



IBM Software Group

Tivoli Enterprise Portal Customization Tips and Techniques

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Agenda

- Introduction
 - ▶ Why Tivoli Enterprise Portal - 'The Power Of The Portal'
- Important Portal Terminology
- Portal Customization And Design
 - ▶ General Tips And Suggestions
- Linking Various Views
- Common Portal Customization Scenarios



IBM And The Tivoli Enterprise Portal

End to End Performance And Availability Management

Business Service Management

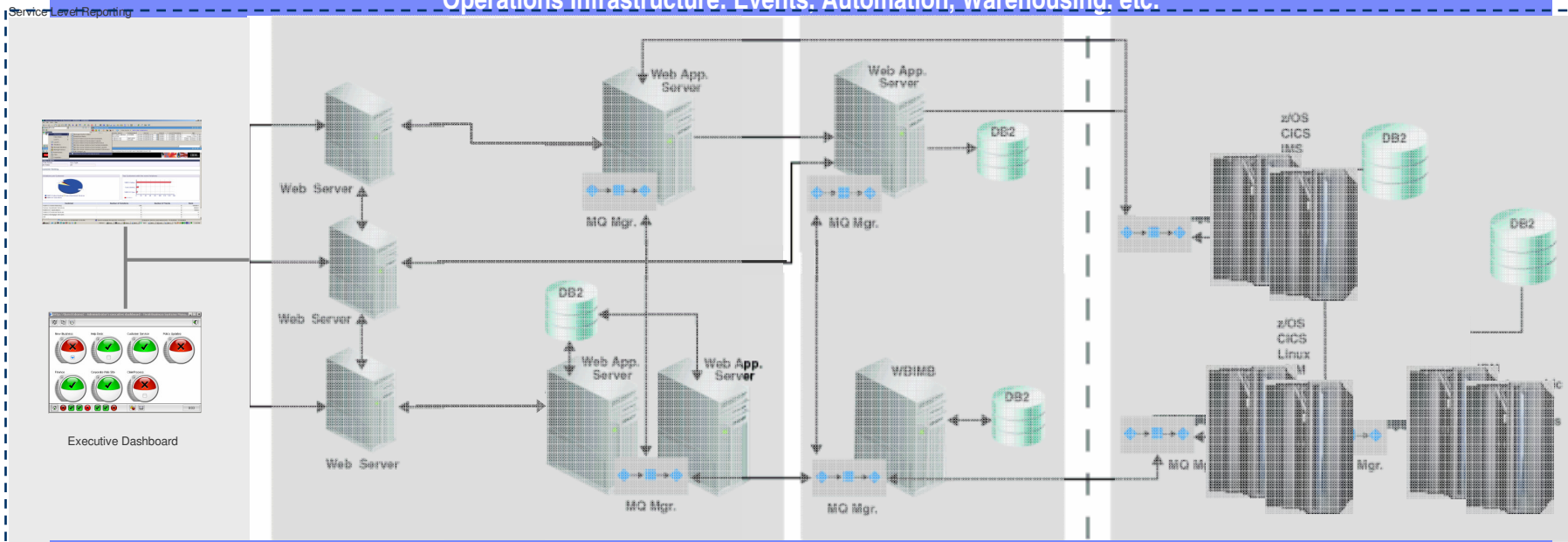
SOA Management

Composite Application Management

Network Management

Systems Management

Operations Infrastructure: Events, Automation, Warehousing, etc.



Operations Infrastructure: Events, Automation, Warehousing, etc.

Asset Management

Storage Management

Workload Management

Security Management

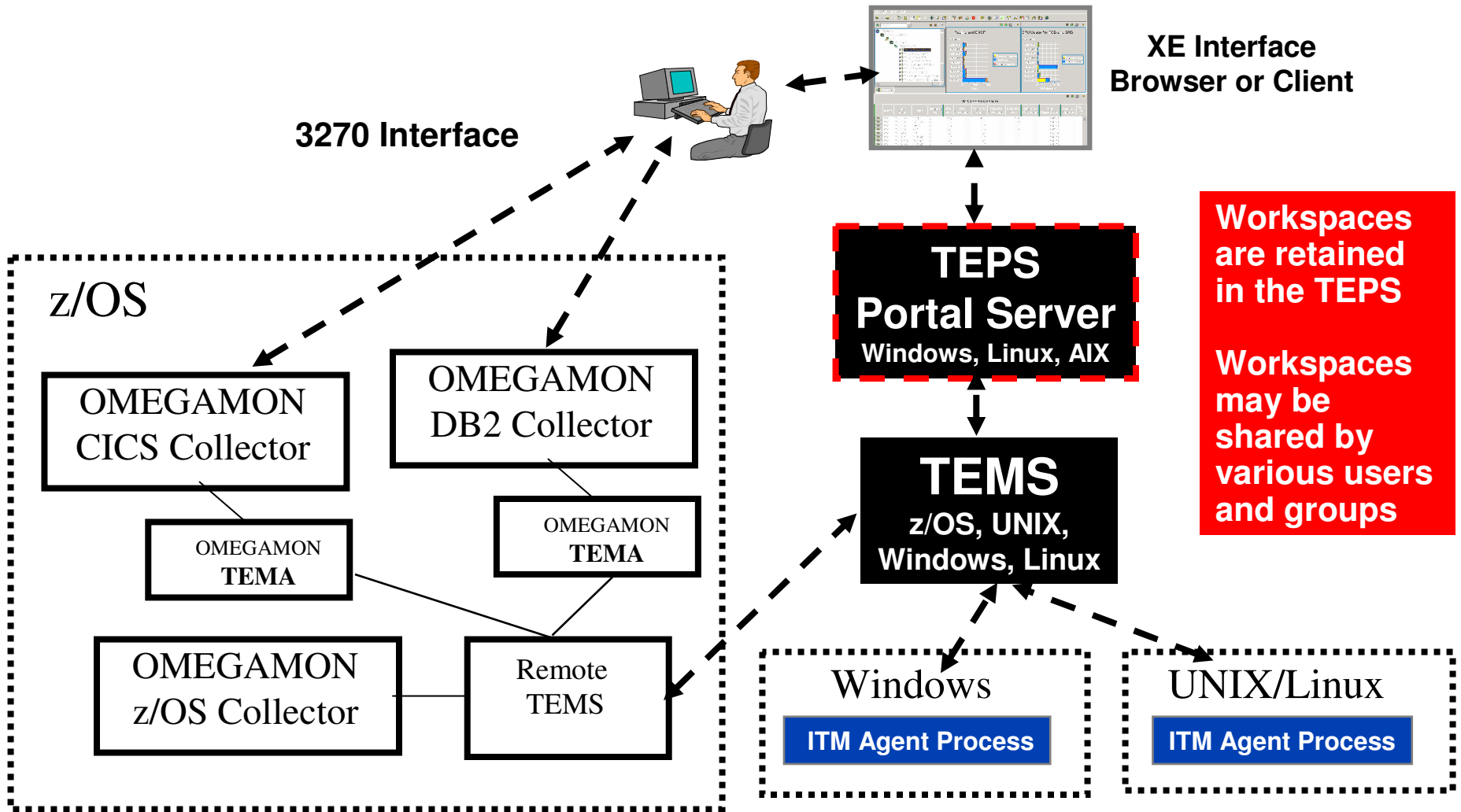
Usage & Accounting Management

Important Concepts And Terminology

- Workspaces
 - ▶ Creating and saving workspaces
 - Author mode and Administration mode
 - ▶ Tabular data, graphs and charts
 - ▶ Graphic views, icons and icon views
 - ▶ Navigation tree
 - ▶ Take actions, terminal, browser
 - ▶ Links and dynamic workspace linking
 - Links from tabular data and/or from graphics
- Queries
 - ▶ Product provided and user defined
- Situations and alerts
 - ▶ Product provided situations and user defined situations

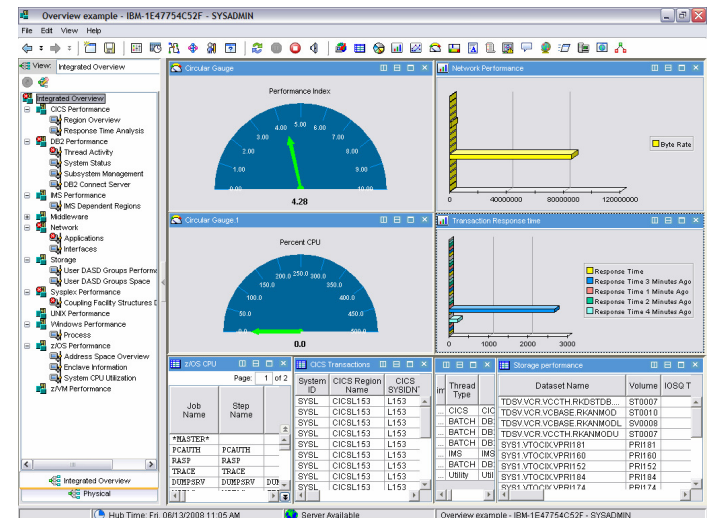


Where Are Customized Workspaces Kept? The Tivoli Enterprise Portal Server (TEPS)



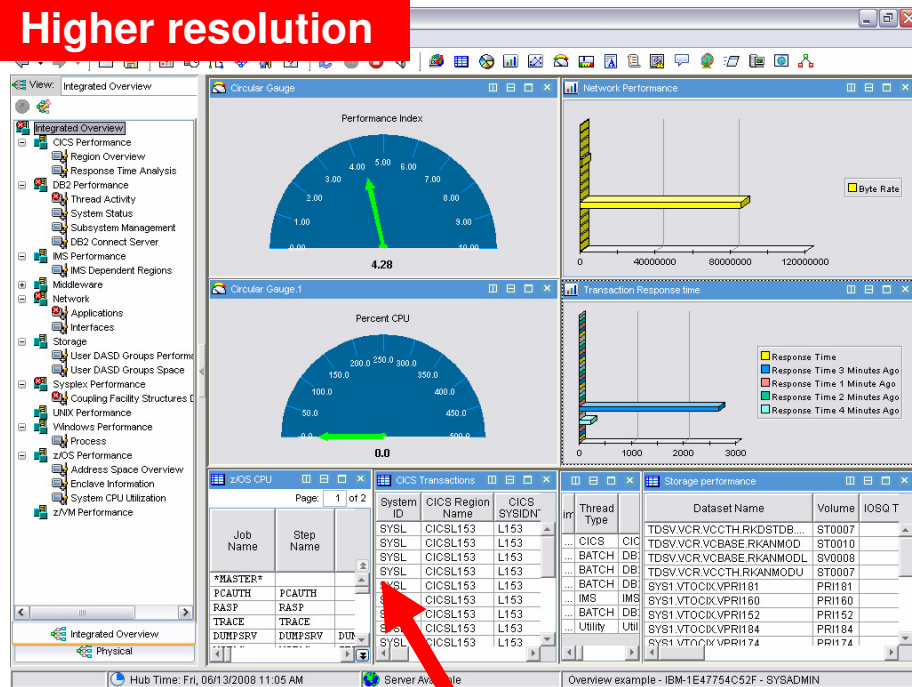
Portal Workspace Customization General Suggestions And Considerations

- When customizing workspaces be aware of the target audience
 - ▶ Technical requirements
 - ▶ Physical display capabilities
- Design screens with speed and utility in mind
 - ▶ Responsiveness of the display impacts its potential benefit
- Considerations that may impact performance
 - ▶ Amount of graphics
 - ▶ Graphical overviews
 - ▶ Tabular versus chart/graph data
 - ▶ Quantity of data requested
 - ▶ Number of managed systems referenced in the workspace

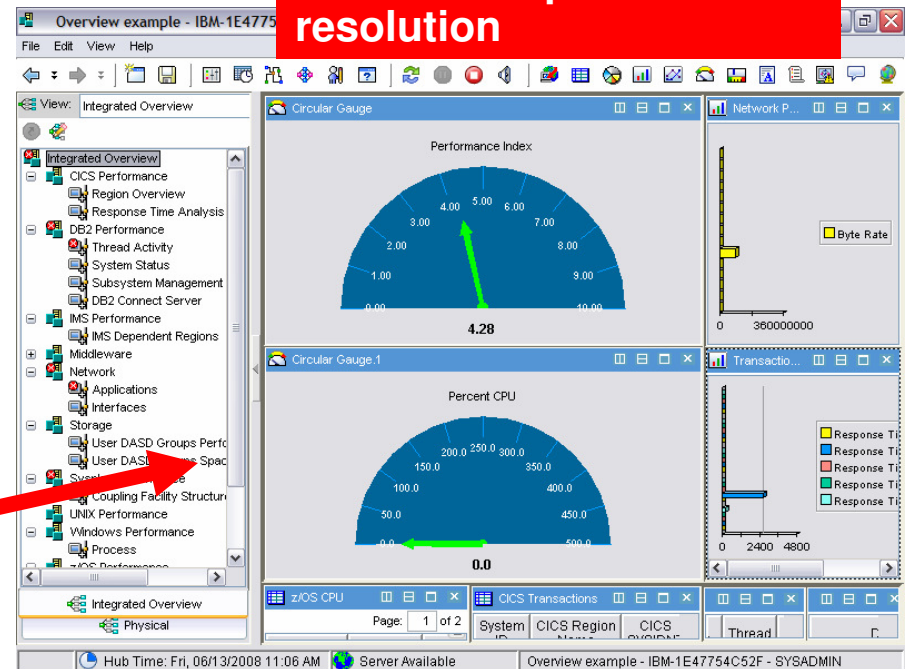


Customize For The Target Audience

Higher resolution



Same workspace at lower resolution



A workspace designed at a higher screen resolution may not work as effectively at a lower screen resolution

When possible consider the display limitations of the target audience

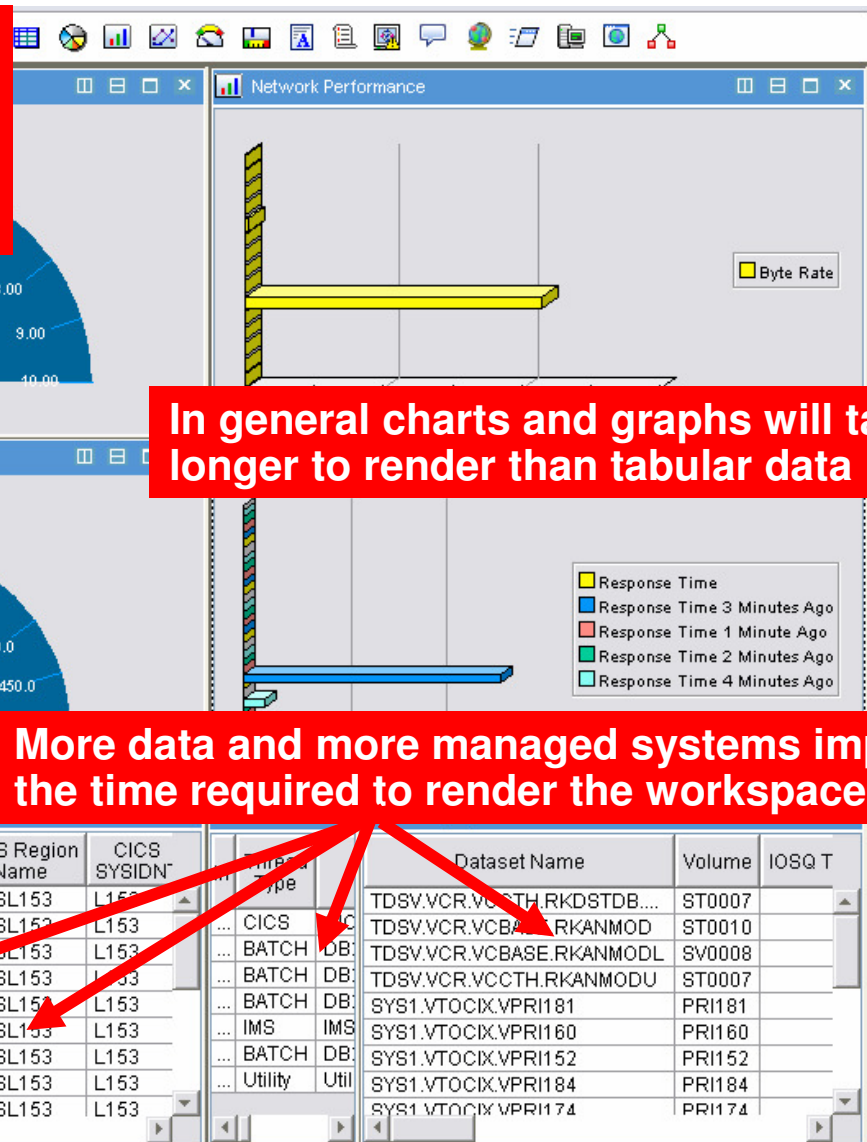
Screen detail is truncated



Workspace Performance – 'Rules Of Thumb'

General rules of thumb

- Avoid the over use of graphs and charts
- Use tabular data where appropriate
- Avoid queries that pull back unneeded data
- Consider carefully multi system queries



In general charts and graphs will take longer to render than tabular data

The more data requested by the query, the longer it may take to return

More data and more managed systems impact the time required to render the workspace

Considerations About Graphic Views

Graphics views provide a powerful end to end monitoring capability.

Graphics are user definable and may be integrated into workspaces.

Considerations for graphics views include the time to scale and render the graphic. In general graphic views may take longer to render than other portions of the workspace.

Originnode	SQL Calls Sent	SQL Calls Received	Data Rows Sent
SYSL:DB2	4	4	105

Considerations About Graphic Views - continued

In possible, design the graphic to fit within the workspace, as opposed to using 'fit to view'

Browse the user graphics directory

Choose from various icons, shapes, or styles

Choose icons



Network



DB2 Connect Server



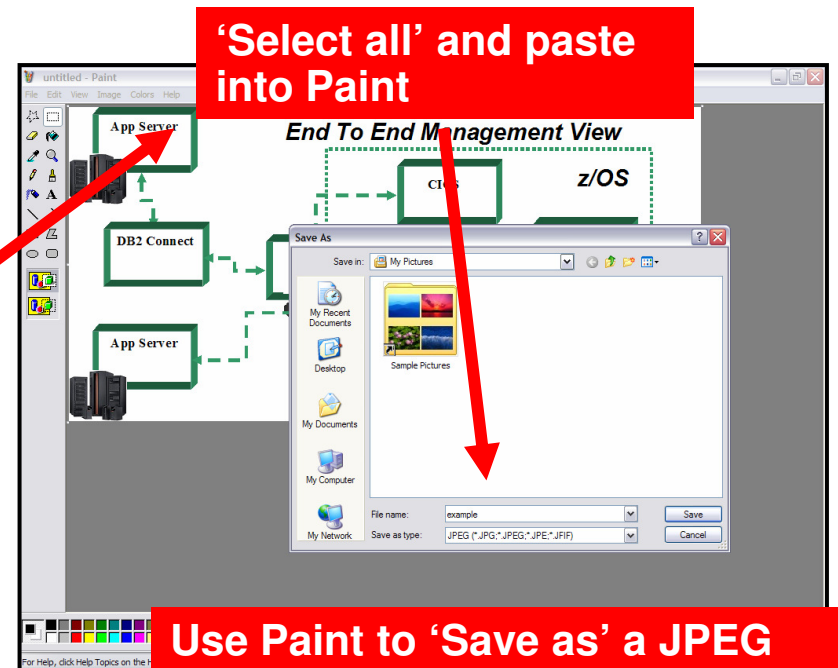
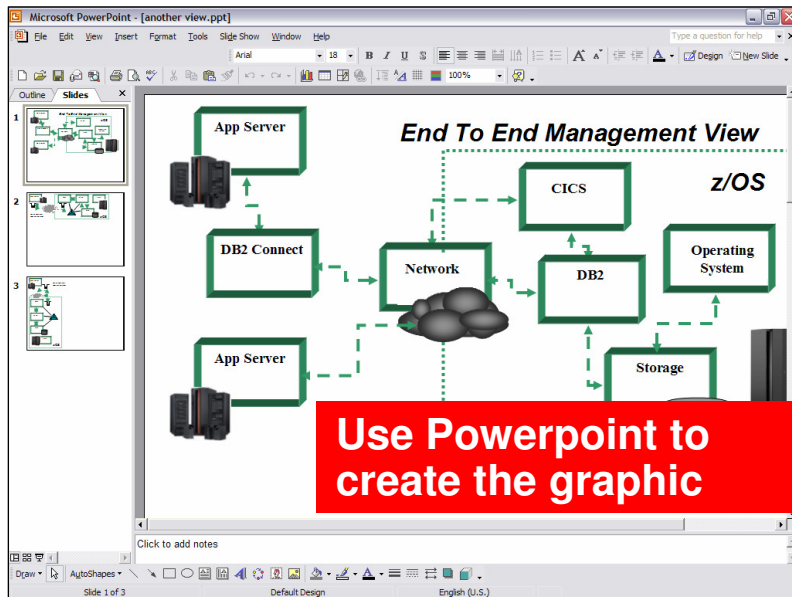
DB2 Performance

Choose shapes



z/OS Performance

Creating A Graphic For Use In The TEP The 'Ed' Method



Copy the JPEG to the TEPs server user directory

`\dir\ITM\CNB\classes\candle\fw\resources\backgrounds\user`

Graphics View Alternatives

Blank Background With Shapes

Choose blank background

Choose shapes in the style options

Graphic View With A Blank Background

Shapes will auto size and render quickly

Shapes will be easily seen

Shapes may be used as alert indicators

This type of display will provide a graphic style overview and render very quickly

Item Name	Item Type	Input Queue Time (Secs)	Program Queue (Sec)	Originnode	Call Calls Sent	Call Calls Received	Data Rows Sent
CICSL153	TRAN GRP C*	00:00:00					
CICSL153	TRAN GRP D*	00:00:00		191F			
CICSL153	TRAN GRP E*	00:00:00					
CICSL153	TRAN GRP J*	00:00:00					

Understanding Queries

Click to 'create another' query

Recommendation – if modifying queries, customize user copies of queries ('Create Another'). Refrain from modifying product provided queries.

	Managed System	CPU Percent	Job Name	Step Name	Proc Step	SvcClass	SvcC Per
1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$						
3							
4							

- Queries control the content of the workspaces
- OMEGAMON and other Tivoli solutions provides queries for the TEP
- Users may make user defined queries
- User defined queries may be used to pre-process data (filter, sort, etc.)
- Queries may consist of custom SQL

Queries Control Workspace Content – An Example

Query Editor

Description: CPU utilization measures for active address

Data Source: TEMS_HUB_JBM-1E477...

Last Modified on: Fri, 06/13/2008 02:...

Last Modified by: SYSADMIN

Specification: Query Results Source

Managed System: CPU Percent

Filter: `>= $NODE$ > 2.0`

CPU Percent	Job Name	Step Name	Proc Step	SvcClass	SvcClass Period	ASID	JESJOBID	TCB Percent	SRB Percent	IFA Percent	IFA on CP Percent	zIIP Percent
80.0	SWONGAL	STEP3		BATCH								
0.0	VCCTH00L	VCCTH00L	TEMS	STCCMS								
10.0	VC02H00L	VC02H00L	02CI	STC								
2.1	NET31	NET	NET31	SYSSTC								
0.4	TCPIPL	TCPIPL	TCPIP	SYSSTC								
0.0	CATALOG	CATALOG	IEFPROC	SYSTEM	1	0X0029		0.0	0.0	0.0	0.0	0.0
0.4	GRS	GRS		SYSTEM	1	0X0007		0.4	0.0	0.0	0.0	0.0

Default query returns info on all address spaces

Advanced Options

Correlation

Sort By: CPU_Percent

Ascending Descending

Group By: None

First/Last Functions

None First Last

Value: 10

CPU Percent	Job Name	Step Name	Proc Step	SvcClass	SvcClass Period	ASID	JESJOBID	TCB Percent	SRB Percent	IFA Percent	IFA on CP Percent	zIIP Percent
80.0	SWONGAL	STEP3		BATCH								
2.1	NET31	NET	NET31	SYSSTC								
10.0	VC02H00L	VC02H00L	02CI	STC								

User defined query returns address spaces over 2% CPU usage

CPU Percent	Job Name	Step Name	Proc Step	SvcClass	SvcClass Period	ASID	JESJOBID	TCB Percent	SRB Percent	IFA Percent	IFA on CP Percent	zIIP Percent
80.0	SWONGAL	STEP3		BATCH		2	0X002C	JOB15263	80.0	0.0	0.0	0.0
10.0	VC02H00L	VC02H00L	02CI	STC		2	0X00AC	STC14973	10.0	0.0	0.0	0.0
2.1	NET31	NET	NET31	SYSSTC			0X0068	STC14490	0.0	2.1	0.0	0.0
0.8	VCCTH00L	VCCTH00L	TEMS	STCCMS		2	0X00D0	STC15280	0.8	0.0	0.0	0.0
0.4	GRS											
0.4	XCFAS											
0.4	WLM											

User defined query returns top 10 address spaces using CPU sorted descending

Queries And Custom SQL

Custom queries with custom SQL expands the ability of the TEP to gather information from a wide variety of sources

The screenshot displays the Tivoli Enterprise Portal (TEP) interface. On the left, a tree view shows the navigation structure, with 'DB2' and 'DB2B' selected. The main window shows the configuration for a query named 'DB2 Thread Exceptions'. The 'Description' field is empty. The 'Data Source' is set to 'ODBC OPAS_TEST Driver do Microsoft Access (*.mdb)'. The 'Last Modified' section shows the query was last modified on 12/17/03 at 09:46:04 by 'SYSADMIN'. The 'Specification' section has a 'Custom SQL' field containing the query: `select * from DB2ThreadExcept,`. A red box highlights this field, and a red arrow points from a text box below to it.

User definable SQL for the query

Understanding Links

Link From A Variety Of Places In Workspaces

The screenshot displays the Tivoli Enterprise Portal interface. It features a navigation tree on the left, a central graphic view, and several data tables at the bottom. Four red callout boxes highlight link locations:

- Link from the navigation tree:** A callout box points to a link icon in the navigation tree.
- Link from graphic icons:** A callout box points to a link icon overlaid on a graphic icon in the central view.
- Link from chart displays:** A callout box points to a link icon overlaid on a chart display.
- Link from tabular data:** A callout box points to a link icon overlaid on a table row.

System ID	CICS Region Name	CICS Version	Period	Goal Type	G Perc
MVSA	CICSTIV1	6.4.0	1	PctResp	
MVSA	CICSTIV3	6.4.0	2	Velocio	
MVSA	CPSMCMAS	6.4.0	1	PctResp	
MVSA	CICSAOR4	6.4.0	2	Velocio	

Exploiting Dynamic Workspace Linking

Example – Drill Down From OMEGAMON XE For DB2 PM/PE To OMEGAMON XE For CICS

**OMEGAMON XE For DB2 PM/PE
CICS Connection display**

Drill down from DB2 to CICS detail within the TEP

**OMEGAMON XE For CICS
Region Overview detail display**

Time	CICS ID	CICS Release	Total Threads Inuse	Total Thread Utilization	Pool Threads Inuse
04/09/07 08:42:18	CICSAOR2	100	0	0.0	0
04/09/07 08:42:18	CICSTIV3	100	0	0.0	0

System ID	CICS Region Name	CICS Version	Region Status	CICS SYSIDNT	VTAM Applid	VTAM Generic Applid	VTAM ACB Open	SOS	Maximum Tasks Percent	Transaction Rate	I/O Rate	Page Rate	CPU Utilization	Storage Viol in Last H
MVSA	CICSAOR2	6.4.0	N/S	C22B	CICSACB3	CICSACB3	Yes	No	2	0	0.0	0.0	0.0	

To Define A New Link Follow The Link Wizard

Right click and select 'Link Wizard'

Select 'Define a new link' Click Next

Time	CICS ID	CICS Release	Total Threads Inuse	Total Thread Utilization	Pool Threads Inuse	Pool Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
04/09/07 08:42:18	CICSAOR2	100	0	0.0	0	0.0	0	30	3
04/09/07 08:42:18	CICSTW3	100	0	0.0	0	0.0	0	30	3

Give The Link A Name And Select The Type Of Link

Enter the name of the link and click 'Next'

Select the type of link (in this example dynamic) and click 'Next'

Workspace Link Wizard - Link Name

Enter a name and description that will be used to identify the link.

Name: CICS Region Overview Info - C5

Description:

Workspace Link Wizard - Link Type

When executed, this link will locate and select a target workspace. The type of this link will determine how the target workspace is located when the link is executed.

Select one of the following link types.

- Dynamic**
When the link is executed, values in the link source context will be used to determine the location of a target workspace. If more than one eligible target workspace is located, the user will be prompted to select an appropriate navigator path leading to the correct target.
- Absolute**
When this link is executed, a specified workspace will be selected at a specified location in the navigator view.
- Relative**
When the link is executed, an attempt will be made to select a workspace that matches the same relative location of a specified target workspace. If more than one eligible target workspace is located, the user will be prompted to select an appropriate navigator path leading to the correct target.

< Back Next > Cancel Finish Help

Time	CICS ID	CICS Release	Total Threads Inuse	Total Thread Utilization	Pool Threads Inuse	Pool Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
04/09/07 08:42:18	CICSAOR2	100	0	0.0	0	0.0	0	30	3

Time	CICS ID	CICS Release	Total Threads Inuse	Total Thread Utilization	Pool Threads Inuse	Pool Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
04/09/07 08:42:18	CICSAOR2	100	0	0.0	0	0.0	0	30	3

Select The Destination Workspace

Workspace Link Wizard - Target Workspace

Select a target workspace for this link.

Navigator View: Physical

Navigator:

- Journal Analysis
- JVM Analysis
- Log Stream Analysis
- LSR Pool Status
- Message Queuing Analysis
- MVS TCB Summary
- Pagepool Summary
- Recovery Manager Analysis
- Region Overview**
- Response Time Analysis
- Service Level Analysis
- Service Task Details
- Storage Analysis
- Subpool Details
- System Initialization Table
- Task Class Analysis
- TCPIP Statistics
- Temporary Storage Queues

Workspace:

- Region Overview
- Region Datasets
- MD_Test

This link does not target a specific workspace

< Back **Next >** Cancel Finish Help

Select the destination workspace and click 'Next'

Time	CICS ID	CICS Release	Total Threads Inuse	Total Thread Utilization	Pool Threads Inuse	Pool Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
04/09/07 08:42:18	CICSAOR2	100	0	0.0	0	0.0	0	30	3
04/09/07 08:42:18	CICSTV3	100	0	0.0	0	0.0	0	30	3

Specifying The Filter Information For The Link

Workspace Link Wizard - Target Filters

In order to dynamically determine a target path at link-time, sufficient target filters must be configured. Target filters are configured by assigning them source context expressions. Assigned expressions will be evaluated against the target filter.

Filter	
Managed system name	
Hostname	
IP address	
SMFID	

Pass managed system name (example – MVSID.CICSREGION) or SMFID to drive drill down

Symbols

- Values
 - Link
 - Selected Row
 - Attributes
 - CICS ID**
 - CICS Release
 - Orignnode
 - Pool Thread Maximum
 - Pool Thread Utilization
 - Pool Thread Waits
 - Pool Threads Inuse
 - Time
 - Total Thread Utilization
 - Total Threads Inuse
 - Total Threads Maximum
 - Id
 - Name
 - Type
- Table - CICS Connections Summary
- Query - CICS Connections

Click 'Symbol' to specify what information to pass

Expression Editor - Managed system name

```
$NODE:-1022$+'.'+$kfw.TableRow:ATTRIBUTE.DP_CI_EXCS.CI_CICSID$
```

In this example this will create a managed system name for the CICS region drill down

Example - MVSA.CICSAOR1

Symbol... Operator... Function... Clear Evaluate

OK Cancel Help

Click 'Evaluate' to see what gets generated

Click 'Next' when done

workspace

< Back Next > Cancel Finish Help

Pool Threads Inuse	Pool Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
0	0.0	0	20	2

Finish The Link Definition

Assign expressions to any of the following target workspace parameters to provide link-time values for them.

Parameter	Expression
Properties	
Symbols	
contextsAvailable	\$kfw.TableRow:-1021A.\$ == \$kfw.LinkSymbolsGroup:PBASED.SOURCE
linksEnabled	true
Target Workspace	
Query - Region Overview	
Symbols	
Table - CICS Region Overview	
Footer	
Header	
Plot Chart - Transaction Rate	
Footer	
Header	
Circular Gauge - Maximum Tasks Percent	
Header	
Circular Gauge - CICS CPU Utilization	
Header	

Buttons: Add Symbol..., Remove Symbol, Modify Expression, < Back, Next >, Cancel

For more detailed drill down capabilities the destination workspace may need additional information passed to it

Optionally enter additional filter information, if needed

Click 'Next' to proceed

Review the task and then press Finish to complete the wizard.

The following link will be modified:

CICS Region Overview Info - C5

Buttons: < Back, Next >, Cancel, Finish, Help

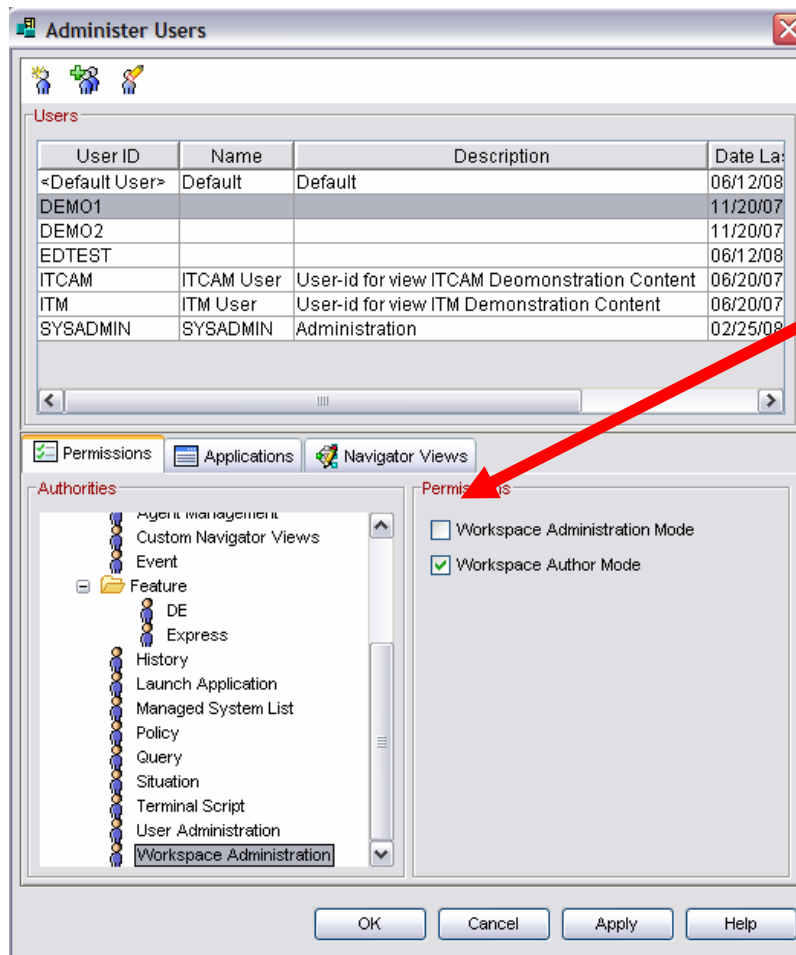
Click 'Finish' when done
The link is ready to use

Follow The Link To Drill Down To The CICS Region Overview From A DB2 Overview Workspace

The link is now ready to use

Time	Connection Name	Pool Threads Inuse	Total Thread Utilization	Pool Thread Waits	Total Threads Maximum	Pool Thread Maximum
04/10/07 10:55:06	CICSAOR6	0	0.0	0	30	3
04/10/07 10:55:06	CICSAOR7	0	0.0	0	30	3

Author Mode And Administration Mode



- Author Mode
 - ▶ Allows the user to create and edit Tivoli Enterprise Portal workspaces, links, and terminal emulator scripts.
- Administration mode
 - ▶ By default workspaces you create are saved with your user ID, and no other users can see them.
 - ▶ Turn on administration mode so that all workspaces you edit and save while in this mode are shared with all users who log on to the same Tivoli Enterprise Portal Server.
- Note
 - ▶ When saving a workspace select 'Do not allow modifications' to prevent other users from assuming ownership when using administration mode

ITM 6.2 Overview

ITM 5.x to ITM 6.2 migration

ITM v5 -> ITM v6 automated upgrade of Resource Models to Situations
Enhancements to v6 agents for parity

Security

- User Authentication via LDAP
- Manage TEP Permissions using User Groups

Advanced Event Integration

Enhance TEP/TEC Integration and Context Based Launching
Per-Situation Control of:

- Enable or Disable send event
- Destination TEC server(s)
- Event severity
- Set TEC Event Severity

Common Event Viewer integrates ITM, TEC and OMNIBUS events in a single console

Broadening Integration and Improved Visualization

Enhance embedded HTML Browser

- Better HTML support
- Better Active Page support

Improve Topology View Integration
Chart View improvements

- Multi-source support
- Multi-line support

Infrastructure Enhancements

Serviceability:

- Problem Determination data gathering tool
- Operations Log Enhanced

Platform Updates:

- Support for Management Clusters
- Support VMware Management Servers
- Reduce Infrastructure (2500 agents/RTEMS)
- Use Java 1.5 for ITM Java-based components
- Support for DB2 V9.1 / Include DB2 V9.1 in ITM BOM
- Support Tivoli License Manager

Agent Enhancements

- Monitor for the IBM AIX / System P environment
- Unix Agent Zone Support
- OS Agent ping response times and md5 checksums
- Support >64 characters in service names

Agent Builder

- Eclipse based toolkit for rapid development
- Use GUI wizards to create IRA-based agents
- Remote connection to browse data sources
- Enhanced Log file monitoring



Example ITM 6.2 TEP Usability Enhancements View Swap

Tivoli Enterprise Portal - Welcome DNET581

File Edit View Help

Navigator View: Physical Page: 1 of 3

CPU Usage

Address Space CPU Utiliz...

Address Space Counts

Address Space Count	Started Task Count	Batch Job Count	TSO Co
298	267	4	

Central Storage Frame Count

Click and drag tiles in the workspace to rearrange the display

Tivoli Enterprise Portal - Welcome DNET581

File Edit View Help

Navigator View: Physical Page: 1 of 3

Address Space CPU Utiliz...

Job Name	Step Name	Proc Step	Type	SvcCl
MASTER			STC	SYSTE
PCAUTH	PCAUTH		STC	SYSTE
RASP	RASP		STC	SYSTE
TRACE	TRACE		STC	SYSTE
DUMPSRV	DUMPSRV	DUMPSRV	STC	SYSTE
XCFAS	XCFAS	IEFPROC	STC	SYSTE
GRS	GRS		STC	SYSTE
SMSPDSE	SMSPDSE		STC	SYSTE
CICSVR	CICSVR	IEFPROC	STC	OPSD
CONSOLE	CONSOLE		STC	SYSTE
WLM	WLM	IEFPROC	STC	SYSTE

Address Space Counts

Address Space Count	Started Task Count	Batch Job Count	TSO Co
298	267	4	

CPU Usage

Central Storage Frame Count

Common Portal Customization Scenarios

- The customized Subject Mater Expert (SME) view
- The integrated performance view
- The SME technical graphic overview
- The SME application specific view
- The end to end business application view
- The integrated alert management overview
- Management by exception view



Example Customization Scenarios

Integrated Subject Matter Expert (SME) View

Welcome SYSADMIN Log out

Tivoli Enterprise Portal

File Edit View Help

View: Physical

- Cryptographic Copr...
- DASD MVS
- DASD MVS Devices

Storage Subsystem

Physical

CF Structure Performance							
Structure Name	CF Name	Asynchronous Requests per minute	Synchronous Requests per minute	Storage Size	Duplex	AutoAlter	Ma
CICSRLS	CF01	0.0	0.0	589824	Disabled	No	LPAR40
CIXLG_DFHLOG_1	CF01	0.0	0.0	540999680	Disabled	Yes	LPAR40
DFHXQLS_SHAH	CF01	0.0	0.0	2064318464	Disabled	No	LPAR40

CF Performance

Shared DASD Performance						
Group Name	Average True Percent Busy	Highest True Percent Busy	Highest True Percent Busy Volser	Average Device Contention Index	Highest Device Contention Index	Highest De Contention I Volser
PRIVATE NON-SMS VOLUMES	0.0	5.9	ST0002	56.254	100.000	CSP121
SGBLD				95	45.454	BLD003

Shared DASD Performance

Storage And Paging Performance				UIC Count	
Managed System	Page Fault Rate	Expanded Storage Pages Moved	Sy Pac	Unreferenced Interval Count	
LPAR400J:MVS:MVSPLEX	17	0.0			

Storage paging and UIC stats

CPC LPARs Status															
Cluster Name	LPAR Name	Physical %CPU	Overhead %CPU	Current Weight	Physical %Weight	CPU Index	Effective %Weight	Logical %Weight	Effective Weight Index	Logical %CPU	CPU %Ready	WLM Managed	Initial Weight	Maximur Weight	
LPAR400J.B36A.2084	CANSYSL	6.4	0.0	3	3.1	2.1	88.7	41.9	2.1	85.9	11.0	NO	3		
LPAR400J.B36A.2084	CANSP12	0.4	0.0	3	3.1	0.1	16.7	27.9	0.6	4.0	19.9	NO	3		
LPAR400J.B36A.2084	_CLTotal	6.8	0.0	6	6.2			0.0	0.0	0.0	30.9	NO	0		

CPU info

As seen from System: SYSL

In the integrated SME view pull together detailed information specific to a given component (such as z/OS, CICS, IMS, or DB2)

Example – The Integrated Performance View

In the integrated performance view pull together detailed performance information for multiple components

Network performance

Integrated graphic overview

CICS performance

IMS performance

DB2 performance

End To End Management View

The screenshot displays a complex performance monitoring interface. At the top, a 'Graphic View' window shows an 'End To End Management View' diagram. This diagram illustrates the flow of data and performance metrics between various system components: App Servers (UNIX and Windows Performance), DB2 Connect, Network, CICS (CICS Performance), z/OS (z/OS Performance), DB2 (DB2 Performance), Operating System, and Storage. A red callout box highlights 'Network performance' near a graph showing Transmit Byte Rate, Receive Byte Rate, and Byte Rate over time. Another red callout box highlights 'Integrated graphic overview' for the central diagram. Below the diagram, three data tables are visible: 'CICS Response Time', 'IMS Response Time', and 'DB2 Distributed Performance'. Red callout boxes highlight 'CICS performance', 'IMS performance', and 'DB2 performance' for these respective tables.

Application Name	Connection Count	Transmit Byte Rate	Recei Byte Rate
CICSL153	3	221	2
DB1LDIST	2	0	
IMS9FCO	3	0	

CICS Region Name	Group Name	Response Time
CICSL153	TRAN GRP C*	00:00:00
CICSL153	TRAN GRP D*	00:00:00
CICSL153	TRAN GRP E*	00:00:00

IMSID	Item Name	Item Type	Input Queue Time (Secs.)	Program Queue (Sec)
I91F	PARTL	PSB	0.0000	

Originnode	SQL Calls Sent	SQL Calls Received	Data Rows Sent
D81L:SYSL:DB2	4	4	105

Queries And Customization To Create The Integrated Performance View

End To End Management View

The diagram illustrates the integration of various system components into a single performance view. It includes:

- Network**: Represented by a cloud icon.
- CICS**: CICS Performance.
- DB2**: DB2 Performance.
- Storage**: Storage Performance.
- z/OS**: z/OS Performance and Operating System.

Query Editor - CICS Performance query

Description: Default Response Time Analysis Query
 Data Source: TEMS_HUB_JBM-1E47754C52F Ip...
 Last Modified on: Fri, 06/13/2008 10:53 AM
 Last Modified by: SYSADMIN

Query Editor - Network Performance query

Description: This query returns
 Data Source: TEMS H...

Table: Critical Applications Net...

Application Name	Connection Count	Transmit Byte Rate	Receiv Byte Rate
CICSL153	3	221	2
D81LDIST	2	0	
IMS9FCON	3	0	

Table: CICS Response Time

Group Name	Response Time
AN GRP C*	00:00:00
AN GRP D*	00:00:00
AN GRP E*	00:00:00

Table: IMS Response Time

IMSID	Item Name	Item Type	Input Queue Time (Secs.)	Program Queue (S)
I91F	PARTL	PSB	0.0000	

Figure: CICS Response Time

Bar chart showing RO Time (Secs.) with a value of 0.40.

Text Box: In the integrated performance queries and graphic overview from multiple agent types and sources may be integrated into a single composite view

The SME Technical Graphic Overview

Enterprise Portal

File Edit View Help

View: Logical

Graphic View

Sysplex Performance Overview

Coupling Facility Structures Data for Sysplex

Shared DASD Groups Data For Sysplex

z/OS MVS System A
System CPU Utilization

DB2
Thread Activity

z/OS MVS System B
System CPU Utilization

DB2
Thread Activity

z/OS MVS System C
System CPU Utilization

DB2
Thread Activity

Physical Logical

The focus of this view is technical and hardware/platform specific in nature. Target audience may be systems or operations.

Specify Column To Graph And Add Filters To The Graphic

Preview

Getpage Counts

DISTSERV
DISTSERV

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38

Getpage Count

Query Filters Style

Filters

	Getpage Count	Originnode	Time	Thread Type	Connection Type	Plan Name	Percent
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	abc EQ DISTSERV	
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	abc EQ DSNJDBC	

Data Snapshot

	Originnode	Time	Thread Type	Connection Type	Plan Name	Percent
	B:MVSA:DB2	01/06/06 ...	Allied	Unknown	KO2540IF	
	B:MVSA:DB2	01/06/06 ...	Allied	DB2_Call_Att...	FPEPLAN	
	B:MVSA:DB2	01/06/06 ...	Allied	DB2_Call_Att...	FPEPLAN	
	B:MVSA:DB2	01/06/06 ...	Allied	DB2_Call_Att...	FPEPLAN	
	66168 DSNB:MVSA:DB2	01/06/06 ...	Allied	DB2_Call_Att...	DB2PM	
	0 DSNB:MVSA:DB2	01/06/06 ...	Allied	DB2_Call_Att...	FPEPLAN	

OK Cancel Apply Test Help

Specify the column to graph and the filter criteria.

The Final SME Application Specific View

Tivoli Enterprise Portal® **Tivoli software**

File Edit View Help

Physical

- DB2
 - DSNA:MVSA:DB2
 - System Status
 - Detailed Thread Exception**
 - Lock Conflicts
 - Subsystem Management
 - Log Manager
 - Utility Jobs
 - EDM Pool
 - Buffer Pool Management
 - Volume Activity
 - CICS Connections
 - IMS Connections

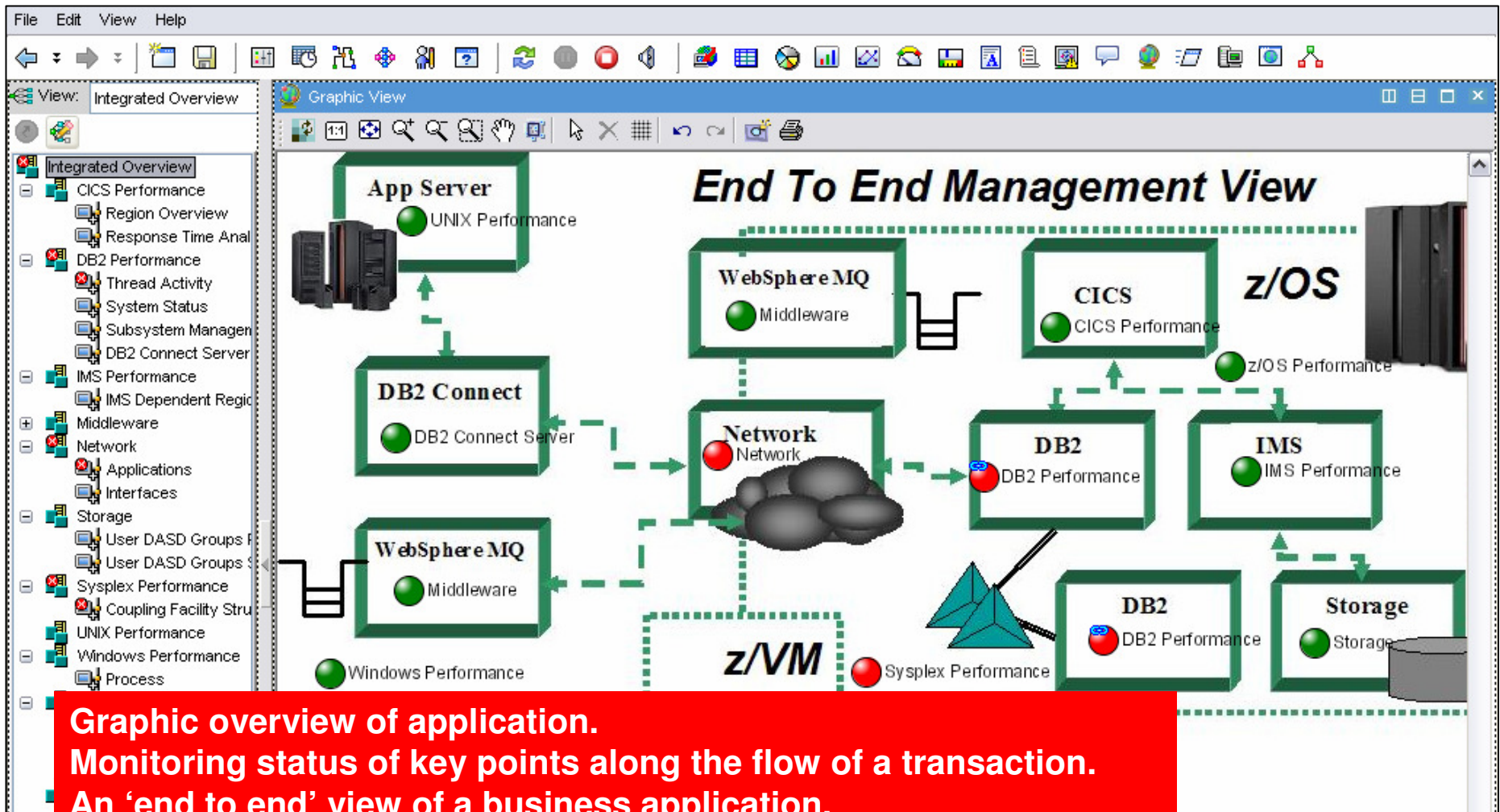
Getpage Counts

Connection Type	Plan Name	Package Name	Correlation Identifier	Authorization Identifier	DB2ID	CPU Utilization	DB2 CPU Used	DB2 Elapsed Time	Getpage Count	Locks Owned	Thread Status
Unknown	DSNJDBC		BBOS001S	ASSR1	DSNA	0.0	00:00:02.996	00:00:06.9	64	1	NOT_IN_DB2
Unknown	DSNJDBC		BBOS001S	ASSR1	DSNA	0.0	00:00:00.327	00:00:00.5	124	1	NOT_IN_DB2

Detailed Thread Exceptions

The result is a filtered workspace that will target specific applications (DSNJDBC and DISTSERV) and highlight key performance indicators.

The End To End Business Application View



Business Application View Navigation Tree Customization

View: Integrated Overview

Graphic View

Icons to customize the navigation tree

App Server

End To End Management View

z/OS

z/OS Performance

IMS

IMS Performance

Storage

Storage Performance

Enterprise

Windows Systems

z/OS Systems

Target View: Integrated Overview

Source View: Physical

Integrated Overview

- CICS Performance
 - Region Overview
 - Response Time Anal
- DB2 Performance
 - Thread Activity
 - System Status
 - Subsystem Managen
 - DB2 Connect Server
- IMS Performance
 - IMS Dependent Regio
- Middleware
- Network
 - Applications
 - Interfaces
- Storage
 - User DASD Groups F
 - User DASD Groups S
- Sysplex Performance
 - Coupling Facility Stru
- UNIX Performance
- Windows Performance
 - Process
- z/OS Performance
 - Address Space Ove
 - Enclave Information
 - System CPU Utilizatio
- z/VM Performance

Customize the navigation tree to focus on key performance and availability information.

Close Help

Customizing The End To End Business Application View

The screenshot displays the 'End To End Management View' in a software application. The interface includes a menu bar (File, Edit, View, Help), a toolbar with various icons, and a 'View: Integrated Overview' pane on the left. The main area shows a hierarchical diagram of system components connected by dashed lines. Components include 'App Server' (UNIX Performance), 'WebSphere MQ' (Middleware), 'CICS' (CICS Performance), 'z/OS' (z/OS Performance), 'Network' (Network), 'DB2' (DB2 Performance), 'IMS' (IMS Performance), 'DB2' (DB2 Performance), 'Storage' (Storage), and 'Sysplex Performance'. A red box labeled 'Thread Activity' is overlaid on the Network component. Two red arrows point from the navigation tree on the left to the main diagram, with a red box containing the text 'Click and drag' and another red box containing the text 'Use the navigation tree to create and populate icons on the graphic view. Click and drag icons to the graphic.'

The Integrated Alert Management Overview

Blank background with shapes option provides an easily visible alert view

Situation alert console

Severity	Status	Owner	Situation Name
Critical	Open		EW_Demo_Thre
Critical	Open		Dist_DB2_Net_A
			EW_Demo_CF

Browser interface

Take action to issue commands

Take Action

Action Name:

Comments:

Management By Exception View

Integrated view focused on key exception indicators.

The screenshot displays the Tivoli Performance Viewer interface with several key components:

- z/OS Service Class High PI:** A table showing performance metrics for different service classes.

Service Class	Period	Performance Index	Percent CPU	Percent IFA	Percent IFA on CP
IMSCL2	1	2,436.00	0.0	0.0	0.0
BATCH	1	4.28	0.0	0.0	0.0
CICS	1	4.10	0.0	0.0	0.0
STC	1	3.75	0.0	0.0	0.0
TSO	2	1.50	0.0	0.0	0.0
- High CPU Tasks:** A table listing tasks with high CPU usage.

CPU Percent	Job Name	SvcClass	SvcClass Period	ASID	JESJOBID
80.0	SWONGAL	BATCH	2	0X002C	JOB15263
10.0	VC02H00L	STC	2	0X00AC	STC14973
2.1	NET31	SYSSVC	1	0X0068	STC14490
- System CPU Utilization:** A table showing system-wide CPU usage.

Managed System	Average CPU Percent	RMF MVS CPU Percent	RMF L CPU Percent
LPAR400J:SYSL:MVSSYS	91	87.1	79.7
- Operator Alerts:** A table showing system alerts.

Managed System	SYSLOG	RMF	SMF
LPAR400J:SYSL:MVSSYS	False	Not Active	Not Recording
- Situation Event Console:** A table showing critical alerts.

Severity	Status	Owner	Situation Name
Critical	Open		EW_Demo_Thread_Alert
Critical	Open		Dist_DB2_Net_Alert
Critical	Open		EW_Demo_CF_Alert
- DASD High I/O MSR Time:** A table showing disk I/O performance.

Address	Volume	Storage Group	Response	I/O Rate	Cache Status	Per Res
0X32D0	PAGL03	N/A	2.6	13.7	Active	
0X32D1	PAGL04					
0X3842	TDSHR1					

Creating A Management By Exception Workspace

Specify a filter option of CPU greater than 'n' percent

Filters this portion of the display

High CPU Tasks

CPU Percent	Job Name	SvcClass	SvcClass Period	ASID	JESJOBID
80.0	SWONGA1	BATCH	2	0X002C	JOB15263
10.0	VC02H00L	STC	2	0X00AC	STC14973
2.1	NET31	SYS			

Filters

CPU Percent > 1.0

Filter ID	Field	Operator	Value
1	CPU Percent	>	1.0

Data Snapshot

CPU Percent	Job Name	SvcClass	SvcClass Period	ASID	JES
80.0	SWONGA1	BATCH	2	0X002C	JOB1
10.0	VC02H00L	STC	2	0X00AC	STC1
2.1	NET31	SYSSTC	1	0X0068	STC1
0.8	VCCTH00L	STCCMS	2	0X00D0	STC1
0.4	GRS	SYSTEM	1	0X0007	
0.4	VC02H00L	SYSTEM	1	0X0006	

Tape Mount Pending

Managed System	Dropped Ready	Tape Mounts Pending	Not Responding

DASD High I/O MSR Time

Address	Volume	Storage Group	Response	I/O Rate	Cache Status	Per Res
0X32D0	PAGL03	N/A	2.6	13.7	Active	
0X32D1	PAGL04	N/A	2.3	13.4	Active	
0X3842	TDSHR1	SGTDSHR	4.5	0.0	Active	

Take Action

Action Name: <Select Action>

Command:

Tivoli Enterprise Portal Customization

General Recommendations

- Understand the target audience
 - ▶ Understand their technical or management requirements
 - ▶ Understand their capabilities (display types, etc.)
- Understand the capabilities of the TEP
 - ▶ Be aware of the ability to combine information from a variety of sources
- Understand that custom TEP workspace design is an iterative process
 - ▶ Create prototypes and test
 - ▶ You probably will not get it perfect the first time
 - ▶ Improve and optimize
- Test thoroughly to ensure that displays are responsive and meet requirements



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