_ue_for_cs_voice})	Sum, nkcttbh, nkrttbh, tot

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7.6.80 Cell.Nokia.UMTS.rab.active_failure_ps_data

RAB - Active failures for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rab_active_failures_for_all_causes_for_ps	PERCENTAGE	FLOAT	Percentage of RAB active failures for PS data.	100 * {tot_rab_active_failures_for_all_causes_for_ps} / {Nokia.rab.setup_access_complete.tot_rab_access_completions_all_ps}	Average, avg, nkcttbh, nkrttbh
rab_act_fail_for_ps_data_call_backg_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by an integrity check failure	PMMOResult_Service_Level.M1001C195	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_ps_data_call_conv_class_due_to_integrity_check	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by an integrity check failure	PMMOResult_Service_Level.M1001C177	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_ps_data_call_intera_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by an integrity check failure	PMMOResult_Service_Level.M1001C189	Sum, nkcttbh, nkrttbh, tot
rab_act_fail_for_ps_data_call_stream_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by an integrity check failure	PMMOResult_Service_Level.M1001C183	Sum, nkcttbh, nkrttbh, tot

rab_active_failures_due_to_bts_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by a BTS	PMMOResult_Service_Level.M1001C193	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by a BTS	PMMOResult_Service_Level.M1001C175	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by a BTS	PMMOResult_Service_Level.M1001C187	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_bts_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by a BTS	PMMOResult_Service_Level.M1001C181	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level.M1001C191	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data	PMMOResult_Service_Level.M1001C173	Sum, nkcttbh, nkrttbh, tot

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			calls with conservational class caused by the IU interface. When for example the signalling connection between the RNC and CN fails		
rab_active_failures_due_to_iu_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level.M1001C185	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level.M1001C179	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level.M1001C194	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number	PMMOResult_Service_Level.M1001C176	Sum, nkcttbh,

ps_data_conv			of RAB active failures for PS data calls with conservational class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface		nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level.M1001C188	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level.M1001C182	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by a radio interface	PMMOResult_Service_Level.M1001C192	Sum, nkcttbh, nkrttbh, tot
rab_active_failure	ACCUMULA	INT8	- Obsolete in	PMMOResult_Service_	Sum,

s_due_to_radio_int_for_ps_data_conv	TION		RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by a radio interface	Level.M1001C174	nkcttbh, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by a radio interface	PMMOResult_Service_Level.M1001C186	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by a radio interface	PMMOResult_Service_Level.M1001C180	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C196	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C178	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C190	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_rnc_for	ACCUMULATION	INT8	A number of RAB active failures for	PMMOResult_Service_Level.M1001C184	Sum, nkcttbh,

_ps_data_stream			PS data calls with streaming class caused by RNCs internal reasons		nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_backg	ACCUMULATION	INT8	Number of RAB active failures caused by UE for PS data background.	PMMOResult_Service_Level.M1001C398	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of RAB active failures caused by UE for PS data conversational.	PMMOResult_Service_Level.M1001C395	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_intera	ACCUMULATION	INT8	Number of RAB active failures caused by UE for PS data interactive.	PMMOResult_Service_Level.M1001C397	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_stream	ACCUMULATION	INT8	Number of RAB active failures caused by UE for PS data streaming.	PMMOResult_Service_Level.M1001C396	Sum, nkcttbh, nkrttbh, tot
tot_active_failures_due_to_radio_int_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data calls caused by a radio interface	({rab_active_failures_due_to_radio_int_for_ps_data_conv}+ {rab_active_failures_due_to_radio_int_for_ps_data_stream}+ {rab_active_failures_due_to_radio_int_for_ps_data_intera}+ {rab_active_failures_due_to_radio_int_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_act_fail_for_ps_call_conv_	ACCUMULATION	INT8	Total number of RAB active	({rab_act_fail_for_ps_data_call_conv_class_du	Sum, nkcttbh,

class_due_to_integrity_check			failures for PS data calls caused by an integrity check failure	e_to_integrity_check}+ {rab_act_fail_for_ps_data_call_stream_class_due_to_integrity_check}+ {rab_act_fail_for_ps_data_call_intera_class_due_to_integrity_check}+ {rab_act_fail_for_ps_data_call_backg_class_due_to_integrity_check})	nkrttbh, tot
tot_rab_active_failures_due_to_bts_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data calls caused by a BTS	({rab_active_failures_due_to_bts_for_ps_data_conv}+ {rab_active_failures_due_to_bts_for_ps_data_stream}+ {rab_active_failures_due_to_bts_for_ps_data_intera}+ {rab_active_failures_due_to_bts_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_failures_due_to_iu_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data calls caused by the IU interface. When for example the signalling connection between the RNC and CN fails	({rab_active_failures_due_to_iu_for_ps_data_conv}+ {rab_active_failures_due_to_iu_for_ps_data_stream}+ {rab_active_failures_due_to_iu_for_ps_data_intera}+ {rab_active_failures_due_to_iu_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_failures_due_to_iur_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data calls caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	({rab_active_failures_due_to_iur_for_ps_data_conv}+ {rab_active_failures_due_to_iur_for_ps_data_stream}+ {rab_active_failures_due_to_iur_for_ps_data_intera}+ {rab_active_failures_du	Sum, nkcttbh, nkrttbh, tot

				e_to_iur_for_ps_data_backg})	
tot_rab_active_failures_due_to_rnc_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data calls caused by RNCs internal reasons	({rab_active_failures_due_to_rnc_for_ps_data_conv}+ {rab_active_failures_due_to_rnc_for_ps_data_stream}+ {rab_active_failures_due_to_rnc_for_ps_data_intera}+ {rab_active_failures_due_to_rnc_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_failures_due_to_ue_for_ps	ACCUMULATION	INT8	Total number of RAB active failures caused by UE for PS data.	({rab_active_failures_due_to_ue_for_ps_data_conv}+ {rab_active_failures_due_to_ue_for_ps_data_stream}+ {rab_active_failures_due_to_ue_for_ps_data_intera}+ {rab_active_failures_due_to_ue_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_active_failures_for_all_causes_for_ps	ACCUMULATION	INT8	Total number of RAB active failures for PS data.	({tot_rab_active_failures_due_to_iu_for_ps}+ {tot_active_failures_due_to_radio_int_for_ps} + {tot_rab_active_failures_due_to_bts_for_ps}+ {tot_rab_active_failures_due_to_iur_for_ps}+ {tot_rab_act_fail_for_ps_call_conv_class_due_to_integrity_check}+ {tot_rab_active_failures	Sum, nkcttbh, nkrttbh, tot

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				_due_to_rnc_for_ps}+ {tot_rab_active_failures _due_to_ue_for_ps})	

7.6.81 Cell.Nokia.UMTS.rab.active_failures_ps

RAB active failure measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_active_failures_for_ps_data_background_in_pch_state	ACCUMULATION	INTEGER	The number of RAB active failures in cell-PCH state for PS data with interactive class service.	PMMOResult_Service_Level.M1001C594	Sum, nkcttbh, nkrttbh, tot
rab_active_failures_for_ps_data_interactive_in_pch_state	ACCUMULATION	INTEGER	The number of RAB active failures in cell-PCH state for PS data with background class service.	PMMOResult_Service_Level.M1001C593	Sum, nkcttbh, nkrttbh, tot

7.6.82 Cell.Nokia.UMTS.rab.active_release_cs_data

RAB - Active releases for CS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_rel_cs_conv_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS conversational calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C423	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_cs_stream_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS streaming calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C424	Sum, nkcttbh, nkrttbh, tot

rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for CS streaming calls due to pre-emption when RAB has DL resources reserved according to guaranteed bit rate in downlink.	PMMOResult_Service_Level.M1001C430	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for CS streaming class calls due to SRNC relocation in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.	PMMOResult_Service_Level.M1001C428	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS streaming class calls due to unspecified error received from CN in case of RAB	PMMOResult_Service_Level.M1001C426	Sum, nkcttbh, nkrttbh, tot

			has DL resources according to guaranteed bit rate DL in RAB parameters. This is only possible for CS non-transparent data in streaming class.		
rab_act_rel_cs_stream_guar_bit_rate_ul_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for CS streaming calls due to pre-emption when RAB has UL resources reserved according to guaranteed bit rate in uplink.	PMMOResult_Service_Level.M1001C429	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_ul_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for CS streaming class calls due to SRNC relocation in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.	PMMOResult_Service_Level.M1001C427	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate	ACCUMULATION	INTEGER	Number of RAB active releases for	PMMOResult_Service_Level.M1001C425	Sum, nkcttbh,

_ul_due_to_unspec_error_in_cn			CS streaming class calls due to unspecified error received from CN in case of RAB has UL resources according to guaranteed bit rate UL in RAB parameters. This is only possible for CS non-transparent data in streaming class.		nkrttbh, tot
rab_act_rel_cs_voice_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS voice calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C422	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_preemption_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with conversational class due to pre emption	PMMOResult_Service_Level.M1001C152	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_preemption_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with streaming class due to pre emption	PMMOResult_Service_Level.M1001C154	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with conversational class due to SRNC relocation. Note this counter	PMMOResult_Service_Level.M1001C151	Sum, nkcttbh, nkrttbh, tot

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			includes both SRNS relocations and inter RNC intra frequency hard handovers		
rab_active_releases_due_to_srnc_reloc_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with streaming class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C153	Sum, nkcttbh, nkrttbh, tot

7.6.83 Cell.Nokia.UMTS.rab.active_release_cs_voice

RAB - Active releases for CS voice service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_rel_cs_voice_pre_lic	ACCUMULATION	INTEGER	The number of RAB releases due to pre-emption due to capacity license exceeded for CS voice calls. Also counter M1001C144 RAB ACTIVE RELEASES DUE TO PRE-EMPTION FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level.M1001C620	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_preemption_for_cs_voice	ACCUMULATION	INT8	A number of RAB active releases for CS voice calls due to pre emption	PMMOResult_Service_Level.M1001C144	Sum, nkcttbh, nkrttbh, tot

rab_active_releases_due_to_srnc_reloc_for_cs_voice	ACCUMULATION	INT8	A number of RAB active releases for CS voice calls due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C143	Sum, nkcttbh, nkrttbh, tot

7.6.84 Cell.Nokia.UMTS.rab.active_release_ps_data

RAB - Active releases for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_rel_ps_backg_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS background class calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C433	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_interact_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS interactive class calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C432	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_stream_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C431	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate	ACCUMULATION	INT8	The number of RAB active	PMMOResult_Service_Level.M1001C439	Sum, nkcttbh,

_dl_due_to_pre_emption			releases for PS streaming calls due to pre-emption in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters.		nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_dl_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for PS streaming class calls due to SRNC relocation in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.	PMMOResult_Service_Level.M1001C437	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_dl_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN in case of RAB has DL resources according to guaranteed bit rate DL in RAB parameters.	PMMOResult_Service_Level.M1001C435	Sum, nkcttbh, nkrttbh, tot

rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for PS streaming calls due to pre-emption in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level.M1001C438	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for PS streaming class calls due to SRNC relocation in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.	PMMOResult_Service_Level.M1001C436	Sum, nkcttbh, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN	PMMOResult_Service_Level.M1001C434	Sum, nkcttbh, nkrttbh, tot

			in case of RAB has UL resources according to guaranteed bit rate UL in RAB parameters.		
rab_active_releases_due_to_preemption_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active releases for PS data calls due to pre emption	PMMOResult_Service_Level.M1001C168	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_preemption_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with streaming class due to pre emption.	PMMOResult_Service_Level.M1001C170	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with interactive class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C172	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active releases for PS data calls with conservational class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency	PMMOResult_Service_Level.M1001C167	Sum, nkcttbh, nkrttbh, tot

			hard handovers		
rab_active_releases_due_to_srnc_reloc_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with background class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C171	Sum, nkcttbh, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with streaming class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C169	Sum, nkcttbh, nkrttbh, tot

7.6.85 Cell.Nokia.UMTS.rab.connections_in_cs

RAB CS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_cs_amr_122_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS AMR 12.2 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C474	Sum, nkcttbh, nkrttbh, tot

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rab_cs_data_conv_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data conversational 64 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C475	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_conv_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C468	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_stream_144_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 14.4 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C476	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_stream_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS streaming connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C469	Sum, nkcttbh, nkrttbh, tot
rab_cs_streaming_576_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 14.4 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C477	Sum, nkcttbh, nkrttbh, tot
rab_cs_voice_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS voice connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C467	Sum, nkcttbh, nkrttbh, tot
rab_ps_streaming_16_64_guar_16_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink	PMMOResult_Service_Level.M1001C478	Sum, nkcttbh, nkrttbh, tot

			connections that enter a new reference cell.		
rab_ps_streaming_16_64_guar_8_32_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum bit rates 16 kbit/s for uplink and 64 kbit/s for downlink and guaranteed bit rates 8 kbit/s for uplink and 32 kbit/s for downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C479	Sum, nkcttbh, nkrttbh, tot

7.6.86 Cell.Nokia.UMTS.rab.connections_in_ps

RAB PS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_ps_data_backg_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS background connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C473	Sum, nkcttbh, nkrttbh, tot
rab_ps_data_intera_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS interactive connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C472	Sum, nkcttbh, nkrttbh, tot
rab_ps_data_stream_enters_new_re	ACCUMULATION	INTEGER	The number of RAB PS streaming	PMMOResult_Service_Level.M1001C471	Sum, nkcttbh,

f_cell			connections+E4 reference cell.		nkrttbh, tot
rab_ps_nrt_128_128_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 128 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C485	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_128_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C486	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_128_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 64 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C484	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_384_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C487	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_384_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 64 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C488	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_128_enters_new_ref	ACCUMULATION	INTEGER	The number of RAB PS NRT 64	PMMOResult_Service_Level.M1001C481	Sum, nkcttbh,

_cell			kbit/s uplink and 128 kbit/s downlink connections that enter a new reference cell.		nkrttbh, tot
rab_ps_nrt_64_256_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 256 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C482	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C483	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 64 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C480	Sum, nkcttbh, nkrttbh, tot

7.6.87 Cell.Nokia.UMTS.rab.connections_out_cs

RAB CS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_cs_amr_122_leaves_old_ref_cel	ACCUMULATION	INTEGER	The number of RAB CS AMR	PMMOResult_Service_Level.M1001C451	Sum, nkcttbh,

l			12.2 kbit/s connections that have left from the old reference cell.		nkrttbh, tot
rab_cs_data_conv_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data conversational 64 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C452	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_conv_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C445	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_stream_144_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 14.4 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C453	Sum, nkcttbh, nkrttbh, tot
rab_cs_data_stream_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS streaming connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C446	Sum, nkcttbh, nkrttbh, tot
rab_cs_streaming_576_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 57.6 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C454	Sum, nkcttbh, nkrttbh, tot
rab_cs_voice_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS voice connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C444	Sum, nkcttbh, nkrttbh, tot

rab_ps_streaming_16_64_guar_16_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C455	Sum, nkcttbh, nkrttbh, tot
rab_ps_streaming_16_64_guar_8_32_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink and guaranteed bit rates 8 kbit/s for uplink and 32 kbit/s for downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C456	Sum, nkcttbh, nkrttbh, tot

7.6.88 Cell.Nokia.UMTS.rab.connections_out_ps

RAB PS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_ps_data_backg_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS background connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C450	Sum, nkcttbh, nkrttbh, tot

rab_ps_data_intera_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS interactive connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C449	Sum, nkcttbh, nkrttbh, tot
rab_ps_data_stream_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS streaming connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C448	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_128_128_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 128 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C462	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_128_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 384 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C463	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_128_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C461	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_384_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 384 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C464	Sum, nkcttbh, nkrttbh, tot

rab_ps_nrt_384_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C465	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_128_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 128 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C458	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_256_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 256 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C459	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 384 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C460	Sum, nkcttbh, nkrttbh, tot
rab_ps_nrt_64_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C457	Sum, nkcttbh, nkrttbh, tot

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7.6.89 Cell.Nokia.UMTS.rab.control_procedures

RAB - RAB control procedure related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
phy_ch_reconf_comp	ACCUMULATION	INT8	A number of physical channel reconfigurations completed.	PMMOResult_RRC.M1006C60	Sum, nkcttbh, nkrttbh, tot
phy_ch_reconf_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of physical channel reconfiguration failures due to unsupported configuration.	PMMOResult_RRC.M1006C73	Sum, nkcttbh, nkrttbh, tot
phy_ch_reconf_fail	ACCUMULATION	INT8	The number of all the physical channel reconfiguration failures.	PMMOResult_RRC.M1006C72	Sum, nkcttbh, nkrttbh, tot
phy_ch_reconf	ACCUMULATION	INT8	A number of physical channel reconfigurations.	PMMOResult_RRC.M1006C59	Sum, nkcttbh, nkrttbh, tot
radio_bearer_reconf_complete	ACCUMULATION	INT8	Number of radio bearer reconfigurations completed	PMMOResult_RRC.M1006C31	Sum, nkcttbh, nkrttbh, tot
radio_bearer_reconf_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of radio bearer reconfiguration failures due to unsupported configuration.	PMMOResult_RRC.M1006C75	Sum, nkcttbh, nkrttbh, tot
radio_bearer_reconf_fail	ACCUMULATION	INT8	The number of all the radio bearer reconfiguration failures.	PMMOResult_RRC.M1006C74	Sum, nkcttbh, nkrttbh, tot
radio_bearer_reco	ACCUMULA	INT8	A number of radio	PMMOResult_RRC.M	Sum,

nf	TION		bearer reconfigurations	1006C30	nkcttbh, nkrttbh, tot
radio_bearer_release_complete	ACCUMULATION	INT8	Number of Radio Bearer Release complete messages received.	PMMOResult_RRC.M1006C68	Sum, nkcttbh, nkrttbh, tot
radio_bearer_release	ACCUMULATION	INT8	Number of Radio Bearer Release messages sent.	PMMOResult_RRC.M1006C67	Sum, nkcttbh, nkrttbh, tot
radio_bearer_setup_complete	ACCUMULATION	INT8	A number of radio bearer setups completed	PMMOResult_RRC.M1006C29	Sum, nkcttbh, nkrttbh, tot
radio_bearer_setup_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of radio bearer setup failures due to unsupported configuration.	PMMOResult_RRC.M1006C77	Sum, nkcttbh, nkrttbh, tot
radio_bearer_setup_fail	ACCUMULATION	INT8	The number of all the radio bearer setup failures.	PMMOResult_RRC.M1006C76	Sum, nkcttbh, nkrttbh, tot
radio_bearer_setup	ACCUMULATION	INT8	A number of radio bearer setups.	PMMOResult_RRC.M1006C28	Sum, nkcttbh, nkrttbh, tot
tran_ch_reconf_comp	ACCUMULATION	INT8	A number of transport channel reconfigurations completed.	PMMOResult_RRC.M1006C33	Sum, nkcttbh, nkrttbh, tot
tran_ch_reconf	ACCUMULATION	INT8	A number of transport channel reconfigurations.	PMMOResult_RRC.M1006C32	Sum, nkcttbh, nkrttbh, tot

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transport_format_combination_control_for_tfo	ACCUMULATION	INTEGER	The number of sent Transport Format Combination Control messages for Tandem Free Operation.	PMMOResult_RRC.M1006C81	Sum, nkcttbh, nkrttbh, tot

7.6.90 Cell.Nokia.UMTS.rab.holding_times

RAB - Service holding time statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_dch_holding_time_for_ps_rab_with_background_class	INTENSITY	FLOAT	Calculation for average DCH holding time for PS RAB with background class	{average_dch_holding_time_for_ps_rab_with_background_class} / {denominator_for_dch_holding_time_for_ps_data_backg}	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_dch_holding_time_for_ps_rab_with_interactive_class	INTENSITY	FLOAT	Calculation for average DCH holding time for PS RAB with interactive class	{average_dch_holding_time_for_ps_rab_with_interactive_class} / {denominator_for_dch_holding_time_for_ps_data_intera}	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_rab_holding_time_for_cs_data_call_with_conversational_class	ACCUMULATION	INTEGER	Measuring the holding time of a cs data call with conversational class	PMMOResult_Service_Level.M1001C201	Sum, nkcttbh, nkrttbh, tot
ave_rab_holding_time_for_cs_data_call_with_streaming_class	ACCUMULATION	INTEGER	Measuring the holding time of a cs data call with streaming class	PMMOResult_Service_Level.M1001C203	Sum, nkcttbh, nkrttbh, tot
ave_rab_holding_time_for_cs_voice_call	ACCUMULATION	INTEGER	Measuring the holding time of a cs voice call	PMMOResult_Service_Level.M1001C199	Sum, nkcttbh, nkrttbh, tot
ave_rab_holding_time_for_ps_call_with_background_class	ACCUMULATION	INTEGER	Measures the average RAB holding time of PS data calls with	PMMOResult_Service_Level.M1001C211	Sum, nkcttbh, nkrttbh, tot

			background class		
ave_rab_holding_time_for_ps_call_with_interactive_class	ACCUMULATION	INTEGER	Measures the average RAB holding time of PS data calls with interactive class	PMMOResult_Service_Level.M1001C209	Sum, nkcttbh, nkrttbh, tot
ave_rab_holding_time_for_ps_call_with_streaming_class	ACCUMULATION	INTEGER	Measures the average RAB holding time of PS data calls with streaming class	PMMOResult_Service_Level.M1001C207	Sum, nkcttbh, nkrttbh, tot
average_dch_holding_time_for_ps_rab_with_background_class	INTENSITY	INTEGER	Average DCH holding time for PS RAB with background class	PMMOResult_Service_Level.M1001C215	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_dch_holding_time_for_ps_rab_with_interactive_class	INTENSITY	INTEGER	Average DCH holding time for PS RAB with interactive class	PMMOResult_Service_Level.M1001C213	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_cs_streaming_144	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_cs_streaming_144} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_streaming_144}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_cs_streaming_576	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS streaming class 57.6 kbit/s calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_cs_streaming_576} /	Average, avg, max, min, nkcttbh, nkrttbh,

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				{Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_stream_576}	tot
average_rab_hold_time_in_ref_cell_for_amr_122	INTENSITY	FLOAT	Average RAB holding time in reference cell for AMR 12.2 kbit/s calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_for_amr_122} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_amr_122}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_for_cs_conv_64	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS conversational class 64 kbit/s calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_for_cs_conv_64} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_conv_64}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_for_cs_conv	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS conversational class calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_for_cs_conv} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_conv}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_for_cs_stream	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS streaming class calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_for_cs_stream} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_stream}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_hold_time_in_ref_cell_for_cs_voice	INTENSITY	FLOAT	Average RAB holding time in reference cell for CS voice calls.	100 * {Nokia.rab.holding_times.rab_hold_time_in_ref_cell_for_cs_voice} / {Nokia.rab.holding_times.denom_hold_tm_ref_cell_cs_voice}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_cs_amr_multimode	INTENSITY	FLOAT	Average RAB holding time of a CS AMR	100 * {Nokia.rab.holding_times.rab_holding_time_cs	Average, avg, max, min,

			Multimode call.	_amr_multimode} / {Nokia.rab.holding_times.denominator_for_cs_amr_multimode}	nkcttbh, nkrttbh, tot
average_rab_holding_time_for_cs_data_call_with_conversational_class	INTENSITY	FLOAT	Calculation for the average holding time of a CS data call with conversational class	{ave_rab_holding_time_for_cs_data_call_with_conversational_class} / {denominator_for_rab_holding_time_for_cs_data_conv}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_cs_data_call_with_streaming_class	INTENSITY	FLOAT	Calculation for the average holding time of a CS data call with streaming class	{ave_rab_holding_time_for_cs_data_call_with_streaming_class} / {denominator_for_rab_holding_time_for_cs_data_stream}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_cs_voice_call	INTENSITY	FLOAT	Calculation for the average holding time of a CS voice call	{ave_rab_holding_time_for_cs_voice_call} / {denominator_for_rab_holding_time_for_cs_voice}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_ps_call_with_background_class	INTENSITY	FLOAT	Calculation for the average RAB holding time of PS data calls with background class	{ave_rab_holding_time_for_ps_call_with_background_class} / {denominator_for_rab_holding_time_for_ps_data_backg}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_ps_call_with_conversational_class	INTENSITY	FLOAT	Calculation for the average holding time of a PS data call with conversational class	{sum_of_rab_holding_times_for_ps_data_conv} / {denominator_for_rab_holding_time_for_ps_data_conv}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_ps_c	INTENSITY	FLOAT	Calculation for the average RAB	{ave_rab_holding_time_for_ps_call_with_inter	Average, avg, max,

all_with_interactive_class			holding time of PS data calls with interactive class	active_class} / {denominator_for_rab_holding_time_for_ps_data_intera}	min, nkcttbh, nkrttbh, tot
average_rab_holding_time_for_ps_call_with_streaming_class	INTENSITY	FLOAT	Calculation for the average RAB holding time of PS data calls with streaming class	{ave_rab_holding_time_for_ps_call_with_streaming_class} / {denominator_for_rab_holding_time_for_ps_data_stream}	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_rab_holding_time_cs_conversational_64	INTENSITY	FLOAT	Average RAB holding time of a CS Conversational 64 kpbs data call.	{rab_holding_time_cs_conversational_64}/ {denominator_for_cs_conversational_64}	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_rab_holding_time_cs_streaming_14_4	INTENSITY	FLOAT	Average RAB holding time of a CS Streaming 14.4 kbps data call.	{rab_holding_time_cs_streaming_14_4}/ {denominator_for_cs_streaming_14_4}	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_rab_holding_time_cs_streaming_57_6	INTENSITY	FLOAT	Average RAB holding time of a CS Streaming 57.6 kbps data call.	{rab_holding_time_cs_streaming_57_6}/ {denominator_for_cs_streaming_57_6}	Average, avg, max, min, nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_amr_122	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for AMR 12.2 kbit/s calls.	PMMOResult_Service_Level.M1001C496	Sum, nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_cs_conv_64	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS conversational class 64 kbit/s calls.	PMMOResult_Service_Level.M1001C498	Sum, nkcttbh, nkrttbh, tot
denom_hold_tm_r	ACCUMULA	INTEG	Denominator for	PMMOResult_Service_	Sum,

ef_cell_cs_conv	TION	ER	RAB holding time in reference cell for CS conversational class calls.	Level.M1001C492	nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_cs_stream_576	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS streaming class 57.6 kbit/s calls.	PMMOResult_Service_Level.M1001C502	Sum, nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_cs_stream	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS streaming class calls.	PMMOResult_Service_Level.M1001C494	Sum, nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_cs_streaming_144	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls.	PMMOResult_Service_Level.M1001C500	Sum, nkcttbh, nkrttbh, tot
denom_hold_tm_ref_cell_cs_voice	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS voice calls.	PMMOResult_Service_Level.M1001C490	Sum, nkcttbh, nkrttbh, tot
denominator_for_cs_amr_multimode	ACCUMULATION	INTEGER	Denominator for RAB holding time for CS AMR Multimode calls.	PMMOResult_Service_Level.M1001C367	Sum, nkcttbh, nkrttbh, tot
denominator_for_cs_conversational_64	ACCUMULATION	INT8	Denominator for RAB holding time for CS Conversational 64 kbps data calls.Denominator for RAB holding	PMMOResult_Service_Level.M1001C369	Sum, nkcttbh, nkrttbh, tot

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			time for CS Conversational 64 kbps data calls.		
denominator_for_cs_streaming_14_4	ACCUMULATION	INT8	Denominator for RAB holding time for CS Streaming 14.4 kbps data calls.Denominator for RAB holding time for CS Streaming 14.4 kbps data calls.	PMMOResult_Service_Level.M1001C371	Sum, nkcttbh, nkrttbh, tot
denominator_for_cs_streaming_57_6	ACCUMULATION	INT8	Denominator for RAB holding time for CS Streaming 57.6 kbps data calls.Denominator for RAB holding time for CS Streaming 57.6 kbps data calls.	PMMOResult_Service_Level.M1001C373	Sum, nkcttbh, nkrttbh, tot
denominator_for_dch_holding_time_for_ps_data_backg	ACCUMULATION	INTEGER	Denominator for DCH holding time PS call with background class	PMMOResult_Service_Level.M1001C216	Sum, nkcttbh, nkrttbh, tot
denominator_for_dch_holding_time_for_ps_data_intera	ACCUMULATION	INTEGER	Denominator for DCH holding time PS call with interactive class	PMMOResult_Service_Level.M1001C214	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_for_cs_data_conv	ACCUMULATION	INTEGER	Denominator for RAB holding time cs data calls with conversational class	PMMOResult_Service_Level.M1001C202	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_for_cs_data_stream	ACCUMULATION	INTEGER	Denominator for RAB holding time of CS data calls with streaming class	PMMOResult_Service_Level.M1001C204	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_	ACCUMULATION	INTEGER	Denominator for RAB holding time	PMMOResult_Service_Level.M1001C200	Sum, nkcttbh,

for_cs_voice			cs voice calls		nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_backg	ACCUMULATION	INTEGER	Denominator for RAB holding time of PS calls with background class	PMMOResult_Service_Level.M1001C212	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_conv	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Denominator for RAB holding time of PS calls with conversational class	PMMOResult_Service_Level.M1001C206	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_intera	ACCUMULATION	INTEGER	Denominator for RAB holding time of PS calls with interactive class	PMMOResult_Service_Level.M1001C210	Sum, nkcttbh, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_stream	ACCUMULATION	INTEGER	Denominator for RAB holding time of PS calls with streaming class	PMMOResult_Service_Level.M1001C208	Sum, nkcttbh, nkrttbh, tot
rab_hold_time_in_ref_cell_cs_streaming_144	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls gives an average holding time for the call type in question.	PMMOResult_Service_Level.M1001C499	Sum, nkcttbh, nkrttbh, tot
rab_hold_time_in	ACCUMULA	INTEG	RAB holding time	PMMOResult_Service_	Sum,

_ref_cell_cs_streaming_576	TION	ER	in reference cell for CS streaming class 57.6 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for CS streaming class 57.6 kbit/s calls gives an average holding time for the call type in question.	Level.M1001C501	nkcttbh, nkrttbh, tot
rab_hold_time_in_ref_cell_for_amr_122	ACCUMULATION	INT8	RAB holding time in reference cell for AMR 12.2 kbit/s calls.	PMMOResult_Service_Level.M1001C495	Sum, nkcttbh, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_conv_64	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS conversational class 64 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for CS conversational class 64 kbit/s calls gives an average holding time for the call type in question.	PMMOResult_Service_Level.M1001C497	Sum, nkcttbh, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_conv	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS conversational class calls. This counter divided by the Denominator for RAB holding time in reference	PMMOResult_Service_Level.M1001C491	Sum, nkcttbh, nkrttbh, tot

			cell for CS voice calls gives an average holding time for the call type in question.		
rab_hold_time_in_ref_cell_for_cs_stream	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS streaming class calls. This counter divided by the Denominator for RAB holding time in reference cell for CS streaming class calls gives an average holding time for the call type in question.	PMMOResult_Service_Level.M1001C493	Sum, nkcttbh, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_voice	ACCUMULATION	INT8	RAB holding time in reference cell for CS voice calls. This counter divided by the Denominator for RAB holding time in reference cell for CS voice calls gives an average holding time for the call type in question.	PMMOResult_Service_Level.M1001C489	Sum, nkcttbh, nkrttbh, tot
rab_holding_time_cs_amr_multimode	ACCUMULATION	INTEGER	This counter measures the RAB holding time of a CS AMR Multimode call. This counter divided by the	PMMOResult_Service_Level.M1001C366	Sum, nkcttbh, nkrttbh, tot

			denominator gives the average RAB holding time for the RAB type in question.		
rab_holding_time_cs_conversational_64	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a CS Conversational 64 kpbs data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level.M1001C368	Sum, nkcttbh, nkrttbh, tot
rab_holding_time_cs_streaming_14_4	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a CS Streaming 14.4 kbps data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level.M1001C370	Sum, nkcttbh, nkrttbh, tot
rab_holding_time_cs_streaming_57_6	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a CS Streaming 57.6 kbps data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level.M1001C372	Sum, nkcttbh, nkrttbh, tot
sum_of_rab_holding_times_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Sum of RAB holding times for PS data	PMMOResult_Service_Level.M1001C205	Sum, nkcttbh, nkrttbh, tot

			conversational calls. This counter divided by the denominator (see the Dependencies) gives the average RAB holding time of PS data conversational calls. --- RAB holding time is defined as the time		

7.6.91 Cell.Nokia.UMTS.rab.reconfigurations

RAB - Reconfiguration statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_reconf_att	ACCUMULATION	INT8	A number of RAB reconfiguration attempts. Note this counter includes reconfiguration failures for all types of RAB	PMMOResult_Service_Level.M1001C197	Sum, nkcttbh, nkrttbh, tot
rab_reconf_fail	ACCUMULATION	INT8	-Obsolete in RN2.1- A number of RAB reconfiguration attempts. Note this counter includes reconfiguration failures for all types of RAB	PMMOResult_Service_Level.M1001C198	Sum, nkcttbh, nkrttbh, tot

7.6.92 Cell.Nokia.UMTS.rab.setup_access_complete

RAB - Setup access completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

_%_rab_access_completions_for_cs_data_conv	PERCENTAGE	FLOAT	Percentage of CS Data Conversation RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_cs_data_conv}/ {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_completions_for_cs_data_stream	PERCENTAGE	FLOAT	Percentage of CS Data Streaming RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_cs_data_stream}/ {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_completions_for_cs_voice	PERCENTAGE	FLOAT	Percentage of CS Voice RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_cs_voice}/ {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_completions_for_ps_data_backg	PERCENTAGE	FLOAT	Percentage of PS Data Background RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_ps_data_backg} / {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_completions_for_ps_data_conv	PERCENTAGE	FLOAT	Percentage of PS Data Interactive RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_ps_data_intera} / {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_completions_for_ps_data_intera	PERCENTAGE	FLOAT	Percentage of PS Data Conversation RAB Access Completion against Total RAB Access Completion	100 * {rab_access_completions_for_ps_data_conv}/ {tot_rab_access_completions_all_cs_ps}	Average, avg, nkcttbh, nkrttbh
_%_rab_access_co	PERCENTAGE	FLOAT	Percentage of PS Data Streaming	100 * {rab_access_completio	Average, avg,

mpletions_for_ps_data_stream			RAB Access Completion against Total RAB Access Completion	ns_for_ps_data_stream }/ {tot_rab_access_completions_all_cs_ps}	nkcttbh, nkrttbh
rab_access_comp_cs_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB access completed for CS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate DL defined in RAB parameters. Possible only for CS non-transparent data in streaming class.	PMMOResult_Service_Level.M1001C414	Sum, nkcttbh, nkrttbh, tot
rab_access_comp_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB access completed for CS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate UL defined in RAB parameters. Possible only for CS non-transparent data in streaming class.	PMMOResult_Service_Level.M1001C413	Sum, nkcttbh, nkrttbh, tot
rab_access_comp_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB access completed for PS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate DL defined in RAB parameters. Possible only for PS RT data in	PMMOResult_Service_Level.M1001C416	Sum, nkcttbh, nkrttbh, tot

			streaming class.		
rab_access_comp_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB access completed for PS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate UL defined in RAB parameters. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level.M1001C415	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_streaming_57_6	ACCUMULATION	INT8	Number of RAB access completions for CS Streaming 57.6 kbps.	PMMOResult_Service_Level.M1001C268	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB access completions for CS voice calls using Wireless Priority Service. Also M1001C115 RAB ACCESS COMPLETIONS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level.M1001C602	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level.M1001C380	Sum, nkcttbh, nkrttbh, tot
rab_access_compl	ACCUMULA	INTEG	Number of RAB	PMMOResult_Service_	Sum,

ete_ps_nrt_128_256	TION	ER	access completions for PS NRT RAB with a bit rate of 128 kbps uplink/256 kbps downlink.	Level.M1001C597	nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_128_384	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C381	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C379	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 384 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C382	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 384 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C383	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level.M1001C278	Sum, nkcttbh, nkrttbh, tot
rab_access_compl	ACCUMULA	INT8	The number of	PMMOResult_Service_	Sum,

ete_ps_nrt_64_256	TION		RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/256 kbps downlink.	Level.M1001C279	nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C280	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C277	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	The number of RAB access completions for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/64 kbps downlink and guaranteed bit rate of 16 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C270	Sum, nkcttbh, nkrttbh, tot
rab_access_complete_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	The number of RAB access completions for PS Streaming RAB with a maximum bit rate of 16 kbps	PMMOResult_Service_Level.M1001C272	Sum, nkcttbh, nkrttbh, tot

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			uplink/64 kbps downlink and guaranteed bit rate of 8 kbps uplink/32 kbps downlink.		
rab_access_completions_for_cs_data_conv_64	ACCUMULATION	INT8	The number of completed RAB access phases for 64 kbps CS data conversational.	PMMOResult_Service_Level.M1001C264	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB setup access completions for CS data calls with conversational class	PMMOResult_Service_Level.M1001C116	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_cs_data_stream_14_4	ACCUMULATION	INT8	The number of completed RAB access phases for 14.4 kbps CS data streaming.	PMMOResult_Service_Level.M1001C266	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup access completions for CS data calls with streaming class	PMMOResult_Service_Level.M1001C117	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup access completions for CS voice calls	PMMOResult_Service_Level.M1001C115	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup access completions for PS calls with background class	PMMOResult_Service_Level.M1001C121	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access completions for PS calls with conversational	PMMOResult_Service_Level.M1001C118	Sum, nkcttbh, nkrttbh, tot

			class		
rab_access_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup access completions for PS calls with interactive class	PMMOResult_Service_Level.M1001C120	Sum, nkcttbh, nkrttbh, tot
rab_access_completions_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB setup access completions for PS calls with streaming class	PMMOResult_Service_Level.M1001C119	Sum, nkcttbh, nkrttbh, tot
tot_rab_access_completions_all_cs_ps	ACCUMULATION	INT8	Total number of RAB setup access completions for CS and PS Calls	({tot_rab_access_completions_all_cs}+ {tot_rab_access_completions_all_ps})	Sum, nkcttbh, nkrttbh, tot
tot_rab_access_completions_all_cs	ACCUMULATION	INT8	Total number of RAB setup access completions for CS Calls covering (Voice, Streaming and Conversational)	({rab_access_completions_for_cs_voice}+ {rab_access_completions_for_cs_data_conv}+ {rab_access_completions_for_cs_data_stream})	Sum, nkcttbh, nkrttbh, tot
tot_rab_access_completions_all_ps	ACCUMULATION	INT8	Total number of RAB setup access completions for PS calls covering (conversational, streaming, interactive and background)	({rab_access_completions_for_ps_data_conv} + {rab_access_completions_for_ps_data_stream}+ {rab_access_completions_for_ps_data_intera} + {rab_access_completions_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot

7.6.93 Cell.Nokia.UMTS.rab.setup_access_failure

RAB - Setup access failures statistics

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KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_acc_fail_for_cs_data_call_conv_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for CS data calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C125	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_conv_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for CS data calls with conversational class caused by the UE	PMMOResult_Service_Level.M1001C124	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_stream_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for CS data calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C127	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_stream_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for CS data calls with streaming class caused by the UE	PMMOResult_Service_Level.M1001C126	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_cs_voice_call_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for CS voice calls caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C123	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_cs_voice_call_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for CS voice calls caused by the UE	PMMOResult_Service_Level.M1001C122	Sum, nkcttbh, nkrttbh, tot

rab_setup_acc_fail_for_ps_data_call_backg_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with background class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C135	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_backg_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with background class caused by the UE	PMMOResult_Service_Level.M1001C134	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_conv_class_due_to_rnc_internal	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access failures for PS calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C129	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_conv_class_due_to_ue	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access failures for PS calls with conversational class caused by the UE	PMMOResult_Service_Level.M1001C128	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_intera_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with interactive class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C133	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fai	ACCUMULA	INT8	A number of RAB	PMMOResult_Service_	Sum,

l_for_ps_data_call_intera_class_due_to_ue	TION		setup access failures for PS calls with interactive class caused by the UE	Level.M1001C132	nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_stream_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level.M1001C131	Sum, nkcttbh, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_stream_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with streaming class caused by the UE	PMMOResult_Service_Level.M1001C130	Sum, nkcttbh, nkrttbh, tot

7.6.94 Cell.Nokia.UMTS.rab.setup_attempts

RAB - Setup attempts statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_att_for_all_cs	ACCUMULATION	INT8	Total RAB setup attempts for all CS calls	{rab_setup_attempts_for_cs_voice} + {rab_setup_attempts_for_cs_data_conv} + {rab_setup_attempts_for_cs_data_stream}	Sum, nkcttbh, nkrttbh, tot
rab_setup_att_for_all_ps	ACCUMULATION	INT8	Total RAB setup attempts for all PS calls	{rab_setup_attempts_for_ps_data_conv} + {rab_setup_attempts_for_ps_data_stream} + {rab_setup_attempts_for_ps_data_intera} + {rab_setup_attempts_for_ps_data_backg}	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode	ACCUMULATION	INTEGER	Number of RAB setup attempts for CS AMR	PMMOResult_Service_Level.M1001C261	Sum, nkcttbh, nkrttbh,

			Multimode calls.		tot
rab_setup_attempt_cs_conversational_64	ACCUMULATION	INT8	Number of RAB setup attempts for CS Conversational 64 kbps.	PMMOResult_Service_Level.M1001C263	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_streaming_14_4	ACCUMULATION	INT8	Number of RAB setup attempt for CS Streaming 14.4 kbps.	PMMOResult_Service_Level.M1001C265	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_streaming_57_6	ACCUMULATION	INT8	Number of RAB setup attempts for CS Streaming 57.6 kbps.	PMMOResult_Service_Level.M1001C267	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup attempts for CS voice calls using Wireless Priority Service. Also M1001C66 RAB SETUP ATTEMPTS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level.M1001C599	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level.M1001C375	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_256	ACCUMULATION	INTEGER	Number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/	PMMOResult_Service_Level.M1001C596	Sum, nkcttbh, nkrttbh, tot

			256 kbps downlink.		
rab_setup_attempt_ps_nrt_128_384	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C376	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C374	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 384 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C377	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 384 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C378	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_128	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level.M1001C274	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_256	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps	PMMOResult_Service_Level.M1001C275	Sum, nkcttbh, nkrttbh, tot

			uplink/256 kbps downlink.		
rab_setup_attempt_ps_nrt_64_384	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level.M1001C276	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_64	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C273	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	Number of RAB setup attempts for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and guaranteed bit rate of 16 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level.M1001C269	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	Number of RAB setup attempts for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and guaranteed bit rate of 8 kbps uplink/32 kbps downlink.	PMMOResult_Service_Level.M1001C271	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempt	ACCUMULA	INT8	A number of RAB	PMMOResult_Service_	Sum,

s_for_cs_data_conv	TION		setup attempts for CS data calls with conservational class	Level.M1001C67	nkcttbh, nkrttbh, tot
rab_setup_attempts_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup attempts for CS data calls with streaming class	PMMOResult_Service_Level.M1001C68	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempts_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup attempts for CS voice calls	PMMOResult_Service_Level.M1001C66	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempts_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with background class. For NRT services the RAB can be established without an immediate reservation of radio resources (unlike RT services). The radio resources will be allocated on demand using as signalling link between the MS and RNC	PMMOResult_Service_Level.M1001C72	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup attempts for PS calls with conservational class	PMMOResult_Service_Level.M1001C69	Sum, nkcttbh, nkrttbh, tot
rab_setup_attempts_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with interactive class. For NRT services	PMMOResult_Service_Level.M1001C71	Sum, nkcttbh, nkrttbh, tot

			the RAB can be established without an immediate reservation of radio resources (unlike RT services). The radio resources will be allocated on demand using as signalling link between the MS and RNC		
rab_setup_attempts_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with streaming class	PMMOResult_Service_Level.M1001C70	Sum, nkcttbh, nkrttbh, tot

7.6.95 Cell.Nokia.UMTS.rab.setup_complete

RAB - Setup completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rab_setup_comp_for_all_cs	PERCENTAGE	FLOAT	Percentage of total RAB setup completions for Circuit switched Calls (cf. Voice, streaming and conversational classes)	100 * {rab_setup_comp_for_all_cs}/ {Nokia.rab.setup_attempts.rab_setup_att_for_all_cs}	Average, avg, nkcttbh, nkrttbh
_%_rab_setup_comp_for_all_ps	PERCENTAGE	FLOAT	Percentage of RAB setup completions for all Packet switched calls (cf. conversational, streaming,	100 * {rab_setup_comp_for_all_ps}/ {Nokia.rab.setup_attempts.rab_setup_att_for_all_ps}	Average, avg, nkcttbh, nkrttbh

			interactive and background classes)		
_%_successful_cs_calls_per_qos_type_for_conversation_class	PERCENTAGE	FLOAT	Percentage of successful Circuit switched Calls per QoS Type for Conversational Class	100 * {rab_setup_completions_for_cs_data_conv}/ {rab_setup_comp_for_all_cs}	Average, avg, nkcttbh, nkrttbh
_%_successful_cs_calls_per_qos_type_for_streaming_class	PERCENTAGE	FLOAT	Percentage of successful Circuit switched Calls per QoS Type for Streaming Class	100 * {rab_setup_completions_for_cs_data_stream}/ {rab_setup_comp_for_all_cs}	Average, avg, nkcttbh, nkrttbh
_%_successful_cs_calls_per_qos_type_for_voice_calls	PERCENTAGE	FLOAT	Percentage of successful Circuit switched Calls per QoS Type for Voice Class	100 * {rab_setup_completions_for_cs_voice}/ {rab_setup_comp_for_all_cs}	Average, avg, nkcttbh, nkrttbh
_%_successful_ps_calls_per_qos_type_for_background_class	PERCENTAGE	FLOAT	Percentage of successful Packet switched Calls per QoS Type for background Class	100 * {rab_setup_completions_for_ps_data_backg}/ {rab_setup_comp_for_all_ps}	Average, avg, nkcttbh, nkrttbh
_%_successful_ps_calls_per_qos_type_for_conversational_class	PERCENTAGE	FLOAT	Percentage of successful Packet switched Calls per QoS Type for Conversational Class	100 * {rab_setup_completions_for_ps_data_conv}/ {rab_setup_comp_for_all_ps}	Average, avg, nkcttbh, nkrttbh
_%_successful_ps_calls_per_qos_type_for_interactive_class	PERCENTAGE	FLOAT	Percentage of successful Packet switched Calls per QoS Type for interactive Class	100 * {rab_setup_completions_for_ps_data_intera}/ {rab_setup_comp_for_all_ps}	Average, avg, nkcttbh, nkrttbh
_%_successful_ps_calls_per_qos_type_for_streaming_class	PERCENTAGE	FLOAT	Percentage of successful Packet switched Calls per QoS Type for Streaming Class	100 * {rab_setup_completions_for_ps_data_stream}/ {rab_setup_comp_for_all_ps}	Average, avg, nkcttbh, nkrttbh
rab_setup_comp_c	ACCUMULA	INT8	The number of	PMMOResult_Service	Sum,

s_stream_guar_bit_rate_dl	TION		RAB setups completed for non-transparent CS data calls in streaming traffic class with resources reserved according to guaranteed bit rate DL in RAB parameters. Possible only for CS non-transparent data in streaming class.	_Level.M1001C412	nkcttbh, nkrttbh, tot
rab_setup_comp_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB setups completed for non-transparent CS data calls in streaming traffic class with resources reserved according to guaranteed bit rate UL in RAB parameters. Possible only for CS non-transparent data in streaming class.	PMMOResult_Service_Level.M1001C411	Sum, nkcttbh, nkrttbh, tot
rab_setup_comp_for_all_cs	ACCUMULATION	INT8	Total RAB setup completions for Circuit switched Calls (cf. Voice, streaming and conversational classes)	{rab_setup_completions_for_cs_voice} + {rab_setup_completions_for_cs_data_conv} + {rab_setup_completions_for_cs_data_stream}	Sum, nkcttbh, nkrttbh, tot
rab_setup_comp_f	ACCUMULA	INT8	Total RAB setup	{rab_setup_completion	Sum,

or_all_ps	TION		completions for all Packet switched calls (cf. conversational, streaming, interactive and background classes)	s_for_ps_data_conv} + {rab_setup_completions_for_ps_data_stream} + {rab_setup_completions_for_ps_data_intera} + {rab_setup_completions_for_ps_data_backg}	nkcttbh, nkrttbh, tot
rab_setup_comp_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB setups completed for PS calls in streaming traffic class with resources reserved according to guaranteed bit rate DL in RAB parameters.	PMMOResult_Service_Level.M1001C410	Sum, nkcttbh, nkrttbh, tot
rab_setup_comp_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB setups completed for PS calls in streaming traffic class with resources reserved according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level.M1001C409	Sum, nkcttbh, nkrttbh, tot
rab_setup_complete_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup completions for CS voice calls using Wireless Priority Service. Also M1001C73 RAB SETUP COMPLETIONS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level.M1001C600	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_cs_data_	ACCUMULATION	INT8	A number of RAB setup completions	PMMOResult_Service_Level.M1001C74	Sum, nkcttbh,

conv			for CS data calls with conservational class		nkrttbh, tot
rab_setup_completions_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup completions for CS data calls with streaming class	PMMOResult_Service_Level.M1001C75	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup completions for CS voice calls	PMMOResult_Service_Level.M1001C73	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with background class	PMMOResult_Service_Level.M1001C79	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup completions for PS calls with conservational class	PMMOResult_Service_Level.M1001C76	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with interactive class	PMMOResult_Service_Level.M1001C78	Sum, nkcttbh, nkrttbh, tot
rab_setup_completions_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with streaming class	PMMOResult_Service_Level.M1001C77	Sum, nkcttbh, nkrttbh, tot

7.6.96 Cell.Nokia.UMTS.rab.setup_failure_cs

RAB - Setup failure for CS service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_cs_blocking_ratio	PERCENTAGE	FLOAT	Percentage of RAB setup block for all Circuit switched calls (cf. Voice, streaming and conversational classes)	100 * {rab_setup_fail_for_all_cs}/ {Nokia.rab.setup_attempts.rab_setup_att_for_all_cs}	Average, avg, nkcttbh, nkrttbh
_%_rab_setup_fail_cs_conv	PERCENTAGE	FLOAT	Percentage of RAB CS conv setup failures for all causes	100 * ({rab_setup_failures_due_to_ac_for_cs_data_conv}+ {rab_setup_failures_due_to_bts_for_cs_data_conv}+ {rab_setup_failures_due_to_transport_for_cs_data_conv}+ {rab_setup_failures_due_to_rnc_for_cs_data_conv}+ {rab_setup_failures_due_to_frozen_bts_for_cs_data_conv})/ {Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_conv}	Average, avg, nkcttbh, nkrttbh
_%_rab_setup_fail_cs_stream	PERCENTAGE	FLOAT	Percentage of RAB CS stream setup failures for all causes	100 * ({rab_setup_failures_due_to_ac_for_cs_data_stream}+ {rab_setup_failures_due_to_bts_for_cs_data_stream}+ {rab_setup_failures_due_to_transport_for_cs_data_stream}+ {rab_setup_failures_due_to_rnc_for_cs_data_stream}+ {rab_setup_failures_due_to_frozen_bts_for_cs_data_stream})/	Average, avg, nkcttbh, nkrttbh

				{Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_stream}	
_%_rab_setup_fail_cs_voice	PERCENTAGE	FLOAT	Percentage of RAB CS voice setup failures for all causes	100 * ({rab_setup_failures_due_to_ac_for_cs_voice}+ {rab_setup_failures_due_to_bts_for_cs_voice}+ {rab_setup_failures_due_to_transport_for_cs_voice}+ {rab_setup_failures_due_to_rnc_for_cs_voice}+ {rab_setup_failures_due_to_frozen_bts_for_cs_voice})/ {Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_voice}	Average, avg, nkcttbh, nkrttbh
rab_setup_fail_for_all_cs	ACCUMULATION	INT8	Total RAB setup Failures for Circuit switched Calls (cf. Voice, streaming and conversational classes)	{Nokia.rab.setup_attempts.rab_setup_att_for_all_cs} - {Nokia.rab.setup_complete.rab_setup_comp_for_all_cs}	Sum, nkcttbh, nkrttbh, tot
rab_setup_failure_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup failures for CS voice calls using Wireless Priority Service. Also some other RAB SETUP FAILURE counter is updated along with this counter.	PMMOResult_Service_Level.M1001C601	Sum, nkcttbh, nkrttbh, tot
rab_setup_failure	ACCUMULA	INT8	A number of CS	PMMOResult_Service	Sum,

s_due_to_ac_for_cs_data_conv	TION		data RAB setup failures with conservational class caused by an AC.	_Level.M1001C85	nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_ac_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by an AC	PMMOResult_Service_Level.M1001C90	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_ac_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by an AC	PMMOResult_Service_Level.M1001C80	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup fails	PMMOResult_Service_Level.M1001C86	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_bts_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused a the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure,	PMMOResult_Service_Level.M1001C91	Sum, nkcttbh, nkrttbh, tot

			hardware overload, message corruption), that RAB setup fails		
rab_setup_failures_due_to_bts_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by a BTS. When a BTS rejects a RADIO LINK RECONFIGURATION PREPARATION (eg. Due to an equipment failure, hardware overload, message corruption), the RAB setup fails	PMMOResult_Service_Level.M1001C81	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class due to a frozen BTS	PMMOResult_Service_Level.M1001C89	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class due to a frozen BTS	PMMOResult_Service_Level.M1001C94	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures due to a frozen BTS	PMMOResult_Service_Level.M1001C84	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_conv	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport resource shortage	PMMOResult_Service_Level.M1001C532	Sum, nkcttbh, nkrttbh, tot

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			for CS data conversational.		
rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_stream	ACCUMULATION	INT8	The number of RAB setup failures caused by a lack of Iub AAL2 transport resources for CS data streaming.	PMMOResult_Service_Level.M1001C533	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_cs_voice	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport resource shortage for CS voice.	PMMOResult_Service_Level.M1001C531	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C88	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C93	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by RNCs internal reasons. When the RAN connection setup is rejected due to RNCs internal reasons (eg.	PMMOResult_Service_Level.M1001C83	Sum, nkcttbh, nkrttbh, tot

			parameter mismatch, timer expiry), the RAB setup fails		
rab_setup_failures_due_to_transport_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by transmission	PMMOResult_Service_Level.M1001C87	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_transport_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by transmission	PMMOResult_Service_Level.M1001C92	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_transport_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by transmission	PMMOResult_Service_Level.M1001C82	Sum, nkcttbh, nkrttbh, tot
rab_setup_not_started_due_to_not_supported_parameters_for_cs	ACCUMULATION	INT8	The number of occasions when the CS RAB setup attempt is not started due to requested parameters are not supported by the RNC. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level.M1001C255	Sum, nkcttbh, nkrttbh, tot
rab_setup_not_started_due_to_ue_capability_for_cs	ACCUMULATION	INT8	The number of occasions when the CS RAB setup attempt is not started due to requested	PMMOResult_Service_Level.M1001C256	Sum, nkcttbh, nkrttbh, tot

			parameters are not supported by the UE. The RAB setup attempt counter is not updated in this case.		
rab_stp_fail_cs_conv_iu_cs	ACCUMULATION	INTEGER	The number of failed CS Conversational data traffic class RAB setups due to Iu-CS transport resources. Also counter M1001C87 is updated with this counter.	PMMOResult_Service_Level.M1001C626	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_cs_conv_iur_tr	ACCUMULATION	INTEGER	The number of failed CS Conversational data traffic class RAB setups due to Iur transport resources. Also counter M1001C87 is updated with this counter.	PMMOResult_Service_Level.M1001C622	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_cs_stre_iu_cs	ACCUMULATION	INTEGER	The number of failed CS Streaming traffic class RAB setups due to Iu-CS transport resources. Also counter M1001C92 is updated with this counter.	PMMOResult_Service_Level.M1001C627	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_cs_stre_iur_tr	ACCUMULATION	INTEGER	The number of failed CS Streaming traffic class RAB setups due to Iur transport resources. Also counter M1001C92 is updated with this	PMMOResult_Service_Level.M1001C623	Sum, nkcttbh, nkrttbh, tot

			counter.		
rab_stp_fail_cs_voice_iu_cs	ACCUMULATION	INTEGER	The number of failed CS voice RAB setups due to Iu-CS transport resources. Also counter M1001C82 is updated with this counter.	PMMOResult_Service_Level.M1001C625	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_cs_voice_iur_tr	ACCUMULATION	INTEGER	The number of failed CS voice RAB setups due to Iur transport resources. Also counter M1001C82 is updated with this counter.	PMMOResult_Service_Level.M1001C621	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_cs_voice_lic	ACCUMULATION	INTEGER	The number of RAB setup failures caused by AMR capacity license exceeded for CS voice.	PMMOResult_Service_Level.M1001C619	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_cs_conv	ACCUMULATION	INT8	Total RAB CS voice setup failures for all causes	({rab_setup_failures_due_to_ac_for_cs_data_conv}+ {rab_setup_failures_due_to_bts_for_cs_data_conv}+ {rab_setup_failures_due_to_transport_for_cs_data_conv}+ {rab_setup_failures_due_to_rnc_for_cs_data_conv}+ {rab_setup_failures_due_to_frozen_bts_for_cs_data_conv})	Sum, nkcttbh, nkrttbh, tot

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tot_rab_setup_fail_cs_stream	ACCUMULATION	INT8	Total RAB CS voice setup failures for all causes	({rab_setup_failures_due_to_ac_for_cs_data_stream}+ {rab_setup_failures_due_to_bts_for_cs_data_stream}+ {rab_setup_failures_due_to_transport_for_cs_data_stream}+ {rab_setup_failures_due_to_rnc_for_cs_data_stream}+ {rab_setup_failures_due_to_frozen_bts_for_cs_data_stream})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_cs_voice	ACCUMULATION	INT8	Total RAB CS voice setup failures for all causes	({rab_setup_failures_due_to_ac_for_cs_voice}+ {rab_setup_failures_due_to_bts_for_cs_voice}+ {rab_setup_failures_due_to_transport_for_cs_voice}+ {rab_setup_failures_due_to_rnc_for_cs_voice}+ {rab_setup_failures_due_to_frozen_bts_for_cs_voice})	Sum, nkcttbh, nkrttbh, tot

7.6.97 Cell.Nokia.UMTS.rab.setup_failure_ps

RAB - Setup failure for PS service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_ps_blocking_ratio	PERCENTAGE	FLOAT	Percentage of RAB setup block for all Packet switched calls (cf. conversational, streaming, interactive and	100 * {rab_setup_fail_for_all_ps}/ {Nokia.rab.setup_attempts.rab_setup_att_for_all_ps}	Average, avg, nkcttbh, nkrttbh

			background classes)		
dch_setup_failures_due_to_iub_aal2_trans_for_ps_data_backg	ACCUMULATION	INT8	The number of DCH setup failures caused by Iub AAL2 transport resource shortage for PS data background.	PMMOResult_Service_Level.M1001C111	Sum, nkcttbh, nkrttbh, tot
dch_setup_failures_due_to_iub_aal2_trans_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by transmission	PMMOResult_Service_Level.M1001C106	Sum, nkcttbh, nkrttbh, tot
rab_setup_fail_for_all_ps	ACCUMULATION	INT8	Total RAB setup failures for all Packet switched calls (cf. conversational, streaming, interactive and background classes)	{Nokia.rab.setup_attempts.rab_setup_att_for_all_ps} - {Nokia.rab.setup_complete.rab_setup_comp_for_all_ps}	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by an AC.	PMMOResult_Service_Level.M1001C110	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup for conservational class failures caused by an AC.	PMMOResult_Service_Level.M1001C95	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by an AC.	PMMOResult_Service_Level.M1001C105	Sum, nkcttbh, nkrttbh, tot

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rab_setup_failures_due_to_ac_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by an AC.	PMMOResult_Service_Level.M1001C100	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_anchoring_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by the anchoring RNC case. When the RNC rejects an NRT RAB setup attempt due the anchoring RNC case	PMMOResult_Service_Level.M1001C113	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_anchoring_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by the anchoring RNC case. When the RNC rejects an NRT RAB setup attempt due the anchoring RNC case	PMMOResult_Service_Level.M1001C108	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_bts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup f	PMMOResult_Service_Level.M1001C96	Sum, nkcttbh, nkrttbh, tot
rab_setup_failure	ACCUMULA	INT8	A number of PS call	PMMOResult_Service	Sum,

s_due_to_bts_for_ps_data_stream	TION		RAB setup failures for streaming class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup fails	_Level.M1001C101	nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class due to a frozen BTS	PMMOResult_Service_Level.M1001C114	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class due to a frozen BTS	PMMOResult_Service_Level.M1001C99	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class due to a frozen BTS	PMMOResult_Service_Level.M1001C109	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class due to a frozen BTS	PMMOResult_Service_Level.M1001C104	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_ps_data_stream	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport	PMMOResult_Service_Level.M1001C534	Sum, nkcttbh, nkrttbh, tot

			resource shortage for PS data streaming.		
rab_setup_failures_due_to_rnc_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C112	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C98	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C107	Sum, nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level.M1001C103	Sum, nkcttbh, nkrttbh, tot
rab_setup_failure	ACCUMULA	INT8	- Obsolete in RN2.2	PMMOResult_Service	Sum,

s_due_to_transport_for_ps_data_conv	TION		- A number of PS call RAB setup failures for conservational class caused by transmission	_Level.M1001C97	nkcttbh, nkrttbh, tot
rab_setup_failures_due_to_transport_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by transmission	PMMOResult_Service_Level.M1001C102	Sum, nkcttbh, nkrttbh, tot
rab_setup_not_started_due_to_not_supported_parameters_for_ps	ACCUMULATION	INT8	The number of occasions when the PS RAB setup attempt is not started due to requested parameters are not supported by the RNC. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level.M1001C257	Sum, nkcttbh, nkrttbh, tot
rab_setup_not_started_due_to_ue_capability_for_ps	ACCUMULATION	INT8	The number of occasions when the PS RAB setup attempt is not started due to requested parameters are not supported by the UE. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level.M1001C258	Sum, nkcttbh, nkrttbh, tot
rab_stp_fail_ps_stre_iur_tr	ACCUMULATION	INTEGER	The number of failed PS Streaming traffic class RAB	PMMOResult_Service_Level.M1001C624	Sum, nkcttbh, nkrttbh,

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			setups due to Iur transport resources. Also counter M1001C102 is updated with this counter.		tot
tot_rab_setup_fail_ac_ps	ACCUMULATION	INT8	Total number of PS call RAB setup for PS RAB class failures caused by an AC.	({rab_setup_failures_due_to_ac_for_ps_data_conv}+ {rab_setup_failures_due_to_ac_for_ps_data_stream}+ {rab_setup_failures_due_to_ac_for_ps_data_intera}+ {rab_setup_failures_due_to_ac_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_anchoring_ps	ACCUMULATION	INT8	Total number of PS call RAB setup failures caused by the anchoring RNC case. When the RNC rejects an NRT RAB setup attempt due the anchoring RNC case	({rab_setup_failures_due_to_anchoring_for_ps_data_intera}+ {rab_setup_failures_due_to_anchoring_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_bts_ps	ACCUMULATION	INT8	Total number of PS call RAB setup failures caused by the BTS.	({rab_setup_failures_due_to_bts_for_ps_data_conv}+ {rab_setup_failures_due_to_bts_for_ps_data_stream})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_frozen_bts_ps	ACCUMULATION	INT8	Total number of PS call RAB setup failures due to a frozen BTS	({rab_setup_failures_due_to_frozen_bts_for_ps_data_conv}+ {rab_setup_failures_due_to_frozen_bts_for_ps_data_stream}+ {rab_setup_failures_due_to_frozen_bts_for_ps_data_backg}+ {rab_setup_failures_du	Sum, nkcttbh, nkrttbh, tot

				e_to_frozen_bts_for_ps_data_intera})	
tot_rab_setup_fail_iub_aal2_trans_ps	ACCUMULATION	INT8	Total number of RAB setup failures caused by Iub AAL2 transport resource shortage.	({dch_setup_failures_due_to_iub_aal2_trans_for_ps_data_intera}+ {rab_setup_failures_due_to_iub_aal2_trans_for_ps_data_stream}+ {dch_setup_failures_due_to_iub_aal2_trans_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_rnc_ps	ACCUMULATION	INT8	Total number of PS call RAB setup failures for caused by RNCs internal reasons (eg. parameter mismatch, timer expiry)	({rab_setup_failures_due_to_rnc_for_ps_data_conv}+ {rab_setup_failures_due_to_rnc_for_ps_data_stream}+ {rab_setup_failures_due_to_rnc_for_ps_data_intera}+ {rab_setup_failures_due_to_rnc_for_ps_data_backg})	Sum, nkcttbh, nkrttbh, tot
tot_rab_setup_fail_trans_ps	ACCUMULATION	INT8	Total number of PS call RAB setup failures caused by transmission	({rab_setup_failures_due_to_transport_for_ps_data_conv}+ {rab_setup_failures_due_to_transport_for_ps_data_stream})	Sum, nkcttbh, nkrttbh, tot

7.6.98 Cell.Nokia.UMTS.rab.setup_time

RAB - Setup time statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
average_setup_time_for_cs_data_con	INTENSITY	FLOAT	Calculation for average setup time	{sum_of_rab_setup_times_for_cs_data_conv	Average, avg, max,

v_rab			for a CS data conversational RAB	} / {denominator_for_sum_of_rab_setup_times_for_cs_data_conv}	min, nkcttbh, nkrttbh, tot
average_setup_time_for_cs_data_stream_rab	INTENSITY	FLOAT	Calculation for average setup time for a CS data streaming RAB	{sum_of_rab_setup_times_for_cs_data_stream} / {denominator_for_sum_of_rab_setup_times_for_cs_data_stream}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_time_for_cs_voice_rab	INTENSITY	FLOAT	Calculation for average setup time for a CS voice RAB	{sum_of_rab_setup_times_for_cs_voice} / {denominator_for_sum_of_rab_setup_times_for_cs_voice}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_time_for_ps_data_background_rab	INTENSITY	FLOAT	Calculation for average setup time for a PS data background RAB	{sum_of_rab_setup_times_for_ps_data_backg} / {denominator_for_sum_of_rab_setup_times_for_ps_data_backg}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_time_for_ps_data_conv_rab	INTENSITY	FLOAT	Calculation for average setup time for a PS data conversational RAB	{sum_of_rab_setup_times_for_ps_data_conv} / {denominator_for_sum_of_rab_setup_times_for_ps_data_conv}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_time_for_ps_data_interactive_rab	INTENSITY	FLOAT	Calculation for average setup time for a PS data interactive RAB	{sum_of_rab_setup_times_for_ps_data_intera} / {denominator_for_sum_of_rab_setup_times_for_ps_data_intera}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_time_for_ps_data_stream_rab	INTENSITY	FLOAT	Calculation for average setup time for a PS data streaming RAB	{sum_of_rab_setup_times_for_ps_data_stream} / {denominator_for_sum_of_rab_setup_times_for_ps_data_stream}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_setup_tim	INTENSITY	FLOA	Calculation for	{sum_of_rrc_setup_tim	Average,

e_for_rrc		T	average setup time for RRC	es} / {denominator_for_sum_of_rrc_setup_times}	avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_cs_data_conv	INTENSITY	INTEGER	Denominator for average setup time for a CS data conversational RAB	PMMOResult_Service_Level.M1001C226	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_cs_data_stream	INTENSITY	INTEGER	Denominator for average setup time for a CS data streaming RAB	PMMOResult_Service_Level.M1001C228	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_cs_voice	INTENSITY	INTEGER	Denominator for average setup time for a CS voice RAB	PMMOResult_Service_Level.M1001C224	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_backg	INTENSITY	INTEGER	Denominator for average setup time for a PS data background RAB	PMMOResult_Service_Level.M1001C236	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_conv	INTENSITY	INTEGER	- Obsolete in RN2.2 - Denominator for average setup time for a PS data conversational RAB	PMMOResult_Service_Level.M1001C230	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_s	INTENSITY	INTEG	Denominator for	PMMOResult_Service_	Average,

um_of_rab_setup_times_for_ps_data_intera		ER	average setup time for a PS data interactive RAB	Level.M1001C234	avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_stream	INTENSITY	INTEGER	Denominator for average setup time for a PS data streaming RAB	PMMOResult_Service_Level.M1001C232	Average, avg, max, min, nkcttbh, nkrttbh, tot
denominator_for_sum_of_rrc_setup_times	INTENSITY	INTEGER	Denominator for average setup time for RRC	PMMOResult_Service_Level.M1001C222	Average, avg, max, min, nkcttbh, nkrttbh, tot
rab_setup_time_max_cs_data_conversational	INTENSITY	INTEGER	The maximum CS Conversational Data RAB setup time during the measurement period defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages	PMMOResult_Service_Level.M1001C605	Constant, avg, max, min, nkcttbh, nkrttbh, tot
rab_setup_time_max_cs_streaming	INTENSITY	INTEGER	The maximum CS Streaming RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during	PMMOResult_Service_Level.M1001C606	Constant, avg, max, min, nkcttbh, nkrttbh, tot

			an RAB establishment.		
rab_setup_time_max_cs_voice	INTENSITY	INTEGER	The maximum CS Conversational Data RAB setup time during the measurement period defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level.M1001C604	Constant, avg, max, min, nkcttbh, nkrttbh, tot
rab_setup_time_max_ps_background	INTENSITY	INTEGER	The maximum PS Background RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level.M1001C609	Constant, avg, max, min, nkcttbh, nkrttbh, tot
rab_setup_time_max_ps_interactive	INTENSITY	INTEGER	The maximum PS Interactive RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT	PMMOResult_Service_Level.M1001C608	Constant, avg, max, min, nkcttbh, nkrttbh, tot

			REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.		
rab_setup_time_max_ps_streaming	INTENSITY	INTEGER	The maximum PS Streaming RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level.M1001C607	Constant, avg, max, min, nkcttbh, nkrttbh, tot
rrc_setup_time_max	INTENSITY	INTEGER	The maximum RRC connection setup time defined as the time between messages an RRC: RRC CONNECTION REQUEST and an RRC: RRC CONNECTION SETUP COMPLETE.	PMMOResult_Service_Level.M1001C603	Constant, avg, max, min, nkcttbh, nkrttbh, tot
sum_of_rab_setup_times_for_cs_data_conv	ACCUMULATION	INT8	Sum of RAB setup times for CS data conversational. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS data conversational. ---	PMMOResult_Service_Level.M1001C225	Sum, nkcttbh, nkrttbh, tot

			RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rab_setup_times_for_cs_data_stream	ACCUMULATION	INT8	Sum of RAB setup times for CS data streaming. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS data streaming. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment.	PMMOResult_Service_Level.M1001C227	Sum, nkcttbh, nkrttbh, tot

			NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rab_setup_times_for_cs_voice	ACCUMULATION	INT8	Sum of RAB setup times for CS voice. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS voice. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.	PMMOResult_Service_Level.M1001C223	Sum, nkcttbh, nkrttbh, tot
sum_of_rab_setup_times_for_ps_data_backg	ACCUMULATION	INT8	Sum of RAB setup times for PS data background. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data background. --- RAB setup time is defined as the time between the	PMMOResult_Service_Level.M1001C235	Sum, nkcttbh, nkrttbh, tot

			RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rab_setup_times_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Sum of RAB setup times for PS data conversational. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data conversational. --- RAB setup time is defined as the time between the RANA	PMMOResult_Service_Level.M1001C229	Sum, nkcttbh, nkrttbh, tot
sum_of_rab_setup_times_for_ps_data_intera	ACCUMULATION	INT8	Sum of RAB setup times for PS data interactive. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time	PMMOResult_Service_Level.M1001C233	Sum, nkcttbh, nkrttbh, tot

			for PS data interactive. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rab_setup_times_for_ps_data_stream	ACCUMULATION	INT8	Sum of RAB setup times for PS data streaming. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data streaming. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and	PMMOResult_Service_Level.M1001C231	Sum, nkcttbh, nkrttbh, tot

			RAB Access phases.		
sum_of_rrc_setup_times	ACCUMULATION	INT8	Sum of RRC setup times. This counter divided by the denominator (see the Dependencies) gives the average RRC setup time. --- RRC setup time is defined as the time between the RRC: RRC CONNECTION REQUEST message and the RRC: RRC CONNECTION SETUP COMPLETE message. NOTE! Setup time covers both the RRC Setup and RRC Access phases.	PMMOResult_Service_Level.M1001C221	Sum, nkcttbh, nkrttbh, tot

7.6.99 Cell.Nokia.UMTS.rach

Random Access Channel related statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_rach_data_throughput	INTENSITY	INTEGER	Average RACH throughput of user data, in bit/s, multiplied by 10	PMMOResult_Cell_Resource.M1000C62	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_rach_decod_	INTENSITY	INTEG	-Obsolete in	PMMOResult_Cell_Res	Average,

msgs		ER	RN2.1- Average number of RACH decoded messages multiplied by 10	ource.M1000C56	avg, max, min, nkcttbh, nkrttbh, tot
ave_rach_load	INTENSITY	INTEGER	-Obsolete in RN2.1- Average RACH load multiplied by 10	PMMOResult_Cell_Resource.M1000C54	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_rach_throughput	INTENSITY	INTEGER	Average RACH throughput of both user data and signalling, in bit/s, multiplied by 10	PMMOResult_Cell_Resource.M1000C60	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_succ_decod_msgs	INTENSITY	INTEGER	-Obsolete in RN2.1- Average number of RACH successfully decoded messages multiplied by 10	PMMOResult_Cell_Resource.M1000C58	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rach_data_throughput	INTENSITY	FLOAT	Calculation for average RACH throughput of user data	{ave_rach_data_throughput} / {rach_denom_4}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rach_load	INTENSITY	FLOAT	Calculation for average RACH load	{ave_rach_load} / {rach_denom_0}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rach_throughput	INTENSITY	FLOAT	Calculation for average RACH throughput of both user data and signalling	{ave_rach_throughput} / {rach_denom_3}	Average, avg, max, min, nkcttbh, nkrttbh, tot

average_rachdecod_msgs	INTENSITY	FLOAT	Calculation for average RACH Decoded messages	{ave_rach_decod_msgs} / {rach_denom_1}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_succ_decod_msgs	INTENSITY	FLOAT	Calculation for average number of RACH successfully decoded messages	{ave_succ_decod_msgs} / {rach_denom_2}	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_rach_ack_preambles	INTENSITY	FLOAT	This counter indicates the average number of acknowledged PRACH preambles during the Radio Resource Indication period. This counter is updated only for cells using the 3GPP Iub interface.	{sum_rach_ack_preambles}/ {denom_rach_ack_preambles}	Average, avg, max, min, nkcttbh, nkrttbh, tot
denom_rach_ack_preambles	ACCUMULATION	INT8	The number of measurement reports including acknowledged PRACH preamble information. This counter is updated only for cells using the 3GPP Iub interface.	PMMOResult_Cell_Resource.M1000C177	Sum, nkcttbh, nkrttbh, tot
rach_denom_0	ACCUMULATION	INT8	-Obsolete in RN2.1-	PMMOResult_Cell_Resource.M1000C55	Sum, nkcttbh,

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			Denominator for Average RACH load		nkrttbh, tot
rach_denom_1	ACCUMULATION	INT8	-Obsolete in RN2.1- Denominator for RACH decoded messages	PMMOResult_Cell_Resource.M1000C57	Sum, nkcttbh, nkrttbh, tot
rach_denom_2	ACCUMULATION	INT8	-Obsolete in RN2.1- Denominator for RACH successfully decoded messages	PMMOResult_Cell_Resource.M1000C59	Sum, nkcttbh, nkrttbh, tot
rach_denom_3	ACCUMULATION	INT8	Denominator for RACH throughput user data and signalling in bit/s	PMMOResult_Cell_Resource.M1000C61	Sum, nkcttbh, nkrttbh, tot
rach_denom_4	ACCUMULATION	INT8	Denominator for RACH throughput user data in bit/s	PMMOResult_Cell_Resource.M1000C63	Sum, nkcttbh, nkrttbh, tot
sum_rach_ack_preambles	ACCUMULATION	INT8	The number of acknowledged PRACH preambles reported by the BTS indicates the RACH channel load. This counter, divided by the denominator, gives the average number of acknowledged PRACH preambles during the Radio Resource Indication period. This counter is updated only for cells using the	PMMOResult_Cell_Resource.M1000C176	Sum, nkcttbh, nkrttbh, tot

			3GPP Iub interface.		

7.6.100Cell.Nokia.UMTS.radio_bearer

Radio bearer measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rb_downgrade_due_to_throughput_based_optimization	ACCUMULATION	INTEGER	The number of radio bearer downgrades due to the Throughput Based Optimization of the PS algorithm.	PMMOResult_Cell_Resource.M1000C226	Sum, nkcttbh, nkrttbh, tot
rb_release_due_to_throughput_based_optimization	ACCUMULATION	INTEGER	The number of radio bearer releases due to the Throughput Based Optimization of the PS algorithm.	PMMOResult_Cell_Resource.M1000C227	Sum, nkcttbh, nkrttbh, tot

7.6.101Cell.Nokia.UMTS.radio_downgrade_release_due_to_congestion

Radio bearer downgrades due to congestion statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_dch_selected_due_to_hsdpa_power	ACCUMULATION	INTEGER	The number of times when HSDSCH downlink transport channel cannot be selected due to downlink power limits. This counter includes	PMMOResult_Cell_Resource.M1000C144	Sum, nkcttbh, nkrttbh, tot

			both interactive and background class connections.		
hsdsch_release_due_to_dl_overload	ACCUMULATION	INTEGER	The number of HS-DSCH allocation releases due to downlink overload. This counter includes both interactive and background class connections.	PMMOResult_Cell_Resource.M1000C149	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_dyn_link_opt_due_to_rl_power_congestion	ACCUMULATION	INT8	The number of radio bearer downgrades by the dynamic link optimisation for NRT traffic due to RL power congestion.	PMMOResult_Cell_Resource.M1000C143	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_enh_overload_control_using_rl_reconf	ACCUMULATION	INT8	The number of radio bearer downgrades by the enhanced overload control using the radio link reconfiguration method.	PMMOResult_Cell_Resource.M1000C154	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_enh_overload_control_using_tfc_subset	ACCUMULATION	INT8	The number of radio bearer downgrades by the enhanced overload control using the TFC subset method.	PMMOResult_Cell_Resource.M1000C142	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_pbs_due_to_aal2_congestion	ACCUMULATION	INT8	The number of RB downgrades by priority-based scheduling (PBS) due to AAL2 congestion.	PMMOResult_Cell_Resource.M1000C145	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by	ACCUMULA	INT8	The number of RB	PMMOResult_Cell_Res	Sum,

_pbs_due_to_bts_congestion	TION		downgrades by priority-based scheduling (PBS) due to BTS congestion.	ource.M1000C146	nkcttbh, nkrttbh, tot
rb_downgrade_by_pbs_due_to_interference_congestion	ACCUMULATION	INT8	The number of RB downgrades by priority-based scheduling (PBS) due to interference congestion.	PMMOResult_Cell_Resource.M1000C147	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_pbs_due_to_spreading_code_congestion	ACCUMULATION	INT8	The number of RB downgrades by priority-based scheduling (PBS) due to spreading code congestion.	PMMOResult_Cell_Resource.M1000C148	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_preemption_due_to_aal2_congestion	ACCUMULATION	INT8	The number of RB downgrades by pre-emption due to AAL2 congestion.	PMMOResult_Cell_Resource.M1000C150	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_preemption_due_to_bts_congestion	ACCUMULATION	INT8	The number of RB downgrades by pre-emption due to BTS congestion.	PMMOResult_Cell_Resource.M1000C151	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_preemption_due_to_interference_congestion	ACCUMULATION	INT8	The number of RB downgrades by pre-emption due to interference congestion.	PMMOResult_Cell_Resource.M1000C152	Sum, nkcttbh, nkrttbh, tot
rb_downgrade_by_preemption_due_to_spreading_code_congestion	ACCUMULATION	INT8	The number of RB downgrades by pre-emption due to spreading code congestion.	PMMOResult_Cell_Resource.M1000C153	Sum, nkcttbh, nkrttbh, tot
rb_release_by_dy	ACCUMULA	INT8	The number of	PMMOResult_Cell_Res	Sum,

n_link_opt_due_to_rl_power_congestion	TION		released radio bearers by the dynamic link optimisation for NRT traffic due to RL power congestion.	ource.M1000C155	nkcttbh, nkrttbh, tot
rb_release_by_pbs_due_to_aal2_congestion	ACCUMULATION	INT8	The number of released radio bearers by priority- based scheduling (PBS) due to AAL2 congestion.	PMMOResult_Cell_Resource.M1000C157	Sum, nkcttbh, nkrttbh, tot
rb_release_by_pbs_due_to_bts_congestion	ACCUMULATION	INT8	The number of released radio bearers by priority- based scheduling (PBS) due to BTS congestion.	PMMOResult_Cell_Resource.M1000C158	Sum, nkcttbh, nkrttbh, tot
rb_release_by_pbs_due_to_interference_congestion	ACCUMULATION	INT8	The number of released radio bearers by priority- based scheduling (PBS) due to interference congestion.	PMMOResult_Cell_Resource.M1000C159	Sum, nkcttbh, nkrttbh, tot
rb_release_by_pbs_due_to_spreading_code_congestion	ACCUMULATION	INT8	The number of released radio bearers by priority- based scheduling (PBS) due to spreading code congestion.	PMMOResult_Cell_Resource.M1000C160	Sum, nkcttbh, nkrttbh, tot
rb_release_by_preemption_due_to_aal2_congestion	ACCUMULATION	INT8	The number of released radio bearers by pre-emption due to AAL2 congestion.	PMMOResult_Cell_Resource.M1000C162	Sum, nkcttbh, nkrttbh, tot
rb_release_by_preemption_due_to_b	ACCUMULATION	INT8	The number of released radio	PMMOResult_Cell_Resource.M1000C163	Sum, nkcttbh,

ts_congestion			bearers by pre-emption due to BTS congestion.		nkrttbh, tot
rb_release_by_preemption_due_to_interference_congestion	ACCUMULATION	INT8	The number of released radio bearers by pre-emption due to interference congestion.	PMMOResult_Cell_Resource.M1000C164	Sum, nkcttbh, nkrttbh, tot
rb_release_by_preemption_due_to_spreading_code_congestion	ACCUMULATION	INT8	The number of released radio bearers by pre-emption due to spreading code congestion.	PMMOResult_Cell_Resource.M1000C165	Sum, nkcttbh, nkrttbh, tot
rb_release_due_to_enh_overload_control_using_rl_reconf	ACCUMULATION	INT8	The number of radio bearer releases by the enhanced overload control using the radio link reconfiguration method.	PMMOResult_Cell_Resource.M1000C166	Sum, nkcttbh, nkrttbh, tot
tot_RB_downgrade_congestion_overload_ctrl	ACCUMULATION	INT8	Total number of RB downgrades due to various congestion issues and overload control mechanism	{rb_downgrade_by_enh_overload_control_using_tfc_subset} + {rb_downgrade_by_dyn_link_opt_due_to_rl_power_congestion} + {rb_downgrade_by_pbs_due_to_aal2_congestion} + {rb_downgrade_by_pbs_due_to_bts_congestion} + {rb_downgrade_by_pbs_due_to_interference_congestion} +	Sum, nkcttbh, nkrttbh, tot

				{rb_downgrade_by_pbs_due_to_spreading_code_congestion} + {rb_downgrade_by_preemption_due_to_aal2_congestion} + {rb_downgrade_by_preemption_due_to_bts_congestion} + {rb_downgrade_by_preemption_due_to_interference_congestion} + {rb_downgrade_by_preemption_due_to_spreading_code_congestion} + {rb_downgrade_by_enh_overload_control_using_rl_reconf}	
tot_RB_release_congestion_overload_ctrl	ACCUMULATION	INT8	Total number of RB release due to various congestion issues and overload control mechanism	{rb_release_by_dyn_link_opt_due_to_rl_power_congestion} + {rb_release_by_pbs_due_to_aal2_congestion} + {rb_release_by_pbs_due_to_bts_congestion} + {rb_release_by_pbs_due_to_interference_congestion} + {rb_release_by_pbs_due_to_spreading_code_congestion} + {rb_release_by_preemption_due_to_aal2_congestion} + {rb_release_by_preemption_due_to_bts_congestion} + {rb_release_by_preemption_due_to_interference_congestion} + {rb_release_by_preemption_due_to_spreading_code_congestion} + {rb_release_due_to_enh	Sum, nkcttbh, nkrttbh, tot

				_overload_control_using_rl_reconf} + {hsdsch_release_due_to_dl_overload}	

7.6.102Cell.Nokia.UMTS.radio_link

Radio link power and measurement related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_trx_for_rl_in_cell	INTENSITY	INTEGER	Average transmission power for radio links in the cell	PMMOResult_Cell_Resource.M1000C89	Average, avg, max, min, nkcttbh, nkrttbh, tot
lvl_ave_trx_for_rl_in_cell	INTENSITY	FLOAT	Average transmission power for radio links in the cell in dbm	-10 + (({ave_trx_for_rl_in_cell}-10)*0.5)	Average, avg, max, min, nkcttbh, nkrttbh, tot
nbr_of_rl_meas_reps	ACCUMULATION	INT8	Number of radio link measurement reports	PMMOResult_Cell_Resource.M1000C92	Sum, nkcttbh, nkrttbh, tot
nbr_of_rls	INTENSITY	INTEGER	Number of reported radio links	PMMOResult_Cell_Resource.M1000C90	Average, avg, max, min, nkcttbh, nkrttbh, tot
sum_sqr_trx_for_rl_in_cell	INTENSITY	FLOAT	Sum of squared measured values for transmission powers for the	PMMOResult_Cell_Resource.M1000C91	Average, avg, max, min, nkcttbh,

			radio links in the cell. Measured in dBm*100		nkrttbh, tot

7.6.103Cell.Nokia.UMTS.RAN_Accessibility.Service_Level

WCDMA RAN KPI Accessibility:Service Level related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_amr_cssr	INTENSITY	FLOAT	AMR Call Setup Success Ratio [%] over the reporting period. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.Note 1:The RRC request repetitions done by the UE after the RRC reject are included in the formula. Note 2:The cell re-selections occured during RRC setup are included in the formula.	if ((M1001C22 + M1001C32 + M1001C40 - M1001C573 - M1001C578 - M1001C582 - M1001C562 - M1001C553 - M1001C558) * M1001C115 * M1001C66) = 0 then 0 else (100 * (M1001C22 - M1001C23 + M1001C32 - M1001C33 + M1001C40 - M1001C41 - M1001C562 - M1001C553 - M1001C558) / ((M1001C22 + M1001C32 + M1001C40 - M1001C573 - M1001C578 - M1001C582 - M1001C562 - M1001C553 - M1001C558) * (M1001C115 / M1001C66)))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_multirab_setup_access_complete_ratio_amr_nrt	INTENSITY	FLOAT	RAB Setup and Access Complete Ratio [%] for Multi RAB AMR+NRT Service services over the reporting period. Covers RAB	if (PMMOResult_Service_Level.M1001C281 + M1001C282 + M1001C283 + M1001C284 + M1001C285 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			Setup and Access phases (From RAB Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed before RAB setup in order to make a call.	M1001C286 + M1001C293 + M1001C294 + M1001C295 + M1001C296 + M1001C297 + M1001C298)=0 then 0 else 100 * (M1001C287 + M1001C288 + M1001C289 + M1001C290 + M1001C291 + M1001C292 + M1001C299 + M1001C300 + M1001C301 + M1001C302 + M1001C303 + M1001C304) / (M1001C281 + M1001C282 + M1001C283 + M1001C284 + M1001C285 + M1001C286 + M1001C293 + M1001C294 + M1001C295 + M1001C296 + M1001C297 + M1001C298)	
_%_multirab_setup_access_complete_ratio_gr_1nrt	INTENSITY	FLOAT	RAB Setup and Access Complete Ratio [%] for Multi RAB with more than one NRT Service over the reporting period. Covers RAB Setup and Access phases	if (PMMOResult_Service_Level.M1001C305 + M1001C306 + M1001C307 + M1001C311)=0 then 0 else 100 * (M1001C308 + M1001C309 + M1001C310 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			(From RAB Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed before RAB setup in order to make a call.	M1001C312) / (M1001C305 + M1001C306 + M1001C307 + M1001C311)	
_%_multirab_setup_access_complete_ratio_rt_nrt	INTENSITY	FLOAT	RAB Setup and Access Complete Ratio [%] for Multi RAB containing RT+NRT Services over the reporting period.Covers RAB Setup and Access phases (From RAB Assignment Request to Radio Bearer Setup Complete).This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed before RAB setup in order to make a call.	if (PMMOResult_Service_Level.M1001C313 + M1001C314 + M1001C315 + M1001C316 + M1001C317 + M1001C318)=0 then 0 else 100 * (M1001C319 + M1001C320 + M1001C321 + M1001C322 + M1001C323 + M1001C324) / (M1001C313 + M1001C314 + M1001C315 + M1001C316 + M1001C317 + M1001C318)	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_packet_cssr	INTENSITY	FLOAT	Packet Call Setup Success Ratio [%]	if ((M1001C26 + M1001C28 + M1001C36	Average, avg,

			over the reporting period. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 The RRC request repetitions done by the UE after the RRC reject are included in the formula. Note 2 The cell re-selections occured during RRC setup are included in the formula. Note 3 This KPI formula considers NRT RAB as a single call. Therefore, it is not in line with the packet call definition.	+ M1001C38 - M1001C580 - M1001C575 - M1001C576 - M1001C581 - M1001C560 - M1001C556 - M1001C555 - M1001C561)* (M1001C120 +M1001C121) * (M1001C71+ M1001C72))=0 then 0 else 100 * ((M1001C26 - M1001C27 + M1001C28 - M1001C29 + M1001C36 - M1001C37 + M1001C38 - M1001C39 - M1001C560 - M1001C556 - M1001C555 - M1001C561) / (M1001C26 + M1001C28 + M1001C36 + M1001C38 - M1001C580 - M1001C575 - M1001C576 - M1001C581 - M1001C560 - M1001C556 - M1001C555 - M1001C561)) * ((M1001C120 +M1001C121) / (M1001C71+ M1001C72))	nkcttbh, nkrttbh, tot, min, max
_%_rab_access_and	PERCENTAGE	FLOAT	RAB Setup and Access Complete	100 * ({Nokia.rab.setup_access	Average, avg,

_complete_ratio_for_nrt_services_network			Ratio [%] for NRT services over the reporting period. Covers RAB Setup and Access phases (From RAB Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 RRC connection is needed before RAB setup in order to make a call. Note 2 The RAB reject due to a previous anchoring case is taken into account.	_complete.rab_access_completions_for_ps_data_intera}+ {Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_backg})/ ({Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_stream}+ {Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_intera} - {Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_conv} - {Nokia.rab.setup_failure_ps.rab_setup_failures_due_to_anchoring_for_ps_data_backg})	nkcttbh, nkrttbh
_%_rab_access_and_complete_ratio_for_nrt_services_user	PERCENTAGE	FLOAT	RAB Setup and Access Complete Ratio [%] for NRT services over the reporting period. Covers RAB Setup and Access phases (From RAB Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC	100 * ({Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_intera}+ {Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_backg})/ ({Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_stream}+ {Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_intera})	Average, avg, nkcttbh, nkrttbh

			Product Documentation.RRC connection is needed before RAB setup in order to make a call.		
_%_rab_setup_and_access_complete_ratio_amr_voice	PERCENTAGE	FLOAT	RAB Setup and Access Complete Ratio [%] for voice calls over the reporting period. Covers RAB Setup and Access phases (From RAB Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed before RAB setup in order to make a call.	100 * {Nokia.rab.setup_access_complete.rab_access_completions_for_cs_voice} / {Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_voice}	Average, avg, nkcttbh, nkrttbh
_%_rab_setup_and_access_complete_ratio_rt_service	PERCENTAGE	FLOAT	RAB Setup and Access Complete Ratio [%] for RT service excluding voice over the reporting period. Covers RAB Setup and Access phases (From RAB	100 * ({Nokia.rab.setup_access_complete.rab_access_completions_for_cs_data_conv} + {Nokia.rab.setup_access_complete.rab_access_completions_for_cs_data_stream} +	Average, avg, nkcttbh, nkrttbh

			Assignment Request to Radio Bearer Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation Note RRC connection is needed before RAB setup in order to make a call.	{Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_conv} + {Nokia.rab.setup_access_complete.rab_access_completions_for_ps_data_stream})/ ({Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_conv} + {Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_stream} + {Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_conv} + {Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_stream})	
_%_rrc_setup_and_access_complete_ratio_network	PERCENTAGE	FLOAT	RRC Setup and Access Complete Ratio [%] over the reporting period. Covers RRC Setup and Access phases (From RRC Connection Request to RRC Connection Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed also for other purposes than a call (SMS, LU, detach, for example).	100 * ({Nokia.rrc.connection_access.rrc_acc_comp} + {Nokia.rrc.connection_setup.rrc_conn_setup_completed_and_directed})/ ({Nokia.rrc.connection_setup.rrc_setup_att} + {Nokia.rrc.connection_setup.rrc_conn_setup_completed_and_directed})	Average, avg, nkcttbh, nkrttbh

_%_rrc_setup_and_access_complete_ratio_user	PERCENTAGE	FLOAT	RRC Setup and Access Complete Ratio [%] over the reporting period. Covers RRC Setup and Access phases (From RRC Connection Request to RRC Connection Setup Complete). This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note RRC connection is needed also for other purposes than a call (SMS, LU, Detach, for example).	100 * ({Nokia.rrc.connection_access.rrc_acc_comp} + {Nokia.rrc.connection_setup.rrc_conn_setup_completed_and_directed})/ ({Nokia.rrc.connection_setup.rrc_setup_att} - {Nokia.rrc.connection_setup.rrc_connection_setup_attempt_repeats} - {Nokia.rrc.connection_access.rrc_connection_access_release_due_to_cell_reselection} + {Nokia.rrc.connection_setup.rrc_conn_setup_completed_and_directed})	Average, avg, nkcttbh, nkrttbh
_%_streaming_cssr	INTENSITY	FLOAT	Streaming Call Setup Success Ratio [%] over the reporting period. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 The RRC request repetitions done by the UE	if ((M1001C24 + M1001C34 - M1001C574 - M1001C579 - M1001C554 - M1001C559)* (M1001C117 + M1001C119) *(M1001C68 + M1001C70))=0 then 0 else 100 * ((M1001C24 - M1001C25 + M1001C34 - M1001C35 - M1001C554 - M1001C559) /	Average, avg, nkcttbh, nkrttbh, tot, min, max

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			after the RRC reject are included in the formula. Note 2 The cell re-selections occured during RRC setup are included in the formula.	(M1001C24 + M1001C34 - M1001C574 - M1001C579 - M1001C554 - M1001C559)) * ((M1001C117 + M1001C119) / (M1001C68 + M1001C70))	
_%_udi_cssr	INTENSITY	FLOAT	UDI Call Setup Success Ratio [%] over the reporting period. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1:The RRC request repetitions done by the UE after the RRC reject are included in the formula. Note 2:The cell re-selections occured during RRC setup are included in the formula.	if ((M1001C22 + M1001C32 - M1001C573 - M1001C578 - M1001C553 - M1001C558) * M1001C116 * M1001C67)=0 then 0 else 100 * (M1001C22 - M1001C23 + M1001C32 - M1001C33 - M1001C553 - M1001C558) / (M1001C22 + M1001C32 - M1001C573 - M1001C578 - M1001C553 - M1001C558) * (M1001C116 / M1001C67)	Average, avg, nkcttbh, nkrttbh, tot, min, max

7.6.104Cell.Nokia.UMTS.RAN_Accessibility.Traffic

WCDMA RAN KPI Accessibility:Traffic related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdpa_accessibility_nrt_traffic_user	INTENSITY	FLOAT	The accessibility of all started allocations for HS-DSCH for NRT Traffic. This KPI is	if (PMMOResult_Traffic. M1002C385 + M1002C389 + M1002C401 +	Average, avg, nkcttbh, nkrttbh, tot, min,

			based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. The number of times when HS-DSCH channel has been established divided by the number of times when HS-DSCH channel has been selected by cell specific PS. Note 1 The times the HS_DSCH would have been selected but the number of allowed HS-DSCH users were exceeded are not counted.	M1002C402 + M1002C413 + M1002C415 + M1002C416 + M1002C417 + M1002C421 + M1002C423 + M1002C424 + M1002C425)=0 then 0 else (M1002C385 + M1002C389) / (M1002C385 + M1002C389 + M1002C401 + M1002C402 + M1002C413 + M1002C415 + M1002C416 + M1002C417 + M1002C421 + M1002C423 + M1002C424 + M1002C425) * 100	max
_%_hsdpa_accessibility_nrt_traffic	INTENSITY	FLOAT	The accessibility of all started allocations for HS-DSCH for NRT Traffic. This KPI is based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. The number of times when HS-DSCH channel has	if (PMMOResult_Traffic. M1002C385 + M1002C389 + M1002C401 + M1002C402 + M1002C413 + M1002C416 + M1002C417 + M1002C421 + M1002C424 + M1002C425)=0 then 0 else (M1002C385 + M1002C389) / (M1002C385 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			been established divided by the number of times when HS-DSCH channel has been selected by cell specific PS. Note 1 The times the HS_DSCH would have been selected but the number of allowed HS-DSCH users were exceeded are not counted. Note 2 The setup failures due to UE are not included in the formula.	M1002C389 + M1002C401 + M1002C402 + M1002C413 + M1002C416 + M1002C417 + M1002C421 + M1002C424 + M1002C425) * 100	
_%_hsdpa_resource_accessibility_rt_traffic	INTENSITY	FLOAT	HSDPA Resource Accessibility for RT traffic	if (PMMOResult_Traffic. M1002C569 + M1002C591 + M1002C577 + M1002C581 + M1002C582 + M1002C584 + M1002C585)=0 then 0 else 100 * (M1002C569 / (M1002C569 + M1002C591 + M1002C577 + M1002C581 + M1002C582 + M1002C584 + M1002C585))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_hsupa_resource_accessibility_nrt_traffic	INTENSITY	FLOAT	HSUPA Resource Accessibility for NRT traffic	if (PMMOResult_Traffic. M1002C531 + M1002C532 + M1002C520 + M1002C519 + M1002C516 + M1002C515 + M1002C517 + M1002C518+	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1002C526 + M1002C525 + M1002C530 + M1002C529 + M1002C528 + M1002C527 + M1002C524 + M1002C523)=0 then 0 else 100 * ((M1002C531 + M1002C532) / (M1002C531 + M1002C532 + M1002C520 + M1002C519 + M1002C516 + M1002C515 + M1002C517 + M1002C518+ M1002C526 + M1002C525 + M1002C530 + M1002C529 + M1002C528 + M1002C527 + M1002C524 + M1002C523))	
_%_hsupa_resource_accessibility_rt_traffic	INTENSITY	FLOAT	HSUPA Resource Accessibility for RT traffic	if (PMMOResult_Traffic. M1002C607 + M1002C599 + M1002C600 + M1002C601 + M1002C603 + M1002C604 + M1002C605 + M1002C606)=0 then 0 else 100 * (M1002C607 / (M1002C607 + M1002C599 + M1002C600 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

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				M1002C601 + M1002C603 + M1002C604 + M1002C605 + M1002C606))	

7.6.105Cell.Nokia.UMTS.RAN_Integrity.RCPM

WCDMA RAN KPI Integrity:RCPM related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nrt_dch_dl_efficiency	PERCENTAGE	FLOAT	The efficiency of selected Background Radio Bearers in Downlink using DCH or HS-DSCH according to the radio connection types. The bit rate of once transmitted background RLC PDUs or HS-DSCH RLC PDUs divided by the bit rate of all transmitted background RLC PDUs.This KPI is based on the Radio Connection Performance Measurement RLC in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. For SHO, all cells in AS are measured. All active set sizes allowed. If one cell is problematic, and further information is needed from that	100 * {Nokia.rcpm.dl_pdcp_sdu_pdu_rlc.dl_net_throughput_of_am_rlc_pdu}/ {Nokia.rcpm.dl_pdcp_sdu_pdu_rlc.dl_gross_throughput_of_am_rlc_pdu}	Average, avg, nkcttbh, nkrttbh

			cell, then it is possible to set active set size to 1.		

7.6.106Cell.Nokia.UMTS.RAN_Mobility.InterSystem_Handover

WCDMA RAN KPI Mobility:Intersystem Handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_inter_system_hard_ho_success_ratio	INTENSITY	FLOAT	Inter System Hard Handover Success Ratio [%] for the reporting period in the Source Cell of the Hard Handover. [RAN_KPI_0022]	if (PMMOResult_Inter_System_Handover.M1010C18 + M1010C22 + M1010C26 + M1010C30 + M1010C34 + M1010C56 + M1010C60 + M1010C64 + M1010C68 + M1010C72 + M1010C76 + M1010C83 + M1010C97 + M1010C145 + M1010C144 + M1010C142 + M1010C137 + M1010C143 + M1010C138 + M1010C147 + M1010C140 + M1010C146 + M1010C139 + M1010C148 + M1010C141)=0 then 0 else 100 * (M1010C19 + M1010C23 +M1010C27 + M1010C31+ M1010C35 + M1010C57 + M1010C61 + M1010C65 + M1010C69 + M1010C73 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1010C77 + M1010C84 + M1010C98 + M1010C157 + M1010C156 + M1010C154 + M1010C149 + M1010C155 + M1010C150 + M1010C159 + M1010C152 + M1010C158 + M1010C151 + M1010C160 + M1010C153) / (M1010C18 + M1010C22 + M1010C26 + M1010C30 + M1010C34 + M1010C56 + M1010C60 + M1010C64 + M1010C68 + M1010C72 + M1010C76 + M1010C83 + M1010C97 + M1010C145 + M1010C144 + M1010C142 + M1010C137 + M1010C143 + M1010C138 + M1010C147 + M1010C140 + M1010C146 + M1010C139 + M1010C148 + M1010C141)	
_%_intra_system_hard_ho_success_ratio	INTENSITY	FLOAT	- Obsolete in RN2.2 - Intra System Hard Handover Success Ratio [%] for the reporting period in the Source Cell of the Hard Handover. This KPI is based on Intra System Handover	if (PMMOResult_Inter_System_Handover.M1010C18 + M1010C22 + M1010C26 + M1010C30 + M1010C34 + M1010C56 + M1010C60 + M1010C64 + M1010C68 + M1010C72)=0 then 0	Average, avg, nkcttbh, nkrttbh, tot, min, max

			Measurement where Intra System HHO triggering and outcome is measured. See RNC	else 100 * (M1010C19 + M1010C23 + M1010C27 + M1010C31 + M1010C35 + M1010C57 + M1010C61 + M1010C65 + M1010C69 + M1010C73) / (M1010C18 + M1010C22 + M1010C26 + M1010C30 + M1010C34 + M1010C56 + M1010C60 + M1010C64 + M1010C68 + M1010C72)	

7.6.107Cell.Nokia.UMTS.RAN_Mobility.IntraSystem_HardHandover

WCDMA RAN KPI Mobility:Intrasystem Handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdpa_serving_cell_change_success_rate	INTENSITY	FLOAT	HSDPA Serving Cell Change Success Rate over the reporting period in the Source Cell. [%]. [RAN_KPI_0048]	if (PMMOResult_Intra_System_Handover.M1008C213 + M1008C214 + M1008C215 + M1008C216)=0 then 0 else 100 * (M1008C222 + M1008C223) / (M1008C213 + M1008C214 + M1008C215 + M1008C216)	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_inter_system_hard_ho_success_ratio	INTENSITY	FLOAT	Intra System Hard Handover Success Ratio [%] for the reporting period in the Source Cell of the Hard Handover.	if (PMMOResult_Intra_System_Handover.M1008C4 + M1008C5 + M1008C13 + M1008C14 + M1008C54 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			This KPI is based on Intra System Handover Measurement where Intra System HHO triggering and outcome is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	M1008C58 + M1008C62 + M1008C102 + M1008C106 + M1008C110)=0 then 0 else 100 * (M1008C6 + M1008C15 + M1008C55 + M1008C59 + M1008C63 + M1008C103 + M1008C107 + M1008C111) / (M1008C4 + M1008C5 + M1008C13 + M1008C14 + M1008C54 + M1008C58 + M1008C62 + M1008C102 + M1008C106 + M1008C110)	

7.6.108Cell.Nokia.UMTS.RAN_Mobility.Soft_Handover

WCDMA RAN KPI Mobility:Soft Handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
soft_handover_overhead_cell	INTENSITY	FLOAT	Soft Handover Overhead [%] over the reporting period for One Cell or whole RNC. This KPI is based on Soft Handover (SHO) measurement where Active Set sizes are measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.Note In the SHO measurement, the counters are for both RNC and WCELL. This formula uses	if ((PMMOResult_Soft_Handover.M1007C0+M1007C19) + (M1007C1+M1007C20)/2+ (M1007C2+M1007C21)/3) = 0 then 0 else (((((M1007C0+M1007C19)*1 + (M1007C1+M1007C20) *2 + (M1007C2+M1007C21) *3)/ (M1007C0 + M1007C19 + M1007C1 + M1007C20 + M1007C2+M1007C21)) - 1) *100)	Average, avg, nkcttbh, nkrttbh, tot, min, max

			either the cell level counters or RNC level counters.		
soft_handover_success_ratio	INTENSITY	FLOAT	Soft Handover Success Rate meaning branch addition, branch deletion or branch replacement over the reporting period in the Source Cell of the Soft Handover. This KPI is based on Soft Handover measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Soft_Handover.M1007C10 + M1007C11 + M1007C12 + M1007C27 + M1007C28 + M1007C29) = 0 then 0 else ((M1007C15 + M1007C32) / (M1007C10 + M1007C11 + M1007C12 + M1007C27 + M1007C28 + M1007C29))	Average, avg, nkcttbh, nkrttbh, tot, min, max

7.6.109Cell.Nokia.UMTS.RAN_Retainability.Service_Level

WCDMA RAN KPI Retainability:Service Level related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_multirab_drop_ratio_amr_nrt_network	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio for Multi-RAB AMR+NRT Service [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters -	if (PMMOResult_Service_Level.M1001C287 + M1001C288 + M1001C289 + M1001C290 + M1001C291 + M1001C292 + M1001C299 + M1001C300 + M1001C301 + M1001C302 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			RNW Part in Nokia WCDMA RNC Product Documentation. Note I	M1001C303 + M1001C304)=0 then 0 else 100 - (100 * (M1001C341 + M1001C342 + M1001C343 + M1001C344 + M1001C345 + M1001C346 + M1001C347 + M1001C348 + M1001C349 + M1001C350 + M1001C351 + M1001C352) / (M1001C287 + M1001C288 + M1001C289 + M1001C290 + M1001C291 + M1001C292 + M1001C299 + M1001C300 + M1001C301 + M1001C302 + M1001C303 + M1001C304))	
_%_multirab_drop_ratio_gr_1nrt_network	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio, Multi-RAB containing more than one NRT Service, [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documented	if (PMMOResult_Service_Level.M1001C308 + M1001C309 + M1001C310 + M1001C312)=0 then 0 else 100 - (100 * (M1001C353 + M1001C354 + M1001C355 + M1001C356) / (M1001C308 + M1001C309 + M1001C310 + M1001C312))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_	INTENSI	FLOA	- Obsolete in RN2.2	if	Average,

%_multirab_drop_ratio_rt_nrt_network	TY	T	- RAB Drop Ratio for Multi-RAB containing RT +NRT Service [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documented	(PMMOResult_Service_Level.M1001C319 + M1001C320 + M1001C321 +M1001C322 + M1001C323 + M1001C324 + M1001C328 +M1001C329 + M1001C330)=0 then 0 else 100 - (100 * (M1001C357 + M1001C358 + M1001C359 + M1001C360 + M1001C361 + M1001C362 + M1001C363 + M1001C364 + M1001C365) / (M1001C319 + M1001C320 + M1001C321 +M1001C322 + M1001C323 + M1001C324 + M1001C328 +M1001C329 + M1001C330))	avg, nkcttbh, nkrttbh, tot, min, max
_%_multirab_success_ratio_amr_nrt_network	INTENSITY	FLOAT	RAB Success Ratio for Multi-RAB AMR+NRT Service [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0029]	if (PMMOResult_Service_Level.M1001C341 + M1001C342 + M1001C442 + M1001C343 + M1001C344 + M1001C345 + M1001C346 + M1001C503 + M1001C504 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1001C505 + M1001C506 + M1001C507 + M1001C508 + M1001C509 + M1001C510 + M1001C511 + M1001C512 + M1001C513 + M1001C514 + M1001C515 + M1001C516)=0 then 0 else 100 - (100 * (M1001C503 + M1001C504 + M1001C505 + M1001C506 + M1001C507 + M1001C508 + M1001C509 + M1001C510 + M1001C511 + M1001C512 + M1001C513 + M1001C514 + M1001C515 + M1001C516) / (M1001C341 + M1001C342 + M1001C442 + M1001C343 + M1001C344 + M1001C345 + M1001C346 + M1001C503 + M1001C504 + M1001C505 + M1001C506 + M1001C507 + M1001C508 + M1001C509 + M1001C510 + M1001C511 + M1001C512 + M1001C513 + M1001C514 +	

				M1001C515 + M1001C516))	
_%_multirab_success_ratio_gr_1nrt_network	INTENSITY	FLOAT	RAB Success Ratio, Multi-RAB containing more than one NRT Service, [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note For NRT RABs pre-emption is not possible. [RAN_KPI_0031]	if (PMMOResult_Service_Level.M1001C353 + M1001C354 + M1001C355 + M1001C356 + M1001C526 + M1001C527 + M1001C528 + M1001C529)=0 then 0 else 100 - (100 * (M1001C526 + M1001C527 + M1001C528 + M1001C529) / (M1001C353 + M1001C354 + M1001C355 + M1001C356 + M1001C526 + M1001C527 + M1001C528 + M1001C529))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_multirab_success_ratio_rt_nrt_network	INTENSITY	FLOAT	RAB Success Ratio for Multi-RAB containing RT +NRT Service [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C357 + M1001C358 + M1001C359 + M1001C360 + M1001C361 + M1001C362 + M1001C363 + M1001C364 + M1001C365 + M1001C517 + M1001C518 + M1001C519 + M1001C520 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

			Note In this KPI, RAB Releases due to pre-emption are NOT considered in the formula. [RAN_KPI_0030]	M1001C521 + M1001C522 + M1001C523 + M1001C524 + M1001C525)=0 then 0 else 100 - (100 * (M1001C517 + M1001C518 + M1001C519 + M1001C520 + M1001C521 + M1001C522 + M1001C523 + M1001C524 + M1001C525) / (M1001C357 + M1001C358 + M1001C359 + M1001C360 + M1001C361 + M1001C362 + M1001C363 + M1001C364 + M1001C365 + M1001C517 + M1001C518 + M1001C519 + M1001C520 + M1001C521 + M1001C522 + M1001C523 + M1001C524 + M1001C525))	
_%_rab_drop_ratio_amr_voice_network	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio for AMR Voice [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC	if (PMMOResult_Service_Level.M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392)=0 then 0 else 100 * ((M1001C145	Average, avg, nkcttbh, nkrttbh, tot, min, max

			Product Documentation.	+ M1001C146 + M1001C147 + M1001C148 + M1001C150) / (M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392))	
_%_rab_drop_ratio_amr_voice_user	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio for AMR Voice [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392)=0 then 0 else 100 * ((M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392)) / ((M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392))	Average, avg, nkcttbh, nkrttbh, tot, min, max

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_%_rab_drop_ratio_nrt_service_network	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio for AMR Voice [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196 + M1001C398 + M1001C397)=0 then 0 else 100 * ((M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196) / (M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196 + M1001C398 + M1001C397))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_	INTENSI	FLOA	- Obsolete in RN2.2	if	Average,

%_rab_drop_ratio_rt_services_excl_voice_network	TY	T	- RAB Drop Ratio for RT services excluding Voice [%] over the reporting period. Covers RAB Active Phase of a call. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	(PMMOResult_Service_Level.M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396)=0 then 0 else 100 * ((M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 +	avg, nkcttbh, nkrttbh, tot, min, max

				M1001C182 + M1001C184) / (M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396))	
_%_rab_drop_ratio_rt_services_excl_voice_user	INTENSITY	FLOAT	- Obsolete in RN2.2 - RAB Drop Ratio for RT services excluding Voice [%] over the reporting period. Covers RAB Active Phase of a call.This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184+ M1001C393+ M1001C394+ M1001C396)=0 then 0 else 100 * ((M1001C152 + M1001C154 + M1001C170 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393+ M1001C394+ M1001C396) / (M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 +	

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				M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184+ M1001C393+ M1001C394+ M1001C396))	
_ %_rab_success_ratio_amr_voice_network	INTENSITY	FLOAT	RAB Success Ratio for AMR Voice [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0006]	if (PMMOResult_Service_Level.M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392)=0 then 0 else 100 - (100 * (M1001C145 + M1001C146 + M1001C147+ M1001C148 + M1001C150) / (M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1001C392))	
_%_rab_success_ratio_amr_voice_user	INTENSITY	FLOAT	RAB Success Ratio for AMR Voice [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0006A]	if (PMMOResult_Service_Level.M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392)=0 then 0 else 100 - (100 * (M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392) / (M1001C136 + M1001C143 + M1001C144 + M1001C145 + M1001C146 + M1001C147 + M1001C148 + M1001C150 + M1001C392))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_rab_success_ratio_nrt_services_network	INTENSITY	FLOAT	RAB Success Ratio for NRT Services [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0008]	if (PMMOResult_Service_Level.M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C396 + M1001C398 + M1001C397)=0 then 0 else 100 - (100 * (M1001C185 + M1001C186 + M1001C187+ M1001C188 + M1001C190 + M1001C191 + M1001C192 +M1001C193 + M1001C194 + M1001C196) / (M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C396 + M1001C398 + M1001C397))	
_%_rab_success_ratio_nrt_services_user	INTENSITY	FLOAT	RAB Success Ratio for NRT Services [%] from the end user perspective over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0008A]	if (PMMOResult_Service_Level.M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

				M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196 + M1001C398 + M1001C397)=0 then 0 else 100 - (100 * (M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196 + M1001C398 + M1001C397 - M1001C594 - M1001C593) / (M1001C141 + M1001C142 + M1001C171 + M1001C172 + M1001C185 + M1001C186 + M1001C187 + M1001C188 + M1001C190 + M1001C191 + M1001C192 + M1001C193 + M1001C194 + M1001C196 + M1001C398 + M1001C397))	
_ %_rab_success_rati	INTENSITY	FLOAT	RAB Success Ratio for RT Services	if (PMMOResult_Service_	Average, avg,

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o_rt_services_excl_voice_network			Excluding Voice [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0007]	Level.M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157+ M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396)=0 then 0 else 100 - (100 * (M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 +M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184) / (M1001C137 + M1001C138 + M1001C140 +	nkcttbh, nkrttbh, tot, min, max

				M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157+ M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396))	
_%_rab_success_ratio_rt_services_excl_voice_user	INTENSITY	FLOAT	RAB Success Ratio for RT Services Excluding Voice [%] over the reporting period. Covers RAB Active Phase of a call. [RAN_KPI_0007A]	if (PMMOResult_Service_Level.M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 +	Average, avg, nkcttbh, nkrttbh, tot, min, max

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				M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396)=0 then 0 else 100 - (100 * (M1001C152 + M1001C154 + M1001C170+ M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396) / (M1001C137 + M1001C138 + M1001C140 + M1001C152 + M1001C151 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C155 + M1001C156 +	

				M1001C157 + M1001C158 + M1001C160 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C393 + M1001C394 + M1001C396))	
_%_rrc_drop_ratio	INTENSITY	FLOAT	- Obsolete in RN2.2 - RRC Drop Ratio [%] over the reporting period. Covers RRC Active Phase of a call.This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C12 + M1001C13 + M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391)=0 then 0 else 100 * ((M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391) / (M1001C12 + M1001C13 + M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_rrc_success_rati	INTENSITY	FLOAT	RRC Success Ratio [%] over the	if (PMMOResult_Service_	Average, avg,

o_network			reporting period. Covers RRC Active Phase of a call. [RAN_KPI_0005]	Level.M1001C12 + M1001C13+ M1001C14 + M1001C15 + M1001C16 + M1001C17 +M1001C18 + M1001C21 + M1001C391)=0 then 0 else 100 - (100 * (M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21) / (M1001C12 + M1001C13+ M1001C14 + M1001C15 + M1001C16 + M1001C17 +M1001C18 + M1001C21 + M1001C391))	nkcttbh, nkrttbh, tot, min, max
_%_rrc_success_ratio_user	INTENSITY	FLOAT	RRC Success Ratio [%] over the reporting period. Covers RRC Active Phase of a call. [RAN_KPI_0005A]	if (PMMOResult_Service_Level.M1001C12 + M1001C13 + M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391)=0 then 0 else 100 - (100 * (M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391) / (M1001C12 + M1001C13 + M1001C14 + M1001C15 + M1001C16 + M1001C17 + M1001C18 + M1001C21 + M1001C391))	Average, avg, nkcttbh, nkrttbh, tot, min, max
_%_streaming_call_drop_ratio	INTENSITY	FLOAT	Streaming Call Drop Ratio [%] over the reporting period. This KPI is	if (PMMOResult_Service_Level.M1001C138 + M1001C140 +	Average, avg, nkcttbh, nkrttbh,

			based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184 + M1001C394 + M1001C396)=0 then 0 else 100 * ((M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 + M1001C184) / (M1001C138 + M1001C140 + M1001C154 + M1001C153 + M1001C170 + M1001C169 + M1001C161 + M1001C162 + M1001C163 + M1001C164 + M1001C166 + M1001C179 + M1001C180 + M1001C181 + M1001C182 +	tot, min, max

				M1001C184 + M1001C394 + M1001C396))	
_%_udi_call_drop_ratio	INTENSITY	FLOAT	UDI Call Drop Ratio [%] over the reporting period. This KPI is based on Service Level measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (PMMOResult_Service_Level.M1001C137 + M1001C152 + M1001C151 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C393)=0 then 0 else 100 * (M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160) / (M1001C137 + M1001C152 + M1001C151 + M1001C155 + M1001C156 + M1001C157 + M1001C158 + M1001C160 + M1001C393)	Average, avg, nkcttbh, nkrttbh, tot, min, max

7.6.110Cell.Nokia.UMTS.RAN_Retainability.Traffic

WCDMA RAN KPI Retainability:Traffic related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdpa_retainability_nrt_traffic	PERCENTAGE	FLOAT	The retainability of all successfully allocated HS-DSCH for NRT traffic. This KPI is based on Traffic Measurement. Note The normal transition from HS-	100 * ({Nokia.traffic.hsdsch_allocation_release.hsdsch_normal_release_for_interactive} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_normal_release_for_background})/	Average, avg, nkcttbh, nkrttbh

			DSCH to FACH/DCH is considered to be a normal HS-DSCH release (including transitions due to mobility and pre-emption).	({Nokia.traffic.hsdsch_allocation_release.hsdsch_normal_release_for_interactive} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_normal_release_for_background} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_release_due_to_other_failure_for_interactive} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_release_due_to_other_failure_for_background} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_release_due_to_rl_failure_for_interactive} + {Nokia.traffic.hsdsch_allocation_release.hsdsch_release_due_to_rl_failure_for_background})	

7.6.111Cell.Nokia.UMTS.RAN_Usage.Cell_Resource

WCDMA RAN KPI Usage:Cell Resource related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
average_fach_throughput	INTENSITY	FLOAT	Average FACH Throughput [kbit/s] over the reporting period. Includes both the user and signalling data. This measurement is based on Cell Resource	{Nokia.sccpch.ave_fach_user_tot_throughput_for_sccpch_inc_pch} / ({Nokia.sccpch.fach_user_tot_throughput_denom_0}*1000)	Average, avg, max, min, nkcttbh, nkrttbh, tot

			Measurement, where the average FACH Throughput of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.		
average_pch_throughput	INTENSITY	FLOAT	Average PCH Throughput [kbit/s] over the reporting period. Includes both the user and signalling data. This KPI is based on Cell Resource Measurement, where the average PCH Throughput of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	({Nokia.sccpch.ave_pch_throughput}/ {Nokia.sccpch.pch_throughput_denom_0})/1000	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_rach_throughput	INTENSITY	FLOAT	Average RACH Throughput [kbit/s] over the reporting period. Includes both user and signalling data. This measurement is based on Cell Resource Measurement, where the average RACH Throughput of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product	({Nokia.rach.ave_rach_throughput}/ {Nokia.rach.rach_denom_3})/1000	Average, avg, max, min, nkcttbh, nkrttbh, tot

			Documentation.		
average_sab_throughput	INTENSITY	FLOAT	Average SAB Throughput [kbit/s] over the reporting period. Includes both the user and signalling data. This measurement is based on Cell Resource Measurement, where the average SAB Throughput of a cell is measured. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	{Nokia.sccpch.ave_fach_total_throughput_sab} / ({Nokia.sccpch.ave_fach_total_throughput_sab_denom}*1000)	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.112Cell.Nokia.UMTS.RAN_Usage.Cell_Usage

WCDMA RAN KPI Usage:Cell Usage related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cs_erlang	INTENSITY	FLOAT	CS Erlang meaning the CS RAB holding time. This KPI is based on Service Level measurement on RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. The Traffic measurement	if interval = 0 then 0 else (PMMOResult_Service_Level.M1001C199+ ((M1001C368*64)/12.2) + ((M1001C370*14.4)/12.2)+ ((M1001C372*57.6)/12.2))/(100*60*interval)	Average, avg, max, min, nkcttbh, nkrttbh, tot

			provides only data when traffic allocation occurs. Therefore, there may not always be data for all the cells or all the intervals. The formula does not take this into account.		

7.6.113Cell.Nokia.UMTS.RAN_Usage.RCPM

WCDMA RAN KPI Usage:RCPM related statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
average_net_throughput	INTENSITY	FLOAT	The net throughput in Downlink for Interactive and Background Class traffic using DCH or HSDSCH depending on the service type filtered. The throughput excludes RLC retransmissions. This KPI is based on Radio Connection Performance Measurement RLC. See RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if interval = 0 then 0 else (PMMOResult_RCPM_RLC.M1017C15*M1017C29)/(interval*60)	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.114Cell.Nokia.UMTS.RAN_Usage.Service_Level

WCDMA RAN KPI Usage:Service Level related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_cell_availability_excluding_blu	INTENSITY	FLOAT	Cell Availability, excluding blocked by user state (BLU). [RAN_KPI_0018B]	if (PMMOResult_Cell_Resource.M1000C180 - M1000C179)=0 then 0 else 100 * M1000C178 / (M1000C180 - M1000C179)	Average, avg, nkcttbh, nkrttbh, tot, min, max
cell_availability	INTENSITY	FLOAT	The availability of the WCELLs under a controlling RNC (CRNC). This KPI is based on Cell Resource measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	if (interval * 60) = 0 then 0 else (PMMOResult_Cell_Resource.M1000C73*20/ (interval * 60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
noise_floor_of_system	INTENSITY	FLOAT	Average PrxNoise threshold used in dBm.	{Nokia.prxtotal.ave_prx_noise}/(-100)	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.115Cell.Nokia.UMTS.RAN_Usage.Traffic

WCDMA RAN KPI Usage:Traffic related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
average_allocated_downlink_dedicated_channel_capacity_cs_calls_crnc	INTENSITY	FLOAT	Allocated Downlink Dedicated Channel Capacity [kbit/s] for CS Voice in	if ((interval*60) * 100) = 0 then 0 else ((4.75 * PMMOResult_Traffic.M1002C42) + (4.75 *	Average, avg, max, min, nkcttbh,

			Controlling RNC for the reporting period. These throughput calculations are based on resource allocation counters and do not show the actual throughput but only the allocated capacity. This KPI is based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 The counters in the formula include soft handover overheads.	M1002C278) + (5.15 * M1002C43) + (5.15 * M1002C279) + (5.9 * M1002C44) + (5.9 * M1002C280) + (6.7 * M1002C45) + (6.7 * M1002C281) + (7.4 * M1002C46) + (7.4 * M1002C282) + (7.95 * M1002C47) +(7.95 * M1002C283) + (10.2 * M1002C48) + (10.2 * M1002C284) + (12.2 * M1002C49) + (12.2 * M1002C285)) / (interval * 60 *100)	nkrttbh, tot
average_allocated_downlink_dedicated_channel_capacity_data_calls_crnc	INTENSITY	FLOAT	Allocated Downlink Dedicated Channel Capacity [kbit/s] for Data Calls in Controlling RNC over the reporting period. These throughput calculations are based on resource allocation counters and do not show actual throughput but only the allocated capacity. This KPI is based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC	if interval=0 then 0 else ((((64*PMMOResult_Traffic.M1002C69)/2) + (57.6*M1002C81) + (128*M1002C218) + (384*M1002C221) + (128*M1002C234) + (384*M1002C237) + (64*M1002C334) + (57.6*M1002C333) + (128*M1002C335) + (384*M1002C338) + (8*M1002C214) + (8*M1002C230) + (16* M1002C215) + (16*M1002C231) + (32*M1002C216) + (32*M1002C232) + (8*M1002C327) + (16*M1002C329) + (32*M1002C331) +	Average, avg, max, min, nkcttbh, nkrttbh, tot

			Product Documentation. Note 1 The counters in the formula include soft handover overheads. Note 2 The formula was updated in RAN04 with new NRT RB bit rates 8,16 and 32.	(14.4*M1002C79) + (14.4*M1002C328) + (256*M1002C219) + (256*M1002C235) + (256*M1002C336)) / (interval * 60 * 100))	
average_allocated_uplink_dedicated_channel_capacity_cs_voice_crnc	INTENSITY	FLOAT	Allocated Uplink Dedicated Channel Capacity [kbit/s] for CS Voice in Controlling RNC for the reporting period. These throughput calculations are based on resource allocation counters and do not show the actual throughput but only the allocated capacity. This KPI is based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 The counters in the formula include soft handover overheads. Note 2	if (interval * 60 * 100) = 0 then 0 else (((4.75 * PMMOResult_Traffic.M1002C34) + (4.75 * M1002C270) + (5.15 * M1002C35) + (5.15 * M1002C271) + (5.9 * M1002C36) + (5.9 * M1002C272) + (6.7 * M1002C37) + (6.7 * M1002C273) + (7.4 * M1002C38) + (7.4 * M1002C274) + (7.95 * M1002C39) + (7.95 * M1002C275) + (10.2 * M1002C40) + (10.2 * M1002C276) + (12.2 * M1002C41) + (12.2 * M1002C277)) / (interval * 60 * 100))	Average, avg, max, min, nkcttbh, nkrttbh, tot

			The formula was updated in RAN04 with new NRT RB bit rates 8, 16 and 32.		
average_allocated_uplink_dedicated_channel_capacity_data_calls_crnc	INTENSITY	FLOAT	Allocated Uplink Dedicated Channel Capacity [kbit/s] for Data Calls in Controlling RNC over the reporting period. These throughput calculations are based on resource allocation counters and do not show the actual throughput but only the allocated capacity. This KPI is based on Traffic measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation. Note 1 The counters in the formula include soft handover overheads. Note 2 The formula was updated in RAN04 with new NRT RB bit rates 8,16 and 32.	if ((interval*60) * 100) = 0 then 0 else (((64*PMMOResult_Traffic.M1002C177) + (57.6*M1002C78) +(128*M1002C210) + (384*M1002C213) + (128*M1002C226) + (384*M1002C229) + (64*M1002C322) + (57.6*M1002C321) + (128*M1002C323) + (384*M1002C326) + (8*M1002C206) + (8*M1002C222) + (16*M1002C207) + (16*M1002C223) + (32*M1002C208) + (32*M1002C224) + (64*M1002C209) + (64*M1002C225) + (8*M1002C315) + (16*M1002C317) + (32*M1002C319) + (14.4*M1002C76) + (256*M1002C211) + (256*M1002C227) + (14.4*M1002C316) + (256*M1002C324)) / ((interval*60) * 100))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.116Cell.Nokia.UMTS.rcpm.dl_pdcp_sdu_pdu_rlc

RCPM RLC - Downlink PDCP, PDU, SDU transfer statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation

am_rlc_dl_pdus_for_transmission	ACCUMULATION	INT8	The number of downlink RLC AM PDUs added to the RLC transmission buffer. This includes also PDUs retransmitted due to RLC polling procedure.	PMMOResult_RCPM_RLC.M1017C21	Sum, nkcttbh, nkrttbh, tot
am_rlc_pdus_transmitted_in_downlink	ACCUMULATION	INT8	The number of transmitted RLC AM DL PDUs. Includes also retransmitted DL PDUs and control PDUs.	PMMOResult_RCPM_RLC.M1017C6	Sum, nkcttbh, nkrttbh, tot
average_am_rlc_transmission_buffer_occupancy	INTENSITY	INT8	The average RLC AM DL PDU transmission buffer occupancy. Includes both first-time transmission and retransmission buffers. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC.M1017C0	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_number_of_transmissions_per_pdu_in_am_rlc_dl	INTENSITY	FLOAT	The average number of required transmissions per PDU in RLC AM DL. For a perfect connection the value of this counter is one.	PMMOResult_RCPM_RLC.M1017C18	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_pdcp_buffer_occupancy	INTENSITY	INT8	The average PDCP buffer occupancy in RLC AM DL. Does not include	PMMOResult_RCPM_RLC.M1017C1	Average, avg, max, min, nkcttbh,

			periods when the DL transmission buffers in the RLC entity are empty.		nkrttbh, tot
bad_rlc_am_dl_connections	ACCUMULATION	INT8	The number of bad connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC.M1017C9	Sum, nkcttbh, nkrttbh, tot
dl_gross_throughput_of_am_rlc_pdu	INTENSITY	FLOAT	The average downlink PDU gross throughput of the RLC AM connection. Includes also retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC.M1017C12	Average, avg, max, min, nkcttbh, nkrttbh, tot
dl_net_throughput_of_am_rlc_pdu	INTENSITY	FLOAT	The average downlink net PDU throughput of RLC AM connections. Does not include retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC.M1017C15	Average, avg, max, min, nkcttbh, nkrttbh, tot
dl_pdu_error_ratio_in_am_rlc	INTENSITY	FLOAT	The ratio between unsuccessfully transmitted RLC AM DL PDUs and all transmitted RLC AM DL	PMMOResult_RCPM_RLC.M1017C5	Average, avg, max, min, nkcttbh, nkrttbh, tot

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			PDUs (including retransmissions).		
dl_rlc_am_sdu_payload_of_ps_traffic	ACCUMULATION	INT8	The number of SDU bytes transmitted in downlink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (after PDCP in DL) and includes RLC SDU headers. Discarded SDUs are included.	PMMOResult_RCPM_RLC.M1017C31	Sum, nkcttbh, nkrttbh, tot
ideal_rlc_am_dl_connections	ACCUMULATION	INT8	The number of ideal connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC.M1017C11	Sum, nkcttbh, nkrttbh, tot
measurement_time_period_for_dl_rlc_am	ACCUMULATION	INT8	The total time period when the measurement was active in the RLC AM DL entity. The active time is the time between when the first RLC SDU arrives in the RLC buffer and when all the RLC PDUs of the packet call have been acknowledged. Periods when the DL transmission buffers are empty are excluded.	PMMOResult_RCPM_RLC.M1017C29	Sum, nkcttbh, nkrttbh, tot
pdu_discard_ratio_in_am_rlc_dl	INTENSITY	FLOAT	The RLC PDU discard ratio for downlink connections using	PMMOResult_RCPM_RLC.M1017C19	Average, avg, max, min, nkcttbh,

			RLC AM.		nkrttbh, tot
received_dl_pdu_reports	ACCUMULATION	INT8	The number of RLC AM reports for the RLC AM DL PDU error ratio measurement.	PMMOResult_RCPM_RLC.M1017C8	Sum, nkcttbh, nkrttbh, tot
reports_for_average_dl_buffer_occupancy	ACCUMULATION	INT8	The number of RLC AM reports for the RLC AM DL transmission buffer and the PDCP buffer occupancy measurement.	PMMOResult_RCPM_RLC.M1017C4	Sum, nkcttbh, nkrttbh, tot
reports_for_dl_am_rlc_throughput	ACCUMULATION	INT8	The number of RLC AM reports for RLC AM DL gross and net throughput values.	PMMOResult_RCPM_RLC.M1017C14	Sum, nkcttbh, nkrttbh, tot
rlc_am_dl_average_transfer_delay_of_sdu	INTENSITY	INT8	The average transfer delay of transferred RLC AM SDUs in downlink. Transfer delay is the time difference between when the SDU is received from the upper layer (RRC or PDCP) and when the last PDU containing data from that SDU is acknowledged by the UE as successfully transferred. If an	PMMOResult_RCPM_RLC.M1017C24	Average, avg, max, min, nkcttbh, nkrttbh, tot

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			SDU is discarded due to SDU discard function, the transfer time is then the difference between the time when SDU is received from the upper layer and the time when SDU is discarded.		
rlc_am_dl_sum_of_ave_transfer_delay_of_sdu	ACCUMULATION	INT8	The sum of average SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC.M1017C25	Sum, nkcttbh, nkrttbh, tot
rlc_am_dl_sum_of_squared_transmission_delay_of_sdu	ACCUMULATION	INT8	The sum of squared SDU transmission delay values in RLC AM DL.	PMMOResult_RCPM_RLC.M1017C27	Sum, nkcttbh, nkrttbh, tot
rlc_am_dl_sum_of_standard_deviations_of_transfer_delay_of_sdu	ACCUMULATION	INT8	The sum of standard deviations of the SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC.M1017C26	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_error_ratio	INTENSITY	FLOAT	The average SDU error ratio in RLC AM downlink. Defined as the ratio between discarded SDUs and the total number of SDUs received for transmission from the PDCP layer. Note that this counter does not include RLC SDUs that have overflowed from	PMMOResult_RCPM_RLC.M1017C22	Average, avg, max, min, nkcttbh, nkrttbh, tot

			the PDCP buffer.		
rlc_retransmission_distribution_class_0	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully delivered to the UE without retransmissions.	PMMOResult_RCPM_RLC.M1017C44	Sum, nkcttbh, nkrttbh, tot
rlc_retransmission_distribution_class_1	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with one retransmission.	PMMOResult_RCPM_RLC.M1017C45	Sum, nkcttbh, nkrttbh, tot
rlc_retransmission_distribution_class_2	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with two retransmissions.	PMMOResult_RCPM_RLC.M1017C46	Sum, nkcttbh, nkrttbh, tot
rlc_retransmission_distribution_class_3	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with three retransmissions.	PMMOResult_RCPM_RLC.M1017C47	Sum, nkcttbh, nkrttbh, tot
rlc_retransmission_distribution_class_4	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully	PMMOResult_RCPM_RLC.M1017C48	Sum, nkcttbh, nkrttbh, tot

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			delivered to the UE with four retransmissions.		
rlc_retransmission_distribution_class_5	ACCUMULATION	INT8	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with five or more retransmissions or the PDU is discarded.	PMMOResult_RCPM_RLC.M1017C49	Sum, nkcttbh, nkrttbh, tot
sdus_for_transmission_in_rlc_am_dl	ACCUMULATION	INT8	The number of RLC AM SDUs ready for transmission in downlink. Includes also discarded SDUs.	PMMOResult_RCPM_RLC.M1017C28	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_am_rlc_buffer_occupancy_values	ACCUMULATION	INT8	The sum of squared RLC AM DL PDU transmission buffer occupancy values. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC.M1017C2	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_ave_number_of_pdu_transmissions	ACCUMULATION	FLOAT	The sum of squared average number of transmissions per PDU values in RLC AM DL.	PMMOResult_RCPM_RLC.M1017C20	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_dl_gross_throughput_of_rlc_am_pdu	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU gross throughput values.	PMMOResult_RCPM_RLC.M1017C13	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_d	ACCUMULA	FLOA	The sum of	PMMOResult_RCPM_	Sum,

l_net_throughput_of_am_rlc_pdu	TION	T	squared RLC AM DL PDU net throughput values.	RLC.M1017C16	nkcttbh, nkrttbh, tot
sum_of_squared_dl_pdu_error_ratio	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU error ratio values.	PMMOResult_RCPM_RLC.M1017C7	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_pdcp_buffer_occupancy_values	ACCUMULATION	FLOAT	The sum of squared PDCP buffer occupancy values in RLC AM DL. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC.M1017C3	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_rlc_am_sdu_dl_error_ratio	ACCUMULATION	FLOAT	The sum of squared SDU error ratio values in RLC AM DL. Measured from the RLC entity.	PMMOResult_RCPM_RLC.M1017C23	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_transmission_time_values_for_dl_am_rlc	ACCUMULATION	INT8	The sum of squared transmission time values for the RLC AM downlink.	PMMOResult_RCPM_RLC.M1017C17	Sum, nkcttbh, nkrttbh, tot
too_good_rlc_am_dl_connections	ACCUMULATION	INT8	The number of too good connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC.M1017C10	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_10	ACCUMULATION	INT8	The number of connections with larger than 1 Mbit/s downlink gross	PMMOResult_RCPM_RLC.M1017C43	Sum, nkcttbh, nkrttbh, tot

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			throughput.		
user_dl_throughput_distribution_class_11	ACCUMULATION	INTEGER	The number of connections with the 2 Mbit/s...4 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC.M1017C50	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_12	ACCUMULATION	INTEGER	The number of connections with the 4 Mbit/s...8 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC.M1017C51	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_13	ACCUMULATION	INTEGER	The number of connections with larger than the 8 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC.M1017C52	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_1	ACCUMULATION	INT8	The number of connections with 0...4 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C34	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_2	ACCUMULATION	INT8	The number of connections with 4...8 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C35	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_3	ACCUMULATION	INT8	The number of connections with 8...16 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C36	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_4	ACCUMULATION	INT8	The number of connections with 16...32 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C37	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_clas	ACCUMULATION	INT8	The number of connections with	PMMOResult_RCPM_RLC.M1017C38	Sum, nkcttbh,

s_5			32...64 kbit/s downlink gross throughput.		nkrttbh, tot
user_dl_throughput_distribution_class_6	ACCUMULATION	INT8	The number of connections with 64...128 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C39	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_7	ACCUMULATION	INT8	The number of connections with 128...256 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C40	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_8	ACCUMULATION	INT8	The number of connections with 256...512 kbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C41	Sum, nkcttbh, nkrttbh, tot
user_dl_throughput_distribution_class_9	ACCUMULATION	INT8	The number of connections with 512 kbit/s...1 Mbit/s downlink gross throughput.	PMMOResult_RCPM_RLC.M1017C42	Sum, nkcttbh, nkrttbh, tot

7.6.117Cell.Nokia.UMTS.rcpm.ul_am_rlc

RCPM RLC - Uplink AM transfer statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
measurement_time_period_for_ul_rlc_am	ACCUMULATION	INT8	The total time period when the measurement was active in the RLC AM UL entity. The	PMMOResult_RCPM_RLC.M1017C33	Sum, nkcttbh, nkrttbh, tot

			active time is the time between when the first RLC SDU arrives in the RLC buffer and when all the RLC PDUs of the packet call have been acknowledged. Periods when the transmission buffers are empty are excluded.		
transmitted_am_rlc_pdus_in_uplink	ACCUMULATION	INT8	The number of received RLC AM PDUs in uplink.	PMMOResult_RCPM_RLC.M1017C32	Sum, nkcttbh, nkrttbh, tot
ul_rlc_am_sdu_payload_of_ps_traffic	ACCUMULATION	INT8	The number of SDU bytes transmitted in uplink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (before PDCP in UL) and includes RLC SDU headers.	PMMOResult_RCPM_RLC.M1017C30	Sum, nkcttbh, nkrttbh, tot

7.6.118Cell.Nokia.UMTS.rcpm.ul_pdcp_sdu_pdu_rlc

RCPM RLC - Uplink PDCP, PDU, SDU transfer statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
user_ul_throughput_distribution_class_1	ACCUMULATION	INTEGER	The number of connections with the 0 kbit/s...250 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC.M1017C53	Sum, nkcttbh, nkrttbh, tot

user_ul_throughput_distribution_class_2	ACCUMULATION	INTEGER	The number of connections with the 250 kbit/s...500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC.M1017C54	Sum, nkcttbh, nkrttbh, tot
user_ul_throughput_distribution_class_3	ACCUMULATION	INTEGER	The number of connections with the 500 kbit/s...1 Mbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC.M1017C55	Sum, nkcttbh, nkrttbh, tot
user_ul_throughput_distribution_class_4	ACCUMULATION	INTEGER	The number of connections with the 1000 kbit/s...1500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC.M1017C56	Sum, nkcttbh, nkrttbh, tot
user_ul_throughput_distribution_class_5	ACCUMULATION	INTEGER	The number of connections with larger than the 1500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC.M1017C57	Sum, nkcttbh, nkrttbh, tot

7.6.119Cell.Nokia.UMTS.rlc_retransmission_wcel

RLC AM PDU retransmission statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
rlc_retrans_distr_class_0_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE without retransmissions.	PMMOResult_RCPM_RLC_WCEL.M1026C44	Sum, nkcttbh, nkrttbh, tot

rlc_retrans_distr_class_1_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with one retransmission.	PMMOResult_RCPM_RLC_WCEL.M1026C45	Sum, nkcttbh, nkrttbh, tot
rlc_retrans_distr_class_2_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with two retransmissions.	PMMOResult_RCPM_RLC_WCEL.M1026C46	Sum, nkcttbh, nkrttbh, tot
rlc_retrans_distr_class_3_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with three retransmissions.	PMMOResult_RCPM_RLC_WCEL.M1026C47	Sum, nkcttbh, nkrttbh, tot
rlc_retrans_distr_class_4_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with four retransmissions.	PMMOResult_RCPM_RLC_WCEL.M1026C48	Sum, nkcttbh, nkrttbh, tot
rlc_retrans_distr_class_5_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with five or more retransmissions or the PDU is discarded.	PMMOResult_RCPM_RLC_WCEL.M1026C49	Sum, nkcttbh, nkrttbh, tot

7.6.120Cell.Nokia.UMTS.rrc.connection_access

RRC - Connection access failures/completions/releases statistics

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
_%_rrc_acc_comp	PERCENTAGE	FLOAT	Percentage of RRC connection access completions over setups.	100 * ({Nokia.rrc.connection_setup.rrc_setup_compl}-{tot_rrc_access_fail})/{Nokia.rrc.connection_setup.rrc_setup_compl}	Average, avg, nkcttbh, nkrttbh
_%_rrc_acc_fail	PERCENTAGE	FLOAT	Percentage of RRC connection access failures over setup completes	100 * {tot_rrc_access_fail}/{Nokia.rrc.connection_setup.rrc_setup_compl}	Average, avg, nkcttbh, nkrttbh
rrc_acc_comp	ACCUMULATION	INT8	A number of RRC connection access completions	PMMOResult_Service_Level.M1001C8	Sum, nkcttbh, nkrttbh, tot
rrc_acc_fail_due_to_radio_int_synch	ACCUMULATION	INT8	A number of RRC connection access failures caused by radio interface synchronisation. If the BTS fails to establish synchronisation at radio L1 during the timer t_inisyf, it will send a RL failure message indicating a cause synchronisation failure to the RNC	PMMOResult_Service_Level.M1001C9	Sum, nkcttbh, nkrttbh, tot
rrc_acc_fail_due_to_rnc_inter_reasons	ACCUMULATION	INT8	A number of RRC connection access failures caused by RNCs internal reasons (eg. Parameter mismatch, timer	PMMOResult_Service_Level.M1001C11	Sum, nkcttbh, nkrttbh, tot

			expiry)		
rrc_acc_fail_due_to_uu_int	ACCUMULATION	INT8	A number of RRC connection access failures caused by UU interface. When the RNC does not receive RRC_CONNECTION_SETUP from the UE.	PMMOResult_Service_Level.M1001C10	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_call_re_establishment	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause call re- establishment. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C569	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_detach	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause detach. This is the case when the UE has sent a new RRC connection request to the new	PMMOResult_Service_Level.M1001C566	Sum, nkcttbh, nkrttbh, tot

			cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_emergency_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause emergency call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C562	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_inter_rat_cell_change_order	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause inter- RAT cell change order. This	PMMOResult_Service_Level.M1001C564	Sum, nkcttbh, nkrttbh, tot

			is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_inter_rat_cell_resel	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause inter- RAT cell reselection. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C563	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mo_background_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating background call.	PMMOResult_Service_Level.M1001C556	Sum, nkcttbh, nkrttbh, tot

			This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mo_conversational_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating conversational call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C553	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mo_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases	PMMOResult_Service_Level.M1001C567	Sum, nkcttbh, nkrttbh,

			due to cell reselection for calls established with the cause originating high priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		tot
rrc_access_release_mo_interactive_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating interactive call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C555	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mo_low_priority	ACCUMULATION	INT8	The number of RRC connection	PMMOResult_Service_Level.M1001C568	Sum, nkcttbh,

_signalling			access releases due to cell reselection for calls established with the cause originating low priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		nkrttbh, tot
rrc_access_release_mo_streaming_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating streaming call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC	PMMOResult_Service_Level.M1001C554	Sum, nkcttbh, nkrttbh, tot

			releases resources for the old RRC connection attempt.		
rrc_access_release_mo_subscribed_traffic_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating subscribed traffic call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C557	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mt_background_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating background call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old	PMMOResult_Service_Level.M1001C561	Sum, nkcttbh, nkrttbh, tot

			cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_cause_unknown	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating - cause unknown. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C572	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mt_conversational_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating conversational call. This is the case when the UE has sent a new	PMMOResult_Service_Level.M1001C558	Sum, nkcttbh, nkrttbh, tot

			RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating high priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C570	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mt_interactive_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating interactive call. This is the case when the UE has	PMMOResult_Service_Level.M1001C560	Sum, nkcttbh, nkrttbh, tot

			sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating low priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C571	Sum, nkcttbh, nkrttbh, tot
rrc_access_release_mt_streaming_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for	PMMOResult_Service_Level.M1001C559	Sum, nkcttbh, nkrttbh, tot

			calls established with the cause terminating streaming call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_registration	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause registration. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C565	Sum, nkcttbh, nkrttbh, tot
rrc_act_rel_directed_retry	ACCUMULATION	INTEGER	The number of RRC connections released after a successful Directed Retry	PMMOResult_Service_Level.M1001C640	Sum, nkcttbh, nkrttbh, tot

			inter-system handover procedure for CS Voice calls. Also some RAB setup failure counter is updated before this counter. This counter does not include Wireless Priority Service related inter-system handovers.		
rrc_connection_access_release_due_to_cell_reselection	ACCUMULATION	INT8	The number of RRC Connection Access releases due to cell reselection. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level.M1001C241	Sum, nkcttbh, nkrttbh, tot
srb_act_fail_backg	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and	PMMOResult_Service_Level.M1001C638	Sum, nkcttbh, nkrttbh, tot

			terminating background calls are included.		
srb_act_fail_conv	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating conversational calls are included.	PMMOResult_Service_Level.M1001C635	Sum, nkcttbh, nkrttbh, tot
srb_act_fail_intera	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating interactive calls are included.	PMMOResult_Service_Level.M1001C637	Sum, nkcttbh, nkrttbh, tot
srb_act_fail_other	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment.	PMMOResult_Service_Level.M1001C639	Sum, nkcttbh, nkrttbh, tot
srb_act_fail_strea	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both	PMMOResult_Service_Level.M1001C636	Sum, nkcttbh, nkrttbh, tot

			originating and terminating streaming calls are included.		
tot_rrc_access_fail	ACCUMULATION	INT8	Total RRC access failures of all causes	{rrc_acc_fail_due_to_radio_int_synch}+ {rrc_acc_fail_due_to_uu_int}+ {rrc_acc_fail_due_to_rnc_inter_reasons}	Sum, nkcttbh, nkrttbh, tot

7.6.121Cell.Nokia.UMTS.rrc.connection_active

RRC - Connection active failures/completions/releases statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rrc_active_fail	PERCENTAGE	FLOAT	Percentage of RRC active failures over access.	100 * {tot_rrc_active_fail}/ ({rrc_active_comp}+ {rrc_active_rel_due_to_srnc_reloc}+ {rrc_active_rel_due_to_pre_emp}+ {rrc_conn_active_rel_due_to_unspec_error_in_cn}+ {tot_rrc_active_fail})	Average, avg, nkcttbh, nkrttbh
rrc_active_comp	ACCUMULATION	INT8	A number of RRC connection active completions	PMMOResult_Service_Level.M1001C12	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_bts_reasons	ACCUMULATION	INT8	A number of RRC connection active failures caused by a BTS	PMMOResult_Service_Level.M1001C17	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_du	ACCUMULA	INT8	A number of RRC	PMMOResult_Service_	Sum,

e_to_ciph_fail	TION		connection active failures caused by a ciphering failure	Level.M1001C19	nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_integrity_check	ACCUMULATION	INT8	A number of RRC connection active failures caused by an integrity check failure	PMMOResult_Service_Level.M1001C20	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_iu_int	ACCUMULATION	INT8	A number of RRC connection active failures caused by the IU interface. When for example, the signalling connection fails between the RNC and CN	PMMOResult_Service_Level.M1001C15	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_radio_interface	ACCUMULATION	INT8	A number of RRC connection active failures caused by a radio interface	PMMOResult_Service_Level.M1001C16	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_rnc_inter_reasons	ACCUMULATION	INT8	A number of RRC connection active failures caused by RNCs internal reasons (eg. Parameter mismatch, timer expiry)	PMMOResult_Service_Level.M1001C21	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_the_iur_int	ACCUMULATION	INT8	A number of RRC connection active failures caused by the IUR interface. When for example, the SRNC relocation procedure fails because of the IUR interface.	PMMOResult_Service_Level.M1001C18	Sum, nkcttbh, nkrttbh, tot
rrc_active_fail_due_to_ue	ACCUMULATION	INT8	The number of RRC active	PMMOResult_Service_Level.M1001C391	Sum, nkcttbh,

			failures due to UE.		nkrttbh, tot
rrc_active_rel_due_to_pre_emp	ACCUMULATION	INT8	A number of RRC connection active releases due to pre emption	PMMOResult_Service_Level.M1001C14	Sum, nkcttbh, nkrttbh, tot
rrc_active_rel_due_to_srnc_reloc	ACCUMULATION	INT8	A number of RRC connection active releases due to SRNC relocation. Note this counters includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level.M1001C13	Sum, nkcttbh, nkrttbh, tot
rrc_conn_act_rel_ganho	ACCUMULATION	INTEGER	The number of RRC active releases due to inter-system handover to Generic Access Network (GAN).	PMMOResult_Service_Level.M1001C643	Sum, nkcttbh, nkrttbh, tot
rrc_conn_act_rel_hho	ACCUMULATION	INTEGER	The number of RRC active releases due to inter-frequency inter-RNC hard handover.	PMMOResult_Service_Level.M1001C800	Sum, nkcttbh, nkrttbh, tot
rrc_conn_act_rel_intra_hho	ACCUMULATION	INTEGER	The number of RRC active releases due to intra-frequency inter-RNC hard handover.	PMMOResult_Service_Level.M1001C642	Sum, nkcttbh, nkrttbh, tot
rrc_conn_act_rel_isho	ACCUMULATION	INTEGER	The number of RRC active	PMMOResult_Service_Level.M1001C803	Sum, nkcttbh,

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			releases due to inter system handover to GSM.		nkrttbh, tot
rrc_conn_active_rel_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	The number of RRC connection active releases due to unspecified error received from CN.	PMMOResult_Service_Level.M1001C421	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel_due_hw_res	ACCUMULATION	INTEGER	The number of RRC connection releases due to RNC HW resources. Also counter M1001C12 is updated along with this counter.	PMMOResult_Service_Level.M1001C629	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel_due_inactivity	ACCUMULATION	INTEGER	The number of RRC connection releases due to user inactivity in Cell-PCH or URA-PCH state. Also counter M1001C12 is updated along with this counter.	PMMOResult_Service_Level.M1001C628	Sum, nkcttbh, nkrttbh, tot
tot_rrc_active_fail	ACCUMULATION	INT8	Total RRC active failures of all causes	{rrc_active_rel_due_to_srnc_reloc}+ {rrc_active_rel_due_to_pre_emp}+ {rrc_active_fail_due_to_iu_int}+ {rrc_active_fail_due_to_radio_interface}+ {rrc_active_fail_due_to_bts_reasons}+ {rrc_active_fail_due_to_the_iur_int}+ {rrc_active_fail_due_to_ciph_fail}+ {rrc_active_fail_due_to	Sum, nkcttbh, nkrttbh, tot

				_integrity_check}+ {rrc_active_fail_due_to _rnc_inter_reasons}+ {rrc_active_fail_due_to _ue}	

7.6.122Cell.Nokia.UMTS.rrc.connection_mobility_procedures

RRC - Connection mobility procedures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_active_set_update_rl_del_success	PERCENTAGE	FLOAT	The percentage of successfully deleted radio links with an active set update procedure.	100 * {active_set_update_rl_del_success}/ {active_set_update_rl_del_attempts}	Average, avg, nkcttbh, nkrttbh
active_set_update_rl_add_attempts	ACCUMULATION	INTEGER	The number of attempted radio link additions with an active set update procedure.	PMMOResult_RRC.M1006C121	Sum, nkcttbh, nkrttbh, tot
active_set_update_rl_add_fail_no_reply	ACCUMULATION	INTEGER	The number of failed radio link additions with an active set update procedure due to the UE not responding to an RRC: ACTIVE SET UPDATE.	PMMOResult_RRC.M1006C124	Sum, nkcttbh, nkrttbh, tot
active_set_update_rl_add_failure_ue	ACCUMULATION	INTEGER	The number of failed radio link additions with an active set update procedure due to the UE responding with an RRC: ACTIVE	PMMOResult_RRC.M1006C123	Sum, nkcttbh, nkrttbh, tot

			SET UPDATE FAILURE.		
active_set_update_rl_add_success	ACCUMULATION	INTEGER	The number of successfully added radio links with an active set update procedure.	PMMOResult_RRC.M1006C122	Sum, nkcttbh, nkrttbh, tot
active_set_update_rl_del_attempts	ACCUMULATION	INTEGER	The number of attempted radio link deletions with an active set update procedure.	PMMOResult_RRC.M1006C125	Sum, nkcttbh, nkrttbh, tot
active_set_update_rl_del_success	ACCUMULATION	INTEGER	The number of successfully deleted radio links with an active set update procedure.	PMMOResult_RRC.M1006C126	Sum, nkcttbh, nkrttbh, tot
assistance_data_delivery_messages	ACCUMULATION	INTEGER	The number of sent UE positioning related Assistance Data Delivery messages.	PMMOResult_RRC.M1006C99	Sum, nkcttbh, nkrttbh, tot
cell_update_att_due_to_cell_resel	ACCUMULATION	INT8	A number of cell update attempts due to cell reselection.	PMMOResult_RRC.M1006C34	Sum, nkcttbh, nkrttbh, tot
cell_update_att_due_to_data_transm	ACCUMULATION	INT8	A number of cell update attempts due to UL data transmission. If the cell update cause in the RRC,CELL_UPDATE message is UL data transmission then the RNCs RRC signalling entity forwards this information to RNCs PS and starts the cell update procedure.	PMMOResult_RRC.M1006C36	Sum, nkcttbh, nkrttbh, tot

cell_update_att_due_to_paging_resp	ACCUMULATION	INT8	A number of cell update attempts due to paging response.If the cell update cause in the RRC CELL_UPDATE message is paging response, the RNCs RRC signalling entity updates the MS location information and if the reason for paging was DL data transmission while the MS was in URA_PCH state, this location information is forwarded to the RNCs PS.	PMMOResult_RRC.M1006C37	Sum, nkcttbh, nkrttbh, tot
cell_update_att_due_to_per_update	ACCUMULATION	INT8	A number of cell update attempts due to periodic update. If the cell update causes in the RRC CELL_UPDATE message is periodic cell update, the RNCs RRC signalling entity starts the cell update procedure.	PMMOResult_RRC.M1006C35	Sum, nkcttbh, nkrttbh, tot
cell_update_att_due_to_radio_link_failure	ACCUMULATION	INT8	A number of cell update attempts due to a radio link failure.	PMMOResult_RRC.M1006C39	Sum, nkcttbh, nkrttbh, tot
cell_update_att_d	ACCUMULA	INT8	A number of cell	PMMOResult_RRC.M	Sum,

ue_to_re_entered_service_area	TION		update attempts due to a re entered service area.	1006C38	nkcttbh, nkrttbh, tot
cell_update_att_due_to_rlc_unrecoverable_error	ACCUMULATION	INT8	A number of cell update attempts due to an RLC unrecoverable error.	PMMOResult_RRC.M1006C40	Sum, nkcttbh, nkrttbh, tot
denom_res_allo_tm_fach	ACCUMULATION	INTEGER	Denominator for M1006C184, used for average calculation.	PMMOResult_RRC.M1006C185	Sum, nkcttbh, nkrttbh, tot
denom_res_allo_tm_rrc_setup	ACCUMULATION	INTEGER	Denominator for M1006C182, used for average calculation.	PMMOResult_RRC.M1006C183	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_dch_pch	ACCUMULATION	INTEGER	Denominator for M1006C178 used for average calculation.	PMMOResult_RRC.M1006C179	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_fach_pch	ACCUMULATION	INTEGER	Denominator for M1006C180 used for average calculation.	PMMOResult_RRC.M1006C181	Sum, nkcttbh, nkrttbh, tot
ho_from_utran_com_fail	ACCUMULATION	INT8	Number of received handover from UTRAN Command Failures for Circuit Switched calls.	PMMOResult_RRC.M1006C64	Sum, nkcttbh, nkrttbh, tot
ho_from_utran_com	ACCUMULATION	INT8	Number of sent handover from UTRAN Commands for Circuit Switched calls.	PMMOResult_RRC.M1006C63	Sum, nkcttbh, nkrttbh, tot
inter_rat_ho_from_utran_fail	ACCUMULATION	INT8	Number of failed inter RAT handovers for Packet Switched calls.	PMMOResult_RRC.M1006C62	Sum, nkcttbh, nkrttbh, tot
inter_rat_ho_from_utran	ACCUMULATION	INT8	Number of started (attempted) inter	PMMOResult_RRC.M1006C61	Sum, nkcttbh,

			RAT handovers for Packet Switched calls.		nkrttbh, tot
rrc_conn_mode_left_cell	ACCUMULATION	INT8	-Obsolete in RN2.1- A number of RRC connected mode UEs that have moved to another cell.	PMMOResult_RRC.M1006C43	Sum, nkcttbh, nkrttbh, tot
rrc_connect_mode_ues_that_left_cell_thru_cell_or_ura_update_proc	ACCUMULATION	INT8	[rrc_connected_mode_ues_that_have_left_the_cell_through_cell_or_ura_update_procedure] - A number of RRC connected mode UEs in CELL_FACH, CELL_PCH, URA_PCH state that have left the cell due to CellURA update procedure. Full name (too long) is RRC_CONNECTED_MODE_UES_THAT_HAVE_LEFT_THE_CELL_THROUGH_CELL_OR_URA_UPDATE_PROCEDURE	PMMOResult_RRC.M1006C66	Sum, nkcttbh, nkrttbh, tot
rrc_ho_to_utran_comp	ACCUMULATION	INT8	Number of received RRC handover to UTRAN complete messages for Circuit Switched calls	PMMOResult_RRC.M1006C65	Sum, nkcttbh, nkrttbh, tot
rrc_re_est_fail_no	ACCUMULA	INTEG	The number of	PMMOResult_RRC.M	Sum,

reply_mr	TION	ER	failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM message sent by the RNC, for UEs with at least two RABs.	1006C191	nkcttbh, nkrttbh, tot
rrc_re_est_fail_no reply_rt	ACCUMULA TION	INTEG ER	The number of failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM message sent by the RNC, for UEs with at least one RT RAB.	PMMOResult_RRC.M 1006C188	Sum, nkcttbh, nkrttbh, tot
rrc_re_est_fail_ue _mr	ACCUMULA TION	INTEG ER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER RECONFIGURATI ON FAILURE message, for UEs with at least two RABs.	PMMOResult_RRC.M 1006C190	Sum, nkcttbh, nkrttbh, tot
rrc_re_est_fail_ue _rt	ACCUMULA TION	INTEG ER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER RECONFIGURATI ON FAILURE message, for UEs with at least one RT	PMMOResult_RRC.M 1006C187	Sum, nkcttbh, nkrttbh, tot

			RAB.		
rrc_re_est_succ_mr	ACCUMULATION	INTEGER	The number of successful RRC connection re-establishments for UEs with at least two RABs.	PMMOResult_RRC.M1006C189	Sum, nkcttbh, nkrttbh, tot
rrc_re_est_succ_rt	ACCUMULATION	INTEGER	The number of successful RRC connection re-establishments for UEs with at least one RT RAB.	PMMOResult_RRC.M1006C186	Sum, nkcttbh, nkrttbh, tot
sum_res_allo_time_fach	ACCUMULATION	INTEGER	Sum of HW and Radio resource allocation time between UL/DL capacity request or RT-RAB Assignment Request received and NBAP: RADIO LINK SETUP sent to NodeB. This counter, divided by the denominator, provides the average resource allocation time.	PMMOResult_RRC.M1006C184	Sum, nkcttbh, nkrttbh, tot
sum_res_allo_time_rrc_setup	ACCUMULATION	INTEGER	Sum of HW, Transmission and Radio resource allocation time in the RRC Connection Establishment procedure, defined as the time between	PMMOResult_RRC.M1006C182	Sum, nkcttbh, nkrttbh, tot

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			RRC: RRC CONNECTION REQUEST received by RNC and RRC:RRC CONNECTION SETUP sent to UE. This counter, divided by the denominator, provides the average resource allocation time.		
sum_st_trans_time_fach_pch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-FACH state to Cell-PCH or URA-PCH state, defined as the time between: When RNC decides to initiate Cell_FACH to Cell_PCH transition - RRC: Physical Channel Reconfiguration Complete. This counter, divided by the denominator, provides the average state transition time.	PMMOResult_RRC.M1006C180	Sum, nkcttbh, nkrttbh, tot
ura_update_att_due_to_change_of_ura	ACCUMULATION	INT8	A number of cell update attempts due to a change of URA (URA reselection).	PMMOResult_RRC.M1006C41	Sum, nkcttbh, nkrttbh, tot
ura_update_att_due_to_per_update	ACCUMULATION	INT8	A number of URA update attempts due to periodic update.	PMMOResult_RRC.M1006C42	Sum, nkcttbh, nkrttbh, tot

7.6.123Cell.Nokia.UMTS.rrc.connection_setup

RRC - Connection setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_rrc_connections_success_rate	PERCENTAGE	FLOAT	Percentage of Radio Resource Control (RRC) connection setups completed	100 * {rrc_setup_compl}/ {rrc_setup_att}	Average, avg, nkcttbh, nkrttbh
_%_rrc_setup_fail	PERCENTAGE	FLOAT	Percentage of Radio Resource Control (RRC) connection setups failed.	100 * ({rrc_setup_att}-{rrc_setup_compl})/ {rrc_setup_att}	Average, avg, nkcttbh, nkrttbh
access_stratum_release_indicator_release_6	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs with access stratum release indicator release 6.	PMMOResult_Service_Level.M1001C616	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup_completed_after_directed	ACCUMULATION	INT8	The RRC connection setup is completed after directed to the cell. This counter is updated to that cell to which the RRC connection is directed.	PMMOResult_Service_Level.M1001C259	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup_completed_and_directed	ACCUMULATION	INT8	RRC Connection setup completed and directed to another cell. This counter is updated for the cell where the RRC CONNECTION REQUEST was received.	PMMOResult_Service_Level.M1001C260	Sum, nkcttbh, nkrttbh, tot

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rrc_conn_setup_fail_due_to_icsu_overload	ACCUMULATION	INTEGER	The number of RRC setup failures caused by ICSU overload.	PMMOResult_Service_Level.M1001C618	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup_fail_due_to_rnti_allo_fail	ACCUMULATION	INT8	Number of RRC setup failures caused by RNTI allocation failure.	PMMOResult_Service_Level.M1001C247	Sum, nkcttbh, nkrttbh, tot
rrc_connection_setup_attempt_repeats	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC. This counter is used for gathering information on RRC connection request retransmissions eventually leading to the successful RRC connection establishment (i.e. the retransmissions were not caused by a failure in the Uu).	PMMOResult_Service_Level.M1001C242	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_call_re_establishment	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the	PMMOResult_Service_Level.M1001C589	Sum, nkcttbh, nkrttbh, tot

			cause call re-establishment from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_detach	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause detach from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C586	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_emergency_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause emergency call from the same UE if the RRC connection request is rejected due to an unsuccessful resource	PMMOResult_Service_Level.M1001C582	Sum, nkcttbh, nkrttbh, tot

			reservation attempt in RNC.		
rrc_setup_att_repeat_inter_rat_cell_change_order	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause inter-RAT cell change order from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C584	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_inter_rat_cell_resel	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause inter-RAT cell reselection from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C583	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mo_background_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating	PMMOResult_Service_Level.M1001C576	Sum, nkcttbh, nkrttbh, tot

			background call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mo_conversational_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating conversational call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C573	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mo_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating high priority signalling from the same UE if the RRC connection request is rejected due to an	PMMOResult_Service_Level.M1001C587	Sum, nkcttbh, nkrttbh, tot

			unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mo_interactive_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating interactive call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C575	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mo_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating low priority signalling from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C588	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mo_streaming_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully	PMMOResult_Service_Level.M1001C574	Sum, nkcttbh, nkrttbh, tot

			received by the RNC) with the cause originating streaming call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mo_subscribed_traffic_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating subscribed traffic call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C577	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mt_background_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating background call from the same UE if the RRC	PMMOResult_Service_Level.M1001C581	Sum, nkcttbh, nkrttbh, tot

			connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mt_cause_unknown	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating - cause unknown from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C592	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mt_conversational_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating conversational call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C578	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mt_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions	PMMOResult_Service_Level.M1001C590	Sum, nkcttbh, nkrttbh, tot

			(successfully received by the RNC) with the cause terminating high priority signalling from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mt_interactive_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating interactive call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C580	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_mt_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating low priority	PMMOResult_Service_Level.M1001C591	Sum, nkcttbh, nkrttbh, tot

			signalling from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mt_streaming_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating streaming call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C579	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att_repeat_registration	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause registration from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level.M1001C585	Sum, nkcttbh, nkrttbh, tot
rrc_setup_att	ACCUMULATION	INT8	A number of RRC connection setup	PMMOResult_Service_Level.M1001C0	Sum, nkcttbh,

			attempts		nkrttbh, tot
rrc_setup_compl	ACCUMULATION	INT8	A number of RRC connection setups completed	PMMOResult_Service_Level.M1001C1	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_ac	ACCUMULATION	INT8	A number of RRC connection setup failures caused by AC	PMMOResult_Service_Level.M1001C3	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_bts_reasons	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a BTS. When the BTS rejects an initial RL setup	PMMOResult_Service_Level.M1001C4	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_frozen_bts	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a frozen BTS. Frozen BTS means that currently no new RRC connections are allowed	PMMOResult_Service_Level.M1001C7	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_hc	ACCUMULATION	INT8	A number of RRC connection setup failures caused by HC	PMMOResult_Service_Level.M1001C2	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_iub_aal2_trans	ACCUMULATION	INT8	The number of RRC setup failures caused by Iub AAL2 transport resource shortage.	PMMOResult_Service_Level.M1001C530	Sum, nkcttbh, nkrttbh, tot
rrc_setup_fail_due_to_rnc_inter_reas	ACCUMULATION	INT8	A number of RRC connection setup	PMMOResult_Service_Level.M1001C6	Sum, nkcttbh,

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ons			failures caused by RNCs internal reasons (eg. Parameter mismatch, timer expiry)		nkrttbh, tot
rrc_setup_fail_due_to_trans	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a transmission	PMMOResult_Service_Level.M1001C5	Sum, nkcttbh, nkrttbh, tot
rrc_setup_reject_due_to_emergency_call_redirection	ACCUMULATION	INTEGER	The number of RRC connections rejected due to emergency call redirection.	PMMOResult_Service_Level.M1001C617	Sum, nkcttbh, nkrttbh, tot
succ_rrc_setup_backg	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a background call. Both originating and terminating background calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level.M1001C633	Sum, nkcttbh, nkrttbh, tot
succ_rrc_setup_conv	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a conversational call. Both originating and terminating conversational calls are included. RRC connections established via	PMMOResult_Service_Level.M1001C630	Sum, nkcttbh, nkrttbh, tot

			SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.		
succ_rrc_setup_intera	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a interactive call. Both originating and terminating interactive calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level.M1001C632	Sum, nkcttbh, nkrttbh, tot
succ_rrc_setup_other	ACCUMULATION	INTEGER	The number of successful RRC connection setups with establishment cause other than those covered by counters M1001C630-M1001C633. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level.M1001C634	Sum, nkcttbh, nkrttbh, tot
succ_rrc_setup_strea	ACCUMULATION	INTEGER	The number of successful RRC	PMMOResult_Service_Level.M1001C631	Sum, nkcttbh,

			connection setups for a streaming call. Both originating and terminating streaming calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.		nkrttbh, tot
tot_rrc_setup_fail	ACCUMULATION	INT8	A number of RRC connection setup failures. Theoretically a should be the total of all the failure cause types	{rrc_setup_att}-{rrc_setup_compl}	Sum, nkcttbh, nkrttbh, tot
ue_support_for_edch_category_1	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 1 defined in 3GPP TS 25.306.	PMMOResult_Service_Level.M1001C610	Sum, nkcttbh, nkrttbh, tot
ue_support_for_edch_category_2	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 2 defined in 3GPP TS 25.306.	PMMOResult_Service_Level.M1001C611	Sum, nkcttbh, nkrttbh, tot
ue_support_for_edch_category_3	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 3 defined in 3GPP TS 25.306.	PMMOResult_Service_Level.M1001C612	Sum, nkcttbh, nkrttbh, tot
ue_support_for_ed	ACCUMULA	INTEG	The number of	PMMOResult_Service	Sum,

ch_category_4	TION	ER	RRC connection establishments by UEs supporting E-DCH category 4 defined in 3GPP TS 25.306.	_Level.M1001C613	nkcttbh, nkrttbh, tot
ue_support_for_edch_category_5	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 5 defined in 3GPP TS 25.306.	PMMOResult_Service_Level.M1001C614	Sum, nkcttbh, nkrttbh, tot
ue_support_for_edch_category_6	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 6 defined in 3GPP TS 25.306.	PMMOResult_Service_Level.M1001C615	Sum, nkcttbh, nkrttbh, tot
ue_support_ganho	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs that support handover to Generic Access Network (GAN).	PMMOResult_Service_Level.M1001C641	Sum, nkcttbh, nkrttbh, tot

7.6.124Cell.Nokia.UMTS.rrc.connections

RRC connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_connection_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RRC Connections that enter a new reference cell.	PMMOResult_Service_Level.M1001C466	Sum, nkcttbh, nkrttbh, tot

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rrc_connection_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RRC Connections that have left from the old reference cell.	PMMOResult_Service_Level.M1001C443	Sum, nkcttbh, nkrttbh, tot

7.6.125Cell.Nokia.UMTS.rrc.establishment_per_ue_capability

RRC - Connection establishments per UE statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
access_stratum_release_indicator_release_4	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 4.	PMMOResult_Service_Level.M1001C404	Sum, nkcttbh, nkrttbh, tot
access_stratum_release_indicator_release_5	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 5.	PMMOResult_Service_Level.M1001C552	Sum, nkcttbh, nkrttbh, tot
access_stratum_release_indicator_release_99	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 99.	PMMOResult_Service_Level.M1001C405	Sum, nkcttbh, nkrttbh, tot
ue_rxtx_time_difference_positioning_capability_type_2	ACCUMULATION	INT8	The number of RRC connection establishments by UEs that support RX-TX time difference positioning capability type 2.	PMMOResult_Service_Level.M1001C408	Sum, nkcttbh, nkrttbh, tot
ue_support_for_gsm	ACCUMULATION	INT8	The number of RRC connection establishments by	PMMOResult_Service_Level.M1001C406	Sum, nkcttbh, nkrttbh,

			UEs that support GSM.		tot
ue_support_for_hsdsch_class_1_to_6	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 1, 2, 3, 4, 5 or 6. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level.M1001C548	Sum, nkcttbh, nkrttbh, tot
ue_support_for_hsdsch_class_11_or_12	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 11 or 12. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level.M1001C551	Sum, nkcttbh, nkrttbh, tot
ue_support_for_hsdsch_class_7_or_8	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 7 or 8. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level.M1001C549	Sum, nkcttbh, nkrttbh, tot
ue_support_for_hsdsch_class_9_or_10	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 9 or 10. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level.M1001C550	Sum, nkcttbh, nkrttbh, tot
ue_support_for_ip	ACCUMULA	INT8	The number RRC	PMMOResult_Service_	Sum,

hc	TION		connection establishments by UEs that support RFC2507 IP header compression.	Level.M1001C389	nkcttbh, nkrttbh, tot
ue_support_for_multi_carrier_cdma	ACCUMULATION	INT8	The number of RRC connection establishments by UEs that support multi-carrier CDMA.	PMMOResult_Service_Level.M1001C407	Sum, nkcttbh, nkrttbh, tot
ue_support_for_rohc	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number RRC connection establishments by UEs that support RFC3095 (ROHC) IP header compression.	PMMOResult_Service_Level.M1001C390	Sum, nkcttbh, nkrttbh, tot
ue_support_nw_ag_ps	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs that support network assisted GPS.	PMMOResult_Service_Level.M1001C595	Sum, nkcttbh, nkrttbh, tot

7.6.126Cell.Nokia.UMTS.rrc.radio_bearer_setup

Radio bearer setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
att_rb_setup_hsdpa	ACCUMULATION	INTEGER	The number of attempted Radio Bearer setups for HSDPA.	PMMOResult_RRC.M1006C149	Sum, nkcttbh, nkrttbh, tot
fail_rb_setup_hsdpa_noreply	ACCUMULATION	INTEGER	The number of failed Radio Bearer setups for HSDPA due to UE	PMMOResult_RRC.M1006C192	Sum, nkcttbh, nkrttbh, tot

			not responding.		
fail_rb_setup_hsdpa_ue	ACCUMULATION	INTEGER	The number of failed Radio Bearer setups for HSDPA due to UE responding with a failure message.	PMMOResult_RRC.M1006C193	Sum, nkcttbh, nkrttbh, tot
succ_rb_setup_hsdpa	ACCUMULATION	INTEGER	The number of successful Radio Bearer setups for HSDPA.	PMMOResult_RRC.M1006C150	Sum, nkcttbh, nkrttbh, tot

7.6.127Cell.Nokia.UMTS.rrc.setup_causes_call_reestablish

RRC - Connection setup cause:call re-establishments statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
call_re_estab_attempts	ACCUMULATION	INT8	A number of call re establishment attempts	PMMOResult_Service_Level.M1001C58	Sum, nkcttbh, nkrttbh, tot
call_re_estab_failures	ACCUMULATION	INT8	A number of call re establishment attempt failures	PMMOResult_Service_Level.M1001C59	Sum, nkcttbh, nkrttbh, tot

7.6.128Cell.Nokia.UMTS.rrc.setup_causes_detach

RRC - Connection setup cause:call detachments statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
detach_attempts	ACCUMULATION	INT8	A number of detach attempts	PMMOResult_Service_Level.M1001C48	Sum, nkcttbh, nkrttbh, tot

detach_failures	ACCUMULATION	INT8	A number of detach attempt failures	PMMOResult_Service_Level.M1001C49	Sum, nkcttbh, nkrttbh, tot

7.6.129Cell.Nokia.UMTS.rrc.setup_causes_emergency

RRC - Connection setup cause:emergency calls statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
emergency_call_attempts	ACCUMULATION	INT8	A number of emergency call attempts	PMMOResult_Service_Level.M1001C40	Sum, nkcttbh, nkrttbh, tot
emergency_call_failures	ACCUMULATION	INT8	A number of emergency call attempt failures	PMMOResult_Service_Level.M1001C41	Sum, nkcttbh, nkrttbh, tot

7.6.130Cell.Nokia.UMTS.rrc.setup_causes_high_priority_sig

RRC - Connection setup cause:high priority signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_high_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile originating high priority signalling attempts	PMMOResult_Service_Level.M1001C50	Sum, nkcttbh, nkrttbh, tot
mobile_originating_high_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile originating high priority signalling attempt failures	PMMOResult_Service_Level.M1001C51	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_high_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile terminating high priority signalling attempts	PMMOResult_Service_Level.M1001C52	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_high_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile terminating high priority	PMMOResult_Service_Level.M1001C53	Sum, nkcttbh, nkrttbh,

			signalling attempt failures		tot

7.6.131Cell.Nokia.UMTS.rrc.setup_causes_intr_rat

RRC - Connection setup cause: intra RAT related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
intr_rat_cell_chng_ord_attempts	ACCUMULATION	INT8	A number of intr_rat_cell_chng_ord attempts	PMMOResult_Service_Level.M1001C44	Sum, nkcttbh, nkrttbh, tot
intr_rat_cell_chng_ord_failures	ACCUMULATION	INT8	A number of intr_rat_cell_chng_ord failures	PMMOResult_Service_Level.M1001C45	Sum, nkcttbh, nkrttbh, tot
intr_rat_cell_re_select_attempts	ACCUMULATION	INT8	A number of intr_rat_cell_re_select attempts	PMMOResult_Service_Level.M1001C42	Sum, nkcttbh, nkrttbh, tot
intr_rat_cell_re_select_failures	ACCUMULATION	INT8	A number of intr_rat_cell_re_select failures	PMMOResult_Service_Level.M1001C43	Sum, nkcttbh, nkrttbh, tot

7.6.132Cell.Nokia.UMTS.rrc.setup_causes_intrregistration

RRC - Connection setup cause:registration request statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
registration_attempts	ACCUMULATION	INT8	A number of registration attempts	PMMOResult_Service_Level.M1001C46	Sum, nkcttbh, nkrttbh, tot
registration_failure	ACCUMULA	INT8	A number of	PMMOResult_Service_	Sum,

s	TION		registration failures	Level.M1001C47	nkcttbh, nkrttbh, tot

7.6.133Cell.Nokia.UMTS.rrc.setup_causes_low_priority_sig

RRC - Connection setup cause:low priority signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_low_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile originating low priority signalling attempts	PMMOResult_Service_Level.M1001C54	Sum, nkcttbh, nkrttbh, tot
mobile_originating_low_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile originating low priority signalling attempt failures	PMMOResult_Service_Level.M1001C55	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_low_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile terminating low priority signalling attempts	PMMOResult_Service_Level.M1001C56	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_low_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile terminating low priority signalling attempt failures	PMMOResult_Service_Level.M1001C57	Sum, nkcttbh, nkrttbh, tot

7.6.134Cell.Nokia.UMTS.rrc.setup_causes_mobile_orig

RRC - Connection setup cause:mobile originating statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_background_call_attempts	ACCUMULATION	INT8	A number of mobile originating background call attempts	PMMOResult_Service_Level.M1001C28	Sum, nkcttbh, nkrttbh, tot
mobile_originating_background_call_failures	ACCUMULATION	INT8	A number of mobile originating background call	PMMOResult_Service_Level.M1001C29	Sum, nkcttbh, nkrttbh,

			attempt failures		tot
mobile_originating_conversational_call_attempts	ACCUMULATION	INT8	A number of mobile originating conversational call attempts	PMMOResult_Service_Level.M1001C22	Sum, nkcttbh, nkrttbh, tot
mobile_originating_conversational_call_failures	ACCUMULATION	INT8	A number of mobile originating conversational call attempt failures	PMMOResult_Service_Level.M1001C23	Sum, nkcttbh, nkrttbh, tot
mobile_originating_interactive_call_attempts	ACCUMULATION	INT8	A number of mobile originating interactive call attempts	PMMOResult_Service_Level.M1001C26	Sum, nkcttbh, nkrttbh, tot
mobile_originating_interactive_call_failures	ACCUMULATION	INT8	A number of mobile originating interactive call attempt failures	PMMOResult_Service_Level.M1001C27	Sum, nkcttbh, nkrttbh, tot
mobile_originating_streaming_call_attempts	ACCUMULATION	INT8	A number of mobile originating streaming call attempts	PMMOResult_Service_Level.M1001C24	Sum, nkcttbh, nkrttbh, tot
mobile_originating_streaming_call_failures	ACCUMULATION	INT8	A number of mobile originating streaming call attempt failures	PMMOResult_Service_Level.M1001C25	Sum, nkcttbh, nkrttbh, tot
mobile_originating_subscribed_traffic_call_attempts	ACCUMULATION	INT8	A number of mobile originating subscribed traffic call attempts	PMMOResult_Service_Level.M1001C30	Sum, nkcttbh, nkrttbh, tot
mobile_originating_subscribed_traffic_call_failures	ACCUMULATION	INT8	A number of mobile originating subscribed traffic call attempt failures	PMMOResult_Service_Level.M1001C31	Sum, nkcttbh, nkrttbh, tot

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7.6.135Cell.Nokia.UMTS.rrc.setup_causes_mobile_term

RRC - Connection setup cause:mobile terminating statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_terminating_background_call_attempts	ACCUMULATION	INT8	A number of mobile terminating background call attempts	PMMOResult_Service_Level.M1001C38	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_background_call_failures	ACCUMULATION	INT8	A number of mobile terminating background call attempt failures	PMMOResult_Service_Level.M1001C39	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_conversational_call_attempts	ACCUMULATION	INT8	A number of mobile terminating conversational call attempts	PMMOResult_Service_Level.M1001C32	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_conversational_call_failures	ACCUMULATION	INT8	A number of mobile terminating conversational call attempt failures	PMMOResult_Service_Level.M1001C33	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_interactive_call_attempts	ACCUMULATION	INT8	A number of mobile terminating interactive call attempts	PMMOResult_Service_Level.M1001C36	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_interactive_call_failures	ACCUMULATION	INT8	A number of mobile terminating interactive call attempt failures	PMMOResult_Service_Level.M1001C37	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_streaming_call_attempts	ACCUMULATION	INT8	A number of mobile terminating streaming call attempts	PMMOResult_Service_Level.M1001C34	Sum, nkcttbh, nkrttbh, tot
mobile_terminating_streaming_call_failures	ACCUMULATION	INT8	A number of mobile terminating streaming call attempt failures	PMMOResult_Service_Level.M1001C35	Sum, nkcttbh, nkrttbh, tot

7.6.136Cell.Nokia.UMTS.rrc.setup_causes_term_unknown

RRC - Connection setup cause:unknown termination of calls statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
terminating_cause_unknown_attempts	ACCUMULATION	INT8	A number of terminating call attempts with an unknown cause	PMMOResult_Service_Level.M1001C60	Sum, nkcttbh, nkrttbh, tot
terminating_cause_unknown_failures	ACCUMULATION	INT8	A number of terminating calls with an unknown cause failure	PMMOResult_Service_Level.M1001C61	Sum, nkcttbh, nkrttbh, tot

7.6.137Cell.Nokia.UMTS.sccpch

Secondary Common Control Physical Channel (SCCPCH) related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_fach_total_throughput_sab_denom	ACCUMULATION	INT8	The denominator for FACH Throughput for Service Area Broadcast (user data and signalling).	PMMOResult_Cell_Resource.M1000C131	Sum, nkcttbh, nkrttbh, tot
ave_fach_total_throughput_sab	ACCUMULATION	INT8	The total throughput of FACH containing the CTCH channel used for Service Area Broadcast. Both user data and signalling are included. This counter, divided by the denominator, gives the average total throughput of	PMMOResult_Cell_Resource.M1000C130	Sum, nkcttbh, nkrttbh, tot

			the channel.		
ave_fach_user_data_throughput_for_sccpch_exc_pch	INTENSITY	FLOAT	Average FACH throughput of user data only in bit/s for a SCCPCH (PCH not present).This counter, divided by the denominator, gives Average FACH data throughput for SCCPCH channel (excluding PCH) on a measurement period.The FACH_u includes only the user related data.	PMMOResult_Cell_Resource.M1000C107	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_fach_user_data_throughput_for_sccpch_inc_pch	INTENSITY	FLOAT	Average FACH throughput of user data only in bit/s for a SCCPCH including PCH. This counter, divided by the denominator, gives Average FACH user throughput for SCCPCH channel including PCH on a measurement period.The FACH_u includes only the user related data.	PMMOResult_Cell_Resource.M1000C68	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_fach_user_throughput_sab_denom	ACCUMULATION	INT8	The denominator for counter FACH Throughput for Service Area Broadcast (user data only).	PMMOResult_Cell_Resource.M1000C133	Sum, nkcttbh, nkrttbh, tot

ave_fach_user_throughput_sab	ACCUMULATION	INT8	The user data throughput of FACH containing the CTCH channel used for Service Area Broadcast. This counter, divided by the denominator, gives the average user data throughput of the channel.	PMMOResult_Cell_Resource.M1000C132	Sum, nkcttbh, nkrttbh, tot
ave_fach_user_tot_throughput_for_sccpch_exc_pch	INTENSITY	FLOAT	Average FACH throughput of both user data and signalling in bit/s for a SCCPCH (PCH not present).This counter, divided by the denominator, gives Average FACH throughput for SCCPCH channel (excluding PCH) on a measurement period.The FACH Total throughput means all the user related data (FACH_u) and signalling (FACH_c).	PMMOResult_Cell_Resource.M1000C105	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_fach_user_tot_throughput_for_sccpch_inc_pch	INTENSITY	FLOAT	Average FACH throughput of both user data and signalling in bit/s	PMMOResult_Cell_Resource.M1000C66	Average, avg, max, min, nkcttbh,

			for a SCCPCH including PCH. This counter, divided by the denominator, gives Average FACH throughput for SCCPCH channel including PCH on a measurement period.The FACH Total throughput means all the user related data (FACH_u) and signalling (FACH_c)		nkrttbh, tot
ave_pch_throughput	INTENSITY	FLOAT	Average PCH throughput in bit/s for a SCCPCH channel including PCH	PMMOResult_Cell_Resource.M1000C70	Average, avg, max, min, nkcttbh, nkrttbh, tot
ave_sccpch_exc_pch_load	INTENSITY	FLOAT	Average load of SCCPCH channel PCH not present measured as percentage. This counter, divided by the denominator, gives Average SCCPCH channel load excluding PCH on a measurement period.The FACH_u and FACH_c logical channels are mapped to this SCCPCH physical channel. When this SCCPCH is	PMMOResult_Cell_Resource.M1000C103	Average, avg, max, min, nkcttbh, nkrttbh, tot

			used this PCH channel is found in the SCCPCH channel including PCH.		
ave_sccpch_inc_pch_load	INTENSITY	FLOAT	Average load of SCCPCH channel including PCH.This counter, divided by the denominator, gives Average SCCPCH channel load including PCH on a measurement period.The FACH_u, FACH_c and PCH transport channels are mapped to this SCCPCH physical channel. When more than one SCCPCH are used this channel includes only PCH.	PMMOResult_Cell_Resource.M1000C64	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_fach_user_data_throughput_for_sccpch_exc_pch	INTENSITY	FLOAT	Calculation for average FACH throughput of user data only, PCH not present	{ave_fach_user_data_throughput_for_sccpch_exc_pch} / {fach_user_data_throughput_denom_1}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_fach_user_data_throughput_for_sccpch_inc_pch	INTENSITY	FLOAT	Calculation for average FACH throughput of user data only	{ave_fach_user_data_throughput_for_sccpch_inc_pch} / {fach_user_data_throughput_denom_0}	Average, avg, max, min, nkcttbh, nkrttbh,

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					tot
average_fach_user_tot_throughput_for_sccpch_exc_pch	INTENSITY	FLOAT	Calculation for average FACH user data and signalling, PCH not present	{ave_fach_user_tot_throughput_for_sccpch_exc_pch} / {fach_user_tot_throughput_denom_1}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_fach_user_tot_throughput_for_sccpch_inc_pch	INTENSITY	FLOAT	Calculation for average FACH throughput of user data and signalling	{ave_fach_user_tot_throughput_for_sccpch_inc_pch} / {fach_user_tot_throughput_denom_0}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_pch_throughput	INTENSITY	FLOAT	Calculation for average PCH throughput	{ave_pch_throughput} / {pch_throughput_denom_0}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_sccpch_exc_pch_load	INTENSITY	FLOAT	Calculation for average load of SCCPCH channel, PCH not present	{ave_sccpch_exc_pch_load} / {sccpch_load_denom_1}	Average, avg, max, min, nkcttbh, nkrttbh, tot
average_sccpch_inc_pch_load	INTENSITY	FLOAT	Calculation for average load of SCCPCH channel	{ave_sccpch_inc_pch_load} / {sccpch_load_denom_0}	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_total_throughput_sab	INTENSITY	FLOAT	The average throughput of FACH containing the CTCH channel used for Service Area Broadcast. Both user data and signalling are included.	{ave_fach_total_throughput_sab}/ ({ave_fach_total_throughput_sab_denom}*1000)	Average, avg, max, min, nkcttbh, nkrttbh, tot
avg_user_through	INTENSITY	FLOA	The average user	{ave_fach_user_through	Average,

put_sab		T	data throughput of FACH containing the CTCH channel used for Service Area Broadcast.	put_sab}/ ({ave_fach_user_throughput_sab_denom}*1000)	avg, max, min, nkcttbh, nkrttbh, tot
fach_user_data_throughput_denom_0	ACCUMULATION	INT8	Denominator for average FACH throughput of user data only including PCH	PMMOResult_Cell_Resource.M1000C69	Sum, nkcttbh, nkrttbh, tot
fach_user_data_throughput_denom_1	ACCUMULATION	INT8	Denominator for average FACH throughput of user data only (PCH not present)	PMMOResult_Cell_Resource.M1000C108	Sum, nkcttbh, nkrttbh, tot
fach_user_tot_throughput_denom_0	ACCUMULATION	INT8	Denominator for average FACH throughput of both user data and signalling in bit/s for a SCCPCH including PCH	PMMOResult_Cell_Resource.M1000C67	Sum, nkcttbh, nkrttbh, tot
fach_user_tot_throughput_denom_1	ACCUMULATION	INT8	Denominator for average FACH throughput of both user data and signalling in bit/s (PCH not present)	PMMOResult_Cell_Resource.M1000C106	Sum, nkcttbh, nkrttbh, tot
pch_throughput_denom_0	ACCUMULATION	INT8	Denominator for average PCH throughput	PMMOResult_Cell_Resource.M1000C71	Sum, nkcttbh, nkrttbh, tot
sccpch_load_denom_0	ACCUMULATION	INT8	Denominator for average load of SCCPCH channel including PCH	PMMOResult_Cell_Resource.M1000C65	Sum, nkcttbh, nkrttbh, tot

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sccpch_load_denom_1	ACCUMULATION	INT8	Denominator for average load of SCCPCH channel (PCH not present)	PMMOResult_Cell_Resource.M1000C104	Sum, nkcttbh, nkrttbh, tot

7.6.138Cell.Nokia.UMTS.signalling_paging_message

RRC - Connection management:Signalling, Paging, Initial direct transfer, Security mode and signalling connection statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ini_dir_tran	ACCUMULATION	INT8	Number of initial direct transfer messages	PMMOResult_RRC.M1006C54	Sum, nkcttbh, nkrttbh, tot
paging_type_1_att_cn_orig	ACCUMULATION	INT8	A number of CN originated paging type 1 attempts. Indicates the number of CN originated paging attempts to mobiles in idle mode or PCH/URA substate.	PMMOResult_RRC.M1006C25	Sum, nkcttbh, nkrttbh, tot
paging_type_1_att_rnc_orig	ACCUMULATION	INT8	A number of RNC originated paging type 1 attempts. Indicates the number of RNC originated paging attempts to mobiles in idle mode or PCH/URA substate.	PMMOResult_RRC.M1006C26	Sum, nkcttbh, nkrttbh, tot
paging_type_2_att	ACCUMULATION	INT8	A number of paging type 2 attempts. Indicates the number of (CN originated) paging	PMMOResult_RRC.M1006C27	Sum, nkcttbh, nkrttbh, tot

			attempts to mobiles in DCH or RACH/FACH substate.		
sec_mod_contrl_comp	ACCUMULATION	INT8	Number of Security Mode Control Complete messages.	PMMOResult_RRC.M1006C56	Sum, nkcttbh, nkrttbh, tot
sec_mod_contrl	ACCUMULATION	INT8	Number of Security Mode Control messages.	PMMOResult_RRC.M1006C55	Sum, nkcttbh, nkrttbh, tot
sig_conn_rel_req	ACCUMULATION	INT8	Number of Signalling Connection Release Indication (request) messages.	PMMOResult_RRC.M1006C58	Sum, nkcttbh, nkrttbh, tot
sig_conn_rel	ACCUMULATION	INT8	Number of Signalling Connection Release messages.	PMMOResult_RRC.M1006C57	Sum, nkcttbh, nkrttbh, tot

7.6.139Cell.Nokia.UMTS.signalling_rrc.connection_setup_requests

RRC Signalling - Connection setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_release_due_to_hsdpa_resumption_timer_rejected	ACCUMULATION	INTEGER	The number of times when HSDPA resumption timer has expired but reconfiguration to DCH 0/0 is rejected. The reason for rejection can be one	PMMOResult_RRC.M1006C117	Sum, nkcttbh, nkrttbh, tot

			of the following: 1) The maximum number of HSDPA users is exceeded in the cell. 2) It is not possible to allocate HSDPA power to the cell. 3) There is another parallel layer-3 procedure ongoing. 4) HdschGuardTimerHO or HsdschGuardTimerLowThrou ghput timer is running.		
rrc_conn_req_for_call_re_estab	ACCUMULATION	INT8	A number of establishment requests for call re establishments.	PMMOResult_RRC.M1006C19	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_detach	ACCUMULATION	INT8	A number of establishment requests for detach.	PMMOResult_RRC.M1006C12	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_emerg_call	ACCUMULATION	INT8	A number of establishment requests for emergency calls.	PMMOResult_RRC.M1006C8	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_intr_rat_cell_chng_ord	ACCUMULATION	INT8	A number of establishment requests for intr_rat_cell_chng_ord.	PMMOResult_RRC.M1006C10	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_intr_rat_cell_re_select	ACCUMULATION	INT8	A number of establishment requests for intr_rat_cell_re_select.	PMMOResult_RRC.M1006C9	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_backgr_call	ACCUMULATION	INT8	A number of establishment requests for originating	PMMOResult_RRC.M1006C6	Sum, nkcttbh, nkrttbh, tot

			background calls.		
rrc_conn_req_for_moc_estab_of_conv_call	ACCUMULATION	INT8	A number of establishment requests for originating conversational calls.	PMMOResult_RRC.M1006C0	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_interact_call	ACCUMULATION	INT8	A number of establishment requests for originating interactive calls.	PMMOResult_RRC.M1006C4	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_stream_call	ACCUMULATION	INT8	A number of establishment requests for originating streaming calls.	PMMOResult_RRC.M1006C2	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_backgr_call	ACCUMULATION	INT8	A number of establishment requests for terminating background calls.	PMMOResult_RRC.M1006C7	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_conv_call	ACCUMULATION	INT8	A number of establishment requests for terminating conversational calls.	PMMOResult_RRC.M1006C1	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_interact_call	ACCUMULATION	INT8	A number of establishment requests for terminating interactive calls.	PMMOResult_RRC.M1006C5	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_stream_call	ACCUMULATION	INT8	A number of establishment requests for terminating streaming calls.	PMMOResult_RRC.M1006C3	Sum, nkcttbh, nkrttbh, tot

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rrc_conn_req_for_originating_high_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for originating call high priority signalling.	PMMOResult_RRC.M1006C13	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_originating_low_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for originating call low priority signalling.	PMMOResult_RRC.M1006C14	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_originating_subscribed_traffic_call	ACCUMULATION	INT8	A number of establishment requests for an originating subscribed traffic call.	PMMOResult_RRC.M1006C18	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_registration	ACCUMULATION	INT8	A number of establishment requests for registration.	PMMOResult_RRC.M1006C11	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_terminating_cause_unknown	ACCUMULATION	INT8	A number of establishment requests for terminating call; the cause is unknown.	PMMOResult_RRC.M1006C17	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_terminating_high_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for terminating call high priority signalling.	PMMOResult_RRC.M1006C15	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_for_terminating_low_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for terminating call low priority signalling.	PMMOResult_RRC.M1006C16	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup_retrans_triggered_by_timer	ACCUMULATION	INTEGER	The number of RRC Connection Setup retransmissions if RRC Connection Setup Complete is not received in time	PMMOResult_RRC.M1006C101	Sum, nkcttbh, nkrttbh, tot

			defined in RRCconnRepTimer2.		
rrc_conn_setup_retrans_triggered_by_ue	ACCUMULATION	INTEGER	The number of UE Triggered RRC Connection Setup retransmissions. RRC Connection Setup is retransmitted immediately and timer RRCconnRepTimer2 restarted if repeated RRC Connection Request is received during the ongoing RRC connection setup procedure.	PMMOResult_RRC.M1006C100	Sum, nkcttbh, nkrttbh, tot
rrc_reestablish_fail_no_reply_nrt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM sent by RNC.	PMMOResult_RRC.M1006C120	Sum, nkcttbh, nkrttbh, tot
rrc_reestablish_fail_ue_nrt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER RECONFIGURATION FAILURE.	PMMOResult_RRC.M1006C119	Sum, nkcttbh, nkrttbh, tot
rrc_reestablish_success_nrt	ACCUMULATION	INTEGER	The number of successful RRC connection reestablishments. Note: an RRC re-establisment is not	PMMOResult_RRC.M1006C118	Sum, nkcttbh, nkrttbh, tot

			done for RT in Nokia implementation		

7.6.140Cell.Nokia.UMTS.signalling_rrc.connection_status

RRC Signalling - Connection status statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_conn_for_cell_pch_due_to_ue_is_lost	ACCUMULATION	INT8	A number of RRC connection releases in CELL_PCH state due to a cause MS is lost. If the RNC cannot obtain any cell update message as a response to repeated paging to the MS. (Incorrectly named as RRC_CONN_FOR_CELL_PCH_DUE_TO_MS_IS_LOST in Nokia document)	PMMOResult_RRC.M1006C51	Sum, nkcttbh, nkrttbh, tot
rrc_conn_reject_due_to_rrc_connection_setup_redirection	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of RRC Connection Reject messages sent to UE with RRC connection setup redirection information. In this case, the RRC connection request is rejected but the information of other cell carrier is given where UE should make a new	PMMOResult_RRC.M1006C70	Sum, nkcttbh, nkrttbh, tot
rrc_conn_reject_due_to_rrmu_overl	ACCUMULATION	INT8	Number of RRC Connection	PMMOResult_RRC.M1006C69	Sum, nkcttbh,

oad			Request rejects due to RRMU overload (RNTI cannot be allocated).		nkrttbh, tot
rrc_conn_reject	ACCUMULATION	INT8	A number of RRC connection request reject messages. When the RRC signalling entity acknowledges a rejection to the UE. The reason for the rejection can be, Internal reason BTS reason Transmission reason AC reason.	PMMOResult_RRC.M1006C21	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel_due_to_rnc_internal	ACCUMULATION	INT8	The number of RRC connection releases due to RNC internal reason.	PMMOResult_RRC.M1006C111	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel_for_due_to_cell_or_ura_update_conf_fail	ACCUMULATION	INT8	A number of RRC connection releases due to a cell or URA update confirmation failure.	PMMOResult_RRC.M1006C52	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel_for_due_to_dir_sig_conn_re_est	ACCUMULATION	INT8	A number of RRC connection releases due to the reason directed signalling connection re establishment	PMMOResult_RRC.M1006C53	Sum, nkcttbh, nkrttbh, tot
rrc_conn_rel	ACCUMULATION	INT8	A number of RRC connection releases.	PMMOResult_RRC.M1006C24	Sum, nkcttbh, nkrttbh, tot

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rrc_conn_release_on_ccch	ACCUMULATION	INT8	The number of RRC connection releases on common control channel.	PMMOResult_RRC.M1006C109	Sum, nkcttbh, nkrttbh, tot
rrc_conn_req_fail	ACCUMULATION	INT8	A number of RRC connection request failures. When the message is tried to be decoded and the data is corrupted, the message cannot be interpreted (Unable to solve ASN.1 coding or reason unknown).	PMMOResult_RRC.M1006C20	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup_compl_received	ACCUMULATION	INT8	The number of RRC CONNECTION SETUP COMPLETE messages received.	PMMOResult_RRC.M1006C23	Sum, nkcttbh, nkrttbh, tot
rrc_conn_setup	ACCUMULATION	INT8	A number of RRC connection setups	PMMOResult_RRC.M1006C22	Sum, nkcttbh, nkrttbh, tot
rrc_rel_due_to_ms_is_lost_in_cell_fach	ACCUMULATION	INT8	The number of RRC connection releases due to -MS is lost- in CELL_FACH state.	PMMOResult_RRC.M1006C112	Sum, nkcttbh, nkrttbh, tot
rrc_rel_mslost_ura_pch	ACCUMULATION	INTEGER	The number of RRC connection releases due to 'MS is lost' in URA_PCH state.	PMMOResult_RRC.M1006C110	Sum, nkcttbh, tot
rrc_status_messages_due_to_invalid_configuration	ACCUMULATION	INTEGER	The number of received RRC STATUS messages from the UE in case radio access	PMMOResult_RRC.M1006C104	Sum, nkcttbh, nkrttbh, tot

			bearers for the CN domain indicated by the IE "CN domain identity" exist in the variable ESTABLISHED_ RABS while signaling connection release is requested by CN.		
rrc_status_messag es_due_to_invalid _paging_type_2_ message	ACCUMULA TION	INTEG ER	The number of received RRC STATUS messages from the UE in case the UE receives a PAGING TYPE 2 message, which contains a protocol error causing the variable PROTOCOL_ERR OR_REJ ECT to be set to TRUE.	PMMOResult_RRC.M 1006C103	Sum, nkcttbh, nkrttbh, tot
rrc_status_messag es	ACCUMULA TION	INTEG ER	The total number of received RRC STATUS messages with Protocol Error Information.	PMMOResult_RRC.M 1006C102	Sum, nkcttbh, nkrttbh, tot
rrc_status_msg_d ue_to_asn1_violat ion_or_encoding_ error	ACCUMULA TION	INTEG ER	The number of received RRC STATUS messages from the UE in case the UE receives an RRC message on the DCCH for which the encoded message does not	PMMOResult_RRC.M 1006C105	Sum, nkcttbh, nkrttbh, tot

			result in any valid abstract syntax value (or "encoding error").		

7.6.141Cell.Nokia.UMTS.signalling_rrc.measurement_report

RRC Signalling - Measurement report statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cap_req_ul	ACCUMULATION	INT8	A number of capacity requests in UL	PMMOResult_RRC.M1006C44	Sum, nkcttbh, nkrttbh, stdev, tot
meas_report_messages_with_periodic_reporting_results	ACCUMULATION	INT8	The number of RRC:MEASUREMENT REPORT messages containing periodical reporting results.	PMMOResult_RRC.M1006C85	Sum, nkcttbh, nkrttbh, tot

7.6.142Cell.Nokia.UMTS.signalling_rrc.signalling_protocol_states

RRC Signalling - Protocol states statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
att_fach_to_hs_dsch	ACCUMULATION	INTEGER	The number of attempted state transitions from FACH to HS-DSCH.	PMMOResult_RRC.M1006C151	Sum, nkcttbh, nkrttbh, tot
att_hs_dsch_to_fach	ACCUMULATION	INTEGER	The number of attempted state transitions from HS-DSCH to DCH.	PMMOResult_RRC.M1006C153	Sum, nkcttbh, nkrttbh, tot
att_pch_dch_trans_umrlc	ACCUMULATION	INTEGER	The number of attempted Cell/URA-PCH to DCH state	PMMOResult_RRC.M1006C196	Sum, nkcttbh, nkrttbh, tot

			transitions using UM-RLC. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.		
avg_ue_operating_time_in_cell_dch	INTENSITY	FLOAT	Average operating time when the UE is in CELL_DCH state.	{sum_of_ue_operating_time_in_cell_dch}/{num_of_ue_measured_in_cell_dch}	Average, avg, max, min, nkcttbh, nkrttbh, stdev, tot
avg_ue_operating_time_in_cell_fach	INTENSITY	FLOAT	Average operating time when the UE is in CELL_FACH state.	{sum_of_ue_operating_time_in_cell_fach}/{num_of_ue_measured_in_cell_fach}	Average, avg, max, min, nkcttbh, nkrttbh, stdev, tot
avg_ue_operating_time_in_cell_pch	INTENSITY	FLOAT	Average operating time when the UE is in CELL_PCH state.	{sum_of_ue_operating_time_in_cell_pch}/{num_of_ue_measured_in_cell_pch}	Average, avg, max, min, nkcttbh, nkrttbh, stdev, tot
cell_dch_state_to_cell_fach	ACCUMULATION	INT8	A number of state transitions from CELL_DCH state to CELL_FACH state	PMMOResult_RRC.M1006C45	Sum, nkcttbh, nkrttbh, stdev, tot
cell_dch_state_to_cell_pch	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH state to CELL_PCH	PMMOResult_RRC.M1006C114	Sum, nkcttbh, nkrttbh, tot

			state.		
cell_dch_to_cell_fach_state_transitions_due_to_ps_interruption_timer	ACCUMULATION	INT8	The number of state transitions from CELL DCH to CELL FACH due to PS interruption timer. If PS Interruption Timer expires and there is another capacity request for the CELL that is under the same BTS, the packet scheduler of the RNC releases the dedicated transport channel and the related radio links. The UE is moved to Cell_FACH state unless it has other user plane dedicated transport channels allocated.	PMMOResult_RRC.M1006C71	Sum, nkcttbh, nkrttbh, tot
cell_fach_state_to_cell_dch	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_DCH state.	PMMOResult_RRC.M1006C46	Sum, nkcttbh, nkrttbh, stdev, tot
cell_fach_state_to_cell_pch_aft_cell_update	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_PCH state after Cell Update attempt.	PMMOResult_RRC.M1006C48	Sum, nkcttbh, nkrttbh, stdev, tot
cell_fach_state_to_cell_pch_due_to_inactivity	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_PCH state after inactivity is detected.	PMMOResult_RRC.M1006C47	Sum, nkcttbh, nkrttbh, stdev, tot
cell_fach_state_to	ACCUMULA	INTEG	The number of state	PMMOResult_RRC.M	Sum,

_hsdsch	TION	ER	transitions from CELL-FACH state to CELL-DCH state with HS-DSCH downlink transport channel.	1006C127	nkcttbh, nkrttbh, tot
cell_fach_state_to_ura_pch	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to URA_PCH state.	PMMOResult_RRC.M1006C49	Sum, nkcttbh, nkrttbh, stdev, tot
cell_upd_after_pag_cell_pch	ACCUMULATION	INTEGER	The number of Cell updates counted as a paging response received from the UE after paging in Cell-PCH state. This counter is also used as a denominator when average paging delay is calculated from M1006C163.	PMMOResult_RRC.M1006C157	Sum, nkcttbh, nkrttbh, tot
cell_upd_after_pag_ura_pch	ACCUMULATION	INTEGER	The number of Cell updates counted as a paging response received from the UE after paging in URA-PCH state. This counter is also used as a denominator when average paging delay is calculated using M1006C166.	PMMOResult_RRC.M1006C161	Sum, nkcttbh, nkrttbh, tot
cell_update_att_data_tr_tvm	ACCUMULATION	INTEGER	The number of Cell Update messages received with cause "uplink data	PMMOResult_RRC.M1006C199	Sum, nkcttbh, nkrttbh, tot

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			transmission" and "traffic volume indicator" IE set as true. Also M1006C36 is updated along with this counter.		
dch_release_due_to_hsdpa_resumption_timer	ACCUMULATION	INTEGER	The number of times when PS NRT DCH is reconfigured to DCH 0/0 due to HSDPA resumption timer expiration.	PMMOResult_RRC.M1006C116	Sum, nkcttbh, nkrttbh, tot
denom_pag_delay_resp_cel_pch	ACCUMULATION	INTEGER	The number of paging delay values updated to counter M1006C164. Used as a denominator in average calculation.	PMMOResult_RRC.M1006C165	Sum, nkcttbh, nkrttbh, tot
denom_pag_delay_resp_ura_pch	ACCUMULATION	INTEGER	The number of paging delay values updated to counter M1006C167. Used as a denominator in average calculation.	PMMOResult_RRC.M1006C168	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_dch_fach	ACCUMULATION	INTEGER	Denominator for M1006C176 used for average calculation.	PMMOResult_RRC.M1006C177	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_fach_dch	ACCUMULATION	INTEGER	Denominator for M1006C172 used for average calculation.	PMMOResult_RRC.M1006C173	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_pch_dch	ACCUMULATION	INTEGER	Denominator for M1006C174 used for average calculation.	PMMOResult_RRC.M1006C175	Sum, nkcttbh, nkrttbh, tot
denom_st_trans_time_pch_fach	ACCUMULATION	INTEGER	Denominator for M1006C170 used for average	PMMOResult_RRC.M1006C171	Sum, nkcttbh, nkrttbh,

			calculation.		tot
denom_time_aal2_setup	ACCUMULATION	INTEGER	Denominator for M1006C194, used for average calculation.	PMMOResult_RRC.M1006C195	Sum, nkcttbh, nkrttbh, tot
fail_pag_no_resp_cell_pch	ACCUMULATION	INTEGER	The number of unsuccessful paging occasions when the RNC judges the whole paging occasion unsuccessful due to no response from the UE.	PMMOResult_RRC.M1006C158	Sum, nkcttbh, nkrttbh, tot
fail_pag_no_resp_ura_pch	ACCUMULATION	INTEGER	The number of unsuccessful paging occasion when the RNC judges the whole paging occasion unsuccessful due to no response from the UE.	PMMOResult_RRC.M1006C162	Sum, nkcttbh, nkrttbh, tot
hsdsch_state_to_cell_fach_due_to_low_utilisation	ACCUMULATION	INT8	The number of RRC state transitions from CELL DCH (HS-DSCH) state to CELL FACH state due to low utilisation.	PMMOResult_RRC.M1006C113	Sum, nkcttbh, nkrttbh, tot
hsdsch_state_to_cell_pch	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH (HS-DSCH) state to CELL_PCH state.	PMMOResult_RRC.M1006C115	Sum, nkcttbh, nkrttbh, tot

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mea_cap_req_for_dl	ACCUMULATION	INT8	Measuring Capacity request for DL. When MAC c sends a capacity request to an RRC entity when activity in DL is detected.	PMMOResult_RRC.M1006C50	Sum, nkcttbh, nkrttbh, stdev, tot
num_of_ue_measured_in_cell_dch	ACCUMULATION	INT8	The denominator for the counters M1006C87 and M1006C88. Needed for average and variance calculation.	PMMOResult_RRC.M1006C89	Sum, nkcttbh, nkrttbh, tot
num_of_ue_measured_in_cell_fach	ACCUMULATION	INT8	The denominator for the counters M1006C90 and M1006C91. Needed for average and variance calculation.	PMMOResult_RRC.M1006C92	Sum, nkcttbh, nkrttbh, tot
num_of_ue_measured_in_cell_pch	ACCUMULATION	INT8	The denominator for the counters M1006C93 and M1006C94. Needed for average and variance calculation.	PMMOResult_RRC.M1006C95	Sum, nkcttbh, nkrttbh, tot
num_ue_meas_ura_pch	ACCUMULATION	INTEGER	Denominator for counters M1006C96 needed for average calculation	PMMOResult_RRC.M1006C98	Sum, nkcttbh, tot
pag_delay_cu_cell_pch	ACCUMULATION	INTEGER	The sum of Cell-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: CELL UPDATE received	PMMOResult_RRC.M1006C163	Sum, nkcttbh, nkrttbh, tot

			from the UE. This counter, divided by M1006C157, provides the average paging delay.		
pag_delay_resp_cell_pch	ACCUMULATION	INTEGER	The sum of Cell-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: UTRAN MOBILITY INFORMATION CONFIRM or any other UL DCCH received from the UE after a successful connection establishment procedure.	PMMOResult_RRC.M1006C164	Sum, nkcttbh, nkrttbh, tot
paging_messages_cell_pch	ACCUMULATION	INTEGER	The number of paging messages sent to UE in Cell-PCH state. This counter contains all sent pages, not only repeated ones, before the UE response is received or before paging is stopped due to no response from the UE.	PMMOResult_RRC.M1006C156	Sum, nkcttbh, nkrttbh, tot
paging_messages_ura_pch	ACCUMULATION	INTEGER	The number of paging messages	PMMOResult_RRC.M1006C160	Sum, nkcttbh,

			sent to UE in URA-PCH state. This counter contains all sent pages, not only repeated ones, before the UE response is received or before paging is stopped due to no response from the UE.		nkrttbh, tot
paging_occasion_cell_pch	ACCUMULATION	INTEGER	The number of occasions when paging is required for UE in Cell-PCH state, i.e. the RNC starts paging.	PMMOResult_RRC.M1006C155	Sum, nkcttbh, nkrttbh, tot
paging_occasion_ura_pch	ACCUMULATION	INTEGER	The number of occasions when paging is required for UE in URA-PCH state, i.e. the RNC starts paging.	PMMOResult_RRC.M1006C159	Sum, nkcttbh, nkrttbh, tot
prach_delay_range_value	INTENSITY	INTEGER	The value of WCEL parameter PRACHDelayRange when the last RRC Connection Request or Cell Update of the measurement interval was received.	PMMOResult_RRC.M1006C169	Sum, avg, max, min, nkcttbh, nkrttbh, tot
resel_pch_dch_trans	ACCUMULATION	INTEGER	The number of cell reselections that occurred during the attempted Cell/URA-PCH to DCH state transitions using UM-RLC. This counter can be used in the Cell Update	PMMOResult_RRC.M1006C198	Sum, nkcttbh, nkrttbh, tot

			success rate calculation for excluding the reselections from the attempts. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.		
squared_sum_of_ue_operating_time_in_cell_dch	ACCUMULATION	INT8	The sum of squared operating time values when the UE is in CELL_DCH state. Needed for variance calculation.	PMMOResult_RRC.M1006C88	Sum, nkcttbh, nkrttbh, tot
squared_sum_of_ue_operating_time_in_cell_fach	ACCUMULATION	INT8	The sum of squared operating time values when the UE is in CELL_FACH state. Needed for variance calculation. The counter does not include those times that are used in CELL_FACH state when the UE is performing cell update or URA update procedure and after that is sent back to CELL_PCH or URA_PCH state, i.e. the UE is	PMMOResult_RRC.M1006C91	Sum, nkcttbh, nkrttbh, tot

			performing periodic cell update or URA update procedure or cell or URA reselection.		
squared_sum_of_ue_operating_time_in_cell_pch	ACCUMULATION	INT8	The sum of squared operating time values when the UE is in CELL_PCH state. Needed for variance calculation. Counting operating time in CELL_PCH is not interrupted if the UE performs cell update procedure due to periodic update or cell reselection.	PMMOResult_RRC.M1006C94	Sum, nkcttbh, nkrttbh, tot
state_trans_cell_dch_to_cell_fach_due_to_low_utilisation	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH state to CELL_FACH state due to low DCH utilisation. If downlink or uplink throughput in the number of bytes goes below the threshold defined with the RNC configuration parameters DCHutilRelThrDL or DCHutilRelThrUL, the PS DCH release procedure starts. For more information on the parameters, see WCDMA RAS05 Parameter	PMMOResult_RRC.M1006C86	Sum, nkcttbh, nkrttbh, tot

			Dictionary.		
succ_fach_to_hs_dsch	ACCUMULATION	INTEGER	The number of successful state transitions from FACH to HS-DSCH.	PMMOResult_RRC.M1006C152	Sum, nkcttbh, nkrttbh, tot
succ_hs_dsch_to_fach	ACCUMULATION	INTEGER	The number of successful state transitions from HS-DSCH to DCH.	PMMOResult_RRC.M1006C154	Sum, nkcttbh, nkrttbh, tot
succ_pch_dch_trans_umrlc	ACCUMULATION	INTEGER	The number of successful Cell/URA-PCH to DCH state transition attempts using UM-RLC. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.	PMMOResult_RRC.M1006C197	Sum, nkcttbh, nkrttbh, tot
sum_of_ue_operating_time_in_cell_dch	ACCUMULATION	INT8	The sum of operating time when the UE is in CELL_DCH state. This counter, divided by the denominator M1006C89, gives the average operating time in CELL_DCH state.	PMMOResult_RRC.M1006C87	Sum, nkcttbh, nkrttbh, tot
sum_of_ue_operating_time_in_cell_fach	ACCUMULATION	INT8	The sum of operating time when the UE is in	PMMOResult_RRC.M1006C90	Sum, nkcttbh, nkrttbh,

			CELL_FACH state. This counter, divided by the denominator M1006C92, gives the average operating time in CELL_FACH state. The counter does not include those times that are used in CELL_FACH state when the UE is performing cell update or URA update procedure and after that is sent back to CELL_PCH or URA_PCH state, i.e. the UE is performing the periodic cell update or URA update procedure or cell or URA reselection.		tot
sum_of_ue_operating_time_in_cell_pch	ACCUMULATION	INT8	The sum of operating time when the UE is in CELL_PCH state. This counter, divided by the denominator M1006C95, gives the average operating time in CELL_PCH state. Counting operating time in CELL_PCH is not interrupted if the UE performs cell update procedure due to periodic update or cell reselection.	PMMOResult_RRC.M1006C93	Sum, nkcttbh, nkrttbh, tot

			The unit of this counter is 10 seconds, meaning that value 1 means 10 seconds in CELL_PCH state. Times shorter than 10 seconds will be counted as 10 seconds.		
sum_oper_time_ura_pch	ACCUMULATION	INTEGER	Sum of operating time when UE is in URA_PCH state.	PMMOResult_RRC.M1006C96	Sum, nkcttbh, tot
sum_pag_delay_cu_ura_pch	ACCUMULATION	INTEGER	The sum of URA-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: CELL UPDATE received from the UE. This counter, divided by M1006C161, provides the average paging delay.	PMMOResult_RRC.M1006C166	Sum, nkcttbh, nkrttbh, tot
sum_pag_delay_resp_ura_pch	ACCUMULATION	INTEGER	The sum of URA-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: UTRAN MOBILITY INFORMATION CONFIRM or any	PMMOResult_RRC.M1006C167	Sum, nkcttbh, nkrttbh, tot

			other UL DCCH received from the UE after a successful connection establishment procedure.		
sum_st_trans_time_dch_fach	ACCUMULATION	INTEGER	Sum of state transition times from Cell-DCH state to Cell-FACH state, defined as the time between: When RNC decides to initiate Cell_DCH to Cell_FACH transition - RRC: Radio Bearer Reconfiguration Complete or Radio Bearer Release Complete. This counter, divided by the denominator, provides the average state transition time.	PMMOResult_RRC.M1006C176	Sum, nkcttbh, nkrttbh, tot
sum_st_trans_time_dch_pch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-DCH state to Cell-PCH or URA-PCH state, defined as the time between: When RNC decides to initiate Cell_DCH to Cell_PCH transition - RRC: Radio Bearer Reconfiguration Complete or Radio Bearer Release Complete. This counter, divided by	PMMOResult_RRC.M1006C178	Sum, nkcttbh, nkrttbh, tot

			the denominator, provides the average state transition time.		
sum_st_trans_time_fach_dch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-FACH state to Cell-DCH state, defined as the time between: UL/DL capacity request, RAB Setup - RRC: Radio Bearer Reconfiguration Complete or RRC: Radio Bearer Setup Complete. This counter, divided by the denominator, provides the average state transition time.	PMMOResult_RRC.M1006C172	Sum, nkcttbh, nkrttbh, tot
sum_st_trans_time_pch_dch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-PCH or URA-PCH state to Cell-DCH state, defined as the time between: RRC: Cell Update (cause: UL Data Transmission or Paging response) - RRC: Radio Bearer Reconfiguration Complete. This counter, divided by the denominator, provides the	PMMOResult_RRC.M1006C174	Sum, nkcttbh, nkrttbh, tot

			average state transition time.		
sum_st_trans_time_pch_fach	ACCUMULATION	INTEGER	Sum of state transition times from Cell-PCH or URA-PCH state to Cell-FACH state, defined as the time between: RRC: Cell Update (cause: UL Data Transmission or Paging response) - RRC: Utran Mobility Information Confirm (or any other UL-DCCH message before UMIC).	PMMOResult_RRC.M1006C170	Sum, nkcttbh, nkrttbh, tot
sum_time_aal2_setup	ACCUMULATION	INTEGER	Sum of Iub AAL2 Setup time, defined as the difference between ALCAP: Establishment Request (ERQ) and ALCAP: Establishment Confirm (ECF). This counter, divided by the denominator, provides the average AAL2 setup time.	PMMOResult_RRC.M1006C194	Sum, nkcttbh, nkrttbh, tot

7.6.143Cell.Nokia.UMTS.soft_handover.nrt

NRT soft handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_active_set_updates_on	PERCENTAGE	FLOAT	Percentage of successful active set updates	100 * {successful_active_set_updates_on_sho_for_nrt	Average, avg, nkcttbh,

_sho_for_nrt_traffic			attempts on SHO for RT traffic.	_traffic}/ {tot_attempts_active_set_updates_on_sho_for_nrt_traffic}	nkrttbh
_%_unsuccessful_active_set_updates_on_sho_for_nrt_traffic	PERCENTAGE	FLOAT	Percentage of unsuccessful active set updates attempts on SHO for RT traffic.	100 * {unsuccessful_active_set_updates_on_sho_for_nrt_traffic}/ {tot_attempts_active_set_updates_on_sho_for_nrt_traffic}	Average, avg, nkcttbh, nkrttbh
cell_addition_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell addition failures on SHO for NRT traffic. When the mobile station sends an event triggered (event 1A) periodic measurement report to the RNC in order to add a cell into the active set. The event 1A triggered periodic reporting is controlled with parameters Addition Window and Addition Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side	PMMOResult_Soft_Handover.M1007C30	Sum, nkcttbh, nkrttbh, tot

			when the RNC receives the measurement report. This counter is not updated in the cell that is the object of the addition failure/request.		
cell_addition_request_on_sho_for_nrt_traffic	ACCUMULATION	INTEGER	A number of cell addition requests on SHO for NRT traffic. When a mobile station sends a measurement report (event1A) to the RNC in order to add a cell to the active set. The addition window of cells in event 1A is controlled with radio network planning parameters Addition Window and Addition Time. Only the SRNC can update the counter. The counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. The counter is not updated in the cell that is the object of the addition request.	PMMOResult_Soft_Handover.M1007C27	Sum, nkcttbh, nkrttbh, tot

cell_deletion_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	This counter is updated, when UE sends a periodic measurement report triggered by event 1B to the RNC in order to remove a cell from the active set. That situation can appear, for example, when the RNC is prevented from deleting the old branch to the active set before the new branch is synchronised. Event 1B triggered periodic reporting is controlled with the Drop Window and Drop Reporting Interval parameters. Only the serving RNC (SRNC) can update the counter. The counter is updated in every cell that is in the active set on the SRNC side when the RNC receives the measurement report.	PMMOResult_Soft_Handover.M1007C37	Sum, nkcttbh, nkrttbh, tot
cell_deletion_requ	ACCUMULA	INT8	A number of cell	PMMOResult_Soft_Ha	Sum,

est_on_sho_for_nrt_traffic	TION		deletion requests on SHO for NRT traffic. When a mobile station sends the measurement report (event1B) to the RNC in order to remove a cell from the active set. The drop window of cells in event 1B is controlled with parameters Drop Window and Drop Time. Only the SRNC can update the counter. The counter is updated in every cell (including the removed cell itself) that is in the active set on SRNC side when the RNC receives the measurement report.	ndover.M1007C28	nkcttbh, nkrttbh, tot
cell_replacement_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell replacement failures on SHO for NRT traffic. When the mobile station sends an event triggered (event 1C) periodic measurement report to the RNC in order to replace a cell in the active set with a non active cell. The event 1C triggered	PMMOResult_Soft_Handover.M1007C31	Sum, nkcttbh, nkrttbh, tot

			periodic reporting is controlled with parameters Replacement Window and Replacement Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
cell_replacement_request_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell replacement requests on SHO for NRT traffic. When a mobile station sends the measurement report (event1C) to the RNC in order to replace a cell in the active set with a non active cell. The event 1C is	PMMOResult_Soft_Handover.M1007C29	Sum, nkcttbh, nkrttbh, tot

			controlled with parameters Replacement Window and Replacement Time. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
five_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to the active set, the size of which is five. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RN	PMMOResult_Soft_Handover.M1007C23	Sum, nkcttbh, nkrttbh, tot
four_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to the active set, the size of which is four.	PMMOResult_Soft_Handover.M1007C22	Sum, nkcttbh, nkrttbh, tot

			Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RN		
high_ue_rx_tx_time_difference_for_nrt	ACCUMULATION	INT8	A number of successful active set updates on SHO for NRT traffic. When the RNC sends an ACTIVE SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set and the mobile station acknowledges the messages by sending the ACTIVE SET UPDATE COMPLETE message. Only the serving RNC (SRNC) can update the counter.In case of cell addition/replacement, the counter is updated in every	PMMOResult_Soft_Handover.M1007C34	Sum, nkcttbh, nkrttbh, tot

			cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
inter_rnc_soft_ho_duration_on_the_srnc_side_for_nrt_traffic	INTENSITY	INTEGER	Time period during which the cell participates in inter RNC soft handover on serving RNC (SRNC) side for NRT traffic.Only the SRNC may update this counter. The unit value is 100 ms.	PMMOResult_Soft_Handover.M1007C26	Average, avg, max, min, nkcttbh, nkrttbh, tot
low_ue_rx_tx_time_difference_for_nrt	ACCUMULATION	INT8	A number of unsuccessful active setup dates on SHO for NRT traffic.When the mobile station acknowledges an active SET UPDATE message with an	PMMOResult_Soft_Handover.M1007C35	Sum, nkcttbh, nkrttbh, tot

			ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC)can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the active SET UPDATE message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
one_cell_in_edch_	ACCUMULA	INTEG	The sum of the	PMMOResult_Soft_Ha	Sum,

active_set_duration	TION	ER	time periods during which this cell has belonged to the E-DCH active set, whose size has been one.	ndover.M1007C63	nkcttbh, nkrttbh, tot
one_cell_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the active set, the size of which is one. Only the serving RNC can update the counter. The unit value is 100 ms.	PMMOResult_Soft_Handover.M1007C19	Sum, nkcttbh, nkrttbh, tot
six_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to the active set, the size of which is six. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RNC	PMMOResult_Soft_Handover.M1007C24	Sum, nkcttbh, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_nrt_traffic	ACCUMULATION	INTEGER	Time period during which the cell participates in softer handover on serving RNC (SRNC) side for NRT traffic.Only the SRNC may update the counter. The unit value is 100 ms.	PMMOResult_Soft_Handover.M1007C25	Sum, nkcttbh, nkrttbh, tot
successful_active_	ACCUMULA	INT8	A number of	PMMOResult_Soft_Ha	Sum,

set_updates_on_sho_for_nrt_traffic	TION		successful active set updates on SHO for NRT traffic. When the RNC sends an ACTIVE SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set and the mobile station acknowledges the messages by sending the ACTIVE SET UPDATE COMPLETE message. Only the serving RNC (SRNC) can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell	ndover.M1007C32	nkcttbh, nkrttbh, tot

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			deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
three_cells_in_edch_active_set_duration	ACCUMULATION	INTEGER	The sum of the time periods during which this cell has belonged to the E-DCH active set, whose size has been three.	PMMOResult_Soft_Handover.M1007C65	Sum, nkcttbh, nkrttbh, tot
three_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the active set, the size of which is three. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RNC side for NRT.	PMMOResult_Soft_Handover.M1007C21	Sum, nkcttbh, nkrttbh, tot
tot_attempts_active_set_updates_on_sho_for_nrt_traffic	ACCUMULATION	INT8	Total number active set updates attempts on SHO for NRT traffic.	({successful_active_set_updates_on_sho_for_nrt_traffic}+ {unsuccessful_active_set_updates_on_sho_for_nrt_traffic})	Sum, nkcttbh, nkrttbh, tot
two_cells_in_edch_active_set_duratio	ACCUMULATION	INTEGER	The sum of the time periods	PMMOResult_Soft_Handover.M1007C64	Sum, nkcttbh,

n			during which this cell has belonged to the E-DCH active set, whose size has been two.		nkrttbh, tot
two_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the active set, the size of which is two. Only the serving RNC can update the counter. The unit value is 100 ms.	PMMOResult_Soft_Handover.M1007C20	Sum, nkcttbh, nkrttbh, tot
unsuccessful_active_set_updates_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of unsuccessful active setup dates on SHO for NRT traffic.When the mobile station acknowledges an active SET UPDATE message with an ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC)can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the	PMMOResult_Soft_Handover.M1007C33	Sum, nkcttbh, nkrttbh, tot

			active set on SRNC side when the RNC sends the active SET UPDATE message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		

7.6.144Cell.Nokia.UMTS.soft_handover.rt

RT soft handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_active_set_update_success_ratio	PERCENTAGE	FLOAT	Percentage of successful active set updates on soft handover for real time and non real time traffic	100 * ({successful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.successful_active_set_updates_on_sho_for_nrt_traffic})/ ({unsuccessful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.unsuccessful_active_set_updates_on_sho_for_n	Average, avg, nkcttbh, nkrttbh

				rt_traffic} + {successful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.successful_active_set_updates_on_sho_for_nrt_traffic})	
_%_successful_active_set_updates_on_sho_for_rt_traffic	PERCENTAGE	FLOAT	Percentage of successful active set updates attempts on SHO for RT traffic.	100 * {successful_active_set_updates_on_sho_for_rt_traffic}/ {tot_attempts_active_set_updates_on_sho_for_rt_traffic}	Average, avg, nkcttbh, nkrttbh
_%_unsuccessful_active_set_updates_on_sho_for_rt_traffic	PERCENTAGE	FLOAT	Percentage of unsuccessful active set updates attempts on SHO for RT traffic.	100 * {unsuccessful_active_set_updates_on_sho_for_rt_traffic}/ {tot_attempts_active_set_updates_on_sho_for_rt_traffic}	Average, avg, nkcttbh, nkrttbh
cell_addition_failure_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell addition failures on SHO for RT traffic. When a mobile station sends an event triggered (event 1A) periodic measurement report to the RNC in order to add a cell into the active set. The event 1A triggered periodic reporting is controlled with	PMMOResult_Soft_Handover.M1007C13	Sum, nkcttbh, nkrttbh, tot

			parameters Addition Window and Addition Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the cell that is the object of the addition failure/request.		
cell_addition_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell addition requests on SHO for RT traffic. When the mobile station sends a measurement report (event 1A) to the RNC in order to add a cell to the active set. The addition window of cells in event 1A is controlled with radio network planning parameters Addition Window and Addition Time. Only the SRNC can update	PMMOResult_Soft_Handover.M1007C10	Sum, nkcttbh, nkrttbh, tot

			the counter. The counter is updated in every cell including in the active set on SRNC side when the RNC receives the measurement report. The counter is not updated in the cell that is the object of the addition request.		
cell_deletion_failure_on_sho_for_rt_traffic	ACCUMULATION	INT8	This counter is updated, when UE sends a periodic measurement report triggered by event 1B to the RNC in order to remove a cell from the active set. That situation can appear, for example, when the RNC is prevented to delete the old branch to the active set before the new branch is synchronised. Event 1B triggered periodic reporting is controlled with the Drop Window and Drop	PMMOResult_Soft_Handover.M1007C36	Sum, nkcttbh, nkrttbh, tot

			Reporting Interval parameters. Only the serving RNC (SRNC) can update the counter. The counter is updated in every cell that is in the active set on the SRNC side when the RNC receives the measurement report.		
cell_deletion_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell deletion requests on SHO for RT traffic. When the mobile station sends a measurement report (event 1B)to the RNC in order to remove a cell from the active set. The drop window of cells in event 1B is controlled with parameters Drop Window and Drop Time. Only the SRNC can update the counter. The counter is updated in every cell (including the removed cell itself) that is, in the active set on SRNC side when the RNC receives the measurement	PMMOResult_Soft_Handover.M1007C11	Sum, nkcttbh, nkrttbh, tot

			report.		
cell_replacement_failure_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell replacement failures on SHO for RT traffic. When a mobile station sends an event triggered (event 1C) periodic measurement report to the RNC in order to replace a cell in the active set with a non active cell. The event 1C triggered periodic reporting is controlled with parameters Replacement Window and Replacement Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the	PMMOResult_Soft_Handover.M1007C14	Sum, nkcttbh, nkrttbh, tot

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			non active cell that triggers the replacement request.		
cell_replacement_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell replacement requests on SHO for RT traffic. When a mobile station sends a measurement report (event 1C) to the RNC in order to replace a cell in the active set with a non active cell. The event 1C is controlled with parameters Replacement Window and Replacement Time. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.	PMMOResult_Soft_Handover.M1007C12	Sum, nkcttbh, nkrttbh, tot
five_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the	PMMOResult_Soft_Handover.M1007C4	Sum, nkcttbh, nkrttbh,

			cell belongs to an active set, the size of which is five. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving R		tot
four_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to an active set, the size of which is four. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving R	PMMOResult_Soft_Handover.M1007C3	Sum, nkcttbh, nkrttbh, tot
high_ue_rx_tx_time_difference_for_rt	ACCUMULATION	INT8	High UE Rx Tx time difference for RT When a UE sends the measurement report (event 6F) to the RNC in order to indicate that the UE Rx Tx time difference for a	PMMOResult_Soft_Handover.M1007C17	Sum, nkcttbh, nkrttbh, tot

			radio link has become larger than an absolute threshold. The absolute threshold for the event is controlled with a parameter Upper Rx Tx TD Threshold. Only the serving RNC (SRNC) can update the counter. This counter is updated only in the active set cell that triggers the reporting event 6F.		
inter_rnc_soft_ho_duration_on_the_drnc_side_for_rt_nrt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in inter RNC soft handover on drifting RNC (DRNC) side for RT/NRT traffic or the cell is controlled by other RNC than SRNC. NOTE, The DRNC cannot separate RT and NRT traffic. Therefore, soft/softer HO durations are calculated together in the DRNC. Only the DRNC can update this counter. The unit	PMMOResult_Soft_Handover.M1007C9	Sum, nkcttbh, nkrttbh, tot

			value is100ms.		
inter_rnc_soft_ho_duration_on_the_srnc_side_for_rt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in inter RNC soft handover on serving RNC (SRNC) side for RT traffic. Only the SRNC may update this counter. The unit value is 100ms.	PMMOResult_Soft_Handover.M1007C8	Sum, nkcttbh, nkrttbh, tot
low_ue_rx_tx_time_difference_for_rt	ACCUMULATION	INT8	Low UE Rx Tx time difference for RT. When the UE sends the measurement report (event 6G) to the RNC in order to indicate that the UE Rx Tx time difference for a radio link has become less than an absolute threshold. The absolute threshold for the event 6G is controlled with the parameter Lower Rx Tx TD Threshold. Only the serving RNC (SRNC) can update the counter. This counter is	PMMOResult_Soft_Handover.M1007C18	Sum, nkcttbh, nkrttbh, tot

			updated only in the active set cell that triggers the reporting event 6G.		
one_cell_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is one. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.	PMMOResult_Soft_Handover.M1007C0	Sum, nkcttbh, nkrttbh, tot
six_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to an active set, the size of which is six. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RN	PMMOResult_Soft_Handover.M1007C5	Sum, nkcttbh, nkrttbh, tot
softer_handover_duration_on_the_drnc_side_for_rt_nrt_traffic	ACCUMULATION	INT8	Sum of time periods during which the cell participates in softer handover on DRNC side for RT/NRT	PMMOResult_Soft_Handover.M1007C7	Sum, nkcttbh, nkrttbh, tot

			traffic.		
softer_handover_duration_on_the_srnc_side_for_rt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in softer handover on serving RNC (SRNC) side for RT traffic. Only the SRNC may update the counter. The unit value is 100ms.	PMMOResult_Soft_Handover.M1007C6	Sum, nkcttbh, nkrttbh, tot
successful_active_set_updates_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of successful active set updates on SHO for RT traffic. When the RNC sends an active SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set, and the mobile station acknowledges the messages by sending an active SET UPDATE COMPLETE message. Only the serving RNC (SRNC) can update the counter. In case of cell addition/replacem	PMMOResult_Soft_Handover.M1007C15	Sum, nkcttbh, nkrttbh, tot

			ent, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell (including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
three_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is three. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.	PMMOResult_Soft_Handover.M1007C2	Sum, nkcttbh, nkrttbh, tot
tot_attempts_active_set_updates_on_sho_for_rt_traffic	ACCUMULATION	INT8	Total number active set updates attempts on SHO	({successful_active_set_updates_on_sho_for_rt_traffic}+	Sum, nkcttbh, nkrttbh,

			for RT traffic.	{unsuccessful_active_set_updates_on_sho_for_rt_traffic})	tot
two_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is two. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.	PMMOResult_Soft_Handover.M1007C1	Sum, nkcttbh, nkrttbh, tot
unsuccessful_active_set_updates_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of unsuccessful active set updates on SHO for RT traffic. When the mobile station acknowledges the message with the ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC) can update the counter. In case of cell addition/ replacement, the counter is	PMMOResult_Soft_Handover.M1007C16	Sum, nkcttbh, nkrttbh, tot

			updated in every cell that is in the active set on the SRNC side when the RNC sends the ACTIVE SET UPDATE message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell (including there moved cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		

7.6.145Cell.Nokia.UMTS.soft_handovers_dsr

Soft handover DSR statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cpich_ecno_det_denom	ACCUMULATION	INTEGER	The number of 1A/1B/1C reports updated to counter M1028C0, used as a denominator for average calculation.	PMMOResult_AutoDef_SHO_DSR.M1028C1	Sum, nkcttbh, nkrttbh, tot
cpich_ecno_det_sum	ACCUMULATION	INTEGER	Sum of linearized CPICH Ec/No values of the	PMMOResult_AutoDef_SHO_DSR.M1028C0	Sum, nkcttbh, nkrttbh,

			unidentified detected set cells reported by the UE.		tot
cpich_rscp_det_denom	ACCUMULATION	INTEGER	The number of 1A/1B/1C reports updated to counter M1028C2, used as a denominator for average calculation.	PMMOResult_AutoDef_SHO_DSR.M1028C3	Sum, nkcttbh, nkrttbh, tot
cpich_rscp_det_sum	ACCUMULATION	INTEGER	Sum of CPICH RSCP values of the unidentified detected set cells reported by the UE.	PMMOResult_AutoDef_SHO_DSR.M1028C2	Sum, nkcttbh, nkrttbh, tot

7.6.146Cell.Nokia.UMTS.soft_handover

Soft handover measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_cell_addition_success_to_edch_active_set	PERCENTAGE	FLOAT	The percentage of cells successfully added to E-DCH active set.	100 * {cell_addition_success_to_edch_active_set}/ ({cell_addition_attempt_req_by_ue_to_edch_as}+ {cell_addition_attempt_retry_to_edch_as})	Average, avg, nkcttbh, nkrttbh
cell_addition_attempt_req_by_ue_to_edch_as	ACCUMULATION	INTEGER	The number of cell addition attempts to E-DCH active set due to UE reporting event	PMMOResult_Soft_Handover.M1007C67	Sum, nkcttbh, nkrttbh, tot

			1A or 1C.		
cell_addition_attempt_retry_to_edch_as	ACCUMULATION	INTEGER	The number of cell addition attempts to E-DCH active set due to retry timer.	PMMOResult_Soft_Handover.M1007C70	Sum, nkcttbh, nkrttbh, tot
cell_addition_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Addition Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C56	Sum, nkcttbh, nkrttbh, tot
cell_addition_request_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Addition Requests on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C53	Sum, nkcttbh, nkrttbh, tot
cell_addition_success_to_edch_active_set	ACCUMULATION	INTEGER	The number of cells successfully added to E-DCH active set.	PMMOResult_Soft_Handover.M1007C68	Sum, nkcttbh, nkrttbh, tot
cell_deletion_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Deletion Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C57	Sum, nkcttbh, nkrttbh, tot
cell_deletion_request_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Deletion Requests on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C54	Sum, nkcttbh, nkrttbh, tot
cell_not_added_to_edch_active_set_but_added_to_dch_as	ACCUMULATION	INTEGER	The number of times when the cell could not be added to E-DCH active set but addition to DCH active set was successful.	PMMOResult_Soft_Handover.M1007C69	Sum, nkcttbh, nkrttbh, tot
cell_replacement_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Replacement Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C58	Sum, nkcttbh, nkrttbh, tot
cell_replacement_request_on_sho_f	ACCUMULATION	INTEGER	Cell Replacement Requests on SHO	PMMOResult_Soft_Handover.M1007C55	Sum, nkcttbh,

or_hsdpa_mobility			for HSDPA.		nkrttbh, tot
cell_specific_cpich_ec_no_class_0	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 0 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C38	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_1	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 1 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C39	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_2	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which	PMMOResult_Soft_Handover.M1007C40	Sum, nkcttbh, nkrttbh, tot

			the CPICH Ec/No value is inside Class 2 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.		
cell_specific_cpich_ec_no_class_3	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 3 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C41	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_4	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 4 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C42	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpic	ACCUMULA	INTEG	The number of	PMMOResult_Soft_Ha	Sum,

h_ec_no_class_5	TION	ER	received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 5 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	ndover.M1007C43	nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_6	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 6 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C44	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_7	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 7 range. The CPICH Ec/No	PMMOResult_Soft_Handover.M1007C45	Sum, nkcttbh, nkrttbh, tot

			measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.		
cell_specific_cpich_ec_no_class_8	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 8 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C46	Sum, nkcttbh, nkrttbh, tot
cell_specific_cpich_ec_no_class_9	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 9 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover.M1007C47	Sum, nkcttbh, nkrttbh, tot
high_ue_rx_tx_time_difference_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of high UE Rx- Tx time difference for HSDPA mobility.	PMMOResult_Soft_Handover.M1007C61	Sum, nkcttbh, nkrttbh, tot

inter_rnc_soft_handover_duration_on_the_srnc_side_for_hsdpa_mobility	ACCUMULATION	INTEGER	Inter-RNC soft HO duration on the SRNC side for HSDPA.	PMMOResult_Soft_Handover.M1007C52	Sum, nkcttbh, nkrttbh, tot
low_ue_rx_tx_time_difference_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of low UE Rx- Tx time difference for HSDPA mobility.	PMMOResult_Soft_Handover.M1007C62	Sum, nkcttbh, nkrttbh, tot
one_cell_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods the one cell in Active Set during the HSDPA SHO.	PMMOResult_Soft_Handover.M1007C48	Sum, nkcttbh, nkrttbh, tot
setup_fail_sho_branch_bts	ACCUMULATION	INTEGER	The number of soft handover branch setup failures due to BTS. This counter is updated for the cell(s) where the failure occurred.	PMMOResult_Soft_Handover.M1007C71	Sum, nkcttbh, nkrttbh, tot
setup_fail_sho_branch_iub	ACCUMULATION	INTEGER	The number of soft handover branch setup failures due to Iub transmission. This counter is updated for the cell(s) where the failure occurred.	PMMOResult_Soft_Handover.M1007C72	Sum, nkcttbh, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_hsdpa_mobility	ACCUMULATION	INTEGER	Softer HO duration on the SRNC side for HSDPA.	PMMOResult_Soft_Handover.M1007C51	Sum, nkcttbh, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_hsupa	ACCUMULATION	INTEGER	E-DCH softer handover duration.	PMMOResult_Soft_Handover.M1007C66	Sum, nkcttbh, nkrttbh,

_mobility					tot
successful_active_set_updates_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of successful Active Set Updates on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C59	Sum, nkcttbh, nkrttbh, tot
three_cells_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods three cells in Active Set during the HSDPA SHO.	PMMOResult_Soft_Handover.M1007C50	Sum, nkcttbh, nkrttbh, tot
two_cells_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods two cells in Active Set during the HSDPA SHO.	PMMOResult_Soft_Handover.M1007C49	Sum, nkcttbh, nkrttbh, tot
unsuccessful_active_set_updates_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of unsuccessful Active Set Updates on SHO for HSDPA.	PMMOResult_Soft_Handover.M1007C60	Sum, nkcttbh, nkrttbh, tot

7.6.147Cell.Nokia.UMTS.traffic_dch_requests_cs_data_calls_srnc

Traffic - DCH requests for CS data services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_dho_req_for_cs_data_call_conv_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a transparent CS Data Call with conversational class due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C58	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_cs_data_call_conv_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a transparent CS Data Call(on SRNC side)rejected for reasons caused by	PMMOResult_Traffic.M1002C59	Sum, nkcttbh, nkrttbh, tot

			radio resources in the target cell of diversity handover.		
rt_dch_dho_req_for_cs_data_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a non transparent CS Data Call with streaming class due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C60	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_cs_data_call_stream_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a non transparent CS Data Call with streaming class (SRNC side) rejected for reasons caused by radio resources in the target cell of diversity handover.	PMMOResult_Traffic.M1002C61	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_cs_data_call_conv_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for transparent CS data call with conversational class due to the hard handover in SRNC	PMMOResult_Traffic.M1002C343	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_cs_data_call_conv_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for transparent CS data call with conversational class (on SRNC	PMMOResult_Traffic.M1002C344	Sum, nkcttbh, nkrttbh, tot

			side) rejected for radio resource reasons in the target cell of the hard handover		
rt_dch_hho_req_for_cs_data_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for transparent CS data call with streaming class due to the hard handover in SRNC	PMMOResult_Traffic.M1002C345	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_cs_data_call_stream_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for transparent CS data call with streaming class (on SRNC side) rejected for radio resource reasons in the target cell of the hard handover	PMMOResult_Traffic.M1002C346	Sum, nkcttbh, nkrttbh, tot
rt_dch_ini_req_for_cs_data_call_conv_class_in_srnc	ACCUMULATION	INT8	Total number of initial RT DCH requests for transparent CS Data Calls with conversational class in the SRNC.	PMMOResult_Traffic.M1002C56	Sum, nkcttbh, nkrttbh, tot
rt_dch_ini_req_for_cs_data_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of initial RT DCH requests for non transparent CS Data Calls with streaming class in the SRNC.	PMMOResult_Traffic.M1002C57	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_data_call_conv_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a transparent CS Data Call with conversational class in the SRNC.	PMMOResult_Traffic.M1002C50	Sum, nkcttbh, nkrttbh, tot

rt_dch_req_for_cs_data_call_conv_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of rejected RT DCH requests for a transparent CS Data Call with conversational class in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C53	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_data_call_conv_class_reject_in_ul_in_srnc	ACCUMULATION	INT8	Total number of rejected RT DCH requests for a transparent CS Data Call with conversational class in the SRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C52	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_data_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a non transparent CS Data Call with streaming class in the SRNC.	PMMOResult_Traffic.M1002C51	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_data_call_stream_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of rejected RT DCH requests for anon transparent CS Data Call with streaming class in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C55	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs	ACCUMULA	INT8	Total number of	PMMOResult_Traffic.	Sum,

_data_call_stream_class_reject_in_ul_in_srnc	TION		rejected RT DCH requests for anon transparent CS Data Call with streaming class in the SRNC for reasons caused by UL radio resources.	M1002C54	nkcttbh, nkrttbh, tot

7.6.148Cell.Nokia.UMTS.traffic.allocations_compressed_mode.srnc

Traffic - Compressed mode allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_dura_for_com_mode_dl_to_int_freq_hho_in_srnc	INTENSITY	INTEGER	Allocated durations for a compressed mode in DL to Inter Frequency HHO in SRNC	PMMOResult_Traffic.M1002C366	Average, avg, max, min, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_dl_to_int_sys_hho_in_srnc	INTENSITY	INTEGER	Allocated durations for a compressed mode in DL to Inter System HHO in SRNC	PMMOResult_Traffic.M1002C370	Average, avg, max, min, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_dl_using_hls_method_in_srnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in DL using the high layer scheduling method in SRNC.	PMMOResult_Traffic.M1002C440	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_dl_using_sf2_method_in_srnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in DL using the SF/2 method in SRNC.	PMMOResult_Traffic.M1002C438	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_co	INTENSITY	INTEG	Allocated	PMMOResult_Traffic.	Average,

m_mode_ul_to_int_freq_hho_in_srnc		ER	durations for a compressed mode in UL to Inter Frequency HHO in SRNC	M1002C365	avg, max, min, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_ul_to_int_sys_hho_in_srnc	INTENSITY	INTEGER	Allocated durations for a compressed mode in UL to Inter System HHO in SRNC	PMMOResult_Traffic.M1002C369	Average, avg, max, min, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_ul_using_hls_method_in_srnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in UL using the high layer scheduling method in SRNC.	PMMOResult_Traffic.M1002C439	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_ul_using_sf2_method_in_srnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in UL using the SF/2 method in SRNC.	PMMOResult_Traffic.M1002C437	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Allocations for a compressed mode in DL to Inter Frequency HHO in SRNC	PMMOResult_Traffic.M1002C364	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_to_int_sys_hho_in_srnc	ACCUMULATION	INT8	Allocations for a compressed mode in DL to Inter System HHO in SRNC	PMMOResult_Traffic.M1002C368	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_using_hls_method_in_srnc	ACCUMULATION	INT8	The number of allocations for compressed mode	PMMOResult_Traffic.M1002C436	Sum, nkcttbh, nkrttbh,

			in DL using the high layer scheduling method in SRNC.		tot
allo_for_com_mode_dl_using_sf2_method_in_srnc	ACCUMULATION	INT8	The number of allocations for compressed mode in DL using the SF/2 method in SRNC.	PMMOResult_Traffic.M1002C434	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Allocations for a compressed mode in UL to Inter Frequency HHO in SRNC	PMMOResult_Traffic.M1002C363	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_to_int_sys_hho_in_srnc	ACCUMULATION	INT8	Allocations for a compressed mode in UL to Inter System HHO in SRNC	PMMOResult_Traffic.M1002C367	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_using_hls_method_in_srnc	ACCUMULATION	INT8	The number of allocations for compressed mode in UL using the high layer scheduling method in SRNC.	PMMOResult_Traffic.M1002C435	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_using_sf2_method_in_srnc	ACCUMULATION	INT8	The number of allocations for compressed mode in UL using the SF/2 method in SRNC.	PMMOResult_Traffic.M1002C433	Sum, nkcttbh, nkrttbh, tot

7.6.149Cell.Nokia.UMTS.traffic.amr_codec_mode

AMR codec statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_codec_change_fail_icsu	ACCUMULATION	INTEGER	The number of AMR codec	PMMOResult_Traffic.M1002C566	Sum, nkcttbh,

			changes prevented by the ICSU unit load.		nkrttbh, tot
amr_codec_change_fail_other	ACCUMULATION	INTEGER	The number of AMR codec changes that failed due to other reason than one of the following: ICSU load, other active set cells do not have the needed AMR mode set enabled, other active set cells are not in underload state, the active set has changed during the last five seconds or another parallel procedure is ongoing for the same UE.	PMMOResult_Traffic.M1002C567	Sum, nkcttbh, nkrttbh, tot
amr_lower_codec_sf128_inc	ACCUMULATION	INTEGER	The number of times when AMR codec mode set {5.9, 4.75} on SF128 is selected for an incoming call.	PMMOResult_Traffic.M1002C561	Sum, nkcttbh, nkrttbh, tot
amr_lower_codec_sf256_inc	ACCUMULATION	INTEGER	The number of times when AMR codec mode set {5.9, 4.75} on SF256 is selected for an incoming call.	PMMOResult_Traffic.M1002C562	Sum, nkcttbh, nkrttbh, tot

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load_amr_dgr_sf128_success	ACCUMULATION	INTEGER	The number of successful load triggered AMR codec mode downgrades to set {5.9, 4.75} on SF128. This counter is updated only for the cell that triggered the codec downgrade.	PMMOResult_Traffic.M1002C563	Sum, nkcttbh, nkrttbh, tot
load_amr_dgr_sf256_success	ACCUMULATION	INTEGER	The number of successful load triggered AMR codec mode downgrades to set {5.9, 4.75} on SF256.	PMMOResult_Traffic.M1002C564	Sum, nkcttbh, nkrttbh, tot
load_amr_upgrade_success	ACCUMULATION	INTEGER	The number of AMR codec upgrades due to load thresholds.	PMMOResult_Traffic.M1002C565	Sum, nkcttbh, nkrttbh, tot

7.6.150Cell.Nokia.UMTS.traffic.amr_hspa_allocation

AMR HSPA allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_amr_multinrt_hspa	ACCUMULATION	INTEGER	The number of allocations for AMR + more than one NRT_HSPA.	PMMOResult_Traffic.M1002C617	Sum, nkcttbh, nkrttbh, tot
allo_amr_rt_multinrt_hspa	ACCUMULATION	INTEGER	The number of allocations for AMR + RT_HSPA + more than one NRT_HSPA.	PMMOResult_Traffic.M1002C620	Sum, nkcttbh, nkrttbh, tot
allo_amr_rt_nrt_hspa	ACCUMULATION	INTEGER	The number of allocations for AMR +	PMMOResult_Traffic.M1002C619	Sum, nkcttbh, nkrttbh,

			RT_HSPA + NRT_HSPA.		tot
allo_multinrt_hspa	ACCUMULATION	INTEGER	The number of allocations for more than one NRT_HSPA.	PMMOResult_Traffic.M1002C618	Sum, nkcttbh, nkrttbh, tot
allo_rt_multinrt_hspa	ACCUMULATION	INTEGER	The number of allocations for RT_HSPA + more than one NRT_HSPA.	PMMOResult_Traffic.M1002C622	Sum, nkcttbh, nkrttbh, tot
allo_rt_nrt_hspa	ACCUMULATION	INTEGER	The number of allocations for RT_HSPA + NRT_HSPA.	PMMOResult_Traffic.M1002C621	Sum, nkcttbh, nkrttbh, tot

7.6.151Cell.Nokia.UMTS.traffic.compressed_mode_hsdpa_users

Compressed mode allocation for HSDPA users statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_cm_hsdpa_ifho	ACCUMULATION	INTEGER	The number of successful compressed mode allocations for HSDPA users triggered by inter-frequency measurements.	PMMOResult_Traffic.M1002C623	Sum, nkcttbh, nkrttbh, tot
allo_dura_cm_hsdpa_ifho	ACCUMULATION	INTEGER	The allocation duration of compressed mode for HSDPA users triggered by inter-frequency measurements.	PMMOResult_Traffic.M1002C624	Sum, nkcttbh, nkrttbh, tot

rej_cm_hsdpa_ifho	ACCUMULATION	INTEGER	The number of rejected compressed mode requests for HSDPA users triggered by inter-frequency measurements.	PMMOResult_Traffic.M1002C625	Sum, nkcttbh, nkrttbh, tot

7.6.152Cell.Nokia.UMTS.traffic.dch_allocations_cs_data_calls.srnc

Traffic - DCH allocation for CS data services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_non_transparent_cs_data_throughput	INTENSITY	FLOAT	Non Transparent Circuit switched data throughput Downlink (kbps/Second)	if (interval*60) = 0 then 0 else (((14.4*PMMOResult_Traffic.M1002C79)+(28.8*M1002C80)+(57.6*M1002C81))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_nontrans_cs_data_stream_14_4_kbps_dl_srnc	INTENSITY	INTEGER	[rt_dch_allo_dur_for_nontrans_cs_data_stream_class_14_4_kbps_in_dl_in_srnc] - 14.4 kbps RT DCH allocations for non transparent CS Data Calls in DL with streaming class	PMMOResult_Traffic.M1002C79	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_nontrans_cs_data_stream_14_4_kbps_ul_srnc	INTENSITY	INTEGER	[rt_dch_allo_dur_for_nontrans_cs_data_stream_class_14_4_kbps_in_ul_in_srnc] - 14.4 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class	PMMOResult_Traffic.M1002C76	Average, avg, max, min, nkcttbh, nkrttbh, tot

rt_dch_allo_dur_for_nontrans_cs_data_stream_28_8_kbps_dl_srnc	INTENSITY	INTEGER	- Obsolete in RN2.2 - [rt_dch_allo_dur_for_nontrans_cs_data_stream_class_28_8_kbps_in_dl_in_srnc] - 28.8 kbps RT DCH allocations for non transparent CS Data Calls in DL with streaming class	PMMOResult_Traffic.M1002C80	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_nontrans_cs_data_stream_28_8_kbps_ul_srnc	INTENSITY	INTEGER	- Obsolete in RN2.2 - [rt_dch_allo_dur_for_nontrans_cs_data_stream_class_28_8_kbps_in_ul_in_srnc] - 28.8 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class	PMMOResult_Traffic.M1002C77	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_nontrans_cs_data_stream_57_6_kbps_dl_srnc	INTENSITY	INTEGER	[rt_dch_allo_dur_for_nontrans_cs_data_stream_class_57_6_kbps_in_dl_in_srnc] - 56.7 kbps RT DCH allocations for non transparent CS Data Calls in DL with streaming class	PMMOResult_Traffic.M1002C81	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_nontrans_cs_da	INTENSITY	INTEGER	[rt_dch_allo_dur_for_nontrans_cs_da	PMMOResult_Traffic.M1002C78	Average, avg, max,

ta_stream_57_6_kbps_ul_srnc			ta_stream_class_57_6_kbps_in_ul_in_srnc] - 56.7 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class		min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_trans_cs_data_conv_class_28_8_kbps_in_srnc	INTENSITY	INTEGER	- Obsolete in RN2.2 - Duration of 28.8 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C66	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_trans_cs_data_conv_class_32_kbps_in_srnc	INTENSITY	INTEGER	- Obsolete in RN2.2 - Duration of 32 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C67	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_trans_cs_data_conv_class_33_6_kbps_in_srnc	INTENSITY	INTEGER	- Obsolete in RN2.2 - Duration of 33.6 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C68	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_trans_cs_data_conv_class_64_kbps_in_srnc	INTENSITY	INTEGER	Duration of 64 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C69	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_for_nontrans_cs_data_stream_class_14_4	ACCUMULATION	INT8	14.4 kbps RT DCH allocations for non transparent	PMMOResult_Traffic.M1002C73	Sum, nkcttbh, nkrttbh,

_kbps_in_dl_in_srnc			CS Data Calls in DL with streaming class		tot
rt_dch_allo_for_nontrans_cs_data_stream_class_14_4_kbps_in_ul_in_srnc	ACCUMULATION	INT8	14.4 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class	PMMOResult_Traffic.M1002C70	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_nontrans_cs_data_stream_class_28_8_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - 28.8 kbps RT DCH allocations for non transparent CS Data Calls in DL with streaming class	PMMOResult_Traffic.M1002C74	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_nontrans_cs_data_stream_class_28_8_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - 28.8 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class	PMMOResult_Traffic.M1002C71	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_nontrans_cs_data_stream_class_56_7_kbps_in_dl_in_srnc	ACCUMULATION	INT8	56.7 kbps RT DCH allocations for non transparent CS Data Calls in DL with streaming class	PMMOResult_Traffic.M1002C75	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_nontrans_cs_data_stream_class_56_7_kbps_in_ul_in_srnc	ACCUMULATION	INT8	56.7 kbps RT DCH allocations for non transparent CS Data Calls in UL with streaming class	PMMOResult_Traffic.M1002C72	Sum, nkcttbh, nkrttbh, tot

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rt_dch_allo_for_trans_cs_data_conv_class_28_8_kbps_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of 28.8 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C62	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_trans_cs_data_conv_class_32_kbps_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of 32 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C63	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_trans_cs_data_conv_class_33_6_kbps_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of 33.6 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C64	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_trans_cs_data_conv_class_64_kbps_in_srnc	ACCUMULATION	INT8	A number of 64 kbps RT DCH allocations for transparent CS Data Calls with conversational class	PMMOResult_Traffic.M1002C65	Sum, nkcttbh, nkrttbh, tot
transparent_cs_data_throughput	INTENSITY	FLOAT	Transparent Circuit switched data throughput Uplink and Downlink (kbps/Second)	if (interval*60) = 0 then 0 else (((28.8*PMMOResult_Traffic.M1002C66)+(32*M1002C67)+(33.6*M1002C68)+(64*M1002C69))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
ul_non_transparent_cs_data_throughput	INTENSITY	FLOAT	Non Transparent Circuit switched data throughput Uplink	if (interval*60) = 0 then 0 else (((14.4*PMMOResult_Traffic.M1002C76)+(2	Average, avg, max, min, nkcttbh,

			(kbps/Second)	8.8*M1002C77)+(57.6 *M1002C78))*(0.01)/ (interval*60))	nkrttbh, tot

7.6.153Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.drnc

Traffic - DCH allocation for CS voice services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_allo_for_amr_10_2_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 10.2 kbps allocations in DL	PMMOResult_Traffic.M1002C268	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_10_2_kbps_in_ul_in_drnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of RT DCH allocations in the DRNC for AMR. AMR 10.2 kbps allocations in UL	PMMOResult_Traffic.M1002C260	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_12_2_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocation in the DRNC for AMR. AMR 12.2 kbps allocations in DL	PMMOResult_Traffic.M1002C269	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_12_2_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 12.2 kbps allocations in UL	PMMOResult_Traffic.M1002C261	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_4_75_kbps_in	ACCUMULATION	INT8	Number of RT DCH allocations in	PMMOResult_Traffic.M1002C262	Sum, nkcttbh,

_dl_in_drnc			the DRNC for AMR. AMR 4.75 kbps allocations in DL		nkrttbh, tot
rt_dch_allo_for_amr_4_75_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 4.75 kbps allocations in UL	PMMOResult_Traffic.M1002C254	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_15_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 5.15 kbps allocations in DL	PMMOResult_Traffic.M1002C263	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_15_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 5.15 kbps allocations in UL	PMMOResult_Traffic.M1002C255	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_9_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 5.9 kbps allocations in DL	PMMOResult_Traffic.M1002C264	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_9_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 5.9 kbps allocations in UL	PMMOResult_Traffic.M1002C256	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_6_7_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 6.7 kbps allocations in DL	PMMOResult_Traffic.M1002C265	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_a	ACCUMULA	INT8	Number of RT	PMMOResult_Traffic.M	Sum,

mr_6_7_kbps_in_ul_in_drnc	TION		DCH allocations in the DRNC for AMR. AMR 6.7 kbps allocations in UL	1002C257	nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_4_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 7.4 kbps allocations in DL	PMMOResult_Traffic.M1002C266	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_4_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 7.4 kbps allocations in UL	PMMOResult_Traffic.M1002C258	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_95_kbps_in_dl_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 7.95 kbps allocations in DL	PMMOResult_Traffic.M1002C267	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_95_kbps_in_ul_in_drnc	ACCUMULATION	INT8	Number of RT DCH allocations in the DRNC for AMR. AMR 7.95 kbps allocations in UL	PMMOResult_Traffic.M1002C259	Sum, nkcttbh, nkrttbh, tot

7.6.154Cell.Nokia.UMTS.traffic.dch_allocations_cs_voice_calls.srnc

Traffic - DCH allocation for CS voice services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_allo_for_a	ACCUMULA	INT8	- Obsolete in	PMMOResult_Traffic.	Sum,

mr_10_2_kbps_in_dl_in_srnc	TION		RN2.2 - A number of RT DCH allocations for AMR 10.2 kbps allocations in DL.	M1002C32	nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_10_2_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 10.2 kbps allocations in UL AMR calls may be asymmetric, i.e. There is need for separate UL and DL counters.	PMMOResult_Traffic. M1002C24	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_12_2_kbps_in_dl_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 12.2 kbps allocations in DL.	PMMOResult_Traffic. M1002C33	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_12_2_kbps_in_ul_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 12.2 kbps allocations in UL.	PMMOResult_Traffic. M1002C25	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_4_75_kbps_in_dl_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 4.75 kbps allocations in DL.	PMMOResult_Traffic. M1002C26	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_4_75_kbps_in_ul_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 4.75 kbps allocations in UL.	PMMOResult_Traffic. M1002C18	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_15_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 5.15 kbps allocations in DL.	PMMOResult_Traffic. M1002C27	Sum, nkcttbh, nkrttbh, tot

rt_dch_allo_for_amr_5_15_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 5.15 kbps allocations in UL.	PMMOResult_Traffic.M1002C19	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_9_kbps_in_dl_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 5.9 kbps allocations in DL. AMR calls may be asymmetric, i.e. There is need for separate UL and DL counters.	PMMOResult_Traffic.M1002C28	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_5_9_kbps_in_ul_in_srnc	ACCUMULATION	INT8	A number of RT DCH allocations for AMR 5.9 kbps allocations in UL.	PMMOResult_Traffic.M1002C20	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_6_7_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 6.7 kbps allocations in DL	PMMOResult_Traffic.M1002C29	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_6_7_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 6.7 kbps allocations in UL.	PMMOResult_Traffic.M1002C21	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_4_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 7.4 kbps allocations in DL.	PMMOResult_Traffic.M1002C30	Sum, nkcttbh, nkrttbh, tot

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rt_dch_allo_for_amr_7_4_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 7.4 kbps allocations in UL	PMMOResult_Traffic.M1002C22	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_95_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 7.95 kbps allocations in DL.	PMMOResult_Traffic.M1002C31	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_amr_7_95_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RT DCH allocations for AMR 7.95 kbps allocations in UL.	PMMOResult_Traffic.M1002C23	Sum, nkcttbh, nkrttbh, tot

7.6.155Cell.Nokia.UMTS.traffic.dch_allocations_data_calls.drnc

Traffic - DCH allocation for Data call services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_allo_for_data_call_128_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 128 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C311	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_128_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 128 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C299	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_14_4_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 14.4 kbps DCH allocation	PMMOResult_Traffic.M1002C304	Sum, nkcttbh, nkrttbh, tot

			for data call in DL		
dch_allo_for_data_call_14_4_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 14.4 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C292	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_16_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 16 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C305	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_16_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 16 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C293	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_256_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 256 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C312	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_256_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 256 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C300	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_28_8_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 28.8 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C306	Sum, nkcttbh, nkrttbh, tot

dch_allo_for_data_call_28_8_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 28.8 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C294	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_32_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 32 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C307	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_32_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 32 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C295	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_320_kbps_in_dl_in_drnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of DCH allocations for a data call in the DRNC. 320 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C313	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_320_kbps_in_ul_in_drnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of DCH allocations for a data call in the DRNC. 320 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C301	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_33_6_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 33.6 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C308	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_33_6_kbps_i	ACCUMULATION	INT8	A number of DCH allocations for a	PMMOResult_Traffic.M1002C296	Sum, nkcttbh,

n_ul_in_drnc			data call in the DRNC. 33.6 kbps DCH allocation for data call in UL		nkrttbh, tot
dch_allo_for_data_call_384_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 384 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C314	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_384_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 384 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C302	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_57_6_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 57.6 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C309	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_57_6_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 57.6 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C297	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_64_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 64 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C310	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_64_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the	PMMOResult_Traffic. M1002C298	Sum, nkcttbh, nkrttbh,

			DRNC. 64 kbps DCH allocation for data call in UL		tot
dch_allo_for_data_call_8_kbps_in_dl_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 8 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C303	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_data_call_8_kbps_in_ul_in_drnc	ACCUMULATION	INT8	A number of DCH allocations for a data call in the DRNC. 8 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C291	Sum, nkcttbh, nkrttbh, tot
dl_ps_data_ps_throughput_drnc	INTENSITY	FLOAT	Packet switched data throughput Downlink (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C327)+(14.4*M1002C328)+(16*M1002C329)+(28.8*M1002C330)+(32*M1002C331)+(33.6*M1002C332)+(57.6*M1002C333)+(64*M1002C334)+(128*M1002C335)+(256*M1002C336)+(320*M1002C337)+(384*M1002C338))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
ul_ps_data_ps_throughput_drnc	INTENSITY	FLOAT	Packet switched data throughput Uplink (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C315)+(14.4*M1002C316)+(16*M1002C317)+(28.8*M1002C318)+(32*M1002C319)+(33.6*M1002C320)+(57.6*M1002C321)+(64*M1002C322)+(128*M1002C323)+(256*M1002C324)+(320*M1002C325)+(384*M1002C326))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.156Cell.Nokia.UMTS.traffic.dch_allocations_signalling_links.drnc

Traffic - DCH allocation for signalling links at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_allo_dura_for_sig_link_1_7_kbps_in_drnc	ACCUMULATION	INTEGER	DRNC DCH Allocations for Signalling link 1.7 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C246	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_sig_link_13_6_kbps_in_drnc	ACCUMULATION	INTEGER	DRNC DCH Allocations for Signalling link 13.6 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C248	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_sig_link_3_4_kbps_in_drnc	ACCUMULATION	INTEGER	DRNC DCH Allocations for Signalling link 3.4 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C247	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_1_7_kbps_in_drnc	ACCUMULATION	INT8	DRNC DCH Allocations for Signalling link 1.7 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C243	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_13_6_kbps_in_drnc	ACCUMULATION	INT8	DRNC DCH Allocations for Signalling link 13.6 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C245	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_3_4_kbps_in_drnc	ACCUMULATION	INT8	DRNC DCH Allocations for Signalling link 3.4 kbps allocations in	PMMOResult_Traffic.M1002C244	Sum, nkcttbh, nkrttbh, tot

			UL/DL		
signalling_throughput_drnc	INTENSITY	FLOAT	Signalling data throughput uplink and downlink	if (interval*60) = 0 then 0 else (((1.7*PMMOResult_Traffic.M1002C246)+(3.4*M1002C247)+(13.6*M1002C248))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.157Cell.Nokia.UMTS.traffic.dch_allocations_streaming_class

DCH allocations with streaming class statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_sel_max_hsdpa_users_str	ACCUMULATION	INTEGER	The number of times when the DCH channel type is selected for streaming class connections due to maximum amount of HSDPA users or MAC-d flows in the WBTS, local cell group or cell.	PMMOResult_Traffic.M1002C591	Sum, nkcttbh, nkrttbh, tot
hs_dsch_ret_downgrade_str	ACCUMULATION	INTEGER	The number of DCH allocations with streaming class due to HSDPA return channel (DCH UL) downgrade.	PMMOResult_Traffic.M1002C590	Sum, nkcttbh, nkrttbh, tot
hs_dsch_ret_upgrade_str	ACCUMULATION	INTEGER	The number of DCH allocations with streaming class due to HSDPA return channel (DCH UL) upgrade.	PMMOResult_Traffic.M1002C589	Sum, nkcttbh, nkrttbh, tot

7.6.158Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.drnc

Traffic - DCH allocation durations for CS voice services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_cs_amr_throughput_drnc	INTENSITY	FLOAT	Circuit switched adaptive multirate codex (AMR) throughput in Downlink (kbps/Second)	if (interval*60) = 0 then 0 else (((4.75*M1002C278)+(5.15*PMMOResult_Traffic.M1002C279)+(5.9*M1002C280)+(6.7*M1002C281)+(7.4*M1002C282)+(7.95*M1002C283)+(10.2*M1002C284)+(12.2*M1002C285))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_10_2_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the DRNC for AMR. AMR 10.2 kbps allocations in DL	PMMOResult_Traffic.M1002C284	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_10_2_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 10.2 kbps allocations in UL	PMMOResult_Traffic.M1002C276	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_12_2_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the DRNC for AMR. AMR 12.2 kbps allocations in DL	PMMOResult_Traffic.M1002C285	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_12_2_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 12.2	PMMOResult_Traffic.M1002C277	Sum, nkcttbh, nkrttbh, tot

			kbps allocations in UL		
rt_dch_allo_dura_for_amr_4_75_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 4.75 kbps allocations in DL	PMMOResult_Traffic.M1002C278	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_4_75_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 4.75 kbps allocations in UL	PMMOResult_Traffic.M1002C270	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_15_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 5.15 kbps allocations in DL	PMMOResult_Traffic.M1002C279	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_15_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 5.15 kbps allocations in UL	PMMOResult_Traffic.M1002C271	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_9_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the DRNC for AMR. AMR 5.9 kbps allocations in DL	PMMOResult_Traffic.M1002C280	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_9_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 5.9 kbps allocations in UL	PMMOResult_Traffic.M1002C272	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_6_7_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the	PMMOResult_Traffic.M1002C281	Sum, nkcttbh, nkrttbh,

			DRNC for AMR. AMR 6.7 kbps allocations in DL		tot
rt_dch_allo_dura_for_amr_6_7_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 6.7 kbps allocations in UL	PMMOResult_Traffic.M1002C273	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_4_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the DRNC for AMR. AMR 7.4 kbps allocations in DL	PMMOResult_Traffic.M1002C282	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_4_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 7.4 kbps allocations in UL	PMMOResult_Traffic.M1002C274	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_95_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	RT DCH allocations duration in the DRNC for AMR. AMR 7.95 kbps allocations in DL	PMMOResult_Traffic.M1002C283	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_95_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	RT DCH allocation duration in the DRNC for AMR. AMR 7.95 kbps allocations in UL	PMMOResult_Traffic.M1002C275	Sum, nkcttbh, nkrttbh, tot
ul_cs_amr_throughput_drnc	INTENSITY	FLOAT	Circuit switched adaptive multirate codex (AMR) throughput Uplink	if (interval*60) = 0 then 0 else (((4.75*PMMOResult_Traffic.M1002C270)+(5	Average, avg, max, min, nkcttbh,

			(kbps/Second)	.15*M1002C271)+(5.9*M1002C272)+(6.7*M1002C273)+(7.4*M1002C274)+(7.95*M1002C275)+(10.2*M1002C276)+(12.2*M1002C277))*(0.01)/(interval*60))	nkrttbh, tot

7.6.159Cell.Nokia.UMTS.traffic.dch_duration_cs_voice_calls.srnc

Traffic - DCH allocation durations for CS voice services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_cs_amr_throughput	INTENSITY	FLOAT	Circuit switched adaptive multirate codex (AMR) throughput in Downlink (kbps/Second)	if (interval*60) = 0 then 0 else (((4.75*PMMOResult_Traffic.M1002C42)+(5.15*M1002C43)+(5.9*M1002C44)+(6.7*M1002C45)+(7.4*M1002C46)+(7.95*M1002C47)+(10.2*M1002C48)+(12.2*M1002C49))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_10_2_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 10.2 kbps allocated in DL	PMMOResult_Traffic.M1002C48	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_10_2_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 10.2 kbps allocated in UL	PMMOResult_Traffic.M1002C40	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_12_2_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	RT DCH allocated duration for AMR 12.2 kbps allocated in DL	PMMOResult_Traffic.M1002C49	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_	ACCUMULA	INTEG	RT DCH allocated	PMMOResult_Traffic.	Sum,

for_amr_12_2_kbps_in_ul_in_srnc	TION	ER	duration for AMR 12.2 kbps allocated in UL	M1002C41	nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_4_75_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	RT DCH allocated duration for AMR 4.75 kbps allocated in DL	PMMOResult_Traffic.M1002C42	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_4_75_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	RT DCH allocated duration for AMR 4.75 kbps allocations in UL in the SRNC	PMMOResult_Traffic.M1002C34	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_15_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 5.15 kbps allocated in DL	PMMOResult_Traffic.M1002C43	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_15_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 5.15 kbps allocated in UL	PMMOResult_Traffic.M1002C35	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_9_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	RT DCH allocated duration for AMR 5.9 kbps allocated in DL	PMMOResult_Traffic.M1002C44	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_5_9_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	RT DCH allocated duration for AMR 5.9 kbps allocated in UL	PMMOResult_Traffic.M1002C36	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_6_7_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 6.7 kbps	PMMOResult_Traffic.M1002C45	Sum, nkcttbh, nkrttbh, tot

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			allocated in DL		
rt_dch_allo_dura_for_amr_6_7_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 6.7 kbps allocated in UL	PMMOResult_Traffic.M1002C37	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_4_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 7.4 kbps allocated in DL	PMMOResult_Traffic.M1002C46	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_4_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 7.4 kbps allocated in UL	PMMOResult_Traffic.M1002C38	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_95_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 7.95 kbps allocated in DL	PMMOResult_Traffic.M1002C47	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dura_for_amr_7_95_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - RT DCH allocated duration for AMR 7.95 kbps allocated in UL	PMMOResult_Traffic.M1002C39	Sum, nkcttbh, nkrttbh, tot
ul_cs_amr_throughput	INTENSITY	FLOAT	Circuit switched adaptive multirate codex (AMR) throughput Uplink (kbps/Second)	if (interval*60) = 0 then 0 else (((4.75*PMMOResult_Traffic.M1002C34)+(5.15*M1002C35)+(5.9*M1002C36)+(6.7*M1002C37)+(7.4*M1002C38)+(7.95*M1002C39)+(10.2*M1002C40)+(12.2*M1002C41))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.160Cell.Nokia.UMTS.traffic.dch_duration_data_calls_dl.drnc

Traffic - DCH allocation durations for DL data call services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_allo_dura_for_data_call_128_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 128 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C335	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_14_4_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 14.4 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C328	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_16_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 16 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C329	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_256_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 256 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C336	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_28_8_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 28.8 kbps DCH allocation for data call in DL	PMMOResult_Traffic.M1002C330	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_32_k	ACCUMULATION	INTEGER	DCH allocation duration for a data	PMMOResult_Traffic.M1002C331	Sum, nkcttbh,

bps_in_dl_in_drnc			call in the DRNC. 32 kbps DCH allocation for data call in DL		nkrttbh, tot
dch_allo_dura_for_data_call_320_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - DCH allocation duration for a data call in the DRNC. 320 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C337	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_33_6_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 33.6 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C332	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_384_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 384 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C338	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_57_6_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 57.6 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C333	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_64_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 64 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C334	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_8_kbps_in_dl_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 8 kbps DCH allocation for data call in DL	PMMOResult_Traffic. M1002C327	Sum, nkcttbh, nkrttbh, tot

7.6.161Cell.Nokia.UMTS.traffic.dch_duration_data_calls_ul.drnc

Traffic - DCH allocation durations for UL data call services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_allo_dura_for_data_call_128_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 128 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C323	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_14_4_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 14.4 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C316	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_16_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 16 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C317	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_256_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 256 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C324	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_28_8_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 28.8 kbps DCH allocation for data call in UL	PMMOResult_Traffic.M1002C318	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_fo	ACCUMULA	INTEG	DCH allocation	PMMOResult_Traffic.	Sum,

r_data_call_32_kbps_in_ul_in_drnc	TION	ER	duration for a data call in the DRNC. 32 kbps DCH allocation for data call in UL	M1002C319	nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_320_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - DCH allocation duration for a data call in the DRNC. 320 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C325	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_33_6_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 33.6 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C320	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_384_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 384 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C326	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_57_6_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 57.6 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C321	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_64_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 64 kbps DCH allocation for data call in UL	PMMOResult_Traffic. M1002C322	Sum, nkcttbh, nkrttbh, tot
dch_allo_dura_for_data_call_8_kbps_in_ul_in_drnc	ACCUMULATION	INTEGER	DCH allocation duration for a data call in the DRNC. 8 kbps DCH allocation for data	PMMOResult_Traffic. M1002C315	Sum, nkcttbh, nkrttbh, tot

			call in UL		

7.6.162Cell.Nokia.UMTS.traffic.dch_request_hsdsch

Traffic - DCH request for HSDSCH users statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
channel_type_switch_from_dch_to_hsdsch_for_background	ACCUMULATION	INTEGER	The number of successful channel switches made directly from DCH xx/yy to HSDSCH for background traffic class.	PMMOResult_Traffic.M1002C508	Sum, nkcttbh, nkrttbh, tot
channel_type_switch_from_dch_to_hsdsch_for_interactive	ACCUMULATION	INTEGER	The number of successful channel switches made directly from DCH xx/yy to HSDSCH for interactive traffic class.	PMMOResult_Traffic.M1002C507	Sum, nkcttbh, nkrttbh, tot
dch_selected_for_background_due_to_max_hsdpa_users	ACCUMULATION	INT8	The number of times when the DCH channel type is selected for background class connections due to maximum amount of HSDPA users in the cell.	PMMOResult_Traffic.M1002C476	Sum, nkcttbh, nkrttbh, tot
dch_selected_for_interactive_due_to_max_hsdpa_users	ACCUMULATION	INT8	The number of times when the DCH channel type is selected for interactive class	PMMOResult_Traffic.M1002C475	Sum, nkcttbh, nkrttbh, tot

			connections due to maximum amount of HSDPA users in the cell.		
fach_to_dch_from_hspa_to_hspa_layer	ACCUMULATION	INTEGER	The number of FACH to DCH state transitions directing the UE from one HSPA layer to another HSPA layer.	PMMOResult_Traffic.M1002C514	Sum, nkcttbh, nkrttbh, tot
fach_to_dch_from_hspa_to_non_hspa_layer	ACCUMULATION	INTEGER	The number of FACH to DCH state transitions directing the UE from HSPA layer to non- HSPA layer.	PMMOResult_Traffic.M1002C513	Sum, nkcttbh, nkrttbh, tot
fach_to_dch_from_non_hspa_to_hspa_layer	ACCUMULATION	INTEGER	The number of FACH to DCH state transitions directing the UE from non-HSPA layer to HSPA layer.	PMMOResult_Traffic.M1002C512	Sum, nkcttbh, nkrttbh, tot
swi_dch_to_hs_dsch_str	ACCUMULATION	INTEGER	The number of successful channel switches made directly from the DCH xx/yy to the HS-DSCH for the streaming traffic class.	PMMOResult_Traffic.M1002C568	Sum, nkcttbh, nkrttbh, tot

7.6.163Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.drnc

Traffic - DCH requests for CS voice services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_dho_req_for_cs_voice_call_	ACCUMULATION	INT8	Total number of DCH requests for a	PMMOResult_Traffic.M1002C252	Sum, nkcttbh,

in_drnc			CS Voice Call due to the diversity handover in the DRNC.		nkrttbh, tot
rt_dch_dho_req_for_cs_voice_call_reject_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a CS Voice Call rejected by the DRNC for reasons caused by radio resources in the target cell of the diversity handover.	PMMOResult_Traffic.M1002C253	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_over_iur_req_for_cs_voice_call_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a CS Voice Call due to a hard handover (HHO) over IUR in the DRNC.	PMMOResult_Traffic.M1002C373	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_over_iur_req_for_cs_voice_call_reject_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a CS Voice Call rejected by the DRNC for radio resource reasons in the target cell of the hard handover (HHO) over IUR.	PMMOResult_Traffic.M1002C374	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_voice_call_in_drnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call in the DRNC.	PMMOResult_Traffic.M1002C249	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_voice_call_reject_in_dl_in_drnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call rejected in the DRNC for reasons caused by DL	PMMOResult_Traffic.M1002C251	Sum, nkcttbh, nkrttbh, tot

			radio resources.		
rt_dch_req_for_cs_voice_call_reject_in_ul_in_drnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call rejected in the DRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C250	Sum, nkcttbh, nkrttbh, tot

7.6.164Cell.Nokia.UMTS.traffic.dch_requests_cs_voice_calls.srnc

Traffic - DCH requests for CS voice services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_dho_req_for_cs_voice_call_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for CS Voice Call due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C16	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_cs_voice_call_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a CS Voice Call rejected by the SRNC for reasons caused by radio resources in the target cell of	PMMOResult_Traffic.M1002C17	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_cs_voice_call_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for CS Voice Call due to hard handover in the SRNC.	PMMOResult_Traffic.M1002C341	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_cs_voice_call_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a CS Voice Call rejected by the SRNC for reasons caused by radio resources in the target cell of hard	PMMOResult_Traffic.M1002C342	Sum, nkcttbh, nkrttbh, tot

			handover		
rt_dch_init_req_for_cs_voice_call_in_srnc	ACCUMULATION	INT8	Total number of initial RTDCH requests for a CS Voice Call in the SRNC.	PMMOResult_Traffic.M1002C15	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_voice_call_in_srnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call in the SRNC.	PMMOResult_Traffic.M1002C12	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_voice_call_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call rejected in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C14	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_cs_voice_call_reject_in_ul_in_srnc	ACCUMULATION	INT8	Total number of RTDCH requests for a CS Voice Call rejected in the SRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C13	Sum, nkcttbh, nkrttbh, tot

7.6.165Cell.Nokia.UMTS.traffic.dch_requests_data_calls.drnc

Traffic - DCH requests for data services at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_dho_req_for_data_call_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a Data Call due to the diversity handover in the DRNC.	PMMOResult_Traffic.M1002C289	Sum, nkcttbh, nkrttbh, tot

dch_dho_req_for_data_call_reject_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a data call rejected by the DRNC for reasons caused by radio resources in the target cell of the diversity handover.	PMMOResult_Traffic.M1002C290	Sum, nkcttbh, nkrttbh, tot
dch_hho_over_iur_req_for_data_call_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a Data Call due to a hard handover (HHO) over IUR in the DRNC.	PMMOResult_Traffic.M1002C375	Sum, nkcttbh, nkrttbh, tot
dch_hho_over_iur_req_for_data_call_reject_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a Data Call rejected by the DRNC for radio resource reasons in the target cell of the hard handover (HHO) over IUR.	PMMOResult_Traffic.M1002C376	Sum, nkcttbh, nkrttbh, tot
dch_req_for_data_call_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a data call direction in the DRNC.	PMMOResult_Traffic.M1002C286	Sum, nkcttbh, nkrttbh, tot
dch_req_for_data_call_reject_in_dl_in_drnc	ACCUMULATION	INT8	Total number of rejected DCH requests for a Data Call in the DRNC for DL radio reasons. Updated when a DCH request for a data call in DL direction (DRNC side) is rejected for reasons caused by radio resources.	PMMOResult_Traffic.M1002C288	Sum, nkcttbh, nkrttbh, tot
dch_req_for_data_call_reject_in_ul	ACCUMULATION	INT8	Total number of rejected DCH	PMMOResult_Traffic.M1002C287	Sum, nkcttbh,

_in_drnc			requests for a Data Call in the DRNC for UL radio reasons.		nkrttbh, tot

7.6.166Cell.Nokia.UMTS.traffic.dch_requests_ps_calls_handover.srnc

Traffic - DCH requests for PS services due to handover at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nrt_dch_dho_req_for_ps_call_backg_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS Calls with background class due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C108	Sum, nkcttbh, nkrttbh, tot
nrt_dch_dho_req_for_ps_call_backg_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS Calls with background class rejected by the SRNC for reasons caused by radio resources in the target cell of diversity handover.	PMMOResult_Traffic.M1002C109	Sum, nkcttbh, nkrttbh, tot
nrt_dch_dho_req_for_ps_call_intera_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS Calls with interactive class due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C106	Sum, nkcttbh, nkrttbh, tot
nrt_dch_dho_req_for_ps_call_intera_class_reject_in_s	ACCUMULATION	INT8	Total number of RT DCH requests for a PS Call with	PMMOResult_Traffic.M1002C107	Sum, nkcttbh, nkrttbh,

rnc			interactive class rejected by the SRNC for reasons caused by radio resources in the target cell of diversity handover.		tot
nrt_dch_hho_req_for_ps_call_backg_class_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for PS calls with background class due to the hard handover in SRNC.	PMMOResult_Traffic.M1002C353	Sum, nkcttbh, nkrttbh, tot
nrt_dch_hho_req_for_ps_call_backg_class_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for PS calls with background class rejected by SRNC for radio resource reasons in the target cell of the hard handover.	PMMOResult_Traffic.M1002C354	Sum, nkcttbh, nkrttbh, tot
nrt_dch_hho_req_for_ps_call_intera_class_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for PS calls with interactive class due to the hard handover in SRNC.	PMMOResult_Traffic.M1002C351	Sum, nkcttbh, nkrttbh, tot
nrt_dch_hho_req_for_ps_call_intera_class_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a PS call with interactive class rejected by SRNC for radio resource reasons in the target cell of the hard handover.	PMMOResult_Traffic.M1002C352	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_ps_call_conv_class_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of RT DCH requests for a	PMMOResult_Traffic.M1002C102	Sum, nkcttbh, nkrttbh, tot

			PS Call with conversational class due to diversity handover in the SRNC.		
rt_dch_dho_req_for_ps_call_conv_class_reject_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of RT DCH requests for PS Calls with conversational class rejected by the SRNC for reasons caused by radio resources in the target cell of diversity handover.	PMMOResult_Traffic.M1002C103	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_ps_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS Calls with streaming class due to diversity handover in the SRNC.	PMMOResult_Traffic.M1002C104	Sum, nkcttbh, nkrttbh, tot
rt_dch_dho_req_for_ps_call_stream_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS Calls with streaming class rejected by the SRNC for reasons caused by radio resources in the target cell of diversity handover.	PMMOResult_Traffic.M1002C105	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_ps_call_conv_class_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of RT DCH requests for	PMMOResult_Traffic.M1002C347	Sum, nkcttbh, nkrttbh, tot

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			PS calls with conversational class due to the hard handover in SRNC		
rt_dch_hho_req_for_ps_call_conv_class_reject_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of RT DCH requests for PS calls with conversational class (on SRNC side) rejected for radio resource reasons in the target cell of the hard handover	PMMOResult_Traffic.M1002C348	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_ps_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS calls with streaming class due to the hard handover in SRNC	PMMOResult_Traffic.M1002C349	Sum, nkcttbh, nkrttbh, tot
rt_dch_hho_req_for_ps_call_stream_class_reject_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for PS calls with streaming class (on SRNC side) rejected for radio resource reasons in the target cell of the hard handover	PMMOResult_Traffic.M1002C350	Sum, nkcttbh, nkrttbh, tot

7.6.167Cell.Nokia.UMTS.traffic.dch_requests_ps_calls.srnc

Traffic - DCH requests for PS services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nrt_dch_ini_req_for_ps_call_backgr_class_in_dl_in_srnc	ACCUMULATION	INT8	Total number of initial NRT DCH requests for a PS Call with	PMMOResult_Traffic.M1002C101	Sum, nkcttbh, nkrttbh, tot

			background class in DL direction in the SRNC.		
nrt_dch_ini_req_for_ps_call_backgr_class_in_ul_in_srnc	ACCUMULATION	INT8	Total number of initial NRT DCH requests for PS Calls with background class in UL direction in the SRNC.	PMMOResult_Traffic.M1002C100	Sum, nkcttbh, nkrttbh, tot
nrt_dch_ini_req_for_ps_call_intera_class_in_dl_in_srnc	ACCUMULATION	INT8	Total number of initial NRT DCH requests for a PS Call with interactive class in DL direction in the SRNC.	PMMOResult_Traffic.M1002C99	Sum, nkcttbh, nkrttbh, tot
nrt_dch_ini_req_for_ps_call_intera_class_in_ul_in_srnc	ACCUMULATION	INT8	Total number of initial NRT DCH requests for a PS Call with interactive class in UL direction in the SRNC.	PMMOResult_Traffic.M1002C98	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_backg_class_in_dl_in_srnc	ACCUMULATION	INT8	Total number of NRT DCH requests for a PS Call with background class in DL direction in the SRNC.	PMMOResult_Traffic.M1002C87	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_backg_class_in_ul_in_srnc	ACCUMULATION	INT8	Total number of NRT DCH requests for a PS Call with background class in UL direction in the SRNC.	PMMOResult_Traffic.M1002C86	Sum, nkcttbh, nkrttbh, tot

nrt_dch_req_for_ps_call_backg_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of rejected NRT DCH requests for a PS Call with background class in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C95	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_backg_class_reject_in_ul_in_srnc	ACCUMULATION	INT8	Total number of Rejected NRT DCH requests for A PS Call with background class in the SRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C94	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_intera_class_in_dl_in_srnc	ACCUMULATION	INT8	Total number of NRT DCH requests for a PS Call with interactive class in DL direction in the SRNC.	PMMOResult_Traffic.M1002C85	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_intera_class_in_ul_in_srnc	ACCUMULATION	INT8	Total number of NRT DCH requests for a PS Call with interactive class in UL direction in the SRNC.	PMMOResult_Traffic.M1002C84	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_intera_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of rejected NRT DCH requests for a PS Call with interactive class in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C93	Sum, nkcttbh, nkrttbh, tot
nrt_dch_req_for_ps_call_intera_cla	ACCUMULATION	INT8	Total number of rejected NRT DCH	PMMOResult_Traffic.M1002C92	Sum, nkcttbh,

ss_reject_in_ul_in_srnc			requests for a PS Call with interactive class in the SRNC for reasons caused by UL radio resources.		nkrttbh, tot
rt_dch_ini_req_for_ps_call_conv_class_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of initial RT DCH requests for a PS Call with conversational class in the SRNC.	PMMOResult_Traffic.M1002C96	Sum, nkcttbh, nkrttbh, tot
rt_dch_ini_req_for_ps_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of initial RT DCH requests for PS Calls with streaming class in the SRNC.	PMMOResult_Traffic.M1002C97	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_ps_call_conv_class_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of RT DCH requests for a PS Call with conversational class in the SRNC.	PMMOResult_Traffic.M1002C82	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_ps_call_conv_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Total number of rejected RT DCH requests for a PS Call with conversational class in the SRNC for reasons caused by DL radio resources.	PMMOResult_Traffic.M1002C89	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_ps	ACCUMULA	INT8	- Obsolete in	PMMOResult_Traffic.	Sum,

_call_conv_class_reject_in_ul_in_srnc	TION		RN2.2 - Total number of rejected RT DCH requests for a PS Call with conversational class in the SRNC for reasons caused by UL radio resources.	M1002C88	nkcttbh, nkrttbh, tot
rt_dch_req_for_ps_call_stream_class_in_srnc	ACCUMULATION	INT8	Total number of RT DCH requests for a PS Call with streaming class in the SRNC.	PMMOResult_Traffic.M1002C83	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_ps_call_stream_class_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of rejected RT DCH requests for a PS Call with streaming class in DL direction in the SRNC.	PMMOResult_Traffic.M1002C91	Sum, nkcttbh, nkrttbh, tot
rt_dch_req_for_ps_call_stream_class_reject_in_ul_in_srnc	ACCUMULATION	INT8	Total number of rejected RT DCH requests for a PS Call with streaming class in the SRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C90	Sum, nkcttbh, nkrttbh, tot

7.6.168Cell.Nokia.UMTS.traffic.dch_requests_signalling_links.drnc

Traffic - DCH requests for signalling links at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_dho_req_for_sig_link_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link due to the diversity handover in the DRNC.	PMMOResult_Traffic.M1002C241	Sum, nkcttbh, nkrttbh, tot

dch_dho_req_for_sig_link_reject_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link rejected by the DRNC for reasons caused by radio resources in the target cell of the diversity handover.	PMMOResult_Traffic.M1002C242	Sum, nkcttbh, nkrttbh, tot
dch_hho_over_iur_req_for_sig_link_in_drnc	ACCUMULATION	INT8	DRNC requests for a signalling link due to hard handover (HHO) over IUR in DRNC.	PMMOResult_Traffic.M1002C371	Sum, nkcttbh, nkrttbh, tot
dch_hho_over_iur_req_for_sig_link_reject_in_drnc	ACCUMULATION	INT8	DRNC requests for a signalling link rejected by the DRNC for radio resource reasons in the target cell of the hard handover (HHO) over IUR. HHO over IUR is used when the first radio link for an UE is set up on DRNC side.	PMMOResult_Traffic.M1002C372	Sum, nkcttbh, nkrttbh, tot
dch_req_for_sig_link_in_drnc	ACCUMULATION	INT8	Total number of signalling link requests in the DRNC. Includes handovers and DCH modifications.	PMMOResult_Traffic.M1002C238	Sum, nkcttbh, nkrttbh, tot
dch_req_for_sig_link_reject_in_dl_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link	PMMOResult_Traffic.M1002C240	Sum, nkcttbh, nkrttbh,

			rejected in the DRNC for reasons caused by DL radio resources.		tot
dch_req_for_sig_link_reject_in_ul_in_drnc	ACCUMULATION	INT8	Total number of DCH requests for signalling link rejected in the DRNC for reasons caused by UL radio resources.	PMMOResult_Traffic.M1002C239	Sum, nkcttbh, nkrttbh, tot

7.6.169Cell.Nokia.UMTS.traffic.edch_allocation_release

EDCH channel release statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsupa_resource_retainability_nrt_traffic	INTENSITY	FLOAT	HSUPA Resource Retainability for NRT traffic	if (PMMOResult_Traffic.M1002C535 + M1002C536 + M1002C537 + M1002C538 + M1002C539 + M1002C540 + M1002C541 + M1002C542)=0 then 0 else 100 * ((M1002C535+M1002C536 + M1002C537 + M1002C538)/ (M1002C535 + M1002C536 + M1002C537 + M1002C538 + M1002C539 + M1002C540 + M1002C541 + M1002C542))	Average, nkcttbh, nkrttbh, tot, min, max
_%_hsupa_resource_retainability_rt_traffic	INTENSITY	FLOAT	HSUPA Resource Retainability for RT traffic	if (PMMOResult_Traffic.M1002C609 + M1002C610 +	Average, nkcttbh, nkrttbh, tot, min,

				M1002C611 + M1002C612)=0 then 0 else 100 * ((M1002C609 + M1002C610) / (M1002C609 + M1002C610 + M1002C611 + M1002C612))	max
amr_edch_normal_release	ACCUMULATION	INTEGER	The number of AMR + E-DCH multi-RAB normal releases.	PMMOResult_Traffic. M1002C544	Sum, nkcttbh, nkrttbh, tot
edch_allo_cancel_for_background_due_to_non_acceptable_as	ACCUMULATION	INTEGER	The number of times when EDCH allocation made by the cell specific packet scheduler for a background class connection is cancelled due to non-acceptable E-DCH active set.	PMMOResult_Traffic. M1002C520	Sum, nkcttbh, nkrttbh, tot
edch_allo_cancel_for_interactive_due_to_non_acceptable_as	ACCUMULATION	INTEGER	The number of times when EDCH allocation made by the cell specific packet scheduler for an interactive class connection is cancelled due to non-acceptable E-DCH active set.	PMMOResult_Traffic. M1002C519	Sum, nkcttbh, nkrttbh, tot
edch_normal_release_for_background	ACCUMULATION	INTEGER	The number of E-DCH normal releases in the SRNC for background class	PMMOResult_Traffic. M1002C536	Sum, nkcttbh, nkrttbh, tot

			connections.		
edch_normal_release_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH normal releases in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C535	Sum, nkcttbh, nkrttbh, tot
edch_release_due_hsdsch_serving_cell_change_for_background	ACCUMULATION	INTEGER	The number of E-DCH releases due to HS-DSCH serving cell change for background class connections, i.e. the new HS-DSCH serving cell does not support E-DCH.	PMMOResult_Traffic.M1002C538	Sum, nkcttbh, nkrttbh, tot
edch_release_due_hsdsch_serving_cell_change_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH releases due to HS-DSCH serving cell change for interactive class connections, i.e. the new HS-DSCH serving cell does not support E-DCH.	PMMOResult_Traffic.M1002C537	Sum, nkcttbh, nkrttbh, tot
edch_release_due_to_other_failure_for_background	ACCUMULATION	INTEGER	The number of E-DCH releases due to other failure reason for background class connections.	PMMOResult_Traffic.M1002C542	Sum, nkcttbh, nkrttbh, tot
edch_release_due_to_other_failure_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH releases due to other failure reason for interactive class connections.	PMMOResult_Traffic.M1002C541	Sum, nkcttbh, nkrttbh, tot
edch_release_due	ACCUMULA	INTEG	The number of E-	PMMOResult_Traffic.	Sum,

_to_rl_failure_for_background	TION	ER	DCH releases for background class connections due to radio link failure, uplink RLC unrecoverable error or UE not responding to an RRC message sent by the RNC.	M1002C540	nkcttbh, nkrttbh, tot
edch_release_due_to_rl_failure_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH releases for interactive class connections due to radio link failure, uplink RLC unrecoverable error or UE not responding to an RRC message sent by the RNC.	PMMOResult_Traffic. M1002C539	Sum, nkcttbh, nkrttbh, tot
rel_edch_hsdsch_scc_str	ACCUMULATION	INTEGER	The number of E-DCH releases due to a HS-DSCH serving cell change for streaming class connections, that is, the new HS-DSCH serving cell does not support the E-DCH.	PMMOResult_Traffic. M1002C610	Sum, nkcttbh, nkrttbh, tot
rel_edch_norm_str	ACCUMULATION	INTEGER	The number of E-DCH normal releases in the SRNC for streaming class connections.	PMMOResult_Traffic. M1002C609	Sum, nkcttbh, nkrttbh, tot

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rel_edch_other_fail_str	ACCUMULATION	INTEGER	The number of E-DCH releases for streaming class connections due to some other failure reason than a radio link failure or an uplink RLC unrecoverable error.	PMMOResult_Traffic.M1002C612	Sum, nkcttbh, nkrttbh, tot
rel_edch_rl_fail_str	ACCUMULATION	INTEGER	The number of E-DCH releases for streaming class connections due to a radio link failure, an uplink RLC unrecoverable error, or due to the UE not responding to an RRC message sent by the RNC.	PMMOResult_Traffic.M1002C611	Sum, nkcttbh, nkrttbh, tot

7.6.170Cell.Nokia.UMTS.traffic.edch_allocation

EDCH channel allocation statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_dur_edch_str	ACCUMULATION	INTEGER	The sum of E-DCH allocation durations for streaming class connections.	PMMOResult_Traffic.M1002C608	Sum, nkcttbh, nkrttbh, tot
allo_ed_inter_rnc_hho_str	ACCUMULATION	INTEGER	The number of successful E-DCH allocations for incoming Inter-RNC HHO for streaming class connections.	PMMOResult_Traffic.M1002C615	Sum, nkcttbh, nkrttbh, tot
allo_success_edch	ACCUMULA	INTEG	The number of	PMMOResult_Traffic.	Sum,

_str	TION	ER	successful E-DCH allocations for streaming class connections.	M1002C607	nkcttbh, nkrttbh, tot
amr_edch_allocations	ACCUMULATION	INTEGER	The number of AMR + E-DCH multi-RAB allocations.	PMMOResult_Traffic. M1002C543	Sum, nkcttbh, nkrttbh, tot
edch_allo_canc_na_as_str	ACCUMULATION	INTEGER	The number of times when the E-DCH allocation made by the cell specific packet scheduler for a streaming class connection is cancelled due to a non-acceptable E-DCH active set.	PMMOResult_Traffic. M1002C601	Sum, nkcttbh, nkrttbh, tot
edch_allo_for_inter_rnc_hho_background	ACCUMULATION	INTEGER	The number of successful EDCH allocations for incoming Inter-RNC HHO for background class connections. M1002C532 is updated along with this counter.	PMMOResult_Traffic. M1002C550	Sum, nkcttbh, nkrttbh, tot
edch_allo_for_inter_rnc_hho_interactive	ACCUMULATION	INTEGER	The number of successful EDCH allocations for incoming Inter-RNC HHO for interactive class connections. M1002C531 is updated along	PMMOResult_Traffic. M1002C549	Sum, nkcttbh, nkrttbh, tot

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			with this counter.		
edch_allocation_duration_for_for_background	ACCUMULATION	INTEGER	The sum of E-DCH allocation durations for background class connections.	PMMOResult_Traffic.M1002C534	Sum, nkcttbh, nkrttbh, tot
edch_allocation_duration_for_for_interactive	ACCUMULATION	INTEGER	The sum of E-DCH allocation durations for interactive class connections.	PMMOResult_Traffic.M1002C533	Sum, nkcttbh, nkrttbh, tot
edch_allocations_for_background	ACCUMULATION	INTEGER	The number of successful EDCH allocations for interactive class connections.	PMMOResult_Traffic.M1002C532	Sum, nkcttbh, nkrttbh, tot
edch_allocations_for_interactive	ACCUMULATION	INTEGER	The number of successful EDCH allocations for interactive class connections.	PMMOResult_Traffic.M1002C531	Sum, nkcttbh, nkrttbh, tot

7.6.171Cell.Nokia.UMTS.traffic.edsch_setup_failures

EDCH channel setup statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
edch_setup_fail_for_inter_rnc_hho_background	ACCUMULATION	INTEGER	The number of E-DCH setup failures for incoming Inter-RNC HHO for background class connections. Also one of the basic E-DCH setup failure counters is updated along with this counter.	PMMOResult_Traffic.M1002C552	Sum, nkcttbh, nkrttbh, tot
edch_setup_fail_for_inter_rnc_hho_	ACCUMULATION	INTEGER	The number of E-DCH setup	PMMOResult_Traffic.M1002C551	Sum, nkcttbh,

interactive			failures for incoming Inter-RNC HHO for interactive class connections. Also one of the basic E-DCH setup failure counters is updated along with this counter.		nkrttbh, tot
edch_setup_failure_due_to_bts_for_background	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to BTS for background class connections.	PMMOResult_Traffic.M1002C526	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_bts_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to BTS for interactive class connections.	PMMOResult_Traffic.M1002C525	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_other_reasons_for_background	ACCUMULATION	INTEGER	The number of E-DCH setup failures for background class connections due to reasons not covered by the other failure counters, for example due to RNC internal failures.	PMMOResult_Traffic.M1002C530	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_other_reasons_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH setup failures for interactive class	PMMOResult_Traffic.M1002C529	Sum, nkcttbh, nkrttbh, tot

			connections due to reasons not covered by the other failure counters, for example due to RNC internal failures.		
edch_setup_failure_due_to_transport_for_background	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to transport for background class connections.	PMMOResult_Traffic.M1002C528	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_transport_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to transport for interactive class connections.	PMMOResult_Traffic.M1002C527	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_ue_for_background	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to UE for background class connections.	PMMOResult_Traffic.M1002C524	Sum, nkcttbh, nkrttbh, tot
edch_setup_failure_due_to_ue_for_interactive	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to UE for interactive class connections	PMMOResult_Traffic.M1002C523	Sum, nkcttbh, nkrttbh, tot
setup_fail_edch_bts_str	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to BTS for streaming class connections.	PMMOResult_Traffic.M1002C604	Sum, nkcttbh, nkrttbh, tot
setup_fail_edch_other_str	ACCUMULATION	INTEGER	The number of E-DCH setup failures for streaming class connections due to reasons not covered by the	PMMOResult_Traffic.M1002C606	Sum, nkcttbh, nkrttbh, tot

			other failure counters, for example due to RNC internal failures.		
setup_fail_edch_trans_str	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to transport for streaming class connections.	PMMOResult_Traffic.M1002C605	Sum, nkcttbh, nkrttbh, tot
setup_fail_edch_ue_str	ACCUMULATION	INTEGER	The number of E-DCH setup failures due to UE for streaming class connections.	PMMOResult_Traffic.M1002C603	Sum, nkcttbh, nkrttbh, tot
stp_f_ed_inter_rnc_hho_str	ACCUMULATION	INTEGER	The number of E-DCH setup failures for incoming Inter-RNC HHO for streaming class connections.	PMMOResult_Traffic.M1002C616	Sum, nkcttbh, nkrttbh, tot
tot_edsch_setup_fail_backg	ACCUMULATION	INTEGER	Total number of E-DCH setup failures for background connections due to various equipment reasons	{edch_setup_failure_due_to_ue_for_background}+ {edch_setup_failure_due_to_bts_for_background}+ {edch_setup_failure_due_to_transport_for_background}+ {edch_setup_failure_due_to_other_reasons_for_background}	Sum, nkcttbh, nkrttbh, tot
tot_edsch_setup_fail_inter	ACCUMULATION	INTEGER	Total number of E-DCH setup failures for	{edch_setup_failure_due_to_ue_for_interactive}+	Sum, nkcttbh, nkrttbh,

			background connections due to various equipment reasons	{edch_setup_failure_due_to_bts_for_interactive}+ {edch_setup_failure_due_to_transport_for_interactive}+ {edch_setup_failure_due_to_other_reasons_for_interactive}	tot
ul_dch_sel_bts_hw_str	ACCUMULATION	INTEGER	The number of times when the E-DCH uplink transport channel cannot be selected for a streaming class connection in this cell because the BTS has reported that it has no capacity available for the E-DCH.	PMMOResult_Traffic.M1002C600	Sum, nkcttbh, nkrttbh, tot
ul_dch_sel_max_hsupa_usr_str	ACCUMULATION	INTEGER	The number of times when the E-DCH uplink transport channel cannot be selected for a streaming class connection in this cell due to maximum amount of E-DCH users in the cell or in the local cell group.	PMMOResult_Traffic.M1002C599	Sum, nkcttbh, nkrttbh, tot
ul_dch_selected_for_background_due_to_bts_hw_limit	ACCUMULATION	INTEGER	The number of times when EDCH uplink transport channel cannot be selected in this cell for a background class connection because BTS has reported to have	PMMOResult_Traffic.M1002C518	Sum, nkcttbh, nkrttbh, tot

			no capacity available for E-DCH.		
ul_dch_selected_for_background_due_to_max_hsupa_users	ACCUMULATION	INTEGER	The number of times when EDCH uplink transport channel cannot be selected in this cell for a background class connection due to maximum amount of E-DCH users in the cell or in the local cell group.	PMMOResult_Traffic.M1002C516	Sum, nkcttbh, nkrttbh, tot
ul_dch_selected_for_interactive_due_to_bts_hw_limit	ACCUMULATION	INTEGER	The number of times when EDCH uplink transport channel cannot be selected in this cell for an interactive class connection because BTS has reported to have no capacity available for E-DCH.	PMMOResult_Traffic.M1002C517	Sum, nkcttbh, nkrttbh, tot
ul_dch_selected_for_interactive_due_to_max_hsupa_users	ACCUMULATION	INTEGER	The number of times when EDCH uplink transport channel cannot be selected in this cell for an interactive class connection due to maximum amount of E-DCH users in the cell or in the	PMMOResult_Traffic.M1002C515	Sum, nkcttbh, nkrttbh, tot

			local cell group.		

7.6.172Cell.Nokia.UMTS.traffic.hsdsch_allocation_release

Traffic - HSDSCH allocation release statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hsdsch_normal_release_for_background	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow normal releases in the SRNC for background class connections.	PMMOResult_Traffic.M1002C410	Sum, nkcttbh, nkrttbh, tot
hsdsch_normal_release_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow normal releases in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C407	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_mobility_dch_transition_for_background	ACCUMULATION	INT8	The number of HS-DSCH releases due to mobility-related HS-DSCH to DCH transitions in the SRNC for background class connections.	PMMOResult_Traffic.M1002C412	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_mobility_dch_transition_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH releases due to mobility-related HS-DSCH to DCH transitions in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C409	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_other_dch_tr	ACCUMULATION	INT8	The number of HS-DSCH	PMMOResult_Traffic.M1002C480	Sum, nkcttbh,

ansition_reason_for_background			allocation normal releases due to other than mobility-related HS-DSCH to DCH switch (e.g. multi-RAB restrictions) for background class connections.		nkrttbh, tot
hsdsch_release_due_to_other_dch_transition_reason_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH allocation normal releases due to other than mobility-related HS-DSCH to DCH switch (e.g. multi-RAB restrictions) for interactive class connections.	PMMOResult_Traffic.M1002C477	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_other_failure_for_background	ACCUMULATION	INT8	The number of HS-DSCH allocation releases due to other than radio link failure in the SRNC for background class connections.	PMMOResult_Traffic.M1002C411	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_other_failure_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH allocation releases due to other than radio link failure in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C408	Sum, nkcttbh, nkrttbh, tot

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hsdsch_release_due_to_preemption_for_background	ACCUMULATION	INT8	The number of HS-DSCH allocation normal releases due to pre-emptions for background class connections.	PMMOResult_Traffic.M1002C481	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_preemption_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH allocation normal releases due to pre-emptions for interactive class connections.	PMMOResult_Traffic.M1002C478	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_rl_failure_for_background	ACCUMULATION	INT8	The number of HS-DSCH allocation releases due to radio link failure or uplink RLC unrecoverable error for background class connections.	PMMOResult_Traffic.M1002C482	Sum, nkcttbh, nkrttbh, tot
hsdsch_release_due_to_rl_failure_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH allocation releases due to radio link failure or uplink RLC unrecoverable error for interactive class connections.	PMMOResult_Traffic.M1002C479	Sum, nkcttbh, nkrttbh, tot
rel_allo_hs_dsch_mob_dch_str	ACCUMULATION	INTEGER	The number of HS-DSCH releases due to mobility-related HS-DSCH to DCH transitions in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C580	Sum, nkcttbh, nkrttbh, tot

rel_allo_hs_dsch_oth_dch_str	ACCUMULATION	INTEGER	The number of HS-DSCH allocation normal releases due to other than mobility-related HS-DSCH to DCH switch (e.g. multi-RAB restrictions) for streaming class connections.	PMMOResult_Traffic.M1002C592	Sum, nkcttbh, nkrttbh, tot
rel_allo_hs_dsch_pre_emp_str	ACCUMULATION	INTEGER	The number of HS-DSCH allocation normal releases due to pre-emptions for streaming class connections.	PMMOResult_Traffic.M1002C593	Sum, nkcttbh, nkrttbh, tot
rel_allo_oth_fail_hsdsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH allocation releases due to other than radio link failure in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C579	Sum, nkcttbh, nkrttbh, tot
rel_allo_rl_fail_hs_dsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH allocation releases due to radio link failure, RLC protocol reset or uplink RLC unrecoverable error for streaming class connections.	PMMOResult_Traffic.M1002C594	Sum, nkcttbh, nkrttbh, tot

7.6.173Cell.Nokia.UMTS.traffic.hsdsch_allocation

Traffic - HSDSCH allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdpa_resource_retainability_rt_traffic	PERCENTAGE	FLOAT	HSDPA Resource Retainability for RT traffic	100 * {Nokia.traffic.hsdsch_allocation.rel_allo_norm_hs_dsch_str}/ ({Nokia.traffic.hsdsch_allocation.rel_allo_norm_hs_dsch_str}+ {Nokia.traffic.hsdsch_allocation_release.rel_allo_rl_fail_hs_dsch_str}+ {Nokia.traffic.hsdsch_allocation_release.rel_allo_oth_fail_hsdsch_str})	Average, avg, max, min, nkcttbh, nkrttbh, tot
allo_dur_hs_dsch_flow_str	ACCUMULATION	INTEGER	The sum of HS-DSCH MAC-d flow allocation durations in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C573	Sum, nkcttbh, nkrttbh, tot
allo_dur_hs_dsch_ret_128_str	ACCUMULATION	INTEGER	The sum of 128 kbps return channel allocation durations in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C576	Sum, nkcttbh, nkrttbh, tot
allo_dur_hs_dsch_ret_16_str	ACCUMULATION	INTEGER	The sum of DCH allocation durations for 16 kbps HS-DSCH return channels for the streaming traffic.	PMMOResult_Traffic.M1002C574	Sum, nkcttbh, nkrttbh, tot
allo_dur_hs_dsch_ret_64_str	ACCUMULATION	INTEGER	The sum of 64 kbps return channel allocation durations in the	PMMOResult_Traffic.M1002C575	Sum, nkcttbh, nkrttbh, tot

			SRNC for streaming class connections.		
allo_hs_dsch_flow_str	ACCUMULATION	INTEGER	The number of HS-DSCH MAC-d flow allocations in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C569	Sum, nkcttbh, nkrttbh, tot
allo_hs_dsch_ret_128_str	ACCUMULATION	INTEGER	The number of HS-DSCH 128 kbps return channel (DCH UL) allocations in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C572	Sum, nkcttbh, nkrttbh, tot
allo_hs_dsch_ret_16_str	ACCUMULATION	INTEGER	The number of allocations for 16 kbps HS-DSCH return channels (DCH UL) for the streaming traffic.	PMMOResult_Traffic.M1002C570	Sum, nkcttbh, nkrttbh, tot
allo_hs_dsch_ret_64_str	ACCUMULATION	INTEGER	The number of HS-DSCH 64 kbps return channel (DCH UL) allocations in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C571	Sum, nkcttbh, nkrttbh, tot
allo_hs_inter_rnc_hho_str	ACCUMULATION	INTEGER	The number of successful HS-DSCH allocations for incoming Inter-RNC HHO for streaming class connections.	PMMOResult_Traffic.M1002C613	Sum, nkcttbh, nkrttbh, tot

			Also counter M1002C569 is updated along with this counter.		
hsdsch_128_kbps_return_ch_allocations_for_background	ACCUMULATION	INT8	The number of HS-DSCH 128 kbps return channel (DCH UL) allocations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C391	Sum, nkcttbh, nkrttbh, tot
hsdsch_128_kbps_return_ch_allocations_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH 128 kbps return channel (DCH UL) allocations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C387	Sum, nkcttbh, nkrttbh, tot
hsdsch_128_kbps_return_ch_duration_for_background	ACCUMULATION	INT8	The sum of 128 kbps return channel allocation durations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C399	Sum, nkcttbh, nkrttbh, tot
hsdsch_128_kbps_return_ch_duration_for_interactive	ACCUMULATION	INT8	The sum of 128 kbps return channel allocation durations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C395	Sum, nkcttbh, nkrttbh, tot
hsdsch_16_kbps_return_ch_allocations_for_background	ACCUMULATION	INTEGER	The number of allocations for 16 kbps HS-DSCH return channel (DCH UL) for background traffic.	PMMOResult_Traffic.M1002C502	Sum, nkcttbh, nkrttbh, tot
hsdsch_16_kbps_r	ACCUMULA	INTEG	The number of	PMMOResult_Traffic.M	Sum,

eturn_ch_allocations_for_interactive	TION	ER	allocations for 16 kbps HS-DSCH return channel (DCH UL) for interactive traffic.	1002C501	nkcttbh, nkrttbh, tot
hsdsch_16_kbps_return_ch_duration_for_background	ACCUMULATION	INTEGER	The summary of DCH allocation durations for 16 kbps HS-DSCH return channel for background traffic.	PMMOResult_Traffic.M1002C504	Sum, nkcttbh, nkrttbh, tot
hsdsch_16_kbps_return_ch_duration_for_interactive	ACCUMULATION	INTEGER	The summary of DCH allocation durations for 16 kbps HS-DSCH return channel for interactive traffic.	PMMOResult_Traffic.M1002C503	Sum, nkcttbh, nkrttbh, tot
hsdsch_384_kbps_return_ch_allocations_for_background	ACCUMULATION	INT8	The number of HS-DSCH 384 kbps return channel (DCH UL) allocations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C392	Sum, nkcttbh, nkrttbh, tot
hsdsch_384_kbps_return_ch_allocations_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH 384 kbps return channel (DCH UL) allocations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C388	Sum, nkcttbh, nkrttbh, tot
hsdsch_384_kbps_return_ch_duration_for_background	ACCUMULATION	INT8	The sum of 384 kbps return channel allocation durations in the	PMMOResult_Traffic.M1002C400	Sum, nkcttbh, nkrttbh, tot

			SRNC for background class connections.		
hsdsch_384_kbps_return_ch_duration_for_interactive	ACCUMULATION	INT8	The sum of 384 kbps return channel allocation durations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C396	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_allocations_for_background	ACCUMULATION	INT8	The number of HS-DSCH 64 kbps return channel (DCH UL) allocations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C390	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_allocations_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH 64 kbps return channel (DCH UL) allocations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C386	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_duration_for_background	ACCUMULATION	INT8	The sum of 64 kbps return channel allocation durations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C398	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_duration_for_interactive	ACCUMULATION	INT8	The sum of 64 kbps return channel allocation durations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C394	Sum, nkcttbh, nkrttbh, tot
hsdsch_allo_for_inter_rnc_hho_bac	ACCUMULATION	INTEGER	The number of successful	PMMOResult_Traffic.M1002C546	Sum, nkcttbh,

kground			HSDSCH allocations for incoming Inter-RNC HHO for background class connections. Also counter M1002C389 is updated along with this counter.		nkrttbh, tot
hsdsch_allo_for_inter_rnc_hho_interactive	ACCUMULATION	INTEGER	The number of successful HSDSCH allocations for incoming Inter-RNC HHO for interactive class connections. Also counter M1002C385 is updated along with this counter.	PMMOResult_Traffic.M1002C545	Sum, nkcttbh, nkrttbh, tot
hsdsch_macd_flow_allocations_for_background	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow allocations in the SRNC for background class connections.	PMMOResult_Traffic.M1002C389	Sum, nkcttbh, nkrttbh, tot
hsdsch_macd_flow_allocations_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow allocations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C385	Sum, nkcttbh, nkrttbh, tot
hsdsch_macd_flow_duration_for_background	ACCUMULATION	INT8	The sum of HS-DSCH MAC-d flow allocation durations in the	PMMOResult_Traffic.M1002C397	Sum, nkcttbh, nkrttbh, tot

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			SRNC for background class connections.		
hsdsch_macd_flow_duration_for_interactive	ACCUMULATION	INT8	The sum of HS-DSCH MAC-d flow allocation durations in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C393	Sum, nkcttbh, nkrttbh, tot
hsdsch_return_ch_downgrades_for_background	ACCUMULATION	INT8	The number of DCH allocations with background class due to HSDPA return channel (DCH UL) upgrade.	PMMOResult_Traffic.M1002C432	Sum, nkcttbh, nkrttbh, tot
hsdsch_return_ch_downgrades_for_interactive	ACCUMULATION	INT8	The number of DCH allocations with interactive class due to HSDPA return channel (DCH UL) downgrade.	PMMOResult_Traffic.M1002C430	Sum, nkcttbh, nkrttbh, tot
hsdsch_return_ch_upgrades_for_background	ACCUMULATION	INT8	The number of DCH allocations with background class due to HSDPA return channel (DCH UL) upgrade.	PMMOResult_Traffic.M1002C431	Sum, nkcttbh, nkrttbh, tot
hsdsch_return_ch_upgrades_for_interactive	ACCUMULATION	INT8	The number of DCH allocations with interactive class due to HSDPA return channel (DCH UL) upgrade.	PMMOResult_Traffic.M1002C429	Sum, nkcttbh, nkrttbh, tot
hsdsch_throughput_background	INTENSITY	FLOAT	The average hsdsch throughput for background services	if (interval*60) = 0 then 0 else (((16*PMMOResult_Traffic.M1002C504)+(64*	Average, avg, max, min, nkcttbh,

				M1002C398)+(128*M1002C399)+(384*M1002C400))*(0.01)/(interval*60))	nkrttbh, tot
hsdsch_throughput_interactive	INTENSITY	FLOAT	The average hsdsch throughput for interactive services	if (interval*60) = 0 then 0 else (((16*PMMOResult_Traffic.M1002C503)+(64*M1002C394)+(128*M1002C395)+(384*M1002C396))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
rej_hs_dsch_ret_str	ACCUMULATION	INTEGER	The number of failed allocations for the HS-DSCH transport channel due to lack of radio resources for the UL DCH return channel for streaming class connections.	PMMOResult_Traffic.M1002C577	Sum, nkcttbh, nkrttbh, tot
rel_allo_norm_hs_dsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH MAC-d flow normal releases in the SRNC for streaming class connections. Includes also HS-DSCH releases due to 1A event triggered state transitions to FACH.	PMMOResult_Traffic.M1002C578	Sum, nkcttbh, nkrttbh, tot

7.6.174Cell.Nokia.UMTS.traffic.hsdsch_request

Traffic - HSDSCH request statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rejected_hsdsch_return_ch_for_background	ACCUMULATION	INT8	The number of failed allocations for the HS- DSCH transport channel due to lack of radio resources for the UL DCH return channel for background class connections. After rejection the capacity request is sent back to the PS queue and the HS-DSCH channel type is not allowed for this capacity request any more.	PMMOResult_Traffic.M1002C402	Sum, nkcttbh, nkrttbh, tot
rejected_hsdsch_return_ch_for_interactive	ACCUMULATION	INT8	The number of failed allocations for the HS- DSCH transport channel due to lack of radio resources for the UL DCH return channel for interactive class connections. After rejection the capacity request is sent back to the PS queue and the HS-DSCH channel type is not allowed for this capacity request any more.	PMMOResult_Traffic.M1002C401	Sum, nkcttbh, nkrttbh, tot
tot_hsdsch_setup_att_backg	ACCUMULATION	INT8	Total HSDSCH setup attempts for background service after NBAP RL reconfigruation, transport resource	(PMMOResult_Traffic.M1002C390 + M1002C391 + M1002C392 + M1002C421 + M1002C422 +	Sum, nkcttbh, nkrttbh, tot

			reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. This takes the sum of all allocation successful and allocation failures.	M1002C423 + M1002C424 + M1002C425)	
tot_hsdsch_setup_att_inter	ACCUMULATION	INT8	Total HSDSCH setup attempts for interactive service after NBAP RL reconfigruation, transport resource reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. This takes the sum of all allocation successful and allocation failures.	(PMMOResult_Traffic. M1002C386 + M1002C387 + M1002C388 + M1002C413 + M1002C414 + M1002C415 + M1002C416 + M1002C417)	Sum, nkcttbh, nkrttbh, tot

7.6.175Cell.Nokia.UMTS.traffic.hsdsch_setup_failures

Traffic - HSDSCH setup failures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_hsdsch_setup_fail_backg	PERCENTAGE	FLOAT	Percentage HSDSCH setup failures for background service after NBAP RL	100 * {tot_hsdsch_setup_fail_backg}/ {Nokia.traffic.hsdsch_request.tot_hsdsch_setup_att_backg}	Average, avg, nkcttbh, nkrttbh

			reconfigruation, transport resource reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. The setup failures takes into consideration of all setup fail causes.		
_%_hsdsch_setup_fail_inter	PERCENTAGE	FLOAT	Percentage HSDSCH setup failures for interactive service after NBAP RL reconfigruation, transport resource reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. The setup failures takes into consideration of all setup fail causes.	100 * {tot_hsdsch_setup_fail_inter}/ {Nokia.traffic.hsdsch_request.tot_hsdsch_setup_att_inter}	Average, avg, nkcttbh, nkrttbh
dl_dch_sel_hsdpa_power_str	ACCUMULATION	INTEGER	The number of times when the HS-DSCH downlink transport channel cannot be selected for a streaming class connection due to downlink power limits.	PMMOResult_Traffic.M1002C602	Sum, nkcttbh, nkrttbh, tot
dl_dch_selected_f	ACCUMULA	INTEG	The number of	PMMOResult_Traffic.	Sum,

or_background_due_to_hsdpa_power	TION	ER	times when HS-DSCH downlink transport channel cannot be selected for a background class connection due to downlink power limits.	M1002C522	nkcttbh, nkrttbh, tot
dl_dch_selected_for_interactive_due_to_hsdpa_power	ACCUMULATION	INTEGER	The number of times when HS-DSCH downlink transport channel cannot be selected for an interactive class connection due to downlink power limits.	PMMOResult_Traffic. M1002C521	Sum, nkcttbh, nkrttbh, tot
hsdsch_128_kbps_return_ch_iub_transport_setup_failure_for_background	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to 128 kbps return channel Iub transport (AAL2) in the SRNC for background class connections.	PMMOResult_Traffic. M1002C427	Sum, nkcttbh, nkrttbh, tot
hsdsch_128_kbps_return_ch_iub_transport_setup_failure_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH failures due to 128 kbps return channel Iub transport (AAL2) in the SRNC for interactive class connections.	PMMOResult_Traffic. M1002C419	Sum, nkcttbh, nkrttbh, tot
hsdsch_16_kbps_return_ch_iub_transport_setup_failure_for_background	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to 16 kbps return	PMMOResult_Traffic. M1002C506	Sum, nkcttbh, nkrttbh, tot

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			channel Iub transport (AAL2) for background traffic class connections.		
hsdsch_16_kbps_return_ch_iub_transport_setup_failure_for_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to 16 kbps return channel Iub transport (AAL2) for interactive traffic class connections.	PMMOResult_Traffic.M1002C505	Sum, nkcttbh, nkrttbh, tot
hsdsch_384_kbps_return_ch_iub_transport_setup_failure_for_background	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to 384 kbps return channel Iub transport (AAL2) in the SRNC for background class connections.	PMMOResult_Traffic.M1002C428	Sum, nkcttbh, nkrttbh, tot
hsdsch_384_kbps_return_ch_iub_transport_setup_failure_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to 384 kbps return channel Iub transport (AAL2) in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C420	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_iub_transport_setup_failure_for_background	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to 64 kbps return channel Iub transport (AAL2) in the SRNC for background class connections.	PMMOResult_Traffic.M1002C426	Sum, nkcttbh, nkrttbh, tot
hsdsch_64_kbps_return_ch_iub_tran	ACCUMULATION	INT8	The number of HS-DSCH setup	PMMOResult_Traffic.M1002C418	Sum, nkcttbh,

sport_setup_failure_for_interactive			failures due to 64 kbps return channel Iub transport (AAL2) in the SRNC for interactive class connections.		nkrttbh, tot
hsdsch_macd_flow_setup_failure_due_to_iub_transport_for_background	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow setup failures due to Iub transport (AAL2) in the SRNC for background class connections.	PMMOResult_Traffic.M1002C422	Sum, nkcttbh, nkrttbh, tot
hsdsch_macd_flow_setup_failure_due_to_iub_transport_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH MAC-d flow setup failures due to Iub transport (AAL2) in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C414	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_fail_for_inter_rnc_hho_background	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures for incoming Inter-RNC HHO for background class connections. Also one of the basic HSDSCH setup failure counters is updated along with this counter.	PMMOResult_Traffic.M1002C548	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_fail_for_inter_rnc_hho_interactive	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures for	PMMOResult_Traffic.M1002C547	Sum, nkcttbh, nkrttbh,

			incoming Inter-RNC HHO for interactive class connections. Also one of the basic HS-DSCH setup failure counters is updated along with this counter.		tot
hsdsch_setup_failure_due_to_bts_for_background	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to BTS in the SRNC for background class connections.	PMMOResult_Traffic.M1002C424	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_failure_due_to_bts_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to BTS in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C416	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_failure_due_to_rnc_internal_for_background	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to RNC internal reasons (including RNC internal transport) in the SRNC for background class connections.	PMMOResult_Traffic.M1002C421	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_failure_due_to_rnc_internal_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to RNC internal reasons (including RNC internal transport) in the SRNC for interactive class connections.	PMMOResult_Traffic.M1002C413	Sum, nkcttbh, nkrttbh, tot
hsdsch_setup_failure_due_to_ue_fo	ACCUMULATION	INT8	The number of HS-DSCH setup	PMMOResult_Traffic.M1002C423	Sum, nkcttbh,

r_background			failures due to UE in the SRNC for background class connections.		nkrttbh, tot
hsdsch_setup_failure_due_to_ue_for_interactive	ACCUMULATION	INT8	The number of HS-DSCH setup failures due to UE in the SRNC for interactive class connections.	PMMOResult_Traffic. M1002C415	Sum, nkcttbh, nkrttbh, tot
hsdsch_total_iub_transport_setup_fail_for_background	ACCUMULATION	INT8	The total number of HS-DSCH setup failures due Iub transport (AAL2) in the SRNC for background class connections. This counter is equal to the sum of M1002C422, M1002C426, M1002C427 and M1002C428.	PMMOResult_Traffic. M1002C425	Sum, nkcttbh, nkrttbh, tot
hsdsch_total_iub_transport_setup_fail_for_interactive	ACCUMULATION	INT8	The total number of HS-DSCH setup failures due Iub transport (AAL2) in the SRNC for interactive class connections. This counter is equal to the sum of M1002C414, M1002C418, M1002C419 and M1002C420.	PMMOResult_Traffic. M1002C417	Sum, nkcttbh, nkrttbh, tot

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setup_fail_128_iub_hsdsch_st	ACCUMULATION	INTEGER	The number of HS-DSCH failures due to the 128 kbps return channel Iub transport in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C588	Sum, nkcttbh, nkrttbh, tot
setup_fail_16_iub_hsdsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to the 16 kbps return channel Iub transport for streaming traffic class connections.	PMMOResult_Traffic.M1002C586	Sum, nkcttbh, nkrttbh, tot
setup_fail_64_iub_hsdsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to the 64 kbps return channel Iub transport in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C587	Sum, nkcttbh, nkrttbh, tot
setup_fail_bts_hs_dsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to BTS in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C584	Sum, nkcttbh, nkrttbh, tot
setup_fail_iub_hs_total_str	ACCUMULATION	INTEGER	The total number of HS-DSCH setup failures due Iub transport in the SRNC for streaming class connections. This counter is equal to the sum of M1002C586, M1002C587,	PMMOResult_Traffic.M1002C585	Sum, nkcttbh, nkrttbh, tot

			M1002C588 and M1002C582.		
setup_fail_iub_mac_d_str	ACCUMULATION	INTEGER	The number of HS-DSCH MAC-d flow setup failures due to Iub transport in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C582	Sum, nkcttbh, nkrttbh, tot
setup_fail_rnc_hs_dsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to RNC internal reasons (including RNC internal transport) in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C581	Sum, nkcttbh, nkrttbh, tot
setup_fail_ue_hs_dsch_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures due to UE in the SRNC for streaming class connections.	PMMOResult_Traffic.M1002C583	Sum, nkcttbh, nkrttbh, tot
stp_f_hs_inter_rnc_hho_str	ACCUMULATION	INTEGER	The number of HS-DSCH setup failures for incoming Inter-RNC HHO for streaming class connections.	PMMOResult_Traffic.M1002C614	Sum, nkcttbh, nkrttbh, tot
tot_hsdsch_setup_fail_backg	ACCUMULATION	INT8	Total HSDSCH setup failures for background service after NBAP RL	({hsdsch_setup_failure_due_to_rnc_internal_for_background}+ {hsdsch_macd_flow_setup_failure_due_to_iub_t	Sum, nkcttbh, nkrttbh, tot

			reconfigruation, transport resource reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. The setup failures takes into consideration of all setup fail causes.	ransport_for_background}+ {hsdsch_setup_failure_due_to_ue_for_background}+ {hsdsch_setup_failure_due_to_bts_for_background}+ {hsdsch_total_iub_transport_setup_fail_for_background})	
tot_hsdsch_setup_fail_inter	ACCUMULATION	INT8	Total HSDSCH setup failures for interactive service after NBAP RL reconfigruation, transport resource reservation, RNC internal resource reservation and RRC RB reconfiguration has been successful. The setup failures takes into consideration of all setup fail causes.	({hsdsch_setup_failure_due_to_rnc_internal_for_interactive}+ {hsdsch_macd_flow_setup_failure_due_to_iub_transport_for_interactive}+ {hsdsch_setup_failure_due_to_ue_for_interactive}+ {hsdsch_setup_failure_due_to_bts_for_interactive}+ {hsdsch_total_iub_transport_setup_fail_for_interactive})	Sum, nkcttbh, nkrttbh, tot

7.6.176Cell.Nokia.UMTS.traffic.multirab.background_connections

HS-DSCH background measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_hs_dsch_allocatio_ns_for_background	ACCUMULATION	INTEGER	Number of AMR + HS-DSCH multi-RAB allocations for background class	PMMOResult_Traffic.M1002C405	Sum, nkcttbh, nkrttbh, tot

			connections.		
amr_hs_dsch_normal_release_for_background	ACCUMULATION	INTEGER	Number of AMR + HS-DSCH multi-RAB normal releases for background class connections (one of the RBs is released).	PMMOResult_Traffic.M1002C406	Sum, nkcttbh, nkrttbh, tot
amr_hs_dsch_setup_failure_for_background	ACCUMULATION	INTEGER	Number of setup failures for AMR + HS-DSCH for background class connections.	PMMOResult_Traffic.M1002C404	Sum, nkcttbh, nkrttbh, tot
rejected_amr_hs_dsch_for_background	ACCUMULATION	INTEGER	Number of times when admission control rejects setting up AMR + HS-DSCH connection for background class connections.	PMMOResult_Traffic.M1002C403	Sum, nkcttbh, nkrttbh, tot

7.6.177Cell.Nokia.UMTS.traffic.multirab.interactive_connections

HS-DSCH interactive measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_hs_dsch_allocatio_ns_for_interactive	ACCUMULATION	INTEGER	Number of AMR + HS-DSCH multi-RAB allocations for interactive class connections.	PMMOResult_Traffic.M1002C485	Sum, nkcttbh, nkrttbh, tot
amr_hs_dsch_normal_release_for_i	ACCUMULATION	INTEGER	Number of AMR + HS-DSCH	PMMOResult_Traffic.M1002C486	Sum, nkcttbh,

nteractive			multi-RAB normal releases for interactive class connections (one of the RBs is released).		nkrttbh, tot
amr_hs_dsch_setup_failure_for_interactive	ACCUMULATION	INTEGER	Number of setup failures for AMR + HS-DSCH for interactive class connections.	PMMOResult_Traffic.M1002C484	Sum, nkcttbh, nkrttbh, tot
rejected_amr_hs_dsch_for_interactive	ACCUMULATION	INTEGER	Number of times when admission control rejects setting up AMR + HS-DSCH connection for interactive class connections.	PMMOResult_Traffic.M1002C483	Sum, nkcttbh, nkrttbh, tot

7.6.178Cell.Nokia.UMTS.traffic.multirab.streaming_connections

Multi-RAB streaming connections statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_hs_dsch_amr_str	ACCUMULATION	INTEGER	The number of AMR + HS-DSCH multi-RAB allocations for streaming class connections.	PMMOResult_Traffic.M1002C597	Sum, nkcttbh, nkrttbh, tot
rej_hs_dsch_amr_str	ACCUMULATION	INTEGER	The number of times that admission control rejects setting up an AMR + HS-DSCH connection for streaming class connections.	PMMOResult_Traffic.M1002C595	Sum, nkcttbh, nkrttbh, tot
rel_allo_norm_hs dsch_amr_str	ACCUMULATION	INTEGER	The number of AMR + HS-DSCH	PMMOResult_Traffic.M1002C598	Sum, nkcttbh,

			multi-RAB normal releases for streaming class connections (one of the RBs is released).		nkrttbh, tot
setup_fail_hs_dsch_amr_str	ACCUMULATION	INTEGER	The number of setup failures for AMR + HS-DSCH for streaming class connections.	PMMOResult_Traffic.M1002C596	Sum, nkcttbh, nkrttbh, tot

7.6.179Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc

Traffic - NRT DCH allocation for PS background services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_ps_data_backg_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Downlink with background class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C230)+(16*M1002C231)+(32*M1002C232)+(64*M1002C233)+(128*M1002C234)+(256*M1002C235)+(320*M1002C236)+(384*M1002C236))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_128_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 128 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C170	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_128_kbps_in_u	ACCUMULATION	INT8	Number of 128 kbps NRT DCH allocations for PS	PMMOResult_Traffic.M1002C162	Sum, nkcttbh, nkrttbh,

l_in_srnc			Calls in UL with conversational class in the SRNC		tot
nrt_dch_allo_for_ps_call_backg_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 16 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C167	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 16 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C159	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_256_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 256 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C171	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_256_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 256 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C163	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_32_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 32 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C168	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 32 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C160	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_cla	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number	PMMOResult_Traffic.M1002C172	Sum, nkcttbh,

ss_320_kbps_in_dl_in_srnc			of 320 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC		nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_320_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 320 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C164	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_384_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 384 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C173	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_384_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 384 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C165	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 64 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C169	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_64_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 64 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C161	Sum, nkcttbh, nkrttbh, tot

nrt_dch_allo_for_ps_call_backg_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 8 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C166	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_backg_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 8 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C158	Sum, nkcttbh, nkrttbh, tot
ul_ps_data_backg_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Uplink with background class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C222)+(16*M1002C223)+(32*M1002C224)+(64*M1002C225)+(128*M1002C226)+(256*M1002C227)+(320*M1002C228)+(384*M1002C229))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.180Cell.Nokia.UMTS.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc

Traffic - NRT DCH allocation for PS interactive services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_ps_data_intera_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Downlink with interactive class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C214)+(16*M1002C215)+(32*M1002C216)+(64*M1002C217)+(128*M1002C218)+(256*M1002C219)+(320*M1002C220)+(384*M1002C221))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_12	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_clas	PMMOResult_Traffic.M1002C154	Sum, nkcttbh,

8_kbps_in_dl_srnc			s_128_kbps_in_dl_in_srnc] - Number of 128 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC		nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_128_kbps_in_ul_srnc	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_class_128_kbps_in_ul_in_srnc] - Number of 128 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C146	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_256_kbps_in_dl_srnc	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_class_256_kbps_in_dl_in_srnc] - Number of 256 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C155	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_256_kbps_in_ul_srnc	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_class_256_kbps_in_ul_in_srnc] - Number of 256 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C147	Sum, nkcttbh, nkrttbh, tot

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nrt_dch_allo_for_ps_call_intera_320_kbps_in_dl_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - [nrt_dch_allo_for_ps_call_intera_class_320_kbps_in_dl_in_srnc] - Number of 320 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C156	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_320_kbps_in_ul_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - [nrt_dch_allo_for_ps_call_intera_class_320_kbps_in_ul_in_srnc] - Number of 320 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C148	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_384_kbps_in_dl_srnc	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_class_384_kbps_in_dl_in_srnc] - Number of 384 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C157	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_384_kbps_in_ul_srnc	ACCUMULATION	INT8	[nrt_dch_allo_for_ps_call_intera_class_384_kbps_in_ul_in_srnc] - Number of 384 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C149	Sum, nkcttbh, nkrttbh, tot

nrt_dch_allo_for_ps_call_intera_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 8 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C150	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_for_ps_call_intera_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 8 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C142	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_ps_call_intera_class_16_kbps_in_dl_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_16_kbps_in_dl_in_srnc:Number of 16 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C151	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_ps_call_intera_class_16_kbps_in_ul_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_16_kbps_in_ul_in_srnc:Number of 16 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C143	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_ps_call_intera_class_32_kbps_in_dl_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_32_kbps_in_dl_in_srnc:Number of 32 kbps NRT DCH allocations	PMMOResult_Traffic.M1002C152	Sum, nkcttbh, nkrttbh, tot

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			for PS Calls in DL with conversational class in the SRNC		
nrt_dch_allo_ps_call_intera_class_32_kbps_in_ul_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_32_kbps_in_ul_in_srnc:Number of 32 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C144	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_ps_call_intera_class_64_kbps_in_dl_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_64_kbps_in_dl_in_srnc:Number of 64 kbps NRT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C153	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_ps_call_intera_class_64_kbps_in_ul_srnc	ACCUMULATION	INT8	nrt_dch_allo_for_ps_call_intera_class_64_kbps_in_ul_in_srnc:Number of 64 kbps NRT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C145	Sum, nkcttbh, nkrttbh, tot
ul_ps_data_intera_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Uplink with interactive class (kbps/Second)	if (interval*60) = 0 then 0 else ((8*PMMOResult_Traffic.M1002C206)+(16*M1002C207)+(32*M1002C208)+(64*M1002C209)+(128*M1002C210)+(256*M1002C211)+(320*M1002C212)+(384*	Average, avg, max, min, nkcttbh, nkrttbh, tot

				M1002C213))*(0.01)/ (interval*60)	

7.6.181Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_backg_class.srnc

Traffic - NRT DCH allocation durations for PS background services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nrt_dch_allo_dur_for_ps_call_backg_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 16 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C231	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 16 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C223	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_32_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 32 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C232	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 32 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C224	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 64 kbps NRT DCH allocation for PS Calls in DL with	PMMOResult_Traffic.M1002C233	Sum, nkcttbh, nkrttbh, tot

			background class in the SRNC		
nrt_dch_allo_dur_for_ps_call_backg_class_64_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 64 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C225	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 8 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C230	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_backg_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 8 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C222	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_128_kbps_in_dl_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_128_kbps_in_dl_in_srnc:Duration of 128 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C234	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_128_kbps_in_ul_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_128_kbps_in_ul_in_srnc:Duration of 128 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C226	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_c	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg	PMMOResult_Traffic.M1002C235	Sum, nkcttbh,

lass_256_kbps_in_dl_srnc			_class_256_kbps_in_dl_in_srnc:Duration of 256 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC		nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_256_kbps_in_ul_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_256_kbps_in_ul_in_srnc:Duration of 256 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C227	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_320_kbps_in_dl_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_320_kbps_in_dl_in_srnc:-Obsolete in RN2.2 - Duration of 320 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C236	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_320_kbps_in_ul_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_320_kbps_in_ul_in_srnc:-Obsolete in RN2.2 - Duration of 320 kbps NRT DCH allocation for PS Calls in UL with background class	PMMOResult_Traffic.M1002C228	Sum, nkcttbh, nkrttbh, tot

			in the SRNC		
nrt_dch_allo_dur_ps_call_backg_class_384_kbps_in_dl_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_384_kbps_in_dl_in_srnc:Duration of 384 kbps NRT DCH allocation for PS Calls in DL with background class in the SRNC	PMMOResult_Traffic.M1002C237	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_backg_class_384_kbps_in_ul_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_backg_class_384_kbps_in_ul_in_srnc:Duration of 384 kbps NRT DCH allocation for PS Calls in UL with background class in the SRNC	PMMOResult_Traffic.M1002C229	Sum, nkcttbh, nkrttbh, tot

7.6.182Cell.Nokia.UMTS.traffic.nrt_dch_duration_ps_calls_intera_class.srnc

Traffic - NRT DCH allocation durations for PS interactive services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nrt_dch_allo_dur_for_ps_call_intera_128_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_128_kbps_in_dl_in_srnc] - Duration of 128 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C218	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_128_kbps_in_ul_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_128_kbps_in_ul_in_srnc] - Duration of 128	PMMOResult_Traffic.M1002C210	Sum, nkcttbh, nkrttbh, tot

			kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC		
nrt_dch_allo_dur_for_ps_call_intera_16_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_16_kbps_in_dl_in_srnc] - Duration of 16 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C215	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_16_kbps_in_ul_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_16_kbps_in_ul_in_srnc] - Duration of 16 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC	PMMOResult_Traffic.M1002C207	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_256_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_256_kbps_in_dl_in_srnc] - Duration of 256 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C219	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_256_kbps_in_u	ACCUMULATION	INTEGER	- Obsolete in RN3.0 - [nrt_dch_allo_dur	PMMOResult_Traffic.M1002C211	Sum, nkcttbh, nkrttbh,

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

l_srnc			_for_ps_call_intera_class_256_kbps_in_ul_in_srnc] - Duration of 256 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC		tot
nrt_dch_allo_dur_for_ps_call_intera_32_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_32_kbps_in_dl_in_srnc] - Duration of 32 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C216	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_32_kbps_in_ul_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_32_kbps_in_ul_in_srnc] - Duration of 32 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC	PMMOResult_Traffic.M1002C208	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_320_kbps_in_dl_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - [nrt_dch_allo_dur_for_ps_call_intera_class_320_kbps_in_dl_in_srnc] - Duration of 320 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C220	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_inter	ACCUMULATION	INTEGER	- Obsolete in RN2.2 -	PMMOResult_Traffic.M1002C212	Sum, nkcttbh,

a_320_kbps_in_ul_srnc			[nrt_dch_allo_dur_for_ps_call_intera_class_320_kbps_in_ul_in_srnc] - Duration of 320 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC		nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_384_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_384_kbps_in_dl_in_srnc] - Duration of 384 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C221	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_384_kbps_in_ul_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_384_kbps_in_ul_in_srnc] - Duration of 384 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC	PMMOResult_Traffic.M1002C213	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_for_ps_call_intera_64_kbps_in_dl_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_64_kbps_in_dl_in_srnc] - Duration of 64 kbps NRT DCH allocation for PS Calls in DL with interactive class in	PMMOResult_Traffic.M1002C217	Sum, nkcttbh, nkrttbh, tot

			the SRNC		
nrt_dch_allo_dur_for_ps_call_intera_64_kbps_in_ul_srnc	ACCUMULATION	INTEGER	[nrt_dch_allo_dur_for_ps_call_intera_class_64_kbps_in_ul_in_srnc] - Duration of 64 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC	PMMOResult_Traffic.M1002C209	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_intera_class_8_kbps_in_dl_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_intera_class_8_kbps_in_dl_in_srnc:Duration of 8 kbps NRT DCH allocation for PS Calls in DL with interactive class in the SRNC	PMMOResult_Traffic.M1002C214	Sum, nkcttbh, nkrttbh, tot
nrt_dch_allo_dur_ps_call_intera_class_8_kbps_in_ul_srnc	ACCUMULATION	INTEGER	nrt_dch_allo_dur_for_ps_call_intera_class_8_kbps_in_ul_in_srnc:Duration of 8 kbps NRT DCH allocation for PS Calls in UL with interactive class in the SRNC	PMMOResult_Traffic.M1002C206	Sum, nkcttbh, nkrttbh, tot

7.6.183Cell.Nokia.UMTS.traffic.nrt_dch_reconfiguration

NRT DCH reconfiguration statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rej_dch_rec_due_codes_bgr_dl	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for background traffic class due to running out of	PMMOResult_Traffic.M1002C558	Sum, nkcttbh, nkrttbh, tot

			channelization codes in DL.		
rej_dch_rec_due_codes_int_dl	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for interactive traffic class due to running out of channelization codes in DL.	PMMOResult_Traffic.M1002C557	Sum, nkcttbh, nkrttbh, tot
rej_dch_rec_due_pwr_bgr_dl	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for background traffic class due to power limits in DL.	PMMOResult_Traffic.M1002C560	Sum, nkcttbh, nkrttbh, tot
rej_dch_rec_due_pwr_bgr_ul	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for background traffic class due to power limits in UL.	PMMOResult_Traffic.M1002C629	Sum, nkcttbh, nkrttbh, tot
rej_dch_rec_due_pwr_int_dl	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for interactive traffic class due to power limits in DL.	PMMOResult_Traffic.M1002C559	Sum, nkcttbh, nkrttbh, tot
rej_dch_rec_due_pwr_int_ul	ACCUMULATION	INTEGER	The number of NRT DCH reconfiguration rejects for interactive traffic class due to power	PMMOResult_Traffic.M1002C628	Sum, nkcttbh, nkrttbh, tot

			limits in UL.		

7.6.184Cell.Nokia.UMTS.traffic.nrt_dch_setup_reject

NRT DCH setup reject statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rej_dch_due_codes_bgr_dl	ACCUMULATION	INTEGER	The number of NRT DCH setup rejects for background traffic class due to running out of codes in DL.	PMMOResult_Traffic.M1002C554	Sum, nkcttbh, nkrttbh, tot
rej_dch_due_codes_int_dl	ACCUMULATION	INTEGER	The number of NRT DCH setup rejects for interactive traffic class due to running out of channelization codes in DL.	PMMOResult_Traffic.M1002C553	Sum, nkcttbh, nkrttbh, tot
rej_dch_due_power_bgr_dl	ACCUMULATION	INTEGER	The number of NRT DCH setup rejects for background traffic class due to power limits in DL.	PMMOResult_Traffic.M1002C556	Sum, nkcttbh, nkrttbh, tot
rej_dch_due_power_bgr_ul	ACCUMULATION	INTEGER	The number of NRT DCH setup rejects for background traffic class due to power limits in UL.	PMMOResult_Traffic.M1002C627	Sum, nkcttbh, nkrttbh, tot
rej_dch_due_power_int_dl	ACCUMULATION	INTEGER	The number of NRT DCH setup rejects for interactive traffic class due to power limits in DL.	PMMOResult_Traffic.M1002C555	Sum, nkcttbh, nkrttbh, tot
rej_dch_due_pow	ACCUMULA	INTEG	The number of	PMMOResult_Traffic.	Sum,

er_int_ul	TION	ER	NRT DCH setup rejects for interactive traffic class due to power limits in UL.	M1002C626	nkcttbh, nkrttbh, tot

7.6.185Cell.Nokia.UMTS.traffic.requests_and_allocations_for_compressed_mode.drnc

Traffic - Compressed mode requests and allocations at DRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_dura_for_com_mode_dl_in_drnc	ACCUMULATION	INT8	Allocated durations for a compressed mode in DL in DRNC	PMMOResult_Traffic.M1002C384	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_dl_using_hls_method_in_drnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in DL using the high layer scheduling method in DRNC.	PMMOResult_Traffic.M1002C449	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_dl_using_sf2_method_in_drnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in DL using the SF/2 method in DRNC.	PMMOResult_Traffic.M1002C447	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_ul_in_drnc	ACCUMULATION	INT8	Allocated durations for a compressed mode in UL in DRNC	PMMOResult_Traffic.M1002C383	Sum, nkcttbh, nkrttbh, tot
allo_dura_for_com_mode_ul_using_hls_method_in_drnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in UL using	PMMOResult_Traffic.M1002C448	Sum, nkcttbh, nkrttbh, tot

			the high layer scheduling method in DRNC.		
allo_dura_for_com_mode_ul_using_sf2_method_in_drnc	ACCUMULATION	INT8	Summary of allocated durations for compressed mode in UL using the SF/2 method in DRNC.	PMMOResult_Traffic.M1002C446	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_in_drnc	ACCUMULATION	INT8	Allocations for a compressed mode in DL in DRNC	PMMOResult_Traffic.M1002C382	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_using_hls_method_in_drnc	ACCUMULATION	INT8	The number of allocations for compressed mode in DL using the high layer scheduling method in DRNC.	PMMOResult_Traffic.M1002C444	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_dl_using_sf2_method_in_drnc	ACCUMULATION	INT8	The number of allocations for compressed mode in DL using the SF/2 method in DRNC.	PMMOResult_Traffic.M1002C442	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_in_drnc	ACCUMULATION	INT8	Allocations for a compressed mode in UL in DRNC	PMMOResult_Traffic.M1002C381	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_using_hls_method_in_drnc	ACCUMULATION	INT8	The number of allocations for compressed mode in UL using the high layer scheduling method in DRNC.	PMMOResult_Traffic.M1002C443	Sum, nkcttbh, nkrttbh, tot
allo_for_com_mode_ul_using_sf2_method_in_drnc	ACCUMULATION	INT8	The number of allocations for compressed mode in UL using the	PMMOResult_Traffic.M1002C441	Sum, nkcttbh, nkrttbh, tot

			SF/2 method in DRNC.		
req_for_com_mode_dl_in_drnc	ACCUMULATION	INT8	Requests for a compressed mode in DL in DRNC. Also called REQ_FOR_COM_MODE_DL_HHO_IN_DRNC	PMMOResult_Traffic.M1002C378	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_dl_reject_in_drnc	ACCUMULATION	INT8	Requests for a compressed mode in DL rejected by the DRNC for radio resource reasons in the target cell.	PMMOResult_Traffic.M1002C380	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_ul_in_drnc	ACCUMULATION	INT8	Requests for a compressed mode in UL in DRNC	PMMOResult_Traffic.M1002C377	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_ul_reject_in_drnc	ACCUMULATION	INT8	Requests for a compressed mode in UL rejected by the DRNC for radio resource reasons in the target cell.	PMMOResult_Traffic.M1002C379	Sum, nkcttbh, nkrttbh, tot

7.6.186Cell.Nokia.UMTS.traffic.requests_and_allocations_for_signalling_links.srnc

Traffic - Signalling link requests and allocations at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_allo_dura_for_sig_link_1_7_kbps_in_srnc	INTENSITY	INTEGER	A number of DCH allocated durations.	PMMOResult_Traffic.M1002C9	Average, avg, max, min,

			Signalling link 1.7 kpbs allocations in UL/DL		nkcttbh, nkrttbh, tot
dch_allo_dura_for_sig_link_13_6_kbps_in_srnc	INTENSITY	INTEGER	A number of DCH allocated durations. Signalling link 13.6 kpbs allocations in UL/DL	PMMOResult_Traffic.M1002C11	Average, avg, max, min, nkcttbh, nkrttbh, tot
dch_allo_dura_for_sig_link_3_4_kbps_in_srnc	INTENSITY	INTEGER	A number of DCH allocated durations. Signalling link 3.4 kpbs allocations in UL/DL	PMMOResult_Traffic.M1002C10	Average, avg, max, min, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_1_7_kbps_in_srnc	ACCUMULATION	INT8	A number of DCH allocations for a signalling link in the SRNC. Signalling link 1.7 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C6	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_13_6_kbps_in_srnc	ACCUMULATION	INT8	A number of DCH allocations for a signalling link in the SRNC. Signalling link 13.6 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C8	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_3_4_kbps_in_srnc	ACCUMULATION	INT8	A number of DCH allocations for a signalling link in the SRNC. Signalling link 3.4 kbps allocations in UL/DL	PMMOResult_Traffic.M1002C7	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_from_hspa_to_hspa_layer	ACCUMULATION	INTEGER	The number of DCH allocations for signaling link from HSPA layer	PMMOResult_Traffic.M1002C511	Sum, nkcttbh, nkrttbh, tot

			to HSPA layer due to Directed RRC Connection Setup for HSPA layer.		
dch_allo_for_sig_link_from_hspa_to_non_hspa_layer	ACCUMULATION	INTEGER	The number of DCH allocations for signaling link from HSPA layer to non-HSPA layer due to Directed RRC Connection Setup for HSPA layer.	PMMOResult_Traffic.M1002C510	Sum, nkcttbh, nkrttbh, tot
dch_allo_for_sig_link_from_non_hspa_to_hspa_layer	ACCUMULATION	INTEGER	The number of DCH allocations for signaling link from non-HSPA layer to HSPA layer due to Directed RRC Connection Setup for HSPA layer.	PMMOResult_Traffic.M1002C509	Sum, nkcttbh, nkrttbh, tot
dch_dho_req_for_sig_link_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link because of the diversity handover in the SRNC	PMMOResult_Traffic.M1002C4	Sum, nkcttbh, nkrttbh, tot
dch_dho_req_for_sig_link_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link rejected by the SRNC for reasons caused by radio resources in the target cell of the diversity handover	PMMOResult_Traffic.M1002C5	Sum, nkcttbh, nkrttbh, tot
dch_hho_req_for_	ACCUMULA	INT8	Total number of	PMMOResult_Traffic.	Sum,

sig_link_in_srnc	TION		DCH requests for a signalling link due to the hard handover in the SRNC	M1002C339	nkcttbh, nkrttbh, tot
dch_hho_req_for_sig_link_reject_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link rejected by the SRNC for reasons caused by radio resources in the target cell of the hard handover	PMMOResult_Traffic.M1002C340	Sum, nkcttbh, nkrttbh, tot
dch_req_for_rrc_conn_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for RRC connection establishment in the SRNC	PMMOResult_Traffic.M1002C3	Sum, nkcttbh, nkrttbh, tot
dch_req_for_sig_link_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link in the SRNC. Includes RRC connection establishments, RRC state changes and handovers	PMMOResult_Traffic.M1002C0	Sum, nkcttbh, nkrttbh, tot
dch_req_for_sig_link_reject_in_dl_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link rejected in the SRNC for reasons caused by DL radio resources	PMMOResult_Traffic.M1002C2	Sum, nkcttbh, nkrttbh, tot
dch_req_for_sig_link_reject_in_ul_in_srnc	ACCUMULATION	INT8	Total number of DCH requests for a signalling link rejected in the SRNC for reasons caused by UL radio resources	PMMOResult_Traffic.M1002C1	Sum, nkcttbh, nkrttbh, tot

signalling_throughput	INTENSITY	FLOAT	Signalling data throughput uplink and downlink	if (interval*60) = 0 then 0 else (((1.7*PMMOResult_Traffic.M1002C9)+(3.4*M1002C10)+(13.6*M1002C11))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.187Cell.Nokia.UMTS.traffic.requests_compressed_mode.srnc

Traffic - Compressed mode requests at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
req_for_com_mode_dl_reject_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in DL to Inter Frequency HHO rejected by the SRNC for radio resource reasons in the target cell	PMMOResult_Traffic.M1002C360	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_dl_reject_to_int_syst_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in DL to Inter System HHO rejected by the SRNC for radio resource reasons in the target cell	PMMOResult_Traffic.M1002C362	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_dl_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in DL to Inter Frequency HHO in SRNC	PMMOResult_Traffic.M1002C356	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_dl_to_int_syst_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in DL to Inter	PMMOResult_Traffic.M1002C358	Sum, nkcttbh, nkrttbh,

			System HHO in SRNC		tot
req_for_com_mode_ul_reject_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in UL to Inter Frequency HHO rejected by the SRNC for radio resource reasons in the target cell	PMMOResult_Traffic.M1002C359	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_ul_reject_to_int_syst_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in UL to Inter System HHO rejected by the SRNC for radio resource reasons in the target cell	PMMOResult_Traffic.M1002C361	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_ul_to_int_freq_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in UL to Inter Frequency HHO in SRNC	PMMOResult_Traffic.M1002C355	Sum, nkcttbh, nkrttbh, tot
req_for_com_mode_ul_to_int_syst_hho_in_srnc	ACCUMULATION	INT8	Requests for a compressed mode in UL to Inter System HHO in SRNC	PMMOResult_Traffic.M1002C357	Sum, nkcttbh, nkrttbh, tot

7.6.188Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_conv_class.srnc

Traffic - RT DCH allocation for PS conversational services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_ps_data_conv_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Downlink with conversational class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C182)+(16*M1002C183)+(32*M1002C184)+(64*M1002C185)+(128*M1002C186	Average, avg, max, min, nkcttbh, nkrttbh, tot

				)+(256*M1002C187)+(320*M1002C188)+(384*M1002C189))*(0.01)/(interval*60))	
rt_dch_allo_for_ps_call_conv_class_128_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 128 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C122	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_128_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 128 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C114	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 16 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C119	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 16 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C111	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number	PMMOResult_Traffic.M1002C123	Sum, nkcttbh,

_256_kbps_in_dl_in_srnc			of 256 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC		nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_256_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 256 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C115	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_32_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 32 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C120	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 32 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C112	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_320_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 320 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C124	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_320_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 320 kbps RT DCH allocations for PS Calls in UL	PMMOResult_Traffic.M1002C116	Sum, nkcttbh, nkrttbh, tot

			with conversational class in the SRNC		
rt_dch_allo_for_ps_call_conv_class_384_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 384 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C125	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_384_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 384 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C117	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 64 kbps RT DCH allocations for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C121	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_64_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 64 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C113	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_conv_class_8_kbps_in_dl_in	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 8 kbps RT DCH	PMMOResult_Traffic.M1002C118	Sum, nkcttbh, nkrttbh,

_srnc			allocations for PS Calls in DL with conversational class in the SRNC		tot
rt_dch_allo_for_ps_call_conv_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 8 kbps RT DCH allocations for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C110	Sum, nkcttbh, nkrttbh, tot
ul_ps_data_conv_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Uplink with conversational class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C174)+(16*M1002C175)+(32*M1002C176)+(64*M1002C177)+(128*M1002C178)+(256*M1002C179)+(320*M1002C180)+(384*M1002C181))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.189Cell.Nokia.UMTS.traffic.rt_dch_allocations_ps_calls_stream_class.srnc

Traffic - RT DCH allocation for PS streaming services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dl_ps_data_stream_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Uplink with stream class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C198)+(16*M1002C199)+(32*M1002C200)+(64*M1002C201)+(128*M1002C202)+(256*M1002C203)+(320*M1002C204)+(384*M1002C205))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_128_kbps_in_dl	ACCUMULATION	INT8	Number of 128 kbps RT DCH allocations for PS	PMMOResult_Traffic.M1002C138	Sum, nkcttbh, nkrttbh,

_in_srnc			Calls in DL with streaming class in the SRNC		tot
rt_dch_allo_for_ps_call_stream_class_128_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 128 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C130	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 16 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C135	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 16 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C127	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_256_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 256 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C139	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_256_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 256 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C131	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_32_kbps_in_dl_	ACCUMULATION	INT8	Number of 32 kbps RT DCH allocations for PS	PMMOResult_Traffic.M1002C136	Sum, nkcttbh, nkrttbh,

in_srnc			Calls in DL with streaming class in the SRNC		tot
rt_dch_allo_for_ps_call_stream_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 32 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C128	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_320_kbps_in_dl_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 320 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C140	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_320_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 320 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C132	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_384_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 384 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C141	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_384_kbps_in_ul_in_srnc	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of 384 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C133	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 64 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C137	Sum, nkcttbh, nkrttbh, tot

rt_dch_allo_for_ps_call_stream_class_64_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 64 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C129	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INT8	Number of 8 kbps RT DCH allocations for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C134	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_for_ps_call_stream_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INT8	Number of 8 kbps RT DCH allocations for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C126	Sum, nkcttbh, nkrttbh, tot
ul_ps_data_stream_class_throughput	INTENSITY	FLOAT	Packet switched data throughput Uplink with stream class (kbps/Second)	if (interval*60) = 0 then 0 else (((8*PMMOResult_Traffic.M1002C190)+(16*M1002C191)+(32*M1002C192)+(64*M1002C193)+(128*M1002C194)+(256*M1002C195)+(320*M1002C196)+(384*M1002C197))*(0.01)/(interval*60))	Average, avg, max, min, nkcttbh, nkrttbh, tot

7.6.190Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_conv_class.srnc

Traffic - RT DCH allocation durations for PS conversational services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_allo_dur_for_ps_call_conv_	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration	PMMOResult_Traffic.M1002C186	Sum, nkcttbh,

class_128_kbps_in_dl_in_srnc			of 128 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC		nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_128_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 128 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C178	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 16 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C183	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 16 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C175	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_256_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 256 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C187	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_256_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 256 kbps RT DCH allocation for PS Calls in UL	PMMOResult_Traffic.M1002C179	Sum, nkcttbh, nkrttbh, tot

			with conversational class in the SRNC		
rt_dch_allo_dur_for_ps_call_conv_class_32_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 32 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C184	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 32 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C176	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_320_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 320 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C188	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_320_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 320 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C180	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_384_kbps_i	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 384 kbps RT	PMMOResult_Traffic.M1002C189	Sum, nkcttbh, nkrttbh,

n_dl_in_srnc			DCH allocation for PS Calls in DL with conversational class in the SRNC		tot
rt_dch_allo_dur_for_ps_call_conv_class_384_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 384 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C181	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 64 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C185	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_64_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 64 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C177	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 8 kbps RT DCH allocation for PS Calls in DL with conversational class in the SRNC	PMMOResult_Traffic.M1002C182	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_conv_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - Duration of 8 kbps RT DCH allocation for PS Calls in UL with conversational class in the SRNC	PMMOResult_Traffic.M1002C174	Sum, nkcttbh, nkrttbh, tot

7.6.191Cell.Nokia.UMTS.traffic.rt_dch_duration_ps_calls_stream_class.srnc

Traffic - RT DCH allocation durations for PS streaming services at SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rt_dch_allo_dur_for_ps_call_stream_class_16_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 16 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C199	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_16_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 16 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C191	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_32_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 32 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C200	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_32_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 32 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C192	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_64_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 64 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C201	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_f	ACCUMULA	INTEG	Duration of 64	PMMOResult_Traffic.	Sum,

or_ps_call_stream_class_64_kbps_in_ul_in_srnc	TION	ER	kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	M1002C193	nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_8_kbps_in_dl_in_srnc	ACCUMULATION	INTEGER	Duration of 8 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C198	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_for_ps_call_stream_class_8_kbps_in_ul_in_srnc	ACCUMULATION	INTEGER	Duration of 8 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C190	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_128_kbps_in_dl_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_128_kbps_in_dl_in_srnc:Duration of 128 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C202	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_128_kbps_in_ul_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_128_kbps_in_ul_in_srnc:Duration of 128 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C194	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_256_kbps_in_dl_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_256_kbps_in_dl_in_srnc:Duration of 256 kbps RT DCH	PMMOResult_Traffic.M1002C203	Sum, nkcttbh, nkrttbh, tot

			allocation for PS Calls in DL with streaming class in the SRNC		
rt_dch_allo_dur_ps_call_stream_class_256_kbps_in_ul_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_256_kbps_in_ul_in_srnc:- Obsolete in RN2.2 - Duration of 256 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C195	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_320_kbps_in_dl_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_320_kbps_in_dl_in_srnc:- Obsolete in RN2.2 - Duration of 320 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	PMMOResult_Traffic.M1002C204	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_320_kbps_in_ul_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_320_kbps_in_ul_in_srnc:- Obsolete in RN2.2 - Duration of 320 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C196	Sum, nkcttbh, nkrttbh, tot
rt_dch_allo_dur_	ACCUMULA	INTEG	rt_dch_allo_dur_f	PMMOResult_Traffic.	Sum,

ps_call_stream_class_384_kbps_in_dl_srnc	TION	ER	or_ps_call_stream_class_384_kbps_in_dl_in_srnc:Duration of 384 kbps RT DCH allocation for PS Calls in DL with streaming class in the SRNC	M1002C205	nkcttbh, nkrttbh, tot
rt_dch_allo_dur_ps_call_stream_class_384_kbps_in_ul_srnc	ACCUMULATION	INTEGER	rt_dch_allo_dur_for_ps_call_stream_class_384_kbps_in_ul_in_srnc:-Obsolete in RN2.2 - Duration of 384 kbps RT DCH allocation for PS Calls in UL with streaming class in the SRNC	PMMOResult_Traffic.M1002C197	Sum, nkcttbh, nkrttbh, tot

7.6.192Cell.Nokia.UMTS.traffic.wamr

Statistics for WAMR

KPI	Type	Data Type	Description	Derivation	Aggregation
allo_for_wamr_12_65_drnc	ACCUMULATION	INTEGER	The number of WAMR 12.65 kbps allocations in the DRNC.	PMMOResult_Traffic.M1002C491	Sum, nkcttbh, nkrttbh, tot
allo_for_wamr_12_65_srnc	ACCUMULATION	INTEGER	The number of WAMR 12.65 kbps allocations in the SRNC. WAMR calls are symmetric, i.e., there is no need for separate UL and DL counters.	PMMOResult_Traffic.M1002C487	Sum, nkcttbh, nkrttbh, tot
allo_for_wamr_66_drnc	ACCUMULATION	INTEGER	The number of WAMR 6.6 kbps allocations in the	PMMOResult_Traffic.M1002C493	Sum, nkcttbh, nkrttbh,

			DRNC.		tot
allo_for_wamr_6_6_srnc	ACCUMULATION	INTEGER	The number of WAMR 6.6 kbps allocations in the SRNC. WAMR calls are symmetric, i.e., there is no need for separate UL and DL counters.	PMMOResult_Traffic.M1002C488	Sum, nkcttbh, nkrttbh, tot
allo_for_wamr_8_85_drnc	ACCUMULATION	INTEGER	The number of WAMR 8.85 kbps allocations in the DRNC.	PMMOResult_Traffic.M1002C492	Sum, nkcttbh, nkrttbh, tot
dura_for_wamr_12_65_drnc	ACCUMULATION	INTEGER	The summary of DCH allocation durations for WAMR 12.65 kbps calls in the DRNC.	PMMOResult_Traffic.M1002C494	Sum, nkcttbh, nkrttbh, tot
dura_for_wamr_12_65_srnc	ACCUMULATION	INTEGER	The summary of DCH allocation durations for WAMR 12.65 kbps calls in the SRNC.	PMMOResult_Traffic.M1002C489	Sum, nkcttbh, nkrttbh, tot
dura_for_wamr_6_6_drnc	ACCUMULATION	INTEGER	The summary of DCH allocation durations for WAMR 6.6 kbps calls in the DRNC.	PMMOResult_Traffic.M1002C496	Sum, nkcttbh, nkrttbh, tot
dura_for_wamr_6_6_srnc	ACCUMULATION	INTEGER	The summary of DCH allocation durations for WAMR 6.6 kbps calls in the SRNC.	PMMOResult_Traffic.M1002C490	Sum, nkcttbh, nkrttbh, tot

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dura_for_wamr_8_85_drnc	ACCUMULATION	INTEGER	The summary of DCH allocation durations for WAMR 8.85 kbps calls in the DRNC.	PMMOResult_Traffic.M1002C495	Sum, nkcttbh, nkrttbh, tot
swi_from_namr_to_wamr_drnc	ACCUMULATION	INTEGER	The number of DCH modifications due to switching from NAMR to WAMR in the DRNC.	PMMOResult_Traffic.M1002C500	Sum, nkcttbh, nkrttbh, tot
swi_from_namr_to_wamr_srnc	ACCUMULATION	INTEGER	The number of DCH modifications due to switching from NAMR to WAMR in the SRNC.	PMMOResult_Traffic.M1002C498	Sum, nkcttbh, nkrttbh, tot
swi_from_wamr_to_namr_drnc	ACCUMULATION	INTEGER	The number of DCH modifications due to switching from WAMR to NAMR in the DRNC.	PMMOResult_Traffic.M1002C499	Sum, nkcttbh, nkrttbh, tot
swi_from_wamr_to_namr_srnc	ACCUMULATION	INTEGER	The number of DCH modifications due to switching from WAMR to NAMR in the SRNC.	PMMOResult_Traffic.M1002C497	Sum, nkcttbh, nkrttbh, tot

7.6.193Cell.Nokia.UMTS.tx_power

Transmitted power statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_txpow_load_below_target	ACCUMULATION	INTEGER	The number of times when (TxPower) < (target load threshold).	PMMOResult_Cell_Resource.M1000C289	Sum, nkcttbh, nkrttbh, tot
amr_txpow_load_	ACCUMULA	INTEG	The number of	PMMOResult_Cell_Res	Sum,

over_target	TION	ER	times when (TxPower) >= (target load threshold).	ource.M1000C290	nkcttbh, nkrttbh, tot
amr_txpow_load_overload	ACCUMULATION	INTEGER	The number of times when (TxPower) >= (over load threshold).	PMMOResult_Cell_Resource.M1000C291	Sum, nkcttbh, nkrttbh, tot
amr_txpow_load_underload	ACCUMULATION	INTEGER	The number of times when (TxPower) < (under load threshold).	PMMOResult_Cell_Resource.M1000C288	Sum, nkcttbh, nkrttbh, tot
rtwp_class_0	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 0 range (RTWP< -108 dBm).	PMMOResult_Cell_Resource.M1000C320	Sum, nkcttbh, nkrttbh, tot
rtwp_class_10	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 10 range (-99 dBm <=RTWP< -98 dBm).	PMMOResult_Cell_Resource.M1000C330	Sum, nkcttbh, nkrttbh, tot
rtwp_class_11	ACCUMULATION	INTEGER	The number of total uplink power (RTWP)	PMMOResult_Cell_Resource.M1000C331	Sum, nkcttbh, nkrttbh,

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			measurement report samples in which the power value is inside Class 11 range (-98 dBm <=RTWP< -96 dBm).		tot
rtwp_class_12	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 12 range (-96 dBm <=RTWP< -94 dBm).	PMMOResult_Cell_Resource.M1000C332	Sum, nkcttbh, nkrttbh, tot
rtwp_class_13	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 13 range (-94 dBm <=RTWP< -92 dBm).	PMMOResult_Cell_Resource.M1000C333	Sum, nkcttbh, nkrttbh, tot
rtwp_class_14	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 14 range (-92 dBm <=RTWP< -89 dBm).	PMMOResult_Cell_Resource.M1000C334	Sum, nkcttbh, nkrttbh, tot
rtwp_class_15	ACCUMULATION	INTEGER	The number of total uplink power	PMMOResult_Cell_Resource.M1000C335	Sum, nkcttbh,

			(RTWP) measurement report samples in which the power value is inside Class 15 range (-89 dBm <=RTWP< -86 dBm).		nkrttbh, tot
rtwp_class_16	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 16 range (-86 dBm <=RTWP< -83 dBm).	PMMOResult_Cell_Resource.M1000C336	Sum, nkcttbh, nkrttbh, tot
rtwp_class_17	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 17 range (-83 dBm <=RTWP< -80 dBm).	PMMOResult_Cell_Resource.M1000C337	Sum, nkcttbh, nkrttbh, tot
rtwp_class_18	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 18 range	PMMOResult_Cell_Resource.M1000C338	Sum, nkcttbh, nkrttbh, tot

			(-80 dBm <=RTWP< -75 dBm).		
rtwp_class_19	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 19 range (-75 dBm <=RTWP< -70 dBm).	PMMOResult_Cell_Resource.M1000C339	Sum, nkcttbh, nkrttbh, tot
rtwp_class_1	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 1 range (-108 dBm <=RTWP< -107 dBm).	PMMOResult_Cell_Resource.M1000C321	Sum, nkcttbh, nkrttbh, tot
rtwp_class_20	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 20 range (-70 dBm <=RTWP< -65 dBm).	PMMOResult_Cell_Resource.M1000C340	Sum, nkcttbh, nkrttbh, tot
rtwp_class_21	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside	PMMOResult_Cell_Resource.M1000C341	Sum, nkcttbh, nkrttbh, tot

			Class 21 range (-65 dBm <= RTWP).		
rtwp_class_2	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 2 range (-107 dBm <=RTWP< -106 dBm).	PMMOResult_Cell_Resource.M1000C322	Sum, nkcttbh, nkrttbh, tot
rtwp_class_3	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 3 range (-106 dBm <=RTWP< -105).	PMMOResult_Cell_Resource.M1000C323	Sum, nkcttbh, nkrttbh, tot
rtwp_class_4	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 4 range (-105 dBm <=RTWP< -104 dBm).	PMMOResult_Cell_Resource.M1000C324	Sum, nkcttbh, nkrttbh, tot
rtwp_class_5	ACCUMULATION	INTEGER	The number of total uplink power (RTWP)	PMMOResult_Cell_Resource.M1000C325	Sum, nkcttbh, nkrttbh,

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			measurement report samples in which the power value is inside Class 5 range (-104 dBm <=RTWP< -103 dBm).		tot
rtwp_class_6	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 6 range (-103 dBm <=RTWP< -102 dBm).	PMMOResult_Cell_Resource.M1000C326	Sum, nkcttbh, nkrttbh, tot
rtwp_class_7	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 7 range (-102 dBm <=RTWP< -101 dBm).	PMMOResult_Cell_Resource.M1000C327	Sum, nkcttbh, nkrttbh, tot
rtwp_class_8	ACCUMULATION	INTEGER	The number of total uplink power (RTWP) measurement report samples in which the power value is inside Class 8 range (-101 dBm <=RTWP< -100 dBm).	PMMOResult_Cell_Resource.M1000C328	Sum, nkcttbh, nkrttbh, tot
rtwp_class_9	ACCUMULATION	INTEGER	The number of total uplink power	PMMOResult_Cell_Resource.M1000C329	Sum, nkcttbh,

			(RTWP) measurement report samples in which the power value is inside Class 9 range (-100 dBm <=RTWP< -99 dBm).		nkrttbh, tot
tx_cr_pwr_class_0	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 0 range.	PMMOResult_Cell_Resource.M1000C342	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_10	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 10 range.	PMMOResult_Cell_Resource.M1000C352	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_1	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 1 range.	PMMOResult_Cell_Resource.M1000C343	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_2	ACCUMULATION	INTEGER	The number of Transmitted	PMMOResult_Cell_Resource.M1000C344	Sum, nkcttbh,

			Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 2 range.		nkrttbh, tot
tx_cr_pwr_class_3	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 3 range.	PMMOResult_Cell_Resource.M1000C345	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_4	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 4 range.	PMMOResult_Cell_Resource.M1000C346	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_5	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 5 range.	PMMOResult_Cell_Resource.M1000C347	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_6	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 6 range.	PMMOResult_Cell_Resource.M1000C348	Sum, nkcttbh, nkrttbh, tot

tx_cr_pwr_class_7	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 7 range.	PMMOResult_Cell_Resource.M1000C349	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_8	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 8 range.	PMMOResult_Cell_Resource.M1000C350	Sum, nkcttbh, nkrttbh, tot
tx_cr_pwr_class_9	ACCUMULATION	INTEGER	The number of Transmitted Carrier Power (TxCrPwr) measurement report samples in which the power value is inside Class 9 range.	PMMOResult_Cell_Resource.M1000C351	Sum, nkcttbh, nkrttbh, tot

7.6.194Cell.Nokia.UMTS.ue_quality_measurement

UE quality BLER statistics.

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
average_bler_from_quality_measure	INTENSITY	FLOAT	The average block error rate for	PMMOResult_RCPM_UEQ.M1018C0	Average, avg, max,

ments			downlink radio connection. Measured by using the UE Quality Measurement.		min, nkcttbh, nkrttbh, tot
received_quality_reports_from_ues	ACCUMULATION	INTEGER	The number of received quality reports from UE.	PMMOResult_RCPM_UEQ.M1018C1	Sum, nkcttbh, nkrttbh, tot
sum_of_squared_ueq_bler_values	ACCUMULATION	FLOAT	Sum of squared BLER values.	PMMOResult_RCPM_UEQ.M1018C2	Sum, nkcttbh, nkrttbh, tot

7.6.195Cell.Nokia.UMTS.user_throughput_wcel

User throughput statistics

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
user_dl_thrp_dist_class_1_w	ACCUMULATION	INTEGER	The number of connections with 0...4 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C34	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_10_w	ACCUMULATION	INTEGER	The number of connections with 1 Mbit/s...2 Mbit/s downlink gross RLC PDU throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C43	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_11_w	ACCUMULATION	INTEGER	The number of connections with the 2 Mbit/s...4 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C50	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist	ACCUMULA	INTEG	The number of	PMMOResult_RCPM_	Sum,

_class_12_w	TION	ER	connections with the 4 Mbit/s...8 Mbit/s downlink RLC PDU gross throughput.	RLC_WCEL.M1026C51	nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_13_w	ACCUMULATION	INTEGER	The number of connections with larger than the 8 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C52	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_2_w	ACCUMULATION	INTEGER	The number of connections with 4...8 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C35	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_3_w	ACCUMULATION	INTEGER	The number of connections with 8...16 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C36	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_4_w	ACCUMULATION	INTEGER	The number of connections with 16...32 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C37	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_5_w	ACCUMULATION	INTEGER	The number of connections with 32...64 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C38	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_6_w	ACCUMULATION	INTEGER	The number of connections with	PMMOResult_RCPM_RLC_WCEL.M1026C3	Sum, nkcttbh,

			64...128 kbit/s downlink RLC PDU gross throughput.	9	nkrttbh, tot
user_dl_thrp_dist_class_7_w	ACCUMULATION	INTEGER	The number of connections with 128...256 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C40	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_8_w	ACCUMULATION	INTEGER	The number of connections with 256...512 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C41	Sum, nkcttbh, nkrttbh, tot
user_dl_thrp_dist_class_9_w	ACCUMULATION	INTEGER	The number of connections with 512 kbit/s...1 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C42	Sum, nkcttbh, nkrttbh, tot
user_ul_thrp_dist_class_1_w	ACCUMULATION	INTEGER	The number of connections with the 0 kbit/s...250 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C53	Sum, nkcttbh, nkrttbh, tot
user_ul_thrp_dist_class_2_w	ACCUMULATION	INTEGER	The number of connections with the 250 kbit/s...500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C54	Sum, nkcttbh, nkrttbh, tot
user_ul_thrp_dist_class_3_w	ACCUMULATION	INTEGER	The number of connections with the 500 kbit/s...1 Mbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C55	Sum, nkcttbh, nkrttbh, tot
user_ul_thrp_dist_class_4_w	ACCUMULATION	INTEGER	The number of connections with the 1000 kbit/s...1500 kbit/s	PMMOResult_RCPM_RLC_WCEL.M1026C56	Sum, nkcttbh, nkrttbh, tot

			uplink SDU throughput.		
user_ul_thrp_dist_class_5_w	ACCUMULATION	INTEGER	The number of connections with larger than the 1500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_WCEL.M1026C57	Sum, nkcttbh, nkrttbh, tot

7.6.196Cell.Nokia.UMTS.wbts_fractional_load

Fractional load statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fract_load_distr_class_00	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 0 (L = 0).	PMMOResult_HSDPA_WBTS.M5000C245	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_01	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 1 (0 < L <= 0.05).	PMMOResult_HSDPA_WBTS.M5000C246	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_c	ACCUMULA	INTEG	Rise Over Thermal	PMMOResult_HSDPA_	Sum,

lass_02	TION	ER	in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 2 (0.05 < L <= 0.1).	WBTS.M5000C247	nkcttbh, nkrttbh, tot
fract_load_distr_class_03	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 3 (0.1 < L <= 0.15).	PMMOResult_HSDPA_WBTS.M5000C248	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_04	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 4 (0.15 < L <= 0.2).	PMMOResult_HSDPA_WBTS.M5000C249	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_05	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches	PMMOResult_HSDPA_WBTS.M5000C250	Sum, nkcttbh, nkrttbh, tot

			to limits defined for class 5 (0.2 < L <= 0.25).		
fract_load_distr_class_06	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 6 (0.25 < L <= 0.3).	PMMOResult_HSDPA_WBTS.M5000C251	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_07	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 7 (0.3 < L <= 0.35).	PMMOResult_HSDPA_WBTS.M5000C252	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_08	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 8 (0.35 < L <= 0.4).	PMMOResult_HSDPA_WBTS.M5000C253	Sum, nkcttbh, nkrttbh, tot

fract_load_distr_class_09	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 9 (0.4 < L <= 0.45).	PMMOResult_HSDPA_WBTS.M5000C254	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_10	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 10 (0.45 < L <= 0.5).	PMMOResult_HSDPA_WBTS.M5000C255	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_11	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 11 (0.5 < L <= 0.55).	PMMOResult_HSDPA_WBTS.M5000C256	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_12	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling	PMMOResult_HSDPA_WBTS.M5000C257	Sum, nkcttbh, nkrttbh, tot

			operation matches to limits defined for class 12 (0.55 < L <= 0.6).		
fract_load_distr_class_13	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 13 (0.6 < L <= 0.65).	PMMOResult_HSDPA_WBTS.M5000C258	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_14	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 14 (0.65 < L <= 0.7).	PMMOResult_HSDPA_WBTS.M5000C259	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_15	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 15 (0.7 <	PMMOResult_HSDPA_WBTS.M5000C260	Sum, nkcttbh, nkrttbh, tot

			L <= 0.75).		
fract_load_distr_class_16	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 16 (0.75 < L <= 0.8).	PMMOResult_HSDPA_WBTS.M5000C261	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_17	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 17 (0.8 < L <= 0.85).	PMMOResult_HSDPA_WBTS.M5000C262	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_18	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 18 (0.85 < L <= 0.9).	PMMOResult_HSDPA_WBTS.M5000C263	Sum, nkcttbh, nkrttbh, tot
fract_load_distr_class_19	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load	PMMOResult_HSDPA_WBTS.M5000C264	Sum, nkcttbh, nkrttbh, tot

			is calculated in the normal scheduling operation matches to limits defined for class 19 (0.9 < L <= 0.95).		
fract_load_distr_class_20	ACCUMULATION	INTEGER	Rise Over Thermal in Fractional load:L = 1 - (Pnoise/Ptotal), Ptotal>=Pnoise. The fractional load is calculated in the normal scheduling operation matches to limits defined for class 20 (0.95 < L <= 1).	PMMOResult_HSDPA_WBTS.M5000C265	Sum, nkcttbh, nkrttbh, tot

7.6.197Cell.Nokia.UMTS.wbts_hsdsch_credit

HS-DSCH credict reduction statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hs_dsch_credit_rdct_buf_full	ACCUMULATION	INTEGER	Number of HS-DSCH credit reductions due to MAC-HS buffer filling.	PMMOResult_HSDPA_WBTS.M5000C179	Sum, nkcttbh, nkrttbh, tot
hs_dsch_credit_rdct_due_dly	ACCUMULATION	INTEGER	Number of HS-DSCH credit reductions due to Iub delay build-up.	PMMOResult_HSDPA_WBTS.M5000C176	Sum, nkcttbh, nkrttbh, tot
hs_dsch_credit_rdct_frm_loss	ACCUMULATION	INTEGER	Number of HS-DSCH credit reductions due to frame loss.	PMMOResult_HSDPA_WBTS.M5000C178	Sum, nkcttbh, nkrttbh, tot

hs_dsch_credit_rdct_svre_dly	ACCUMULATION	INTEGER	Number of HS-DSCH credit reductions due to severe Iub delay build-up.	PMMOResult_HSDPA_WBTS.M5000C177	Sum, nkcttbh, nkrttbh, tot

7.6.198Cell.Nokia.UMTS.wbts_ue_nonserving_power

UE power statistics in non-serving radio link

KPI	Type	Data Type	Description	Derivation	Aggregation
non_serving_ergch_commands	ACCUMULATION	INTEGER	Number of non-serving E-RGCH commands sent due to power overload.	PMMOResult_HSDPA_WBTS.M5000C244	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_00	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 0.	PMMOResult_HSDPA_WBTS.M5000C212	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_01	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 1.	PMMOResult_HSDPA_WBTS.M5000C213	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_02	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 2.	PMMOResult_HSDPA_WBTS.M5000C214	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_03	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 3.	PMMOResult_HSDPA_WBTS.M5000C215	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_	ACCUMULA	INTEG	UE Power	PMMOResult_HSDPA	Sum,

04	TION	ER	Headroom value reported by the UE in the non-serving radio link set is 4.	_WBTS.M5000C216	nkcttbh, nkrttbh, tot
uph_non_serving_05	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 5.	PMMOResult_HSDPA_WBTS.M5000C217	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_06	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 6.	PMMOResult_HSDPA_WBTS.M5000C218	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_07	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 7.	PMMOResult_HSDPA_WBTS.M5000C219	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_08	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 8.	PMMOResult_HSDPA_WBTS.M5000C220	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_09	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 9.	PMMOResult_HSDPA_WBTS.M5000C221	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_10	ACCUMULATION	INTEGER	UE Power Headroom value	PMMOResult_HSDPA_WBTS.M5000C222	Sum, nkcttbh,

			reported by the UE in the non-serving radio link set is 10.		nkrttbh, tot
uph_non_serving_11	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 11.	PMMOResult_HSDPA_WBTS.M5000C223	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_12	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 12.	PMMOResult_HSDPA_WBTS.M5000C224	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_13	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 13.	PMMOResult_HSDPA_WBTS.M5000C225	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_14	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 14.	PMMOResult_HSDPA_WBTS.M5000C226	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_15	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 15.	PMMOResult_HSDPA_WBTS.M5000C227	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_16	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 16.	PMMOResult_HSDPA_WBTS.M5000C228	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_	ACCUMULA	INTEG	UE Power	PMMOResult_HSDPA	Sum,

17	TION	ER	Headroom value reported by the UE in the non-serving radio link set is 17.	_WBTS.M5000C229	nkcttbh, nkrttbh, tot
uph_non_serving_18	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 18.	PMMOResult_HSDPA_WBTS.M5000C230	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_19	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 19.	PMMOResult_HSDPA_WBTS.M5000C231	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_20	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 20.	PMMOResult_HSDPA_WBTS.M5000C232	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_21	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 21.	PMMOResult_HSDPA_WBTS.M5000C233	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_22	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 22.	PMMOResult_HSDPA_WBTS.M5000C234	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_23	ACCUMULATION	INTEGER	UE Power Headroom value	PMMOResult_HSDPA_WBTS.M5000C235	Sum, nkcttbh,

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			reported by the UE in the non-serving radio link set is 23.		nkrttbh, tot
uph_non_serving_24	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 24.	PMMOResult_HSDPA_WBTS.M5000C236	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_25	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 25.	PMMOResult_HSDPA_WBTS.M5000C237	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_26	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 26.	PMMOResult_HSDPA_WBTS.M5000C238	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_27	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 27.	PMMOResult_HSDPA_WBTS.M5000C239	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_28	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 28.	PMMOResult_HSDPA_WBTS.M5000C240	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_29	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 29.	PMMOResult_HSDPA_WBTS.M5000C241	Sum, nkcttbh, nkrttbh, tot
uph_non_serving_	ACCUMULA	INTEG	UE Power	PMMOResult_HSDPA	Sum,

30	TION	ER	Headroom value reported by the UE in the non-serving radio link set is 30.	_WBTS.M5000C242	nkcttbh, nkrttbh, tot
uph_non_serving_31	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the non-serving radio link set is 31.	PMMOResult_HSDPA_WBTS.M5000C243	Sum, nkcttbh, nkrttbh, tot

7.6.199Cell.Nokia.UMTS.wbts_ue_serving_power

UE power statistics in serving radio link

KPI	Type	Data Type	Description	Derivation	Aggregation
uph_serving_00	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 0.	PMMOResult_HSDPA_WBTS.M5000C180	Sum, nkcttbh, nkrttbh, tot
uph_serving_01	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 1.	PMMOResult_HSDPA_WBTS.M5000C181	Sum, nkcttbh, nkrttbh, tot
uph_serving_02	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 2.	PMMOResult_HSDPA_WBTS.M5000C182	Sum, nkcttbh, nkrttbh, tot
uph_serving_03	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving	PMMOResult_HSDPA_WBTS.M5000C183	Sum, nkcttbh, nkrttbh, tot

			radio link set is 3.		
uph_serving_04	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 4.	PMMOResult_HSDPA_WBTS.M5000C184	Sum, nkcttbh, nkrttbh, tot
uph_serving_05	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 5.	PMMOResult_HSDPA_WBTS.M5000C185	Sum, nkcttbh, nkrttbh, tot
uph_serving_06	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 6.	PMMOResult_HSDPA_WBTS.M5000C186	Sum, nkcttbh, nkrttbh, tot
uph_serving_07	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 7.	PMMOResult_HSDPA_WBTS.M5000C187	Sum, nkcttbh, nkrttbh, tot
uph_serving_08	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 8.	PMMOResult_HSDPA_WBTS.M5000C188	Sum, nkcttbh, nkrttbh, tot
uph_serving_09	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 9.	PMMOResult_HSDPA_WBTS.M5000C189	Sum, nkcttbh, nkrttbh, tot
uph_serving_10	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 10.	PMMOResult_HSDPA_WBTS.M5000C190	Sum, nkcttbh, nkrttbh, tot
uph_serving_11	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 11.	PMMOResult_HSDPA_WBTS.M5000C191	Sum, nkcttbh, nkrttbh, tot

uph_serving_12	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 12.	PMMOResult_HSDPA_WBTS.M5000C192	Sum, nkcttbh, nkrttbh, tot
uph_serving_13	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 13.	PMMOResult_HSDPA_WBTS.M5000C193	Sum, nkcttbh, nkrttbh, tot
uph_serving_14	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 14.	PMMOResult_HSDPA_WBTS.M5000C194	Sum, nkcttbh, nkrttbh, tot
uph_serving_15	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 15.	PMMOResult_HSDPA_WBTS.M5000C195	Sum, nkcttbh, nkrttbh, tot
uph_serving_16	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 16.	PMMOResult_HSDPA_WBTS.M5000C196	Sum, nkcttbh, nkrttbh, tot
uph_serving_17	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 17.	PMMOResult_HSDPA_WBTS.M5000C197	Sum, nkcttbh, nkrttbh, tot
uph_serving_18	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 18.	PMMOResult_HSDPA_WBTS.M5000C198	Sum, nkcttbh, nkrttbh, tot
uph_serving_19	ACCUMULA	INTEG	UE Power	PMMOResult_HSDPA_	Sum,

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	TION	ER	Headroom value reported by the UE in the serving radio link set is 19.	WBTS.M5000C199	nkcttbh, nkrttbh, tot
uph_serving_20	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 20.	PMMOResult_HSDPA_WBTS.M5000C200	Sum, nkcttbh, nkrttbh, tot
uph_serving_21	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 21.	PMMOResult_HSDPA_WBTS.M5000C201	Sum, nkcttbh, nkrttbh, tot
uph_serving_22	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 22.	PMMOResult_HSDPA_WBTS.M5000C202	Sum, nkcttbh, nkrttbh, tot
uph_serving_23	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 23.	PMMOResult_HSDPA_WBTS.M5000C203	Sum, nkcttbh, nkrttbh, tot
uph_serving_24	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 24.	PMMOResult_HSDPA_WBTS.M5000C204	Sum, nkcttbh, nkrttbh, tot
uph_serving_25	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 25.	PMMOResult_HSDPA_WBTS.M5000C205	Sum, nkcttbh, nkrttbh, tot
uph_serving_26	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 26.	PMMOResult_HSDPA_WBTS.M5000C206	Sum, nkcttbh, nkrttbh, tot
uph_serving_27	ACCUMULATION	INTEGER	UE Power Headroom value	PMMOResult_HSDPA_WBTS.M5000C207	Sum, nkcttbh,

			reported by the UE in the serving radio link set is 27.		nkrttbh, tot
uph_serving_28	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 28.	PMMOResult_HSDPA_WBTS.M5000C208	Sum, nkcttbh, nkrttbh, tot
uph_serving_29	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 29.	PMMOResult_HSDPA_WBTS.M5000C209	Sum, nkcttbh, nkrttbh, tot
uph_serving_30	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 30.	PMMOResult_HSDPA_WBTS.M5000C210	Sum, nkcttbh, nkrttbh, tot
uph_serving_31	ACCUMULATION	INTEGER	UE Power Headroom value reported by the UE in the serving radio link set is 31.	PMMOResult_HSDPA_WBTS.M5000C211	Sum, nkcttbh, nkrttbh, tot

7.6.200Cell.Nokia.UMTS.wbts_wn.hs_users

WBTS HSDPA users per TTI statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
hsdpa_user_buffers_with_data_in_the_buffer_for_each_tti	ACCUMULATION	INTEGER	Number of user buffers with data in the buffer for each TTI.	PMMOResult_HSDPA_WBTS.M5000C85	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_0_4_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI	PMMOResult_HSDPA_WBTS.M5000C158	Sum, nkcttbh, nkrttbh,

			when there are no HSDPA users in the target cell and four HSDPA users in the other cell (0-4).		tot
hsdpa_users_0_5_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are no HSDPA users in the target cell and five HSDPA users in the other cell (0-5).	PMMOResult_HSDPA_WBTS.M5000C159	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_0_6_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are no HSDPA users in the target cell and six HSDPA users in the other cell (0-6).	PMMOResult_HSDPA_WBTS.M5000C160	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_0_in_target_cell_1_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are no HSDPA users in the target cell and one HSDPA user in the other cell (0-1).	PMMOResult_HSDPA_WBTS.M5000C76	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_0_in_target_cell_2_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are no HSDPA users in the target cell and two HSDPA users in the other cell (0-2).	PMMOResult_HSDPA_WBTS.M5000C77	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_0_in	ACCUMULA	INTEG	Number of	PMMOResult_HSDPA_	Sum,

_target_cell_3_in_other_cell	TION	ER	scheduled HSDPA users per TTI when there are no HSDPA users in the target cell and three HSDPA users in the other cell (0-3).	WBTS.M5000C78	nkcttbh, nkrttbh, tot
hsdpa_users_1_3_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and three HSDPA users in the other cell (1-3).	PMMOResult_HSDPA_WBTS.M5000C161	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_1_4_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and four HSDPA users in the other cell (1-4).	PMMOResult_HSDPA_WBTS.M5000C162	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_1_5_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and five HSDPA users in the other cell (1-5).	PMMOResult_HSDPA_WBTS.M5000C163	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_1_6_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI	PMMOResult_HSDPA_WBTS.M5000C164	Sum, nkcttbh, nkrttbh,

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			when there is one HSDPA user in the target cell and six HSDPA users in the other cell (1-6).		tot
hsdpa_users_1_in_target_cell_0_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and no HSDPA users in the other cell (1-0).	PMMOResult_HSDPA_WBTS.M5000C79	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_1_in_target_cell_1_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and one HSDPA user in the other cell (1-1).	PMMOResult_HSDPA_WBTS.M5000C80	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_1_in_target_cell_2_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there is one HSDPA user in the target cell and two HSDPA users in the other cell (1-2).	PMMOResult_HSDPA_WBTS.M5000C81	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_2_2_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and two HSDPA users in the other cell (2-2).	PMMOResult_HSDPA_WBTS.M5000C165	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_2_3_	ACCUMULA	INTEG	Number of	PMMOResult_HSDPA_	Sum,

in_cells	TION	ER	scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and three HSDPA users in the other cell (2-3).	WBTS.M5000C166	nkcttbh, nkrttbh, tot
hsdpa_users_2_4_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and four HSDPA users in the other cell (2-4).	PMMOResult_HSDPA_WBTS.M5000C167	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_2_5_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and five HSDPA users in the other cell (2-5).	PMMOResult_HSDPA_WBTS.M5000C168	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_2_6_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and six HSDPA users in the other cell (2-6).	PMMOResult_HSDPA_WBTS.M5000C169	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_2_in_target_cell_0_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI	PMMOResult_HSDPA_WBTS.M5000C82	Sum, nkcttbh, nkrttbh,

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			when there are two HSDPA users in the target cell and no HSDPA users in the other cell (2-0).		tot
hsdpa_users_2_in_target_cell_1_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are two HSDPA users in the target cell and one HSDPA user in the other cell (2-1).	PMMOResult_HSDPA_WBTS.M5000C83	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_1_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and one HSDPA user in the other cell (3-1).	PMMOResult_HSDPA_WBTS.M5000C170	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_2_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and two HSDPA users in the other cell (3-2).	PMMOResult_HSDPA_WBTS.M5000C171	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_3_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and three HSDPA users in	PMMOResult_HSDPA_WBTS.M5000C172	Sum, nkcttbh, nkrttbh, tot

			the other cell (3-3).		
hsdpa_users_3_4_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and four HSDPA users in the other cell (3-4).	PMMOResult_HSDPA_WBTS.M5000C173	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_5_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and five HSDPA users in the other cell (3-5).	PMMOResult_HSDPA_WBTS.M5000C174	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_6_in_cells	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target cell and six HSDPA users in the other cell (3-6).	PMMOResult_HSDPA_WBTS.M5000C175	Sum, nkcttbh, nkrttbh, tot
hsdpa_users_3_in_target_cell_0_in_other_cell	ACCUMULATION	INTEGER	Number of scheduled HSDPA users per TTI when there are three HSDPA users in the target	PMMOResult_HSDPA_WBTS.M5000C84	Sum, nkcttbh, nkrttbh, tot

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			cell and no HSDPA users in the other cell (3-0).		

7.6.201Cell.Nokia.UMTS.wbts_wn.hsupa_power

WBTS HSUPA power transmission statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
hsupa_dl_physical_channel_power_distribution_class_01	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 1 (power less 0.1W).	PMMOResult_HSDPA_WBTS.M5000C145	Sum, nkcttbh, nkrttbh, tot
hsupa_dl_physical_channel_power_distribution_class_02	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 2 (0.1W more or equal power and less than 0.2W).	PMMOResult_HSDPA_WBTS.M5000C146	Sum, nkcttbh, nkrttbh, tot
hsupa_dl_physical_channel_power_distribution_class_03	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 3 (0.2Wmore or equal power and less than 0.4W).	PMMOResult_HSDPA_WBTS.M5000C147	Sum, nkcttbh, nkrttbh, tot
hsupa_dl_physical_channel_power_distribution_class_04	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 4	PMMOResult_HSDPA_WBTS.M5000C148	Sum, nkcttbh, nkrttbh, tot

			(0.4Wmore or equal power and less than 0.8W).		
hsupa_dl_physical_channel_power_distribution_class_05	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 5 (0.8W more or equal power and less than1.6W).	PMMOResult_HSDPA_WBTS.M5000C149	Sum, nkcttbh, nkrttbh, tot
hsupa_dl_physical_channel_power_distribution_class_06	ACCUMULATION	INTEGER	Number of measurement periods whose average power matches the power limits of class 6 (power more or equal power than1.6W).	PMMOResult_HSDPA_WBTS.M5000C150	Sum, nkcttbh, nkrttbh, tot
hsupa_ul_average_physical_channel_power	INTENSITY	INTEGER	Indicates the average received HSUPA power using the average over the measurement period samples.	PMMOResult_HSDPA_WBTS.M5000C156	Average, avg, max, min, nkcttbh, nkrttbh, tot
hsupa_ul_maximum_physical_channel_power	INTENSITY	INTEGER	Indicates the maximum received HSUPA power using the average over the measurement period.	PMMOResult_HSDPA_WBTS.M5000C155	Constant, avg, max, min, nkcttbh, nkrttbh, tot
hsupa_ul_minimum_physical_channel_power	INTENSITY	INTEGER	Indicates the minimum received HSUPA power	PMMOResult_HSDPA_WBTS.M5000C154	Minimum, avg, max, min,

			using the average over the measurement period.		nkcttbh, nkrttbh, tot
hsupa_ul_physical_channel_power_sample_counter	ACCUMULATION	INTEGER	Number of samples used for received HSUPA power counters	PMMOResult_HSDPA_WBTS.M5000C157	Sum, nkcttbh, nkrttbh, tot

7.6.202Cell.Nokia.UMTS.wbts_wn.hsupa_thput

WBTS HSUPA throughput statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
hsupa_average_macd_throughput	INTENSITY	INTEGER	Indicates the average HSUPA MAC-d throughput [kbit/s] using the average over the measurement period samples.	PMMOResult_HSDPA_WBTS.M5000C153	Average, avg, max, min, nkcttbh, nkrttbh, tot
hsupa_maximum_macd_throughput	INTENSITY	INTEGER	Indicates the maximum HSUPA MAC-d throughput [kbit/s] using the average over the measurement period.	PMMOResult_HSDPA_WBTS.M5000C152	Constant, avg, max, min, nkcttbh, nkrttbh, tot
hsupa_minimum_macd_throughput	INTENSITY	INTEGER	Indicates the minimum HSUPA MAC-d throughput [kbit/s] using the average over the measurement period.	PMMOResult_HSDPA_WBTS.M5000C151	Minimum, avg, max, min, nkcttbh, nkrttbh, tot

7.6.203Cell.Nokia.UMTS.wbts_wn.mac_e_transmit

WBTS EDCH MAC-E PDU statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation

mac_e_pdu_dtx_counter	ACCUMULATION	INTEGER	Number of DTXs (no transmission) detected in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C141	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_harq_failure_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are not received correctly despite retransmission in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C142	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_lost_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly but lost for an unknown reason, such as buffer overflow.	PMMOResult_HSDPA_WBTS.M5000C143	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_0_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly without retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C128	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_1_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with one retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C129	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_10_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with ten retransmissions in	PMMOResult_HSDPA_WBTS.M5000C138	Sum, nkcttbh, nkrttbh, tot

			E-DCH Serving Cell.		
mac_e_pdu_retransmissions_11_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with eleven retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C139	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_12_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with twelve retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C140	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_2_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with two retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C130	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_3_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with three retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C131	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_4_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with four retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C132	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_5_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with five retransmissions in	PMMOResult_HSDPA_WBTS.M5000C133	Sum, nkcttbh, nkrttbh, tot

			E-DCH Serving Cell.		
mac_e_pdu_retransmissions_6_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with six retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C134	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_7_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with seven retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C135	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_8_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with eight retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C136	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_9_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly with nine retransmissions in E-DCH Serving Cell.	PMMOResult_HSDPA_WBTS.M5000C137	Sum, nkcttbh, nkrttbh, tot
mac_e_pdu_retransmissions_unknown_counter	ACCUMULATION	INTEGER	Number of MAC-e PDUs that are received correctly but the number of retransmissions is unknown.	PMMOResult_HSDPA_WBTS.M5000C144	Sum, nkcttbh, nkrttbh, tot

7.6.204Cell.Nokia.UMTS.wbts_wn3.buffer_delay

MAC PDU measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
average_mac_d_pdu_buffer_delay	INTENSITY	FLOAT	Average MAC-D PDU buffer delay.	PMMOResult_HSDPA_WBTS.M5000C41	Average, avg, max, min, nkcttbh, nkrttbh, tot
maximum_mac_d_pdu_buffer_delay	INTENSITY	INTEGER	Maximum MAC-D PDU buffer delay.	PMMOResult_HSDPA_WBTS.M5000C43	Constant, avg, max, min, nkcttbh, nkrttbh, tot
minimum_mac_d_pdu_buffer_delay	INTENSITY	INTEGER	Minimum MAC-D PDU buffer delay.	PMMOResult_HSDPA_WBTS.M5000C42	Minimum, avg, max, min, nkcttbh, nkrttbh, tot

7.6.205Cell.Nokia.UMTS.wbts_wn3.cqi

Nokia WBTS WN3.0 specific:CQI measurement related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cqi_dist_cl_0	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 0" (numbers of CQI value 0).	PMMOResult_HSDPA_WBTS.M5000C8	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_10	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 10" (numbers of	PMMOResult_HSDPA_WBTS.M5000C18	Sum, nkcttbh, nkrttbh, tot

			CQI value 10).		
cqi_dist_cl_11	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 11" (numbers of CQI value	PMMOResult_HSDPA_WBTS.M5000C19	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_12	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 12" (numbers of CQI value 12).	PMMOResult_HSDPA_WBTS.M5000C20	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_13	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 13" (numbers of CQI value 13).	PMMOResult_HSDPA_WBTS.M5000C21	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_14	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 14" (numbers of CQI value 14).	PMMOResult_HSDPA_WBTS.M5000C22	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_15	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 15" (numbers of CQI value 15).	PMMOResult_HSDPA_WBTS.M5000C23	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_16	ACCUMULA	INT8	Number of	PMMOResult_HSDPA_	Sum,

	TION		reported CQI values matching to "Reported CQI distribution - class 16" (numbers of CQI value 16).	WBTS.M5000C24	nkcttbh, nkrttbh, tot
cqi_dist_cl_17	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 17" (numbers of CQI value 17).	PMMOResult_HSDPA_WBTS.M5000C25	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_18	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 18" (numbers of CQI value 18).	PMMOResult_HSDPA_WBTS.M5000C26	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_19	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 19" (numbers of CQI value 19).	PMMOResult_HSDPA_WBTS.M5000C27	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_1	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 1" (numbers of CQI value 1).	PMMOResult_HSDPA_WBTS.M5000C9	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_20	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 20" (numbers of CQI value 20).	PMMOResult_HSDPA_WBTS.M5000C28	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_21	ACCUMULA	INT8	Number of	PMMOResult_HSDPA_	Sum,

	TION		reported CQI values matching to "Reported CQI distribution - class 21" (numbers of CQI value 21).	WBTS.M5000C29	nkcttbh, nkrttbh, tot
cqi_dist_cl_22	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 22" (numbers of CQI value 22).	PMMOResult_HSDPA_WBTS.M5000C30	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_23	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 23" (numbers of CQI value 23).	PMMOResult_HSDPA_WBTS.M5000C31	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_24	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 24" (numbers of CQI value 24).	PMMOResult_HSDPA_WBTS.M5000C32	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_25	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 25" (numbers of CQI value 25).	PMMOResult_HSDPA_WBTS.M5000C33	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_26	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI	PMMOResult_HSDPA_WBTS.M5000C34	Sum, nkcttbh, nkrttbh, tot

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			distribution - class 26" (numbers of CQI value 26).		
cqi_dist_cl_27	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 27" (numbers of CQI value 27).	PMMOResult_HSDPA_WBTS.M5000C35	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_28	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 28" (numbers of CQI value 28).	PMMOResult_HSDPA_WBTS.M5000C36	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_29	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 29" (numbers of CQI value 29).	PMMOResult_HSDPA_WBTS.M5000C37	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_2	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 2" (numbers of CQI value 2).	PMMOResult_HSDPA_WBTS.M5000C10	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_30	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 30" (numbers of CQI value 30).	PMMOResult_HSDPA_WBTS.M5000C38	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_3	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI	PMMOResult_HSDPA_WBTS.M5000C11	Sum, nkcttbh, nkrttbh, tot

			distribution - class 3" (numbers of CQI value 3).		
cqi_dist_cl_4	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 4" (numbers of CQI value 4).	PMMOResult_HSDPA_WBTS.M5000C12	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_5	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 5" (numbers of CQI value 5).	PMMOResult_HSDPA_WBTS.M5000C13	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_6	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 6" (numbers of CQI value 6).	PMMOResult_HSDPA_WBTS.M5000C14	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_7	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 7" (numbers of CQI value 7).	PMMOResult_HSDPA_WBTS.M5000C15	Sum, nkcttbh, nkrttbh, tot
cqi_dist_cl_8	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 8" (numbers of CQI value 8).	PMMOResult_HSDPA_WBTS.M5000C16	Sum, nkcttbh, nkrttbh, tot

cqi_dist_cl_9	ACCUMULATION	INT8	Number of reported CQI values matching to "Reported CQI distribution - class 9" (numbers of CQI value 9).	PMMOResult_HSDPA_WBTS.M5000C17	Sum, nkcttbh, nkrttbh, tot
cqi_failed	ACCUMULATION	INT8	Number of CQI decoding failures.	PMMOResult_HSDPA_WBTS.M5000C39	Sum, nkcttbh, nkrttbh, tot

7.6.206Cell.Nokia.UMTS.wbts_wn3.discarded_mac

Nokia WBTS WN3.0 specific:Discarded MAC related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
disc_mac_hs_pdu_max_retrans	ACCUMULATION	INT8	Number of discarded MAC-hs PDUs due to maximum number of retransmissions.	PMMOResult_HSDPA_WBTS.M5000C47	Sum, nkcttbh, nkrttbh, tot
disc_mac_hs_pdu_t1	ACCUMULATION	INT8	Number of discarded MAC-hs PDUs due to T1 timer.	PMMOResult_HSDPA_WBTS.M5000C46	Sum, nkcttbh, nkrttbh, tot
discarded_mac_hs_pdus_due_to_other_reason	ACCUMULATION	INTEGER	Number of discarded MAC-hs PDUs due to other reason.	PMMOResult_HSDPA_WBTS.M5000C48	Sum, nkcttbh, nkrttbh, tot

7.6.207Cell.Nokia.UMTS.wbts_wn3.hsscch_power

Nokia WBTS WN3.0 specific:HS-SCCH power related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hs_scch_pwr_dist_class_0	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. Number of TTIs	PMMOResult_HSDPA_WBTS.M5000C69	Sum, nkcttbh, nkrttbh, tot

			matching to power limit of class 0 (range; lower than 0.1 W).		
hs_scch_pwr_dist_class_1	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. Number of TTIs matching to power limits of class 1 (range 0.1 ... 0.2 W).	PMMOResult_HSDPA_WBTS.M5000C70	Sum, nkcttbh, nkrttbh, tot
hs_scch_pwr_dist_class_2	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. Number of TTIs matching to power limits of class 2 (range 0.2 ... 0.4 W).	PMMOResult_HSDPA_WBTS.M5000C71	Sum, nkcttbh, nkrttbh, tot
hs_scch_pwr_dist_class_3	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. Number of TTIs matching to power limits of class 3 (range 0.4 ... 0.8 W).	PMMOResult_HSDPA_WBTS.M5000C72	Sum, nkcttbh, nkrttbh, tot
hs_scch_pwr_dist_class_4	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. Number of TTIs matching to power limits of class 4 (range 0.8 ... 1.6 W).	PMMOResult_HSDPA_WBTS.M5000C73	Sum, nkcttbh, nkrttbh, tot
hs_scch_pwr_dist_class_5	ACCUMULATION	INT8	The HS-SCCH transmit power	PMMOResult_HSDPA_WBTS.M5000C74	Sum, nkcttbh,

			measurement. Number of TTIs matching to power limits of class 5 (range; over 1.6 W).		nkrttbh, tot
hs_scch_pwr_sum	ACCUMULATION	INT8	The HS-SCCH transmit power measurement. The sum of Watts in active TTIs.	PMMOResult_HSDPA_WBTS.M5000C75	Sum, nkcttbh, nkrttbh, tot

7.6.208Cell.Nokia.UMTS.wbts_wn3.idle_time

MAC PDU measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
ttis_without_sending_data_from_user_buffer	ACCUMULATION	INTEGER	Number of TTIs when the data is not sent although there is data to send in the buffers.	PMMOResult_HSDPA_WBTS.M5000C45	Sum, nkcttbh, nkrttbh, tot
unscheduled_ttis_data_in_user_buffer	ACCUMULATION	INTEGER	The number of unscheduled TTIs (HSDPA idle time) when there is data in the users buffers (queues).	PMMOResult_HSDPA_WBTS.M5000C44	Sum, nkcttbh, nkrttbh, tot

7.6.209Cell.Nokia.UMTS.wbts_wn3.mac_d_pdu

Nokia WBTS WN3.0 specific:MAC-d PDU related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
discarded_data_in_macd_pdus	ACCUMULATION	INTEGER	Amount of data in MAC-d PDUs discarded due to flow control buffer overflow.	PMMOResult_HSDPA_WBTS.M5000C127	Sum, nkcttbh, nkrttbh, tot

drop_mac_d_pdu_bts_owfl_656	ACCUMULATION	INTEGER	Number of dropped 656 bit MAC-d PDUs due to BTS buffer overflow.	PMMOResult_HSDPA_WBTS.M5000C278	Sum, nkcttbh, nkrttbh, tot
drop_mac_d_pdu_max_retx_656	ACCUMULATION	INTEGER	Number of dropped 656 bit MAC-d PDUs due to maximum number of retransmissions.	PMMOResult_HSDPA_WBTS.M5000C280	Sum, nkcttbh, nkrttbh, tot
drop_mac_d_pdu_max_retx_tot	ACCUMULATION	INTEGER	Number of dropped MAC-d PDUs due to maximum number of retransmissions. This counter includes PDUs of all sizes.	PMMOResult_HSDPA_WBTS.M5000C279	Sum, nkcttbh, nkrttbh, tot
drop_mac_d_pdu_oth_reason_656	ACCUMULATION	INTEGER	Number of dropped 656 bit MAC-d PDUs due to other reason.	PMMOResult_HSDPA_WBTS.M5000C282	Sum, nkcttbh, nkrttbh, tot
drop_mac_d_pdu_oth_reason_tot	ACCUMULATION	INTEGER	Number of dropped MAC-d PDUs due to other reason. This counter includes PDUs of all sizes.	PMMOResult_HSDPA_WBTS.M5000C281	Sum, nkcttbh, nkrttbh, tot
hsdpa_data_volume_macd_Iub	ACCUMULATION	FLOAT	HSDPA received data (Mbit) in RAN access points (=WCELLs). Based on received MAC-d PDUs in HS-DSCH data frames at BTS.	{mac_d_pdu_tot}*336/1000000	Sum, nkcttbh, nkrttbh, tot

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hsdpa_macd_net_throughput_bts	INTENSITY	FLOAT	HSDPA MAC-d net throughput, that is, successfully delivered MAC-d PDUs to HSDPA Capable UEs assuming that MAC-hs is capable of delivering the PUDs.	(({mac_d_pdu_tot}-{mac_d_pdu_drop_bts_owfl})*336/1000)/{measurement_seconds}	Average, avg, max, min, nkcttbh, nkrttbh, tot
mac_d_pdu_656	ACCUMULATION	INTEGER	Number of MAC-D PDUs size of 656, updated when the BTS received MAC-D PDUs from RNC/I-HSPA.	PMMOResult_HSDPA_WBTS.M5000C40	Sum, nkcttbh, tot
mac_d_pdu_drop_bts_owfl	ACCUMULATION	INT8	Number of dropped MAC-d PDUs due to BTS buffer overflow.	PMMOResult_HSDPA_WBTS.M5000C6	Sum, nkcttbh, nkrttbh, tot
mac_d_pdu_tot	ACCUMULATION	INT8	Total number of received MAC-d PDUs.	PMMOResult_HSDPA_WBTS.M5000C7	Sum, nkcttbh, nkrttbh, tot
received_data_in_macd_pdus	ACCUMULATION	INTEGER	Amount of data received from the RNC in MAC-d PDUs.	PMMOResult_HSDPA_WBTS.M5000C126	Sum, nkcttbh, nkrttbh, tot

7.6.210Cell.Nokia.UMTS.wbts_wn3.mac_hs_transmit

Nokia WBTS WN3.0 specific:MAC-HS related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hsdpa_mac_hs_efficiency	PERCENTAGE	FLOAT	HSDPA Retransmission ratio between BTS and HSDPA capable UEs done	100 * ({Nokia.wbts_wn3.mac_hs_transmit.mac_hs_pdu_retr_dist_cl_0} + {Nokia.wbts_wn3.mac	Average, avg, max, min, nkcttbh, nkrttbh,

			by MAC-hs. Based on successfully sent MAC-hs PDUs divided by totally sent MAC-hs PDUs. (Total number of all successful sent MAC-hs PDUs divided by total number of all transmitted MAC-hs PDUs (including retransmissions)).	_hs_transmit.mac_hs_pdu_retr_dist_cl_1} + {Nokia.wbts_wn3.mac_hs_transmit.mac_hs_pdu_retr_dist_cl_2} + {Nokia.wbts_wn3.mac_hs_transmit.mac_hs_pdu_retr_dist_cl_3} + {Nokia.wbts_wn3.mac_hs_transmit.mac_hs_pdu_retr_dist_cl_4} + {Nokia.wbts_wn3.mac_hs_transmit.mac_hs_pdu_retr_dist_cl_5})/ ({Nokia.wbts_wn3.mac_hs_transmit.orig_trans_1_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_2_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_3_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_4_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_5_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_1_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_2_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_3_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.orig_trans_4_code_16qam} +	tot

				{Nokia.wbts_wn3.mac_hs_transmit.orig_trans_5_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_1_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_2_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_3_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_4_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_5_code_qpsk} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_1_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_2_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_3_code_16qam} + {Nokia.wbts_wn3.mac_hs_transmit.retrans_4_code_16qam}+ {Nokia.wbts_wn3.mac_hs_transmit.retrans_5_code_16qam})	
mac_hs_pdu_retr_dist_cl_0	ACCUMULATION	INT8	Number of correctly delivered MAC-hs PDUs that have been done without retransmission matching to "MAC-hs PDU retransmission distribution - class 0".	PMMOResult_HSDPA_WBTS.M5000C0	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retr_	ACCUMULA	INT8	Number of MAC-	PMMOResult_HSDPA	Sum,

dist_cl_1	TION		hs PDU retransmissions matching to "MAChs PDU retransmission distribution - class 1" (1 retransmission per PDU).	_WBTS.M5000C1	nkcttbh, nkrttbh, tot
mac_hs_pdu_retr_dist_cl_2	ACCUMULATION	INT8	Number of MAC-hs PDU retransmissions matching to "MAChs PDU retransmission distribution - class 2" (2 retransmission per PDU).	PMMOResult_HSDPA_WBTS.M5000C2	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retr_dist_cl_3	ACCUMULATION	INT8	Number of MAC-hs PDU retransmissions matching to "MAChs PDU retransmission distribution - class 3" (3 retransmission per PDU).	PMMOResult_HSDPA_WBTS.M5000C3	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retr_dist_cl_4	ACCUMULATION	INT8	Number of MAC-hs PDU retransmissions matching to "MAChs PDU retransmission distribution - class 4" (4 retransmission per PDU).	PMMOResult_HSDPA_WBTS.M5000C4	Sum, nkcttbh, nkrttbh, tot

mac_hs_pdu_retr_dist_cl_5	ACCUMULATION	INT8	Number of MAC-hs PDU retransmissions matching to "MAChs PDU retransmission distribution - class 5" (more than 4 retransmission per PDU).	PMMOResult_HSDPA_WBTS.M5000C5	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_10_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 10 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C120	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_10_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 10 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C110	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_11_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 11 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C121	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_11_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 11 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C111	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_12_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 12 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C122	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_1	ACCUMULATION	INTEGER	Number of retransmitted	PMMOResult_HSDPA_WBTS.M5000C112	Sum, nkcttbh,

2_code_by_qpsk			MAC-hs PDUs with 12 codes using QPSK modulation.		nkrttbh, tot
mac_hs_pdu_retransmission_with_13_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 13 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C123	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_13_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 13 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C113	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_14_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 14 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C124	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_14_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 14 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C114	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_15_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 15 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C125	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_15_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs	PMMOResult_HSDPA_WBTS.M5000C115	Sum, nkcttbh, nkrttbh,

			with 15 codes using QPSK modulation.		tot
mac_hs_pdu_retransmission_with_6_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 6 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C116	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_6_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 6 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C106	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_7_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 7 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C117	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_7_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 7 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C107	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_8_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 8 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C118	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_8_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 8 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C108	Sum, nkcttbh, nkrttbh, tot
mac_hs_pdu_retransmission_with_9_code_by_16qam	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 9 codes using 16QAM	PMMOResult_HSDPA_WBTS.M5000C119	Sum, nkcttbh, nkrttbh, tot

			modulation.		
mac_hs_pdu_retransmission_with_9_code_by_qpsk	ACCUMULATION	INTEGER	Number of retransmitted MAC-hs PDUs with 9 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C109	Sum, nkcttbh, nkrttbh, tot
orig_trans_1_code_16qam	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 1 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C54	Sum, nkcttbh, nkrttbh, tot
orig_trans_1_code_qpsk	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 1 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C49	Sum, nkcttbh, nkrttbh, tot
orig_trans_2_code_16qam	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 2 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C55	Sum, nkcttbh, nkrttbh, tot
orig_trans_2_code_qpsk	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 2 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C50	Sum, nkcttbh, nkrttbh, tot
orig_trans_3_code_16qam	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 3 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C56	Sum, nkcttbh, nkrttbh, tot
orig_trans_3_code_qpsk	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 3 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C51	Sum, nkcttbh, nkrttbh, tot

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orig_trans_4_code_16qam	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 4 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C57	Sum, nkcttbh, nkrttbh, tot
orig_trans_4_code_qpsk	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 4 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C52	Sum, nkcttbh, nkrttbh, tot
orig_trans_5_code_16qam	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 5 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C58	Sum, nkcttbh, nkrttbh, tot
orig_trans_5_code_qpsk	ACCUMULATION	INT8	Number of original MAC-hs PDU transmissions with 5 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C53	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_10_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 10 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C100	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_10_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 10 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C90	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_11_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 11 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C101	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_11_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 11 codes using	PMMOResult_HSDPA_WBTS.M5000C91	Sum, nkcttbh, nkrttbh, tot

			QPSK modulation.		
original_mac_hs_pdu_transmission_with_12_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 12 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C102	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_12_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 12 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C92	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_13_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 13 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C103	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_13_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 13 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C93	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_14_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 14 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C104	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_14_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 14 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C94	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_	ACCUMULATION	INTEGER	Number of original MAC-hs PDU	PMMOResult_HSDPA_WBTS.M5000C105	Sum, nkcttbh,

with_15_code_by_16qam			transmissions with 15 codes using 16QAM modulation.		nkrttbh, tot
original_mac_hs_pdu_transmission_with_15_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 15 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C95	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_6_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 6 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C96	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_6_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 6 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C86	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_7_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 7 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C97	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_7_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 7 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C87	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_8_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 8 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C98	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_8_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 8 codes using	PMMOResult_HSDPA_WBTS.M5000C88	Sum, nkcttbh, nkrttbh, tot

			QPSK modulation.		
original_mac_hs_pdu_transmission_with_9_code_by_16qam	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 9 codes using 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C99	Sum, nkcttbh, nkrttbh, tot
original_mac_hs_pdu_transmission_with_9_code_by_qpsk	ACCUMULATION	INTEGER	Number of original MAC-hs PDU transmissions with 9 codes using QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C89	Sum, nkcttbh, nkrttbh, tot
retrans_1_code_16qam	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 1 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C64	Sum, nkcttbh, nkrttbh, tot
retrans_1_code_qpsk	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 1 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C59	Sum, nkcttbh, nkrttbh, tot
retrans_2_code_16qam	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 2 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C65	Sum, nkcttbh, nkrttbh, tot
retrans_2_code_qpsk	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 2 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C60	Sum, nkcttbh, nkrttbh, tot
retrans_3_code_16qam	ACCUMULATION	INT8	Number of retransmitted	PMMOResult_HSDPA_WBTS.M5000C66	Sum, nkcttbh,

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			MAC-hs PDUs with 3 code by 16QAM modulation.		nkrttbh, tot
retrans_3_code_qpsk	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 3 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C61	Sum, nkcttbh, nkrttbh, tot
retrans_4_code_16qam	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 4 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C67	Sum, nkcttbh, nkrttbh, tot
retrans_4_code_qpsk	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 4 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C62	Sum, nkcttbh, nkrttbh, tot
retrans_5_code_16qam	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 5 code by 16QAM modulation.	PMMOResult_HSDPA_WBTS.M5000C68	Sum, nkcttbh, nkrttbh, tot
retrans_5_code_qpsk	ACCUMULATION	INT8	Number of retransmitted MAC-hs PDUs with 5 code by QPSK modulation.	PMMOResult_HSDPA_WBTS.M5000C63	Sum, nkcttbh, nkrttbh, tot

7.6.211Cell.Nokia.UMTS.wcel_olpc_measurement

OLPC measurements

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_power_no_of_	ACCUMULA	INTEG	The number of	PMMOResult_RCPM_	Sum,

outage_dl_w	TION	ER	dedicated radio link reports received where transmission power is at the maximum value defined by the parameters PtxDLAbsMax and CPICHtoRefRABoffset.	OLPC_WCEL.M1024C18	nkcttbh, nkrttbh, tot
rl_power_no_of_samples_dl_w	ACCUMULATION	INTEGER	The number of samples for the dedicated radio link power measurement counter M1024C15.	PMMOResult_RCPM_OLPC_WCEL.M1024C17	Sum, nkcttbh, nkrttbh, tot
rl_power_sq_sum_dl_w	ACCUMULATION	INTEGER	The sum of the squared radio link power values in DL.	PMMOResult_RCPM_OLPC_WCEL.M1024C16	Sum, nkcttbh, nkrttbh, tot
rl_power_sum_dl_w	INTENSITY	INTEGER	The average downlink transmission power of the radio links matching the RAB parameters of the measurement object.	PMMOResult_RCPM_OLPC_WCEL.M1024C15	Average, avg, max, min, nkcttbh, nkrttbh, tot
ul_average_ber_denom_w	ACCUMULATION	INTEGER	The number of BER samples in the Average BER counter.	PMMOResult_RCPM_OLPC_WCEL.M1024C9	Sum, nkcttbh, nkrttbh, tot
ul_average_ber_w	INTENSITY	FLOAT	The average uplink BER, calculated as a weighted average from UL BER values reported by the OLPC controller that gets the BER estimate from the	PMMOResult_RCPM_OLPC_WCEL.M1024C8	Average, avg, max, min, nkcttbh, nkrttbh, tot

			WBTS in the Frame Protocol data frame.		
ul_average_ebno_denom_w	ACCUMULATION	INTEGER	The number of Eb/No samples in the Average UL Eb/No counter.	PMMOResult_RCPM_OLPC_WCEL.M1024C1	Sum, nkcttbh, nkrttbh, tot
ul_average_ebno_w	INTENSITY	INTEGER	The average uplink Eb/No, calculated as a weighted average from the Eb/No values reported by OLPC.	PMMOResult_RCPM_OLPC_WCEL.M1024C0	Average, avg, max, min, nkcttbh, nkrttbh, tot
ul_bad_connections_w	ACCUMULATION	INTEGER	The number of bad uplink connections.	PMMOResult_RCPM_OLPC_WCEL.M1024C12	Sum, nkcttbh, nkrttbh, tot
ul_crc_noks_w	ACCUMULATION	INTEGER	The number of transport blocks received with CRC NOK in the uplink.	PMMOResult_RCPM_OLPC_WCEL.M1024C5	Sum, nkcttbh, nkrttbh, tot
ul_crc_oks_w	ACCUMULATION	INTEGER	The number of received transport blocks with CRC OK in the uplink.	PMMOResult_RCPM_OLPC_WCEL.M1024C4	Sum, nkcttbh, nkrttbh, tot
ul_edch_harq_retrans_w	ACCUMULATION	INTEGER	The number of HARQ retransmissions reported by the BTS in E-DCH FP frames.	PMMOResult_RCPM_OLPC_WCEL.M1024C19	Sum, nkcttbh, nkrttbh, tot
ul_ideal_connections_w	ACCUMULATION	INTEGER	The number of ideal uplink connections.	PMMOResult_RCPM_OLPC_WCEL.M1024C13	Sum, nkcttbh, nkrttbh, tot
ul_num_bler_reports_w	ACCUMULATION	INTEGER	The number of UL BLER reports received from OLPC.	PMMOResult_RCPM_OLPC_WCEL.M1024C7	Sum, nkcttbh, nkrttbh, tot
ul_num_ebno_reports_w	ACCUMULATION	INTEGER	The UL Eb/No reports that L3	PMMOResult_RCPM_OLPC_WCEL.M1024	Sum, nkcttbh,

			entity has received from the OLPC Controller.	C3	nkrttbh, tot
ul_num_of_ber_reports_w	ACCUMULATION	INTEGER	The number of UL BER reports received from OLPC. Updated only when BER is used as a quality estimate for UL OLPC.	PMMOResult_RCPM_OLPC_WCEL.M1024C11	Sum, nkcttbh, nkrttbh, tot
ul_sum_sq_ber_w	ACCUMULATION	FLOAT	The sum of squared UL BER values calculated by the OLPC controller.	PMMOResult_RCPM_OLPC_WCEL.M1024C10	Sum, nkcttbh, nkrttbh, tot
ul_sum_sq_bler_w	ACCUMULATION	FLOAT	The sum of squared BLER values, calculated from UL BLER values reported by OLPC.	PMMOResult_RCPM_OLPC_WCEL.M1024C6	Sum, nkcttbh, nkrttbh, tot
ul_sum_sq_ebno_w	ACCUMULATION	FLOAT	The sum of Squared linear Eb/No values, calculated from the UL Eb/No values reported by OLPC.	PMMOResult_RCPM_OLPC_WCEL.M1024C2	Sum, nkcttbh, nkrttbh, tot
ul_too_good_connections_w	ACCUMULATION	INTEGER	The number of too good uplink connections.	PMMOResult_RCPM_OLPC_WCEL.M1024C14	Sum, nkcttbh, nkrttbh, tot

7.6.212Cell.Nokia.UMTS.wcel_rlc_measurement

RLC AM measurements

The performance data measurements for this KPI group are recorded against the combination of Cell and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
rlc_am_dl_buffer_reports_w	ACCUMULATION	INTEGER	The number of RLC AM reports for the RLC AM DL transmission buffer and the PDCP buffer occupancy measurement.	PMMOResult_RCPM_RLC_WCEL.M1026C4	Sum, nkcttbh, nkrttbh, tot
rlc_am_dl_meas_time_w	ACCUMULATION	INTEGER	The total time period when the measurement was active in the RLC AM DL entity.	PMMOResult_RCPM_RLC_WCEL.M1026C29	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdcp_dl_avg_buf_occ_w	INTENSITY	INTEGER	The average PDCP buffer occupancy in RLC AM DL. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_WCEL.M1026C1	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdcp_sum_sq_buf_occ_w	ACCUMULATION	INTEGER	The sum of squared PDCP buffer occupancy values in RLC AM DL. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_WCEL.M1026C3	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_avg_buf_occ_w	INTENSITY	INTEGER	The average RLC AM DL PDU transmission buffer occupancy. Includes both first-time transmission and retransmission buffers.	PMMOResult_RCPM_RLC_WCEL.M1026C0	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_avg_trans_w	INTENSITY	FLOAT	The average number of required	PMMOResult_RCPM_RLC_WCEL.M1026C1	Average, avg, max,

			transmissions per PDU in RLC AM DL. For a perfect connection the value of this counter is one.	8	min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_bad_conn_w	ACCUMULATION	INTEGER	The number of bad connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_WCEL.M1026C9	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_discard_rat_w	INTENSITY	FLOAT	The RLC PDU discard ratio for downlink connections using RLC AM.	PMMOResult_RCPM_RLC_WCEL.M1026C19	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_err_ratio_w	INTENSITY	FLOAT	The ratio between unsuccessfully transmitted RLC AM DL PDUs and all transmitted RLC AM DL PDUs (including retransmissions).	PMMOResult_RCPM_RLC_WCEL.M1026C5	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_err_reports_w	ACCUMULATION	INTEGER	The number of RLC AM reports for the RLC AM DL PDU error ratio measurement.	PMMOResult_RCPM_RLC_WCEL.M1026C8	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_for_trans_w	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs added to the RLC transmission buffer. This includes also PDUs retransmitted due to RLC polling procedure.	PMMOResult_RCPM_RLC_WCEL.M1026C21	Sum, nkcttbh, nkrttbh, tot

rlc_am_pdu_dl_gr_tp_sq_sum_w	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU gross throughput values.	PMMOResult_RCPM_RLC_WCEL.M1026C13	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_gr_tp_w	INTENSITY	FLOAT	The average downlink PDU gross throughput of the RLC AM connection. Includes also retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_WCEL.M1026C12	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_ideal_conn_w	ACCUMULATION	INTEGER	The number of ideal connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_WCEL.M1026C11	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_net_tp_sq_s_w	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU net throughput values.	PMMOResult_RCPM_RLC_WCEL.M1026C16	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_net_tp_w	INTENSITY	FLOAT	The average downlink net PDU throughput of RLC AM connections. Does not include retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_WCEL.M1026C15	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_sq_sum_err_w	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU error ratio values.	PMMOResult_RCPM_RLC_WCEL.M1026C7	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_sq_sum_tr_ti_w	ACCUMULATION	INTEGER	The sum of squared transmission time	PMMOResult_RCPM_RLC_WCEL.M1026C17	Sum, nkcttbh, nkrttbh,

			values for the RLC AM downlink.		tot
rlc_am_pdu_dl_sq_sum_trans_w	ACCUMULATION	FLOAT	The sum of squared average number of transmissions per PDU values in RLC AM DL.	PMMOResult_RCPM_RLC_WCEL.M1026C20	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_sum_sq_buf_o_w	ACCUMULATION	INTEGER	The sum of squared RLC AM DL PDU transmission buffer occupancy values. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_WCEL.M1026C2	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_too_good_con_w	ACCUMULATION	INTEGER	The number of too good connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_WCEL.M1026C10	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_total_trans_w	ACCUMULATION	INTEGER	The number of transmitted RLC AM DL PDUs. Includes also retransmitted DL PDUs and control PDUs.	PMMOResult_RCPM_RLC_WCEL.M1026C6	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_dl_tp_reports_w	ACCUMULATION	INTEGER	The number of RLC AM reports for RLC AM DL gross and net throughput values.	PMMOResult_RCPM_RLC_WCEL.M1026C14	Sum, nkcttbh, nkrttbh, tot
rlc_am_pdu_ul_for_trans_w	ACCUMULATION	INTEGER	The number of received RLC AM PDUs in uplink.	PMMOResult_RCPM_RLC_WCEL.M1026C32	Sum, nkcttbh, nkrttbh,

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					tot
rlc_am_sdu_dl_avg_tr_delay_w	INTENSITY	INTEGER	The average transfer delay of transferred RLC AM SDUs in downlink.	PMMOResult_RCPM_RLC_WCEL.M1026C24	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_error_ratio_w	INTENSITY	FLOAT	The average SDU error ratio in RLC AM downlink. Defined as the ratio between discarded SDUs and the total number of SDUs received for transmission from the PDCP layer.	PMMOResult_RCPM_RLC_WCEL.M1026C22	Average, avg, max, min, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_ps_vol_w	ACCUMULATION	INTEGER	The number of SDU bytes transmitted in downlink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (after PDCP in DL) and includes RLC SDU headers.	PMMOResult_RCPM_RLC_WCEL.M1026C31	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_sdus_for_tra_w	ACCUMULATION	INTEGER	The number of RLC AM SDUs ready for transmission in downlink. Includes also discarded SDUs.	PMMOResult_RCPM_RLC_WCEL.M1026C28	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_sq_sum_err_r_w	ACCUMULATION	FLOAT	The sum of squared SDU error ratio values in RLC AM DL. Measured from the RLC entity.	PMMOResult_RCPM_RLC_WCEL.M1026C23	Sum, nkcttbh, nkrttbh, tot

rlc_am_sdu_dl_sum_sq_tr_d_w	ACCUMULATION	INTEGER	The sum of squared SDU transmission delay values in RLC AM DL.	PMMOResult_RCPM_RLC_WCEL.M1026C27	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_dl_sum_tr_delay_w	ACCUMULATION	INTEGER	The sum of average SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC_WCEL.M1026C25	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_sum_tr_del_stad_w	ACCUMULATION	INTEGER	The sum of standard deviations of the SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC_WCEL.M1026C26	Sum, nkcttbh, nkrttbh, tot
rlc_am_sdu_ul_ps_vol_w	ACCUMULATION	INTEGER	The number of SDU bytes transmitted in uplink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (before PDCP in UL) and includes RLC SDU headers.	PMMOResult_RCPM_RLC_WCEL.M1026C30	Sum, nkcttbh, nkrttbh, tot
rlc_am_ul_meas_time_w	ACCUMULATION	INTEGER	The total time period when the measurement was active in the RLC AM UL entity.	PMMOResult_RCPM_RLC_WCEL.M1026C33	Sum, nkcttbh, nkrttbh, tot

7.7 Computer_Unit Performance Indicators

This section shows the key performance indicators and other counters for the Computer_Unit object, divided into the following sub-sections:

- Computer_Unit.Nokia.UMTS.aal5_measurement_chorus

- Computer_Unit.Nokia.UMTS.aal5_measurement_dmx
- Computer_Unit.Nokia.UMTS.atm_performance
- Computer_Unit.Nokia.UMTS.availability
- Computer_Unit.Nokia.UMTS.dsp_load
- Computer_Unit.Nokia.UMTS.dsp_state_change
- Computer_Unit.Nokia.UMTS.tcpip_measurement.associations
- Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv4
- Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv6
- Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv4
- Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv6
- Computer_Unit.Nokia.UMTS.tcpip_measurement.sctp
- Computer_Unit.Nokia.UMTS.tcpip_measurement.tcp
- Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv4
- Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv6
- Computer_Unit.Nokia.UMTS.unit_load

7.7.1 Computer_Unit.Nokia.UMTS.aal5_measurement_chorus

AAL5 PDU in CHORUS system statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
abrte_count	ACCUMULATION	INT8	Abort message indication error counter. Length field zero error.	PMMOResult_AAL5MeaChorus.M549C8	Sum, nkcuavlbh, tot
bsy_count	ACCUMULATION	INT8	Rx buffers exhausted (busy condition) counter.	PMMOResult_AAL5MeaChorus.M549C7	Sum, nkcuavlbh, tot
crc32e_count	ACCUMULATION	INT8	Number of RX CRC error. CRC32 error in AAL5 PDU.	PMMOResult_AAL5MeaChorus.M549C10	Sum, nkcuavlbh, tot
lne_count	ACCUMULATION	INT8	RX length error counter. AAL5 CPCS PDU length violation.	PMMOResult_AAL5MeaChorus.M549C9	Sum, nkcuavlbh, tot
mic_count	ACCUMULATION	INT8	The number of misinserted cells dropped as a result of address lookup failure.	PMMOResult_AAL5MeaChorus.M549C1	Sum, nkcuavlbh, tot

rx_error	ACCUMULATION	INT8	The overall number of rx errors.	PMMOResult_AAL5MeaChorus.M549C6	Sum, nkcuavlbh, tot
rx_pdu	ACCUMULATION	INT8	The number of received AAL5 CPCS PDUs.	PMMOResult_AAL5MeaChorus.M549C4	Sum, nkcuavlbh, tot
rx_size	ACCUMULATION	INT8	The number of received bytes.	PMMOResult_AAL5MeaChorus.M549C5	Sum, nkcuavlbh, tot
tx_pdu	ACCUMULATION	INT8	The number of transmitted AAL5 CPCS PDUs.	PMMOResult_AAL5MeaChorus.M549C2	Sum, nkcuavlbh, tot
tx_size	ACCUMULATION	INT8	The number of transmitted bytes.	PMMOResult_AAL5MeaChorus.M549C3	Sum, nkcuavlbh, tot
utopiae	ACCUMULATION	INT8	The number of cells dropped as a result of UTOPIA parity error.	PMMOResult_AAL5MeaChorus.M549C0	Sum, nkcuavlbh, tot

7.7.2 Computer_Unit.Nokia.UMTS.aal5_measurement_dmx

AAL5 PDU in DMX system statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
aal5_pdu_discard_cnt	ACCUMULATION	INT8	Counter for AAL5 CPCS PDUs discarded.	PMMOResult_AAL5MeaDMX.M547C3	Sum, nkcuavlbh, tot
cell_discard_cnt	ACCUMULATION	INT8	Cell discarded counter.	PMMOResult_AAL5MeaDMX.M547C2	Sum, nkcuavlbh, tot
cell_rx_cnt	ACCUMULATION	INT8	Cell received counter.	PMMOResult_AAL5MeaDMX.M547C1	Sum, nkcuavlbh, tot

cell_tx_cnt	ACCUMULATION	INT8	Cell transmitted counter.	PMMOResult_AAL5MeaDMX.M547C0	Sum, nkcuavlbh, tot
incorrect_fields	ACCUMULATION	INT8	Incorrect Fields (CRC 32 Violation).	PMMOResult_AAL5MeaDMX.M547C5	Sum, nkcuavlbh, tot
invalid_fields	ACCUMULATION	INT8	Invalid Fields (Invalid CPI plus Oversized Received SDU plus Length Violation).	PMMOResult_AAL5MeaDMX.M547C4	Sum, nkcuavlbh, tot
rsm_timer_exp	ACCUMULATION	INT8	Reassembly Timer Expirations.	PMMOResult_AAL5MeaDMX.M547C6	Sum, nkcuavlbh, tot

7.7.3 Computer_Unit.Nokia.UMTS.atm_performance

ATM Cells ingress/egress statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
e_clp0_drop	ACCUMULATION	INT8	Total Cell Loss Priority 0 (CLP0) cells, over threshold on egress.This tells how many low priority cells buffer management has discarded.There is a discard threshold CLP is 0 cells. When the number of CLP is 0 cell in the buffer reaches the CLP is 0 threshold, outgoing cells are discarded.	PMMOResult_ATM_layer_perf.M528C24	Sum, nkcuavlbh, tot
e_clp1_drop	ACCUMULATION	INT8	Total Cell Loss Priority 1 (CLP1) cells, over	PMMOResult_ATM_layer_perf.M528C8	Sum, nkcuavlbh, tot

			threshold on egress.This tells how many low priority cells buffer management has discarded.There is a discard threshold CLP is 1 cells. When the number of CLP is 1 cell in the buffer reaches the CLP is 1 threshold, outgoing cells are discarded.		
e_epd_drop	ACCUMULATION	INT8	Total cells discarded to EPD on egress.When congestion occurs and buffers are filling, Early Packet Discard (EPD) discards new packets arriving at a queue. All cells associated with a new packet are discarded. The remaining buffer space can't then be used for ATM cells belonging to packets that already have entered the queue.	PMMOResult_ATM_layer_perf.M528C10	Sum, nkcuavlbh, tot
e_err_bram	ACCUMULATION	INT8	Egress cells discarded due to checksum errors.	PMMOResult_ATM_layer_perf.M528C26	Sum, nkcuavlbh, tot
e_err_fi	ACCUMULATION	INT8	Total egress cells discarded due to	PMMOResult_ATM_layer_perf.M528C28	Sum, nkcuavlbh

			parity errors at fabric interface.		, tot
e_err_lookup	ACCUMULATION	INT8	Egress cells discarded on connection lookup.When the cell is received, the information about the connection is read from the header. The cells are discarded due to wrong destination or erroneous	PMMOResult_ATM_layer_perf.M528C29	Sum, nkcuavlbh, tot
e_frames_epd_drop	ACCUMULATION	INT8	Total frames discarded to EPD on egress.Total amount of AAL5 packets that Early Packet Discard (EPD) discards.Frame means here an AAL5 packet.	PMMOResult_ATM_layer_perf.M528C11	Sum, nkcuavlbh, tot
e_ppd_drop	ACCUMULATION	INT8	Total cells discarded to PPD on egress.Partial Packet Discard (PPD) discards all the cells associated with the packet discarded during buffer overflow.	PMMOResult_ATM_layer_perf.M528C9	Sum, nkcuavlbh, tot
e_rcv_from_fi	ACCUMULATION	INT8	Total egress cells received at fabric interface.Cells received at one of the interfaces of the switching fabric ports.	PMMOResult_ATM_layer_perf.M528C27	Sum, nkcuavlbh, tot
e_transmit_to_phy	ACCUMULATION	INT8	Total number of egress cells	PMMOResult_ATM_layer_perf.M528C25	Sum, nkcuavlbh

			transmitted to the PHY devices.The count of cells transmitted to the physical layer.		, tot
i_clp0_drop	ACCUMULATION	INT8	Total Cell Loss Priority 0 (CLP0) cells, over threshold on ingress.This tells how many low priority cells buffer management has discarded.There is a discard threshold CLP is 0 cells. When the number of CLP is 0 cells in the buffer reaches the CLP is 0 threshold, incoming cells are discarded.	PMMOResult_ATM_layer_perf.M528C16	Sum, nkcuavlbh, tot
i_clp1_drop	ACCUMULATION	INT8	Total Cell Loss Priority 1 (CLP1) cells, over threshold on ingress.This tells how many low priority cells buffer management has discarded.There is a discard threshold CLP is 1 cells. When the number of CLP is 1 cell in n the buffer reaches the CLP is 1 threshold, incoming cells are	PMMOResult_ATM_layer_perf.M528C2	Sum, nkcuavlbh, tot

			discarded.		
i_epd_drop	ACCUMULATION	INT8	Total cells discarded to EPD on ingress.When congestion occurs and buffers are filling, Early Packet Discard (EPD) discards new packets arriving at a queue.All cells associated with a new packet are discarded. The remaining buffer space can't then be used for ATM cells belonging to packets that already have entered the queue.	PMMOResult_ATM_layer_perf.M528C4	Sum, nkcuavlbh, tot
i_err_bram	ACCUMULATION	INT8	Ingress cells discarded due to checksum errors.	PMMOResult_ATM_layer_perf.M528C20	Sum, nkcuavlbh, tot
i_err_crc	ACCUMULATION	INT8	Ingress cells discarded due to Cyclic Redundancy Check (CRC) errors.The count of cells detecting errors in the transmission of data using a polynomial code and cyclic check character.	PMMOResult_ATM_layer_perf.M528C22	Sum, nkcuavlbh, tot
i_err_header	ACCUMULATION	INT8	Total ATM header errors.This bit indicates that an invalid VPI/VCI was detected in an ingress cell.Invalid	PMMOResult_ATM_layer_perf.M528C23	Sum, nkcuavlbh, tot

			VPI/VCI includes: VPI values greater than the configured maximum, VCI values greater than the configured maximum, and VCI values less than32 for which the valid bit is not set in the Look up Compression Table. M528C23 Since RN1.5		
i_frames_epd_drop	ACCUMULATION	INT8	Total frames discarded to EPD on ingress.Total amount of AAL5 packets that Early Packet Discard (EPD) discards.Frame indicates an AAL5 packet.	PMMOResult_ATM_layer_perf.M528C5	Sum, nkcuavlbh, tot
i_policing_drop	ACCUMULATION	INT8	Ingress cells discarded due to policing action.Policing discards the cells which can affect the QoS of established connections (cells which violate traffic contract). Policing at UNI is referred to as UPC (usage parameter control). Policing at NNI is referred to	PMMOResult_ATM_layer_perf.M528C19	Sum, nkcuavlbh, tot

			as NPC (network parameter control).		
i_ppd_drop	ACCUMULATION	INT8	Total cells discarded to EPD on ingress.When congestion occurs and buffers are filling, Early Packet Discard (EPD) discards new packets arriving at a queue.All cells associated with a new packet are discarded. The remaining buffer space can't then be used for ATM cells belonging to packets that already have entered the queue.	PMMOResult_ATM_layer_perf.M528C3	Sum, nkcuavlbh, tot
i_tagged	ACCUMULATION	INT8	Ingress cells tagged due to policing action.This counter tells how many higher priority cells have been tagged to lower priority by UPC/NPC.	PMMOResult_ATM_layer_perf.M528C18	Sum, nkcuavlbh, tot
i_transmit_to_fabric	ACCUMULATION	INT8	Total number of ingress cells transmitted to the switch fabric.	PMMOResult_ATM_layer_perf.M528C17	Sum, nkcuavlbh, tot
i_utopia_err	ACCUMULATION	INT8	Ingress cells discarded due to parity errors at UTOPIA interface.Count of cells when error was detected as a result of a parity	PMMOResult_ATM_layer_perf.M528C21	Sum, nkcuavlbh, tot

			check at Universal Test and Operations Interface for ATM.		

7.7.4 Computer_Unit.Nokia.UMTS.availability

Computer unit resource statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
admin_restarts	ACCUMULATION	INT8	The amount of computer unit restarts that are made by user with MML commands.	PMMOResult_Availability.M608C1	Sum, nkcuavlbh, tot
disconnect_time	ACCUMULATION	INT8	This parameter shows as seconds the disconnect time when the computer unit is not in WO EX or SP EX state.	PMMOResult_Availability.M608C4	Sum, nkcuavlbh, tot
duplex_disconn_time	ACCUMULATION	INT8	This parameter shows the disconnect time of duplicated computer units as seconds, when neither of the units is in WO EX or SP EX state. The parameter is updated when the working unit returns to WO EX state.	PMMOResult_Availability.M608C3	Sum, nkcuavlbh, tot
duplex_restarts	ACCUMULA	INT8	ARTS The amount	PMMOResult_Availabil	Sum,

	TION		of duplicated computer unit restarts when both units have been restarted at the same time.	ity.M608C2	nkcuavlbh, tot
family_restarts	ACCUMULATION	INT8	Total amount of process family restarts in the computer unit The parameter is not updated when the total unit restart happens	PMMOResult_Availability.M608C5	Sum, nkcuavlbh, tot
unit_restarts	ACCUMULATION	INT8	The amount of computer unit restarts.	PMMOResult_Availability.M608C0	Sum, nkcuavlbh, tot

7.7.5 Computer_Unit.Nokia.UMTS.dsp_load

DSP load statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cpu_load_avg	INTENSITY	FLOAT	The average value of CPU load.	PMMOResult_DSP_Load.M617C1	Average, avg, max, min, nkcuavlbh, tot
cpu_load_max_mem_use_exter	INTENSITY	FLOAT	The CPU load value at the time of maximum external memory usage.	PMMOResult_DSP_Load.M617C18	Constant, avg, max, min, nkcuavlbh, tot
cpu_load_max_mem_use_inter	INTENSITY	FLOAT	The CPU load value at the time of maximum internal memory usage.	PMMOResult_DSP_Load.M617C14	Constant, avg, max, min, nkcuavlbh, tot
cpu_load_max_proc_num	INTENSITY	FLOAT	The CPU load value when a maximum number of	PMMOResult_DSP_Load.M617C5	Constant, avg, max, min,

			applications is running in the DSP.		nkcuavlbh, tot
cpu_load_max	INTENSITY	FLOAT	The maximum CPU load value.	PMMOResult_DSP_Load.M617C8	Constant, avg, max, min, nkcuavlbh, tot
mem_use_exter_avg	INTENSITY	FLOAT	The average value of external memory usage.	PMMOResult_DSP_Load.M617C3	Average, avg, max, min, nkcuavlbh, tot
mem_use_exter_max_cpu_load	INTENSITY	FLOAT	The external memory usage value at the time of maximum CPU load.	PMMOResult_DSP_Load.M617C11	Constant, avg, max, min, nkcuavlbh, tot
mem_use_exter_max_mem_use_int	INTENSITY	FLOAT	The external memory usage value at the time of maximum internal memory usage.	PMMOResult_DSP_Load.M617C15	Constant, avg, max, min, nkcuavlbh, tot
mem_use_exter_max_proc_num	INTENSITY	INTEGER	The external memory usage value when a maximum number of applications is running in the DSP.	PMMOResult_DSP_Load.M617C7	Constant, avg, max, min, nkcuavlbh, tot
mem_use_exter_max	INTENSITY	FLOAT	The maximum value of external memory usage.	PMMOResult_DSP_Load.M617C16	Constant, avg, max, min, nkcuavlbh, tot
mem_use_inter_avg	INTENSITY	FLOAT	The average value of internal memory usage.	PMMOResult_DSP_Load.M617C2	Average, avg, max, min,

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					nkcuavlbh, tot
mem_use_inter_max_cpu_load	INTENSITY	FLOAT	The internal memory usage value at the time of maximum CPU load.	PMMOResult_DSP_Load.M617C10	Constant, avg, max, min, nkcuavlbh, tot
mem_use_inter_max_mem_use_ext	INTENSITY	FLOAT	The internal memory usage value at the time of maximum external memory usage.	PMMOResult_DSP_Load.M617C19	Constant, avg, max, min, nkcuavlbh, tot
mem_use_inter_max_proc_num	INTENSITY	INTEGER	The internal memory usage value when a maximum number of applications is running in the DSP.	PMMOResult_DSP_Load.M617C6	Constant, avg, max, min, nkcuavlbh, tot
mem_use_inter_max	INTENSITY	FLOAT	The maximum value of internal memory usage.	PMMOResult_DSP_Load.M617C12	Constant, avg, max, min, nkcuavlbh, tot
proc_num_avg	INTENSITY	INTEGER	The average number of application processes.	PMMOResult_DSP_Load.M617C0	Average, avg, max, min, nkcuavlbh, tot
proc_num_max_cpu_load	INTENSITY	INTEGER	The number of application processes at the time of maximum CPU load.	PMMOResult_DSP_Load.M617C9	Constant, avg, max, min, nkcuavlbh, tot
proc_num_max_mem_use_exter	INTENSITY	INTEGER	The number of application processes at the time of maximum external memory usage.	PMMOResult_DSP_Load.M617C17	Constant, avg, max, min, nkcuavlbh, tot
proc_num_max_mem_use_inter	INTENSITY	INTEGER	The number of application	PMMOResult_DSP_Load.M617C13	Constant, avg, max,

			processes at the time of maximum internal memory usage.		min, nkcuavlbh, tot
proc_num_max	INTENSITY	INTEGER	The maximum number of application processes.	PMMOResult_DSP_Load.M617C4	Constant, avg, max, min, nkcuavlbh, tot

7.7.6 Computer_Unit.Nokia.UMTS.dsp_state_change

DSP state change statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
restart_sys	ACCUMULATION	INTEGER	The number of times a DSP is restarted by the system.	PMMOResult_DSP_State_Changes.M612C0	Sum, nkcuavlbh, tot
restart_user	ACCUMULATION	INTEGER	The number of times a DSP is restarted by a command operator.	PMMOResult_DSP_State_Changes.M612C1	Sum, nkcuavlbh, tot

7.7.7 Computer_Unit.Nokia.UMTS.tcpip_measurement.associations

SCTP association statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
sctp_aborted	ACCUMULATION	INTEGER	The number of times that associations have made a direct transition to the CLOSED state	PMMOResult_TCPIP_Meas.M563C240	Sum, nkcuavlbh, tot

			from any state using the primitive 'ABORT': AnyState --Abort--> CLOSED.		
sctp_active_establishment	ACCUMULATION	INTEGER	The number of times that associations have made a direct transition to the ESTABLISHED state from the COOKIE-ECHOED state: COOKIE-ECHOED -> ESTABLISHED. The upper layer initiated the association attempt.	PMMOResult_TCPIP_Meas.M563C237	Sum, nkcuavlbh, tot
sctp_current_establishment	ACCUMULATION	INTEGER	The number of associations for which the current state is either ESTABLISHED, SHUTDOWN-RECEIVED or SHUTDOWN-PENDING.	PMMOResult_TCPIP_Meas.M563C236	Sum, nkcuavlbh, tot
sctp_passive_establishment	ACCUMULATION	INTEGER	The number of times that associations have made a direct transition to the ESTABLISHED state from the CLOSED state: CLOSED -> ESTABLISHED. The remote endpoint initiated the association attempt.	PMMOResult_TCPIP_Meas.M563C238	Sum, nkcuavlbh, tot

sctp_received_bytes	ACCUMULATION	INTEGER	The number of bytes received in sequence.	PMMOResult_TCPIP_Meas.M563C243	Sum, nkcuavlbh, tot
sctp_restarted	ACCUMULATION	INTEGER	The number of restarted SCTP associations due to peer dropped.	PMMOResult_TCPIP_Meas.M563C239	Sum, nkcuavlbh, tot
sctp_shutdowns	ACCUMULATION	INTEGER	The number of times that associations have made a direct transition to the CLOSED state from either the SHUTDOWN-SENT state or the SHUTDOWN-ACK-SENT state. Graceful termination of the association.	PMMOResult_TCPIP_Meas.M563C241	Sum, nkcuavlbh, tot
sctp_too_many_retransmissions	ACCUMULATION	INTEGER	The number of associations closed due to excessive retransmissions.	PMMOResult_TCPIP_Meas.M563C242	Sum, nkcuavlbh, tot

7.7.8 Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv4

TCPIP - ICMPv4 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
icps_badcode	ACCUMULATION	INT8	ICMPv4 messages with bad code fields. Number of ICMP messages that have bad code fields.	PMMOResult_TCPIP_Meas.M563C47	Sum, nkcuavlbh, tot

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icps_badlen	ACCUMULATION	INT8	ICMP messages with bad length. The number of ICMP messages with an invalid ICMP body.	PMMOResult_TCPIP_Meas.M563C50	Sum, nkcuavlbh, tot
icps_checksum	ACCUMULATION	INT8	ICMP message bad checksum. The number of ICMP messages with an invalid ICMP checksum.	PMMOResult_TCPIP_Meas.M563C49	Sum, nkcuavlbh, tot
icps_error	ACCUMULATION	INT8	The number of ICMPv4 error messages sent out, excluding the ICMPv4 Redirect message.	PMMOResult_TCPIP_Meas.M563C30	Sum, nkcuavlbh, tot
icps_inecho	ACCUMULATION	INT8	Received ICMPv4 Echo messages The number of ICMP Echo (request) messages received.	PMMOResult_TCPIP_Meas.M563C36	Sum, nkcuavlbh, tot
icps_inechoreply	ACCUMULATION	INT8	Received ICMPv4 Echo Reply messages. The number of ICMP Echo Reply messages received.	PMMOResult_TCPIP_Meas.M563C32	Sum, nkcuavlbh, tot
icps_inireq	ACCUMULATION	INT8	Received ICMPv4 Information Request messages. The number of ICMP Information Request messages received.	PMMOResult_TCPIP_Meas.M563C43	Sum, nkcuavlbh, tot
icps_inireqreply	ACCUMULATION	INT8	Received ICMPv4 Information Reply messages. The number of ICMP Information Reply	PMMOResult_TCPIP_Meas.M563C44	Sum, nkcuavlbh, tot

			messages received.		
icps_inmaskreply	ACCUMULATION	INT8	Received ICMPv4 Address Mask Reply messages. The number of ICMP Address Mask Reply messages received.	PMMOResult_TCPIP_Meas.M563C46	Sum, nkcuavlbh, tot
icps_inmaskreq	ACCUMULATION	INT8	Received ICMPv4 Address Mask Request messages. The number of ICMP Address Mask Request messages received.	PMMOResult_TCPIP_Meas.M563C45	Sum, nkcuavlbh, tot
icps_inparamprob	ACCUMULATION	INT8	Received ICMPv4 Parameter Problem messages. The number of ICMP Parameter Problem messages received.	PMMOResult_TCPIP_Meas.M563C40	Sum, nkcuavlbh, tot
icps_inredirect	ACCUMULATION	INT8	Received ICMPv4 Redirect messages The number of ICMP Redirect messages received.	PMMOResult_TCPIP_Meas.M563C35	Sum, nkcuavlbh, tot
icps_inrouteradvert	ACCUMULATION	INT8	Received ICMPv4 Router Advertisement messages. The number of ICMP Router Advertisement messages received.	PMMOResult_TCPIP_Meas.M563C37	Sum, nkcuavlbh, tot
icps_inroutersolicit	ACCUMULATION	INT8	Received ICMPv4 Router Solicitation messages. The	PMMOResult_TCPIP_Meas.M563C38	Sum, nkcuavlbh, tot

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			number of ICMP Router Solicitation messages received.		
icps_insourcequenc h	ACCUMULA TION	INT8	Received ICMPv4 Source Quench messages The number of ICMP Source Quench messages received.	PMMOResult_TCPIP_ Meas.M563C34	Sum, nkcuavlbh , tot
icps_intimxceed	ACCUMULA TION	INT8	Received ICMPv4 Time Exceeded messages. The number of ICMP Time Exceeded messages received.	PMMOResult_TCPIP_ Meas.M563C39	Sum, nkcuavlbh , tot
icps_intstamp	ACCUMULA TION	INT8	Received ICMPv4 Timestamp messages. The number of ICMP Timestamp (request) messages received.	PMMOResult_TCPIP_ Meas.M563C41	Sum, nkcuavlbh , tot
icps_intstampreply	ACCUMULA TION	INT8	Received ICMPv4 Timestamp Reply messages. The number of ICMP Timestamp Reply messages received.	PMMOResult_TCPIP_ Meas.M563C42	Sum, nkcuavlbh , tot
icps_inunreach	ACCUMULA TION	INT8	Received ICMPv4 Destination Unreachable messages. The number of ICMP Destination Unreachable messages received.	PMMOResult_TCPIP_ Meas.M563C33	Sum, nkcuavlbh , tot
icps_oldicmp	ACCUMULA TION	INT8	The number of received IP datagrams including ICMP error messages.	PMMOResult_TCPIP_ Meas.M563C31	Sum, nkcuavlbh , tot

icps_outechoreply	ACCUMULATION	INT8	Sent ICMPv4 Echo Reply messages. The number of ICMP Echo Reply messages sent.	PMMOResult_TCPIP_Meas.M563C51	Sum, nkcuavlbh, tot
icps_outecho	ACCUMULATION	INT8	Sent ICMPv4 Echo messages. The number of ICMP Echo (request) messages sent.	PMMOResult_TCPIP_Meas.M563C55	Sum, nkcuavlbh, tot
icps_outireqreply	ACCUMULATION	INT8	Sent ICMPv4 Information Reply messages. The number of ICMP Information Reply messages sent.	PMMOResult_TCPIP_Meas.M563C63	Sum, nkcuavlbh, tot
icps_outireq	ACCUMULATION	INT8	Sent ICMPv4 Information Request messages. The number of ICMP Information Request messages sent.	PMMOResult_TCPIP_Meas.M563C62	Sum, nkcuavlbh, tot
icps_outmaskreply	ACCUMULATION	INT8	Sent ICMPv4 Address Mask Reply messages. The number of ICMP Address Mask Reply messages sent.	PMMOResult_TCPIP_Meas.M563C65	Sum, nkcuavlbh, tot
icps_outmaskreq	ACCUMULATION	INT8	Sent ICMPv4 Address Mask Request messages. The number of ICMP Address Mask Request	PMMOResult_TCPIP_Meas.M563C64	Sum, nkcuavlbh, tot

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			messages sent.		
icps_outparamprob	ACCUMULATION	INT8	Sent ICMPv4 Parameter Problem messages. The number of ICMP Parameter Problem messages sent.	PMMOResult_TCPIP_Meas.M563C59	Sum, nkcuavlbh, tot
icps_outredirect	ACCUMULATION	INT8	Sent ICMPv4 Redirect messages. The number of ICMP Redirect messages sent. For a host, this object will always be zero, since hosts do not send redirect messages.	PMMOResult_TCPIP_Meas.M563C54	Sum, nkcuavlbh, tot
icps_outrouteradvert	ACCUMULATION	INT8	Sent ICMPv4 Router Advertisement messages. The number of ICMP Router Advertisement messages sent.	PMMOResult_TCPIP_Meas.M563C56	Sum, nkcuavlbh, tot
icps_outroutersolicit	ACCUMULATION	INT8	Sent ICMPv4 Router Solicitation messages. The number of ICMP Router Solicitation messages sent.	PMMOResult_TCPIP_Meas.M563C57	Sum, nkcuavlbh, tot
icps_outsourcequench	ACCUMULATION	INT8	Sent ICMPv4 Source Quench messages. The number of ICMP Source Quench messages sent.	PMMOResult_TCPIP_Meas.M563C53	Sum, nkcuavlbh, tot
icps_outtimxceed	ACCUMULATION	INT8	Sent ICMPv4 Time Exceeded messages. The number of ICMP Time Exceeded	PMMOResult_TCPIP_Meas.M563C58	Sum, nkcuavlbh, tot

			messages sent.		
icps_outtstamprepl y	ACCUMULA TION	INT8	Sent ICMPv4 Timestamp Reply messages. The number of ICMP Timestamp Reply messages sent.	PMMOResult_TCPIP_ Meas.M563C61	Sum, nkcuavlbh , tot
icps_outtstamp	ACCUMULA TION	INT8	Sent ICMPv4 Timestamp messages. The number of ICMP Timestamp (request) messages sent.	PMMOResult_TCPIP_ Meas.M563C60	Sum, nkcuavlbh , tot
icps_outunreach	ACCUMULA TION	INT8	Sent ICMPv4 Destination Unreachable messages. The number of ICMP Destination Unreachable messages sent.	PMMOResult_TCPIP_ Meas.M563C52	Sum, nkcuavlbh , tot
icps_reflect	ACCUMULA TION	INT8	ICMP message reflects. The number of ICMP message responses generated.	PMMOResult_TCPIP_ Meas.M563C66	Sum, nkcuavlbh , tot
icps_tooshort	ACCUMULA TION	INT8	Too short ICMP messages. The number of ICMP messages with the length of the ICMP header shorter than the minimum length.	PMMOResult_TCPIP_ Meas.M563C48	Sum, nkcuavlbh , tot

7.7.9 Computer_Unit.Nokia.UMTS.tcpip_measurement.icmpv6

TCPIP - ICMPv6 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
icp6s_badcode	ACCUMULATION	INT8	ICMPv6 messages with bad code fields. The number of ICMP messages with an invalid code.	PMMOResult_TCPIP_Meas.M563C190	Sum, nkcuavlbh, tot
icp6s_badlen	ACCUMULATION	INT8	The number of MLD, WRU, ND or Router Renumbering ICMPv6 messages whose length is too short.	PMMOResult_TCPIP_Meas.M563C193	Sum, nkcuavlbh, tot
icp6s_canterror	ACCUMULATION	INT8	The number of received IPv6 datagrams including ICMPv6 error message.	PMMOResult_TCPIP_Meas.M563C171	Sum, nkcuavlbh, tot
icp6s_checksum	ACCUMULATION	INT8	ICMPv6 message bad checksum. The number of ICMP messages with an invalid ICMPv6 checksum.	PMMOResult_TCPIP_Meas.M563C192	Sum, nkcuavlbh, tot
icp6s_dstunreachaddr	ACCUMULATION	INT8	The number of ICMPv6 Destination Unreachable messages with address unreachable (3) code.	PMMOResult_TCPIP_Meas.M563C215	Sum, nkcuavlbh, tot
icp6s_dstunreachadmin	ACCUMULATION	INT8	The number of ICMPv6 Destination Unreachable	PMMOResult_TCPIP_Meas.M563C213	Sum, nkcuavlbh, tot

			messages with the -communication with destination administratively prohibited- (1) code.		
icp6s_dstunreachbeyondscope	ACCUMULATION	INT8	The number of ICMPv6 Destination Unreachable messages with the -beyond scope- (2) code.	PMMOResult_TCPIP_Meas.M563C214	Sum, nkcuavlbh, tot
icp6s_dstunreachnoport	ACCUMULATION	INT8	The number of ICMPv6 Destination Unreachable messages with the -port unreachable- (4) code.	PMMOResult_TCPIP_Meas.M563C216	Sum, nkcuavlbh, tot
icp6s_dstunreachnoroute	ACCUMULATION	INT8	The number of ICMPv6 Destination Unreachable messages with the -no route to destination- (0) code.	PMMOResult_TCPIP_Meas.M563C212	Sum, nkcuavlbh, tot
icp6s_error	ACCUMULATION	INT8	The number of sent ICMPv6 error messages.	PMMOResult_TCPIP_Meas.M563C170	Sum, nkcuavlbh, tot
icp6s_indstunreach	ACCUMULATION	INT8	Received ICMPv6 Destination Unreachable messages. The number of ICMP Destination Unreachable	PMMOResult_TCPIP_Meas.M563C195	Sum, nkcuavlbh, tot

			messages received.		
icp6s_inecho	ACCUMULATION	INT8	Received ICMPv6 Echo Request messages. The number of ICMP Echo Request messages received.	PMMOResult_TCPIP_Meas.M563C199	Sum, nkcuavlbh, tot
icp6s_inechoreply	ACCUMULATION	INT8	Received ICMPv6 Echo Reply messages. The number of ICMP Echo Reply messages received.	PMMOResult_TCPIP_Meas.M563C200	Sum, nkcuavlbh, tot
icp6s_inmlddone	ACCUMULATION	INT8	Received ICMPv6 Multicast Listener Done messages. The number of ICMP Multicast Listener Done messages received.	PMMOResult_TCPIP_Meas.M563C203	Sum, nkcuavlbh, tot
icp6s_inmldquery	ACCUMULATION	INT8	Received ICMPv6 Multicast Listener Query messages. The number of ICMP Multicast Listener Query messages received.	PMMOResult_TCPIP_Meas.M563C201	Sum, nkcuavlbh, tot
icp6s_inmldreport	ACCUMULATION	INT8	Received ICMPv6 Multicast Listener Report messages. The number of ICMP Multicast Listener Report messages received.	PMMOResult_TCPIP_Meas.M563C202	Sum, nkcuavlbh, tot
icp6s_inneighboradvert	ACCUMULATION	INT8	Received ICMPv6 Neighbor Advertisement messages. The number of ICMP Neighbor Advertisement messages received.	PMMOResult_TCPIP_Meas.M563C207	Sum, nkcuavlbh, tot

icp6s_inneighborsolicit	ACCUMULATION	INT8	Received ICMPv6 Neighbor Solicitation messages. The number of ICMP Neighbor Solicitation messages received.	PMMOResult_TCPIP_Meas.M563C206	Sum, nkcuavlbh, tot
icp6s_inniquery	ACCUMULATION	INT8	Received ICMPv6 Node Information Query messages. The number of ICMP Node Information Query messages received.	PMMOResult_TCPIP_Meas.M563C210	Sum, nkcuavlbh, tot
icp6s_innireply	ACCUMULATION	INT8	Received ICMPv6 Node Information Reply messages. The number of ICMP Node Information Reply messages received.	PMMOResult_TCPIP_Meas.M563C211	Sum, nkcuavlbh, tot
icp6s_inparamprob	ACCUMULATION	INT8	Received ICMPv6 Parameter Problem messages. The number of ICMP Parameter Problem messages received.	PMMOResult_TCPIP_Meas.M563C198	Sum, nkcuavlbh, tot
icp6s_inpkttoobig	ACCUMULATION	INT8	Received ICMPv6 Too Big messages. The number of ICMP Too Big messages received.	PMMOResult_TCPIP_Meas.M563C196	Sum, nkcuavlbh, tot
icp6s_inredirect	ACCUMULATION	INT8	Received ICMPv6 Redirect messages. The number of ICMP Redirect	PMMOResult_TCPIP_Meas.M563C208	Sum, nkcuavlbh, tot

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			messages received.		
icp6s_inrouteradvert	ACCUMULATION	INT8	Received ICMPv6 Router Advertisement messages. The number of ICMP Router Advertisement messages received.	PMMOResult_TCPIP_Meas.M563C205	Sum, nkcuavlbh, tot
icp6s_inrouterrenumber	ACCUMULATION	INT8	Received ICMPv6 Router Renumbering messages. The number of ICMPv6 Router Renumbering messages received.	PMMOResult_TCPIP_Meas.M563C209	Sum, nkcuavlbh, tot
icp6s_inroutersolicit	ACCUMULATION	INT8	Received ICMPv6 Router Solicitation messages. The number of ICMP Router Solicitation messages received.	PMMOResult_TCPIP_Meas.M563C204	Sum, nkcuavlbh, tot
icp6s_intimeexceed	ACCUMULATION	INT8	Received ICMPv6 Time Exceeded messages. The number of ICMP Time Exceeded messages received.	PMMOResult_TCPIP_Meas.M563C197	Sum, nkcuavlbh, tot
icp6s_nd_toomanyopt	ACCUMULATION	INT8	The number of ICMPv6 messages with too many ND options.	PMMOResult_TCPIP_Meas.M563C225	Sum, nkcuavlbh, tot
icp6s_outdstunreach	ACCUMULATION	INT8	Sent ICMPv6 Destination Unreachable messages. The number of ICMP Destination Unreachable messages sent.	PMMOResult_TCPIP_Meas.M563C173	Sum, nkcuavlbh, tot

icp6s_outechoreply	ACCUMULATION	INT8	Sent ICMPv6 Echo Reply messages. The number of ICMP Echo Reply messages sent.	PMMOResult_TCPIP_Meas.M563C178	Sum, nkcuavlbh, tot
icp6s_outecho	ACCUMULATION	INT8	Sent ICMPv6 Echo Request messages. The number of ICMP Echo Request messages sent.	PMMOResult_TCPIP_Meas.M563C177	Sum, nkcuavlbh, tot
icp6s_outmlddone	ACCUMULATION	INT8	Sent ICMPv6 Multicast Listener Done messages. The number of ICMP Multicast Listener Done messages sent.	PMMOResult_TCPIP_Meas.M563C181	Sum, nkcuavlbh, tot
icp6s_outmldquery	ACCUMULATION	INT8	Sent ICMPv6 Multicast Listener Query messages. The number of ICMP Multicast Listener Query messages sent.	PMMOResult_TCPIP_Meas.M563C179	Sum, nkcuavlbh, tot
icp6s_outmldreport	ACCUMULATION	INT8	Sent ICMPv6 Multicast Listener Report messages. The number of ICMP Multicast Listener Report messages sent.	PMMOResult_TCPIP_Meas.M563C180	Sum, nkcuavlbh, tot
icp6s_outneighboradvert	ACCUMULATION	INT8	Sent ICMPv6 Neighbor Advertisement messages. The number of ICMP	PMMOResult_TCPIP_Meas.M563C185	Sum, nkcuavlbh, tot

			Neighbor Advertisement messages sent.		
icp6s_outneighborsolicit	ACCUMULATION	INT8	Sent ICMPv6 Neighbor Solicitation messages. The number of ICMP Neighbor Solicitation messages sent.	PMMOResult_TCPIP_Meas.M563C184	Sum, nkcuavlbh, tot
icp6s_outniquery	ACCUMULATION	INT8	Sent ICMPv6 Node Information Query messages. The number of ICMP Node Information Query messages sent.	PMMOResult_TCPIP_Meas.M563C188	Sum, nkcuavlbh, tot
icp6s_outnireply	ACCUMULATION	INT8	Sent ICMPv6 Node Information Reply messages. The number of ICMP Node Information Reply messages sent.	PMMOResult_TCPIP_Meas.M563C189	Sum, nkcuavlbh, tot
icp6s_outparamprob	ACCUMULATION	INT8	Sent ICMPv6 Parameter Problem messages. The number of ICMP Parameter Problem messages sent.	PMMOResult_TCPIP_Meas.M563C176	Sum, nkcuavlbh, tot
icp6s_outpkttoobig	ACCUMULATION	INT8	Sent ICMPv6 Too Big messages. The number of ICMP Too Big messages sent.	PMMOResult_TCPIP_Meas.M563C174	Sum, nkcuavlbh, tot
icp6s_outredirect	ACCUMULATION	INT8	Sent ICMPv6 Redirect messages. The number of ICMP Redirect messages sent. For	PMMOResult_TCPIP_Meas.M563C186	Sum, nkcuavlbh, tot

			a host, this object will always be zero, since hosts do not send redirect messages.		
icp6s_outrouteradvert	ACCUMULATION	INT8	Sent ICMPv6 Router Advertisement messages. The number of ICMP Router Advertisement messages sent.	PMMOResult_TCPIP_Meas.M563C183	Sum, nkcuavlbh, tot
icp6s_outrouterrenumber	ACCUMULATION	INT8	Sent ICMPv6 Router Renumbering messages. The number of ICMP Router Renumbering messages sent.	PMMOResult_TCPIP_Meas.M563C187	Sum, nkcuavlbh, tot
icp6s_outroutersolicit	ACCUMULATION	INT8	Sent ICMPv6 Router Solicitation messages. The number of ICMP Router Solicitation messages sent.	PMMOResult_TCPIP_Meas.M563C182	Sum, nkcuavlbh, tot
icp6s_outtimeexceed	ACCUMULATION	INT8	Sent ICMPv6 Time Exceeded messages. The number of ICMP Time Exceeded messages sent.	PMMOResult_TCPIP_Meas.M563C175	Sum, nkcuavlbh, tot
icp6s_packettoobig	ACCUMULATION	INT8	The number of ICMPv6 Too Big messages (with code 0).	PMMOResult_TCPIP_Meas.M563C217	Sum, nkcuavlbh, tot

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icp6s_paramprobheader	ACCUMULATION	INT8	The number of ICMPv6 Parameter Problem messages with the -erroneous header field encountered- code (0).	PMMOResult_TCPIP_Meas.M563C220	Sum, nkcuavlbh, tot
icp6s_paramprobnextheader	ACCUMULATION	INT8	The number of ICMPv6 Parameter Problem messages with the -unrecognized Next Header type encountered- code (1).	PMMOResult_TCPIP_Meas.M563C221	Sum, nkcuavlbh, tot
icp6s_paramproboption	ACCUMULATION	INT8	The number of ICMPv6 Parameter Problem messages with the -unrecognized IPv6 option encountered- code (2).	PMMOResult_TCPIP_Meas.M563C222	Sum, nkcuavlbh, tot
icp6s_redirect	ACCUMULATION	INT8	The number of ICMPv6 Redirect messages.	PMMOResult_TCPIP_Meas.M563C223	Sum, nkcuavlbh, tot
icp6s_reflect	ACCUMULATION	INT8	ICMPv6 message reflects. The number of ICMPv6 message responses generated.	PMMOResult_TCPIP_Meas.M563C194	Sum, nkcuavlbh, tot
icp6s_timeexceedreassembly	ACCUMULATION	INT8	The number of ICMPv6 Time Exceeded messages with the -fragment reassembly time exceeded- code (1).	PMMOResult_TCPIP_Meas.M563C219	Sum, nkcuavlbh, tot

icp6s_timeexceedtransit	ACCUMULATION	INT8	The number of ICMPv6 Time Exceeded messages with the -hop limit exceeded in transit- code (0).	PMMOResult_TCPIP_Meas.M563C218	Sum, nkcuavlbh, tot
icp6s_toofreq	ACCUMULATION	INT8	Errors not generated because of rate limitation. The number of times when errors were not generated because of rate limitation.	PMMOResult_TCPIP_Meas.M563C172	Sum, nkcuavlbh, tot
icp6s_tooshort	ACCUMULATION	INT8	Too short ICMPv6 messages. The number of ICMP messages with the length of the ICMPv6 header shorter than the minimum length.	PMMOResult_TCPIP_Meas.M563C191	Sum, nkcuavlbh, tot
icp6s_unknown	ACCUMULATION	INT8	The number of unknown ICMPv6 messages.	PMMOResult_TCPIP_Meas.M563C224	Sum, nkcuavlbh, tot

7.7.10 Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv4

TCPIP - IPv4 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_ips_delivered	PERCENTAGE	FLOAT	Success rate for received IPv4 datagrams delivered successfully.	100 * {ips_delivered}/{ips_total}	Average, avg, nkcuavlbh

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ips_badaddr	ACCUMULATION	INT8	Invalid address in the header of an IP datagram. The number of discarded IP datagrams that have an invalid source address.	PMMOResult_TCPIP_Meas.M563C29	Sum, nkcuavlbh, tot
ips_badfrags	ACCUMULATION	INT8	Malformed IP fragments dropped.	PMMOResult_TCPIP_Meas.M563C13	Sum, nkcuavlbh, tot
ips_badhlen	ACCUMULATION	INT8	Received IP datagrams with bad header length. The number of input IP datagrams discarded because of invalid header length.	PMMOResult_TCPIP_Meas.M563C5	Sum, nkcuavlbh, tot
ips_badlen	ACCUMULATION	INT8	Received IP datagrams with bad length. The number of input IP datagrams discarded because of inconsistent IP header and IP data length.	PMMOResult_TCPIP_Meas.M563C6	Sum, nkcuavlbh, tot
ips_badoptions	ACCUMULATION	INT8	Received IP datagrams with errors in IP options. The number of input IP datagrams discarded because of errors discovered in processing their header IP options.	PMMOResult_TCPIP_Meas.M563C7	Sum, nkcuavlbh, tot
ips_badsum	ACCUMULATION	INT8	Received IP datagrams with errored checksum. The number of	PMMOResult_TCPIP_Meas.M563C1	Sum, nkcuavlbh, tot

			input IP datagrams discarded because of errors in their checksum.		
ips_badvers	ACCUMULATION	INT8	Received IP datagrams with version errors. The number of input IP datagrams discarded because of version number mismatch.	PMMOResult_TCPIP_Meas.M563C8	Sum, nkcuavlbh, tot
ips_cantforward	ACCUMULATION	INT8	Received IP datagrams not forwardable. The number of input datagrams discarded because the IP address in their IP header destination field was not a valid address to be forwarded to.	PMMOResult_TCPIP_Meas.M563C18	Sum, nkcuavlbh, tot
ips_cantfrag	ACCUMULATION	INT8	IP datagrams fragment failed. The number of IP datagrams that have been discarded because they needed to be fragmented at this entity but the fragmenting failed.	PMMOResult_TCPIP_Meas.M563C27	Sum, nkcuavlbh, tot
ips_delivered	ACCUMULATION	INT8	Received IP datagrams delivered successfully. The	PMMOResult_TCPIP_Meas.M563C15	Sum, nkcuavlbh, tot

			total number of input IP datagrams successfully delivered.		
ips_fastforward	ACCUMULATION	INT8	IP datagrams fast-forwarded.	PMMOResult_TCPIP_Meas.M563C26	Sum, nkcuavlbh, tot
ips_forward	ACCUMULATION	INT8	Forwarded IP datagrams. The number of input IP datagrams for which this entity was not their final IP destination, as a result of which an attempt was made to find a route to forward them to the correct final destination.	PMMOResult_TCPIP_Meas.M563C17	Sum, nkcuavlbh, tot
ips_fragdropped	ACCUMULATION	INT8	IP fragments dropped. The number of discarded IP fragments because of duplicates or insufficient space.	PMMOResult_TCPIP_Meas.M563C10	Sum, nkcuavlbh, tot
ips_fragmented	ACCUMULATION	INT8	Outgoing IP datagrams fragmented. The number of outgoing IP datagrams that have been successfully fragmented at this entity.	PMMOResult_TCPIP_Meas.M563C24	Sum, nkcuavlbh, tot
ips_fragments	ACCUMULATION	INT8	IP fragments received.	PMMOResult_TCPIP_Meas.M563C9	Sum, nkcuavlbh, tot
ips_fragtimeout	ACCUMULATION	INT8	IP fragments timed out. The number of	PMMOResult_TCPIP_Meas.M563C11	Sum, nkcuavlbh

			IP fragments dropped after time-out.		, tot
ips_localout	ACCUMULATION	INT8	IP datagrams sent from this host. The total number of IP datagrams generated by the system, not forwarded.	PMMOResult_TCPIP_Meas.M563C20	Sum, nkcuavlbh, tot
ips_nogif	ACCUMULATION	INT8	No match gif IP datagrams. Tunneling IP datagrams that cannot find match gif.	PMMOResult_TCPIP_Meas.M563C28	Sum, nkcuavlbh, tot
ips_noproto	ACCUMULATION	INT8	Received IP datagrams with unknown protocol. The number of locally addressed datagrams received successfully but discarded because of an unknown or unsupported protocol.	PMMOResult_TCPIP_Meas.M563C16	Sum, nkcuavlbh, tot
ips_noroute	ACCUMULATION	INT8	Outgoing IP datagrams, no route found. The number of IP datagrams discarded because no route could be found to transmit them to their destination.	PMMOResult_TCPIP_Meas.M563C23	Sum, nkcuavlbh, tot
ips_odropped	ACCUMULA	INT8	Outgoing IP	PMMOResult_TCPIP_	Sum,

	TION		datagrams discarded. The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded for resource shortages, for example, lack of buffer space.	Meas.M563C22	nkcuavlbh, tot
ips_ofragments	ACCUMULATION	INT8	Outgoing IP datagram fragments created. The number of outgoing IP datagram fragments that have been generated as a result of fragmentation at this entity.	PMMOResult_TCPIP_Meas.M563C25	Sum, nkcuavlbh, tot
ips_rawout	ACCUMULATION	INT8	Raw IP datagrams. The total number of IP datagrams generated. The number of packets sent with the fabricated IP header.	PMMOResult_TCPIP_Meas.M563C21	Sum, nkcuavlbh, tot
ips_rcvmemdrop	ACCUMULATION	INT8	The number of IP fragments dropped because of insufficient memory.	PMMOResult_TCPIP_Meas.M563C12	Sum, nkcuavlbh, tot
ips_reassembled	ACCUMULATION	INT8	Reassembled IP datagrams. The number of IP datagrams	PMMOResult_TCPIP_Meas.M563C14	Sum, nkcuavlbh, tot

			successfully reassembled.		
ips_redirectsent	ACCUMULATION	INT8	The number of redirect messages sent.	PMMOResult_TCPIP_Meas.M563C19	Sum, nkcuavlbh, tot
ips_toolong	ACCUMULATION	INT8	Too long IP datagrams received. The number of discarded IP datagrams the length of which exceeds the maximum IP packet size.	PMMOResult_TCPIP_Meas.M563C4	Sum, nkcuavlbh, tot
ips_tooshort	ACCUMULATION	INT8	Too short IP datagrams received. The number of discarded IP datagrams with invalid data length.	PMMOResult_TCPIP_Meas.M563C3	Sum, nkcuavlbh, tot
ips_toosmall	ACCUMULATION	INT8	Too small IP datagrams received. The number of discarded IP datagrams because they are too small to contain an IP packet.	PMMOResult_TCPIP_Meas.M563C2	Sum, nkcuavlbh, tot
ips_total	ACCUMULATION	INT8	Received IP datagrams. The total number of input IP datagrams received from interfaces, including those	PMMOResult_TCPIP_Meas.M563C0	Sum, nkcuavlbh, tot

			received in error.		
tot_Ips_sent_received_fwd	ACCUMULATION	INT8	Total IPv4 packets sent, received and forwarded	{ips_localout} + {ips_total} + {ips_forward}	Sum, nkcuavlbh, tot

7.7.11 Computer_Unit.Nokia.UMTS.tcpip_measurement.ipv6

TCPIP - IPv6 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_ip6s_delivered	PERCENTAGE	FLOAT	Success rate for received IPv6 datagrams delivered successfully.	100 * {ip6s_delivered}/ {ip6s_total}	Average, avg, nkcuavlbh
ip6s_badoptions	ACCUMULATION	INT8	Incoming IPv6 datagrams with option errors. The number of input IPv6 datagrams discarded because of errors discovered when processing their IPv6 options.	PMMOResult_TCPIP_Meas.M563C143	Sum, nkcuavlbh, tot
ip6s_badscope	ACCUMULATION	INT8	The number of IPv6 datagrams that violated scope rules.	PMMOResult_TCPIP_Meas.M563C161	Sum, nkcuavlbh, tot
ip6s_badvers	ACCUMULATION	INT8	Incoming IPv6 datagrams with version errors. The number of input datagrams discarded because of version number mismatch in their IPv6 headers.	PMMOResult_TCPIP_Meas.M563C144	Sum, nkcuavlbh, tot
ip6s_cantforward	ACCUMULATION	INT8	Received IPv6 datagrams not forwardable. The	PMMOResult_TCPIP_Meas.M563C152	Sum, nkcuavlbh, tot

			number of input datagrams discarded because the IP address in their IPv6 header destination field was not a valid address to be forwarded to.		
ip6s_cantfrag	ACCUMULATION	INT8	IPv6 datagram fragment failed. The number of IPv6 datagrams that have been discarded because they needed to be fragmented at this entity but the fragmenting failed.	PMMOResult_TCPIP_Meas.M563C160	Sum, nkcuavlbh, tot
ip6s_delivered	ACCUMULATION	INT8	Incoming IPv6 datagrams delivered. The total number of datagrams successfully delivered to IPv6 user protocols (including ICMP). This counter is incremented at the interface to which these datagrams were addressed, which might not necessarily be the input interface for some of the datagrams.	PMMOResult_TCPIP_Meas.M563C150	Sum, nkcuavlbh, tot
ip6s_exthdrtoolon	ACCUMULA	INT8	IPv6 datagrams	PMMOResult_TCPIP_	Sum,

g	TION		whose headers are not continuous.	Meas.M563C167	nkcuavlbh, tot
ip6s_forward	ACCUMULATION	INT8	Outgoing IPv6 datagram forwarded. The number of output datagrams which this entity received and forwarded to their final destinations. In entities which do not act as IPv6 routers, this counter will include only those packets which were Source-Routed via this entity, and the Source-Route processing was successful.	PMMOResult_TCPIP_Meas.M563C151	Sum, nkcuavlbh, tot
ip6s_fragdropped	ACCUMULATION	INT8	IPv6 fragments dropped. The number of discarded IP fragments because of duplicates or insufficient space.	PMMOResult_TCPIP_Meas.M563C146	Sum, nkcuavlbh, tot
ip6s_fragmented	ACCUMULATION	INT8	Outgoing IPv6 datagrams fragmented. The number of outgoing IPv6 datagrams that have been successfully fragmented at this entity.	PMMOResult_TCPIP_Meas.M563C158	Sum, nkcuavlbh, tot
ip6s_fragments	ACCUMULATION	INT8	Received IPv6 fragments.	PMMOResult_TCPIP_Meas.M563C145	Sum, nkcuavlbh, tot

ip6s_fragoverflow	ACCUMULATION	INT8	Overflowed IPv6 fragments. IPv6 fragments that exceeded the limit.	PMMOResult_TCPIP_Meas.M563C148	Sum, nkcuavlbh, tot
ip6s_fragtimeout	ACCUMULATION	INT8	IPv6 fragments timed out. The number of IPv6 fragments dropped after time- out.	PMMOResult_TCPIP_Meas.M563C147	Sum, nkcuavlbh, tot
ip6s_localout	ACCUMULATION	INT8	IPv6 datagrams sent from this host. The total number of IPv6 datagrams generated in the system, not forwarded.	PMMOResult_TCPIP_Meas.M563C154	Sum, nkcuavlbh, tot
ip6s_m1	ACCUMULATION	INT8	Multicast IPv6 datagrams which do not join.	PMMOResult_TCPIP_Meas.M563C163	Sum, nkcuavlbh, tot
ip6s_m2m	ACCUMULATION	INT8	The usage of two or more memory buffers. The number of times that two or more memory buffers have been used by the networking protocols.	PMMOResult_TCPIP_Meas.M563C164	Sum, nkcuavlbh, tot
ip6s_mext1	ACCUMULATION	INT8	The usage of one external memory buffer. The number of times that one external memory buffer has been used by the networking protocols.	PMMOResult_TCPIP_Meas.M563C165	Sum, nkcuavlbh, tot

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ip6s_mext2m	ACCUMULATION	INT8	The usage of two or more external memory buffers. The number of times that two or more external memory buffers have been used by the networking protocols.	PMMOResult_TCPIP_Meas.M563C166	Sum, nkcuavlbh, tot
ip6s_nogif	ACCUMULATION	INT8	The number of tunneling IPv6 datagrams that cannot find gif.	PMMOResult_TCPIP_Meas.M563C168	Sum, nkcuavlbh, tot
ip6s_noroute	ACCUMULATION	INT8	Incoming IPv6 datagrams with no route. The number of input datagrams discarded because no route could be found to transmit them to their destination.	PMMOResult_TCPIP_Meas.M563C157	Sum, nkcuavlbh, tot
ip6s_notmember	ACCUMULATION	INT8	Multicast IPv6 datagrams which do not join.	PMMOResult_TCPIP_Meas.M563C162	Sum, nkcuavlbh, tot
ip6s_odropped	ACCUMULATION	INT8	Discarded outgoing IPv6 datagrams. The number of output IPv6 datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded, for example, because of insufficient buffer space.	PMMOResult_TCPIP_Meas.M563C156	Sum, nkcuavlbh, tot
ip6s_ofragments	ACCUMULATION	INT8	Outgoing IPv6 datagram	PMMOResult_TCPIP_Meas.M563C159	Sum, nkcuavlbh

			fragments created. The number of outgoing IPv6 datagram fragments that have been generated as a result of fragmentation at this entity.		, tot
ip6s_rawout	ACCUMULATION	INT8	Raw IPv6 datagrams. The total number of IPv6 datagrams generated. The number of datagrams sent with the fabricated IPv6 header.	PMMOResult_TCPIP_Meas.M563C155	Sum, nkcuavlbh, tot
ip6s_reassembled	ACCUMULATION	INT8	IPv6 datagrams reassembled ok. The number of IPv6 datagrams successfully reassembled.	PMMOResult_TCPIP_Meas.M563C149	Sum, nkcuavlbh, tot
ip6s_redirectsend	ACCUMULATION	INT8	IPv6 redirects sent. The number of redirect datagrams sent.	PMMOResult_TCPIP_Meas.M563C153	Sum, nkcuavlbh, tot
ip6s_toomanyhdr	ACCUMULATION	INT8	IPv6 datagrams discarded because of too many headers.	PMMOResult_TCPIP_Meas.M563C169	Sum, nkcuavlbh, tot
ip6s_tooshort	ACCUMULATION	INT8	Too short IPv6 datagrams. The number of discarded IPv6 datagrams with	PMMOResult_TCPIP_Meas.M563C141	Sum, nkcuavlbh, tot

			invalid data length.		
ip6s_toosmall	ACCUMULATION	INT8	Too small IPv6 datagrams. The number of discarded IPv6 datagrams that are too small to contain an IP packet.	PMMOResult_TCPIP_Meas.M563C142	Sum, nkcuavlbh, tot
ip6s_total	ACCUMULATION	INT8	IPv6 datagrams received. The total number of input datagrams received by the interface, including those received in error.	PMMOResult_TCPIP_Meas.M563C140	Sum, nkcuavlbh, tot
tot_ip6s_sent_received_fwd	ACCUMULATION	INT8	Total IPv6 packets sent, received and forwarded	{ip6s_localout} + {ip6s_total} + {ip6s_forward}	Sum, nkcuavlbh, tot

7.7.12 Computer_Unit.Nokia.UMTS.tcpip_measurement.sctp

SCTP measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
sctp_bad_csum	ACCUMULATION	INTEGER	The number of SCTP packets received with an invalid checksum.	PMMOResult_TCPIP_Meas.M563C251	Sum, nkcuavlbh, tot
sctp_bad_ssn	ACCUMULATION	INTEGER	The number of dropped chunks due to bad stream sequence number.	PMMOResult_TCPIP_Meas.M563C250	Sum, nkcuavlbh, tot
sctp_bad_stream_nbr	ACCUMULATION	INTEGER	The number of dropped chunks due to bad stream number.	PMMOResult_TCPIP_Meas.M563C253	Sum, nkcuavlbh, tot
sctp_bad_vtag	ACCUMULATION	INTEGER	The number of dropped SCTP	PMMOResult_TCPIP_Meas.M563C252	Sum, nkcuavlbh

			packets due to bad verification tag.		, tot
sctp_dropped_fragment	ACCUMULATION	INTEGER	The number of dropped invalid fragments.	PMMOResult_TCPIP_Meas.M563C249	Sum, nkcuavlbh, tot
sctp_header_drops	ACCUMULATION	INTEGER	The number of dropped SCTP packets due to bad header.	PMMOResult_TCPIP_Meas.M563C255	Sum, nkcuavlbh, tot
sctp_in_multicast	ACCUMULATION	INTEGER	The number of dropped multicast SCTP packets (SCTP cannot be multicast).	PMMOResult_TCPIP_Meas.M563C254	Sum, nkcuavlbh, tot
sctp_no_memory	ACCUMULATION	INTEGER	The number of SCTP chunks dropped due to no memory.	PMMOResult_TCPIP_Meas.M563C258	Sum, nkcuavlbh, tot
sctp_no_ports	ACCUMULATION	INTEGER	The number of dropped SCTP packets due to no endpoint found.	PMMOResult_TCPIP_Meas.M563C257	Sum, nkcuavlbh, tot
sctp_receive_window_drops	ACCUMULATION	INTEGER	The number of dropped SCTP packets due to no receive window.	PMMOResult_TCPIP_Meas.M563C256	Sum, nkcuavlbh, tot
sctp_received_chunk_data	ACCUMULATION	INTEGER	The number of SCTP DATA chunks received.	PMMOResult_TCPIP_Meas.M563C265	Sum, nkcuavlbh, tot
sctp_received_chunk_hback	ACCUMULATION	INTEGER	The number of SCTP HEARTBEAT-ACK chunks received.	PMMOResult_TCPIP_Meas.M563C271	Sum, nkcuavlbh, tot
sctp_received_chu	ACCUMULA	INTEG	The number of	PMMOResult_TCPIP_	Sum,

nk_hbreq	TION	ER	SCTP HEARTBEAT-REQ chunks received.	Meas.M563C269	nkcuavlbh, tot
sctp_received_chunk_sack	ACCUMULATION	INTEGER	The number of SCTP SACK chunks received.	PMMOResult_TCPIP_Meas.M563C267	Sum, nkcuavlbh, tot
sctp_received_control	ACCUMULATION	INTEGER	The number of SCTP control chunks received (no duplicate chunks included).	PMMOResult_TCPIP_Meas.M563C246	Sum, nkcuavlbh, tot
sctp_received_datagrams	ACCUMULATION	INTEGER	The number of received valid packets.	PMMOResult_TCPIP_Meas.M563C245	Sum, nkcuavlbh, tot
sctp_received_duplicated_tsn	ACCUMULATION	INTEGER	The number of received duplicated TSN.	PMMOResult_TCPIP_Meas.M563C248	Sum, nkcuavlbh, tot
sctp_received_ootb	ACCUMULATION	INTEGER	The number of out of the blue packets received by the host. An out of the blue packet is an SCTP packet correctly formed, including the proper checksum, but for which the receiver was unable to identify an appropriate association.	PMMOResult_TCPIP_Meas.M563C247	Sum, nkcuavlbh, tot
sctp_received_packets	ACCUMULATION	INTEGER	The number of SCTP packets received. Duplicates and invalid packets are included.	PMMOResult_TCPIP_Meas.M563C244	Sum, nkcuavlbh, tot
sctp_sent_bytes	ACCUMULATION	INTEGER	The number of SCTP bytes sent.	PMMOResult_TCPIP_Meas.M563C259	Sum, nkcuavlbh, tot

sctp_sent_chunk_data	ACCUMULATION	INTEGER	The number of SCTP DATA chunks sent.	PMMOResult_TCPIP_Meas.M563C266	Sum, nkcuavlbh, tot
sctp_sent_chunk_hback	ACCUMULATION	INTEGER	The number of SCTP HEARTBEAT-ACK chunks sent.	PMMOResult_TCPIP_Meas.M563C272	Sum, nkcuavlbh, tot
sctp_sent_chunk_hbreq	ACCUMULATION	INTEGER	The number of SCTP HEARTBEAT-REQ chunks sent.	PMMOResult_TCPIP_Meas.M563C270	Sum, nkcuavlbh, tot
sctp_sent_chunk_sack	ACCUMULATION	INTEGER	The number of SCTP SACK chunks sent.	PMMOResult_TCPIP_Meas.M563C268	Sum, nkcuavlbh, tot
sctp_sent_control	ACCUMULATION	INTEGER	The number of SCTP control chunks sent (retransmissions are not included). Control chunks are those chunks different from DATA.	PMMOResult_TCPIP_Meas.M563C261	Sum, nkcuavlbh, tot
sctp_sent_datagrams	ACCUMULATION	INTEGER	The number of SCTP packets sent. Retransmitted DATA chunks are included.	PMMOResult_TCPIP_Meas.M563C260	Sum, nkcuavlbh, tot
sctp_sent_fast_retransmissions	ACCUMULATION	INTEGER	The number of fast retransmitted SCTP chunks.	PMMOResult_TCPIP_Meas.M563C263	Sum, nkcuavlbh, tot
sctp_sent_retransmissions	ACCUMULATION	INTEGER	The number of retransmitted SCTP chunks.	PMMOResult_TCPIP_Meas.M563C262	Sum, nkcuavlbh, tot
sctp_sent_window_probe	ACCUMULATION	INTEGER	The number of SCTP chunks sent	PMMOResult_TCPIP_Meas.M563C264	Sum, nkcuavlbh

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			for window probes.		, tot

7.7.13 Computer_Unit.Nokia.UMTS.tcpip_measurement.tcp

TCPIP - TCP measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
tcps_accepts	ACCUMULATION	INT8	TCP connection accepts. The number of synchronize sequence numbers (SYN) received in LISTEN state.	PMMOResult_TCPIP_Meas.M563C101	Sum, nkcuavlbh, tot
tcps_badsyn	ACCUMULATION	INT8	Bad TCP connection attempts. Received acknowledgements for which this entity has no synchronize sequence numbers (SYN) in compressed state.	PMMOResult_TCPIP_Meas.M563C118	Sum, nkcuavlbh, tot
tcps_closed	ACCUMULATION	INT8	Closed TCP connections. The number of closed connections. Includes the number of dropped connections TCPS_DROPS M563C104.	PMMOResult_TCPIP_Meas.M563C103	Sum, nkcuavlbh, tot
tcps_connattempt	ACCUMULATION	INT8	The number of sent TCP connection requests.	PMMOResult_TCPIP_Meas.M563C100	Sum, nkcuavlbh, tot
tcps_conndrops	ACCUMULATION	INT8	Dropped embryonic TCP connections. The number of TCP connections that have been dropped	PMMOResult_TCPIP_Meas.M563C105	Sum, nkcuavlbh, tot

			before synchronize sequence number (SYN) is received.		
tcps_connects	ACCUMULATION	INT8	TCP connection established. The number of TCP connections that have been established (actively or passively), including accepted connections (TCPS_ACCEPTS M563C101).	PMMOResult_TCPIP_Meas.M563C102	Sum, nkcuavlbh, tot
tcps_delack	ACCUMULATION	INT8	Delayed ack-only TCP segments. The number of sent delayed ACK-only (acknowledgement-only) TCP segments.	PMMOResult_TCPIP_Meas.M563C73	Sum, nkcuavlbh, tot
tcps_drops	ACCUMULATION	INT8	Dropped TCP connections. The number of dropped TCP connections after synchronize sequence number (SYN) is received.	PMMOResult_TCPIP_Meas.M563C104	Sum, nkcuavlbh, tot
tcps_keepdrops	ACCUMULATION	INT8	Dropped in keep-alive. The number of TCP connections dropped by the keep-alive timer, when the connection is in established or awaiting	PMMOResult_TCPIP_Meas.M563C113	Sum, nkcuavlbh, tot

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			synchronize sequence numbers (SYN) state.		
tcps_keepprobe	ACCUMULATION	INT8	Keep-alive probes sent.	PMMOResult_TCPIP_Meas.M563C112	Sum, nkcuavlbh, tot
tcps_keeptimeo	ACCUMULATION	INT8	Keep timeout. The number of times when the keep-alive timer or connection-establishment timer expires.	PMMOResult_TCPIP_Meas.M563C111	Sum, nkcuavlbh, tot
tcps_noport	ACCUMULATION	INT8	Dropped TCP packets. The number of discarded TCP segments that are dropped because no socket is available.	PMMOResult_TCPIP_Meas.M563C117	Sum, nkcuavlbh, tot
tcps_pawsdrop	ACCUMULATION	INT8	TCP segments dropped because of PAWs. The number of TCP segments dropped because of PAWs (protection against wrapped sequence numbers).	PMMOResult_TCPIP_Meas.M563C87	Sum, nkcuavlbh, tot
tcps_pcbhashmiss	ACCUMULATION	INT8	PCB hash miss. The number of times when the protocol control block (PCB) cache comparison fails.	PMMOResult_TCPIP_Meas.M563C116	Sum, nkcuavlbh, tot
tcps_persisttimeo	ACCUMULATION	INT8	Persist timeouts. The number of times that the persist timer expires.	PMMOResult_TCPIP_Meas.M563C110	Sum, nkcuavlbh, tot
tcps_predack	ACCUMULATION	INT8	Prediction correct for ACKs. The	PMMOResult_TCPIP_Meas.M563C114	Sum, nkcuavlbh

			number of times when the TCP segment header prediction is correct for ACKs (acknowledgements).		, tot
tcps_preddat	ACCUMULATION	INT8	Prediction correct for TCP data packets. The number of times when the TCP segment header prediction is correct for the TCP data segments.	PMMOResult_TCPIP_Meas.M563C115	Sum, nkcuavlbh , tot
tcps_rcvackbyte	ACCUMULATION	INT8	Received ACK TCP bytes. The number of received bytes acknowledged by received ACK (acknowledgement) TCP packets.	PMMOResult_TCPIP_Meas.M563C80	Sum, nkcuavlbh , tot
tcps_rcvackpack	ACCUMULATION	INT8	Received ACK (acknowledgement) TCP segments.	PMMOResult_TCPIP_Meas.M563C79	Sum, nkcuavlbh , tot
tcps_rcvacktoomuch	ACCUMULATION	INT8	Too many ACKs. The number of received ACKs (acknowledgements) for unsent TCP data.	PMMOResult_TCPIP_Meas.M563C82	Sum, nkcuavlbh , tot
tcps_rcvafterclose	ACCUMULATION	INT8	TCP segments received after close. The number of segments received after the connection is closed.	PMMOResult_TCPIP_Meas.M563C96	Sum, nkcuavlbh , tot

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tcps_rcvbadoff	ACCUMULATION	INT8	Received bad header offset TCP segments. Received TCP segments discarded because of invalid header offset fields or header length.	PMMOResult_TCPIP_Meas.M563C98	Sum, nkcuavlbh, tot
tcps_rcvbadsum	ACCUMULATION	INT8	Received TCP segments with bad checksum. Received TCP segments discarded with checksum errors.	PMMOResult_TCPIP_Meas.M563C97	Sum, nkcuavlbh, tot
tcps_rcvbyteafterwin	ACCUMULATION	INT8	Received TCP bytes of data after window. The number of received bytes beyond the advertised window.	PMMOResult_TCPIP_Meas.M563C93	Sum, nkcuavlbh, tot
tcps_rcvbyte	ACCUMULATION	INT8	Received in-sequence TCP bytes. The number of bytes received in sequence.	PMMOResult_TCPIP_Meas.M563C84	Sum, nkcuavlbh, tot
tcps_rcvdupack	ACCUMULATION	INT8	Duplicated ACK TCP segments. The number of duplicated ACK (acknowledgement) segments received.	PMMOResult_TCPIP_Meas.M563C81	Sum, nkcuavlbh, tot
tcps_rcvdupbyte	ACCUMULATION	INT8	Received duplicate TCP bytes. The number of completely duplicated bytes received.	PMMOResult_TCPIP_Meas.M563C86	Sum, nkcuavlbh, tot
tcps_rcvduppack	ACCUMULATION	INT8	Duplicate TCP segments. The number of completely	PMMOResult_TCPIP_Meas.M563C85	Sum, nkcuavlbh, tot

			duplicated segments received.		
tcps_rcvoobyte	ACCUMULATION	INT8	Received out-of-order TCP bytes.	PMMOResult_TCPIP_Meas.M563C91	Sum, nkcuavlbh, tot
tcps_rcvoopack	ACCUMULATION	INT8	Received out-of-order TCP segments.	PMMOResult_TCPIP_Meas.M563C90	Sum, nkcuavlbh, tot
tcps_rcvpackafterwin	ACCUMULATION	INT8	Received TCP segments of data after window. The number of received segments with data beyond the advertised window.	PMMOResult_TCPIP_Meas.M563C92	Sum, nkcuavlbh, tot
tcps_rcvpack	ACCUMULATION	INT8	Received in-sequence TCP segments. The number of received segments in-sequence.	PMMOResult_TCPIP_Meas.M563C83	Sum, nkcuavlbh, tot
tcps_rcvpartdupbyte	ACCUMULATION	INT8	Received TCP bytes with partially duplicated data. The number of duplicate bytes in part-duplicate segments.	PMMOResult_TCPIP_Meas.M563C89	Sum, nkcuavlbh, tot
tcps_rcvpartduppack	ACCUMULATION	INT8	Received TCP segments with duplicated data.	PMMOResult_TCPIP_Meas.M563C88	Sum, nkcuavlbh, tot
tcps_rcvshort	ACCUMULATION	INT8	Received too short TCP segments. Received TCP segments discarded because of the TCP segment is too	PMMOResult_TCPIP_Meas.M563C99	Sum, nkcuavlbh, tot

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			short.		
tcps_rcvtotal	ACCUMULATION	INT8	The total number of received TCP segments.	PMMOResult_TCPIP_Meas.M563C78	Sum, nkcuavlbh, tot
tcps_rcvwinprobe	ACCUMULATION	INT8	Received TCP window probes. The number of window probe segments received.	PMMOResult_TCPIP_Meas.M563C94	Sum, nkcuavlbh, tot
tcps_rcvwinupd	ACCUMULATION	INT8	Received window update TCP segments.	PMMOResult_TCPIP_Meas.M563C95	Sum, nkcuavlbh, tot
tcps_rexmttimeo	ACCUMULATION	INT8	Retransmit timeouts.	PMMOResult_TCPIP_Meas.M563C108	Sum, nkcuavlbh, tot
tcps_rttupdated	ACCUMULATION	INT8	RTT updates. The number of times when Round trip time (RTT) estimators are updated.	PMMOResult_TCPIP_Meas.M563C106	Sum, nkcuavlbh, tot
tcps_sc_aborted	ACCUMULATION	INT8	TCP segment SYN cache aborted. The number of TCP segment synchronize sequence numbers (SYN) caches aborted because of no space to build the protocol control block (PCB).	PMMOResult_TCPIP_Meas.M563C122	Sum, nkcuavlbh, tot
tcps_sc_added	ACCUMULATION	INT8	TCP segment SYN cache entries added.	PMMOResult_TCPIP_Meas.M563C119	Sum, nkcuavlbh, tot
tcps_sc_bucketoverflow	ACCUMULATION	INT8	TCP segment SYN cache dropped because of bucket overflow.	PMMOResult_TCPIP_Meas.M563C125	Sum, nkcuavlbh, tot
tcps_sc_collisions	ACCUMULA	INT8	TCP segment SYN	PMMOResult_TCPIP_	Sum,

	TION		cache hash collisions.	Meas.M563C120	nkcuavlbh, tot
tcps_sc_completed	ACCUMULATION	INT8	TCP segment SYN cache completed.	PMMOResult_TCPIP_Meas.M563C121	Sum, nkcuavlbh, tot
tcps_sc_dropped	ACCUMULATION	INT8	TCP segment SYNs dropped because of no route or no space.	PMMOResult_TCPIP_Meas.M563C129	Sum, nkcuavlbh, tot
tcps_sc_dupesyn	ACCUMULATION	INT8	Duplicate TCP segment SYNs received for entries already in the cache.	PMMOResult_TCPIP_Meas.M563C128	Sum, nkcuavlbh, tot
tcps_sc_overflowed	ACCUMULATION	INT8	TCP segment SYN caches dropped because of overflow.	PMMOResult_TCPIP_Meas.M563C124	Sum, nkcuavlbh, tot
tcps_sc_reset	ACCUMULATION	INT8	TTCP segment SYN caches dropped because of RST.	PMMOResult_TCPIP_Meas.M563C126	Sum, nkcuavlbh, tot
tcps_sc_retransmitted	ACCUMULATION	INT8	TCP segment SYNs and ACKs (acknowledgements) retransmitted.	PMMOResult_TCPIP_Meas.M563C130	Sum, nkcuavlbh, tot
tcps_sc_timed_out	ACCUMULATION	INT8	TCP segment SYN cache timed out.	PMMOResult_TCPIP_Meas.M563C123	Sum, nkcuavlbh, tot
tcps_sc_unreach	ACCUMULATION	INT8	TCP segment SYN cache dropped because ICMP is unreachable.	PMMOResult_TCPIP_Meas.M563C127	Sum, nkcuavlbh, tot
tcps_segstimed	ACCUMULATION	INT8	Segments measure RTT. The number	PMMOResult_TCPIP_Meas.M563C107	Sum, nkcuavlbh

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			of segments for which TCP tried to measure Round trip time (RTT).		, tot
tcps_sndacks	ACCUMULATION	INT8	Sent ACK-only TCP segments. The number of sent ACK-only (acknowledgement-only) TCP segments (data length = 0).	PMMOResult_TCPIP_Meas.M563C72	Sum, nkcuavlbh, tot
tcps_sndbyte	ACCUMULATION	INT8	Sent TCP data bytes.	PMMOResult_TCPIP_Meas.M563C69	Sum, nkcuavlbh, tot
tcps_sndctrl	ACCUMULATION	INT8	Control TCP segments. The number of sent control (SYN, FIN, RST) TCP segments (data length = 0).	PMMOResult_TCPIP_Meas.M563C77	Sum, nkcuavlbh, tot
tcps_sndpack	ACCUMULATION	INT8	TCP data segments sent. The number of TCP segments sent (data length > 0).	PMMOResult_TCPIP_Meas.M563C68	Sum, nkcuavlbh, tot
tcps_sndprobe	ACCUMULATION	INT8	TCP Window probes. The number of sent window probes. 1 byte of data forced by the persist timer.	PMMOResult_TCPIP_Meas.M563C75	Sum, nkcuavlbh, tot
tcps_sndrexmitbyte	ACCUMULATION	INT8	Retransmitted TCP data bytes. The number of retransmitted TCP data bytes sent.	PMMOResult_TCPIP_Meas.M563C71	Sum, nkcuavlbh, tot
tcps_sndrexmitpack	ACCUMULATION	INT8	Retransmitted TCP segments. The number of retransmitted TCP	PMMOResult_TCPIP_Meas.M563C70	Sum, nkcuavlbh, tot

			data segments sent.		
tcps_sndtotal	ACCUMULATION	INT8	Total TCP segments sent. The total number of sent TCP segments.	PMMOResult_TCPIP_Meas.M563C67	Sum, nkcuavlbh, tot
tcps_sndurg	ACCUMULATION	INT8	URG only TCP segments. The number of TCP segments sent with Urgent Pointer (URG) only (data length = 0).	PMMOResult_TCPIP_Meas.M563C74	Sum, nkcuavlbh, tot
tcps_sndwinup	ACCUMULATION	INT8	Window update TCP segments. The number of sent window update-only TCP segments (data length = 0).	PMMOResult_TCPIP_Meas.M563C76	Sum, nkcuavlbh, tot
tcps_timeoutdrop	ACCUMULATION	INT8	Timeout drops. The number of TCP connections dropped in retransmission timeout.	PMMOResult_TCPIP_Meas.M563C109	Sum, nkcuavlbh, tot
tot_tcp_tx_rx_bytes	ACCUMULATION	INT8	Total number of TCP bytes send and received	{tot_tcps_sndbyte_sndrexmitbyte}+ {tot_tcps_rcvbyte_all}	Sum, nkcuavlbh, tot
tot_tcps_rcvbyte_all	ACCUMULATION	INT8	Total received TCP data bytes	{tcps_rcvackbyte} + {tcps_rcvbyte} + {tcps_rcvdupbyte} + {tcps_rcvpartdupbyte} + {tcps_rcvoobyte} + {tcps_rcvbyteafterwin}	Sum, nkcuavlbh, tot
tot_tcps_sndbyte_sndrexmitbyte	ACCUMULATION	INT8	Total sent and retransmit data bytes	{tcps_sndbyte} + {tcps_sndrexmitbyte}	Sum, nkcuavlbh, tot

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7.7.14 Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv4

TCPIP - UDPv4 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
udps_badlen	ACCUMULATION	INT8	The number of received UPD datagrams not delivered to upper layers because the data is longer than the datagram itself.	PMMOResult_TCPIP_Meas.M563C133	Sum, nkcuavlbh, tot
udps_badsum	ACCUMULATION	INT8	Bad checksum of the UDP datagram. The number of received UPD datagrams not delivered because of checksum errors.	PMMOResult_TCPIP_Meas.M563C134	Sum, nkcuavlbh, tot
udps_fullsock	ACCUMULATION	INT8	UDP packets dropped because of full socket buffers. The number of received UDP datagrams not delivered because input socket buffers are full.	PMMOResult_TCPIP_Meas.M563C137	Sum, nkcuavlbh, tot
udps_hdrops	ACCUMULATION	INT8	Incomplete UDP datagram header. The number of received UDP datagrams not delivered because the datagram is shorter than the header.	PMMOResult_TCPIP_Meas.M563C132	Sum, nkcuavlbh, tot
udps_ipackets	ACCUMULATION	INT8	Received UDP datagrams. The	PMMOResult_TCPIP_Meas.M563C131	Sum, nkcuavlbh

			total number of received UDP datagrams delivered to UDP users.		, tot
udps_noportbcast	ACCUMULATION	INT8	Broadcast/multicast UPD datagrams with no port. The number of received broadcast/multicast UPD datagrams with no process on the destination port.	PMMOResult_TCPIP_Meas.M563C136	Sum, nkcuavlbh, tot
udps_noport	ACCUMULATION	INT8	Received UDP datagrams with no port. The number of received UDP datagrams with no process on the destination port.	PMMOResult_TCPIP_Meas.M563C135	Sum, nkcuavlbh, tot
udps_opackets	ACCUMULATION	INT8	UDP datagrams output. The total number of UDP datagrams sent.	PMMOResult_TCPIP_Meas.M563C139	Sum, nkcuavlbh, tot
udps_pcbhashmiss	ACCUMULATION	INT8	UDP datagram PCB hash misses. The number of UPD datagrams with Process Control Block (PCB) hash misses.	PMMOResult_TCPIP_Meas.M563C138	Sum, nkcuavlbh, tot

7.7.15 Computer_Unit.Nokia.UMTS.tcpip_measurement.udpv6

TCPIP - UDPv6 measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
udp6s_badlen	ACCUMULATION	INT8	Bad data length of a UDPv6 datagram. The number of received UPDv6 datagrams not delivered because the data is longer than the packet.	PMMOResult_TCPIP_Meas.M563C228	Sum, nkcuavlbh, tot
udp6s_badsum	ACCUMULATION	INT8	Bad checksum of a UDPv6 datagram. The number of received UPDv6 datagrams not delivered because of checksum errors.	PMMOResult_TCPIP_Meas.M563C229	Sum, nkcuavlbh, tot
udp6s_fullsock	ACCUMULATION	INT8	UDPv6 datagrams dropped because of full socket buffers. The number of received UDPv6 datagrams not delivered because input socket buffers are full.	PMMOResult_TCPIP_Meas.M563C233	Sum, nkcuavlbh, tot
udp6s_hdrops	ACCUMULATION	INT8	Incomplete UDPv6 datagram header. The number of received UDPv6 datagrams not delivered because the packet is shorter than the header.	PMMOResult_TCPIP_Meas.M563C227	Sum, nkcuavlbh, tot
udp6s_ipackets	ACCUMULATION	INT8	Received UDPv6 datagrams. The total number of received UDP	PMMOResult_TCPIP_Meas.M563C226	Sum, nkcuavlbh, tot

			datagrams delivered to UDPv6 users.		
udp6s_noportmcast	ACCUMULATION	INT8	Multicast UPDv6 datagrams with no port. The number of received UPDv6 multicast/broadcast datagrams discarded because of no process on the destination port.	PMMOResult_TCPIP_Meas.M563C232	Sum, nkcuavlbh, tot
udp6s_noport	ACCUMULATION	INT8	Received UDPv6 datagrams with no process on the destination port.	PMMOResult_TCPIP_Meas.M563C231	Sum, nkcuavlbh, tot
udp6s_nosum	ACCUMULATION	INT8	Received UDPv6 datagrams without checksum.	PMMOResult_TCPIP_Meas.M563C230	Sum, nkcuavlbh, tot
udp6s_opackets	ACCUMULATION	INT8	UDPv6 datagrams output. Total number of UDPv6 datagrams sent.	PMMOResult_TCPIP_Meas.M563C235	Sum, nkcuavlbh, tot
udp6s_pcbcachemiss	ACCUMULATION	INT8	UDPv6 PCB hash misses. The number of UPDv6 datagrams with Process Control Block (PCB) hash misses.	PMMOResult_TCPIP_Meas.M563C234	Sum, nkcuavlbh, tot

7.7.16 Computer_Unit.Nokia.UMTS.unit_load

Computer unit load statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

average_load	INTENSITY	FLOAT	The Average Load for monitored computer unit. The value is the arithmetical average of samples taken from the processor load. The length of the sampling interval is 4 seconds.	PMMOResult_Unit_Load.M592C0	Average, avg, max, min, nkcuavlbh, tot
peak_load_date	INTENSITY	INTEGER	Peak Load date	PMMOResult_Unit_Load.M592C2	Constant, avg, max, min, nkcuavlbh, tot
peak_load_time	INTENSITY	INTEGER	Peak load time	PMMOResult_Unit_Load.M592C3	Constant, avg, max, min, nkcuavlbh, tot
peak_load	INTENSITY	FLOAT	The Peak Load of monitored computer unit.This is the highest recorded value of the processor load during a measurement period. The value is the average of the sampling interval. The length of the sampling interval is 4 seconds.	PMMOResult_Unit_Load.M592C1	Constant, avg, max, min, nkcuavlbh, tot

7.8 DSP_Pool Performance Indicators

This section shows the key performance indicators and other counters for the DSP_Pool object, divided into the following sub-sections:

- DSP_Pool.Nokia.UMTS.dsp_resource_util

7.8.1 DSP_Pool.Nokia.UMTS.dsp_resource_util

DSP resource utilization statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
available_cap_on_ne	INTENSITY	FLOAT	The percentage of resources available in a service pool (or the total percentage of available shared TPG resources in the MGW).	PMMOResult_DSP_Resource_Utilization.M615C0	Constant, avg, max, min, nkrttbh, tot
curr_res_alloc_on_ne	INTENSITY	INTEGER	The current number of resources allocated from a service pool.	PMMOResult_DSP_Resource_Utilization.M615C2	Constant, avg, max, min, nkrttbh, tot
fail_alloc_dsp_on_ne	ACCUMULATION	INTEGER	The number of times resource allocation failed due to lack of DSP resources in a service pool.	PMMOResult_DSP_Resource_Utilization.M615C5	Sum, nkrttbh, tot
fail_alloc_ppc_on_ne	ACCUMULATION	INTEGER	The number of times resource allocation failed due to lack of shared TPG resources.	PMMOResult_DSP_Resource_Utilization.M615C6	Sum, nkrttbh, tot
fail_modify_on_ne	ACCUMULATION	INTEGER	The number of times modification of a resource failed due to lack of DSP/TPG	PMMOResult_DSP_Resource_Utilization.M615C7	Sum, nkrttbh, tot

			resources.		
lowest_cap_on_ne	INTENSITY	FLOAT	The lowest measured percentage of resources available in a service pool (or the lowest measured percentage of total shared TPG resources in the MGW).	PMMOResult_DSP_Resource_Utilization.M615C1	Minimum, avg, max, min, nkrttbh, tot
peak_res_alloc_on_ne	INTENSITY	INTEGER	The peak number of resources allocated from a service pool.	PMMOResult_DSP_Resource_Utilization.M615C3	Constant, avg, max, min, nkrttbh, tot
ser_pool_overflow_on_ne	ACCUMULATION	INTEGER	The number of times a resource was allocated from a secondary pool instead of the primary pool.	PMMOResult_DSP_Resource_Utilization.M615C8	Sum, nkrttbh, tot
succ_res_alloc_on_ne	ACCUMULATION	INTEGER	The total cumulative number of the resources allocated from a service pool.	PMMOResult_DSP_Resource_Utilization.M615C4	Sum, nkrttbh, tot

7.9 Ethernet_IF Performance Indicators

This section shows the key performance indicators and other counters for the Ethernet_IF object, divided into the following sub-sections:

- Ethernet_IF.Nokia.UMTS.ethernet_if_perf

7.9.1 Ethernet_IF.Nokia.UMTS.ethernet_if_perf

Ethernet frames performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ether_drop_events	ACCUMULATION	INT8	The number of drop packet events.	PMMOResult_Ethernet_Interface_Perf.M564C30	Sum, nkrttbh, tot
ether_rx_1024_max_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length between 1024 and the maximum number of bytes.	PMMOResult_Ethernet_Interface_Perf.M564C10	Sum, nkrttbh, tot
ether_rx_128_255_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length between 128 and 255 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C7	Sum, nkrttbh, tot
ether_rx_256_511_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length between 256 and 511 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C8	Sum, nkrttbh, tot
ether_rx_512_1023_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length between 512 and 1023 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C9	Sum, nkrttbh, tot
ether_rx_64_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length of exactly 64 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C5	Sum, nkrttbh, tot
ether_rx_65_127_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length between 65 and 127 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C6	Sum, nkrttbh, tot
ether_rx_broadcast	ACCUMULA	INT8	The number of	PMMOResult_Ethernet	Sum,

_frame	TION		Ethernet frames transmitted with broadcast address.	_Interface_Perf.M564C3	nkrttbh, tot
ether_rx_buffer_overflow	ACCUMULATION	INT8	The number of Ethernet frames dropped due to RX buffer overflow.	PMMOResult_Ethernet_Interface_Perf.M564C15	Sum, nkrttbh, tot
ether_rx_crc_err	ACCUMULATION	INT8	The number of Ethernet frames received that have a CRC error.	PMMOResult_Ethernet_Interface_Perf.M564C14	Sum, nkrttbh, tot
ether_rx_frame_alignment_err	ACCUMULATION	INT8	The number of Ethernet frames that have an error which occurred because the frame does not end on a byte boundary are received.	PMMOResult_Ethernet_Interface_Perf.M564C11	Sum, nkrttbh, tot
ether_rx_frame	ACCUMULATION	INT8	The total number of Ethernet frames received.	PMMOResult_Ethernet_Interface_Perf.M564C0	Sum, nkrttbh, tot
ether_rx_kilobyte	ACCUMULATION	INT8	The total number of kilobytes received.	PMMOResult_Ethernet_Interface_Perf.M564C1	Sum, nkrttbh, tot
ether_rx_multicast_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with multicast address.	PMMOResult_Ethernet_Interface_Perf.M564C2	Sum, nkrttbh, tot
ether_rx_too_long_frame	ACCUMULATION	INT8	The number of Ethernet frames received with a length greater than the maximum frame size.	PMMOResult_Ethernet_Interface_Perf.M564C12	Sum, nkrttbh, tot
ether_rx_too_short	ACCUMULA	INT8	The number of	PMMOResult_Ethernet	Sum,

_frame	TION		Ethernet frames received with a length of less than 64 bytes.	_Interface_Perf.M564C 13	nkrttbh, tot
ether_rx_unicast_frame	ACCUMULATION	INT8	The number of Ethernet frames received with physical MAC address.	PMMOResult_Ethernet_Interface_Perf.M564C 4	Sum, nkrttbh, tot
ether_rx_vlan_tagged	ACCUMULATION	INT8	The number of received packets that are VLAN tagged.	PMMOResult_Ethernet_Interface_Perf.M564C 16	Sum, nkrttbh, tot
ether_tx_1024_max_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with a length between 1024 and the maximum number of bytes.	PMMOResult_Ethernet_Interface_Perf.M564C 27	Sum, nkrttbh, tot
ether_tx_128_255_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with a length between 128 and 255 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C 24	Sum, nkrttbh, tot
ether_tx_256_511_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with a length between 256 and 511 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C 25	Sum, nkrttbh, tot
ether_tx_512_1023_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with a length between 512 and 1023 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C 26	Sum, nkrttbh, tot
ether_tx_64_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with a length of exactly 64 bytes.	PMMOResult_Ethernet_Interface_Perf.M564C 22	Sum, nkrttbh, tot
ether_tx_65_127_f	ACCUMULA	INT8	The number of	PMMOResult_Ethernet	Sum,

rame	TION		Ethernet frames transmitted with a length between 65 and 127 bytes.	_Interface_Perf.M564C23	nkrttbh, tot
ether_tx_abort_for_coll	ACCUMULATION	INT8	The number of Ethernet frames not transmitted - transmission is aborted after 16 collisions.	PMMOResult_Ethernet_Interface_Perf.M564C28	Sum, nkrttbh, tot
ether_tx_broadcast_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with broadcast address.	PMMOResult_Ethernet_Interface_Perf.M564C20	Sum, nkrttbh, tot
ether_tx_frame	ACCUMULATION	INT8	The total number of Ethernet frames transmitted.	PMMOResult_Ethernet_Interface_Perf.M564C17	Sum, nkrttbh, tot
ether_tx_kilobyte	ACCUMULATION	INT8	The total number of kilobytes transmitted.	PMMOResult_Ethernet_Interface_Perf.M564C18	Sum, nkrttbh, tot
ether_tx_late_coll	ACCUMULATION	INT8	The number of Ethernet frames that were dropped because of a late collision for Half-duplex mode are transmitted.	PMMOResult_Ethernet_Interface_Perf.M564C29	Sum, nkrttbh, tot
ether_tx_multicast_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with multicast address.	PMMOResult_Ethernet_Interface_Perf.M564C19	Sum, nkrttbh, tot
ether_tx_unicast_frame	ACCUMULATION	INT8	The number of Ethernet frames transmitted with physical MAC address.	PMMOResult_Ethernet_Interface_Perf.M564C21	Sum, nkrttbh, tot

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7.10 Exchange_Terminal Performance Indicators

This section shows the key performance indicators and other counters for the Exchange_Terminal object, divided into the following sub-sections:

- Exchange_Terminal.Nokia.UMTS.crc_measurement
- Exchange_Terminal.Nokia.UMTS.disturbance_stats_limit
- Exchange_Terminal.Nokia.UMTS.frame_alignment_loss
- Exchange_Terminal.Nokia.UMTS.pdh_error_code

7.10.1 Exchange_Terminal.Nokia.UMTS.crc_measurement

CRC measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
local_end_avail_time	ACCUMULATION	INTEGER	CRC measurement: availability time at the local end, given in 1/100 seconds.	PMMOResult_PDH_Statistics.M145B2C63	Sum, tot
local_end_bbe	PERCENTAGE	FLOAT	CRC measurement: percentage of background block errors at the local end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C69	Average, avg
local_end_degraded_minutes	PERCENTAGE	FLOAT	CRC measurement: percentage of degraded minutes at the local end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C65	Average, avg
local_end_error_f	PERCENTA	FLOA	CRC	PMMOResult_PDH_Sta	Average,

ree_sec	GE	T	measurement: percentage of error free seconds at the local end, given in 1/100 percents (the percentage value multiplied with 100).	tistics.M145B2C67	avg
local_end_errored_seconds	PERCENTAGE	FLOAT	CRC measurement: percentage of errored seconds at the local end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C66	Average, avg
local_end_ser_errored_sec	PERCENTAGE	FLOAT	CRC measurement: percentage of seriously errored seconds at the local end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C68	Average, avg
local_end_total_time	ACCUMULATION	INTEGER	CRC measurement: total time at the local end, given in 1/100 seconds.	PMMOResult_PDH_Statistics.M145B2C62	Sum, tot
local_end_unavail_time	ACCUMULATION	INTEGER	CRC measurement: unavailability time at the local end, given in 1/100	PMMOResult_PDH_Statistics.M145B2C64	Sum, tot

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			seconds.		
remote_end_avail_time	ACCUMULATION	INTEGER	CRC measurement: availability time at the remote end, given in 1/100 seconds.	PMMOResult_PDH_Statistics.M145B2C71	Sum, tot
remote_end_bbe	PERCENTAGE	FLOAT	CRC measurement: percentage of background block errors at the remote end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C77	Average, avg
remote_end_degraded_minutes	PERCENTAGE	FLOAT	CRC measurement: percentage of degraded minutes at the remote end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C73	Average, avg
remote_end_error_free_sec	PERCENTAGE	FLOAT	CRC measurement: percentage of error free seconds at the remote end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C75	Average, avg
remote_end_errored_seconds	PERCENTAGE	FLOAT	CRC measurement: percentage of errored seconds at the remote end, given in 1/100 percents (the	PMMOResult_PDH_Statistics.M145B2C74	Average, avg

			percentage value multiplied with 100).		
remote_end_ser_errored_sec	PERCENTAGE	FLOAT	CRC measurement: percentage of seriously errored seconds at the remote end, given in 1/100 percents (the percentage value multiplied with 100).	PMMOResult_PDH_Statistics.M145B2C76	Average, avg
remote_end_total_time	ACCUMULATION	INTEGER	CRC measurement: total time at the remote end, given in 1/100 seconds.	PMMOResult_PDH_Statistics.M145B2C70	Sum, tot
remote_end_unavail_time	ACCUMULATION	INTEGER	CRC measurement: unavailability time at the remote end, given in 1/100 seconds.	PMMOResult_PDH_Statistics.M145B2C72	Sum, tot

7.10.2 Exchange_Terminal.Nokia.UMTS.disturbance_stats_limit

Disturbance measurement statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ais_received_ctr_1	ACCUMULATION	INTEGER	The number of 'AIS received' disturbances of group 1. Disturbances are divided into four groups according	PMMOResult_PDH_Statistics.M145B2C21	Sum, tot

			to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		
ais_received_ctr_2	ACCUMULATION	INTEGER	The number of 'AIS received' disturbances of group 2. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C22	Sum, tot
ais_received_ctr_3	ACCUMULATION	INTEGER	The number of 'AIS received' disturbances of group 3. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C23	Sum, tot
ais_received_ctr_4	ACCUMULATION	INTEGER	The number of 'AIS received' disturbances of group 4. Disturbances are divided into four groups according to the duration of the disturbance.	PMMOResult_PDH_Statistics.M145B2C24	Sum, tot

			The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		
disturb_ctr_1_lower_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C6	Sum, tot
disturb_ctr_1_upper_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C7	Sum, tot
disturb_ctr_2_lower_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C8	Sum, tot

disturb_ctr_2_upper_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C9	Sum, tot
disturb_ctr_3_lower_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C10	Sum, tot
disturb_ctr_3_upper_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C11	Sum, tot
disturb_ctr_4_lower_limit	ACCUMULATION	INTEGER	The limits for statistics counters of disturbances. The disturbances are recorded according to the duration of the disturbance. This field indicates the limits expressed in milliseconds.	PMMOResult_PDH_Statistics.M145B2C12	Sum, tot

frame_alignment_lost_ctr_1	ACCUMULATION	INTEGER	The number of 'frame alignment signal lost' disturbances of group 1. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C17	Sum, tot
frame_alignment_lost_ctr_2	ACCUMULATION	INTEGER	The number of 'frame alignment signal lost' disturbances of group 2. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C18	Sum, tot
frame_alignment_lost_ctr_3	ACCUMULATION	INTEGER	The number of 'frame alignment signal lost' disturbances of group 3. Disturbances are divided into four groups according to the duration of the disturbance.	PMMOResult_PDH_Statistics.M145B2C19	Sum, tot

			The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		
frame_alignment_lost_ctr_4	ACCUMULATION	INTEGER	The number of 'frame alignment signal lost' disturbances of group 4. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C20	Sum, tot
in_signal_missing_ctr_1	ACCUMULATION	INTEGER	The number of 'incoming signal missing' disturbances of group 1. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C13	Sum, tot
in_signal_missing_ctr_2	ACCUMULATION	INTEGER	The number of 'incoming signal missing' disturbances of group 2. Disturbances are divided into four groups according to the duration of	PMMOResult_PDH_Statistics.M145B2C14	Sum, tot

			the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		
in_signal_missing_ctr_3	ACCUMULATION	INTEGER	The number of 'incoming signal missing' disturbances of group 3. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C15	Sum, tot
in_signal_missing_ctr_4	ACCUMULATION	INTEGER	The number of 'incoming signal missing' disturbances of group 4. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C16	Sum, tot
remote_end_alarm_ctr_1	ACCUMULATION	INTEGER	The number of 'remote end alarm' disturbances of	PMMOResult_PDH_Statistics.M145B2C25	Sum, tot

			group 1. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		
remote_end_alarm_ctr_2	ACCUMULATION	INTEGER	The number of 'remote end alarm' disturbances of group 2. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C26	Sum, tot
remote_end_alarm_ctr_3	ACCUMULATION	INTEGER	The number of 'remote end alarm' disturbances of group 3. Disturbances are divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.	PMMOResult_PDH_Statistics.M145B2C27	Sum, tot
remote_end_alarm_ctr_4	ACCUMULATION	INTEGER	The number of 'remote end alarm' disturbances of group 4. Disturbances are	PMMOResult_PDH_Statistics.M145B2C28	Sum, tot

			divided into four groups according to the duration of the disturbance. The disturbance limits are defined in the M145B2C6-M145B2C12 fields.		

7.10.3 Exchange_Terminal.Nokia.UMTS.frame_alignment_loss

Frame alignment statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fra_ctr_1_lower_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	PMMOResult_PDH_Statistics.M145B2C49	Sum, tot
fra_ctr_1_upper_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The	PMMOResult_PDH_Statistics.M145B2C50	Sum, tot

			field indicates the counter limits (errors/5 seconds).		
fra_ctr_2_lower_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	PMMOResult_PDH_Statistics.M145B2C51	Sum, tot
fra_ctr_2_upper_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	PMMOResult_PDH_Statistics.M145B2C52	Sum, tot
fra_ctr_3_lower_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	PMMOResult_PDH_Statistics.M145B2C53	Sum, tot
fra_ctr_3_upper_l	ACCUMULA	INTEG	Limits for the	PMMOResult_PDH_Sta	Sum, tot

imit	TION	ER	statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	tistics.M145B2C54	
fra_ctr_4_lower_limit	ACCUMULATION	INTEGER	Limits for the statistics counters of frame alignment loss. The bit error ratio is based on the erroneous frame alignment signals received during five seconds. The field indicates the counter limits (errors/5 seconds).	PMMOResult_PDH_Statistics.M145B2C55	Sum, tot
frame_alignment_error_ctr_1	ACCUMULATION	INTEGER	Counter 1 for frame alignment errors. The errors are counted using four counters depending on the number of errors within five seconds. The error limits are defined in the M145B2C49-M145B2C55 fields.	PMMOResult_PDH_Statistics.M145B2C56	Sum, tot

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frame_alignment_error_ctr_2	ACCUMULATION	INTEGER	Counter 2 for frame alignment errors. The errors are counted using four counters depending on the number of errors within five seconds. The error limits are defined in the M145B2C49-M145B2C55 fields.	PMMOResult_PDH_Statistics.M145B2C57	Sum, tot
frame_alignment_error_ctr_3	ACCUMULATION	INTEGER	Counter 3 for frame alignment errors. The errors are counted using four counters depending on the number of errors within five seconds. The error limits are defined in the M145B2C49-M145B2C55 fields.	PMMOResult_PDH_Statistics.M145B2C58	Sum, tot
frame_alignment_error_ctr_4	ACCUMULATION	INTEGER	Counter 4 for frame alignment errors. The errors are counted using four counters depending on the number of errors within five seconds. The error limits are defined in the M145B2C49-M145B2C55 fields.	PMMOResult_PDH_Statistics.M145B2C59	Sum, tot
negative_slips	ACCUMULATION	INTEGER	The counter value for negative slips.	PMMOResult_PDH_Statistics.M145B2C60	Sum, tot

positive_slips	ACCUMULATION	INTEGER	The counter value for positive slips.	PMMOResult_PDH_Statistics.M145B2C61	Sum, tot

7.10.4 Exchange_Terminal.Nokia.UMTS.pdh_error_code

PDH error code statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
crc_error_code	INTENSITY	FLOAT	Error code concerning the CRC counters. Zero value means a successful report, non-zero value indicates that no CRC counters are present. The value is a general DX error code in decimal format.	PMMOResult_PDH_Statistics.M145B2C5	Constant, avg, max, min, tot
dist_error_code	INTENSITY	FLOAT	Error code concerning the short disturbances counters. Zero value means a successful report, non-zero value indicates that no disturbance counters are present. The value is a general DX error code in decimal format.	PMMOResult_PDH_Statistics.M145B2C2	Constant, avg, max, min, tot
fra_error_code	INTENSITY	FLOAT	Error code concerning the frame alignment error counters. Zero	PMMOResult_PDH_Statistics.M145B2C3	Constant, avg, max, min, tot

			value means a successful report, non-zero value indicates that no frame alignment counters are present. The value is a general DX error code in decimal format.		
slip_error_code	INTENSITY	FLOAT	Error code concerning the slip counters. Zero value means a successful report, non-zero value indicates that no slip counters are present. The value is a general DX error code in decimal format.	PMMOResult_PDH_Statistics.M145B2C4	Constant, avg, max, min, tot
total_error_code	INTENSITY	FLOAT	Error code concerning the whole report. Zero value means a successful report, non-zero value indicates that no counters are present. The value is a general DX error code in decimal format.	PMMOResult_PDH_Statistics.M145B2C1	Constant, avg, max, min, tot

7.11 FTM_AAL2 Performance Indicators

This section shows the key performance indicators and other counters for the FTM_AAL2 object, divided into the following sub-sections:

- FTM_AAL2.Nokia.UMTS.aal2_priority_queue_bts

7.11.1 FTM_AAL2.Nokia.UMTS.aal2_priority_queue_bts

AAL2 prioritisation queue statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
avg_aal2_buff_delay_pri_q_1	INTENSITY	INTEGER	Average buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C4	Average, avg, max, min, nkrttbh, tot
avg_aal2_buff_delay_pri_q_2	INTENSITY	INTEGER	Average buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C5	Average, avg, max, min, nkrttbh, tot
avg_aal2_buff_delay_pri_q_3	INTENSITY	INTEGER	Average buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C6	Average, avg, max, min, nkrttbh, tot
avg_aal2_buff_delay_pri_q_4	INTENSITY	INTEGER	Average buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C7	Average, avg, max, min, nkrttbh, tot
drop_byte_aal2_pri_overf_q_1	ACCUMULATION	INTEGER	Number of bytes in dropped UDP packets due to uplink AAL2 prioritisation queue buffer overflow inside VCC.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C0	Sum, nkrttbh, tot
drop_byte_aal2_pri_overf_q_2	ACCUMULATION	INTEGER	Number of bytes in dropped UDP packets due to uplink AAL2	PMMOResult_AAL2_Sched_Perf_BTS.M5115C1	Sum, nkrttbh, tot

			prioritisation queue buffer overflow inside VCC.		
drop_byte_aal2_pri_overf_q_3	ACCUMULATION	INTEGER	Number of bytes in dropped UDP packets due to uplink AAL2 prioritisation queue buffer overflow inside VCC.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C2	Sum, nkrttbh, tot
drop_byte_aal2_pri_overf_q_4	ACCUMULATION	INTEGER	Number of bytes in dropped UDP packets due to uplink AAL2 prioritisation queue buffer overflow inside VCC.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C3	Sum, nkrttbh, tot
max_aal2_buff_delay_pri_q_1	INTENSITY	INTEGER	Maximum buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C8	Constant, avg, max, min, nkrttbh, tot
max_aal2_buff_delay_pri_q_2	INTENSITY	INTEGER	Maximum buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C9	Constant, avg, max, min, nkrttbh, tot
max_aal2_buff_delay_pri_q_3	INTENSITY	INTEGER	Maximum buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C10	Constant, avg, max, min, nkrttbh, tot
max_aal2_buff_delay_pri_q_4	INTENSITY	INTEGER	Maximum buffering delay per AAL2 prioritisation queue.	PMMOResult_AAL2_Sched_Perf_BTS.M5115C11	Constant, avg, max, min, nkrttbh, tot

7.12 FTM_ATM_IF Performance Indicators

This section shows the key performance indicators and other counters for the FTM_ATM_IF object, divided into the following sub-sections:

- FTM_ATM_IF.Nokia.UMTS.interface_measurement

7.12.1 FTM_ATM_IF.Nokia.UMTS.interface_measurement

FTM ATM interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
discarded_cells_due_to_hec	ACCUMULATION	INT8	Count of incoming ATM cells discarded due to a Header Error Check (HEC) violation. For the FTOA (the SDH/ Sonet transport sub-module) this counter counts noncorrectable AND correctable HEC errors together.	PMMOResult_FTM_ATM_if.M5105C3	Sum, nkrttbh, tot
disccells	ACCUMULATION	INT8	The number of incoming ATM cells, which have been discarded due to protocol errors (e.g. illegal VPI/VCI value).	PMMOResult_FTM_ATM_if.M5105C4	Sum, nkrttbh, tot
totcbrcellsegress	ACCUMULATION	INT8	Total number of cells with Service Category CBR transmitted from ATM interface.	PMMOResult_FTM_ATM_if.M5105C6	Sum, nkrttbh, tot

totcbrcellsingress	ACCUMULATION	INT8	Total number of cells with service category CBR received at the ATM interface.	PMMOResult_FTM_ATM_if.M5105C5	Sum, nkrttbh, tot
totcellsegress	ACCUMULATION	INT8	Total number of cells transmitted on an ATM interface.	PMMOResult_FTM_ATM_if.M5105C1	Sum, nkrttbh, tot
totcellsingress	ACCUMULATION	INT8	Total number of cells received on an ATM interface.	PMMOResult_FTM_ATM_if.M5105C0	Sum, nkrttbh, tot
totubrcellsegress	ACCUMULATION	INT8	Total number of cells with service category UBR transmitted from the ATM interface.	PMMOResult_FTM_ATM_if.M5105C8	Sum, nkrttbh, tot
totubrcellsingress	ACCUMULATION	INT8	Total number of cells with service category UBR received at the ATM interface.	PMMOResult_FTM_ATM_if.M5105C7	Sum, nkrttbh, tot
unavailable_seconds_on_atm_interface	ACCUMULATION	INTEGER	Unavailable Seconds (UAS) are calculated by counting the number of seconds for which the ATM interface is unavailable.	PMMOResult_FTM_ATM_if.M5105C2	Sum, nkrttbh, tot

7.13 FTM_ATM_VC Performance Indicators

This section shows the key performance indicators and other counters for the FTM_ATM_VC object, divided into the following sub-sections:

- FTM_ATM_VC.Nokia.UMTS.interface_measurement

7.13.1 FTM_ATM_VC.Nokia.UMTS.interface_measurement

FTM ATM virtual channel (VC) statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
totcellsegressvc	ACCUMULATION	INT8	Total number of ATM cells transmitted (CLP0 and 1) at a ATM Virtual Channel (VC).	PMMOResult_FTM_ATM_VC.M5106C1	Sum, nkrttbh, tot
totcellsingressvc	ACCUMULATION	INT8	Total number of ATM cells received (CLP0 and 1) at a ATM Virtual Channel (VC).	PMMOResult_FTM_ATM_VC.M5106C0	Sum, nkrttbh, tot

7.14 FTM_ATM_VP Performance Indicators

This section shows the key performance indicators and other counters for the FTM_ATM_VP object, divided into the following sub-sections:

- FTM_ATM_VP.Nokia.UMTS.interface_measurement

7.14.1 FTM_ATM_VP.Nokia.UMTS.interface_measurement

FTM ATM virtual path (VP) statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
totcellsegressvp	ACCUMULATION	INT8	Total number of cells transmitted (CLP0 and 1) at a ATM Virtual Path (VP).	PMMOResult_FTM_ATM_VP.M5107C1	Sum, nkrttbh, tot
totcellsingressvp	ACCUMULATION	INT8	Total number of ATM cells received (CLP0 and 1) at a ATM Virtual Path (VP)	PMMOResult_FTM_ATM_VP.M5107C0	Sum, nkrttbh, tot

7.15 FTM_Ethernet_Link Performance Indicators

This section shows the key performance indicators and other counters for the FTM_Ethernet_Link object, divided into the following sub-sections:

- FTM_Ethernet_Link.Nokia.UMTS.interface_measurement

7.15.1 FTM_Ethernet_Link.Nokia.UMTS.interface_measurement

FTM ethernet interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
ethifinocts_15	ACCUMULATION	INT8	Number of octets in valid frames received on the interface.	PMMOResult_FTM_ethernet_link.M5110C0	Sum, nkrttbh, tot
ethifinpkt_15	ACCUMULATION	INT8	Number of received Ethernet packets on the interface (errored and non-errored).	PMMOResult_FTM_ethernet_link.M5110C2	Sum, nkrttbh, tot
ethifinpkterr_15	ACCUMULATION	INT8	Number of received Ethernet packets with FCS errors.	PMMOResult_FTM_ethernet_link.M5110C4	Sum, nkrttbh, tot
ethifinunknownvlan_15	ACCUMULATION	INT8	Number of received Ethernet packets with unknown VLAN ID.	PMMOResult_FTM_ethernet_link.M5110C7	Sum, nkrttbh, tot
ethifoutdiscshaping_15	ACCUMULATION	INT8	Number of Ethernet TX packets that are discarded due to rate shaping.	PMMOResult_FTM_ethernet_link.M5110C6	Sum, nkrttbh, tot
ethifoutocts_15	ACCUMULATION	INT8	Number of octets in valid frames transmitted on the interface	PMMOResult_FTM_ethernet_link.M5110C1	Sum, nkrttbh, tot
ethifoutpkt_15	ACCUMULA	INT8	Number of	PMMOResult_FTM_et	Sum,

	TION		transmitted Ethernet packets on the interface.	hernet_link.M5110C3	nkrttbh, tot
ethifses_15	ACCUMULATION	INTEGER	Severely Errored Seconds (SES): Counts the number of seconds which contain a defect. Defect: LOS on Ethernet interface. SES are not incremented during Unavailable Seconds (UAS). Standard: [G.826].	PMMOResult_FTM_ethernet_link.M5110C10	Sum, nkrttbh, tot
ethifuas_15	ACCUMULATION	INTEGER	Unavailable Seconds (UAS): Counts the number of seconds for which the interface is unavailable. The interface is defined unavailable from either the beginning of: 1. 10 contiguous SES, and/ or 2. a defect. An interface is available again after a 10 second absence of all defects and SES. While the interface is	PMMOResult_FTM_ethernet_link.M5110C9	Sum, nkrttbh, tot

			unavailable, the only count that is incremented is UAS. Defect: LOS on Ethernet interface only. Standard: [G.826].		
ethunknownpsnhdr_15	ACCUMULATION	INT8	The number of Ethernet frames received whose PSN header is not configured or has a reserved value.	PMMOResult_FTM_ethernet_link.M5110C8	Sum, nkrttbh, tot

7.16 FTM_IP Performance Indicators

This section shows the key performance indicators and other counters for the FTM_IP object, divided into the following sub-sections:

- FTM_IP.Nokia.UMTS.ftm_ip_stats
- FTM_IP.Nokia.UMTS.ftm_timing

7.16.1 FTM_IP.Nokia.UMTS.ftm_ip_stats

FTM IP statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ifinerrors15	ACCUMULATION	INT8	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.	PMMOResult_FTM_IP_Statistics.M5117C4	Sum, nkrttbh, tot
ifinoctets15	ACCUMULATION	INT8	The total number of octects received by the interface, including framing characters.	PMMOResult_FTM_IP_Statistics.M5117C1	Sum, nkrttbh, tot
ifinpackets15	ACCUMULA	INT8	The number of	PMMOResult_FTM_IP	Sum,

	TION		inbound packets that were delivered to higher-layer protocols.	_Statistics.M5117C0	nkrttbh, tot
ifoutoctets15	ACCUMULATION	INT8	The total number of octets transmitted by the interface, including framing characters.	PMMOResult_FTM_IP_Statistics.M5117C3	Sum, nkrttbh, tot
ifoutpackets15	ACCUMULATION	INT8	The number of outbound packets that were successfully transmitted.	PMMOResult_FTM_IP_Statistics.M5117C2	Sum, nkrttbh, tot

7.16.2 FTM_IP.Nokia.UMTS.ftm_timing

Timing over packet service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
topavephaseerror15	INTENSITY	INTEGER	The average value of the timing over packet service phase error in microseconds during the interval.	PMMOResult_FTM_Timing_Packet.M5116C2	Average, avg, max, min, nkrttbh, tot
topmaxphaseerror15	INTENSITY	INTEGER	The maximum value of the timing over packet service phase error in microseconds during the interval.	PMMOResult_FTM_Timing_Packet.M5116C3	Constant, avg, max, min, nkrttbh, tot

topminphaseerror15	INTENSITY	INTEGER	The minimum value of the timing over packet service phase error in microseconds during the interval.	PMMOResult_FTM_Timing_Packet.M5116C1	Minimum, avg, max, min, nkrttbh, tot
toprxsyncmsg15	ACCUMULATION	INTEGER	The number of received ToP event messages. Event messages are time stamped and used for clock recovery.	PMMOResult_FTM_Timing_Packet.M5116C4	Sum, nkrttbh, tot
topsls15	ACCUMULATION	INTEGER	The number of seconds during this interval while the timing over packet service was in synchronous state.	PMMOResult_FTM_Timing_Packet.M5116C0	Sum, nkrttbh, tot

7.17 FTM_PDH_IF Performance Indicators

This section shows the key performance indicators and other counters for the FTM_PDH_IF object, divided into the following sub-sections:

- FTM_PDH_IF.Nokia.UMTS.interface_measurement

7.17.1 FTM_PDH_IF.Nokia.UMTS.interface_measurement

FTM PDH connection interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
background_block_errors	ACCUMULATION	INTEGER	Background Block Errors (BBE): counts the number of errored blocks. Errored block is a block in which one or more bits are corrupted.	PMMOResult_FTM_PDH_if.M5101C3	Sum, nkrttbh, tot

			Corruption is detected by inspecting the CRC information and/or the Frame Alignment Signal (FAS). Does not count during during SES or UAS.		
errored_seconds	ACCUMULATION	INTEGER	Errored Seconds (ES): counts the number of seconds with one or more errored blocks or at least one defect. Errored block is a block in which one ore more bits are corrupted. Defect: LOS, LOF, AIS. ES are not incremented during Unavailable Seconds (UAS).	PMMOResult_FTM_PDH_if.M5101C1	Sum, nkrttbh, tot
severely_errored_seconds	ACCUMULATION	INTEGER	Severely Errored Seconds (SES): counts the number of seconds which contain at least 30% errored blocks or at least one defect. Defect: LOS, LOF, AIS. SES is a subset of ES. Errored block: A block in which one ore more bits are corrupted. SES	PMMOResult_FTM_PDH_if.M5101C2	Sum, nkrttbh, tot

			are not incremented during Unavailable Seconds (UAS) Standard: [G.826]		
unavailable_seconds	ACCUMULATION	INTEGER	Unavailable Seconds (UAS): counts the number of seconds for which the interface is unavailable. The interface is defined to be unavailable from either the beginning of 10 contiguous SES, and/or a defect. An interface is available again after a 10-second absence of all defects and SES. While the interface is unavailable, the only count that is incremented is UAS. Defect: LOS, LOF, AIS.	PMMOResult_FTM_PDH_if.M5101C0	Sum, nkrttbh, tot

7.18 FTM_PHB Performance Indicators

This section shows the key performance indicators and other counters for the FTM_PHB object, divided into the following sub-sections:

- FTM_PHB.Nokia.UMTS.ftm_phb_stats

7.18.1 FTM_PHB.Nokia.UMTS.ftm_phb_stats

FTM PHB statistics

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
ifdroppedoctets_af1	ACCUMULATION	INT8	The number of outbound octets within the Assured Forwarding 1 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C18	Sum, nkrttbh, tot
ifdroppedoctets_af2	ACCUMULATION	INT8	The number of outbound octets within the Assured Forwarding 2 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C14	Sum, nkrttbh, tot
ifdroppedoctets_af3	ACCUMULATION	INT8	The number of outbound octets within the Assured Forwarding 3 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C10	Sum, nkrttbh, tot
ifdroppedoctets_af4	ACCUMULATION	INT8	The number of outbound octets within the Assured Forwarding 4 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C6	Sum, nkrttbh, tot
ifdroppedoctets_be	ACCUMULA	INT8	The number of	PMMOResult_FTM_P	Sum,

	TION		outbound octets within the Best Effort PHB class that were dropped in the IP scheduler due to congestion.	HB_Statistics.M5118C22	nkrttbh, tot
ifdroppedoctets_ef	ACCUMULATION	INT8	The number of outbound octets within the Expedited Forwarding PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C2	Sum, nkrttbh, tot
ifdroppedpackets_af1	ACCUMULATION	INT8	The number of outbound packets within the Assured Forwarding 1 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C19	Sum, nkrttbh, tot
ifdroppedpackets_af2	ACCUMULATION	INT8	The number of outbound packets within the Assured Forwarding 2 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C15	Sum, nkrttbh, tot
ifdroppedpackets_af3	ACCUMULATION	INT8	The number of outbound packets within the Assured Forwarding 3 PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C11	Sum, nkrttbh, tot
ifdroppedpackets_a	ACCUMULA	INT8	The number of	PMMOResult_FTM_P	Sum,

f4	TION		outbound packets within the Assured Forwarding 4 PHB class that were dropped in the IP scheduler due to congestion.	HB_Statistics.M5118C7	nkrttbh, tot
ifdroppedpackets_be	ACCUMULATION	INT8	The number of outbound packets within the Best Effort PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C23	Sum, nkrttbh, tot
ifdroppedpackets_ef	ACCUMULATION	INT8	The number of outbound packets within the Expedited Forwarding PHB class that were dropped in the IP scheduler due to congestion.	PMMOResult_FTM_PHB_Statistics.M5118C3	Sum, nkrttbh, tot
ifoctets_af1	ACCUMULATION	INT8	The total number of octets transmitted out of the interface, including framing characters, using the Assured Forwarding 1 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C16	Sum, nkrttbh, tot
ifoctets_af2	ACCUMULATION	INT8	The total number of octets transmitted out of the interface, including framing	PMMOResult_FTM_PHB_Statistics.M5118C12	Sum, nkrttbh, tot

			characters, using the Assured Forwarding 2 PHB class.		
ifoctets_af3	ACCUMULATION	INT8	The total number of octets transmitted out of the interface, including framing characters, using the Assured Forwarding 3 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C8	Sum, nkrttbh, tot
ifoctets_af4	ACCUMULATION	INT8	The total number of octets transmitted out of the interface, including framing characters, using the Assured Forwarding 4 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C4	Sum, nkrttbh, tot
ifoctets_be	ACCUMULATION	INT8	The total number of octets transmitted out of the interface, including framing characters, using the Best Effort PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C20	Sum, nkrttbh, tot
ifoctets_ef	ACCUMULATION	INT8	The total number of octets transmitted by the interface, including framing characters, using Expedited Forwarding PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C0	Sum, nkrttbh, tot
ifpackets_af1	ACCUMULATION	INT8	The number of outbound packets that were successfully	PMMOResult_FTM_PHB_Statistics.M5118C17	Sum, nkrttbh, tot

			transmitted within the Assured Forwarding 1 PHB class.		
ifpackets_af2	ACCUMULATION	INT8	The number of outbound packets that were successfully transmitted within the Assured Forwarding 2 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C13	Sum, nkrttbh, tot
ifpackets_af3	ACCUMULATION	INT8	The number of outbound packets that were successfully transmitted within the Assured Forwarding 3 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C9	Sum, nkrttbh, tot
ifpackets_af4	ACCUMULATION	INT8	The number of outbound packets that were successfully transmitted within the Assured Forwarding 4 PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C5	Sum, nkrttbh, tot
ifpackets_be	ACCUMULATION	INT8	The number of outbound packets that were successfully transmitted within the Best Effort PHB class.	PMMOResult_FTM_PHB_Statistics.M5118C21	Sum, nkrttbh, tot
ifpackets_ef	ACCUMULATION	INT8	The number of outbound packets that were	PMMOResult_FTM_PHB_Statistics.M5118C1	Sum, nkrttbh, tot

			successfully transmitted within the Expedited Forwarding PHB class.		

7.19 FTM_PSN_IP Performance Indicators

This section shows the key performance indicators and other counters for the FTM_PSN_IP object, divided into the following sub-sections:

- FTM_PSN_IP.Nokia.UMTS.interface_measurement

7.19.1 FTM_PSN_IP.Nokia.UMTS.interface_measurement

FTM packet switching network IP tunnelling statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
pwtpktlost_15	ACCUMULATION	INTEGER	Number of lost Ethernet frames carrying PWE frames.	PMMOResult_FTM_PSN_IP.M5114C3	Sum, nkrttbh, tot
pwtpktrecv_15	ACCUMULATION	INT8	Number of received packets on a tunnel.	PMMOResult_FTM_PSN_IP.M5114C1	Sum, nkrttbh, tot
pwtpkttransm_15	ACCUMULATION	INT8	Number of transmitted packets on a tunnel.	PMMOResult_FTM_PSN_IP.M5114C2	Sum, nkrttbh, tot
pwtunknownpwhdr_15	ACCUMULATION	INTEGER	The number of received Ethernet frames whose pseudowire header is not configured or has a reserved value.	PMMOResult_FTM_PSN_IP.M5114C0	Sum, nkrttbh, tot

7.20 FTM_PWMP_IF Performance Indicators

This section shows the key performance indicators and other counters for the FTM_PWMP_IF object, divided into the following sub-sections:

- FTM_PWMP_IF.Nokia.UMTS.interface_measurement

7.20.1 FTM_PWMP_IF.Nokia.UMTS.interface_measurement

FTM SDH VCX connection interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
pseudowire_packet_loss	ACCUMULATION	INTEGER	Based on pseudowire sequence numbers, an estimation of the number of lost packets will be provided guided by RFC 4717.	PMMOResult_PWMP.M5113C2	Sum, nkrttbh, tot
pwses_15	ACCUMULATION	INTEGER	Severely Errored Seconds (SES): Counts the number of seconds which contain a defect. Defect: BFD down in ingress or egress. SES are not incremented during Unavailable Seconds (UAS) Standard: [G.826].	PMMOResult_PWMP.M5113C1	Sum, nkrttbh, tot
pwuas_15	ACCUMULATION	INTEGER	Unavailable Seconds (UAS): Counts the number of seconds for which the interface is unavailable. The interface is	PMMOResult_PWMP.M5113C0	Sum, nkrttbh, tot

			defined unavailable from either the beginning of: 10 contiguous SES, and/or a defect. An interface is available again after a 10 second absence of all defects and SES. While the interface is unavailable, the only count that is incremented is UAS. Defect: BFD down in ingress or egress only. Standard: [G.826].		

7.21 FTM_SDH_IF Performance Indicators

This section shows the key performance indicators and other counters for the FTM_SDH_IF object, divided into the following sub-sections:

- FTM_SDH_IF.Nokia.UMTS.interface_measurement

7.21.1 FTM_SDH_IF.Nokia.UMTS.interface_measurement

FTM SDH connection interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
bbe_b15	ACCUMULATION	INTEGER	Background Block Errors (BBE) on the Sdh Path (B3): Counts the number of errored blocks not occurring during SES or UAS. Errored block: A block in which one ore	PMMOResult_FTM_SDH_if.M5102C7	Sum, nkrttbh, tot

			more bits are corrupted. Detected by inspecting the bit interleaved parity (BIP) information. Standard: [G.826]		
es_b315	ACCUMULATION	INTEGER	Errored Seconds (ES) on the SDH Path (B3): Counts the number of seconds with one or more errored blocks or at least one defect. Defect: LOS, LOF, AIS-MS, AIS-AU, LOP-AU, UNEQHP, PLM-HP. Errored block: A block in which one ore more bits are corrupted. ES are not incremented during Unavailable Seconds (UAS) Standard: [G.826]	PMMOResult_FTM_SDH_if.M5102C5	Sum, nkrttbh, tot
ses_b315	ACCUMULATION	INTEGER	Severely Errored Seconds (SES) on the SDH Path (B3): Counts the number of seconds which contain 30% errored blocks or at least one defect. Defect: LOS, LOF, AIS-MS, AIS-AU, LOPAU, UNEQ-HP, PLM-HP. SES	PMMOResult_FTM_SDH_if.M5102C6	Sum, nkrttbh, tot

			is a subset of ES. Errored block: A block in which one ore more bits are corrupted. Detected by inspecting the bit interleaved parity (BIP) information. SES are not incremented during Unavailable Seconds (UAS). Standard: [G.826]		
uas_b315	ACCUMULATION	INTEGER	Unavailable Seconds (UAS) on the SDH Path (B3): Counts the number of seconds for which the SDH Path on the interface is unavailable. The interface is defined unavailable from either the beginning of 10 contiguous SES B3, or from the beginning of a defect. An interface is available again after a 10 second absence of all defects and SES. While the interface is unavailable, the only count that is incremented is UAS. Defect: LOS, LOF, AIS-MS, AIS-AU, LOP-AU, UNEQHP, PLM-	PMMOResult_FTM_SDH_if.M5102C4	Sum, nkrttbh, tot

			HP. Standard: [G.826]		

7.22 IMA_Group Performance Indicators

This section shows the key performance indicators and other counters for the IMA_Group object, divided into the following sub-sections:

- IMA_Group.Nokia.UMTS.logical_interface_ima

7.22.1 IMA_Group.Nokia.UMTS.logical_interface_ima

IMA link and group interface statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
gr_fc	ACCUMULATION	INT8	The number of Near End group failure condition in the IMA Group.The number of possible Near End group failure alarms when conditions are config abort and there are insufficient links.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C1	Sum, nkrttbh, tot
gr_uas_ima	ACCUMULATION	INT8	Unavailable seconds of IMA Group. An interval when the IMA group is unable to transfer cells. The number of one second intervals when the Group Traffic State Machine (GTSM)	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C0	Sum, nkrttbh, tot

			is down.		
iv_ima1	ACCUMULATION	INT8	ICP violations of IMA link.The number of errors, invalid or missing links in the IMA Control ProtocolCell (ICP) cells. This does not include SES IMA and UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C3	Sum, nkrttbh, tot
iv_ima2	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C15	Sum, nkrttbh, tot
iv_ima3	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C27	Sum, nkrttbh, tot
iv_ima4	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C39	Sum, nkrttbh, tot
iv_ima5	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C51	Sum, nkrttbh, tot
iv_ima6	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C63	Sum, nkrttbh, tot

iv_ima7	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C75	Sum, nkrttbh, tot
iv_ima8	ACCUMULATION	INT8	Sum of errored, invalid or missing ICP cells, except during SES IMA and UASIMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C87	Sum, nkrttbh, tot
rx_fc1	ACCUMULATION	INT8	Near End Rx link failure count of IMA link .The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C13	Sum, nkrttbh, tot
rx_fc2	ACCUMULATION	INT8	Near End Rx link failure count of IMA link (AF PHY 0086.001).The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C25	Sum, nkrttbh, tot
rx_fc3	ACCUMULA	INT8	Near End Rx link	PMMOResult_IMA_G	Sum,

	TION		failure count of IMA link.The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.	ROUP_ID_IMA_LOGICAL_IF.M514C37	nkrttbh, tot
rx_fc4	ACCUMULATION	INT8	Near End Rx link failure count of IMA link (AF PHY 0086.001).The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C49	Sum, nkrttbh, tot
rx_fc5	ACCUMULATION	INT8	Near End Rx link failure count of IMA link (AF PHY 0086.001).The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C61	Sum, nkrttbh, tot
rx_fc6	ACCUMULATION	INT8	Near End Rx link failure count of IMA link. The number of Near End Rx link failures, Loss of IMA Frame (LIF),	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C73	Sum, nkrttbh, tot

			Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.		
rx_fc7	ACCUMULATION	INT8	Near End Rx link failure count of IMA link (AF PHY 0086.001).The number of Near End Rx link failures, Loss of IMA Frame (LIF), Link Out of Delay Synchronization (LODS) and Rx Fault alarm condition entries.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C85	Sum, nkrttbh, tot
rx_fc8	ACCUMULATION	INT8	The count of Near End Rx link failure (LIF, LODS, Rx Fault) alarm condition entrances	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C97	Sum, nkrttbh, tot
rx_uus_ima_fe1	ACCUMULATION	INT8	The Rx unusable seconds at Far End of IMA link .The number of seconds that have Rx unusable indications from the Rx FarEnd LSM. The interval when the IMA link is unable to transfer cells.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C11	Sum, nkrttbh, tot
rx_uus_ima_fe2	ACCUMULATION	INT8	The count of seconds with Rx unusable	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C23	Sum, nkrttbh, tot

			indications from the Rx Far End LSM.		
rx_uus_ima_fe3	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C35	Sum, nkrttbh, tot
rx_uus_ima_fe4	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C47	Sum, nkrttbh, tot
rx_uus_ima_fe5	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C59	Sum, nkrttbh, tot
rx_uus_ima_fe6	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C71	Sum, nkrttbh, tot
rx_uus_ima_fe7	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C83	Sum, nkrttbh, tot
rx_uus_ima_fe8	ACCUMULATION	INT8	The count of seconds with Rx unusable indications from the Rx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C95	Sum, nkrttbh, tot
rx_uus_ima1	ACCUMULATION	INT8	The Rx unusable seconds of IMA	PMMOResult_IMA_GROUP_ID_IMA_LOGI	Sum, nkrttbh,

			link .The number of Rx unusable seconds at the Rx Near End Link State Machine (LSM). The interval when the IMA link is unable to transfer cells.	CAL_IF.M514C9	tot
rx_uus_ima2	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C21	Sum, nkrttbh, tot
rx_uus_ima3	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C33	Sum, nkrttbh, tot
rx_uus_ima4	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C45	Sum, nkrttbh, tot
rx_uus_ima5	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C57	Sum, nkrttbh, tot
rx_uus_ima6	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C69	Sum, nkrttbh, tot
rx_uus_ima7	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C81	Sum, nkrttbh, tot
rx_uus_ima8	ACCUMULATION	INT8	The count of Rx unusable seconds at the Tx Near End	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C93	Sum, nkrttbh, tot

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			LSM.		
ses_ima_fe1	ACCUMULATION	INT8	Severely errored seconds at far end of IMA link .The number of one second intervals at Far End containing one or more RDI IMA defects. This does not include defects during USA IMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C5	Sum, nkrttbh, tot
ses_ima_fe2	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C17	Sum, nkrttbh, tot
ses_ima_fe3	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C29	Sum, nkrttbh, tot
ses_ima_fe4	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C41	Sum, nkrttbh, tot
ses_ima_fe5	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C53	Sum, nkrttbh, tot

			USAIMA FE conditions.		
ses_ima_fe6	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C65	Sum, nkrttbh, tot
ses_ima_fe7	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C77	Sum, nkrttbh, tot
ses_ima_fe8	ACCUMULATION	INT8	The count of one second intervals at Far End containing one or more RDIIMA defects, except during the USAIMA FE conditions.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C89	Sum, nkrttbh, tot
ses_ima1	ACCUMULATION	INT8	Severely errored seconds at near end of IMA link .The number of one second intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C4	Sum, nkrttbh, tot

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			(for example, LOS, OOF/LOF,AIS or LCD), LIF or LODS defects. This does not include defects during UAS IMA condition.		
ses_ima2	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C16	Sum, nkrttbh, tot
ses_ima3	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C28	Sum, nkrttbh, tot
ses_ima4	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C40	Sum, nkrttbh, tot

			cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.		
ses_ima5	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C52	Sum, nkrttbh, tot
ses_ima6	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C64	Sum, nkrttbh, tot

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ses_ima7	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C76	Sum, nkrttbh, tot
ses_ima8	ACCUMULATION	INT8	Count of one seconds intervals at Near End containing greater than or equal to 30% of the ICP cells counted as IV IMA or one or more link defects (for example, LOS, OOF/LOF, AIS or LCD), LIF or LODS defects except during UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C88	Sum, nkrttbh, tot
tx_fc1	ACCUMULATION	INT8	Near End Tx link failure of the IMA link .The number of Near End Tx link failures Tx misconnected and Tx Fault alarm condition entries	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C12	Sum, nkrttbh, tot
tx_fc2	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C24	Sum, nkrttbh, tot

tx_fc3	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C36	Sum, nkrttbh, tot
tx_fc4	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C48	Sum, nkrttbh, tot
tx_fc5	ACCUMULATION	INT8	TX_FC5 GCN62 The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C60	Sum, nkrttbh, tot
tx_fc6	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C72	Sum, nkrttbh, tot
tx_fc7	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C84	Sum, nkrttbh, tot
tx_fc8	ACCUMULATION	INT8	The count of Near End Tx link failure (Tx misconnected, Tx Fault) alarm condition entrances.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C96	Sum, nkrttbh, tot

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tx_uus_ima_fe1	ACCUMULATION	INT8	The Tx unusable seconds at Far End of IMA link .The number of seconds that have Tx unusable indicates to the Tx Far EndLink State Machine (LSM). The interval when the IMA link is unable to transfer cells.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C10	Sum, nkrttbh, tot
tx_uus_ima_fe2	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C22	Sum, nkrttbh, tot
tx_uus_ima_fe3	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C34	Sum, nkrttbh, tot
tx_uus_ima_fe4	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C46	Sum, nkrttbh, tot
tx_uus_ima_fe5	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C58	Sum, nkrttbh, tot
tx_uus_ima_fe6	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C70	Sum, nkrttbh, tot

tx_uus_ima_fe7	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C82	Sum, nkrttbh, tot
tx_uus_ima_fe8	ACCUMULATION	INT8	The count of seconds with Tx unusable indications from the Tx Far End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C94	Sum, nkrttbh, tot
tx_uus_ima1	ACCUMULATION	INT8	The Tx unusable seconds of IMA link .The number of Tx unusable seconds at the Tx Near End Link State Machine (LSM). The interval when the IMA link is unable to transfer cells.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C8	Sum, nkrttbh, tot
tx_uus_ima2	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C20	Sum, nkrttbh, tot
tx_uus_ima3	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C32	Sum, nkrttbh, tot
tx_uus_ima4	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C44	Sum, nkrttbh, tot
tx_uus_ima5	ACCUMULATION	INT8	The count of Tx unusable seconds at	PMMOResult_IMA_GROUP_ID_IMA_LOGI	Sum, nkrttbh,

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			the Tx Near End LSM.	CAL_IF.M514C56	tot
tx_uus_ima6	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C68	Sum, nkrttbh, tot
tx_uus_ima7	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C80	Sum, nkrttbh, tot
tx_uus_ima8	ACCUMULATION	INT8	The count of Tx unusable seconds at the Tx Near End LSM.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C92	Sum, nkrttbh, tot
uas_ima_fe1	ACCUMULATION	INT8	Unavailable seconds at Far End of IMA link .At the Far End the period of unavailable time begins at the start of ten consecutive SES IMAFE. This includes the first ten seconds to enter the UAS IMA FE condition and ends at the start of ten consecutive seconds with no SES IMA FE. This does not include the last ten seconds to exit the UAS IMA FE condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C7	Sum, nkrttbh, tot
uas_ima_fe2	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C19	Sum, nkrttbh, tot

			the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.		
uas_ima_fe3	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C31	Sum, nkrttbh, tot
uas_ima_fe4	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C43	Sum, nkrttbh, tot

			with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.		
uas_ima_fe5	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C55	Sum, nkrttbh, tot
uas_ima_fe6	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C67	Sum, nkrttbh, tot
uas_ima_fe7	ACCUMULATION	INT8	End unavailability begins at the onset of 10 contiguous	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C79	Sum, nkrttbh, tot

			SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.		
uas_ima_fe8	ACCUMULATION	INT8	Unavailable seconds at Far End: Far End unavailability begins at the onset of 10 contiguous SES IMA FE including the first 10 seconds to enter the UASIMA FE condition and ends at the onset of 10 contiguous seconds with no SESIMA FE, excluding the last 10 seconds to exit the UAS IMA FE condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C91	Sum, nkrttbh, tot
uas_ima1	ACCUMULATION	INT8	Unavailable seconds at Near End of IMA link. .At the Near End the period of unavailable time begins at the start of ten consecutive SES IMA. This includes the first	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C6	Sum, nkrttbh, tot

			ten seconds to enter the UAS IMA condition and ends at the start of the first ten consecutive seconds with no SES IMA. This does not include the last ten seconds to exit the UAS IMA condition.		
uas_ima2	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C18	Sum, nkrttbh, tot
uas_ima3	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C30	Sum, nkrttbh, tot

			10 seconds to exit the UAS IMA condition.		
uas_ima4	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C42	Sum, nkrttbh, tot
uas_ima5	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C54	Sum, nkrttbh, tot

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uas_ima6	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C66	Sum, nkrttbh, tot
uas_ima7	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C78	Sum, nkrttbh, tot
uas_ima8	ACCUMULATION	INT8	Unavailable seconds at Near End: Near End unavailability begins at the onset of 10 contiguous SES IMA including the first 10 seconds to enter the UAS	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C90	Sum, nkrttbh, tot

			IMA condition and ends at the onset of 10 contiguous seconds with no SES IMA, excluding the last 10 seconds to exit the UAS IMA condition.		
unit_index1	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C2	Average, tot, min, max
unit_index2	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C14	Average, tot, min, max
unit_index3	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C26	Average, tot, min, max
unit_index4	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C38	Average, tot, min, max
unit_index5	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C50	Average, tot, min, max
unit_index6	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C62	Average, tot, min, max
unit_index7	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C74	Average, tot, min, max
unit_index8	INTENSITY	INTEGER	IMA link id.	PMMOResult_IMA_GROUP_ID_IMA_LOGICAL_IF.M514C86	Average, tot, min, max

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7.23 Interface Performance Indicators

This section shows the key performance indicators and other counters for the Interface object, divided into the following sub-sections:

- Interface.Nokia.UMTS.interface_measurement_atm
- Interface.Nokia.UMTS.interface_measurement_stm1

7.23.1 Interface.Nokia.UMTS.interface_measurement_atm

ATM interface at RNC equipment measurement.

KPI	Type	Data Type	Description	Derivation	Aggregation
disc_hec	ACCUMULATION	INTEGER	The number of ingress cells discarded due to HEC violation.	PMMOResult_ATM_interface.M532C26	Sum, tot
eg_cap	INTENSITY	INTEGER	The configured egress bandwidth for CLP=0+1 ATM cells.	PMMOResult_ATM_interface.M532C25	Average, avg, max, min, tot
eg_cbr_queued_cell	ACCUMULATION	INT8	The number of egress CBR cells in queue per interface.	PMMOResult_ATM_interface.M532C5	Sum, tot
eg_cbr_rec_cell	ACCUMULATION	INT8	The number of received egress CBR cells per interface.	PMMOResult_ATM_interface.M532C3	Sum, tot
eg_cbr_tr_cell	ACCUMULATION	INT8	The number of transmitted egress CBR cells per interface.	PMMOResult_ATM_interface.M532C4	Sum, tot
eg_tot_queued_cell	ACCUMULATION	INT8	The total number of egress ATM cells in queue per interface.	PMMOResult_ATM_interface.M532C23	Sum, tot
eg_tot_rec_cell	ACCUMULATION	INT8	The total number of received egress ATM cells per interface.	PMMOResult_ATM_interface.M532C21	Sum, tot

eg_tot_tr_cell	ACCUMULATION	INT8	The total number of transmitted egress ATM cells per interface.	PMMOResult_ATM_interface.M532C22	Sum, tot
eg_ubr_plus_queued_cell	ACCUMULATION	INT8	The number of egress UBR+ cells in queue per interface.	PMMOResult_ATM_interface.M532C11	Sum, tot
eg_ubr_plus_rec_cell	ACCUMULATION	INT8	The number of received egress UBR+ cells per interface.	PMMOResult_ATM_interface.M532C9	Sum, tot
eg_ubr_plus_tr_cell	ACCUMULATION	INT8	The number of transmitted egress UBR+ cells per interface.	PMMOResult_ATM_interface.M532C10	Sum, tot
eg_ubr_queued_cell	ACCUMULATION	INT8	The number of egress UBR cells in queue per interface.	PMMOResult_ATM_interface.M532C17	Sum, tot
eg_ubr_rec_cell	ACCUMULATION	INT8	The number of received egress UBR cells per interface.	PMMOResult_ATM_interface.M532C15	Sum, tot
eg_ubr_tr_cell	ACCUMULATION	INT8	The number of transmitted egress UBR cells per interface.	PMMOResult_ATM_interface.M532C16	Sum, tot
err_hec	ACCUMULATION	INTEGER	The number of ingress cells with HEC violation, both corrected and discarded cells.	PMMOResult_ATM_interface.M532C27	Sum, tot
in_cap	INTENSITY	INTEGER	The configured ingress bandwidth for CLP=0+1	PMMOResult_ATM_interface.M532C24	Average, avg, max, min, tot

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			ATM cells.		
in_cbr_queued_cell	ACCUMULATION	INT8	The number of ingress CBR cells in queue per interface.	PMMOResult_ATM_interface.M532C2	Sum, tot
in_cbr_rec_cell	ACCUMULATION	INT8	The number of received ingress CBR cells per interface.	PMMOResult_ATM_interface.M532C0	Sum, tot
in_cbr_trans_cell	ACCUMULATION	INT8	The number of transmitted ingress CBR cells per interface.	PMMOResult_ATM_interface.M532C1	Sum, tot
in_tot_queued_cell	ACCUMULATION	INT8	The total number of ingress ATM cells in queue per interface.	PMMOResult_ATM_interface.M532C20	Sum, tot
in_tot_rec_cell	ACCUMULATION	INT8	The total number of received ingress ATM cells per interface.	PMMOResult_ATM_interface.M532C18	Sum, tot
in_tot_tr_cell	ACCUMULATION	INT8	The total number of transmitted ingress ATM cells per interface.	PMMOResult_ATM_interface.M532C19	Sum, tot
in_ubr_plus_queued_cell	ACCUMULATION	INT8	The number of ingress UBR+ cells in queue per interface.	PMMOResult_ATM_interface.M532C8	Sum, tot
in_ubr_plus_rec_cell	ACCUMULATION	INT8	The number of received ingress CBR cells per interface.	PMMOResult_ATM_interface.M532C6	Sum, tot
in_ubr_plus_tr_cell	ACCUMULATION	INT8	The number of transmitted ingress UBR+ cells per interface.	PMMOResult_ATM_interface.M532C7	Sum, tot
in_ubr_queued_cell	ACCUMULATION	INT8	The number of ingress UBR cells in queue per	PMMOResult_ATM_interface.M532C14	Sum, tot

			interface.		
in_ubr_rec_cell	ACCUMULATION	INT8	The number of received ingress UBR cells per interface.	PMMOResult_ATM_interface.M532C12	Sum, tot
in_ubr_tr_cell	ACCUMULATION	INT8	The number of transmitted ingress UBR cells per interface.	PMMOResult_ATM_interface.M532C13	Sum, tot

7.23.2 Interface.Nokia.UMTS.interface_measurement_stm1

STM-1 Interface statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fe_mux_bbe	ACCUMULATION	INT8	Multiplex section background block errors at the Far . An errored block is a block in which one or more bits have an error. B2 byte in section overhead header (SOH) is used for the multiplex section error monitoring using Bit Interleaved Parity 8 (BIP 8) code, in an even parity. The BIP 8 is computed over all bit or previous STM frames after scrambling and is placed in byte B2 of the current	PMMOResult_STM_1_IF.M513C27	Sum, tot

			frame before scrambling.		
fe_mux_es	ACCUMULATION	INT8	Multiplex section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects	PMMOResult_STM_1_IF.M513C28	Sum, tot
fe_mux_ses	ACCUMULATION	INT8	Multiplex section severely errored second at the Far End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects	PMMOResult_STM_1_IF.M513C29	Sum, tot
fe_mux_uas	ACCUMULATION	INT8	Multiplex section unavailable seconds at the Far End. A period of unavailable time	PMMOResult_STM_1_IF.M513C26	Sum, tot

			begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.		
fe_path1_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Far End. An errored block is a block in which one or more bits have an error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8 (BIP 8) code, in an even parity. The BIP 8 is computed over all bits or previous STM frames after scrambling and is placed in byte B3	PMMOResult_STM_1_IF.M513C31	Sum, tot

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			of the current frame before scrambling		
fe_path1_es	ACCUMULATION	INT8	Path termination section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C32	Sum, tot
fe_path1_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Far End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C33	Sum, tot
fe_path1_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Far.	PMMOResult_STM_1_IF.M513C30	Sum, tot

			A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of the unavailable time. A new period of available time begins at the start often consecutive non SES events. These ten seconds are considered to be part of the available time.		
fe_path2_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Far End. An errored block is a block in which one or more bits were in error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8 (BIP 8) code, in an even parity. The BIP 8 is computed over all bits or previous STM	PMMOResult_STM_1_IF.M513C35	Sum, tot

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			frames after scrambling and is placed in byte B3 of the current frame before scrambling.		
fe_path2_es	ACCUMULATION	INT8	Path termination section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C36	Sum, tot
fe_path2_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Far End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C37	Sum, tot

fe_path2_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Far End (ITU T G.826). A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of the unavailable time. A new period of available time begins at the start often consecutive non SES events.	PMMOResult_STM_1_IF.M513C34	Sum, tot
fe_path3_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Far End. An errored block is a block in which one or more bits are in error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8 (BIP 8) code in an even parity. The BIP 8 is computed over all bits or previous STM	PMMOResult_STM_1_IF.M513C39	Sum, tot

			frame after scrambling and is placed in byte B3 of the current frame before scrambling.		
fe_path3_es	ACCUMULATION	INT8	Path termination section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects. The object is path termination section (B3) errors	PMMOResult_STM_1_IF.M513C40	Sum, tot
fe_path3_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Far End). The number of one seconds periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed	PMMOResult_STM_1_IF.M513C41	Sum, tot

			objects.		
fe_path3_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Far End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of the unavailable time. A new period of available time begins at the start often consecutive non SES events. These ten seconds are considered to be part of available time.	PMMOResult_STM_1_IF.M513C38	Sum, tot
ne_mux_bbe	ACCUMULATION	INT8	Multiplex section background block errors at the Near End. An errored block is a block in which one or more bits have an error. B2 byte in section overhead header (SOH) is used for the multiplex section error monitoring using Bit Interleaved Parity 8 (BIP 8) code, in an even	PMMOResult_STM_1_IF.M513C11	Sum, tot

			parity. The BIP 8 is computed over all bits or previous STM frames after scrambling and is placed in byte B2 of the current frame before scrambling.		
ne_mux_es	ACCUMULATION	INT8	Multiplex section errored seconds at the Near End.The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C12	Sum, tot
ne_mux_ses	ACCUMULATION	INT8	Multiplex section severely errored second at the Near End.The number of one second periods which contain greater than or equal threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C13	Sum, tot

ne_mux_uas	ACCUMULATION	INT8	Multiplex section unavailable seconds at the Near End. A period of unavailable time begins at the start of ten consecutive SES events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.	PMMOResult_STM_1_IF.M513C10	Sum, tot
ne_path1_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Near End. An errored block is a block in which one or more bits have an error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bi Interleaved Parity 8 (BIP 8) code, in an even parity. The BIP 8 is computed over all bits or previous STM	PMMOResult_STM_1_IF.M513C15	Sum, tot

			frame after scrambling and is placed in byte B3 of the current frame before scrambling.		
ne_path1_es	ACCUMULATION	INT8	Path termination section errored second at the Near. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects	PMMOResult_STM_1_IF.M513C16	Sum, tot
ne_path1_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Near End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C17	Sum, tot

ne_path1_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Near End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of the unavailable time. A new period of available time begins at the start often consecutive non SES events. These ten seconds are considered to be part of the available time.	PMMOResult_STM_1_IF.M513C14	Sum, tot
ne_path2_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Near End. An errored block is a block in which one or more bits have an error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8 (BIP 8) code, in an even parity. The	PMMOResult_STM_1_IF.M513C19	Sum, tot

			BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B3 of the current frame before scrambling.		
ne_path2_es	ACCUMULATION	INT8	Path termination section errored second at the Near End .The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C20	Sum, tot
ne_path2_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Near End. The number of one second periods which contained greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the	PMMOResult_STM_1_IF.M513C21	Sum, tot

			relevant managed objects		
ne_path2_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Near End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of the unavailable time. A new period of available time begins at the start often consecutive non SES events. These ten seconds are considered to be part of the available time.	PMMOResult_STM_1_IF.M513C18	Sum, tot
ne_path3_bbe	ACCUMULATION	INT8	Path termination section background block errors at the Near End. An errored block is a block in which one or more bits have an error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8	PMMOResult_STM_1_IF.M513C23	Sum, tot

			(BIP 8) code, in an even parity. The BIP 8 is computed over all bits or previous STM frames after scrambling and is placed in byte B3 of the current frame before scrambling.		
ne_path3_es	ACCUMULATION	INT8	Path termination section errored second at the Near End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_STM_1_IF.M513C24	Sum, tot
ne_path3_ses	ACCUMULATION	INT8	Path termination section severely errored second at the Near End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the	PMMOResult_STM_1_IF.M513C25	Sum, tot

			counters may be obtained by the relevant managed objects.		
ne_path3_uas	ACCUMULATION	INT8	Path termination section unavailable seconds at the Near End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.	PMMOResult_STM_1_IF.M513C22	Sum, tot
reg_bbe	ACCUMULATION	INT8	Regenerator section background block errors. An errored block is a block in which one or more bits have an error. B1 byte in section overhead header (SOH) is used for the regeneration section error monitoring using the Bit Interleaved	PMMOResult_STM_1_IF.M513C0	Sum, tot

			Parity 8 (BIP 8) code, in an even parity.The BIP 8 is computed over all bits or previous STM frames after scrambling, and is placed in byte B1 of the current frame before scrambling.In this case the block means STM1 frame.		
reg_es	ACCUMULATION	INT8	Regenerator section errored second. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects. The objects are regeneration section (B1) errors and regeneration section Out Of Frame (OOF) events.	PMMOResult_STM_1_IF.M513C1	Sum, tot
reg_ses	ACCUMULATION	INT8	The number of one second periods which contained greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by the Exchange terminal	PMMOResult_STM_1_IF.M513C2	Sum, tot

			configuration handling MML. The default value of the threshold is 30%. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects. The objects are regeneration section (B1) errors and regeneration section OOF events.		
reg_uas	ACCUMULATION	INT8	Regenerator section is unavailable for a number of seconds. The period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be a part of the	PMMOResult_STM_1_IF.M513C9	Sum, tot

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			available time.		

7.24 IP_IF Performance Indicators

This section shows the key performance indicators and other counters for the IP_IF object, divided into the following sub-sections:

- IP_IF.Nokia.UMTS.ip_qos_meas
- IP_IF.Nokia.UMTS.ipv4_datagrams
- IP_IF.Nokia.UMTS.ipv6_datagrams
- IP_IF.Nokia.UMTS.udp_meas_ip_interface

7.24.1 IP_IF.Nokia.UMTS.ip_qos_meas

IP packets performance statistics

The performance data measurements for this KPI group are recorded against the combination of IP_IF and IP_PHB (ip_phb_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
discarded_packets	ACCUMULATION	INTEGER	The number of received IP packets discarded. Possible reasons for the discard can be for example unknown protocol, version number mismatch, other format errors, time-to-live exceeded or errors discovered in processing IP options.	PMMOResult_IP_QOS_Meas.M567C4	Sum, nkrttbh, tot
egress_sent_bytes	ACCUMULATION	INTEGER	The amount of data sent in IP packets.	PMMOResult_IP_QOS_Meas.M567C3	Sum, nkrttbh, tot
egress_sent_packets	ACCUMULATION	INTEGER	The number of IP packets sent.	PMMOResult_IP_QOS_Meas.M567C2	Sum, nkrttbh, tot
ingress_received_bytes	ACCUMULATION	INTEGER	The amount of data received in IP	PMMOResult_IP_QOS_Meas.M567C1	Sum, nkrttbh,

			packets.		tot
ingress_received_packets	ACCUMULATION	INTEGER	The number of IP packets received.	PMMOResult_IP_QOS_Meas.M567C0	Sum, nkrttbh, tot

7.24.2 IP_IF.Nokia.UMTS.ipv4_datagrams

IPv4 datagrams statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ip4_in_bytes	ACCUMULATION	INTEGER	The amount of data received in IPv4 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C0	Sum, nkrttbh, tot
ip4_in_delivers	ACCUMULATION	INTEGER	The number of IPv4 datagrams delivered to L4 processing	PMMOResult_IP_Meas_IP_Interface.M565C4	Sum, nkrttbh, tot
ip4_in_forw_datagrams	ACCUMULATION	INTEGER	The number of forwarded IPv4 datagrams	PMMOResult_IP_Meas_IP_Interface.M565C3	Sum, nkrttbh, tot
ip4_in_hdr_errors	ACCUMULATION	INTEGER	The number of received IPv4 datagrams with header error	PMMOResult_IP_Meas_IP_Interface.M565C2	Sum, nkrttbh, tot
ip4_in_no_routes	ACCUMULATION	INTEGER	The number of IPv4 datagrams in which there was no IP route defined	PMMOResult_IP_Meas_IP_Interface.M565C5	Sum, nkrttbh, tot
ip4_in_reas_reqds	ACCUMULATION	INTEGER	The number of IPv4 datagrams for which reassembly was required	PMMOResult_IP_Meas_IP_Interface.M565C6	Sum, nkrttbh, tot
ip4_in_receives	ACCUMULA	INTEG	The number of	PMMOResult_IP_Meas	Sum,

	TION	ER	received IPv4 datagrams	_IP_Interface.M565C1	nkrttbh, tot
ip4_out_bytes	ACCUMULATION	INTEGER	The amount of data sent in IPv4 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C7	Sum, nkrttbh, tot
ip4_out_frag_fails	ACCUMULATION	INTEGER	The number of sent IPv4 datagrams which could not be successfully fragmented	PMMOResult_IP_Meas_IP_Interface.M565C11	Sum, nkrttbh, tot
ip4_out_frag_oks	ACCUMULATION	INTEGER	The number of sent IPv4 datagrams which could be successfully fragmented	PMMOResult_IP_Meas_IP_Interface.M565C10	Sum, nkrttbh, tot
ip4_out_fragreates	ACCUMULATION	INTEGER	The number of fragments created for sent IPv4 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C12	Sum, nkrttbh, tot
ip4_out_no_l2_routes	ACCUMULATION	INTEGER	The number of sent IPv4 datagrams for which the L2 gateway was not found	PMMOResult_IP_Meas_IP_Interface.M565C9	Sum, nkrttbh, tot
ip4_out_requests	ACCUMULATION	INTEGER	The number of locally sent IPv4 datagrams	PMMOResult_IP_Meas_IP_Interface.M565C8	Sum, nkrttbh, tot

7.24.3 IP_IF.Nokia.UMTS.ipv6_datagrams

IPv6 datagrams statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ip6_in_bytes	ACCUMULATION	INTEGER	The amount of data received in IPv6 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C13	Sum, nkrttbh, tot
ip6_in_delivers	ACCUMULA	INTEG	The number of	PMMOResult_IP_Meas	Sum,

	TION	ER	IPv6 datagrams delivered to L4 processing	_IP_Interface.M565C17	nkrttbh, tot
ip6_in_forw_datagrams	ACCUMULATION	INTEGER	The number of forwarded IPv6 datagrams	PMMOResult_IP_Meas_IP_Interface.M565C16	Sum, nkrttbh, tot
ip6_in_hdr_errors	ACCUMULATION	INTEGER	The number of received IPv6 datagrams with header error	PMMOResult_IP_Meas_IP_Interface.M565C15	Sum, nkrttbh, tot
ip6_in_no_routes	ACCUMULATION	INTEGER	The number of IPv6 datagrams in which there was no IP route defined	PMMOResult_IP_Meas_IP_Interface.M565C18	Sum, nkrttbh, tot
ip6_in_reas_reqds	ACCUMULATION	INTEGER	The number of IPv6 datagrams for which reassembly was required	PMMOResult_IP_Meas_IP_Interface.M565C19	Sum, nkrttbh, tot
ip6_in_receives	ACCUMULATION	INTEGER	The number of received IPv6 datagrams	PMMOResult_IP_Meas_IP_Interface.M565C14	Sum, nkrttbh, tot
ip6_in_too_big_errors	ACCUMULATION	INTEGER	The number of IPv6 datagrams which exceed MTU	PMMOResult_IP_Meas_IP_Interface.M565C20	Sum, nkrttbh, tot
ip6_in_truncated_pkts	ACCUMULATION	INTEGER	The number of discarded IPv6 datagrams which do not carry enough data.	PMMOResult_IP_Meas_IP_Interface.M565C21	Sum, nkrttbh, tot
ip6_out_bytes	ACCUMULATION	INTEGER	The amount of data sent in IPv6 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C22	Sum, nkrttbh, tot

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ip6_out_frag_fails	ACCUMULATION	INTEGER	The number of sent IPv6 datagrams which could not be successfully fragmented.	PMMOResult_IP_Meas_IP_Interface.M565C26	Sum, nkrttbh, tot
ip6_out_frag_oks	ACCUMULATION	INTEGER	The number of sent IPv6 datagrams which could be successfully fragmented.	PMMOResult_IP_Meas_IP_Interface.M565C25	Sum, nkrttbh, tot
ip6_out_fragreates	ACCUMULATION	INTEGER	The number of fragments which are created for the sent IPv6 datagrams.	PMMOResult_IP_Meas_IP_Interface.M565C27	Sum, nkrttbh, tot
ip6_out_no_l2_routes	ACCUMULATION	INTEGER	The number of sent IPv6 datagrams for which the L2 gateway was not found.	PMMOResult_IP_Meas_IP_Interface.M565C24	Sum, nkrttbh, tot
ip6_out_requests	ACCUMULATION	INTEGER	The number of IPv6 datagrams which are locally sent.	PMMOResult_IP_Meas_IP_Interface.M565C23	Sum, nkrttbh, tot

7.24.4 IP_IF.Nokia.UMTS.udp_meas_ip_interface

UDP datagrams statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
in_datagrams	ACCUMULATION	INTEGER	The number of UDP datagrams received.	PMMOResult_UDP_Meas_IP_Interface.M566C0	Sum, nkrttbh, tot
in_errors	ACCUMULATION	INTEGER	The number of UDP datagrams received with errors.	PMMOResult_UDP_Meas_IP_Interface.M566C2	Sum, nkrttbh, tot

no_ports	ACCUMULATION	INTEGER	The number of UDP datagrams for which there is no application at the destination port.	PMMOResult_UDP_Meas_IP_Interface.M566C1	Sum, nkrttbh, tot
out_datagrams	ACCUMULATION	INTEGER	The number of UDP datagrams sent.	PMMOResult_UDP_Meas_IP_Interface.M566C3	Sum, nkrttbh, tot

7.25 IP_Route Performance Indicators

This section shows the key performance indicators and other counters for the IP_Route object, divided into the following sub-sections:

- IP_Route.Nokia.UMTS.rnc_rtp_rtcp_measurement

7.25.1 IP_Route.Nokia.UMTS.rnc_rtp_rtcp_measurement

RTP and RTCP packets performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
lost_egress_rtp_packets	ACCUMULATION	INTEGER	The number of lost egress direction RTP data packets that are reported to be missing by MGW using RTCP protocol messages.	PMMOResult_RNC_RTP_RTCP.M803C28	Sum, nkrttbh, tot
lost_rtp_packets	ACCUMULATION	INTEGER	The number of lost ingress direction RTP data packets that are not received according to the received sequence numbers.	PMMOResult_RNC_RTP_RTCP.M803C4	Sum, nkrttbh, tot
max_rtp_jitter	INTENSITY	INTEG	The maximum	PMMOResult_RNC_R	Constant,

		ER	jitter value within the collected 5 second samples during the measurement interval.	TP_RTCP.M803C27	avg, max, min, nkrttbh, tot
rec_rtcp_packets	ACCUMULATION	INTEGER	The number of received RTCP packets.	PMMOResult_RNC_RTP_RTCP.M803C6	Sum, nkrttbh, tot
rec_rtp_packets	ACCUMULATION	INTEGER	The number of received RTP packets. The actual number of packets can be calculated by multiplying this counter value by 10.	PMMOResult_RNC_RTP_RTCP.M803C0	Sum, nkrttbh, tot
rec_rtp_payload	ACCUMULATION	INTEGER	The RTP payload data received during the measurement interval. Header and padding data is not included.	PMMOResult_RNC_RTP_RTCP.M803C1	Sum, nkrttbh, tot
rtp_jitter_class_10	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 9...10 ms.	PMMOResult_RNC_RTP_RTCP.M803C16	Sum, nkrttbh, tot
rtp_jitter_class_11	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 10...15 ms.	PMMOResult_RNC_RTP_RTCP.M803C17	Sum, nkrttbh, tot
rtp_jitter_class_12	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 15...20 ms.	PMMOResult_RNC_RTP_RTCP.M803C18	Sum, nkrttbh, tot

rtp_jitter_class_13	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 20...25 ms.	PMMOResult_RNC_RTP_RTCP.M803C19	Sum, nkrttbh, tot
rtp_jitter_class_14	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 25...30 ms.	PMMOResult_RNC_RTP_RTCP.M803C20	Sum, nkrttbh, tot
rtp_jitter_class_15	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 30...35 ms.	PMMOResult_RNC_RTP_RTCP.M803C21	Sum, nkrttbh, tot
rtp_jitter_class_16	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 35...40 ms.	PMMOResult_RNC_RTP_RTCP.M803C22	Sum, nkrttbh, tot
rtp_jitter_class_17	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 40...45 ms.	PMMOResult_RNC_RTP_RTCP.M803C23	Sum, nkrttbh, tot
rtp_jitter_class_18	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 45...50 ms.	PMMOResult_RNC_RTP_RTCP.M803C24	Sum, nkrttbh, tot
rtp_jitter_class_19	ACCUMULA	INTEG	The number of 5	PMMOResult_RNC_R	Sum,

	TION	ER	second sampling intervals where the average RTP jitter is in range 50...55 ms.	TP_RTCP.M803C25	nkrttbh, tot
rtp_jitter_class_1	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is below 1 ms.	PMMOResult_RNC_RTP_RTCP.M803C7	Sum, nkrttbh, tot
rtp_jitter_class_20	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in larger than 55 ms.	PMMOResult_RNC_RTP_RTCP.M803C26	Sum, nkrttbh, tot
rtp_jitter_class_2	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 1...2 ms.	PMMOResult_RNC_RTP_RTCP.M803C8	Sum, nkrttbh, tot
rtp_jitter_class_3	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 2...3 ms.	PMMOResult_RNC_RTP_RTCP.M803C9	Sum, nkrttbh, tot
rtp_jitter_class_4	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 3...4 ms.	PMMOResult_RNC_RTP_RTCP.M803C10	Sum, nkrttbh, tot
rtp_jitter_class_5	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 4...5 ms.	PMMOResult_RNC_RTP_RTCP.M803C11	Sum, nkrttbh, tot
rtp_jitter_class_6	ACCUMULA	INTEG	The number of 5	PMMOResult_RNC_R	Sum,

	TION	ER	second sampling intervals where the average RTP jitter is in range 5...6 ms.	TP_RTCP.M803C12	nkrttbh, tot
rtp_jitter_class_7	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 6...7 ms.	PMMOResult_RNC_RTP_RTCP.M803C13	Sum, nkrttbh, tot
rtp_jitter_class_8	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 7...8 ms.	PMMOResult_RNC_RTP_RTCP.M803C14	Sum, nkrttbh, tot
rtp_jitter_class_9	ACCUMULATION	INTEGER	The number of 5 second sampling intervals where the average RTP jitter is in range 8...9 ms.	PMMOResult_RNC_RTP_RTCP.M803C15	Sum, nkrttbh, tot
sent_rtcp_packets	ACCUMULATION	INTEGER	The number of sent RTCP packets.	PMMOResult_RNC_RTP_RTCP.M803C5	Sum, nkrttbh, tot
sent_rtp_packets	ACCUMULATION	INTEGER	The number of sent RTP packets. The actual number of packets can be calculated by multiplying this counter value by 10.	PMMOResult_RNC_RTP_RTCP.M803C2	Sum, nkrttbh, tot
sent_rtp_payload	ACCUMULATION	INTEGER	The RTP payload data sent during the measurement	PMMOResult_RNC_RTP_RTCP.M803C3	Sum, nkrttbh, tot

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			interval. Header and padding data is not included.		

7.26 IP_Route_BTS Performance Indicators

This section shows the key performance indicators and other counters for the IP_Route_BTS object, divided into the following sub-sections:

- IP_Route_BTS.Nokia.UMTS.ip_route_measurements
- IP_Route_BTS.Nokia.UMTS.ip_transport_resource_reservations

7.26.1 IP_Route_BTS.Nokia.UMTS.ip_route_measurements

IP route measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
committed_bit_rate_ip_route	INTENSITY	FLOAT	IP Based Route committed bit rate at the end of the measurement interval.	PMMOResult_IP_Based_Route.M568C2	Constant, avg, max, min, nkrttbh, tot
in_data_ip_route	ACCUMULATION	INTEGER	The IP datagram data volume received from IP route (ingress).	PMMOResult_IP_Based_Route.M568C1	Sum, nkrttbh, tot
max_ip_udp_conn_ip_route	INTENSITY	INTEGER	The maximum number of IP/UDP connections during the measurement interval.	PMMOResult_IP_Based_Route.M568C8	Constant, avg, max, min, nkrttbh, tot
max_reserved_rate_ip_route	INTENSITY	FLOAT	The maximum value of reserved IP layer bit rate during the measurement interval.	PMMOResult_IP_Based_Route.M568C5	Constant, avg, max, min, nkrttbh, tot
min_ip_udp_conn_ip_route	INTENSITY	INTEGER	The minimum number of IP/UDP connections during the measurement	PMMOResult_IP_Based_Route.M568C7	Minimum, avg, max, min, nkrttbh,

			interval.		tot
min_reserved_rate_ip_route	INTENSITY	FLOAT	The minimum value of reserved IP layer bit rate during the measurement interval.	PMMOResult_IP_Based_Route.M568C4	Minimum, avg, max, min, nkrttbh, tot
nbr_samples_ip_route	ACCUMULATION	INTEGER	The number of samples used for calculating the average number of IP/UDP connections and the average reserved bit rate.	PMMOResult_IP_Based_Route.M568C9	Sum, nkrttbh, tot
out_data_ip_route	ACCUMULATION	INTEGER	The IP datagram data volume sent out to IP route (egress).	PMMOResult_IP_Based_Route.M568C0	Sum, nkrttbh, tot
sum_ip_udp_conn_ip_route	ACCUMULATION	INTEGER	The sum of UDP/IP connections for IP based route. This counter, divided by the denominator M568C9, provides the average number of connections.	PMMOResult_IP_Based_Route.M568C6	Sum, nkrttbh, tot
sum_reserved_rate_ip_route	ACCUMULATION	FLOAT	Sum of samples for IP layer bit rate for IP based route. This counter, divided by the denominator M568C9, provides the average	PMMOResult_IP_Based_Route.M568C3	Sum, nkrttbh, tot

			reserved bit rate.		

7.26.2 IP_Route_BTS.Nokia.UMTS.ip_transport_resource_reservations

IP transport resource reservation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_ip_route_accessibility	PERCENTAGE	FLOAT	IP Route Accessibility	100 * {succ_rnc_ip_res}/ ({succ_rnc_ip_res}+ {fail_rnc_ip_res_ext}+ {fail_rnc_ip_res_int}+ {fail_rnc_ip_res_other})	Average, nkrttbh, tot
fail_bts_ip_res_ext_trans	ACCUMULATION	INTEGER	The number of failed IP transport resource reservations in the BTS due to external connection admission control.	PMMOResult_RNC_IP_CAC.M804C5	Sum, nkrttbh, tot
fail_bts_ip_res_other_trans	ACCUMULATION	INTEGER	The number of failed IP transport resource reservations in the BTS due to some other transport related failure.	PMMOResult_RNC_IP_CAC.M804C6	Sum, nkrttbh, tot
fail_rnc_ip_res_ext	ACCUMULATION	INTEGER	The number of failed IP transport resource reservations in the RNC due to external connection admission control.	PMMOResult_RNC_IP_CAC.M804C1	Sum, nkrttbh, tot
fail_rnc_ip_res_int	ACCUMULATION	INTEGER	The number of failed IP transport resource reservations in the	PMMOResult_RNC_IP_CAC.M804C2	Sum, nkrttbh, tot

			RNC due to internal connection admission control.		
fail_rnc_ip_res_other	ACCUMULATION	INTEGER	The number of failed IP transport resource reservations in the RNC due to other than connection admission control reasons.	PMMOResult_RNC_IP_CAC.M804C3	Sum, nkrttbh, tot
succ_bts_ip_res	ACCUMULATION	INTEGER	The number of successful IP transport resource reservations in the BTS.	PMMOResult_RNC_IP_CAC.M804C4	Sum, nkrttbh, tot
succ_rnc_ip_res	ACCUMULATION	INTEGER	The number of successful IP transport resource reservations in the RNC.	PMMOResult_RNC_IP_CAC.M804C0	Sum, nkrttbh, tot

7.27 IuPC_IF Performance Indicators

This section shows the key performance indicators and other counters for the IuPC_IF object, divided into the following sub-sections:

- IuPC_IF.Nokia.UMTS.sas_performance

7.27.1 IuPC_IF.Nokia.UMTS.sas_performance

RNC to SAS message statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
assistance_data_delivery_failure_from_sas	ACCUMULATION	INTEGER	The number of failed assistance data responses	PMMOResult_IuPC_interface.M1021C3	Sum, nkrttbh, tot

			from SAS.		
assistance_data_requests_to_sas	ACCUMULATION	INTEGER	The number of assistance data requests sent to SAS.	PMMOResult_IuPC_interface.M1021C0	Sum, nkrttbh, tot
dir_pos_init_fail_from_sas	ACCUMULATION	INTEGER	The number of received position initiation failures (with direct reporting) from SAS.	PMMOResult_IuPC_interface.M1021C11	Sum, nkrttbh, tot
dir_pos_init_req_to_sas	ACCUMULATION	INTEGER	The number of sent position initiation requests (with direct reporting) to SAS.	PMMOResult_IuPC_interface.M1021C9	Sum, nkrttbh, tot
dir_pos_init_resp_from_sas	ACCUMULATION	INTEGER	The number of received position initiation responses (with direct reporting) from SAS.	PMMOResult_IuPC_interface.M1021C10	Sum, nkrttbh, tot
error_indications_from_sas	ACCUMULATION	INTEGER	The number of received error indication messages from SAS.	PMMOResult_IuPC_interface.M1021C8	Sum, nkrttbh, tot
per_pos_act_fail_to_sas	ACCUMULATION	INTEGER	The number of sent position activation failures (with periodical reporting) to SAS.	PMMOResult_IuPC_interface.M1021C21	Sum, nkrttbh, tot
per_pos_act_req_from_sas	ACCUMULATION	INTEGER	The total number of received position activation requests (with periodical reporting) from SAS.	PMMOResult_IuPC_interface.M1021C19	Sum, nkrttbh, tot
per_pos_act_resp_to_sas	ACCUMULATION	INTEGER	The number of sent position	PMMOResult_IuPC_interface.M1021C20	Sum, nkrttbh,

			activation responses (with periodical reporting) to SAS.		tot
per_pos_init_fail_from_sas	ACCUMULATION	INTEGER	The number of received position initiation failures (with periodical reporting) from SAS.	PMMOResult_IuPC_interface.M1021C18	Sum, nkrttbh, tot
per_pos_init_req_to_sas	ACCUMULATION	INTEGER	The number of sent position initiation requests (with periodical reporting) to SAS.	PMMOResult_IuPC_interface.M1021C16	Sum, nkrttbh, tot
per_pos_init_resp_from_sas	ACCUMULATION	INTEGER	The number of received position initiation responses (with periodical reporting) from SAS.	PMMOResult_IuPC_interface.M1021C17	Sum, nkrttbh, tot
per_pos_repo_to_sas	ACCUMULATION	INTEGER	The number of sent periodical position reports to SAS.	PMMOResult_IuPC_interface.M1021C22	Sum, nkrttbh, tot
position_calculation_delivery_failure_from_sas	ACCUMULATION	INTEGER	The number of failed position calculation responses from SAS.	PMMOResult_IuPC_interface.M1021C7	Sum, nkrttbh, tot
position_calculation_requests_to_sas	ACCUMULATION	INTEGER	The number of position calculation requests sent to SAS.	PMMOResult_IuPC_interface.M1021C4	Sum, nkrttbh, tot

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rej_dir_loc_due_fail_con_sas	ACCUMULATION	INTEGER	The total number of rejected direct location requests because the connection to SAS has been lost or cannot be established.	PMMOResult_IuPC_interface.M1021C23	Sum, nkrttbh, tot
rej_per_loc_due_fail_con_sas	ACCUMULATION	INTEGER	The total number of rejected periodical location requests because the connection to SAS has been lost or cannot be established.	PMMOResult_IuPC_interface.M1021C24	Sum, nkrttbh, tot
succ_agps_pos_act_to_sas	ACCUMULATION	INTEGER	The number of successfully served AGPS position activation requests (with direct reporting) from SAS.	PMMOResult_IuPC_interface.M1021C14	Sum, nkrttbh, tot
succ_cirtt_pos_act_to_sas	ACCUMULATION	INTEGER	The number of successfully served CIRTT position activation requests (with direct reporting) from SAS.	PMMOResult_IuPC_interface.M1021C12	Sum, nkrttbh, tot
successful_assistance_data_delivery_from_sas	ACCUMULATION	INTEGER	The number of assistance data requests successfully served by SAS.	PMMOResult_IuPC_interface.M1021C2	Sum, nkrttbh, tot
successful_position_calculation_results_from_sas	ACCUMULATION	INTEGER	The number of position calculation requests successfully served by SAS.	PMMOResult_IuPC_interface.M1021C6	Sum, nkrttbh, tot
unsucc_agps_pos_	ACCUMULA	INTEG	The number of	PMMOResult_IuPC_int	Sum,

act_to_sas	TION	ER	unsuccessfully served AGPS position activation requests (with direct reporting) from SAS.	erface.M1021C15	nkrttbh, tot
unsucc_cirtt_pos_act_to_sas	ACCUMULATION	INTEGER	The number of unsuccessfully served CIRTT position activation requests (with direct reporting) from SAS.	PMMOResult_IuPC_interface.M1021C13	Sum, nkrttbh, tot
unsuccessful_assistance_data_requests_using_sas	ACCUMULATION	INTEGER	The number of failed assistance data requests because of SAS was not able to serve the assistance data request.	PMMOResult_IuPC_interface.M1021C1	Sum, nkrttbh, tot
unsuccessful_position_calculations_using_sas	ACCUMULATION	INTEGER	The number of failed position calculation requests because of SAS was not able to serve the position calculation request.	PMMOResult_IuPC_interface.M1021C5	Sum, nkrttbh, tot

7.28 IuPS_IF Performance Indicators

This section shows the key performance indicators and other counters for the IuPS_IF object, divided into the following sub-sections:

- IuPS_IF.Nokia.UMTS.iups_interface

7.28.1 IuPS_IF.Nokia.UMTS.iups_interface

RNC to SGSN link connection statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
average_nbr_of_gtp_tunnels	INTENSITY	INTEGER	The average number of GTP tunnels during measurement period.	PMMOResult_IU_PS_performance.M801C18	Average, avg, max, min, nkrttbh, tot
echo_request_received	ACCUMULATION	INTEGER	The number of GTP: Echo Request messages received from SGSN.	PMMOResult_IU_PS_performance.M801C12	Sum, nkrttbh, tot
echo_response_received	ACCUMULATION	INTEGER	The number of GTP: Echo Response messages received from SGSN.	PMMOResult_IU_PS_performance.M801C13	Sum, nkrttbh, tot
echo_response_sent	ACCUMULATION	INTEGER	The number of GTP: Echo Response messages sent to SGSN.	PMMOResult_IU_PS_performance.M801C14	Sum, nkrttbh, tot
error_indications_received	ACCUMULATION	INTEGER	The number of GTP: Error Indication messages received from SGSN.	PMMOResult_IU_PS_performance.M801C15	Sum, nkrttbh, tot
error_indications_sent	ACCUMULATION	INTEGER	The number of GTP: Error Indication messages sent to SGSN.	PMMOResult_IU_PS_performance.M801C16	Sum, nkrttbh, tot
extens_head_notif_received	ACCUMULATION	INTEGER	The number of GTP: Supported Extension Headers Notification messages received from SGSN.	PMMOResult_IU_PS_performance.M801C17	Sum, nkrttbh, tot

input_bytes_total_udp	ACCUMULATION	INT8	The total number of user data bytes received from PS core network to RNC GTPU unit. Includes both user data and control messages payload. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C0	Sum, nkrttbh, tot
input_ip_packets_total	ACCUMULATION	INT8	The number of IP packets received from PS core network to RNC GTPU unit.	PMMOResult_IU_PS_performance.M801C1	Sum, nkrttbh, tot
input_traf_bytes_tc_backgr	ACCUMULATION	INT8	The number of user data bytes received from PS core network to RNC GTPU unit for background class connections. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C5	Sum, nkrttbh, tot
input_traf_bytes_tc_conv	ACCUMULATION	INT8	-Obsolete in RN3.0-The number of user data bytes received from PS core network to RNC GTPU unit for conversational class connections. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C2	Sum, nkrttbh, tot

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input_traf_bytes_tc_interac	ACCUMULATION	INT8	The number of user data bytes received from PS core network to RNC GTPU unit for interactive class connections. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C4	Sum, nkrttbh, tot
input_traf_bytes_tc_stream	ACCUMULATION	INT8	The number of user data bytes received from PS core network to RNC GTPU unit for streaming class connections. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C3	Sum, nkrttbh, tot
max_nbr_of_gtp_tunnels	INTENSITY	INTEGER	The maximum number of GTP tunnels during measurement period.	PMMOResult_IU_PS_performance.M801C19	Constant, avg, max, min, nkrttbh, tot
output_bytes_total_udp	ACCUMULATION	INT8	The total number of traffic bytes sent from RNC GTPU unit towards PS core network. Includes both user data and control messages payload. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_performance.M801C6	Sum, nkrttbh, tot
output_ip_packets_total	ACCUMULATION	INT8	The number of IP packets sent from RNC GTPU unit towards PS core network.	PMMOResult_IU_PS_performance.M801C7	Sum, nkrttbh, tot
output_traf_bytes	ACCUMULA	INT8	The number of	PMMOResult_IU_PS_p	Sum,

_tc_backgr	TION		user data bytes sent from RNC GTPU unit towards PS core network for background class connections. Does not include the IP, UDP or GTP headers.	erformance.M801C11	nkrttbh, tot
output_traf_bytes _tc_conv	ACCUMULA TION	INT8	-Obsolete in RN3.0-The number of user data bytes sent from RNC GTPU unit towards PS core network for conversational class connections. Does not include the IP, UDP or GTP headers	PMMOResult_IU_PS_p erformance.M801C8	Sum, nkrttbh, tot
output_traf_bytes _tc_interac	ACCUMULA TION	INT8	The number of user data bytes sent from RNC GTPU unit towards PS core network for interactive class connections. Does not include the IP, UDP or GTP headers.	PMMOResult_IU_PS_p erformance.M801C10	Sum, nkrttbh, tot
output_traf_bytes _tc_stream	ACCUMULA TION	INT8	The number of user data bytes sent from RNC GTPU unit towards PS core network for	PMMOResult_IU_PS_p erformance.M801C9	Sum, nkrttbh, tot

			streaming class connections. Does not include the IP, UDP or GTP headers.		

7.29 LCG Performance Indicators

This section shows the key performance indicators and other counters for the LCG object, divided into the following sub-sections:

- LCG.Nokia.UMTS.frame_protocol
- LCG.Nokia.UMTS.wbts_pool_ce_resources

7.29.1 LCG.Nokia.UMTS.frame_protocol

FP payload statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cch_data_from_iub	ACCUMULATION	INT8	Payload data of FP common channels received from the Iub interface to the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C4	Sum, nkrttbh, tot
cch_data_to_iub_interface	ACCUMULATION	INT8	Payload data of FP common channels sent to the Iub interface in the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C3	Sum, nkrttbh, tot
cch_fp_frms_w_crc_error	ACCUMULATION	INT8	Number of received FP data frames with CRC error from common channels.	PMMOResult_Frame_Protocol_WBTS.M5003C9	Sum, nkrttbh, tot
cch_fp_frms_w_delay	ACCUMULATION	INT8	Number of received FP data frames with too high delay from common channels.	PMMOResult_Frame_Protocol_WBTS.M5003C10	Sum, nkrttbh, tot
cch_fp_frms_w_oth_err	ACCUMULATION	INT8	Number of received FP data	PMMOResult_Frame_Protocol_WBTS.M5003	Sum, nkrttbh,

			frames with other error reasons from common channels.	C11	tot
cch_fp_rec_data_frms	ACCUMULATION	INT8	Number of successfully received FP data frames from common channels.	PMMOResult_Frame_Protocol_WBTS.M5003C8	Sum, nkrttbh, tot
dch_data_from_iub	ACCUMULATION	INT8	Payload data of FP dedicated channels received from the Iub interface to the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C6	Sum, nkrttbh, tot
dch_data_to_iub	ACCUMULATION	INT8	Payload data of FP dedicated channels sent to the Iub interface in the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C5	Sum, nkrttbh, tot
dch_fp_rec_frms_w_crc_err	ACCUMULATION	INT8	Number of received FP data frames with CRC error from dedicated channels.	PMMOResult_Frame_Protocol_WBTS.M5003C13	Sum, nkrttbh, tot
dch_fp_rec_frms_w_delay	ACCUMULATION	INT8	Number of received FP data frames with too high delay from dedicated channels.	PMMOResult_Frame_Protocol_WBTS.M5003C14	Sum, nkrttbh, tot
dch_fp_rec_frms_w_oth_err	ACCUMULATION	INT8	Number of received FP data frames with other error reasons from dedicated channels.	PMMOResult_Frame_Protocol_WBTS.M5003C15	Sum, nkrttbh, tot

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dch_ok_fp_data_frms	ACCUMULATION	INT8	Number of successfully received FP data frames from dedicated channels.	PMMOResult_Frame_Protocol_WBTS.M5003C12	Sum, nkrttbh, tot
edch_data_to_iub	ACCUMULATION	INT8	Payload data of FP enhanced dedicated channels sent to the Iub interface in the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C7	Sum, nkrttbh, tot
hs_dsch_fp_frms_w_crc	ACCUMULATION	INT8	Number of received FP data frames with CRC error from high speed downlink shared channels.	PMMOResult_Frame_Protocol_WBTS.M5003C17	Sum, nkrttbh, tot
hs_dsch_fp_frms_w_oth_err	ACCUMULATION	INT8	Number of received FP data frames with other error reasons from high speed downlink shared channels.	PMMOResult_Frame_Protocol_WBTS.M5003C18	Sum, nkrttbh, tot
hs_dsch_ok_fp_frms	ACCUMULATION	INT8	Number of successfully received FP data frames from high speed downlink shared channels.	PMMOResult_Frame_Protocol_WBTS.M5003C16	Sum, nkrttbh, tot
hsdsch_data_from_iub	ACCUMULATION	INT8	Payload data of FP high-speed downlink shared channels received from the Iub interface to the Local Cell Group.	PMMOResult_Frame_Protocol_WBTS.M5003C20	Sum, nkrttbh, tot
iub_throughput_ul_bts	INTENSITY	FLOAT	Iub data volume UL in BTS	(({cch_data_to_iub_interface} + {dch_data_to_iub} + {edch_data_to_iub})*8)	Average, nkrttbh, tot, min, max

				/1000	
mace_pdu_lost	ACCUMULATION	INT8	Number of MAC-e PDUs that are received correctly but lost for an unknown reason, such as buffer overflow.	PMMOResult_Frame_Protocol_WBTS.M5003C19	Sum, nkrttbh, tot

7.29.2 LCG.Nokia.UMTS.wbts_pool_ce_resources

Local cell group resource pool statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
average_number_of_available_channel_elements	INTENSITY	INTEGER	The average number of available Channel Elements. I.e. average amount of working baseband resources (HW capacity).	PMMOResult_WBTS_HW.M5001C2	Average, avg, max, min, nkrttbh, tot
average_number_of_used_ce_for_dl	INTENSITY	INTEGER	Average number of used Channel Elements in Downlink direction.	PMMOResult_WBTS_HW.M5001C7	Average, avg, max, min, nkrttbh, tot
average_number_of_used_ce_for_hsupa_dl	INTENSITY	INTEGER	Average number of used CE for HSUPA DL.	PMMOResult_WBTS_HW.M5001C14	Average, avg, max, min, nkrttbh, tot
average_number_of_used_ce_for_hsupa_ul	INTENSITY	INTEGER	Average number of used CE for HSUPA UL.	PMMOResult_WBTS_HW.M5001C11	Average, avg, max, min, nkrttbh, tot

average_number_of_used_ce_for_ul	INTENSITY	INTEGER	Average number of used Channel Elements in Uplink direction.	PMMOResult_WBTS_HW.M5001C8	Average, avg, max, min, nkrttbh, tot
maximum_number_of_available_channel_elements	INTENSITY	INTEGER	Maximum number of available Channel Elements. I.e. maximum amount of working baseband resources (HW capacity).	PMMOResult_WBTS_HW.M5001C0	Constant, avg, max, min, nkrttbh, tot
maximum_number_of_used_ce_for_dl	INTENSITY	INTEGER	Maximum number of used Channel Elements in Downlink direction.	PMMOResult_WBTS_HW.M5001C3	Constant, avg, max, min, nkrttbh, tot
maximum_number_of_used_ce_for_hsupa_dl	INTENSITY	INTEGER	Maximum number of used CE for HSUPA DL.	PMMOResult_WBTS_HW.M5001C12	Constant, avg, max, min, nkrttbh, tot
maximum_number_of_used_ce_for_hsupa_ul	INTENSITY	INTEGER	Maximum number of used CE for HSUPA UL.	PMMOResult_WBTS_HW.M5001C9	Constant, avg, max, min, nkrttbh, tot
maximum_number_of_used_ce_for_ul	INTENSITY	INTEGER	Maximum number of used Channel Elements in Uplink direction.	PMMOResult_WBTS_HW.M5001C4	Constant, avg, max, min, nkrttbh, tot
minimum_number_of_available_channel_elements	INTENSITY	INTEGER	Minimum number of available Channel Elements. I.e. minimum amount of working baseband resources (HW capacity).	PMMOResult_WBTS_HW.M5001C1	Minimum, avg, max, min, nkrttbh, tot
minimum_number_of_used_ce_for_dl	INTENSITY	INTEGER	Minimum number of used Channel	PMMOResult_WBTS_HW.M5001C5	Minimum, avg, max,

			Elements in Downlink direction.		min, nkrttbh, tot
minimum_number_of_used_ce_for_hsupa_dl	INTENSITY	INTEGER	Minimum number of used CE for HSUPA DL.	PMMOResult_WBTS_HW.M5001C13	Minimum, avg, max, min, nkrttbh, tot
minimum_number_of_used_ce_for_hsupa_ul	INTENSITY	INTEGER	Minimum number of used CE for HSUPA UL.	PMMOResult_WBTS_HW.M5001C10	Minimum, avg, max, min, nkrttbh, tot
minimum_number_of_used_ce_for_ul	INTENSITY	INTEGER	Minimum number of used Channel Elements in Uplink direction.	PMMOResult_WBTS_HW.M5001C6	Minimum, avg, max, min, nkrttbh, tot

7.30 Neighbour Performance Indicators

This section shows the key performance indicators and other counters for the Neighbour object, divided into the following sub-sections:

- Neighbour.Nokia.UMTS.hard_handovers
- Neighbour.Nokia.UMTS.inter_frequency_ho
- Neighbour.Nokia.UMTS.soft_handovers

7.30.1 Neighbour.Nokia.UMTS.hard_handovers

Hard handover statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
bsic_denom	ACCUMULATION	INTEGER	The number of successful BSIC Verifications.	PMMOResult_AutoDef_ISHO.M1015C5	Sum, tot

bsic_verif_time	ACCUMULATION	INTEGER	Sum of BSIC verification times.	PMMOResult_AutoDef_ISHO.M1015C4	Sum, tot
number_of_completed_inter_system_hho	ACCUMULATION	INTEGER	The number of completed outgoing inter system hard handovers. This counter is updated for a measurement object in which source and target cells are defined. If cells A and B were in the active set and intersystem hard handover to GSM cell C is successful, this counter is updated by 1 for objects (A,C) and (B,C).	PMMOResult_AutoDef_ISHO.M1015C1	Sum, tot
number_of_inter_system_hho_attempts	ACCUMULATION	INTEGER	The number of outgoing inter system hard handover attempts. This counter is updated for a measurement object in which source and target cells are defined. If cells A and B are in the active set and inter-system hard handover to GSM cell C is attempted, this counter is updated by 1 for objects (A,C) and (B,C).	PMMOResult_AutoDef_ISHO.M1015C0	Sum, tot
rssi_denom	ACCUMULATION	INTEGER	The number of received Inter-RAT measurement	PMMOResult_AutoDef_ISHO.M1015C3	Sum, tot

			reports with an RSSI value.		
rssi_sum	ACCUMULATION	INTEGER	Sum of GSM RSSI values received from the UE in Inter-RAT measurement reports	PMMOResult_AutoDef_ISHO.M1015C2	Sum, tot

7.30.2 Neighbour.Nokia.UMTS.inter_frequency_ho

Intra and inter-frequency handover statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
cpich_ecno_ifho_denom	ACCUMULATION	INTEGER	This counter provides the number of samples taken for counter M1014C2.	PMMOResult_AutoDef_IFHO.M1014C3	Sum, tot
cpich_ecno_ifho_sum	ACCUMULATION	INTEGER	The sum of CPICH Ec/No values of an inter-frequency neighbour cell.	PMMOResult_AutoDef_IFHO.M1014C2	Sum, tot
cpich_rscp_ifho_denom	ACCUMULATION	INTEGER	This counter provides the number of samples taken for counter M1014C4.	PMMOResult_AutoDef_IFHO.M1014C5	Sum, tot
cpich_rscp_ifho_sum	ACCUMULATION	INTEGER	The sum of CPICH RSCP values of an inter-frequency neighbour cell.	PMMOResult_AutoDef_IFHO.M1014C4	Sum, tot
number_of_completed_inter_frequen	ACCUMULATION	INTEGER	The number of completed inter	PMMOResult_AutoDef_IFHO.M1014C1	Sum, tot

cy_hho			frequency hard handovers. This counter is updated for a measurement object in which source and target cells are defined. Also Inter-RNC handovers are counted. If cells A and B were in the active set and inter-frequency hard handover to cell C is successful, this counter is updated by 1 for objects (A,C) and (B,C).		
number_of_inter_frequency_hho_attempts	ACCUMULATION	INTEGER	The number of inter frequency hard handover attempts. This counter is updated for a measurement object in which source and target cells are defined. Also Inter-RNC handovers are counted. If cells A and B are in the active set and inter-frequency hard handover to cell C is attempted, this counter is updated by 1 for objects (A,C) and (B,C).	PMMOResult_AutoDef_IFHO.M1014C0	Sum, tot

7.30.3 Neighbour.Nokia.UMTS.soft_handovers

Soft handover statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
cpich_ecno_sho_denom	ACCUMULATION	INTEGER	The number of 1A/1C reports updated to counter M1013C4, used as a denominator for average calculation.	PMMOResult_AutoDef_SHO.M1013C5	Sum, tot
cpich_ecno_sho_diff_denom	ACCUMULATION	INTEGER	This counter provides the number of samples taken for counter M1013C3.	PMMOResult_AutoDef_SHO.M1013C3	Sum, tot
cpich_ecno_sho_diff_sum	ACCUMULATION	INTEGER	The sum of CPICH Ec/No difference values between source and target-cells of the handover.	PMMOResult_AutoDef_SHO.M1013C2	Sum, tot
cpich_ecno_sho_sum	ACCUMULATION	INTEGER	Sum of CPICH Ec/No values of the neighbour cells reported by the UE.	PMMOResult_AutoDef_SHO.M1013C4	Sum, tot
cpich_rscp_sho_denom	ACCUMULATION	INTEGER	The number of 1A/1C reports updated to counter M1013C6, used as a denominator for average calculation.	PMMOResult_AutoDef_SHO.M1013C7	Sum, tot
cpich_rscp_sho_sum	ACCUMULATION	INTEGER	Sum of CPICH RSCP values of the neighbour cells reported by the UE.	PMMOResult_AutoDef_SHO.M1013C6	Sum, tot

number_of_completed_intra_frequency_sho	ACCUMULATION	INTEGER	The number of completed intra frequency soft handovers. This counter is updated for a measurement object in which source and target cells are defined. Also Inter-RNC handovers are counted. Branch addition: If cells A and B are in the active set and branch addition for cell C is successful, this counter is updated by 1 for objects (A,C) and (B,C). Branch replacement: If cells A and B are in the active set and cell C is successfully added to active set with in branch replacement operation with cell B (B branch removed), this counter is updated by 1 for object (A,C) Branch deletion: This counter is not updated in branch deletion.	PMMOResult_AutoDef_SHO.M1013C1	Sum, tot
number_of_intra_frequency_sho_attempts	ACCUMULATION	INTEGER	The number of intra frequency soft handover attempts. This counter is updated	PMMOResult_AutoDef_SHO.M1013C0	Sum, tot

			for a measurement object in which source and target cells are defined. Also Inter-RNC handovers are counted. Branch addition: If cells A and B are in the active set and branch addition for cell C is attempted, this counter is updated by 1 for objects (A,C) and (B,C). Branch replacement: If cells A and B are in the active set and cell B is attempted to be replaced with cell C, this counter is updated by 1 for object (A,C) Branch deletion: This counter is not updated in branch deletion.		

7.31 Neighbour_RNC Performance Indicators

This section shows the key performance indicators and other counters for the Neighbour_RNC object, divided into the following sub-sections:

- Neighbour_RNC.Nokia.UMTS.cswitch.iurelreq
- Neighbour_RNC.Nokia.UMTS.cswitch.relocation.source
- Neighbour_RNC.Nokia.UMTS.cswitch.relocation.target
- Neighbour_RNC.Nokia.UMTS.interrnc.forward
- Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.source

- Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.target
- Neighbour_RNC.Nokia.UMTS.interrnc.relocation.cancel
- Neighbour_RNC.Nokia.UMTS.interrnc.relocation.misc
- Neighbour_RNC.Nokia.UMTS.interrnc.relocation.source
- Neighbour_RNC.Nokia.UMTS.interrnc.relocation.target
- Neighbour_RNC.Nokia.UMTS.interrnc.relocation
- Neighbour_RNC.Nokia.UMTS.macd_pdu_data_stats
- Neighbour_RNC.Nokia.UMTS.nrt_dch_failure_stats
- Neighbour_RNC.Nokia.UMTS.pswitch
- Neighbour_RNC.Nokia.UMTS.RAN_Usage.Service_Level
- Neighbour_RNC.Nokia.UMTS.rnsap.compressed_mode_command
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_dedicated_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_addition_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_failures_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_fail_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_misc_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_fail_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_setup_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.global_iur
- Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.source
- Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.target
- Neighbour_RNC.Nokia.UMTS.rnsap.iur_avail
- Neighbour_RNC.Nokia.UMTS.rnsap.iur_com_meas
- Neighbour_RNC.Nokia.UMTS.rnsap.iur_dl_powcon
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.allocation
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_cn
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_msc
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.misc_target
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation.preparation
- Neighbour_RNC.Nokia.UMTS.rnsap.relocation
- Neighbour_RNC.Nokia.UMTS.sho_branch_failure

7.31.1 Neighbour_RNC.Nokia.UMTS.cswitch.iurelreq

Circuit switched based inter-system hard handover IU release statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_mis	ACCUMULATION	INT8	A number of IU release requests during incoming	PMMOResult_L3Reloc.M1009C270	Sum, nkrttbh, tot

c_cause			MSC controlled inter system HHOs due to a Miscellaneous cause.		
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C268	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C271	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Protocol cause.	PMMOResult_L3Reloc.M1009C269	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C266	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_tr_	ACCUMULATION	INT8	A number of IU release requests during incoming	PMMOResult_L3Reloc.M1009C267	Sum, nkrttbh, tot

cause			MSC controlled inter system HHOs due to a Transport Layer cause.		
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C264	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C262	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C265	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Protocol cause.	PMMOResult_L3Reloc.M1009C263	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C260	Sum, nkrttbh, tot

inter_syst_hho_iu_rel_out_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C261	Sum, nkrttbh, tot

7.31.2 Neighbour_RNC.Nokia.UMTS.cswitch.relocation.source

Circuit switched based inter-system hard handover relocation at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_syst_hho_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C257	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C255	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C258	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_pro	ACCUMULATION	INT8	A number of outgoing MSC controlled inter	PMMOResult_L3Reloc.M1009C256	Sum, nkrttbh, tot

t_cause			system HHOs cancelled due to a Protocol cause.		
inter_syst_hho_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C252	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C253	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C251	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHOs cancelled due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C254	Sum, nkrttbh, tot
inter_syst_hho_out_prep_req_contr_by_msc	ACCUMULATION	INT8	Number of outgoing MSC controlled inter system HHO preparation requests.	PMMOResult_L3Reloc.M1009C235	Sum, nkrttbh, tot
inter_syst_hho_out_prep_succ_contr_by_msc	ACCUMULATION	INT8	Number of successful outgoing MSC	PMMOResult_L3Reloc.M1009C236	Sum, nkrttbh, tot

			controlled inter system HHO preparations.		
inter_syst_hho_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C239	Sum, nkrttbh, tot
inter_syst_hho_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C237	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C241	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C242	Sum, nkrttbh, tot

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inter_syst_hho_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C240	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C238	Sum, nkrttbh, tot

7.31.3 Neighbour_RNC.Nokia.UMTS.cswitch.relocation.target

Circuit switched based inter-system hard handover relocation at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_incoming_intersystem_hho_target_rnc_cs	PERCENTAGE	FLOAT	Incoming Inter System HHO Success in Target RNC for CS	100 * {inter_syst_compl_in_target_rnc_contr_by_msc }/ {inter_syst_hho_in_prep_req_contr_by_msc}	Average, nkrttbh, tot
inter_syst_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INT8	A number of outgoing Relocation Complete messages during incoming MSC controlled inter system HHO	PMMOResult_L3Reloc.M1009C259	Sum, nkrttbh, tot
inter_syst_hho_in_prep_req_contr_by_msc	ACCUMULATION	INT8	Number of incoming MSC controlled inter system HHO preparation requests.	PMMOResult_L3Reloc.M1009C243	Sum, nkrttbh, tot

inter_syst_hho_in_prep_succ_contr_by_msc	ACCUMULATION	INT8	Number of successful incoming MSC controlled inter system HHO preparations.	PMMOResult_L3Reloc.M1009C244	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C249	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C247	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C250	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation	PMMOResult_L3Reloc.M1009C248	Sum, nkrttbh, tot

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			preparation failures due to a Protocol cause.		
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C245	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C246	Sum, nkrttbh, tot

7.31.4 Neighbour_RNC.Nokia.UMTS.interrnc.forward

Inter-RNC hard handover: Forward SRNS context statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
forw_srns_con_in	ACCUMULATION	INT8	Number of received Forward SRNS Context messages from SGSN in target RNC.	PMMOResult_L3Reloc.M1009C234	Sum, nkrttbh, tot
forw_srns_con_out	ACCUMULATION	INT8	Number of Forward SRNS Context messages to SGSN in source RNC.	PMMOResult_L3Reloc.M1009C233	Sum, nkrttbh, tot

7.31.5 Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.source

Inter-RNC hard handover: IU release request at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_iu_rel_out_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C212	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C210	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C213	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Protocol cause.	PMMOResult_L3Reloc.M1009C211	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C208	Sum, nkrttbh, tot
inter_hho_iu_rel_	ACCUMULA	INT8	A number of IU	PMMOResult_L3Reloc.	Sum,

out_contr_by_2cn_due_to_tr_cause	TION		release requests during outgoing 2CN controlled inter HHOs due to a Transport Layer cause.	M1009C209	nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc. M1009C200	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc. M1009C198	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc. M1009C201	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Protocol cause.	PMMOResult_L3Reloc. M1009C199	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc. M1009C196	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_ms	ACCUMULATION	INT8	A number of IU release requests	PMMOResult_L3Reloc. M1009C197	Sum, nkrttbh,

c_due_to_tr_cause			during outgoing MSC controlled inter HHOs due to a Transport Layer cause.		tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C206	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C204	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C207	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Protocol cause.	PMMOResult_L3Reloc.M1009C205	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Radio Network	PMMOResult_L3Reloc.M1009C202	Sum, nkrttbh, tot

			Layer cause.		
inter_hho_iu_rel_out_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C203	Sum, nkrttbh, tot

7.31.6 Neighbour_RNC.Nokia.UMTS.interrnc.iurelreq.target

Inter-RNC hard handover: IU release request at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_iu_rel_in_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C230	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C228	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C231	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Protocol cause.	PMMOResult_L3Reloc.M1009C229	Sum, nkrttbh, tot

inter_hho_iu_rel_in_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C226	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C227	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C218	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C216	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C219	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_prot_cau	ACCUMULATION	INT8	A number of IU release requests during incoming	PMMOResult_L3Reloc.M1009C217	Sum, nkrttbh, tot

se			MSC controlled inter HHOs due to a Protocol cause.		
inter_hho_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C214	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled inter HHOs due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C215	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C224	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C222	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C225	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled	PMMOResult_L3Reloc.M1009C223	Sum, nkrttbh, tot

			inter HHOs due to a Protocol cause.		
inter_hho_iu_rel_in_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C220	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C221	Sum, nkrttbh, tot

7.31.7 Neighbour_RNC.Nokia.UMTS.interrnc.relocation.cancel

Inter-RNC hard handover: Relocation commit cancel by MSC/SGSN statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C188	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C186	Sum, nkrttbh, tot

inter_rnc_hho_out_cancel_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C189	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Protocol cause.	PMMOResult_L3Reloc.M1009C187	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C183	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C184	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C182	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C185	Sum, nkrttbh, tot

inter_rnc_hho_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C172	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C170	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C173	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Protocol cause.	PMMOResult_L3Reloc.M1009C171	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C167	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_relo	ACCUMULATION	INT8	A number of outgoing MSC controlled inter	PMMOResult_L3Reloc.M1009C168	Sum, nkrttbh, tot

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c_prep_tim_exp			RNC HHOs cancelled due to the expiry of the relocation preparation timer.		
inter_rnc_hho_out_cancel_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C166	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C169	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C180	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C178	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C181	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by	ACCUMULATION	INT8	A number of outgoing SGSN	PMMOResult_L3Reloc.M1009C179	Sum, nkrttbh,

_sgsn_due_to_prot_cause			controlled inter RNC HHOs cancelled due to a Protocol cause.		tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C175	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C176	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C174	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C177	Sum, nkrttbh, tot

7.31.8 Neighbour_RNC.Nokia.UMTS.interrnc.relocation.misc

Inter-RNC hard handover: Relocation due to other sources statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_compl_in_target_rnc_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing Relocation Complete messages during incoming 2CN controlled HHO.	PMMOResult_L3Reloc.M1009C195	Sum, nkrttbh, tot
inter_hho_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INT8	A number of outgoing Relocation Complete messages during incoming MSC controlled HHO.	PMMOResult_L3Reloc.M1009C193	Sum, nkrttbh, tot
inter_hho_compl_in_target_rnc_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing Relocation Complete messages during incoming SGSN controlled HHO.	PMMOResult_L3Reloc.M1009C194	Sum, nkrttbh, tot
inter_hho_det_in_target_rnc_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing Relocation Detect messages during incoming SGSN controlled HHO.	PMMOResult_L3Reloc.M1009C191	Sum, nkrttbh, tot
inter_hho_detect_in_target_rnc_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing Relocation Detect messages during incoming 2CN controlled HHO.	PMMOResult_L3Reloc.M1009C192	Sum, nkrttbh, tot
inter_hho_detect_in_target_rnc_contr_by_msc	ACCUMULATION	INT8	A number of outgoing Relocation Detect messages during incoming MSC controlled HHO.	PMMOResult_L3Reloc.M1009C190	Sum, nkrttbh, tot

7.31.9 Neighbour_RNC.Nokia.UMTS.interrnc.relocation.source

Inter-RNC hard handover: Relocation due to source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_out_prep_req_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing 2CN controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_L3Reloc.M1009C120	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_req_contr_by_msc	ACCUMULATION	INT8	A number of outgoing MSC controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_L3Reloc.M1009C118	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_req_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing SGSN controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_L3Reloc.M1009C119	Sum, nkrttbh, tot
inter_rnc_hho_out	ACCUMULA	INT8	A number of	PMMOResult_L3Reloc.	Sum,

_prep_succ_contr_by_2cn	TION		successful outgoing 2CN controlled inter RNC HHO requests.	M1009C123	nkrttbh, tot
inter_rnc_hho_out_prep_succ_contr_by_msc	ACCUMULATION	INT8	A number of successful outgoing MSC controlled inter RNC HHO requests.	PMMOResult_L3Reloc. M1009C121	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_succ_contr_by_sgsn	ACCUMULATION	INT8	A number of successful outgoing SGSN controlled inter RNC HHO requests.	PMMOResult_L3Reloc. M1009C122	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc. M1009C140	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc. M1009C138	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc. M1009C141	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_co	ACCUMULATION	INT8	A number of outgoing 2CN	PMMOResult_L3Reloc. M1009C139	Sum, nkrttbh,

ntr_by_2cn_due_to_prot_cause			controlled HHO relocation preparation failures due to a Protocol cause.		tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C136	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C137	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C128	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C126	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_co	ACCUMULATION	INT8	A number of outgoing MSC	PMMOResult_L3Reloc.M1009C129	Sum, nkrttbh,

ntr_by_msc_due_to_non_stan_cause			controlled HHO relocation preparation failures due to a Non Standard cause.		tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C127	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C124	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C125	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C134	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C132	Sum, nkrttbh, tot

inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C135	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C133	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C130	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C131	Sum, nkrttbh, tot

7.31.10Neighbour_RNC.Nokia.UMTS.interrnc.relocation.target

Inter-RNC hard handover: Relocation due to target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_cs_relocatio	PERCENTAGE	FLOAT	Relocation Success in	100 * ({Nokia.rnsap.relocation.misc	Average, nkrttbh,

n_success_target_rnc			Target RNC for CS	_target.srns_reloc_compl_in_target_rnc_contr_by_msc}+ {Nokia.interrnc.relocation.misc.inter_hho_compl_in_target_rnc_contr_by_msc})/ ({Nokia.rnsap.relocation.allocation.srns_reloc_in_prep_req_contr_by_msc}+ {Nokia.interrnc.relocation.target.inter_rnc_hho_in_prep_req_contr_by_msc})	tot
_%_ps_relocation_success_target_rnc	PERCENTAGE	FLOAT	Relocation Success in Target RNC for PS	100 * ({Nokia.rnsap.relocation.misc_target.srns_reloc_compl_in_target_rnc_contr_by_sgsn}+ {Nokia.interrnc.relocation.misc.inter_hho_compl_in_target_rnc_contr_by_sgsn})/ ({Nokia.rnsap.relocation.allocation.srns_reloc_in_prep_req_contr_by_sgsn}+ {Nokia.interrnc.relocation.target.inter_rnc_hho_in_prep_req_contr_by_sgsn})	Average, nkrttbh, tot
inter_rnc_hho_in_prep_req_contr_by_2cn	ACCUMULATION	INT8	A number of incoming 2CN controlled inter RNC HHO requests.	PMMOResult_L3Reloc.M1009C144	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_req_contr_by_msc	ACCUMULATION	INT8	A number of incoming MSC controlled inter RNC HHO requests.	PMMOResult_L3Reloc.M1009C142	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_req_contr_by_sgsn	ACCUMULATION	INT8	A number of incoming SGSN controlled inter RNC HHO requests.	PMMOResult_L3Reloc.M1009C143	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_succ_contr_by_2cn	ACCUMULATION	INT8	A number of successful incoming 2CN controlled inter	PMMOResult_L3Reloc.M1009C147	Sum, nkrttbh, tot

			RNC HHO preparations.		
inter_rnc_hho_in_prep_succ_contr_by_msc	ACCUMULATION	INT8	A number of successful incoming MSC controlled inter RNC HHO preparations.	PMMOResult_L3Reloc.M1009C145	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_succ_contr_by_sgsn	ACCUMULATION	INT8	A number of successful incoming SGSN controlled inter RNC HHO preparations.	PMMOResult_L3Reloc.M1009C146	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C164	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C162	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C165	Sum, nkrttbh, tot

inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C163	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C160	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C161	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C152	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C150	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_non_st	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation	PMMOResult_L3Reloc.M1009C153	Sum, nkrttbh, tot

an_cause			preparation failures due to a Non Standard cause.		
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C151	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C148	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of incoming MSC controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C149	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C158	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO	PMMOResult_L3Reloc.M1009C156	Sum, nkrttbh, tot

_due_to_nas_cause			relocation preparation failures due to a Non Access Stratum cause.		
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C159	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C157	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C154	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C155	Sum, nkrttbh, tot

7.31.11Neighbour_RNC.Nokia.UMTS.interrnc.relocation

Inter-RNC hard handover: Relocation commit statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

inter_rnc_hho_commit_in_source_rnc	ACCUMULATION	INT8	A number of committed inter RNC hard handovers on source RNC side.	PMMOResult_L3Reloc.M1009C116	Sum, nkrttbh, tot
inter_rnc_hho_commit_in_target_rnc	ACCUMULATION	INT8	A number of committed inter RNC hard handovers on target RNC side.	PMMOResult_L3Reloc.M1009C117	Sum, nkrttbh, tot

7.31.12Neighbour_RNC.Nokia.UMTS.macd_pdu_data_stats

MAC-d PDU statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS Voice (AMR) data in RNC in the uplink direction for data received from DRNC during the measurement interval.	PMMOResult_L3Iur.M1004C147	Sum, nkrttbh, tot
amr_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS Voice (AMR) data in RNC in the downlink direction for data sent to DRNC during the measurement period.	PMMOResult_L3Iur.M1004C148	Sum, nkrttbh, tot
bgr_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU background data in	PMMOResult_L3Iur.M1004C151	Sum, nkrttbh, tot

			RNC in the uplink direction for data received from DRNC during the measurement interval (includes both Rel99 DCH and E-DCH).		
bgr_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU background data in RNC in the downlink direction for data sent to DRNC during the measurement interval (includes both Rel99 DCH and HS-DSCH).	PMMOResult_L3Iur.M1004C152	Sum, nkrttbh, tot
bgr_dch_dl_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU NRT DCH background call DCH data in the downlink direction during the measurement interval.	PMMOResult_L3Iur.M1004C164	Sum, nkrttbh, tot
bgr_dch_ul_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU NRT DCH background call DCH data in the uplink direction during the measurement interval.	PMMOResult_L3Iur.M1004C163	Sum, nkrttbh, tot
cs_conv_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS conversational data in RNC in the uplink direction for data received from DRNC during the measurement	PMMOResult_L3Iur.M1004C153	Sum, nkrttbh, tot

			interval. This counter does not include CS Voice calls, but only CS Conversational data calls (UDI).		
cs_conv_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS conversational data in RNC in the downlink direction for data sent to DRNC during the measurement interval. This counter does not include CS Voice calls, but only CS Conversational data calls (UDI).	PMMOResult_L3Iur.M1004C154	Sum, nkrttbh, tot
cs_strea_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS streaming data in RNC in the uplink direction for data received from DRNC during the measurement interval.	PMMOResult_L3Iur.M1004C155	Sum, nkrttbh, tot
cs_strea_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU CS streaming data in RNC in the downlink direction for data sent to DRNC during the measurement interval.	PMMOResult_L3Iur.M1004C157	Sum, nkrttbh, tot

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intera_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU interactive data in RNC in the uplink direction for data received from DRNC during the measurement interval.	PMMOResult_L3Iur.M1004C149	Sum, nkrttbh, tot
intera_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU interactive data in RNC in the downlink direction for data sent to DRNC during the measurement interval.	PMMOResult_L3Iur.M1004C150	Sum, nkrttbh, tot
intera_dch_dl_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU NRT DCH interactive call DCH data in the downlink direction during the measurement interval.	PMMOResult_L3Iur.M1004C162	Sum, nkrttbh, tot
intera_dch_ul_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU NRT DCH interactive call DCH data in the uplink direction during the measurement interval.	PMMOResult_L3Iur.M1004C161	Sum, nkrttbh, tot
ps_str_dch_dl_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU PS RT streaming call DCH data in the downlink direction during the measurement interval.	PMMOResult_L3Iur.M1004C160	Sum, nkrttbh, tot
ps_str_dch_ul_da	ACCUMULA	INTEG	The amount of	PMMOResult_L3Iur.M	Sum,

ta_from_drnc	TION	ER	MAC-d PDU PS RT streaming call DCH data in the uplink direction during the measurement interval.	1004C159	nkrttbh, tot
ps_strea_data_from_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU PS streaming data in RNC in the uplink direction for data received from DRNC during the measurement interval (includes both Rel99 DCH and E-DCH).	PMMOResult_L3Iur.M1004C156	Sum, nkrttbh, tot
ps_strea_data_to_drnc	ACCUMULATION	INTEGER	The amount of MAC-d PDU PS streaming data in RNC in the downlink direction for data sent to DRNC during the measurement interval (includes both Rel99 DCH and HS-DSCH).	PMMOResult_L3Iur.M1004C158	Sum, nkrttbh, tot

7.31.13Neighbour_RNC.Nokia.UMTS.nrt_dch_failure_stats

NRT radio bearer statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fail_nrt_dch_dl_reconf_iur	ACCUMULATION	INTEGER	The number of DCH DL reconfiguration	PMMOResult_L3Iur.M1004C167	Sum, nkrttbh, tot

			failures for NRT RB in the downlink direction due to Iur interface.		
fail_nrt_dch_setup_iur	ACCUMULATION	INTEGER	The number of DCH setup failures for NRT radio bearer due to Iur interface.	PMMOResult_L3Iur.M1004C165	Sum, nkrttbh, tot
fail_nrt_dch_ul_reconf_iur	ACCUMULATION	INTEGER	The number of DCH reconfiguration failures for NRT RB in the uplink direction due to Iur interface.	PMMOResult_L3Iur.M1004C166	Sum, nkrttbh, tot

7.31.14Neighbour_RNC.Nokia.UMTS.pswitch

Packet switched based inter system hard handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_con_req_in	ACCUMULATION	INT8	Number of received SRNS Context Requests from SGSN.	PMMOResult_L3Reloc.M1009C273	Sum, nkrttbh, tot
srns_con_res_out	ACCUMULATION	INT8	Number of sent SRNS Context Responses to SGSN.	PMMOResult_L3Reloc.M1009C274	Sum, nkrttbh, tot
srns_data_frw_com_in	ACCUMULATION	INT8	Number of received Data Forward Command messages from SGSN.	PMMOResult_L3Reloc.M1009C275	Sum, nkrttbh, tot
sta_forw_data_in_source_rnc_on_iu	ACCUMULATION	INT8	Number of started forwarding data cases in Source RNC on IU. This	PMMOResult_L3Reloc.M1009C272	Sum, nkrttbh, tot

			counter includes both SRNC relocation and Inter RNC HHO cases.		

7.31.15Neighbour_RNC.Nokia.UMTS.RAN_Usage.Service_Level

RAN service usage KPIs

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_iur_availability	INTENSITY	FLOAT	The percentage of time when the Iur interface SCCP subsystem is in working state. [%]. [RAN_KPI_0053]	if PMMOResult_L3Iur.M1004C144=0 then 0 else 100 * (M1004C143 / M1004C144)	Average, avg, max, min, nkrttbh, tot

7.31.16Neighbour_RNC.Nokia.UMTS.rnsap.compressed_mode_command

RNSAP - DCH radio link compressed mode command statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_rec_comp_mode_cmds_on_drnc	ACCUMULATION	INT8	Number of received Compressed Mode Commands on DRNC side.	PMMOResult_L3Iur.M1004C85	Sum, nkrttbh, tot
nbr_of_sent_comp_mode_cmds_on_srnc	ACCUMULATION	INT8	Number of sent Compressed Mode Commands on SRNC side.	PMMOResult_L3Iur.M1004C84	Sum, nkrttbh, tot

7.31.17Neighbour_RNC.Nokia.UMTS.rnsap.dch_dedicated_iur

RNSAP - DCH dedicated measurement initiation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_rec_ded_mea_fail_ind_on_srnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Failure Indication messages on SRNC side.	PMMOResult_L3Iur.M1004C96	Sum, nkrttbh, tot
nbr_of_rec_ded_mea_fail_on_srnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Failure messages on SRNC side.	PMMOResult_L3Iur.M1004C88	Sum, nkrttbh, tot
nbr_of_rec_ded_mea_ini_on_drnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Initiation messages on DRNC side.	PMMOResult_L3Iur.M1004C89	Sum, nkrttbh, tot
nbr_of_rec_ded_mea_ini_on_srnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Report messages on SRNC side.	PMMOResult_L3Iur.M1004C92	Sum, nkrttbh, tot
nbr_of_rec_ded_mea_res_on_srnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Response messages on SRNC side.	PMMOResult_L3Iur.M1004C87	Sum, nkrttbh, tot
nbr_of_rec_ded_mea_ter_req_on_drnc	ACCUMULATION	INT8	Number of received Dedicated Measurement Termination messages on DRNC side.	PMMOResult_L3Iur.M1004C95	Sum, nkrttbh, tot
nbr_of_sent_ded_mea_fail_ind_on_drnc	ACCUMULATION	INT8	Number of sent Dedicated Measurement Failure Indication messages on DRNC side.	PMMOResult_L3Iur.M1004C97	Sum, nkrttbh, tot
nbr_of_sent_ded_	ACCUMULA	INT8	Number of sent	PMMOResult_L3Iur.M	Sum,

mea_fail_on_drnc	TION		Dedicated Measurement Failure messages on DRNC side.	1004C91	nkrttbh, tot
nbr_of_sent_ded_mea_ini_on_srnc	ACCUMULATION	INT8	Number of sent Dedicated Measurement Initiation messages on SRNC side.	PMMOResult_L3Iur.M1004C86	Sum, nkrttbh, tot
nbr_of_sent_ded_mea_rep_on_drnc	ACCUMULATION	INT8	Number of sent Dedicated Measurement Report messages on DRNC side.	PMMOResult_L3Iur.M1004C93	Sum, nkrttbh, tot
nbr_of_sent_ded_mea_res_on_drnc	ACCUMULATION	INT8	Number of sent Dedicated Measurement Response messages on DRNC side.	PMMOResult_L3Iur.M1004C90	Sum, nkrttbh, tot
nbr_of_sent_ded_mea_ter_req_on_srnc	ACCUMULATION	INT8	Number of sent Dedicated Measurement Termination messages on SRNC side.	PMMOResult_L3Iur.M1004C94	Sum, nkrttbh, tot

7.31.18Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_addition_iur

RNSAP - DCH radio link addition statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_radio_link_addition_success_rate_over_iur	PERCENTAGE	FLOAT	Percentage of radio link addition successes on inter RNC handover on serving and	100 * ({rl_add_succ_for_inter_rnc_sho_on_srnc} + {rl_add_succ_for_inter_rnc_sho_on_drnc})/	Average, avg, nkrttbh

			drifting RNC	({rl_add_req_for_inter_rnc_sho_on_srnc} + {rl_add_succ_for_inter_rnc_sho_on_drnc})	
rl_add_fail_for_inter_rnc_sho_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Miscellaneous cause.	PMMOResult_L3Iur.M1004C23	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_drnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C22	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C20	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_drnc_due_to_tr_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Transport Layer cause.	PMMOResult_L3Iur.M1004C21	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on	PMMOResult_L3Iur.M1004C19	Sum, nkrttbh, tot

			SRNC side (outgoing RL setup) due to a Miscellaneous cause.		
rl_add_fail_for_inter_rnc_sho_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C18	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C16	Sum, nkrttbh, tot
rl_add_fail_for_inter_rnc_sho_on_srnc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of radio link addition failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Transport Layer cause.	PMMOResult_L3Iur.M1004C17	Sum, nkrttbh, tot
rl_add_req_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link addition requests for inter RNC soft HO on DRNC side (incoming RL setup).	PMMOResult_L3Iur.M1004C13	Sum, nkrttbh, tot

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rl_add_req_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link addition requests for inter RNC soft HO on SRNC side (outgoing RL setup).	PMMOResult_L3Iur.M1004C12	Sum, nkrttbh, tot
rl_add_succ_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link addition successes on inter RNC soft HO on DRNC side (incoming RL setup).	PMMOResult_L3Iur.M1004C15	Sum, nkrttbh, tot
rl_add_succ_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link addition successes on inter RNC soft HO on SRNC side (outgoing RL setup).	PMMOResult_L3Iur.M1004C14	Sum, nkrttbh, tot

7.31.19Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_failures_iur

RNSAP - DCH radio link failures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_del_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link deletions on inter RNC soft HO on DRNC side.	PMMOResult_L3Iur.M1004C36	Sum, nkrttbh, tot
rl_del_for_inter_rnc_sho_on_srnc_due_to_hanging_resource	ACCUMULATION	INT8	The number of radio link deletion requests for inter-RNC soft handover on SRNC due to hanging resource.	PMMOResult_L3Iur.M1004C112	Sum, nkrttbh, tot
rl_del_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link deletions on inter RNC soft HO on SRNC side.	PMMOResult_L3Iur.M1004C34	Sum, nkrttbh, tot

rl_del_resp_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link deletion responses on inter RNC soft HO on DRNC side.	PMMOResult_L3Iur.M1004C37	Sum, nkrttbh, tot
rl_del_resp_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link deletion responses on inter RNC soft HO on SRNC side.	PMMOResult_L3Iur.M1004C35	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Miscellaneous cause.	PMMOResult_L3Iur.M1004C33	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_drnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C32	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C30	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_drnc_due_to_syn_fail	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on DRNC side due to a radio link	PMMOResult_L3Iur.M1004C29	Sum, nkrttbh, tot

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			synchronisation failure.		
rl_fail_for_inter_rnc_sho_on_drnc_due_to_tr_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Transport Layer cause.	PMMOResult_L3Iur.M1004C31	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Miscellaneous cause.	PMMOResult_L3Iur.M1004C28	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C27	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C25	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_srnc_due_to_syn_fail	ACCUMULATION	INT8	A number of radio link failures on inter RNC soft HO on SRNC side due to a radio link synchronisation failure.	PMMOResult_L3Iur.M1004C24	Sum, nkrttbh, tot
rl_fail_for_inter_rnc_sho_on_srnc_d	ACCUMULATION	INT8	A number of radio link failures on	PMMOResult_L3Iur.M1004C26	Sum, nkrttbh,

ue_to_tr_cause			inter RNC soft HO on SRNC side (outgoing RL setup) due to a Transport Layer cause.		tot

7.31.20Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_iur

RNSAP - DCH radio link preemption, restoration and physical channel reconfiguration statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_rec_phy_cha_reconf_com_on_drnc	ACCUMULATION	INT8	Number of received Physical Channel Reconfiguration Commands on DRNC side.	PMMOResult_L3Iur.M1004C105	Sum, nkrttbh, tot
nbr_of_rec_phy_cha_reconf_req_on_srnc	ACCUMULATION	INT8	Number of received Physical Channel Reconfiguration Requests on SRNC side.	PMMOResult_L3Iur.M1004C102	Sum, nkrttbh, tot
nbr_of_rec_rl_pre_emp_req_ind_on_srnc	ACCUMULATION	INT8	Number of received Radio Link Pre emption Required Indication messages on SRNC side.	PMMOResult_L3Iur.M1004C98	Sum, nkrttbh, tot
nbr_of_rec_rl_res_ind_on_srnc	ACCUMULATION	INT8	Number of received Radio Link Restoration Indication messages on SRNC side.	PMMOResult_L3Iur.M1004C100	Sum, nkrttbh, tot

nbr_of_sent_phy_cha_reconf_com_on_srnc	ACCUMULATION	INT8	Number of sent Physical Channel Reconfiguration Commands on SRNC side.	PMMOResult_L3Iur.M1004C103	Sum, nkrttbh, tot
nbr_of_sent_phy_cha_reconf_req_on_drnc	ACCUMULATION	INT8	Number of sent Physical Channel Reconfiguration Requests on DRNC side.	PMMOResult_L3Iur.M1004C104	Sum, nkrttbh, tot
nbr_of_sent_res_ind_on_drnc	ACCUMULATION	INT8	Number of sent Radio Link Restoration Indication messages on DRNC side.	PMMOResult_L3Iur.M1004C101	Sum, nkrttbh, tot
nbr_of_sent_rl_pre_emp_req_ind_on_drnc	ACCUMULATION	INT8	Number of sent Radio Link Pre emption Required Indication messages on DRNC side.	PMMOResult_L3Iur.M1004C99	Sum, nkrttbh, tot

7.31.21 Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_fail_iur

RNSAP - DCH synchronised radio link reconfiguration failures over Iur statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_prep_synch_over_iur_dch_add_fail_on_drnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_drnc_due_to_misc_cause] - A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (DRNC	PMMOResult_L3Iur.M1004C65	Sum, nkrttbh, tot

			side).		
rl_reconf_prep_synch_over_iur_dch_add_fail_on_drnc_due_prot_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_drnc_due_to_prot_cause] - A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause (DRNC side).	PMMOResult_L3Iur.M1004C64	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_add_fail_on_drnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_drnc_due_to_rn_layer_cause] - A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Radio Network Layer cause (DRNC side).	PMMOResult_L3Iur.M1004C62	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_add_fail_on_drnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_drnc_due_to_tr_cause:A number of failed DCH additions for synchronised radio link	PMMOResult_L3Iur.M1004C63	Sum, nkrttbh, tot

			reconfiguration preparations over IUR due to a Transport Layer cause (DRNC side).		
rl_reconf_prep_synch_over_iur_dch_add_fail_on_srnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_srnc_due_to_misc_cause] - A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (SRNC side).	PMMOResult_L3Iur.M1004C53	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_add_fail_on_srnc_due_prot_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_srnc_due_to_prot_cause] - A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause (SRNC side).	PMMOResult_L3Iur.M1004C52	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_add_fail_on_srnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_srnc_due_to_rn_layer_cause] - A number of failed DCH additions for synchronised radio link reconfiguration	PMMOResult_L3Iur.M1004C50	Sum, nkrttbh, tot

			preparations over IUR due to a Radio Network Layer cause (SRNC side).		
rl_reconf_prep_synch_over_iur_dch_add_fail_on_srnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_add_fail_on_srnc_due_to_tr_cause:A number of failed DCH additions for synchronised radio link reconfiguration preparations over IUR due to a Transport Layer cause (SRNC side).	PMMOResult_L3Iur.M1004C51	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_drnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_drnc_due_to_misc_cause] - A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (DRNC side).	PMMOResult_L3Iur.M1004C73	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_drnc_due_prot_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_drnc_due_to_prot_cause] - A number of failed DCH	PMMOResult_L3Iur.M1004C72	Sum, nkrttbh, tot

			deletions for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause (DRNC side).		
rl_reconf_prep_synch_over_iur_dch_del_fail_on_drnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_drnc_due_to_rn_layer_cause] - A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Radio Network Layer cause (DRNC side).	PMMOResult_L3Iur.M1004C70	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_drnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_drnc_due_to_tr_cause: A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Transport Layer cause (DRNC side).	PMMOResult_L3Iur.M1004C71	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_srnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_srnc_due_to_misc_cause] - A number of failed DCH deletions for	PMMOResult_L3Iur.M1004C61	Sum, nkrttbh, tot

			synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (SRNC side).		
rl_reconf_prep_synch_over_iur_dch_del_fail_on_srnc_due_prot_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_srnc_due_to_prot_cause] - A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause (SRNC side).	PMMOResult_L3Iur.M1004C60	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_srnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_srnc_due_to_rn_layer_cause] - A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Radio Network Layer cause (SRNC side).	PMMOResult_L3Iur.M1004C58	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_del_fail_on_srnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_del_fail_on_srnc_due_to_tr_cause:	PMMOResult_L3Iur.M1004C59	Sum, nkrttbh, tot

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			A number of failed DCH deletions for synchronised radio link reconfiguration preparations over IUR due to a Transport Layer cause (SRNC side).		
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_drnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_drnc_due_to_misc_cause] - A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (DRNC side).	PMMOResult_L3Iur.M1004C69	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_drnc_due_prot_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_drnc_due_to_prot_cause] - A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause.	PMMOResult_L3Iur.M1004C68	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_drnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_drnc_due_to_rn_layer_cause] - A number of failed DCH modifications	PMMOResult_L3Iur.M1004C66	Sum, nkrttbh, tot

			for synchronised radio link reconfiguration preparations over IUR due to a Radio Network Layer cause (DRNC side).		
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_drnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_drnc_due_to_tr_cause:A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Transport Layer cause (DRNC side).	PMMOResult_L3Iur.M1004C67	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_srnc_due_misc_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_srnc_due_to_misc_cause] - A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Miscellaneous cause (SRNC side).	PMMOResult_L3Iur.M1004C57	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_	PMMOResult_L3Iur.M1004C56	Sum, nkrttbh,

_mod_fail_on_srnc_due_prot_cause			dch_mod_fail_on_srnc_due_to_prot_cause] - A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Protocol cause (SRNC side).		tot
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_srnc_due_rn_layer_cause	ACCUMULATION	INT8	[rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_srnc_due_to_rn_layer_cause] - A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Radio Network Layer cause (SRNC side).	PMMOResult_L3Iur.M1004C54	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_dch_mod_fail_on_srnc_due_tr_cause	ACCUMULATION	INT8	rl_reconf_prep_synch_over_iur_for_dch_mod_fail_on_srnc_due_to_tr_cause:A number of failed DCH modifications for synchronised radio link reconfiguration preparations over IUR due to a Transport Layer cause (SRNC side).	PMMOResult_L3Iur.M1004C55	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_fail_on_drnc	ACCUMULATION	INT8	A number of failed synchronised radio link reconfiguration	PMMOResult_L3Iur.M1004C83	Sum, nkrttbh, tot

			preparations over IUR (DRNC side).		
rl_reconf_prep_synch_over_iur_fail_on_srnc	ACCUMULATION	INT8	A number of successful synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C82	Sum, nkrttbh, tot

7.31.22Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_iur

RNSAP - DCH synchronised radio link addition/deletion/modification reconfigurations over Iur statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_prep_synch_over_iur_for_dch_add_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH additions for synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C47	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_add_on_drnc	ACCUMULATION	INT8	A number of started DCH additions for synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C41	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_add_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH additions for synchronised radio link	PMMOResult_L3Iur.M1004C44	Sum, nkrttbh, tot

			reconfiguration preparations over IUR (SRNC side).		
rl_reconf_prep_synch_over_iur_for_dch_add_on_srnc	ACCUMULATION	INT8	A number of started DCH additions for synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C38	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_del_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C49	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_del_on_drnc	ACCUMULATION	INT8	A number of started DCH deletions for synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C43	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_del_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH deletions for synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C46	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_del_on_srnc	ACCUMULATION	INT8	A number of started DCH deletions for synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C40	Sum, nkrttbh, tot

rl_reconf_prep_synch_over_iur_for_dch_mod_on_drnc_ready	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations over IUR.	PMMOResult_L3Iur.M1004C48	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_mod_on_drnc	ACCUMULATION	INT8	A number of started DCH modifications for synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C42	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_mod_on_srnc_ready	ACCUMULATION	INT8	A number of successful DCH modifications for synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C45	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_for_dch_mod_on_srnc	ACCUMULATION	INT8	A number of started DCH modifications for synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C39	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_on_drnc_ready	ACCUMULATION	INT8	A number of successful synchronised radio link reconfiguration preparations over	PMMOResult_L3Iur.M1004C81	Sum, nkrttbh, tot

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			IUR (DRNC side).		
rl_reconf_prep_synch_over_iur_on_drnc	ACCUMULATION	INT8	A number of started synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C79	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_on_srnc_ready	ACCUMULATION	INT8	A number of successful synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C80	Sum, nkrttbh, tot
rl_reconf_prep_synch_over_iur_on_srnc	ACCUMULATION	INT8	A number of started synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C78	Sum, nkrttbh, tot

7.31.23Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_sync_misc_iur

RNSAP - DCH synchronised radio link reconfigurations committed/cancelled over Iur statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_canc_synch_on_drnc_over_iur	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C77	Sum, nkrttbh, tot
rl_reconf_canc_synch_on_srnc_over_iur	ACCUMULATION	INT8	A number of cancelled synchronised radio link reconfiguration preparations over	PMMOResult_L3Iur.M1004C76	Sum, nkrttbh, tot

			IUR (SRNC side).		
rl_reconf_comm_synch_on_drnc_over_iur	ACCUMULATION	INT8	A number of committed synchronised radio link reconfiguration preparations over IUR (DRNC side).	PMMOResult_L3Iur.M1004C75	Sum, nkrttbh, tot
rl_reconf_comm_synch_on_srnc_over_iur	ACCUMULATION	INT8	A number of committed synchronised radio link reconfiguration preparations over IUR (SRNC side).	PMMOResult_L3Iur.M1004C74	Sum, nkrttbh, tot

7.31.24Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_fail_iur

RNSAP - DCH unsynchronised radio link reconfiguration failures over Iur statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_reconf_req_unsynch_over_iur_fail_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	The number of failed unsynchronised radio link reconfiguration requests over Iur on DRNC due to a miscellaneous cause.	PMMOResult_L3Iur.M1004C142	Sum, nkrttbh, tot
rl_reconf_req_unsynch_over_iur_fail_on_drnc_due_to_prot_cause	ACCUMULATION	INT8	The number of failed unsynchronised radio link reconfiguration requests over Iur on DRNC due to a	PMMOResult_L3Iur.M1004C141	Sum, nkrttbh, tot

			protocol cause.		
rl_reconf_req_unsynch_over_iur_fail_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	The number of failed unsynchronised radio link reconfiguration requests over Iur on DRNC due to a radio network layer cause.	PMMOResult_L3Iur.M1004C139	Sum, nkrttbh, tot
rl_reconf_req_unsynch_over_iur_fail_on_drnc_due_to_tr_cause	ACCUMULATION	INT8	The number of failed unsynchronised radio link reconfiguration requests over Iur on DRNC due to a transport layer cause.	PMMOResult_L3Iur.M1004C140	Sum, nkrttbh, tot

7.31.25Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_reconfig_unsync_iur

RNSAP - DCH synchronised radio link reconfiguration received/responded over Iur statistics

7.31.26Neighbour_RNC.Nokia.UMTS.rnsap.dch_radio_link_setup_iur

RNSAP - DCH radio link setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rl_setup_fail_for_inter_rnc_sho_on_drnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Miscellaneous cause.	PMMOResult_L3Iur.M1004C11	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_drnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C10	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_drnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C8	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_drnc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on DRNC side (incoming RL setup) due to a Transport Layer cause.	PMMOResult_L3Iur.M1004C9	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_srnc_due_to_misc_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on SRNC side (outgoing RL	PMMOResult_L3Iur.M1004C7	Sum, nkrttbh, tot

			setup) due to a Miscellaneous cause.		
rl_setup_fail_for_inter_rnc_sho_on_srnc_due_to_prot_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Protocol cause.	PMMOResult_L3Iur.M1004C6	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_srnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Radio Network Layer cause.	PMMOResult_L3Iur.M1004C4	Sum, nkrttbh, tot
rl_setup_fail_for_inter_rnc_sho_on_srnc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of radio link setup failures on inter RNC soft HO on SRNC side (outgoing RL setup) due to a Transport Layer cause.	PMMOResult_L3Iur.M1004C5	Sum, nkrttbh, tot
rl_setup_req_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link setup requests for inter RNC soft HO on DRNC side (incoming RL setup).	PMMOResult_L3Iur.M1004C1	Sum, nkrttbh, tot
rl_setup_req_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link setup requests for inter RNC soft HO on SRNC side (outgoing RL setup).	PMMOResult_L3Iur.M1004C0	Sum, nkrttbh, tot
rl_setup_succ_for_inter_rnc_sho_on_drnc	ACCUMULATION	INT8	A number of radio link setup successes on inter RNC soft HO on	PMMOResult_L3Iur.M1004C3	Sum, nkrttbh, tot

			DRNC side (incoming RL setup).		
rl_setup_succ_for_inter_rnc_sho_on_srnc	ACCUMULATION	INT8	A number of radio link setup successes on inter RNC soft HO on SRNC side (outgoing RL setup).	PMMOResult_L3Iur.M1004C2	Sum, nkrttbh, tot

7.31.27Neighbour_RNC.Nokia.UMTS.rnsap.global_iur

RNSAP - DCH radio link addition statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
common_meas_init_failures_over_iur_on_drnc_due_rn_layer	ACCUMULATION	INT8	The number of common measurement initiation failures due to radio network layer cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C121	Sum, nkrttbh, tot
common_meas_init_request_iur_on_drnc	ACCUMULATION	INT8	The number of common measurement initiation requests over Iur on DRNC.	PMMOResult_L3Iur.M1004C114	Sum, nkrttbh, tot
nbr_of_rec_error_ind_on_iur	ACCUMULATION	INT8	Number of received Error Indication messages on the IUR.	PMMOResult_L3Iur.M1004C107	Sum, nkrttbh, tot
nbr_of_sent_error_ind_on_iur	ACCUMULATION	INT8	Number of sent Error Indication	PMMOResult_L3Iur.M1004C106	Sum, nkrttbh,

			messages on the IUR.		tot

7.31.28Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.source

RNSAP - DCH radio link IU release request at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_iu_rel_out_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C96	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C94	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C97	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C95	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_rn_laye	ACCUMULATION	INT8	A number of IU release requests during outgoing	PMMOResult_L3Reloc.M1009C92	Sum, nkrttbh, tot

r_cause			2CN controlled SRNS relocations due to a Radio Network Layer cause.		
srns_reloc_iu_rel_out_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C93	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C84	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C82	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C85	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_prot_c	ACCUMULATION	INT8	A number of IU release requests during outgoing	PMMOResult_L3Reloc.M1009C83	Sum, nkrttbh, tot

ause			MSC controlled SRNS relocations due to a Protocol cause.		
srns_reloc_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C80	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C81	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C90	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C88	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C91	Sum, nkrttbh, tot

srns_reloc_iu_rel_out_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C89	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C86	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C87	Sum, nkrttbh, tot
sta_forw_data_in_source_rnc_on_iur	ACCUMULATION	INT8	Number of started forwarding data cases in Source RNC on IUR. This counter includes both SRNC relocation and Inter RNC HHO cases.	PMMOResult_L3Reloc.M1009C232	Sum, nkrttbh, tot

7.31.29Neighbour_RNC.Nokia.UMTS.rnsap.iu_release_request.target

RNSAP - DCH radio link IU release request at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

srns_reloc_iu_rel_in_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C114	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C112	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C115	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C113	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C110	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming 2CN controlled SRNS relocations	PMMOResult_L3Reloc.M1009C111	Sum, nkrttbh, tot

			due to a Transport Layer cause.		
srns_reloc_iu_rel_in_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C102	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C100	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C103	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C101	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Radio	PMMOResult_L3Reloc.M1009C98	Sum, nkrttbh, tot

			Network Layer cause.		
srns_reloc_iu_rel_in_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C99	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C108	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C106	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C109	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C107	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_rn_laye	ACCUMULATION	INT8	A number of IU release requests during incoming	PMMOResult_L3Reloc.M1009C104	Sum, nkrttbh, tot

r_cause			SGSN controlled SRNS relocations due to a Radio Network Layer cause.		
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C105	Sum, nkrttbh, tot

7.31.30Neighbour_RNC.Nokia.UMTS.rnsap.iur_avail

IuR availabilty measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
iur_availability_denom	ACCUMULATION	INTEGER	The number of samples for Iur availability measuring, used as a denominator for Iur availability percentage calculation.	PMMOResult_L3Iur.M1004C144	Sum, nkrttbh, tot
iur_availability	ACCUMULATION	INTEGER	The number of samples when Iur interface is in working state. The Iu interface availability percentage can be calculated as a ratio of this counter and M1004C144.	PMMOResult_L3Iur.M1004C143	Sum, nkrttbh, tot

iur_not_working_duration	ACCUMULATION	INTEGER	The duration that Iur interface is in non-working state.	PMMOResult_L3Iur.M1004C145	Sum, nkrttbh, tot
iur_to_wo_state_changes	ACCUMULATION	INTEGER	The number of Iur interface state changes from non-working to working state.	PMMOResult_L3Iur.M1004C146	Sum, nkrttbh, tot
pc_iur_availability	PERCENTAGE	FLOAT	Percentage of time the Iur interface is available/in working state.	100 * {iur_availability}/ {iur_availability_denom}	Average, avg, nkrttbh

7.31.31 Neighbour_RNC.Nokia.UMTS.rnsap.iur_com_meas

IuR measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
common_meas_failure_indication_over_iur_on_drnc_due_misc	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Miscellaneous cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C136	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_drnc_due_prot	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Protocol cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C135	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_drnc_due_rn_layer	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indication due to Radio Network Layer cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C133	Sum, nkrttbh, tot

common_meas_failure_indication_over_iur_on_drnc_due_tr_layer	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Transmission Layer cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C134	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_srnc_due_misc	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Miscellaneous cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C132	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_srnc_due_prot	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Protocol cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C131	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_srnc_due_rn_layer	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Radio Network Layer cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C129	Sum, nkrttbh, tot
common_meas_failure_indication_over_iur_on_srnc_due_tr_layer	ACCUMULATION	INTEGER	The number of Common Measurement Failure Indications due to Transmission Layer cause over	PMMOResult_L3Iur.M1004C130	Sum, nkrttbh, tot

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			Iur on SRNC.		
common_meas_init_failures_over_iur_on_drnc_due_misc	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Miscellaneous cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C124	Sum, nkrttbh, tot
common_meas_init_failures_over_iur_on_drnc_due_prot	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Protocol cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C123	Sum, nkrttbh, tot
common_meas_init_failures_over_iur_on_drnc_due_tr_layer	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Transmission Layer cause over Iur on DRNC.	PMMOResult_L3Iur.M1004C122	Sum, nkrttbh, tot
common_meas_init_failures_over_iur_on_srnc_due_misc	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Miscellaneous cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C120	Sum, nkrttbh, tot
common_meas_init_failures_over_iur_on_srnc_due_prot	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Protocol cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C119	Sum, nkrttbh, tot
common_meas_init_failures_over_iur_on_srnc_due_r	ACCUMULATION	INTEGER	The number of Common Measurement	PMMOResult_L3Iur.M1004C117	Sum, nkrttbh, tot

n_layer			Initiation Failures due to Radio Network Layer cause over Iur on SRNC.		
common_meas_init_failures_over_iur_on_srnc_due_tr_layer	ACCUMULATION	INTEGER	The number of Common Measurement Initiation failures due to Transmission Layer cause over Iur on SRNC.	PMMOResult_L3Iur.M1004C118	Sum, nkrttbh, tot
common_meas_init_request_iur_on_srnc	ACCUMULATION	INTEGER	The number of Common Measurement Initiation requests over Iur on SRNC.	PMMOResult_L3Iur.M1004C113	Sum, nkrttbh, tot
common_meas_init_response_iur_on_drnc	ACCUMULATION	INTEGER	The number of Common Measurement Initiation responses over Iur on DRNC.	PMMOResult_L3Iur.M1004C116	Sum, nkrttbh, tot
common_meas_init_response_iur_on_srnc	ACCUMULATION	INTEGER	The number of Common Measurement Initiation responses over Iur on SRNC.	PMMOResult_L3Iur.M1004C115	Sum, nkrttbh, tot
common_meas_reports_over_iur_on_drnc	ACCUMULATION	INTEGER	The number of Common Measurement reports over Iur on DRNC.	PMMOResult_L3Iur.M1004C126	Sum, nkrttbh, tot
common_meas_reports_over_iur_on	ACCUMULATION	INTEGER	The number of Common	PMMOResult_L3Iur.M1004C125	Sum, nkrttbh,

_srnc			Measurement reports over Iur on SRNC.		tot
common_meas_terminatio_ns_over_iur_on_drnc	ACCUMULATION	INTEGER	The number of Common Measurement Terminations over Iur on DRNC.	PMMOResult_L3Iur.M1004C128	Sum, nkrttbh, tot
common_meas_terminatio_ns_over_iur_on_srnc	ACCUMULATION	INTEGER	The number of Common Measurement Terminations over Iur on SRNC.	PMMOResult_L3Iur.M1004C127	Sum, nkrttbh, tot

7.31.32Neighbour_RNC.Nokia.UMTS.rnsap.iur_dl_powcon

IuR power control measurements

7.31.33Neighbour_RNC.Nokia.UMTS.rnsap.relocation.allocation

RNSAP - Relocation resource allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_in_prep_req_contr_by_2cn	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C28	Sum, nkrttbh, tot
srns_reloc_in_prep_req_contr_by_msc	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C26	Sum, nkrttbh, tot
srns_reloc_in_prep_req_contr_by_sgsn	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C27	Sum, nkrttbh, tot
srns_reloc_in_prep_succ_contr_by_2cn	ACCUMULATION	INT8	A number of successful incoming 2CN	PMMOResult_L3Reloc.M1009C31	Sum, nkrttbh, tot

			controlled SRNS relocation preparation requests.		
srns_reloc_in_prep_succ_contr_by_msc	ACCUMULATION	INT8	A number of successful incoming MSC controlled SRNS relocation preparation requests.	PMMOResult_L3Reloc.M1009C29	Sum, nkrttbh, tot
srns_reloc_in_prep_succ_contr_by_sgsn	ACCUMULATION	INT8	A number of successful incoming SGSN controlled SRNS relocation preparation requests.	PMMOResult_L3Reloc.M1009C30	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C48	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C46	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C49	Sum, nkrttbh, tot
srns_reloc_in_pre	ACCUMULA	INT8	A number of	PMMOResult_L3Reloc.	Sum,

p_unsucc_contr_by_2cn_due_to_prot_cause	TION		incoming 2CN controlled SRNS relocation preparation failures due to a Protocol cause.	M1009C47	nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc. M1009C44	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc. M1009C45	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc. M1009C36	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc. M1009C34	Sum, nkrttbh, tot
srns_reloc_in_pre	ACCUMULA	INT8	A number of	PMMOResult_L3Reloc.	Sum,

p_unsucc_contr_by_msc_due_to_non_stan_cause	TION		incoming MSC controlled SRNS relocation preparation failures due to a Non Standard cause.	M1009C37	nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc. M1009C35	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc. M1009C32	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of incoming MSC controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc. M1009C33	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc. M1009C42	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Non Access Stratum	PMMOResult_L3Reloc. M1009C40	Sum, nkrttbh, tot

			cause.		
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C43	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C41	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C38	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C39	Sum, nkrttbh, tot

7.31.34Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_cn

RNSAP - Relocation to 2CN cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

srns_reloc_out_cancel_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C72	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C70	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C73	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C71	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C67	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C68	Sum, nkrttbh, tot

srns_reloc_out_cancel_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C66	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C69	Sum, nkrttbh, tot

7.31.35Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_msc

RNSAP - Relocation to MSC cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C56	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C54	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_ms	ACCUMULATION	INT8	A number of outgoing MSC	PMMOResult_L3Reloc.M1009C57	Sum, nkrttbh,

c_due_to_non_stan_cause			controlled SRNS relocation cancellations due to a Non Standard cause.		tot
srns_reloc_out_cancel_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C55	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to the expiry of the relocation overall timer.	PMMOResult_L3Reloc.M1009C51	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C52	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C50	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C53	Sum, nkrttbh, tot

7.31.36Neighbour_RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn

RNSAP - Relocation to SGSN cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_cancel_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C64	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C62	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C65	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Protocol cause.	PMMOResult_L3Reloc.M1009C63	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_reloc_ove_tim_exp	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the	PMMOResult_L3Reloc.M1009C59	Sum, nkrttbh, tot

			relocation overall timer.		
srns_reloc_out_cancel_contr_by_sgsn_due_to_reloc_prep_tim_exp	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_L3Reloc.M1009C60	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C58	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C61	Sum, nkrttbh, tot

7.31.37Neighbour_RNC.Nokia.UMTS.rnsap.relocation.misc_target

RNSAP - Relocation detected/completed by Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_compl_in_target_rnc_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing relocation complete messages during incoming 2CN controlled SRNS relocation.	PMMOResult_L3Reloc.M1009C79	Sum, nkrttbh, tot
srns_reloc_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INT8	A number of outgoing relocation	PMMOResult_L3Reloc.M1009C77	Sum, nkrttbh, tot

			complete messages during incoming MSC controlled SRNS relocation.		
srns_reloc_compl_in_target_rnc_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing relocation complete messages during incoming SGSN controlled SRNS relocation.	PMMOResult_L3Reloc.M1009C78	Sum, nkrttbh, tot
srns_reloc_det_in_target_rnc_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing relocation detect messages during incoming 2CN controlled SRNS relocation.	PMMOResult_L3Reloc.M1009C76	Sum, nkrttbh, tot
srns_reloc_det_in_target_rnc_contr_by_msc	ACCUMULATION	INT8	A number of outgoing relocation detect messages during incoming MSC controlled SRNS relocation.	PMMOResult_L3Reloc.M1009C74	Sum, nkrttbh, tot
srns_reloc_det_in_target_rnc_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing relocation detect messages during incoming SGSN controlled SRNS relocation.	PMMOResult_L3Reloc.M1009C75	Sum, nkrttbh, tot

7.31.38Neighbour_RNC.Nokia.UMTS.rnsap.relocation.preparation

RNSAP - Relocation preparation by SRNC statistics

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
srns_reloc_out_prep_req_contr_by_2cn	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C4	Sum, nkrttbh, tot
srns_reloc_out_prep_req_contr_by_msc	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C2	Sum, nkrttbh, tot
srns_reloc_out_prep_req_contr_by_sgsn	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_L3Reloc.M1009C3	Sum, nkrttbh, tot
srns_reloc_out_prep_succ_contr_by_2cn	ACCUMULATION	INT8	A number of successful outgoing 2CN controlled SRNS relocation preparation requests.	PMMOResult_L3Reloc.M1009C7	Sum, nkrttbh, tot
srns_reloc_out_prep_succ_contr_by	ACCUMULATION	INT8	A number of successful	PMMOResult_L3Reloc.M1009C5	Sum, nkrttbh,

_msc			outgoing MSC controlled SRNS relocation preparation requests.		tot
srns_reloc_out_prep_succ_contr_by_sgsn	ACCUMULATION	INT8	A number of successful outgoing SGSN controlled SRNS relocation preparation requests.	PMMOResult_L3Reloc.M1009C6	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_non_stan_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C25	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C22	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C23	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation	PMMOResult_L3Reloc.M1009C20	Sum, nkrttbh, tot

			preparation failures due to a Radio Network Layer cause.		
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C21	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_rec_from_sgsn_due_misc_cause	ACCUMULATION	INT8	A number of outgoing 2CN controlled SRNS relocation preparation failures from the SGSN due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C24	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C12	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C10	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C13	Sum, nkrttbh, tot

srns_reloc_out_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C11	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C8	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C9	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_L3Reloc.M1009C18	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_L3Reloc.M1009C16	Sum, nkrttbh, tot

srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_L3Reloc.M1009C19	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_L3Reloc.M1009C17	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_L3Reloc.M1009C14	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_L3Reloc.M1009C15	Sum, nkrttbh, tot

7.31.39Neighbour_RNC.Nokia.UMTS.rnsap.relocation

RNSAP - Committed SRNS relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
reloc_commit_in_source_rnc	ACCUMULATION	INT8	A number of committed Serving RNS Relocations on source RNC side.	PMMOResult_L3Reloc.M1009C0	Sum, nkrttbh, tot
reloc_commit_in_	ACCUMULA	INT8	A number of	PMMOResult_L3Reloc.	Sum,

target_rnc	TION		committed Serving RNS Relocations on target RNC side.	M1009C1	nkrttbh, tot

7.31.40 Neighbour_RNC.Nokia.UMTS.sho_branch_failure

SHO failure statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
fail_sho_branch_setup_iur	ACCUMULATION	INTEGER	The number of SHO Branch setup failures due to Iur interface.	PMMOResult_L3Iur.M1004C168	Sum, nkrttbh, tot

7.32 NodeB Performance Indicators

This section shows the key performance indicators and other counters for the NodeB object, divided into the following sub-sections:

- NodeB.Nokia.UMTS.bts_hw
- NodeB.Nokia.UMTS.nbap_reset_procedures
- NodeB.Nokia.UMTS.radio_link

7.32.1 NodeB.Nokia.UMTS.bts_hw

BTS hardware usage statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_avail_pool_capa_dl	INTENSITY	FLOAT	Obsolete since RN4.0: Average DSP processing capacity available for processing downlink physical channels in a pool of cells. (Available	PMMOResult_Traffic.M1000C84	Average, avg, max, min, nkrttbh, tot

			bit rate for this pool). Measured in units of 10kb/s		
ave_avail_pool_capa_ul	INTENSITY	FLOAT	Obsolete since RN4.0: Average DSP processing capacity available for processing uplink physical channels in a pool of cells. (Available bit rate for this pool). Measured in units of 10kb/s	PMMOResult_Traffic.M1000C86	Average, avg, max, min, nkrttbh, tot
average_avail_pool_capa_dl	INTENSITY	FLOAT	Calculation for average DSP processing capacity for downlink	{ave_avail_pool_capa_dl} / {nbr_of_pool_rep_dl}	Average, avg, max, min, nkrttbh, tot
average_avail_pool_capa_ul	INTENSITY	FLOAT	Calculation for average DSP processing capacity for uplink	{ave_avail_pool_capa_ul} / {nbr_of_pool_rep_ul}	Average, avg, max, min, nkrttbh, tot
average_available_percentage_pool_capacity_dl	INTENSITY	FLOAT	Obsolete since RN4.0: The average percentage DSP processing capacity available for processing downlink physical channels. The capacity is calculated based on initial capacity credits received in the NBAP:AUDIT RESPONSE message, and on updated capacity credits received in the	PMMOResult_Traffic.M1000C134	Average, avg, max, min, nkrttbh, tot

			NBAP:RESOURCE STATUS INDICATION message. This counter is updated only for base stations using 3GPP Iub.		
average_available_percentage_pool_capacity_ul	INTENSITY	FLOAT	Obsolete since RN4.0: The average percentage DSP processing capacity available for processing uplink physical channels. The capacity is calculated based on initial capacity credits received in the NBAP:AUDIT RESPONSE message, and on updated capacity credits received in the NBAP:RESOURCE STATUS INDICATION message. This counter is updated only for base stations using 3GPP Iub.	PMMOResult_Traffic.M1000C135	Average, avg, max, min, nkrttbh, tot
bts_hw_capacity_dl_denominator	ACCUMULATION	INT8	Obsolete since RN4.0: The denominator for downlink DSP processing	PMMOResult_Traffic.M1000C136	Sum, nkrttbh, tot

			capacity counter.		
bts_hw_capacity_ul_denominator	ACCUMULATION	INT8	Obsolete since RN4.0: The denominator for uplink DSP processing capacity counter.	PMMOResult_Traffic.M1000C137	Sum, nkrttbh, tot
nbr_of_cells	ACCUMULATION	INTEGER	Obsolete since RN4.0: Number of cells belonging to the pool	PMMOResult_Traffic.M1000C88	Sum, nkrttbh, tot
nbr_of_pool_rep_dl	ACCUMULATION	INT8	Obsolete since RN4.0: Number of radio resource indication reports containing pool capacity information for DL	PMMOResult_Traffic.M1000C85	Sum, nkrttbh, tot
nbr_of_pool_rep_ul	ACCUMULATION	INT8	Obsolete since RN4.0: Number of radio resource indication reports containing pool capacity information for UL	PMMOResult_Traffic.M1000C87	Sum, nkrttbh, tot

7.32.2 NodeB.Nokia.UMTS.nbap_reset_procedures

NBAP reset procedures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
reset_request_received_with_ie_communication_context	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "communication context", meaning	PMMOResult_L3Iub_0.M1005C173	Sum, nkrttbh, tot

			that the termination point for one UE is reset. NOTE: This counter is updated for the WBTS object. (WBTS/ WCEL-300000000 in the XML measurement file created by NEMU)		
reset_request_received_with_ie_communication_control_port	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "communication control port", meaning that the termination points for one cell are reset. NOTE: This counter is updated for the WBTS object. (WBTS/ WCEL-300000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub_0.M1005C174	Sum, nkrttbh, tot
reset_request_received_with_ie_node_b	ACCUMULATION	INT8	The number of reset request messages received from the BTS with the information element "Node B", meaning that all termination points of the BTS are reset. NOTE: This counter is updated	PMMOResult_L3Iub_0.M1005C175	Sum, nkrttbh, tot

			for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)		
reset_request_sent_with_ie_communication_context	ACCUMULATION	INT8	The number of reset request messages sent to the BTS with the information element "communication context", meaning that the termination point for one UE is reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub_0.M1005C170	Sum, nkrttbh, tot
reset_request_sent_with_ie_communication_control_port	ACCUMULATION	INT8	The number of reset request messages sent to the BTS with the information element "communication control port", meaning that termination points for one cell are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-300000000 in the XML measurement file created by	PMMOResult_L3Iub_0.M1005C171	Sum, nkrttbh, tot

			NEMU)		
reset_request_sent_with_ie_node_b	ACCUMULATION	INT8	The number of reset request messages sent to the BTS with the information element "Node B", meaning that all termination points of the BTS are reset. NOTE: This counter is updated for the WBTS object. (WBTS/WCEL-30 0000000 in the XML measurement file created by NEMU)	PMMOResult_L3Iub_0.M1005C172	Sum, nkrttbh, tot

7.32.3 NodeB.Nokia.UMTS.radio_link

Radio link measurement related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
nbr_of_rl_meas_reps	ACCUMULATION	INT8	Number of radio link measurement reports at BTS	PMMOResult_Traffic.M1000C92	Sum, nkrttbh, tot

7.33 Physical_Layer_Term_Point Performance Indicators

This section shows the key performance indicators and other counters for the Physical_Layer_Term_Point object, divided into the following sub-sections:

- Physical_Layer_Term_Point.Nokia.UMTS.interface_specific

7.33.1 Physical_Layer_Term_Point.Nokia.UMTS.interface_specific

Interface performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
disc_cells	ACCUMULATION	INT8	Discarded cells. This includes cells with more than one bit errors. This parameter provides a count of the number of incoming ATM cells discarded due to a Header Error Check (HEC) violation. HEC is used for checking and correcting an error in the ATM cell header. One bit errors are corrected. If there are more Errors in the header, it cannot be corrected but the cell is discarded.	PMMOResult_Interface_TC.M512C0	Sum, nkrttbh, tot
err_cells	ACCUMULATION	INT8	Errored cells. This includes all the cells that have errors one or more bit errors in the header. This parameter provides a count of incoming ATM cells that contain Header Error Check	PMMOResult_Interface_TC.M512C1	Sum, nkrttbh, tot

7.34 RNC Performance Indicators

This section shows the key performance indicators and other counters for the RNC object, divided into the following sub-sections:

- RNC.Nokia.UMTS.anchoring_soft_handover
- RNC.Nokia.UMTS.anchoring.incoming_handovers_relocations
- RNC.Nokia.UMTS.anchoring.intrasys_hho_scc
- RNC.Nokia.UMTS.anchoring.multirab.access_complete
- RNC.Nokia.UMTS.anchoring.multirab.active_complete
- RNC.Nokia.UMTS.anchoring.multirab.active_failure
- RNC.Nokia.UMTS.anchoring.multirab.setup_attempts
- RNC.Nokia.UMTS.anchoring.prach_prop_delay
- RNC.Nokia.UMTS.anchoring.rab.access_complete
- RNC.Nokia.UMTS.anchoring.rab.active_complete_cs_data
- RNC.Nokia.UMTS.anchoring.rab.active_complete_ps_data
- RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_data
- RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_voice
- RNC.Nokia.UMTS.anchoring.rab.active_failure_ps_data
- RNC.Nokia.UMTS.anchoring.rab.active_failures_ps
- RNC.Nokia.UMTS.anchoring.rab.active_release_cs_data
- RNC.Nokia.UMTS.anchoring.rab.active_release_cs_voice
- RNC.Nokia.UMTS.anchoring.rab.active_release_ps_data
- RNC.Nokia.UMTS.anchoring.rab.connections_in_cs
- RNC.Nokia.UMTS.anchoring.rab.connections_in_ps
- RNC.Nokia.UMTS.anchoring.rab.connections_out_cs
- RNC.Nokia.UMTS.anchoring.rab.connections_out_ps
- RNC.Nokia.UMTS.anchoring.rab.control_procedures
- RNC.Nokia.UMTS.anchoring.rab.holding_times
- RNC.Nokia.UMTS.anchoring.rab.reconfigurations
- RNC.Nokia.UMTS.anchoring.rab.setup_access_complete
- RNC.Nokia.UMTS.anchoring.rab.setup_access_failure
- RNC.Nokia.UMTS.anchoring.rab.setup_attempts
- RNC.Nokia.UMTS.anchoring.rab.setup_complete
- RNC.Nokia.UMTS.anchoring.rab.setup_failure_cs
- RNC.Nokia.UMTS.anchoring.rab.setup_failure_ps
- RNC.Nokia.UMTS.anchoring.rab.setup_time
- RNC.Nokia.UMTS.anchoring.rrc.connection_access
- RNC.Nokia.UMTS.anchoring.rrc.connection_active
- RNC.Nokia.UMTS.anchoring.rrc.connection_mobility_procedures
- RNC.Nokia.UMTS.anchoring.rrc.connection_setup
- RNC.Nokia.UMTS.anchoring.rrc.connections
- RNC.Nokia.UMTS.anchoring.rrc.establishment_per_ue_capability
- RNC.Nokia.UMTS.anchoring.rrc.radio_bearer_setup
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_call_reestablish
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_detach

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- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_emergency
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_high_priority_sig
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intr_rat
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intrregistration
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_low_priority_sig
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_orig
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_term
- RNC.Nokia.UMTS.anchoring.rrc.setup_causes_term_unknown
- RNC.Nokia.UMTS.anchoring.signalling_paging_message
- RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_setup_requests
- RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_status
- RNC.Nokia.UMTS.anchoring.signalling_rrc.measurement_report
- RNC.Nokia.UMTS.anchoring.signalling_rrc.signalling_protocol_states
- RNC.Nokia.UMTS.cswitch.iurelreq
- RNC.Nokia.UMTS.cswitch.relocation.source
- RNC.Nokia.UMTS.cswitch.relocation.target
- RNC.Nokia.UMTS.dsp_performance
- RNC.Nokia.UMTS.dsp_service
- RNC.Nokia.UMTS.hspa_ifho_meas
- RNC.Nokia.UMTS.interrnc.forward
- RNC.Nokia.UMTS.interrnc.iurelreq.source
- RNC.Nokia.UMTS.interrnc.iurelreq.target
- RNC.Nokia.UMTS.interrnc.relocation.cancel
- RNC.Nokia.UMTS.interrnc.relocation.misc
- RNC.Nokia.UMTS.interrnc.relocation.source
- RNC.Nokia.UMTS.interrnc.relocation.target
- RNC.Nokia.UMTS.interrnc.relocation
- RNC.Nokia.UMTS.intrasys_hho_inter_nrt
- RNC.Nokia.UMTS.intrasys_hho_inter_rt
- RNC.Nokia.UMTS.intrasys_hho_intra_nrt
- RNC.Nokia.UMTS.intrasys_hho_intra_rt
- RNC.Nokia.UMTS.intrasys_hho_rejected_relocations
- RNC.Nokia.UMTS.location_services_agps
- RNC.Nokia.UMTS.location_services
- RNC.Nokia.UMTS.pswitch
- RNC.Nokia.UMTS.RAN_Accessibility.Location_Service
- RNC.Nokia.UMTS.RAN_Mobility.Soft_Handover
- RNC.Nokia.UMTS.RAN_Usage.Service_Level
- RNC.Nokia.UMTS.ranap_stats
- RNC.Nokia.UMTS.rlc_retransmission
- RNC.Nokia.UMTS.rnap_stats
- RNC.Nokia.UMTS.rnc_busy_hour_kpi
- RNC.Nokia.UMTS.rnc_capacity_usage
- RNC.Nokia.UMTS.rnc_olpc_measurement
- RNC.Nokia.UMTS.rnc_rlc_measurement
- RNC.Nokia.UMTS.rnsap.iu_release_request.source

- RNC.Nokia.UMTS.rnsap.iu_release_request.target
- RNC.Nokia.UMTS.rnsap.relocation.allocation
- RNC.Nokia.UMTS.rnsap.relocation.cancel_cn
- RNC.Nokia.UMTS.rnsap.relocation.cancel_msc
- RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn
- RNC.Nokia.UMTS.rnsap.relocation.misc_target
- RNC.Nokia.UMTS.rnsap.relocation.preparation
- RNC.Nokia.UMTS.rnsap.relocation
- RNC.Nokia.UMTS.sabp_measurements
- RNC.Nokia.UMTS.sccp_single_meters
- RNC.Nokia.UMTS.soft_handover.nrt
- RNC.Nokia.UMTS.soft_handover.rt
- RNC.Nokia.UMTS.user_throughput

7.34.1 RNC.Nokia.UMTS.anchoring_soft_handover

Soft handover measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_cell_addition_success_to_edch_active_set	PERCENTAGE	FLOAT	The percentage of cells successfully added to E-DCH active set.	100 * {cell_addition_success_to_edch_active_set}/ ({cell_addition_attempt_req_by_ue_to_edch_as}+ {cell_addition_attempt_retry_to_edch_as})	Average, avg, nkrttbh
cell_addition_attempt_req_by_ue_to_edch_as	ACCUMULATION	INTEGER	The number of cell addition attempts to E-DCH active set due to UE reporting event 1A or 1C.	PMMOResult_Soft_Handover_RNC.M1007C67	Sum, nkrttbh, tot
cell_addition_attempt_retry_to_edch_as	ACCUMULATION	INTEGER	The number of cell addition attempts to E-DCH active set due to retry timer.	PMMOResult_Soft_Handover_RNC.M1007C70	Sum, nkrttbh, tot

cell_addition_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Addition Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C56	Sum, nkrttbh, tot
cell_addition_request_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Addition Requests on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C53	Sum, nkrttbh, tot
cell_addition_success_to_edch_active_set	ACCUMULATION	INTEGER	The number of cells successfully added to E-DCH active set.	PMMOResult_Soft_Handover_RNC.M1007C68	Sum, nkrttbh, tot
cell_deletion_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Deletion Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C57	Sum, nkrttbh, tot
cell_deletion_request_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Deletion Requests on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C54	Sum, nkrttbh, tot
cell_not_added_to_edch_active_set_but_added_to_dch_as	ACCUMULATION	INTEGER	The number of times when the cell could not be added to E-DCH active set but addition to DCH active set was successful.	PMMOResult_Soft_Handover_RNC.M1007C69	Sum, nkrttbh, tot
cell_replacement_failure_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Replacement Requests failed on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C58	Sum, nkrttbh, tot
cell_replacement_request_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	Cell Replacement Requests on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C55	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_0	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 0 range. The CPICH Ec/No measuring is done only for the best	PMMOResult_Soft_Handover_RNC.M1007C38	Sum, nkrttbh, tot

			cell in the active set, i.e. the cell in the AS with the highest Ec/No value.		
cell_specific_cpich_ec_no_class_1	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 1 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C39	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_2	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 2 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C40	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_3	ACCUMULATION	INTEGER	The number of received 1A intra-	PMMOResult_Soft_Handover_RNC.M1007C4	Sum, nkrttbh,

			frequency measurement reports in which the CPICH Ec/No value is inside Class 3 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	1	tot
cell_specific_cpich_ec_no_class_4	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 4 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C42	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_5	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 5 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No	PMMOResult_Soft_Handover_RNC.M1007C43	Sum, nkrttbh, tot

			value.		
cell_specific_cpich_ec_no_class_6	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 6 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C44	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_7	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 7 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C45	Sum, nkrttbh, tot
cell_specific_cpich_ec_no_class_8	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No	PMMOResult_Soft_Handover_RNC.M1007C46	Sum, nkrttbh, tot

			value is inside Class 8 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.		
cell_specific_cpich_ec_no_class_9	ACCUMULATION	INTEGER	The number of received 1A intra-frequency measurement reports in which the CPICH Ec/No value is inside Class 9 range. The CPICH Ec/No measuring is done only for the best cell in the active set, i.e. the cell in the AS with the highest Ec/No value.	PMMOResult_Soft_Handover_RNC.M1007C47	Sum, nkrttbh, tot
high_ue_rx_tx_time_difference_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of high UE Rx- Tx time difference for HSDPA mobility.	PMMOResult_Soft_Handover_RNC.M1007C61	Sum, nkrttbh, tot
inter_rnc_soft_handover_duration_on_the_srnc_side_for_hsdpa_mobility	ACCUMULATION	INTEGER	Inter-RNC soft HO duration on the SRNC side for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C52	Sum, nkrttbh, tot
low_ue_rx_tx_time_difference_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of low UE Rx- Tx time difference for HSDPA mobility.	PMMOResult_Soft_Handover_RNC.M1007C62	Sum, nkrttbh, tot
one_cell_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods the one cell in Active Set during the HSDPA SHO.	PMMOResult_Soft_Handover_RNC.M1007C48	Sum, nkrttbh, tot

setup_fail_sho_branch_bts	ACCUMULATION	INTEGER	The number of soft handover branch setup failures due to BTS. This counter is updated for the cell(s) where the failure occurred.	PMMOResult_Soft_Handover_RNC.M1007C71	Sum, nkrttbh, tot
setup_fail_sho_branch_iub	ACCUMULATION	INTEGER	The number of soft handover branch setup failures due to Iub transmission. This counter is updated for the cell(s) where the failure occurred.	PMMOResult_Soft_Handover_RNC.M1007C72	Sum, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_hsdpa_mobility	ACCUMULATION	INTEGER	Softer HO duration on the SRNC side for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C51	Sum, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_hsupa_mobility	ACCUMULATION	INTEGER	E-DCH softer handover duration.	PMMOResult_Soft_Handover_RNC.M1007C66	Sum, nkrttbh, tot
successful_active_set_updates_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of successful Active Set Updates on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C59	Sum, nkrttbh, tot
three_cells_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods three cells in Active Set during the HSDPA SHO.	PMMOResult_Soft_Handover_RNC.M1007C50	Sum, nkrttbh, tot
two_cells_in_the_active_set_for_hsdpa_mobility	ACCUMULATION	INTEGER	The sum of time periods two cells in Active Set	PMMOResult_Soft_Handover_RNC.M1007C49	Sum, nkrttbh, tot

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			during the HSDPA SHO.		
unsuccessful_active_set_updates_on_sho_for_hsdpa_mobility	ACCUMULATION	INTEGER	The number of unsuccessful Active Set Updates on SHO for HSDPA.	PMMOResult_Soft_Handover_RNC.M1007C60	Sum, nkrttbh, tot

7.34.2 RNC.Nokia.UMTS.anchoring.incoming_handovers_relocations

RNC anchoring:Incoming handover and relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
number_of_int_rnc_inter_freq_hho_attempts	ACCUMULATION	INT8	A number of inter RNC inter frequency hard handover attempts	PMMOResult_Service_Level_0.M1001C217	Sum, nkrttbh, tot
number_of_inter_rnc_intra_freq_hho_attempts	ACCUMULATION	INT8	A number of inter RNC intra frequency hard handover attempts	PMMOResult_Service_Level_0.M1001C64	Sum, nkrttbh, tot
number_of_inter_sys_hho_attempts	ACCUMULATION	INT8	A number of inter system hard handover attempts	PMMOResult_Service_Level_0.M1001C219	Sum, nkrttbh, tot
number_of_srnc_relocation_attempts	ACCUMULATION	INT8	A number of SRNC relocation attempts	PMMOResult_Service_Level_0.M1001C62	Sum, nkrttbh, tot
number_of_unsuccessful_int_rnc_inter_freq_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter RNC inter frequency hard handover attempts	PMMOResult_Service_Level_0.M1001C218	Sum, nkrttbh, tot
number_of_unsuccessful_inter_rnc_intra_freq_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter RNC intra frequency hard handover attempts	PMMOResult_Service_Level_0.M1001C65	Sum, nkrttbh, tot
number_of_unsuccessful_inter_sys_hho_attempts	ACCUMULATION	INT8	A number of unsuccessful inter system hard	PMMOResult_Service_Level_0.M1001C220	Sum, nkrttbh, tot

			handover attempts		
number_of_unsuccessful_srnc_relocation_attempts	ACCUMULATION	INT8	A number of unsuccessful SRNC relocation attempts	PMMOResult_Service_Level_0.M1001C63	Sum, nkrttbh, tot

7.34.3 RNC.Nokia.UMTS.anchoring.intrasys_hho_scc

HS-DSCH handover measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_unsuccessful_inter_rnc_hho_caused_by_hspa_scc	PERCENTAGE	FLOAT	The percentage of failed inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	100 * {unsuccessful_inter_rnc_hho_caused_by_hspa_scc}/ {inter_rnc_hho_attempts_due_to_hspa_scc}	Average, avg, nkrttbh
edch_downgraded_to_dch_in_scc	ACCUMULATION	INTEGER	The number of successful HSDSCH serving cell changes where E-DCH uplink is downgraded to DCH.	PMMOResult_Intra_System_HHO_RNC.M1008C242	Sum, nkrttbh, tot
edch_inter_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed inter-BTS E-DCH serving cell changes.	PMMOResult_Intra_System_HHO_RNC.M1008C241	Sum, nkrttbh, tot
edch_intra_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed intra-BTS E-DCH serving cell changes.	PMMOResult_Intra_System_HHO_RNC.M1008C240	Sum, nkrttbh, tot

edch_serving_cell_changes_started	ACCUMULATION	INTEGER	The number of E-DCH serving cell change attempts.	PMMOResult_Intra_System_HHO_RNC.M1008C239	Sum, nkrttbh, tot
hs_dsch_inter_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed inter-BTS HS-DSCH serving cell changes.	PMMOResult_Intra_System_HHO_RNC.M1008C223	Sum, nkrttbh, tot
hs_dsch_intra_bts_serving_cell_changes_successful	ACCUMULATION	INTEGER	The number of successfully completed intra-BTS HS-DSCH serving cell changes.	PMMOResult_Intra_System_HHO_RNC.M1008C222	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_ac	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to admission control, for example because the maximum number of HSDPA users were already allocated in the target cells.	PMMOResult_Intra_System_HHO_RNC.M1008C220	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_bts	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to BTS.	PMMOResult_Intra_System_HHO_RNC.M1008C218	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_other_reason	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to other reasons.	PMMOResult_Intra_System_HHO_RNC.M1008C221	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_transport	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to transport.	PMMOResult_Intra_System_HHO_RNC.M1008C219	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_failed_due_to_ue	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change failures due to UE.	PMMOResult_Intra_System_HHO_RNC.M1008C217	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_prevented_due_to_ti	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell changes prevented due	PMMOResult_Intra_System_HHO_RNC.M1008C224	Sum, nkrttbh, tot

mer			to timer HSDPACellChangeMinInterval for minimum interval between HS-DSCH serving cell changes.		
hs_dsch_serving_cell_changes_started_due_to_active_set_update	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to Active Set Update (1B/1C).	PMMOResult_Intra_System_HHO_RNC.M1008C215	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_cpich_ec_no	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to CPICH Ec/No.	PMMOResult_Intra_System_HHO_RNC.M1008C213	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_other_reason	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to other reason (e.g. due to RL failure / Rx-Tx time difference).	PMMOResult_Intra_System_HHO_RNC.M1008C216	Sum, nkrttbh, tot
hs_dsch_serving_cell_changes_started_due_to_ul_sir_error	ACCUMULATION	INTEGER	The number of HS-DSCH serving cell change attempts started due to UL SIR error.	PMMOResult_Intra_System_HHO_RNC.M1008C214	Sum, nkrttbh, tot
inter_rnc_hho_attempts_due_to_hspa_scc	ACCUMULATION	INTEGER	The number of inter-RNC hard handover attempts due to HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_HHO_RNC.M1008C243	Sum, nkrttbh, tot

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successful_inter_rnc_hho_due_to_hspa_scc	ACCUMULATION	INTEGER	The number of successful outgoing Inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_HHO_RNC.M1008C244	Sum, nkrttbh, tot
unsuccessful_inter_rnc_hho_caused_by_hspa_scc	ACCUMULATION	INTEGER	The number of failed inter-RNC hard handovers triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_HHO_RNC.M1008C245	Sum, nkrttbh, tot

7.34.4 RNC.Nokia.UMTS.anchoring.multirab.access_complete

RNC anchoring:Multi-RAB: Access completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_access_complete_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C310	Sum, nkrttbh, tot
rab_access_complete_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C309	Sum, nkrttbh, tot

rab_access_complete_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C308	Sum, nkrttbh, tot
rab_access_complete_3_ps_nrt	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "3 PS NRT".	PMMOResult_Service_Level_0.M1001C312	Sum, nkrttbh, tot
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+1PS NRT(64/128)".	PMMOResult_Service_Level_0.M1001C288	Sum, nkrttbh, tot
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination CS AMR 12.2 + 1PS NRT(64/384).	PMMOResult_Service_Level_0.M1001C441	Sum
rab_access_complete_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+1PS NRT(64/64)".	PMMOResult_Service_Level_0.M1001C287	Sum, nkrttbh, tot
rab_access_complete_cs_amr_12_2_	ACCUMULATION	INT8	The number of RAB access	PMMOResult_Service_Level_0.M1001C291	Sum, nkrttbh,

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2_ps_nrt_background_and_background			completed for a multi-RAB combination "CS AMR 12.2+2PS NRT(BACKGROUND and BACKGROUND)".		tot
rab_access_complete_cs_amr_12_2_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+2PS NRT(INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C290	Sum, nkrttbh, tot
rab_access_complete_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2+2PS NRT(INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C289	Sum, nkrttbh, tot
rab_access_complete_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS AMR 12.2 + 3 PS NRT".	PMMOResult_Service_Level_0.M1001C292	Sum, nkrttbh, tot
rab_access_complete_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C300	Sum, nkrttbh, tot
rab_access_complete_cs_amr_multimode_1_ps_nrt_6	ACCUMULATION	INTEGER	The number of RAB access completed for a	PMMOResult_Service_Level_0.M1001C299	Sum, nkrttbh, tot

4_64			multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".		
rab_access_complete_cs_amr_multimode_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C303	Sum, nkrttbh, tot
rab_access_complete_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C302	Sum, nkrttbh, tot
rab_access_complete_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C301	Sum, nkrttbh, tot

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rab_access_complete_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB access completed for a multi-RAB combination "CS AMR MULTIMODE + 3 PS NRT".	PMMOResult_Service_Level_0.M1001C304	Sum, nkrttbh, tot
rab_access_complete_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 128)".	PMMOResult_Service_Level_0.M1001C329	Sum, nkrttbh, tot
rab_access_complete_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 384)".	PMMOResult_Service_Level_0.M1001C330	Sum, nkrttbh, tot
rab_access_complete_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completed for a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/ 64)".	PMMOResult_Service_Level_0.M1001C328	Sum, nkrttbh, tot
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/128	PMMOResult_Service_Level_0.M1001C320	Sum, nkrttbh, tot

			kbps downlink)".		
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".	PMMOResult_Service_Level_0.M1001C321	Sum, nkrttbh, tot
rab_access_complete_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level_0.M1001C319	Sum, nkrttbh, tot
rab_access_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level_0.M1001C323	Sum, nkrttbh, tot
rab_access_complete_ps_stream_gu	ACCUMULATION	INT8	The number of RAB access	PMMOResult_Service_Level_0.M1001C324	Sum, nkrttbh,

ar_less_than_max_1_ps_nrt_64_384			complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".		tot
rab_access_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access complete for a multi- RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level_0.M1001C322	Sum, nkrttbh, tot

7.34.5 RNC.Nokia.UMTS.anchoring.multirab.active_complete

RNC anchoring:Multi-RAB: Active failures, completions and releases statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_fail_for_multi_rab_with_amr_and_cs_conv_data	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with CS conversational data and PS NRT connections	PMMOResult_Service_Level_0.M1001C238	Sum, nkrttbh, tot
rab_act_fail_for_multi_rab_with_amr_and_cs_streaming_data	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with CS streaming data and PS NRT connections	PMMOResult_Service_Level_0.M1001C239	Sum, nkrttbh, tot
rab_act_fail_for_multi_rab_with_amr_and_nrt	ACCUMULATION	INT8	Number of RAB active failures for multi RAB with AMR and PS NRT	PMMOResult_Service_Level_0.M1001C237	Sum, nkrttbh, tot

			connections		
rab_act_fail_for_multi_rab_with_multiple_nrt	ACCUMULATION	INT8	Number of active failures for multi RAB with multiple PS NRT connections	PMMOResult_Service_Level_0.M1001C240	Sum, nkrttbh, tot
rab_active_complete_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C355	Sum, nkrttbh, tot
rab_active_complete_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C354	Sum, nkrttbh, tot
rab_active_complete_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C353	Sum, nkrttbh, tot
rab_active_complete_3_ps_nrt	ACCUMULATION	INT8	The number of RAB active	PMMOResult_Service_Level_0.M1001C356	Sum, nkrttbh,

			completions and active releases for the multi-RAB combination "3 PS NRT".		tot
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 1 PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C342	Sum, nkrttbh, tot
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination CS AMR 12.2 + 1 PS NRT (64/384).	PMMOResult_Service_Level_0.M1001C442	Sum
rab_active_complete_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 1 PS NRT (64/64)".	PMMOResult_Service_Level_0.M1001C341	Sum, nkrttbh, tot
rab_active_complete_cs_amr_12_2_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C345	Sum, nkrttbh, tot
rab_active_complete_cs_amr_12_2_2_ps_nrt_interactiv	ACCUMULATION	INT8	The number of RAB active completions and	PMMOResult_Service_Level_0.M1001C344	Sum, nkrttbh, tot

e_and_background			active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE and BACKGROUND)".		
rab_active_complete_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C343	Sum, nkrttbh, tot
rab_active_complete_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR 12.2 + 3 PS NRT".	PMMOResult_Service_Level_0.M1001C346	Sum, nkrttbh, tot
rab_active_complete_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C348	Sum, nkrttbh, tot
rab_active_complete_cs_amr_multim	ACCUMULATION	INTEGER	The number of RAB active	PMMOResult_Service_Level_0.M1001C347	Sum, nkrttbh,

ode_1_ps_nrt_64_64			completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".		tot
rab_active_complete_cs_amr_multimode_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C351	Sum, nkrttbh, tot
rab_active_complete_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C350	Sum, nkrttbh, tot
rab_active_complete_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C349	Sum, nkrttbh, tot

rab_active_complete_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for the multi-RAB combination "CS AMR MULTIMODE + 3 PS NRT".	PMMOResult_Service_Level_0.M1001C352	Sum, nkrttbh, tot
rab_active_complete_cs_amr_multimode	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for CS AMR Multimode.	PMMOResult_Service_Level_0.M1001C331	Sum, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/128 kbps downlink)".	PMMOResult_Service_Level_0.M1001C364	Sum, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/384 kbps downlink)".	PMMOResult_Service_Level_0.M1001C365	Sum, nkrttbh, tot
rab_active_complete_cs_conversational_1_ps_nrt_64_	ACCUMULATION	INT8	The number of RAB active completions and	PMMOResult_Service_Level_0.M1001C363	Sum, nkrttbh, tot

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64			active releases for the multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64 kbps uplink/64 kbps downlink)".		
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB (64kbps uplink/128kbps downlink)".	PMMOResult_Service_Level_0.M1001C358	Sum, nkrttbh, tot
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB (64 kbps uplink/384kbps downlink)".	PMMOResult_Service_Level_0.M1001C359	Sum, nkrttbh, tot
rab_active_complete_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate equal to max bit rate + 1 PS NRT RAB(64 kbps uplink/64 kbps	PMMOResult_Service_Level_0.M1001C357	Sum, nkrttbh, tot

			downlink)".		
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/128 kbps downlink)".	PMMOResult_Service_Level_0.M1001C361	Sum, nkrttbh, tot
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/384 kbps downlink)".	PMMOResult_Service_Level_0.M1001C362	Sum, nkrttbh, tot
rab_active_complete_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for the multi-RAB combination "PS Streaming RAB with guaranteed bit rate less than max bit rate + 1 PS NRT RAB (64 kbps uplink/64 kbps	PMMOResult_Service_Level_0.M1001C360	Sum, nkrttbh, tot

			downlink)".		

7.34.6 RNC.Nokia.UMTS.anchoring.multirab.active_failure

Multi-RAB active failure measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_active_fail_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 2 PS NRT background class.	PMMOResult_Service_Level_0.M1001C528	Sum, nkrttbh, tot
rab_active_fail_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 1 PS NRT interactive class + 1 PS NRT background class.	PMMOResult_Service_Level_0.M1001C527	Sum, nkrttbh, tot
rab_active_fail_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 2 PS NRT interactive class.	PMMOResult_Service_Level_0.M1001C526	Sum, nkrttbh, tot
rab_active_fail_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination 3 PS NRT.	PMMOResult_Service_Level_0.M1001C529	Sum, nkrttbh, tot
rab_active_fail_cs_amr_122_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C504	Sum, nkrttbh, tot

rab_active_fail_cs_amr_122_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C505	Sum, nkrttbh, tot
rab_active_fail_cs_amr_122_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C503	Sum, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 2 PS NRT background class.	PMMOResult_Service_Level_0.M1001C508	Sum, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 1 PS NRT interactive class + 1 PS NRT background class.	PMMOResult_Service_Level_0.M1001C507	Sum, nkrttbh, tot
rab_active_fail_cs_amr_122_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination	PMMOResult_Service_Level_0.M1001C506	Sum, nkrttbh, tot

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			CS AMR 12.2 kbit/s + 2 PS NRT interactive class.		
rab_active_fail_cs_amr_122_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR 12.2 kbit/s + 3 PS NRT.	PMMOResult_Service_Level_0.M1001C509	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C511	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C512	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C510	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_2_ps_nrt_background_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + 2 PS NRT background	PMMOResult_Service_Level_0.M1001C515	Sum, nkrttbh, tot

			class.		
rab_active_fail_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + 1 PS NRT interactive class + 1 PS NRT background class.	PMMOResult_Service_Level_0.M1001C514	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS AMR Multimode + 2 PS NRT interactive class.	PMMOResult_Service_Level_0.M1001C513	Sum, nkrttbh, tot
rab_active_fail_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination AMR Multimode + 3 PS NRT.	PMMOResult_Service_Level_0.M1001C516	Sum, nkrttbh, tot
rab_active_fail_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational class + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C518	Sum, nkrttbh, tot
rab_active_fail_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational	PMMOResult_Service_Level_0.M1001C519	Sum, nkrttbh, tot

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			class + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.		
rab_active_fail_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination CS conversational class + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C517	Sum, nkrttbh, tot
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C521	Sum, nkrttbh, tot
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C522	Sum, nkrttbh, tot
rab_active_fail_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which	PMMOResult_Service_Level_0.M1001C520	Sum, nkrttbh, tot

			guaranteed bit rate equals to maximum bit rate + PS NRT 64 kbit/s uplink and 64 kbit/s downlink.		
rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate + PS NRT 64 kbit/s uplink and 128 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C524	Sum, nkrttbh, tot
rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate + PS NRT 64 kbit/s uplink and 384 kbit/s downlink.	PMMOResult_Service_Level_0.M1001C525	Sum, nkrttbh, tot
rab_active_fail_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB active failures for multi RAB combination PS streaming class in which guaranteed bit rate is less than maximum bit rate	PMMOResult_Service_Level_0.M1001C523	Sum, nkrttbh, tot

			+ PS NRT 64 kbit/s uplink and 64 kbit/s downlink.		

7.34.7 RNC.Nokia.UMTS.anchoring.multirab.setup_attempts

RNC anchoring:Multi-RAB: Setup attempts statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_attempt_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C307	Sum, nkrttbh, tot
rab_setup_attempt_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C306	Sum, nkrttbh, tot
rab_setup_attempt_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C305	Sum, nkrttbh, tot
rab_setup_attempt_3_ps_nrt	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "3 PS NRT".	PMMOResult_Service_Level_0.M1001C311	Sum, nkrttbh, tot

rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C282	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_384	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination CS AMR 12.2 + PS NRT (64/384).	PMMOResult_Service_Level_0.M1001C440	Sum
rab_setup_attempt_cs_amr_12_2_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + PS NRT (64/64)".	PMMOResult_Service_Level_0.M1001C281	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_background_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2 PS NRT (BACKGROUND and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C285	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_interactive_and_background	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2	PMMOResult_Service_Level_0.M1001C284	Sum, nkrttbh, tot

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			PS NRT (INTERACTIVE and BACKGROUND)".		
rab_setup_attempt_cs_amr_12_2_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2 + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C283	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_12_2_3_ps_nrt	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS AMR 12.2+3PS NRT".	PMMOResult_Service_Level_0.M1001C286	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_1_ps_nrt_64_128	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C294	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_1_ps_nrt_64_64	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 1 PS NRT (64/64)".	PMMOResult_Service_Level_0.M1001C293	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_background_and_back	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a	PMMOResult_Service_Level_0.M1001C297	Sum, nkrttbh, tot

ground			multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (BACKGROUND and BACKGROUND)".		
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_interactive_and_background	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and BACKGROUND)".	PMMOResult_Service_Level_0.M1001C296	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_2_ps_nrt_interactive_and_interactive	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR MULTIMODE + 2 PS NRT (INTERACTIVE and INTERACTIVE)".	PMMOResult_Service_Level_0.M1001C295	Sum, nkrttbh, tot
rab_setup_attempt_cs_amr_multimode_3_ps_nrt	ACCUMULATION	INTEGER	The number of RAB setup attempts, the result of which would be a multi-RAB combination "CS AMR	PMMOResult_Service_Level_0.M1001C298	Sum, nkrttbh, tot

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			MULTIMODE + 3 PS NRT".		
rab_setup_attempt_cs_conversational_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/128)".	PMMOResult_Service_Level_0.M1001C326	Sum, nkrttbh, tot
rab_setup_attempt_cs_conversational_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/384)".	PMMOResult_Service_Level_0.M1001C327	Sum, nkrttbh, tot
rab_setup_attempt_cs_conversational_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "CS CONVERSATIONAL + 1 PS NRT (64/64)".	PMMOResult_Service_Level_0.M1001C325	Sum, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_equals_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level_0.M1001C314	Sum, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_	ACCUMULATION	INT8	The number of RAB setup attempts	PMMOResult_Service_Level_0.M1001C315	Sum, nkrttbh,

equals_max_1_ps_nrt_64_384			the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".		tot
rab_setup_attempt_ps_stream_guar_equals_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate the same as maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level_0.M1001C313	Sum, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/128 kbps downlink)".	PMMOResult_Service_Level_0.M1001C317	Sum, nkrttbh, tot
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with	PMMOResult_Service_Level_0.M1001C318	Sum, nkrttbh, tot

			guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/384 kbps downlink)".		
rab_setup_attempt_ps_stream_guar_less_than_max_1_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB setup attempts the result of which would be a multi-RAB combination "PS Streaming with guaranteed bit rate less than maximum bit rate" + "PS NRT (64 kpbs uplink/64 kbps downlink)".	PMMOResult_Service_Level_0.M1001C316	Sum, nkrttbh, tot

7.34.8 RNC.Nokia.UMTS.anchoring.prach_prop_delay

RNC aggregated:PRACH propagation delay statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
prach_propagation_delay_class_0	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_000 (3GPP TS 25.133). This corresponds approximately to the distance of 0...234 meters.	PMMOResult_RRC_0.M1006C128	Sum, nkrttbh, tot
prach_propagation_delay_class_10	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_026...PROP_DELA	PMMOResult_RRC_0.M1006C138	Sum, nkrttbh, tot

			Y_029 (3GPP TS 25.133). This corresponds the distance of 6084...7020 meters.		
prach_propagation_delay_class_11	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_030...PROP_DELAY_033 (3GPP TS 25.133). This corresponds the distance of 7020...7956 meters.	PMMOResult_RRC_0.M1006C139	Sum, nkrttbh, tot
prach_propagation_delay_class_12	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_034...PROP_DELAY_042 (3GPP TS 25.133). This corresponds the distance of 7956...10062 meters.	PMMOResult_RRC_0.M1006C140	Sum, nkrttbh, tot
prach_propagation_delay_class_13	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with	PMMOResult_RRC_0.M1006C141	Sum, nkrttbh, tot

			value PROP_DELAY_043...PROP_DELAY_063 (3GPP TS 25.133). This corresponds the distance of 10062...14976 meters.		
prach_propagation_delay_class_14	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_064...PROP_DELAY_084 (3GPP TS 25.133). This corresponds the distance of 14976...19890 meters.	PMMOResult_RRC_0.M1006C142	Sum, nkrttbh, tot
prach_propagation_delay_class_15	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_085...PROP_DELAY_106 (3GPP TS 25.133). This corresponds the distance of 19890...25038 meters.	PMMOResult_RRC_0.M1006C143	Sum, nkrttbh, tot
prach_propagation_delay_class_16	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_1	PMMOResult_RRC_0.M1006C144	Sum, nkrttbh, tot

			07...PROP_DELAY_127 (3GPP TS 25.133). This corresponds the distance of 25038...29952 meters.		
prach_propagation_delay_class_17	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_128...PROP_DELAY_148 (3GPP TS 25.133). This corresponds the distance of 29952...34866 meters.	PMMOResult_RRC_0.M1006C145	Sum, nkrttbh, tot
prach_propagation_delay_class_18	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_149...PROP_DELAY_170 (3GPP TS 25.133). This corresponds the distance of 34866...40014 meters.	PMMOResult_RRC_0.M1006C146	Sum, nkrttbh, tot
prach_propagation_delay_class_19	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by	PMMOResult_RRC_0.M1006C147	Sum, nkrttbh, tot

			the WBTS with value PROP_DELAY_171...PROP_DELAY_213 (3GPP TS 25.133). This corresponds the distance of 40014...50076 meters.		
prach_propagation_delay_class_1	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_001 (3GPP TS 25.133). This corresponds approximately to the distance of 234...468 meters.	PMMOResult_RRC_0.M1006C129	Sum, nkrttbh, tot
prach_propagation_delay_class_20	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_214 or greater (3GPP TS 25.133). This corresponds the distance greater than 50076 meters.	PMMOResult_RRC_0.M1006C148	Sum, nkrttbh, tot
prach_propagation_delay_class_2	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_002...PROP_DELA	PMMOResult_RRC_0.M1006C130	Sum, nkrttbh, tot

			Y_003 (3GPP TS 25.133). This corresponds the distance of 468...936 meters.		
prach_propagation_delay_class_3	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_004 (3GPP TS 25.133). This corresponds the distance of 936...1170 meters.	PMMOResult_RRC_0.M1006C131	Sum, nkrttbh, tot
prach_propagation_delay_class_4	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_005...PROP_DELAY_006 (3GPP TS 25.133). This corresponds the distance of 1170...1638 meters.	PMMOResult_RRC_0.M1006C132	Sum, nkrttbh, tot
prach_propagation_delay_class_5	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_007...PROP_DELA	PMMOResult_RRC_0.M1006C133	Sum, nkrttbh, tot

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			Y_008 (3GPP TS 25.133). This corresponds the distance of 1638...2106 meters.		
prach_propagation_delay_class_6	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_009...PROP_DELAY_012 (3GPP TS 25.133). This corresponds the distance of 2106...3042 meters.	PMMOResult_RRC_0.M1006C134	Sum, nkrttbh, tot
prach_propagation_delay_class_7	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_013...PROP_DELAY_016 (3GPP TS 25.133). This corresponds the distance of 3042...3978 meters.	PMMOResult_RRC_0.M1006C135	Sum, nkrttbh, tot
prach_propagation_delay_class_8	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_017...PROP_DELAY_020 (3GPP TS 25.133). This	PMMOResult_RRC_0.M1006C136	Sum, nkrttbh, tot

			corresponds the distance of 3978...4914 meters.		
prach_propagation_delay_class_9	ACCUMULATION	INTEGER	The number of PRACH Propagation Delay values reported by the WBTS with value PROP_DELAY_021...PROP_DELAY_025 (3GPP TS 25.133). This corresponds the distance of 4914...6084 meters.	PMMOResult_RRC_0.M1006C137	Sum, nkrttbh, tot

7.34.9 RNC.Nokia.UMTS.anchoring.rab.access_complete

RAB access complete measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_access_complete_cs_amr_multimode	ACCUMULATION	INTEGER	Number of RAB access completions for CS AMR Multimode calls.	PMMOResult_Service_Level_0.M1001C262	Sum, nkrttbh, tot

7.34.10RNC.Nokia.UMTS.anchoring.rab.active_complete_cs_data

RNC anchoring:RAB - Active completions for CS voice and data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_comp_for_cs_stream_guar_bit	ACCUMULATION	INT8	The number of RAB active	PMMOResult_Service_Level_0.M1001C418	Sum, nkrttbh,

_rate_dl			completions for CS streaming calls in case resources for the RAB are reserved according to guaranteed bit rate DL defined in RAB parameters . Possible only for CS non-transparent data in streaming class.		tot
rab_act_comp_for_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB active completions for CS streaming calls in case resources for the RAB are reserved according to the guaranteed bit rate in uplink.	PMMOResult_Service_Level_0.M1001C417	Sum, nkrttbh, tot
rab_active_complete_cs_conversational_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Conversational 64 kbps.	PMMOResult_Service_Level_0.M1001C332	Sum, nkrttbh, tot
rab_active_complete_cs_streaming_14_4	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Streaming 14.4 kbps.	PMMOResult_Service_Level_0.M1001C333	Sum, nkrttbh, tot
rab_active_complete_cs_streaming_57_6	ACCUMULATION	INT8	The number of RAB active completions and active releases for CS Streaming 57.6 kbps.	PMMOResult_Service_Level_0.M1001C334	Sum, nkrttbh, tot
rab_active_completions_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active completions for CS data calls with	PMMOResult_Service_Level_0.M1001C137	Sum, nkrttbh, tot

			conversational class		
rab_active_completions_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active completions for CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C138	Sum, nkrttbh, tot
rab_active_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB active completions for CS voice calls	PMMOResult_Service_Level_0.M1001C136	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_data_conv	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS data conversational, when the RAB is established and released in the same cell.	PMMOResult_Service_Level_0.M1001C249	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_data_stream	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS data streaming, when the RAB is established and released in the same cell.	PMMOResult_Service_Level_0.M1001C250	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_cs_voice	ACCUMULATION	INT8	The number of normal completions of RAB active phases for CS voice, when the RAB is established and released in the	PMMOResult_Service_Level_0.M1001C248	Sum, nkrttbh, tot

			same cell.		

7.34.11RNC.Nokia.UMTS.anchoring.rab.active_complete_ps_data

RNC anchoring:RAB - Active completions for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_comp_for_ps_call_using_iphc_conv_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with conversational class using RFC2507 IP header compression.	PMMOResult_Service_Level_0.M1001C243	Sum, nkrttbh, tot
rab_act_comp_for_ps_call_using_iphc_stream_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with streaming class using RFC2507 IP header compression.	PMMOResult_Service_Level_0.M1001C244	Sum, nkrttbh, tot
rab_act_comp_for_ps_call_using_rohc_conv_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions for the PS data calls with conversational class using ROHC IP header compression.	PMMOResult_Service_Level_0.M1001C245	Sum, nkrttbh, tot
rab_act_comp_for_ps_call_using_rohc_stream_class	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of RAB active completions	PMMOResult_Service_Level_0.M1001C246	Sum, nkrttbh, tot

			for the PS data calls with streaming class using ROHC IP header compression.		
rab_act_comp_for_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB active completions for PS streaming calls in which resources for the RAB are reserved according to the guaranteed bit rate in downlink. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level_0.M1001C420	Sum, nkrttbh, tot
rab_act_comp_for_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB active completions for PS streaming calls in case resources for the RAB are reserved according to the guaranteed bit rate in uplink. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level_0.M1001C419	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 128 kbps downlink.	PMMOResult_Service_Level_0.M1001C385	Sum, nkrttbh, tot

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rab_active_complete_ps_nrt_128_256	ACCUMULATION	INTEGER	The number of RAB active completions and active releases for PS NRT RAB with a bitrate of 128 kbps uplink/ 256 kbps downlink.	PMMOResult_Service_Level_0.M1001C598	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_128_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level_0.M1001C386	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 128 kbps uplink/ 64 kbps downlink.	PMMOResult_Service_Level_0.M1001C384	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 384 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level_0.M1001C387	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 384 kbps uplink/ 64 kbps downlink.	PMMOResult_Service_Level_0.M1001C388	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB active completions and	PMMOResult_Service_Level_0.M1001C338	Sum, nkrttbh, tot

			active releases for PS NRT RAB with a bit rate of 64 kbps uplink/ 128 kbps downlink.		
rab_active_complete_ps_nrt_64_256	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 64 kbps uplink/ 256 kbps downlink.	PMMOResult_Service_Level_0.M1001C339	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_64_384	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of64 kbps uplink/ 384 kbps downlink.	PMMOResult_Service_Level_0.M1001C340	Sum, nkrttbh, tot
rab_active_complete_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C337	Sum, nkrttbh, tot
rab_active_complete_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/64 kbps downlink and a	PMMOResult_Service_Level_0.M1001C335	Sum, nkrttbh, tot

			guaranteed bit rate of 16 kbps uplink/ 64 kbps downlink.		
rab_active_complete_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	The number of RAB active completions and active releases for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/64 kbps downlink and a guaranteed bit rate of 8 kbps uplink/32 kbps downlink.	PMMOResult_Service_Level_0.M1001C336	Sum, nkrttbh, tot
rab_active_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active completions for PS calls with background class	PMMOResult_Service_Level_0.M1001C142	Sum, nkrttbh, tot
rab_active_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active completions for PS calls with conversational class	PMMOResult_Service_Level_0.M1001C139	Sum, nkrttbh, tot
rab_active_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active completions for PS calls with interactive class	PMMOResult_Service_Level_0.M1001C141	Sum, nkrttbh, tot
rab_active_completions_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active completions for PS calls with streaming class	PMMOResult_Service_Level_0.M1001C140	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_backg	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data background, when the RAB is	PMMOResult_Service_Level_0.M1001C254	Sum, nkrttbh, tot

			established and released in the same cell.		
rab_active_completions_in_same_cell_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of normal completions of RAB active phases for PS data conversational, when the RAB is established and released in the same cell.	PMMOResult_Service_Level_0.M1001C251	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_intera	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data interactive, when the RAB is established and released in the same cell.	PMMOResult_Service_Level_0.M1001C253	Sum, nkrttbh, tot
rab_active_completions_in_same_cell_for_ps_data_stream	ACCUMULATION	INT8	The number of normal completions of RAB active phases for PS data streaming, when the RAB is established and released in the same cell.	PMMOResult_Service_Level_0.M1001C252	Sum, nkrttbh, tot

7.34.12RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_data

RNC anchoring:RAB - Active failures for CS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_fail_for_cs_data_call_stream_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C165	Sum, nkrttbh, tot
rab_act_fail_for_cs_data_conv_class_call_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C159	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conservational class caused by a BTS	PMMOResult_Service_Level_0.M1001C157	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by a BTS	PMMOResult_Service_Level_0.M1001C163	Sum, nkrttbh, tot
rab_active_failures_due_to_iu_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by the IU interface. When for example, the signalling connection between RNC and CN fails	PMMOResult_Service_Level_0.M1001C155	Sum, nkrttbh, tot
rab_active_failures_due_to_iu_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C161	Sum, nkrttbh, tot

			caused by the IU interface. When for example, the signalling connection between RNC and CN fails		
rab_active_failures_due_to_iur_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by the IUR interface. When for example, the SRNC relocation procedure fails due to the IUR interface	PMMOResult_Service_Level_0.M1001C158	Sum, nkrttbh, tot
rab_active_failures_due_to_iur_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by the IUR interface. When for example, the SRNC relocation procedure fails due to the IUR interface	PMMOResult_Service_Level_0.M1001C164	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conservational class caused by the radio interface	PMMOResult_Service_Level_0.M1001C156	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_in	ACCUMULATION	INT8	A number of RAB active failures for	PMMOResult_Service_Level_0.M1001C162	Sum, nkrttbh,

t_for_cs_data_stream			CS data calls with streaming class caused by the radio interface		tot
rab_active_failures_due_to_rnc_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C160	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active failures for CS data calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C166	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_data_conv	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS data conversational.	PMMOResult_Service_Level_0.M1001C393	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_data_stream	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS data streaming.	PMMOResult_Service_Level_0.M1001C394	Sum, nkrttbh, tot

7.34.13RNC.Nokia.UMTS.anchoring.rab.active_failure_cs_voice

RNC anchoring:RAB - Active failures for CS voice service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_fail_for_cs_voice_call_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C149	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls	PMMOResult_Service_Level_0.M1001C147	Sum, nkrttbh, tot

			caused by a BTS		
rab_active_failures_due_to_iu_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by the IU interface. When for example, the signalling connections between the RNC and CN fails	PMMOResult_Service_Level_0.M1001C145	Sum, nkrttbh, tot
rab_active_failures_due_to_iur_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by the IUR interface. When for example, the SRNC relocation procedure fails because of the IUR interface	PMMOResult_Service_Level_0.M1001C148	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls due to the radio interface	PMMOResult_Service_Level_0.M1001C146	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_cs_voice	ACCUMULATION	INT8	A number of RAB active failures for CS voice calls caused by RNCs internal reasons. Includes also ciphering failures	PMMOResult_Service_Level_0.M1001C150	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_cs_voice	ACCUMULATION	INT8	Number of RAB active failures caused by UE for CS voice.	PMMOResult_Service_Level_0.M1001C392	Sum, nkrttbh, tot

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7.34.14RNC.Nokia.UMTS.anchoring.rab.active_failure_ps_data

RNC anchoring:RAB - Active failures for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_fail_for_ps_data_call_backg_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C195	Sum, nkrttbh, tot
rab_act_fail_for_ps_data_call_conv_class_due_to_integrity_check	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C177	Sum, nkrttbh, tot
rab_act_fail_for_ps_data_call_intera_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C189	Sum, nkrttbh, tot
rab_act_fail_for_ps_data_call_stream_class_due_to_integrity_check	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by an integrity check failure	PMMOResult_Service_Level_0.M1001C183	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by a BTS	PMMOResult_Service_Level_0.M1001C193	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number	PMMOResult_Service_Level_0.M1001C175	Sum, nkrttbh,

ps_data_conv			of RAB active failures for PS data calls with conservational class caused by a BTS		tot
rab_active_failures_due_to_bts_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by a BTS	PMMOResult_Service_Level_0.M1001C187	Sum, nkrttbh, tot
rab_active_failures_due_to_bts_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by a BTS	PMMOResult_Service_Level_0.M1001C181	Sum, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level_0.M1001C191	Sum, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by the IU interface. When for example the signalling connection	PMMOResult_Service_Level_0.M1001C173	Sum, nkrttbh, tot

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			between the RNC and CN fails		
rab_active_failures_due_to_iu_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level_0.M1001C185	Sum, nkrttbh, tot
rab_active_failures_due_to_iu_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by the IU interface. When for example the signalling connection between the RNC and CN fails	PMMOResult_Service_Level_0.M1001C179	Sum, nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level_0.M1001C194	Sum, nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by the IUR interface. When for example	PMMOResult_Service_Level_0.M1001C176	Sum, nkrttbh, tot

			the SRNC relocation fails due to the IUR interface		
rab_active_failures_due_to_iur_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level_0.M1001C188	Sum, nkrttbh, tot
rab_active_failures_due_to_iur_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by the IUR interface. When for example the SRNC relocation fails due to the IUR interface	PMMOResult_Service_Level_0.M1001C182	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by a radio interface	PMMOResult_Service_Level_0.M1001C192	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by a radio interface	PMMOResult_Service_Level_0.M1001C174	Sum, nkrttbh, tot

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rab_active_failures_due_to_radio_int_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by a radio interface	PMMOResult_Service_Level_0.M1001C186	Sum, nkrttbh, tot
rab_active_failures_due_to_radio_int_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by a radio interface	PMMOResult_Service_Level_0.M1001C180	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with background class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C196	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active failures for PS data calls with conservational class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C178	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with interactive class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C190	Sum, nkrttbh, tot
rab_active_failures_due_to_rnc_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active failures for PS data calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C184	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_backg	ACCUMULATION	INT8	Number of RAB active failures caused by UE for	PMMOResult_Service_Level_0.M1001C398	Sum, nkrttbh, tot

			PS data background.		
rab_active_failures_due_to_ue_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of RAB active failures caused by UE for PS data conversational.	PMMOResult_Service_Level_0.M1001C395	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_intera	ACCUMULATION	INT8	Number of RAB active failures caused by UE for PS data interactive.	PMMOResult_Service_Level_0.M1001C397	Sum, nkrttbh, tot
rab_active_failures_due_to_ue_for_ps_data_stream	ACCUMULATION	INT8	Number of RAB active failures caused by UE for PS data streaming.	PMMOResult_Service_Level_0.M1001C396	Sum, nkrttbh, tot

7.34.15RNC.Nokia.UMTS.anchoring.rab.active_failures_ps

RAB active failure measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_active_failures_for_ps_data_background_in_pch_state	ACCUMULATION	INTEGER	The number of RAB active failures in cell-PCH state for PS data with interactive class service.	PMMOResult_Service_Level_0.M1001C594	Sum, nkrttbh, tot
rab_active_failures_for_ps_data_interactive_in_pch_state	ACCUMULATION	INTEGER	The number of RAB active failures in cell-PCH state for PS data with background class service.	PMMOResult_Service_Level_0.M1001C593	Sum, nkrttbh, tot

7.34.16RNC.Nokia.UMTS.anchoring.rab.active_release_cs_data

RNC anchoring:RAB - Active releases for CS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_rel_cs_conv_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS conversational calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C423	Sum, nkrttbh, tot
rab_act_rel_cs_stream_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS streaming calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C424	Sum, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for CS streaming calls due to pre-emption when RAB has DL resources reserved according to guaranteed bit rate in downlink.	PMMOResult_Service_Level_0.M1001C430	Sum, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for CS streaming class calls due to SRNC relocation in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters. NOTE! This counter includes SRNS relocations,	PMMOResult_Service_Level_0.M1001C428	Sum, nkrttbh, tot

			inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.		
rab_act_rel_cs_stream_guar_bit_rate_dl_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS streaming class calls due to unspecified error received from CN in case of RAB has DL resources according to guaranteed bit rate DL in RAB parameters. This is only possible for CS non-transparent data in streaming class.	PMMOResult_Service_Level_0.M1001C426	Sum, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_ul_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for CS streaming calls due to pre-emption when RAB has UL resources reserved according to guaranteed bit rate in uplink.	PMMOResult_Service_Level_0.M1001C429	Sum, nkrttbh, tot
rab_act_rel_cs_stream_guar_bit_rate_ul_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for CS streaming class calls due to SRNC	PMMOResult_Service_Level_0.M1001C427	Sum, nkrttbh, tot

			relocation in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.		
rab_act_rel_cs_stream_guar_bit_rate_ul_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS streaming class calls due to unspecified error received from CN in case of RAB has UL resources according to guaranteed bit rate UL in RAB parameters. This is only possible for CS non-transparent data in streaming class.	PMMOResult_Service_Level_0.M1001C425	Sum, nkrttbh, tot
rab_act_rel_cs_voice_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for CS voice calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C422	Sum, nkrttbh, tot
rab_active_releases_due_to_preemption_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with conversational	PMMOResult_Service_Level_0.M1001C152	Sum, nkrttbh, tot

			class due to pre emption		
rab_active_releases_due_to_preemption_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with streaming class due to pre emption	PMMOResult_Service_Level_0.M1001C154	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with conversational class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C151	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB active releases for CS data calls with streaming class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C153	Sum, nkrttbh, tot

7.34.17RNC.Nokia.UMTS.anchoring.rab.active_release_cs_voice

RNC anchoring:RAB - Active releases for CS voice service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

rab_act_rel_cs_voice_pre_lic	ACCUMULATION	INTEGER	The number of RAB releases due to pre-emption due to capacity license exceeded for CS voice calls. Also counter M1001C144 RAB ACTIVE RELEASES DUE TO PRE-EMPTION FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level_0.M1001C620	Sum, nkrttbh, tot
rab_active_releases_due_to_preemption_for_cs_voice	ACCUMULATION	INT8	A number of RAB active releases for CS voice calls due to pre emption	PMMOResult_Service_Level_0.M1001C144	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_cs_voice	ACCUMULATION	INT8	A number of RAB active releases for CS voice calls due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C143	Sum, nkrttbh, tot

7.34.18RNC.Nokia.UMTS.anchoring.rab.active_release_ps_data

RNC anchoring:RAB - Active releases for PS data service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_act_rel_ps_backg_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS background class calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C433	Sum, nkrttbh, tot

rab_act_rel_ps_interact_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS interactive class calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C432	Sum, nkrttbh, tot
rab_act_rel_ps_stream_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN.	PMMOResult_Service_Level_0.M1001C431	Sum, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_dl_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for PS streaming calls due to pre-emption in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters.	PMMOResult_Service_Level_0.M1001C439	Sum, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_dl_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for PS streaming class calls due to SRNC relocation in case RAB has DL resources according to guaranteed bit rate DL in RAB parameters. NOTE! This counter includes SRNS relocations, inter-RNC intra-	PMMOResult_Service_Level_0.M1001C437	Sum, nkrttbh, tot

			frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.		
rab_act_rel_ps_stream_guar_bit_rate_dl_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN in case of RAB has DL resources according to guaranteed bit rate DL in RAB parameters.	PMMOResult_Service_Level_0.M1001C435	Sum, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_pre_emption	ACCUMULATION	INT8	The number of RAB active releases for PS streaming calls due to pre-emption in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level_0.M1001C438	Sum, nkrttbh, tot
rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_srnc_reloc	ACCUMULATION	INT8	The number of RAB active releases for PS streaming class calls due to SRNC relocation in case RAB has UL resources according to guaranteed bit rate UL in RAB parameters. NOTE! This counter includes	PMMOResult_Service_Level_0.M1001C436	Sum, nkrttbh, tot

			SRNS relocations, inter-RNC intra-frequency hard handovers, inter-RNC inter-frequency hard handovers and inter-system hard handovers.		
rab_act_rel_ps_stream_guar_bit_rate_ul_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	Number of RAB active releases for PS streaming class calls due to unspecified error received from CN in case of RAB has UL resources according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level_0.M1001C434	Sum, nkrttbh, tot
rab_active_releases_due_to_preemption_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active releases for PS data calls due to pre emption	PMMOResult_Service_Level_0.M1001C168	Sum, nkrttbh, tot
rab_active_releases_due_to_preemption_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with streaming class due to pre emption.	PMMOResult_Service_Level_0.M1001C170	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with interactive class due to SRNC	PMMOResult_Service_Level_0.M1001C172	Sum, nkrttbh, tot

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			relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers		
rab_active_releases_due_to_srnc_reloc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB active releases for PS data calls with conservational class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C167	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with background class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C171	Sum, nkrttbh, tot
rab_active_releases_due_to_srnc_reloc_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB active releases for PS data calls with streaming class due to SRNC relocation. Note this counter includes both SRNS relocations and inter RNC intra frequency	PMMOResult_Service_Level_0.M1001C169	Sum, nkrttbh, tot

			hard handovers		

7.34.19RNC.Nokia.UMTS.anchoring.rab.connections_in_cs

RAB CS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_cs_amr_122_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS AMR 12.2 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C474	Sum, nkrttbh, tot
rab_cs_data_conv_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data conversational 64 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C475	Sum, nkrttbh, tot
rab_cs_data_conv_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C468	Sum, nkrttbh, tot
rab_cs_data_stream_144_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 14.4 kbit/s connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C476	Sum, nkrttbh, tot
rab_cs_data_stream_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS streaming connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C469	Sum, nkrttbh, tot
rab_cs_streaming_	ACCUMULA	INTEG	The number of	PMMOResult_Service	Sum,

576_enters_new_ref_cell	TION	ER	RAB CS data streaming 14.4 kbit/s connections that enter a new reference cell.	_Level_0.M1001C477	nkrttbh, tot
rab_cs_voice_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS voice connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C467	Sum, nkrttbh, tot
rab_ps_streaming_16_64_guar_16_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C478	Sum, nkrttbh, tot
rab_ps_streaming_16_64_guar_8_32_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum bit rates 16 kbit/s for uplink and 64 kbit/s for downlink and guaranteed bit rates 8 kbit/s for uplink and 32 kbit/s for downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C479	Sum, nkrttbh, tot

7.34.20RNC.Nokia.UMTS.anchoring.rab.connections_in_ps

RAB PS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_ps_data_back	ACCUMULA	INTEG	The number of	PMMOResult_Service_	Sum,

g_enters_new_ref_cell	TION	ER	RAB PS background connections that enter a new reference cell.	Level_0.M1001C473	nkrttbh, tot
rab_ps_data_intera_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS interactive connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C472	Sum, nkrttbh, tot
rab_ps_data_stream_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS streaming connections+E4 reference cell.	PMMOResult_Service_Level_0.M1001C471	Sum, nkrttbh, tot
rab_ps_nrt_128_128_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 128 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C485	Sum, nkrttbh, tot
rab_ps_nrt_128_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C486	Sum, nkrttbh, tot
rab_ps_nrt_128_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 64 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C484	Sum, nkrttbh, tot

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rab_ps_nrt_384_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C487	Sum, nkrttbh, tot
rab_ps_nrt_384_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 64 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C488	Sum, nkrttbh, tot
rab_ps_nrt_64_128_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 128 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C481	Sum, nkrttbh, tot
rab_ps_nrt_64_256_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 256 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C482	Sum, nkrttbh, tot
rab_ps_nrt_64_384_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 384 kbit/s downlink connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C483	Sum, nkrttbh, tot
rab_ps_nrt_64_64_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 64 kbit/s downlink	PMMOResult_Service_Level_0.M1001C480	Sum, nkrttbh, tot

			connections that enter a new reference cell.		

7.34.21RNC.Nokia.UMTS.anchoring.rab.connections_out_cs

RAB CS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_cs_amr_122_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS AMR 12.2 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C451	Sum, nkrttbh, tot
rab_cs_data_conv_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data conversational 64 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C452	Sum, nkrttbh, tot
rab_cs_data_conv_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C445	Sum, nkrttbh, tot
rab_cs_data_stream_144_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 14.4 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C453	Sum, nkrttbh, tot
rab_cs_data_stream_leaves_old_ref	ACCUMULATION	INTEGER	The number of RAB CS streaming	PMMOResult_Service_Level_0.M1001C446	Sum, nkrttbh,

_cell			connections that have left from the old reference cell.		tot
rab_cs_streaming_576_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming 57.6 kbit/s connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C454	Sum, nkrttbh, tot
rab_cs_voice_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS voice connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C444	Sum, nkrttbh, tot
rab_ps_streaming_16_64_guar_16_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C455	Sum, nkrttbh, tot
rab_ps_streaming_16_64_guar_8_32_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB CS data streaming with maximum and guaranteed bit rates 16 kbit/s for uplink and 64 kbit/s for downlink and guaranteed bit rates 8 kbit/s for uplink and 32 kbit/s for downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C456	Sum, nkrttbh, tot

7.34.22RNC.Nokia.UMTS.anchoring.rab.connections_out_ps

RAB PS connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_ps_data_backg_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS background connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C450	Sum, nkrttbh, tot
rab_ps_data_intera_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS interactive connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C449	Sum, nkrttbh, tot
rab_ps_data_stream_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS streaming connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C448	Sum, nkrttbh, tot
rab_ps_nrt_128_128_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 128 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C462	Sum, nkrttbh, tot
rab_ps_nrt_128_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 384 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C463	Sum, nkrttbh, tot

rab_ps_nrt_128_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 128 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C461	Sum, nkrttbh, tot
rab_ps_nrt_384_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 384 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C464	Sum, nkrttbh, tot
rab_ps_nrt_384_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 384 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C465	Sum, nkrttbh, tot
rab_ps_nrt_64_128_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 128 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C458	Sum, nkrttbh, tot
rab_ps_nrt_64_256_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 256 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C459	Sum, nkrttbh, tot
rab_ps_nrt_64_384_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 384 kbit/s downlink	PMMOResult_Service_Level_0.M1001C460	Sum, nkrttbh, tot

			connections that have left from the old reference cell.		
rab_ps_nrt_64_64_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RAB PS NRT 64 kbit/s uplink and 64 kbit/s downlink connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C457	Sum, nkrttbh, tot

7.34.23RNC.Nokia.UMTS.anchoring.rab.control_procedures

RNC anchoring:RAB - RAB control procedure related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
phy_ch_reconf_comp	ACCUMULATION	INT8	A number of physical channel reconfigurations completed.	PMMOResult_RRC_0.M1006C60	Sum, nkrttbh, tot
phy_ch_reconf_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of physical channel reconfiguration failures due to unsupported configuration.	PMMOResult_RRC_0.M1006C73	Sum, nkrttbh, tot
phy_ch_reconf_fail	ACCUMULATION	INT8	The number of all the physical channel reconfiguration failures.	PMMOResult_RRC_0.M1006C72	Sum, nkrttbh, tot
phy_ch_reconf	ACCUMULATION	INT8	A number of physical channel reconfigurations.	PMMOResult_RRC_0.M1006C59	Sum, nkrttbh, tot
radio_bearer_reconf_complete	ACCUMULATION	INT8	Number of radio bearer	PMMOResult_RRC_0.M1006C31	Sum, nkrttbh,

			reconfigurations completed		tot
radio_bearer_reconf_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of radio bearer reconfiguration failures due to unsupported configuration.	PMMOResult_RRC_0.M1006C75	Sum, nkrttbh, tot
radio_bearer_reconf_fail	ACCUMULATION	INT8	The number of all the radio bearer reconfiguration failures.	PMMOResult_RRC_0.M1006C74	Sum, nkrttbh, tot
radio_bearer_reconf	ACCUMULATION	INT8	A number of radio bearer reconfigurations	PMMOResult_RRC_0.M1006C30	Sum, nkrttbh, tot
radio_bearer_release_complete	ACCUMULATION	INT8	Number of Radio Bearer Release complete messages received.	PMMOResult_RRC_0.M1006C68	Sum, nkrttbh, tot
radio_bearer_release	ACCUMULATION	INT8	Number of Radio Bearer Release messages sent.	PMMOResult_RRC_0.M1006C67	Sum, nkrttbh, tot
radio_bearer_setup_complete	ACCUMULATION	INT8	A number of radio bearer setups completed	PMMOResult_RRC_0.M1006C29	Sum, nkrttbh, tot
radio_bearer_setup_fail_due_to_unsupported_configuration	ACCUMULATION	INT8	The number of radio bearer setup failures due to unsupported configuration.	PMMOResult_RRC_0.M1006C77	Sum, nkrttbh, tot
radio_bearer_setup_fail	ACCUMULATION	INT8	The number of all the radio bearer setup failures.	PMMOResult_RRC_0.M1006C76	Sum, nkrttbh, tot
radio_bearer_setup	ACCUMULATION	INT8	A number of radio bearer setups.	PMMOResult_RRC_0.M1006C28	Sum, nkrttbh, tot
tran_ch_reconf_comp	ACCUMULATION	INT8	A number of transport channel reconfigurations completed.	PMMOResult_RRC_0.M1006C33	Sum, nkrttbh, tot

tran_ch_reconf	ACCUMULATION	INT8	A number of transport channel reconfigurations.	PMMOResult_RRC_0.M1006C32	Sum, nkrttbh, tot
transport_format_combination_control_for_tfo	ACCUMULATION	INTEGER	The number of sent Transport Format Combination Control messages for Tandem Free Operation.	PMMOResult_RRC_0.M1006C81	Sum, nkrttbh, tot

7.34.24RNC.Nokia.UMTS.anchoring.rab.holding_times

RNC anchoring:RAB - Service holding time statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ave_rab_holding_time_for_cs_data_call_with_conversational_class	INTENSITY	INTEGER	Measuring the holding time of a cs data call with conversational class	PMMOResult_Service_Level_0.M1001C201	Average, avg, max, min, nkrttbh, tot
ave_rab_holding_time_for_cs_data_call_with_streaming_class	INTENSITY	INTEGER	Measuring the holding time of a cs data call with streaming class	PMMOResult_Service_Level_0.M1001C203	Average, avg, max, min, nkrttbh, tot
ave_rab_holding_time_for_cs_voice_call	INTENSITY	INTEGER	Measuring the holding time of a cs voice call	PMMOResult_Service_Level_0.M1001C199	Average, avg, max, min, nkrttbh, tot
ave_rab_holding_time_for_ps_call_with_background_class	INTENSITY	INTEGER	Measures the average RAB holding time of PS data calls with background class	PMMOResult_Service_Level_0.M1001C211	Average, avg, max, min, nkrttbh, tot
ave_rab_holding_t	INTENSITY	INTEG	Measures the	PMMOResult_Service	Average,

ime_for_ps_call_with_interactive_class		ER	average RAB holding time of PS data calls with interactive class	_Level_0.M1001C209	avg, max, min, nkrttbh, tot
ave_rab_holding_time_for_ps_call_with_streaming_class	INTENSITY	INTEGER	Measures the average RAB holding time of PS data calls with streaming class	PMMOResult_Service_Level_0.M1001C207	Average, avg, max, min, nkrttbh, tot
average_dch_holding_time_for_ps_rab_with_background_class	INTENSITY	INTEGER	Average DCH holding time for PS RAB with background class	PMMOResult_Service_Level_0.M1001C215	Average, avg, max, min, nkrttbh, tot
average_dch_holding_time_for_ps_rab_with_interactive_class	INTENSITY	INTEGER	Average DCH holding time for PS RAB with interactive class	PMMOResult_Service_Level_0.M1001C213	Average, avg, max, min, nkrttbh, tot
denom_hold_tm_ref_cell_amr_122	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for AMR 12.2 kbit/s calls.	PMMOResult_Service_Level_0.M1001C496	Sum, nkrttbh, tot
denom_hold_tm_ref_cell_cs_conv_64	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS conversational class 64 kbit/s calls.	PMMOResult_Service_Level_0.M1001C498	Sum, nkrttbh, tot
denom_hold_tm_ref_cell_cs_conv	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS conversational class calls.	PMMOResult_Service_Level_0.M1001C492	Sum, nkrttbh, tot
denom_hold_tm_ref_cell_cs_stream_576	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS streaming class 57.6 kbit/s calls.	PMMOResult_Service_Level_0.M1001C502	Sum, nkrttbh, tot
denom_hold_tm_r	ACCUMULA	INTEG	Denominator for	PMMOResult_Service	Sum,

ef_cell_cs_stream	TION	ER	RAB holding time in reference cell for CS streaming class calls.	_Level_0.M1001C494	nkrttbh, tot
denom_hold_tm_ref_cell_cs_streaming_144	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls.	PMMOResult_Service_Level_0.M1001C500	Sum, nkrttbh, tot
denom_hold_tm_ref_cell_cs_voice	ACCUMULATION	INTEGER	Denominator for RAB holding time in reference cell for CS voice calls.	PMMOResult_Service_Level_0.M1001C490	Sum, nkrttbh, tot
denominator_for_cs_amr_multimode	ACCUMULATION	INTEGER	Denominator for RAB holding time for CS AMR Multimode calls.	PMMOResult_Service_Level_0.M1001C367	Sum, nkrttbh, tot
denominator_for_cs_conversational_64	ACCUMULATION	INT8	Denominator for RAB holding time for CS Conversational 64 kbps data calls.Denominator for RAB holding time for CS Conversational 64 kbps data calls.	PMMOResult_Service_Level_0.M1001C369	Sum, nkrttbh, tot
denominator_for_cs_streaming_14_4	ACCUMULATION	INT8	Denominator for RAB holding time for CS Streaming 14.4 kbps data calls.Denominator for RAB holding time for CS Streaming 14.4 kbps data calls.	PMMOResult_Service_Level_0.M1001C371	Sum, nkrttbh, tot
denominator_for_c	ACCUMULA	INT8	Denominator for	PMMOResult_Service	Sum,

s_streaming_57_6	TION		RAB holding time for CS Streaming 57.6 kbps data calls.Denominator for RAB holding time for CS Streaming 57.6 kbps data calls.	_Level_0.M1001C373	nkrttbh, tot
denominator_for_dch_holding_time_for_ps_data_backg	INTENSITY	INTEGER	Denominator for DCH holding time PS call with background class	PMMOResult_Service_Level_0.M1001C216	Average, avg, max, min, nkrttbh, tot
denominator_for_dch_holding_time_for_ps_data_intera	INTENSITY	INTEGER	Denominator for DCH holding time PS call with interactive class	PMMOResult_Service_Level_0.M1001C214	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_cs_data_conv	INTENSITY	INTEGER	Denominator for RAB holding time cs data calls with conversational class	PMMOResult_Service_Level_0.M1001C202	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_cs_data_stream	INTENSITY	INTEGER	Denominator for RAB holding time of CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C204	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_cs_voice	INTENSITY	INTEGER	Denominator for RAB holding time cs voice calls	PMMOResult_Service_Level_0.M1001C200	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_backg	INTENSITY	INTEGER	Denominator for RAB holding time of PS calls with background class	PMMOResult_Service_Level_0.M1001C212	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_conv	INTENSITY	INTEGER	- Obsolete in RN2.2 - Denominator for	PMMOResult_Service_Level_0.M1001C206	Average, avg, max, min,

			RAB holding time of PS calls with conversational class		nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_intera	INTENSITY	INTEGER	Denominator for RAB holding time of PS calls with interactive class	PMMOResult_Service_Level_0.M1001C210	Average, avg, max, min, nkrttbh, tot
denominator_for_rab_holding_time_for_ps_data_stream	INTENSITY	INTEGER	Denominator for RAB holding time of PS calls with streaming class	PMMOResult_Service_Level_0.M1001C208	Average, avg, max, min, nkrttbh, tot
rab_hold_time_in_ref_cell_cs_streaming_144	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for CS streaming class 14.4 kbit/s calls gives an average holding time for the call type in question.	PMMOResult_Service_Level_0.M1001C499	Sum, nkrttbh, tot
rab_hold_time_in_ref_cell_cs_streaming_576	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS streaming class 57.6 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for	PMMOResult_Service_Level_0.M1001C501	Sum, nkrttbh, tot

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			CS streaming class 57.6 kbit/s calls gives an average holding time for the call type in question.		
rab_hold_time_in_ref_cell_for_amr_122	ACCUMULATION	INTEGER	lding time in reference cell for AMR 12.2 kbit/s calls gives an average holding time for the call type in question.	PMMOResult_Service_Level_0.M1001C495	Sum, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_conv_64	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS conversational class 64 kbit/s calls. This counter divided by the Denominator for RAB holding time in reference cell for CS conversational class 64 kbit/s calls gives an average holding time for the call type in question.	PMMOResult_Service_Level_0.M1001C497	Sum, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_conv	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS conversational class calls. This counter divided by the Denominator for RAB holding time in reference cell for CS voice calls gives an average holding time for the call type in question.	PMMOResult_Service_Level_0.M1001C491	Sum, nkrttbh, tot
rab_hold_time_in_ref_cell_for_cs_str	ACCUMULATION	INTEGER	RAB holding time in reference cell for	PMMOResult_Service_Level_0.M1001C493	Sum, nkrttbh,

eam			CS streaming class calls. This counter divided by the Denominator for RAB holding time in reference cell for CS streaming class calls gives an average holding time for the call type in question.		tot
rab_hold_time_in_ref_cell_for_cs_voice	ACCUMULATION	INTEGER	RAB holding time in reference cell for CS voice calls. This counter divided by the Denominator for RAB holding time in reference cell for CS voice calls gives an average holding time for the call type in question.	PMMOResult_Service_Level_0.M1001C489	Sum, nkrttbh, tot
rab_holding_time_cs_amr_multimode	ACCUMULATION	INTEGER	This counter measures the RAB holding time of a CS AMR Multimode call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level_0.M1001C366	Sum, nkrttbh, tot
rab_holding_time_cs_conversational_64	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a	PMMOResult_Service_Level_0.M1001C368	Sum, nkrttbh, tot

			CS Conversational 64 kpbs data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.		
rab_holding_time_cs_streaming_14_4	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a CS Streaming 14.4 kbps data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level_0.M1001C370	Sum, nkrttbh, tot
rab_holding_time_cs_streaming_57_6	ACCUMULATION	FLOAT	This counter measures the RAB holding time of a CS Streaming 57.6 kbps data call. This counter divided by the denominator gives the average RAB holding time for the RAB type in question.	PMMOResult_Service_Level_0.M1001C372	Sum, nkrttbh, tot
sum_of_rab_holding_times_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Sum of RAB holding times for PS data conversational calls. This counter divided by the denominator (see the Dependencies) gives the average RAB holding time of PS data conversational	PMMOResult_Service_Level_0.M1001C205	Sum, nkrttbh, tot

			calls. --- RAB holding time is defined as the time		

7.34.25RNC.Nokia.UMTS.anchoring.rab.reconfigurations

RNC anchoring:RAB - Reconfiguration statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_reconf_att	ACCUMULATION	INT8	-Obsolete in RN2.1- A number of RAB reconfiguration attempts. Note this counter includes reconfiguration failures for all types of RAB	PMMOResult_Service_Level_0.M1001C197	Sum, nkrttbh, tot
rab_reconf_fail	ACCUMULATION	INT8	-Obsolete in RN2.1- A number of RAB reconfiguration attempts. Note this counter includes reconfiguration failures for all types of RAB	PMMOResult_Service_Level_0.M1001C198	Sum, nkrttbh, tot

7.34.26RNC.Nokia.UMTS.anchoring.rab.setup_access_complete

RNC anchoring:RAB - Setup access completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_access_comp_cs_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB access completed for CS	PMMOResult_Service_Level_0.M1001C414	Sum, nkrttbh, tot

			streaming calls in case resources for the RAB are allocated according to guaranteed bit rate DL defined in RAB parameters. Possible only for CS non-transparent data in streaming class.		
rab_access_comp_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB access completed for CS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate UL defined in RAB parameters. Possible only for CS non-transparent data in streaming class.	PMMOResult_Service_Level_0.M1001C413	Sum, nkrttbh, tot
rab_access_comp_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB access completed for PS streaming calls in case resources for the RAB are allocated according to guaranteed bit rate DL defined in RAB parameters. Possible only for PS RT data in streaming class.	PMMOResult_Service_Level_0.M1001C416	Sum, nkrttbh, tot
rab_access_comp_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB access completed for PS streaming calls in case resources for the RAB are	PMMOResult_Service_Level_0.M1001C415	Sum, nkrttbh, tot

			allocated according to guaranteed bit rate UL defined in RAB parameters. Possible only for PS RT data in streaming class.		
rab_access_complete_cs_streaming_57_6	ACCUMULATION	INT8	Number of RAB access completions for CS Streaming 57.6 kbps.	PMMOResult_Service_Level_0.M1001C268	Sum, nkrttbh, tot
rab_access_complete_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB access completions for CS voice calls using Wireless Priority Service. Also M1001C115 RAB ACCESS COMPLETIONS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level_0.M1001C602	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level_0.M1001C380	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_128_256	ACCUMULATION	INTEGER	Number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/256 kbps downlink.	PMMOResult_Service_Level_0.M1001C597	Sum, nkrttbh, tot
rab_access_compl	ACCUMULA	INT8	The number of	PMMOResult_Service	Sum,

ete_ps_nrt_128_384	TION		RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/384 kbps downlink.	_Level_0.M1001C381	nkrttbh, tot
rab_access_complete_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 128 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C379	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 384 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level_0.M1001C382	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 384 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C383	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_64_128	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level_0.M1001C278	Sum, nkrttbh, tot
rab_access_complete_ps_nrt_64_256	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/256 kbps downlink.	PMMOResult_Service_Level_0.M1001C279	Sum, nkrttbh, tot
rab_access_compl	ACCUMULA	INT8	The number of	PMMOResult_Service	Sum,

ete_ps_nrt_64_384	TION		RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/384 kbps downlink.	_Level_0.M1001C280	nkrttbh, tot
rab_access_complete_ps_nrt_64_64	ACCUMULATION	INT8	The number of RAB access completions for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C277	Sum, nkrttbh, tot
rab_access_complete_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	The number of RAB access completions for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/64 kbps downlink and guaranteed bit rate of 16 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C270	Sum, nkrttbh, tot
rab_access_complete_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	The number of RAB access completions for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/64 kbps downlink and guaranteed bit rate of 8 kbps uplink/32 kbps downlink.	PMMOResult_Service_Level_0.M1001C272	Sum, nkrttbh, tot
rab_access_completions_for_cs_data	ACCUMULATION	INT8	The number of completed RAB	PMMOResult_Service_Level_0.M1001C264	Sum, nkrttbh,

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_conv_64			access phases for 64 kbps CS data conversational.		tot
rab_access_completions_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB setup access completions for CS data calls with conversational class	PMMOResult_Service_Level_0.M1001C116	Sum, nkrttbh, tot
rab_access_completions_for_cs_data_stream_14_4	ACCUMULATION	INT8	The number of completed RAB access phases for 14.4 kbps CS data streaming.	PMMOResult_Service_Level_0.M1001C266	Sum, nkrttbh, tot
rab_access_completions_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup access completions for CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C117	Sum, nkrttbh, tot
rab_access_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup access completions for CS voice calls	PMMOResult_Service_Level_0.M1001C115	Sum, nkrttbh, tot
rab_access_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup access completions for PS calls with background class	PMMOResult_Service_Level_0.M1001C121	Sum, nkrttbh, tot
rab_access_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access completions for PS calls with conversational class	PMMOResult_Service_Level_0.M1001C118	Sum, nkrttbh, tot
rab_access_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup access completions for PS calls with interactive class	PMMOResult_Service_Level_0.M1001C120	Sum, nkrttbh, tot
rab_access_compl	ACCUMULA	INT8	A number of RAB	PMMOResult_Service	Sum,

etions_for_ps_data_stream	TION		setup access completions for PS calls with streaming class	_Level_0.M1001C119	nkrttbh, tot

7.34.27RNC.Nokia.UMTS.anchoring.rab.setup_access_failure

RNC anchoring:RAB - Setup access failures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_acc_fail_for_cs_data_call_conv_class_due_to_rnc_internal	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access failures for CS data calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C125	Sum, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_conv_class_due_to_ue	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup access failures for CS data calls with conversational class caused by the UE	PMMOResult_Service_Level_0.M1001C124	Sum, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_stream_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for CS data calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C127	Sum, nkrttbh, tot
rab_setup_acc_fail_for_cs_data_call_stream_class_due	ACCUMULATION	INT8	A number of RAB setup access failures for CS data	PMMOResult_Service_Level_0.M1001C126	Sum, nkrttbh, tot

_to_ue			calls with streaming class caused by the UE		
rab_setup_acc_fail_for_cs_voice_call_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for CS voice calls caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C123	Sum, nkrttbh, tot
rab_setup_acc_fail_for_cs_voice_call_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for CS voice calls caused by the UE	PMMOResult_Service_Level_0.M1001C122	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_backg_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with background class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C135	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_backg_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with background class caused by the UE	PMMOResult_Service_Level_0.M1001C134	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_conv_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with conversational class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C129	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_conv_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with conversational class caused by the UE	PMMOResult_Service_Level_0.M1001C128	Sum, nkrttbh, tot
rab_setup_acc_fail	ACCUMULA	INT8	A number of RAB	PMMOResult_Service_	Sum,

_for_ps_data_call_intera_class_due_to_rnc_internal	TION		setup access failures for PS calls with interactive class caused by RNCs internal reasons	Level_0.M1001C133	nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_intera_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with interactive class caused by the UE	PMMOResult_Service_Level_0.M1001C132	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_stream_class_due_to_rnc_internal	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with streaming class caused by RNCs internal reasons	PMMOResult_Service_Level_0.M1001C131	Sum, nkrttbh, tot
rab_setup_acc_fail_for_ps_data_call_stream_class_due_to_ue	ACCUMULATION	INT8	A number of RAB setup access failures for PS calls with streaming class caused by the UE	PMMOResult_Service_Level_0.M1001C130	Sum, nkrttbh, tot

7.34.28RNC.Nokia.UMTS.anchoring.rab.setup_attempts

RNC anchoring:RAB - Setup attempts statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_attempt_cs_amr_multimode	ACCUMULATION	INTEGER	Number of RAB setup attempts for CS AMR Multimode calls.	PMMOResult_Service_Level_0.M1001C261	Sum, nkrttbh, tot
rab_setup_attempt	ACCUMULA	INT8	Number of RAB	PMMOResult_Service	Sum,

_cs_conversational_64	TION		setup attempts for CS Conversational 64 kbps.	_Level_0.M1001C263	nkrttbh, tot
rab_setup_attempt_cs_streaming_14_4	ACCUMULATION	INT8	Number of RAB setup attempt for CS Streaming 14.4 kbps.	PMMOResult_Service_Level_0.M1001C265	Sum, nkrttbh, tot
rab_setup_attempt_cs_streaming_57_6	ACCUMULATION	INT8	Number of RAB setup attempts for CS Streaming 57.6 kbps.	PMMOResult_Service_Level_0.M1001C267	Sum, nkrttbh, tot
rab_setup_attempt_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup attempts for CS voice calls using Wireless Priority Service. Also M1001C66 RAB SETUP ATTEMPTS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level_0.M1001C599	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_128	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level_0.M1001C375	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_256	ACCUMULATION	INTEGER	Number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/ 256 kbps downlink.	PMMOResult_Service_Level_0.M1001C596	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_128_384	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/384	PMMOResult_Service_Level_0.M1001C376	Sum, nkrttbh, tot

			kbps downlink.		
rab_setup_attempt_ps_nrt_128_64	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 128 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C374	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_384_384	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 384 kbps uplink/384 kbps downlink.	PMMOResult_Service_Level_0.M1001C377	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_384_64	ACCUMULATION	INT8	The number of RAB setup attempts for PS NRT RAB with a bit rate of 384 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C378	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_128	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/128 kbps downlink.	PMMOResult_Service_Level_0.M1001C274	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_256	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/256 kbps downlink.	PMMOResult_Service_Level_0.M1001C275	Sum, nkrttbh, tot
rab_setup_attempt_ps_nrt_64_384	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with	PMMOResult_Service_Level_0.M1001C276	Sum, nkrttbh, tot

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			a bit rate of 64 kbps uplink/384 kbps downlink.		
rab_setup_attempt_ps_nrt_64_64	ACCUMULATION	INT8	Number of RAB setup attempts for PS NRT RAB with a bit rate of 64 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C273	Sum, nkrttbh, tot
rab_setup_attempt_ps_streaming_16_64_guar_16_64	ACCUMULATION	INT8	Number of RAB setup attempts for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and guaranteed bit rate of 16 kbps uplink/64 kbps downlink.	PMMOResult_Service_Level_0.M1001C269	Sum, nkrttbh, tot
rab_setup_attempt_ps_streaming_16_64_guar_8_32	ACCUMULATION	INT8	Number of RAB setup attempts for PS Streaming RAB with a maximum bit rate of 16 kbps uplink/ 64 kbps downlink and guaranteed bit rate of 8 kbps uplink/32 kbps downlink.	PMMOResult_Service_Level_0.M1001C271	Sum, nkrttbh, tot
rab_setup_attempts_for_cs_data_conv	ACCUMULATION	INT8	A number of RAB setup attempts for CS data calls with conservational class	PMMOResult_Service_Level_0.M1001C67	Sum, nkrttbh, tot
rab_setup_attempts_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup attempts for CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C68	Sum, nkrttbh, tot
rab_setup_attempts_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup attempts for	PMMOResult_Service_Level_0.M1001C66	Sum, nkrttbh,

			CS voice calls		tot
rab_setup_attempts_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with background class. For NRT services the RAB can be established without an immediate reservation of radio resources (unlike RT services). The radio resources will be allocated on demand using as signalling link between the MS and RNC	PMMOResult_Service_Level_0.M1001C72	Sum, nkrttbh, tot
rab_setup_attempts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup attempts for PS calls with conservational class	PMMOResult_Service_Level_0.M1001C69	Sum, nkrttbh, tot
rab_setup_attempts_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with interactive class. For NRT services the RAB can be established without an immediate reservation of radio resources (unlike RT	PMMOResult_Service_Level_0.M1001C71	Sum, nkrttbh, tot

			services). The radio resources will be allocated on demand using as signalling link between the MS and RNC		
rab_setup_attempts_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB setup attempts for PS calls with streaming class	PMMOResult_Service_Level_0.M1001C70	Sum, nkrttbh, tot

7.34.29RNC.Nokia.UMTS.anchoring.rab.setup_complete

RNC anchoring:RAB - Setup completions statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_comp_cs_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB setups completed for non-transparent CS data calls in streaming traffic class with resources reserved according to guaranteed bit rate DL in RAB parameters. Possible only for CS non-transparent data in streaming class.	PMMOResult_Service_Level_0.M1001C412	Sum, nkrttbh, tot
rab_setup_comp_cs_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB setups completed for non-transparent CS data calls in streaming traffic class with resources reserved according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level_0.M1001C411	Sum, nkrttbh, tot

			Possible only for CS non-transparent data in streaming class.		
rab_setup_comp_ps_stream_guar_bit_rate_dl	ACCUMULATION	INT8	The number of RAB setups completed for PS calls in streaming traffic class with resources reserved according to guaranteed bit rate DL in RAB parameters.	PMMOResult_Service_Level_0.M1001C410	Sum, nkrttbh, tot
rab_setup_comp_ps_stream_guar_bit_rate_ul	ACCUMULATION	INT8	The number of RAB setups completed for PS calls in streaming traffic class with resources reserved according to guaranteed bit rate UL in RAB parameters.	PMMOResult_Service_Level_0.M1001C409	Sum, nkrttbh, tot
rab_setup_complete_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup completions for CS voice calls using Wireless Priority Service. Also M1001C73 RAB SETUP COMPLETIONS FOR CS VOICE is updated along with this counter.	PMMOResult_Service_Level_0.M1001C600	Sum, nkrttbh, tot
rab_setup_completions_for_cs_data_	ACCUMULATION	INT8	A number of RAB setup completions	PMMOResult_Service_Level_0.M1001C74	Sum, nkrttbh,

conv			for CS data calls with conservational class		tot
rab_setup_completions_for_cs_data_stream	ACCUMULATION	INT8	A number of RAB setup completions for CS data calls with streaming class	PMMOResult_Service_Level_0.M1001C75	Sum, nkrttbh, tot
rab_setup_completions_for_cs_voice	ACCUMULATION	INT8	A number of RAB setup completions for CS voice calls	PMMOResult_Service_Level_0.M1001C73	Sum, nkrttbh, tot
rab_setup_completions_for_ps_data_backg	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with background class	PMMOResult_Service_Level_0.M1001C79	Sum, nkrttbh, tot
rab_setup_completions_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB setup completions for PS calls with conservational class	PMMOResult_Service_Level_0.M1001C76	Sum, nkrttbh, tot
rab_setup_completions_for_ps_data_intera	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with interactive class	PMMOResult_Service_Level_0.M1001C78	Sum, nkrttbh, tot
rab_setup_completions_for_ps_data_stream	ACCUMULATION	INT8	A number of RAB setup completions for PS calls with streaming class	PMMOResult_Service_Level_0.M1001C77	Sum, nkrttbh, tot

7.34.30RNC.Nokia.UMTS.anchoring.rab.setup_failure_cs

RNC anchoring:RAB - Setup failure for CS service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rab_setup_failure_cs_voice_wps	ACCUMULATION	INTEGER	The number of RAB setup failures for CS voice calls using Wireless Priority	PMMOResult_Service_Level_0.M1001C601	Sum, nkrttbh, tot

			Service. Also some other RAB SETUP FAILURE counter is updated along with this counter.		
rab_setup_failures_due_to_ac_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by an AC.	PMMOResult_Service_Level_0.M1001C85	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by an AC	PMMOResult_Service_Level_0.M1001C90	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by an AC	PMMOResult_Service_Level_0.M1001C80	Sum, nkrttbh, tot
rab_setup_failures_due_to_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup fails	PMMOResult_Service_Level_0.M1001C86	Sum, nkrttbh, tot
rab_setup_failures_due_to_bts_for_	ACCUMULATION	INT8	A number of CS data RAB setup	PMMOResult_Service_Level_0.M1001C91	Sum, nkrttbh,

cs_data_stream			failures with streaming class caused a the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup fails		tot
rab_setup_failures_due_to_bts_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by a BTS. When a BTS rejects a RADIO LINK RECONFIGURATION PREPARATION (eg. Due to an equipment failure, hardware overload, message corruption), the RAB setup fails	PMMOResult_Service_Level_0.M1001C81	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C89	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C94	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures due to a	PMMOResult_Service_Level_0.M1001C84	Sum, nkrttbh, tot

			frozen BTS		
rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_conv	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport resource shortage for CS data conversational.	PMMOResult_Service_Level_0.M1001C532	Sum, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_stream	ACCUMULATION	INT8	The number of RAB setup failures caused by a lack of Iub AAL2 transport resources for CS data streaming.	PMMOResult_Service_Level_0.M1001C533	Sum, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_cs_voice	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport resource shortage for CS voice.	PMMOResult_Service_Level_0.M1001C531	Sum, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level_0.M1001C88	Sum, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB	PMMOResult_Service_Level_0.M1001C93	Sum, nkrttbh, tot

			setup fails		
rab_setup_failures_due_to_rnc_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by RNCs internal reasons. When the RAN connection setup is rejected due to RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level_0.M1001C83	Sum, nkrttbh, tot
rab_setup_failures_due_to_transport_for_cs_data_conv	ACCUMULATION	INT8	A number of CS data RAB setup failures with conservational class caused by transmission	PMMOResult_Service_Level_0.M1001C87	Sum, nkrttbh, tot
rab_setup_failures_due_to_transport_for_cs_data_stream	ACCUMULATION	INT8	A number of CS data RAB setup failures with streaming class caused by transmission	PMMOResult_Service_Level_0.M1001C92	Sum, nkrttbh, tot
rab_setup_failures_due_to_transport_for_cs_voice	ACCUMULATION	INT8	A number of CS voice RAB setup failures caused by transmission	PMMOResult_Service_Level_0.M1001C82	Sum, nkrttbh, tot
rab_setup_not_started_due_to_not_supported_parameters_for_cs	ACCUMULATION	INT8	The number of occasions when the CS RAB setup attempt is not started due to requested parameters are not supported by the RNC. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level_0.M1001C255	Sum, nkrttbh, tot

rab_setup_not_started_due_to_ue_capability_for_cs	ACCUMULATION	INT8	The number of occasions when the CS RAB setup attempt is not started due to requested parameters are not supported by the UE. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level_0.M1001C256	Sum, nkrttbh, tot
rab_stp_fail_cs_conv_iu_cs	ACCUMULATION	INTEGER	The number of failed CS Conversational data traffic class RAB setups due to Iu-CS transport resources. Also counter M1001C87 is updated with this counter.	PMMOResult_Service_Level_0.M1001C626	Sum, nkrttbh, tot
rab_stp_fail_cs_conv_iur_tr	ACCUMULATION	INTEGER	The number of failed CS Conversational data traffic class RAB setups due to Iur transport resources. Also counter M1001C87 is updated with this counter.	PMMOResult_Service_Level_0.M1001C622	Sum, nkrttbh, tot
rab_stp_fail_cs_stre_iu_cs	ACCUMULATION	INTEGER	The number of failed CS Streaming traffic class RAB setups due to Iu-CS transport resources. Also counter M1001C92 is	PMMOResult_Service_Level_0.M1001C627	Sum, nkrttbh, tot

			updated with this counter.		
rab_stp_fail_cs_stre_iur_tr	ACCUMULATION	INTEGER	The number of failed CS Streaming traffic class RAB setups due to Iur transport resources. Also counter M1001C92 is updated with this counter.	PMMOResult_Service_Level_0.M1001C623	Sum, nkrttbh, tot
rab_stp_fail_cs_voice_iu_cs	ACCUMULATION	INTEGER	The number of failed CS voice RAB setups due to Iu-CS transport resources. Also counter M1001C82 is updated with this counter.	PMMOResult_Service_Level_0.M1001C625	Sum, nkrttbh, tot
rab_stp_fail_cs_voice_iur_tr	ACCUMULATION	INTEGER	The number of failed CS voice RAB setups due to Iur transport resources. Also counter M1001C82 is updated with this counter.	PMMOResult_Service_Level_0.M1001C621	Sum, nkrttbh, tot
rab_stp_fail_cs_voice_lic	ACCUMULATION	INTEGER	The number of RAB setup failures caused by AMR capacity license exceeded for CS voice.	PMMOResult_Service_Level_0.M1001C619	Sum, nkrttbh, tot

7.34.31RNC.Nokia.UMTS.anchoring.rab.setup_failure_ps

RNC anchoring:RAB - Setup failure for PS service statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dch_setup_failures_due_to_iub_aal2_trans_for_ps_d	ACCUMULATION	INT8	The number of DCH setup failures caused by Iub AAL2	PMMOResult_Service_Level_0.M1001C111	Sum, nkrttbh, tot

ata_backg			transport resource shortage for PS data background.		
dch_setup_failures_due_to_iub_aal2_trans_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by transmission	PMMOResult_Service_Level_0.M1001C106	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by an AC.	PMMOResult_Service_Level_0.M1001C110	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup for conservational class failures caused by an AC.	PMMOResult_Service_Level_0.M1001C95	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by an AC.	PMMOResult_Service_Level_0.M1001C105	Sum, nkrttbh, tot
rab_setup_failures_due_to_ac_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by an AC.	PMMOResult_Service_Level_0.M1001C100	Sum, nkrttbh, tot
rab_setup_failures_due_to_anchoring_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by the anchoring RNC case. When the RNC rejects an NRT RAB setup attempt due the anchoring RNC case	PMMOResult_Service_Level_0.M1001C113	Sum, nkrttbh, tot

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rab_setup_failures_due_to_anchoring_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by the anchoring RNC case. When the RNC rejects an NRT RAB setup attempt due the anchoring RNC case	PMMOResult_Service_Level_0.M1001C108	Sum, nkrttbh, tot
rab_setup_failures_due_to_bts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup f	PMMOResult_Service_Level_0.M1001C96	Sum, nkrttbh, tot
rab_setup_failures_due_to_bts_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by the BTS. When the BTS rejects RADIO LINK RECONFIGURATION PREPARATION (eg. due to an equipment failure, hardware overload, message corruption), that RAB setup fails	PMMOResult_Service_Level_0.M1001C101	Sum, nkrttbh, tot

rab_setup_failures_due_to_frozen_bts_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C114	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C99	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C109	Sum, nkrttbh, tot
rab_setup_failures_due_to_frozen_bts_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class due to a frozen BTS	PMMOResult_Service_Level_0.M1001C104	Sum, nkrttbh, tot
rab_setup_failures_due_to_iub_aal2_trans_for_ps_data_stream	ACCUMULATION	INT8	The number of RAB setup failures caused by Iub AAL2 transport resource shortage for PS data streaming.	PMMOResult_Service_Level_0.M1001C534	Sum, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_backg	ACCUMULATION	INT8	A number of PS call RAB setup failures for background class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level_0.M1001C112	Sum, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for	PMMOResult_Service_Level_0.M1001C98	Sum, nkrttbh, tot

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			conservational class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails		
rab_setup_failures_due_to_rnc_for_ps_data_intera	ACCUMULATION	INT8	A number of PS call RAB setup failures for interactive class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level_0.M1001C107	Sum, nkrttbh, tot
rab_setup_failures_due_to_rnc_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by RNCs internal reasons (eg. parameter mismatch, timer expiry), the RAB setup fails	PMMOResult_Service_Level_0.M1001C103	Sum, nkrttbh, tot
rab_setup_failures_due_to_transport_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of PS call RAB setup failures for conservational class caused by transmission	PMMOResult_Service_Level_0.M1001C97	Sum, nkrttbh, tot
rab_setup_failures_due_to_transport_for_ps_data_stream	ACCUMULATION	INT8	A number of PS call RAB setup failures for streaming class caused by transmission	PMMOResult_Service_Level_0.M1001C102	Sum, nkrttbh, tot
rab_setup_not_started_due_to_not_supported_parameters_for_ps	ACCUMULATION	INT8	The number of occasions when the PS RAB setup attempt is not started due to requested	PMMOResult_Service_Level_0.M1001C257	Sum, nkrttbh, tot

			parameters are not supported by the RNC. The RAB setup attempt counter is not updated in this case.		
rab_setup_not_started_due_to_ue_capability_for_ps	ACCUMULATION	INT8	The number of occasions when the PS RAB setup attempt is not started due to requested parameters are not supported by the UE. The RAB setup attempt counter is not updated in this case.	PMMOResult_Service_Level_0.M1001C258	Sum, nkrttbh, tot
rab_stp_fail_ps_stre_iur_tr	ACCUMULATION	INTEGER	The number of failed PS Streaming traffic class RAB setups due to Iur transport resources. Also counter M1001C102 is updated with this counter.	PMMOResult_Service_Level_0.M1001C624	Sum, nkrttbh, tot

7.34.32RNC.Nokia.UMTS.anchoring.rab.setup_time

RNC anchoring:RAB - Setup time statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
denominator_for_sum_of_rab_setup_times_for_cs_data_conv	INTENSITY	INTEGER	Denominator for average setup time for a CS data conversational RAB	PMMOResult_Service_Level_0.M1001C226	Average, avg, max, min, nkrttbh, tot

denominator_for_sum_of_rab_setup_times_for_cs_data_stream	INTENSITY	INTEGER	Denominator for average setup time for a CS data streaming RAB	PMMOResult_Service_Level_0.M1001C228	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_cs_voice	INTENSITY	INTEGER	Denominator for average setup time for a CS voice RAB	PMMOResult_Service_Level_0.M1001C224	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_backg	INTENSITY	INTEGER	Denominator for average setup time for a PS data background RAB	PMMOResult_Service_Level_0.M1001C236	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_conv	INTENSITY	INTEGER	- Obsolete in RN2.2 - Denominator for average setup time for a PS data conversational RAB	PMMOResult_Service_Level_0.M1001C230	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_intera	INTENSITY	INTEGER	Denominator for average setup time for a PS data interactive RAB	PMMOResult_Service_Level_0.M1001C234	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rab_setup_times_for_ps_data_stream	INTENSITY	INTEGER	Denominator for average setup time for a PS data streaming RAB	PMMOResult_Service_Level_0.M1001C232	Average, avg, max, min, nkrttbh, tot
denominator_for_sum_of_rrc_setup_times	INTENSITY	INTEGER	Denominator for average setup time for RRC	PMMOResult_Service_Level_0.M1001C222	Average, avg, max, min, nkrttbh, tot
rab_setup_time_max_cs_data_conversational	INTENSITY	INTEGER	The maximum CS Conversational Data RAB setup time during the	PMMOResult_Service_Level_0.M1001C605	Constant, avg, max, min, nkrttbh,

			measurement period defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages		tot
rab_setup_time_max_cs_streaming	INTENSITY	INTEGER	The maximum CS Streaming RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level_0.M1001C606	Constant, avg, max, min, nkrttbh, tot
rab_setup_time_max_cs_voice	INTENSITY	INTEGER	The maximum CS Conversational Data RAB setup time during the measurement period defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level_0.M1001C604	Constant, avg, max, min, nkrttbh, tot

rab_setup_time_max_ps_background	INTENSITY	INTEGER	The maximum PS Background RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level_0.M1001C609	Constant, avg, min, nkrttbh, tot, max
rab_setup_time_max_ps_interactive	INTENSITY	INTEGER	The maximum PS Interactive RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level_0.M1001C608	Constant, avg, max, min, nkrttbh, tot
rab_setup_time_max_ps_streaming	INTENSITY	INTEGER	The maximum PS Streaming RAB setup time defined as the time between an RANAP: RAB ASSIGNMENT REQUEST and an RANAP: RAB ASSIGNMENT RESPONSE messages during an RAB establishment.	PMMOResult_Service_Level_0.M1001C607	Constant, avg, max, min, nkrttbh, tot
rrc_setup_time_max	INTENSITY	INTEGER	The maximum RRC connection	PMMOResult_Service_Level_0.M1001C603	Constant, avg, max,

			setup time defined as the time between messages an RRC: RRC CONNECTION REQUEST and an RRC: RRC CONNECTION SETUP COMPLETE.		min, nkrttbh, tot
sum_of_rab_setup_times_for_cs_data_conv	ACCUMULATION	INT8	Sum of RAB setup times for CS data conversational. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS data conversational. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.	PMMOResult_Service_Level_0.M1001C225	Sum, nkrttbh, tot
sum_of_rab_setup_times_for_cs_dat	ACCUMULATION	INT8	Sum of RAB setup times for CS data	PMMOResult_Service_Level_0.M1001C227	Sum, nkrttbh,

a_stream			streaming. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS data streaming. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		tot
sum_of_rab_setup_times_for_cs_voice	ACCUMULATION	INT8	Sum of RAB setup times for CS voice. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for CS voice. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during	PMMOResult_Service_Level_0.M1001C223	Sum, nkrttbh, tot

			RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rab_setup_times_for_ps_data_backg	ACCUMULATION	INT8	Sum of RAB setup times for PS data background. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data background. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.	PMMOResult_Service_Level_0.M1001C235	Sum, nkrttbh, tot
sum_of_rab_setup_times_for_ps_data_conv	ACCUMULATION	INT8	- Obsolete in RN2.2 - Sum of RAB setup times for PS data conversational.	PMMOResult_Service_Level_0.M1001C229	Sum, nkrttbh, tot

			This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data conversational. --- RAB setup time is defined as the time between the RANA		
sum_of_rab_setup_times_for_ps_data_intera	ACCUMULATION	INT8	Sum of RAB setup times for PS data interactive. This counter divided by the denominator (see the Dependencies) gives the average RAB setup time for PS data interactive. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.	PMMOResult_Service_Level_0.M1001C233	Sum, nkrttbh, tot
sum_of_rab_setup_times_for_ps_data_stream	ACCUMULATION	INT8	Sum of RAB setup times for PS data streaming. This counter divided by the denominator	PMMOResult_Service_Level_0.M1001C231	Sum, nkrttbh, tot

			(see the Dependencies) gives the average RAB setup time for PS data streaming. --- RAB setup time is defined as the time between the RANAP: RAB ASSIGNMENT REQUEST and RANAP: RAB ASSIGNMENT RESPONSE messages during RAB establishment. NOTE! Setup time covers both the RAB Setup and RAB Access phases.		
sum_of_rrc_setup_times	ACCUMULATION	INT8	Sum of RRC setup times. This counter divided by the denominator (see the Dependencies) gives the average RRC setup time. --- RRC setup time is defined as the time between the RRC: RRC CONNECTION REQUEST message and the RRC: RRC CONNECTION SETUP	PMMOResult_Service_Level_0.M1001C221	Sum, nkrttbh, tot

			COMPLETE message. NOTE! Setup time covers both the RRC Setup and RRC Access phases.		

7.34.33RNC.Nokia.UMTS.anchoring.rrc.connection_access

RNC anchoring:RRC - Connection access failures/completions/releases statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_acc_comp	ACCUMULATION	INT8	A number of RRC connection access completions	PMMOResult_Service_Level_0.M1001C8	Sum, nkrttbh, tot
rrc_acc_fail_due_to_radio_int_synch	ACCUMULATION	INT8	A number of RRC connection access failures caused by radio interface synchronisation. If the BTS fails to establish synchronisation at radio L1 during the timer t_inisyf, it will send a RL failure message indicating a cause synchronisation failure to the RNC	PMMOResult_Service_Level_0.M1001C9	Sum, nkrttbh, tot
rrc_acc_fail_due_to_rnc_inter_reasons	ACCUMULATION	INT8	A number of RRC connection access failures caused by RNCs internal reasons (eg. Parameter mismatch, timer expiry)	PMMOResult_Service_Level_0.M1001C11	Sum, nkrttbh, tot
rrc_acc_fail_due_to_uu_int	ACCUMULATION	INT8	A number of RRC connection access failures caused by UU interface.	PMMOResult_Service_Level_0.M1001C10	Sum, nkrttbh, tot

			When the RNC does not receive RRC_CONNECTION_SETUP from the UE.		
rrc_access_release_call_re_establishment	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause call re-establishment. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C569	Sum, nkrttbh, tot
rrc_access_release_detach	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause detach. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup	PMMOResult_Service_Level_0.M1001C566	Sum, nkrttbh, tot

			phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_emergency_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause emergency call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C562	Sum, nkrttbh, tot
rrc_access_release_inter_rat_cell_change_order	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause inter-RAT cell change order. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC	PMMOResult_Service_Level_0.M1001C564	Sum, nkrttbh, tot

			releases resources for the old RRC connection attempt.		
rrc_access_release_inter_rat_cell_resel	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause inter-RAT cell reselection. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C563	Sum, nkrttbh, tot
rrc_access_release_mo_background_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating background call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup	PMMOResult_Service_Level_0.M1001C556	Sum, nkrttbh, tot

			phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mo_conversational_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating conversational call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C553	Sum, nkrttbh, tot
rrc_access_release_mo_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating high priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still	PMMOResult_Service_Level_0.M1001C567	Sum, nkrttbh, tot

			ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mo_interactive_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating interactive call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C555	Sum, nkrttbh, tot
rrc_access_release_mo_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating low priority signalling. This is the case when the UE has sent a new RRC connection request	PMMOResult_Service_Level_0.M1001C568	Sum, nkrttbh, tot

			to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mo_streaming_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating streaming call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C554	Sum, nkrttbh, tot
rrc_access_release_mo_subscribed_traffic_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause originating subscribed traffic call. This is the case when the UE has sent a new RRC connection request to the new	PMMOResult_Service_Level_0.M1001C557	Sum, nkrttbh, tot

			cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_background_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating background call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C561	Sum, nkrttbh, tot
rrc_access_release_mt_cause_unknown	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating - cause unknown. This is the case when the	PMMOResult_Service_Level_0.M1001C572	Sum, nkrttbh, tot

			UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_conversational_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating conversational call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C558	Sum, nkrttbh, tot
rrc_access_release_mt_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating high priority signalling. This is the case when the UE has sent a new RRC	PMMOResult_Service_Level_0.M1001C570	Sum, nkrttbh, tot

			connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_interactive_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating interactive call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C560	Sum, nkrttbh, tot
rrc_access_release_mt_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating low	PMMOResult_Service_Level_0.M1001C571	Sum, nkrttbh, tot

			priority signalling. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_access_release_mt_streaming_call	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause terminating streaming call. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.	PMMOResult_Service_Level_0.M1001C559	Sum, nkrttbh, tot
rrc_access_release_registration	ACCUMULATION	INT8	The number of RRC connection access releases due to cell reselection for calls established with the cause registration. This is the case when the	PMMOResult_Service_Level_0.M1001C565	Sum, nkrttbh, tot

			UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
rrc_act_rel_directed_retry	ACCUMULATION	INTEGER	The number of RRC connections released after a successful Directed Retry inter-system handover procedure for CS Voice calls. Also some RAB setup failure counter is updated before this counter. This counter does not include Wireless Priority Service related inter-system handovers.	PMMOResult_Service_Level_0.M1001C640	Sum, nkrttbh, tot
rrc_connection_access_release_due_to_cell_reselection	ACCUMULATION	INT8	The number of RRC Connection Access releases due to cell reselection. This is the case when the UE has sent a new RRC connection request to the new cell while the RRC connection setup phase is still	PMMOResult_Service_Level_0.M1001C241	Sum, nkrttbh, tot

			ongoing in the old cell. The RNC releases resources for the old RRC connection attempt.		
srb_act_fail_backg	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating background calls are included.	PMMOResult_Service_Level_0.M1001C638	Sum, nkrttbh, tot
srb_act_fail_conv	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating conversational calls are included.	PMMOResult_Service_Level_0.M1001C635	Sum, nkrttbh, tot
srb_act_fail_intera	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating interactive calls are included.	PMMOResult_Service_Level_0.M1001C637	Sum, nkrttbh, tot
srb_act_fail_other	ACCUMULATION	INTEGER	The number of abnormally	PMMOResult_Service_Level_0.M1001C639	Sum, nkrttbh,

			released RRC connections with standalone signalling radio bearer before RAB assignment.		tot
srb_act_fail_strea	ACCUMULATION	INTEGER	The number of abnormally released RRC connections with standalone signalling radio bearer before RAB assignment. Both originating and terminating streaming calls are included.	PMMOResult_Service_Level_0.M1001C636	Sum, nkrttbh, tot

7.34.34RNC.Nokia.UMTS.anchoring.rrc.connection_active

RNC anchoring:RRC - Connection active failures/completions/releases statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_active_comp	ACCUMULATION	INT8	A number of RRC connection active completions	PMMOResult_Service_Level_0.M1001C12	Sum, nkrttbh, tot
rrc_active_fail_due_to_bts_reasons	ACCUMULATION	INT8	A number of RRC connection active failures caused by a BTS	PMMOResult_Service_Level_0.M1001C17	Sum, nkrttbh, tot
rrc_active_fail_due_to_ciph_fail	ACCUMULATION	INT8	A number of RRC connection active failures caused by a ciphering failure	PMMOResult_Service_Level_0.M1001C19	Sum, nkrttbh, tot
rrc_active_fail_du	ACCUMULA	INT8	A number of RRC	PMMOResult_Service_	Sum,

e_to_integrity_check	TION		connection active failures caused by an integrity check failure	Level_0.M1001C20	nkrttbh, tot
rrc_active_fail_due_to_iu_int	ACCUMULATION	INT8	A number of RRC connection active failures caused by the IU interface. When for example, the signalling connection fails between the RNC and CN	PMMOResult_Service_Level_0.M1001C15	Sum, nkrttbh, tot
rrc_active_fail_due_to_radio_interface	ACCUMULATION	INT8	A number of RRC connection active failures caused by a radio interface	PMMOResult_Service_Level_0.M1001C16	Sum, nkrttbh, tot
rrc_active_fail_due_to_rnc_inter_reasons	ACCUMULATION	INT8	A number of RRC connection active failures caused by RNCs internal reasons (eg. Parameter mismatch, timer expiry)	PMMOResult_Service_Level_0.M1001C21	Sum, nkrttbh, tot
rrc_active_fail_due_to_the_iur_int	ACCUMULATION	INT8	A number of RRC connection active failures caused by the IUR interface. When for example, the SRNC relocation procedure fails because of the IUR interface.	PMMOResult_Service_Level_0.M1001C18	Sum, nkrttbh, tot
rrc_active_fail_due_to_ue	ACCUMULATION	INT8	The number of RRC active failures due to UE.	PMMOResult_Service_Level_0.M1001C391	Sum, nkrttbh, tot
rrc_active_rel_due_to_pre_emp	ACCUMULATION	INT8	A number of RRC connection active releases due to pre emption	PMMOResult_Service_Level_0.M1001C14	Sum, nkrttbh, tot

rrc_active_rel_due_to_srnc_reloc	ACCUMULATION	INT8	A number of RRC connection active releases due to SRNC relocation. Note this counters includes both SRNS relocations and inter RNC intra frequency hard handovers	PMMOResult_Service_Level_0.M1001C13	Sum, nkrttbh, tot
rrc_conn_act_rel_ganho	ACCUMULATION	INTEGER	The number of RRC active releases due to inter-system handover to Generic Access Network (GAN).	PMMOResult_Service_Level_0.M1001C643	Sum, nkrttbh, tot
rrc_conn_act_rel_hho	ACCUMULATION	INTEGER	The number of RRC active releases due to inter-frequency inter-RNC hard handover.	PMMOResult_Service_Level_0.M1001C800	Sum, nkrttbh, tot
rrc_conn_act_rel_intra_hho	ACCUMULATION	INTEGER	The number of RRC active releases due to intra-frequency inter-RNC hard handover.	PMMOResult_Service_Level_0.M1001C642	Sum, nkrttbh, tot
rrc_conn_act_rel_isho	ACCUMULATION	INTEGER	The number of RRC active releases due to inter system handover to GSM.	PMMOResult_Service_Level_0.M1001C803	Sum, nkrttbh, tot
rrc_conn_active_rel_due_to_unspec_error_in_cn	ACCUMULATION	INTEGER	The number of RRC connection active releases due to unspecified	PMMOResult_Service_Level_0.M1001C421	Sum, nkrttbh, tot

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			error received from CN.		
rrc_conn_rel_due_hw_res	ACCUMULATION	INTEGER	The number of RRC connection releases due to RNC HW resources. Also counter M1001C12 is updated along with this counter.	PMMOResult_Service_Level_0.M1001C629	Sum, nkrttbh, tot
rrc_conn_rel_due_inactivity	ACCUMULATION	INTEGER	The number of RRC connection releases due to user inactivity in Cell-PCH or URA-PCH state. Also counter M1001C12 is updated along with this counter.	PMMOResult_Service_Level_0.M1001C628	Sum, nkrttbh, tot

7.34.35RNC.Nokia.UMTS.anchoring.rrc.connection_mobility_procedures

RNC anchoring:RRC - Connection mobility procedures statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_active_set_update_rl_del_success	PERCENTAGE	FLOAT	The percentage of successfully deleted radio links with an active set update procedure.	100 * {active_set_update_rl_del_success}/ {active_set_update_rl_del_attempts}	Average, avg, nkrttbh
active_set_update_rl_add_attempts	ACCUMULATION	INTEGER	The number of attempted radio link additions with an active set update procedure.	PMMOResult_RRC_0.M1006C121	Sum, nkrttbh, tot
active_set_update_rl_add_fail_no_reply	ACCUMULATION	INTEGER	The number of failed radio link additions with an active set update	PMMOResult_RRC_0.M1006C124	Sum, nkrttbh, tot

			procedure due to the UE not responding to an RRC: ACTIVE SET UPDATE.		
active_set_update_rl_add_failure_ue	ACCUMULATION	INTEGER	The number of failed radio link additions with an active set update procedure due to the UE responding with an RRC: ACTIVE SET UPDATE FAILURE.	PMMOResult_RRC_0.M1006C123	Sum, nkrttbh, tot
active_set_update_rl_add_success	ACCUMULATION	INTEGER	The number of successfully added radio links with an active set update procedure.	PMMOResult_RRC_0.M1006C122	Sum, nkrttbh, tot
active_set_update_rl_del_attempts	ACCUMULATION	INTEGER	The number of attempted radio link deletions with an active set update procedure.	PMMOResult_RRC_0.M1006C125	Sum, nkrttbh, tot
active_set_update_rl_del_success	ACCUMULATION	INTEGER	The number of successfully deleted radio links with an active set update procedure.	PMMOResult_RRC_0.M1006C126	Sum, nkrttbh, tot
assistance_data_delivery_messages	ACCUMULATION	INTEGER	The number of sent UE positioning related Assistance Data Delivery messages.	PMMOResult_RRC_0.M1006C99	Sum, nkrttbh, tot
cell_update_att_due_to_cell_resel	ACCUMULATION	INT8	A number of cell update attempts due to cell reselection.	PMMOResult_RRC_0.M1006C34	Sum, nkrttbh, tot

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cell_update_att_due_to_data_transm	ACCUMULATION	INT8	A number of cell update attempts due to UL data transmission. If the cell update cause in the RRC,CELL_UPDATE message is UL data transmission then the RNCs RRC signalling entity forwards this information to RNCs PS and starts the cell update procedure.	PMMOResult_RRC_0.M1006C36	Sum, nkrttbh, tot
cell_update_att_due_to_paging_resp	ACCUMULATION	INT8	A number of cell update attempts due to paging response.If the cell update cause in the RRC CELL_UPDATE message is paging response, the RNCs RRC signalling entity updates the MS location information and if the reason for paging was DL data transmission while the MS was in URA_PCH state, this location information is forwarded to the RNCs PS.	PMMOResult_RRC_0.M1006C37	Sum, nkrttbh, tot
cell_update_att_due_to_per_update	ACCUMULATION	INT8	A number of cell update attempts due to periodic update. If the cell update causes in the RRC CELL_UPDATE message is periodic	PMMOResult_RRC_0.M1006C35	Sum, nkrttbh, tot

			cell update, the RNCs RRC signalling entity starts the cell update procedure.		
cell_update_att_due_to_radio_link_failure	ACCUMULATION	INT8	A number of cell update attempts due to a radio link failure.	PMMOResult_RRC_0.M1006C39	Sum, nkrttbh, tot
cell_update_att_due_to_re_entered_service_area	ACCUMULATION	INT8	A number of cell update attempts due to a re entered service area.	PMMOResult_RRC_0.M1006C38	Sum, nkrttbh, tot
cell_update_att_due_to_rlc_unrecoverable_error	ACCUMULATION	INT8	A number of cell update attempts due to an RLC unrecoverable error.	PMMOResult_RRC_0.M1006C40	Sum, nkrttbh, tot
denom_res_allo_tm_fach	ACCUMULATION	INTEGER	Denominator for M1006C184, used for average calculation.	PMMOResult_RRC_0.M1006C185	Sum, nkrttbh, tot
denom_res_allo_tm_rrc_setup	ACCUMULATION	INTEGER	Denominator for M1006C182, used for average calculation.	PMMOResult_RRC_0.M1006C183	Sum, nkrttbh, tot
denom_st_trans_time_dch_pch	ACCUMULATION	INTEGER	Denominator for M1006C178 used for average calculation.	PMMOResult_RRC_0.M1006C179	Sum, nkrttbh, tot
denom_st_trans_time_fach_pch	ACCUMULATION	INTEGER	Denominator for M1006C180 used for average calculation.	PMMOResult_RRC_0.M1006C181	Sum, nkrttbh, tot
ho_from_utran_com_fail	ACCUMULATION	INT8	Number of received handover from UTRAN Command	PMMOResult_RRC_0.M1006C64	Sum, nkrttbh, tot

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			Failures for Circuit Switched calls.		
ho_from_utran_com	ACCUMULATION	INT8	Number of sent handover from UTRAN Commands for Circuit Switched calls.	PMMOResult_RRC_0.M1006C63	Sum, nkrttbh, tot
inter_rat_ho_from_utran_fail	ACCUMULATION	INT8	Number of failed inter RAT handovers for Packet Switched calls.	PMMOResult_RRC_0.M1006C62	Sum, nkrttbh, tot
inter_rat_ho_from_utran	ACCUMULATION	INT8	Number of started (attempted) inter RAT handovers for Packet Switched calls.	PMMOResult_RRC_0.M1006C61	Sum, nkrttbh, tot
rrc_conn_mode_left_cell	ACCUMULATION	INT8	-Obsolete in RN2.1- A number of RRC connected mode UEs that have moved to another cell.	PMMOResult_RRC_0.M1006C43	Sum, nkrttbh, tot
rrc_connect_mode_ues_that_left_cell_thru_cell_or_ura_update_proc	ACCUMULATION	INT8	[rrc_connected_mode_ues_that_have_left_the_cell_through_cell_or_ura_update_procedure] - A number of RRC connected mode UEs in CELL_FACH, CELL_PCH, URA_PCH state that have left the cell due to CellURA update procedure. Full name (too long) is RRC_CONNECTED_MODE_UES_THAT_HAVE_LEFT_THE_CELL_THR	PMMOResult_RRC_0.M1006C66	Sum, nkrttbh, tot

			OUGH_CELL_OR_URA_UPDATE_PROCEDURE		
rrc_ho_to_utran_comp	ACCUMULATION	INT8	Number of received RRC handover to UTRAN complete messages for Circuit Switched calls	PMMOResult_RRC_0.M1006C65	Sum, nkrttbh, tot
rrc_re_est_fail_noreply_mr	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM message sent by the RNC, for UEs with at least two RABs.	PMMOResult_RRC_0.M1006C191	Sum, nkrttbh, tot
rrc_re_est_fail_noreply_rt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM message sent by the RNC, for UEs with at least one RT RAB.	PMMOResult_RRC_0.M1006C188	Sum, nkrttbh, tot
rrc_re_est_fail_ue_mr	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER RECONFIGURATI	PMMOResult_RRC_0.M1006C190	Sum, nkrttbh, tot

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			ON FAILURE message, for UEs with at least two RABs.		
rrc_re_est_fail_ue_rt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER RECONFIGURATION FAILURE message, for UEs with at least one RT RAB.	PMMOResult_RRC_0.M1006C187	Sum, nkrttbh, tot
rrc_re_est_succ_mr	ACCUMULATION	INTEGER	The number of successful RRC connection re-establishments for UEs with at least two RABs.	PMMOResult_RRC_0.M1006C189	Sum, nkrttbh, tot
rrc_re_est_succ_rt	ACCUMULATION	INTEGER	The number of successful RRC connection re-establishments for UEs with at least one RT RAB.	PMMOResult_RRC_0.M1006C186	Sum, nkrttbh, tot
sum_res_allo_time_fach	ACCUMULATION	INTEGER	Sum of HW and Radio resource allocation time between UL/DL capacity request or RT-RAB Assignment Request received and NBAP: RADIO LINK SETUP sent to NodeB. This counter, divided by the denominator, provides the average resource allocation	PMMOResult_RRC_0.M1006C184	Sum, nkrttbh, tot

			time.		
sum_res_allo_time_rrc_setup	ACCUMULATION	INTEGER	Sum of HW, Transmission and Radio resource allocation time in the RRC Connection Establishment procedure, defined as the time between RRC: RRC CONNECTION REQUEST received by RNC and RRC:RRC CONNECTION SETUP sent to UE. This counter, divided by the denominator, provides the average resource allocation time.	PMMOResult_RRC_0.M1006C182	Sum, nkrttbh, tot
sum_st_trans_time_fach_pch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-FACH state to Cell-PCH or URA-PCH state, defined as the time between: When RNC decides to initiate Cell_FACH to Cell_PCH transition - RRC: Physical Channel Reconfiguration Complete. This counter, divided by the denominator, provides the average	PMMOResult_RRC_0.M1006C180	Sum, nkrttbh, tot

			state transition time.		
ura_update_att_due_to_change_of_ura	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of cell update attempts due to a change of URA (URA reselection).	PMMOResult_RRC_0.M1006C41	Sum, nkrttbh, tot
ura_update_att_due_to_per_update	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of URA update attempts due to periodic update.	PMMOResult_RRC_0.M1006C42	Sum, nkrttbh, tot

7.34.36RNC.Nokia.UMTS.anchoring.rrc.connection_setup

RNC anchoring:RRC - Connection setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
access_stratum_release_indicator_release_6	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs with access stratum release indicator release 6.	PMMOResult_Service_Level_0.M1001C616	Sum, nkrttbh, tot
rrc_conn_setup_completed_after_directed	ACCUMULATION	INT8	The RRC connection setup is completed after directed to the cell. This counter is updated to that cell to which the RRC connection is directed.	PMMOResult_Service_Level_0.M1001C259	Sum, nkrttbh, tot
rrc_conn_setup_completed_and_directed	ACCUMULATION	INT8	RRC Connection setup completed and directed to another cell. This counter is updated for the cell where the RRC CONNECTION REQUEST was received.	PMMOResult_Service_Level_0.M1001C260	Sum, nkrttbh, tot

rrc_conn_setup_fail_due_to_icsu_overload	ACCUMULATION	INTEGER	The number of RRC setup failures caused by ICSU overload.	PMMOResult_Service_Level_0.M1001C618	Sum, nkrttbh, tot
rrc_conn_setup_fail_due_to_rnti_allo_fail	ACCUMULATION	INT8	Number of RRC setup failures caused by RNTI allocation failure.	PMMOResult_Service_Level_0.M1001C247	Sum, nkrttbh, tot
rrc_connection_setup_attempt_repeats	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC. This counter is used for gathering information on RRC connection request retransmissions eventually leading to the successful RRC connection establishment (i.e. the retransmissions were not caused by a failure in the Uu).	PMMOResult_Service_Level_0.M1001C242	Sum, nkrttbh, tot
rrc_setup_att_repeat_call_re_establis	ACCUMULATION	INT8	The number of RRC connection	PMMOResult_Service_Level_0.M1001C589	Sum, nkrttbh,

hment			request retransmissions (successfully received by the RNC) with the cause call re-establishment from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		tot
rrc_setup_att_repeat_detach	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause detach from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C586	Sum, nkrttbh, tot
rrc_setup_att_repeat_emergency_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause emergency call from the same UE if the RRC connection request is rejected due to an unsuccessful resource	PMMOResult_Service_Level_0.M1001C582	Sum, nkrttbh, tot

			reservation attempt in RNC.		
rrc_setup_att_repeat_inter_rat_cell_change_order	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause inter-RAT cell change order from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C584	Sum, nkrttbh, tot
rrc_setup_att_repeat_inter_rat_cell_resel	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause inter-RAT cell reselection from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C583	Sum, nkrttbh, tot
rrc_setup_att_repeat_mo_background_call	ACCUMULATION	INT8	The number of RRC connection request	PMMOResult_Service_Level_0.M1001C576	Sum, nkrttbh, tot

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			retransmissions (successfully received by the RNC) with the cause originating background call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mo_conversational_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating conversational call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C573	Sum, nkrttbh, tot
rrc_setup_att_repeat_mo_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating high priority signalling from the same UE if the RRC connection request is rejected due to an	PMMOResult_Service_Level_0.M1001C587	Sum, nkrttbh, tot

			unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mo_interactive_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating interactive call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C575	Sum, nkrttbh, tot
rrc_setup_att_repeat_mo_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating low priority signalling from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C588	Sum, nkrttbh, tot

rrc_setup_att_repeat_mo_streaming_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating streaming call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C574	Sum, nkrttbh, tot
rrc_setup_att_repeat_mo_subscribed_traffic_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause originating subscribed traffic call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C577	Sum, nkrttbh, tot
rrc_setup_att_repeat_mt_background_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating background call from the same UE if the RRC	PMMOResult_Service_Level_0.M1001C581	Sum, nkrttbh, tot

			connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mt_cause_unknown	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating - cause unknown from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C592	Sum, nkrttbh, tot
rrc_setup_att_repeat_mt_conversational_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating conversational call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C578	Sum, nkrttbh, tot

rrc_setup_att_repeat_mt_high_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating high priority signalling from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C590	Sum, nkrttbh, tot
rrc_setup_att_repeat_mt_interactive_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating interactive call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C580	Sum, nkrttbh, tot
rrc_setup_att_repeat_mt_low_priority_signalling	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating low priority signalling from the	PMMOResult_Service_Level_0.M1001C591	Sum, nkrttbh, tot

			same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.		
rrc_setup_att_repeat_mt_streaming_call	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause terminating streaming call from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt in RNC.	PMMOResult_Service_Level_0.M1001C579	Sum, nkrttbh, tot
rrc_setup_att_repeat_registration	ACCUMULATION	INT8	The number of RRC connection request retransmissions (successfully received by the RNC) with the cause registration from the same UE if the RRC connection request is rejected due to an unsuccessful resource reservation attempt	PMMOResult_Service_Level_0.M1001C585	Sum, nkrttbh, tot

			in RNC.		
rrc_setup_att	ACCUMULATION	INT8	A number of RRC connection setup attempts	PMMOResult_Service_Level_0.M1001C0	Sum, nkrttbh, tot
rrc_setup_compl	ACCUMULATION	INT8	A number of RRC connection setups completed	PMMOResult_Service_Level_0.M1001C1	Sum, nkrttbh, tot
rrc_setup_fail_due_to_ac	ACCUMULATION	INT8	A number of RRC connection setup failures caused by AC	PMMOResult_Service_Level_0.M1001C3	Sum, nkrttbh, tot
rrc_setup_fail_due_to_bts_reasons	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a BTS. When the BTS rejects an initial RL setup	PMMOResult_Service_Level_0.M1001C4	Sum, nkrttbh, tot
rrc_setup_fail_due_to_frozen_bts	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a frozen BTS. Frozen BTS means that currently no new RRC connections are allowed	PMMOResult_Service_Level_0.M1001C7	Sum, nkrttbh, tot
rrc_setup_fail_due_to_hc	ACCUMULATION	INT8	A number of RRC connection setup failures caused by HC	PMMOResult_Service_Level_0.M1001C2	Sum, nkrttbh, tot
rrc_setup_fail_due_to_iub_aal2_trans	ACCUMULATION	INT8	The number of RRC setup failures caused by Iub AAL2 transport resource shortage.	PMMOResult_Service_Level_0.M1001C530	Sum, nkrttbh, tot
rrc_setup_fail_due_to_rnc_inter_reasons	ACCUMULATION	INT8	A number of RRC connection setup failures caused by RNCs internal reasons (eg. Parameter	PMMOResult_Service_Level_0.M1001C6	Sum, nkrttbh, tot

			mismatch, timer expiry)		
rrc_setup_fail_due_to_trans	ACCUMULATION	INT8	A number of RRC connection setup failures caused by a transmission	PMMOResult_Service_Level_0.M1001C5	Sum, nkrttbh, tot
rrc_setup_reject_due_to_emergency_call_redirection	ACCUMULATION	INTEGER	The number of RRC connections rejected due to emergency call redirection.	PMMOResult_Service_Level_0.M1001C617	Sum, nkrttbh, tot
succ_rrc_setup_backg	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a background call. Both originating and terminating background calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level_0.M1001C633	Sum, nkrttbh, tot
succ_rrc_setup_conv	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a conversational call. Both originating and terminating conversational calls are included. RRC connections established via	PMMOResult_Service_Level_0.M1001C630	Sum, nkrttbh, tot

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			SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.		
succ_rrc_setup_intera	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a interactive call. Both originating and terminating interactive calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level_0.M1001C632	Sum, nkrttbh, tot
succ_rrc_setup_other	ACCUMULATION	INTEGER	The number of successful RRC connection setups with establishment cause other than those covered by counters M1001C630-M1001C633. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.	PMMOResult_Service_Level_0.M1001C634	Sum, nkrttbh, tot
succ_rrc_setup_strea	ACCUMULATION	INTEGER	The number of successful RRC connection setups for a streaming call. Both originating and terminating	PMMOResult_Service_Level_0.M1001C631	Sum, nkrttbh, tot

			streaming calls are included. RRC connections established via SRNC relocation, Inter-RNC HHO or CS Inter-System handover are not included.		
ue_support_for_edch_category_1	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 1 defined in 3GPP TS 25.306.	PMMOResult_Service_Level_0.M1001C610	Sum, nkrttbh, tot
ue_support_for_edch_category_2	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 2 defined in 3GPP TS 25.306.	PMMOResult_Service_Level_0.M1001C611	Sum, nkrttbh, tot
ue_support_for_edch_category_3	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 3 defined in 3GPP TS 25.306.	PMMOResult_Service_Level_0.M1001C612	Sum, nkrttbh, tot
ue_support_for_edch_category_4	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 4 defined in 3GPP TS 25.306.	PMMOResult_Service_Level_0.M1001C613	Sum, nkrttbh, tot
ue_support_for_ed	ACCUMULA	INTEG	The number of	PMMOResult_Service	Sum,

ch_category_5	TION	ER	RRC connection establishments by UEs supporting E-DCH category 5 defined in 3GPP TS 25.306.	_Level_0.M1001C614	nkrttbh, tot
ue_support_for_edch_category_6	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs supporting E-DCH category 6 defined in 3GPP TS 25.306.	PMMOResult_Service_Level_0.M1001C615	Sum, nkrttbh, tot
ue_support_ganho	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs that support handover to Generic Access Network (GAN).	PMMOResult_Service_Level_0.M1001C641	Sum, nkrttbh, tot

7.34.37RNC.Nokia.UMTS.anchoring.rrc.connections

RRC connection measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_connection_enters_new_ref_cell	ACCUMULATION	INTEGER	The number of RRC Connections that enter a new reference cell.	PMMOResult_Service_Level_0.M1001C466	Sum, nkrttbh, tot
rrc_connection_leaves_old_ref_cell	ACCUMULATION	INTEGER	The number of RRC Connections that have left from the old reference cell.	PMMOResult_Service_Level_0.M1001C443	Sum, nkrttbh, tot

7.34.38RNC.Nokia.UMTS.anchoring.rrc.establishment_per_ue_capability

RNC anchoring:RRC - Connection establishments per UE statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

access_stratum_release_indicator_release_4	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 4.	PMMOResult_Service_Level_0.M1001C404	Sum, nkrttbh, tot
access_stratum_release_indicator_release_5	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 5.	PMMOResult_Service_Level_0.M1001C552	Sum, nkrttbh, tot
access_stratum_release_indicator_release_99	ACCUMULATION	INT8	The number of RRC connection establishments by UEs with access stratum release indicator release 99.	PMMOResult_Service_Level_0.M1001C405	Sum, nkrttbh, tot
ue_rxtx_time_difference_positioning_capability_type_2	ACCUMULATION	INT8	The number of RRC connection establishments by UEs that support RX-TX time difference positioning capability type 2.	PMMOResult_Service_Level_0.M1001C408	Sum, nkrttbh, tot
ue_support_for_gsm	ACCUMULATION	INT8	The number of RRC connection establishments by UEs that support GSM.	PMMOResult_Service_Level_0.M1001C406	Sum, nkrttbh, tot
ue_support_for_hsdsch_class_1_to_6	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 1, 2, 3, 4, 5 or 6.	PMMOResult_Service_Level_0.M1001C548	Sum, nkrttbh, tot

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			The classes are defined in 3GPP TS 25.133.		
ue_support_for_hsdsch_class_11_or_12	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 11 or 12. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level_0.M1001C551	Sum, nkrttbh, tot
ue_support_for_hsdsch_class_7_or_8	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 7 or 8. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level_0.M1001C549	Sum, nkrttbh, tot
ue_support_for_hsdsch_class_9_or_10	ACCUMULATION	INT8	The number of RRC connection establishments by UEs supporting HS-DSCH classes 9 or 10. The classes are defined in 3GPP TS 25.133.	PMMOResult_Service_Level_0.M1001C550	Sum, nkrttbh, tot
ue_support_for_iphc	ACCUMULATION	INT8	The number RRC connection establishments by UEs that support RFC2507 IP header compression.	PMMOResult_Service_Level_0.M1001C389	Sum, nkrttbh, tot
ue_support_for_multi_carrier_cdma	ACCUMULATION	INT8	The number of RRC connection establishments by UEs that support multi-carrier CDMA.	PMMOResult_Service_Level_0.M1001C407	Sum, nkrttbh, tot

ue_support_for_rohc	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number RRC connection establishments by UEs that support RFC3095 (ROHC) IP header compression.	PMMOResult_Service_Level_0.M1001C390	Sum, nkrttbh, tot
ue_support_nw_agps	ACCUMULATION	INTEGER	The number of RRC connection establishments by UEs that support network assisted GPS.	PMMOResult_Service_Level_0.M1001C595	Sum, nkrttbh, tot

7.34.39RNC.Nokia.UMTS.anchoring.rrc.radio_bearer_setup

RRC radio bearer setup measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
att_rb_setup_hsdpa	ACCUMULATION	INTEGER	The number of attempted Radio Bearer setups for HSDPA.	PMMOResult_RRC_0.M1006C149	Sum, nkrttbh, tot
fail_rb_setup_hsdpa_noreply	ACCUMULATION	INTEGER	The number of failed Radio Bearer setups for HSDPA due to UE not responding.	PMMOResult_RRC_0.M1006C192	Sum, nkrttbh, tot
fail_rb_setup_hsdpa_ue	ACCUMULATION	INTEGER	The number of failed Radio Bearer setups for HSDPA due to UE responding with a failure message.	PMMOResult_RRC_0.M1006C193	Sum, nkrttbh, tot

succ_rb_setup_hsdpa	ACCUMULATION	INTEGER	The number of successful Radio Bearer setups for HSDPA.	PMMOResult_RRC_0.M1006C150	Sum, nkrttbh, tot

7.34.40RNC.Nokia.UMTS.anchoring.rrc.setup_causes_call_reestablish

RNC anchoring:RRC - Connection setup cause:call re-establishments statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
call_re_estab_attempts	ACCUMULATION	INT8	A number of call re establishment attempts	PMMOResult_Service_Level_0.M1001C58	Sum, nkrttbh, tot
call_re_estab_failures	ACCUMULATION	INT8	A number of call re establishment attempt failures	PMMOResult_Service_Level_0.M1001C59	Sum, nkrttbh, tot

7.34.41RNC.Nokia.UMTS.anchoring.rrc.setup_causes_detach

RNC anchoring:RRC - Connection setup cause:call detachments statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
detach_attempts	ACCUMULATION	INT8	A number of detach attempts	PMMOResult_Service_Level_0.M1001C48	Sum, nkrttbh, tot
detach_failures	ACCUMULATION	INT8	A number of detach attempt failures	PMMOResult_Service_Level_0.M1001C49	Sum, nkrttbh, tot

7.34.42RNC.Nokia.UMTS.anchoring.rrc.setup_causes_emergency

RNC anchoring:RRC - Connection setup cause:emergency calls statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
emergency_call_attempts	ACCUMULATION	INT8	A number of emergency call attempts	PMMOResult_Service_Level_0.M1001C40	Sum, nkrttbh, tot
emergency_call_fa	ACCUMULA	INT8	A number of	PMMOResult_Service_	Sum,

ilures	TION		emergency call attempt failures	Level_0.M1001C41	nkrttbh, tot

7.34.43RNC.Nokia.UMTS.anchoring.rrc.setup_causes_high_priority_sig

RNC anchoring:RRC - Connection setup cause:high priority signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_high_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile originating high priority signalling attempts	PMMOResult_Service_Level_0.M1001C50	Sum, nkrttbh, tot
mobile_originating_high_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile originating high priority signalling attempt failures	PMMOResult_Service_Level_0.M1001C51	Sum, nkrttbh, tot
mobile_terminating_high_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile terminating high priority signalling attempts	PMMOResult_Service_Level_0.M1001C52	Sum, nkrttbh, tot
mobile_terminating_high_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile terminating high priority signalling attempt failures	PMMOResult_Service_Level_0.M1001C53	Sum, nkrttbh, tot

7.34.44RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intr_rat

RNC anchoring:RRC - Connection setup cause: intra RAT related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
intr_rat_cell_chng_ord_attempts	ACCUMULATION	INT8	A number of intr_rat_cell_chng_ord attempts	PMMOResult_Service_Level_0.M1001C44	Sum, nkrttbh, tot

intr_rat_cell_chng_ord_failures	ACCUMULATION	INT8	A number of intr_rat_cell_chng_ord failures	PMMOResult_Service_Level_0.M1001C45	Sum, nkrttbh, tot
intr_rat_cell_re_select_attempts	ACCUMULATION	INT8	A number of intr_rat_cell_re_select attempts	PMMOResult_Service_Level_0.M1001C42	Sum, nkrttbh, tot
intr_rat_cell_re_select_failures	ACCUMULATION	INT8	A number of intr_rat_cell_re_select failures	PMMOResult_Service_Level_0.M1001C43	Sum, nkrttbh, tot

7.34.45RNC.Nokia.UMTS.anchoring.rrc.setup_causes_intrregistration

RNC anchoring:RRC - Connection setup cause:registration request statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
registration_attempts	ACCUMULATION	INT8	A number of registration attempts	PMMOResult_Service_Level_0.M1001C46	Sum, nkrttbh, tot
registration_failures	ACCUMULATION	INT8	A number of registration failures	PMMOResult_Service_Level_0.M1001C47	Sum, nkrttbh, tot

7.34.46RNC.Nokia.UMTS.anchoring.rrc.setup_causes_low_priority_sig

RNC anchoring:RRC - Connection setup cause:low priority signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_low_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile originating low priority signalling attempts	PMMOResult_Service_Level_0.M1001C54	Sum, nkrttbh, tot
mobile_originating_low_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile originating low priority signalling attempt failures	PMMOResult_Service_Level_0.M1001C55	Sum, nkrttbh, tot
mobile_terminating_low_priority_signalling_attempts	ACCUMULATION	INT8	A number of mobile terminating low priority	PMMOResult_Service_Level_0.M1001C56	Sum, nkrttbh, tot

			signalling attempts		
mobile_terminating_low_priority_signalling_failures	ACCUMULATION	INT8	A number of mobile terminating low priority signalling attempt failures	PMMOResult_Service_Level_0.M1001C57	Sum, nkrttbh, tot

7.34.47RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_orig

RNC anchoring:RRC - Connection setup cause:mobile originating statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_originating_background_call_attempts	ACCUMULATION	INT8	A number of mobile originating background call attempts	PMMOResult_Service_Level_0.M1001C28	Sum, nkrttbh, tot
mobile_originating_background_call_failures	ACCUMULATION	INT8	A number of mobile originating background call attempt failures	PMMOResult_Service_Level_0.M1001C29	Sum, nkrttbh, tot
mobile_originating_conversational_call_attempts	ACCUMULATION	INT8	A number of mobile originating conversational call attempts	PMMOResult_Service_Level_0.M1001C22	Sum, nkrttbh, tot
mobile_originating_conversational_call_failures	ACCUMULATION	INT8	A number of mobile originating conversational call attempt failures	PMMOResult_Service_Level_0.M1001C23	Sum, nkrttbh, tot
mobile_originating_interactive_call_attempts	ACCUMULATION	INT8	A number of mobile originating interactive call attempts	PMMOResult_Service_Level_0.M1001C26	Sum, nkrttbh, tot
mobile_originating_interactive_call_failures	ACCUMULATION	INT8	A number of mobile originating interactive call	PMMOResult_Service_Level_0.M1001C27	Sum, nkrttbh, tot

			attempt failures		
mobile_originating_streaming_call_attempts	ACCUMULATION	INT8	A number of mobile originating streaming call attempts	PMMOResult_Service_Level_0.M1001C24	Sum, nkrttbh, tot
mobile_originating_streaming_call_failures	ACCUMULATION	INT8	A number of mobile originating streaming call attempt failures	PMMOResult_Service_Level_0.M1001C25	Sum, nkrttbh, tot
mobile_originating_subscribed_traffic_call_attempts	ACCUMULATION	INT8	A number of mobile originating subscribed traffic call attempts	PMMOResult_Service_Level_0.M1001C30	Sum, nkrttbh, tot
mobile_originating_subscribed_traffic_call_failures	ACCUMULATION	INT8	A number of mobile originating subscribed traffic call attempt failures	PMMOResult_Service_Level_0.M1001C31	Sum, nkrttbh, tot

7.34.48RNC.Nokia.UMTS.anchoring.rrc.setup_causes_mobile_term

RNC anchoring:RRC - Connection setup cause:mobile terminating statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
mobile_terminating_background_call_attempts	ACCUMULATION	INT8	A number of mobile terminating background call attempts	PMMOResult_Service_Level_0.M1001C38	Sum, nkrttbh, tot
mobile_terminating_background_call_failures	ACCUMULATION	INT8	A number of mobile terminating background call attempt failures	PMMOResult_Service_Level_0.M1001C39	Sum, nkrttbh, tot
mobile_terminating_conversational_call_attempts	ACCUMULATION	INT8	A number of mobile terminating conversational call attempts	PMMOResult_Service_Level_0.M1001C32	Sum, nkrttbh, tot
mobile_terminating_conversational_call_failures	ACCUMULATION	INT8	A number of mobile terminating conversational call attempt failures	PMMOResult_Service_Level_0.M1001C33	Sum, nkrttbh, tot

mobile_terminating_interactive_call_attempts	ACCUMULATION	INT8	A number of mobile terminating interactive call attempts	PMMOResult_Service_Level_0.M1001C36	Sum, nkrttbh, tot
mobile_terminating_interactive_call_failures	ACCUMULATION	INT8	A number of mobile terminating interactive call attempt failures	PMMOResult_Service_Level_0.M1001C37	Sum, nkrttbh, tot
mobile_terminating_streaming_call_attempts	ACCUMULATION	INT8	A number of mobile terminating streaming call attempts	PMMOResult_Service_Level_0.M1001C34	Sum, nkrttbh, tot
mobile_terminating_streaming_call_failures	ACCUMULATION	INT8	A number of mobile terminating streaming call attempt failures	PMMOResult_Service_Level_0.M1001C35	Sum, nkrttbh, tot

7.34.49RNC.Nokia.UMTS.anchoring.rrc.setup_causes_term_unknown

RNC anchoring:RRC - Connection setup cause:unknown termination of calls statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
terminating_cause_unknown_attempts	ACCUMULATION	INT8	A number of terminating call attempts with an unknown cause	PMMOResult_Service_Level_0.M1001C60	Sum, nkrttbh, tot
terminating_cause_unknown_failures	ACCUMULATION	INT8	A number of terminating calls with an unknown cause failure	PMMOResult_Service_Level_0.M1001C61	Sum, nkrttbh, tot

7.34.50RNC.Nokia.UMTS.anchoring.signalling_paging_message

RNC anchoring:RRC - Connection management:Signalling, Paging, Initial dir ect transfer, Security mode and signalling connection statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
ini_dir_tran	ACCUMULATION	INT8	Number of initial direct transfer messages	PMMOResult_RRC_0.M1006C54	Sum, nkrttbh, tot
paging_type_1_att_cn_orig	ACCUMULATION	INT8	A number of CN originated paging type 1 attempts. Indicates the number of CN originated paging attempts to mobiles in idle mode or PCH/URA substate.	PMMOResult_RRC_0.M1006C25	Sum, nkrttbh, tot
paging_type_1_att_rnc_orig	ACCUMULATION	INT8	A number of RNC originated paging type 1 attempts. Indicates the number of RNC originated paging attempts to mobiles in idle mode or PCH/URA substate.	PMMOResult_RRC_0.M1006C26	Sum, nkrttbh, tot
paging_type_2_att	ACCUMULATION	INT8	A number of paging type 2 attempts. Indicates the number of (CN originated) paging attempts to mobiles in DCH or RACH/FACH substate.	PMMOResult_RRC_0.M1006C27	Sum, nkrttbh, tot
sec_mod_contrl_comp	ACCUMULATION	INT8	Number of Security Mode Control Complete messages.	PMMOResult_RRC_0.M1006C56	Sum, nkrttbh, tot
sec_mod_contrl	ACCUMULATION	INT8	Number of Security Mode	PMMOResult_RRC_0.M1006C55	Sum, nkrttbh,

			Control messages.		tot
sig_conn_rel_req	ACCUMULATION	INT8	Number of Signalling Connection Release Indication (request) messages.	PMMOResult_RRC_0.M1006C58	Sum, nkrttbh, tot
sig_conn_rel	ACCUMULATION	INT8	Number of Signalling Connection Release messages.	PMMOResult_RRC_0.M1006C57	Sum, nkrttbh, tot

7.34.51RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_setup_requests

RNC anchoring:RRC Signalling - Connection setup statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_conn_req_for_call_re_estab	ACCUMULATION	INT8	A number of establishment requests for call re establishments.	PMMOResult_RRC_0.M1006C19	Sum, nkrttbh, tot
rrc_conn_req_for_detach	ACCUMULATION	INT8	A number of establishment requests for detach.	PMMOResult_RRC_0.M1006C12	Sum, nkrttbh, tot
rrc_conn_req_for_emerg_call	ACCUMULATION	INT8	A number of establishment requests for emergency calls.	PMMOResult_RRC_0.M1006C8	Sum, nkrttbh, tot
rrc_conn_req_for_intr_rat_cell_chng_ord	ACCUMULATION	INT8	A number of establishment requests for intr_rat_cell_chng_ord.	PMMOResult_RRC_0.M1006C10	Sum, nkrttbh, tot
rrc_conn_req_for_intr_rat_cell_re_	ACCUMULATION	INT8	A number of establishment	PMMOResult_RRC_0.M1006C9	Sum, nkrttbh,

select			requests for intr_rat_cell_re_select.		tot
rrc_conn_req_for_moc_estab_of_backgr_call	ACCUMULATION	INT8	A number of establishment requests for originating background calls.	PMMOResult_RRC_0.M1006C6	Sum, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_conv_call	ACCUMULATION	INT8	A number of establishment requests for originating conversational calls.	PMMOResult_RRC_0.M1006C0	Sum, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_interact_call	ACCUMULATION	INT8	A number of establishment requests for originating interactive calls.	PMMOResult_RRC_0.M1006C4	Sum, nkrttbh, tot
rrc_conn_req_for_moc_estab_of_stream_call	ACCUMULATION	INT8	A number of establishment requests for originating streaming calls.	PMMOResult_RRC_0.M1006C2	Sum, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_backgr_call	ACCUMULATION	INT8	A number of establishment requests for terminating background calls.	PMMOResult_RRC_0.M1006C7	Sum, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_conv_call	ACCUMULATION	INT8	A number of establishment requests for terminating conversational calls.	PMMOResult_RRC_0.M1006C1	Sum, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_interact_call	ACCUMULATION	INT8	A number of establishment requests for terminating interactive calls.	PMMOResult_RRC_0.M1006C5	Sum, nkrttbh, tot
rrc_conn_req_for_mtc_estab_of_stream_call	ACCUMULATION	INT8	A number of establishment requests for	PMMOResult_RRC_0.M1006C3	Sum, nkrttbh, tot

			terminating streaming calls.		
rrc_conn_req_for_originating_high_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for originating call high priority signalling.	PMMOResult_RRC_0.M1006C13	Sum, nkrttbh, tot
rrc_conn_req_for_originating_low_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for originating call low priority signalling.	PMMOResult_RRC_0.M1006C14	Sum, nkrttbh, tot
rrc_conn_req_for_originating_subscribed_traffic_call	ACCUMULATION	INT8	A number of establishment requests for an originating subscribed traffic call.	PMMOResult_RRC_0.M1006C18	Sum, nkrttbh, tot
rrc_conn_req_for_registration	ACCUMULATION	INT8	A number of establishment requests for registration.	PMMOResult_RRC_0.M1006C11	Sum, nkrttbh, tot
rrc_conn_req_for_terminating_cause_unknown	ACCUMULATION	INT8	A number of establishment requests for terminating call; the cause is unknown.	PMMOResult_RRC_0.M1006C17	Sum, nkrttbh, tot
rrc_conn_req_for_terminating_high_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for terminating call high priority signalling.	PMMOResult_RRC_0.M1006C15	Sum, nkrttbh, tot
rrc_conn_req_for_terminating_low_priority_signalling	ACCUMULATION	INT8	A number of establishment requests for terminating call low	PMMOResult_RRC_0.M1006C16	Sum, nkrttbh, tot

			priority signalling.		
rrc_conn_setup_retrans_triggered_by_timer	ACCUMULATION	INTEGER	The number of RRC Connection Setup retransmissions if RRC Connection Setup Complete is not received in time defined in RRCconnRepTimer 2.	PMMOResult_RRC_0.M1006C101	Sum, nkrttbh, tot
rrc_conn_setup_retrans_triggered_by_ue	ACCUMULATION	INTEGER	The number of UE Triggered RRC Connection Setup retransmissions. RRC Connection Setup is retransmitted immediately and timer RRCconnRepTimer 2 restarted if repeated RRC Connection Request is received during the ongoing RRC connection setup procedure.	PMMOResult_RRC_0.M1006C100	Sum, nkrttbh, tot
rrc_reestablish_fail_no_reply_nrt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE not replying to an RRC: CELL UPDATE CONFIRM sent by RNC.	PMMOResult_RRC_0.M1006C120	Sum, nkrttbh, tot
rrc_reestablish_fail_ue_nrt	ACCUMULATION	INTEGER	The number of failed RRC connection re-establishments due to the UE replying with an RRC: RADIO BEARER	PMMOResult_RRC_0.M1006C119	Sum, nkrttbh, tot

			RECONFIGURATION FAILURE.		
rrc_reestablish_success_nrt	ACCUMULATION	INTEGER	The number of successful RRC connection reestablishments. Note: an RRC re-establisment is not done for RT in Nokia implementation	PMMOResult_RRC_0.M1006C118	Sum, nkrttbh, tot

7.34.52RNC.Nokia.UMTS.anchoring.signalling_rrc.connection_status

RNC anchoring:RRC Signalling - Connection status statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rrc_conn_for_cell_pch_due_to_ue_is_lost	ACCUMULATION	INT8	A number of RRC connection releases in CELL_PCH state due to a cause MS is lost. If the RNC cannot obtain any cell update message as a response to repeated paging to the MS. (Incorrectly named as RRC_CONN_FOR_CELL_PCH_DUE_TO_MS_IS_LOST in Nokia document)	PMMOResult_RRC_0.M1006C51	Sum, nkrttbh, tot
rrc_conn_reject_due_to_rrc_connection_setup_redirect	ACCUMULATION	INT8	- Obsolete in RN2.2 - Number of RRC Connection	PMMOResult_RRC_0.M1006C70	Sum, nkrttbh, tot

ion			Reject messages sent to UE with RRC connection setup redirection information. In this case, the RRC connection request is rejected but the information of other cell carrier is given where UE should make a new		
rrc_conn_reject_due_to_rrmu_overload	ACCUMULATION	INT8	Number of RRC Connection Request rejects due to RRMU overload (RNTI cannot be allocated).	PMMOResult_RRC_0.M1006C69	Sum, nkrttbh, tot
rrc_conn_reject	ACCUMULATION	INT8	A number of RRC connection request reject messages. When the RRC signalling entity acknowledges a rejection to the UE. The reason for the rejection can be, Internal reason BTS reason Transmission reason AC reason.	PMMOResult_RRC_0.M1006C21	Sum, nkrttbh, tot
rrc_conn_rel_due_to_rnc_internal	ACCUMULATION	INT8	The number of RRC connection releases due to RNC internal reason.	PMMOResult_RRC_0.M1006C111	Sum, nkrttbh, tot
rrc_conn_rel_for_due_to_cell_or_ura_update_conf_fail	ACCUMULATION	INT8	A number of RRC connection releases due to a cell or URA update confirmation failure.	PMMOResult_RRC_0.M1006C52	Sum, nkrttbh, tot
rrc_conn_rel_for_	ACCUMULA	INT8	A number of RRC	PMMOResult_RRC_0.	Sum,

due_to_dir_sig_conn_re_est	TION		connection releases due to the reason directed signalling connection re establishment	M1006C53	nkrttbh, tot
rrc_conn_rel	ACCUMULATION	INT8	A number of RRC connection releases.	PMMOResult_RRC_0.M1006C24	Sum, nkrttbh, tot
rrc_conn_release_on_ccch	ACCUMULATION	INT8	The number of RRC connection releases on common control channel.	PMMOResult_RRC_0.M1006C109	Sum, nkrttbh, tot
rrc_conn_req_fail	ACCUMULATION	INT8	A number of RRC connection request failures. When the message is tried to be decoded and the data is corrupted, the message cannot be interpreted (Unable to solve ASN.1 coding or reason unknown).	PMMOResult_RRC_0.M1006C20	Sum, nkrttbh, tot
rrc_conn_setup_compl_received	ACCUMULATION	INT8	The number of RRC CONNECTION SETUP COMPLETE messages received.	PMMOResult_RRC_0.M1006C23	Sum, nkrttbh, tot
rrc_conn_setup	ACCUMULATION	INT8	A number of RRC connection setups	PMMOResult_RRC_0.M1006C22	Sum, nkrttbh, tot
rrc_rel_due_to_ms_is_lost_in_cell_fach	ACCUMULATION	INT8	The number of RRC connection releases due to -MS is lost- in	PMMOResult_RRC_0.M1006C112	Sum, nkrttbh, tot

			CELL_FACH state.		
rrc_status_messages_due_to_invalid_configuration	ACCUMULATION	INTEGER	The number of received RRC STATUS messages from the UE in case radio access bearers for the CN domain indicated by the IE "CN domain identity" exist in the variable ESTABLISHED_RABS while signaling connection release is requested by CN.	PMMOResult_RRC_0.M1006C104	Sum, nkrttbh, tot
rrc_status_messages_due_to_invalid_paging_type_2_message	ACCUMULATION	INTEGER	The number of received RRC STATUS messages from the UE in case the UE receives a PAGING TYPE 2 message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJ ECT to be set to TRUE.	PMMOResult_RRC_0.M1006C103	Sum, nkrttbh, tot
rrc_status_messages	ACCUMULATION	INTEGER	The total number of received RRC STATUS messages with Protocol Error Information.	PMMOResult_RRC_0.M1006C102	Sum, nkrttbh, tot
rrc_status_msg_due_to_asn1_violation_or_encoding_error	ACCUMULATION	INTEGER	The number of received RRC STATUS messages from the UE in case the UE receives an RRC message on the	PMMOResult_RRC_0.M1006C105	Sum, nkrttbh, tot

			DCCH for which the encoded message does not result in any valid abstract syntax value (or "encoding error").		

7.34.53RNC.Nokia.UMTS.anchoring.signalling_rrc.measurement_report

RNC anchoring:RRC Signalling - Measurement report statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cap_req_ul	ACCUMULATION	INT8	A number of capacity requests in UL	PMMOResult_RRC_0.M1006C44	Sum, nkrttbh, tot
meas_report_messages_with_periodic_reporting_results	ACCUMULATION	INT8	The number of RRC:MEASUREMENT REPORT messages containing periodical reporting results.	PMMOResult_RRC_0.M1006C85	Sum, nkrttbh, tot

7.34.54RNC.Nokia.UMTS.anchoring.signalling_rrc.signalling_protocol_states

RNC anchoring:RRC Signalling - Protocol states statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
att_fach_to_hs_dsch	ACCUMULATION	INTEGER	The number of attempted state transitions from FACH to HS-DSCH.	PMMOResult_RRC_0.M1006C151	Sum, nkrttbh, tot
att_hs_dsch_to_fach	ACCUMULATION	INTEGER	The number of attempted state transitions from HS-	PMMOResult_RRC_0.M1006C153	Sum, nkrttbh, tot

			DSCH to DCH.		
att_pch_dch_trans_umrlc	ACCUMULATION	INTEGER	The number of attempted Cell/URA-PCH to DCH state transitions using UM-RLC. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.	PMMOResult_RRC_0.M1006C196	Sum, nkrttbh, tot
cell_dch_state_to_cell_fach	ACCUMULATION	INT8	A number of state transitions from CELL_DCH state to CELL_FACH state	PMMOResult_RRC_0.M1006C45	Sum, nkrttbh, tot
cell_dch_state_to_cell_pch	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH state to CELL_PCH state.	PMMOResult_RRC_0.M1006C114	Sum, nkrttbh, tot
cell_dch_to_cell_fach_state_transit_ps_interrupt_timer	ACCUMULATION	INT8	cell_dch_to_cell_fach_state_transitions_due_ps_interrupt_timer: [cell_dch_to_cell_fach_state_transitions_due_to_ps_interruption_timer] - The number of state transitions from CELL DCH to CELL FACH due to PS interruption timer. If PS Interruption Timer expires and there is another capacity request for the CELL that is under the same BTS, the packet scheduler of the RNC releases the dedicated transport channel and the related radio	PMMOResult_RRC_0.M1006C71	Sum, nkrttbh, tot

			links. The UE is moved to Cell_FACH state unless it has other user plane dedicated transport channels allocated.		
cell_fach_state_to_cell_dch	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_DCH state.	PMMOResult_RRC_0.M1006C46	Sum, nkrttbh, tot
cell_fach_state_to_cell_pch_aft_cell_update	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_PCH state after Cell Update attempt.	PMMOResult_RRC_0.M1006C48	Sum, nkrttbh, tot
cell_fach_state_to_cell_pch_due_to_inactivity	ACCUMULATION	INT8	A number of state transitions from CELL_FACH state to CELL_PCH state after inactivity is detected.	PMMOResult_RRC_0.M1006C47	Sum, nkrttbh, tot
cell_fach_state_to_hsdsch	ACCUMULATION	INTEGER	The number of state transitions from CELL-FACH state to CELL-DCH state with HS-DSCH downlink transport channel.	PMMOResult_RRC_0.M1006C127	Sum, nkrttbh, tot
cell_fach_state_to_ura_pch	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of state transitions from CELL_FACH state to URA_PCH state.	PMMOResult_RRC_0.M1006C49	Sum, nkrttbh, tot
cell_upd_after_pag_cell_pch	ACCUMULATION	INTEGER	The number of Cell updates counted as a paging response	PMMOResult_RRC_0.M1006C157	Sum, nkrttbh, tot

			received from the UE after paging in Cell-PCH state. This counter is also used as a denominator when average paging delay is calculated from M1006C163.		
cell_upd_after_pag_ura_pch	ACCUMULATION	INTEGER	The number of Cell updates counted as a paging response received from the UE after paging in URA-PCH state. This counter is also used as a denominator when average paging delay is calculated using M1006C166.	PMMOResult_RRC_0.M1006C161	Sum, nkrttbh, tot
cell_update_att_data_tr_tvm	ACCUMULATION	INTEGER	The number of Cell Update messages received with cause "uplink data transmission" and "traffic volume indicator" IE set as true. Also M1006C36 is updated along with this counter.	PMMOResult_RRC_0.M1006C199	Sum, nkrttbh, tot
dch_release_due_to_hsdpa_resumption_timer_rejected	ACCUMULATION	INTEGER	The number of times when HSDPA resumption timer has expired but reconfiguration to DCH 0/0 is rejected. The reason for rejection can be one of the following: 1) The maximum number of HSDPA users is exceeded in the cell. 2) It is not possible to allocate HSDPA power to the	PMMOResult_RRC_0.M1006C117	Sum, nkrttbh, tot

			cell. 3) There is another parallel layer-3 procedure ongoing. 4) HdschGuardTimerHO or HsdschGuardTimerLowThrou ghput timer is running.		
dch_release_due_to_hsdpa_resumption_timer	ACCUMULATION	INTEGER	The number of times when PS NRT DCH is reconfigured to DCH 0/0 due to HSDPA resumption timer expiration.	PMMOResult_RRC_0.M1006C116	Sum, nkrttbh, tot
denom_pag_delay_resp_cel_pch	ACCUMULATION	INTEGER	The number of paging delay values updated to counter M1006C164. Used as a denominator in average calculation.	PMMOResult_RRC_0.M1006C165	Sum, nkrttbh, tot
denom_pag_delay_resp_ura_pch	ACCUMULATION	INTEGER	The number of paging delay values updated to counter M1006C167. Used as a denominator in average calculation.	PMMOResult_RRC_0.M1006C168	Sum, nkrttbh, tot
denom_st_trans_time_dch_fach	ACCUMULATION	INTEGER	Denominator for M1006C176 used for average calculation.	PMMOResult_RRC_0.M1006C177	Sum, nkrttbh, tot
denom_st_trans_time_fach_dch	ACCUMULATION	INTEGER	Denominator for M1006C172 used for average calculation.	PMMOResult_RRC_0.M1006C173	Sum, nkrttbh, tot
denom_st_trans_time_pch_dch	ACCUMULATION	INTEGER	Denominator for M1006C174 used for average calculation.	PMMOResult_RRC_0.M1006C175	Sum, nkrttbh, tot

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denom_st_trans_time_pch_fach	ACCUMULATION	INTEGER	Denominator for M1006C170 used for average calculation.	PMMOResult_RRC_0.M1006C171	Sum, nkrttbh, tot
denom_time_aal2_setup	ACCUMULATION	INTEGER	Denominator for M1006C194, used for average calculation.	PMMOResult_RRC_0.M1006C195	Sum, nkrttbh, tot
fail_pag_no_resp_cell_pch	ACCUMULATION	INTEGER	The number of unsuccessful paging occasions when the RNC judges the whole paging occasion unsuccessful due to no response from the UE.	PMMOResult_RRC_0.M1006C158	Sum, nkrttbh, tot
fail_pag_no_resp_ura_pch	ACCUMULATION	INTEGER	The number of unsuccessful paging occasion when the RNC judges the whole paging occasion unsuccessful due to no response from the UE.	PMMOResult_RRC_0.M1006C162	Sum, nkrttbh, tot
hsdsch_state_to_cell_fach_due_to_low_utilisation	ACCUMULATION	INT8	The number of RRC state transitions from CELL DCH (HS-DSCH) state to CELL FACH state due to low utilisation.	PMMOResult_RRC_0.M1006C113	Sum, nkrttbh, tot
hsdsch_state_to_cell_pch	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH (HS-DSCH) state to CELL_PCH state.	PMMOResult_RRC_0.M1006C115	Sum, nkrttbh, tot
mea_cap_req_for_dl	ACCUMULATION	INT8	Measuring Capacity request for DL. When MAC c sends a capacity request to an RRC entity when activity in DL is detected.	PMMOResult_RRC_0.M1006C50	Sum, nkrttbh, tot

num_of_ue_measured_in_cell_dch	ACCUMULATION	INT8	The denominator for the counters M1006C87 and M1006C88. Needed for average and variance calculation.	PMMOResult_RRC_0.M1006C89	Sum, nkrttbh, tot
num_of_ue_measured_in_cell_fach	ACCUMULATION	INT8	The denominator for the counters M1006C90 and M1006C91. Needed for average and variance calculation.	PMMOResult_RRC_0.M1006C92	Sum, nkrttbh, tot
num_of_ue_measured_in_cell_pch	ACCUMULATION	INT8	The denominator for the counters M1006C93 and M1006C94. Needed for average and variance calculation.	PMMOResult_RRC_0.M1006C95	Sum, nkrttbh, tot
pag_delay_cu_cell_pch	ACCUMULATION	INTEGER	The sum of Cell-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: CELL UPDATE received from the UE. This counter, divided by M1006C157, provides the average paging delay.	PMMOResult_RRC_0.M1006C163	Sum, nkrttbh, tot
pag_delay_resp_cell_pch	ACCUMULATION	INTEGER	The sum of Cell-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: UTRAN	PMMOResult_RRC_0.M1006C164	Sum, nkrttbh, tot

			MOBILITY INFORMATION CONFIRM or any other UL DCCH received from the UE after a successful connection establishment procedure.		
paging_messages_cell_pch	ACCUMULATION	INTEGER	The number of paging messages sent to UE in Cell-PCH state. This counter contains all sent pages, not only repeated ones, before the UE response is received or before paging is stopped due to no response from the UE.	PMMOResult_RRC_0.M1006C156	Sum, nkrttbh, tot
paging_messages_ura_pch	ACCUMULATION	INTEGER	The number of paging messages sent to UE in URA-PCH state. This counter contains all sent pages, not only repeated ones, before the UE response is received or before paging is stopped due to no response from the UE.	PMMOResult_RRC_0.M1006C160	Sum, nkrttbh, tot
paging_occasion_cell_pch	ACCUMULATION	INTEGER	The number of occasions when paging is required for UE in Cell-PCH state, i.e. the RNC starts paging.	PMMOResult_RRC_0.M1006C155	Sum, nkrttbh, tot
paging_occasion_ura_pch	ACCUMULATION	INTEGER	The number of occasions when paging is required for UE in URA-PCH	PMMOResult_RRC_0.M1006C159	Sum, nkrttbh, tot

			state, i.e. the RNC starts paging.		
prach_delay_range_value	INTENSITY	INTEGER	The value of WCEL parameter PRACHDelayRange when the last RRC Connection Request or Cell Update of the measurement interval was received.	PMMOResult_RRC_0.M1006C169	Sum, avg, max, min, nkrttbh, tot
resel_pch_dch_trans	ACCUMULATION	INTEGER	The number of cell reselections that occurred during the attempted Cell/URA-PCH to DCH state transitions using UM-RLC. This counter can be used in the Cell Update success rate calculation for excluding the reselections from the attempts. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.	PMMOResult_RRC_0.M1006C198	Sum, nkrttbh, tot
squared_sum_of_ue_operating_time_in_cell_dch	ACCUMULATION	INT8	The sum of squared operating time values when the UE is in CELL_DCH state. Needed for variance calculation.	PMMOResult_RRC_0.M1006C88	Sum, nkrttbh, tot
squared_sum_of_ue_operating_tim	ACCUMULATION	INT8	The sum of squared operating time values	PMMOResult_RRC_0.M1006C91	Sum, nkrttbh,

e_in_cell_fach			when the UE is in CELL_FACH state. Needed for variance calculation. The counter does not include those times that are used in CELL_FACH state when the UE is performing cell update or URA update procedure and after that is sent back to CELL_PCH or URA_PCH state, i.e. the UE is performing periodic cell update or URA update procedure or cell or URA reselection.		tot
squared_sum_of_ue_operating_time_in_cell_pch	ACCUMULATION	INT8	The sum of squared operating time values when the UE is in CELL_PCH state. Needed for variance calculation. Counting operating time in CELL_PCH is not interrupted if the UE performs cell update procedure due to periodic update or cell reselection.	PMMOResult_RRC_0.M1006C94	Sum, nkrttbh, tot
state_trans_cell_dch_to_cell_fach_due_to_low_utilisation	ACCUMULATION	INT8	The number of RRC state transitions from CELL_DCH state to CELL_FACH state due to low DCH utilisation. If downlink or uplink throughput in the number of bytes goes below the threshold defined with the RNC configuration	PMMOResult_RRC_0.M1006C86	Sum, nkrttbh, tot

			parameters DCHutilRelThrDL or DCHutilRelThrUL, the PS DCH release procedure starts. For more information on the parameters, see WCDMA RAS05 Parameter Dictionary.		
succ_fach_to_hs_dsch	ACCUMULATION	INTEGER	The number of successful state transitions from FACH to HS-DSCH.	PMMOResult_RRC_0.M1006C152	Sum, nkrttbh, tot
succ_hs_dsch_to_fach	ACCUMULATION	INTEGER	The number of successful state transitions from HS-DSCH to DCH.	PMMOResult_RRC_0.M1006C154	Sum, nkrttbh, tot
succ_pch_dch_trans_umrlc	ACCUMULATION	INTEGER	The number of successful Cell/URA-PCH to DCH state transition attempts using UM-RLC. This counter is updated for the cell where RRC: CELL UPDATE was originally received, even if the UE would be redirected to another cell.	PMMOResult_RRC_0.M1006C197	Sum, nkrttbh, tot
sum_of_ue_operating_time_in_cell_dch	ACCUMULATION	INT8	The sum of operating time when the UE is in CELL_DCH state. This counter, divided by the denominator M1006C89, gives the average operating time in CELL_DCH state.	PMMOResult_RRC_0.M1006C87	Sum, nkrttbh, tot

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sum_of_ue_operating_time_in_cell_fach	ACCUMULATION	INT8	The sum of operating time when the UE is in CELL_FACH state. This counter, divided by the denominator M1006C92, gives the average operating time in CELL_FACH state. The counter does not include those times that are used in CELL_FACH state when the UE is performing cell update or URA update procedure and after that is sent back to CELL_PCH or URA_PCH state, i.e. the UE is performing the periodic cell update or URA update procedure or cell or URA reselection.	PMMOResult_RRC_0.M1006C90	Sum, nkrttbh, tot
sum_of_ue_operating_time_in_cell_pch	ACCUMULATION	INT8	The sum of operating time when the UE is in CELL_PCH state. This counter, divided by the denominator M1006C95, gives the average operating time in CELL_PCH state. Counting operating time in CELL_PCH is not interrupted if the UE performs cell update procedure due to periodic update or cell reselection. The unit of this counter is 10 seconds, meaning that value 1 means 10	PMMOResult_RRC_0.M1006C93	Sum, nkrttbh, tot

			seconds in CELL_PCH state. Times shorter than 10 seconds will be counted as 10 seconds.		
sum_pag_delay_cu_ura_pch	ACCUMULATION	INTEGER	The sum of URA-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: CELL UPDATE received from the UE. This counter, divided by M1006C161, provides the average paging delay.	PMMOResult_RRC_0.M1006C166	Sum, nkrttbh, tot
sum_pag_delay_resp_ura_pch	ACCUMULATION	INTEGER	The sum of URA-PCH paging delays defined as the time between the first sent RRC: PAGING TYPE 1 message and the RRC: UTRAN MOBILITY INFORMATION CONFIRM or any other UL DCCH received from the UE after a successful connection establishment procedure.	PMMOResult_RRC_0.M1006C167	Sum, nkrttbh, tot
sum_st_trans_time_dch_fach	ACCUMULATION	INTEGER	Sum of state transition times from Cell-DCH state to Cell-FACH state,	PMMOResult_RRC_0.M1006C176	Sum, nkrttbh, tot

			defined as the time between: When RNC decides to initiate Cell_DCH to Cell_FACH transition - RRC: Radio Bearer Reconfiguration Complete or Radio Bearer Release Complete. This counter, divided by the denominator, provides the average state transition time.		
sum_st_trans_time_dch_pch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-DCH state to Cell-PCH or URA-PCH state, defined as the time between: When RNC decides to initiate Cell_DCH to Cell_PCH transition - RRC: Radio Bearer Reconfiguration Complete or Radio Bearer Release Complete. This counter, divided by the denominator, provides the average state transition time.	PMMOResult_RRC_0.M1006C178	Sum, nkrttbh, tot
sum_st_trans_time_fach_dch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-FACH state to Cell-DCH state, defined as the time between: UL/DL capacity request, RAB Setup - RRC: Radio Bearer Reconfiguration Complete or RRC:	PMMOResult_RRC_0.M1006C172	Sum, nkrttbh, tot

			Radio Bearer Setup Complete. This counter, divided by the denominator, provides the average state transition time.		
sum_st_trans_time_pch_dch	ACCUMULATION	INTEGER	Sum of state transition times from Cell-PCH or URA-PCH state to Cell-DCH state, defined as the time between: RRC: Cell Update (cause: UL Data Transmission or Paging response) - RRC: Radio Bearer Reconfiguration Complete. This counter, divided by the denominator, provides the average state transition time.	PMMOResult_RRC_0.M1006C174	Sum, nkrttbh, tot
sum_st_trans_time_pch_fach	ACCUMULATION	INTEGER	Sum of state transition times from Cell-PCH or URA-PCH state to Cell-FACH state, defined as the time between: RRC: Cell Update (cause: UL Data Transmission or Paging response) - RRC: Utran Mobility Information Confirm (or any other UL-DCCH message before UMIC).	PMMOResult_RRC_0.M1006C170	Sum, nkrttbh, tot
sum_time_aal2_s	ACCUMULA	INTEG	Sum of Iub AAL2	PMMOResult_RRC_	Sum,

etup	TION	ER	Setup time, defined as the difference between ALCAP: Establishment Request (ERQ) and ALCAP: Establishment Confirm (ECF). This counter, divided by the denominator, provides the average AAL2 setup time.	0.M1006C194	nkrttbh, tot

7.34.55RNC.Nokia.UMTS.cswitch.iurelreq

RNC level: Circuit switched based inter-system hard handover IU release statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C270	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C268	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C271	Sum, nkrttbh, tot
inter_syst_hho_iu	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

_rel_in_contr_by_msc_due_to_prot_cause	TION	ER	release requests during incoming MSC controlled inter system HHOs due to a Protocol cause.	on_ISHO.M1009C269	nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C266	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_in_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter system HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C267	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C264	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C262	Sum, nkrttbh, tot
inter_syst_hho_iu	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

_rel_out_contr_by_msc_due_to_non_stan_cause	TION	ER	release requests during outgoing MSC controlled inter system HHOs due to a Non Standard cause.	on_ISHO.M1009C265	nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C263	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C260	Sum, nkrttbh, tot
inter_syst_hho_iu_rel_out_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter system HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C261	Sum, nkrttbh, tot

7.34.56RNC.Nokia.UMTS.cswitch.relocation.source

RNC level: Circuit switched based inter-system hard handover relocation at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_syst_hho_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C257	Sum, nkrttbh, tot

inter_syst_hho_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C255	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C258	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C256	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C252	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to the expiry of the relocation preparation timer.	PMMOResult_Relocation_ISHO.M1009C253	Sum, nkrttbh, tot
inter_syst_hho_out_cancel_contr_	ACCUMULATION	INTEGER	A number of outgoing MSC	PMMOResult_Relocation_ISHO.M1009C251	Sum, nkrttbh,

by_msc_due_to_rn_layer_cause			controlled inter system HHOs cancelled due to a Radio Network Layer cause.		tot
inter_syst_hho_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHOs cancelled due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C254	Sum, nkrttbh, tot
inter_syst_hho_out_prep_req_contr_by_msc	ACCUMULATION	INTEGER	Number of outgoing MSC controlled inter system HHO preparation requests.	PMMOResult_Relocation_ISHO.M1009C235	Sum, nkrttbh, tot
inter_syst_hho_out_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	Number of successful outgoing MSC controlled inter system HHO preparations.	PMMOResult_Relocation_ISHO.M1009C236	Sum, nkrttbh, tot
inter_syst_hho_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C239	Sum, nkrttbh, tot
inter_syst_hho_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C237	Sum, nkrttbh, tot

inter_syst_hho_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C241	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C242	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C240	Sum, nkrttbh, tot
inter_syst_hho_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter system HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C238	Sum, nkrttbh, tot

7.34.57RNC.Nokia.UMTS.cswitch.relocation.target

RNC level: Circuit switched based inter-system hard handover relocation at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_syst_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing Relocation Complete messages during incoming MSC controlled inter system HHO	PMMOResult_Relocation_ISHO.M1009C259	Sum, nkrttbh, tot
inter_syst_hho_in_prep_req_contr_by_msc	ACCUMULATION	INTEGER	Number of incoming MSC controlled inter system HHO preparation requests.	PMMOResult_Relocation_ISHO.M1009C243	Sum, nkrttbh, tot
inter_syst_hho_in_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	Number of successful incoming MSC controlled inter system HHO preparations.	PMMOResult_Relocation_ISHO.M1009C244	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C249	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C247	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_co	ACCUMULATION	INTEGER	A number of incoming MSC	PMMOResult_Relocation_ISHO.M1009C250	Sum, nkrttbh,

ntr_by_msc_due_to_non_stan_cause			controlled inter system HHO relocation preparation failures due to a Non Standard cause.		tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C248	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C245	Sum, nkrttbh, tot
inter_syst_hho_in_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter system HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C246	Sum, nkrttbh, tot

7.34.58RNC.Nokia.UMTS.dsp_performance

Signal Processing Resource Manager (SPRM) statistics

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
amr_allowed_capacity	INTENSITY	FLOAT	-Obsolete in RN2.1- This value is the average of allocated capacity of each DSP having AMR transcoder service configured.	PMMOResult_DSP_Meas.M613C35	Average, avg, max, min, nkrttbh, tot
amr_current_calls	INTENSITY	INT8	-Obsolete in RN2.1- The amount of current calls using AMR transcoder service in all DSPs.	PMMOResult_DSP_Meas.M613C36	Average, avg, max, min, nkrttbh, tot
amr_failed_calls	ACCUMULATION	INT8	-Obsolete in RN2.1- The amount of failed calls using AMR transcoder service in all DSPs.	PMMOResult_DSP_Meas.M613C39	Sum, nkrttbh, tot
amr_peak_calls	INTENSITY	INTEGER	-Obsolete in RN2.1- The peak value of calls using AMR transcoder service in all DSPs.	PMMOResult_DSP_Meas.M613C37	Constant, avg, max, min, nkrttbh, tot
amr_total_calls	ACCUMULATION	INT8	-Obsolete in RN2.1- The total amount of calls using AMR transcoder service in all DSPs.	PMMOResult_DSP_Meas.M613C38	Sum, nkrttbh, tot
cc_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of common channel service The average allocated capacity value is the arithmetical average of	PMMOResult_DSP_Meas.M613C0	Average, avg, max, min, nkrttbh, tot

			samples.The samples are taken by 10 second interval. The percentage consumption is read from all the DSPs that has configured to serve common channel service. All the percentage consumptions of common channel service are summed when the sample is taken. The average value is counted at the end of measurement period.		
cc_current_calls	INTENSITY	INTEGER	Current number of common channel service requests. This is an instantaneous value taken from the end of the measurement period.	PMMOResult_DSP_Meas.M613C1	Constant, avg, max, min, nkrttbh, tot
cc_failed_calls	ACCUMULATION	INT8	The number of failed common channel service requests.	PMMOResult_DSP_Meas.M613C4	Sum, nkrttbh, tot
cc_peak_calls	INTENSITY	INT8	The peak number of common channel service requests. The value	PMMOResult_DSP_Meas.M613C2	Constant, avg, max, min, nkrttbh,

			is the highest value of used services recorded during a measurement period		tot
cc_total_calls	ACCUMULATION	INT8	The total amount of successful common channel service requests.	PMMOResult_DSP_Meas.M613C3	Sum, nkrttbh, tot
crct_allowed_capacity	INTENSITY	FLOAT	-Obsolete in RN2.1- This value is the average of allocated capacity of each DSP having circuit switched data service configured.	PMMOResult_DSP_Meas.M613C30	Average, nkrttbh, tot, min, max
crct_current_calls	ACCUMULATION	INT8	-Obsolete in RN2.1- The amount of current calls using circuit switched data service in all DSPs.	PMMOResult_DSP_Meas.M613C31	Sum, nkrttbh, tot
crct_failed_calls	ACCUMULATION	INT8	-Obsolete in RN2.1- The amount of failed calls using circuit switched data service in all DSPs.	PMMOResult_DSP_Meas.M613C34	Sum, nkrttbh, tot
crct_peak_calls	INTENSITY	INTEGER	-Obsolete in RN2.1- The peak value of calls using circuit switched data service in all DSPs.	PMMOResult_DSP_Meas.M613C32	Constant, nkrttbh, tot, min, max
crct_total_calls	ACCUMULATION	INT8	-Obsolete in RN2.1- The total amount of calls using circuit switched data	PMMOResult_DSP_Meas.M613C33	Sum, nkrttbh, tot

			service in all DSPs.		
drnc_allocated_capacity	INTENSITY	FLOAT	- Obsolete in RN2.2 - The average allocated capacity of drifting RNC service The average allocated capacity value is the arithmetical average of samples.The samples are taken by 10 second interval. The percentage consumption is read from all the DSPs that	PMMOResult_DSP_Meas.M613C25	Average, avg, max, min, nkrttbh, tot
drnc_current_calls	INTENSITY	INT8	- Obsolete in RN2.2 - The current number of drifting RNC service requests. This is an instantaneous value taken from the end of the measurement period.	PMMOResult_DSP_Meas.M613C26	Average, avg, max, min, nkrttbh, tot
drnc_failed_calls	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of failed drifting RNC service requests.	PMMOResult_DSP_Meas.M613C29	Sum, nkrttbh, tot
drnc_peak_calls	INTENSITY	INTEGER	- Obsolete in RN2.2 - The peak number of drifting	PMMOResult_DSP_Meas.M613C27	Constant, avg, max, min,

			RNC service requests. The value is the highest value of used services recorded during a measurement period.		nkrttbh, tot
drnc_total_calls	ACCUMULATION	INT8	- Obsolete in RN2.2 - The total amount of successful using drifting RNC service requests.	PMMOResult_DSP_Meas.M613C28	Sum, nkrttbh, tot
hsdpa_common_alloc_capacity	INTENSITY	FLOAT	The average allocated capacity of HSDPA common channel services. The allocated capacity is the reserved services percentage of the configured HSDPA common channel services. The percentage of consumption is read from all the DSPs that have been configured to serve DSP services used for HSDPA common channel services. The average allocated capacity value is the arithmetic average of samples taken at 10 second intervals. The percentage is 100 if all the services configured for HSDPA common channel services	PMMOResult_DSP_Meas.M613C45	Average, avg, max, min, nkrttbh, tot

			are reserved for the entire measurement period.		
hsdpa_common_current_calls	INTENSITY	INT8	The current number of the used HSDPA common channel services. This is an instantaneous value taken at the end of the measurement period.	PMMOResult_DSP_Meas.M613C46	Constant, avg, max, min, nkrttbh, tot
hsdpa_common_failed_calls	ACCUMULATION	INT8	The number of failed HSDPA common channel service requests.	PMMOResult_DSP_Meas.M613C49	Sum, nkrttbh, tot
hsdpa_common_peak_calls	INTENSITY	INT8	The peak number of HSDPA common channel service requests. The value is the highest value of the used services recorded during the measurement period.	PMMOResult_DSP_Meas.M613C47	Constant, avg, max, min, nkrttbh, tot
hsdpa_common_total_calls	ACCUMULATION	INT8	The total number of successful HSDPA common channel service requests.	PMMOResult_DSP_Meas.M613C48	Sum, nkrttbh, tot
hsdpa_nrtd_alloc_capacity	INTENSITY	FLOAT	The average allocated capacity of HSDPA non-real-time data services. The	PMMOResult_DSP_Meas.M613C55	Average, avg, max, min, nkrttbh, tot

			allocated capacity is the reserved services percentage of configured HSDPA non-real-time data services. The percentage consumption is read from all the DSPs that have been configured to serve DSP services used for HSDPA non-real-time data services. The average allocated capacity value is the arithmetic average of samples taken at 10 second intervals. The percentage is 100 if all the services configured for HSDPA non-real-time data services are reserved for the entire measurement period.		
hsdpa_nrtd_current_calls	INTENSITY	INT8	The current number of the used HSDPA non-real-time data services. This is an instantaneous value taken at the end of the measurement period.	PMMOResult_DSP_Meas.M613C56	Constant, avg, max, min, nkrttbh, tot
hsdpa_nrtd_failed_calls	ACCUMULATION	INT8	The number of failed HSDPA non-real-time data service requests.	PMMOResult_DSP_Meas.M613C59	Sum, nkrttbh, tot

hsdpa_nrtd_peak_calls	INTENSITY	INT8	The peak number of HSDPA non-real-time data service requests. The value is the highest number of the used services recorded during the measurement period.	PMMOResult_DSP_Meas.M613C57	Constant, avg, max, min, nkrttbh, tot
hsdpa_nrtd_total_calls	ACCUMULATION	INT8	The total number of successful HSDPA non-real-time data service requests.	PMMOResult_DSP_Meas.M613C58	Sum, nkrttbh, tot
hsdpa_sl_allocated_capacity	INTENSITY	FLOAT	- Obsolete in RN2.2 - The average allocated capacity of dedicated HSDPA control channel services. The allocated capacity is the reserved services percentage of the configured dedicated HSDPA control channel services. The percentage of consumption is read	PMMOResult_DSP_Meas.M613C50	Average, avg, max, min, nkrttbh, tot
hsdpa_sl_current_calls	INTENSITY	INT8	- Obsolete in RN2.2 - The current number of the used dedicated HSDPA control channel services.	PMMOResult_DSP_Meas.M613C51	Constant, avg, max, min, nkrttbh, tot

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			This is an instantaneous value taken at the end of the measurement period.		
hsdpa_sl_failed_calls	ACCUMULATION	INT8	- Obsolete in RN2.2 - The number of failed dedicated HSDPA control channel service requests	PMMOResult_DSP_Meas.M613C54	Sum, nkrttbh, tot
hsdpa_sl_peak_calls	INTENSITY	INT8	- Obsolete in RN2.2 - The peak number of dedicated HSDPA control channel service requests. The value is the highest number of the used services recorded during the measurement period.	PMMOResult_DSP_Meas.M613C52	Constant, avg, max, min, nkrttbh, tot
hsdpa_sl_total_calls	ACCUMULATION	INT8	- Obsolete in RN2.2 - The total number of successful dedicated HSDPA control channel service requests.	PMMOResult_DSP_Meas.M613C53	Sum, nkrttbh, tot
nrtd_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of non real time data service The average allocated capacity value is the arithmetical average of samples.The samples are taken by 10 second interval. The	PMMOResult_DSP_Meas.M613C20	Average, avg, max, min, nkrttbh, tot

			percentage consumption is read from all the DSPs that has configured to serve non real time data service. All the percentage consumptions of non real time data service are summed when the sample is taken. The average value is counted at the end of measurement period.		
nrtd_current_calls	INTENSITY	INT8	The current number of non real time data service requests. This is an instantaneous value taken from the end of the measurement period.	PMMOResult_DSP_Meas.M613C21	Constant, avg, max, min, nkrttbh, tot
nrtd_failed_calls	ACCUMULATION	INT8	The number of failed non real time data service requests.	PMMOResult_DSP_Meas.M613C24	Sum, nkrttbh, tot
nrtd_peak_calls	INTENSITY	INTEGER	The peak number of non real time data service requests. The value is the highest value of used services recorded during a measurement	PMMOResult_DSP_Meas.M613C22	Constant, avg, max, min, nkrttbh, tot

			period.		
nrtd_total_calls	ACCUMULATION	INT8	The total amount of successful non real time data service quests.	PMMOResult_DSP_Meas.M613C23	Sum, nkrttbh, tot
rt_ps_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of real-time streaming services. The allocated capacity is the percentage of the reserved DSP resources which are configured for real-time streaming services. The percentage of consumption is read from all the DSPs that have been configured to serve DSP services used for real-time streaming services. The average allocated capacity value is the arithmetic average of samples taken at 10 second intervals. The percentage is 100 if all the services configured for real-time streaming services are reserved for the entire measurement period.	PMMOResult_DSP_Meas.M613C40	Average, avg, max, min, nkrttbh, tot
rt_ps_current_calls	INTENSITY	INT8	The current number of used real-time	PMMOResult_DSP_Meas.M613C41	Constant, avg, max, min,

			streaming services. This is an instantaneous value taken at the end of the measurement period.		nkrttbh, tot
rt_ps_failed_calls	ACCUMULATION	INT8	The number of failed real-time streaming service requests.	PMMOResult_DSP_Meas.M613C44	Sum, nkrttbh, tot
rt_ps_peak_calls	INTENSITY	INT8	The peak number of real-time streaming service requests. The value is the highest number of the used services recorded during the measurement period.	PMMOResult_DSP_Meas.M613C42	Constant, avg, max, min, nkrttbh, tot
rt_ps_total_calls	ACCUMULATION	INT8	The total number of successful real-time streaming service requests.	PMMOResult_DSP_Meas.M613C43	Sum, nkrttbh, tot
rtd_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of real time data service. The average allocated capacity value is the arithmetical average of samples.The samples are taken by 10 second interval. The percentage	PMMOResult_DSP_Meas.M613C10	Average, avg, max, min, nkrttbh, tot

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			consumption is read from all the DSPs that has configured to serve real time data service. All the percentage consumptions of real time data service are summed when the sample is taken. The average value is counted at the end of measurement period.		
rtd_current_calls	INTENSITY	INT8	The current number of real time data service requests. This is an instantaneous value taken from the end of the measurement period.	PMMOResult_DSP_Meas.M613C11	Constant, avg, max, min, nkrttbh, tot
rtd_failed_calls	ACCUMULATION	INT8	The number of failed real time data service requests.	PMMOResult_DSP_Meas.M613C14	Sum, nkrttbh, tot
rtd_peak_calls	INTENSITY	INTEGER	The peak number of real time data service requests. The value is the highest value of used services recorded during a measurement period.	PMMOResult_DSP_Meas.M613C12	Constant, avg, max, min, nkrttbh, tot
rtd_total_calls	ACCUMULATION	INT8	The total amount of successful real time data service requests.	PMMOResult_DSP_Meas.M613C13	Sum, nkrttbh, tot

rts_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of real time data speech service The average allocated capacity value is the arithmetical average of samples.The samples are taken by 10 second interval. The percentage consumption is read from all the DSPs that has configured to serve real time data speech service. All the percentage consumptions of real time data speech service are summed when the sample is taken. The average value counted at the end of measurement period.	PMMOResult_DSP_Meas.M613C15	Average, avg, max, min, nkrttbh, tot
rts_current_calls	INTENSITY	FLOAT	The current number of real time data speech service requests. This is an instantaneous value taken from the end of the measurement period.	PMMOResult_DSP_Meas.M613C16	Constant, avg, max, min, nkrttbh, tot
rts_failed_calls	ACCUMULA	INT8	The number of	PMMOResult_DSP_M	Sum,

	TION		failed real time data speech service requests.	eas.M613C19	nkrttbh, tot
rts_peak_calls	INTENSITY	INTEGER	The peak number of real time data speech service requests. The value is the highest value of used services recorded during a measurement period.	PMMOResult_DSP_Meas.M613C17	Constant, avg, max, min, nkrttbh, tot
rts_total_calls	ACCUMULATION	INT8	The total amount of successful real time data speech service requests.	PMMOResult_DSP_Meas.M613C18	Sum, nkrttbh, tot
sc_allocated_capacity	INTENSITY	FLOAT	The average allocated capacity of dedicated control channel service. The average allocated capacity value is the arithmetical average of samples.The samples are taken by 10 second interval. The percentage consumption is read from all the DSPs that has configured to serve dedicated control channel service. All the percentage consumptions of dedicated control channel service are summed when the sample is taken. The average value is counted at the	PMMOResult_DSP_Meas.M613C5	Average, avg, max, min, nkrttbh, tot

			end of measurement period.		
sc_current_calls	INTENSITY	FLOAT	Current number of dedicated control channel service requests.This is an instantaneous value taken from the end of the measurement period	PMMOResult_DSP_Meas.M613C6	Constant, avg, max, min, nkrttbh, tot
sc_failed_calls	ACCUMULATION	INT8	The amount of failed calls using dedicated control channel service in all DSPs. When a call using dedicated control channel service fails. This happens when, there are no DSP resources available in the NE while creating the service, there are no DSP resources available in the NE while modifying the service, the call is released due to an error in the DSP, the Resource Manager receives erroneous parameters while creating or modifying the service.	PMMOResult_DSP_Meas.M613C9	Sum, nkrttbh, tot

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sc_peak_calls	INTENSITY	INTEGER	The peak number of dedicated control channel service requests. The value is the highest value of used services recorded during a measurement period.	PMMOResult_DSP_Meas.M613C7	Constant, avg, max, min, nkrttbh, tot
sc_total_calls	ACCUMULATION	INT8	The total amount of successful dedicated control channel service requests.	PMMOResult_DSP_Meas.M613C8	Sum, nkrttbh, tot

7.34.59RNC.Nokia.UMTS.dsp_service

DSP service statistics

The performance data measurements for this KPI group are recorded against the combination of RNC and DSP_Service_Type (DSP_Service_Type_Id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
dsp_service_curr_res_alloc	INTENSITY	INTEGER	The current number of resources allocated for a specific DSP service type.	PMMOResult_DSP_Service_Statistics.M609C0	Constant, avg, max, min, nkrttbh, tot
dsp_service_fail_res_alloc	ACCUMULATION	INTEGER	The number of DSP resource allocation failures.	PMMOResult_DSP_Service_Statistics.M609C3	Sum, avg, nkrttbh, tot
dsp_service_fail_res_modify	ACCUMULATION	INTEGER	The number of DSP resource modification failures.	PMMOResult_DSP_Service_Statistics.M609C4	Sum, nkrttbh, tot
dsp_service_peak_res_alloc	INTENSITY	INTEGER	The peak number of resources allocated for a specific DSP service type.	PMMOResult_DSP_Service_Statistics.M609C1	Constant, avg, max, min, nkrttbh, tot

dsp_service_succ_res_alloc	ACCUMULATION	INTEGER	The total cumulative number of the resources allocated for a specific DSP service type.	PMMOResult_DSP_Service_Statistics.M609C2	Sum, nkrttbh, tot
peak_hsdpa_user_rnc	INTENSITY	INTEGER	Peak number of HSDPA users in RNC	{dsp_service_peak_res_alloc}	Average, avg, max, min, nkrttbh, tot
peak_hsupa_user_rnc	INTENSITY	INTEGER	Peak number of HSUPA users in RNC	{dsp_service_peak_res_alloc}	Average, avg, max, min, nkrttbh, tot

7.34.60RNC.Nokia.UMTS.hspa_ifho_meas

HSPA IFHO measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
att_hcap_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA capability based IFHO measurement start attempts.	PMMOResult_Intra_System_HHO_RNC.M1008C262	Sum, nkrttbh, tot
att_hcap_inter_ifho	ACCUMULATION	INTEGER	The number of Inter-RNC HSPA capability based IFHO attempts. This counter includes also handover attempts to I-HSPA cells.	PMMOResult_Intra_System_HHO_RNC.M1008C266	Sum, nkrttbh, tot
att_hcap_intra_ifh	ACCUMULA	INTEG	The number of	PMMOResult_Intra_Sy	Sum,

o	TION	ER	Intra-RNC HSPA capability based IFHO attempts.	stem_HHO_RNC.M1008C265	nkrttbh, tot
att_hspa_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA IFHO measurement start attempts.	PMMOResult_Intra_System_HHO_RNC.M1008C247	Sum, nkrttbh, tot
att_hspa_inter_ifho	ACCUMULATION	INTEGER	The number of Inter-RNC HSPA IFHO attempts.	PMMOResult_Intra_System_HHO_RNC.M1008C251	Sum, nkrttbh, tot
att_hspa_intra_ifho	ACCUMULATION	INTEGER	The number of Intra-RNC HSPA IFHO attempts.	PMMOResult_Intra_System_HHO_RNC.M1008C250	Sum, nkrttbh, tot
fail_hcap_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA capability based IFHO measurement start failures.	PMMOResult_Intra_System_HHO_RNC.M1008C263	Sum, nkrttbh, tot
fail_hcap_inter_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA capability based IFHOs due to UE being lost. This counter includes also failed handovers to I-HSPA cells.	PMMOResult_Intra_System_HHO_RNC.M1008C274	Sum, nkrttbh, tot
fail_hcap_inter_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA capability based IFHOs due to UE rejection. This counter includes also failed handovers to I-HSPA cells.	PMMOResult_Intra_System_HHO_RNC.M1008C272	Sum, nkrttbh, tot
fail_hcap_inter_ifho_utran	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA capability based IFHOs due to UTRAN. This	PMMOResult_Intra_System_HHO_RNC.M1008C270	Sum, nkrttbh, tot

			counter includes also failed handovers to I-HSPA cells.		
fail_hcap_intra_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UE being lost.	PMMOResult_Intra_System_HHO_RNC.M1008C273	Sum, nkrttbh, tot
fail_hcap_intra_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UE rejection.	PMMOResult_Intra_System_HHO_RNC.M1008C271	Sum, nkrttbh, tot
fail_hcap_intra_ifho_utran	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA capability based IFHOs due to UTRAN.	PMMOResult_Intra_System_HHO_RNC.M1008C269	Sum, nkrttbh, tot
fail_hspa_ifho_meas	ACCUMULATION	INTEGER	The number of HSPA IFHO measurement start failures.	PMMOResult_Intra_System_HHO_RNC.M1008C248	Sum, nkrttbh, tot
fail_hspa_inter_ifho_ue_lost	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA IFHOs due to UE being lost.	PMMOResult_Intra_System_HHO_RNC.M1008C261	Sum, nkrttbh, tot
fail_hspa_inter_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA IFHOs due to UE rejection.	PMMOResult_Intra_System_HHO_RNC.M1008C259	Sum, nkrttbh, tot
fail_hspa_inter_ifho_utran	ACCUMULATION	INTEGER	The number of failed Inter-RNC HSPA IFHOs due to UTRAN.	PMMOResult_Intra_System_HHO_RNC.M1008C257	Sum, nkrttbh, tot
fail_hspa_intra_if	ACCUMULA	INTEG	The number of	PMMOResult_Intra_Sy	Sum,

ho_ue_lost	TION	ER	failed Intra-RNC HSPA IFHOs due to UE being lost.	stem_HHO_RNC.M1008C260	nkrttbh, tot
fail_hspa_intra_ifho_ue_nack	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA IFHOs due to UE rejection.	PMMOResult_Intra_System_HHO_RNC.M1008C258	Sum, nkrttbh, tot
fail_hspa_intra_ifho_utran	ACCUMULATION	INTEGER	The number of failed Intra-RNC HSPA IFHOs due to UTRAN.	PMMOResult_Intra_System_HHO_RNC.M1008C256	Sum, nkrttbh, tot
not_start_hcap_ifho_no_cell	ACCUMULATION	INTEGER	The number of times when no cell good enough was found for HSPA capability based IFHO.	PMMOResult_Intra_System_HHO_RNC.M1008C264	Sum, nkrttbh, tot
not_start_hspa_ifho_no_cell	ACCUMULATION	INTEGER	The number of times when no cell good enough was found for HSPA IFHO.	PMMOResult_Intra_System_HHO_RNC.M1008C249	Sum, nkrttbh, tot
succ_hcap_inter_ifho	ACCUMULATION	INTEGER	The number of successful Inter-RNC HSPA capability based IFHOs. This counter includes also handovers to I-HSPA cells.	PMMOResult_Intra_System_HHO_RNC.M1008C268	Sum, nkrttbh, tot
succ_hcap_intra_ifho	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA capability based IFHOs.	PMMOResult_Intra_System_HHO_RNC.M1008C267	Sum, nkrttbh, tot
succ_hspa_inter_ifho	ACCUMULATION	INTEGER	The number of successful Inter-RNC HSPA IFHOs.	PMMOResult_Intra_System_HHO_RNC.M1008C255	Sum, nkrttbh, tot
succ_hspa_intra_ifho_hsdpa	ACCUMULATION	INTEGER	The number of successful Intra-	PMMOResult_Intra_System_HHO_RNC.M100	Sum, nkrttbh,

			RNC HSPA IFHOs with HS-DSCH/DCH allocated in the target cell.	8C253	tot
succ_hspa_intra_ifho_hsupa	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA IFHOs with HS-DSCH/E-DCH allocated in the target cell.	PMMOResult_Intra_System_HHO_RNC.M1008C254	Sum, nkrttbh, tot
succ_hspa_intra_ifho_rel99	ACCUMULATION	INTEGER	The number of successful Intra-RNC HSPA IFHOs with Rel99 DCH allocated in the target cell.	PMMOResult_Intra_System_HHO_RNC.M1008C252	Sum, nkrttbh, tot

7.34.61RNC.Nokia.UMTS.interrnc.forward

RNC level - Inter-RNC hard handover: Forward SRNS context statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
forw_srns_con_in	ACCUMULATION	INTEGER	Number of received Forward SRNS Context messages from SGSN in target RNC.	PMMOResult_Relocation_ISHO.M1009C234	Sum, nkrttbh, tot
forw_srns_con_out	ACCUMULATION	INTEGER	Number of Forward SRNS Context messages to SGSN in source RNC.	PMMOResult_Relocation_ISHO.M1009C233	Sum, nkrttbh, tot

7.34.62RNC.Nokia.UMTS.interrnc.iurelreq.source

RNC level - Inter-RNC hard handover: IU release request at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_iu_rel_out_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C212	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C210	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C213	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C211	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C208	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing	PMMOResult_Relocation_ISHO.M1009C209	Sum, nkrttbh, tot

			2CN controlled inter HHOs due to a Transport Layer cause.		
inter_hho_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C200	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C198	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C201	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C199	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C196	Sum, nkrttbh, tot

inter_hho_iu_rel_out_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled inter HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C197	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C206	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C204	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C207	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C205	Sum, nkrttbh, tot
inter_hho_iu_rel_out_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C202	Sum, nkrttbh, tot
inter_hho_iu_rel_	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

out_contr_by_sgsn_due_to_tr_cause	TION	ER	release requests during outgoing SGSN controlled inter HHOs due to a Transport Layer cause.	on_ISHO.M1009C203	nkrttbh, tot

7.34.63RNC.Nokia.UMTS.interrnc.iurelreq.target

RNC level - Inter-RNC hard handover: IU release request at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_iu_rel_in_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C230	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C228	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C231	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled	PMMOResult_Relocation_ISHO.M1009C229	Sum, nkrttbh, tot

			inter HHOs due to a Protocol cause.		
inter_hho_iu_rel_in_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C226	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled inter HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C227	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C218	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C216	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C219	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to	PMMOResult_Relocation_ISHO.M1009C217	Sum, nkrttbh, tot

			a Protocol cause.		
inter_hho_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C214	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled inter HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C215	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C224	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C222	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C225	Sum, nkrttbh, tot
inter_hho_iu_rel_	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

in_contr_by_sgsn_due_to_prot_cause	TION	ER	release requests during incoming SGSN controlled inter HHOs due to a Protocol cause.	on_ISHO.M1009C223	nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C220	Sum, nkrttbh, tot
inter_hho_iu_rel_in_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled inter HHOs due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C221	Sum, nkrttbh, tot

7.34.64RNC.Nokia.UMTS.interrnc.relocation.cancel

RNC level - Inter-RNC hard handover: Relocation commit cancel by MSC/SGSN statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C188	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C186	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_b	ACCUMULATION	INTEGER	A number of outgoing 2CN	PMMOResult_Relocation_ISHO.M1009C189	Sum, nkrttbh,

y_2cn_due_to_non_stan_cause			controlled inter RNC HHOs cancelled due to a Non Standard cause.		tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C187	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C183	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to the expiry of the relocation preparation timer.	PMMOResult_Relocation_ISHO.M1009C184	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C182	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHOs	PMMOResult_Relocation_ISHO.M1009C185	Sum, nkrttbh, tot

			cancelled due to a Transport Layer cause.		
inter_rnc_hho_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C172	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C170	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C173	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C171	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C167	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs	PMMOResult_Relocation_ISHO.M1009C168	Sum, nkrttbh, tot

			cancelled due to the expiry of the relocation preparation timer.		
inter_rnc_hho_out_cancel_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C166	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHOs cancelled due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C169	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C180	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C178	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Non Standard	PMMOResult_Relocation_ISHO.M1009C181	Sum, nkrttbh, tot

			cause.		
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C179	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C175	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_Relocation_ISHO.M1009C176	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C174	Sum, nkrttbh, tot
inter_rnc_hho_out_cancel_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHOs cancelled due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C177	Sum, nkrttbh, tot

7.34.65RNC.Nokia.UMTS.interrnc.relocation.misc

RNC level - Inter-RNC hard handover: Relocation due to other sources statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_hho_compl_in_target_rnc_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing Relocation Complete messages during incoming 2CN controlled HHO.	PMMOResult_Relocation_ISHO.M1009C195	Sum, nkrttbh, tot
inter_hho_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing Relocation Complete messages during incoming MSC controlled HHO.	PMMOResult_Relocation_ISHO.M1009C193	Sum, nkrttbh, tot
inter_hho_compl_in_target_rnc_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing Relocation Complete messages during incoming SGSN controlled HHO.	PMMOResult_Relocation_ISHO.M1009C194	Sum, nkrttbh, tot
inter_hho_det_in_target_rnc_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing Relocation Detect messages during incoming SGSN controlled HHO.	PMMOResult_Relocation_ISHO.M1009C191	Sum, nkrttbh, tot
inter_hho_detect_in_target_rnc_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing Relocation Detect messages during incoming 2CN controlled HHO.	PMMOResult_Relocation_ISHO.M1009C192	Sum, nkrttbh, tot
inter_hho_detect_in_target_rnc_con	ACCUMULATION	INTEGER	A number of outgoing	PMMOResult_Relocation_ISHO.M1009C190	Sum, nkrttbh,

tr_by_msc			Relocation Detect messages during incoming MSC controlled HHO.		tot

7.34.66RNC.Nokia.UMTS.interrnc.relocation.source

RNC level - Inter-RNC hard handover: Relocation due to source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_out_prep_req_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C120	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_req_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing MSC controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C118	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_req_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled inter RNC HHO requests. HC makes a decision about inter RNC hard handover based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C119	Sum, nkrttbh, tot

inter_rnc_hho_out_prep_succ_contr_by_2cn	ACCUMULATION	INTEGER	A number of successful outgoing 2CN controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C123	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	A number of successful outgoing MSC controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C121	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_succ_contr_by_sgsn	ACCUMULATION	INTEGER	A number of successful outgoing SGSN controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C122	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C140	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C138	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation	PMMOResult_Relocation_ISHO.M1009C141	Sum, nkrttbh, tot

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			preparation failures due to a Non Standard cause.		
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C139	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C136	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_2cn_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C137	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C128	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C126	Sum, nkrttbh, tot

inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C129	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C127	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C124	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C125	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Miscellaneous	PMMOResult_Relocation_ISHO.M1009C134	Sum, nkrttbh, tot

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			cause.		
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C132	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C135	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C133	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C130	Sum, nkrttbh, tot
inter_rnc_hho_out_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C131	Sum, nkrttbh, tot

7.34.67RNC.Nokia.UMTS.interrnc.relocation.target

RNC level - Inter-RNC hard handover: Relocation due to target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_in_prep_req_contr_by_2cn	ACCUMULATION	INTEGER	A number of incoming 2CN controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C144	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_req_contr_by_msc	ACCUMULATION	INTEGER	A number of incoming MSC controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C142	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_req_contr_by_sgsn	ACCUMULATION	INTEGER	A number of incoming SGSN controlled inter RNC HHO requests.	PMMOResult_Relocation_ISHO.M1009C143	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_succ_contr_by_2cn	ACCUMULATION	INTEGER	A number of successful incoming 2CN controlled inter RNC HHO preparations.	PMMOResult_Relocation_ISHO.M1009C147	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	A number of successful incoming MSC controlled inter RNC HHO preparations.	PMMOResult_Relocation_ISHO.M1009C145	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_succ_contr_by_sgsn	ACCUMULATION	INTEGER	A number of successful incoming SGSN controlled inter RNC HHO	PMMOResult_Relocation_ISHO.M1009C146	Sum, nkrttbh, tot

			preparations.		
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C164	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C162	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C165	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C163	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C160	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_co	ACCUMULATION	INTEGER	A number of incoming 2CN	PMMOResult_Relocation_ISHO.M1009C161	Sum, nkrttbh,

ntr_by_2cn_due_to_tr_layer_cause			controlled HHO relocation preparation failures due to a Transport Layer cause.		tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C152	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C150	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C153	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled HHO relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C151	Sum, nkrttbh, tot
inter_rnc_hho_in	ACCUMULA	INTEG	A number of	PMMOResult_Relocati	Sum,

_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	TION	ER	incoming MSC controlled HHO relocation preparation failures due to a Radio Network Layer cause.	on_ISHO.M1009C148	nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C149	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C158	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C156	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C159	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation	PMMOResult_Relocation_ISHO.M1009C157	Sum, nkrttbh, tot

			preparation failures due to a Protocol cause.		
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C154	Sum, nkrttbh, tot
inter_rnc_hho_in_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled HHO relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C155	Sum, nkrttbh, tot

7.34.68RNC.Nokia.UMTS.interrnc.relocation

RNC level: Inter-RNC hard handover: Relocation commit statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
inter_rnc_hho_commit_in_source_rnc	ACCUMULATION	INTEGER	A number of committed inter RNC hard handovers on source RNC side.	PMMOResult_Relocation_ISHO.M1009C116	Sum, nkrttbh, tot
inter_rnc_hho_commit_in_target_rnc	ACCUMULATION	INTEGER	A number of committed inter RNC hard handovers on target RNC side.	PMMOResult_Relocation_ISHO.M1009C117	Sum, nkrttbh, tot

7.34.69RNC.Nokia.UMTS.intrasys_hho_inter_nrt

RNC NRT intra-system inter-frequency handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_inter_freq_handovers_caused_by_imsi_for_nrt	PERCENTAGE	FLOAT	Success rate for inter-frequency handover attempts caused by IMSI for NRT.	100 * {successful_inter_freq_handovers_caused_by_imsi_for_nrt}/ {inter_freq_ho_attempts_caused_by_imsi_for_nrt}	Average, avg, nkrttbh
connection_drops_during_inter_rnc_hho_caused_by_hspa_scc	ACCUMULATION	INTEGER	The number of user plane drops during outgoing Inter-RNC Intrafrequency HHO triggered by HSPA serving cell change. This counter is updated only for the HSPA serving cell before the HHO operation.	PMMOResult_Intra_System_HHO_RNC.M1008C246	Sum, nkrttbh, tot
ifho_because_no_cell_good_enough_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateDL > LHOcapaReqRejRateDL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C161	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute	PMMOResult_Intra_System_HHO_RNC.M1008C98	Sum, nkrttbh, tot

			CPICH Ec/No for NRT.		
inter_freq_ho_attempts_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C94	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C90	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency handover attempts caused by IMSI for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C122	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C86	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C82	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_ecno_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C71	Sum, nkrttbh, tot

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inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH RSCP by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C70	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to DL DPCH by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C69	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring without compressed mode due to IMSI - for UEs with an NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C126	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_HHO_RNC.M1008C68	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C67	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpi	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed	PMMOResult_Intra_System_HHO_RNC.M1008C76	Sum, nkrttbh, tot

ch_ecno_for_nrt			mode due to low measured CPICH Ec/No by the UEs for NRT.		
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C75	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to DL DPCH by the UEs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C74	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring without compressed mode due to IMSI - for UEs with an NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C127	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_HHO_RNC.M1008C73	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas	ACCUMULATION	INT8	Number of started inter frequency HHO	PMMOResult_Intra_System_HHO_RNC.M	Sum, nkrttbh,

_without_comp_mode_due_to_ul_dch_qual_for_nrt			measurements without compressed mode due to quality deterioration report from outer loop power control by the UEs for NRT.	1008C72	tot
inter_rnc_inter_freq_ho_attempts_for_nrt	ACCUMULATION	INT8	Inter RNC inter BTS inter frequency HHO attempts for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C110	Sum, nkrttbh, tot
intra_rnc_inter_bts_inter_freq_ho_attempts_for_nrt	ACCUMULATION	INT8	Intra RNC inter BTS inter frequency HHO attempts for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C106	Sum, nkrttbh, tot
intra_rnc_intra_bts_inter_freq_ho_attempts_for_nrt	ACCUMULATION	INT8	Intra RNC intra BTS inter frequency HHO attempts for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C102	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C173	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C172	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C175	Sum, nkrttbh, tot

load_based_ifho_attempts_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C170	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C171	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C174	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C137	Sum, nkrttbh, tot
load_based_ifho_	ACCUMULA	INTEG	The number of Load	PMMOResult_Intra_S	Sum,

meas_with_com_mod_due_to_capa_rejection_ul_for_nrt	TION	ER	Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	ystem_HHO_RNC.M1008C136	nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C139	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C134	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C135	Sum, nkrttbh, tot

load_based_ifho_meas_with_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C138	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C149	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C148	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_hw_or_logical_res	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after	PMMOResult_Intra_System_HHO_RNC.M1008C151	Sum, nkrttbh, tot

ource_limitation_for_nrt			measuring without compressed mode due to HW or logical resource limitation - by UEs with NRT connection.		
load_based_ifho_meas_without_com_mod_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C146	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C147	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C150	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO	PMMOResult_Intra_System_HHO_RNC.M1008C81	Sum, nkrttbh, tot

_ecno_for_nrt			for NRT, and the inter frequency measurement was triggered due to low measured CPICH Ec/No.		
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to low measured CPICH RSCP.	PMMOResult_Intra_System_HHO_RNC.M1008C80	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to DL DPCH.	PMMOResult_Intra_System_HHO_RNC.M1008C79	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_imsi_for_nrt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C128	Sum, nkrttbh, tot
not_started_inter_	ACCUMULA	INT8	When no	PMMOResult_Intra_S	Sum,

freq_hho_bec_of_no_cell_good_enough_due_to_ue_trx_pwr_for_nrt	TION		neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.	ystem_HHO_RNC.M1008C78	nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ul_dch_qual_for_nrt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for NRT, and the inter frequency measurement was triggered by a quality deterioration report from outer loop power control.	PMMOResult_Intra_System_HHO_RNC.M1008C77	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateUL > LHOcapaReqRejRateUL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C160	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO	PMMOResult_Intra_System_HHO_RNC.M1008C158	Sum, nkrttbh, tot

			reason PrxTotal > PrxTarget + LHOpwrOffsetUL ends without making an inter- frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter- frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C159	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-frequency HHO attempt, because no cell is good enough for	PMMOResult_Intra_System_HHO_RNC.M1008C162	Sum, nkrttbh, tot

			inter- frequency HHO - for UEs with NRT connection.		
not_started_load_based_ifho_no_cell_good_enough_due_hw_or_logical_resource_limit_for_nrt	ACCUMULATION	INTEGER	[not_started_load_based_ifho_because_no_cell_good_enough_due_to_hw_or_logical_resource_limitation_for_nrt] - The number of times when an inter-frequency HHO measurement due to Load Based HO reason HW or logical resource limitation ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C163	Sum, nkrttbh, tot
not_started_service_based_ifho_because_no_cell_good_enough_for_nrt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Service Based ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C164	Sum, nkrttbh, tot
rrc_con_nection_drops_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to CapaReqRejRateDL	PMMOResult_Intra_System_HHO_RNC.M1008C209	Sum, nkrttbh, tot

			> LHOcapaReqRejRateDL - by UEs with NRT connection.		
rrc_conn_drops_during_inter_rnc_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter RNC inter BTS intra frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C113	Sum, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C109	Sum, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	RRC connection drops during intra RNC intra BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C105	Sum, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to HW or logical resource limitation - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C211	Sum, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C210	Sum, nkrttbh, tot

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rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C101	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C97	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C93	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of RRC connection drops during inter-frequency handover caused by IMSI for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C125	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C89	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C85	Sum, nkrttbh, tot

rrc_connection_drops_during_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C206	Sum, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C207	Sum, nkrttbh, tot
rrc_connection_drops_during_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Service Based inter-frequency handover - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C212	Sum, nkrttbh, tot
rrc_connection_drops_ifho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C208	Sum, nkrttbh, tot
service_based_ifho_attempts_for_nr	ACCUMULATION	INTEGER	The number of Service Based inter-	PMMOResult_Intra_System_HHO_RNC.M	Sum, nkrttbh,

t			frequency handover attempts - by UEs with NRT connection.	1008C176	tot
service_based_ifho_meas_with_com_mod_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring with compressed mode - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C140	Sum, nkrttbh, tot
service_based_ifho_meas_without_com_mod_for_nrt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring without compressed mode - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C152	Sum, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C185	Sum, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_ul_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C184	Sum, nkrttbh, tot
successful_ifho_caused_by_hw_or_logical_resource_l	ACCUMULATION	INTEGER	The number of successful Load Based inter-	PMMOResult_Intra_System_HHO_RNC.M1008C187	Sum, nkrttbh, tot

imitation_for_nrt			frequency handover due to HW or logical resource limitation - by UEs with NRT connection.		
successful_ifho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C186	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C99	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C95	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C91	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of successful inter-frequency handovers caused by IMSI for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C123	Sum, nkrttbh, tot

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successful_inter_freq_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C87	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C83	Sum, nkrttbh, tot
successful_inter_rnc_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Successful inter RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C111	Sum, nkrttbh, tot
successful_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C107	Sum, nkrttbh, tot
successful_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C103	Sum, nkrttbh, tot
successful_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C182	Sum, nkrttbh, tot
successful_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT	PMMOResult_Intra_System_HHO_RNC.M1008C183	Sum, nkrttbh, tot

			connection.		
successful_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of successful Service Based inter-frequency handover - by UEs with NRT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C188	Sum, nkrttbh, tot
unsuccessful_ifho_caused_by_capa_rejection_dl_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateDL > LHOcapaReqRejRateDL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C197	Sum, nkrttbh, tot
unsuccessful_ifho	ACCUMULA	INTEG	The number of	PMMOResult_Intra_S	Sum,

_caused_by_capa_rejection_ul_for_nrt	TION	ER	unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateUL > LHOcapaReqRejRateUL - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	ystem_HHO_RNC.M1008C196	nkrttbh, tot
unsuccessful_ifho_caused_by_hw_or_logical_resource_limitation_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to HW or logical resource limitation - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior	PMMOResult_Intra_System_HHO_RNC.M1008C199	Sum, nkrttbh, tot

			to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_reservation_rate_sc_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to ReservationRateSC > LHOresRateSC - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the	PMMOResult_Intra_System_HHO_RNC.M1008C198	Sum, nkrttbh, tot

			normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_freq_handovers_caused_by_cpich_ecno_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C100	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_cpich_rscp_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH RSCP for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C96	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C92	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_imsi_for_nrt	ACCUMULATION	INT8	The number of unsuccessful inter-frequency handovers caused by IMSI for NRT. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and	PMMOResult_Intra_System_HHO_RNC.M1008C124	Sum, nkrttbh, tot

			the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_freq_handovers_caused_by_ue_trx_pwr_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C88	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ul_dch_qual_for_nrt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UL DCH quality deterioration for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C84	Sum, nkrttbh, tot
unsuccessful_inter_rnc_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful inter RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C112	Sum, nkrttbh, tot
unsuccessful_intra_rnc_inter_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful intra RNC inter BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C108	Sum, nkrttbh, tot
unsuccessful_intra_rnc_intra_bts_inter_freq_ho_for_nrt	ACCUMULATION	INT8	Unsuccessful intra RNC intra BTS inter frequency HHOs for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C104	Sum, nkrttbh, tot
unsuccessful_load_based_ifho_caused_by_prxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PrxTotal > PrxTarget + LHOpwrOffsetUL -	PMMOResult_Intra_System_HHO_RNC.M1008C194	Sum, nkrttbh, tot

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			by UEs with NRT connection. -- - If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_load_based_ifho_caused_by_ptxtotal_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with NRT connection. -- - If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the	PMMOResult_Intra_System_HHO_RNC.M1008C195	Sum, nkrttbh, tot

			source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_service_based_ifho_for_nrt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-frequency handovers - by UEs with NRT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C200	Sum, nkrttbh, tot

7.34.70RNC.Nokia.UMTS.intrasys_hho_inter_rt

RNC RT intra-system inter-frequency handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_successful_ifho_caused_by_capa_rejection_dl_for_rt	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-frequency handovers due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	100 * {successful_ifho_caused_by_capa_rejection_dl_for_rt}/ {load_based_ifho_attempts_caused_by_capa_rejection_dl_for_rt}	Average, avg, nkrttbh
_%_successful_ifho_caused_by_capa_rejection_ul_for_rt	PERCENTAGE	FLOAT	The percentage of successful Load Based inter-frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	100 * {successful_ifho_caused_by_capa_rejection_ul_for_rt}/ {load_based_ifho_attempts_caused_by_capa_rejection_ul_for_rt}	Average, avg, nkrttbh
_%_successful_inter_freq_handovers_caused_by_imsi_for_rt	PERCENTAGE	FLOAT	Success rate for inter-frequency handover attempts caused by IMSI for RT.	100 * {successful_inter_freq_handovers_caused_by_imsi_for_rt}/ {inter_freq_ho_attempts_caused_by_imsi_for_rt}	Average, avg, nkrttbh
inter_freq_ho_attempts_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C50	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C46	Sum, nkrttbh, tot
inter_freq_ho_atte	ACCUMULA	INT8	Inter frequency	PMMOResult_Intra_S	Sum,

mpts_caused_by_dl_dpch_pwr_for_rt	TION		HHO attempts caused by DL DPCH approaching maximum power capability for RT.	ystem_HHO_RNC.M1008C42	nkrttbh, tot
inter_freq_ho_attempts_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of inter-frequency handover attempts caused by IMSI for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C115	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C38	Sum, nkrttbh, tot
inter_freq_ho_attempts_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Inter frequency HHO attempts caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C34	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C23	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to low measured CPICH RSCP by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C22	Sum, nkrttbh, tot

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inter_freq_ho_decisions_after_comp_mode_meas_due_to_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to DL DPCH by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C21	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring with compressed mode due to IMSI - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C119	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_HHO_RNC.M1008C20	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_comp_mode_meas_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements with compressed mode due to quality deterioration report from outerloop power control by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C19	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to low measured CPICH Ec/No by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C28	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas	ACCUMULATION	INT8	Number of started inter frequency	PMMOResult_Intra_System_HHO_RNC.M	Sum, nkrttbh,

_without_comp_mode_due_to_cpich_rscp_for_rt			HHO measurements without compressed mode due to low measured CPICH RSCP by the UEs for RT.	1008C27	tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to DL DPCH by the UEs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C26	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of inter-frequency HHO decisions after measuring without compressed mode due to IMSI - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C120	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to UE transmission power approaches its maximum power capability.	PMMOResult_Intra_System_HHO_RNC.M1008C25	Sum, nkrttbh, tot
inter_freq_ho_decisions_after_meas_without_comp_mode_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	Number of started inter frequency HHO measurements without compressed mode due to quality deterioration report from outerloop power control by the	PMMOResult_Intra_System_HHO_RNC.M1008C24	Sum, nkrttbh, tot

			UEs for RT.		
inter_rnc_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Inter RNC inter BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C62	Sum, nkrttbh, tot
intra_rnc_inter_bts_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Intra RNC inter BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C58	Sum, nkrttbh, tot
intra_rnc_intra_bts_inter_freq_ho_attempts_for_rt	ACCUMULATION	INT8	Intra RNC intra BTS inter frequency HHO attempts for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C54	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C232	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C231	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C168	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover	PMMOResult_Intra_System_HHO_RNC.M1008C165	Sum, nkrttbh, tot

			attempts due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.		
load_based_ifho_attempts_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C166	Sum, nkrttbh, tot
load_based_ifho_attempts_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency handover attempts due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C167	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C226	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_capa	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO	PMMOResult_Intra_System_HHO_RNC.M1008C225	Sum, nkrttbh, tot

_rejection_ul_for_rt			decisions after measuring with compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.		
load_based_ifho_meas_with_com_mod_due_to_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C132	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C129	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_mod_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring with compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C130	Sum, nkrttbh, tot
load_based_ifho_meas_with_com_	ACCUMULATION	INTEGER	The number of Load Based inter-	PMMOResult_Intra_System_HHO_RNC.M	Sum, nkrttbh,

mod_due_to_reservation_rate_sc_for_rt			frequency HHO decisions after measuring with compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	1008C131	tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C228	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C227	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode	PMMOResult_Intra_System_HHO_RNC.M1008C144	Sum, nkrttbh, tot

			due to HW or logical resource limitation - by UEs with RT connection.		
load_based_ifho_meas_without_com_mod_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C141	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C142	Sum, nkrttbh, tot
load_based_ifho_meas_without_com_mod_due_to_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of Load Based inter-frequency HHO decisions after measuring without compressed mode due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C143	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_ecno_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency	PMMOResult_Intra_System_HHO_RNC.M1008C33	Sum, nkrttbh, tot

			measurement was triggered due to low measured CPICH Ec/No.		
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_cpich_rscp_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to low measured CPICH RSCP.	PMMOResult_Intra_System_HHO_RNC.M1008C32	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered due to DL DPCH.	PMMOResult_Intra_System_HHO_RNC.M1008C31	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_imsi_for_rt	ACCUMULATION	INT8	The number of times when an inter-frequency HHO measurement due to IMSI ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C121	Sum, nkrttbh, tot
not_started_inter_freq_hho_bec_of_no_cell_good_eno	ACCUMULATION	INT8	When no neighbouring cell is good enough for	PMMOResult_Intra_System_HHO_RNC.M1008C30	Sum, nkrttbh, tot

ugh_due_to_ue_trx_pwr_for_rt			inter frequency HHO for RT, and the inter frequency measurement was triggered due to UE transmission power approaches its maximum power capability.		
not_started_inter_freq_hho_bec_of_no_cell_good_enough_due_to_ul_dch_qual_for_rt	ACCUMULATION	INT8	When no neighbouring cell is good enough for inter frequency HHO for RT, and the inter frequency measurement was triggered by a quality deterioration report from outer loop power control.	PMMOResult_Intra_System_HHO_RNC.M1008C29	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	not_started_load_based_ifho_because_no_cell_good_enough_due_to_to_reservation_rate_sc_for_rt :The number of times when an inter-frequency HHO measurement due to Load Based HO reason ReservationRateSC > LHOresRateSC ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C155	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_	ACCUMULATION	INTEGER	The number of times that an inter-frequency HHO	PMMOResult_Intra_System_HHO_RNC.M1008C230	Sum, nkrttbh, tot

enough_due_to_capa_rejection_dl_for_rt			measurement due to Load Based HO reason CapaReqRejRateDL more than LHOcapaReqRejRateDL ends without making an interfrequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of times that an inter-frequency HHO measurement due to Load Based HO reason CapaReqRejRateUL more than LHOcapaReqRejRateUL ends without making an interfrequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C229	Sum, nkrttbh, tot
not_started_load_based_ifho_because_no_cell_good_enough_due_to_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PrxTotal > PrxTarget + LHOpwrOffsetUL ends without	PMMOResult_Intra_System_HHO_RNC.M1008C153	Sum, nkrttbh, tot

			making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.		
not_started_load_based_ifho_because_no_cell_good_enough_due_to_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Load Based HO reason PtxTotal > PtxTarget + LHOpwrOffsetDL ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C154	Sum, nkrttbh, tot
not_started_load_based_ifho_no_cell_good_enough_due_hw_or_logical_resource_limit_for_rt	ACCUMULATION	INTEGER	[not_started_load_based_ifho_because_no_cell_good_enough_due_to_hw_or_logical_resource_limitation_for_rt] - The number of times when an inter-frequency HHO measurement due to Load Based HO reason HW or logical resource limitation ends without making an inter-frequency HHO attempt, because no cell is good enough for inter- frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C156	Sum, nkrttbh, tot

not_started_service_based_ifho_because_no_cell_good_enough_for_rt	ACCUMULATION	INTEGER	The number of times when an inter-frequency HHO measurement due to Service Based ends without making an inter-frequency HHO attempt, because no cell is good enough for inter-frequency HHO - for UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C157	Sum, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	RRC connection drops during intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C61	Sum, nkrttbh, tot
rrc_conn_drops_during_intra_rnc_intra_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	RRC connection drops during intra RNC intra BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C57	Sum, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C204	Sum, nkrttbh, tot
rrc_connection_drops_during_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to ReservationRateSC	PMMOResult_Intra_System_HHO_RNC.M1008C203	Sum, nkrttbh, tot

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			> LHOresRateSC - by UEs with RT connection.		
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C53	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C49	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C45	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of RRC connection drops during inter-frequency handover caused by IMSI for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C118	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	RRC connection drops during inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C41	Sum, nkrttbh, tot
rrc_connection_drops_during_inter_freq_ho_caused_b	ACCUMULATION	INT8	RRC connection drops during inter frequency hard	PMMOResult_Intra_System_HHO_RNC.M1008C37	Sum, nkrttbh, tot

y_ul_dch_qual_for_rt			handovers caused by UL DCH quality deterioration for RT.		
rrc_connection_drops_during_inter_rnc_int_freq_hho_for_rt	ACCUMULATION	INT8	RRC connection drops during inter RNC inter BTS intra frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C65	Sum, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C201	Sum, nkrttbh, tot
rrc_connection_drops_during_load_based_ifho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based inter- frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C202	Sum, nkrttbh, tot
rrc_connection_drops_during_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Service Based inter- frequency handover - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C205	Sum, nkrttbh, tot
rrc_connection_drops_ifho_caused_by_capa_rejection	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based	PMMOResult_Intra_System_HHO_RNC.M1008C238	Sum, nkrttbh, tot

_dl_for_rt			interfrequency handover due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.		
rrc_connection_drops_ifho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of RRC connection drops during Load Based interfrequency handover due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C237	Sum, nkrttbh, tot
service_based_ifho_attempts_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency handover attempts - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C169	Sum, nkrttbh, tot
service_based_ifho_meas_with_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring with compressed mode - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C133	Sum, nkrttbh, tot
service_based_ifho_meas_without_com_mod_for_rt	ACCUMULATION	INTEGER	The number of Service Based inter-frequency HHO decisions after measuring without compressed mode - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C145	Sum, nkrttbh, tot
successful_ifho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handovers due to	PMMOResult_Intra_System_HHO_RNC.M1008C234	Sum, nkrttbh, tot

			CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection.		
successful_ifho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C233	Sum, nkrttbh, tot
successful_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to HW or logical resource limitation - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C180	Sum, nkrttbh, tot
successful_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to ReservationRateSC > LHOresRateSC - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C179	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C51	Sum, nkrttbh, tot

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successful_inter_freq_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C47	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C43	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of successful inter-frequency handovers caused by IMSI for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C116	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C39	Sum, nkrttbh, tot
successful_inter_freq_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Successful inter frequency hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C35	Sum, nkrttbh, tot
successful_inter_rnc_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful inter RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C63	Sum, nkrttbh, tot
successful_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C59	Sum, nkrttbh, tot
successful_intra_rnc_intra_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Successful intra RNC inter BTS inter frequency HHOs for	PMMOResult_Intra_System_HHO_RNC.M1008C55	Sum, nkrttbh, tot

			RT.		
successful_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C177	Sum, nkrttbh, tot
successful_load_based_ifho_caused_by_ptxtotal_for_rt	ACCUMULATION	INTEGER	The number of successful Load Based inter-frequency handover due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C178	Sum, nkrttbh, tot
successful_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of successful Service Based inter-frequency handover - by UEs with RT connection.	PMMOResult_Intra_System_HHO_RNC.M1008C181	Sum, nkrttbh, tot
unsuccessful_ifho_caused_by_capa_rejection_dl_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateDL more than LHOcapaReqRejRateDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s)	PMMOResult_Intra_System_HHO_RNC.M1008C236	Sum, nkrttbh, tot

			indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_capa_rejection_ul_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to CapaReqRejRateUL more than LHOcapaReqRejRateUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the receipt of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the	PMMOResult_Intra_System_HHO_RNC.M1008C235	Sum, nkrttbh, tot

			normal operation as if no hard handover attempt had occurred.		
unsuccessful_ifho_caused_by_hw_or_logical_resource_limitation_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to HW or logical resource limitation - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C192	Sum, nkrttbh, tot
unsuccessful_ifho_caused_by_reservation_rate_sc_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to ReservationRateSC	PMMOResult_Intra_System_HHO_RNC.M1008C191	Sum, nkrttbh, tot

			> LHOresRateSC - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
unsuccessful_inter_freq_handovers_caused_by_cpich_ecno_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH Ec/No for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C52	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_cpich_rscp_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by low measured absolute CPICH RSCP for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C48	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_dl_dpch_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by DL DPCH approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C44	Sum, nkrttbh, tot

unsuccessful_inter_freq_handovers_caused_by_imsi_for_rt	ACCUMULATION	INT8	The number of unsuccessful inter-frequency handovers caused by IMSI for RT. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C117	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ue_trx_pwr_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UE transmission power approaching maximum power capability for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C40	Sum, nkrttbh, tot
unsuccessful_inter_freq_handovers_caused_by_ul_dch_qual_for_rt	ACCUMULATION	INT8	Unsuccessful inter frequency hard handovers caused by UL DCH quality deterioration for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C36	Sum, nkrttbh, tot
unsuccessful_inter	ACCUMULA	INT8	Unsuccessful inter	PMMOResult_Intra_S	Sum,

_rnc_inter_freq_ho_for_rt	TION		RNC inter BTS inter frequency HHOs for RT.	ystem_HHO_RNC.M1008C64	nkrttbh, tot
unsuccessful_intra_rnc_inter_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Unsuccessful intra RNC inter BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C60	Sum, nkrttbh, tot
unsuccessful_intra_rnc_intra_bts_inter_freq_ho_for_rt	ACCUMULATION	INT8	Unsuccessful intra RNC intra BTS inter frequency HHOs for RT.	PMMOResult_Intra_System_HHO_RNC.M1008C56	Sum, nkrttbh, tot
unsuccessful_load_based_ifho_caused_by_prxtotal_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Load Based inter-frequency handovers due to PrxTotal > PrxTarget + LHOpwrOffsetUL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C189	Sum, nkrttbh, tot
unsuccessful_load	ACCUMULA	INTEG	The number of	PMMOResult_Intra_S	Sum,

_based_ifho_caused_by_ptxtotal_for_rt	TION	ER	unsuccessful Load Based inter-frequency handovers due to PtxTotal > PtxTarget + LHOpwrOffsetDL - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.	ystem_HHO_RNC.M1008C190	nkrttbh, tot
unsuccessful_service_based_ifho_for_rt	ACCUMULATION	INTEGER	The number of unsuccessful Service Based inter-frequency handovers - by UEs with RT connection. --- If the UE fails to establish the physical channel(s) indicated in the	PMMOResult_Intra_System_HHO_RNC.M1008C193	Sum, nkrttbh, tot

			handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		

7.34.71RNC.Nokia.UMTS.intrasys_hho_intra_nrt

RNC NRT intra-system handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cell_addition_failure_due_to_sho_incapability_for_nrt	ACCUMULATION	INT8	Cell addition failure caused by SHO in capability for NRT. When a UE sends an event 1 A triggered measurement report to the RNC in order to add a cell (which is controlled by another RNC than the local RNC) to the active set but the cell addition is either disabled with the parameter Enable Inter RNC Soft Handover or the inter RNC soft handover is not possible due to IUR transport resource	PMMOResult_Intra_System_HHO_RNC.M1008C11	Sum, nkrttbh, tot

			congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.		
cell_replacement_failure_due_to_sho_incapability_for_nrt	ACCUMULATION	INT8	Cell replacement failure caused by SHO incapability for NRT. When a UE sends an event 1C triggered measurement report to the RNC in order to replace a cell in the active set with a non active cell (which is controlled by another RNC than the local RNC), but the cell replacement is either disabled with the parameter Enable Inter RNC Soft Handover or the inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in	PMMOResult_Intra_System_HHO_RNC.M1008C12	Sum, nkrttbh, tot

			a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.		
inter_freq_compr_mode_start_not_possible_for_nrt	ACCUMULATION	INT8	Compressed mode start not possible for NRT.	PMMOResult_Intra_System_HHO_RNC.M1008C66	Sum, nkrttbh, tot
nrt_hho_attempts_due_to_sho_incapability_and_ave_ecno	ACCUMULATION	INT8	HHO attempts caused by SHO incapability for NRT. When the serving RNC starts an inter RNC (intra frequency) hard handover attempt caused by SHO incapability. The parameter HHO Margin forAverage Ec No determines the margin by which the average downlink Ec/No of the target (neighbouring) cell must exceed the average Ec/No of the best active cell before an inter RNC hard handover is possible. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or event 1C triggered measurement report.	PMMOResult_Intra_System_HHO_RNC.M1008C13	Sum, nkrttbh, tot
nrt_hho_attempts_	ACCUMULA	INT8	Immediate HHO	PMMOResult_Intra_S	Sum,

due_to_sho_incapability_and_peak_ecno	TION		attempts caused by SHO incapability for NRT. When the serving RNC starts an immediate inter RNC (intra frequency) hard handover attempt caused by SHO incapability. An immediate HHO attempt is started if the downlink Ec/No of the neighbouring cell exceeds considerably the Ec/No of the best active cell even in one event triggered (event 1A or 1C) measurement report. The parameter HHO Margin for Peak Ec No determines the maximum allowed difference between the downlink Ec/No of the neighbouring cell and the Ec/No of the best active cell in situations when the RNC is not able to perform inter RNC soft handover between these cells. If the difference in downl ink Ec / No values exceeds the value of the parameter, the RNC must perform	ystem_HHO_RNC.M1008C14	nkrttbh, tot

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			inter RNC hard handover immediately. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or event 1C triggered measurement report.		
rrc_connection_drops_during_hho_caused_by_sho_incapability_for_nrt	ACCUMULATION	INT8	RRC connection drops during HHO caused by SHO incapability for NRT. When the timer T358 expires on source RNC side. If the timer T358 expires and neither the target RNC has received the handover complete message, or the source RNC has received a failure message from the mobile station, the source and target RNCs may delete the old and new configurations, and the source RNC sends the IU RELEASE REQUEST (RANAP) message to the CN in order to release the IU connections.	PMMOResult_Intra_System_HHO_RNC.M1008C17	Sum, nkrttbh, tot
successful_hard_handovers_caused_	ACCUMULATION	INT8	Successful hard handovers caused by	PMMOResult_Intra_System_HHO_RNC.M1	Sum, nkrttbh,

by_sho_incapability_for_nrt			SHO incapability for NRT. When the CN (core network) initiates the release of the IU connections to the source RNC by sending the IU RELEASECOMMAND (RANAP) message indicating the cause value Successful relocation.	008C15	tot
ue_is_not_able_to_execute_intra_system_hho_for_nrt	ACCUMULATION	INT8	UE is not able to execute HHO for NRT. When the source RNC receives a handover failure message from the mobile station with the failure cause value Configuration unacceptable. If the UTRAN instructs the mobile station to use a configuration that it does not support, the mobile station will transmit a handover failure on the DCCH to the source RNC. The hard handover procedure ends and the MS resumes the normal operation as if no hard handover attempt had	PMMOResult_Intra_System_HHO_RNC.M1 008C10	Sum, nkrttbh, tot

			occurred.		
unsuccessful_hard_handovers_caused_by_sho_incapability_for_nrt	ACCUMULATION	INT8	Unsuccessful hard handovers caused by SHO incapability for NRT. When the source RNC receives a failure message from the mobile station with the failure cause value Physical channel failure. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message on the DCCH to the source RNC. The hard handover procedure ends and the UE resumes normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C16	Sum, nkrttbh, tot
utran_is_not_able_to_execute_intra_system_hho_for_nrt	ACCUMULATION	INT8	The number of intra-system hard handover failures due to UTRAN. --- The failure can occur, for example, due to the following reasons: radio resource congestion in the target cell, radio link	PMMOResult_Intra_System_HHO_RNC.M1008C9	Sum, nkrttbh, tot

			setup/addition failure in the target BTS, relocation preparation procedure failure in the CN, or relocation resource allocation procedure failure in the target RNC.		

7.34.72RNC.Nokia.UMTS.intrasys_hho_intra_rt

RNC RT intra-system handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cell_addition_failure_due_to_sho_incapability_for_rt	ACCUMULATION	INT8	Cell addition failure caused by SHO incapability for RT. When a UE sends an event 1A triggered measurement report to the RNC in order to add a cell (which is controlled by some other RNC than the local RNC) to the active set, but the cell addition is either disabled with a parameter Enable Inter RNC Soft Handover or inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can	PMMOResult_Intra_System_HHO_RNC.M1008C2	Sum, nkrttbh, tot

			update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.		
cell_replacement_failure_due_to_sho_incapability_for_rt	ACCUMULATION	INT8	Cell replacement failure caused by SHO incapability for RT. When a UE sends an event 1C triggered measurement report to the RNC in order to replace a cell in the active set with a non active cell (which is controlled by another RNC than the local RNC) but the cell replacement is either disabled with a parameter Enable Inter RNC Soft Handover or inter RNC soft handover is not possible due to IUR transport resource congestion. Only the serving RNC (SRNC) can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the measurement report.	PMMOResult_Intra_System_HHO_RNC.M1008C3	Sum, nkrttbh, tot
inter_freq_compr_mode_start_not_possible_for_rt	ACCUMULATION	INT8	Compressed mode start not possible for RT. When an inter	PMMOResult_Intra_System_HHO_RNC.M1008C18	Sum, nkrttbh, tot

			system (inter frequency) HHO measurement cant be activated because compressed mode cant be started.		
rrc_connection_drops_during_hho_caused_by_sho_incapability_for_rt	ACCUMULATION	INT8	RRC connection drops during HHO caused by SHO incapability for RT. When the timer T358 expires on source RNC side. If the timer T358 expires and neither the target RNC has received the handover complete message or the source RNC has received a failure message from the mobile station, the source and target RNCs may delete the old and new configurations, and the source RNC sends the IU RELEASE REQUEST (RANAP) message to the CN in order to release the IU connections.	PMMOResult_Intra_System_HHO_RNC.M1008C8	Sum, nkrttbh, tot
rt_hho_attempts_due_to_sho_incapability_and_ave_ecno	ACCUMULATION	INT8	HHO attempts caused by SHO incapability for RT. When the serving RNC starts an inter	PMMOResult_Intra_System_HHO_RNC.M1008C4	Sum, nkrttbh, tot

			RNC (intra frequency) hard handover attempt caused by SHO incapability. The parameter HHO Margin forAverage Ec No determines the margin by which the average downlink Ec/No of the target(neighbouring) cell must exceed the average Ec/No of the best active cell before inter RNC hard handover is possible. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or 1C triggered measurement report.		
rt_hho_attempts_due_to_sho_incapability_and_peak_ecno	ACCUMULATION	INT8	Immediate HHO attempts caused by SHO incapability for RT. When the serving RNC starts an immediate inter RNC (intra frequency) hard handover attempt caused by SHO incapability. An immediate HHO attempt is started if the downlink Ec/No of the neighbouring cell exceeds	PMMOResult_Intra_System_HHO_RNC.M1008C5	Sum, nkrttbh, tot

			considerably the Ec/No of the best active cell even in one event triggered (event 1A or 1C) measurement report. The parameter HHO Margin for Peak Ec No determines the maximum allowed difference between the downlink Ec/No of the neighbouring cell and the Ec/No of the best active cell in situations when the RNC is not able to perform inter RNC soft handover between these cells. If the difference in downlink Ec/No values exceeds the value of the parameter, the RNC must perform inter RNC hard handover immediately. Only the SRNC can update the counter. This counter is updated in a cell that is the best cell in the active set on SRNC side when the RNC receives the event 1A or 1C triggered measurement report.		
successful_hard_h	ACCUMULA	INT8	Successful hard	PMMOResult_Intra_S	Sum,

andovers_caused_by_sho_incapability_for_rt	TION		handovers caused by SHO incapability for RT. When the CN (core network) initiates the release of the IU connections to the source RNC by sending the IU RELEASECOMMAND (RANAP) message with the cause value Successful relocation .	ystem_HHO_RNC.M1008C6	nkrttbh, tot
ue_is_not_able_to_execute_intra_system_hho_for_rt	ACCUMULATION	INT8	UE is not able to execute HHO for RT. When the source RNC receives a handover failure from the mobile station with the failure cause value Configuration unacceptable . If the UTRAN instructs the mobile station to use a configuration that it does not support, the mobile station transmits a handover failure on the DCCH to the source RNC. The hard handover procedure ends and the MS resumes normal operation as if no hard handover attempt had occurred.	PMMOResult_Intra_System_HHO_RNC.M1008C1	Sum, nkrttbh, tot
unsuccessful_hard_handovers_caused_by_sho_incapability_for_rt	ACCUMULATION	INT8	Unsuccessful hard handovers caused by SHO incapability for RT. When the	PMMOResult_Intra_System_HHO_RNC.M1008C7	Sum, nkrttbh, tot

			source RNC receives a failure message from the mobile station indicating the cause Physical channel failure. If the UE fails to establish the physical channel(s) indicated in the handover command, the UE will revert to the configuration prior to the reception of the handover command (old configuration) and transmit a failure message on the DCCH to the source RNC. The hard handover procedure ends and the UE resumes the normal operation as if no hard handover attempt had occurred.		
utran_is_not_able_to_execute_intra_system_hho_for_rt	ACCUMULATION	INT8	UTRAN is not able to execute HHO for RT. When the hard handover attempt fails before the serving RNC sends the handover command to the mobile station. The failure can'take place, for example, because of the	PMMOResult_Intra_System_HHO_RNC.M1008C0	Sum, nkrttbh, tot

			following reasons, Radio resource congestion in the target cell Radio link setup/addition failure in Node B Failure occurs during the Relocation preparation procedure in the CN. Failure occurs during the Relocation resource allocation procedure in the target RNC.		

7.34.73RNC.Nokia.UMTS.intrasys_hho_rejected_relocations

RNC Intra-system handover rejected SRNS relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
number_of_rejected_srns_relocations	ACCUMULATION	INT8	Number of rejected relocations.Only recorded for Cell_DCH state UEs.	PMMOResult_Intra_System_HHO_RNC.M1008C114	Sum, nkrttbh, tot

7.34.74RNC.Nokia.UMTS.location_services_agps

AGPS-method Location request services statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
agps_assistance_data_volume_to_ue	ACCUMULATION	INT8	The number of A-GPS assistance data bytes transmitted between RNC and UE.	PMMOResult_RNC_Accum_Location_Services.M1011C28	Sum, nkrttbh, tot
assistance_data_delivery_for_agps	ACCUMULATION	INTEGER	The number of sent Assistance Data Delivery	PMMOResult_RNC_Accum_Location_Services.M1011C25	Sum, nkrttbh, tot

			messages for Network Assisted GPS.		
failed_high_priority_lcs_req_agps	ACCUMULATION	INTEGER	The number of failed A-GPS calculations for high priority location requests.	PMMOResult_RNC_Accum_Location_Services.M1011C21	Sum, nkrttbh, tot
failed_high_priority_lcs_req_nw_agps	ACCUMULATION	INTEGER	The number of failed calculations for high priority location requests when using the NW based A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C35	Sum, nkrttbh, tot
failed_normal_priority_lcs_req_agps	ACCUMULATION	INTEGER	The number of failed A-GPS calculations for normal or unknown priority location requests.	PMMOResult_RNC_Accum_Location_Services.M1011C22	Sum, nkrttbh, tot
failed_normal_priority_lcs_req_nw_agps	ACCUMULATION	INTEGER	The number of failed calculations for normal or unknown priority location requests when using the NW based A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C36	Sum, nkrttbh, tot
rrc_measurement_report_with_agps_data_request	ACCUMULATION	INTEGER	The number of received RRC: Measurement Report messages with IE -UE positioning GPS additional Assistance Data Request-.	PMMOResult_RNC_Accum_Location_Services.M1011C23	Sum, nkrttbh, tot

successful_high_priority_lcs_req_accuracy_codes_fulfilled_by_agps	ACCUMULATION	INTEGER	The number of successfully calculated high priority location requests where accuracy codes are fulfilled by only A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C15	Sum, nkrttbh, tot
successful_high_priority_lcs_req_accuracy_codes_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for high priority location requests when accuracy codes are fulfilled using only the NW based AGPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C29	Sum, nkrttbh, tot
successful_high_priority_lcs_req_accuracy_not_fulfilled_by_agps	ACCUMULATION	INTEGER	The number of successfully calculated high priority location requests where either horizontal or vertical accuracy code is NOT fulfilled by A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C17	Sum, nkrttbh, tot
successful_high_priority_lcs_req_accuracy_not_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for high priority location requests when either horizontal or vertical accuracy code is NOT fulfilled using only the NW based A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C31	Sum, nkrttbh, tot
successful_high_p	ACCUMULA	INTEG	The number of	PMMOResult_RNC_A	Sum,

riority_lcs_req_horizontal_accuracy_not_fulfilled_by_agps	TION	ER	successfully calculated high priority location requests where horizontal accuracy code is NOT fulfilled using A-GPS method.	ccum_Location_Services.M1011C19	nkrttbh, tot
successful_high_priority_lcs_req_horizontal_accuracy_not_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for high priority location requests when horizontal accuracy code is NOT fulfilled using only the NW based A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C33	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_accuracy_codes_fulfilled_by_agps	ACCUMULATION	INTEGER	The number of successfully calculated normal or unknown priority location requests where accuracy codes are fulfilled by only A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C16	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_accuracy_codes_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for normal priority location requests when accuracy codes are fulfilled using only the NW based AGPS	PMMOResult_RNC_Accum_Location_Services.M1011C30	Sum, nkrttbh, tot

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			method.		
successful_normal_priority_lcs_req_accuracy_not_fulfilled_by_agps	ACCUMULATION	INTEGER	The number of successfully calculated normal or unknown priority location requests where either horizontal or vertical accuracy code is NOT fulfilled using A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C18	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_accuracy_not_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for normal priority location requests when either horizontal or vertical accuracy code is NOT fulfilled using only the NW based A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C32	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_horizontal_accuracy_not_fulfilled_by_agps	ACCUMULATION	INTEGER	The number of successfully calculated normal or unknown priority location requests where horizontal accuracy code is NOT fulfilled using A-GPS method.	PMMOResult_RNC_Accum_Location_Services.M1011C20	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_horizontal_accuracy_not_fulfilled_by_nw_agps	ACCUMULATION	INTEGER	The number of successful calculations for normal or unknown priority location requests	PMMOResult_RNC_Accum_Location_Services.M1011C34	Sum, nkrttbh, tot

			when horizontal accuracy code is NOT fulfilled using only the NW based AGPS method.		

7.34.75RNC.Nokia.UMTS.location_services

Location request services statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_failed_lcs_requests	PERCENTAGE	FLOAT	% Failed location service request over attempts, excludes emergency calls count.	100 * {failed_lcs_requests}/ {lcs_requests}	Average, avg, nkrttbh
Act_square_sum_emgcy_lcs_tot_lat	INTENSITY	FLOAT	The actual of squared emergency LCS latency. Needed for standard deviation calculation.	{squared_sum_of_emergency_lcs_total_latency}/ {denom_emergency_lcs_total_latency}	Average, avg, max, min, nkrttbh, tot
Act_square_sum_lcs_total_latency	INTENSITY	FLOAT	The actual sum of squared LCS latency. Needed for standard deviation calculation.	{squared_sum_of_lcs_total_latency}/ {denom_lcs_total_latency}	Average, avg, max, min, nkrttbh, tot
avg_cirtt_latency	INTENSITY	FLOAT	Average CI+RTT method latency	{sum_of_cirtt_latency}/ {denom_cirtt_method}	Average, avg, max, min, nkrttbh, tot

Avg_emergency_cirtt_latency	INTENSITY	FLOAT	The average CI+RTT method latency for emergency location requests. Measured from the point when emergency location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This counter, divided by the denominator M1011C56, gives the average CI+RTT method latency for emergency requests.	{sum_of_emergency_cirtt_latency}/ {denom_emergency_cirtt_method}	Average, avg, max, min, nkrttbh, tot
Avg_emergency_gps_latency	INTENSITY	FLOAT	The average of GPS method latency. Measured from the point when CI+RTT position for emergency location request has been calculated in SMLC to point where GPS position is available. This counter, divided by the denominator M1011C61, gives the average GPS latency for emergency	{sum_of_emergency_gps_latency}/ {denom_emergency_gps_method}	Average, avg, max, min, nkrttbh, tot

			requests.		
Avg_emergency_lcs_total_latency	INTENSITY	FLOAT	The average LCS latency, including RTT and RxTx measurements, CI+RTT method calculation and possible A-GPS positioning. Measured from the point when emergency location request has been received by SMLC to point when location response has been sent to CN from SMLC. This counter, divided by the denominator M1011C67, gives the average LCS latency for emergency requests.	{sum_of_emergency_lcs_total_latency}/ {denom_emergency_lcs_total_latency}	Average, avg, max, min, nkrttbh, tot
Avg_gps_latency	INTENSITY	FLOAT	The average GPS method latency. Measured from the point when CI+RTT position has been calculated in SMLC to point where GPS position is available. This counter, divided by the	{sum_of_gps_latency}/ {denom_gps_method}	Average, avg, max, min, nkrttbh, tot

			denominator M1011C43, gives the average GPS latency.		
Avg_lcs_total_latency	INTENSITY	FLOAT	The average LCS latency, including RTT and RxTx measuring, CI+RTT method calculation and possible GPS positioning. Measured from the point when location request has been received by RRC to point when location response has been sent to CN from RRC. This counter, divided by the denominator M1011C49, gives the average LCS latency.	{sum_of_lcs_total_latency}/ {denom_lcs_total_latency}	Average, avg, max, min, nkrttbh, tot
cirtt_latency_between_2_to_5_seconds	ACCUMULATION	INTEGER	Number of CI+RTT position method usage where the latency was between 2 and 5 seconds. Measured from the point when location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This counter includes both normal requests and	PMMOResult_RNC_Accum_Location_Services.M1011C40	Sum, nkrttbh, tot

			emergency requests.		
cirtt_latency_less_than_2_seconds	ACCUMULATION	INTEGER	Number of CI+RTT position method usage where the latency was less than 2 seconds. Measured from the point when location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This counter includes both normal requests and emergency requests.	PMMOResult_RNC_Accum_Location_Services.M1011C39	Sum, nkrttbh, tot
cirtt_latency_over_5_seconds	ACCUMULATION	INTEGER	Number of CI+RTT position method usage where the latency was over 5 seconds. Measured from the point when location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This counter includes both normal requests and	PMMOResult_RNC_Accum_Location_Services.M1011C41	Sum, nkrttbh, tot

			emergency requests.		
denom_cirtt_method	ACCUMULATION	INTEGER	The denominator for the counter M1011C37. Needed for average calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C38	Sum, nkrttbh, tot
denom_emergency_cirtt_method	ACCUMULATION	INTEGER	The denominator for the counter M1011C55. Needed for average calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C56	Sum, nkrttbh, tot
denom_emergency_gps_method	ACCUMULATION	INTEGER	The denominator for the counter M1011C60. Needed for average calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C61	Sum, nkrttbh, tot
denom_emergency_lcs_total_latency	ACCUMULATION	INTEGER	The denominator for the counters M1011C65 and M1011C66. Needed for average and standard deviation calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C67	Sum, nkrttbh, tot
denom_emisho_latency	ACCUMULATION	INTEGER	The denominator for the counter M1011C50. Needed for average calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C51	Sum, nkrttbh, tot
denom_gps_method	ACCUMULATION	INTEGER	The denominator for the counter M1011C42. Needed for average calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C43	Sum, nkrttbh, tot
denom_lcs_total_l	ACCUMULA	INTEG	The denominator	PMMOResult_RNC_A	Sum,

atency	TION	ER	for the counters M1011C47 and M1011C48.	ccum_Location_Services.M1011C49	nkrttbh, tot
emergency_cirtt_latency_between_2_to_5_sec	ACCUMULATION	INTEGER	Number of CI+RTT position method usage for emergency requests where the latency was between 2 and 5 seconds. Measured from the point when emergency location request has been received by RNC to point when CI+RTT position has been calculated in SMLC.	PMMOResult_RNC_Accum_Location_Services.M1011C58	Sum, nkrttbh, tot
emergency_cirtt_latency_less_than_2_sec	ACCUMULATION	INTEGER	Number of CI+RTT position method usage for emergency requests where the latency was less than 2 seconds. Measured from the point when emergency location request has been received by RNC to point when CI+RTT position has been calculated in SMLC.	PMMOResult_RNC_Accum_Location_Services.M1011C57	Sum, nkrttbh, tot
emergency_cirtt_latency_over_5_se	ACCUMULATION	INTEGER	Number of CI+RTT position	PMMOResult_RNC_Accum_Location_Service	Sum, nkrttbh,

c			method usage for emergency requests where the latency was over 5 seconds. Measured from the point when emergency location request has been received by RNC to point when CI+RTT position has been calculated in SMLC.	s.M1011C59	tot
emergency_gps_latency_between_5_to_15_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was between 5 and 15 seconds. Measured from the point when CI+RTT position for emergency location request has been calculated in SMLC to point where GPS position is available.	PMMOResult_RNC_Accum_Location_Services.M1011C63	Sum, nkrttbh, tot
emergency_gps_latency_less_than_5_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was less than 5 seconds. Measured from the point when CI+RTT position for emergency location request has been calculated in SMLC to point where GPS	PMMOResult_RNC_Accum_Location_Services.M1011C62	Sum, nkrttbh, tot

			position is available.		
emergency_gps_latency_over_15_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was over 15 seconds. Measured from the point when CI+RTT position for emergency location request has been calculated in SMLC to point where GPS position is available.	PMMOResult_RNC_Accum_Location_Services.M1011C64	Sum, nkrttbh, tot
emisho_latency_between_2_to_5_seconds	ACCUMULATION	INTEGER	Number of EMISHOs where the time spent for EMISHO was between 2 and 5 seconds. Measured from emergency location request arrival to point where ISHO has been successfully performed.	PMMOResult_RNC_Accum_Location_Services.M1011C53	Sum, nkrttbh, tot
emisho_latency_less_than_2_seconds	ACCUMULATION	INTEGER	Number of EMISHOs where the time spent for EMISHO was less than 2 seconds. Measured from emergency location request arrival to point	PMMOResult_RNC_Accum_Location_Services.M1011C52	Sum, nkrttbh, tot

			where ISHO has been successfully performed.		
emisho_latency_over_5_seconds	ACCUMULATION	INTEGER	Number of EMISHOs where the time spent for EMISHO was over 5 seconds. Measured from emergency location request arrival to point where ISHO has been successfully performed.	PMMOResult_RNC_Accum_Location_Services.M1011C54	Sum, nkrttbh, tot
failed_high_priority_lcs_req_cell_id_rtt	ACCUMULATION	INT8	The number of failed cell ID/RTT calculations for high priority location requests.	PMMOResult_RNC_Accum_Location_Services.M1011C10	Sum, nkrttbh, tot
failed_lcs_requests_due_to_anchoring	ACCUMULATION	INT8	The number of location requests which cannot be served due to anchoring.The number of location requests which cannot be served due to anchoring.	PMMOResult_RNC_Accum_Location_Services.M1011C12	Sum, nkrttbh, tot
failed_lcs_requests_for_emergency_call	ACCUMULATION	INT8	The number of failed location requests related to emergency calls.	PMMOResult_RNC_Accum_Location_Services.M1011C3	Sum, nkrttbh, tot
failed_lcs_requests	ACCUMULATION	INT8	The number of failed location requests.	PMMOResult_RNC_Accum_Location_Services.M1011C2	Sum, nkrttbh, tot
failed_normal_priority_lcs_req_cell_id_method	ACCUMULATION	INT8	The number of failed cell ID/RTT calculations for normal or unknown priority location requests.	PMMOResult_RNC_Accum_Location_Services.M1011C11	Sum, nkrttbh, tot

gps_latency_between_5_to_15_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was between 5 and 15 seconds. Measured from the point when CI+RTT position has been calculated in SMLC to point where GPS position is available.	PMMOResult_RNC_Accum_Location_Services.M1011C45	Sum, nkrttbh, tot
gps_latency_less_than_5_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was less than 5 seconds. Measured from the point when CI+RTT position has been calculated in SMLC to point where GPS position is available.	PMMOResult_RNC_Accum_Location_Services.M1011C44	Sum, nkrttbh, tot
gps_latency_over_15_seconds	ACCUMULATION	INTEGER	Number of GPS position method usage where the latency was over 15 seconds. Measured from the point when CI+RTT position has been calculated in SMLC to point where GPS	PMMOResult_RNC_Accum_Location_Services.M1011C46	Sum, nkrttbh, tot

			position is available		
lcs_requests_for_emergency_call	ACCUMULATION	INT8	The number of received location requests related to emergency calls.	PMMOResult_RNC_Accum_Location_Services.M1011C1	Sum, nkrttbh, tot
lcs_requests	ACCUMULATION	INT8	The number of received location requests from the CN to request information on the location of a given UE.	PMMOResult_RNC_Accum_Location_Services.M1011C0	Sum, nkrttbh, tot
loc_rep_with_cell_gai	ACCUMULATION	INTEGER	Total number of sent location responses with the successful Cell Geographical Area Information coordinates as location estimate when UE is in anchoring.	PMMOResult_RNC_Accum_Location_Services.M1011C70	Sum, nkrttbh, tot
loc_rep_without_cell_gai	ACCUMULATION	INTEGER	Total number of sent location responses without Cell Geographical Area Information coordinates when UE is in anchoring.	PMMOResult_RNC_Accum_Location_Services.M1011C71	Sum, nkrttbh, tot
location_related_data_fail_due_to_dedic_ass_data_not_available	ACCUMULATION	INTEGER	The number received RRC Status messages with IE -assistance data delivery-.	PMMOResult_RNC_Accum_Location_Services.M1011C27	Sum, nkrttbh, tot
location_related_data_requests	ACCUMULATION	INTEGER	The number of received Location Related Data Requests from CN.	PMMOResult_RNC_Accum_Location_Services.M1011C24	Sum, nkrttbh, tot

reject_dir_loc_req_due_capa	ACCUMULATION	INTEGER	The number of rejected direct location requests due to lack of LCS capacity.	PMMOResult_RNC_Accum_Location_Services.M1011C68	Sum, nkrttbh, tot
reject_per_loc_req_due_capa	ACCUMULATION	INTEGER	The number of rejected periodical location requests due to lack of LCS capacity.	PMMOResult_RNC_Accum_Location_Services.M1011C69	Sum, nkrttbh, tot
rejected_lcs_requests_due_to_duplicate_request	ACCUMULATION	INT8	Number of location requests which are rejected, because a location request for the same UE is already in calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C13	Sum, nkrttbh, tot
rrc_status_messages_with_ie_assistance_data_delivery	ACCUMULATION	INTEGER	The number received RRC Status messages with IE -assistance data delivery-.	PMMOResult_RNC_Accum_Location_Services.M1011C26	Sum, nkrttbh, tot
sai_change_reporting_stop_requests_from_cn	ACCUMULATION	INT8	The number of Location Reporting Control messages received from CN requesting to stop reporting at the change of Service Area.	PMMOResult_RNC_Accum_Location_Services.M1011C14	Sum, nkrttbh, tot
squared_sum_of_emergency_lcs_total_latency	INTENSITY	INTEGER	The sum of squared emergency LCS latency. Needed for standard deviation	PMMOResult_RNC_Accum_Location_Services.M1011C66	Average, avg, max, min, nkrttbh, tot

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			calculation.		
squared_sum_of_lcs_total_latency	INTENSITY	INTEGER	The sum of squared LCS latency. Needed for standard deviation calculation.	PMMOResult_RNC_Accum_Location_Services.M1011C48	Average, avg, max, min, nkrttbh, tot
successful_high_priority_lcs_req_accuracy_codes_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated high priority location requests, where accuracy codes are fulfilled only by cell ID/RTT method.	PMMOResult_RNC_Accum_Location_Services.M1011C4	Sum, nkrttbh, tot
successful_high_priority_lcs_req_accuracy_not_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated high priority location requests, where either horizontal or vertical accuracy code is NOT fulfilled only by cell ID/RTT method.	PMMOResult_RNC_Accum_Location_Services.M1011C6	Sum, nkrttbh, tot
successful_high_priority_lcs_req_horizontal_accuracy_not_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated high priority location requests, where horizontal accuracy code is NOT fulfilled using only the cell ID/RTT method.	PMMOResult_RNC_Accum_Location_Services.M1011C8	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_accuracy_codes_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated normal or unknown priority location requests, where	PMMOResult_RNC_Accum_Location_Services.M1011C5	Sum, nkrttbh, tot

			accuracy codes are fulfilled only by cell ID/RTT method.		
successful_normal_priority_lcs_req_accuracy_not_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated normal or unknown priority location requests, where either horizontal or vertical accuracy code is NOT fulfilled using only the cell ID/RTT method.	PMMOResult_RNC_Accum_Location_Services.M1011C7	Sum, nkrttbh, tot
successful_normal_priority_lcs_req_horizontal_accuracy_not_fullfilled_by_cell_id_rtt	ACCUMULATION	INT8	The number of successfully calculated normal or unknown priority location requests, where horizontal accuracy code is NOT fulfilled using only the cell ID/RTT method.	PMMOResult_RNC_Accum_Location_Services.M1011C9	Sum, nkrttbh, tot
sum_of_cirtt_latency	ACCUMULATION	INTEGER	The sum of CI+RTT method latency. Measured from the point when location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This	PMMOResult_RNC_Accum_Location_Services.M1011C37	Sum, nkrttbh, tot

			counter, divided by the denominator M1011C38, gives the average CI+RTT method latency. This counter includes both normal requests and emergency requests.		
sum_of_emergency_cirtt_latency	ACCUMULATION	INTEGER	The sum of CI+RTT method latency for emergency location requests. Measured from the point when emergency location request has been received by RNC to point when CI+RTT position has been calculated in SMLC. This counter, divided by the denominator M1011C56, gives the average CI+RTT method latency for emergency requests.	PMMOResult_RNC_Accum_Location_Services.M1011C55	Sum, nkrttbh, tot
sum_of_emergency_gps_latency	ACCUMULATION	INTEGER	The sum of GPS method latency. Measured from the point when CI+RTT position for emergency location request has been calculated in	PMMOResult_RNC_Accum_Location_Services.M1011C60	Sum, nkrttbh, tot

			SMLC to point where GPS position is available. This counter, divided by the denominator M1011C61, gives the average GPS latency for emergency requests.		
sum_of_emergency_lcs_total_latency	ACCUMULATION	INTEGER	The sum of total LCS latency, including RTT and RxTx measurements, CI+RTT method calculation and possible A-GPS positioning. Measured from the point when emergency location request has been received by SMLC to point when location response has been sent to CN from SMLC. This counter, divided by the denominator M1011C67, gives the average LCS latency for emergency requests.	PMMOResult_RNC_Accum_Location_Services.M1011C65	Sum, nkrttbh, tot
sum_of_emisho_l	ACCUMULA	INTEG	The sum of	PMMOResult_RNC_A	Sum,

atency	TION	ER	EMISHO latency. Measured from emergency location request arrival to point where ISHO is performed successfully. This counter, divided by the denominator M1011C51, gives the average EMISHO latency.	ccum_Location_Services.M1011C50	nkrttbh, tot
sum_of_gps_latency	ACCUMULATION	INTEGER	The sum of GPS method latency. Measured from the point when CI+RTT position has been calculated in SMLC to point where GPS position is available. This counter, divided by the denominator M1011C43, gives the average GPS latency.	PMMOResult_RNC_Accum_Location_Services.M1011C42	Sum, nkrttbh, tot
sum_of_lcs_total_latency	ACCUMULATION	INTEGER	The sum of total LCS latency, including RTT and RxTx measuring, CI+RTT method calculation and possible GPS positioning. Measured from the point when location request has been received by RRC to point when location	PMMOResult_RNC_Accum_Location_Services.M1011C47	Sum, nkrttbh, tot

			response has been sent to CN from RRC. This counter, divided by the denominator M1011C49, gives the average LCS latency.		

7.34.76RNC.Nokia.UMTS.pswitch

RNC level: Packet switched based inter system hard handover statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_con_req_in	ACCUMULATION	INTEGER	Number of received SRNS Context Requests from SGSN.	PMMOResult_Relocation_ISHO.M1009C273	Sum, nkrttbh, tot
srns_con_res_out	ACCUMULATION	INTEGER	Number of sent SRNS Context Responses to SGSN.	PMMOResult_Relocation_ISHO.M1009C274	Sum, nkrttbh, tot
srns_data_frw_com_in	ACCUMULATION	INTEGER	Number of received Data Forward Command messages from SGSN.	PMMOResult_Relocation_ISHO.M1009C275	Sum, nkrttbh, tot
sta_forw_data_in_source_rnc_on_iu	ACCUMULATION	INTEGER	Number of started forwarding data cases in Source RNC on IU. This counter includes both SRNC relocation and Inter RNC HHO	PMMOResult_Relocation_ISHO.M1009C272	Sum, nkrttbh, tot

			cases.		

7.34.77RNC.Nokia.UMTS.RAN_Accessibility.Location_Service

WCDMA RAN KPI Accessibility:Location Service related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_lcs_setup_and_complete_ratio	PERCENTAGE	FLOAT	LCS Setup and Access Complete Ratio [%] over the reporting period. Covers the phase from Location Reporting Request to Location Control Report. This KPI is based on Location Services measurement in RNC Counters - RNW Part in Nokia WCDMA RNC Product Documentation.	100 * ({Nokia.location_services.lcs_requests}-{Nokia.location_services.failed_lcs_requests})/({Nokia.location_services.lcs_requests})	Average, avg, nkrttbh

7.34.78RNC.Nokia.UMTS.RAN_Mobility.Soft_Handover

WCDMA RAN KPI Mobility:Soft Handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
soft_handover_overhead_area	INTENSITY	FLOAT	Soft Handover Overhead [%] on area level over the reporting period. This KPI is based on Soft Handover measurement where Active Set sizes are measured. See RNC Counters - RNW Part in Nokia WCDMA RNC	if ((PMMOResult_Soft_Handover_RNC.M1007C0+M1007C19) + (M1007C1+M1007C20)/2+ (M1007C2+M1007C21)/3) = 0 then 0 else ((M1007C0+M1007C19 + M1007C1+M1007C20 + M1007C2+M1007C21) /	Average, avg, max, min, nkrttbh, tot

			Product Documentation. Note In the SHO Measurement the counters are both for RNC and WCELL. This formula is uses only the RNC level counters.	((M1007C0+M1007C19) + (M1007C1+M1007C20)/2+ (M1007C2+M1007C21)/3) - 1) *100	

7.34.79RNC.Nokia.UMTS.RAN_Usage.Service_Level

RAN service usage KPIs

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_iu_availability	PERCENTAGE	FLOAT	The percentage of time when the Iu interface SCCP subsystem is in working state. [%]. [RAN_KPI_0052]	100 * {Nokia.ranap_stats.iu_availability}/ {Nokia.ranap_stats.iu_availability_denom}	Average, avg, nkrttbh

7.34.80RNC.Nokia.UMTS.ranap_stats

RANAP - Signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
iu_availability_denom	ACCUMULATION	INTEGER	The number of samples for Iu availability measuring, used as a denominator for Iu availability percentage calculation.	PMMOResult_L3Iu.M1003C53	Sum, nkrttbh, tot

iu_availability	ACCUMULATION	INTEGER	The number of samples when Iu interface is in working state. The Iu interface availability percentage can be calculated as a ratio of this counter and M1003C53.	PMMOResult_L3Iu.M1003C52	Sum, nkrttbh, tot
iu_not_working_duration	ACCUMULATION	INTEGER	The duration that Iu interface is in non-working state.	PMMOResult_L3Iu.M1003C54	Sum, nkrttbh, tot
iu_to_wo_state_changes	ACCUMULATION	INTEGER	The number of Iu interface state changes from non-working to working state.	PMMOResult_L3Iu.M1003C55	Sum, nkrttbh, tot
nbr_of_nrt_rab_ass_nonsucc_due_to_anch	ACCUMULATION	INT8	A number of RAB assignment requests that failed to fulfill due to anchoring case.	PMMOResult_L3Iu.M1003C19	Sum, nkrttbh, tot
nbr_of_rec_error_ind	ACCUMULATION	INT8	A number of received Error Indication messages from the CN.	PMMOResult_L3Iu.M1003C46	Sum, nkrttbh, tot
nbr_of_rec_loc_rep_contr	ACCUMULATION	INT8	A number of received Location Reporting Control messages from the CN.	PMMOResult_L3Iu.M1003C37	Sum, nkrttbh, tot
nbr_of_rec_over_cont	ACCUMULATION	INT8	A number of received Overload Control messages from the CN.	PMMOResult_L3Iu.M1003C40	Sum, nkrttbh, tot
nbr_of_rec_reset_ack	ACCUMULATION	INT8	A number of received Reset Acknowledgement messages from the	PMMOResult_L3Iu.M1003C44	Sum, nkrttbh, tot

			CN.		
nbr_of_rec_reset	ACCUMULATION	INT8	A number of received Reset messages from the CN.	PMMOResult_L3Iu.M1003C42	Sum, nkrttbh, tot
nbr_of_sent_error_ind	ACCUMULATION	INT8	A number of sent Error Indication messages to the CN.	PMMOResult_L3Iu.M1003C45	Sum, nkrttbh, tot
nbr_of_sent_loc_rep	ACCUMULATION	INT8	A number of sent Location Reporting Control messages to the CN.	PMMOResult_L3Iu.M1003C38	Sum, nkrttbh, tot
nbr_of_sent_over_cont	ACCUMULATION	INT8	A number of sent Overload Control messages to the CN.	PMMOResult_L3Iu.M1003C39	Sum, nkrttbh, tot
nbr_of_sent_reset_ack	ACCUMULATION	INT8	A number of sent Reset Acknowledgement messages to the CN.	PMMOResult_L3Iu.M1003C43	Sum, nkrttbh, tot
nbr_of_sent_reset	ACCUMULATION	INT8	A number of sent Reset messages to the CN.	PMMOResult_L3Iu.M1003C41	Sum, nkrttbh, tot
rab_ass_nonsucc_due_to_misc_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Miscellaneous cause.	PMMOResult_L3Iu.M1003C17	Sum, nkrttbh, tot
rab_ass_nonsucc_due_to_nas_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Non Access Stratum cause.	PMMOResult_L3Iu.M1003C15	Sum, nkrttbh, tot

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rab_ass_nonsucc_due_to_non_stan_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Non Standard cause.	PMMOResult_L3Iu.M1003C18	Sum, nkrttbh, tot
rab_ass_nonsucc_due_to_prot_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Protocol cause.	PMMOResult_L3Iu.M1003C16	Sum, nkrttbh, tot
rab_ass_nonsucc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Radio Network Layer cause.	PMMOResult_L3Iu.M1003C13	Sum, nkrttbh, tot
rab_ass_nonsucc_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of RAB assignment requests failed due to a Transport Layer cause.	PMMOResult_L3Iu.M1003C14	Sum, nkrttbh, tot
rab_ass_req_by_cn	ACCUMULATION	INT8	A number of RAB Assignment requests sent by the CN. The RAB can also be assigned through Relocation. RAB assignment can include: new assignment RAB reconfiguration.	PMMOResult_L3Iu.M1003C8	Sum, nkrttbh, tot
rab_ass_succ	ACCUMULATION	INT8	A number of RABs that have been successfully established. The RAB can also be assigned through Relocation.	PMMOResult_L3Iu.M1003C11	Sum, nkrttbh, tot
rab_reconf_nonsucc_due_to_misc_cause	ACCUMULATION	INT8	A number of RAB reconfiguration requests failed due to a Miscellaneous cause.	PMMOResult_L3Iu.M1003C24	Sum, nkrttbh, tot

rab_reconf_nonsucc_due_to_nas_cause	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB reconfiguration requests failed due to a Non Access Stratum cause.	PMMOResult_L3Iu.M1003C22	Sum, nkrttbh, tot
rab_reconf_nonsucc_due_to_non_stan_cause	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB reconfiguration requests failed due to a Non Standard cause.	PMMOResult_L3Iu.M1003C25	Sum, nkrttbh, tot
rab_reconf_nonsucc_due_to_prot_cause	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB reconfiguration requests failed due to a Protocol cause.	PMMOResult_L3Iu.M1003C23	Sum, nkrttbh, tot
rab_reconf_nonsucc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of RAB reconfiguration requests failed due to a Radio Network Layer cause.	PMMOResult_L3Iu.M1003C20	Sum, nkrttbh, tot
rab_reconf_nonsucc_due_to_tr_layer_cause	ACCUMULATION	INT8	- Obsolete in RN2.2 - A number of RAB reconfiguration requests failed due to a Transport Layer cause.	PMMOResult_L3Iu.M1003C21	Sum, nkrttbh, tot
rab_reconf_req_by_cn	ACCUMULATION	INT8	A number of RAB Reconfiguration requests sent by the CN. A RAB Assignment can include more than	PMMOResult_L3Iu.M1003C9	Sum, nkrttbh, tot

			one Reconfiguration.		
rab_reconf_succ	ACCUMULATION	INT8	A number of RABs successfully reconfigured. A RAB Assignment can include more than one Reconfiguration.	PMMOResult_L3Iu.M1003C12	Sum, nkrttbh, tot
rab_rel_nonsucc	ACCUMULATION	INT8	A number of RAB release requests that failed to release.	PMMOResult_L3Iu.M1003C27	Sum, nkrttbh, tot
rab_rel_req_by_cn	ACCUMULATION	INT8	A number of RAB Release requests sent by the CN. The RAB can also be assigned through Relocation. RAB assignment can include new assignment RAB reconfiguration.	PMMOResult_L3Iu.M1003C10	Sum, nkrttbh, tot
rab_rel_req_by_rnc_due_to_anch	ACCUMULATION	INT8	A number of RAB releases requested by RNC due to Anchoring RNC cause.Multi service case.	PMMOResult_L3Iu.M1003C35	Sum, nkrttbh, tot
rab_rel_req_by_rnc_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Radio Network Layer cause.	PMMOResult_L3Iu.M1003C29	Sum, nkrttbh, tot
rab_rel_req_by_rnc	ACCUMULATION	INT8	A number of RAB releases requested by the RNC.	PMMOResult_L3Iu.M1003C28	Sum, nkrttbh, tot
rab_rel_req_due_to_misc_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Miscellaneous	PMMOResult_L3Iu.M1003C33	Sum, nkrttbh, tot

			cause.		
rab_rel_req_due_to_nas_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Non Access Stratum cause.	PMMOResult_L3Iu.M1003C31	Sum, nkrttbh, tot
rab_rel_req_due_to_non_stan_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Non Standard cause.	PMMOResult_L3Iu.M1003C34	Sum, nkrttbh, tot
rab_rel_req_due_to_prot_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Protocol cause.	PMMOResult_L3Iu.M1003C32	Sum, nkrttbh, tot
rab_rel_req_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of RAB release requests due to a Transport Layer cause.	PMMOResult_L3Iu.M1003C30	Sum, nkrttbh, tot
rab_rel_succ	ACCUMULATION	INT8	A number of RABs that have been successfully released.	PMMOResult_L3Iu.M1003C26	Sum, nkrttbh, tot
rec_pag_msg	ACCUMULATION	INT8	A number of paging messages received from the CN.	PMMOResult_L3Iu.M1003C36	Sum, nkrttbh, tot
received_location_related_data_request	ACCUMULATION	INTEGER	The number of Location Related Data Request messages received from the CN.	PMMOResult_L3Iu.M1003C56	Sum, nkrttbh, tot
sent_location_related_data_failure	ACCUMULATION	INTEGER	The number of Location Related Data Failure messages sent to the CN.	PMMOResult_L3Iu.M1003C58	Sum, nkrttbh, tot

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sent_location_related_data_response	ACCUMULATION	INTEGER	The number of Location Related Data Response messages sent to the CN.	PMMOResult_L3Iu.M1003C57	Sum, nkrttbh, tot
sign_conn_rel_by_cn	ACCUMULATION	INT8	A number of signalling connection releases from the CN.	PMMOResult_L3Iu.M1003C1	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_misc_cause	ACCUMULATION	INT8	A number of signalling connection release requests due to a Miscellaneous cause.	PMMOResult_L3Iu.M1003C6	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_nas_cause	ACCUMULATION	INT8	A number of signalling connection release requests due to a Non Access Stratum cause.	PMMOResult_L3Iu.M1003C4	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_non_stan_cause	ACCUMULATION	INT8	A number of signalling connection release requests due to a Non Standard cause.	PMMOResult_L3Iu.M1003C7	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_prot_cause	ACCUMULATION	INT8	A number of signalling connection release requests due to a Protocol cause.	PMMOResult_L3Iu.M1003C5	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_rn_layer_cause	ACCUMULATION	INT8	A number of signalling connection release requests due to a Radio Network Layer cause.	PMMOResult_L3Iu.M1003C2	Sum, nkrttbh, tot
sign_conn_rel_req_due_to_tr_layer_cause	ACCUMULATION	INT8	A number of signalling connection release	PMMOResult_L3Iu.M1003C3	Sum, nkrttbh, tot

			requests due to a Transport Layer cause.		
sign_conn_setup	ACCUMULATION	INT8	A number of signalling connection setups.	PMMOResult_L3Iu.M1003C0	Sum, nkrttbh, tot

7.34.81RNC.Nokia.UMTS.rlc_retransmission

RLC AM PDU retransmission statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
rlc_retrans_distr_class_0_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE without retransmissions.	PMMOResult_RCPM_RLC_RNC.M1027C44	Sum, nkrttbh, tot
rlc_retrans_distr_class_1_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with one retransmission.	PMMOResult_RCPM_RLC_RNC.M1027C45	Sum, nkrttbh, tot
rlc_retrans_distr_class_2_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with two retransmissions.	PMMOResult_RCPM_RLC_RNC.M1027C46	Sum, nkrttbh, tot
rlc_retrans_distr_class_3_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have	PMMOResult_RCPM_RLC_RNC.M1027C47	Sum, nkrttbh, tot

			been successfully delivered to the UE with three retransmissions.		
rlc_retrans_distr_class_4_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with four retransmissions.	PMMOResult_RCPM_RLC_RNC.M1027C48	Sum, nkrttbh, tot
rlc_retrans_distr_class_5_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs which have been successfully delivered to the UE with five or more retransmissions or the PDU is discarded.	PMMOResult_RCPM_RLC_RNC.M1027C49	Sum, nkrttbh, tot

7.34.82RNC.Nokia.UMTS.rnap_stats

RANAP message statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cn_invoke_trace_messages	ACCUMULATION	INT8	The number of received CN invoke trace messages.	PMMOResult_L3Iu.M1003C50	Sum, nkrttbh, tot
nbr_of_deleted_paging_messages_due_to_icsu_overload	ACCUMULATION	INT8	Number of deleted paging messages due to overload in ICSU.	PMMOResult_L3Iu.M1003C47	Sum, nkrttbh, tot
nbr_of_deleted_paging_messages_due_to_rrmu_overload	ACCUMULATION	INT8	Number of deleted paging messages due to overload in RRMU.	PMMOResult_L3Iu.M1003C48	Sum, nkrttbh, tot
signaling_connection_release_response	ACCUMULATION	INT8	The number of signalling connection release	PMMOResult_L3Iu.M1003C51	Sum, nkrttbh, tot

			responses (IU RELEASE COMPLETE) sent to CN.		

7.34.83RNC.Nokia.UMTS.rnc_busy_hour_kpi

KPI group for base RNC busy hour calculation

KPI	Type	Data Type	Description	Derivation	Aggregation
total_traffic	ACCUMULATION	INT8	Busy hour kpi aggregated from Cell	PMMOResult_RNC_Traffic.c_ulcsamrth + PMMOResult_RNC_Traffic.c_ul_non_trans_cs_data_th + PMMOResult_RNC_Traffic.c_dl_non_trans_cs_data_th + PMMOResult_RNC_Traffic.c_ul_cs_amr_th + PMMOResult_RNC_Traffic.c_dl_cs_amr_th + PMMOResult_RNC_Traffic.c_ul_ps_data_back_cl_th + PMMOResult_RNC_Traffic.c_dl_ps_data_back_cl_th + PMMOResult_RNC_Traffic.c_ul_ps_data_int_cl_th + PMMOResult_RNC_Traffic.c_dl_ps_data_int_cl_th + PMMOResult_RNC_Traffic.c_ul_ps_data_conv_cl_th + PMMOResult_RNC_Traffic.c_dl_ps_data_conv	Sum, nkrttbh, tot

				_cl_th + PMMOResult_RNC_Traffic.c_ul_ps_data_stream_cl_th + PMMOResult_RNC_Traffic.c_dl_ps_data_stream_cl_th + PMMOResult_RNC_Traffic.c_hsdsch_th_interac + PMMOResult_RNC_Traffic.c_hsdsch_th_back	

7.34.84RNC.Nokia.UMTS.rnc_capacity_usage

RNC capacity usage statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
amr_average	INTENSITY	INTEGER	The average number of AMR calls.	PMMOResult_RNC_Capacity_Usage.M802C0	Average, avg, max, min, nkrttbh, tot
amr_distr_class_0	ACCUMULATION	INTEGER	The distribution of time when the number of simultaneous AMR calls was within 0%-50% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C2	Sum, nkrttbh, tot
amr_distr_class_1	ACCUMULATION	INTEGER	The distribution of time when the number of simultaneous AMR calls was within 50%-70% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C3	Sum, nkrttbh, tot
amr_distr_class_2	ACCUMULATION	INTEGER	The distribution of time when the number of	PMMOResult_RNC_Capacity_Usage.M802C4	Sum, nkrttbh, tot

			simultaneous AMR calls was within 70%-80% of the licensed capacity.		
amr_distr_class_3	ACCUMULATION	INTEGER	The distribution of time when the number of simultaneous AMR calls was within 80%-90% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C5	Sum, nkrttbh, tot
amr_distr_class_4	ACCUMULATION	INTEGER	The distribution of time when the number of simultaneous AMR calls was more than 90% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C6	Sum, nkrttbh, tot
amr_lic_capacity	INTENSITY	INTEGER	Licensed AMR capacity. The counter value is zero in any configuration other than RNC2600 HW.	PMMOResult_RNC_Capacity_Usage.M802C7	Constant, avg, max, min, nkrttbh, tot
amr_max	INTENSITY	INTEGER	The maximum number of AMR calls. The maximum number of AMR calls is the maximum value among the samples during a measurement period.	PMMOResult_RNC_Capacity_Usage.M802C1	Constant, avg, max, min, nkrttbh, tot

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ave_rrc_conn_mode_users	INTENSITY	INTEGER	The average number of RRC connected mode users in the RNC (all states) during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C17	Average, avg, max, min, nkrttbh, tot
ave_users_cell_dch	INTENSITY	INTEGER	The average number of users in Cell-DCH state in the RNC during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C19	Average, avg, max, min, nkrttbh, tot
ave_users_cell_fach	INTENSITY	INTEGER	The average number of users in Cell-FACH state in the RNC during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C20	Average, avg, max, min, nkrttbh, tot
ave_users_cell_pch	INTENSITY	INTEGER	The average number of users in Cell-PCH state in the RNC during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C21	Average, avg, max, min, nkrttbh, tot
ave_users_ura_pch	INTENSITY	INTEGER	The average number of users in URA-PCH state in the RNC during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C22	Average, avg, max, min, nkrttbh, tot
iu_ps_thr_average	INTENSITY	INTEGER	The average Iu-PS throughput in downlink direction from the core network to the RNC. This counter is supported only when the NP8S1 or NP2GE interface unit is used in the Iu-PS interface.	PMMOResult_RNC_Capacity_Usage.M802C8	Average, avg, max, min, nkrttbh, tot

iu_ps_thr_limit_duration	ACCUMULATION	INTEGER	The duration of time when the RNC Iu-PS interface throughput is limited because the usage has exceeded the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C16	Sum, nkrttbh, tot
iu_ps_thr_peak	INTENSITY	INTEGER	The maximum Iu-PS throughput in downlink direction from the core network to the RNC. This counter is supported only when the NP8S1 or NP2GE interface unit is used in the Iu-PS interface.	PMMOResult_RNC_Capacity_Usage.M802C9	Constant, avg, max, min, nkrttbh, tot
iub_ps_thr_distr_class_0	ACCUMULATION	INTEGER	The distribution of time when the Iub PS data throughput was within 0%-50% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C10	Sum, nkrttbh, tot
iub_ps_thr_distr_class_1	ACCUMULATION	INTEGER	The distribution of time when the Iub PS data throughput was within 50%-70% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C11	Sum, nkrttbh, tot
iub_ps_thr_distr_class_2	ACCUMULATION	INTEGER	The distribution of time when the Iub PS data throughput was within 70%-80% of the	PMMOResult_RNC_Capacity_Usage.M802C12	Sum, nkrttbh, tot

			licensed capacity.		
iub_ps_thr_distr_class_3	ACCUMULATION	INTEGER	The distribution of time when the Iub PS data throughput was within 80%-90% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C13	Sum, nkrttbh, tot
iub_ps_thr_distr_class_4	ACCUMULATION	INTEGER	The distribution of time when the Iub PS data throughput was more than 90% of the licensed capacity.	PMMOResult_RNC_Capacity_Usage.M802C14	Sum, nkrttbh, tot
iub_ps_thr_lic_capacity	INTENSITY	INTEGER	Licensed Iub PS data throughput capacity. The counter value is zero when the capacity licensing is not in use.	PMMOResult_RNC_Capacity_Usage.M802C15	Constant, avg, max, min, nkrttbh, tot
max_rrc_conn_mode_users	INTENSITY	INTEGER	The peak number of RRC connected mode users in the RNC (all states) during the measurement period.	PMMOResult_RNC_Capacity_Usage.M802C18	Constant, avg, max, min, nkrttbh, tot
peak_iu_ps_throughput	INTENSITY	FLOAT	Iu-PS peak throughput	{iu_ps_thr_peak}/1000	Average, avg, max, min, nkrttbh, tot

7.34.85RNC.Nokia.UMTS.rnc_olpc_measurement

OLPC measurements

The performance data measurements for this KPI group are recorded against the combination of RNC and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation

rl_power_no_of_outage_dl_r	ACCUMULATION	INTEGER	The number of dedicated radio link reports received where transmission power is at the maximum value defined by the parameters PtxDLAbsMax and CPICHtoRefRABoffset.	PMMOResult_RCPM_OLPC_RNC.M1025C18	Sum, nkrttbh, tot
rl_power_no_of_samples_dl_r	ACCUMULATION	INTEGER	The number of samples for the dedicated radio link power measurement counter M1025C15.	PMMOResult_RCPM_OLPC_RNC.M1025C17	Sum, nkrttbh, tot
rl_power_sq_sum_dl_r	ACCUMULATION	INTEGER	The sum of the squared radio link power values in DL.	PMMOResult_RCPM_OLPC_RNC.M1025C16	Sum, nkrttbh, tot
rl_power_sum_dl_r	INTENSITY	FLOAT	The average downlink transmission power of the radio links matching the RAB parameters of the measurement object.	PMMOResult_RCPM_OLPC_RNC.M1025C15	Average, avg, max, min, nkrttbh, tot
ul_average_ber_denom_r	ACCUMULATION	INTEGER	The number of BER samples in the Average BER counter.	PMMOResult_RCPM_OLPC_RNC.M1025C9	Sum, nkrttbh, tot
ul_average_ber_r	INTENSITY	FLOAT	The average uplink BER, calculated as a weighted average from UL BER values reported by the OLPC controller that gets the BER estimate from the	PMMOResult_RCPM_OLPC_RNC.M1025C8	Average, avg, max, min, nkrttbh, tot

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			WBTS in the Frame Protocol data frame.		
ul_average_ebno_denom_r	ACCUMULATION	INTEGER	The number of Eb/No samples in the Average UL Eb/No counter.	PMMOResult_RCPM_OLPC_RNC.M1025C1	Sum, nkrttbh, tot
ul_average_ebno_r	INTENSITY	FLOAT	The average uplink Eb/No, calculated as a weighted average from the Eb/No values reported by OLPC.	PMMOResult_RCPM_OLPC_RNC.M1025C0	Average, avg, max, min, nkrttbh, tot
ul_bad_connections_r	ACCUMULATION	INTEGER	The number of bad uplink connections.	PMMOResult_RCPM_OLPC_RNC.M1025C12	Sum, nkrttbh, tot
ul_crc_noks_r	ACCUMULATION	INTEGER	The number of transport blocks received with CRC NOK in the uplink.	PMMOResult_RCPM_OLPC_RNC.M1025C5	Sum, nkrttbh, tot
ul_crc_oks_r	ACCUMULATION	INTEGER	The number of received transport blocks with CRC OK in the uplink.	PMMOResult_RCPM_OLPC_RNC.M1025C4	Sum, nkrttbh, tot
ul_edch_harq_retrans_r	ACCUMULATION	INTEGER	The number of HARQ retransmissions reported by the BTS in E-DCH FP frames.	PMMOResult_RCPM_OLPC_RNC.M1025C19	Sum, nkrttbh, tot
ul_ideal_connections_r	ACCUMULATION	INTEGER	The number of ideal uplink connections.	PMMOResult_RCPM_OLPC_RNC.M1025C13	Sum, nkrttbh, tot
ul_num_bler_reports_r	ACCUMULATION	INTEGER	The number of UL BLER reports received from OLPC.	PMMOResult_RCPM_OLPC_RNC.M1025C7	Sum, nkrttbh, tot
ul_num_ebno_reports_r	ACCUMULATION	INTEGER	The UL Eb/No reports that L3 entity has received from the OLPC	PMMOResult_RCPM_OLPC_RNC.M1025C3	Sum, nkrttbh, tot

			Controller.		
ul_num_of_ber_reports_r	ACCUMULATION	INTEGER	The number of UL BER reports received from OLPC. Updated only when BER is used as a quality estimate for UL OLPC.	PMMOResult_RCPM_OLPC_RNC.M1025C11	Sum, nkrttbh, tot
ul_sum_sq_ber_r	ACCUMULATION	FLOAT	The sum of squared UL BER values calculated by the OLPC controller.	PMMOResult_RCPM_OLPC_RNC.M1025C10	Sum, nkrttbh, tot
ul_sum_sq_bler_r	ACCUMULATION	INTEGER	The sum of squared BLER values, calculated from UL BLER values reported by OLPC.	PMMOResult_RCPM_OLPC_RNC.M1025C6	Sum, nkrttbh, tot
ul_sum_sq_ebno_r	ACCUMULATION	FLOAT	The sum of Squared linear Eb/No values, calculated from the UL Eb/No values reported by OLPC.	PMMOResult_RCPM_OLPC_RNC.M1025C2	Sum, nkrttbh, tot
ul_too_good_connections_r	ACCUMULATION	INTEGER	The number of too good uplink connections.	PMMOResult_RCPM_OLPC_RNC.M1025C14	Sum, nkrttbh, tot

7.34.86RNC.Nokia.UMTS.rnc_rlc_measurement

RLC AM DL measurements

The performance data measurements for this KPI group are recorded against the combination of RNC and Radio_Connection_Type (radio_connection_type_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
rlc_am_dl_buffer	ACCUMULA	INTEG	The number of	PMMOResult_RCPM_	Sum,

_reports_r	TION	ER	RLC AM reports for the RLC AM DL transmission buffer and the PDCP buffer occupancy measurement.	RLC_RNC.M1027C4	nkrttbh, tot
rlc_am_dl_meas_time_r	ACCUMULATION	INTEGER	The total time period when the measurement was active in the RLC AM DL entity. The active time is the time between when the first RLC SDU arrives in the RLC buffer and when all the RLC PDUs of the packet call have been acknowledged.	PMMOResult_RCPM_RLC_RNC.M1027C29	Sum, nkrttbh, tot
rlc_am_pdcp_dl_avg_buf_occ_r	INTENSITY	INTEGER	The average PDCP buffer occupancy in RLC AM DL. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_RNC.M1027C1	Average, avg, max, min, nkrttbh, tot
rlc_am_pdcp_sum_sq_buf_occ_r	ACCUMULATION	INTEGER	The sum of squared PDCP buffer occupancy values in RLC AM DL. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_RNC.M1027C3	Sum, nkrttbh, tot
rlc_am_pdu_dl_avg_buf_occ_r	INTENSITY	INTEGER	The average RLC AM DL PDU transmission buffer occupancy. Includes both first-	PMMOResult_RCPM_RLC_RNC.M1027C0	Average, avg, max, min, nkrttbh, tot

			time transmission and retransmission buffers.		
rlc_am_pdu_dl_avg_trans_r	INTENSITY	FLOAT	The average number of required transmissions per PDU in RLC AM DL. For a perfect connection the value of this counter is one.	PMMOResult_RCPM_RLC_RNC.M1027C18	Average, avg, max, min, nkrttbh, tot
rlc_am_pdu_dl_bad_conn_r	ACCUMULATION	INTEGER	The number of bad connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_RNC.M1027C9	Sum, nkrttbh, tot
rlc_am_pdu_dl_discard_rat_r	ACCUMULATION	FLOAT	The RLC PDU discard ratio for downlink connections using RLC AM.	PMMOResult_RCPM_RLC_RNC.M1027C19	Sum, nkrttbh, tot
rlc_am_pdu_dl_err_ratio_r	INTENSITY	FLOAT	The ratio between unsuccessfully transmitted RLC AM DL PDUs and all transmitted RLC AM DL PDUs (including retransmissions).	PMMOResult_RCPM_RLC_RNC.M1027C5	Average, avg, max, min, nkrttbh, tot
rlc_am_pdu_dl_err_reports_r	ACCUMULATION	INTEGER	The number of RLC AM reports for the RLC AM DL PDU error ratio measurement.	PMMOResult_RCPM_RLC_RNC.M1027C8	Sum, nkrttbh, tot
rlc_am_pdu_dl_for_trans_r	ACCUMULATION	INTEGER	The number of downlink RLC AM PDUs added to the RLC transmission	PMMOResult_RCPM_RLC_RNC.M1027C21	Sum, nkrttbh, tot

			buffer. This includes also PDUs retransmitted due to RLC polling procedure.		
rlc_am_pdu_dl_gr_tp_r	INTENSITY	FLOAT	The average downlink PDU gross throughput of the RLC AM connection. Includes also retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_RNC.M1027C12	Average, avg, max, min, nkrttbh, tot
rlc_am_pdu_dl_gr_tp_sq_sum_r	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU gross throughput values.	PMMOResult_RCPM_RLC_RNC.M1027C13	Sum, nkrttbh, tot
rlc_am_pdu_dl_ideal_conn_r	ACCUMULATION	INTEGER	The number of ideal connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_RNC.M1027C11	Sum, nkrttbh, tot
rlc_am_pdu_dl_net_tp_r	INTENSITY	FLOAT	The average downlink net PDU throughput of RLC AM connections. Does not include retransmissions. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_RNC.M1027C15	Average, avg, max, min, nkrttbh, tot
rlc_am_pdu_dl_net_tp_sq_s_r	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU net throughput values.	PMMOResult_RCPM_RLC_RNC.M1027C16	Sum, nkrttbh, tot
rlc_am_pdu_dl_sq_sum_err_r	ACCUMULATION	FLOAT	The sum of squared RLC AM DL PDU	PMMOResult_RCPM_RLC_RNC.M1027C7	Sum, nkrttbh,

			error ratio values.		tot
rlc_am_pdu_dl_sq_sum_tr_ti_r	ACCUMULATION	INTEGER	The sum of squared transmission time values for the RLC AM downlink.	PMMOResult_RCPM_RLC_RNC.M1027C17	Sum, nkrttbh, tot
rlc_am_pdu_dl_sq_sum_trans_r	ACCUMULATION	FLOAT	The sum of squared average number of transmissions per PDU values in RLC AM DL.	PMMOResult_RCPM_RLC_RNC.M1027C20	Sum, nkrttbh, tot
rlc_am_pdu_dl_sum_sq_buf_o_r	ACCUMULATION	INTEGER	The sum of squared RLC AM DL PDU transmission buffer occupancy values. Does not include periods when the DL transmission buffers in the RLC entity are empty.	PMMOResult_RCPM_RLC_RNC.M1027C2	Sum, nkrttbh, tot
rlc_am_pdu_dl_too_good_con_r	ACCUMULATION	INTEGER	The number of too good connections for RLC AM in downlink direction.	PMMOResult_RCPM_RLC_RNC.M1027C10	Sum, nkrttbh, tot
rlc_am_pdu_dl_total_trans_r	ACCUMULATION	INTEGER	The number of transmitted RLC AM DL PDUs. Includes also retransmitted DL PDUs and control PDUs.	PMMOResult_RCPM_RLC_RNC.M1027C6	Sum, nkrttbh, tot
rlc_am_pdu_dl_tp_reports_r	ACCUMULATION	INTEGER	The number of RLC AM reports for RLC AM DL gross and net throughput values.	PMMOResult_RCPM_RLC_RNC.M1027C14	Sum, nkrttbh, tot
rlc_am_pdu_ul_f	ACCUMULA	INTEG	The number of	PMMOResult_RCPM_	Sum,

or_trans_r	TION	ER	received RLC AM PDUs in uplink.	RLC_RNC.M1027C32	nkrttbh, tot
rlc_am_sdu_dl_avg_tr_delay_r	INTENSITY	INTEGER	The average transfer delay of transferred RLC AM SDUs in downlink.	PMMOResult_RCPM_RLC_RNC.M1027C24	Average, avg, max, min, nkrttbh, tot
rlc_am_sdu_dl_error_ratio_r	INTENSITY	FLOAT	The average SDU error ratio in RLC AM downlink. Defined as the ratio between discarded SDUs and the total number of SDUs received for transmission from the PDCP layer.	PMMOResult_RCPM_RLC_RNC.M1027C22	Average, avg, max, min, nkrttbh, tot
rlc_am_sdu_dl_ps_vol_r	ACCUMULATION	INTEGER	The number of SDU bytes transmitted in downlink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (after PDCP in DL) and includes RLC SDU headers.	PMMOResult_RCPM_RLC_RNC.M1027C31	Sum, nkrttbh, tot
rlc_am_sdu_dl_sdus_for_tra_r	ACCUMULATION	INTEGER	The number of RLC AM SDUs ready for transmission in downlink. Includes also discarded SDUs.	PMMOResult_RCPM_RLC_RNC.M1027C28	Sum, nkrttbh, tot
rlc_am_sdu_dl_sq_sum_err_r_r	ACCUMULATION	FLOAT	The sum of squared SDU error ratio values in RLC AM DL. Measured from the RLC entity.	PMMOResult_RCPM_RLC_RNC.M1027C23	Sum, nkrttbh, tot

rlc_am_sdu_dl_sum_sq_tr_d_r	ACCUMULATION	INTEGER	The sum of squared SDU transmission delay values in RLC AM DL.	PMMOResult_RCPM_RLC_RNC.M1027C27	Sum, nkrttbh, tot
rlc_am_sdu_dl_sum_tr_delay_r	ACCUMULATION	INTEGER	The sum of average SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC_RNC.M1027C25	Sum, nkrttbh, tot
rlc_am_sdu_sum_tr_del_stad_r	ACCUMULATION	INTEGER	The sum of standard deviations of the SDU transfer delay values in RLC AM DL.	PMMOResult_RCPM_RLC_RNC.M1027C26	Sum, nkrttbh, tot
rlc_am_sdu_ul_ps_vol_r	ACCUMULATION	INTEGER	The number of SDU bytes transmitted in uplink using RLC AM. The RLC SDU payload measuring is made for compressed bytes (before PDCP in UL) and includes RLC SDU headers.	PMMOResult_RCPM_RLC_RNC.M1027C30	Sum, nkrttbh, tot
rlc_am_ul_meas_time_r	ACCUMULATION	INTEGER	The total time period when the measurement was active in the RLC AM UL entity. The active time is the time between when the first RLC SDU arrives in the RLC buffer and when all the RLC PDUs of the packet call have been	PMMOResult_RCPM_RLC_RNC.M1027C33	Sum, nkrttbh, tot

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			acknowledged.		

7.34.87RNC.Nokia.UMTS.rnsap.iu_release_request.source

RNC level: RNSAP - DCH radio link IU release request at Source RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_iu_rel_out_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C96	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C94	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C97	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C95	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled	PMMOResult_Relocation_ISHO.M1009C92	Sum, nkrttbh, tot

			SRNS relocations due to a Radio Network Layer cause.		
srns_reloc_iu_rel_out_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing 2CN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C93	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C84	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C82	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C85	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled	PMMOResult_Relocation_ISHO.M1009C83	Sum, nkrttbh, tot

			SRNS relocations due to a Protocol cause.		
srns_reloc_iu_rel_out_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C80	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing MSC controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C81	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C90	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C88	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C91	Sum, nkrttbh, tot
srns_reloc_iu_rel	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

_out_contr_by_sgsn_due_to_prot_cause	TION	ER	release requests during outgoing SGSN controlled SRNS relocations due to a Protocol cause.	on_ISHO.M1009C89	nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C86	Sum, nkrttbh, tot
srns_reloc_iu_rel_out_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during outgoing SGSN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C87	Sum, nkrttbh, tot
sta_forw_data_in_source_rnc_on_iur	ACCUMULATION	INTEGER	Number of started forwarding data cases in Source RNC on IUR. This counter includes both SRNC relocation and Inter RNC HHO cases.	PMMOResult_Relocation_ISHO.M1009C232	Sum, nkrttbh, tot

7.34.88RNC.Nokia.UMTS.rnsap.iu_release_request.target

RNC level: RNSAP - DCH radio link IU release request at Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_iu_rel	ACCUMULA	INTEG	A number of IU	PMMOResult_Relocati	Sum,

_in_contr_by_2cn_due_to_misc_cause	TION	ER	release requests during incoming 2CN controlled SRNS relocations due to a Miscellaneous cause.	on_ISHO.M1009C114	nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C112	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C115	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C113	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C110	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming 2CN controlled SRNS relocations due to a Transport	PMMOResult_Relocation_ISHO.M1009C111	Sum, nkrttbh, tot

			Layer cause.		
srns_reloc_iu_rel_in_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C102	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C100	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C103	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C101	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Radio Network Layer	PMMOResult_Relocation_ISHO.M1009C98	Sum, nkrttbh, tot

			cause.		
srns_reloc_iu_rel_in_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming MSC controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C99	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C108	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C106	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C109	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C107	Sum, nkrttbh, tot
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled	PMMOResult_Relocation_ISHO.M1009C104	Sum, nkrttbh, tot

			SRNS relocations due to a Radio Network Layer cause.		
srns_reloc_iu_rel_in_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of IU release requests during incoming SGSN controlled SRNS relocations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C105	Sum, nkrttbh, tot

7.34.89RNC.Nokia.UMTS.rnsap.relocation.allocation

RNC level: RNSAP - Relocation resource allocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_in_prep_req_contr_by_2cn	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C28	Sum, nkrttbh, tot
srns_reloc_in_prep_req_contr_by_msc	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement	PMMOResult_Relocation_ISHO.M1009C26	Sum, nkrttbh, tot

			report.		
srns_reloc_in_prep_req_contr_by_sgsn	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C27	Sum, nkrttbh, tot
srns_reloc_in_prep_succ_contr_by_2cn	ACCUMULATION	INTEGER	A number of successful incoming 2CN controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C31	Sum, nkrttbh, tot
srns_reloc_in_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	A number of successful incoming MSC controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C29	Sum, nkrttbh, tot
srns_reloc_in_prep_succ_contr_by_sgsn	ACCUMULATION	INTEGER	A number of successful incoming SGSN controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C30	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C48	Sum, nkrttbh, tot
srns_reloc_in_pre	ACCUMULA	INTEG	A number of	PMMOResult_Relocati	Sum,

p_unsucc_contr_by_2cn_due_to_nas_cause	TION	ER	incoming 2CN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	on_ISHO.M1009C46	nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C49	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C47	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C44	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of incoming 2CN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C45	Sum, nkrttbh, tot

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srns_reloc_in_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C36	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C34	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C37	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C35	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C32	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of incoming MSC controlled SRNS relocation	PMMOResult_Relocation_ISHO.M1009C33	Sum, nkrttbh, tot

			preparation failures due to a Transport Layer cause.		
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C42	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C40	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C43	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C41	Sum, nkrttbh, tot
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_rn	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS	PMMOResult_Relocation_ISHO.M1009C38	Sum, nkrttbh, tot

_layer_cause			relocation preparation failures due to a Radio Network Layer cause.		
srns_reloc_in_prep_unsucc_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of incoming SGSN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C39	Sum, nkrttbh, tot

7.34.90RNC.Nokia.UMTS.rnsap.relocation.cancel_cn

RNC level: RNSAP - Relocation to 2CN cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_cancel_contr_by_2cn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C72	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C70	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C73	Sum, nkrttbh, tot
srns_reloc_out_ca	ACCUMULA	INTEG	A number of	PMMOResult_Relocati	Sum,

ncel_contr_by_2cn_due_to_prot_cause	TION	ER	outgoing 2CN controlled SRNS relocation cancellations due to a Protocol cause.	on_ISHO.M1009C71	nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C67	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_Relocation_ISHO.M1009C68	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C66	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_2cn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C69	Sum, nkrttbh, tot

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7.34.91RNC.Nokia.UMTS.rnsap.relocation.cancel_msc

RNC level: RNSAP - Relocation to MSC cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_cancel_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C56	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C54	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C57	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C55	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C51	Sum, nkrttbh, tot
srns_reloc_out_ca	ACCUMULA	INTEG	A number of	PMMOResult_Relocati	Sum,

ncel_contr_by_msc_due_to_reloc_prep_tim_exp	TION	ER	outgoing MSC controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	on_ISHO.M1009C52	nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C50	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_msc_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C53	Sum, nkrttbh, tot

7.34.92RNC.Nokia.UMTS.rnsap.relocation.cancel_sgsn

RNC level: RNSAP - Relocation to SGSN cancelled by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_cancel_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C64	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sg	ACCUMULATION	INTEGER	A number of outgoing SGSN	PMMOResult_Relocation_ISHO.M1009C62	Sum, nkrttbh,

sn_due_to_nas_cause			controlled SRNS relocation cancellations due to a Non Access Stratum cause.		tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C65	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C63	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_reloc_ove_tim_exp	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the relocation overall timer.	PMMOResult_Relocation_ISHO.M1009C59	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_reloc_prep_tim_exp	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to the expiry of the relocation preparation timer.	PMMOResult_Relocation_ISHO.M1009C60	Sum, nkrttbh, tot
srns_reloc_out_cancel_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C58	Sum, nkrttbh, tot

srns_reloc_out_cancel_contr_by_sgsn_due_to_tr_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation cancellations due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C61	Sum, nkrttbh, tot

7.34.93RNC.Nokia.UMTS.rnsap.relocation.misc_target

RNC level: RNSAP - Relocation detected/completed by Target RNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_compl_in_target_rnc_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing relocation complete messages during incoming 2CN controlled SRNS relocation.	PMMOResult_Relocation_ISHO.M1009C79	Sum, nkrttbh, tot
srns_reloc_compl_in_target_rnc_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing relocation complete messages during incoming MSC controlled SRNS relocation.	PMMOResult_Relocation_ISHO.M1009C77	Sum, nkrttbh, tot
srns_reloc_compl_in_target_rnc_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing relocation complete messages during incoming SGSN controlled SRNS relocation.	PMMOResult_Relocation_ISHO.M1009C78	Sum, nkrttbh, tot
srns_reloc_det_in_target_rnc_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing relocation detect	PMMOResult_Relocation_ISHO.M1009C76	Sum, nkrttbh, tot

			messages during incoming 2CN controlled SRNS relocation.		
srns_reloc_det_in_target_rnc_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing relocation detect messages during incoming MSC controlled SRNS relocation.	PMMOResult_Relocation_ISHO.M1009C74	Sum, nkrttbh, tot
srns_reloc_det_in_target_rnc_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing relocation detect messages during incoming SGSN controlled SRNS relocation.	PMMOResult_Relocation_ISHO.M1009C75	Sum, nkrttbh, tot

7.34.94RNC.Nokia.UMTS.rnsap.relocation.preparation

RNC level: RNSAP - Relocation preparation by SRNC statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
srns_reloc_out_prep_req_contr_by_2cn	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C4	Sum, nkrttbh, tot
srns_reloc_out_prep_req_contr_by_msc	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation requests.HC makes a relocation	PMMOResult_Relocation_ISHO.M1009C2	Sum, nkrttbh, tot

			decision based on the UE measurement report.		
srns_reloc_out_prep_req_contr_by_sgsn	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation requests.HC makes a relocation decision based on the UE measurement report.	PMMOResult_Relocation_ISHO.M1009C3	Sum, nkrttbh, tot
srns_reloc_out_prep_succ_contr_by_2cn	ACCUMULATION	INTEGER	A number of successful outgoing 2CN controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C7	Sum, nkrttbh, tot
srns_reloc_out_prep_succ_contr_by_msc	ACCUMULATION	INTEGER	A number of successful outgoing MSC controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C5	Sum, nkrttbh, tot
srns_reloc_out_prep_succ_contr_by_sgsn	ACCUMULATION	INTEGER	A number of successful outgoing SGSN controlled SRNS relocation preparation requests.	PMMOResult_Relocation_ISHO.M1009C6	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_	ACCUMULATION	INTEGER	A number of outgoing 2CN	PMMOResult_Relocation_ISHO.M1009C25	Sum, nkrttbh,

by_2cn_due_non_stan_cause			controlled SRNS relocation preparation failures due to a Non Standard cause.		tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C22	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C23	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C20	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C21	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_2cn_rec_from_sgsn_due_misc_cause	ACCUMULATION	INTEGER	A number of outgoing 2CN controlled SRNS relocation preparation failures from the	PMMOResult_Relocation_ISHO.M1009C24	Sum, nkrttbh, tot

			SGSN due to a Miscellaneous cause.		
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C12	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C10	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C13	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C11	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation	PMMOResult_Relocation_ISHO.M1009C8	Sum, nkrttbh, tot

			preparation failures due to a Radio Network Layer cause.		
srns_reloc_out_prep_unsucc_contr_by_msc_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing MSC controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C9	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_misc_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Miscellaneous cause.	PMMOResult_Relocation_ISHO.M1009C18	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_nas_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Non Access Stratum cause.	PMMOResult_Relocation_ISHO.M1009C16	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_non_stan_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Non Standard cause.	PMMOResult_Relocation_ISHO.M1009C19	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_prot_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Protocol cause.	PMMOResult_Relocation_ISHO.M1009C17	Sum, nkrttbh, tot

srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_rn_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Radio Network Layer cause.	PMMOResult_Relocation_ISHO.M1009C14	Sum, nkrttbh, tot
srns_reloc_out_prep_unsucc_contr_by_sgsn_due_to_tr_layer_cause	ACCUMULATION	INTEGER	A number of outgoing SGSN controlled SRNS relocation preparation failures due to a Transport Layer cause.	PMMOResult_Relocation_ISHO.M1009C15	Sum, nkrttbh, tot

7.34.95RNC.Nokia.UMTS.rnsap.relocation

RNC level: RNSAP - Committed SRNS relocation statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
reloc_commit_in_source_rnc	ACCUMULATION	INTEGER	A number of committed Serving RNS Relocations on source RNC side.	PMMOResult_Relocation_ISHO.M1009C0	Sum, nkrttbh, tot
reloc_commit_in_target_rnc	ACCUMULATION	INTEGER	A number of committed Serving RNS Relocations on target RNC side.	PMMOResult_Relocation_ISHO.M1009C1	Sum, nkrttbh, tot

7.34.96RNC.Nokia.UMTS.sabp_measurements

Service Area Broadcast Protocol (SABP) measurements

KPI	Type	Data Type	Description	Derivation	Aggregation
error_indication_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: ERROR INDICATION messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C12	Sum, nkrttbh, tot
failure_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: FAILURE messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C11	Sum, nkrttbh, tot
load_query_complete_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: LOAD QUERY COMPLETE messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C7	Sum, nkrttbh, tot
load_query_msg_from_cbc	ACCUMULATION	INT8	Number of SABP: LOAD QUERY messages received from CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C6	Sum, nkrttbh, tot
message_status_query_complete_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: MESSAGE STATUS QUERY COMPLETE messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C5	Sum, nkrttbh, tot
message_status_query_msg_from_cbc	ACCUMULATION	INT8	Number of SABP: MESSAGE STATUS QUERY messages received from CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C4	Sum, nkrttbh, tot
nbr_kill_comp_msg_sent_cbc	ACCUMULATION	INT8	Number of SABP: KILL COMPLETE message sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C3	Sum, nkrttbh, tot
nbr_kill_msg_rec_cbc	ACCUMULATION	INT8	Number of SABP: KILL messages received from CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C2	Sum, nkrttbh, tot

reset_complete_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: RESET COMPLETE messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C9	Sum, nkrttbh, tot
reset_msg_from_cbc	ACCUMULATION	INT8	Number of SABP: RESET messages received from CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C8	Sum, nkrttbh, tot
restart_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: RESTART messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C10	Sum, nkrttbh, tot
write_replace_complete_msg_to_cbc	ACCUMULATION	INT8	Number of SABP: WRITE-REPLACE COMPLETE messages sent to CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C1	Sum, nkrttbh, tot
write_replace_msg_from_cbc	ACCUMULATION	INT8	Number of SABP: WRITE-REPLACE messages received from CBC.	PMMOResult_RNC_Service_Area_Broadcast.M1012C0	Sum, nkrttbh, tot

7.34.97RNC.Nokia.UMTS.sccp_single_meters

SCCP messages statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
hop_counter_violations	ACCUMULATION	INTEGER	Hop counter violation, 7.13 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C16	Sum, nkrttbh, tot
msgs_req_gtt_from_local_subsys	ACCUMULATION	INTEGER	Messages requiring GT translation from	PMMOResult_SCCP_Single_Meters.M219B2C7	Sum, nkrttbh, tot

			local subsystem.		
msgs_req_gtt_to_local_subsys	ACCUMULATION	INTEGER	Messages requiring GT translation to local subsystem.	PMMOResult_SCCP_Single_Meters.M219B2C6	Sum, nkrttbh, tot
reass_errors_no_reass_space	ACCUMULATION	INTEGER	Reassembly error, no reassembly space, 7.12 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C12	Sum, nkrttbh, tot
reass_errors_reassembly_failed	ACCUMULATION	INTEGER	Reassembly error, Reassembly failed, 7.21 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C13	Sum, nkrttbh, tot
reass_errors_segm_out_of_seq	ACCUMULATION	INTEGER	Reassembly error, Segment received out of sequence, 7.11 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C11	Sum, nkrttbh, tot
reass_errors_timer_expires	ACCUMULATION	INTEGER	Reassembly error, Timer T(reass) expiry, 7.10 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C10	Sum, nkrttbh, tot
sccp_msgs_from_local_subsystem	ACCUMULATION	INTEGER	Processed SCCP messages from local subsystem.	PMMOResult_SCCP_Single_Meters.M219B2C2	Sum, nkrttbh, tot
sccp_msgs_to_local_subsystem	ACCUMULATION	INTEGER	Processed SCCP messages to local subsystem.	PMMOResult_SCCP_Single_Meters.M219B2C1	Sum, nkrttbh, tot
sccp_stp_messages_handled	ACCUMULATION	INTEGER	Processed STP messages to local subsystem.	PMMOResult_SCCP_Single_Meters.M219B2C3	Sum, nkrttbh, tot
sccp_stp_msgs_requiring_gtt	ACCUMULATION	INTEGER	STP messages requiring GT translation.	PMMOResult_SCCP_Single_Meters.M219B2C8	Sum, nkrttbh, tot
segm_errors_segm_not_supported	ACCUMULATION	INTEGER	Segmentation error - Segmenting not supported, 7.19 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C14	Sum, nkrttbh, tot

segm_errors_segmentation_fail	ACCUMULATION	INTEGER	Segmentation error - Segmentation failed, 7.20 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C15	Sum, nkrttbh, tot
total_messages_requiring_gtt	ACCUMULATION	INTEGER	Messages requiring GT translation, total. 9.5 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C9	Sum, nkrttbh, tot
total_sccp_messages_handled	ACCUMULATION	INTEGER	Processed SCCP messages, total. 9.3 in ITU-T Q.752.	PMMOResult_SCCP_Single_Meters.M219B2C5	Sum, nkrttbh, tot
user_independent_messages	ACCUMULATION	INTEGER	Processed user independent SCCP messages.	PMMOResult_SCCP_Single_Meters.M219B2C4	Sum, nkrttbh, tot

7.34.98RNC.Nokia.UMTS.soft_handover.nrt

RNC NRT soft handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cell_addition_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell addition failures on SHO for NRT traffic. When the mobile station sends an event triggered (event 1A) periodic measurement report to the RNC in order to add a cell into the active set. The event 1A triggered periodic	PMMOResult_Soft_Handover_RNC.M1007C30	Sum, nkrttbh, tot

			reporting is controlled with parameters Addition Window and Addition Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the cell that is the object of the addition failure/request.		
cell_addition_request_on_sho_for_nrt_traffic	ACCUMULATION	INTEGER	A number of cell addition requests on SHO for NRT traffic. When a mobile station sends a measurement report (event1A) to the RNC in order to add a cell to the active set. The addition window of cells in event 1A is controlled with radio network planning . Parameters Addition Window and Addition Time. Only the SRNC can update the counter. The	PMMOResult_Soft_Handover_RNC.M1007C27	Sum, nkrttbh, tot

			counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. The counter is not updated in the cell that is the object of the addition request.		
cell_deletion_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	This counter is updated, when UE sends a periodic measurement report triggered by event 1B to the RNC in order to remove a cell from the active set. That situation can appear, for example, when the RNC is prevented from deleting the old branch to the active set before the new branch is synchronised. Event 1B triggered periodic reporting is controlled with the Drop Window and Drop Reporting Interval parameters. Only the serving RNC (SRNC) can update the counter.	PMMOResult_Soft_Handover_RNC.M1007C37	Sum, nkrttbh, tot

			The counter is updated in every cell that is in the active set on the SRNC side when the RNC receives the measurement report.		
cell_deletion_request_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell deletion requests on SHO for NRT traffic. When a mobile station sends the measurement report (event1B) to the RNC in order to remove a cell from the active set. The drop window of cells in event 1B is controlled with parameters Drop Window and Drop Time. Only the SRNC can update the counter. The counter is updated in every cell (including the removed cell itself) that is in the active set on SRNC side when the RNC receives the measurement report.	PMMOResult_Soft_Handover_RNC.M1007C28	Sum, nkrttbh, tot
cell_replacement_failure_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell replacement failures on SHO for NRT traffic. When the mobile station sends an event triggered (event 1C)	PMMOResult_Soft_Handover_RNC.M1007C31	Sum, nkrttbh, tot

			periodic measurement report to the RNC in order to replace a cell in the active set with a non active cell. The event 1C triggered periodic reporting is controlled with parameters Replacement Window and Replacement Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
cell_replacement_request_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of cell replacement requests on SHO for NRT traffic. When a mobile station sends the measurement report (event1C) to	PMMOResult_Soft_Handover_RNC.M1007C29	Sum, nkrttbh, tot

			the RNC in order to replace a cell in the active set with a non active cell. The event 1C is controlled with parameters Replacement Window and Replacement Time. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
five_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to the active set, the size of which is five. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RN	PMMOResult_Soft_Handover_RNC.M1007C23	Sum, nkrttbh, tot
four_cells_in_the_active_set_for_nrt	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period	PMMOResult_Soft_Handover_RNC.M1007C	Sum, nkrttbh,

_srnc			of time when the cell belongs to the active set, the size of which is four. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RN	22	tot
high_ue_rx_tx_time_difference_for_nrt	ACCUMULATION	INT8	A number of successful active set updates on SHO for NRT traffic. When the RNC sends an ACTIVE SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set and the mobile station acknowledges the messages by sending the ACTIVE SET UPDATE COMPLETE message. Only the serving RNC (SRNC) can update the counter.In case of cell	PMMOResult_Soft_Handover_RNC.M1007C34	Sum, nkrttbh, tot

			addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
inter_rnc_soft_ho_duration_on_the_srnc_side_for_nrt_traffic	INTENSITY	INTEGER	Time period during which the cell participates in inter RNC soft handover on serving RNC (SRNC) side for NRT traffic.Only the SRNC may update this counter. The unit value is 100 ms.	PMMOResult_Soft_Handover_RNC.M1007C26	Average, avg, max, min, nkrttbh, tot
low_ue_rx_tx_time_difference_for_nrt	ACCUMULATION	INT8	A number of unsuccessful active setup dates on SHO for NRT traffic.When the mobile station acknowledges an active SET	PMMOResult_Soft_Handover_RNC.M1007C35	Sum, nkrttbh, tot

			UPDATE message with an ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC)can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the active SET UPDATE message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
one_cell_in_edch_	ACCUMULA	INTEG	The sum of the	PMMOResult_Soft_Ha	Sum,

active_set_duration	TION	ER	time periods during which this cell has belonged to the E-DCH active set, whose size has been one.	ndover_RNC.M1007C63	nkrttbh, tot
one_cell_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the active set, the size of which is one. Only the serving RNC can update the counter. The unit value is 100 ms.	PMMOResult_Soft_Handover_RNC.M1007C19	Sum, nkrttbh, tot
six_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to the active set, the size of which is six. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RNC	PMMOResult_Soft_Handover_RNC.M1007C24	Sum, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_nrt_traffic	ACCUMULATION	INTEGER	Time period during which the cell participates in softer handover on serving RNC (SRNC) side for NRT traffic.Only the SRNC may update the counter. The unit value is 100 ms.	PMMOResult_Soft_Handover_RNC.M1007C25	Sum, nkrttbh, tot
successful_active_	ACCUMULA	INT8	A number of	PMMOResult_Soft_Ha	Sum,

set_updates_on_sho_for_nrt_traffic	TION		successful active set updates on SHO for NRT traffic. When the RNC sends an ACTIVE SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set and the mobile station acknowledges the messages by sending the ACTIVE SET UPDATE COMPLETE message. Only the serving RNC (SRNC) can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is	ndover_RNC.M1007C32	nkrttbh, tot

			updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
three_cells_in_edch_active_set_duration	ACCUMULATION	INTEGER	The sum of the time periods during which this cell has belonged to the E-DCH active set, whose size has been three.	PMMOResult_Soft_Handover_RNC.M1007C65	Sum, nkrttbh, tot
three_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the active set, the size of which is three. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell that is in the active set on serving RNC side for NRT.	PMMOResult_Soft_Handover_RNC.M1007C21	Sum, nkrttbh, tot
two_cells_in_edch_active_set_duration	ACCUMULATION	INTEGER	The sum of the time periods during which this cell has belonged to the E-DCH active set, whose size has been two.	PMMOResult_Soft_Handover_RNC.M1007C64	Sum, nkrttbh, tot
two_cells_in_the_active_set_for_nrt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to the	PMMOResult_Soft_Handover_RNC.M1007C20	Sum, nkrttbh, tot

			active set, the size of which is two. Only the serving RNC can update the counter. The unit value is 100 ms.		
unsuccessful_active_set_updates_on_sho_for_nrt_traffic	ACCUMULATION	INT8	A number of unsuccessful active setup dates on SHO for NRT traffic.When the mobile station acknowledges an active SET UPDATE message with an ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC)can update the counter.In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the active SET UPDATE message. The counter is not updated in the cell that triggers the	PMMOResult_Soft_Handover_RNC.M1007C33	Sum, nkrttbh, tot

			addition/replacement request. In case of cell deletion, the counter is updated in every cell(including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		

7.34.99RNC.Nokia.UMTS.soft_handover.rt

RNC RT soft handover related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_active_set_update_success_ratio	PERCENTAGE	FLOAT	Percentage of successful active set updates on soft handover for real time and non real time traffic	100 * ({successful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.successful_active_set_updates_on_sho_for_nrt_traffic})/ ({unsuccessful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.unsuccessful_active_set_updates_on_sho_for_nrt_traffic} + {successful_active_set_updates_on_sho_for_rt_traffic} + {Nokia.soft_handover.nrt.successful_active_set_updates_on_sho_for_nrt_traffic})	Average, avg, nkrttbh
cell_addition_fail	ACCUMULA	INT8	A number of cell	PMMOResult_Soft_Han	Sum,

ure_on_sho_for_rt_traffic	TION		addition failures on SHO for RT traffic. When a mobile station sends an event triggered (event 1A) periodic measurement report to the RNC in order to add a cell into the active set. The event 1A triggered periodic reporting is controlled with parameters Addition Window and Addition Reporting Interval. Only the serving RNC (SRNC) can update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the cell that is the object of the addition failure/request.	dover_RNC.M1007C13	nkrttbh, tot
cell_addition_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell addition requests on SHO for RT	PMMOResult_Soft_Handover_RNC.M1007C10	Sum, nkrttbh, tot

			traffic. When the mobile station sends a measurement report (event 1A) to the RNC in order to add a cell to the active set. The addition window of cells in event 1A is controlled with radio network planning parameters Addition Window and Addition Time. Only the SRNC can update the counter. The counter is updated in every cell including in the active set on SRNC side when the RNC receives the measurement report. The counter is not updated in the cell that is the object of the addition request.		
cell_deletion_failure_on_sho_for_rt_traffic	ACCUMULATION	INT8	This counter is updated, when UE sends a periodic measurement report triggered by event 1B to the RNC in order to remove a cell from the active set. That situation can appear, for example, when	PMMOResult_Soft_Handover_RNC.M1007C36	Sum, nkrttbh, tot

			the RNC is prevented to delete the old branch to the active set before the new branch is synchronised. Event 1B triggered periodic reporting is controlled with the Drop Window and Drop Reporting Interval parameters. Only the serving RNC (SRNC) can update the counter. The counter is updated in every cell that is in the active set on the SRNC side when the RNC receives the measurement report.		
cell_deletion_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell deletion requests on SHO for RT traffic. When the mobile station sends a measurement report (event 1B)to the RNC in order to remove a cell from the active set. The drop window of	PMMOResult_Soft_Handover_RNC.M1007C11	Sum, nkrttbh, tot

			cells in event 1B is controlled with parameters Drop Window and Drop Time. Only the SRNC can update the counter. The counter is updated in every cell (including the removed cell itself) that is, in the active set on SRNC side when the RNC receives the measurement report.		
cell_replacement_failure_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell replacement failures on SHO for RT traffic. When a mobile station sends an event triggered (event 1C) periodic measurement report to the RNC in order to replace a cell in the active set with a non active cell. The event 1C triggered periodic reporting is controlled with parameters Replacement Window and Replacement Reporting Interval. Only the serving RNC (SRNC) can	PMMOResult_Soft_Handover_RNC.M1007C14	Sum, nkrttbh, tot

			update the counter. This counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
cell_replacement_request_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of cell replacement requests on SHO for RT traffic. When a mobile station sends a measurement report (event 1C) to the RNC in order to replace a cell in the active set with a non active cell. The event 1C is controlled with parameters Replacement Window and Replacement Time. Only the serving RNC (SRNC) can update the counter. This	PMMOResult_Soft_Handover_RNC.M1007C12	Sum, nkrttbh, tot

			counter is updated in every cell that is in the active set on SRNC side when the RNC receives the measurement report. This counter is not updated in the non active cell that triggers the replacement request.		
five_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to an active set, the size of which is five. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving R	PMMOResult_Soft_Handover_RNC.M1007C4	Sum, nkrttbh, tot
four_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to an active set, the size of which is four. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on	PMMOResult_Soft_Handover_RNC.M1007C3	Sum, nkrttbh, tot

			serving R		
high_ue_rx_tx_time_difference_for_rt	ACCUMULATION	INT8	High UE Rx Tx time difference for RT When a UE sends the measurement report (event 6F) to the RNC in order to indicate that the UE Rx Tx time difference for a radio link has become larger than an absolute threshold. The absolute threshold for the event is controlled with a parameter Upper Rx Tx TD Threshold. Only the serving RNC (SRNC) can update the counter. This counter is updated only in the active set cell that triggers the reporting event 6F.	PMMOResult_Soft_Handover_RNC.M1007C17	Sum, nkrttbh, tot
inter_rnc_soft_ho_duration_on_the_drnc_side_for_rt_nrt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in inter RNC soft handover on drifting RNC (DRNC) side for RT/NRT traffic or the cell is	PMMOResult_Soft_Handover_RNC.M1007C9	Sum, nkrttbh, tot

			controlled by other RNC than SRNC. NOTE, The DRNC cannot separate RT and NRT traffic. Therefore, soft/softer HO durations are calculated together in the DRNC. Only the DRNC can update this counter. The unit value is100ms.		
inter_rnc_soft_ho_duration_on_the_srnc_side_for_rt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in inter RNC soft handover on serving RNC (SRNC) side for RT traffic. Only the SRNC may update this counter. The unit value is 100ms.	PMMOResult_Soft_Handover_RNC.M1007C8	Sum, nkrttbh, tot
low_ue_rx_tx_time_difference_for_rt	ACCUMULATION	INT8	Low UE Rx Tx time difference for RT. When the UE sends the measurement report (event 6G) to the RNC in order to indicate that the UE Rx Tx time difference for a radio link has become less than an absolute threshold. The absolute threshold for the event 6G is controlled with	PMMOResult_Soft_Handover_RNC.M1007C18	Sum, nkrttbh, tot

			the parameter Lower Rx Tx TD Threshold. Only the serving RNC (SRNC) can update the counter. This counter is updated only in the active set cell that triggers the reporting event 6G.		
one_cell_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is one. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.	PMMOResult_Soft_Handover_RNC.M1007C0	Sum, nkrttbh, tot
six_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	- Obsolete in RN2.2 - A period of time when the cell belongs to an active set, the size of which is six. Only the serving RNC can update the counter. The unit value is 100 ms. This counter	PMMOResult_Soft_Handover_RNC.M1007C5	Sum, nkrttbh, tot

			is updated in every cell including in the active set on serving RN		
softer_handover_duration_on_the_drnc_side_for_rt_nrt_traffic	ACCUMULATION	INT8	Sum of time periods during which the cell participates in softer handover on DRNC side for RT/NRT traffic.	PMMOResult_Soft_Handover_RNC.M1007C7	Sum, nkrttbh, tot
softer_handover_duration_on_the_srnc_side_for_rt_traffic	ACCUMULATION	INTEGER	A period of time during which the cell participates in softer handover on serving RNC (SRNC) side for RT traffic. Only the SRNC may update the counter. The unit value is 100ms.	PMMOResult_Soft_Handover_RNC.M1007C6	Sum, nkrttbh, tot
successful_active_set_updates_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of successful active set updates on SHO for RT traffic. When the RNC sends an active SET UPDATE message to the mobile station in order to add, replace or delete a radio link (or links) from the active set, and the mobile station acknowledges the messages by sending an active SET UPDATE COMPLETE	PMMOResult_Soft_Handover_RNC.M1007C15	Sum, nkrttbh, tot

			message. Only the serving RNC (SRNC) can update the counter. In case of cell addition/replacement, the counter is updated in every cell that is in the active set on SRNC side when the RNC sends the message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell (including the removed cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		
three_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is three. Only the serving RNC can update the counter. The	PMMOResult_Soft_Handover_RNC.M1007C2	Sum, nkrttbh, tot

			unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.		
two_cells_in_the_active_set_for_rt_srnc	ACCUMULATION	INTEGER	A period of time when the cell belongs to an active set, the size of which is two. Only the serving RNC can update the counter. The unit value is 100 ms. This counter is updated in every cell including in the active set on serving RNC side for RT.	PMMOResult_Soft_Handover_RNC.M1007C1	Sum, nkrttbh, tot
unsuccessful_active_set_updates_on_sho_for_rt_traffic	ACCUMULATION	INT8	A number of unsuccessful active set updates on SHO for RT traffic. When the mobile station acknowledges the message with the ACTIVE SET UPDATE FAILURE message or the timer expires in the serving RNC. Only the serving RNC (SRNC) can update the counter. In case of cell addition/ replacement, the counter is updated	PMMOResult_Soft_Handover_RNC.M1007C16	Sum, nkrttbh, tot

			in every cell that is in the active set on the SRNC side when the RNC sends the ACTIVE SET UPDATE message. The counter is not updated in the cell that triggers the addition/replacement request. In case of cell deletion, the counter is updated in every cell (including there moved cell itself) that is in the active set on SRNC side when the RNC sends the ACTIVE SET UPDATE message.		

7.34.100RNC.Nokia.UMTS.user_throughput

SDU and RLC PDU throughtput statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
user_dl_thrp_dist_class_1_r	ACCUMULATION	INTEGER	The number of connections with 0...4 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C34	Sum, nkrttbh, tot

user_dl_thrp_dist_class_10_r	ACCUMULATION	INTEGER	The number of connections with 1 Mbit/s...2 Mbit/s downlink gross RLC PDU throughput.	PMMOResult_RCPM_RLC_RNC.M1027C43	Sum, nkrttbh, tot
user_dl_thrp_dist_class_11_r	ACCUMULATION	INTEGER	The number of connections with the 2 Mbit/s...4 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C50	Sum, nkrttbh, tot
user_dl_thrp_dist_class_12_r	ACCUMULATION	INTEGER	The number of connections with the 4 Mbit/s...8 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C51	Sum, nkrttbh, tot
user_dl_thrp_dist_class_13_r	ACCUMULATION	INTEGER	The number of connections with larger than the 8 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C52	Sum, nkrttbh, tot
user_dl_thrp_dist_class_2_r	ACCUMULATION	INTEGER	The number of connections with 4...8 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C35	Sum, nkrttbh, tot
user_dl_thrp_dist_class_3_r	ACCUMULATION	INTEGER	The number of connections with 8...16 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C36	Sum, nkrttbh, tot
user_dl_thrp_dist_class_4_r	ACCUMULATION	INTEGER	The number of connections with 16...32 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C37	Sum, nkrttbh, tot

user_dl_thrp_dist_class_5_r	ACCUMULATION	INTEGER	The number of connections with 32...64 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C38	Sum, nkrttbh, tot
user_dl_thrp_dist_class_6_r	ACCUMULATION	INTEGER	The number of connections with 64...128 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C39	Sum, nkrttbh, tot
user_dl_thrp_dist_class_7_r	ACCUMULATION	INTEGER	The number of connections with 128...256 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C40	Sum, nkrttbh, tot
user_dl_thrp_dist_class_8_r	ACCUMULATION	INTEGER	The number of connections with 256...512 kbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C41	Sum, nkrttbh, tot
user_dl_thrp_dist_class_9_r	ACCUMULATION	INTEGER	The number of connections with 512 kbit/s...1 Mbit/s downlink RLC PDU gross throughput.	PMMOResult_RCPM_RLC_RNC.M1027C42	Sum, nkrttbh, tot
user_ul_thrp_dist_class_1_r	ACCUMULATION	INTEGER	The number of connections with the 0 kbit/s...250 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_RNC.M1027C53	Sum, nkrttbh, tot
user_ul_thrp_dist_class_2_r	ACCUMULATION	INTEGER	The number of connections with	PMMOResult_RCPM_RLC_RNC.M1027C54	Sum, nkrttbh,

			the 250 kbit/s...500 kbit/s uplink SDU throughput.		tot
user_ul_thrp_dist_class_3_r	ACCUMULATION	INTEGER	The number of connections with the 500 kbit/s...1 Mbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_RNC.M1027C55	Sum, nkrttbh, tot
user_ul_thrp_dist_class_4_r	ACCUMULATION	INTEGER	The number of connections with the 1000 kbit/s...1500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_RNC.M1027C56	Sum, nkrttbh, tot
user_ul_thrp_dist_class_5_r	ACCUMULATION	INTEGER	The number of connections with larger than the 1500 kbit/s uplink SDU throughput.	PMMOResult_RCPM_RLC_RNC.M1027C57	Sum, nkrttbh, tot

7.35 SCCP Performance Indicators

This section shows the key performance indicators and other counters for the SCCP object, divided into the following sub-sections:

- SCCP.Nokia.UMTS.sccp_local_subsystem_availability

7.35.1 SCCP.Nokia.UMTS.sccp_local_subsystem_availability

SCCP local subsystem availability statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dura_of_local_sccp_unavailable	ACCUMULATION	INTEGER	Duration of the unavailability of a local SCCP, 8.5 in ITU-T Q.752.	PMMOResult_SCCP_Local_Subsystem_Availability.M218B2C5	Sum, nkrttbh, tot
start_loc_sccp_unav_failure	ACCUMULATION	INTEGER	Start of unavailability of a local SCCP due to failure, 8.1 in ITU-T Q.752.	PMMOResult_SCCP_Local_Subsystem_Availability.M218B2C1	Sum, nkrttbh, tot

start_loc_sccp_unav_maint_busy	ACCUMULATION	INTEGER	Start of unavailability of a local SCCP due to maintenance busy, 8.2 in ITU-T Q.752.	PMMOResult_SCCP_Local_Subsystem_Availability.M218B2C2	Sum, nkrttbh, tot
start_loc_sccp_unav_maint_cong	ACCUMULATION	INTEGER	Start of unavailability of a local SCCP due to congestion, 8.3 in ITU-T Q.752.	PMMOResult_SCCP_Local_Subsystem_Availability.M218B2C3	Sum, nkrttbh, tot
stop_of_local_sccp_unavailable	ACCUMULATION	INTEGER	Stop of unavailability of a local SCCP, 8.4 in ITU-T Q.752.	PMMOResult_SCCP_Local_Subsystem_Availability.M218B2C4	Sum, nkrttbh, tot

7.36 SCCP_Subsystem Performance Indicators

This section shows the key performance indicators and other counters for the SCCP_Subsystem object, divided into the following sub-sections:

- SCCP_Subsystem.Nokia.UMTS.sccp_subsystem

7.36.1 SCCP_Subsystem.Nokia.UMTS.sccp_subsystem

SCCP subsystem performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dt_1_messages_receiv_from_mtp	ACCUMULATION	INTEGER	DT1 messages received from MTP per sink SSN, 9.9 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C15	Sum, nkrttbh, tot
dt_1_messages_sent_to_mtp	ACCUMULATION	INTEGER	DT1 messages sent to MTP per source SSN, 9.10 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C16	Sum, nkrttbh, tot

dt_2_messages_receiv_from_mtp	ACCUMULATION	INTEGER	DT2 messages received from MTP per sink SSN, 9.11 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C17	Sum, nkrttbh, tot
dt_2_messages_sent_to_mtp	ACCUMULATION	INTEGER	DT2 messages sent to MTP per source SSN, 9.12 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C18	Sum, nkrttbh, tot
ed_messages_received_from_mtp	ACCUMULATION	INTEGER	ED messages received from MTP per sink SSN, 9.14 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C19	Sum, nkrttbh, tot
ed_messages_sent_to_mtp	ACCUMULATION	INTEGER	ED messages sent to MTP per source SSN, 9.13 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C20	Sum, nkrttbh, tot
local_ss_prohibited_start	ACCUMULATION	INTEGER	Start of local subsystem prohibited, 8.9 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C21	Sum, nkrttbh, tot
local_ss_prohibited_stop	ACCUMULATION	INTEGER	Stop of local subsystem prohibited, 8.10 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C22	Sum, nkrttbh, tot
msgs_too_big_for_segmentation	ACCUMULATION	INTEGER	Messages too large for segmentation, 7.14 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C23	Sum, nkrttbh, tot
ss_oos_request_denied_local	ACCUMULATION	INTEGER	Rejection of a coordinated state modification request by a local subsystem, 8.6 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C3	Sum, nkrttbh, tot
ss_oos_request_denied_remote	ACCUMULATION	INTEGER	Rejection of a coordinated state modification request by a	PMMOResult_SCCP_Subsystem.M217B2C4	Sum, nkrttbh, tot

			remote subsystem, 8.7 in ITU-T Q.752.		
ss_oos_request_granted_local	ACCUMULATION	INTEGER	Acceptance of a coordinated state modification request by a local subsystem, 8.6 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C1	Sum, nkrttbh, tot
ss_oos_request_granted_remote	ACCUMULATION	INTEGER	Acceptance of a coordinated state modification request by a remote subsystem, 8.7 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C2	Sum, nkrttbh, tot
total_messages_for_local_ss	ACCUMULATION	INTEGER	All messages related to a local subsystem, 9.4 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C9	Sum, nkrttbh, tot
total_messages_rxed_class_0	ACCUMULATION	INTEGER	All messages received in protocol class 0, 9.7 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C13	Sum, nkrttbh, tot
total_messages_rxed_class_1	ACCUMULATION	INTEGER	All messages received in protocol class 1.	PMMOResult_SCCP_Subsystem.M217B2C14	Sum, nkrttbh, tot
total_messages_sent_class_0	ACCUMULATION	INTEGER	All transmitted messages in protocol class 0, 9.6 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C11	Sum, nkrttbh, tot
total_messages_sent_class_1	ACCUMULATION	INTEGER	All transmitted messages in protocol class 1.	PMMOResult_SCCP_Subsystem.M217B2C12	Sum, nkrttbh, tot

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total_msgs_from_loc_ss_no_gt	ACCUMULATION	INTEGER	Messages from local subsystem that do not require GT translation, , 9.4 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C7	Sum, nkrttbh, tot
total_msgs_from_loc_ss_with_gt	ACCUMULATION	INTEGER	Messages from local subsystem that require GT translation, 9.4 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C8	Sum, nkrttbh, tot
total_msgs_sent_to_backup_ss	ACCUMULATION	INTEGER	All messages transmitted to the redundant subsystem, 9.8 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C10	Sum, nkrttbh, tot
total_msgs_to_loc_ss_no_gt	ACCUMULATION	INTEGER	Messages addressed to a local subsystem that do not require GT translation, 9.4 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C5	Sum, nkrttbh, tot
total_msgs_to_loc_ss_with_gt	ACCUMULATION	INTEGER	Messages addressed to a local subsystem that require GT translation, , 9.4 in ITU-T Q.752.	PMMOResult_SCCP_Subsystem.M217B2C6	Sum, nkrttbh, tot

7.37 SDH_Exchange_Terminal Performance Indicators

This section shows the key performance indicators and other counters for the SDH_Exchange_Terminal object, divided into the following sub-sections:

- SDH_Exchange_Terminal.Nokia.UMTS.interface_measurement_stm0
- SDH_Exchange_Terminal.Nokia.UMTS.protection_group

7.37.1 SDH_Exchange_Terminal.Nokia.UMTS.interface_measurement_stm0

-Obsolete in RN2.1- STM0 related statistics

KPI	Type	Data	Description	Derivation	Aggregati

		Type			on
fe_mux_bbe_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section background block errors at the Far End. An errored block is a block in which one or more bits were in error. B2 byte in section overhead header (SOH) is used for the multiplex section error monitoring using Bit Interleaved Parity 8 (BIP 8) code using even parity. The BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B2 of the current frame before scrambling.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C13	Sum
fe_mux_es_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the	PMMOResult_UNIT_INDEX_STM_0_IF.M515C14	Sum

			counters are obtained by the relevant managed objects.		
fe_mux_ses_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section severely errored second at the Far End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C15	Sum
fe_mux_uas_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section unavailable seconds at the Far End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start	PMMOResult_UNIT_INDEX_STM_0_IF.M515C12	Sum

			of ten consecutive non SES events. These ten seconds are considered to be part of available time.		
fe_path_es_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section errored second at the Far End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C18	Sum
fe_path_ses_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section severely errored second at the Far End. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At	PMMOResult_UNIT_INDEX_STM_0_IF.M515C19	Sum

			the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.		
fe_path1_bbe_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section background block errors at the Far End. An errored block is a block in which one or more bits were in error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8 (BIP 8) code in an even parity. The BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B3 of the current frame before scrambling.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C17	Sum
fe_path1_uas_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section unavailable seconds at the Far End. A period of unavailable time begins at the start of ten consecutive severely errored	PMMOResult_UNIT_INDEX_STM_0_IF.M515C16	Sum

			second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.		
ne_mux_bbe_stm 0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section background block errors at the Near End. An errored block is a block in which one or more bits were in error. B2 byte in section overhead header (SOH) is used for the multiplex section error monitoring using Bit Interleaved Parity 8 (BIP 8) code in an even parity. The BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B2 of the current frame before	PMMOResult_UNIT_INDEX_STM_0_IF.M515C5	Sum

			scrambling.		
ne_mux_es_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section errored second at the Near End. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects. The object is multiplex section (B2) errors.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C6	Sum
ne_mux_ses_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Multiplex section severely errored second at the Near End. The number of one second periods that contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C7	Sum
ne_mux_uas_stm0	ACCUMULA	INT8	-Obsolete in	PMMOResult_UNIT_I	Sum

	TION		RN2.1- Multiplex section unavailable seconds at the Near End. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.	NDEX_STM_0_IF.M5 15C4	
ne_path1_bbe_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section background block errors. An errored block is a block in which one or more bits were in error. B3 byte in section overhead header (SOH) is used for the path termination section error monitoring using Bit Interleaved Parity 8(BIP 8) code in an even parity. The	PMMOResult_UNIT_INDEX_STM_0_IF.M5 15C9	Sum

			BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B3 of the current frame before scrambling.		
ne_path1_es_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section errored second. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C10	Sum
ne_path1_ses_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section severely errored second. The number of one second periods which contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. At the end of each one second interval the contents of the	PMMOResult_UNIT_INDEX_STM_0_IF.M515C11	Sum

			counters may be obtained by the relevant managed objects.		
ne_path1_uas_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Path termination section unavailable seconds. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C8	Sum
reg_bbe_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Regenerator section background block errors. An errored block is a block in which one or more bits were in error. B1 byte in section overhead header (SOH) is used for the regeneration	PMMOResult_UNIT_INDEX_STM_0_IF.M515C1	Sum

			section error monitoring using Bit Interleaved Parity 8 (BIP 8) code in an even parity. The BIP 8 is computed over all bits or previous STM frame after scrambling and is placed in byte B1 of the current frame before scrambling.		
reg_es_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Regenerator section errored second. The number of seconds with one or more errored blocks or at least one defect. At the end of each one second interval the contents of the counters are obtained by the relevant managed objects. The objects are regeneration section (B1) errors and regenerator section out of frame (OOF) events. In this case the block means STM 0 frame.	PMMOResult_UNIT_INDEX_STM_0_IF.M515C2	Sum
reg_ses_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Regenerator section severely errored second. The number of one	PMMOResult_UNIT_INDEX_STM_0_IF.M515C3	Sum

			second periods that contain greater than or equal to threshold errored blocks or at least one defect. The threshold can be handled by Exchange terminal configuration handling MML. The default value of the threshold is 30 %. At the end of each one second interval the contents of the counters may be obtained by the relevant managed objects. The objects are regeneration section (B1) errors and regenerator section out of frame (OOF) events.		
reg_uas_stm0	ACCUMULATION	INT8	-Obsolete in RN2.1- Regenerator section unavailable. A period of unavailable time begins at the start of ten consecutive severely errored second (SES) events. These ten	PMMOResult_UNIT_INDEX_STM_0_IF.M515C0	Sum

			seconds are considered to be part of unavailable time. A new period of available time begins at the start of ten consecutive non SES events. These ten seconds are considered to be part of available time.		

7.37.2 SDH_Exchange_Terminal.Nokia.UMTS.protection_group

STM1 Protection Group related statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
_%_prot_gr_psd	PERCENTAGE	FLOAT	Percentage of time the traffic on protection switch mode.	100 * {prot_gr_psd}/ {measurement_seconds}	Average, avg
prot_gr_psc	ACCUMULATION	INT8	Protection Switch Count of Protection Group. This counter contains the number of switches to the protection section and switches to the working section.	PMMOResult_Sonet_SDH.M516C0	Sum
prot_gr_psd	ACCUMULATION	INT8	Protection Switch Duration of Protection Group. The value of this counter is the number of seconds the traffic is in protection section.	PMMOResult_Sonet_SDH.M516C1	Sum

7.38 Signalling_Link Performance Indicators

This section shows the key performance indicators and other counters for the Signalling_Link object, divided into the following sub-sections:

7.38.1 Signalling_Link.Nokia.UMTS.aal2_signalling

-Obsolete in RAS6.0, group moved to ATM VCC object-AAL2 related signalling statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
aal_para	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-AAL parameters can not be supported (No.93).This parameter provides the number of connections terminated to CauseNo. 93. This cause is used to indicate that the requested AAL parameters	PMMOResult_AAL2_At_UNI.M548C6	Sum, nksltmbh
aal2pi_verif	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The AAL type 2 ID verification/allocation failure.The requested AAL type	PMMOResult_AAL2_At_UNI.M548C20	Sum, nksltmbh

			2 Path Identifier was not available in the destination AAL type 2 node. Internal (non protocol) error.		
adj_node_not_avail	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Adjacent node not available. The connection establishment is rejected since the signalling relation into the adjacent AAL type 2 node was not available. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI.M548C23	Sum, nksltmbh
binding_id_verif	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Binding ID verification failure.The requested Binding Identifier was not available at the destination AALtype 2 node. Internal (nonprotocol) error.	PMMOResult_AAL2_At_UNI.M548C21	Sum, nksltmbh
cid_verif	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The CID verification/allocation failure.The requested AAL type 2 channel (CID)	PMMOResult_AAL2_At_UNI.M548C19	Sum, nksltmbh

			was not available in the destination AAL type 2 node. Internal (non protocol) error.		
common	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Successful connection establishments.The amount of started connection events in the AAL2 signalling. The successful cases refer to attempts stated in the program block operation state and stage which can still fail at a later stage.	PMMOResult_AAL2_At_UNI.M548C24	Sum, nksltmbh
congestion	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Switching equipment congestion (No.42).This parameter provides the number of connections terminated to CauseNo. 42. The cause code indicates that the switching	PMMOResult_AAL2_At_UNI.M548C3	Sum, nksltmbh

			equipment generating this cause is experiencing a period of high traffic.		
info_not_impl	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Information element non existent or not implemented (No.99).This parameter provides the number of connections terminated to CauseNo. 99. It indicates that the equipment sending this cause has received a message which includes information elements/parameters not recognized because the information element identifiers/ parameter names are not defined or are defined but not implemented by the equipment sending the cause. This cause indicates that the information elements/parameters were discarded. However, the information element is not required to be	PMMOResult_AAL2_At_UNI.M548C10	Sum, nksltmbh

			present in the message in order for the equipment sending the cause to process the message.		
invalid_info	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Invalid information element contents (No.100).This parameter provides the number of connections terminated to CauseNo. 100. This cause indicates that the equipment sending this cause has received an information element which it has implemented; however, one or more fields in the information element are coded in a way that has not been implemented by the equipment sending this cause.	PMMOResult_AAL2_At_UNI.M548C11	Sum, nksltmbh
invalid_msg	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Invalid message (No.95).This	PMMOResult_AAL2_At_UNI.M548C7	Sum, nksltmbh

			parameter provides the number of connections terminated to CauseNo. 95. This cause is used to report an invalid message event only when no other cause in the invalid message class applies.		
link_char_verif	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Required traffic characterization unavailable.The requested traffic characterization was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_AAL2_At_UNI.M548C22	Sum, nksltmbh
mandat_info	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Mandatory information element is missing (No.96).This parameter provides the number of connections terminated to CauseNo. 96. This cause indicates that the equipment sending this cause has received a message which is missing an	PMMOResult_AAL2_At_UNI.M548C8	Sum, nksltmbh

			information element which must be present in the message before that message can be processed.		
msg_not_impl	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Message type non existent or not implemented (No.97).This parameter provides the number of connections terminated to CauseNo. 97. This cause Indicates that the equipment sending the cause has received a message with a message type it does not recognize either because this is a message not defined or defined but not implemented by the equipment sending this cause.	PMMOResult_AAL2_At_UNI.M548C9	Sum, nksltmbh
msg_unrecog	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Message with unrecognized parameter,	PMMOResult_AAL2_At_UNI.M548C17	Sum, nksltmbh

			discarded (No.110).This parameter provides the number of connections terminated to CauseNo. 110. This cause indicates that the equipment sending this cause has discarded a received message which includes a parameter that is not recognized.		
net_out	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Network out of order (No.38).This parameter provides the number of connections terminated to CauseNo. 38. It indicates that the network is not functioning correctly and that the condition is likely to last a relatively long period of time; for example, immediately attempting the call again is not likely to be successful.	PMMOResult_AAL2_At_UNI.M548C1	Sum, nksltmbh
req_chan	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Requested circuit/channel not	PMMOResult_AAL2_At_UNI.M548C4	Sum, nksltmbh

			available (No.44).This parameter provides the number of connections terminated to CauseNo. 44. This cause is returned when the circuit or channel indicated by there questing entity cannot be provided by the other side of the interface.		
res_unavail	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Resource unavailable unspecified (No.47).This parameter provides the number of connections terminated to CauseNo. 47. This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.	PMMOResult_AAL2_At_UNI.M548C5	Sum, nksltmbh
sai_alloc	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-OSAI	PMMOResult_AAL2_At_UNI.M548C18	Sum, nksltmbh

			allocation failure.This is the same as the hand process reservation failure. Internal (nonprotocol) error.		
temp_fail	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Temporary failure (No.41).This parameter provides the number of connections terminated to CauseNo. 41. The cause code indicates that the network is not functioning correctly and that the condition is not likely to last a long period of time; for example, the user may wish to try another call almost immediately.	PMMOResult_AAL2_At_UNI.M548C2	Sum, nksltmbh
timer_exp_blo	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Recovery on BLO_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 block request. The block request is a Primitive to request the AAL type 2	PMMOResult_AAL2_At_UNI.M548C15	Sum, nksltmbh

			signalling entity to locally block a particular, unblocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.		
timer_exp_erq	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Recovery on ERQ timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 establish request. Establish request Primitive is used by the AALtype 2 served user to initiate the establishment of a new AAL type 2connection.	PMMOResult_AAL2_At_UNI.M548C12	Sum, nksltmbh
timer_exp_rel	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Recovery on REL_timer expiry (No.102).This parameter provides the number of connections terminated to	PMMOResult_AAL2_At_UNI.M548C13	Sum, nksltmbh

			CauseNo. 102 release request. Release request Primitive is used by the AAL type2 served user to initiate the clearing of an AAL type 2 connection.		
timer_exp_res	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Recovery on RES_timer expiry (No.102).This parameter provides the number of connections terminated to CauseNo. 102 reset request. Reset request is a Primitive to request the AAL type2 signalling entity to reset a particular channel, all channels on a particular AAL type 2 path, or all channels on all AAL type 2 paths between two nodes to the "Idle" state and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_AAL2_At_UNI.M548C14	Sum, nksltmbh
timer_exp_ubl	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Recovery on UBL_timer expiry	PMMOResult_AAL2_At_UNI.M548C16	Sum, nksltmbh

			(No.102).This parameter provides the number of connections terminated to CauseNo. 102 unblock request. Unblock request is a Primitive to request the AALtype 2 signalling entity to locally unblock a particular, blocked AAL type 2path and to indicate this to the peer AAL type 2 signalling entity.		

7.38.2 Signalling_Link.Nokia.UMTS.mtp_signalling_link_availability

MTP signalling link availability statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
dur_of_inhibit_loc_manag_act	ACCUMULATION	INTEGER	Duration of signalling link inhibition due to local management actions, 2.5 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C5	Sum, tot
dur_of_inhibit_rem_manag_act	ACCUMULATION	INTEGER	Duration of signalling link inhibition due to remote management actions, 2.6 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C6	Sum, tot

dur_of_local_busy	ACCUMULATION	INTEGER	Duration of local busy (number of SIBs), 2.15 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C7	Sum, tot
dur_of_unavail_link_failure	ACCUMULATION	INTEGER	Duration of signalling link unavailability due to link failure, 2.7 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C2	Sum, tot
dur_of_unavail_local_blocking	ACCUMULATION	INTEGER	Duration of signalling link unavailability due to local blocking, 2.8 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C3	Sum, tot
dur_of_unavail_rem_proc_outage	ACCUMULATION	INTEGER	Duration of signalling link unavailability due to remote processor outage, 2.9 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C4	Sum, tot
dur_of_unavail	ACCUMULATION	INTEGER	Duration of signalling link unavailability for any reason, 2.1 in ITU-T Q.752. This counter is the sum of ITU-T Q.752 counters 2.7 + 2.8 + 2.9 + 2.5 + 2.6.	PMMOResult_MTP_Sig_Link_Availability.M208B2C1	Sum, tot
durat_loc_busy_atm	ACCUMULATION	INTEGER	Duration of local busy for ATM, 2.15 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C16	Sum, tot
loc_manag_inhibit	ACCUMULATION	INTEGER	Number of local management inhibits, 2.13 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C12	Sum, tot
loc_manag_uninh	ACCUMULA	INTEG	Number of local	PMMOResult_MTP_Sig	Sum, tot

ibited	TION	ER	management uninhibits, 2.14 in ITU-T Q.752.	_Link_Availability.M208B2C13	
local_manual_changeovers	ACCUMULATION	INTEGER	Number of local manual changeovers and changeovers due to system recovery actions, 2.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C8	Sum, tot
rem_inhibit	ACCUMULATION	INTEGER	Start of remote inhibition, 2.18 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C14	Sum, tot
rem_proc_outage_start	ACCUMULATION	INTEGER	Start of remote processor outage, 2.10 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C10	Sum, tot
rem_proc_outage_stop	ACCUMULATION	INTEGER	Stop of remote processor outage, 2.11 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C11	Sum, tot
rem_uninhibited	ACCUMULATION	INTEGER	Stop of remote inhibition, 2.19 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C15	Sum, tot
remote_initiative_changeovers	ACCUMULATION	INTEGER	Number of remote initiative changeovers, 2.3 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Availability.M208B2C9	Sum, tot

7.38.3 Signalling_Link.Nokia.UMTS.mtp_signalling_link_performance

MTP signalling lin k performance statistics

KPI	Type	Data Type	Description	Derivation	Aggregation

automatic_changebacks	ACCUMULATION	INTEGER	Number of automatic changebacks, 1.11 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Performance.M209B3C4	Sum, tot
automatic_changeovers	ACCUMULATION	INTEGER	Number of automatic changeovers, 1.10 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Performance.M209B3C3	Sum, tot
dur_in_service_state	ACCUMULATION	INTEGER	Duration of signalling link in service state, 1.1 in ITU-T Q.752 (TDM) and 1 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B2C1	Sum, tot
link_failures_abnorm_fibr_bsnr	ACCUMULATION	INTEGER	Number of link failures caused by abnormal fibr and bsnr, 1.3 in ITU-T Q.752 only TDM.	PMMOResult_MTP_Sig_Link_Performance.M209B2C3	Sum, tot
link_failures_ali_or_prov_fail	ACCUMULATION	INTEGER	Number of alignment failures, 1.7 in ITU-T Q.752 (TDM) and 6 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B2C7	Sum, tot
link_failures_all_reasons	ACCUMULATION	INTEGER	Number of link failure caused by all reasons, 1.2 in ITU-T Q.752 (TDM) 2 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B2C2	Sum, tot
link_failures_exc_del_of_ack	ACCUMULATION	INTEGER	TDM: number of link failures caused by excessive delay of acknowledgement, 1.4 in ITU-T Q.752 ATM: number of link failures caused by NO_RESPONSE	PMMOResult_MTP_Sig_Link_Performance.M209B2C4	Sum, tot

			timer expiration 3 in ITU-T Q.2144.		
link_failures_exc_dur_of_cong	ACCUMULATION	INTEGER	Number of link failures caused by excessive duration of congesition, 1.6 in ITU-T Q.752 (TDM) and 5 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B2C6	Sum, tot
link_failures_exc_error_rate	ACCUMULATION	INTEGER	Number of link failures caused by excessive error rate, 1.5 in ITU-T Q.752 (TDM) and 4 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B2C5	Sum, tot
link_restorations	ACCUMULATION	INTEGER	Number of link restorations, 1.12 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Performance.M209B3C5	Sum, tot
negative_acks	ACCUMULATION	INTEGER	Number of negative acknowledgements, 1.9 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Performance.M209B3C2	Sum, tot
sd_loss	ACCUMULATION	INTEGER	Number of MAA_ERROR.indications, with error type SD loss 7 in ITU-T Q.2144 (ATM).	PMMOResult_MTP_Sig_Link_Performance.M209B3C6	Sum, tot
sign_units_received_in_error	ACCUMULATION	INTEGER	Number of signal units received in error, 1.8 in ITU-T Q.752 only TDM.	PMMOResult_MTP_Sig_Link_Performance.M209B3C1	Sum, tot

7.38.4 Signalling_Link.Nokia.UMTS.mtp_signalling_link_utilization

MTP signalling link utilization statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
bit_rate	INTENSITY	FLOAT	Signalling link bit rate.	PMMOResult_MTP_Sig_Link_Utilization.M210B1C2	Sum, avg, max, min, tot
cumulative_duration_level1	ACCUMULATION	INTEGER	Cumulative duration of signalling link congestion level 1, 3.7 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C15	Sum, tot
cumulative_duration_level2	ACCUMULATION	INTEGER	Cumulative duration of signalling link congestion level 2.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C16	Sum, tot
cumulative_duration_level3	ACCUMULATION	INTEGER	Cumulative duration of signalling link congestion level 3.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C17	Sum, tot
events_res_in_loss_of_msus_l1	ACCUMULATION	INTEGER	Number of times congestion discard level 1 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C12	Sum, tot
events_res_in_loss_of_msus_l2	ACCUMULATION	INTEGER	Number of times congestion discard level 2 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C13	Sum, tot
events_res_in_loss_of_msus_l3	ACCUMULATION	INTEGER	Number of times congestion discard level 3 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C14	Sum, tot
min_30_peak_traf_in_started	ACCUMULATION	INTEGER	Start time of the peak load of 30 minutes freezing period for incoming traffic	PMMOResult_MTP_Sig_Link_Utilization.M210B3C2	Sum, tot

			(measured as minutes from measurement period start time).		
min_30_peak_traf_out_started	ACCUMULATION	INTEGER	Start time of the peak load of 30 minutes freezing period for outgoing traffic (measured as minutes from measurement period start time).	PMMOResult_MTP_Sig_Link_Utilization.M210B3C4	Sum, tot
min_30_peakload_traffic_in	INTENSITY	INTEGER	Peak load in milliErlangs for 30 minutes periods for incoming traffic.	PMMOResult_MTP_Sig_Link_Utilization.M210B3C1	Sum, avg, max, min, tot
min_30_peakload_traffic_out	INTENSITY	INTEGER	Peak load in milliErlangs for 30 minutes periods for outgoing traffic.	PMMOResult_MTP_Sig_Link_Utilization.M210B3C3	Sum, avg, max, min, tot
min_5_peak_traf_in_started	ACCUMULATION	INTEGER	Start time of the peak load of 5 minutes freezing period for incoming traffic (measured as minutes from measurement period start time).	PMMOResult_MTP_Sig_Link_Utilization.M210B3C6	Sum, tot
min_5_peak_traf_out_started	ACCUMULATION	INTEGER	Start time of the peak load of 5 minutes freezing period for outgoing traffic (measured as	PMMOResult_MTP_Sig_Link_Utilization.M210B3C8	Sum, tot

			minutes from measurement period start time).		
min_5_peakload_traffic_in	INTENSITY	INTEGER	Peak load in milliErlangs for 5 minutes periods for incoming traffic.	PMMOResult_MTP_Sig_Link_Utilization.M210B3C5	Sum, avg, max, min, tot
min_5_peakload_traffic_out	INTENSITY	INTEGER	Peak load in milliErlangs for 5 minutes periods for outgoing traffic.	PMMOResult_MTP_Sig_Link_Utilization.M210B3C7	Sum, avg, max, min, tot
msus_discarded_level1	ACCUMULATION	INTEGER	Number of message signal units (MSUs) discarded due to signalling link congestion (level 1), 3.10 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C9	Sum, tot
msus_discarded_level2	ACCUMULATION	INTEGER	Number of message signal units (MSUs) discarded due to signalling link congestion (level 2).	PMMOResult_MTP_Sig_Link_Utilization.M210B2C10	Sum, tot
msus_discarded_level3	ACCUMULATION	INTEGER	Number of message signal units (MSUs) discarded due to signalling link congestion (level 3).	PMMOResult_MTP_Sig_Link_Utilization.M210B2C11	Sum, tot
msus_received	ACCUMULATION	INTEGER	Number of received message signal units, 3.5 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210B2C4	Sum, tot
msus_transmitted	ACCUMULATION	INTEGER	Number of transmitted	PMMOResult_MTP_Sig_Link_Utilization.M210	Sum, tot

			message signal units, 3.3 in ITU-T Q.752.	B2C3	
octets_retransmitted	ACCUMULATION	INTEGER	Number of octets retransmitted, 3.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C5	Sum, tot
sif_and_sio_octets_received	ACCUMULATION	INTEGER	Number of sif and sio octets received, 3.4 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C2	Sum, tot
sif_and_sio_octets_transmitted	ACCUMULATION	INTEGER	Number of sif and sio octets transmitted, 3.1 in ITU-T Q.752.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C1	Sum, tot
sl_congestion_level1	ACCUMULATION	INTEGER	Number of times congestion onset level 1 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C6	Sum, tot
sl_congestion_level2	ACCUMULATION	INTEGER	Number of times congestion onset level 2 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C7	Sum, tot
sl_congestion_level3	ACCUMULATION	INTEGER	Number of times congestion onset level 3 threshold exceeded.	PMMOResult_MTP_Sig_Link_Utilization.M210 B2C8	Sum, tot

7.38.5 Signalling_Link.Nokia.UMTS.saal

-Obsolete in RAS6.0, group moved to ATM VCC object-SAAL Data related messages.

KPI	Type	Data Type	Description	Derivation	Aggregation
abort_det	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM	PMMOResult_SAAL_At_UNI.M546C42	Sum, nksltmbh

			VCC object-The number of AAL5 CPCS PDUs whose sending has been aborted. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following check: If the LENGTH field in the trailer of the AAL5 PDU is zero, the ABORT bit in the status queue entry is set to a logic high.		
ba_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs whose total PDU length is over the maximum allowable PDU length. SAR Reassembly status. During reassembly maximum SDU delivery length (including trailer and pad) is checked to ensure that the PDU under reassembly does not exceed the maximum SDU delivery length.	PMMOResult_SAAL_At_UNI.M546C35	Sum, nksltmbh
cpi_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM	PMMOResult_SAAL_At_UNI.M546C37	Sum, nksltmbh

			VCC object-The number of reassembled AAL5 CPCS PDUs whose CPI has been invalid. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following check. If the CPI field in the AAL5 trailer is not at zero, the CPI_ERROR bit in the status queue entry is set to a logic high.		
crc_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs whose CRC 32 has been violated. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor compares the calculated CRCREM value to the CRC 32 value in the trailer of the AAL5 PDU. If they	PMMOResult_SAAL_At_UNI.M546C36	Sum, nksltmbh

			are different, the reassembly coprocessor sets the CRC_ERROR bit in the status queue entry to a logic high.		
crc_pad_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs in which either CRC 32 has been violated or PAD field length has been invalid. SAR Reassembly status. See PAD_ERR M546C39 and CRC_ERR M546C36.	PMMOResult_SAAL_At_UNI.M546C40	Sum, nksltmbh
early_disc	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of AAL5 CPCS PDUs which have been discarded because free Rx buffers have not been available. SAR Reassembly status. Early Packet Discard occurred. A partially reassembled CPCS PDU has been discarded due to firewall, buffer underflow, LI_EPD, SN_EPD,	PMMOResult_SAAL_At_UNI.M546C43	Sum, nksltmbh

			ST_EPD, CLP discard or Max PDU length exceeded.		
error_code_a	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Sequenced Data (SD PDU). SD PDU is received in a SSCOP connection state where it should not be received (Q.2110). SD PDU is used to transfer, across an SSCOP connection, sequentially numbered PDUs containing information fields provided by the SSCOP user.	PMMOResult_SAAL_At_UNI.M546C6	Sum, nksltmbh
error_code_b	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Begin (BGN PDU). BGN PDU is received in a SSCOP connection state where it should not be received (Q.2110).	PMMOResult_SAAL_At_UNI.M546C7	Sum, nksltmbh

			Begin (BGN PDU) is used to establish an SSCOP connection between two peer entities. The BGN PDU requests the clearing of the peers transmitter and receiver buffers, and the initialization of the peers transmitter and receiver state variables.		
error_code_c	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Begin Acknowledge (BGAK PDU).BGAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). Begin Acknowledge (BGAK PDU) is used to confirm the establishment of an SSCOP connection between two peer entities.	PMMOResult_SAAL_At_UNI.M546C8	Sum, nksltmbh
error_code_del	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-SD PDUs must be deleted. The SSCOP transmitter	PMMOResult_SAAL_At_UNI.M546C31	Sum, nksltmbh

			has discarded an AA DATA request from the user because it can not store it into its transmit buffer. This can happen if the SSCOP receiver closes the credit window and SSCOP transmitter can not send SD PDUs and has to store them into the transmit buffer. Also if there is congestion in the lower layers the SD PDUs can not be sent (Q.2110).		
error_code_d	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object- Receipt of unsolicited SSCOP Begin Reject (BGREJ PDU). BGREJ PDU is received in a SSCOP connection state where it should not be received (Q.2110). The BGREJ PDU is used to reject the connection request of the peer SSCOP entity.	PMMOResult_SAAL_At_UNI.M546C9	Sum, nksltmbh
error_code_e	ACCUMULA	INT8	-Obsolete in	PMMOResult_SAAL_	Sum,

	TION		RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP End (END PDU).END PDU is received in a SSCOP connection state where it should not be received (Q.2110). The END PDU is used to release an SSCOP connection between two peer entities.	At_UNI.M546C10	nksltmbh
error_code_f	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP End Acknowledge (ENDAK PDU).ENDAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). The ENDAK PDU is used to confirm the release of an SSCOP connection.	PMMOResult_SAAL_At_UNI.M546C11	Sum, nksltmbh
error_code_g	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Polling (POLL PDU). POLL PDU is received in a	PMMOResult_SAAL_At_UNI.M546C12	Sum, nksltmbh

			SSCOP connection state where it should not be received (Q.2110). The POLL PDU is used to request, across an SSCOP connection, status information about the peer SSCOP entity.		
error_code_h	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Status (STAT PDU). STAT PDU is received in a SSCOP connection state where it should not be received (Q.2110). The STAT PDU is used to respond to a status request (POLL PDU) received from a peer SSCOP entity. It contains information regarding the reception status of SD PDUs, credit information for the peer transmitter, and the sequence number [N(PS)] of the POLL PDU to	PMMOResult_SAAL_At_UNI.M546C13	Sum, nksltmbh

			which it is in response.		
error_code_i	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Unsolicited Status Response (USTAT PDU). USTAT PDU is received in a SSCOP connection state where it should not be received (Q.2110). The USTAT PDU is used to respond to a detection of one or more new missing SD PDUs, based on the examination of the sequence numbering of the SD PDU. It contains information regarding the reception status of SD PDUs and credit information for the peer transmitter	PMMOResult_SAAL_At_UNI.M546C14	Sum, nksltmbh
error_code_j	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Resynchronization (RS PDU).RS PDU is received in a SSCOP connection state where it	PMMOResult_SAAL_At_UNI.M546C15	Sum, nksltmbh

			should not be received (Q.2110). The RS PDU is used to re synchronise the buffers and data transfer state variables.		
error_code_k	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Resynchronization Acknowledge (RSAK PDU).RSAK PDU is received in a SSCOP connection state where it should not be received (Q.2110). The RSAK PDU is used to acknowledge the acceptance of a re synchronisation requested by the peer SSCOP entity.	PMMOResult_SAAL_At_UNI.M546C16	Sum, nksltmbh
error_code_l	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Error Recovery (ER PDU). ER PDU is received in a SSCOP connection	PMMOResult_SAAL_At_UNI.M546C17	Sum, nksltmbh

			state where it should not be received (Q.2110). The ER PDU is used to recover from protocol errors.		
error_code_lw	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Local credit window closed. This error counter is increased in the SSCOP receiver when it can not accept any new SD PDUs. This can happen when the receive buffer is full.	PMMOResult_SAAL_At_UNI.M546C29	Sum, nksltmbh
error_code_lx	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Local credit window opened. This error counter is increased in the SSCOP receiver when it can again accept new SD PDUs.	PMMOResult_SAAL_At_UNI.M546C30	Sum, nksltmbh
error_code_m	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Receipt of unsolicited SSCOP Error Recovery Acknowledge (ERAK PDU).ERAK PDU is received in a SSCOP connection	PMMOResult_SAAL_At_UNI.M546C18	Sum, nksltmbh

			state where it should not be received (Q.2110). The ERAK PDU is used to acknowledge the recovery from protocol error.		
error_code_o	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Unsuccessful retransmission. The number of transmissions of BGN, END, ER, or RS PDU (SSCOP state variable VT(CC)) has reached the maximum value of retransmissions (SSCOP parameter MaxCC) (Q.2110). When BGN, END, ER, or RS PDU is sent a timer is set (TimerCC) to wait for the acknowledge and variable VT(CC) is set to 1. If the acknowledge is not received the PDU is retransmitted and TimerCC is set again and VT(CC) is increased. If the VT(CC) reaches the	PMMOResult_SAAL_At_UNI.M546C19	Sum, nksltmbh

			value of MaxCC the PDU is no longer retransmitted.		
error_code_p	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Timer_NO_RESPONSE expiry. SSCOP connection has been released (Q.2110). The Timer_NORESPONSE is set when POLL PDU is sent to peer SSCOP entity. When peer acknowledges with STAT PDU the Timer_NORESPONSE is reset. If peer does not send STAT PDU and the Timer_NO_RESPONSE expires the SSCOP connection is released by SSCOP.	PMMOResult_SAAL_At_UNI.M546C20	Sum, nksltmbh
error_code_q	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-SD or POLL, N(S) error. SD or POLL PDU sequence number (N(S)) error (Q.2110). SD or POLL PDU is received and the N(S) parameter is not valid. Either SD PDU with N(S) that is in SSCOP receive buffer is	PMMOResult_SAAL_At_UNI.M546C21	Sum, nksltmbh

			received or POLL PDU contains N(S) that is greater than the highest expected sequence number (SSCOP variable VR(H)).		
error_code_r	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-STAT N(PS) error.A STAT PDU is received for a POLL PDU that has not been sent (Q.2110). When POLL PDU is sent, the polling sequence number (SSCOP variable N(PS)) is increased and sent in the PDU. The peer SSCOP entity copies this value from POLL PDU into the appropriate STAT PDU. This error code is increased when STAT PDU with N(PS) that has not been sent in any POLL PDU is received.	PMMOResult_SAAL_At_UNI.M546C22	Sum, nksltmbh
error_code_s	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-	PMMOResult_SAAL_At_UNI.M546C23	Sum, nksltmbh

			USTAT N(R) or list elements error. A STAT PDU is received with invalid data. The N(R) parameter in STAT PDU tells the sequence number of SD PDU that the sender of STAT PDU is waiting to be received next. This error counter is increased when the N(R) is greater than the next sequence number to be sent (SSCOP variable VT(S)), or the acknowledgement for that SD PDU has already been received in an earlier STAT or USTAT PDU. The list elements in STAT PDU are used to request retransmission of SD PDUs. This error counter is increased, if such SD PDUs that are not sent or have been acknowledged to be received by the peer SSCOP entity, are requested to be retransmitted.		
error_code_t	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-	PMMOResult_SAAL_At_UNI.M546C24	Sum, nksltmbh

			USTAT (N(R) or list elements error. An USTAT PDU is received with invalid data (Q.2110). The N(R) parameter in STAT PDU tells the sequence number of SD PDU that the sender of STAT PDU is waiting to be received next. This error counter is increased when the N(R) is greater than the next sequence number to be sent (SSCOP variable VT(S)), or the acknowledgement for that SD PDU has already been received in an earlier STAT or USTAT PDU. The list elements in USTAT PDU are used to request retransmission of SD PDUs. This error counter is increased, if such SD PDUs that are not sent or have been acknowledged to be received by the peer SSCOP entity, are requested to be		

			retransmitted		
error_code_u	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-PDU length violation. If the length of a PDU is not between the minimum and maximum length of the PDU or the PDU length is not 32 bit aligned (Q.2110).	PMMOResult_SAAL_At_UNI.M546C25	Sum, nksltmbh
error_code_v	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-SD PDUs must be retransmitted (Q.2110). If SD PDUs have been lost the peer SSCOP entity can request them to be retransmitted with USTAT PDU or STAT PDU.	PMMOResult_SAAL_At_UNI.M546C26	Sum, nksltmbh
error_code_w	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Lack of credit (Q.2110). Number of times when the SSCOP is not allowed to transmit data PDUs to peer node. Also the times when SSCOP receiver doesn't accept any data PDUs sent by peer node are counted. Credit is	PMMOResult_SAAL_At_UNI.M546C27	Sum, nksltmbh

			granted by the SSCOP receiver to allow the peer SSCOP transmitter to transmit new SD PDUs. The credit value is conveyed to the transmitter in the (N(MR) field of each BGN, BGAK, RS, RSAK, ER, ERAK, STAT and USTAT PDU sent by the receiver. The credit value sent to the transmitter is the sequence number of the first SD PDU that the receiver will not accept. The credit is assigned the value "No" when the SSCOP transmitter can not send any SD PDUs because the receiver will not accept them.		
error_code_x	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Local credit window closed. This error counter is increased in the SSCOP receiver when it can not accept any new SD PDUs. This can happen	PMMOResult_SAAL_At_UNI.M546C28	Sum, nksltmbh

			when the receive buffer is full.		
fbq_underf	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of AAL5 CPCS PDUs which have been discarded because of free buffer queue underflows. SAR Reassembly status. An underflow condition occurs when the SAR attempts to retrieve a queue entry and the host has not yet supplied this entry. This condition only happens on the free buffer queues. The SAR detects this condition by checking the queue entry VLD bit. Once detected, the SAR enters an Underflow Detected state on this queue only. Since this signifies that no data buffers are available for reassembly, the SAR initiates EPD on all channels assigned to this queue.	PMMOResult_SAAL_At_UNI.M546C46	Sum, nksltmbh
len_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of	PMMOResult_SAAL_At_UNI.M546C38	Sum, nksltmbh

			reassembled AAL5 CPCS PDUs whose length has been violated. SAR Reassembly status. During reassembly maximum SDU delivery length (including trailer and pad) is checked to ensure that the PDU under reassembly does not exceed the maximum SDU delivery length.		
msus_received	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Number of received signalling data messages from Layer 3.The amount of assured signalling data (AAL data) messages received from the users of Layer 3 (NBAP or AAL2 signalling) via AAL SAP of SSCFUNI.	PMMOResult_SAAL_At_UNI.M546C0	Sum, nksltmbh
msus_transmitted	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Number of transmitted signalling data	PMMOResult_SAAL_At_UNI.M546C3	Sum, nksltmbh

			messages from Layer 3.Number of transmitted signalling data messages sent to Layer 3 by the user of the counterpart Layer 3		
no_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs which have not been errored. SAR Reassembly status.	PMMOResult_SAAL_At_UNI.M546C33	Sum, nksltmbh
octets_received	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Number of received octets from Layer 3. The amount of the assured signalling data (AAL data) message octets received from the users of Layer 3 (NBAP or AAL2 signalling) via AALSAP of SSCF UNI.	PMMOResult_SAAL_At_UNI.M546C1	Sum, nksltmbh
octets_transmitted	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Number of transmitted octets from Layer 3.The number of transmitted	PMMOResult_SAAL_At_UNI.M546C4	Sum, nksltmbh

			signalling data message octets sent to Layer 3 by the user of the counterpart Layer 3.		
pad_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs whose Pad field length is incorrect. SAR Reassembly status. When the EOM cell is processed, the reassembly coprocessor performs the following checks: Compares the value collected in the Length Counter to the value in the LENGTH field in the trailer of the AAL5 PDU. If the number of Pad bytes is less than zero or greater than 47, the PAD_ERROR bit in the status queue entry is set to a logic high.	PMMOResult_SAAL_At_UNI.M546C39	Sum, nksltmbh
rsm_timeout	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM	PMMOResult_SAAL_At_UNI.M546C41	Sum, nksltmbh

			VCC object-The number of reassembled AAL5 CPCS PDUs whose reassembly timer has expired. SAR Reassembly status. The RS8234 automatically detects active CPCSPDU time out for reassembly channels. A PDU time out occurs when a partially received PDU does not complete within a set time period. When it detects this timeout condition, the RS8234 provides a status queue indication to the host. This indication allows the host to recover the buffers held by the partially completed PDU. The RS8234 supports up to eight reassembly time out periods.		
rx_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The total sum of received errors. This counter is updated each time when SAR reassembles a received AAL5 CPCS PDU and	PMMOResult_SAAL_At_UNI.M546C32	Sum, nksltmbh

			some of the following errors are reported by SAR chip (SAR reassembly status) unexp_err, ba_err, crc_err, cpi_err, len_err, pad_err, crc_pad_err, rsm_timeout, abort_det, early_disc, status_qf, vcc_fw, fbq_underf, stat_q_overf		
rx_pdu	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of received error free AAL5 CPCS PDUs.	PMMOResult_SAAL_At_UNI.M546C50	Sum, nksltmbh
rx_size	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of bytes of reassembled error free AAL5 CPCS PDUs.	PMMOResult_SAAL_At_UNI.M546C51	Sum, nksltmbh
sig_commands_received	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-ED Number of received signalling command messages from Layer 3.The signalling	PMMOResult_SAAL_At_UNI.M546C2	Sum, nksltmbh

			commands are channel activation (AAL_establish) and channel release (AAL_release). The counter indicates the reliability of the link used by AAL2.		
sig_notices_transmitted	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-TED Number of transmitted signalling command messages from Layer 3.Signalling commands are channel activation (AAL_establish) and channel release (AAL release). These commands are sent by the user of counterpart Layer 3.	PMMOResult_SAAL_At_UNI.M546C5	Sum, nksltmbh
stat_q_overf	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of AAL5 CPCS PDUs which have been discarded because status queue of the Rx buffers is full. SAR Reassembly status. See STATUS_QF M546C44.	PMMOResult_SAAL_At_UNI.M546C47	Sum, nksltmbh
status_qf	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM	PMMOResult_SAAL_At_UNI.M546C44	Sum, nksltmbh

			VCC object-The number of status queue fulfillments. SAR Reassembly status. A status queue overflow or full condition is entered when the last available status queue entry is written. The reassembly coprocessor detects the condition by comparing the WRITE and READ_UD index pointers in the corresponding status queue base table. Upon detecting a status overflow condition, the Rsm coprocessor sets the internal OVFL bit in the last status queue entry written to a logic high, to indicate the condition. The Rsm coprocessor also sets to one either the RSM_HS_FULL bit in the HOST_ISTAT1 register, or the RSM_LS_FULL bit in the LP_ISTAT1		

			register, to prompt an interrupt. While the reassembly coprocessor is in status full condition, it discards all cells. If a COM or EOM cell is received while the status queue is full, the channel is marked for status full packet discard. When an SSM, EOM, or OAM cell is received during a status full condition, the cell is discarded and the status queue checked. If there is now room in the status queue, then the status full condition is exited.		
tot_bothway_msus	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-Bothway total (received & transmit) number of received signalling data messages from Layer 3.	PMMOResult_SAAL_At_UNI.M546C3 + M546C0	Sum, nksltmbh
unexp_err	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of reassembled AAL5 CPCS PDUs which have contained unexpected errors.	PMMOResult_SAAL_At_UNI.M546C34	Sum, nksltmbh

			SAR Reassembly status.		
vcc_fw	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of AAL5 CPCS PDUs which have been discarded because vcc firewall is crossed. SAR Reassembly status. Implementation of multiple free buffer queues and EPD performs a firewall functionality on a group basis. The user can also set up per VCC a firewall on a channel bychannel basis. The firewall mechanism allows the user to allocate buffer credits on a perchannel basis. During reassembly on a channel enabled for firewall processing, whenever a buffer is taken off free buffer queues 0 through 15, the Rsm coprocessor decrements the RX_COUNTER[15.0] in the Rsm VCC	PMMOResult_SAAL_At_UNI.M546C45	Sum, nksltmbh

			Table entry for that channel. This allows COM buffers to be placed on queues 16 through 31 and not be stopped by the firewall. If the RX_COUNTER[15.0] for a channel is zero when a buffer is required, then the Rsm coprocessor declares a firewall condition. If the firewall condition occurs on a BOM or SSM, the RS8234 writes a status queue entry with the FW bit set, and a NULL in the BD_PNTR field. If the firewall condition occurs on a COM or EOM, the Rsm coprocessor initiates EPD and writes a status queue entry with the FW and EPD bits set. It then discards cells on that channel, until the channel has recovered from the firewall condition. All AAL5 PDUs discarded under the firewall condition cause the AAL5_DSC_CNT counter to be incremented. Recovery occurs		

			only on a BOM or SSM cell when the credit is rechecked.		
vcc_rele	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of illegal vcc releasing attempts. The counter is incremented if vcc reserved by another client is tried to release	PMMOResult_SAAL_At_UNI.M546C49	Sum, nksltmbh
vcc_rese	ACCUMULATION	INT8	-Obsolete in RAS6.0, group moved to ATM VCC object-The number of vcc re reservations. The counter is incremented if an already reserved vcc is tried to obtained by another client.	PMMOResult_SAAL_At_UNI.M546C48	Sum, nksltmbh

7.39 Signalling_LinkSet Performance Indicators

This section shows the key performance indicators and other counters for the Signalling_LinkSet object, divided into the following sub-sections:

- Signalling_LinkSet.Nokia.UMTS.mtp_sig_lset_routeset_avail

7.39.1 Signalling_LinkSet.Nokia.UMTS.mtp_sig_lset_routeset_avail

MTP signalling linkset and routeset availability statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
initiation_of_broadcast_tfa	ACCUMULATION	INTEGER	Transmission of transfer allowed message started due to signalling link restoration, 4.6 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C5	Sum, tot
initiation_of_broadcast_tfp	ACCUMULATION	INTEGER	Transmission of transfer prohibited message started due to signalling link failure ,4.5 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C4	Sum, tot
sl_set_duration_of_una	ACCUMULATION	INTEGER	Duration of signalling link set unavailability, 4.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C3	Sum, tot
sl_set_start_failure	ACCUMULATION	INTEGER	Start of signalling link set failure, 4.3 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C1	Sum, tot
sl_set_stop_failure	ACCUMULATION	INTEGER	Stop of signalling link set failure, 4.4 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C2	Sum, tot
sr_set_una_due_to_tfp_rec	ACCUMULATION	INTEGER	Unavailability of signalling route set due to transfer prohibited message received, 4.7 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C6	Sum, tot
sr_set_una_dura_due_to_tfp_rec	ACCUMULATION	INTEGER	Duration of signalling route set due to transfer prohibited message received, 4.8 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C8	Sum, tot
sr_set_una_dura_to_given_dest	ACCUMULATION	INTEGER	Duration of unavailability of	PMMOResult_MTP_Sig_Linkset_RouteSet_Ava	Sum, tot

			signalling route set, 4.10 in ITU-T Q.752.	ilability.M212B2C9	
sr_set_una_to_given_dest	ACCUMULATION	INTEGER	Unavailability of signalling route set, 4.9 in ITU-T Q.752.	PMMOResult_MTP_Sig_Linkset_RouteSet_Availability.M212B2C7	Sum, tot

7.40 Signalling_Point Performance Indicators

This section shows the key performance indicators and other counters for the Signalling_Point object, divided into the following sub-sections:

- Signalling_Point.Nokia.UMTS.aal2_signalling_nni
- Signalling_Point.Nokia.UMTS.aal2_signalling
- Signalling_Point.Nokia.UMTS.mtp_matrix_signalling_traff
- Signalling_Point.Nokia.UMTS.mtp_signalling_point_status
- Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_sp
- Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_userparts
- Signalling_Point.Nokia.UMTS.routing_error
- Signalling_Point.Nokia.UMTS.sccp_signalling_messages
- Signalling_Point.Nokia.UMTS.sccp_subsystem1_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem10_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem11_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem12_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem13_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem14_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem15_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem16_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem17_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem18_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem19_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem2_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem20_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem3_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem4_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem5_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem6_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem7_msgs
- Signalling_Point.Nokia.UMTS.sccp_subsystem8_msgs

- Signalling_Point.Nokia.UMTS.sccp_subsystem9_msgs

7.40.1 Signalling_Point.Nokia.UMTS.aal2_signalling_nni

AAL2 NNI Signalling statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
aal_para_at_nni	ACCUMULATION	INT8	AAL parameters cannot be supported (#93). Not in use.	PMMOResult_AAL2_At_NNI_new.M552C6	Sum, nkspacbh, tot
aal2pi_verif_at_nni	ACCUMULATION	INT8	AAL type 2 Id verification/allocation failure. Not in use.	PMMOResult_AAL2_At_NNI_new.M552C20	Sum, nkspacbh, tot
adj_node_not_avail_at_nni	ACCUMULATION	INT8	Adjacent node not available.	PMMOResult_AAL2_At_NNI_new.M552C23	Sum, nkspacbh, tot
binding_id_verif_at_nni	ACCUMULATION	INT8	Binding id verification failure. The requested binding identifier was not available in the destination AAL type 2 node. Internal (non-protocol) error.	PMMOResult_AAL2_At_NNI_new.M552C21	Sum, nkspacbh, tot
cid_verif_at_nni	ACCUMULATION	INT8	CID verification/allocation failure. Not in use.	PMMOResult_AAL2_At_NNI_new.M552C19	Sum, nkspacbh, tot
common_at_nni	ACCUMULATION	INT8	The number of connection events started in the AAL2 signalling.	PMMOResult_AAL2_At_NNI_new.M552C24	Sum, nkspacbh, tot
congestion_at_nni	ACCUMULATION	INT8	Switching equipment congestion (#42). This counter provides the number of	PMMOResult_AAL2_At_NNI_new.M552C3	Sum, nkspacbh, tot

			connections terminated by Cause No. 42. The cause code indicates that the switching equipment that generates this cause is experiencing a period of high traffic.		
in_erq_attempt_at_nni	ACCUMULATION	INT8	The number of incoming AAL2 connection establishment requests.	PMMOResult_AAL2_At_NNI_new.M552C32	Sum, tot
in_erq_success_at_nni	ACCUMULATION	INT8	The number of successful incoming AAL2 connection establishments.	PMMOResult_AAL2_At_NNI_new.M552C33	Sum, tot
in_mod_attempt_at_nni	ACCUMULATION	INT8	The number of incoming AAL2 connection modification requests.	PMMOResult_AAL2_At_NNI_new.M552C36	Sum, tot
in_mod_success_at_nni	ACCUMULATION	INT8	The number of successful incoming AAL2 connection modifications.	PMMOResult_AAL2_At_NNI_new.M552C37	Sum, tot
info_not_impl_at_nni	ACCUMULATION	INT8	Inated by Cause No. 99. This indicates that the equipment sending this cause has received a message which includes	PMMOResult_AAL2_At_NNI_new.M552C10	Sum, nkspacbh, tot

			information elements/parameters not recognized because the information element identifiers/ parameter names are not defined, or are defined but not implemented by the equipment sending the cause. This cause indicates that the information elements/ parameters were discarded. However, the information element is not required in the message for the equipment sending the cause to process the message.		
invalid_info_at_nni	ACCUMULATION	INT8	Invalid information element contents (#100). Not in use.	PMMOResult_AAL2_At_NNI_new.M552C11	Sum, nkspacbh, tot
invalid_msg_at_nni	ACCUMULATION	INT8	Invalid message (#95). This counter provides the number of connections terminated by Cause No. 95. This cause is used to report an invalid message event only when no other cause in the invalid message class applies.	PMMOResult_AAL2_At_NNI_new.M552C7	Sum, nkspacbh, tot
link_char_verif_at_nni	ACCUMULATION	INT8	Required traffic characterizations	PMMOResult_AAL2_At_NNI_new.M552C2	Sum, nkspacbh,

			unavailable. Not in use.	2	tot
mandat_info_at_nni	ACCUMULATION	INT8	Mandatory information element is missing (#96). This counter provides the number of connections terminated by Cause No. 96. This cause indicates that the equipment sending the cause has received a message which is missing an information element which must be present in the message before the message can be processed.	PMMOResult_AAL2_At_NNI_new.M552C8	Sum, nkspacbh, tot
mod_fail_coll_at_nni	ACCUMULATION	INT8	The number of failed ALL2 connection modifications because of a collision.	PMMOResult_AAL2_At_NNI_new.M552C40	Sum, tot
mod_fail_int_at_nni	ACCUMULATION	INT8	The number of failed AAL2 connection modifications because of an internal error.	PMMOResult_AAL2_At_NNI_new.M552C39	Sum, tot
mod_fail_rem_at_nni	ACCUMULATION	INT8	The number of failed AAL2 connection	PMMOResult_AAL2_At_NNI_new.M552C41	Sum, tot

			modifications because of a failed remote.		
mod_fail_res_at_nni	ACCUMULATION	INT8	The number of failed AAL2 connection modifications because of an unavailable resource.	PMMOResult_AAL2_At_NNI_new.M552C38	Sum, tot
msg_not_impl_at_nni	ACCUMULATION	INT8	Message type non-existent or not implemented (#97). This counter provides the number of connections terminated by Cause No. 97. The cause indicates that the equipment sending the cause has received a message with a message type which it does not recognise either because it is not defined, or is defined but not implemented by the equipment.	PMMOResult_AAL2_At_NNI_new.M552C9	Sum, nkspacbh, tot
msg_unrecog_at_nni	ACCUMULATION	INT8	Message with an unrecognised parameter, discarded (#110). This counter provides the number of connections terminated by Cause No. 110. This cause indicates that the	PMMOResult_AAL2_At_NNI_new.M552C17	Sum, nkspacbh, tot

			equipment sending this cause has discarded a received message which includes a parameter that is not recognised.		
net_out_at_nni	ACCUMULATION	INT8	Network out of order (#38).	PMMOResult_AAL2_At_NNI_new.M552C1	Sum, nkspacbh, tot
no_channel_at_nni	ACCUMULATION	INT8	No circuit or channel available (#34). This counter provides the number of connections terminated by Cause No. 34. This indicates that at the moment there is no appropriate circuit or channel available to handle the call.	PMMOResult_AAL2_At_NNI_new.M552C28	Sum, nkspacbh, tot
no_route_at_nni	ACCUMULATION	INT8	No route to destination (#3). This counter provides the number of connections terminated by Cause No. 3. This indicates that the called party cannot be reached because the network through which the call has been routed does not serve the	PMMOResult_AAL2_At_NNI_new.M552C27	Sum, nkspacbh, tot

			destination desired.		
nodal_function_at_nni	ACCUMULATION	INT8	The number of nodal function transit connection events started in AAL2 signaling.	PMMOResult_AAL2_At_NNI_new.M552C25	Sum, nkspacbh, tot
out_erq_attempt_at_nni	ACCUMULATION	INT8	The number of outgoing AAL2 connection establishment requests.	PMMOResult_AAL2_At_NNI_new.M552C30	Sum, tot
out_erq_success_at_nni	ACCUMULATION	INT8	The number of successful outgoing AAL2 connection establishments.	PMMOResult_AAL2_At_NNI_new.M552C31	Sum, tot
out_mod_attempt_at_nni	ACCUMULATION	INT8	The number of outgoing AAL2 connection modification requests.	PMMOResult_AAL2_At_NNI_new.M552C34	Sum, tot
out_mod_success_at_nni	ACCUMULATION	INT8	The number of successful outgoing AAL2 connection modifications.	PMMOResult_AAL2_At_NNI_new.M552C35	Sum, tot
req_chan_at_nni	ACCUMULATION	INT8	Requested circuit/channel not available (#44). Not in use.	PMMOResult_AAL2_At_NNI_new.M552C4	Sum, nkspacbh, tot
res_man_overload_at_nni	ACCUMULATION	INT8	Resource manager overload. Connection establishment is rejected because resource manager overload protection is activated in the destination AAL type 2 node.	PMMOResult_AAL2_At_NNI_new.M552C29	Sum, nkspacbh, tot
res_unavail_at_nni	ACCUMULATION	INT8	Resource unavailable unspecified (#47).	PMMOResult_AAL2_At_NNI_new.M552C5	Sum, nkspacbh, tot

			This counter provides the number of connections terminated by Cause No. 47. This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.		
sai_alloc_at_nni	ACCUMULATION	INT8	Originating Signalling Association Identifier (OSAI) allocation failure. An internal resource reservation fails for AAL2 connection establishment. Internal (nonprotocol) error.	PMMOResult_AAL2_At_NNI_new.M552C18	Sum, nkspacbh, tot
temp_fail_at_nni	ACCUMULATION	INT8	Temporary failure (#41). This counter provides the number of connections terminated by Cause No. 41. The cause code indicates that the network is not functioning correctly and that the condition is not likely to last for a	PMMOResult_AAL2_At_NNI_new.M552C2	Sum, nkspacbh, tot

			long period of time. For example, the user may wish to attempt another call almost immediately.		
timer_exp_blo_at_nni	ACCUMULATION	INT8	Recovery on BLO_timer expiry (#102). This counter provides the number of connections terminated by Cause No. 102 block request. Block request is a Primitive to request the AAL type 2 signalling entity to locally block a particular, unblocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_AAL2_At_NNI_new.M552C15	Sum, nkspacbh, tot
timer_exp_erq_at_nni	ACCUMULATION	INT8	Recovery on ERQ_timer expiry (#102). This counter provides the number of connections terminated by Cause No. 102 establish request. Establish request Primitive is used by the AAL type 2 served user to start the establishment of a new AAL type 2 connection.	PMMOResult_AAL2_At_NNI_new.M552C12	Sum, nkspacbh, tot
timer_exp_mod_at_nni	ACCUMULATION	INT8	The number of failed AAL2	PMMOResult_AAL2_At_NNI_new.M552C4	Sum, tot

			connection modifications because of a timer expiring.	2	
timer_exp_rel_at_nni	ACCUMULATION	INT8	Recovery on REL_timer expiry (#102). This counter provides the number of connections terminated by Cause No. 102 release request. The Release request Primitive is used by the AAL type 2 served user to start the clearing of an AAL type 2 connection.	PMMOResult_AAL2_At_NNI_new.M552C13	Sum, nkspacbh, tot
timer_exp_res_at_nni	ACCUMULATION	INT8	Recovery on RES_timer expiry (#102). This counter provides the number of connections terminated by Cause No. 102 reset request. Reset request is a Primitive to request the AAL type 2 signalling entity to reset a particular channel, all channels on a particular AAL type 2 path, or all channels on all AAL type 2 paths	PMMOResult_AAL2_At_NNI_new.M552C14	Sum, nkspacbh, tot

			between two nodes to the "Idle" state and to indicate this to the peer AAL type 2 signalling entity.		
timer_exp_ubl_at_nni	ACCUMULATION	INT8	Recovery on UBL_timer expiry (#102). This counter provides the number of connections terminated by Cause No. 102 unblock request. Unblock request is a Primitive to request the AAL type 2 signalling entity to locally unblock a particular, blocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_AAL2_At_NNI_new.M552C16	Sum, nkspacbh, tot
unalloc_numb_at_nni	ACCUMULATION	INT8	Unallocated (unassigned) number (#1). This counter provides the number of the connections terminated by Cause No. 1. It indicates that the called party cannot be reached because, although the called party number is in a valid format, it is not currently allocated (assigned).	PMMOResult_AAL2_At_NNI_new.M552C26	Sum, nkspacbh, tot

7.40.2 Signalling_Point.Nokia.UMTS.aal2_signalling

-Obsolete in RN2.1- AAL2 Signalling statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
aal_para_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- AAL parameters can not be supported (No.93). This parameter provides the number of connections terminated to Cause No.93. This cause is used to indicate that the requested AAL parameters can not be provided.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C6	Sum, nkspacbh, tot
aal2pi_verif_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- The AAL type 2 Id verification/allocation failure. Requested AAL type 2 Path Identifier was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C20	Sum, nkspacbh, tot
adj_node_not_avail_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Adjacent node not available. Connection establishment rejected since the signalling relation into the adjacent	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C23	Sum, nkspacbh, tot

			AAL type 2 node was not available. Internal (nonprotocol) error.		
binding_id_verif_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Binding id verification failure. Requested Binding Identifier was not available at the destination AAL type 2node. Internal (non protocol) error.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C21	Sum, nkspacbh, tot
cid_verif_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-The AAL type 2 Id verification/allocation failure.Requested AAL type 2 Path Identifier was not available in the destination AAL type 2 node. Internal (non protocol) error.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C19	Sum, nkspacbh, tot
common_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Successful connection established.The number of connection events started in the AAL2 signalling. The successful cases are stated in the program block operation. Which can still fail at a later stage.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C24	Sum, nkspacbh, tot
congestion_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Switching equipment	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C3	Sum, nkspacbh, tot

			congestion (No.42). This parameter provides the number of connections terminated to Cause No.42. The cause code indicates that the switching equipment generating this cause is experiencing a period of high traffic. M545C3 Since RN1.5		
info_not_impl_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Information element non existent or not implemented (No.99). This parameter provides the number of connections terminated to Cause No.99. This indicates that the equipment sending this cause has received a message which includes information elements/parameters not recognized because the information element identifiers/parameter names are not defined or are	PMMOResult_NET_CODE_AAL2_AT_NNI. M545C10	Sum, nkspacbh, tot

			defined but not implemented by the equipment sending the cause. This cause indicates that the information elements/parameters were discarded.However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.		
invalid_info_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Invalid information element contents (No.100). This parameter provides the number of connections terminated to Cause No.100. This cause indicates that the equipment sending this cause has received an information element which it has implemented however, one or more fields in the information element are coded in a way that has not been implemented by the equipment sending this cause.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C11	Sum, nkspacbh, tot
invalid_msg_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Invalid message (No.95). This	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C7	Sum, nkspacbh, tot

			parameter provides the number of connections terminated to Cause No.95. This cause is used to report an invalid message event only when no other cause in the invalid message class applies.		
link_char_verif_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Required traffic characterizations unavailable. Requested traffic characterization was not available in the destination AALtype 2 node. Internal (non protocol) error.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C22	Sum, nkspacbh, tot
mandat_info_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Mandatory information element is missing (No.96). This parameter provides the number of connections terminated to Cause No.96. This cause indicates that the equipment sending the cause has received a message which is missing an information element which must be present in the	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C8	Sum, nkspacbh, tot

			message before that message can be processed.		
msg_not_impl_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Message type non existent or not implemented (No.97). This parameter provides the number of connections terminated to Cause No.97. This indicates that the equipment sending this cause has received a message with a message type which it does not recognize either because this is a message not defined or defined but not implemented by the equipment sending this cause.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C9	Sum, nkspacbh, tot
msg_unrecog_nni	ACCUMULATION	INT8	-Obsolete in RN2.1- Message with unrecognized parameter, discarded (No.110). This parameter provides the number of connections terminated to Cause No.110. This cause indicates that the equipment sending this cause has discarded a received message which includes a parameter that is	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C17	Sum, nkspacbh, tot

			not recognized.		
net_out_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Network out of order (No.38). This parameter provides the number of connections terminated by Cause No.38. This indicates that the network is not functioning correctly and that the condition is likely to last a relatively long period of time; for example, immediately attempting the call again is not likely to be successful.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C1	Sum, nkspacbh, tot
no_channel_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-No circuit or channel available (No.34).This parameter provides the number of connections terminated to CauseNo. 34. This indicates that there is no appropriate circuit or channel presently available to handle the call.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C28	Sum, nkspacbh, tot
no_route_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-No route to destination	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C27	Sum, nkspacbh, tot

			(No.3).This parameter provides a count of the number of connections terminated by CauseNo. 3. This indicates that the called party cannot be reached because the network through which the call has been routed does not serve the destination desired.		
nodal_function_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Successful Nodal function transit connection established.The number of Nodal function transit connection events started in the AAL2signalling. The successful cases are stated in the program block operation.Which can still fail at a later stage.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C25	Sum, nkspacbh, tot
req_chan_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Requested circuit/channel not available (No.44). This parameter provides the number of connections terminated to Cause No.44. This cause is returned when the circuit or channel indicated by the requesting entity	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C4	Sum, nkspacbh, tot

			cannot be provided by the other side of the interface.		
res_man_overload	ACCUMULATION	INT8	-Obsolete in RN2.1-AD Resource manager overload. Connection establishment rejected since the resource manager overload protection is activated (ticket not received from ticket service) in the destination AAL type 2 node.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C29	Sum, nkspacbh, tot
res_unavail_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Resource unavailable unspecified (No.47). This parameter provides the number of connections terminated to Cause No.47. This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C5	Sum, nkspacbh, tot
sai_alloc_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-OSAI allocation failure. This is the same as the hand process reservation	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C18	Sum, nkspacbh, tot

			failure. Internal (non protocol) error.		
temp_fail_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Temporary failure (No.41). This parameter provides the number of connections terminated to Cause No.41. The cause code indicates that the network is not functioning correctly and that the condition is not likely to last for a long period of time; for example, the user may wish to try another call attempt almost immediately.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C2	Sum, nkspacbh, tot
timer_exp_blo_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-NI Recovery on BLO_timer expiry (No.102). This parameter provides the number of connections terminated to Cause No.102 block request. Block request is a Primitive to request the AAL type 2signalling entity to locally block a particular, unblocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C15	Sum, nkspacbh, tot

timer_exp_erq_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Recovery on ERQ_timer expiry (No.102). This parameter provides the number of connections terminated to Cause No.102 establish request. Establish request Primitive is used by the AAL type 2served user to start the establishment of a new AAL type 2 connection.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C12	Sum, nkspacbh, tot
timer_exp_rel_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-NI Recovery on REL_timer expiry (No.102). This parameter provides the number of connections terminated to Cause No.102 release request. The Release request Primitive is used by the AAL type2 served user to start the clearing of an AAL type 2 connection.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C13	Sum, nkspacbh, tot
timer_exp_res_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-NI Recovery on RES_timer expiry (No.102). This parameter provides the number of	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C14	Sum, nkspacbh, tot

			connections terminated to Cause No.102 reset request. Reset request is a Primitive to request the AAL type 2signalling entity to reset a particular channel, all channels on a particular AALtype 2 path, or all channels on all AAL type 2 paths between two nodes to the "Idle" state and to indicate this to the peer AAL type 2 signalling entity.		
timer_exp_ubl_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Recovery on UBL_timer expiry (No.102). This parameter provides the number of connections terminated to Cause No.102 unblock request. Unblock request is a Primitive to request the AAL type 2signalling entity to locally unblock a particular, blocked AAL type 2 path and to indicate this to the peer AAL type 2 signalling entity.	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C16	Sum, nkspacbh, tot
unalloc_numb_nni	ACCUMULATION	INT8	-Obsolete in RN2.1-Unallocated (unassigned)	PMMOResult_NET_CODE_AAL2_AT_NNI.M545C26	Sum, nkspacbh, tot

			number (No.1).This parameter provides a count of the connections terminated by CauseNo. 1. It indicates that the called party cannot be reached because, although the called party number is in a valid format, it is not currently allocated (assigned).		

7.40.3 Signalling_Point.Nokia.UMTS.mtp_matrix_signalling_traff

MTP matrix signalling traffic statistics

The performance data measurements for this KPI group are recorded against the combination of Signalling_Point, Originating_Point (originating_point_id) and Destination_Point (destination_point_id) .

KPI	Type	Data Type	Description	Derivation	Aggregation
received_octets	ACCUMULATION	INTEGER	Number of SIF and SIO octets handled with given OPD, DPC, SIO, 6.6 in ITU-T Q.752.	PMMOResult_MTP_Matrix_Sig_Traffic.M215B2C1	Sum, tot
transmitted_octets	ACCUMULATION	INTEGER	Number of MSUs handled with given OPD, DPC, SIO, 6.7 in ITU-T Q.752.	PMMOResult_MTP_Matrix_Sig_Traffic.M215B2C2	Sum, tot

7.40.4 Signalling_Point.Nokia.UMTS.mtp_signalling_point_status

MTP signalling point status statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
adjacent_sp_ina_duration	ACCUMULATION	INTEGER	Duration of adjacent signal point inaccessible, 5.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C1	Sum, tot
adjacent_sp_inaccessible	ACCUMULATION	INTEGER	Number of adjacent signal point inaccessible, 5.1 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C2	Sum, tot
msu_discarded_rec_msus	ACCUMULATION	INTEGER	Number of message signal units (MSU) discarded due to routing data error for received msus, part of 5.5 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C5	Sum, tot
msu_discarded_trans_msus	ACCUMULATION	INTEGER	Number of message signal units (MSU) discarded due to routing data error for transmitted msus, part of 5.5 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C4	Sum, tot
nbr_of_received_tfc	ACCUMULATION	INTEGER	Number of transfer controlled messages received, 5.8 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C3	Sum, tot
unauthorized_stp_msus_inh_dpc	ACCUMULATION	INTEGER	Unauthorized STP MSU count for inhibited DPC.	PMMOResult_MTP_Sig_Point_Status.M211B2C6	Sum, tot
unauthorized_stp_msus_inh_opc	ACCUMULATION	INTEGER	Unauthorized STP MSU count for inhibited OPC.	PMMOResult_MTP_Sig_Point_Status.M211B2C7	Sum, tot

unauthorized_stp_msus_inh_stp	ACCUMULATION	INTEGER	Unauthorized STP MSU count for inhibited STP.	PMMOResult_MTP_Sig_Point_Status.M211B2C8	Sum, tot
upus_received	ACCUMULATION	INTEGER	User part unavailable MSU received, 5.7 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C10	Sum, tot
upus_transmitted	ACCUMULATION	INTEGER	User part unavailable MSU transmitted, 5.6 in ITU-T Q.752.	PMMOResult_MTP_Sig_Point_Status.M211B2C9	Sum, tot

7.40.5 Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_sp

MTP signalling traffic statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
sif_and_sio_oct_rec_with_opc	ACCUMULATION	INT8	Number of SIF and SIO octets received from OPC, 6.1 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B2C1	Sum, tot
stp_1	INTENSITY	INTEGER	Signalling Transfer Point 1 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C1	Sum, avg, max, min, tot
stp_2	INTENSITY	INTEGER	Signalling Transfer Point 2 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C3	Sum, avg, max, min, tot
stp_3	INTENSITY	INTEGER	Signalling Transfer Point 3 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C5	Sum, avg, max, min, tot
stp_4	INTENSITY	INTEGER	Signalling Transfer Point 4 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C7	Sum, avg, max, min, tot
stp_5	INTENSITY	INTEG	Signalling	PMMOResult_MTP_Si	Sum, avg,

		ER	Transfer Point 5 identifier.	g_Traffic_Report_SP. M213B3C9	max, min, tot
stp_6	INTENSITY	INTEGER	Signalling Transfer Point 6 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C11	Sum, avg, max, min, tot
stp_7	INTENSITY	INTEGER	Signalling Transfer Point 7 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C13	Sum, avg, max, min, tot
stp_8	INTENSITY	INTEGER	Signalling Transfer Point 8 identifier.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C15	Sum, avg, max, min, tot
total_octets_rec_trans	ACCUMULATION	INT8	Total number of SIF and SIO octets (received + transmitted)	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B2C1+M213B2C2	Sum, tot
total_octets_trans_to_dpc	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC (total), 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B2C2	Sum, tot
transmitted_octets_1	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 1, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C2	Sum, tot
transmitted_octets_2	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 2, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C4	Sum, tot
transmitted_octets_3	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 3, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP. M213B3C6	Sum, tot
transmitted_octets_4	ACCUMULATION	INT8	Number for transmitted SIF	PMMOResult_MTP_Sig_Traffic_Report_SP.	Sum, tot

			and SIO octets to DPC via STP 4, 6.2 in ITU-T Q.752.	M213B3C8	
transmitted_octets_5	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 5, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C10	Sum, tot
transmitted_octets_6	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 6, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C12	Sum, tot
transmitted_octets_7	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 7, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C14	Sum, tot
transmitted_octets_8	ACCUMULATION	INT8	Number for transmitted SIF and SIO octets to DPC via STP 8, 6.2 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_SP.M213B3C16	Sum, tot

7.40.6 Signalling_Point.Nokia.UMTS.mtp_signalling_traf_report_userparts

MTP signalling traffic statistics for user parts

KPI	Type	Data Type	Description	Derivation	Aggregation
received_octets	ACCUMULATION	INTEGER	Number of SIF and SIO received	PMMOResult_MTP_Sig_Traffic_Report_User	Sum, tot

			with given SIO, 6.3 in ITU-T Q.752.	Parts.M214B2C1	
transmitted_octets	ACCUMULATION	INTEGER	Number of SIF and SIO transmitted with given SIO, 6.3 in ITU-T Q.752.	PMMOResult_MTP_Sig_Traffic_Report_User Parts.M214B2C2	Sum, tot

7.40.7 Signalling_Point.Nokia.UMTS.routing_error

Routing error statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
routing_failure_net_congestion	ACCUMULATION	INTEGER	Routing error - due to network overload, 7.4 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C8	Sum, tot
routing_failure_net_failure	ACCUMULATION	INTEGER	Routing error - due to failure in network, 7.3 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C7	Sum, tot
routing_failure_of_gt_type_1	ACCUMULATION	INTEGER	Routing error - no translation of GT type 1, 7.1 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C1	Sum, tot
routing_failure_of_gt_type_2	ACCUMULATION	INTEGER	Routing error - no translation of GT type 2.	PMMOResult_SCCP_Sig_Point.M216B2C2	Sum, tot
routing_failure_of_gt_type_3	ACCUMULATION	INTEGER	Routing error - no translation of GT type 3.	PMMOResult_SCCP_Sig_Point.M216B2C3	Sum, tot
routing_failure_of_gt_type_4	ACCUMULATION	INTEGER	Routing error - no translation of GT type 4.	PMMOResult_SCCP_Sig_Point.M216B2C4	Sum, tot
routing_failure_of_specific_gt	ACCUMULATION	INTEGER	Routing error - no translation of specific GT, 7.2 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C6	Sum, tot

routing_failure_of_unknown_gt	ACCUMULATION	INTEGER	Routing error - no translation of unknown GT, 7.1 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C5	Sum, tot
routing_failure_reason_unknown	ACCUMULATION	INTEGER	Routing error - unknown reason, 7.9 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C12	Sum, tot
routing_failure_ss_congestion	ACCUMULATION	INTEGER	Routing error - due to subsystem overload, 7.6 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C10	Sum, tot
routing_failure_subsys_failure	ACCUMULATION	INTEGER	Routing error - due to failure in sussystem 7.5 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C9	Sum, tot
routing_failure_unequipped_usr	ACCUMULATION	INTEGER	Routing error - unequipped user, 7.7 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C11	Sum, tot

7.40.8 Signalling_Point.Nokia.UMTS.sccp_signalling_messages

SCCP signalling meassages statistics

KPI	Type	Data Type	Description	Derivation	Aggregation
cr_messages_received_from_mtp	ACCUMULATION	INTEGER	ISUP embedded CRs plus CRs received from MTP, 9bis.7 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C2	Sum, tot
cr_messages_sent_to_mtp	ACCUMULATION	INTEGER	ISUP embedded CRs plus CRs sent to MTP, 9bis.5 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C1	Sum, tot

cref_messages_receiv_from_mtp	ACCUMULATION	INTEGER	CREF messages received from MTP, 9bis.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C4	Sum, tot
cref_messages_sent_to_mtp	ACCUMULATION	INTEGER	CREF messages sent to MTP, 9bis.6 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C3	Sum, tot
err_messages_received_from_mtp	ACCUMULATION	INTEGER	ERR messages received from MTP, 9bis.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C8	Sum, tot
err_messages_sent_to_mtp	ACCUMULATION	INTEGER	ERR messages sent to MTP, 9bis.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C7	Sum, tot
failure_rel_compl_sup_dpc_cl_2	ACCUMULATION	INTEGER	Failure of release complete supervision, class 2, 7.15 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C9	Sum, tot
failure_rel_compl_sup_dpc_cl_3	ACCUMULATION	INTEGER	Failure of release complete supervision, class 3, 7.15 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C10	Sum, tot
ludt_messages_received	ACCUMULATION	INTEGER	LUDT messages received, 9bis.19 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C23	Sum, tot
ludt_messages_sent	ACCUMULATION	INTEGER	LUDT messages sent, 9bis.17 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C22	Sum, tot
ludts_messages_received	ACCUMULATION	INTEGER	LUDTS messages received, 9bis.20 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C25	Sum, tot
ludts_messages_sent	ACCUMULATION	INTEGER	LUDTS messages sent, 9bis.18 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C24	Sum, tot
release_of_connection_to_dpc	ACCUMULATION	INTEGER	Provider initiated release of a	PMMOResult_SCCP_Sig_Point.M216B3C14	Sum, tot

			connection, 7.18 in ITU-T Q.752.		
reset_of_connection_to_dpc	ACCUMULATION	INTEGER	Provider initiated reset of a connection, 7.17 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C13	Sum, tot
rsr_messages_received_from_mtp	ACCUMULATION	INTEGER	RSR messages received from MTP, 9bis.10 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C6	Sum, tot
rsr_messages_sent_to_mtp	ACCUMULATION	INTEGER	RSR messages sent to MTP, 9bis.9 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C5	Sum, tot
syntax_error_detected	ACCUMULATION	INTEGER	Observed syntax errors, 7.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C13	Sum, tot
timer_tiar_expiry_for_dpc_cl_2	ACCUMULATION	INTEGER	Timer T(iar) expiry, class 2, 7.16 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C11	Sum, tot
timer_tiar_expiry_for_dpc_cl_3	ACCUMULATION	INTEGER	Timer T(iar) expiry, class 3, 7.16 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C12	Sum, tot
udt_messages_received	ACCUMULATION	INTEGER	UDT messages received, 9bis.3 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C15	Sum, tot
udt_messages_sent	ACCUMULATION	INTEGER	UDT messages sent, 9bis.1 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C14	Sum, tot
udts_messages_received	ACCUMULATION	INTEGER	UDTS messages received, 9bis.4 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C17	Sum, tot
udts_messages_se	ACCUMULA	INTEG	UDTS messages	PMMOResult_SCCP_S	Sum, tot

nt	TION	ER	sent, 9bis.2 in ITU-T Q.752.	ig_Point.M216B2C16	
xudt_messages_received	ACCUMULATION	INTEGER	XUDT messages received, 9bis.15 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C19	Sum, tot
xudt_messages_sent	ACCUMULATION	INTEGER	XUDT messages sent, 9bis.13 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C18	Sum, tot
xudts_messages_received	ACCUMULATION	INTEGER	XUDTS messages received, 9bis.16 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C21	Sum, tot
xudts_messages_sent	ACCUMULATION	INTEGER	XUDTS messages sent, 9bis.14 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B2C20	Sum, tot

7.40.9 Signalling_Point.Nokia.UMTS.sccp_subsystem1_msgs

SCCP subsystem1 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_1	ACCUMULATION	INTEGER	Subsystem 1 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C18	Sum, tot
ss_congested_messages_rxed_1	ACCUMULATION	INTEGER	SCCP / Subsystem 1 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C16	Sum, tot
ss_prohibited_messages_rxed_1	ACCUMULATION	INTEGER	Subsystem 1 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C17	Sum, tot
subsystem_number_1	INTENSITY	INTEGER	Identifier of subsystem 1	PMMOResult_SCCP_Sig_Point.M216B3C15	Constant, tot, min, max

7.40.10Signalling_Point.Nokia.UMTS.sccp_subsystem10_msgs

SCCP subsystem10 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_10	ACCUMULATION	INTEGER	Subsystem 10 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C54	Sum, tot
ss_congested_messages_rxed_10	ACCUMULATION	INTEGER	SCCP / Subsystem 10 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C52	Sum, tot
ss_prohibited_messages_rxed_10	ACCUMULATION	INTEGER	Subsystem 10 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C53	Sum, tot
subsystem_number_10	INTENSITY	INTEGER	Identifier of subsystem 10	PMMOResult_SCCP_Sig_Point.M216B3C51	Constant, tot, min, max

7.40.11Signalling_Point.Nokia.UMTS.sccp_subsystem11_msgs

SCCP subsystem11 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_11	ACCUMULATION	INTEGER	Subsystem 11 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C58	Sum, tot
ss_congested_messages_rxed_11	ACCUMULATION	INTEGER	SCCP / Subsystem 11 congested messages received, 8.8 in	PMMOResult_SCCP_Sig_Point.M216B3C56	Sum, tot

			ITU-T Q.752.		
ss_prohibited_messages_rxed_11	ACCUMULATION	INTEGER	Subsystem 11 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C57	Sum, tot
subsystem_number_11	INTENSITY	INTEGER	Identifier of subsystem 11	PMMOResult_SCCP_Sig_Point.M216B3C55	Constant, tot, min, max

7.40.12Signalling_Point.Nokia.UMTS.sccp_subsystem12_msgs

SCCP subsystem12 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_12	ACCUMULATION	INTEGER	Subsystem 12 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C62	Sum, tot
ss_congested_messages_rxed_12	ACCUMULATION	INTEGER	SCCP / Subsystem 12 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C60	Sum, tot
ss_prohibited_messages_rxed_12	ACCUMULATION	INTEGER	Subsystem 12 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C61	Sum, tot
subsystem_number_12	INTENSITY	INTEGER	Identifier of subsystem 12	PMMOResult_SCCP_Sig_Point.M216B3C59	Constant, tot, min, max

7.40.13Signalling_Point.Nokia.UMTS.sccp_subsystem13_msgs

SCCP subsystem13 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messa	ACCUMULA	INTEG	Subsystem 13	PMMOResult_SCCP_S	Sum, tot

ges_rxed_13	TION	ER	allowed messages received, 8.12 in ITU-T Q.752.	ig_Point.M216B3C66	
ss_congested_messages_rxed_13	ACCUMULATION	INTEGER	SCCP / Subsystem 13 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C64	Sum, tot
ss_prohibited_messages_rxed_13	ACCUMULATION	INTEGER	Subsystem 13 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C65	Sum, tot
subsystem_number_13	INTENSITY	INTEGER	Identifier of subsystem 13	PMMOResult_SCCP_Sig_Point.M216B3C63	Constant, tot, min, max

7.40.14Signalling_Point.Nokia.UMTS.sccp_subsystem14_msgs

SCCP subsystem14 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_14	ACCUMULATION	INTEGER	Subsystem 14 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C70	Sum, tot
ss_congested_messages_rxed_14	ACCUMULATION	INTEGER	SCCP / Subsystem 14 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C68	Sum, tot
ss_prohibited_messages_rxed_14	ACCUMULATION	INTEGER	Subsystem 14 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C69	Sum, tot

subsystem_number_14	INTENSITY	INTEGER	Identifier of subsystem 14	PMMOResult_SCCP_Sig_Point.M216B3C67	Constant, tot, min, max

7.40.15Signalling_Point.Nokia.UMTS.sccp_subsystem15_msgs

SCCP subsystem15 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_15	ACCUMULATION	INTEGER	Subsystem 15 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C74	Sum, tot
ss_congested_messages_rxed_15	ACCUMULATION	INTEGER	SCCP / Subsystem 15 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C72	Sum, tot
ss_prohibited_messages_rxed_15	ACCUMULATION	INTEGER	Subsystem 15 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C73	Sum, tot
subsystem_number_15	INTENSITY	INTEGER	Identifier of subsystem 15	PMMOResult_SCCP_Sig_Point.M216B3C71	Constant, tot, min, max

7.40.16Signalling_Point.Nokia.UMTS.sccp_subsystem16_msgs

SCCP subsystem16 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_16	ACCUMULATION	INTEGER	Subsystem 16 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C78	Sum, tot
ss_congested_messages_rxed_16	ACCUMULATION	INTEGER	SCCP / Subsystem 16 congested messages received, 8.8 in	PMMOResult_SCCP_Sig_Point.M216B3C76	Sum, tot

			ITU-T Q.752.		
ss_prohibited_messages_rxed_16	ACCUMULATION	INTEGER	Subsystem 16 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C77	Sum, tot
subsystem_number_16	INTENSITY	INTEGER	Identifier of subsystem 16	PMMOResult_SCCP_Sig_Point.M216B3C75	Constant, tot, min, max

7.40.17Signalling_Point.Nokia.UMTS.sccp_subsystem17_msgs

SCCP subsystem17 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_17	ACCUMULATION	INTEGER	Subsystem 17 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C82	Sum, tot
ss_congested_messages_rxed_17	ACCUMULATION	INTEGER	SCCP / Subsystem 17 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C80	Sum, tot
ss_prohibited_messages_rxed_17	ACCUMULATION	INTEGER	Subsystem 17 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C81	Sum, tot
subsystem_number_17	INTENSITY	INTEGER	Identifier of subsystem 17	PMMOResult_SCCP_Sig_Point.M216B3C79	Constant, tot, min, max

7.40.18Signalling_Point.Nokia.UMTS.sccp_subsystem18_msgs

SCCP subsystem18 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_18	ACCUMULATION	INTEGER	Subsystem 18 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C86	Sum, tot
ss_congested_messages_rxed_18	ACCUMULATION	INTEGER	SCCP / Subsystem 18 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C84	Sum, tot
ss_prohibited_messages_rxed_18	ACCUMULATION	INTEGER	Subsystem 18 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C85	Sum, tot
subsystem_number_18	INTENSITY	INTEGER	Identifier of subsystem 18	PMMOResult_SCCP_Sig_Point.M216B3C83	Constant, tot, min, max

7.40.19Signalling_Point.Nokia.UMTS.sccp_subsystem19_msgs

SCCP subsystem19 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_19	ACCUMULATION	INTEGER	Subsystem 19 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C90	Sum, tot
ss_congested_messages_rxed_19	ACCUMULATION	INTEGER	SCCP / Subsystem 19 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C88	Sum, tot
ss_prohibited_messages_rxed_19	ACCUMULATION	INTEGER	Subsystem 19 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C89	Sum, tot
subsystem_numbe	INTENSITY	INTEG	Identifier of	PMMOResult_SCCP_S	Constant,

r_19		ER	subsystem 19	ig_Point.M216B3C87	tot, min, max

7.40.20Signalling_Point.Nokia.UMTS.sccp_subsystem2_msgs

SCCP subsystem2 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_2	ACCUMULATION	INTEGER	Subsystem 2 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C22	Sum, tot
ss_congested_messages_rxed_2	ACCUMULATION	INTEGER	SCCP / Subsystem 2 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C20	Sum, tot
ss_prohibited_messages_rxed_2	ACCUMULATION	INTEGER	Subsystem 2 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C21	Sum, tot
subsystem_number_2	INTENSITY	INTEGER	Identifier of subsystem 2	PMMOResult_SCCP_Sig_Point.M216B3C19	Constant, tot, min, max

7.40.21Signalling_Point.Nokia.UMTS.sccp_subsystem20_msgs

SCCP subsystem20 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_20	ACCUMULATION	INTEGER	Subsystem 20 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C94	Sum, tot

ss_congested_messages_rxed_20	ACCUMULATION	INTEGER	SCCP / Subsystem 20 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C92	Sum, tot
ss_prohibited_messages_rxed_20	ACCUMULATION	INTEGER	Subsystem 20 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C93	Sum, tot
subsystem_number_20	INTENSITY	INTEGER	Identifier of subsystem 20	PMMOResult_SCCP_Sig_Point.M216B3C91	Constant, tot, min, max

7.40.22Signalling_Point.Nokia.UMTS.sccp_subsystem3_msgs

SCCP subsystem3 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_3	ACCUMULATION	INTEGER	Subsystem 3 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C26	Sum, tot
ss_congested_messages_rxed_3	ACCUMULATION	INTEGER	SCCP / Subsystem 3 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C24	Sum, tot
ss_prohibited_messages_rxed_3	ACCUMULATION	INTEGER	Subsystem 3 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C25	Sum, tot
subsystem_number_3	INTENSITY	INTEGER	Identifier of subsystem 3	PMMOResult_SCCP_Sig_Point.M216B3C23	Constant, tot, min, max

7.40.23Signalling_Point.Nokia.UMTS.sccp_subsystem4_msgs

SCCP subsystem4 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_4	ACCUMULATION	INTEGER	Subsystem 4 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C30	Sum, tot
ss_congested_messages_rxed_4	ACCUMULATION	INTEGER	SCCP / Subsystem 4 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C28	Sum, tot
ss_prohibited_messages_rxed_4	ACCUMULATION	INTEGER	Subsystem 4 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C29	Sum, tot
subsystem_number_4	INTENSITY	INTEGER	Identifier of subsystem 4	PMMOResult_SCCP_Sig_Point.M216B3C27	Constant, tot, min, max

7.40.24Signalling_Point.Nokia.UMTS.sccp_subsystem5_msgs

SCCP subsystem5 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_5	ACCUMULATION	INTEGER	Subsystem 5 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C34	Sum, tot
ss_congested_messages_rxed_5	ACCUMULATION	INTEGER	SCCP / Subsystem 5 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C32	Sum, tot
ss_prohibited_mes	ACCUMULA	INTEG	Subsystem 5	PMMOResult_SCCP_S	Sum, tot

sages_rxed_5	TION	ER	prohibited messages received, 8.11 in ITU-T Q.752.	ig_Point.M216B3C33	
subsystem_number_5	INTENSITY	INTEGER	Identifier of subsystem 5	PMMOResult_SCCP_Sig_Point.M216B3C31	Constant, tot, min, max

7.40.25Signalling_Point.Nokia.UMTS.sccp_subsystem6_msgs

SCCP subsystem6 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_6	ACCUMULATION	INTEGER	Subsystem 6 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C38	Sum, tot
ss_congested_messages_rxed_6	ACCUMULATION	INTEGER	SCCP / Subsystem 6 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C36	Sum, tot
ss_prohibited_messages_rxed_6	ACCUMULATION	INTEGER	Subsystem 6 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C37	Sum, tot
subsystem_number_6	INTENSITY	INTEGER	Identifier of subsystem 6	PMMOResult_SCCP_Sig_Point.M216B3C35	Constant, tot, min, max

7.40.26Signalling_Point.Nokia.UMTS.sccp_subsystem7_msgs

SCCP subsystem7 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_7	ACCUMULATION	INTEGER	Subsystem 7 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C42	Sum, tot

ss_congested_messages_rxed_7	ACCUMULATION	INTEGER	SCCP / Subsystem 7 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C40	Sum, tot
ss_prohibited_messages_rxed_7	ACCUMULATION	INTEGER	Subsystem 7 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C41	Sum, tot
subsystem_number_7	INTENSITY	INTEGER	Identifier of subsystem 7	PMMOResult_SCCP_Sig_Point.M216B3C39	Constant, tot, min, max

7.40.27Signalling_Point.Nokia.UMTS.sccp_subsystem8_msgs

SCCP subsystem8 messages

7.40.28 Signalling_Point.Nokia.UMTS.sccp_subsystem9_msgs

SCCP subsystem9 messages

KPI	Type	Data Type	Description	Derivation	Aggregation
ss_allowed_messages_rxed_9	ACCUMULATION	INTEGER	Subsystem 9 allowed messages received, 8.12 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C50	Sum, tot
ss_congested_messages_rxed_9	ACCUMULATION	INTEGER	SCCP / Subsystem 9 congested messages received, 8.8 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C48	Sum, tot
ss_prohibited_messages_rxed_9	ACCUMULATION	INTEGER	Subsystem 9 prohibited messages received, 8.11 in ITU-T Q.752.	PMMOResult_SCCP_Sig_Point.M216B3C49	Sum, tot
subsystem_number_9	INTENSITY	INTEGER	Identifier of subsystem 9	PMMOResult_SCCP_Sig_Point.M216B3C47	Constant, tot, min, max

7.41 WAC_Unit Performance Indicators

This section shows the key performance indicators and other counters for the WAC_Unit object, divided into the following sub-sections:

- WAC_Unit.Nokia.UMTS.wac_overload_control

7.41.1 WAC_Unit.Nokia.UMTS.wac_overload_control

Window Access Control (WAC) overload control statistics.

KPI	Type	Data Type	Description	Derivation	Aggregation
wac_gate_req_total_rej	ACCUMULATION	INT8	The total number of rejected WAC (Windows Access Control) Gate requests. When an	PMMOResult_Overload_WAC.M594C1	Sum, tot

			entity wants to establish some kind of a signalling connection, such as an AAL2 signalling connection, it should first ask permission from WAC Gate. If the maximum number of accesses is reached, the request will be rejected or put into a queue, waiting for resources to be released. With WAC in place, it is possible to protect system resources and prevent overload situations.		
wac_gate_req_total	ACCUMULATION	INT8	The total number of WAC (Windows Access Control) Gate requests that has been released and rejected. When an entity wants to establish some kind of a signalling connection, such as an AAL2 signalling connection, it should firstly ask permission from WAC Gate. If the maximum number	PMMOResult_Overload_WAC.M594C0	Sum, tot

			of accesses is reached, the request is rejected or put into a queue, waiting for resources to be released by other. With WAC in place, it is possible to protect system resources and prevent overload situations.		

8 Performance Alarms

This section shows details of the alarms that are defined in this technology pack module:

None.

9 Reports

This section shows details of the reports that are defined in this technology pack module.

All reports can be run as raw, daily, weekly or monthly reports.

Where a KPI is marked (DA), it means Data Availability is to be reported upon it.

9.1 AGPS_IF Reports.

This section shows reports for the AGPS_IF object.

9.1.1 AGPS_IF Server Connection Report

This report describes the connections and data requests to the AGPS Server for AGPS functionality.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.AGPS_IF
Primary Object	AGPS_IF
Graph for AGPS Connection and Data Requests	AGPS_IF.Nokia.agps_measurements._ %_successful_connections_to_agps_server, AGPS_IF.Nokia.agps_measurements._

	%_successful_data_requests_from_agps_server
Table for AGPS Connection and Data Requests	AGPS_IF.RNC_Id, AGPS_IF.AGPS_IF_Id, AGPS_IF.Nokia.agps_measurements.successful_connections_to_agps_server, AGPS_IF.Nokia.agps_measurements.unsuccessful_connections_to_agps_server, AGPS_IF.Nokia.agps_measurements.lost_connection_to_agps_server, AGPS_IF.Nokia.agps_measurements.successful_data_requests_from_agps_server, AGPS_IF.Nokia.agps_measurements.unsuccessful_data_requests_from_agps_server, AGPS_IF.Nokia.agps_measurements._%_successful_connections_to_agps_server, AGPS_IF.Nokia.agps_measurements._%_successful_data_requests_from_agps_server

9.2 ATM_VCC Reports.

This section shows reports for the ATM_VCC object.

- ATM VCC CAC Resource Utilisation
- ATM VCC Connection Resource Allocation

9.2.1 ATM VCC CAC Resource Utilisation

This report shows the AAL2 Connection Admission Control average resource utilisation covering normal, reserved AAL2 connections as well as a for HSDPA connections.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.ATM_VCC
Primary Object	ATM_VCC
Table for AAL2 CAC Resource	ATM_VPC.ATM_VPC_Name, ATM_VCC.ATM_VCC_Id, ATM_VCC.Nokia.cac_resource.avg_aal2_connections, ATM_VCC.Nokia.cac_resource.avg_reserved_cell_rate, ATM_VCC.Nokia.cac_resource.avg_aal2_connections_hsdpa, ATM_VCC.Nokia.cac_resource.avg_shared_hsdpa_aal2_allocation

9.2.2 ATM VCC Connection Resource Allocation

This report shows the AAL2 transport resource allocation performance.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.ATM_VCC
Primary Object	ATM_VCC
Table for AAL2 Resource Allocation	ATM_VPC.ATM_VPC_Name, ATM_VCC.ATM_VCC_Id, ATM_VCC.Nokia.resource_reservation.aal2_succeeded, ATM_VCC.Nokia.resource_reservation.aal2_rejected, ATM_VCC.Nokia.resource_reservation._%_res_succeeded, ATM_VCC.Nokia.resource_reservation.aal2_succeeded_hsdpa, ATM_VCC.Nokia.resource_reservation.other_rejected_hsdpa, ATM_VCC.Nokia.resource_reservation._%_aal2_succeeded_hsdpa
Table for AAL2 Allocation Failure per Cause	ATM_VPC.ATM_VPC_Name, ATM_VCC.ATM_VCC_Id, ATM_VCC.Nokia.resource_reservation.res_int_cap, ATM_VCC.Nokia.resource_reservation.res_ext_cap, ATM_VCC.Nokia.resource_reservation.res_other, ATM_VCC.Nokia.resource_reservation.reject_hsdpa_too_many_users , ATM_VCC.Nokia.resource_reservation.transport_rejected_ext_hsdpa, ATM_VCC.Nokia.resource_reservation.transport_rejected_int_hsdpa

9.3 Cell Reports.

This section shows reports for the Cell object.

- Cell Availability
- Cell Average RAB and DCH Holding Times
- Cell Average RRC and RAB Setup Times
- Cell Channel Element Utilisation Voice
- Cell Ch Element Utilisation PS Background 1
- Cell Ch Element Utilisation PS Background 2
- Cell Ch Element Utilise CS PS Streaming 1
- Cell Ch Element Utilise CS PS Streaming 2
- Cell Ch Element Utilise PS Interactive 1
- Cell Ch Element Utlise PS Interactive 2
- Cell Code Usage and Unavailability
- Cell CS Erlang
- Cell CS PS Service Traffic Throughput
- Cell EDCH Allocation Abnorm. Rel. Report
- Cell EDCH Allocation Report
- Cell EDCH Setup Failure Report
- Cell HSDPA Accessibility Retainability Traffic
- Cell HSDPA MAC Efficiency (WBTS WN3.0)

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

9.3.1 Cell Availability

This report uses the Cell availability formula stated Nokia WCDMA RAN KPI documentation which is based on the average code usage in the pool.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graphs for Cell Availability	Cell.Cell_Id, Cell.Nokia.RAN_Usage.Service_Level.cell_availability
Table for Cell Availability	Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Usage.Service_Level.cell_availability

9.3.2 Cell Average RAB and DCH Holding Times

Report for RAB holding times for all CS and PS services.CS covering voice, conversational , streaming while PS covering conversational, streaming, interactive , background.Includes DCH Holding times -PS Interactive , Background services. Data units-10ms

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for CS RAB Holding Times	Cell.Cell_Id, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_voice_call, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_data_call_with_streaming_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_data_call_with_conversational_class
Graph for PS RAB and DCH Holding Times	Cell.Cell_Id, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_streaming_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_conversational_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_interactive_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_background_class, Cell.Nokia.rab.holding_times.average_dch_holding_time_for_ps_rab_with_interactive_class, Cell.Nokia.rab.holding_times.average_dch_holding_time_for_ps_rab_

	with_background_class
Table for RAB Holding Times	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_voice_call, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_data_call_with_streaming_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_cs_data_call_with_conversational_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_streaming_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_conversational_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_interactive_class, Cell.Nokia.rab.holding_times.average_rab_holding_time_for_ps_call_with_background_class, Cell.Nokia.rab.holding_times.average_dch_holding_time_for_ps_rab_with_interactive_class, Cell.Nokia.rab.holding_times.average_dch_holding_time_for_ps_rab_with_background_class

9.3.3 Cell Average RRC and RAB Setup Times

Report for RRC , RAB setup times for all CS , PS services. CS covering voice, conversational ,streaming while PS covering conversational, streaming, interactive , background. RRC Setup time covers both RRC Setup , RRC Access phases. Data units-10ms.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for RRC and CS RAB Setup Times	Cell.Cell_Id, Cell.Nokia.rab.setup_time.average_setup_time_for_rrc, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_voice_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_data_stream_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_data_conv_rab
Graph for PS RAB Setup Times	Cell.Cell_Id, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_stream_ra

	b, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_conv_rab , Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_interactive_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_background_rab
Table for RRC and RAB Setup Times	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_voice_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_data_stream_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_cs_data_conv_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_stream_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_conv_rab , Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_interactive_rab, Cell.Nokia.rab.setup_time.average_setup_time_for_ps_data_background_rab

9.3.4 Cell Channel Element Utilisation Voice

This report describes the average Channel Element Used for conversational voice service.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Cell Channel Element Utilisation Voice	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_cs_conversational_64_kbps, Cell.Nokia.ce_capacity.Avg_used_ce_amr_allocations

9.3.5 Cell Ch Element Utilisation PS Background 1

This part 1 of the report describes the average Channel Element Used for PS Background Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for PS Background 1 - UL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_8_kbps_ul,

	Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_16_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_32_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_64_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_128_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_256_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_384_kbps_ul

9.3.6 Cell Ch Element Utilisation PS Background 2

This part 2 of the report describes the average Channel Element Used for PS Background Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for PS Background 2 - DL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_8_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_16_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_32_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_64_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_128_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_256_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_background_384_kbps_dl

9.3.7 Cell Ch Element Utilise CS PS Streaming 1

This part 1 of the report describes the average Channel Element Used for CS/PS Streaming Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS/PS Streaming 1 - UL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_cs_streaming_144_kbps, Cell.Nokia.ce_capacity.Avg_used_ce_cs_streaming_576_kbps, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_8_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_16_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_32_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_64_kbps_ul,

	Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_128_kbps_ul

9.3.8 Cell Ch Element Utilise CS PS Streaming 2

This part 2 of the report describes the average Channel Element Used for CS/PS Streaming Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS/PS Streaming 2 - DL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_8_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_16_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_32_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_64_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_128_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_256_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_streaming_384_kbps_dl

9.3.9 Cell Ch Element Utilise PS Interactive 1

This part 1 of the report describes the average Channel Element Used for PS Interactive Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for PS Interactive 1 - UL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_8_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_16_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_32_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_64_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_128_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_256_kbps_ul, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_384_kbps_ul

9.3.10 Cell Ch Element Utlise PS Interactive 2

This part 2 of the report describes the average Channel Element Used for PS Interactive Services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell

Primary Object	Cell
Table for PS Interactive 2 - DL	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_8_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_16_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_32_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_64_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_128_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_256_kbps_dl, Cell.Nokia.ce_capacity.Avg_used_ce_ps_interactive_384_kbps_dl

9.3.11 Cell Code Usage and Unavailability

This report shows the code pool usage and unavailability.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for Code Pool Usage	Cell.Cell_Id, Cell.Nokia.code_occupancy.max_code_occupancy_percentage, Cell.Nokia.code_occupancy.minimum_code_occupancy_percentage, Cell.Nokia.code_occupancy.avg_usage_of_code_capacity
Table for Code Pool Usage and Unavailability	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.code_blocking.no_codes_available_sf4, Cell.Nokia.code_blocking.no_codes_available_sf8, Cell.Nokia.code_blocking.no_codes_available_sf16, Cell.Nokia.code_blocking.no_codes_available_sf32, Cell.Nokia.code_blocking.no_codes_available_sf64, Cell.Nokia.code_blocking.no_codes_available_sf128, Cell.Nokia.code_blocking.no_codes_available_sf256, Cell.Nokia.code_occupancy.max_code_occupancy_percentage, Cell.Nokia.code_occupancy.minimum_code_occupancy_percentage, Cell.Nokia.code_occupancy.avg_usage_of_code_capacity, Cell.Nokia.code_blocking.the_nbr_of_succ_code_tree_allo

9.3.12 Cell CS Erlang

This report shows the value of CS Erlang as given by the Nokia WCDMA RAN KPI document. The calculation takes into consideration of the CS type services (Voice, 64kbps conversational, 14.4 kbps streaming, 57.6kbps streaming).

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for CS Erlang in the Cell	Cell.Cell_Id, Cell.Nokia.RAN_Usage.Cell_Usage.cs_erlang
Table for CS Erlang in the Cell	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Usage.Cell_Usage.cs_erlang

9.3.13 Cell CS PS Service Traffic Throughput

This report shows the throughput of the service traffic on SRNC according to each service class.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for CS Traffic	Cell.Nokia.traffic.dch_duration_cs_voice_calls.srnc.ul_cs_amr_throughput, Cell.Nokia.traffic.dch_duration_cs_voice_calls.srnc.dl_cs_amr_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.transparent_cs_data_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.ul_non_transparent_cs_data_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.dl_non_transparent_cs_data_throughput
Table for CS Traffic	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.dch_duration_cs_voice_calls.srnc.ul_cs_amr_throughput, Cell.Nokia.traffic.dch_duration_cs_voice_calls.srnc.dl_cs_amr_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.transparent_cs_data_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.ul_non_transparent_cs_data_throughput, Cell.Nokia.traffic.dch_allocations_cs_data_calls.srnc.dl_non_transparent_cs_data_throughput

Graph for PS Traffic	Cell.Nokia.traffic.rt_dch_allocations_ps_calls_conv_class.srnc.ul_ps_data_conv_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_conv_class.srnc.dl_ps_data_conv_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_stream_class.srnc.ul_ps_data_stream_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_stream_class.srnc.dl_ps_data_stream_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc.ul_ps_data_intera_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc.dl_ps_data_intera_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc.ul_ps_data_backg_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc.dl_ps_data_backg_class_throughput
Table for PS Traffic	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_conv_class.srnc.ul_ps_data_conv_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_conv_class.srnc.dl_ps_data_conv_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_stream_class.srnc.ul_ps_data_stream_class_throughput, Cell.Nokia.traffic.rt_dch_allocations_ps_calls_stream_class.srnc.dl_ps_data_stream_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc.ul_ps_data_intera_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_intera_class.srnc.dl_ps_data_intera_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc.ul_ps_data_backg_class_throughput, Cell.Nokia.traffic.nrt_dch_allocations_ps_calls_backg_class.srnc.dl_ps_data_backg_class_throughput
Graph for HSDPA Traffic	Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_background
Table for HSDPA Traffic	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_background

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

9.3.14 Cell EDCH Allocation Abnorm. Rel. Report

This report shows the EDCH allocation non normal release report for various reasons. This covers cell change, link failures and other failure reasons.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for EDCH Connection NonNormal Release	Cell.BSC_Id, Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_hsdsch_serving_cell_change_for_interactive, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_to_rl_failure_for_interactive, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_to_other_failure_for_interactive, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_hsdsch_serving_cell_change_for_background, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_to_rl_failure_for_background, Cell.Nokia.traffic.edch_allocation_release.edch_release_due_to_other_failure_for_background

9.3.15 Cell EDCH Allocation Report

This report shows the EDCH allocation report for various types of connections (Interactive, Background and AMR multi-RAB)

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for EDCH Allocation	Cell.BSC_Id, Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.edch_allocation.edch_allocations_for_interactive, Cell.Nokia.traffic.edch_allocation.edch_allocations_for_background, Cell.Nokia.traffic.edch_allocation.amr_edch_allocations

9.3.16 Cell EDCH Setup Failure Report

This report shows the EDCH setup failure report for various reasons. This covers both interactive and background connections.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell

Primary Object	Cell
Table for EDCH Setup Failures	Cell.BSC_Id, Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_ue_for_interactive, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_bts_for_interactive, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_transport_for_interactive, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_other_reasons_for_interactive, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_ue_for_background, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_bts_for_background, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_transport_for_background, Cell.Nokia.traffic.edsch_setup_failures.edch_setup_failure_due_to_other_reasons_for_background, Cell.Nokia.traffic.edsch_setup_failures.tot_edsch_setup_fail_inter, Cell.Nokia.traffic.edsch_setup_failures.tot_edsch_setup_fail_backg

9.3.17 Cell HSDPA Accessibility Retainability Traffic

This report shows the percentage on the accessibility and retainability of the HSDPA connection in the cell.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for HSDPA Accessibility/Retainability	Cell.Cell_Id, Cell.Nokia.RAN_Accessibility.Traffic._%_hsdpa_accessibility_nrt_traffic, Cell.Nokia.RAN_Accessibility.Traffic._%_hsdpa_resource_accessibility_rt_traffic, Cell.Nokia.RAN_Retainability.Traffic._%_hsdpa_retainability_nrt_traffic, Cell.Nokia.traffic.hsdsch_allocation._%_hsdpa_resource_retainability_rt_traffic

Table for HSDPA Accessibility/Retainability	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Accessibility.Traffic._ %_hsdpa_accessibility_nrt_traffic, Cell.Nokia.RAN_Accessibility.Traffic._ %_hsdpa_resource_accessibility_rt_traffic, Cell.Nokia.RAN_Retainability.Traffic._ %_hsdpa_retainability_nrt_traffic, Cell.Nokia.traffic.hsdsch_allocation._ %_hsdpa_resource_retainability_rt_traffic

9.3.18 Cell HSDPA MAC Efficiency (WBTS WN3.0)

WBTS WN3.0 based report. This report shows the retransmission ratio of the between BTS and HSDPA capable UEs done by MAC-hs. Based on successfully sent MAC-hs PDUs divided by totally sent MAC-hs PDUs. Based on Nokia WCDMA RAN KPI document.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Cell HSDPA MAC Transmission Efficiency	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.wbts_wn3.mac_hs_transmit.hsdpa_mac_hs_efficiency

9.3.19 Cell HSDPA PDU Vol and MACd Thruput WBTS WN3.0

WBTS WN3.0 based report. This report shows the MAC-d net throughput and the PDU volume received by the WBTS over the IuB. Based on Nokia WCDMA RAN KPI document. Volume is in Mbit, while Throughput is in kbps.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for HSDPA PDU Volume/MAC-d Throughput	Cell.Cell_Id, Cell.Nokia.wbts_wn3.mac_d_pdu.hsdpa_data_volume_macd_Iub, Cell.Nokia.wbts_wn3.mac_d_pdu.hsdpa_macd_net_throughput_bts
Table for HSDPA PDU Volume/MAC-d Throughput	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.wbts_wn3.mac_d_pdu.hsdpa_data_volume_macd_Iub, Cell.Nokia.wbts_wn3.mac_d_pdu.hsdpa_macd_net_throughput_bts

9.3.20 Cell HSDPA User Duration Distribution

This report shows the HSDPA users distribution. Counters for non-hsdpa user will not be updated if the HSDPA function is not activated in the cell.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for Active HSDPA Users	Cell.Nokia.hsdpa_users._%_time_active_hsdpa_users
Table for Users 1	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_1_or_2_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_3_or_4_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_5_or_6_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_7_or_8_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_9_or_10_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_11_or_12_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_13_or_14_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_15_or_16_simultaneous_users, Cell.Nokia.hsdpa_users.tot_duration_active_hsdpa_users, Cell.Nokia.hsdpa_users._%_time_active_hsdpa_users
Table for Users 2	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_17_to_20_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_21_to_24_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_25_to_28_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_29_to_32_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_33_to_36_si

	multaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_37_to_40_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_41_to_44_simultaneous_users, Cell.Nokia.hsdpa_users.duration_of_active_hsdpa_users_45_to_48_simultaneous_users

9.3.21 Cell HSDSCH Allocation and Throughput

This report shows the HSDSCH allocation for PS-calls of various bit rates as well as the overall throughput according to the related service class, I.e. interactive and background.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for HSDSCH Connection Throughput	Cell.Cell_Id, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_background
Table for HSDSCH Allocation-Interactive	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_64_kbps_return_ch_allocations_for_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_128_kbps_return_ch_allocations_for_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_384_kbps_return_ch_allocations_for_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_macd_flow_allocations_for_interactive, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_interactive
Table for HSDSCH Allocation-Background	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_64_kbps_return_ch_allocations_for_background, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_128_kbps_return_ch_allocations_for_background, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_384_kbps_return_ch_allocations_for_background, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_macd_flow_allocations_for_background, Cell.Nokia.traffic.hsdsch_allocation.hsdsch_throughput_background

9.3.22 Cell HSDSCH Connection Setup Failures

This report shows the HSDSCH connection setup failures according to category. The setup attempt for return HSDSCH channel takes into consideration of all failures and allocations and rejects.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Interactive Traffic	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_macd_flow_setup_failure_due_to_iub_transport_for_interactive, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_total_iub_transport_setup_fail_for_interactive, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_ue_for_interactive, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_bts_for_interactive, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_rnc_internal_for_interactive, Cell.Nokia.traffic.hsdsch_setup_failures.tot_hsdsch_setup_fail_inter, Cell.Nokia.traffic.hsdsch_setup_failures._%_hsdsch_setup_fail_inter
Table for Background Traffic	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_macd_flow_setup_failure_due_to_iub_transport_for_background, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_total_iub_transport_setup_fail_for_background, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_ue_for_background, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_bts_for_background, Cell.Nokia.traffic.hsdsch_setup_failures.hsdsch_setup_failure_due_to_rnc_internal_for_background, Cell.Nokia.traffic.hsdsch_setup_failures.tot_hsdsch_setup_fail_backg, Cell.Nokia.traffic.hsdsch_setup_failures._%_hsdsch_setup_fail_backg

9.3.23 Cell HSDSCH Service Cell Change Failure Cause

This report describes the DS-DSCH service cell change attempt failures according to the type of causes.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Failure Per Cause	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_failed_due_to_ue, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_failed_due_to_bts, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_failed_due_to_transport, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_failed_due_to_ac, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_failed_due_to_other_reason

9.3.24 Cell HS-DSCH Service Cell Change Trigger Cause

This report describes the DS-DSCH service cell change attempt triggers according to the type of causes.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Trigger Cause	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_started_due_to_active_set_update, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_started_due_to_cpich_ec_no, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_started_due_to_ul_sir_error, Cell.Nokia.intrasys_hho_scc.hs_dsch_serving_cell_changes_started_due_to_other_reason

9.3.25 Cell HSUPA Accessibility Retainability Traffic

This report shows the HSUPA accessibility and retainability traffic statistics

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for HSUPA	Cell.Nokia.RAN_Accessibility.Traffic._

Accessibility/Retainability	%_hsupa_resource_accessibility_rt_traffic, Cell.Nokia.RAN_Accessibility.Traffic._ %_hsupa_resource_accessibility_nrt_traffic, Cell.Nokia.traffic.edch_allocation_release._ %_hsupa_resource_retainability_rt_traffic, Cell.Nokia.traffic.edch_allocation_release._ %_hsupa_resource_retainability_nrt_traffic
Table for HSUPA Accessibility/Retainability	Cell.Cell_Id, Cell.BS_Id, Cell.BSC_Id, Cell.Nokia.RAN_Accessibility.Traffic._ %_hsupa_resource_accessibility_rt_traffic, Cell.Nokia.RAN_Accessibility.Traffic._ %_hsupa_resource_accessibility_nrt_traffic, Cell.Nokia.traffic.edch_allocation_release._ %_hsupa_resource_retainability_rt_traffic, Cell.Nokia.traffic.edch_allocation_release._ %_hsupa_resource_retainability_nrt_traffic

9.3.26 Cell HSUPA MAC-d Throughput

This report shows the HSUPA MAC-d throughput per cell under the WBTS.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for Throughput	Cell.Nokia.wbts_wn.hsupa_thput.hsupa_average_macd_throughput
Table for HSUPA MAC-d Throughput	Cell.BSC_Id, Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.wbts_wn.hsupa_thput.hsupa_average_macd_throughput, Cell.Nokia.wbts_wn.hsupa_thput.hsupa_maximum_macd_throughput, Cell.Nokia.wbts_wn.hsupa_thput.hsupa_minimum_macd_throughput

9.3.27 Cell HSUPA User Duration Distribution

This report shows the HSUPA users distribution.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell

Primary Object	Cell
Graph for Active HSUPA Users	Cell.Nokia.hsupa_users._%_time_active_hsupa_users
Table for HSUPA Users 1	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_1_or_2_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_3_or_4_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_5_or_6_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_7_or_8_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_9_or_10_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_11_or_12_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_13_or_14_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_15_or_16_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_17_or_18_simultaneous_users, Cell.Nokia.hsupa_users.duration_of_active_hsupa_users_19_or_20_simultaneous_users
Table for HSUPA Users 2	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.hsdpa_users.tot_duration_active_hsdpa_users, Cell.Nokia.hsupa_users._%_time_active_hsupa_users

9.3.28 Cell Inter System Handover RT

This report shows the inter system handover performance for RT services which covers handover success, connection dropped during handover and unsuccessful handover. Second table displays the dropped connection causes.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Inter System Handover RT	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.intersys_hho_rt.tot_inter_system_hho_rt_success, Cell.Nokia.intersys_hho_rt.tot_inter_system_hho_rt_attempts, Cell.Nokia.intersys_hho_rt._%_inter_system_hho_ps_rt_success, Cell.Nokia.intersys_hho_rt.tot_inter_system_hho_rt_unsuccess,

	Cell.Nokia.intersys_hho_rt._%_inter_system_hho_rt_unsuccess, Cell.Nokia.intersys_hho_rt.tot_inter_system_hho_rt_dropped, Cell.Nokia.intersys_hho_rt._%_inter_system_hho_rt_dropped
Table for Inter System Handover Call Dropped Causes	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.intersys_hho_rt.nbr_of_started_inter_syst_hho_meas_without_com_mod_due_to_ul_dch_qual_for_rt, Cell.Nokia.intersys_hho_rt.rrc_connection_drops_during_inter_syst_ho_caused_by_ue_trx_pwr_for_rt, Cell.Nokia.intersys_hho_rt.rrc_connection_drops_during_inter_syst_ho_caused_by_dl_dpch_pwr_for_rt, Cell.Nokia.intersys_hho_rt.rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_rscp_for_rt, Cell.Nokia.intersys_hho_rt.rrc_connection_drops_during_inter_syst_ho_caused_by_cpich_ecno_for_rt, Cell.Nokia.intersys_hho_rt.rrc_connection_drops_during_inter_syst_ho_caused_by_imsi_for_rt, Cell.Nokia.intersys_hho_rt.tot_inter_system_hho_rt_dropped

9.3.29 Cell Multi RAB Retainability - Drop Ratio

This report shows RAB Drop ratio (%) for multiple RAB connections as described in the Nokia WCDMA KPI document. The statistics involve AMR+NRT, RT+NRT, and more than 1 NRT RABs.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for MultiRAB Retainability	Cell.Cell_Id, Cell.Nokia.RAN_Retainability.Service_Level._%_multirab_drop_ratio_amr_nrt_network, Cell.Nokia.RAN_Retainability.Service_Level._%_multirab_drop_ratio_rt_nrt_network, Cell.Nokia.RAN_Retainability.Service_Level._%_multirab_drop_ratio_gr_1nrt_network
Table for MultiRAB Retainability	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Retainability.Service_Level._%_multirab_drop_ratio_amr_nrt_network, Cell.Nokia.RAN_Retainability.Service_Level._%_multirab_drop_ratio_rt_nrt_network,

	Cell.Nokia.RAN_Retainability.Service_Level._ %_multirab_drop_ratio_gr_1nrt_network

9.3.30 Cell NBAP Radio Link Fails Performance 1

This part 1 of the report which shows the Radio Link Setup failure statistics on both SRNC and DRNC on each causes. Also include first RL setup failures and using 3GPP NBAP protocol.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Failures on First RL	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.rl_setup_fail_for_first_rl_due_to_om_interv, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.rl_setup_fail_for_first_rl_due_to_already_activ, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.rl_setup_fail_for_first_rl_due_to_hw_res_not_avail, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.rl_setup_fail_for_first_rl_due_to_not_enough_res, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.rl_setup_fail_for_first_rl_due_to_bts_not_resp, Cell.Nokia.nbap.radio_link_setup_failures_first_rl.tot_rl_setup_fail_for_first_rl
Table for Failures with SHO on SRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_om_interv, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_already_activ, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_hw_res_not_avail, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_not_enough_res, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_bts_not_resp, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_bts_gen_rea, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_rn_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_tr_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_prot_cause,

	Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_sho_on_srnc_due_to_misc_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.tot_rl_setup_fail_for_sho_on_srnc

9.3.31 Cell NBAP Radio Link Fails Performance 2

This part 2 of the report which shows the Radio Link Setup failure statistics on both SRNC and DRNC on each causes. Also include first RL setup failures and using 3GPP NBAP protocol.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Failures with HHO on SRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_om_interv, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_already_activ, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_hw_res_not_avail, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_not_enough_res, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_bts_not_resp, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_bts_gen_rea, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_rn_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_tr_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_prot_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.rl_setup_fail_for_hho_on_srnc_due_to_misc_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.srnc.tot_rl_setup_fail_for_hho_on_srnc
Table for Failures with SHO on DRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_s

	ho_on_drnc_due_to_om_interv, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_already_activ, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_hw_res_not_avail, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_not_enough_res, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_bts_not_resp, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_bts_gen_rea, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_rn_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_tr_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_prot_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_sho_on_drnc_due_to_misc_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.tot_rl_setup_fail_for_sho_on_drnc

9.3.32 Cell NBAP Radio Link Fails Performance 3

This part 3 of the report which shows the Radio Link Setup failure statistics on both SRNC and DRNC on each causes. Also include first RL setup failures and using 3GPP NBAP protocol.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Failures for HHO on DRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_om_interv, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_already_activ, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_hw_res_not_avail, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_not_enough_res, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_bts_not_resp, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_bts_gen_rea, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_

	hho_on_drnc_due_to_rn_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_tr_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_prot_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.rl_setup_fail_for_hho_on_drnc_due_to_misc_cause, Cell.Nokia.nbap.radio_link_setup_failures_ho.drnc.tot_rl_setup_fail_for_hho_on_drnc
Table for Failures using 3GPP NBAP Protocol	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_failures_3gpp_nbap.rl_setup_fail_for_first_rl_due_to_rn_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_3gpp_nbap.rl_setup_fail_for_first_rl_due_to_tr_layer_cause, Cell.Nokia.nbap.radio_link_setup_failures_3gpp_nbap.rl_setup_fail_for_first_rl_due_to_prot_cause, Cell.Nokia.nbap.radio_link_setup_failures_3gpp_nbap.rl_setup_fail_for_first_rl_due_to_misc_cause, Cell.Nokia.nbap.radio_link_setup_failures_3gpp_nbap.tot_rl_setup_fail_3gpp_nbap

9.3.33 Cell NBAP Radio Link Setup Performance - 1

This part 1 of the report which shows the Radio Link Setup statistics on both SRNC and DRNC.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Radio Link Setup First RL	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_succ_for_first_rl, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_att_for_first_rl, Cell.Nokia.nbap.radio_link_setup_successes._%_rl_setup_succ_for_first_rl
Table for Radio Link Setup on SRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_succ_for_sho_on_srnc,

	Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_att_for_sho_on_srnc, Cell.Nokia.nbap.radio_link_setup_successes._%_rl_setup_succ_for_sho_on_srnc, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_succ_for_hho_on_srnc, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_att_for_hho_on_srnc, Cell.Nokia.nbap.radio_link_setup_successes._%_rl_setup_succ_for_hho_on_srnc

9.3.34 Cell NBAP Radio Link Setup Performance - 2

This part 2 of the report which shows the Radio Link Setup statistics on both SRNC and DRNC.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Radio Link Setup on DRNC	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_succ_for_sho_on_drnc, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_att_for_sho_on_drnc, Cell.Nokia.nbap.radio_link_setup_successes._%_rl_setup_succ_for_sho_on_drnc, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_succ_for_hho_on_drnc, Cell.Nokia.nbap.radio_link_setup_successes.rl_setup_att_for_hho_on_drnc, Cell.Nokia.nbap.radio_link_setup_successes._%_rl_setup_succ_for_hho_on_drnc

9.3.35 Cell Packet Call Setup Failure Report

This report shows the packet call setup failure report for various reasons. This covers both interactive and background connections.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for PacketCall Setup Failures Interactive	Cell.BSC_Id, Cell.BS_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_ac_for_interactive, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_bts_for_interactive, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_dmc

	u_res_for_interactive, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_transm_for_interactive, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_ue_for_interactive, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_other_reasons_for_interactive, Cell.Nokia.packet_call.setup_failures.Tot_packet_call_setup_fail_interactive
Table for PacketCall Setup Failures Background	Cell.Cell_Id, Cell.BS_Id, Cell.Cell_Name, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_ac_for_background, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_bts_for_background, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_dmcu_res_for_background, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_transm_for_background, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_ue_for_background, Cell.Nokia.packet_call.setup_failures.packet_call_setup_fail_due_to_other_reasons_for_background, Cell.Nokia.packet_call.setup_failures.Tot_packet_call_setup_fail_background

9.3.36 Cell Percentage Availability Working State

This report describes the percentage of availability for a cell

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Cell Percentage Availability Working State	Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.avail_cell._%_time_wcell_in_working_state, Cell.Nokia.avail_cell._%_time_wcell_in_blocked_by_user_state

9.3.37 Cell RAB Active Failures for all PS services

Report for RAB Active failure breakdowns of PS services(conversational, interactive, streaming,background).The failure rate takes to account number RAB access completes will proceed to RAB access phase(which covers active complete, released , failures)

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for all PS Services	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_due_to_bts_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_rab_act_fail_for_ps_call_conv_class_due_to_integrity_check, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_due_to_iu_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_due_to_iur_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_due_to_rnc_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_due_to_ue_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_active_failures_due_to_radio_int_for_ps, Cell.Nokia.rab.active_failure_ps_data.tot_rab_active_failures_for_all_causes_for_ps, Cell.Nokia.rab.active_failure_ps_data._%_rab_active_failures_for_all_causes_for_ps

9.3.38 Cell RAB Active Failures for CS Conversational

This report shows the RAB Active failure breakdowns for CS Conversational. The failure rate takes into account that the number RAB access completes will proceed into RAB access phase (which covers active complete, released, and failures)

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS Conversational	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_bts_for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_iu_for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_iur_

	for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_radio_int_for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.rab_act_fail_for_cs_data_conv_class_call_due_to_integrity_check, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_rnc_for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_ue_for_cs_data_conv, Cell.Nokia.rab.active_failure_cs_data.tot_rab_active_fail_cs_conv, Cell.Nokia.rab.active_failure_cs_data._%_rab_active_fail_cs_conv

9.3.39 Cell RAB Active Failures for CS Streaming

This report shows the RAB Active failure breakdowns for CS Streaming. The failure rate takes into account that the number RAB access completes will proceed into RAB access phase (which covers active complete, released, and failures)

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS Conversational	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_bts_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_iu_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_iur_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_radio_int_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.rab_act_fail_for_cs_data_call_stream_class_due_to_integrity_check, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_rnc_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.rab_active_failures_due_to_ue_for_cs_data_stream, Cell.Nokia.rab.active_failure_cs_data.tot_rab_active_fail_cs_stream, Cell.Nokia.rab.active_failure_cs_data._%_rab_active_fail_cs_stream

9.3.40 Cell RAB Active Failures for CS Voice

This report shows the RAB Active failure breakdowns for CS Voice. The failure rate takes into account that the number RAB access completes will proceed into RAB active phase (which covers active complete, released, and failures)

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Cell RAB Active Failures for CS Voice	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_bts_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_iu_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_iur_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_radio_int_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.rab_act_fail_for_cs_voice_call_due_to_integrity_check, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_rnc_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.rab_active_failures_due_to_ue_for_cs_voice, Cell.Nokia.rab.active_failure_cs_voice.tot_rab_active_fail_cs_voice, Cell.Nokia.rab.active_failure_cs_voice._%_rab_active_fail_cs_voice

9.3.41 Cell RAB Distribution Report

This report shows the RAB connection distribution by service, taken at the point of RAB Access Complete. It provides the service distribution assigned to the network.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Pie Chart for RAB Access Distribution	Cell.Cell_Id, Cell.Nokia.rab.setup_access_complete._%_rab_access_completions_for_cs_voice, Cell.Nokia.rab.setup_access_complete._%_rab_access_completions_for_cs_data_conv, Cell.Nokia.rab.setup_access_complete._%_rab_access_completions_for_cs_data_stream, Cell.Nokia.rab.setup_access_complete._%_rab_access_completions_for_ps_data_conv,

	Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_stream, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_intera, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_backg
Table for RAB Access Distribution	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_cs_voice, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_cs_data_conv, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_cs_data_stream, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_conv, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_stream, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_intera, Cell.Nokia.rab.setup_access_complete._ %_rab_access_completions_for_ps_data_backg

9.3.42 Cell RAB Setup Failure for all PS services

This report shows the RAB setup failures for all PS services which covers conversational, streaming, interactive and background. Failure cause in this case takes the total of all PS services for each category.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for all PS services	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_ac_ps, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_bts_ps, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_trans_ps, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_rnc_ps, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_frozen_bts_ps, Cell.Nokia.rab.setup_failure_ps.tot_rab_setup_fail_iub_aal2_trans_ps, Cell.Nokia.rab.setup_failure_ps.rab_setup_fail_for_all_ps,

	Cell.Nokia.rab.setup_failure_ps._%_ps_blocking_ratio

9.3.43 Cell RAB Setup Failure for CS Conversational

This report shows the RAB setup failures per cause for CS conversational services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS Conversational	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_ac_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_bts_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_transport_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_rnc_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_frozen_bts_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_conv, Cell.Nokia.rab.setup_failure_cs.tot_rab_setup_fail_cs_conv, Cell.Nokia.rab.setup_failure_cs._%_rab_setup_fail_cs_conv

9.3.44 Cell RAB Setup Failures for CS Streaming

This report shows the RAB setup failures per cause for CS streaming services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for CS Streaming	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_ac_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_bts_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_transport_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_rnc_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_frozen_bts

	_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_iub_aal2_trans_for_cs_data_stream, Cell.Nokia.rab.setup_failure_cs.tot_rab_setup_fail_cs_stream, Cell.Nokia.rab.setup_failure_cs._%_rab_setup_fail_cs_stream

9.3.45 Cell RAB Setup Failures for CS Voice

This report shows the RAB setup failures per cause for CS voice services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RAB Setup Failures for CS Voice	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_ac_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_bts_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_transport_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_rnc_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_frozen_bts_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.rab_setup_failures_due_to_iub_aal2_trans_for_cs_voice, Cell.Nokia.rab.setup_failure_cs.tot_rab_setup_fail_cs_voice, Cell.Nokia.rab.setup_failure_cs._%_rab_setup_fail_cs_voice

9.3.46 Cell RAB Setup Successes for CS

This report shows the RAB setup successes and failures for CS services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RAB Setup	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name,

Successes for CS Services	Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_voice, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_cs_voice, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_conv, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_cs_data_conv, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_cs_data_stream, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_cs_data_stream, Cell.Nokia.rab.setup_complete._%_rab_setup_comp_for_all_cs

9.3.47 Cell RAB Setup Successes for PS

This report shows the RAB setup successes and failures for PS services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RAB Setup Successes for PS Services	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_conv, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_ps_data_conv, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_stream, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_ps_data_stream, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_intera, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_ps_data_intera, Cell.Nokia.rab.setup_attempts.rab_setup_attempts_for_ps_data_backg, Cell.Nokia.rab.setup_complete.rab_setup_completions_for_ps_data_backg, Cell.Nokia.rab.setup_complete._%_rab_setup_comp_for_all_ps

9.3.48 Cell Radio Link Average Power

This report shows the average radio link transmitted power in the cell in dBm.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Average Transmitted Radio Link	Cell.BSC_Id, Cell.Cell_Id, Cell.Nokia.radio_link.lvl_ave_trx_for_rl_in_cell,

Power	Cell.Nokia.radio_link.nbr_of_rl_meas_reps, Cell.Nokia.radio_link.nbr_of_rls

9.3.49 Cell RRC Access Failures Per Cause

This report shows the RRC connection access failures per cause. RRC access attempts takes into consideration of RRC setup completions.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RRC Access Failures Per Cause	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rrc.connection_access.rrc_acc_fail_due_to_radio_int_sync h, Cell.Nokia.rrc.connection_access.rrc_acc_fail_due_to_uu_int, Cell.Nokia.rrc.connection_access.rrc_acc_fail_due_to_rnc_inter_reaso ns, Cell.Nokia.rrc.connection_access.tot_rrc_access_fail, Cell.Nokia.rrc.connection_setup.rrc_setup_compl, Cell.Nokia.rrc.connection_access._%_rrc_acc_fail

9.3.50 Cell RRC Active Failures Per Cause

This report shows the RRC connection active failures per cause. RRC active connection takes into consideration of successful access completions and RRC connection active failures, sum of all active failures excluding special active release cases.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RRC Active Failure Per Cause	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rrc.connection_active.rrc_active_rel_due_to_srnc_reloc, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_iu_int, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_rnc_inter_rea sons, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_bts_reasons, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_the_iur_int, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_ciph_fail, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_integrity_che

	ck, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_ue, Cell.Nokia.rrc.connection_active.rrc_active_rel_due_to_pre_emp, Cell.Nokia.rrc.connection_active.rrc_active_fail_due_to_radio_interface, Cell.Nokia.rrc.connection_active.tot_rrc_active_fail, Cell.Nokia.rrc.connection_active._%_rrc_active_fail

9.3.51 Cell RRC and RAB Retainability - Drop Ratio

This report shows the RRC and RAB Connection Drop ratio (%) for AMR, RT (excluding Voice) and Non RT services as described in the Nokia WCDMA KPI document.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for RRC and RAB Retainability	Cell.Cell_Id, Cell.Nokia.RAN_Retainability.Service_Level._%_rrc_drop_ratio, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_amr_voice_network, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_rt_services_excl_voice_network, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_nrt_service_network
Table for RRC and RAB Retainability	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Retainability.Service_Level._%_rrc_drop_ratio, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_amr_voice_network, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_rt_services_excl_voice_network, Cell.Nokia.RAN_Retainability.Service_Level._%_rab_drop_ratio_nrt_service_network

9.3.52 Cell RRC Connections Setup

This report shows the RRC connection setup successes and failures.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for RRC Connections Setup	Cell.Cell_Id, Cell.Nokia.rrc.connection_setup._%_rrc_setup_fail, Cell.Nokia.rrc.connection_setup.rrc_setup_compl, Cell.Nokia.rrc.connection_setup.tot_rrc_setup_fail, Cell.Nokia.rrc.connection_setup._%_rrc_connections_success_rate

Table for RRC Connections Setup	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rrc.connection_setup.rrc_setup_att, Cell.Nokia.rrc.connection_setup.rrc_setup_compl, Cell.Nokia.rrc.connection_setup._%_rrc_connections_success_rate, Cell.Nokia.rrc.connection_setup.tot_rrc_setup_fail, Cell.Nokia.rrc.connection_setup._%_rrc_setup_fail

9.3.53 Cell RRC Drops Ratio

This report shows Drop ratio covering RRC Active Phase of a call. The initial connections of the RRC active phase takes assumption of the RRC access completion. Or the total of all the RRC active statistics (I.e completion, releases and failures).

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RRC Drops Ratio	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rrc.connection_access.rrc_acc_comp, Cell.Nokia.RAN_Retainability.Service_Level._%_rrc_drop_ratio

9.3.54 Cell RRC Setup Failures Per Cause

This report shows the RRC connection setup failure per cause. Total failures theoretically should be equal to the sum of all causes.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for RRC Setup Failures Per Cause	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_hc, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_ac, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_bts_reasons, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_trans, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_rnc_inter_reas ons, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_frozen_bts, Cell.Nokia.rrc.connection_setup.rrc_conn_setup_fail_due_to_rnti_allo

	_fail, Cell.Nokia.rrc.connection_setup.rrc_setup_fail_due_to_iub_aal2_trans, Cell.Nokia.rrc.connection_setup.tot_rrc_setup_fail, Cell.Nokia.rrc.connection_setup.rrc_setup_att, Cell.Nokia.rrc.connection_setup._%_rrc_setup_fail

9.3.55 Cell Service CSSR Performance

This report shows the CSSR performance on the AMR, UDI, Packet and Streaming services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for CSSR Performance	Cell.Cell_Id, Cell.Nokia.RAN_Accessibility.Service_Level._%_amr_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_udi_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_streaming_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_packet_cssr
Table for CSSR Performance	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Accessibility.Service_Level._%_amr_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_udi_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_streaming_cssr, Cell.Nokia.RAN_Accessibility.Service_Level._%_packet_cssr

9.3.56 Cell Soft Handover RT NRT

This report shows the soft handover performance based on active set updates for RT and NRT services.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graph for Soft Handover RT	RNC.RNC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.soft_handover.rt.successful_active_set_updates_on_sho_for_rt_traffic, Cell.Nokia.soft_handover.rt.unsuccessful_active_set_updates_on_sho_for_rt_traffic, Cell.Nokia.soft_handover.rt._%_successful_active_set_updates_on_sho_for_rt_traffic
Graph for Soft Handover NRT	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.soft_handover.nrt.successful_active_set_updates_on_sho_for_nrt_traffic,

	Cell.Nokia.soft_handover.nrt.unsuccessful_active_set_updates_on_sho_for_nrt_traffic, Cell.Nokia.soft_handover.rt._%_successful_active_set_updates_on_sho_for_rt_traffic

9.3.57 Cell Throughput Report

This report shows the cell data throughput, both downlink and uplink directions.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Throughput	Cell.Cell_Id, Cell.BS_Id, Cell.BSC_Id, Cell.Nokia.cell_thruput.cch_data_cell_dl, Cell.Nokia.cell_thruput.cch_data_cell_ul, Cell.Nokia.cell_thruput.edch_data_nsc_ns_edch_ul, Cell.Nokia.cell_thruput.edch_data_nsc_s_edch_ul, Cell.Nokia.cell_thruput.edch_data_scell_ul, Cell.Nokia.cell_thruput.hs_total_data

9.3.58 Cell Total Service Traffic Throughput

Report for thruput of total cs,ps service traffic on SRNC.The services comprised of allocated CS Voice,CS data transparent-nontransparent,PS Data(Streaming, Interactive, Conversational and Background).Uplink and Downlink thruputs are taken into account

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Graphs for Cell Total Service Traffic Throughput	Cell.Cell_Id, Cell.Nokia.cell_busy_hour_kpi.total_traffic
Table for Cell Total Service Traffic Throughput	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.cell_busy_hour_kpi.total_traffic

9.3.59 Cell Transport Channel Throughput

Report for average throughput of the transport channels in UL and DL, namely RACH, PCH, FACH and FACH used for Service Area Broadcast in kbps as described in the Nokia WCDMA RAN KPI document.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Cell
Primary Object	Cell
Table for Transport Channel Throughput	Cell.BSC_Id, Cell.Cell_Id, Cell.Cell_Name, Cell.Nokia.RAN_Usage.Cell_Resource.average_fach_throughput, Cell.Nokia.RAN_Usage.Cell_Resource.average_pch_throughput, Cell.Nokia.RAN_Usage.Cell_Resource.average_sab_throughput

9.4 Computer_Unit Reports.

This section shows reports for the Computer_Unit object.

- Computer Unit CPU Load in DSP
- Computer Unit Processor Load
- Computer Unit Total TCP IP Traffic

9.4.1 Computer Unit CPU Load in DSP

This report shows the CPU load in the DSP

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Computer_Unit
Primary Object	Computer_Unit
Graph on CPU Load	Computer_Unit.Nokia.dsp_load.cpu_load_avg, Computer_Unit.Nokia.dsp_load.cpu_load_max, Computer_Unit.Nokia.dsp_load.cpu_load_max_mem_use_exter, Computer_Unit.Nokia.dsp_load.cpu_load_max_mem_use_inter, Computer_Unit.Nokia.dsp_load.cpu_load_max_proc_num
Table on CPU Load	Computer_Unit.Computer_Unit_Id, Computer_Unit.Node_Id, Computer_Unit.Nokia.dsp_load.cpu_load_avg, Computer_Unit.Nokia.dsp_load.cpu_load_max, Computer_Unit.Nokia.dsp_load.cpu_load_max_mem_use_exter, Computer_Unit.Nokia.dsp_load.cpu_load_max_mem_use_inter, Computer_Unit.Nokia.dsp_load.cpu_load_max_proc_num

9.4.2 Computer Unit Processor Load

This report shows the processor load in computer units.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Computer_Unit
Primary Object	Computer_Unit
Graph for Processor Load	Computer_Unit.Computer_Unit_Id, Computer_Unit.Nokia.unit_load.average_load, Computer_Unit.Nokia.unit_load.peak_load

9.4.3 Computer Unit Total TCP IP Traffic

This report shows the TCP and IP packet traffic in the computer unit. The statistics is in bytes

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Computer_Unit
Primary Object	Computer_Unit
Graph for TCP/IP Traffic	Computer_Unit.Computer_Unit_Id, Computer_Unit.Nokia.tcpip_measurement.tcp.tot_tcp_tx_rx_bytes, Computer_Unit.Nokia.tcpip_measurement.ipv4.tot_Ips_sent_received_fwd, Computer_Unit.Nokia.tcpip_measurement.ipv6.tot_ip6s_sent_received_fwd
Table for TCP/IP Traffic	Computer_Unit.Computer_Unit_Id, Computer_Unit.Nokia.tcpip_measurement.tcp.tot_tcp_tx_rx_bytes, Computer_Unit.Nokia.tcpip_measurement.ipv4.tot_Ips_sent_received_fwd, Computer_Unit.Nokia.tcpip_measurement.ipv6.tot_ip6s_sent_received_fwd

9.5 LCG Reports.

This section shows reports for the LCG object.

- LCG Channel Element Availability Report
- LCG Channel Element Usage HSPA Report
- LCG Channel Element Usage NonHSPA Report

- LCG Iub Throughput Report

9.5.1 LCG Channel Element Availability Report

This report describes the channel availability in the Local Cell Group.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.LCG
Primary Object	LCG
Table for Channel Element Availability	LCG.RNC_Id, LCG.NodeB_Id, LCG.LCG_Id, LCG.Nokia.wbts_pool_ce_resources.average_number_of_available_channel_elements, LCG.Nokia.wbts_pool_ce_resources.maximum_number_of_available_channel_elements, LCG.Nokia.wbts_pool_ce_resources.minimum_number_of_available_channel_elements

9.5.2 LCG Channel Element Usage HSPA Report

This report describes the channel usage in the Local Cell Group for HSPA connections both Uplinks and Downlinks.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.LCG
Primary Object	LCG
Table for Channel Element Usage HSPA	LCG.RNC_Id, LCG.NodeB_Id, LCG.LCG_Id, LCG.Nokia.wbts_pool_ce_resources.average_number_of_used_ce_for_hsupa_ul, LCG.Nokia.wbts_pool_ce_resources.maximum_number_of_used_ce_for_hsupa_ul, LCG.Nokia.wbts_pool_ce_resources.minimum_number_of_used_ce_for_hsupa_ul, LCG.Nokia.wbts_pool_ce_resources.average_number_of_used_ce_for_hsupa_dl, LCG.Nokia.wbts_pool_ce_resources.maximum_number_of_used_ce_for_hsupa_dl, LCG.Nokia.wbts_pool_ce_resources.minimum_number_of_used_ce_for_hsupa_dl

9.5.3 LCG Channel Element Usage NonHSPA Report

This report describes the channel usage in the Local Cell Group for non HSPA connections both Uplinks and Downlinks.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.LCG
Primary Object	LCG
Table for Channel Element Usage NonHSPA	LCG.RNC_Id, LCG.NodeB_Id, LCG.LCG_Id, LCG.Nokia.wbts_pool_ce_resources.average_number_of_used_ce_for_ul, LCG.Nokia.wbts_pool_ce_resources.maximum_number_of_used_ce_for_ul, LCG.Nokia.wbts_pool_ce_resources.minimum_number_of_used_ce_for_ul, LCG.Nokia.wbts_pool_ce_resources.average_number_of_used_ce_for_dl, LCG.Nokia.wbts_pool_ce_resources.maximum_number_of_used_ce_for_dl, LCG.Nokia.wbts_pool_ce_resources.minimum_number_of_used_ce_for_dl

9.5.4 LCG Iub Throughput Report

This report shows FP layer total Iub Throughput volume UL on BTS side for the reporting period on Iub.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.LCG
Primary Object	LCG
Throughput	RNC.RNC_Id, LCG.LCG_Id, LCG.NodeB_Id, LCG.RNC_Id, LCG.Nokia.frame_protocol.cch_data_to_iub_interface, LCG.Nokia.frame_protocol.dch_data_to_iub, LCG.Nokia.frame_protocol.edch_data_to_iub, LCG.Nokia.frame_protocol.iub_throughput_ul_bts

This edition applies to IBM® Tivoli® Netcool® Performance Manager for Wireless and to all subsequent releases and modifications until otherwise indicated in new editions.

9.6 Neighbour Reports.

This section shows reports for the Neighbour object.

- Neighbour Inter Frequency HHO Report
- Neighbour Inter System HHO Report
- Neighbour Soft Handover Report

9.6.1 Neighbour Inter Frequency HHO Report

This report shows the inter-frequency hard handover attempts and complete statistics.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Neighbour
Primary Object	Neighbour
Table for Inter Frequency Handovers	Neighbour.Source_Cell_Id, Neighbour.Target_Cell_Id, Neighbour.Neighbour_Id, Neighbour.Nokia.inter_frequency_ho.number_of_inter_frequency_hho_attempts, Neighbour.Nokia.inter_frequency_ho.number_of_completed_inter_frequency_hho

9.6.2 Neighbour Inter System HHO Report

This report shows the inter-system hard handover attempts and complete statistics to GSM Cells.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Neighbour
Primary Object	Neighbour
Table for Inter System Handovers	Neighbour.Source_Cell_Id, Neighbour.Target_Cell_Id, Neighbour.Neighbour_Id, Neighbour.Nokia.hard_handovers.number_of_inter_system_hho_attempts, Neighbour.Nokia.hard_handovers.number_of_completed_inter_system_hho

9.6.3 Neighbour Soft Handover Report

This report shows the soft handover attempts and complete statistics.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Neighbour

Primary Object	Neighbour
Table for Soft Handovers	Neighbour.Source_Cell_Id, Neighbour.Target_Cell_Id, Neighbour.Neighbour_Id, Neighbour.Nokia.soft_handovers.number_of_intra_frequency_sho_attempts, Neighbour.Nokia.soft_handovers.number_of_completed_intra_frequency_sho

9.7 Neighbour_RNC Reports.

This section shows reports for the Neighbour_RNC object.

- Neighbour_RNC Iur Interface Availability

9.7.1 Neighbour_RNC Iur Interface Availability

This report describes the availability of the Iur Interface.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Neighbour_RNC
Primary Object	Neighbour_RNC
Neighbour_RNC Iur Interface Availability	Neighbour_RNC.RNC_Neighbour_Id, Neighbour_RNC.Source_RNC_Id, Neighbour_RNC.Target_RNC_Id, Neighbour_RNC.Nokia.rnsap.iur_avail.pc_iur_availability, Neighbour_RNC.Nokia.rnsap.iur_avail.iur_not_working_duration

9.8 NodeB Reports.

This section shows reports for the NodeB object.

- NodeB Hardware Pool Capacity

9.8.1 NodeB Hardware Pool Capacity

This report shows the hardware pool capacity.

Report Feature	Details

Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.NodeB
Primary Object	NodeB
Table for NodeB Hardware Pool Capacity	NodeB.RNC_Id, NodeB.NodeB_Id, NodeB.Nokia.bts_hw.average_available_percentage_pool_capacity_ul , NodeB.Nokia.bts_hw.average_available_percentage_pool_capacity_dl , NodeB.Nokia.bts_hw.nbr_of_cells

9.9 RNC Reports.

This section shows reports for the RNC object.

- RNC Capacity Usage Report
- RNC CS Iu Release Reason Report
- RNC HSPA HHO Cell Change Failure Report
- RNC Intra System Handover Report
- RNC Iu Interface Availability
- RNC Location Service Request Failures
- RNC PS Iu Release Reason Report

9.9.1 RNC Capacity Usage Report

This report shows the RNC capacity usage

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC
Capacity Usage	RNC.RNC_Id, RNC.Nokia.rnc_capacity_usage.amr_average, RNC.Nokia.rnc_capacity_usage.amr_max, RNC.Nokia.rnc_capacity_usage.amr_lic_capacity, RNC.Nokia.rnc_capacity_usage.ave_rrc_conn_mode_users, RNC.Nokia.rnc_capacity_usage.ave_users_cell_dch, RNC.Nokia.rnc_capacity_usage.ave_users_cell_fach, RNC.Nokia.rnc_capacity_usage.ave_users_cell_pch, RNC.Nokia.rnc_capacity_usage.ave_users_ura_pch, RNC.Nokia.rnc_capacity_usage.iu_ps_thr_average, RNC.Nokia.rnc_capacity_usage.iu_ps_thr_limit_duration, RNC.Nokia.rnc_capacity_usage.iu_ps_thr_peak, RNC.Nokia.rnc_capacity_usage.iub_ps_thr_lic_capacity, RNC.Nokia.rnc_capacity_usage.max_rrc_conn_mode_users, RNC.Nokia.rnc_capacity_usage.peak_iu_ps_throughput

9.9.2 RNC CS Iu Release Reason Report

This report describes the Iu release signal coming from and to circuit switched core network subsystem MSC.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC
RNC CS Incoming Iu Release Reason Report	RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_in_contr_by_msc_due_to_rn_layer_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_in_contr_by_msc_due_to_tr_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_in_contr_by_msc_due_to_non_stan_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_in_contr_by_msc_due_to_prot_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_in_contr_by_msc_due_to_misc_cause
RNC CS OutGoing Iu Release Reason Report	RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_out_contr_by_msc_due_to_rn_layer_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_out_contr_by_msc_due_to_tr_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_out_contr_by_msc_due_to_non_stan_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_out_contr_by_msc_due_to_prot_cause, RNC.Nokia.cswitch.iurelreq.inter_syst_hho_iu_rel_out_contr_by_msc_due_to_misc_cause

9.9.3 RNC HSPA HHO Cell Change Failure Report

This report describes the inter-RNC HSPA service Cell Change Failure report

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC

RNC HSPA Cell Change Report	RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.anchoring.intrasys_hho_scc.inter_rnc_hho_attempts_due_to_hspa_scc, RNC.Nokia.anchoring.intrasys_hho_scc.unsuccessful_inter_rnc_hho_caused_by_hspa_scc, RNC.Nokia.anchoring.intrasys_hho_scc._%_unsuccessful_inter_rnc_hho_caused_by_hspa_scc

9.9.4 RNC Intra System Handover Report

This report shows the intra system handover statistics

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC
Intra system handover	RNC.RNC_Id, RNC.Nokia.hspa_ifho_meas.att_hspa_inter_ifho, RNC.Nokia.hspa_ifho_meas.att_hspa_intra_ifho, RNC.Nokia.hspa_ifho_meas.succ_hspa_inter_ifho, RNC.Nokia.hspa_ifho_meas.succ_hspa_intra_ifho_hsdpa, RNC.Nokia.hspa_ifho_meas.succ_hspa_intra_ifho_hsupa, RNC.Nokia.hspa_ifho_meas.succ_hspa_intra_ifho_rel99

9.9.5 RNC Iu Interface Availability

This report describes the Iu interface availability connected to CN.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC
RNC Iu Interface Availability	RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.RAN_Usage.Service_Level._%_iu_availability (DA), RNC.Nokia.ranap_stats.iu_not_working_duration (DA)

9.9.6 RNC Location Service Request Failures

Report of location service request initiated by the RNC , the statistics of the failure statistics , their breakdown.Doesn't include emergency calls related location service requests.Total of failed requests of category to be taken as failed lcs requests

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC

Primary Object	RNC
Table for Location Service Request Failures	RNC.RNC_Id, RNC.Nokia.location_services.failed_high_priority_lcs_req_cell_id_rtt, RNC.Nokia.location_services.failed_normal_priority_lcs_req_cell_id_method, RNC.Nokia.location_services.failed_lcs_requests_due_to_anchoring, RNC.Nokia.location_services.rejected_lcs_requests_due_to_duplicate_request, RNC.Nokia.location_services._%_failed_lcs_requests

9.9.7 RNC PS Iu Release Reason Report

This report describes the Iu release signal coming from and to packet switched core network subsystem SGSN.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.RNC
Primary Object	RNC
RNC PS Incoming Iu Release Reason Report	RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_rn_layer_cause, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_tr_cause, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_nas_cause, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_prot_cause, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_misc_cause, RNC.Nokia.rnsap.iu_release_request.target.srns_reloc_iu_rel_in_contr_by_sgsn_due_to_non_stan_cause
RNC PS OutGoing Iu Release Reason Report	AGPS_IF.Nokia.agps_measurements._%_successful_connections_to_agps_server, RNC.RNC_Id, RNC.RNC_Name, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_contr_by_sgsn_due_to_rn_layer_cause, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_co

	ntr_by_sgsn_due_to_tr_cause, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_contr_by_sgsn_due_to_nas_cause, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_contr_by_sgsn_due_to_prot_cause, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_contr_by_sgsn_due_to_misc_cause, RNC.Nokia.rnsap.iu_release_request.source.srns_reloc_iu_rel_out_contr_by_sgsn_due_to_non_stan_cause

9.10 Signalling_Link Reports.

This section shows reports for the Signalling_Link object.

- MTP Signalling Link Performance
- MTP Signalling Link Utilisation

9.10.1 MTP Signalling Link Performance

This report displays the MTP signalling link performance statistics.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Signalling_Link
Primary Object	Signalling_Link
Link Performance	Signalling_Link.SS7_Link_Id, Signalling_Link.SS7_LinkSet_Id, Signalling_Link.SS7_Point_Id, Signalling_Link.Nokia.mtp_signalling_link_performance.dur_in_service_state, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_all_reasons, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_abnorm_fibr_bsnr, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_ali_or_prov_fail, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_exc_del_of_ack, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_exc_dur_of_cong, Signalling_Link.Nokia.mtp_signalling_link_performance.link_failures_exc_error_rate, Signalling_Link.Nokia.mtp_signalling_link_performance.sign_units_received_in_error, Signalling_Link.Nokia.mtp_signalling_link_performance.negative_acks,

	Signalling_Link.Nokia.mtp_signalling_link_performance.automatic_changebacks, Signalling_Link.Nokia.mtp_signalling_link_performance.automatic_changeovers, Signalling_Link.Nokia.mtp_signalling_link_performance.link_restorations, Signalling_Link.Nokia.mtp_signalling_link_performance.sd_loss

9.10.2 MTP Signalling Link Utilisation

This report displays the signalling link utilisation statistics.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Signalling_Link
Primary Object	Signalling_Link
Link Utilisation	Signalling_Link.SS7_Link_Id, Signalling_Link.SS7_LinkSet_Id, Signalling_Link.SS7_Point_Id, Signalling_Link.Nokia.mtp_signalling_link_utilization.msus_received, Signalling_Link.Nokia.mtp_signalling_link_utilization.msus_transmitted, Signalling_Link.Nokia.mtp_signalling_link_utilization.octets_retransmitted, Signalling_Link.Nokia.mtp_signalling_link_utilization.sif_and_sio_octets_received, Signalling_Link.Nokia.mtp_signalling_link_utilization.sif_and_sio_octets_transmitted

9.11 Signalling_Point Reports.

This section shows reports for the Signalling_Point object.

- MTP Signalling Point Status
- MTP Signalling Point Traffic

9.11.1 MTP Signalling Point Status

This report displays the MTP signalling point status measurements

Report Feature	Details

Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Signalling_Point
Primary Object	Signalling_Point
Status	Signalling_Link.SS7_Point_Id, Signalling_Point.Nokia.mtp_signalling_point_status.adjacent_sp_inaccessible, Signalling_Point.Nokia.mtp_signalling_point_status.nbr_of_received_tfc, Signalling_Point.Nokia.mtp_signalling_point_status.upus_received, Signalling_Point.Nokia.mtp_signalling_point_status.adjacent_sp_ina_duration, Signalling_Point.Nokia.mtp_signalling_point_status.msu_discarded_rec_msus, Signalling_Point.Nokia.mtp_signalling_point_status.msu_discarded_trans_msus, Signalling_Point.Nokia.mtp_signalling_point_status.upus_transmitted

9.11.2 MTP Signalling Point Traffic

This report displays the MTP signalling traffic measurement of signalling points.

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Signalling_Point
Primary Object	Signalling_Point
Traffic	Signalling_Point.SS7_Point_Id, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.sif_and_sio_oct_rec_with_opc, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.total_octets_rec_trans, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.total_octets_trans_to_dpc, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_1, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_2, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_3, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_4, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_5, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_6, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_oct

	ets_7, Signalling_Point.Nokia.mtp_signalling_traf_report_sp.transmitted_octets_8

9.12 DSP_Pool Reports.

This section shows reports for the DSP_Pool object.

- DSP Pool Resource Utilization Report

9.12.1 DSP Pool Resource Utilization Report

This report shows the DSP resource utilization

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.DSP_Pool
Primary Object	DSP_Pool
DSP Resource Utilization	DSP_Pool.DSP_Pool_Id, DSP_Pool.RNC_Id, DSP_Pool.Nokia.dsp_resource_util.available_cap_on_ne, DSP_Pool.Nokia.dsp_resource_util.curr_res_alloc_on_ne, DSP_Pool.Nokia.dsp_resource_util.succ_res_alloc_on_ne, DSP_Pool.Nokia.dsp_resource_util.lowest_cap_on_ne, DSP_Pool.Nokia.dsp_resource_util.peak_res_alloc_on_ne

9.13 Ethernet_IF Reports.

This section shows reports for the Ethernet_IF object.

- Ethernet Interface Performance Report

9.13.1 Ethernet Interface Performance Report

The report shows the ethernet interface performance

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.Ethernet_IF
Primary Object	Ethernet_IF

Ethernet frames received	Ethernet_IF.Ethernet_IF_Id, Ethernet_IF.RNC_Id, Ethernet_IF.Nokia.ethernet_if_perf.ether_rx_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_rx_kilobyte, Ethernet_IF.Nokia.ethernet_if_perf.ether_rx_broadcast_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_rx_multicast_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_rx_unicast_frame
Ethernet frames transmitted	Ethernet_IF.Ethernet_IF_Id, Ethernet_IF.RNC_Id, Ethernet_IF.Nokia.ethernet_if_perf.ether_tx_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_tx_kilobyte, Ethernet_IF.Nokia.ethernet_if_perf.ether_tx_broadcast_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_tx_multicast_frame, Ethernet_IF.Nokia.ethernet_if_perf.ether_tx_unicast_frame

9.14 IP_Route_BTS Reports.

This section shows reports for the IP_Route_BTS object.

- IP Route Accessibility Report

9.14.1 IP Route Accessibility Report

This report shows the average success rate of the transport resource reservation attempts for IP Route based connections

Report Feature	Details
Report Tree Branch	System.UMTS.Engineering.UTRAN.Nokia.IP_ROUTE_BTS
Primary Object	IP_Route_BTS
Graph for IP Route Accessibility	IP_Route_BTS.Nokia.ip_transport_resource_reservations._%_ip_route_accessibility
Table for IP Route Accessibility	IP_Route_BTS.Nokia.ip_transport_resource_reservations.fail_rnc_ip_res_ext, IP_Route_BTS.Nokia.ip_transport_resource_reservations.fail_rnc_ip_res_int, IP_Route_BTS.Nokia.ip_transport_resource_reservations.fail_rnc_ip_res_other, IP_Route_BTS.IP_Route_BTS_Id, IP_Route_BTS.NodeB_Id, IP_Route_BTS.RNC_Id, IP_Route_BTS.Nokia.ip_transport_resource_reservations.succ_rnc_ip_res

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