

Top 10 OMEGAMON XE Tips for Tivoli Enterprise Portal

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IBM

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Session 7984



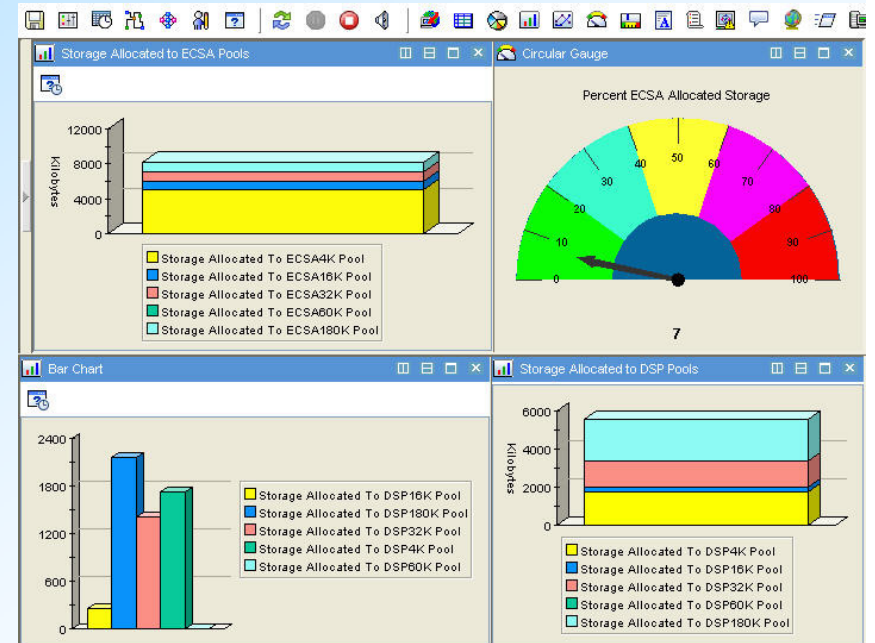
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What is the TEP?

Tivoli Enterprise Portal (TEP)

Common user interface

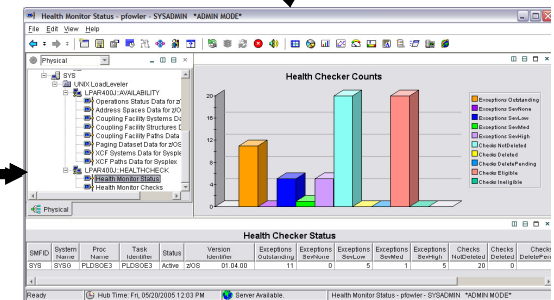
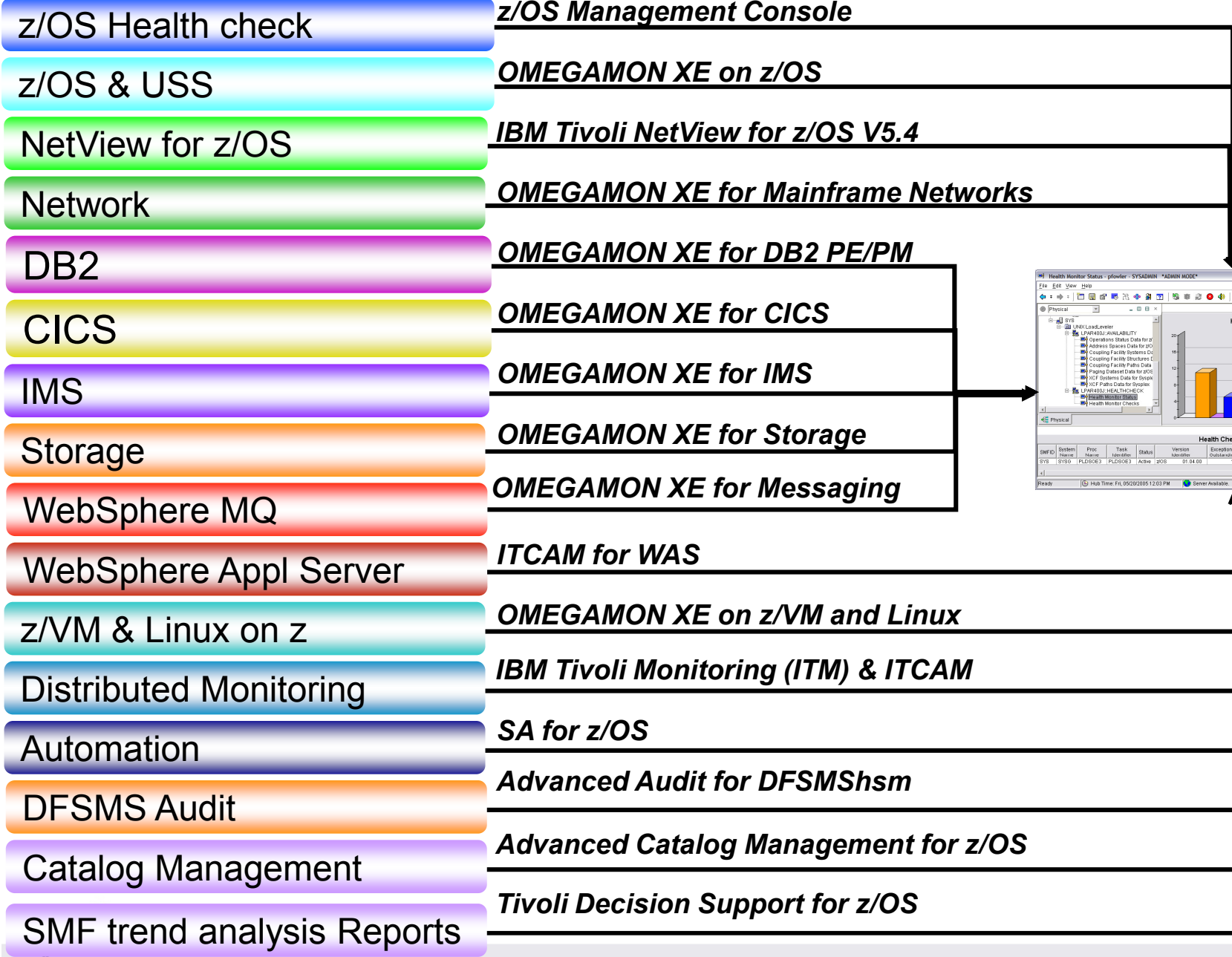
- Manage z/OS and distributed resources from a single browser interface.
- Displays data in graphs, charts and table formats
- View real time and historical data, at the same time
- Easy to configure, right from the TEP
- Out of the box Best Practices
 - Workspaces, Situations, and Expert Advice



Agenda: Leveraging the TEP

TEP top 10 TIPS	Benefit
<i>Cross LPAR Views</i>	View all LPARs in one View
<i>Creating a New Navigator View</i>	Organize workspaces by user and problem
<i>Cross Application Workspaces</i>	Integrate many views into one
<i>Eliminate Multiple pages</i>	Compact simplified views
<i>Filter Queries</i>	Faster Views
<i>Customizing Tables and Charts</i>	Highlight only what you need to see
<i>Situations</i>	Alert only on problems that need action
<i>Topology</i>	Verify Installation fix levels and connectivity
<i>Built-in Tutorials</i>	TEP Online Education
Tuning and ITMSUPER	Tune OMEGAMON Infrastructure

Integrated with the TEP

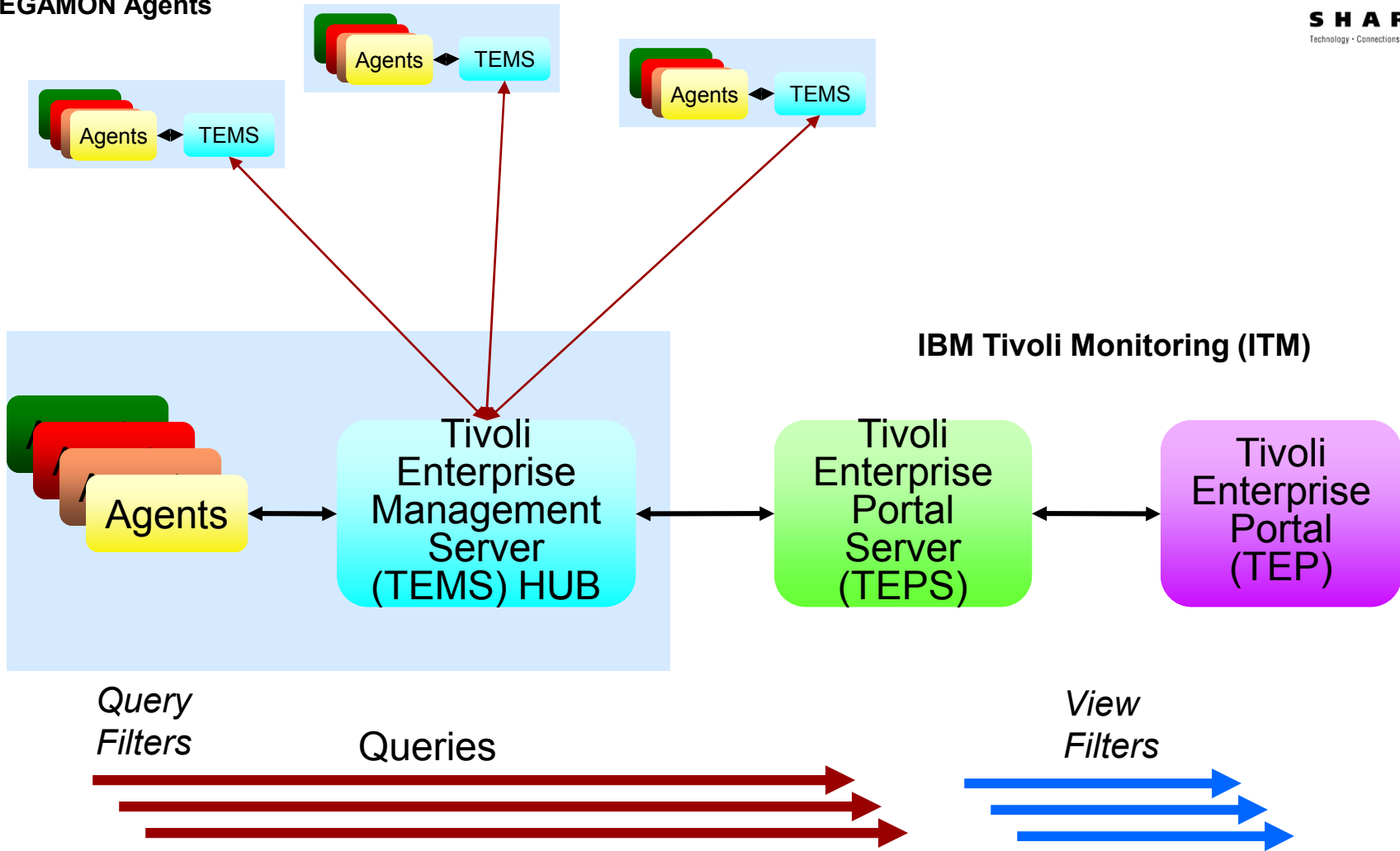


TEP

OMEGAMON XE TEP Infrastructure



OMEGAMON Agents



TEP - Terminology

File Edit View Help

Navigator View

View: zView

- zView
 - z/OS Plexes & Systems
 - DEMOPLX:MVS:SYSPLEX
 - Coupling Facility Policy Data for Sysplex
 - Coupling Facility Structures Data for Sysplex
 - Coupling Facility Systems Data for Sysplex
 - Global Enqueue Data for Sysplex
 - GRS Ring Systems Data for Sysplex
 - Report Classes Data for Sysplex
 - Resource Groups Data for Sysplex
 - Service Classes Data for Sysplex
 - Service Definition Data for Sysplex
 - Shared DASD Groups Data for Sysplex
 - XCF Groups Data for Sysplex
 - XCF Paths Data for Sysplex
 - XCF Systems Data for Sysplex
 - z/OS Management Console
 - MVSA
 - MVSB
 - MVSC
 - DB2PLEX
 - IMSA:MVSA:IMS

CPU Utilization by LPAR

DEMOPLX:MVSB:MVSSYS

Legend: Total TCB% (Purple), Total SRB% (Yellow)

TCP/IP Connections by LPAR

MVSB, MVSC, MVSA

Legend: TCP Session Count (Cyan)

TCP/IP Stacks

MVSB, MVSC, MVSA

Legend: Receive Datagram Rate (Green), Transmit Datagram Rate (Cyan), Input Datagrams in Error (Yellow), Input Discard Percentage (Blue), UDP No Port Count (Red)

Interfaces

OSA2, OSA2

Interfac...

System ID	Interface Name	Control
MVSB	IUTSAMEH	Down
MVSB	TOVTAM	Down

OSA Expre...

CF DEMOZVM, ZTECZVM

Legend: Kilobyte Rate Out Per Minute (Green)

TCP/IP Stack Details

System ID	Receive Datagram Rate	Input Packet Count	Output Packet Count	Input Datagrams in Error	Input Discards
MVSB	94	3948947	2938377	0	804046

OSA Express by LPAR Details

LPAR Name	LPAR Number	Kilobyte Rate In Per Minute	Kilobyte Rate Out Per Minute	Processor Utilization Per Five Minutes	Kilobyte Rate In Per Five Minutes
CF	1	2	2	0	

Hub Time: Tue, 02/10/2009 01:50 PM Server Available IP Stacks and OSA cross LPAR - tivtpe.demopkg

View

Workspace

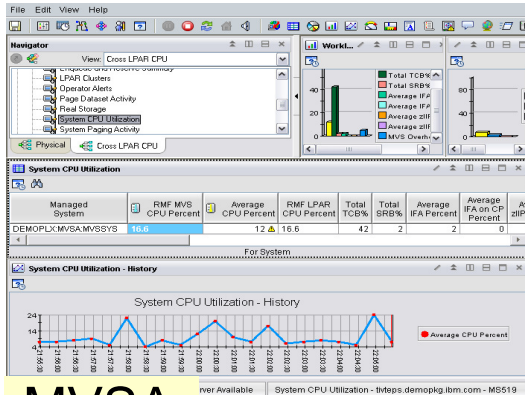
Leveraging the TEP - Agenda



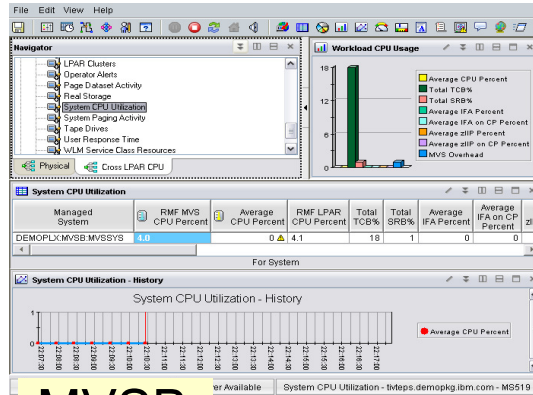
1. Cross LPAR Views
 2. Creating a New Navigator View
 3. Cross Application Workspaces
 4. Eliminate Multiple pages
 5. Reduce Query data
 6. Customizing Tables and Charts
 7. Situations
 8. Topology
 9. Built-in tutorials
 10. Tuning and ITMSUPER
- SHARE** in Boston



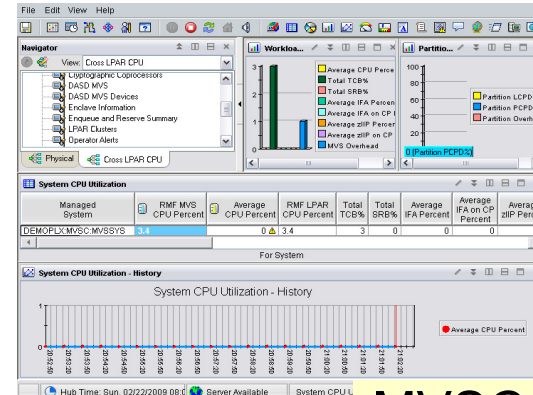
Cross LPAR View - Overview



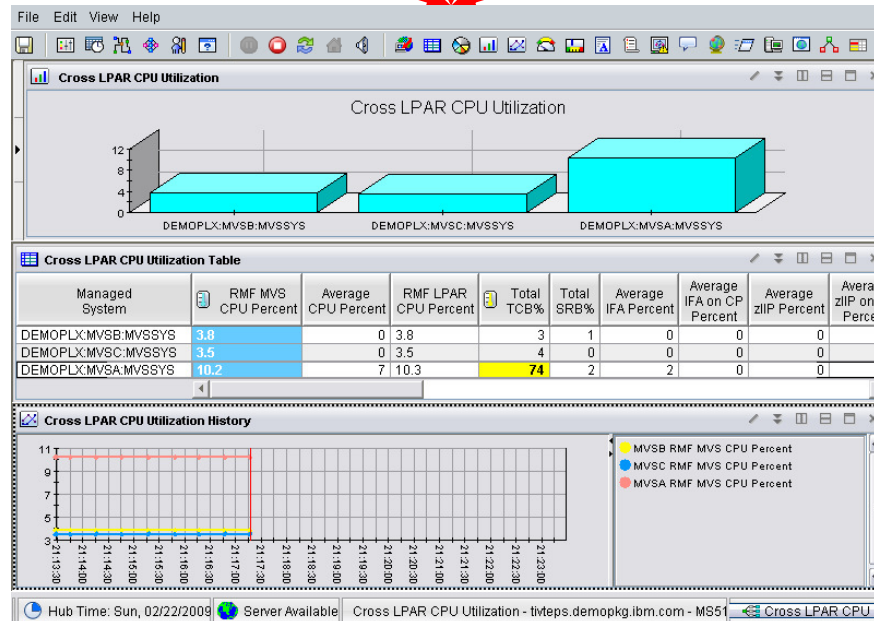
MVSA



MVSB



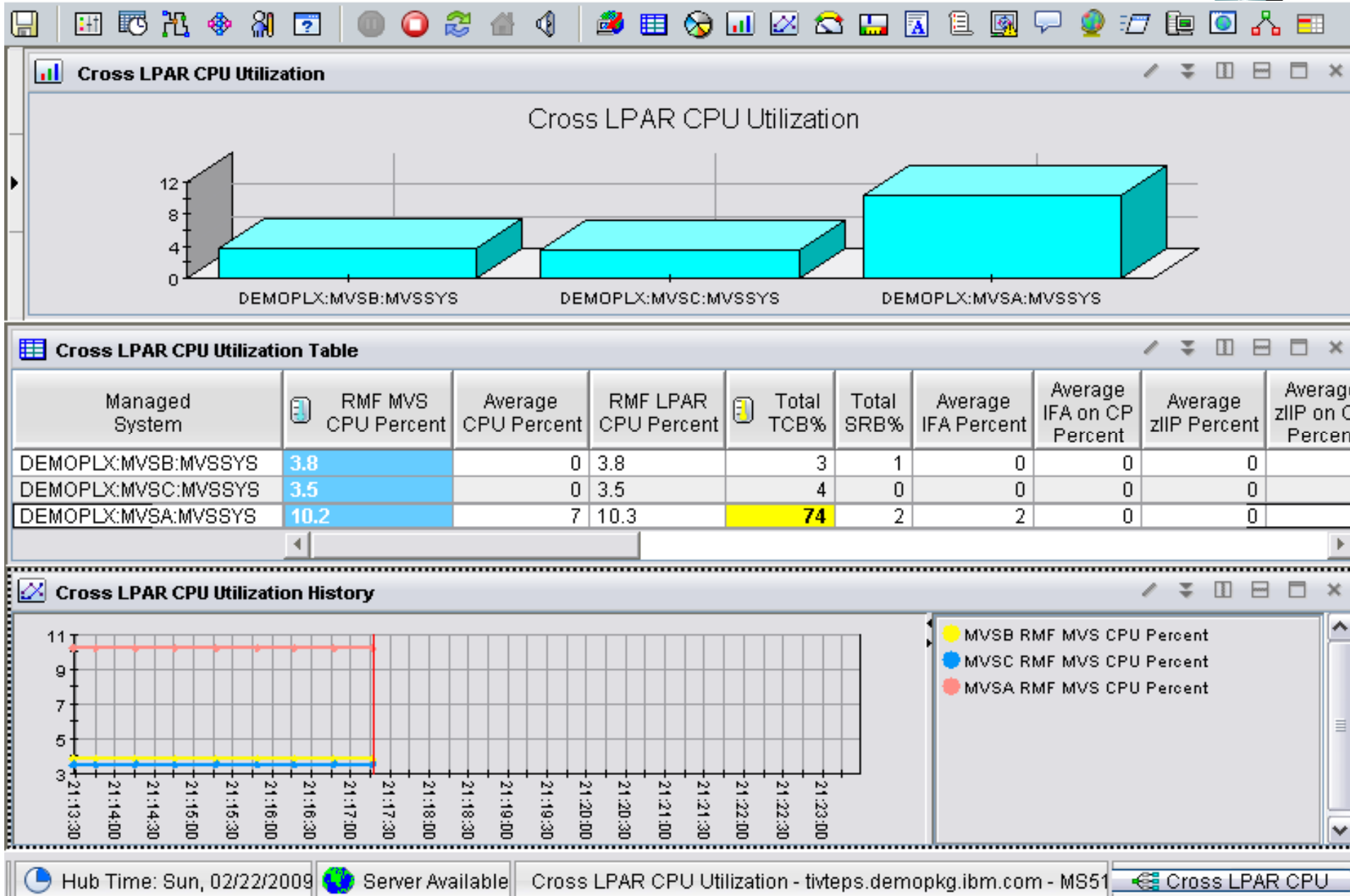
MVSC



MVSA
MVSB
MVSC

Example: OMEGAMON XE on z/OS
Default Physical drill down to see one LPAR at a time

Cross LPAR View – Example



Hub Time: Sun, 02/22/2009

Server Available

Cross LPAR CPU Utilization - tivtaps.demopkg.ibm.com - MS51

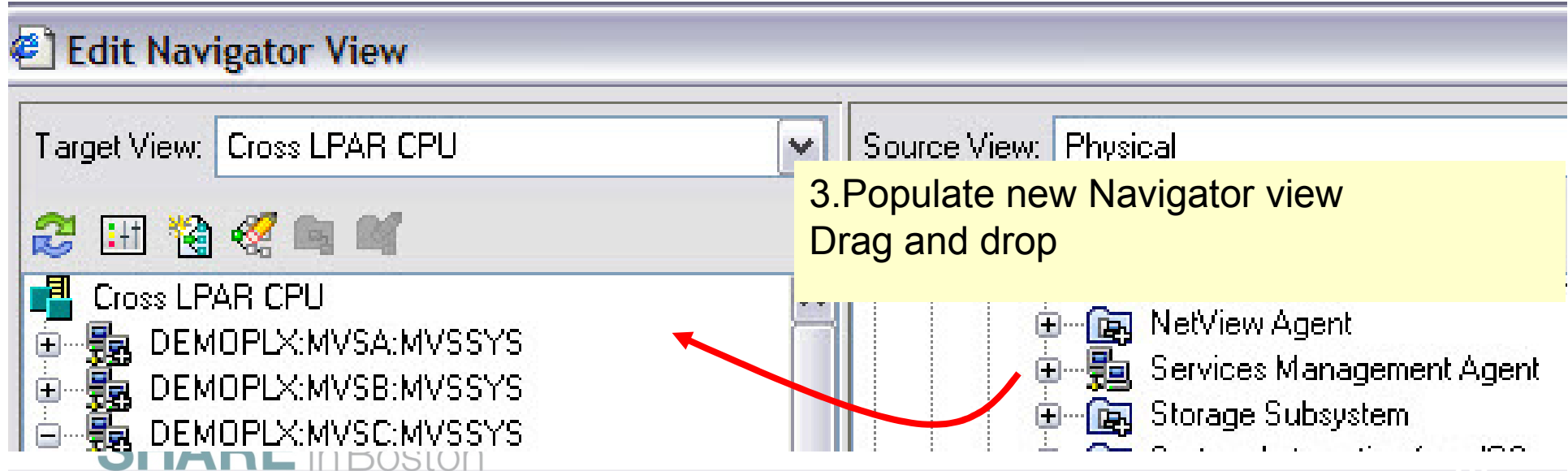
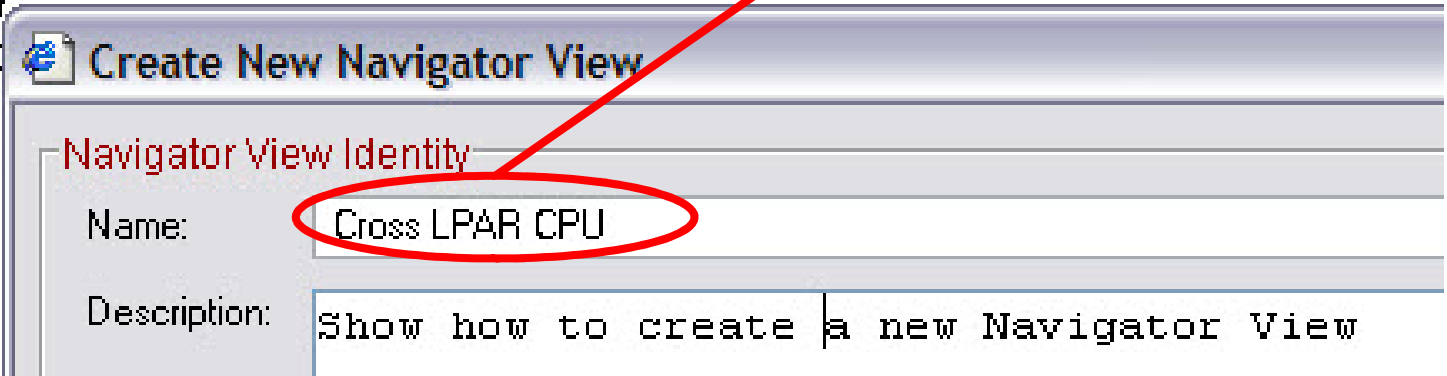
Cross LPAR CPU

New Navigator View

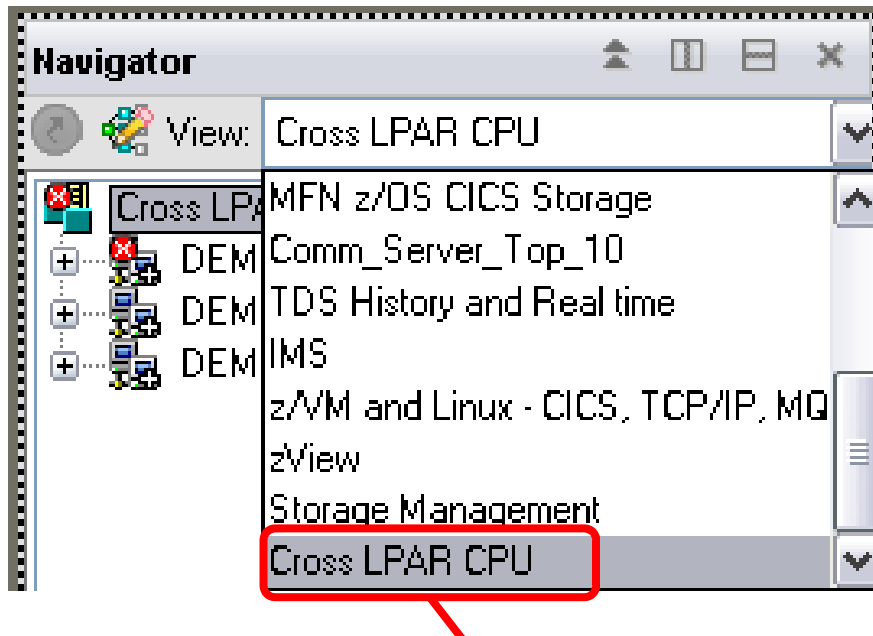


1. Edit Navigator Views

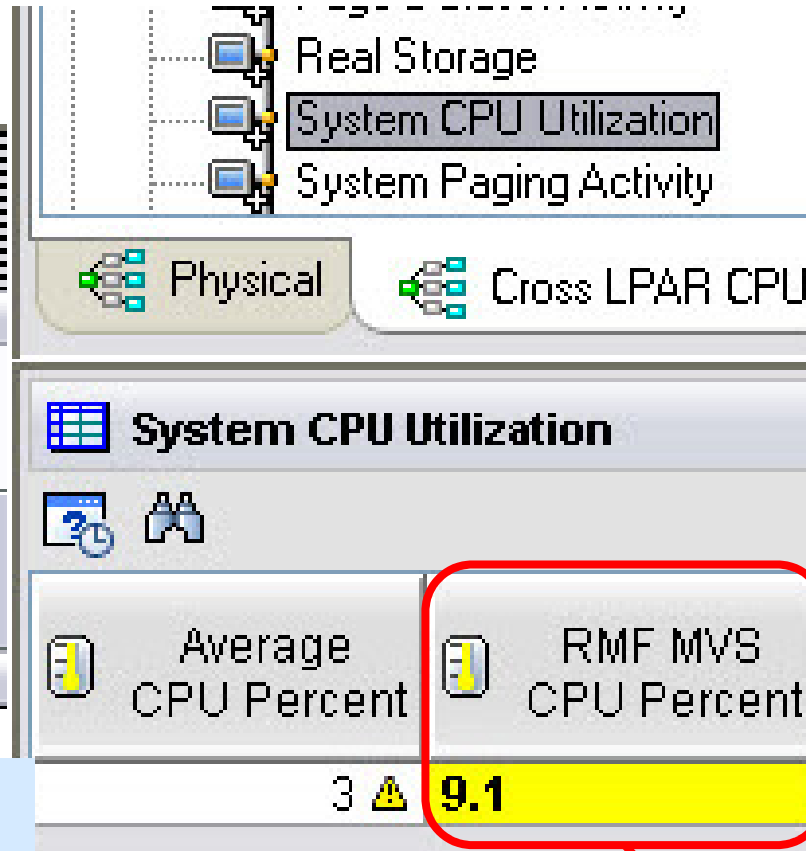
2. Create a New Navigator View



Choose attributes to graph

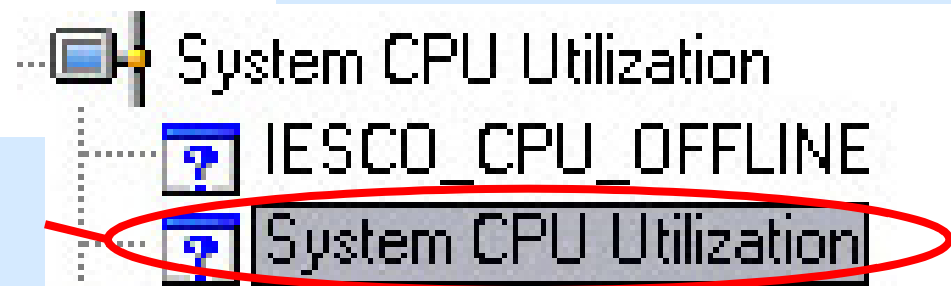


1. Select new Navigator view

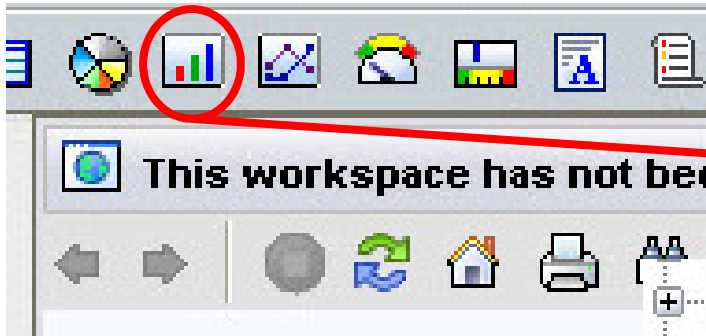


2. Attribute to be graphed

3. Remember Query of Attribute to be graphed



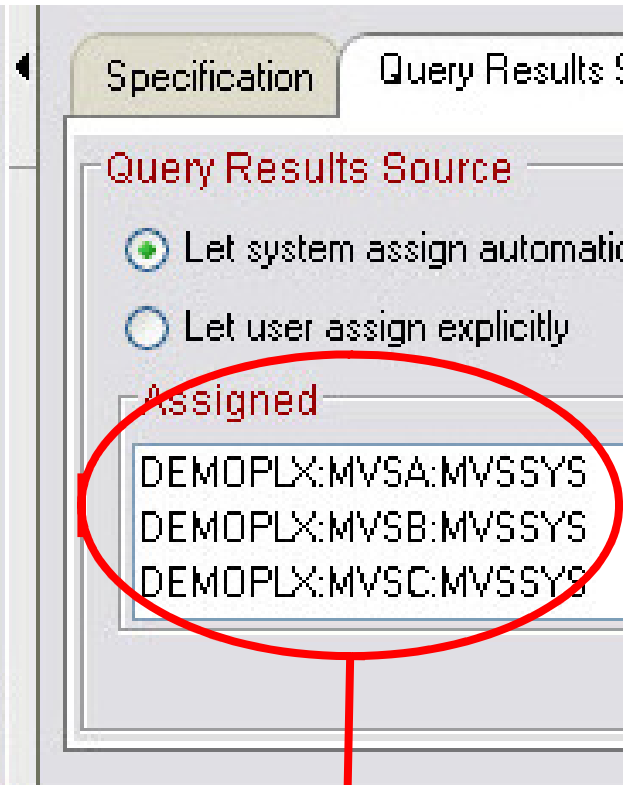
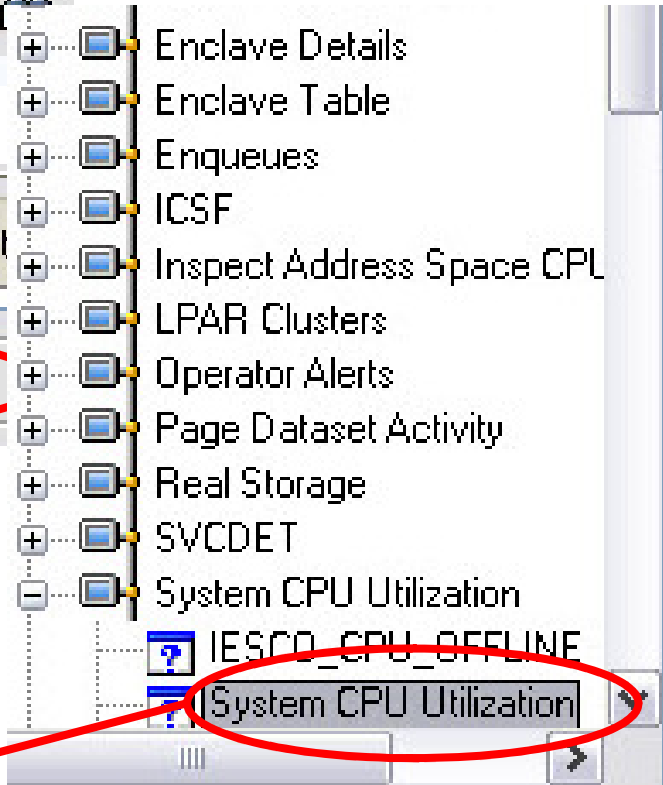
Select type of graph



1. Select Graph type (drag and drop)



2. Assign Query



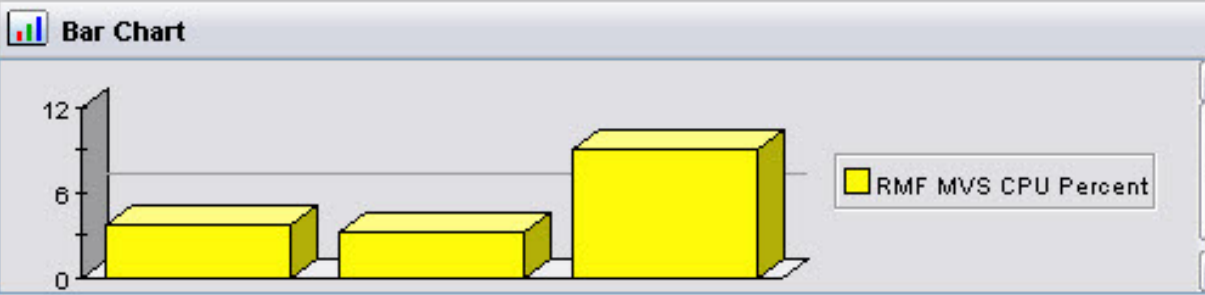
3. Assign Systems (default)

Assign Attribute to Graph

Properties - Cross LPAR CPU

Preview

Bar Chart



12
6
0

RMF MVS CPU Percent

Query Filters Style

Filters

	Managed System	Average CPU Percent	RMF MVS CPU Percent	RMF LPAR CPU Percent	Total TCB%	T SF
1		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2						
3						
4						

1. See Data to be Graphed

2. Assign What to Graph

Data Snapshot

	Managed System	Average CPU Percent	RMF MVS CPU Percent	RMF LPAR CPU Percent
<input type="checkbox"/>	DEMOPLX:MVSB:MVSSYS	0	3.8	3.9
<input type="checkbox"/>	DEMOPLX:MVSC:MVSSYS	0	3.3	3.3
<input type="checkbox"/>	DEMOPLX:MVSA:MVSSYS	3	9.1	9.1

Customize Graph



Properties - Cross LPAR CPU

Preview

CPU Utilization

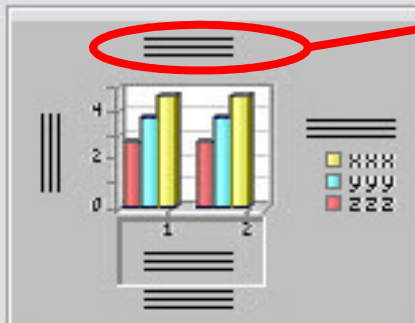
DPLX:MVSB:MVSS

DPLX:MVSC:MVSS

DPLX:MVSA:MVSS

1. Enter Name of window
"CPU Utilization"

Query Filters Style



Text:
Font: Dialog Size: 10 Style: Plain

Orientation
 Horizontal Vertical

Attribute
Managed System

2. Assign axis to display

Category Axis - General Axis Label Category Axis

Workspace

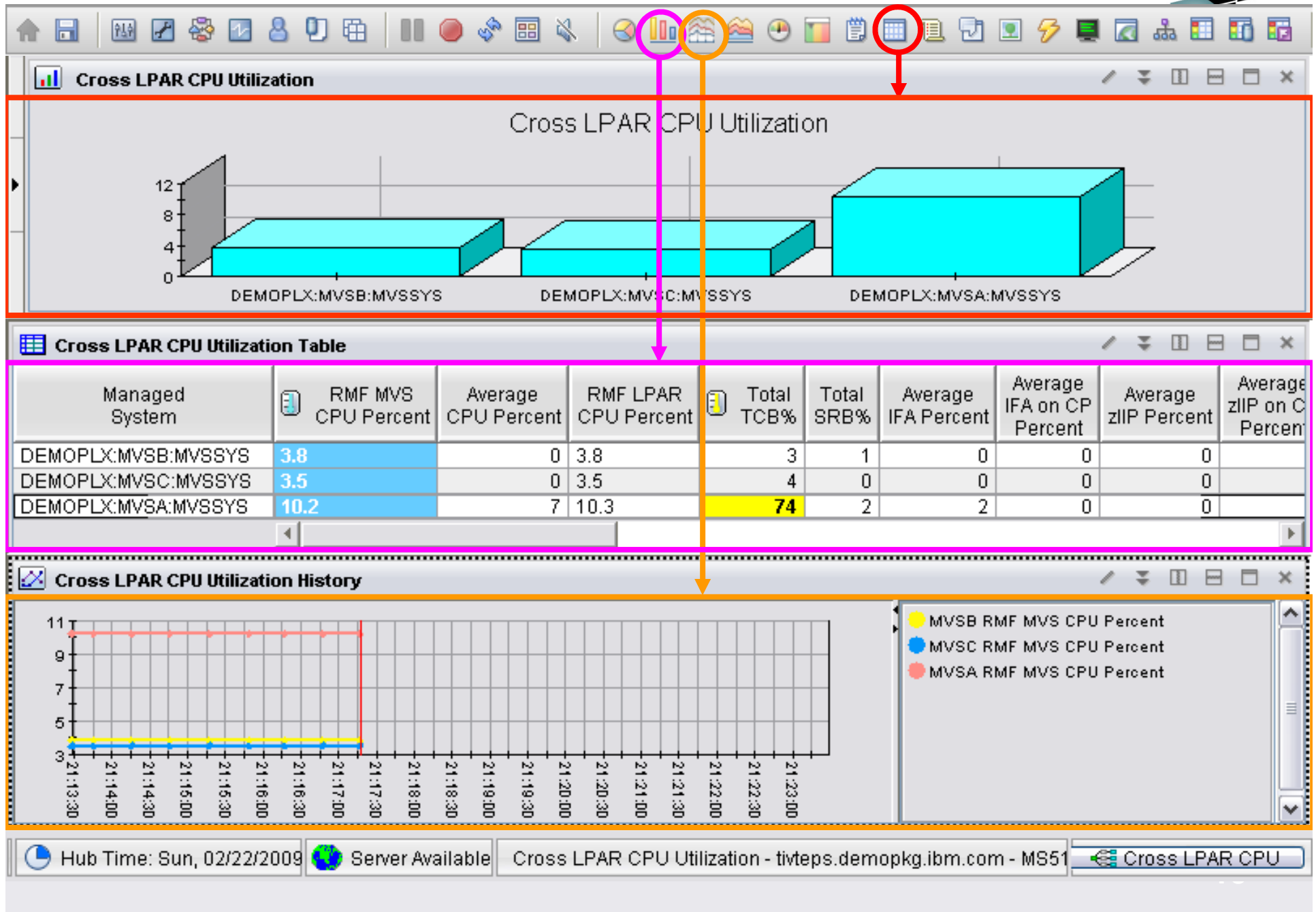


Chart Customization

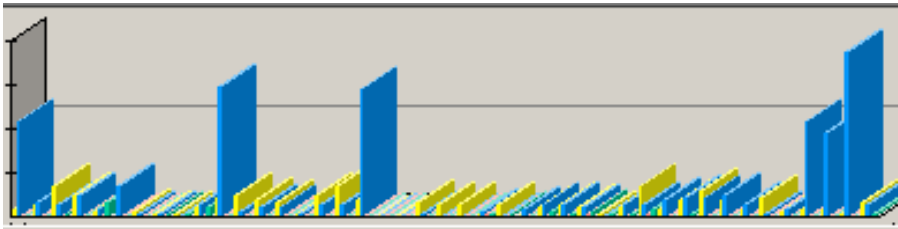


Attribute Item

- Percent Segments Retransmitted
- Response Time
- Response Time Variance
- Segments Retransmitted
- Time Since Last Activity

1. Select attributes

Change bar chart into a stacked bar chart



Query Filters Style

Type

- Stacking Bar Chart
- Bar Chart
- Stacking Bar Chart

2D 3D

2. Stacked 3D bar chart

Query Filters Style

Title

Text: TCP/IP Response Times > 10 Seconds

3. Title of View

Query Filters Style

Text: Dialog

Orientation

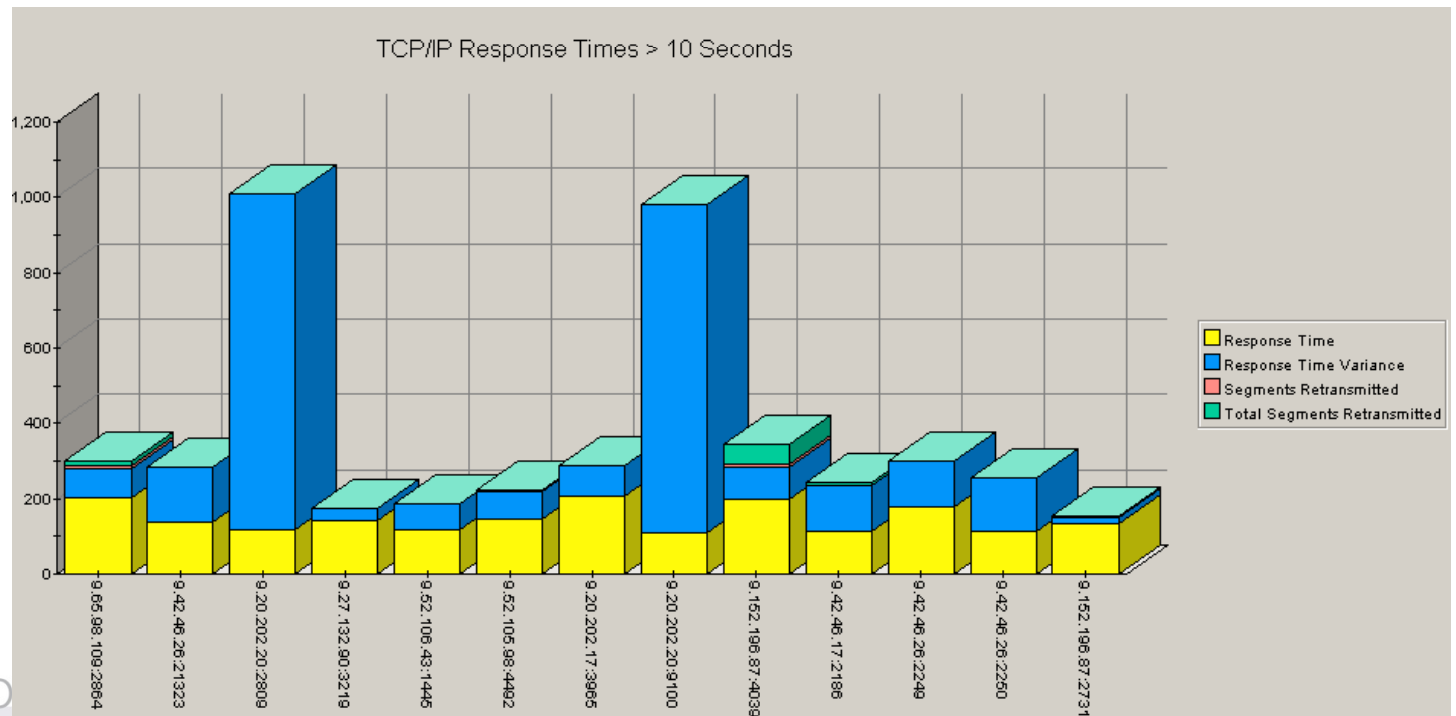
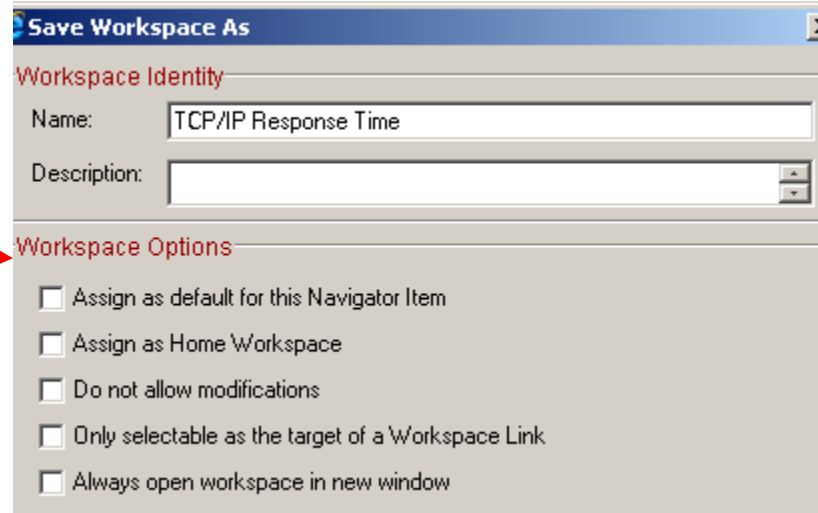
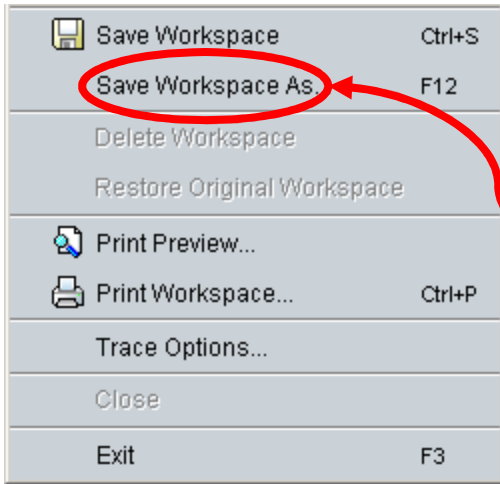
Horizontal

Attribute

- Foreign Socket
- Application Name
- Connection Type
- Local Port
- Foreign Socket

4. Choose axis

Save Workspace



Select Workspace



Navigator

View: Networks

Networks

- Workspace
- Take Action...
- Link To...
- Launch...
- Split vertically
- Split horizontally
- Remove
- Print Preview...
- Print...
- Find...
- Properties...

TCP/IP Response Times > 10 Seconds

TCP/IP Response Times > 10 Seconds

TCP/IP Connections

Application Name	Foreign Socket	Response Time	Segments Retransmitted	Response Time Variance	Telnet Appl Name	Telnet LU Name	Total Segments Retransmitted	Perc Segm Retrans
VCCTH@@L	9.42.46.199:34314	16.00	6	7.00			11	
VCCTH@@L	9.42.9.118:1106	3.00	5	2.00			6	
VCCTH@@L	9.65.98.109:2864	203.00	5	78.00			16	

Chart Customization – AutoRefresh



View Help

- Show Navigator
- Toolbar
- View Toolbars
- Status Bar

Refresh Now F5

Refresh Every ▶

- 30 Seconds
- 60 Seconds
- 5 Minutes
- 15 Minutes
- 60 Minutes
- On Demand

Pause Refresh

Stop Shift+Escape

Turn Sound OFF

Navigator View ▶

Workspace ▶

TCP/IP Response Times > 10 Seconds

TCP/IP Response Times > 10 Seconds

TCP/IP Connections

Application Name	Foreign Socket	Response Time	Segments Retransmitted	Response Time Variance	Telnet Appl Name	Telnet LU Name	Total Segments Retransmitted	Perc Segm Retrans
VCCTH@@L	9.42.46.199:34314	16.00	6	7.00			11	▶
VCCTH@@L	9.42.9.118:1106	3.00	5	2.00			6	▶
VCCTH@@L	9.65.98.109:2864	203.00	5	78.00			16	▶
VCCTH@@L	9.42.46.26:2250	16.00	5	78.00			20	▶

Recommended Workplaces

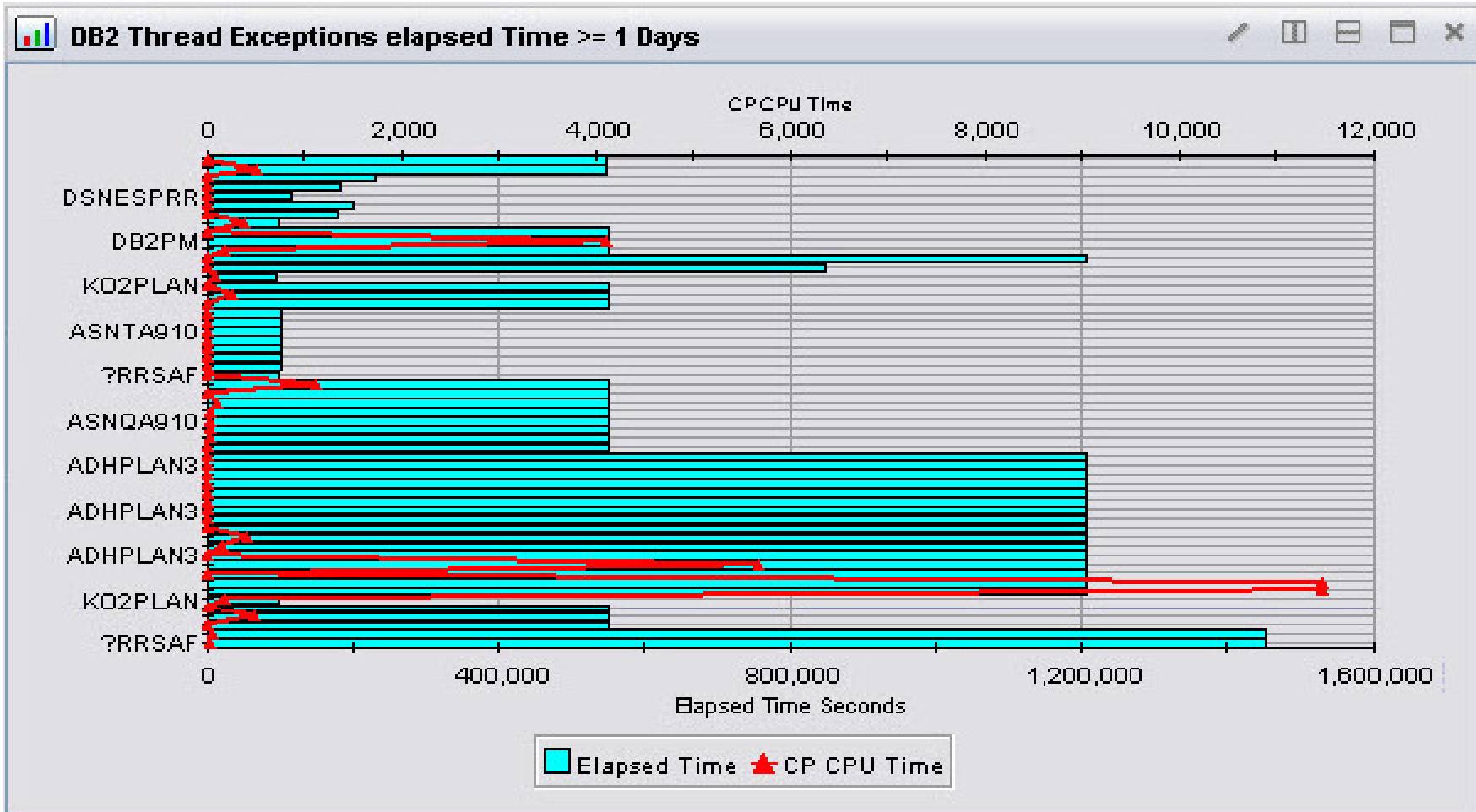


- **OMEGAMON on z/OS**
 - CPU Utilization for all LPARs
 - Top Jobs by CPU for all LPARs
- **OMEGAMON for DB2**
 - Top Thread Exceptions for all DBs all LPARs
- **OMEGAMON MFN**
 - IPStack Status all stacks
 - All HPR with ABR Yellow or Red for all Stacks
 - Worst TCP/IP Connection Response times all Stacks
 - FTPs by duration and bytes
- **OMEGAMON on z/VM and Linux**
 - Top Linux CPU and Memory for all systems
- **OMEGAMON CICS**
 - Region overview cross system
 - Dumps cross Region and LPAR
 - Top Transactions by CPU cross system cross LPAR

DB2 Thread Exceptions

Thread Exceptions across all systems

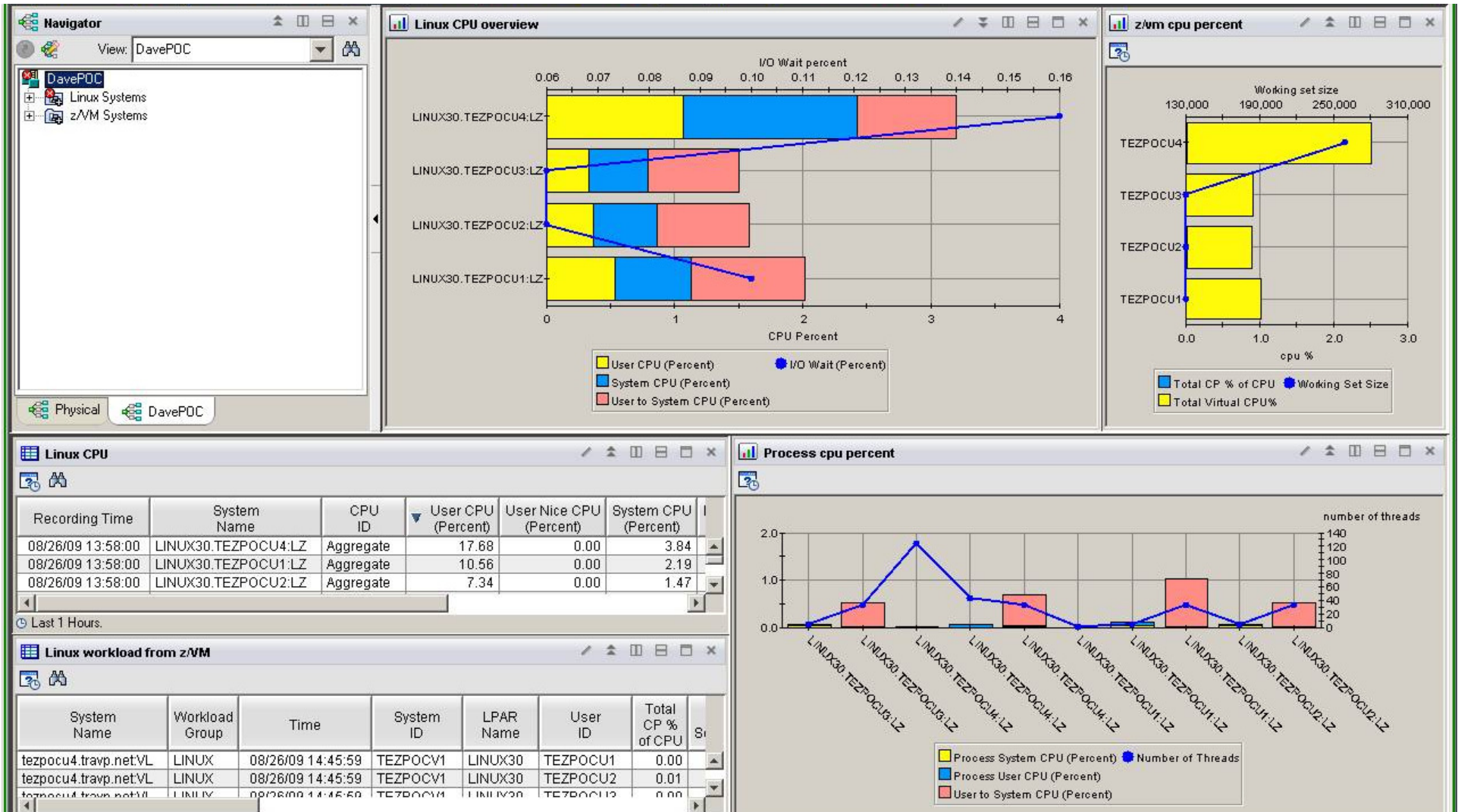
- Elapsed time
- Overlay CPU Time



z/VM and Linux

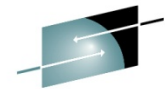
Linux CPU across all systems

- From z/VM's view and Linux OS view
- Highest Process CPU

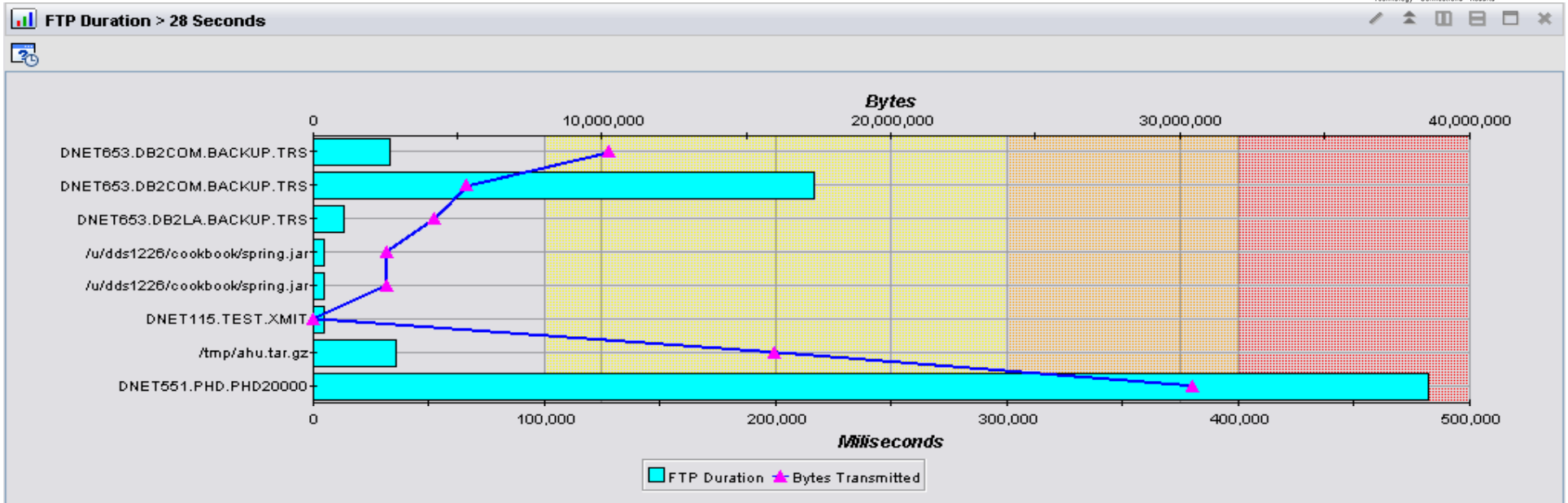


OMEGAMON for MFN

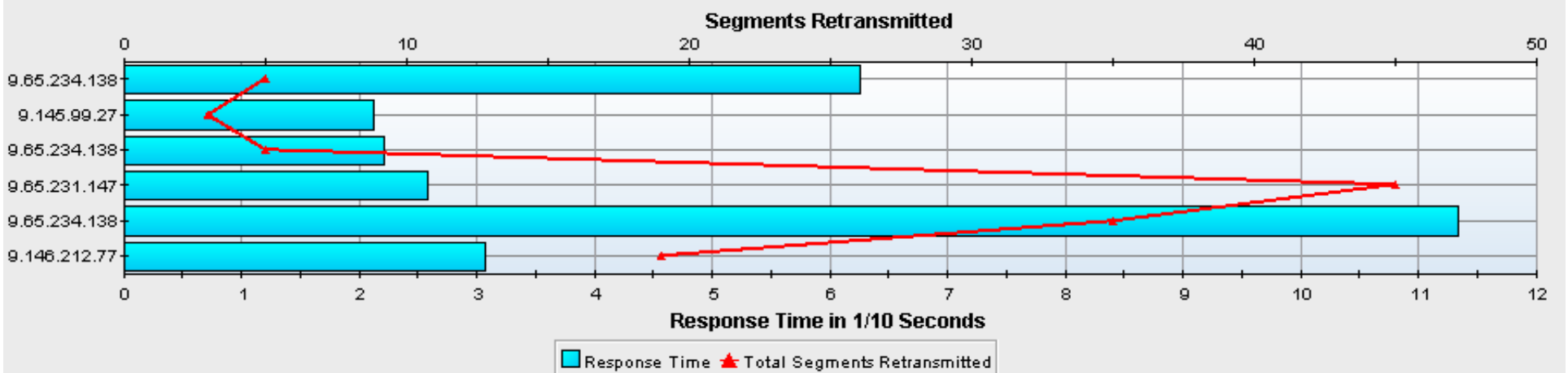
- FTPs Duration overlaid by bytes transmitted
- TCP/IP Connection response time overlaid by segments retransmitted



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Technology · Connections · Results



TCP/IP Connections Response Times

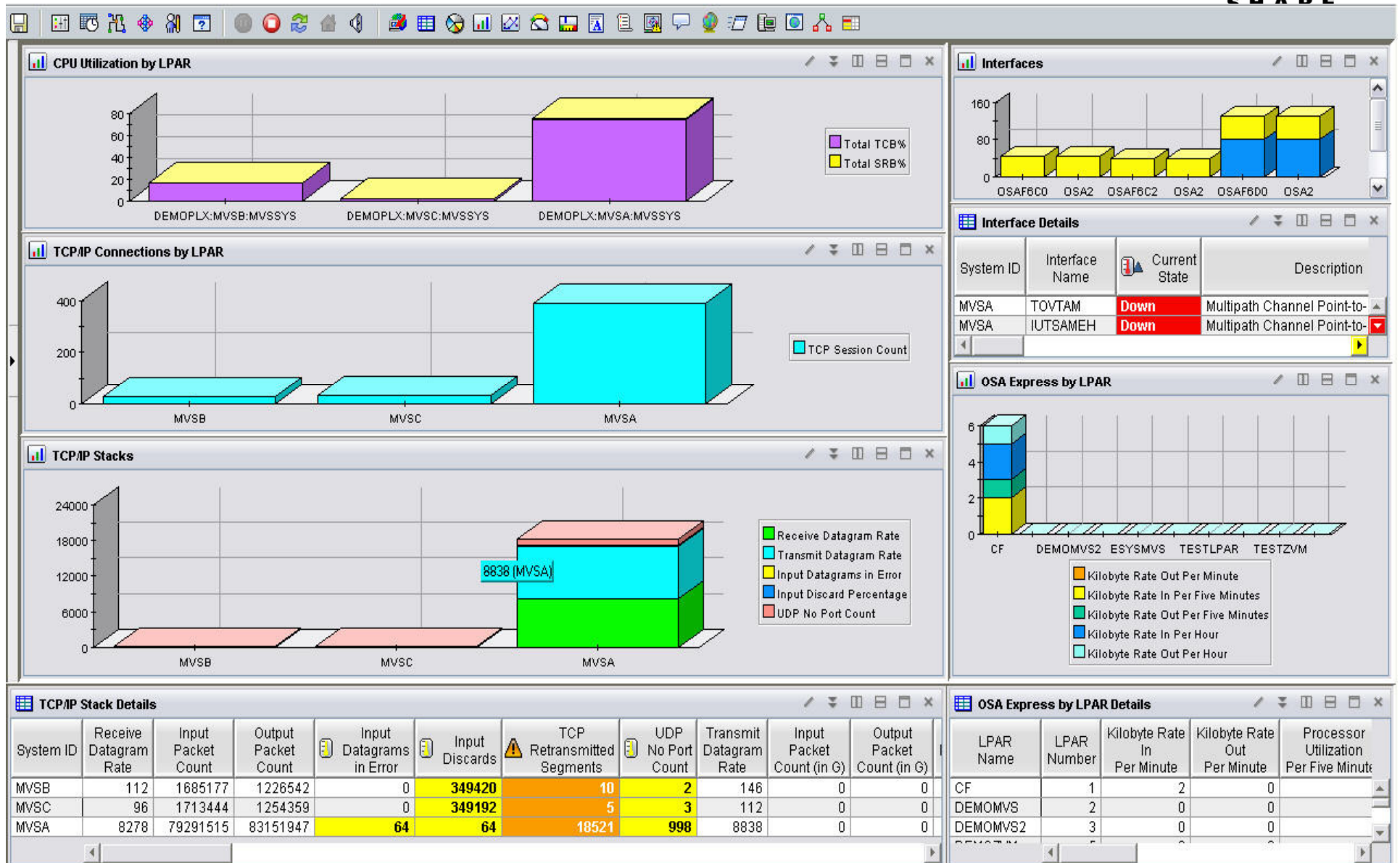


Leveraging the TEP - Agenda

1. Cross LPAR Views
2. Creating a New Navigator View
3. Cross Application Workspaces
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Cross IP-STACK Example



View all aspects of one Applications

- OMEGAMON XE for CICS z/OS
- OMEGAMON XE on z/OS
- OMEGAMON XE for Mainframe Networks

- System Automation for z/OS
- Tivoli Decision Support for z/OS (SMF RECORDS)



Application Name	Connection Count	Active Connections	Accepted Connections	Connection Rate	Server U Time
CICSTIV1	1	0	0	0	464.0

System ID	CICS Region Name	VTAM ACB Open	CICS Version	Region Status	CICS SYSIDNT	VTAM Applid	VTAM Generic Applid
MVSA	CICSTIV1	Yes	6.4.0	N/S	CTV1	CICST001	CICST001

Resource Name	Observed Status	Desired Status	Automation Status	Resource Type	Sys
CICSTIV1	Available	Available	Idle	APL	DEMO

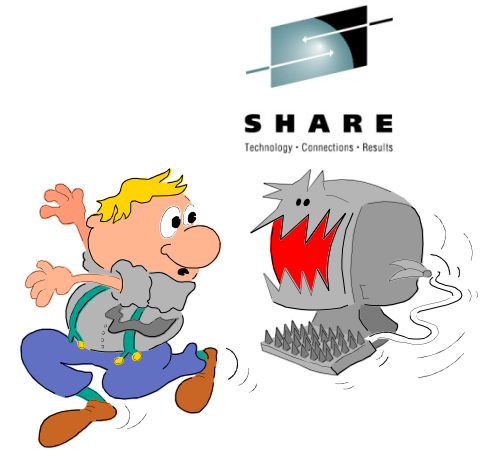
Job Name	Step Name	Proc Step	Type	SvcClass	SvcClass Period	ASID	JESJOBID	CPU Percent	TC
CICSTIV1	CICSTIV1	TIV1	STC	OPSDEF	1	0X011C	STC17051	0.0	

Date	Transaction ID	Average Task Response Time(sec)	Period Name
2009-02-20	STRS	24.654	PRIME
2009-02-19	STRS	20.401	PRIME
2009-02-14	CPLT	14.775	WEEKEND
2009-02-14	CSSY	1.973	WEEKEND

System ID	CICS Region Name	Task State	CICS SYSIDNT	Transaction ID	User ID	Terminal ID	Task Number	Resource Type	Resource Name	Elapsed Time	CPU Time	Program ID	Exceeds MA Threshold
MVSA	CICSTIV1	Suspend	CTV1	CSNE	n/a	n/a	00022	ZC	DFHZNAC1	19 Days	00:00:00	DFHZNAC	No
MVSA	CICSTIV1	Suspend	CTV1	CSNC	n/a	n/a	00019	CSNC	MROQUEUE	19 Days	00:00:00	DFHCRNP	No

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Multiple Page Views

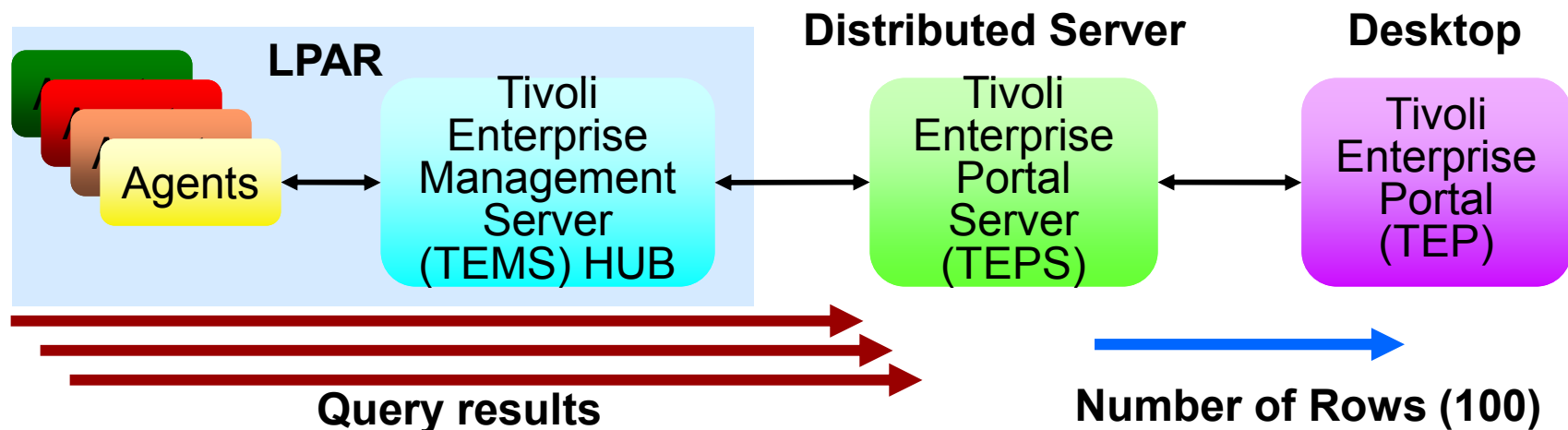
Connections Summary Table

Page: 1 of 2

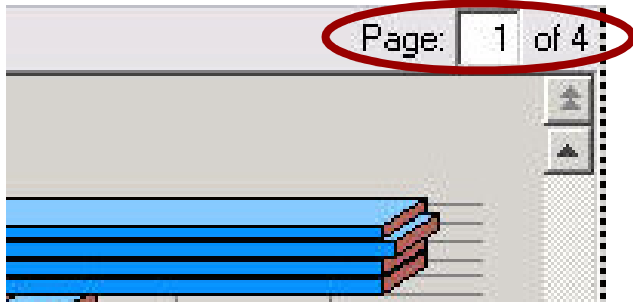
Collection Time	Application Name	Connection Type	Local Port	Foreign IP Address	Foreign Port
09/21/06 11:31:51	VCMVH@@L	TCP_Connection	2249	9.42.46.26	213
09/21/06 11:31:51	VCCTH@@L	TCP_Connection	21323	9.65.98.109	281

Multiple page tables

- Sorts only works one page at a time
- Limited performance savings
- If too many rows, then limit query with a filter



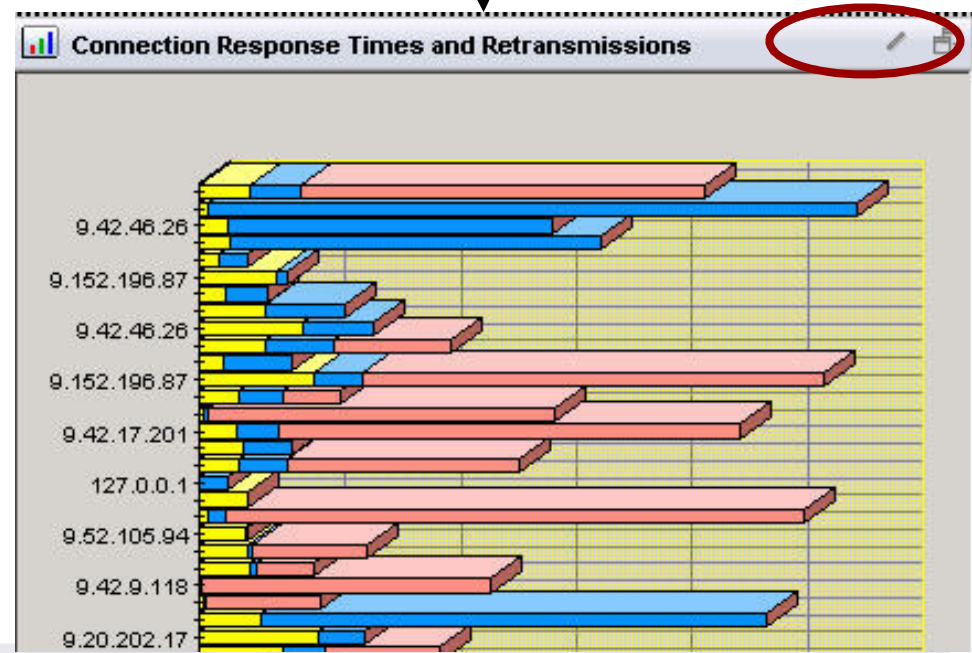
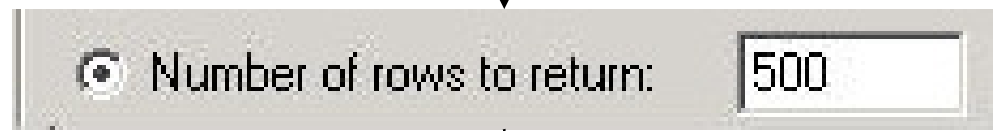
Increase number of rows



Properties

View-level Page Size

- Use default 100 rows will be returned as a page
- Return all rows
- Number of rows to return:



Multi-Page Chart

Increase Rows

Single Page Chart

Save Workspace

Changing Default Rows



The screenshot shows the 'Manage Tivoli Enterprise Monitoring Services - TEM' application window. The main pane displays a list of services under the heading 'Service/Application' and 'Task/SubSystem'. The 'Tivoli Enterprise Portal Browser' service is selected, and a context menu is open over it. The menu items include 'Start', 'Stop', 'Recycle', 'Change Startup...', 'Change Startup Params...', 'Set Defaults For All Age', 'Configure Using Default', 'Create Instance...', 'Create Multi-instance...', and 'Reconfigure...'. The 'Reconfigure...' option is circled in red. A blue callout box titled 'Edit Tivoli Enterprise Portal Browser Parm' is overlaid on the right side of the screenshot, showing the configuration details for the 'cnp.databus.pageSize' parameter.

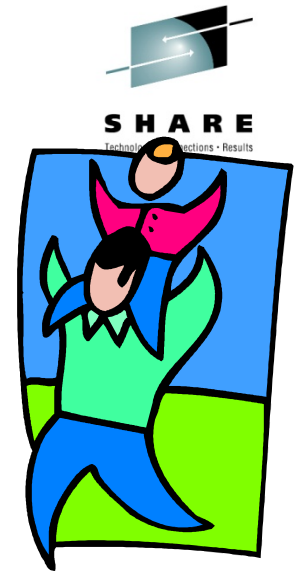
Parm:	Value:
cnp.databus.pageSize	500
<input checked="" type="checkbox"/> In Use	

Change cnp.databus.pageSize on TEP

- Number of rows to fetch in a single logical page
- Increase from default 100 rows
- See ITM Admin Guide SC32-9408

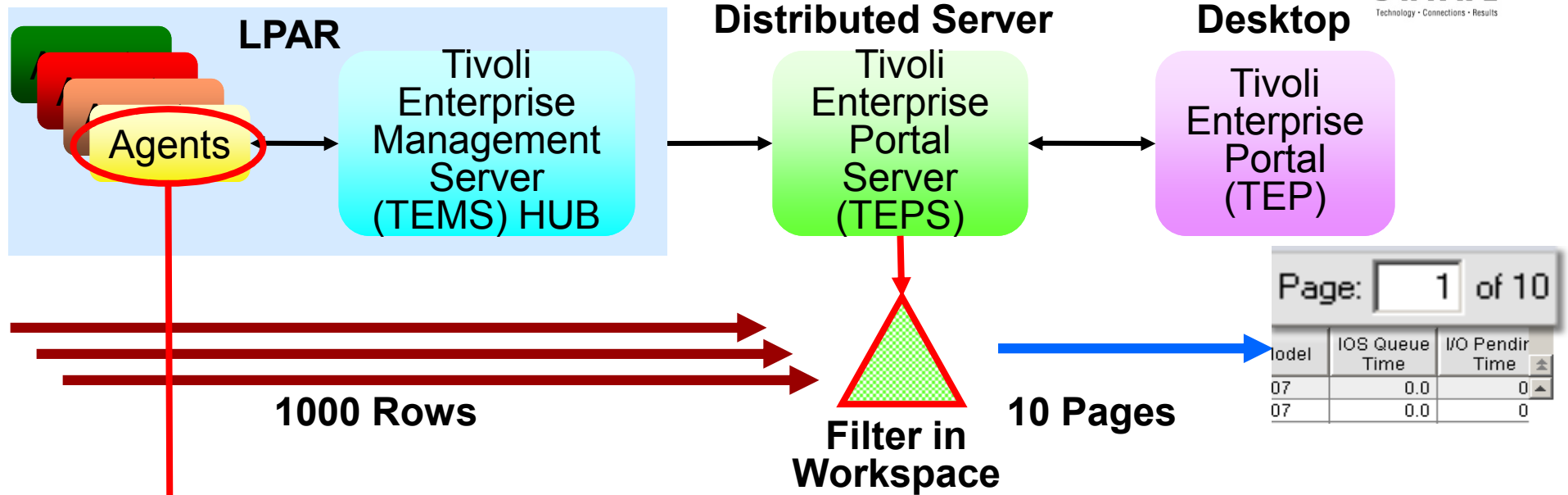
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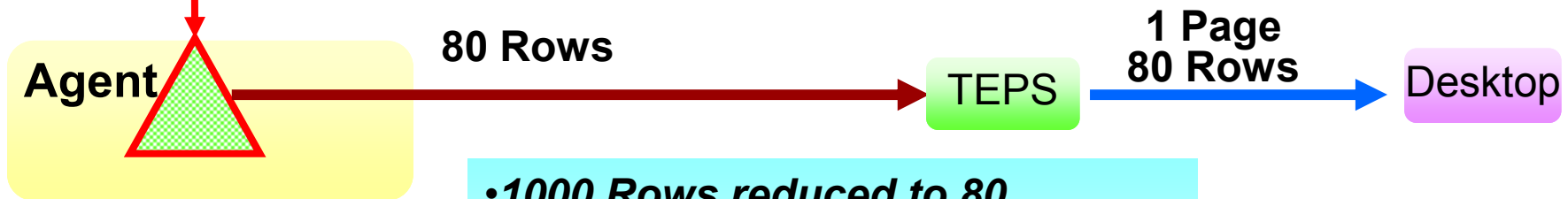


Limit data from agents

Apply Filter at TEPS in Workspace Properties



Or Apply Filter at Agent with Custom Query



- 1000 Rows reduced to 80
- Reduced overhead
- Faster Response Time

Add Filter to Copy of Query



A screenshot of a software interface showing a tree view on the left with 'DASD MVS Devices' selected. A context menu is open over the selected item, with 'Create Another Query' circled in red. The background shows a table with columns 'Managed System', 'Response', and 'I/O Rate'. Row 2 contains the text '== \$NODE\$'.

	Managed System	Response	I/O Rate
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$		

1. Modify Copy of Query

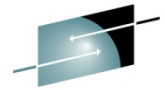
A screenshot of the software interface showing a tree view on the left with 'Filtered DASD MVS DEVICES' circled in red. The main window displays a table with columns 'Managed System', 'Response', and 'I/O Rate'. Row 2 contains the text '== \$NODE\$' and a filter expression '> 10' is applied to the 'Response' column, which is also circled in red.

	Managed System	Response	I/O Rate
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$		

2. Filter (Response Time > 10ms)

Limiting Queries – Save Workspace

10 Pages 1000 Rows



DASD MVS Devices

Page: 1 of 1

Address	Volume	Storage Group	Response	I/O Rate	Cache Status	Percent Reserve	PAV Count	Dev Allocations	Dev Busy Delay Time	CU Busy Delay Time	Director Port Busy Delay	LCU Number	Model	I/O Queue Time	I/O Pending Time
0X3234	PP082R	N/A	0.3	0.0	Active	0.0	0.0	1.0	0.0	0.0	0.0	0X0051	2107	0.0	0
0X3233	PP082Q	N/A	0.3	0.0	Active	0.0	0.0	1.0	0.0	0.0	0.0	0X0051	2107	0.0	0

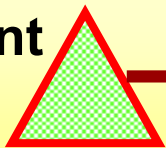
Query Filter (Response time > 10ms)

1 Page 80 Rows

DASD MVS Devices

Volume	Model	Response	I/O Rate	Percent Busy	I/O Pending Time	Dev Busy Delay Time	Address
USER08	2105	98.2	0.1	0.8	1.5	0.0	0X854
USER01	2105	91.5	0.1	0.7	1.5	0.0	0X854
SPL23A	2105	88.7	0.0	0.0	87.5	86.4	0X5A7I
SUPT02	2105	54.6	0.1	0.8	1.4	0.0	0X853I
USER04	2105	54.1	0.1	0.8	1.2	0.0	0X854
SUPT01	2105	53.3	0.1	0.8	1.4	0.0	0X853I

Agent



Filter in Query

80 Rows

TEPS

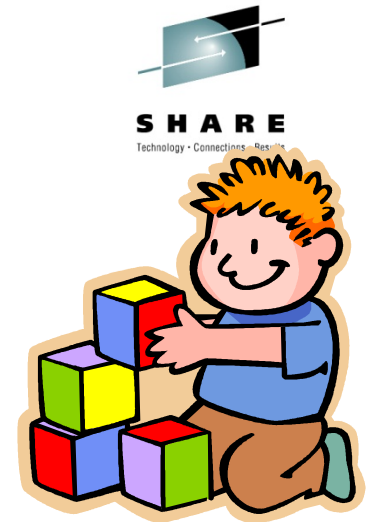
1 Page
80 Rows

Desktop

- 1,000 Rows Reduced to 80
- Reduced overhead
- Faster Response time.

Leveraging the TEP - Agenda

1. Cross LPAR Views
2. Creating a New Navigator View
3. Cross Application Workspaces
4. Eliminate Multiple pages
5. Reduce Query data
6. *Customizing Tables and Charts*
7. Topology
8. Situations
9. Built-in tutorials
10. Tuning and ITMSUPER
SHARE in Boston



Situations and thresholds



View Thresholds can be used to highlight attributes of potential problems.
Note: You will only see these if you are looking at the Table View

Response Time	Origin Node	System ID
15.19	TCP/IP:MVSA	MVSA
5.67	TCP/IP:MVSA	MVSA

Response Time GE 5.00

Out of the box situations to proactively notify you.

- Mainframe Networks
 - TCP/IP
 - TCP/IP:MVSA
 - Applications
 - Address Space
 - Connections
 - N3T_Conn_Rnd_Trip_Time

Table Customization – Thresholds



Properties - Networks

Preview

Table

Origin Node	Byte Rate	Collection Time	Application Name	Connection Type	Local Port
TCPIPL:SYSL	43545665	09/21/06 11:31:51	NET	UDP_Endpoint	12002
TCPIPL:SYSL	0	09/21/06 11:31:51	NET	UDP_Endpoint	
TCPIPL:SYSL	42354599	09/21/06 11:31:51	NET	UDP_Endpoint	
TCPIPL:SYSL	10464	09/21/06 11:31:51	VCCTH@@L	UDP_Endpoint	

Query Filters Thresholds Style

Properties - Networks

Preview

Table

Origin Node	Byte Rate	Collection Time	Application Name	Connection Type
TCPIPL:SYSL	101	09/21/06 11:31:51	INETD4	TCP_Connection
TCPIPL:SYSL	10546	09/21/06 11:31:51	VCCTH@@L	TCP_Connection

Query Filters Thresholds Style

Thresholds

	Use Icons		Response Time	Response Time Variance	Telnet Appl Name	Telnet LU Name	Segments Retransmitted
1	<input type="checkbox"/>	Critical	>= 100.00				
2	<input type="checkbox"/>	Warning					>= 5

Show Formula

Formula

```
(
  (----- Critical -----)
  Response Time >= 100.00)

  (----- Warning -----)
```

IF

- Response Time GE 100.00 → Critical
- Segments Retransmitted GE 5 → Warning

Show detailed formula

OK

Add View Thresholds



Lock this Column		TCP/IP Connections					
Application Name	Foreign Socket	Response Time	Segments Retransmitted	Response Time Variance	Telnet Appl Name	Telnet LU Name	Total Segments Retransmitted
VCMVH@@L	9.42.46.26:21323	83.00	0	98.00			0
VCCTH@@L	9.65.98.109:2864	203.00	5	78.00			16
VCC5H@@L	9.42.46.26:21323	139.00	0	146.00			0
VCC5H@@L	9.42.17.201:29515	35.00	2	49.00			97

- Highlight tables with threshold
- Lock columns to make easier to read when scrolling
- Quick navigation to thresholds
- Sort by selecting title of any column
- Save workspace to remember settings

Overlays Helps Correlate

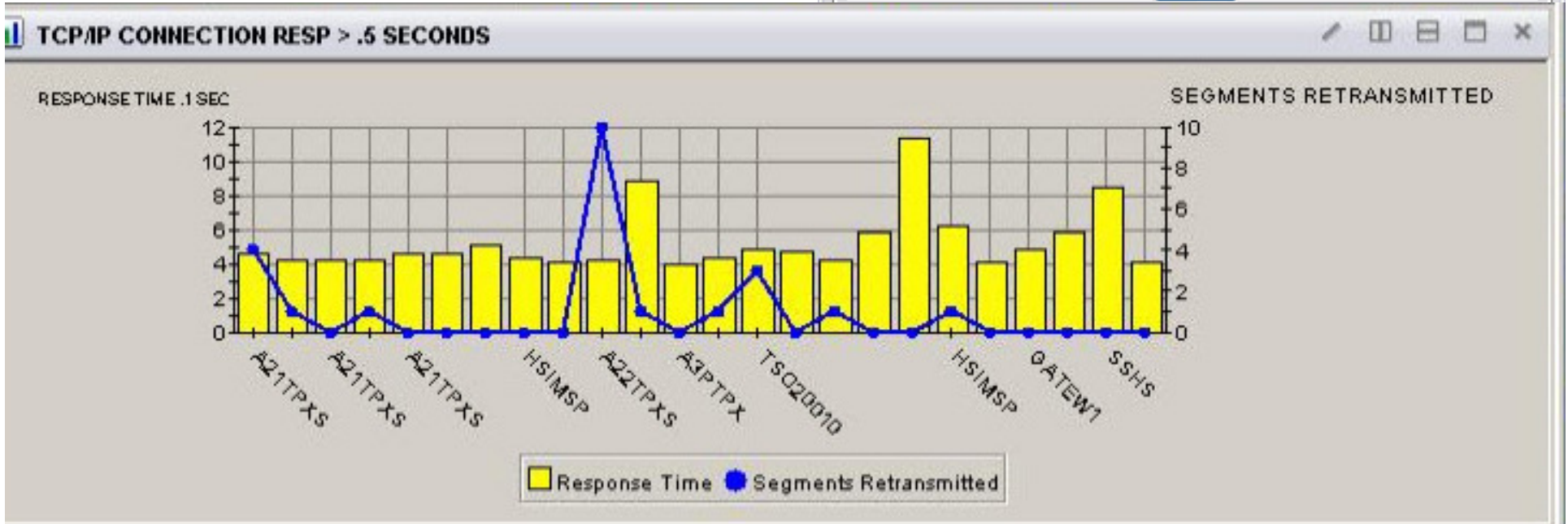


1

2

3

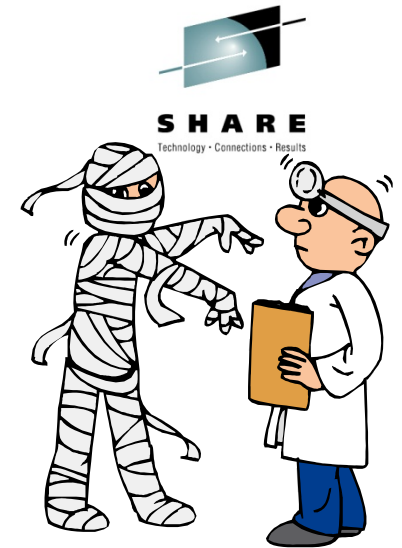
4



Available with ITM 6.2.1 or later

Leveraging the TEP - Agenda

1. Cross LPAR Views
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Locate Started Situations



	Severity	Status	vr	Situation Name
	Critical	Open		Crypto_PCI_Unavailable
	Critical	Open		Crypto_Invalid_Master_Key

- Identify Unnecessary Situations
- In this example, Crypto is NOT installed

The screenshot shows the MVS System console with a context menu open over the 'Situations...' option. The 'Manage Situations' dialog box is displayed, showing a table of situations.

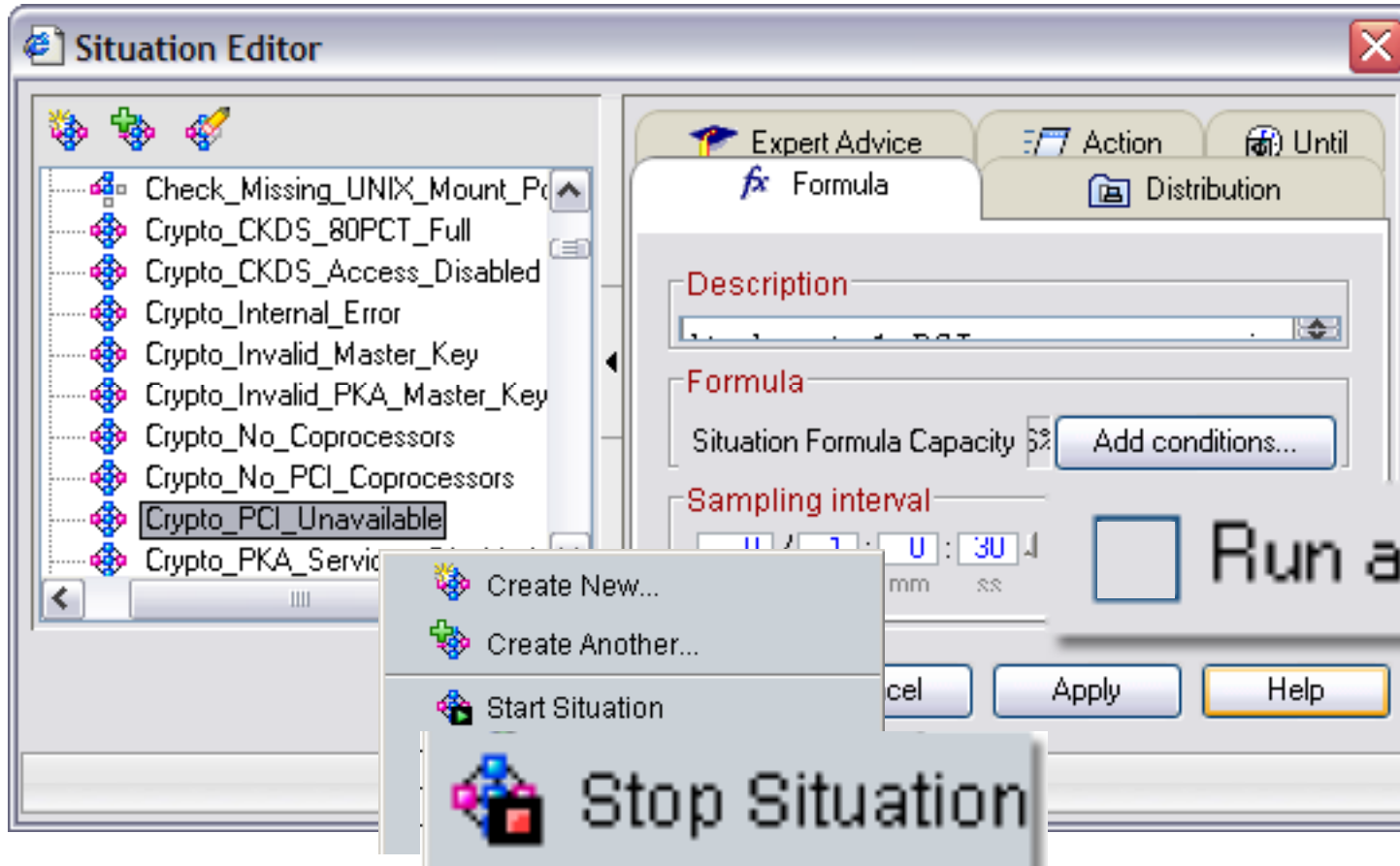
Name	Status	Auto Start	Interval
Crypto_CKDS_80PCT_Full	Started	✓	0d / 0h : 30m : 0s
Crypto_CKDS_Access_Disabled	Started	✓	0d / 1h : 0m : 0s
Crypto_Internal_Error			0d / 0h : 0m : 30s
Crypto_Invalid_Master_Key	Open	✓	0d / 8h : 0m : 30s
Crypto_Invalid_PKA_Master_Keys	Open	✓	0d / 8h : 0m : 30s
Crypto_No_Coprocessors	Started	✓	0d / 4h : 0m : 0s
Crypto_No_PCI_Coprocessors		✓	0d / 0h : 0m : 30s
Crypto_PCI_Unavailable	Open	✓	0d / 1h : 0m : 30s

1. List Situations by Application, one application at a time
2. See which Situation are automatically started

Turn off unnecessary Situations



List all Situations defined



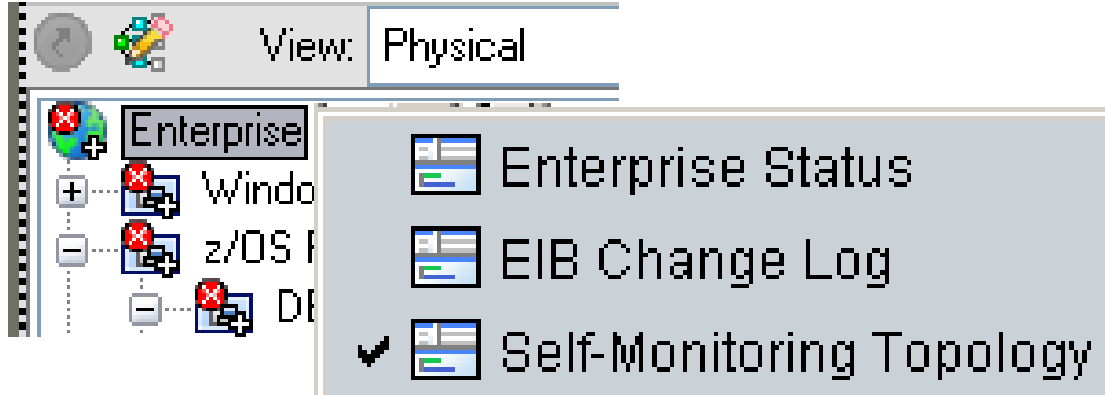
1. Stop situation
2. Uncheck **Run at startup**

Leveraging the TEP - Agenda

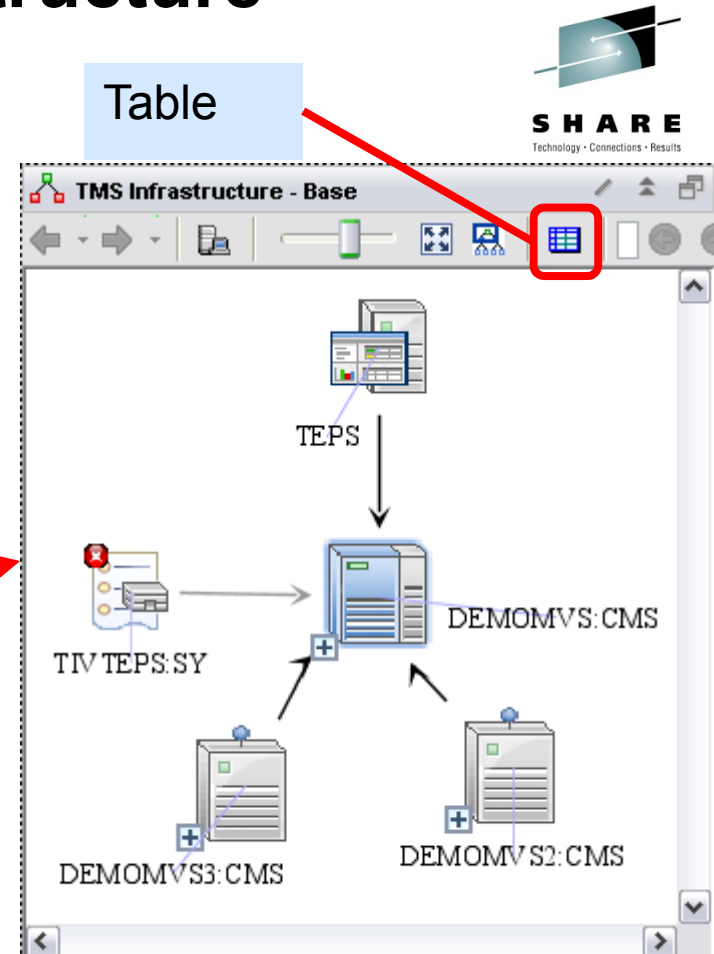
1. Cross LPAR Views
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Tuning and ITMSUPER



Check configuration of Infrastructure

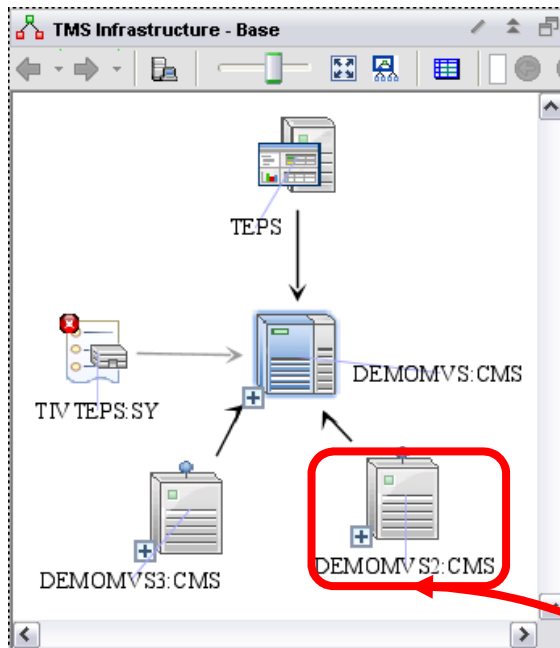


- See Tivoli Management Infrastructure
- TEMS, TEPS, Agents, TDW and Proxy
- Last Heartbeat, Version, IP Address
- CQ = TEPS
- EM = TEMS



Status	Name	Resource T	Product Cod	IP Address	Version	Node	Host Info	Through No	Last Heartb
<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>
Online	DEMOMV...	TEMS	EM	9.39.68.145	06.20.01			DEMOMV...	01/28/09...
Offline	TIVTEPS:...	Sum...	SY	9.39.64.41	06.20.00	TIVTEPS	Win2003 ...	DEMOMV...	01/25/09...
Online	DEMOMV...	TEMS	EM	9.39.68.146	06.20.01			DEMOMV...	01/28/09...
Online	DEMOMV...	TEMS	EM	9.39.68.147	06.20.01			DEMOMV...	01/28/09...
Online	TEPS	TEPS	CQ	9.39.64.41	06.20.00			DEMOMV...	

Check configuration and versions



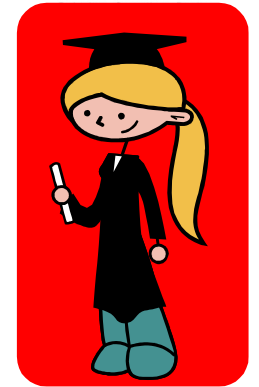
+ Drill down

- Last Heartbeat
- Version
- IP Address
- N3 OMEGAMON for Mainframe Networks
- M5 OMEGAMON ON z/OS
- EM TEMS
- V6.x for ITM and Infrastructure
- V4.x for OMEGAMON Agents

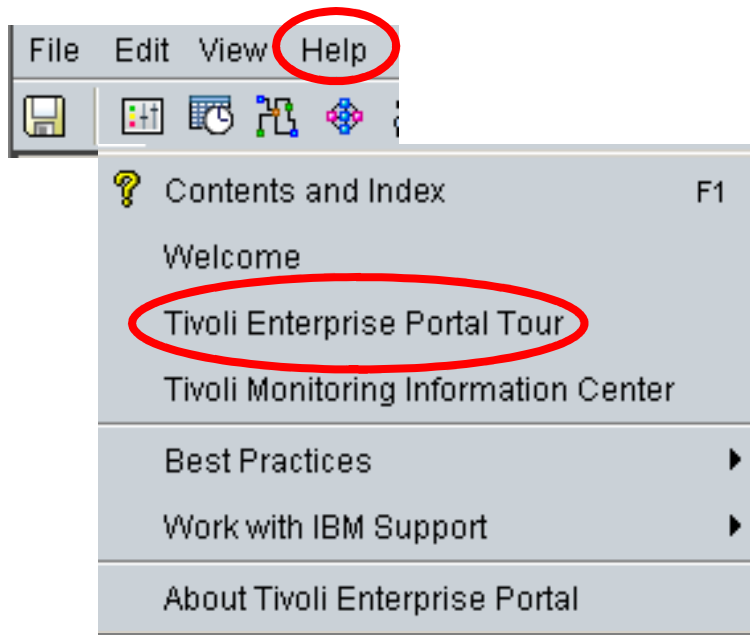
Status	Name	Resource Type	Product Code	IP Address	Version	Node	Host Info	Through Node	Last Heartbeat
<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>	<no filter>
Online	TCPIP:MVSB	Agent	N3		04.01.00			CXEGN3:MVSB:...	01/25/09 18:20:...
Online	DEMOMVS2.CMS	TEMS	EM	9.39.68.146	06.20.01			DEMOMVS:CMS	01/28/09 08:17:...
Online	CXEGN3:MVSB:...	Agent	N3	9.39.68.146	04.01.00	MVSB	z/OS 01.09.00	DEMOMVS2.CMS	01/25/09 18:20:...
Online	VTAM:MVSB	Agent	N3		04.01.00			CXEGN3:MVSB:...	01/25/09 18:20:...
Online	DEMOPLX:MVS...	Agent	M5	9.39.68.146	04.01.00	MVSB	z/OS 01.09.00	DEMOMVS2.CMS	01/25/09 18:18:...

Leveraging the TEP - Agenda

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Built-in Tutorials



Tivoli Enterprise Portal tour

Welcome to the Tivoli Enterprise Portal tour. In under 10 minutes this tour introduces you to some of the major features:

Navigator	Getting started
Workspaces	Tivoli Enterprise Portal window
Views	Using the Navigator
Situations	Tutorial: Defining a workspace
Properties	Linking to a workspace
Conclusion	Responding to events

Tutorial: Defining a workspace

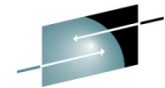
This tutorial gives you hands on practice defining a workspace. In the following exercises you will add new views to an undefined workspace, tailor them with the Properties editor, save the workspace, and, finally, edit the workspace properties.

Leveraging the TEP - Agenda

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Tuning TEP Summary



Problem and symptom	Solution
<i>No or missing data on workspaces</i>	
Too Many Query targets can result in an error TEPS variable KFW_REPORT_NODE_LIMIT Defaults to 200	Use group system lists Such as dynamic ones: *MVS_SYSTEM, *MVS_CICS, *MVS*DB2
Mismatch of application support files	Run ITMSUPER to isolate mismatch
Default filter within query is hiding data Look at Query tab on view properties	Change query filter
No response from query to one of the targets Default query timeout is 10 minutes	Code timeout on query for view See Technote: http://www.ibm.com/support/docview.wss?uid=swg21375786
<i>Workspaces are slow</i>	
Too many rows being return	Filter with custom query to reduce number of rows
Multiple windows in workspace	Use common query for several windows in workspaces All queries to the same agent run serially. But to different agents they run asynchronously.
Low Java cache You may see Heap dumps on desktop	Increase java cache size See Appendix C in ITM admin Guide
Top 10 lists and sorts in Query for many rows Select advance button on query editor	Avoid query sorts, use fixed thresholds Then Sort within workspace view

ITM Super Tool –



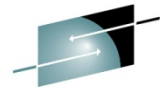
Here is an awesome tool that all our customers should have to help tune and manage OMEGAMON and ITM.

In addition to identifying performance issues caused by things like too many situations, TEPS Analysis will help Identify common problems such as application seed files being out of sync between the HUB and the TEPS.

The tool is really simple to run since there is nothing to install. Just unzip it someplace like the TEPS server and it will prompt you.

This can be downloaded from OPAL. Just search on ITMSUPER at:
<http://www-01.ibm.com/software/brandcatalog/portal/opal>

ITM Super Tool –



See CPU utilization

zOS High CPU Usage Statistics (1.328 Seconds)

Server_Name	Job/Step	CPU_Time/Elapsed Seconds	Life CPU %	TCB_Time Seconds	CPU_Percent	TCB_Percent
PR02:MVSSYS	DIVPDBM1/IEFPROC	28195/194682	14.4%	2244.77	28.2	0.0
PR02:MVSSYS	TCPIP/TCPIP	11622/210599	5.5%	406.23	32.6	0.4
PR02:MVSSYS	DIVPDIST/IEFPROC	42554/194674	21.8%	20341.77	56.5	38.2
:TS01:MVSS	CANSCN/CNDL	14402/180774	7.9%	14332.28	10.4	10.4
TS02:MVSSYS	CATALOG/IEFPROC	33229/210600	15.7%	32524.72	36.0	35.6
TS02:MVSSYS	VLV/VLF	9810/210600	4.6%	9809.37	0.0	0.0
TS02:MVSSYS	HMAUX4/HSM	20162/195016	10.3%	13945.21	0.0	0.0
TS02:MVSSYS	HMAUX1/HSM	32377/195016	16.6%	22776.58	8.6	5.6
TS02:MVSSYS	HMAUX3/HSM	18107/195016	9.2%	12468.89	0.0	0.0
TS02:MVSSYS	HMAUX2/HSM	21447/195016	10.9%	14155.91	0.0	0.0
TS02:MVSSYS	SAMS/SAMS	11793/210600	5.6%	11328.11	0.0	0.0
:TS03:MVSS	CANSCN/CNDL	17439/191884	9%	17366.79	12.1	12.1

Situation overhead can be reduced by increasing interval or turning off

Situation	Table	Rows	Columns	Sample Cost	Interval	Rows Processed Every hour	Situation Cost/hour
Crypto_CKDS_Access_Disabled	KM5.ICSF	1	44	0.01	0030	120	1.2
Crypto_CKDS_80PCT_Full	KM5.ICSF	1	44	0.01	0030	120	1.2
Crypto_Internal_Error	KM5.ICSF	1	44	0.01	0030	120	1.2
Crypto_Invalid_Master_Key	KM5.ICSF	1	44	0.01	0030	120	1.2
Crypto_Invalid_PKA_Master_Keys	KM5.ICSF	1	44	0.09	0030	120	10.8
Crypto_No_Coprocessors	KM5.ICSF	1	44	0.01	0030	120	1.2

Total cost of running the situations at the agent = 27 in seconds/hour , for rows processed = 42500 rows per hour

This works out to be approximately 0.75 % Utilization

ITM Super Tool –

1. This TEPS tool will obtain applications seeded in TEPS and applications seeded at HUB and compare them. It will high light the discrepancies.
 - a. Applications at HUB but not in TEPS are highlighted in red
 - b. Applications at TEPS but not at HUB are highlighted in yellow.

TEPS Applications Versions					
Application	Application ID	Version	TEPS File Date	TEPS Seed Date	HUB Date
ABA	ABA	06.01.00	Fri Sep 21 11:22:42 PDT 2007	Thu Oct 4 10:12:33 PDT 2007	10/07/05 15:54:26
ABH	ABH	06.01.00	Fri Sep 21 11:22:44 PDT 2007	Thu Oct 4 10:12:34 PDT 2007	10/07/05 15:54:26
AMA	AMA	06.01.00	Fri Sep 21 11:22:44 PDT 2007	Thu Oct 4 10:12:35 PDT 2007	10/07/05 15:54:26
AMB	AMB	06.01.00	Fri Sep 21 11:22:44 PDT 2007	Thu Oct 4 10:12:36 PDT 2007	10/07/05 15:54:26
AMD	AMD	06.01.00	Fri Sep 21 11:22:44 PDT 2007	Thu Oct 4 10:12:36 PDT 2007	10/07/05 15:54:26
AMN	AMN	06.01.00	Fri Sep 21 11:22:44 PDT 2007	Thu Oct 4 10:12:36 PDT 2007	10/07/05 15:54:26
IEX01	Missing at TEPS				05/21/06 21:09:49
IEX09	Missing at TEPS				12/01/07 10:42:52
INT00	INT	06.00.00	*	*	03/28/08 20:25:50
IQS	IQS	06.01.00	Fri Sep 21 11:22:56 PDT 2007	Thu Oct 4 10:12:58 PDT 2007	10/07/05 15:54:26
IQY	IQY	06.01.00	Fri Sep 21 11:22:56 PDT 2007	Thu Oct 4 10:12:59 PDT 2007	10/07/05 15:54:26
IQZ	IQZ	06.01.00	Fri Sep 21 11:22:58 PDT 2007	Thu Oct 4 10:13:00 PDT 2007	10/07/05 15:54:26
IUD	IUD	06.01.00	Fri Sep 21 11:22:58 PDT 2007	Thu Oct 4 10:13:01 PDT 2007	10/07/05 15:54:26
IUI	IUI	06.01.00	Fri Sep 21 11:22:58 PDT 2007	Thu Oct 4 10:13:03 PDT 2007	10/07/05 15:54:26
IVD	IVD	06.01.00	Fri Sep 21 11:22:58 PDT 2007	Thu Oct 4 10:13:03 PDT 2007	10/07/05 15:54:26
IVI	IVI	06.01.00	Fri Sep 21 11:23:00 PDT 2007	Thu Oct 4 10:13:04 PDT 2007	10/07/05 15:54:26

Summary

TEP top 10 TIPS	Benefits
<i>Cross LPAR Views</i>	View all LPARs in one view
<i>Creating a New Navigator View</i>	Organize workspaces by user
<i>Cross Application Workspaces</i>	Combine OMEGAMONs for a given Application workspace
<i>Eliminate Multiple pages</i>	Allow columns to sort all rows at once
<i>Reduce Query data</i>	Query filter improves performance
<i>Customizing Tables and Charts</i>	View Thresholds to highlight problems
<i>Situations</i>	Turn off unnecessary situations
<i>Topology</i>	View fix levels and connectivity
<i>Built-in Tutorials</i>	TEP Online Education
<i>Tuning and ITMSUPER</i>	Tune OMEGAMON Infrastructure

TEP Installation Tips

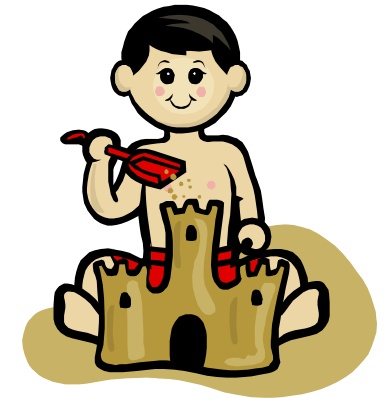


TEP Config Tips If HUB is on z/OS	If Integrated Cryptographic Service Facility (ICSF) is not installed or configured, Then From Manage Tivoli Enterprise Monitoring Services right-click TEPS and select Advanced > Edit ENV File Insert USE_EGG1_FLAG=1
	Add application support to the HUB TEMS: From Manage Tivoli Enterprise Monitoring Services window, right-click TEPS. Select the Actions and select Advanced > Add application support to the TEMS
Running ITM on Linux on z	Supports 64 bit on Linux on z with ITM 6.2.1 or later
New Tivoli on z ServerPac on Shopz	Preinstalled datasets with Latest Releases and maintenance
How to downloading ITM code from ShopzSeries	Video on how to download software on ShopzSeries To order the latest ITM 6.2.2 code for download you should order: 5698-A79 IBM Tivoli Management Services on z/OS V6.2.2 (5698-S53)

Product codes

For a complete list of Codes visit:

<http://www.ibm.com/support/docview.wss?uid=swg21265222>



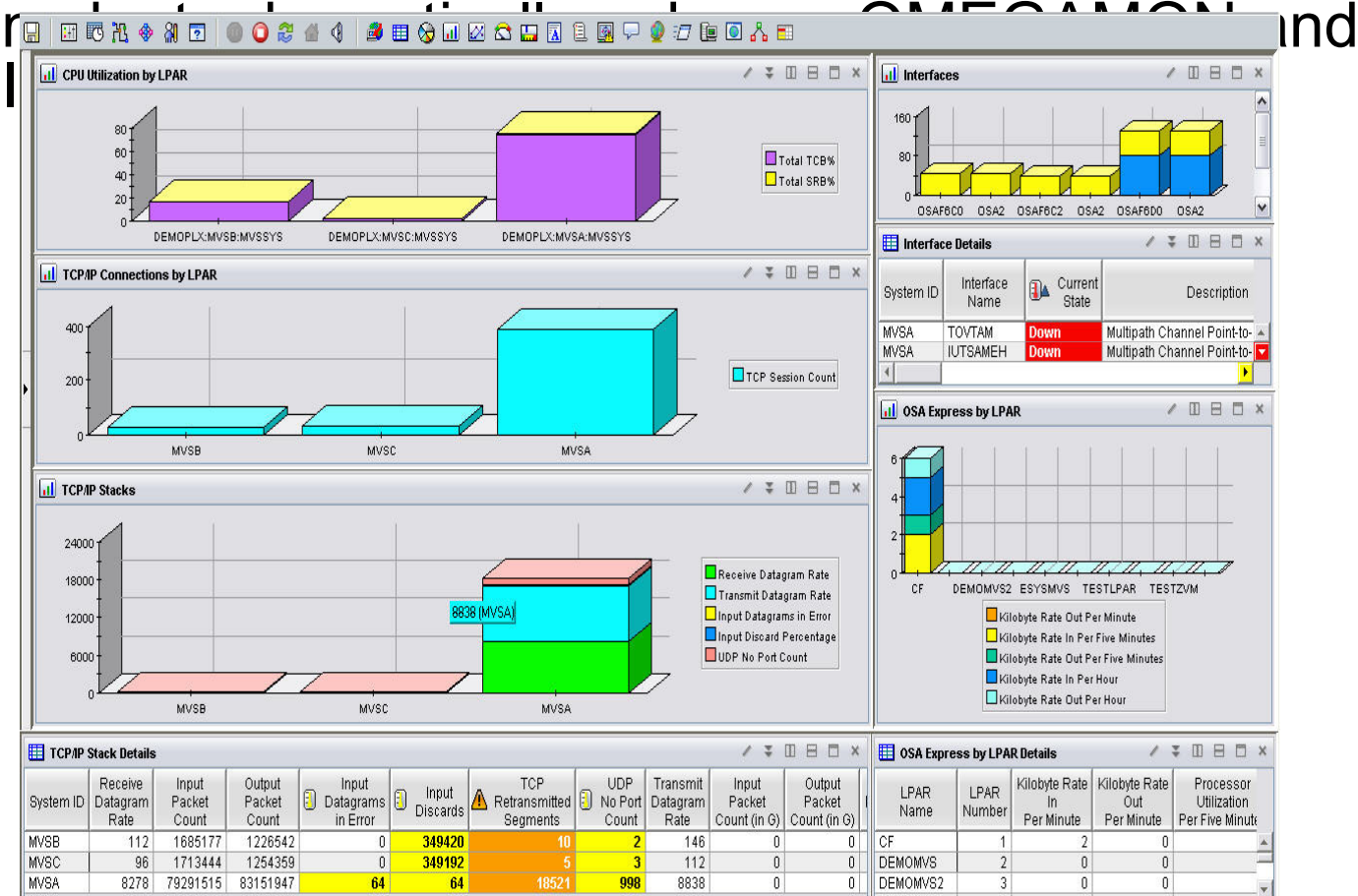
ITM OMEGAMON Infrastructure	cj Tivoli Enterprise Portal Desktop Client cw Tivoli Enterprise Portal Browser Client cq Tivoli Enterprise Portal Server EM Tivoli Enterprise Monitoring Server sy Summarization and Pruning Agent nt Monitoring Agent for Windows OS
DB2	d5 OMEGAMON XE for PE and PM on z/OS
CICS	c5 OMEGAMON XE for CICS on z/OS cp OMEGAMON XE for CICSplex gw OMEGAMON XE for CICS TG on z/OS
IMS	ip OMEGAMON XE for IMS on z/OS i2 OMEGAMON II for IMS
z/OS	m5 OMEGAMON XE on z/OS m2 OMEGAMON II for MVS hl OMEGAMON z/OS Management Console
SOA & WAS	yn ITCAM for WebSphere d4 ITCAM for SOA
MQ	mq WebSphere MQ Monitoring Agent mc WebSphere MQ Configuration Agent
MFN	n3 OMEGAMON XE for Mainframe Networks on OMEGAMON II for Mainframe Network
zNetView zSA	na IBM Tivoli NetView for z/OS Enterprise Management Agent ah System Automation for z/OS
Storage	s3 OMEGAMON XE for Storage on z/OS df OMEGAMON II for SMS rk IBM Tivoli Automated Tape Allocation Manager rv IBM Tivoli Advanced Backup and Recovery for z/OS rw IBM Tivoli Tape Optimizer for z/OS
z/VM Linux	vl OMEGAMON XE on z/VM and Linux lz Monitoring Agent for Linux OS

Abstract: Leveraging the TEP



This is an illustration of how simple it is to customize the TEP.

- Once you have installed the Tivoli Enterprise Portal (TEP), there are some simple changes you can



References:

Narrated demos how to Create a cross LPAR workspace::

<http://www-01.ibm.com/software/os/systemz/telecon/oct29/prz/>



NOTE: Everyone should bookmark this page! Search on:

[Recommended Maintenance Service Levels for OMEGAMON XE products on ITM V6.x](#)

CCR2 OMEGAMON Tuning:

www.ibm.com/software/tivoli/features/ccr2/info.html

- [2004 Issue 2 Part 1: Common data collection overhead reduction tips](#)
- [2004 Issue 3 Part 2: Reducing on-demand CNPS client overhead](#)
- [2004 Issue 4 Part 3: OMEGAMON XE for CICS V100 and CICSplex V220](#)
- [2004 Issue 5 Workload Manager— Sysplex Tuning](#)
- [2004 Issue 6 Part 4: OS/390 and Sysplex from](#)
- [2004 Issue 7 The DB2 trace facility and OMEGAMON II for DB2 historical collection considerations](#)
- [2004 Issue 10 How to maintain time-dependent thresholds without the overhead of embedded situations](#)
- [2005 Issue 6 Sysplex Best Practices – Part 1](#)
- [2005 Issue 7 Sysplex Best Practices – Part 2](#)
- [2006 Issue 2 Part 5: OMEGAMON XE for IMS\(plex\)](#)
- [2008 Issue 3 Resource impact and optimization for Tivoli situation event processing](#)

