Top 10 tips for getting more out of OMEGAMON XE

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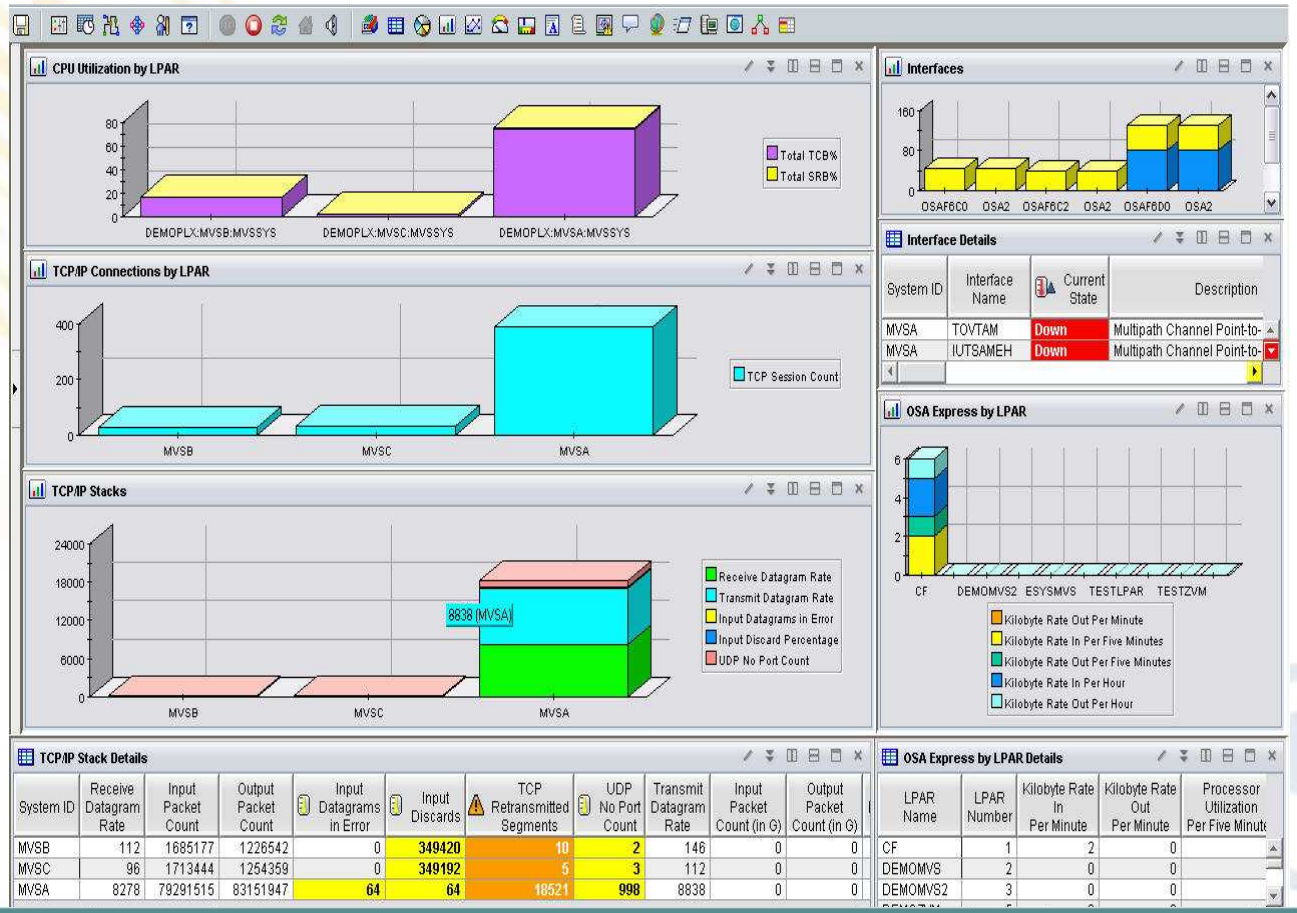
Abstract: Top 10 OMEGAMON XE Tips for the TEP

Once you have installed the Tivoli Enterprise Portal (TEP), there are some simple changes you can make to dramatically enhance OMEGAMON's effectiveness.

This presentation will illustrate how easy it is to customize the TEP and how quickly it can be done.



System ID	Receive Datagram Rate	Input Packet Count	Output Packet Count	Input Datagrams in Error	Input Discards	TCP Retransmitted Segments	UDP No Port Count	Transmit Datagram Rate	Input Packet Count (in G)	Output Packet Count (in G)
MVSB	112	1685177	1226542	0	349420	10	2	146	0	0
MVSC	96	1713444	1254359	0	349192	5	3	112	0	0
MVSA	8278	79291515	83151947	64	64	18521	998	8838	0	0

LPAR Name	LPAR Number	Kilobyte Rate In Per Minute	Kilobyte Rate Out Per Minute	Processor Utilization Per Five Minut
CF	1	2	0	
DEMOMVS	2	0	0	
DEMOMVS2	3	0	0	

Agenda: Top 10 OMEGAMON XE Tips for TEP

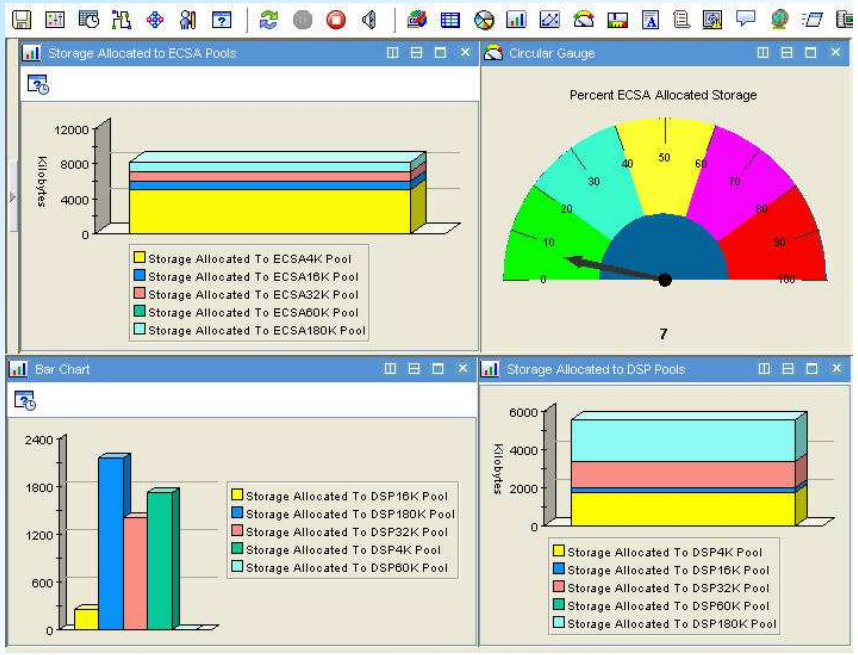
TEP top 10 TIPs	Benefit
Cross LPAR Views	View all LPARs in one View
Creating a New Navigator View	Organize workspaces by user and problem
Cross Application Workspaces	Integrate many views into one
Eliminate Multiple pages	Compact simplified views
Filter Queries	Faster Views
Customizing Tables and Charts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

What is the 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

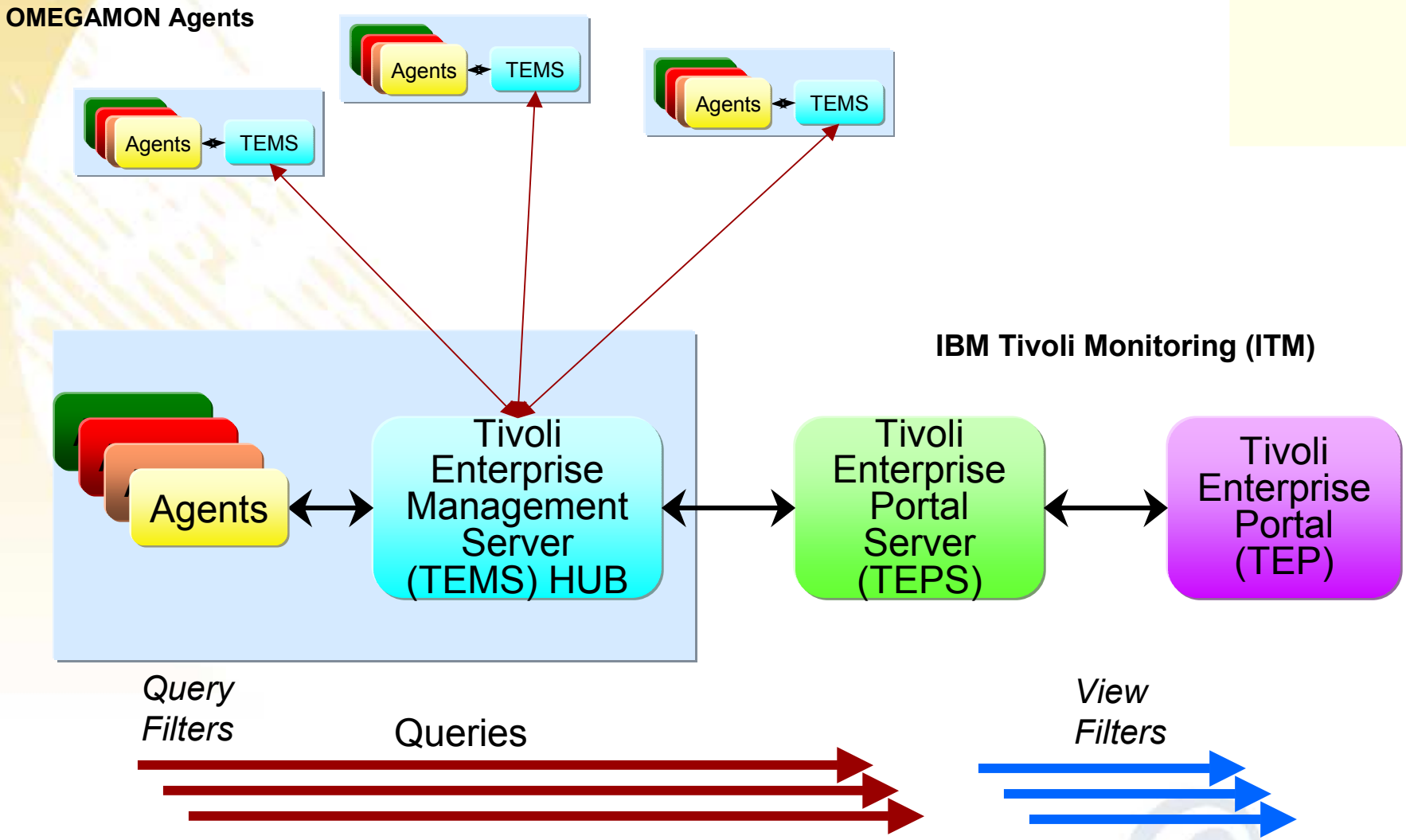


IBM solutions that integrate with the TEP

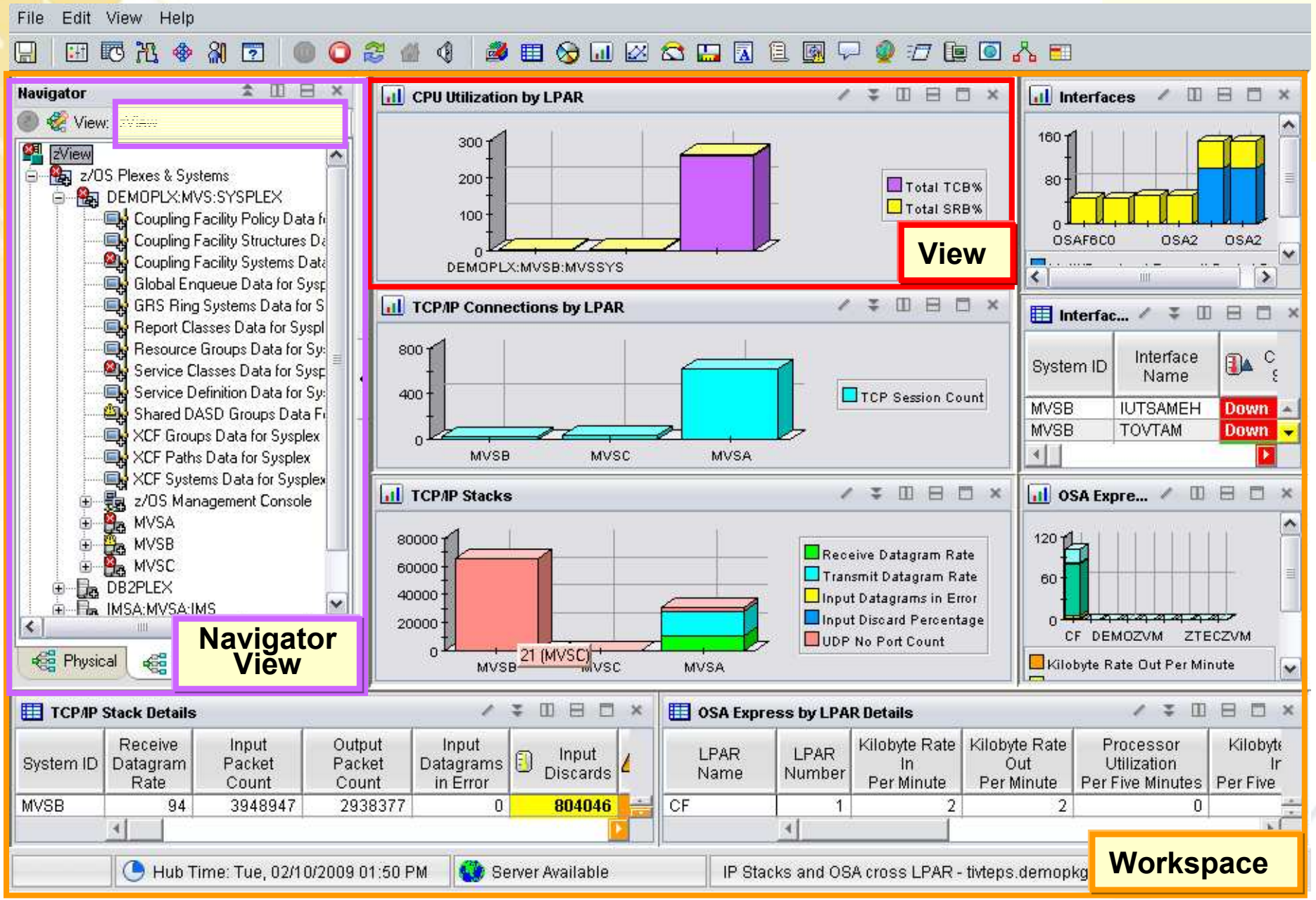
- z/OS Health check — *z/OS Management Console (included with z/OS)*
- z/OS & USS — *OMEGAMON XE on z/OS*
- NetView for z/OS — *IBM Tivoli NetView for z/OS V5.3*
- Network — *OMEGAMON XE for Mainframe Networks*
- DB2 — *OMEGAMON XE for DB2 PE/PM*
- CICS — *OMEGAMON XE for CICS*
- IMS — *OMEGAMON XE for IMS*
- Storage — *OMEGAMON XE for Storage*
- WebSphere MQ — *OMEGAMON XE for Messaging*
- WebSphere Appl Server — *ITCAM for WAS*
- z/VM & Linux on z — *OMEGAMON XE on z/VM and Linux*
- Distributed Monitoring — *IBM Tivoli Monitoring (ITM) & ITCAM*
- Automation — *SA for z/OS*
- DFSMS Audit — *Advanced Audit for DFSMShsm*
- Catalog Management — *Advanced Catalog Management for z/OS*
- SMF trend analysis Reports — *Tivoli Decision Support for z/OS*

TEP

OMEGAMON XE TEP Infrastructure



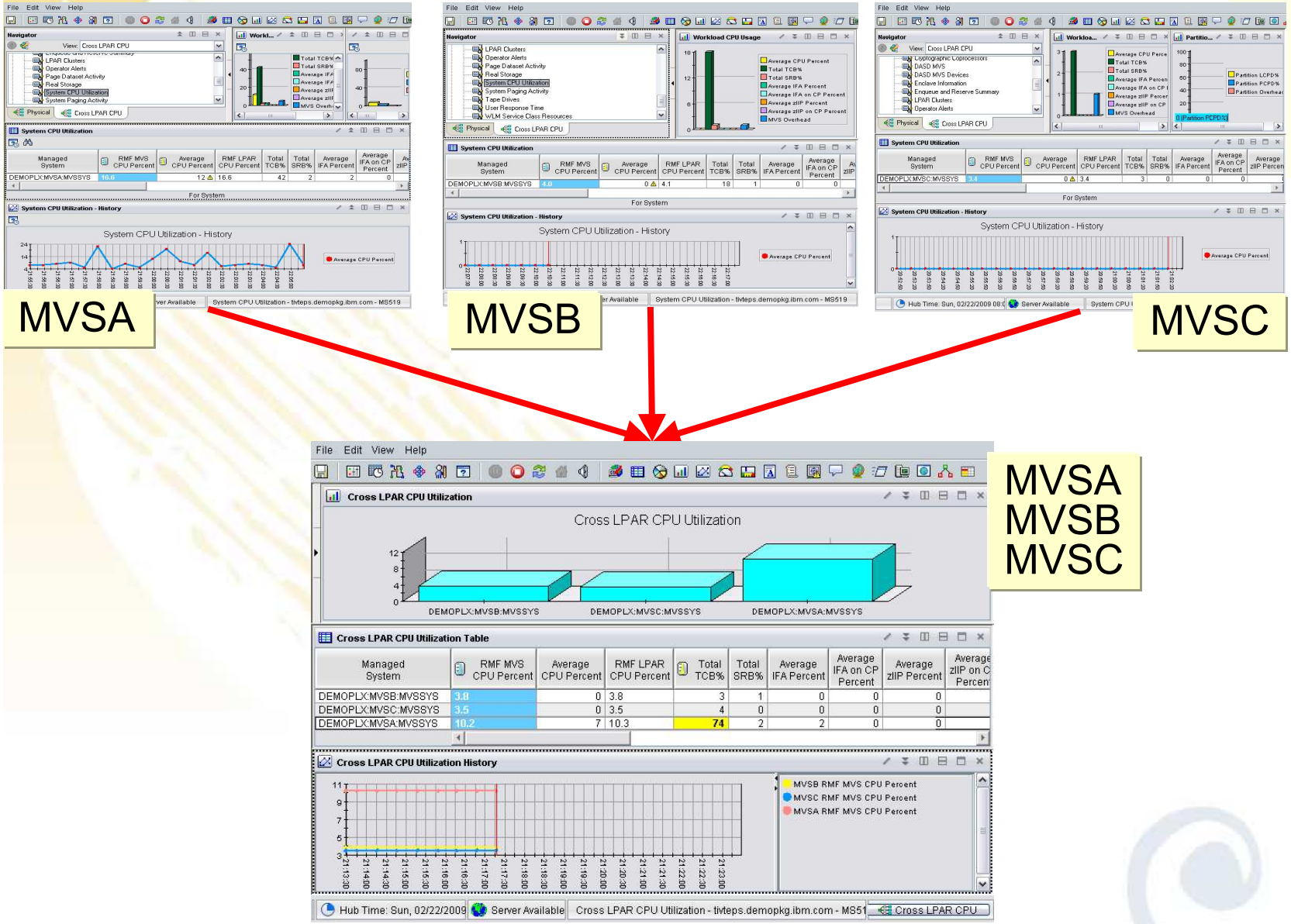
TEP - Terminology



Top 10 Tips

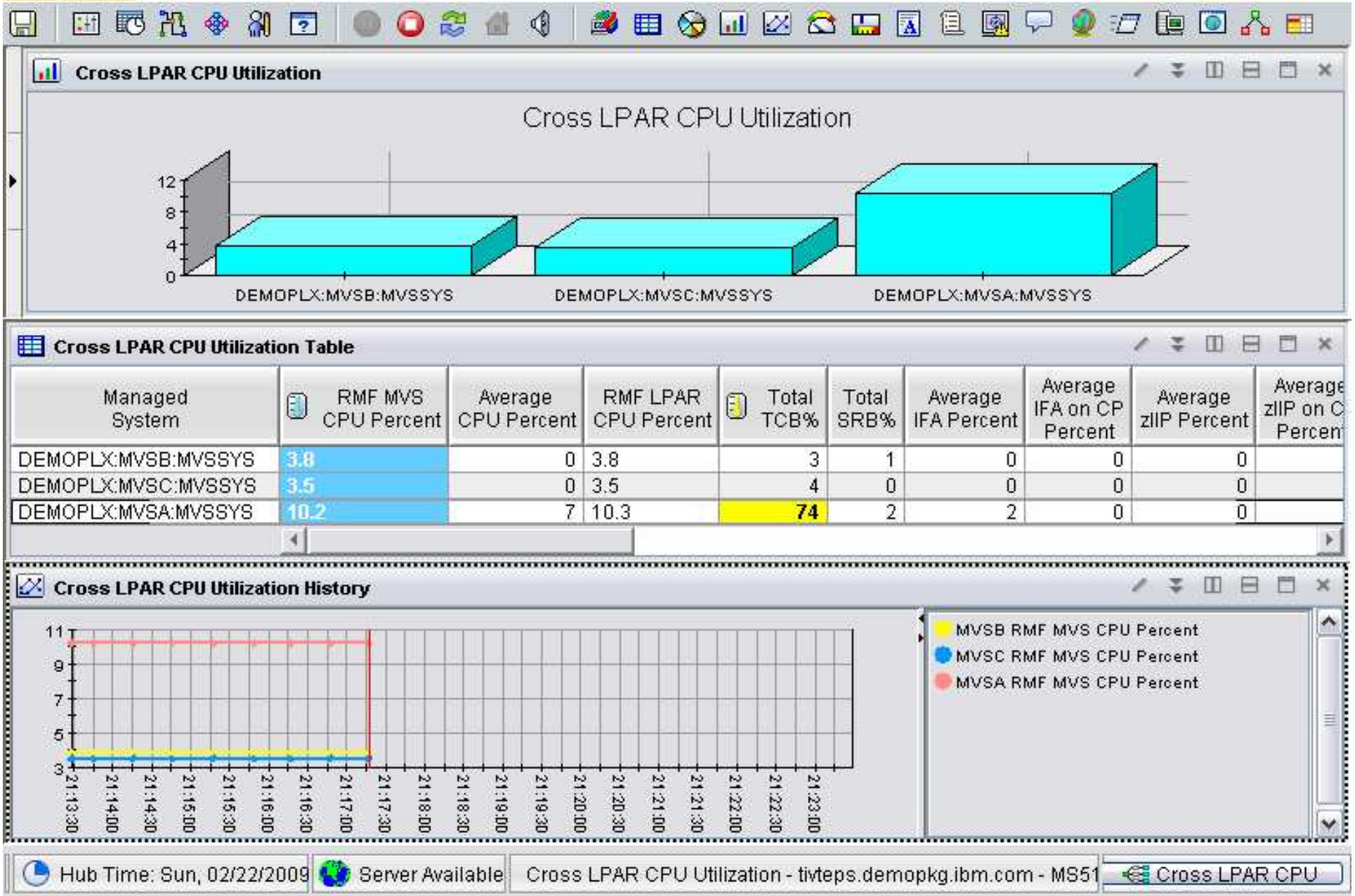
1. **Cross LPAR Views**
2. **Creating a New Navigator View**
3. Cross Application Workspaces
4. Eliminate Multiple pages
5. Reduce Query data
6. Customizing Tables and Charts
7. Situations
8. Topology
9. Built-in tutorials
10. Tuning and ITMSUPER

Cross LPAR View – How can it help you?

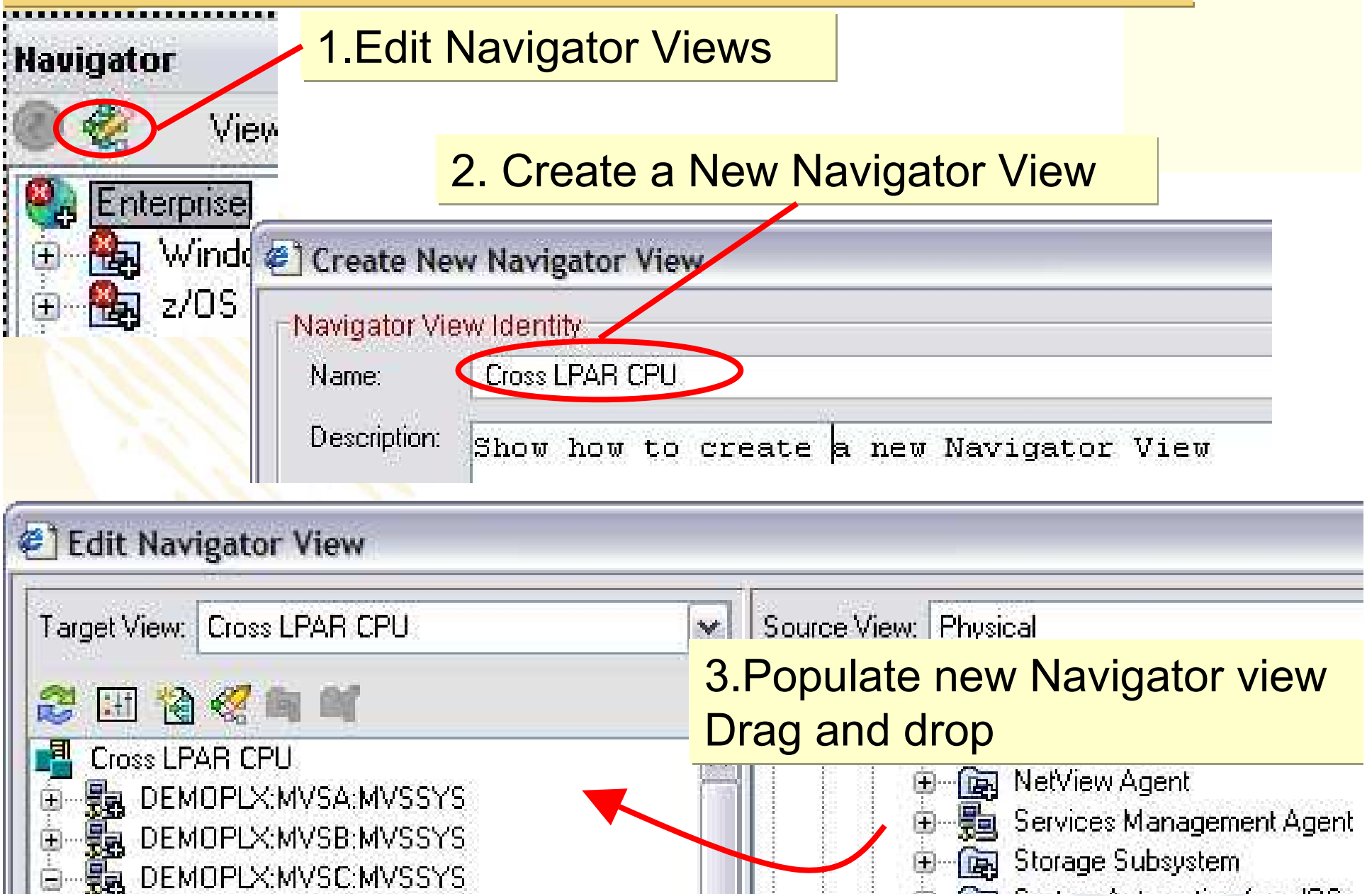


Example: OMEGAMON XE on z/OS
Default Physical drill down to see one LPAR at a time

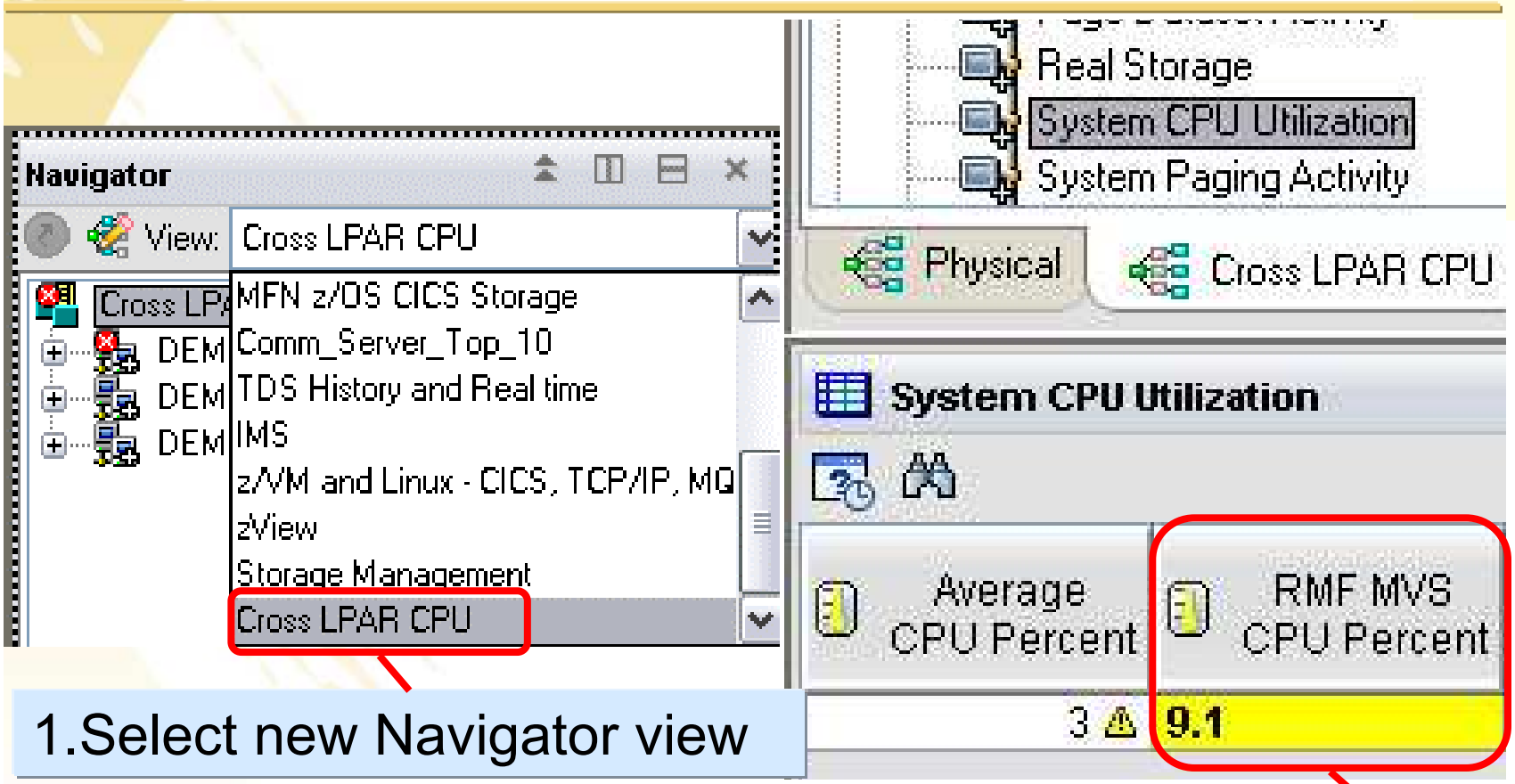
Cross LPAR View – All LPARS on one Workspace



Cross LPAR View – Start with New Navigator View

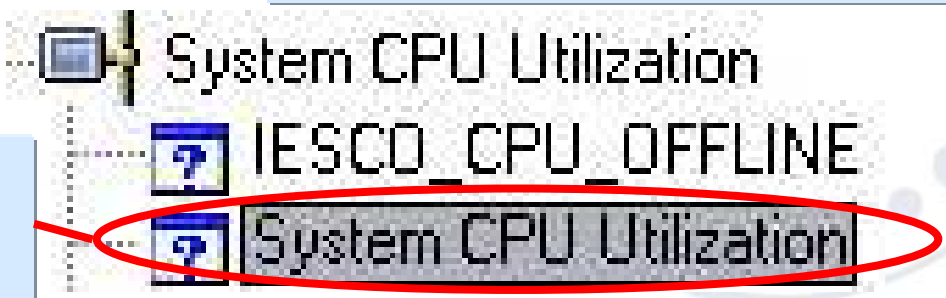


Cross LPAR View – Choose attributes to graph



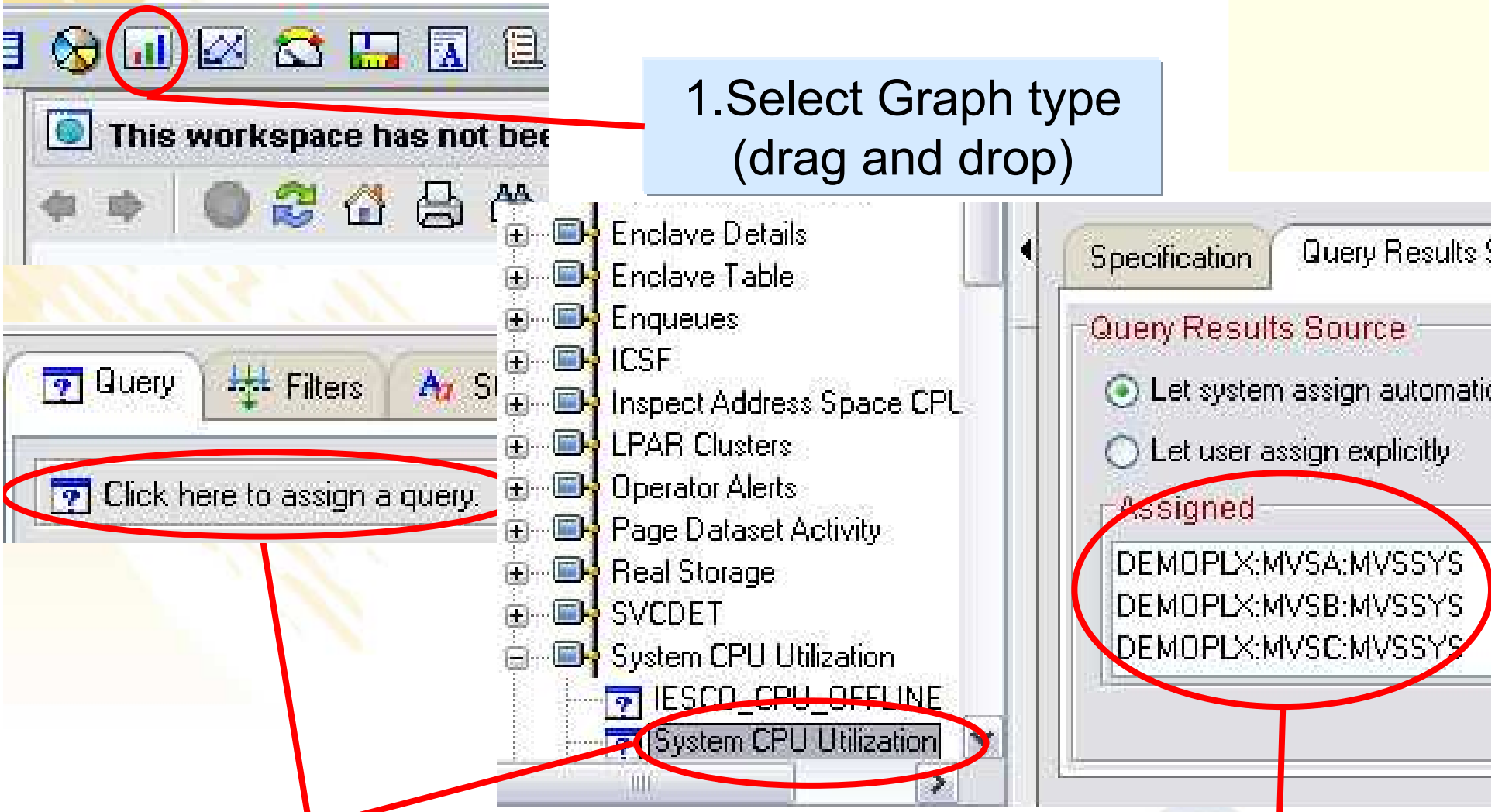
1.Select new Navigator view

2.Attribute to be graphed

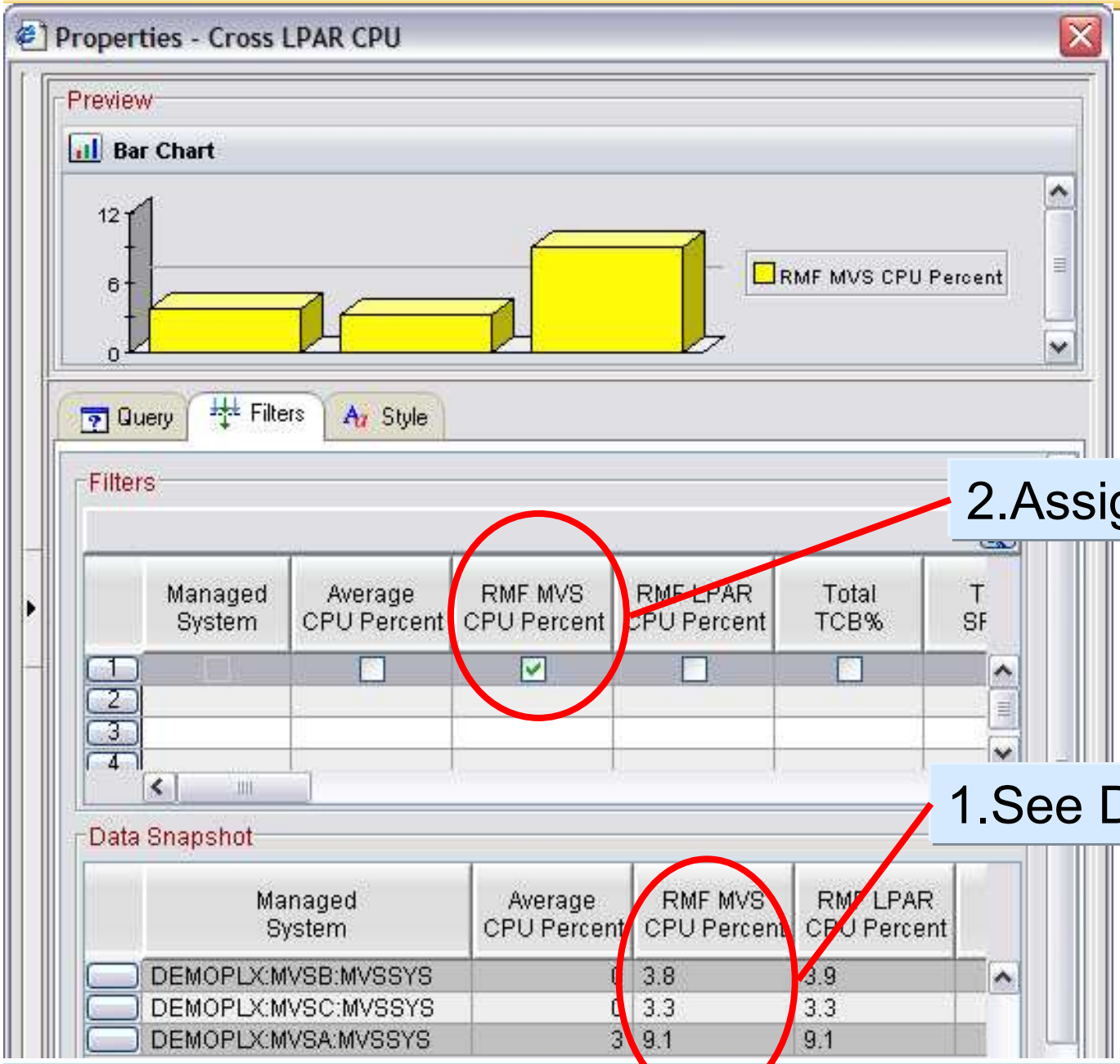


3.Remember Query of Attribute to be graphed

Cross LPAR View – Select type of graph



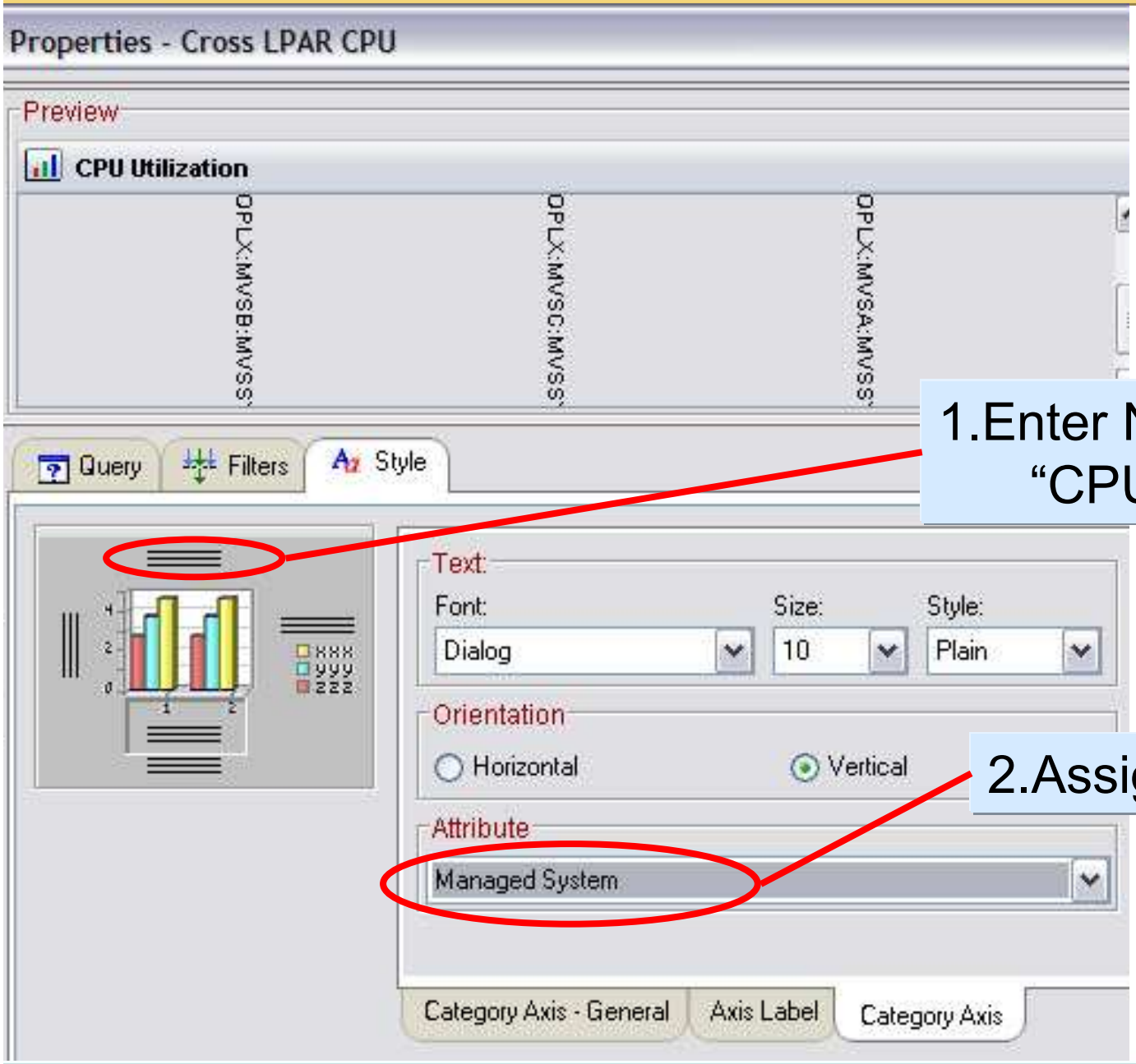
Cross LPAR View – Assign Attribute to Graph



2.Assign What to Graph

1.See Data to be Graphed

Cross LPAR View – Customize Graph



1.Enter Name of window "CPU Utilization"

2.Assign axis to display

Cross LPAR View – Add Views and Save Workspace

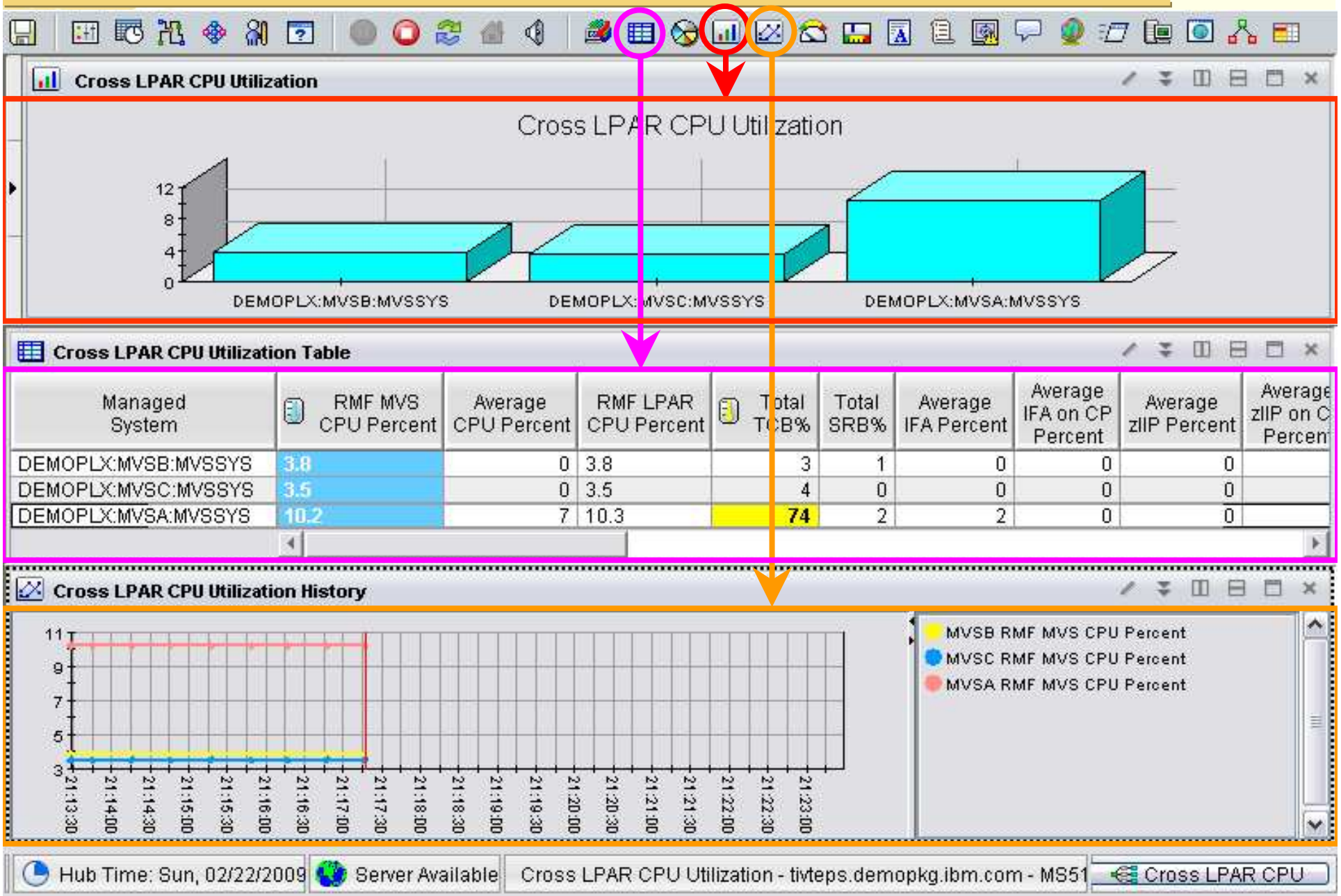
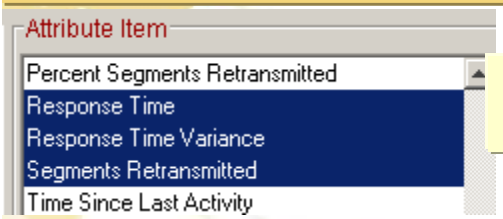
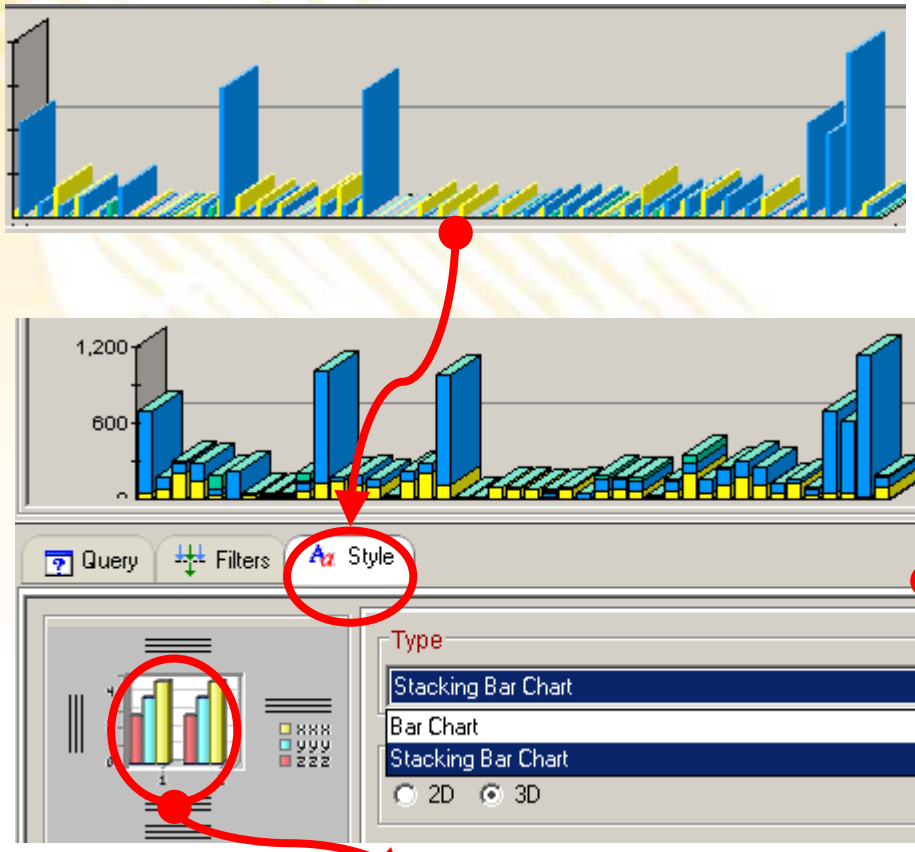


Chart Customization – Style Property Tab Details

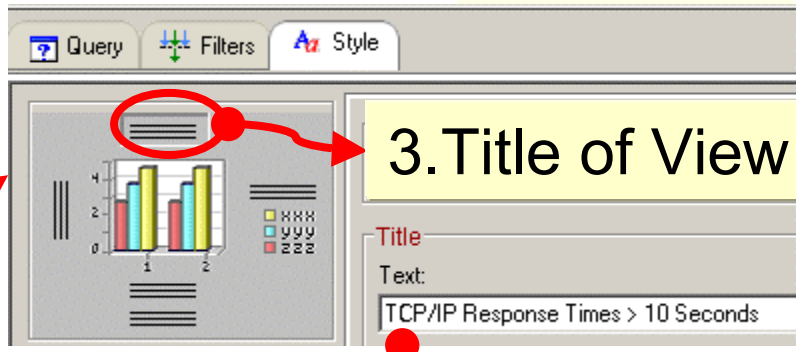


1.Select attributes

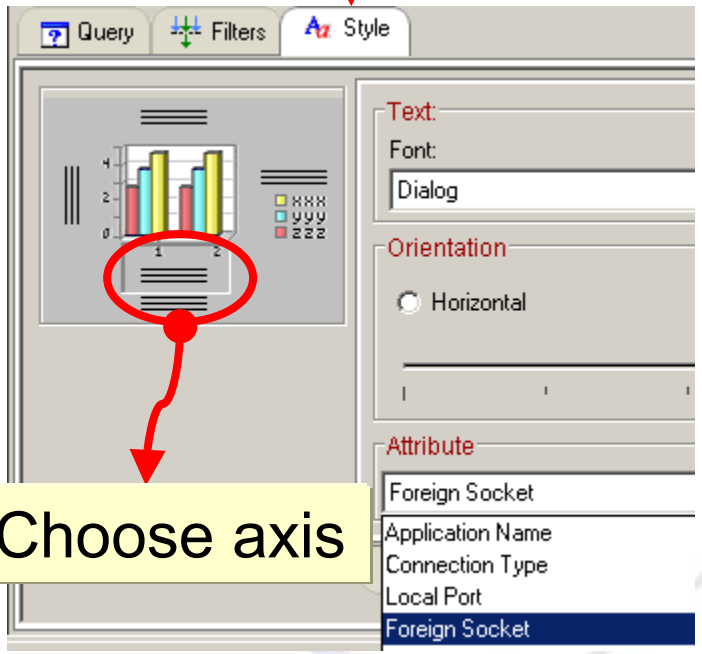
Change bar chart into a stacked bar chart



2.Stacked 3D bar chart

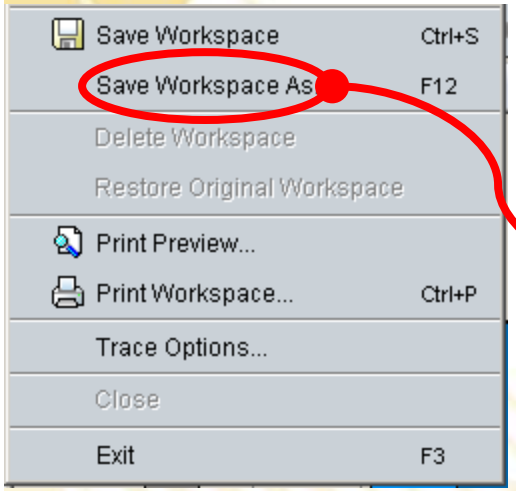


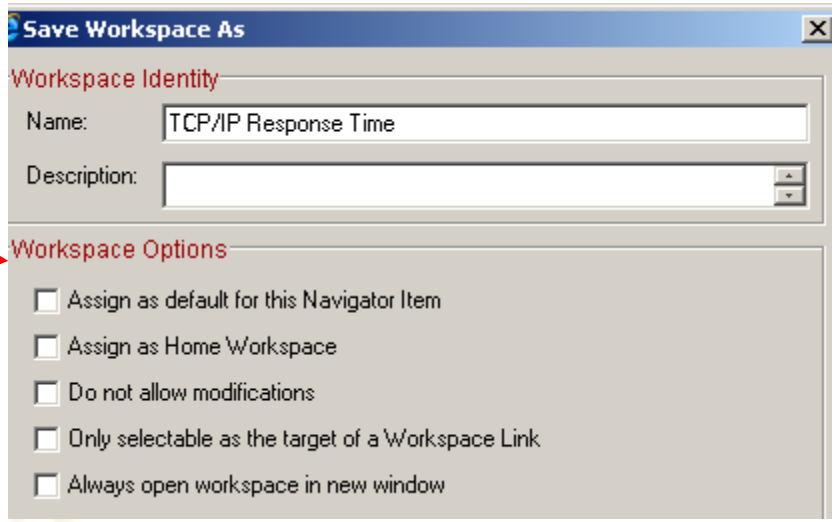
3.Title of View



4.Choose axis

Chart Customization – Save Workspace





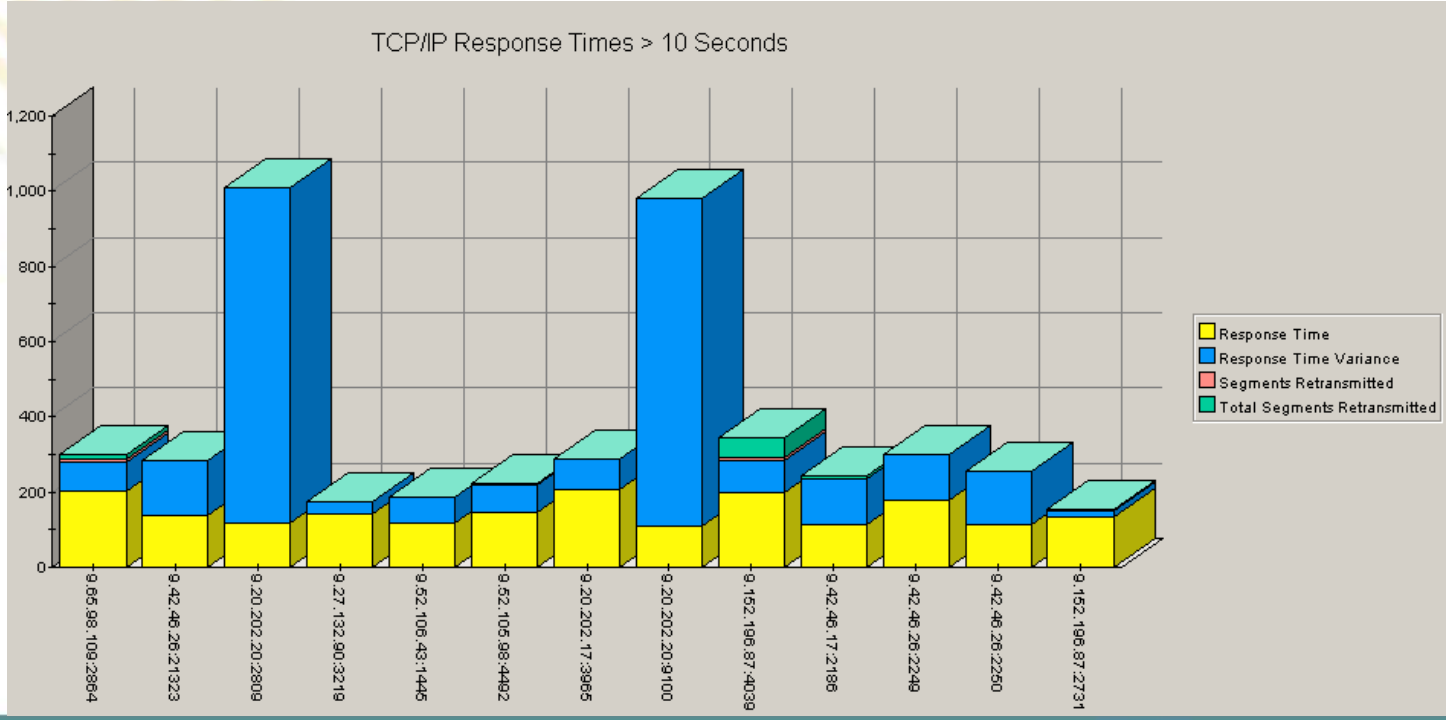
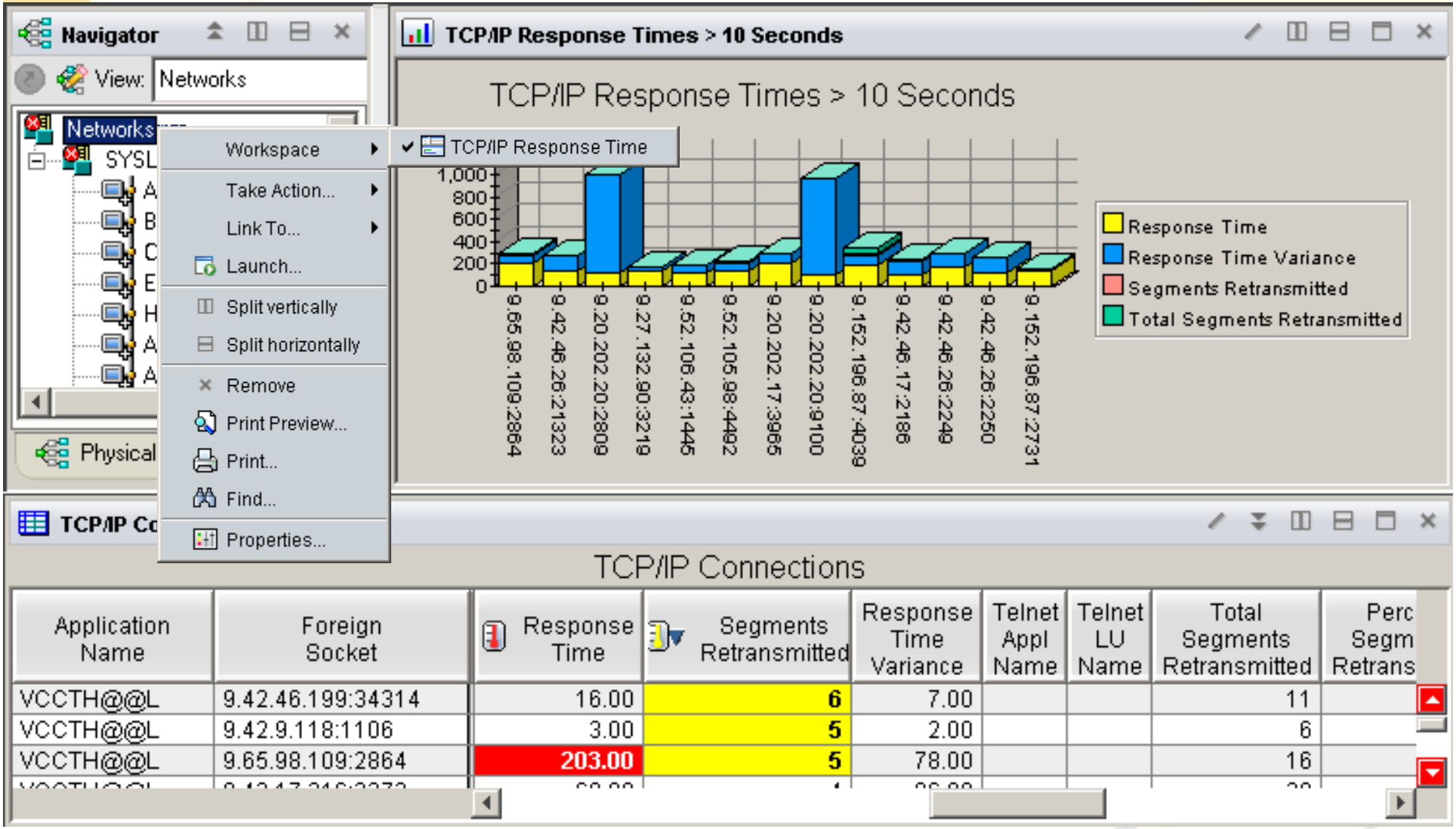
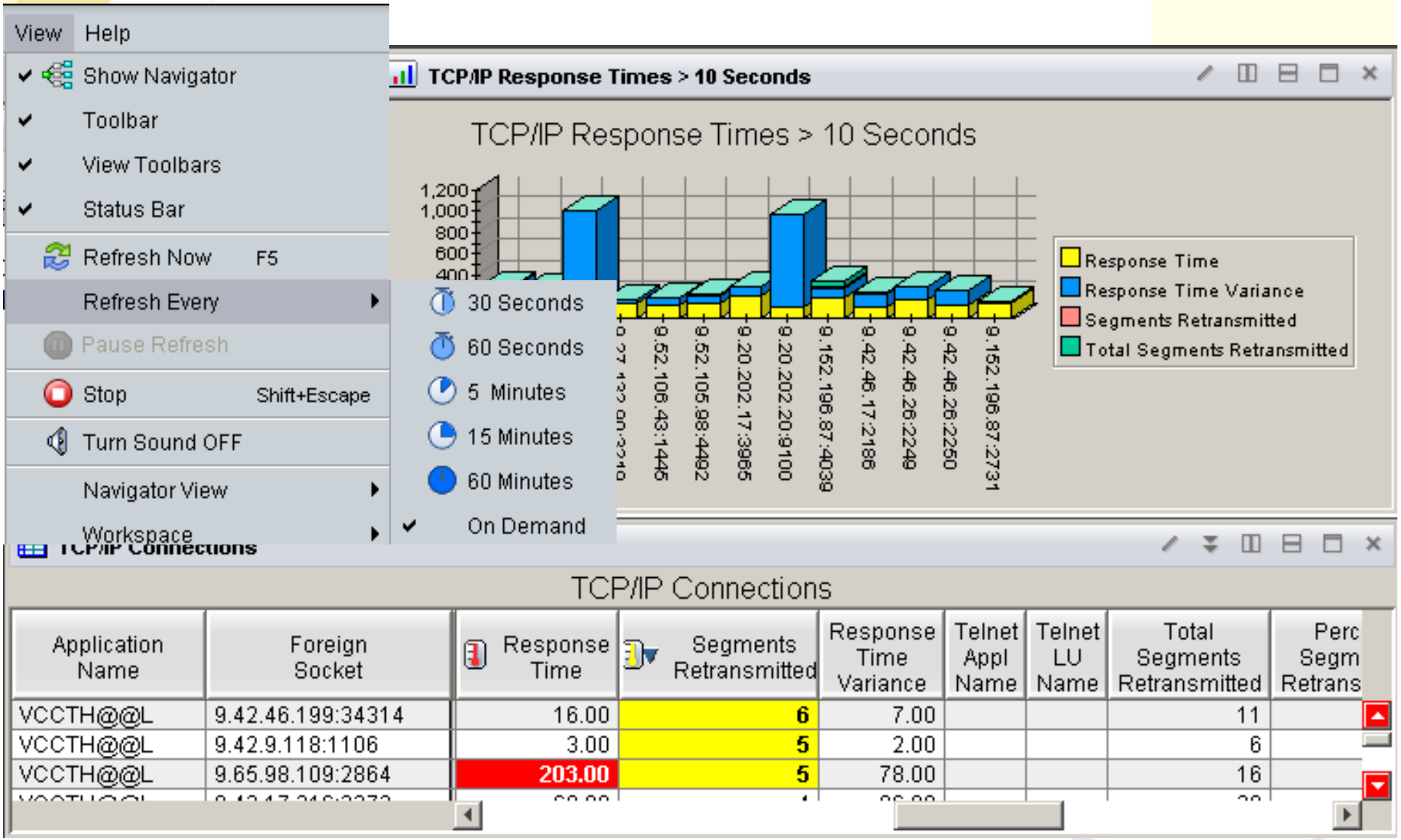


Chart Customization – Select Workspace



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 – AutoRefesh



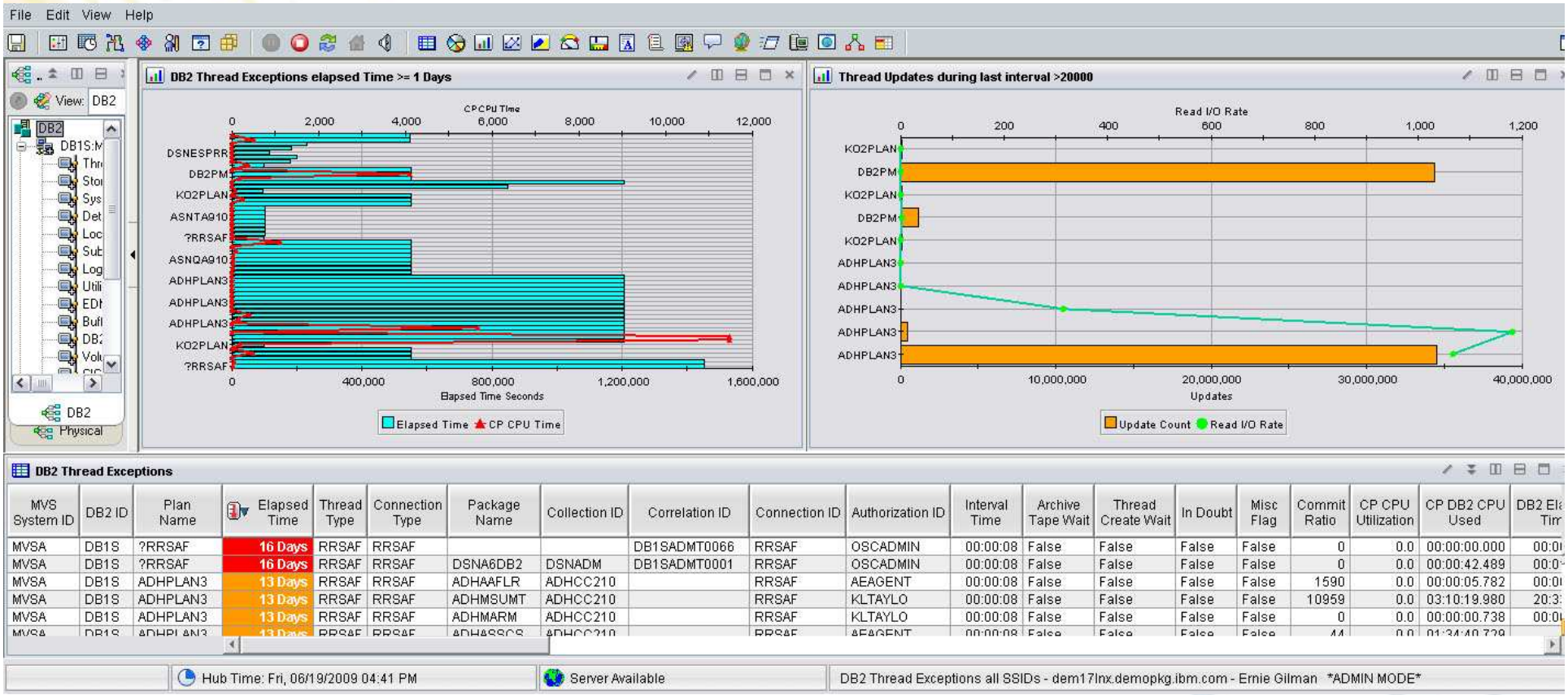
Examples of OMEGAMON cross system workpaces

- **OMEGAMONon z/OS**
  - CPU Utilizaiton 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

OMEGAMON for DB2 Thread Exceptions

Thread Exceptions across all systems

- Elapsed time
- Overlay I/O, Updates, CPU Time

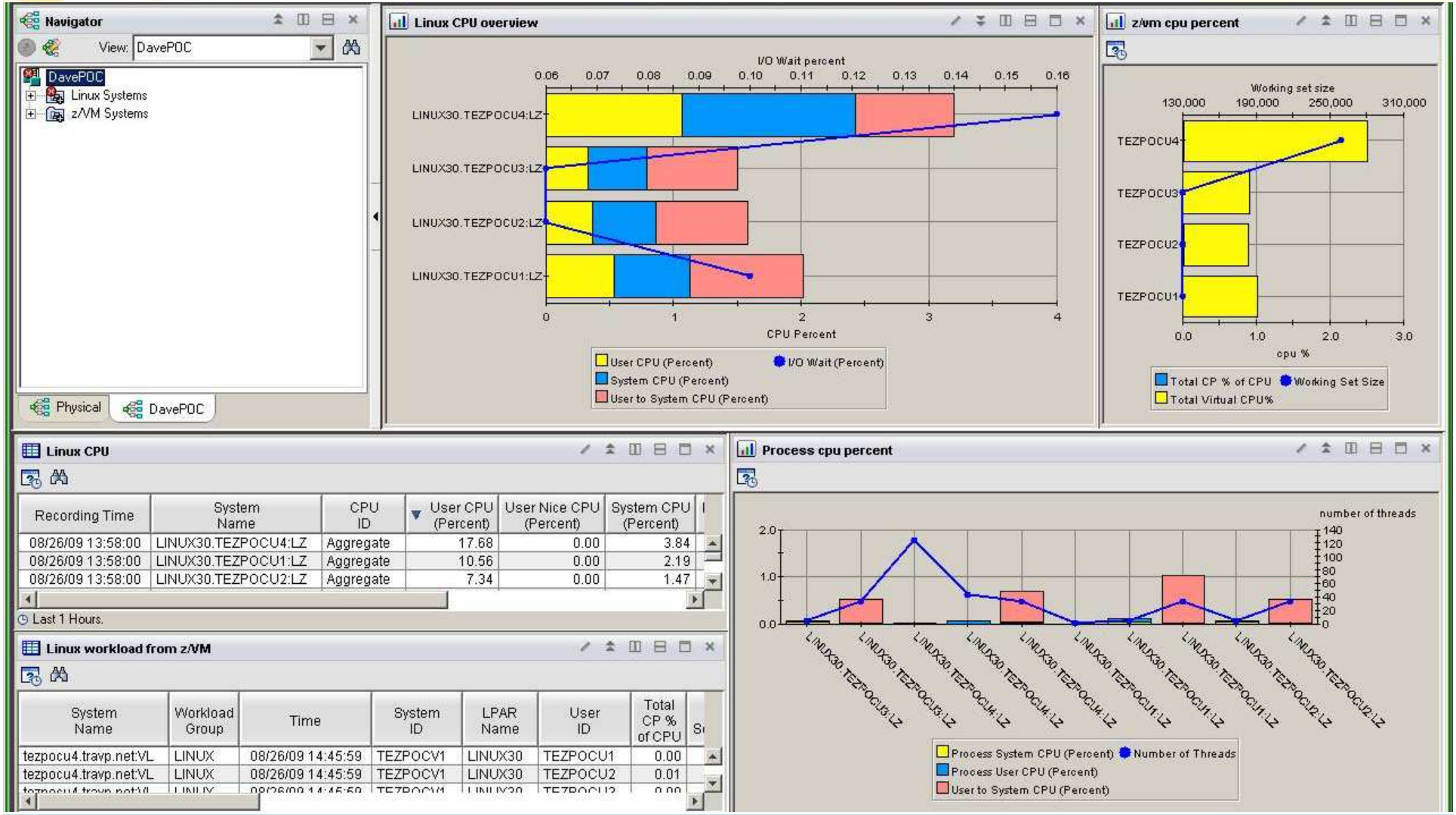


MVS System ID	DB2 ID	Plan Name	Elapsed Time	Thread Type	Connection Type	Package Name	Collection ID	Correlation ID	Connection ID	Authorization ID	Interval Time	Archive Tape Wait	Thread Create Wait	In Doubt	Misc Flag	Commit Ratio	CP CPU Utilization	CP DB2 CPU Used	DB2 El Tim
MVSA	DB1S	?RRSAF	16 Days	RRSAF	RRSAF			DB1SADMT0066	RRSAF	OSCADMIN	00:00:08	False	False	False	False	0	0.0	00:00:00.000	00:0
MVSA	DB1S	?RRSAF	16 Days	RRSAF	RRSAF	DSNA6DB2	DSNADM	DB1SADMT0001	RRSAF	OSCADMIN	00:00:08	False	False	False	False	0	0.0	00:00:42.489	00:0
MVSA	DB1S	ADHPLAN3	13 Days	RRSAF	RRSAF	ADHAAFLR	ADHCC210		RRSAF	AEAGENT	00:00:08	False	False	False	False	1590	0.0	00:00:05.782	00:0
MVSA	DB1S	ADHPLAN3	13 Days	RRSAF	RRSAF	ADHMSUMT	ADHCC210		RRSAF	KLTAYLO	00:00:08	False	False	False	False	10959	0.0	03:10:19.980	20:3
MVSA	DB1S	ADHPLAN3	13 Days	RRSAF	RRSAF	ADHMARM	ADHCC210		RRSAF	KLTAYLO	00:00:08	False	False	False	False	0	0.0	00:00:00.738	00:0

z/VM and Linux

Linux CPU across all systems

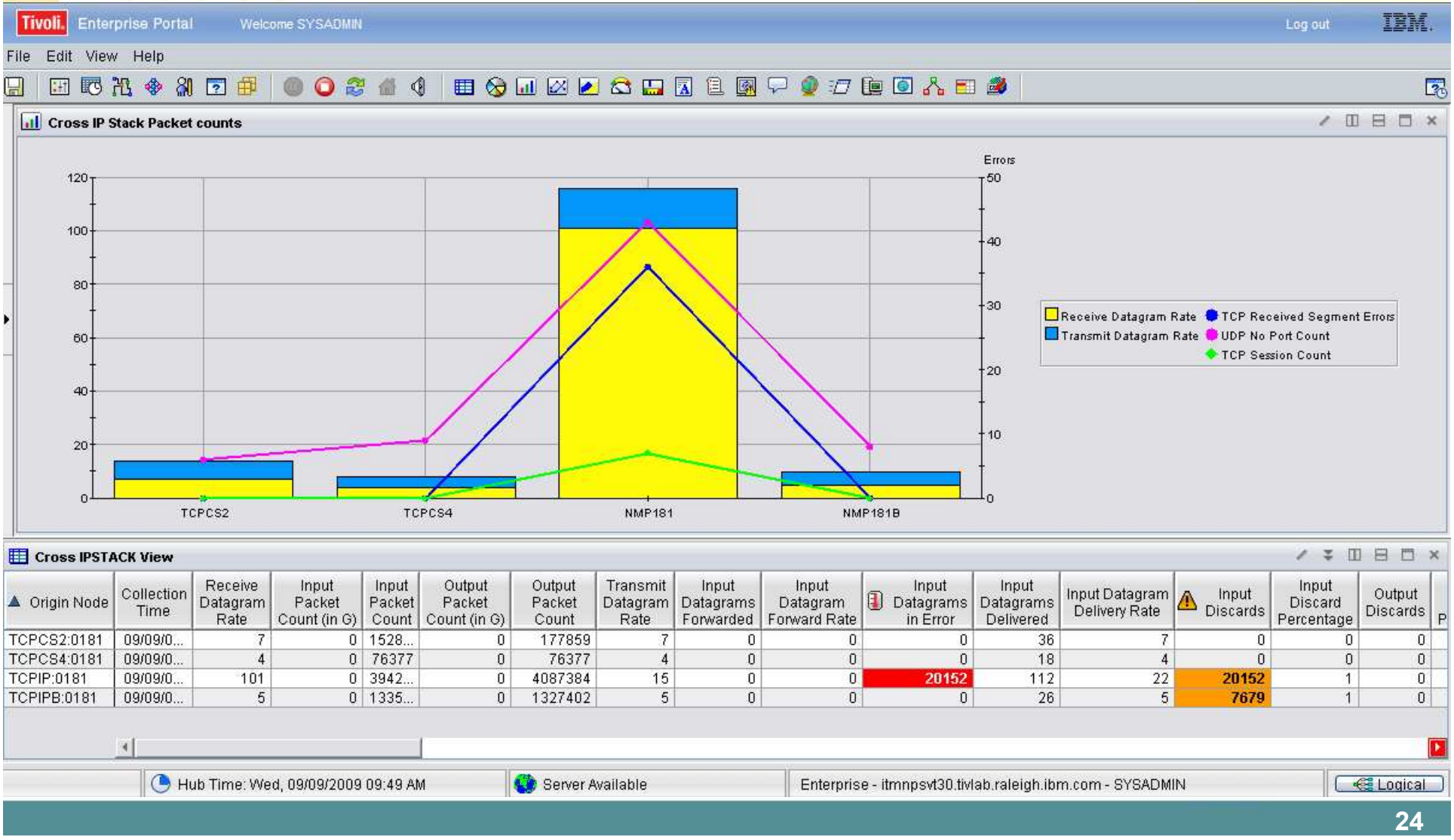
- From z/VM's view and Linux OS view
- Highest Process CPU



MFN Cross IP Stacks

For Each IP Stack:

- Traffic rates
- Connections
- Errors

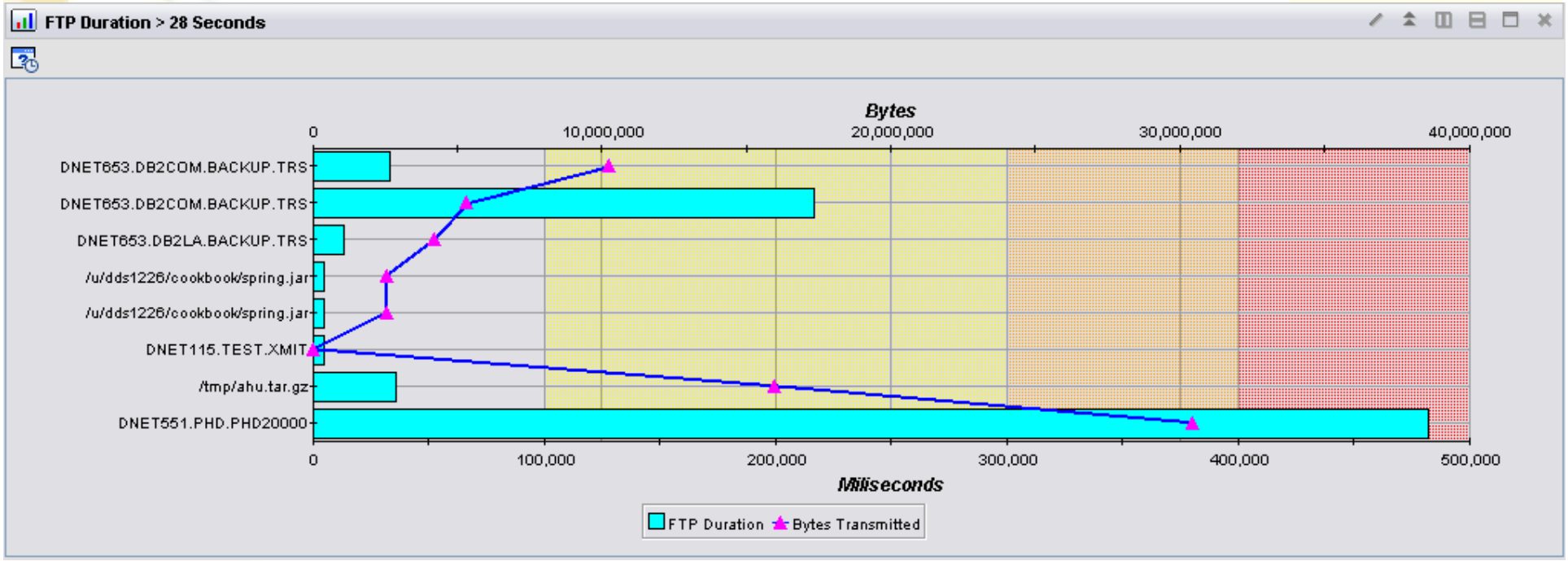


Origin Node	Collection Time	Receive Datagram Rate	Input Packet Count (in G)	Input Packet Count	Output Packet Count (in G)	Output Packet Count	Transmit Datagram Rate	Input Datagrams Forwarded	Input Datagram Forward Rate	Input Datagrams in Error	Input Datagrams Delivered	Input Datagram Delivery Rate	Input Discards	Input Discard Percentage	Output Discards	P
TCPCS2:0181	09/09/0...	7	0	1528...	0	177859	7	0	0	0	36	7	0	0	0	
TCPCS4:0181	09/09/0...	4	0	76377	0	76377	4	0	0	0	18	4	0	0	0	
TCPIP:0181	09/09/0...	101	0	3942...	0	4087384	15	0	0	20152	112	22	20152	1	0	
TCPIPB:0181	09/09/0...	5	0	1335...	0	1327402	5	0	0	0	26	5	7679	1	0	

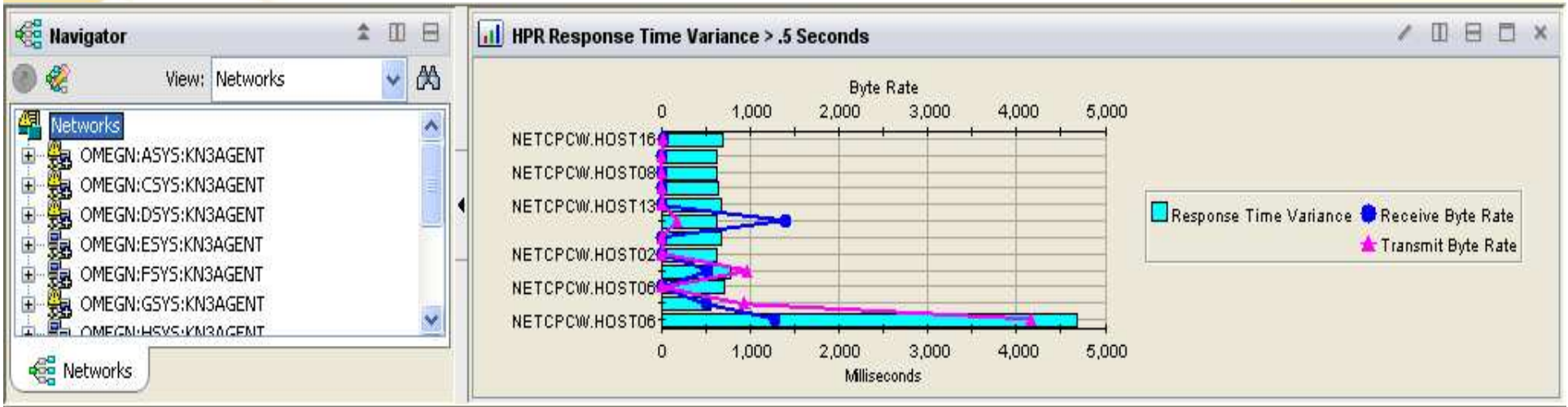
MFN FTPs

FTPs across all LPARs

- Duration and bytes transmitted



MFN EE and HPR



HPR Cross System Details

System ID	Local RTP PU Name	Remote CP Name	ARB Mode	Sessions	Response Time Variance	Path Switches	Class of Service Name	Activation Time	SNA Links Count	Current ARB Threshold	Minimum ARB Threshold	Maximum ARB Threshold
DSYS	CNR000B7	NETCPCW.HOST09	Yellow	3	13	0	#CON...	05/31/09 05:28:11	3	37000	17000	3700(
HSYS	CNR001C4	NETCPCW.HOST06	Yellow	2	4	0	#CON...	06/04/09 07:30:53	2	37000	17000	3700(
CSYS	CNR00181	NETCPCW.HOST02	Yellow	4	4	0	#INTER	06/04/09 11:40:42	3	37000	17000	3700(
DSYS	CNR00157	NETCPCW.HOST25	Yellow	8	5	0	#CON...	05/31/09 23:24:02	2	26760	17000	3700(
CSYS	CNR00178	NETCPCW.HOST02	Red	3	4	0	#INTER	06/04/09 10:49:28	4	37000	17000	3700(
DSYS	CNR000B3	NETCPCW.HOST18	Red	7	7	0	#CON...	05/31/09 05:28:04	2	37000	17000	3700(
DSYS	CNR00085	NETCPCW.HOST35	Red	5	4	0	#CON...	05/31/09 05:26:55	3	37000	17000	3700(
HSYS	CNR00096	NETCPCW.WDC3011A	Green	979	6	0	#CON...	05/31/09 05:18:27	1	37000	17000	3700(
HSYS	CNR00095	NETCPCW.WDC5405A	Green	1058	4	0	#CON...	05/31/09 05:18:27	1	79000	35000	7900(

Top 10 Tips

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
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8. Topology
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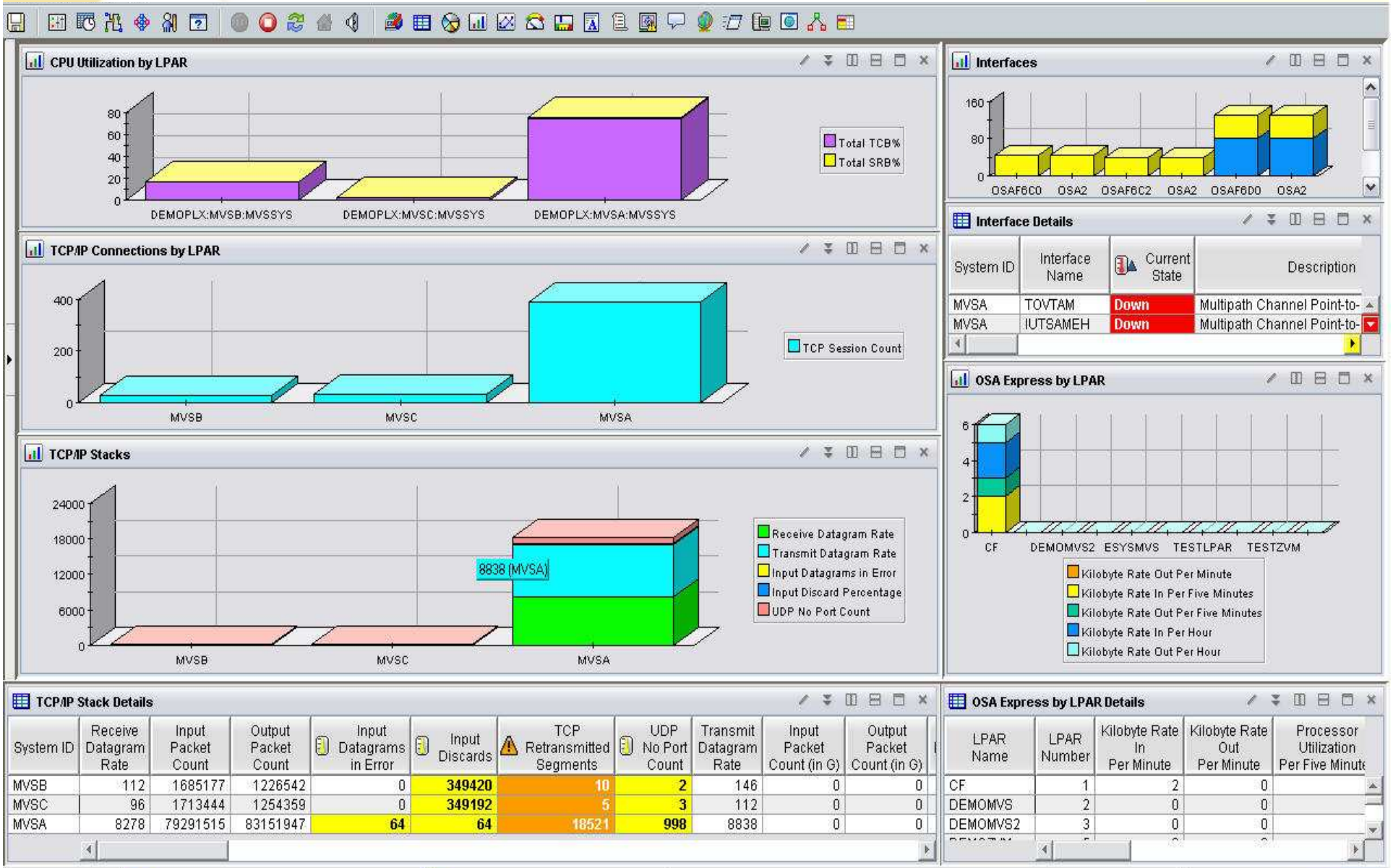
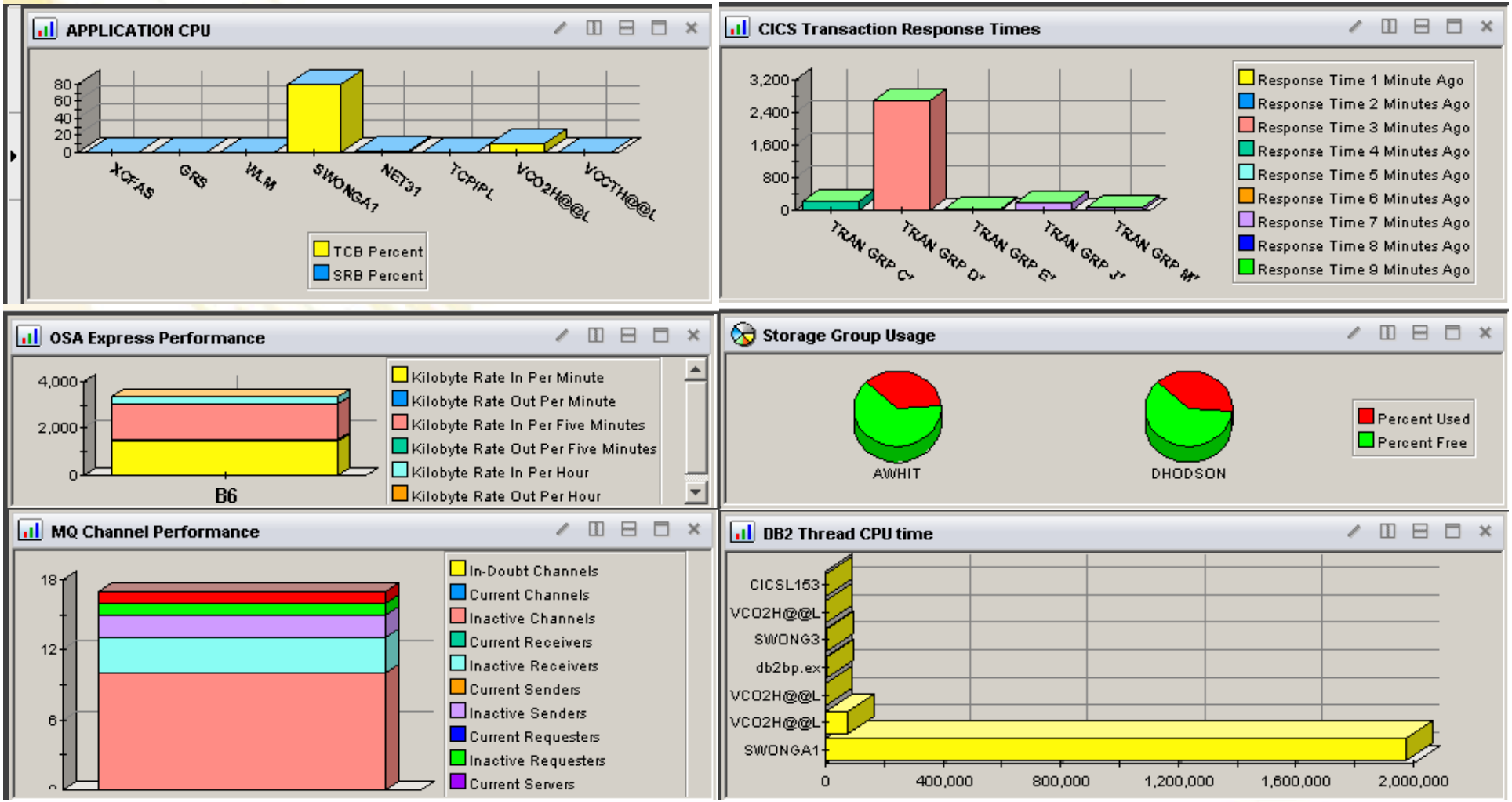
Cross IP-STACK Workspace Example



Cross Application Workspaces –

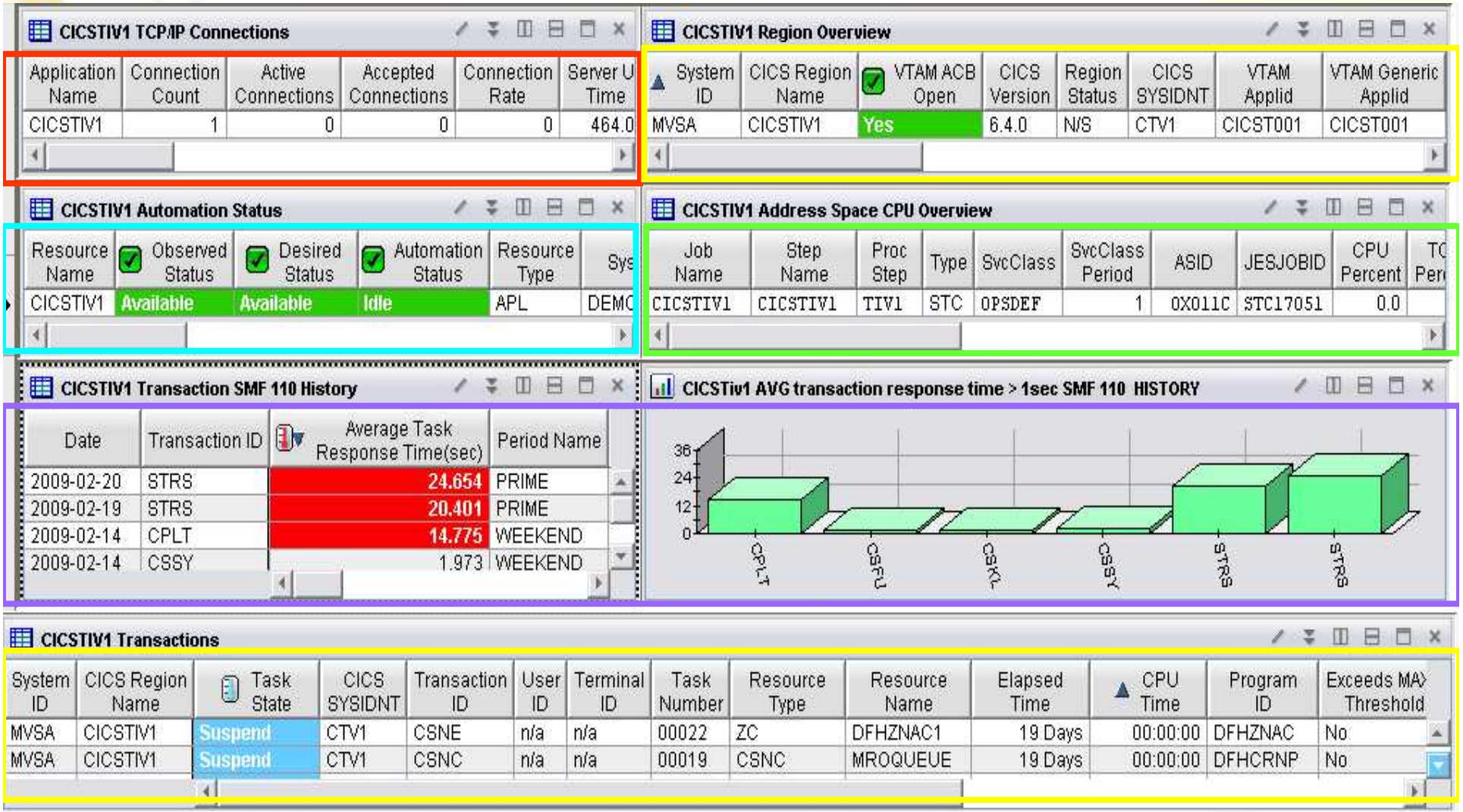
Example of workspace that ties middleware together

- **OMEGAMON XE on z/OS**
- **OMEGAMON XE for Mainframe Networks**
- **OMEGAMON XE for Messaging**
- **OMEGAMON XE for CICS z/OS**
- **OMEGAMON XE for Storage**
- **OMEGAMON XE for DB2 PE**



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)



CICSTIV1 TCP/IP Connections

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

CICSTIV1 Region Overview

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

CICSTIV1 Automation Status

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

CICSTIV1 Address Space CPU Overview

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

CICSTIV1 Transaction SMF 110 History

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

CICSTiv1 AVG transaction response time > 1sec SMF 110 HISTORY

CICSTIV1 Transactions

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 MAX 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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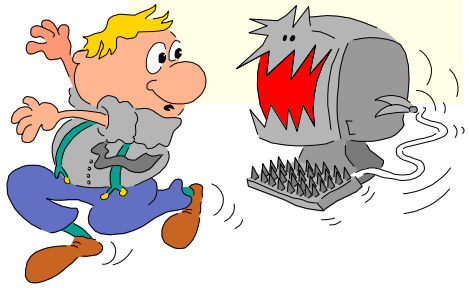


Multiple Page Views – What does it mean?

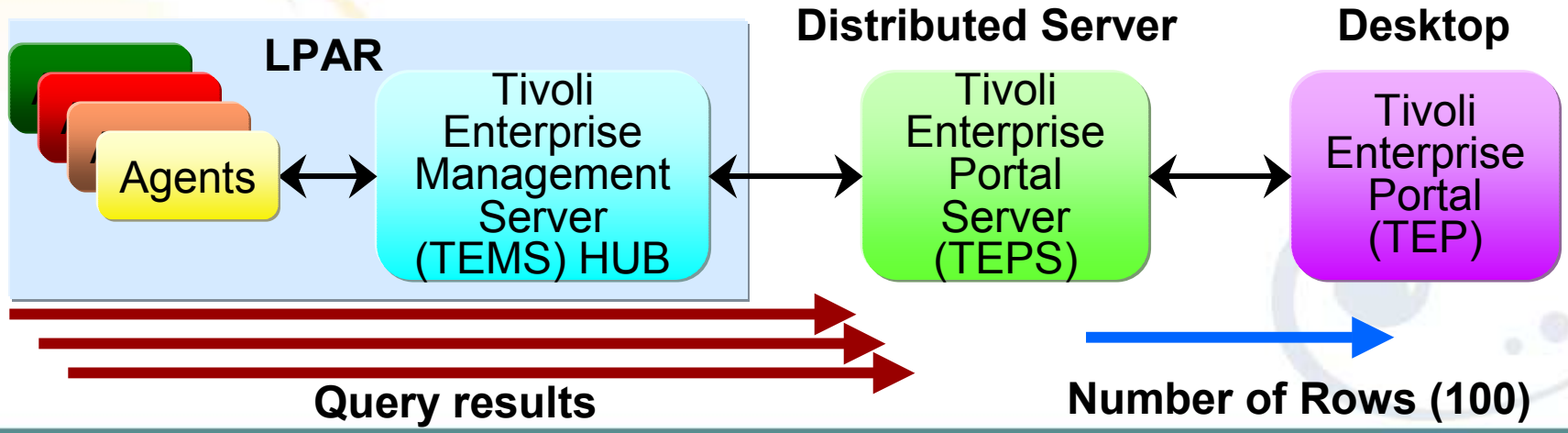
Connections Summary Table

Page: 1 of 2

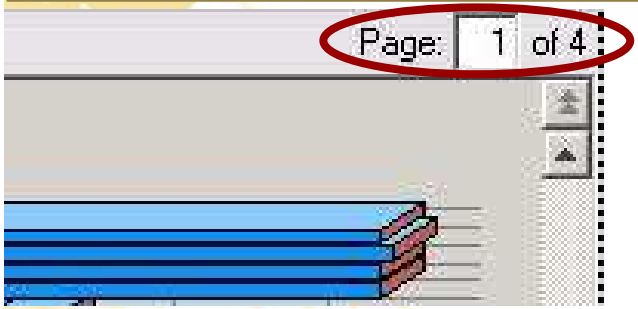
Collection Time	Application Name	Connection Type	Local Port	Foreign IP Address	Forei Por
09/21/06 11:31:51	VCMVH@@L	TCP_Connection	2249	9.42.46.26	213
09/21/06 11:31:51	VCCTH@@L	TCP_Connection	21323	9.65.98.109	281

Multiple page tables

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

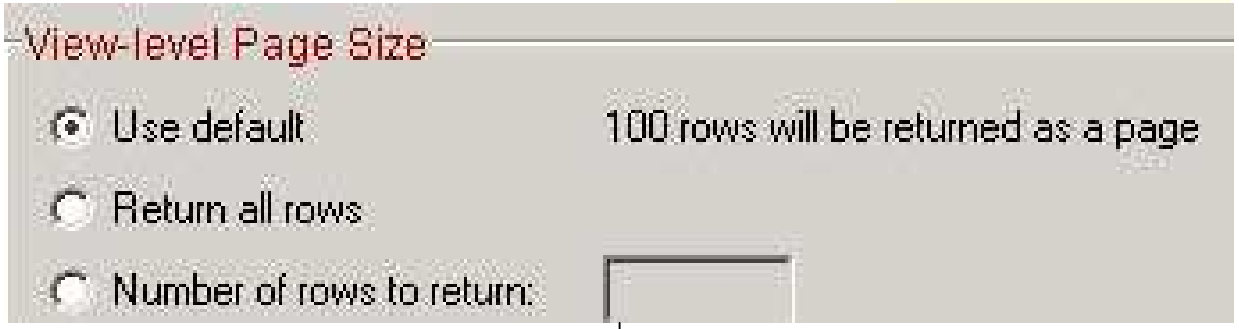


Multiple Page Views – Increase number of rows

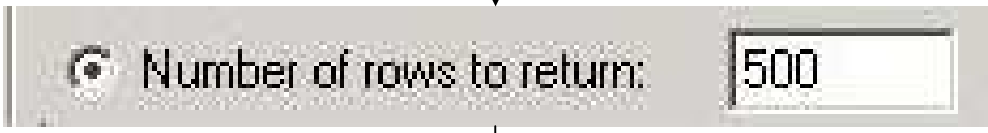


Multi-Page Chart

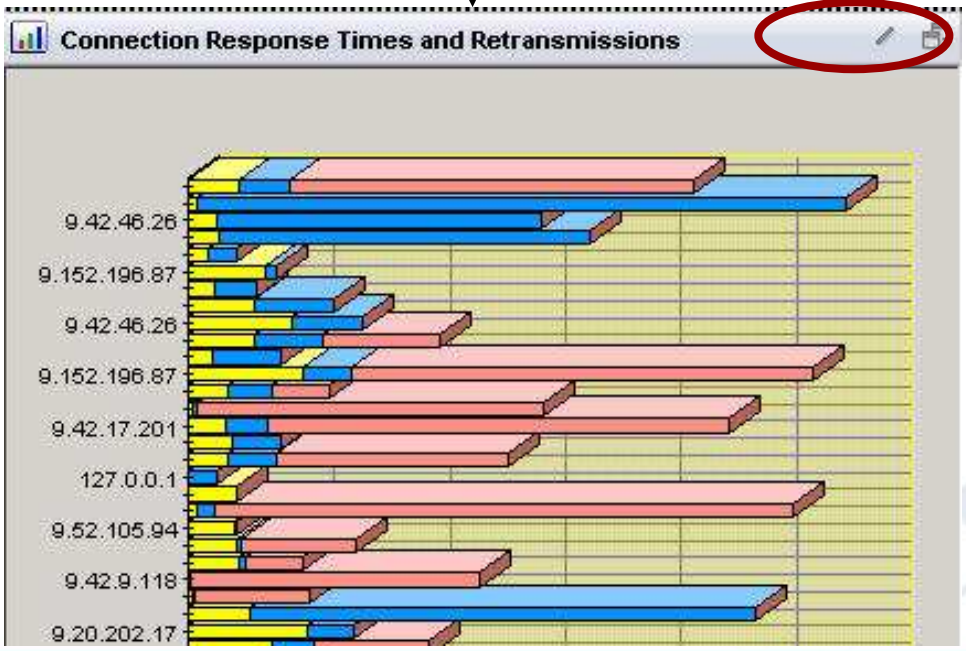
Properties



Increase Rows

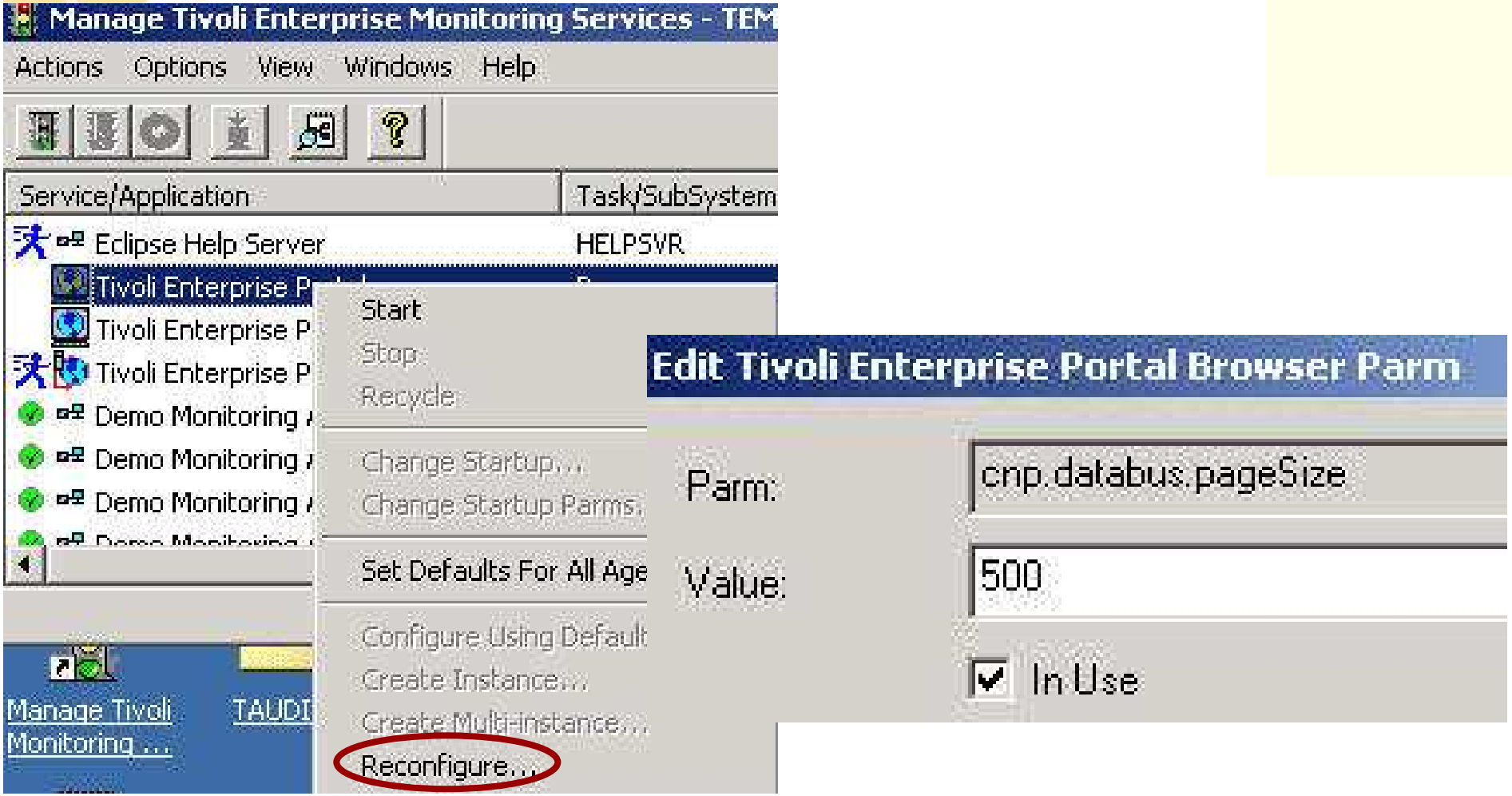


Single Page Chart



Save Workspace

Multiple Page Views – Changing Default Rows



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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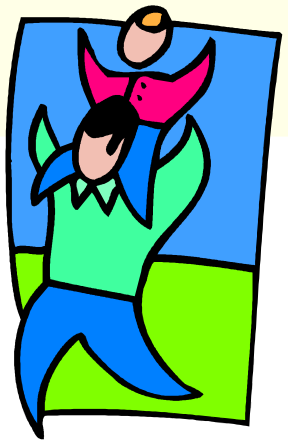
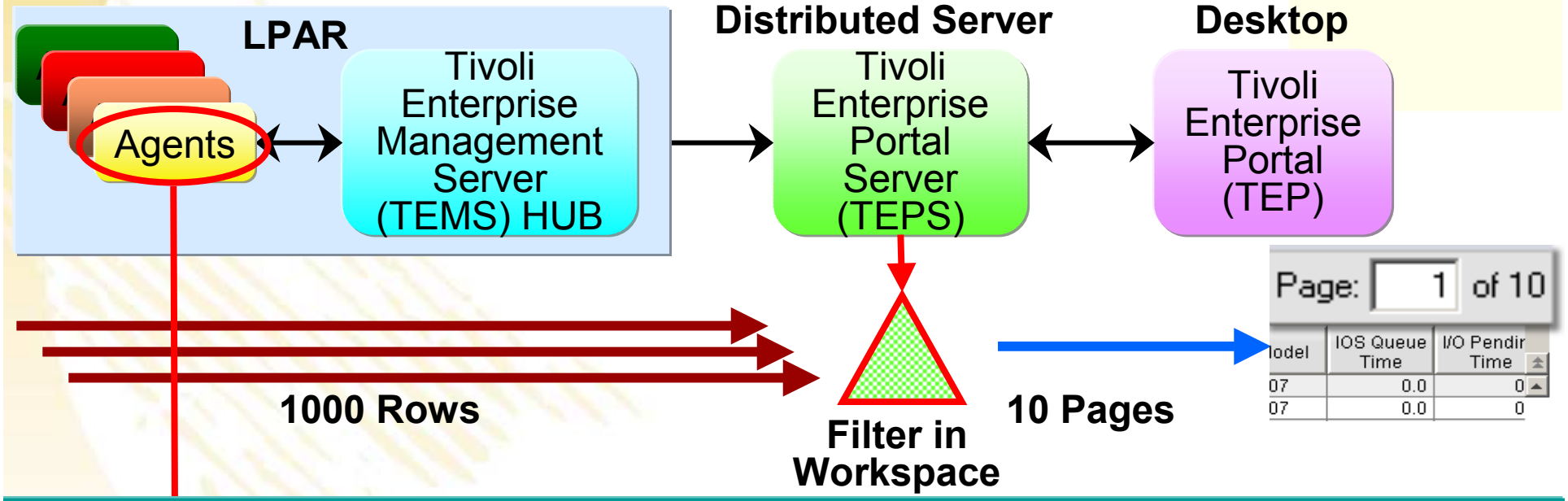
9. Built-in tutorials
10. Tuning and ITMSUPER



Limiting Queries – Limit data from agents

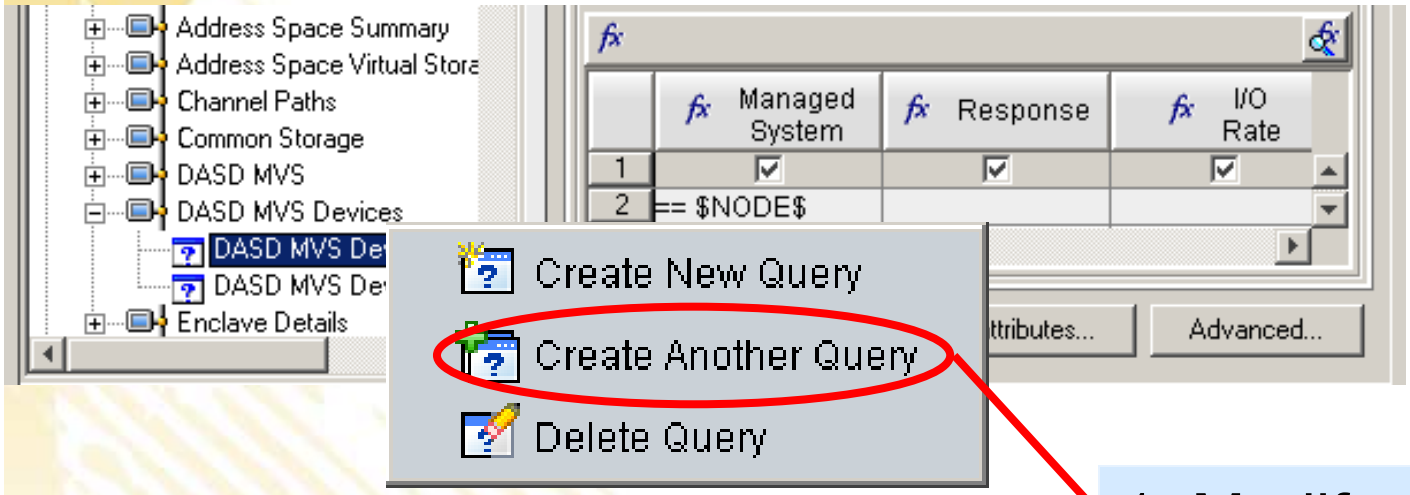
Apply Filter at TEPS in Workspace Properties



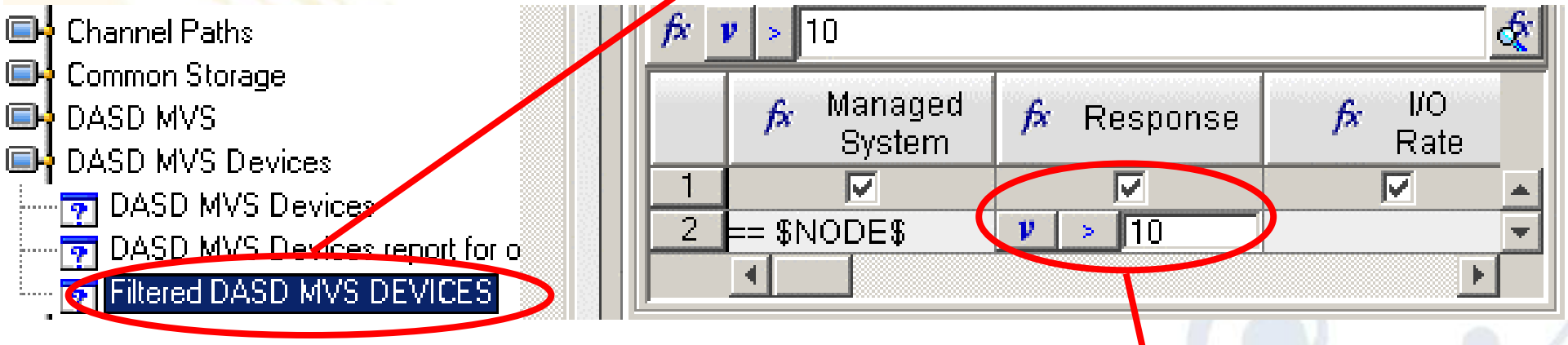
Or Apply Filter at Agent with Custom Query

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

Limiting Queries – Add Filter to Copy of Query



1. Modify Copy of Query



2. Filter (Response Time > 10ms)

Limiting Queries – Save Workspace

10 Pages 1000 Rows

DASD MVS Devices

Page: 1 of 10

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	IOS Queue Time	I/O Pendir 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	Addres
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 → **80 Rows** → TEPS → **1 Page 80 Rows** → Desktop

Filter in Query

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

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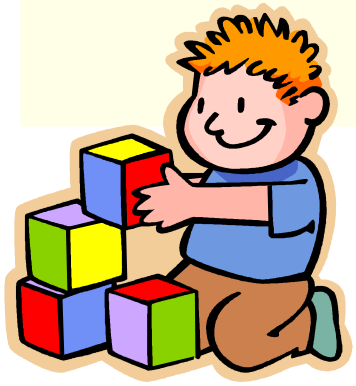
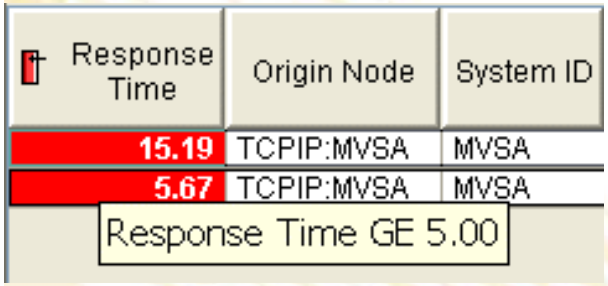


Tivoli Enterprise Portal Situations and thresholds

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



Out of the box situations to proactively notify you.

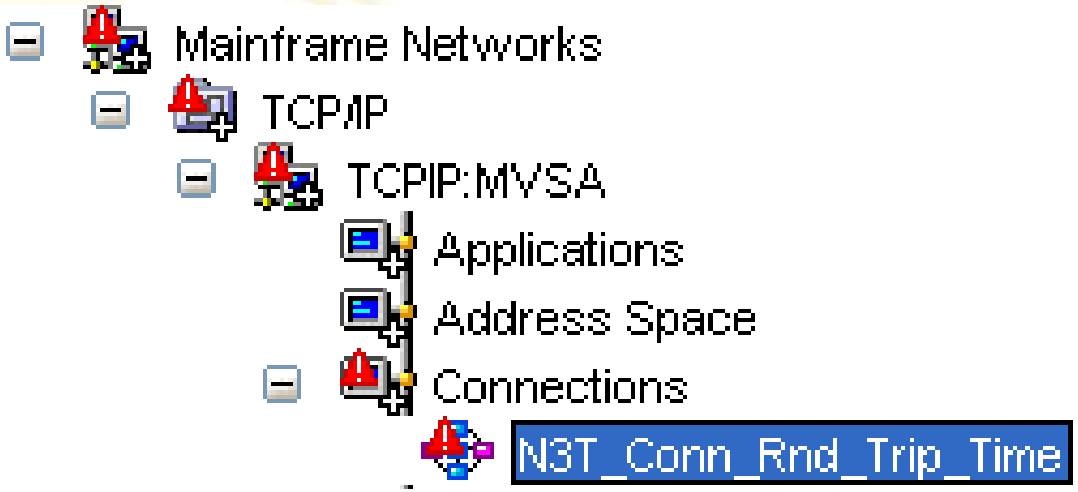


Table Customization – Thresholds

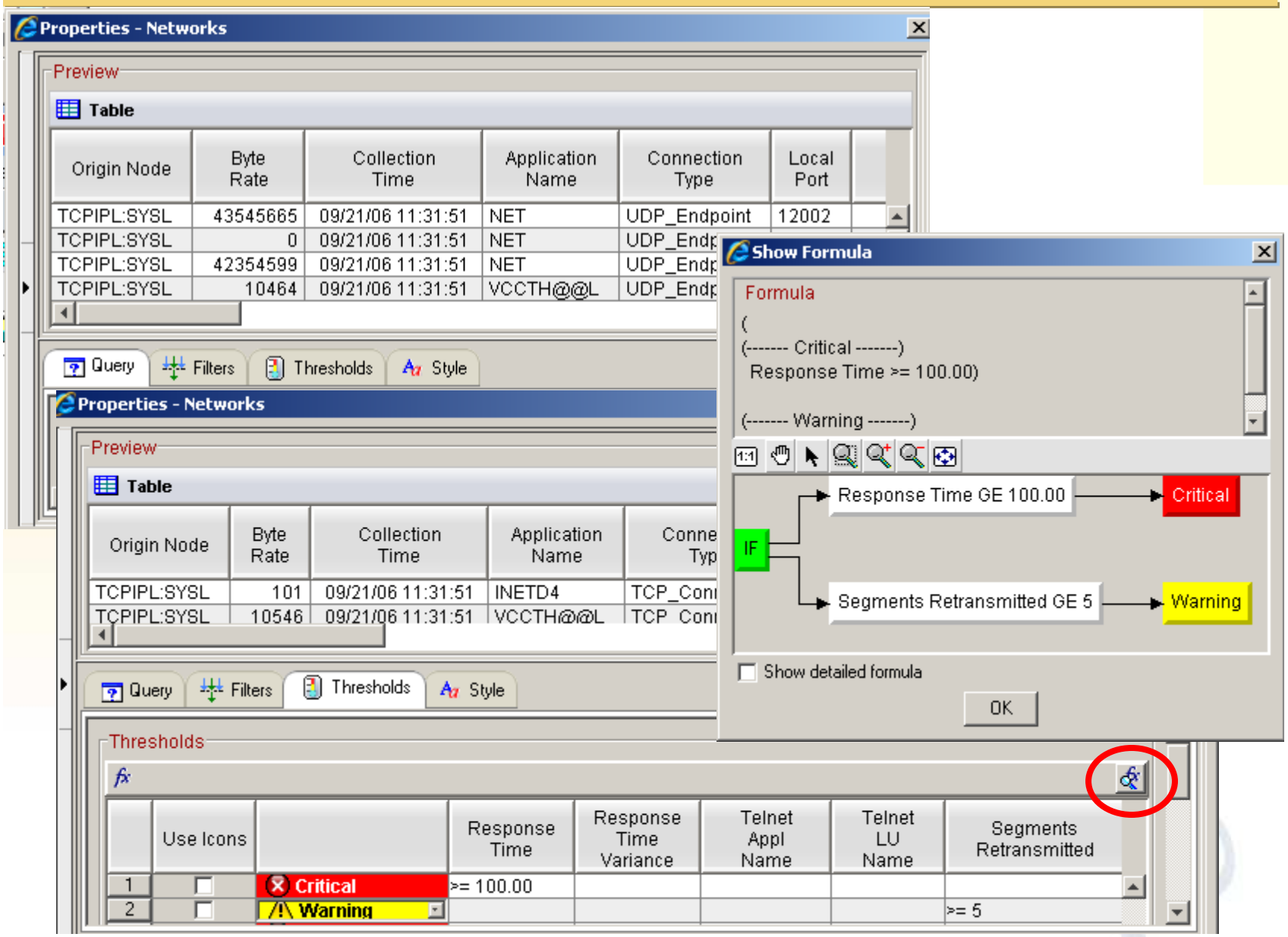
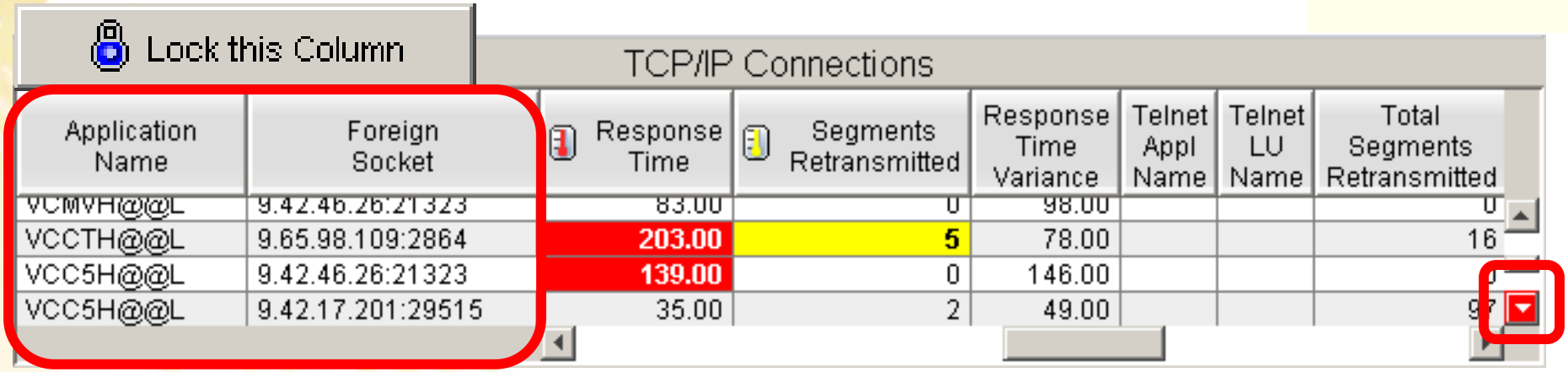
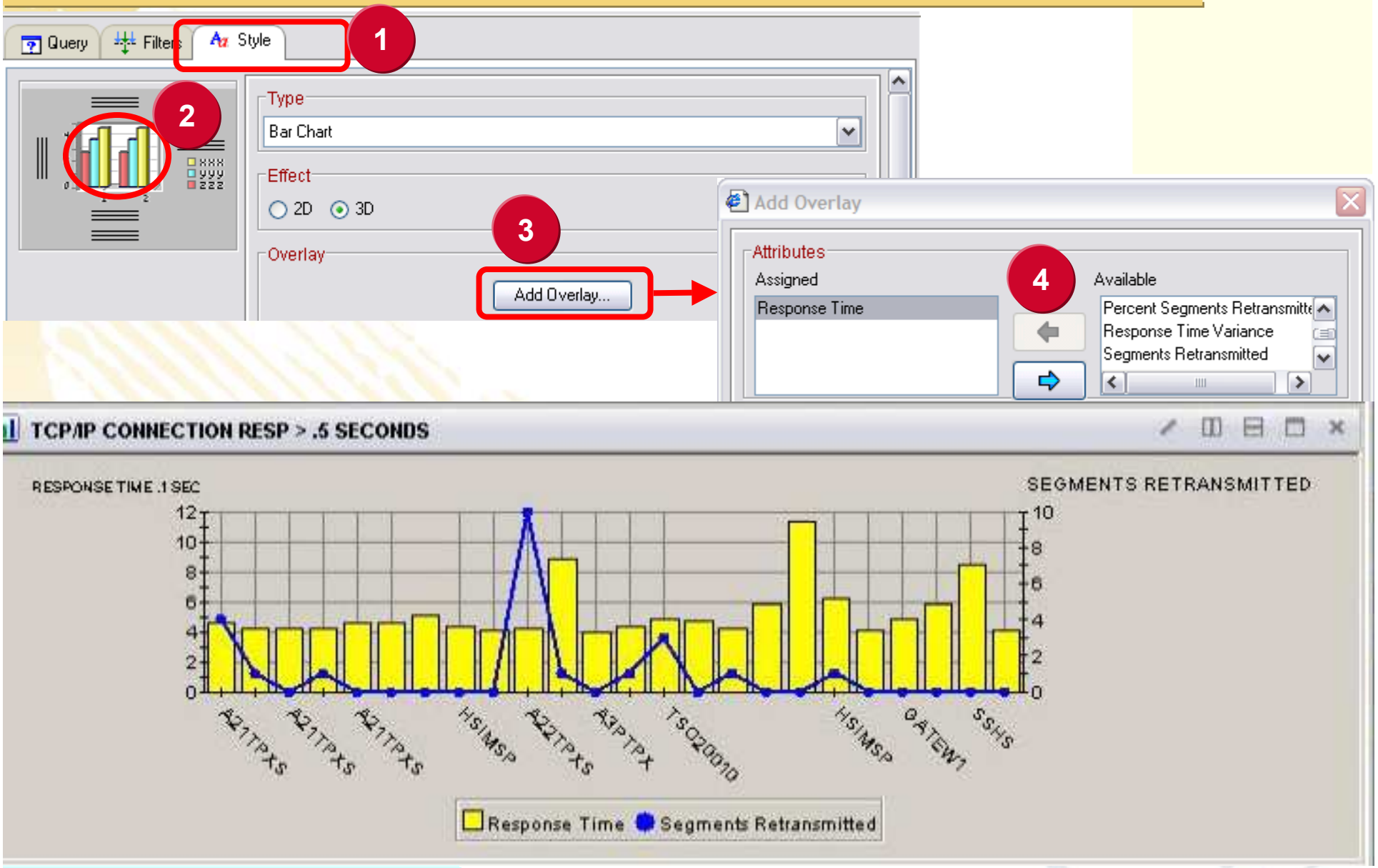


Table Customization – Add View Thresholds



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

Overlays Helps Correlate Attributes



Available with ITM 6.2.1

Top 10 Tips

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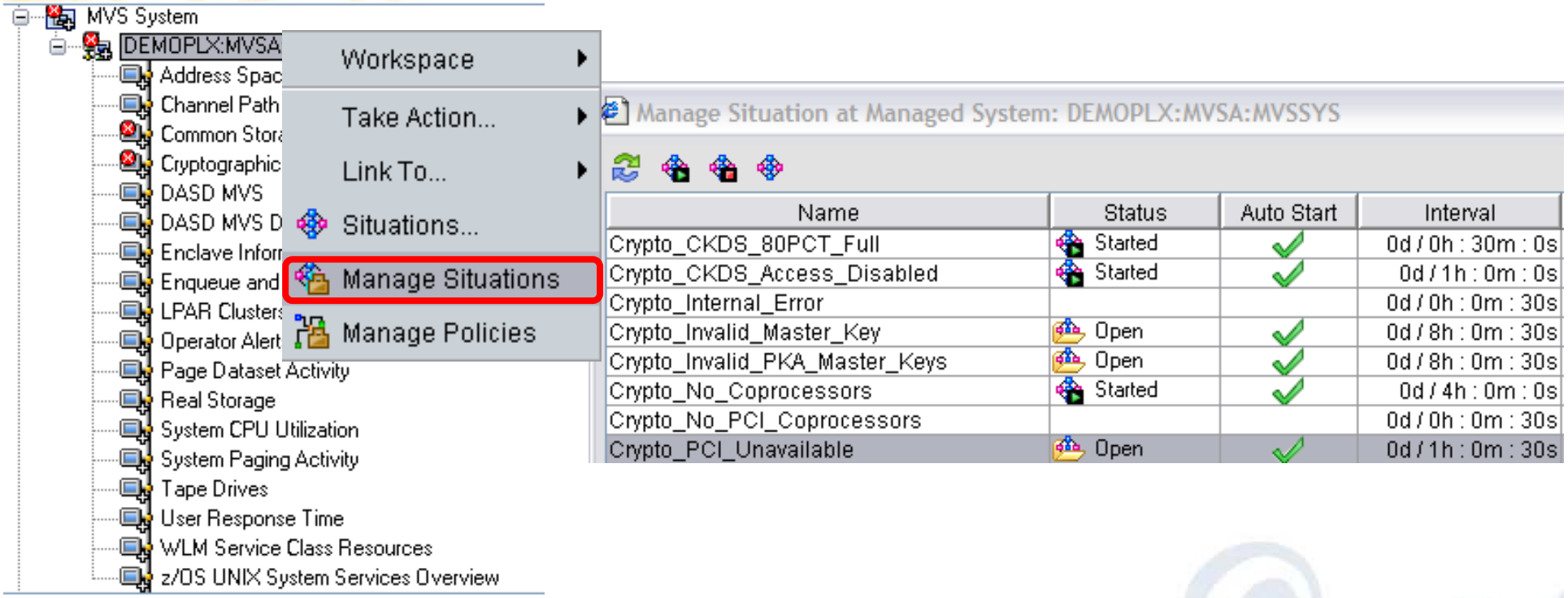
9. Built-in tutorials
10. Tuning and ITMSUPER

Manage Situations – Locate Running Situations

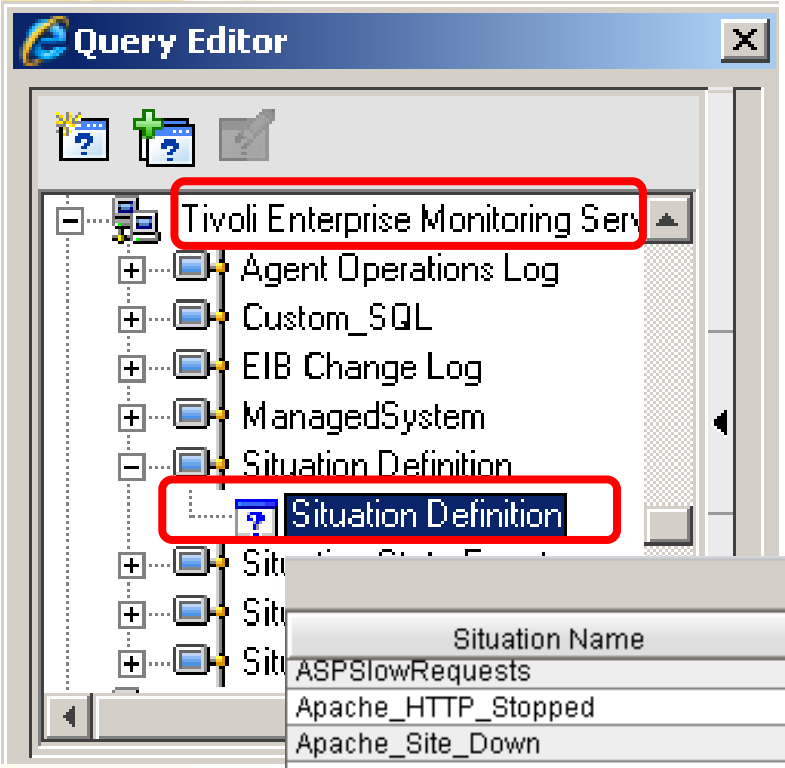
	Severity	Status	vr	Situation Name
	Critical	Open		Crypto_PCI_Unavailable
	Critical	Open		Crypto_Invalid_Master_Key

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



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

Manage Situations – List ALL Active Situations



- To View all situations in Enterprise:
- Create new workspace
  - Situation Definition query
    - Under **Tivoli Enterprise Monitoring Server**

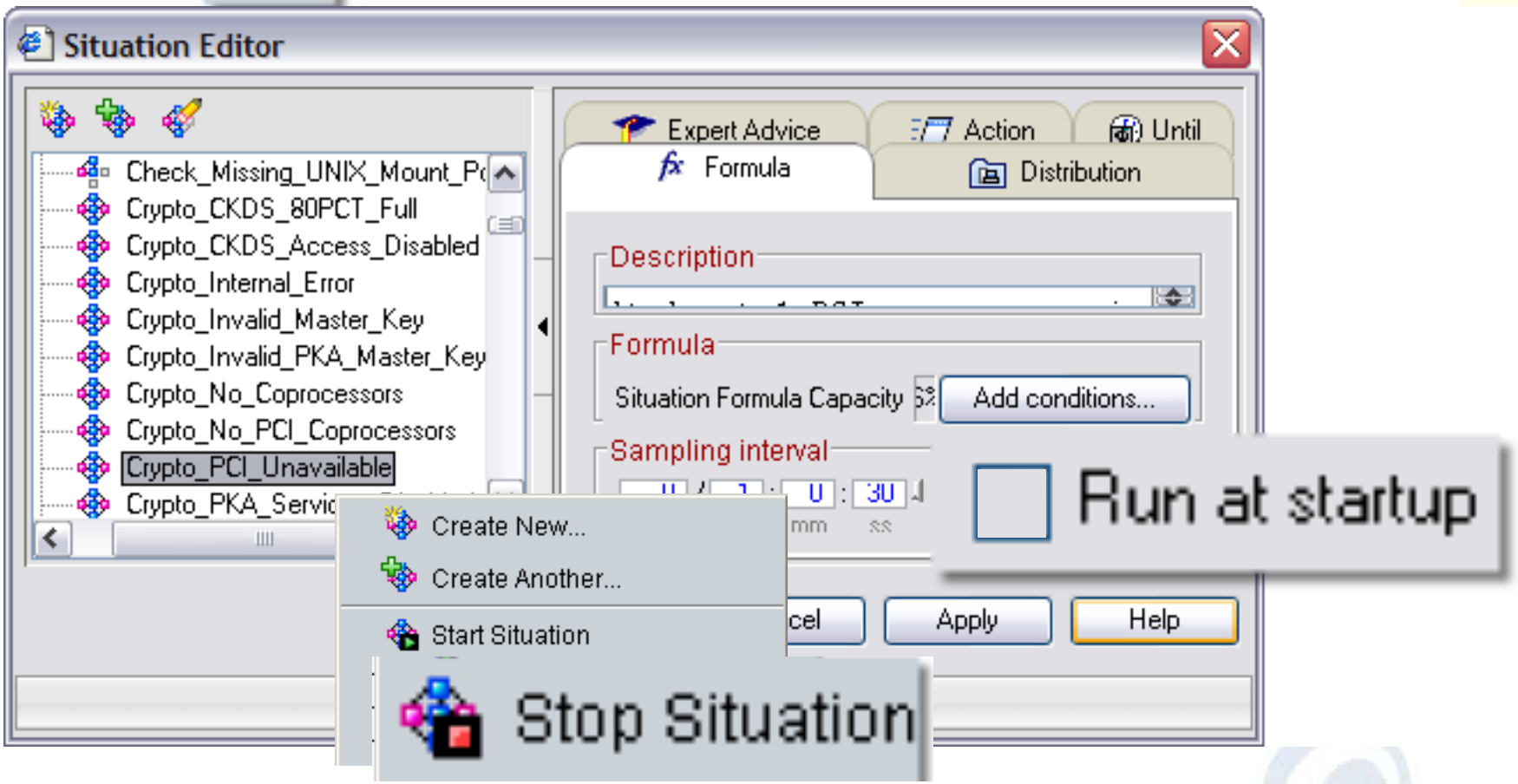
All Defined Situations

Situation Name	Auto Start	Interval Seconds	Description
ASPSlowRequests	*YES	000060	ASP requests are dispatched too slow.
Apache_HTTP_Stopped	*YES	000030	The Apache HTTP server is stopped.
Apache_Site_Down	*YES	000030	The Web site is down.
MQSeries_Dead_Letter	*YES	000500	Dead Letter Queue is not empty
Apache_Site_failed	*YES	000030	Server failures per second violation.
MQSeries_Channels_Indoubt	*YES	000500	At least one channel is In Doubt
WASOutofHeapSpace	*YES	000500	WebSphere Application Server out of Heap Space.
WASNotConnected	*YES	000500	WebSphere Application Server is Not Connected.

- See Autostarted Situations
- Identify unnecessary Situations
- Highlight situations with short intervals
  - Can impact performance

Manage Situations – Turn off unnecessary Situations

List all Situations defined



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

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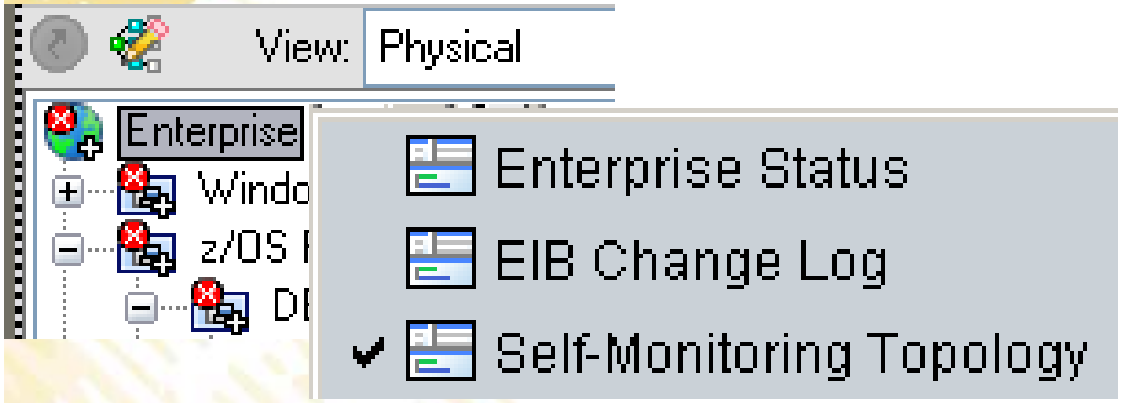
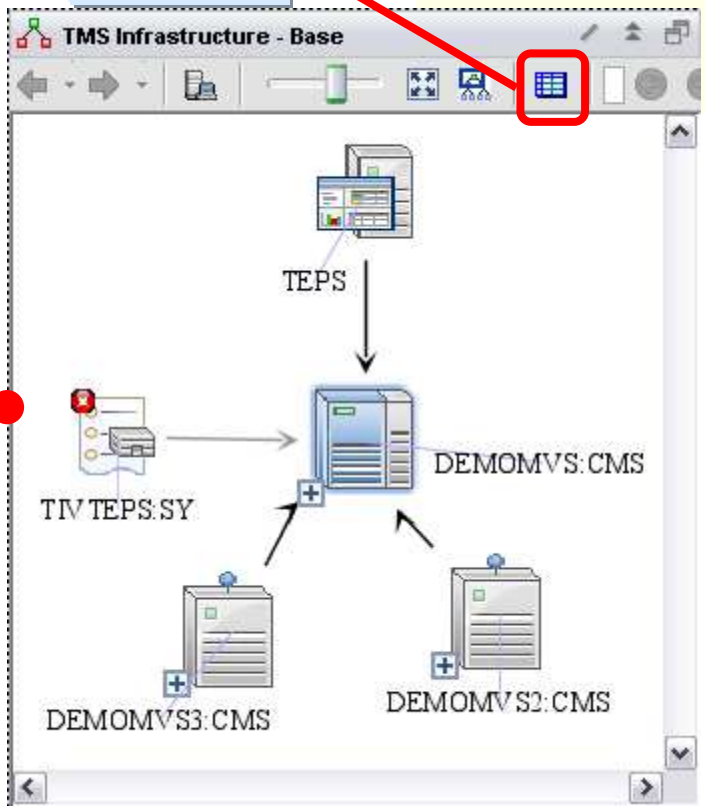
Topology – Check configuration of Infrastructure



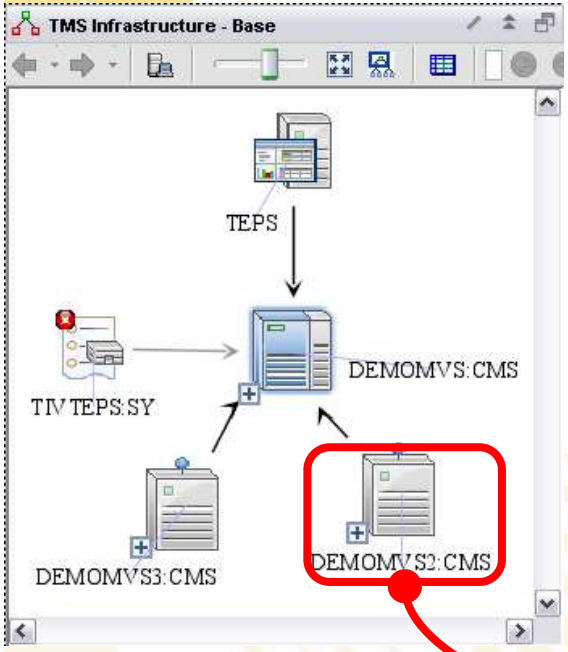
Table



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

Status	Name	Resource T	Product Co	IP Address	Version	Node	Host Info	Through Nc	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...	

Topology – 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

TMS Infrastructure - DEMOMVS2:CMS

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:...

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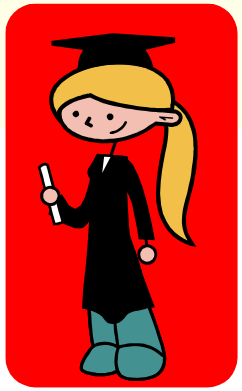
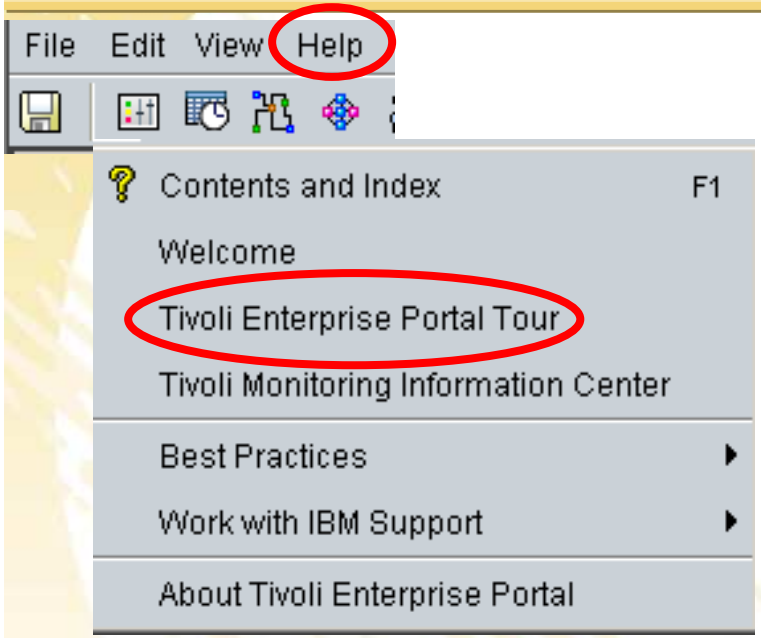


Built-in Tutorials



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
Workspaces
Views
Situations
Properties
Conclusion

Getting started
Tivoli Enterprise Portal window
Using the Navigator
Tutorial: Defining a workspace
Linking to a workspace
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.

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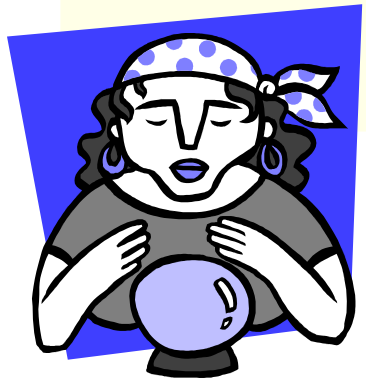

Tuning TEP Summary

Problem and symptom	Solution
No or missing data on workspaces	
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 isol
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
Workspaces are slow	
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

z/OS 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	VLF/VLF	9810/210600	4.6%	9809.37	0.0	0.0
TS02:MVSSYS	HSMAUX4/HSM	20162/195016	10.3%	13945.21	0.0	0.0
TS02:MVSSYS	HSMAUX1/HSM	32377/195016	16.6%	22776.58	8.6	5.6
TS02:MVSSYS	HSMAUX3/HSM	18107/195016	9.2%	12468.89	0.0	0.0
TS02:MVSSYS	HSMAUX2/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
EX01	Missing at TEPS				05/21/06 21:09:49
EX09	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
Cross LPAR Views	View all LPARs in one view
Creating a New Navigator View	Organize workspaces by user
Cross Application Workspaces	Combine OMEGAMONs for a given Application workspace
Eliminate Multiple pages	Allow columns to sort all rows at once
Reduce Query data	Query filter improves performance
Customizing Tables and Charts	View Thresholds to highlight problems
Situations	Turn off unnecessary situations
Topology	View fix levels and connectivity
Built-in Tutorials	TEP Online Education
Tuning and ITMSUPER	Tune OMEGAMON Infrastructure

Additional Hints and Tips

TEP Installation Tips

Connect TEPS to z/OS Hub	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**
TEPS on ITM 6.2.1 and DB2 v9.5	**Application support files** See Readme for special installation instructions
Running ITM on Linux on z	ITM 6.2.1 or later recommended because it supports 64 bit on Linux on z
How to downloading ITM code from ShopzSeries	Video on how to download software on ShopzSeries https://www14.software.ibm.com/ShopzSeries/movies/hgdownload.swf To order the latest ITM 6.2.2 code for download you should order: 5698-A79 IBM Tivoli Management Services on z/OS V6.2.1 (5698-S53)

OMEGAMON and ITM 6.x 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

References:

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

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Order (SK4T-0622-06) http://www-01.ibm.com/support/docview.wss?uid=pub1sk4t062206