



IBM Software Group – Accelerated Value Program

Overview of Tivoli Common Reporting and Cognos Reports for TSM, pSeries

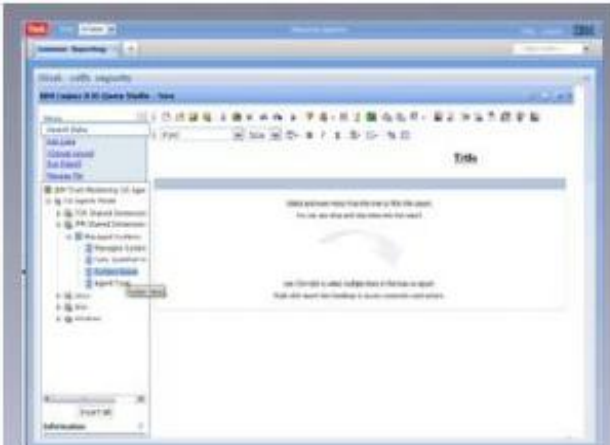
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Agenda

- **Overview of Tivoli Common Reporting (TCR)**
- **Tivoli Product TCR Cognos Reporting Packages**
- **Tivoli Storage Manager Monitoring**
- **ITM pSeries Virtualization Monitoring**
- **Cognos Reports for TSM**
- **Cognos Reports for pSeries**
- **Demonstrate running of some Cognos reports**

What is Tivoli Common Reporting?

- **TCR is a shared component across Tivoli products to run product and developed Cognos reports**



Build custom reports using a drag & drop integrated web-based editor

Author



Single UI for all report formats means common scheduling, distribution, security, and administration

View



Send reports via e-mail, or save for later use. Output in HTML, PDF, Excel, XML, or CSV

Share

Report and Data Model Authoring Interfaces

Query Studio (web-based)

- Intuitive, self-service "ad hoc" reporting
- Drag and drop
- Easy sorting and filtering
- Save, edit, and share

Report Studio (web-based)

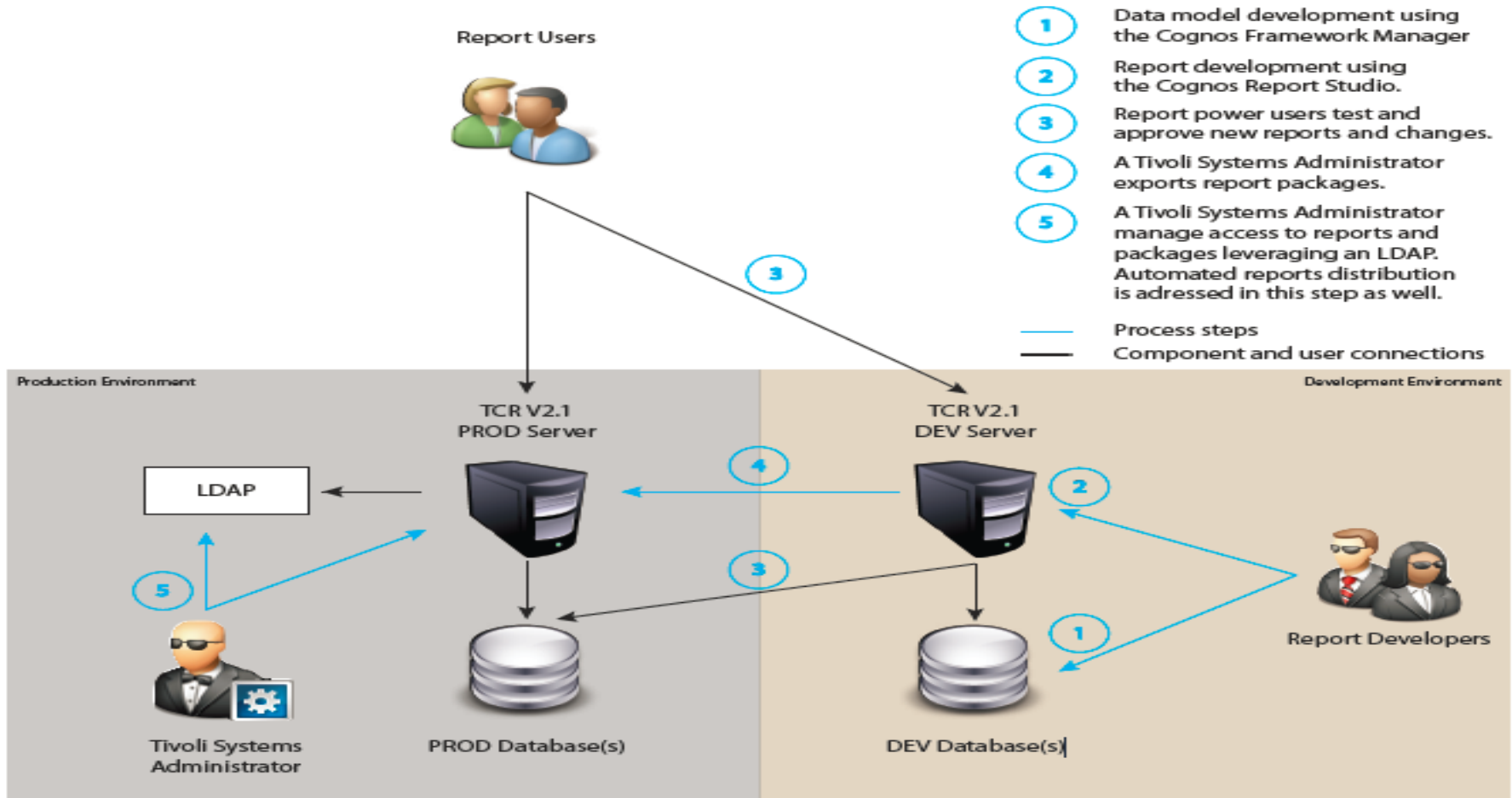
- Create and edit more advanced reports
- Query Studio functions plus more, including:
 - Parameterization
 - Globalization
 - Advanced query manipulation
 - Additional chart types (e.g., maps, gauges)

Framework Manager (Native Windows Application)

- Builds the data model. Not needed for authoring reports.
- The data model are the view into the data from the report authors perspective
- Abstracts the data layer from the building of reports
- Defines the relationships, attribute types, organizes data
- A data model is required to author reports. Data models are provided by IBM products (same zip as reports) or built with Framework Manager.



Report Development, Test Process



1. Tivoli product provides data model. Rarely need to develop a data model
- DEV Server also used to test new releases, fix packs of TCR and product reports
- Default file-based user registry from embedded WAS can be used instead of LDAP

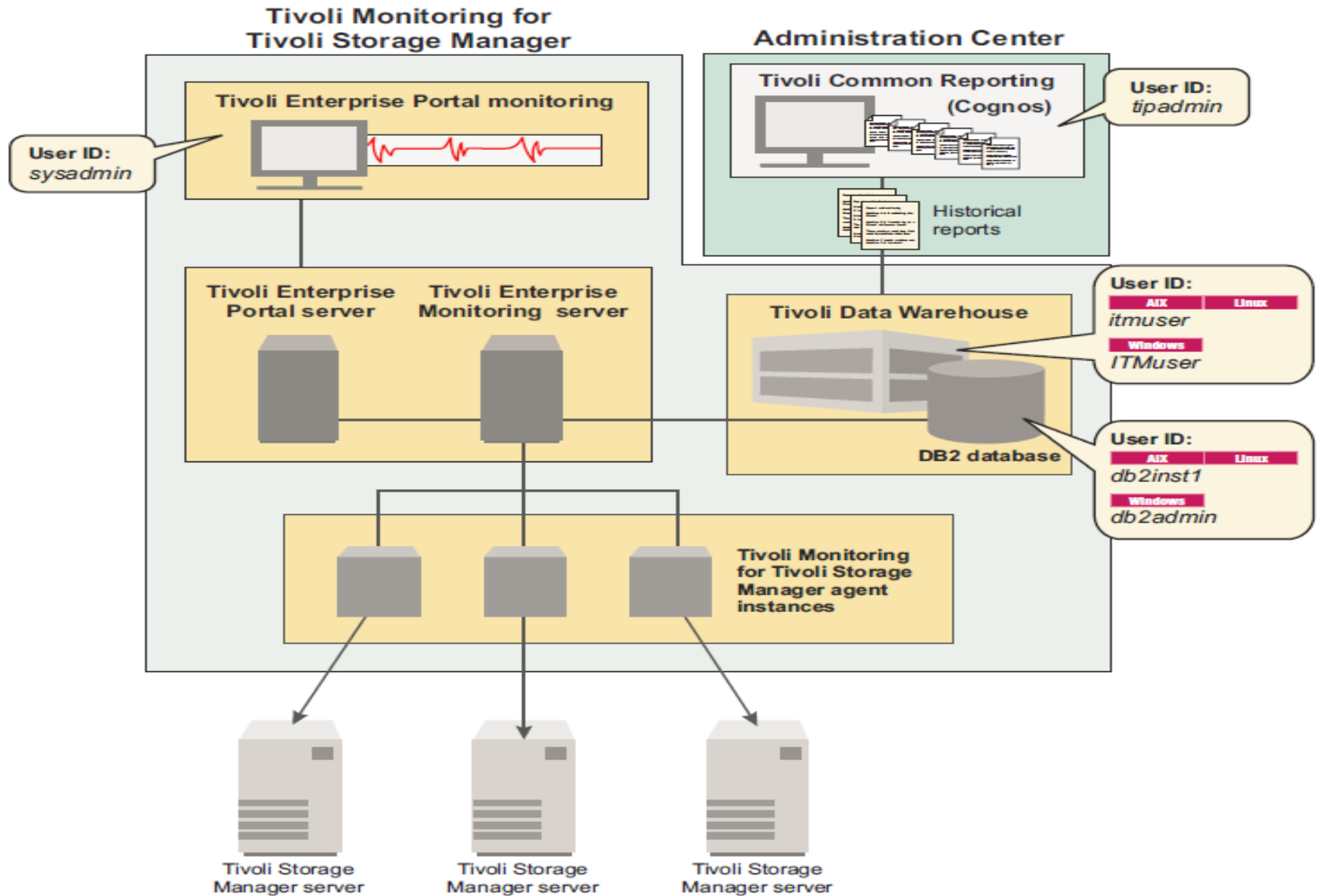
Tivoli Distributed Product TCR Cognos Reporting Packages

- **ITM for System P Reports v6.2.2 IF2**
- **ITM 6.2.3 for Virtual Servers-VMware**
- **ITM V6.2.2 Fix Pack 2 Agent Reports for OS**
- **TSM V6.3.n Administration Center, Tivoli Integrated Portal, and Tivoli Common Reporting**
- **ITCAM for Transactions V7.3**
- **ITCAM for SOA 7.2**
- **IBM Tivoli Productivity Center 4.2.2 or 5.1.1**

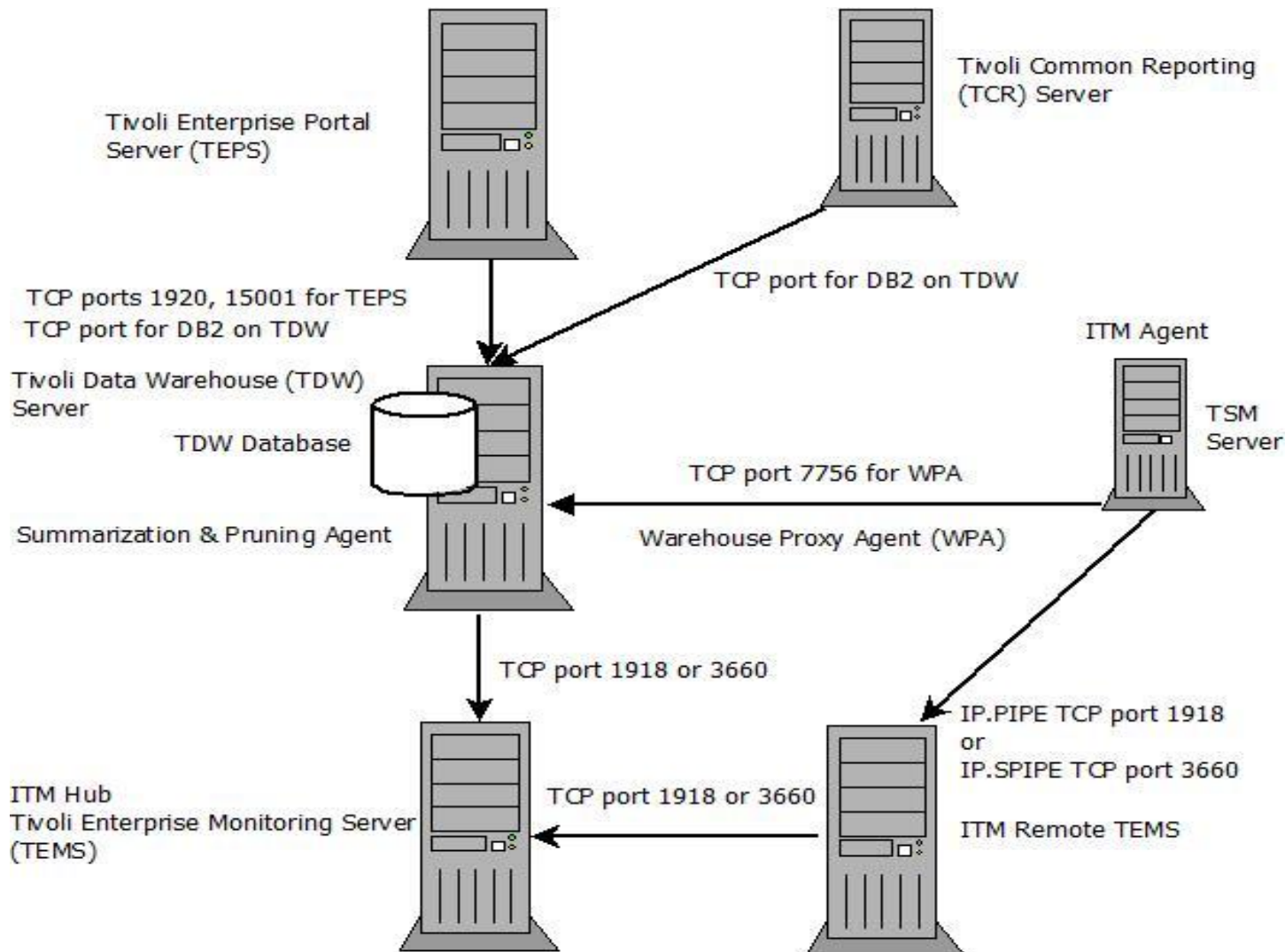
Tivoli z/OS Product TCR Cognos Reporting Packages

- **IBM Tivoli Omegamon XE on z/OS 4.2**
- **IBM Tivoli Omegamon XE for Storage on z/OS 4.2**
- **Tivoli products are releasing Cognos Data Model and Reports for TCR**
- **Check latest information in Report Catalog from <http://www.ibm.com/developerworks/spaces/tcr>**
- **Click on Reporting Tips and Techniques to view reporting demos for above two z/OS products**
- **<http://www.youtube.com/user/TivoliCommonReport>**

Tivoli Monitoring for Tivoli Storage Management



IBM Tivoli Monitoring, Tivoli Data Warehouse and Tivoli Common Reporting



Data from ITM TSM Agent

■ TSM Client

- Client node storage usage by node, filespace and storage pool
- Client node backup status and missed files with reason
- Client node activity in objects and data processed
- Client node replication operations and status

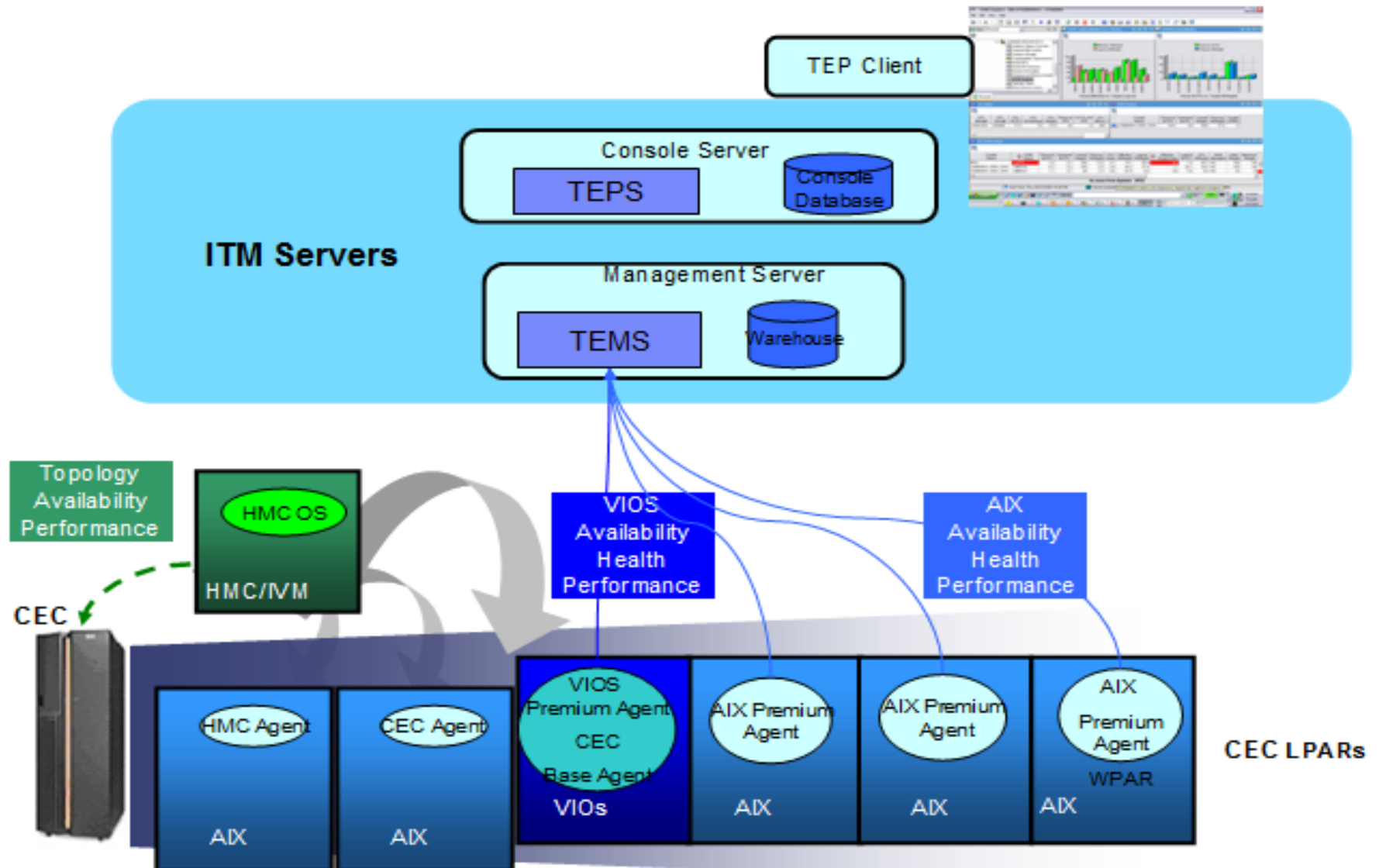
■ TSM Server

- Server activity of backup stgpool, migration, reclamation, others
- Database capacity and usage. Backup status and last backup date
- Storage pools capacity and usage
- Activity Log

■ Devices

- Library and tape drive online status
- Number of available scratch volumes by library with TSM 6.3.3
- Number of read, write errors by tape and disk storage device
- Capacity, usage, storage pool for each tape. TSM node data on tape

ITM Monitoring of pSeries Virtualization



Data from ITM pSeries Agents

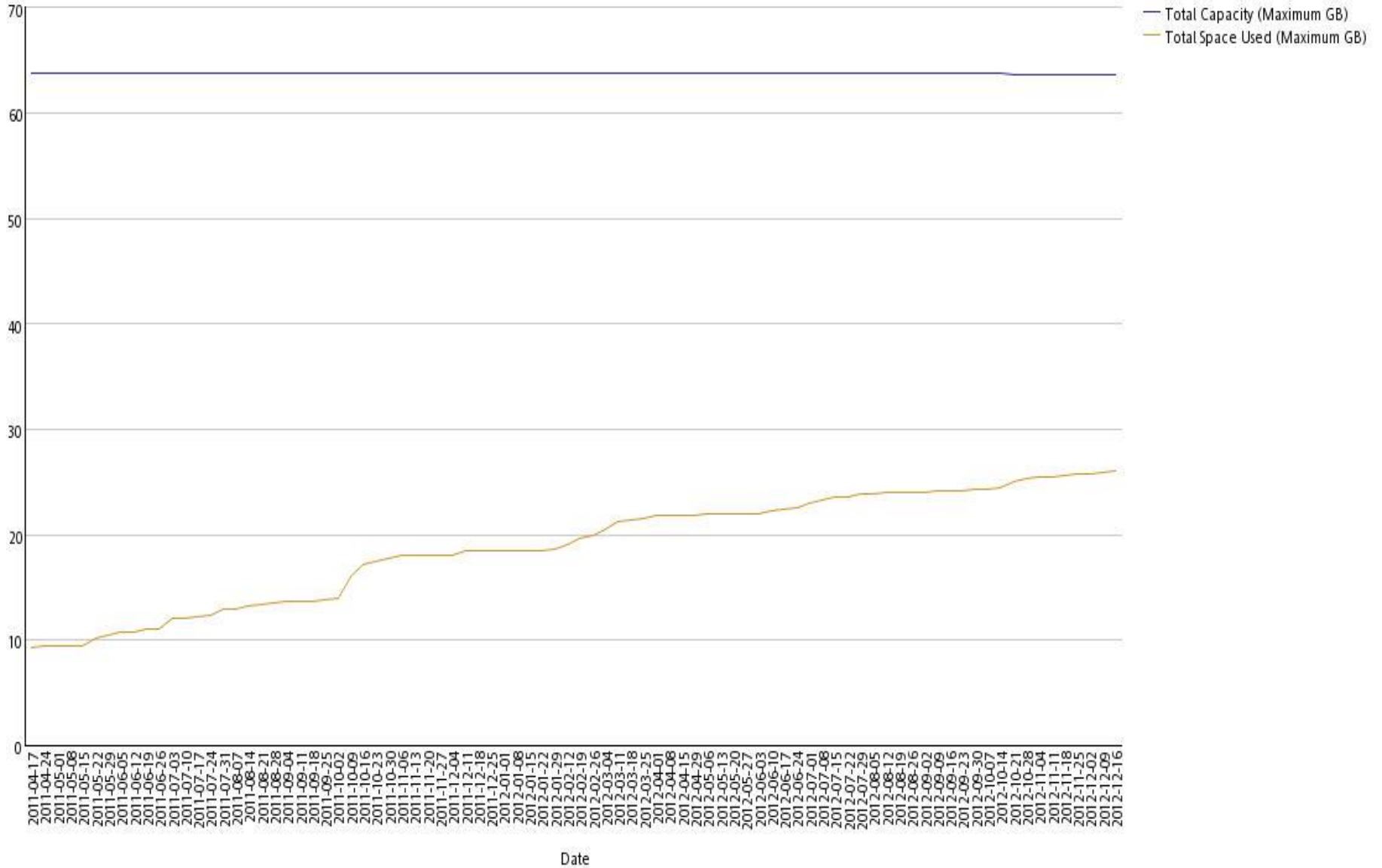
- **ITM Central Electronic Complex (CEC) Agent**
 - CEC is the physical pSeries frame or managed system
 - CPU physical usage, allocation, total at the CEC level
 - CPU usage, allocation of CPU Shared Pools
 - CPU usage versus entitlement of Logical Partitions (LPARs)
 - Memory total, allocation, usage at the CEC level
 - Memory allocation, usage of LPARs
- **ITM Virtual Input Output Server (VIOS) Agent**
 - VIOS virtualizes usage of physical CPU, memory, SAN fibre, network adapters by LPARs
 - I/O rates, errors for SAN fibre channel, network adapters
 - VIOS LPAR CPU, Memory, Paging, Filesystem utilization
- **ITM Hardware Management Console (HMC) Agent**
 - State of each CEC to HMC
 - CPU, Memory, Paging, Filesystem utilization



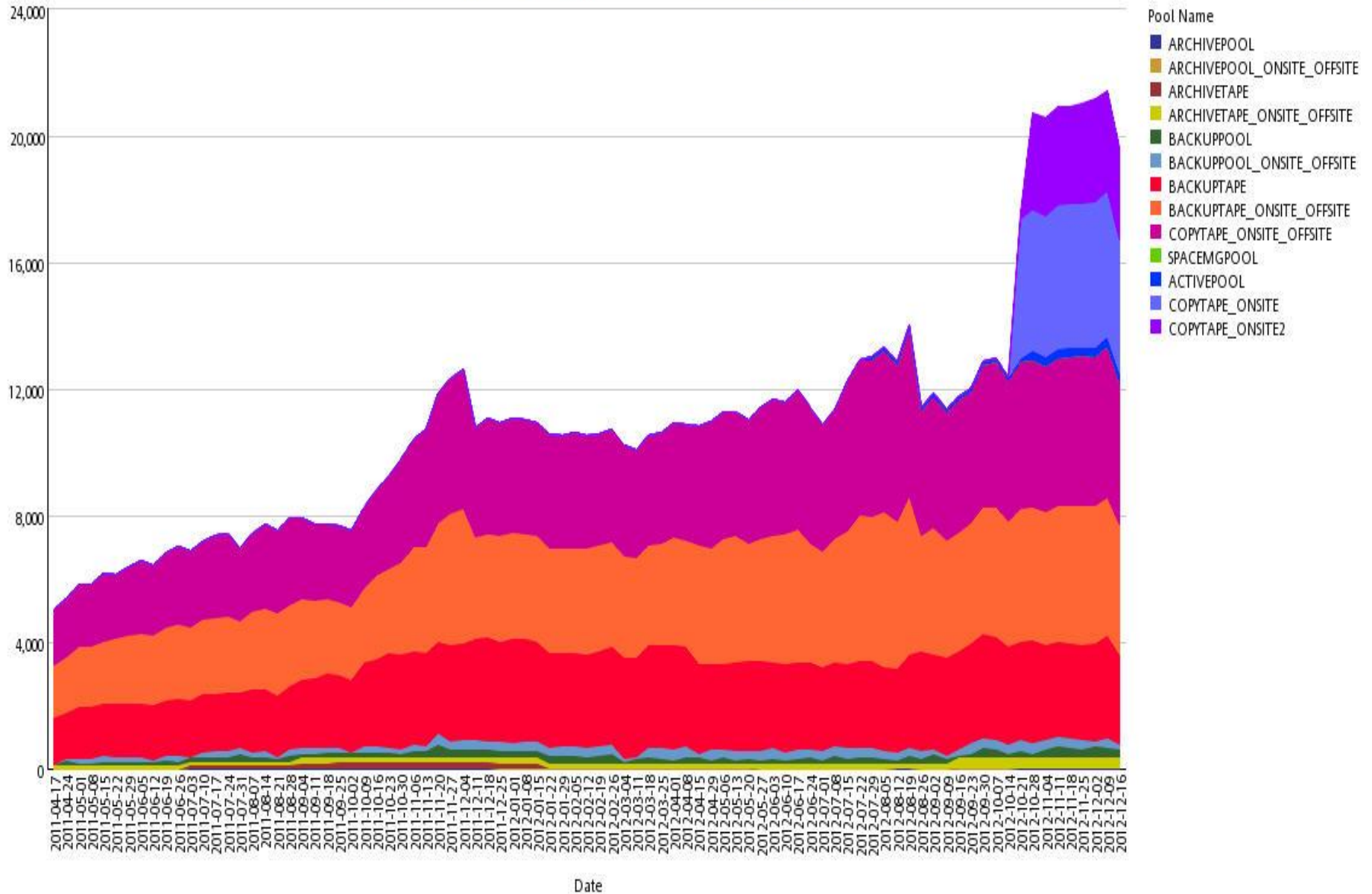
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Cognos Reports for TSM

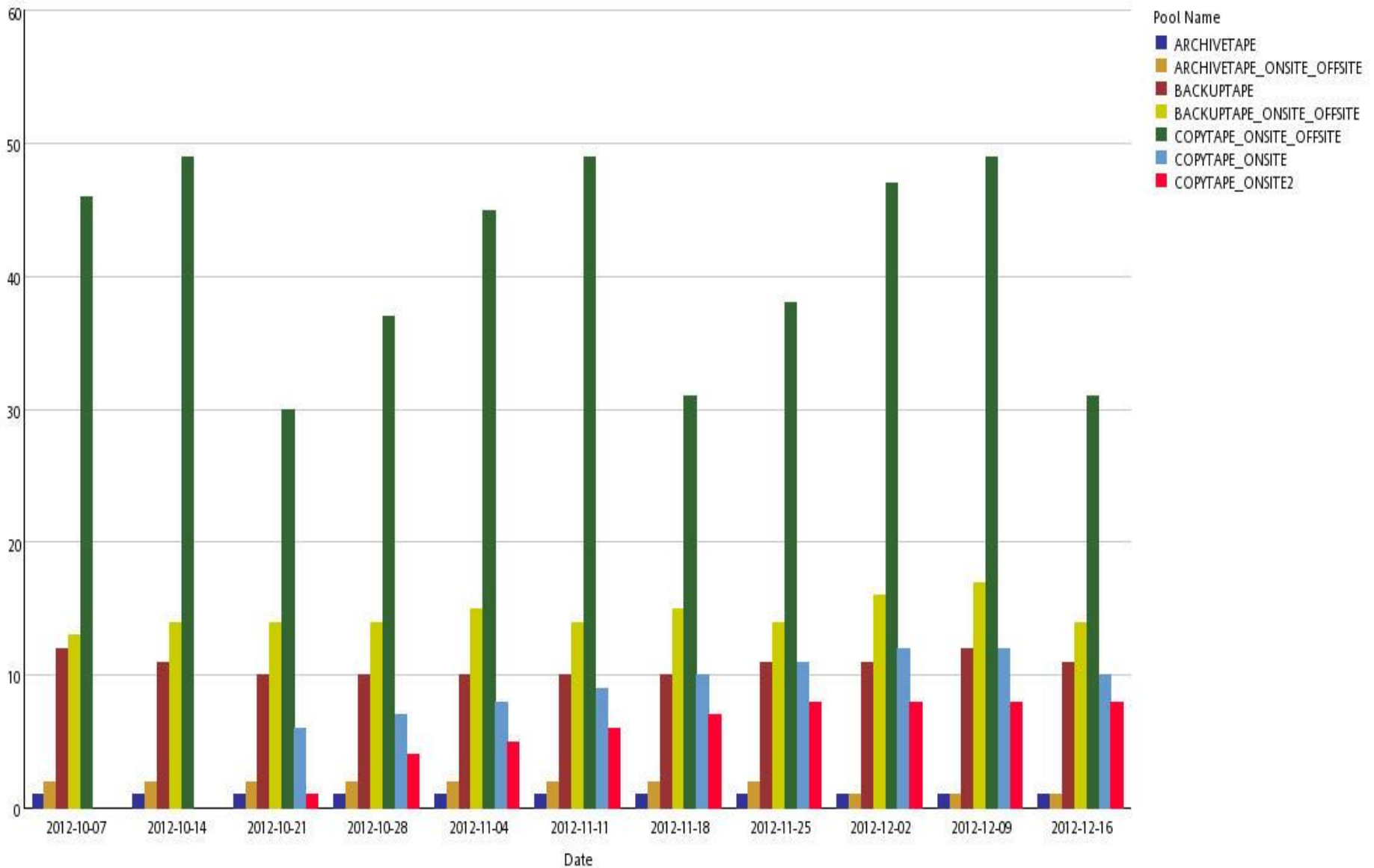
TSM Database Usage in GB for PMMBPA001



TSM Storage Pool Usage in GB for PMMBPA001



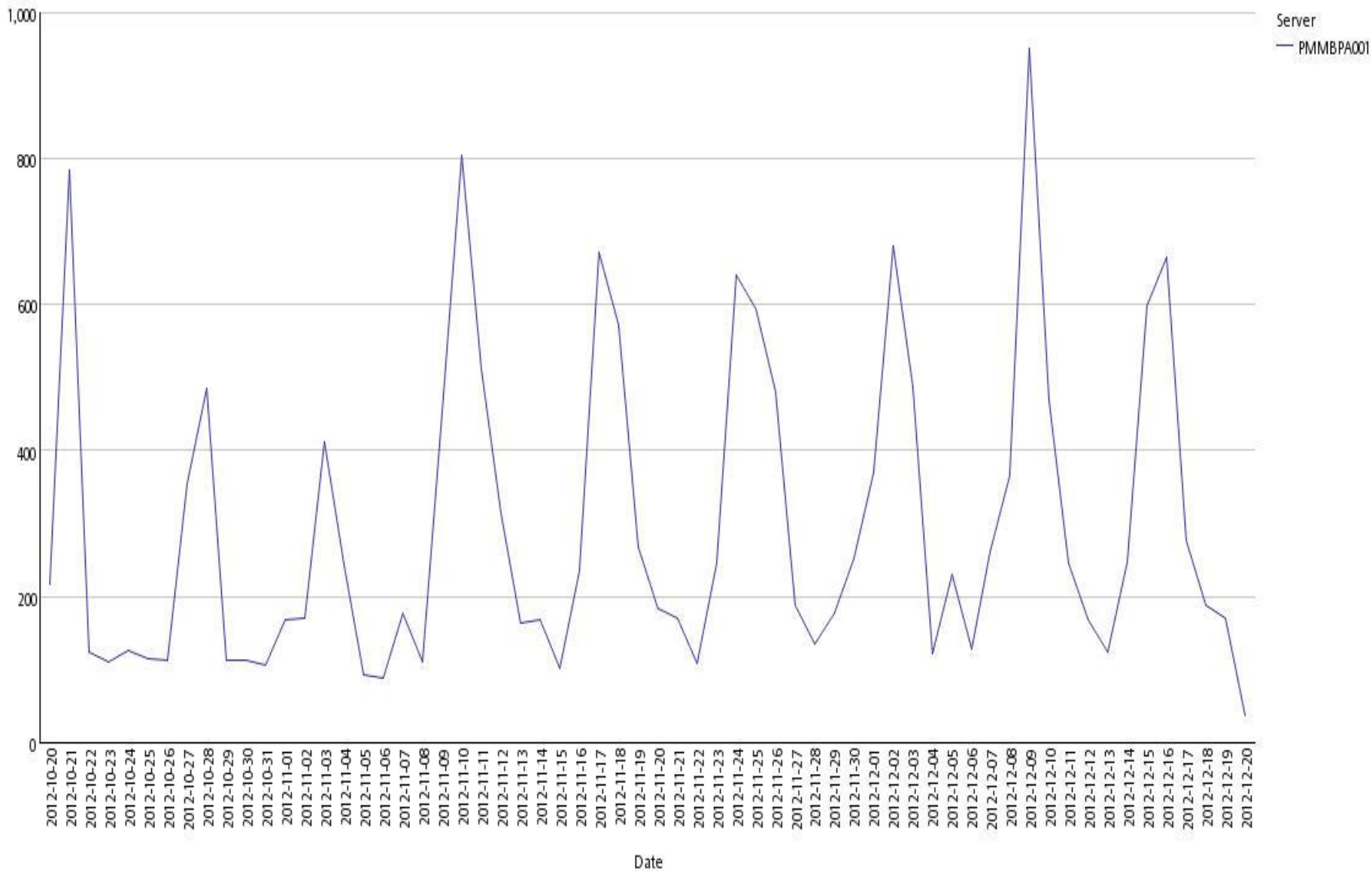
Number of Tapes by TSM Storage Pool for PMMBPA001



TSM Storage Pool Disk Usage > 70 percent

Date	Server	Disk Storage Pool	Maximum Usage in GB	Total Space in GB	Maximum Space Utilization Percent
Oct 14, 2012	PMMBPA001	BACKUPPOOL_ONSITE_OFFSITE	315	446	70
Oct 21, 2012	PMMBPA001	BACKUPPOOL_ONSITE_OFFSITE	336	446	75
Oct 28, 2012	PMMBPA001	BACKUPPOOL_ONSITE_OFFSITE	341	446	76
Dec 15, 2012	PMMBPA001	BACKUPPOOL_ONSITE_OFFSITE	317	446	70

Total TSM Client Node Backup in GB





Highest Storage Space Usage

Servers

* STSMRHEL

Number of Clients to Display

*

* Required

Refresh

Ranked by Total Storage Space Consumed

STSMRHEL

Ranking	Client Node Name	Total Storage Space Consumed (MB)	File and Disk Space Used (MB)	Server Space Used (MB)	Tape Space Used (MB)
1	CWIN2008	5,254	5,254	0	0
2	CSLES11	3,460	3,460	0	0
3	CRHEL6	2,279	2,279	0	0
Summary		10,993	10,993	0	0



Current Client Occupancy Summary

Servers	Clients	Storage Pools
<input checked="" type="checkbox"/> STSMRHEL	<input type="checkbox"/> CRHEL6 <input checked="" type="checkbox"/> CSLES11 <input checked="" type="checkbox"/> CWIN2008	<input checked="" type="checkbox"/> BACKUPTAPE <input type="checkbox"/> COPYTAPE
	Select all Deselect all	Select all Deselect all

* No selection defaults to all

Refresh

Grouped by Node Name and Storage Pool Name

STSMRHEL

Node Name	Storage Pool Name	File Space Name	File Space ID	Collection Time Stamp	Reporting MB	Physical MB	Logical MB	Number of Files
CSLES11	BACKUPTAPE	/	2	24-Dec-12 1:21:10 PM	81	81	81	5,141
		/boot	3	24-Dec-12 1:21:10 PM	28	28	28	32
		/opt	6	24-Dec-12 1:21:10 PM	219	219	219	334
		/srv	7	24-Dec-12 1:21:10 PM	0	0	0	9
		/usr	8	24-Dec-12 1:21:10 PM	1,358	1,358	1,358	108,320
		/var	1	24-Dec-12 1:21:10 PM	42	42	42	741
BACKUPTAPE					1,728	1,728	1,728	114,577
CSLES11					1,728	1,728	1,728	114,577
CWIN2008	BACKUPTAPE	\\cwin2008\c\$	2	24-Dec-12 1:21:10 PM	2,626	2,626	2,626	38,223
	BACKUPTAPE					2,626	2,626	2,626
CWIN2008					2,626	2,626	2,626	38,223
Summary					4,354	4,354	4,354	152,800



Client Backup Currency

Days Since Last Successful Backup: 2

Servers

STSMRHEL

* No selection defaults to all

Minimum Days Since Last Successful Backup

*

* Positive integer

Include Clients Never Backed Up?

* Yes
 No

Refresh

Grouped by Server

STSMRHEL

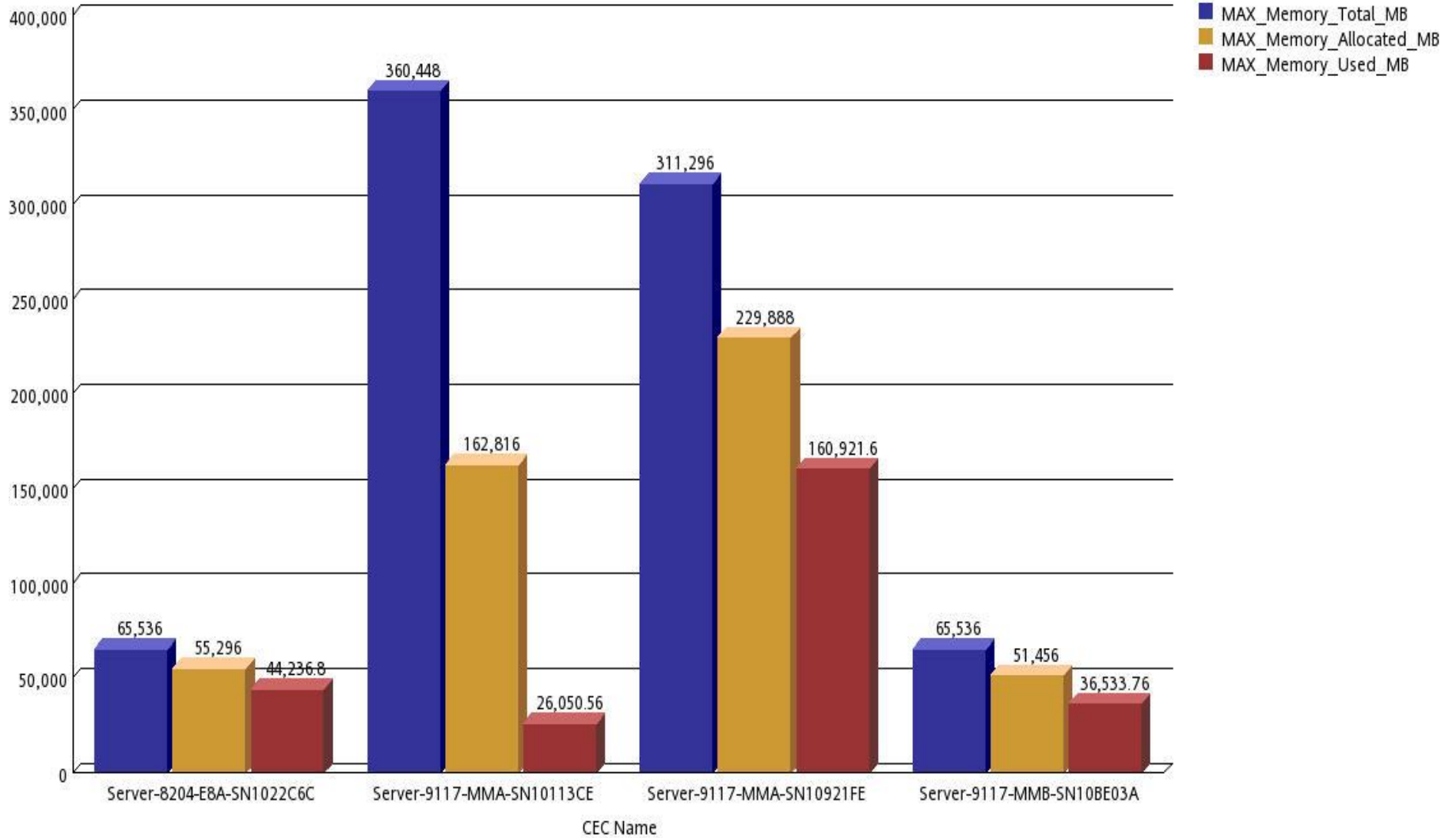
Client Node Name	Domain	Days Since Last Successful Backup:	Last Successful Backup Date	Last Successful Backup Date with Warnings
CSLES11	STANDARD	6	18-Dec-12	
CRHEL6	STANDARD	2	22-Dec-12	



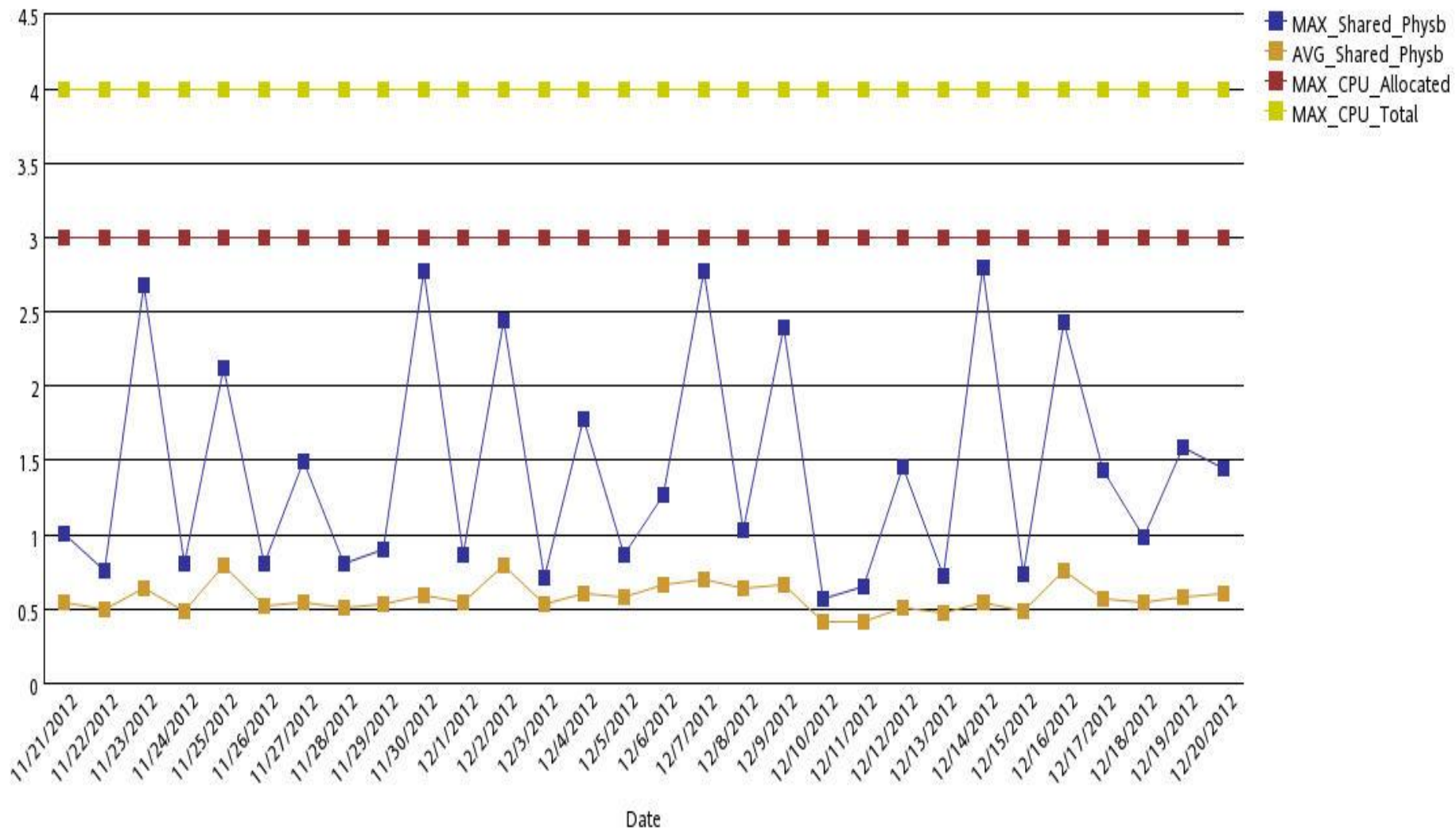
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Cognos Reports for pSeries

**pSeries CEC Memory Usage
Prime Time (09:00 - 17:00)
Central Electronic Complex (CEC) or Managed System**



pSeries CEC Physical CPU Usage for Server-8204-E8A-SN1022C6C
Prime Time (09:00 - 17:00)
Central Electronic Complex (CEC) or Managed System



System P: LPAR Physical CPU Utilization Over Time

Date filter Date Range (below)
Start Date Dec 14, 2012 12:00:00 AM **End Date** Dec 14, 2012 11:59:59 PM
CEC Server-8204-E8A-SN1022C6C **LPAR** All, m9mcxx002, p9mdpa001, p9nipa001, p9sapa001, teamroom, x9appa001, x9mdpa001, x9sapa001, x9tfpa001

CPU Utilization trend of LPAR(s) over time

Standard Timestamp	CPU_Pool_ID	Maximum Pool Capacity	LPAR_Name	Average Physical CPU Units Used	Maximum Physical CPU Units Used	Average CPU Entitlement Used (%)	Average CPU Allocated	Maximum CPU Allocated
Dec 14, 2012 3:00:00 PM	0	4	x9mdpa001	0.17	0.22	42.5	0.4	0.4
		4	x9sapa001	0.04	0.07	21	0.2	0.2
		4	x9tfpa001	0.04	0.07	42.75	0.1	0.1
Dec 14, 2012 4:00:00 PM	0	4	m9mcxx002	0.06	0.09	13	0.5	0.5
		4	p9mdpa001	0.61	2.2	87.25	0.7	0.7
		4	p9nipa001	0.04	0.07	48.75	0.1	0.1
		4	p9sapa001	0.05	0.1	13.5	0.4	0.4
		4	teamroom	0.06	0.11	34.5	0.2	0.2
		4	x9appa001	0.09	0.13	22.75	0.4	0.4
		4	x9mdpa001	0.19	0.29	48.25	0.4	0.4
		4	x9sapa001	0.05	0.08	29	0.2	0.2
		4	x9tfpa001	0.04	0.09	47.5	0.1	0.1
Summary		4		5.76	10.02	29.05	24	24