



Tivoli System Automation for z/OS

System Automation for z/OS goes Tivoli Enterprise Portal

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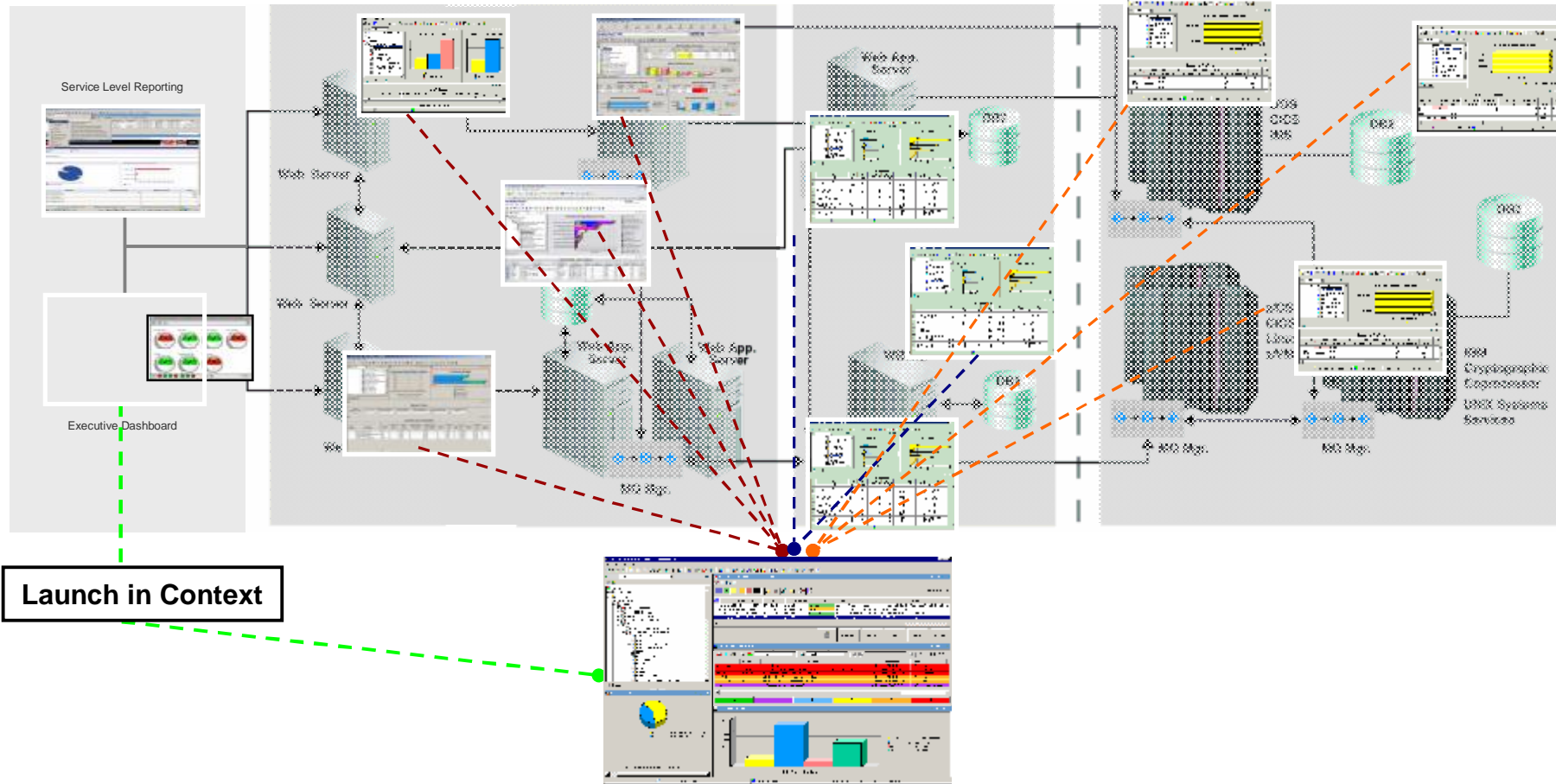
Agenda

- § Introduction
- § TEP Workspaces
- § Situations
- § Status Items
- § Component Overview and Configuration

A Complete View on IT Infrastructure Performance

A single portal to monitor the overall health of the infrastructure

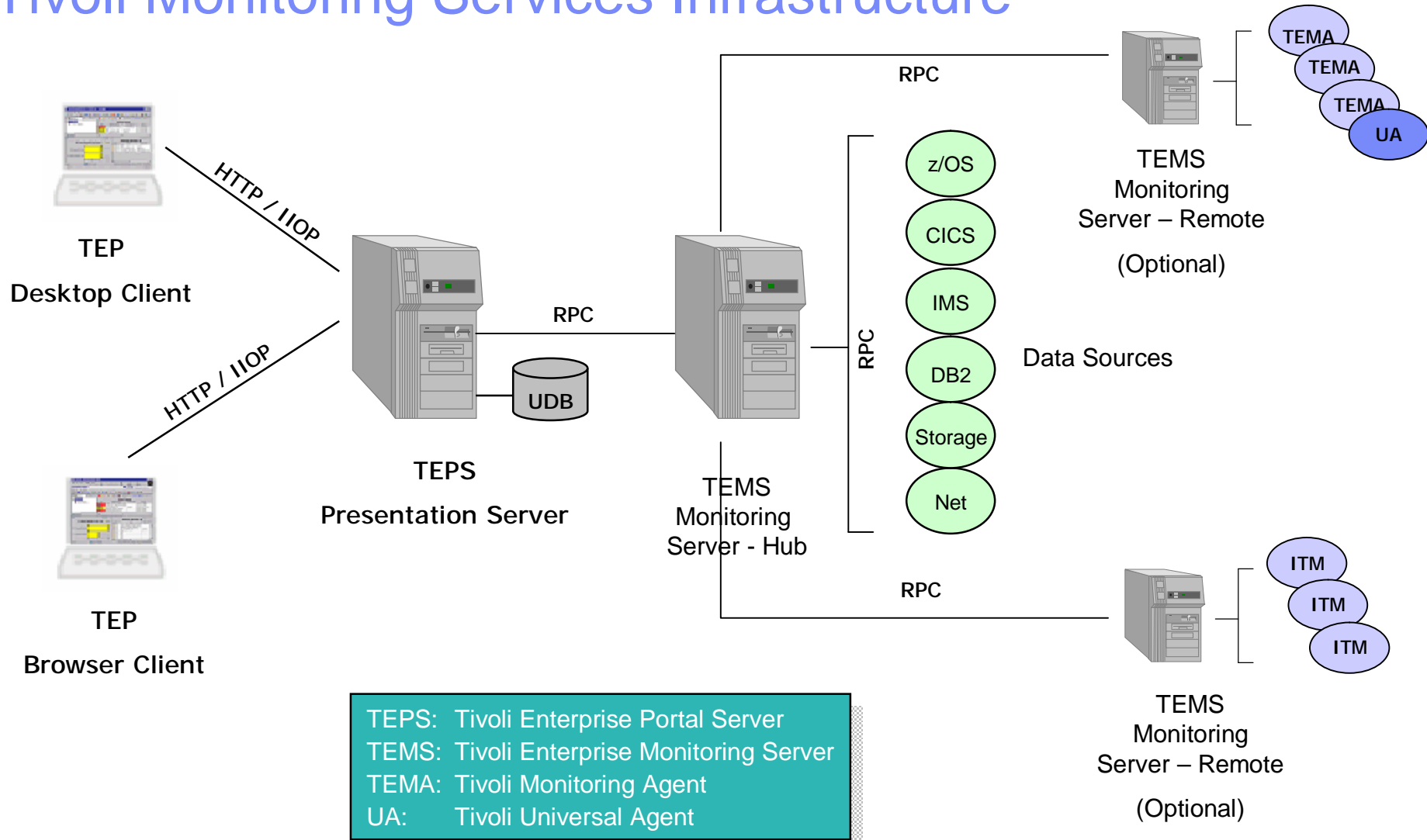
Business Services Distributed Resources Transactions Mainframe Resources



Objective

- § An integrated monitoring environment that spans an IT-organization from End-to-End is an important building block in the IBM service management strategy
- § The Tivoli Enterprise Portal (TEP) fulfills the needs for a user interface that provides these integration capabilities including today
 - IBM Tivoli Monitoring V5
 - IBM Tivoli Monitoring V6
 - OMEGAMON
 - IBM Tivoli Composite Application Management
- § To take the integration to the next level and adding operational tasks to the TEP, automation views must be integrated as well
- § System Automation for z/OS will add an initial set of views providing details about the state of automation on a system, in the sysplex, and within the enterprise
- § Support is shipped as extension to SA z/OS V3.1 in OA18415

Tivoli Monitoring Services Infrastructure



TEPS: Tivoli Enterprise Portal Server
 TEMS: Tivoli Enterprise Monitoring Server
 TEMA: Tivoli Monitoring Agent
 UA: Tivoli Universal Agent

SA z/OS Extensions to ITMS Infrastructure

§ With OA18415, SA z/OS introduces the following extensions to the ITMS infrastructure

- A new monitoring agent (TEMA) collecting data for queries and situations
- Application support for the TEP desktop / browser client

§ SA z/OS Agent

- The TEMA registers the System Automation for z/OS application
- It registers one or more System Automation for z/OS Agent sub-nodes, one for each system with SA/NetView running
- It provides sample routines invoked by the ITMS infrastructure on behalf of queries or situations
- The monitoring agent interfaces with NetView via the Program-to-Program Interface (PPI)

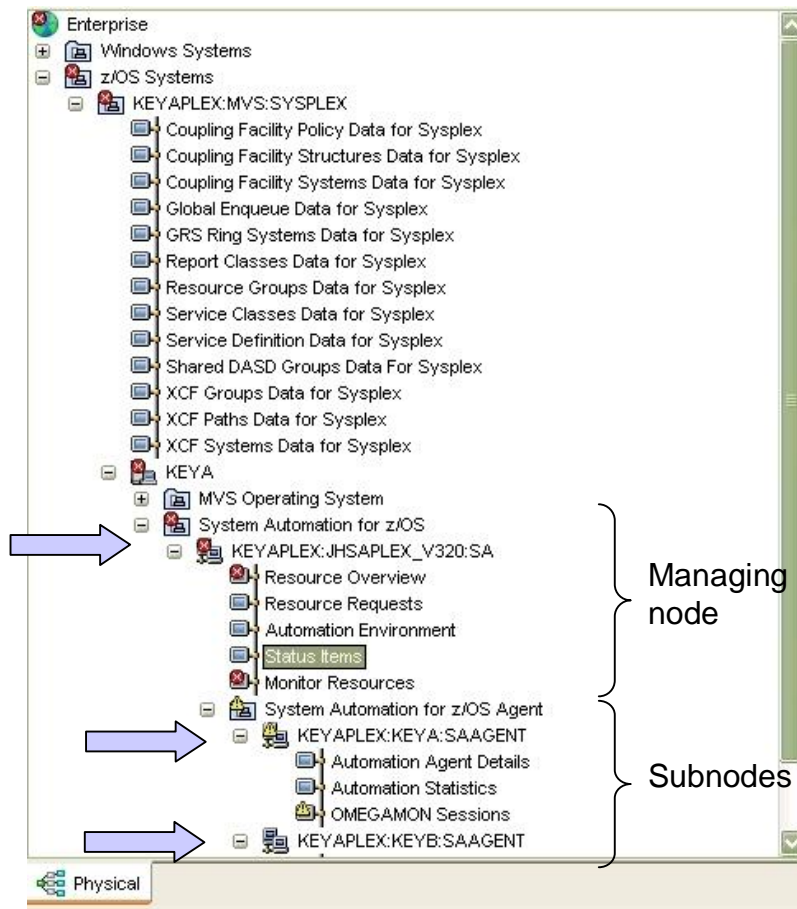
§ SA z/OS application support consisting of

- A set of default queries
- A set of default workspaces containing one or more views based on the default queries
- Links associated with workspaces to allow the user to navigate between different levels of detail
- Situations that allow the user to monitor the health of the automated environment

Agenda

- § Introduction
- ▶ **TEP Workspaces**
- § Situations
- § Status Items
- § Component Overview and Configuration

System Automation in the TEP Navigator



§ SA z/OS appears in the z/OS Systems subtree

§ The TEMA registers at the TEMS using the sysplex name, the SA sysplex group name and the constant “SA”, e.g.

- KEYAPLEX:JHSAPLEX_V310:SA

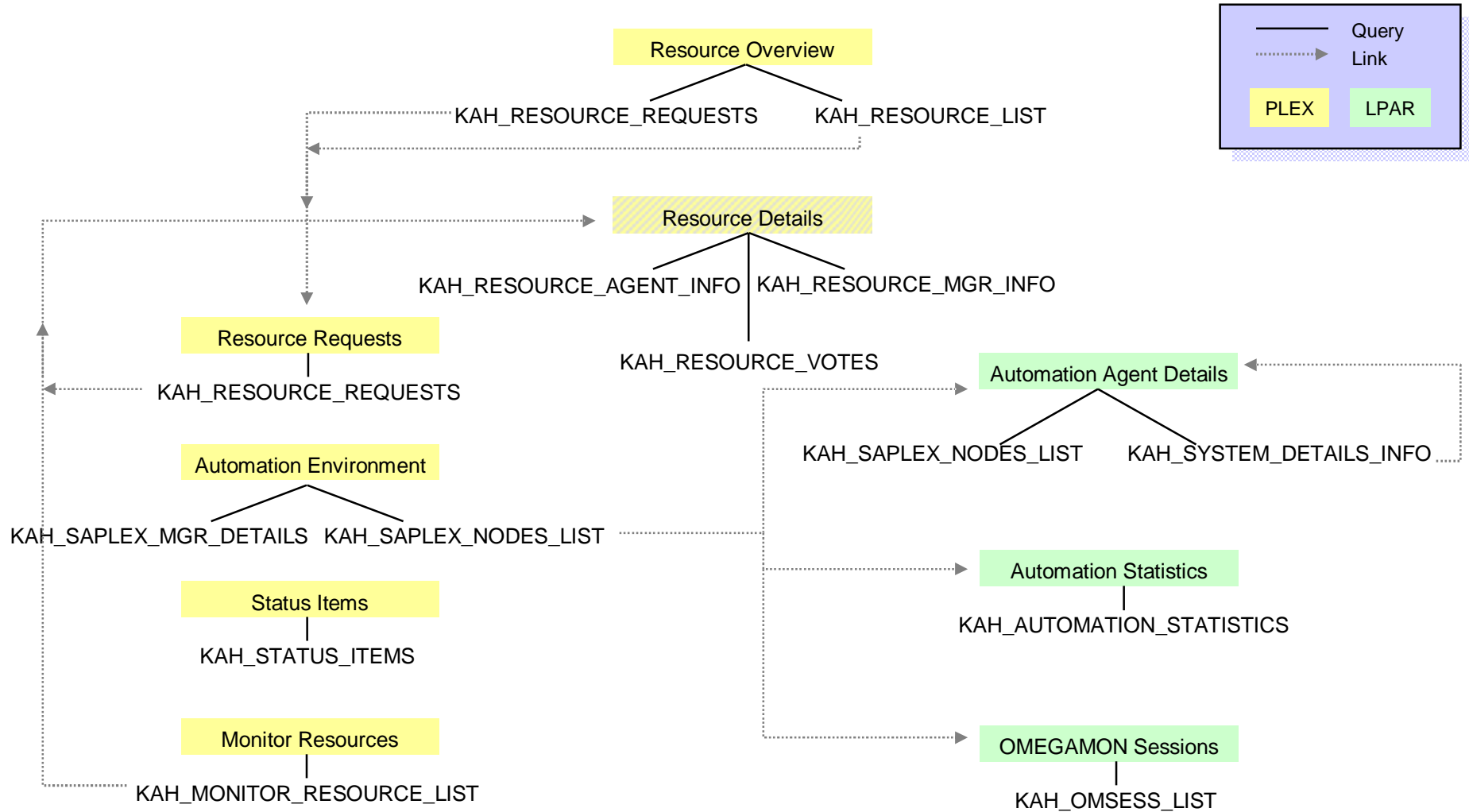
§ The node is shown on the system the TEMA is running on, here system KEYA

§ Each system detected in the automation environment by the TEMA causes an additional subnode to be registered at the TEMS using the sysplex name, the SMF ID, and the constant “SAAGENT”, e.g.

- KEYAPLEX:KEYA:SAAGENT
- KEYAPLEX:KEYB:SAAGENT

§ The existence of subnodes depends on the status of the automation agent

Workspaces and Queries



Resource Overview

Any Requests from Operators?

All Resources in Desired State?

List of all resources in your automation environment incl. status

Resource Name	Resource Type	System	Compound Status	Observed Status	Desired Status	Health Status	Automation Status	Automation Flag	Hold Flag	Description
MYRANDOM	MTR	KEYB	Degraded	Available	Available	Warning	Idle	Yes	No	random monitor
MYRANDOM	MTR	KEYA	Problem	HardDown	Available	NA	Idle	Yes	No	random monitor
KEYA	SYS	KEYA	Satisfactory	Available	Available	NA	Idle	Yes	No	Primary system in JHSAPLEX
KEYB	SYS	KEYB	Satisfactory	Available	Available	NA	Idle	Yes	No	Secondary system in JHSAPLEX
ABANKAPL	APL	KEYA	Satisfactory	SoftDown	Unavailable	NA	Idle	Yes	No	Banking Application (Single System)
AM1	APL	KEYA	Satisfactory	Available	Available	NA	Idle	Yes	No	Automation Manager
Link to Resource Details		KEYB	Problem	HardDown	Unavailable	NA	Idle	Yes	No	SA Automation Manager
		KEYA	Problem	HardDown	Unavailable	NA	Idle	Yes	No	SA Automation Manager
AM2	APL	KEYB	Problem	HardDown	Unavailable	NA	Idle	Yes	No	Automation Manager
APPC	APL	KEYA	Satisfactory	Available	Available	NA	Idle	Yes	No	
APPC	APL	KEYB	Satisfactory	Available	Available	NA	Idle	Yes	No	
ASCH	APL	KEYA	Satisfactory	Available	Available	NA	Idle	Yes	No	
ASCH	APL	KEYB	Satisfactory	Available	Available	NA	Idle	Yes	No	
BLSJPRMI	APL	KEYA	Satisfactory	Available	Available	NA	Idle	Yes	No	

Resource Details

The screenshot displays the Tivoli Enterprise Portal interface. On the left, a tree view shows the navigation structure, including 'KEYA' and 'KEYAPLEX:JHSAPLEX:SA'. The main window is titled 'Resource Votes for ABANKAPL/APL/KEYA' and contains a table with the following data:

Action	Win	Type	From Action	From Resource	Creation Times	Usage
STOP	Yes	Vote	MakeUnAvailable	ABANKCOMP/APG/KEYA	04/04/07 13:44:58	1 GROUP ABA
STOP	N/A	Request	MakeUnAvailable	ABANKAPL/APL/KEYA	04/04/07 13:46:33	1 OPER_JMH
START	Propagate	Vote	MakeAvailable Only	DAYSHIFT/SVP	04/04/07 07:00:00	1 SCHEDULE

Below the table, two panels provide detailed information:

- Manager Information about ABANKAPL/APL/KEYA:**
 - Resource : ABANKAPL/APL/KEYA
 - Description : A Banking Application (Single System)
 - Owner : http://w3.ibm.com/w3odw/spg/marketreportfull.html
 - Status...
 - > Observed Status : SOFTDOWN
 - > Desired Status : UNAVAILABLE
 - > Automation Status : IDLE
 - > Startable Status : YES
 - > Compound Status : SATISFACTORY
 - > Health Status : N/A
 - Dependencies...
 - > PreStart : Satisfied
- Agent Information about ABANKAPL/APL/KEYA:**
 - Subsystem : ABANKAPL on System : KEYA
 - Description : A Banking Application (Single System)
 - Owner : http://w3.ibm.com/w3odw/spg/marketreportfull.html
 - Class : ABANK_CLASS
 - Job Name : ABANK01
 - Procedure : AAAZSSEM
 - Job Type : MVS
 - Current status : AUTODOWN

Three yellow callout boxes highlight specific areas:

- 'Details from the automation manager perspective' points to the Manager Information panel.
- 'Details from the automation agent perspective' points to the Agent Information panel.
- 'All votes affecting this resource' points to the Resource Votes table.

At the bottom of the interface, there are status indicators: 'Hub Time: Not Available', 'Server Available', and 'Resource Details - localhost - JMH'.

Resource Requests

Request Summary

KEYAPLEX.JHSAPLEX:SA

Resource Name	Resource Type	System	Action	Creation Time	Priority	Priority Class	Source	User	Status	Timeout Option	Overrides	Comment	Appl Param
ABANKAPL	APL	KEYA	MakeUnAvailable	04/04/07 13:46:33	01720000	Low	OPER_JMH(JMH)	JMH	P	N/A	NO		
ABANKCOMP	APG	KEYA	MakeUnAvailable	03/15/07 12:16:27	01720000	Low	OPER_JMH(JMH)	JMH	WVS	N/A	NO		
Link to Resource Votes	VP	KEYA	MakeAvailable Only	04/04/07 02:00:00	01140000	Low	SCHEDULE	W	N/A				
	JR	KEYA	MakeAvailable Only	04/04/07 13:00:57	01740000	Low	OPER_SIHE(SIHE)	SIHE	WVU	N/A	NO		

Monitor Resources

Is your system "well"?

KEYAPLEX:JHSAPLEX:SA

Monitor Name	System Name	Status	Health	Last Monitored	Status Message
JES2MON	KEYA	Active	Unknown	03/29/07 08:23:07	Monitor started
MARANDOM	KEYA	Active	Critical	04/04/07 14:01:01	
MBRANDOM	KEYA	Active	Normal	04/04/07 14:01:18	
Link to Monitor Resource Details:		Broken	Unknown	04/04/07 12:33:12	Could not invoke monitor command
		Broken	Unknown	03/29/07 08:23:07	Could not invoke monitor command
JES2MON	KEYB	Active	Unknown	04/04/07 13:29:24	Monitor started
MARANDOM	KEYB	Active	Warning	04/04/07 14:01:31	NONE
MBRANDOM	KEYB	Active	Normal	04/04/07 14:01:28	NONE
MYBROKEN	KEYB	Broken	Unknown	04/04/07 13:29:23	Could not invoke monitor command
MYRANDOM	KEYB	Active	Normal	04/04/07 13:59:26	NONE

List of all Monitor Resources (MTR) and their status

Automation Environment

The screenshot displays the Tivoli Enterprise Portal interface. The top navigation bar includes 'Welcome JMH', 'Tivoli Enterprise Portal', and a 'Log out' button. Below the navigation bar is a menu with 'File', 'Edit', 'View', and 'Help'. The main content area is divided into several sections:

- Left Panel:** A tree view showing the system hierarchy. Under 'System Automation for z/OS', the 'Automation Environment' is selected.
- Automation Manager Details:** A detailed view of the automation manager configuration.

Automation Manager	: KEYA\$\$\$\$2	running on system	: KEYA
Operation mode	: PAM	Job name	: AML
Status	: READY	Start type	: HOT
XCF-Groupname	: INGXSJH		
Start time	: 29 MAR 2007 08:21:21		
PAM selected time	: 29 MAR 2007 08:21:24		
Config refresh time	: 04 APR 2007 13:10:39		
Takeover file	: BHOL.JHSAPLEX.HSATKQVR		
Status	: ENABLED		
Logic Deck ...			
Release	: V3R1M0		
Date built	: 16 Jan 2007		
Time built	: 17:19:53		
Last APAR	: 0A19532		
- Automation Environment Members:** A table listing the members of the automation environment.

System Name	Member Name	Role	Status	Sysplex Name	XCF Group Name	Product Release	Comm Method	E2E Focal Point	SID
KEYA	KEYA	Agent	Ready	KEYAPLEX	INGXSJH	V3R1M0	XCF	No	KEYA
KEYA	KEYA\$\$\$\$2	Pam	Ready	KEYAPLEX	INGXSJH	V3R1M0	XCF	No	
KEYB	KEYB	Agent	Ready	KEYAPLEX	INGXSJH	V3R2M0	XCF	No	KEYB

Two yellow callout boxes pose questions: 'How does the Automation Manager environment look like?' pointing to the details pane, and 'How does the overall automation environment look like?' pointing to the members table.

Automation Agent Details

The screenshot displays the Tivoli Enterprise Portal interface. On the left, a tree view shows the navigation structure, with 'Automation Agent Details' selected under 'KEYAPLEX:KEYA:SAAGENT'. The main area is divided into two panes. The top pane, titled 'Automation Agents', contains a table listing agents. The bottom pane, titled 'Automation Agent Details', shows the configuration for the selected agent.

System Name	Member Name	Role	Status	Sysplex Name	XCF Group Name	Product Release	Comm Method	E2E Focal Point	SID
KEYA	KEYA	Agent	Ready	KEYAPLEX	INGXSGJH	V3R1M0	XCF	No	KEYA
KEYB	KEYB	Agent	Ready	KEYAPLEX	INGXSGJH	V3R2M0	XCF	No	KEYB

Other automation agents

```

Text
System      : KEYA      in Sysplex : KEYAPLEX
Domain      : IPXNG
Sysplex Group : JHSAPLEX
XCF Group name : INXSGJH

Software
> Operating System : z/OS 01.07.01
> NetView          : Tivoli NetView for z/OS V5R2
> Tower(s)         : SA
> System Automation : V3R1M0
> Tower(s)         : SYS0FS

Configuration
> Data set        : SIHE.JHSAPLEX.V310.ACF(ACF2999)
> Built by       : SIHE 04/04/07 13:09:44
> Activated      : 04/04/07 13:10:44
    
```

Agent details such as NetView level, automation configuration (ACF) loaded, captured messages and many more...

Hub Time: MI, 04/04/2007 02:02 PM | Server Available | Automation Agent Details - localhost - JMH

OMEGAMON Sessions

How effective are your OMEGAMON sessions?

Which OMEGAMON sessions are used and what's their status?

Session Name	Session Type	Session Status	Application ID	Fixed LU Name	Source LU Name	Session Data	User ID	Managed Password	Authentication Group	Session Operator	Timeout	Request Count	Command Count	Trap Count	Ex
OMMVSA	MVS	Active	IPXGM2RC		TFNG#0...		BHOL	Yes		AOFSES01	29	86	13	73	
OMMVS4	MVS	Maintenance	IPSPM2RC					No		AOFSES02	29	61	28	33	

Automation Statistics

The screenshot displays the Tivoli Enterprise Portal interface. On the left is a tree view of system components. The main area contains three charts: 'Autom. Agent Activity' (a bar chart with four bars), 'Autom. Manager Activity' (a bar chart with two bars), and 'Messages and Commands' (a bar chart with two bars). Below the charts are two summary tables. A callout box points to the 'System Count' column in the first table.

Autom. Agent Activity

Category	Count
Command Count	0
Messages Count	0
Shutdown Command Count	2
Startup Command Count	15

Autom. Manager Activity

Category	Count
Workitems Per Hour	126.10
Orders Per Hour	1.30

Messages and Commands

Category	Count
Messages Per Hour	0.00
Commands Per Hour	0.00

Automation Statistics Summary

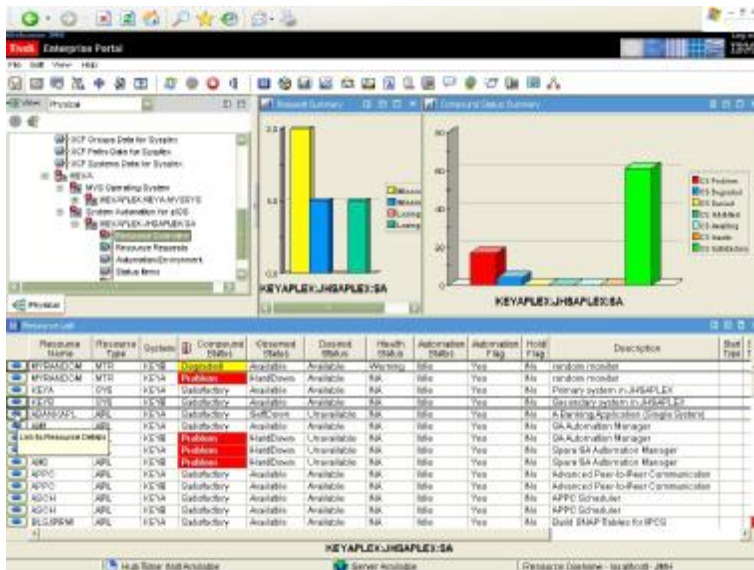
Statistics Begin	Statistics End	Statistics Interval	CPU Time	Resource Count	Managed Resource Count	Monitor Count	Workitem Count	Timeout Count	Order Count	System Count	SAPlex Resource Count	SAPlex Application Count	SAPlex Application Group Count	SAPlex Monitor Resource Count
03/29/07 08:22:51	04/04/07 14:03:11	149:41	5591,70	26	14	5	18874	0	200	2	94	51	16	10

KEYAPLEX:KEYA:SAGENT - More Statistics

Messages Count	Command Count	Startup Command Count	Shutdown Command Count	Messages Per Hour	Commands Per Hour	Workitems Per Hour	Orders Per Hour	Average Waittime	Maximum Waittime
0	0	15	2	0,00	0,00	126,10	1,30	0,20	3,20

Future Additional Workspaces

From ESP-Feedback and Additional Ideas

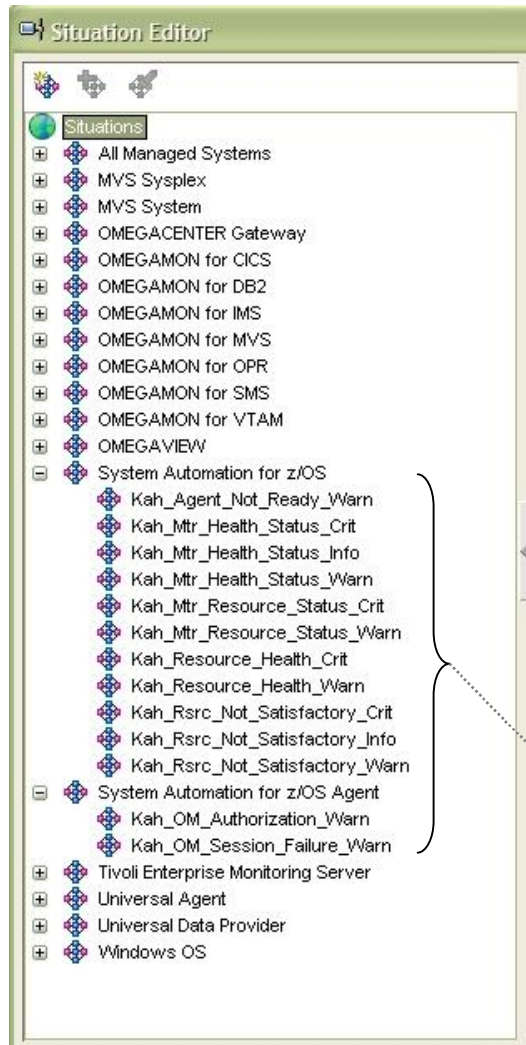


- § Automation Flags
- § Critical messages
- § Historical analysis
- § Job details
- § Gateway status information
- § Outstanding replies
- § IPL data
- § Processor Operations: Partitions, options and status
- § I/O Operations: Connections
- § Combined workspaces with other monitoring products

Agenda

- § Introduction
- § TEP Workspaces
- ▶ **Situations**
- § Status Items
- § Component Overview and Configuration

Situations Provided by SA z/OS

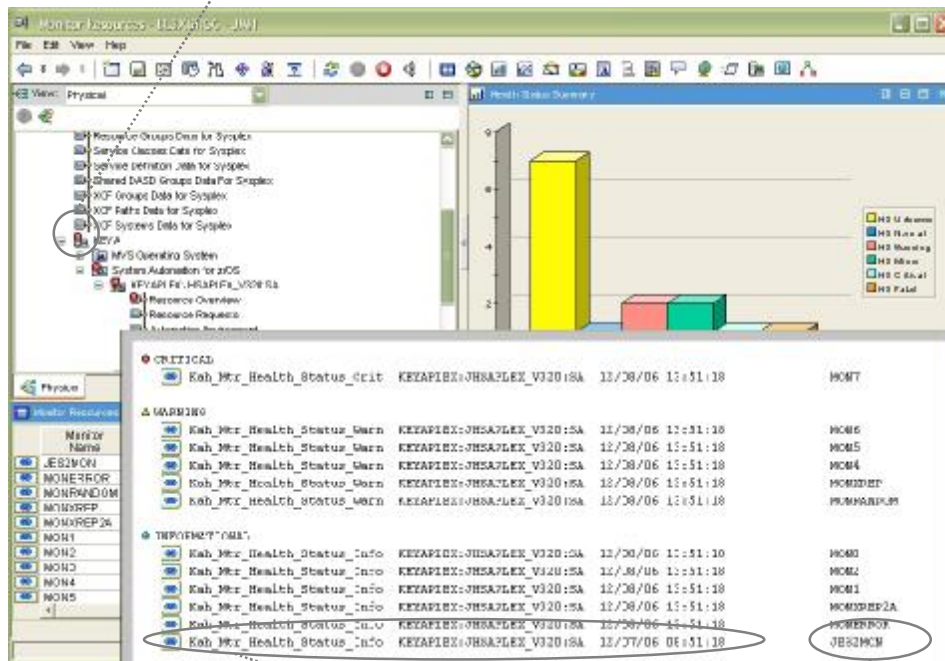


SA z/OS Situations

- § The initial set of situations provided by the product is listed on the left-hand side
- § All situations start with the prefix “Kah_” which is the new product prefix assigned to the monitoring agent
- § Most situations are based on data associated with the managing node called System Automation for z/OS
- § Only OMEGAMON session-related situations are associated with the System Automation for z/OS Agent subnode
- § The situations are active by default
- § The user can use or modify the product provided situations but can also add new situations if required

Situation Example

Color of most severe situation in this node or the underlying subtree



Situation name, node, and date/time

Display item setup with the situation

§ When a situation is true, the icon of the workspace it is associated with changes to the color corresponding to the situation's severity

- Critical situations are shown in red
- Warning situations are shown in yellow
- Informational situations are shown in turquoise

§ When the mouse hovers above such an icon, a popup panel like shown on the left side appears

§ On the panel, the individual situation is listed

§ A link is provided that guides you to detailed information

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- § Introduction
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- § Situations
- ▶ **Status Items**
- § Component Overview and Configuration

Status Items

- § Status items are generic resources not otherwise tied to resources in the automation configuration
- § They are created, updated, and deleted by installation defined routines
- § Each status item consists basically of a
 - Identifier, optionally divided in a group part and name part
 - Description
 - Transient text describing the current status
 - Value representing the current status
- § Status items can be persistent, i.e. their status survives in the automation manager's takeover file until a cold start is made, however, the default lifetime is that of a NetView session
- § Status items are anchored at a particular system in the SA sysplex

Installation-Defined Status Items

The screenshot displays the Tivoli Enterprise Portal interface. On the left is a tree view of system components. The main area is divided into two panes:

- Status Items Table:** A table listing installation-defined status items. A callout points to this table with the text: "List of installation-defined status items with value and descriptive text".
- Initiator Distribution by Jobclass Chart:** A horizontal bar chart showing the distribution of initiators across jobclasses. A callout points to this chart with the text: "Your own summary!".

System	Group	Name	Value	Description	Transient Text	Change Time	Persistence
KEYA	JES2Inits	ClassA	27	Initiators in jobclass	Jobclass A	04/04/07 10:45:09	No
KEYA	JES2Inits	ClassB	13	Initiators in jobclass	Jobclass		
KEYA	JES2Inits	ClassC	12	Initiators in jobclass	Jobclass		
KEYA	JES2Inits	ClassD	11	Initiators in jobclass	Jobclass		
KEYA	JES2Inits	ClassE	10	Initiators in jobclass	Jobclass E	04/04/07 10:45:11	No
KEYA	JES2Inits	ClassF	9	Initiators in jobclass	Jobclass F	04/04/07 10:45:11	No
KEYA	JES2Inits	ClassG	8	Initiators in jobclass	Jobclass G	04/04/07 10:45:11	No
KEYA	JES2Inits	ClassH	1	Initiators in jobclass	Jobclass H	04/04/07 10:45:12	No
KEYA	JES2Inits	ClassI	0	Initiators in jobclass	Jobclass I	04/04/07 10:45:12	No
KEYA	JES2Inits	ClassJ	0	Initiators in jobclass	Jobclass J	04/04/07 10:45:13	No

Initiator Distribution by Jobclass Chart Data:

Jobclass	Value
ClassY	1
ClassW	1
ClassU	1
ClassS	1
ClassQ	1
ClassD	11
ClassM	1
ClassK	1
ClassI	1
ClassG	8
ClassE	10
ClassC	12
ClassA	27

Example: JES3 Workspace

The screenshot displays the JES3 workspace interface with several panels:

- JES3 Spool:** Shows origin node 811STM with a current state of OK and 34% transient text.
- JES3 Main Queue:** Shows origin node 811RSM with a current state of OK and a description of ANZ.JOBS IN MAINQUEUE: 0.
- JES3 Verify Queue:** Shows origin node 811RSM with a current state of OK and a description of 10:56:03 JOBS VERIFYQUEUE: 0 0.
- JES3 Allocation Queue:** Shows origin node 811RSM with a current state of OK and a description of 10:56:03 JOBS ALLOCQUEUE: 0 0.
- JES3 S11 Jobs in Allocation Queue:** A table with columns for Origin Node, Current State, and Description.
- Active Jobs in the System:** A table listing active jobs with columns for Session Name, Current State, Description, and Transient Text.

Session Name	Current State	Description	Transient Text
S11	OK	Active Jobs 10:57:36	5
S13	OK	Active Jobs 10:57:36	8
S13	OK	Active Jobs 10:57:36	7
S14	OK	Active Jobs 10:57:36	12
- JES3 DSP Status:** A table showing DSP status for origin node 811STM with columns for Current State and Description.

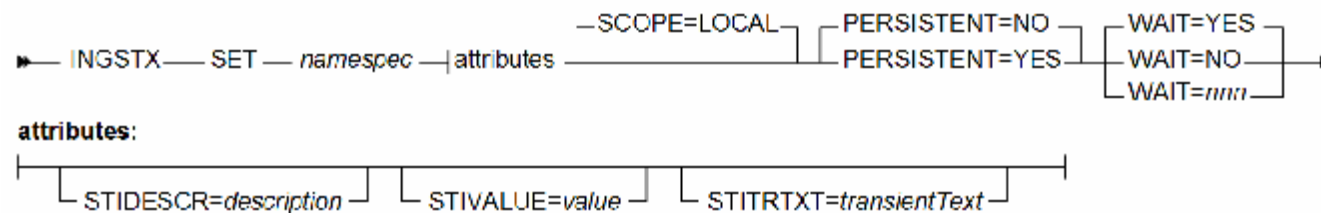
Origin Node	Current State	Description
811STM	OK	DSP CI ACTIVE=00000000
811STM	OK	DSP DEADLINE ACTIVE=00000001
811STM	OK	DSP NJE ACTIVE=00000012
811STM	OK	DSP OUTSERY ACTIVE=00009981
- JES3 DS:** A table showing DSP status for origin node 811RSM with columns for Current State and Description.

Origin Node	Current State	Description
811RSM	OK	NJE LINE01 ACTIVE
811RSM	OK	NJE LINE012 ACTIVE
811RSM	OK	NJE LINE041 ACTIVE
811RSM	OK	NJE LINE042 ACTIVE
811RSM	OK	NJE LINE043 ACTIVE
811RSM	OK	NJE LINE044 ACTIVE
811RSM	OK	NJE LINE045 ACTIVE
811RSM	OK	NJE LINE046 ACTIVE
811RSM	OK	NJE LINE047 ACTIVE
811RSM	OK	NJE LINE048 ACTIVE
811RSM	OK	NJE LINE049 ACTIVE
811RSM	OK	NJE LINE050 ACTIVE
811RSM	OK	NJE LINE051 ACTIVE
811RSM	OK	NJE LINE052 ACTIVE
811RSM	OK	NJE LINE053 ACTIVE
811RSM	OK	NJE LINE054 ACTIVE
811RSM	OK	NJE LINE055 ACTIVE
811RSM	OK	NJE LINE056 ACTIVE
811RSM	OK	NJE LINE057 ACTIVE
811RSM	OK	NJE LINE058 ACTIVE
811RSM	OK	NJE LINE059 ACTIVE
811RSM	OK	NJE LINE060 ACTIVE
- JES3 Events on Plex A:** A table with columns for Status, Situation Name, Display Item, Source, Impact, Opened, Age, Local Timestamp, and Type.

Based on generic installation-defined status items
Powered by SA z/OS

Creating and Updating Status Items ...

- § Status items are created by means of the INGSTX SET command
- § The syntax is



- § Note that INGSTX is case sensitive
 - Entered without the NetView command NETVASIS, the identifier and all attributes are translated to uppercase
 - When using the NetView command NETVASIS, the identifier is used as-is and the case of attributes is preserved when you enclose them in single or double quotes or in parenthesis
- § When the status item does not yet exist, it is created
 - Only at creation time, the persistence of the status item can be set
- § When the status item does already exist, it is updated
 - Attributes specified override existing attributes

Creating Status Items *(cont.)*

- § The status item belongs to the system where INGSTX is invoked
- § The following example creates a non-persistent status item My.StatusItem with an initial value of 20:

Case is preserved!

"My" is the group,
"StatusItem" is
the name

```
NETVASIS INGSTX SET My.StatusItem STI VALUE=20
STI DESCR="Description" STI TRTXT="Initial value"
```

- § Here is an example that updates the status item AnotherStatusItem to set a new value:

```
INGSTX SET AnotherStatusItem STI VALUE=10 STI TRTXT="New Value"
```

The status item is really called
"ANOTHERSTATUSITEM"

The transient text will be
"NEW VALUE"

Querying Status Items

- § Status items are queried by means of the `INGSTX QUERY` command
- § The syntax is

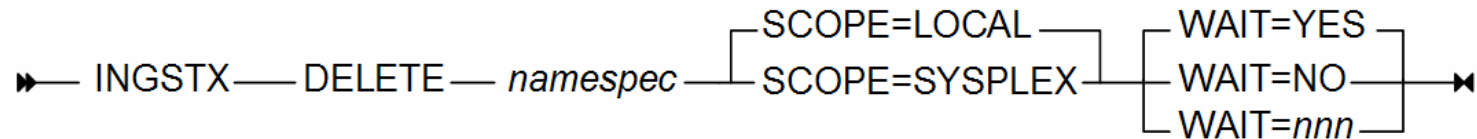
```
▶— INGSTX — QUERY — namespec — SCOPE=LOCAL — SCOPE=SYSPLEX — WAIT=YES — WAIT=nnn —▶
```

- § Status items are queried SA sysplex wide
 - To query just the local status items, use `SCOPE=LOCAL`
- § The following example queries all status items that begin with “My”:

```
NETVASIS INGSTX QUERY My*
```

Deleting Status Items

- § Status items are deleted by means of the INGSTX DELETE command
- § The syntax is



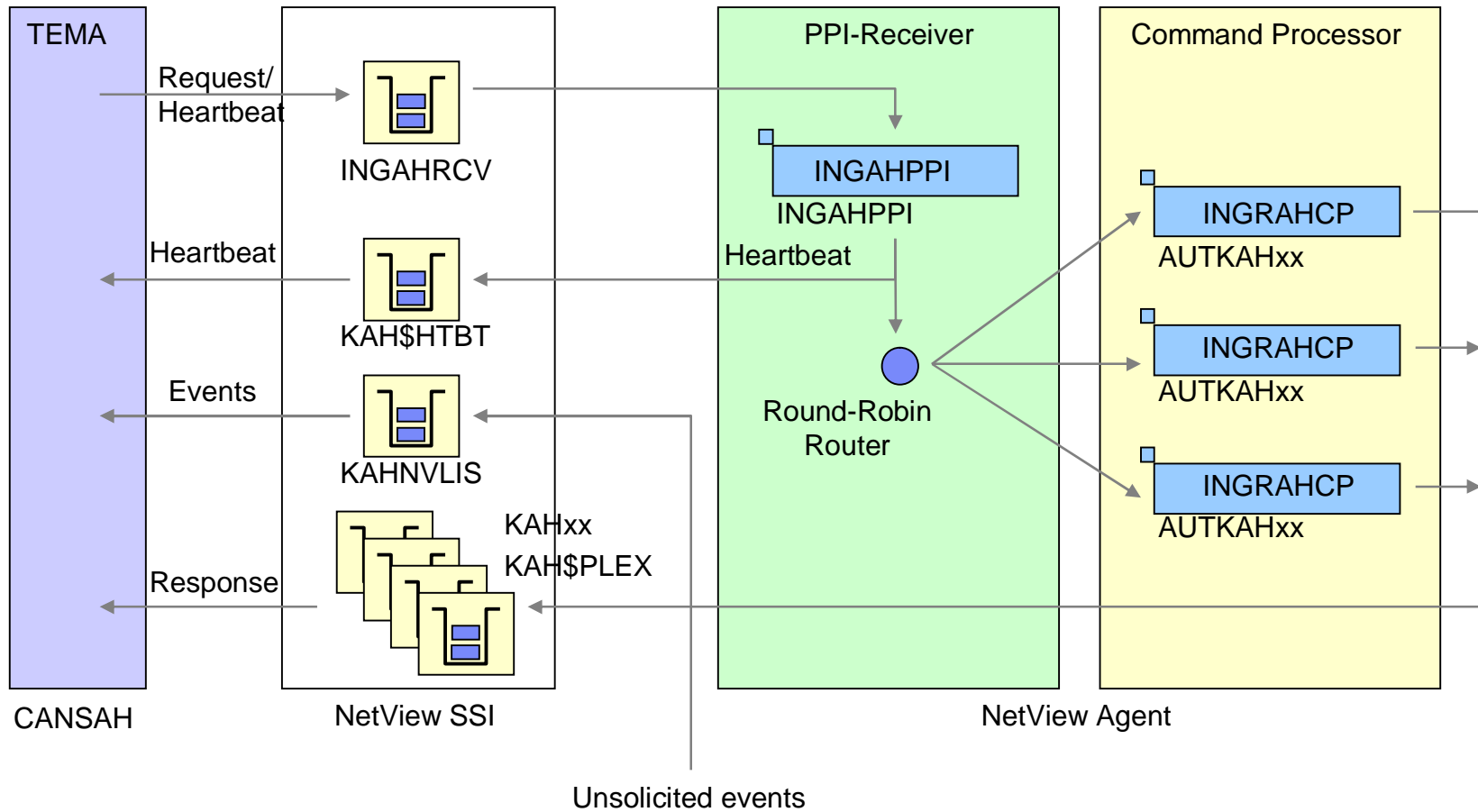
- § Status items are deleted SA sysplex wide
 - To delete just the local status items, use SCOPE=LOCAL
- § The following example deletes all status items that begin with “My”:

```
NETVASIS INGSTX DELETE My*
```

Agenda

- § Introduction
- § TEP Workspaces
- § Situations
- § Status Items
- § Fixed Source LU for OMEGAMON sessions
- ▶ **Component Overview and Configuration**

Component Overview



NetView Configuration...

- § KAH operators must be configured in the automation policy
 - AOP entry must be created with automation functions starting with prefix AOFKAH
 - Each KAH operator must be assigned a task

- § Tasks must be defined for the KAH operators
 - Member AOFOPFSO included in DSIOPF already contains tasks AUTKAH01 to AUTKAH03

- § PPI receiver task may be defined and started through CNMSTYLE
 - Sample member AOFSTYLE contains task definition statements in comments
 - For automatic start, set INIT=YES

- § PPI receiver task may be defined as an application in the automation policy
 - Start and stop of that task is controlled by SA z/OS
 - Task is defined with job type NONMVS and monitor routine AOFATMON
 - Start command: `START TASK=&SUBSJOB, MOD=I NGAHPPI [, MEM=member]`
 - Stop command: `STOP TASK=&SUBSJOB`

NetView Configuration (cont.)

- § The PPI-receiver task reads the PPI-configuration from the initialization member passed upon start of the task
- § The initialization member located in DSIPARM library specifies
 - KAH_PPI_RECEIVER, default value is INGAHRCV
 - KAH_PPI_LISTENER, default value is KAHNVLIS
 - PPI_BUFFER_SIZE, default value is 512 bytes
 - TIMEOUT, default value is 45 seconds
- § Refresh automation policy and validate PPI status after PPI-receiver task was started using the NCCF DISPPI command

```

CNMKWIND OUTPUT FROM  DISPPI RCVRID=INGAHRCV  LINE 0 OF 5
*----- Top of Data -----*
DW0948I RECEIVER  RECEIVER  BUFFER  QUEUED  TOTAL  STORAGE  RCVR
DW0949I IDENTITY  STATUS    LIMIT  BUFFERS  BUFFERS  ALLOCATED  ASID
DW0950I -----
DW0951I INGAHRCV  ACTIVE    1000    0      9710    0 003C
DW0968I END OF DISPLAY
*----- Bottom of Data -----*

```

TEMA Configuration...

§ The monitoring agent is configured through ICAT

§ Decision points

- Configuring the monitoring agent in its own address space (recommended) vs. in an existing ITMS address space, for example a remote TEMS
- Creating a Full Run-Time-Environment (RTE) vs. Sharing RTE
- Communication protocols (IP vs. IPv6 vs. SNA vs. UDP and combinations)

§ Pre-requisite Configuration

- Before the SA z/OS monitoring agent can be configured, a TEMS must be configured in the same or in a different RTE, or on another platform
- The SA z/OS monitoring agent must support at least one communication protocol that is also supported by the TEMS it connects to

TEMA Configuration (cont.)

§ Monitoring agent specific parameters set through dialog

KAHENV variable name	Meaning
KAH_PPI_RECEIVER	Name of the SA z/OS PPI receiver in the automation agent.
KAH_PPI_LISTENER	Name of the TEMA PPI receiver listening for events from the automation agent.
KAH_PPI_BUFFER_SIZE	Size of output buffer.
KAH_PPI_TIMEOUT	Timeout after which a request is terminated if no data is returned.
KAH_PPI_HEARTBEAT_INTVL	Time between validations that connection is still up.
KAH_PPI_CHECK_UP_INTVL	Time between validations that connection is still down.

§ Run-time datasets

- *&rhilev*.RKANPARU contains the KAHENV member with the application specific configuration options set during ICAT processing
- *&rhilev*.RKANPARU also contains other parameter members that reflect the configuration settings done with ICAT
- *&rhilev*.RKANCMDU contains members KAHAGST and KAHOPST used to startup the monitoring agent
- *&rhilev*.RKANSAMU contains procedures and VTAM definitions that must be copied into PROCLIB and VTAMLST datasets for use

TEMA Configuration (cont.)

- § Start monitoring agent through procedure name specified in ICAT
 - Procedure must be copied into PROCLIB before use
 - Example: S CANSAH

- § Validate PPI status after monitoring agent was started using the NCCF DISPPI command

```

CNMKWIND OUTPUT FROM PIPE (END %) NETV DISPPI | SEPARATE | LINE 0 OF 18
*----- Top of Data -----*
DW0948I RECEIVER RECEIVER BUFFER QUEUED TOTAL STORAGE RCVR
DW0949I IDENTITY STATUS LIMIT BUFFERS BUFFERS ALLOCATED ASID
DW0950I -----
DW0951I KAHA00 ACTIVE 1000 0 8 0 00A0
DW0951I KAHA01 ACTIVE 1000 0 5622 0 00A0
DW0951I KAHA02 ACTIVE 1000 0 2250 0 00A0
DW0951I KAHA03 ACTIVE 1000 0 1129 0 00A0
DW0951I KAHA04 ACTIVE 1000 0 8 0 00A0
DW0951I KAHA05 ACTIVE 1000 0 29 0 00A0
DW0951I KAHA06 ACTIVE 1000 0 1156 0 00A0
DW0951I KAHA07 ACTIVE 1000 0 45960 0 00A0
DW0951I KAHA08 ACTIVE 1000 0 411 0 00A0
DW0951I KAHA09 ACTIVE 1000 0 9 0 00A0
DW0951I KAHA10 ACTIVE 1000 0 15 0 00A0
DW0951I KAHA11 ACTIVE 1000 0 4 0 00A0
DW0951I KAH$PLEX ACTIVE 1000 0 5 0 00A0
DW0951I KAH$HTBT ACTIVE 1000 0 5605 0 00A0
DW0951I KAHNVLIS ACTIVE 1000 0 4 0 00A0
*----- Bottom of Data -----*

```

Bibliography



§ Related Documentation

- ITM V610 Administrator's Guide (SC32-9408)
- ITM V610 User's Guide (SC32-9409)
- ITM V610 Configuring Tivoli Enterprise Monitoring Server on z/OS (SC32-9463)
- SA z/OS V3.1 Monitoring Component Configuration and User's Guide (SC33-8337)

§ Other

- [CCR2 Article](http://www-306.ibm.com/software/tivoli/features/ccr2/ccr2-2007-05/enterprise-portal.html): Bringing System Automation for z/OS into the Tivoli Enterprise Portal (<http://www-306.ibm.com/software/tivoli/features/ccr2/ccr2-2007-05/enterprise-portal.html>)
- [STE Web Seminar](#): System Automation for z/OS goes Tivoli Enterprise Portal June 19, 2007

End of Presentation



Thank you very much for your attention

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<http://www-03.ibm.com/servers/eserver/zseries/software/sa/>

SA MP <http://www-306.ibm.com/software/tivoli/products/sys-auto-linux/>

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