



IBM Software Group

OMEGAMON XE V4.1 New Features And Migration Considerations

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@business on demand.

Agenda

- What's been happening with OMEGAMON
 - ▶ New OMEGAMON Versions
 - ▶ About ITM6
 - ▶ OMEGAMON V4.1 Enhancements
 - ▶ New OMEGAMON Offerings
- V4.1 Migration Considerations
 - ▶ Migration strategies and sources of information



OMEGAMON V4.1: A New Version Of OMEGAMON



New Releases of IBM Tivoli Monitoring Solutions

All new product releases - GA during 4Q06 except as noted

Monitoring

IBM Tivoli OMEGAMON XE

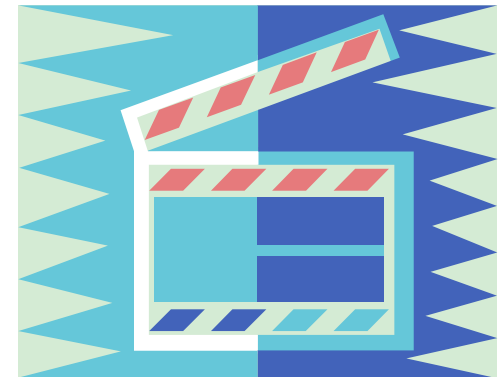
- ▶ z/OS V4.1.0 (*First Quarter 2007 availability*)
- ▶ CICS on z/OS V4.1.0
- ▶ IMS on z/OS V4.1.0
- ▶ DB2 Performance Expert on z/OS V4.1.0
- ▶ DB2 Performance Monitor on z/OS V4.1.0
- ▶ Mainframe Networks V4.1.0
- ▶ Storage on z/OS V4.1.0
- ▶ z/VM and Linux V4.1.0 - (*A New Tivoli Solution*)
- IBM OMEGAMON z/OS Management Console V4.1.0 (*First Quarter 2007 availability*)
- Installation and Customization Assistance Tool (ICAT) V3.1.0 – a component with OMEGAMON products



OMEGAMON V4.1 – Roadmap And Directions

Objectives

- Customer Satisfaction
 - ▶ Globalization
 - ▶ Exploitation of new OS and middleware releases
 - ▶ Customer Enhancements
- Portfolio Simplification
 - ▶ Candle Management Workstation and OMEGAMON II continued movement to TEP
 - ▶ Merging of functionality in product suites where it makes sense
- Integration
 - ▶ Dynamic Workspace Linking
 - ▶ Launch in Context
 - TSLA, TBSM, and more
 - ▶ Tivoli Data Warehouse – pruning and summarization
- Serviceability
 - ▶ Problem Determination Guides
 - ▶ IBM Support Assistant plug-ins
 - ▶ Agent Versioning support
 - ▶ ICAT enhancements



Major New Common OMEGAMON Capabilities

- **Added Globalization to Group 1 languages**
 - ▶ French, German, Italian, Spanish, Portuguese, Chinese, Japanese, Korean
- **Extended Interoperability via Dynamic Workspace Linking**
 - ▶ intelligently link to other workspaces using the context available at the time of link execution to reduce problem resolution time
- **Added zIIP monitoring by OMEGAMON XE on z/OS & XE on DB2 PE/PM on z/OS**
 - ▶ zIIP address spaces, service classes, LPAR data, DDF server thread data, workloads eligible for zIIP that are running on standard CPUs
- **Extended Tivoli Data Warehouse (TDW) with support for Pruning and Summarization**
 - ▶ Automatic deletion of data and consolidated reporting by groups, dates, etc.
- **Support for Agent Versioning added**
 - ▶ Multi-product version support enable incremental deployment of OMEGAMON 4.1.0 products



Tivoli Enterprise Portal - The TEP Integration And Ease Of Navigation Via The Link

The link wizard will allow for building links to provide drill down navigation.

Link from icons or from other areas in the panel.

Note! All times are specific date and time is Friday, Dec 9, 2005 07:28:46 AM. Display calendar for 1 week.

	12/09/05 07:28:46	0	BP0	4000
	12/09/05 07:28:46	0	BP1	4000
	12/09/05 07:28:46	0	BP2	4000

Link from the panel or link from an icon

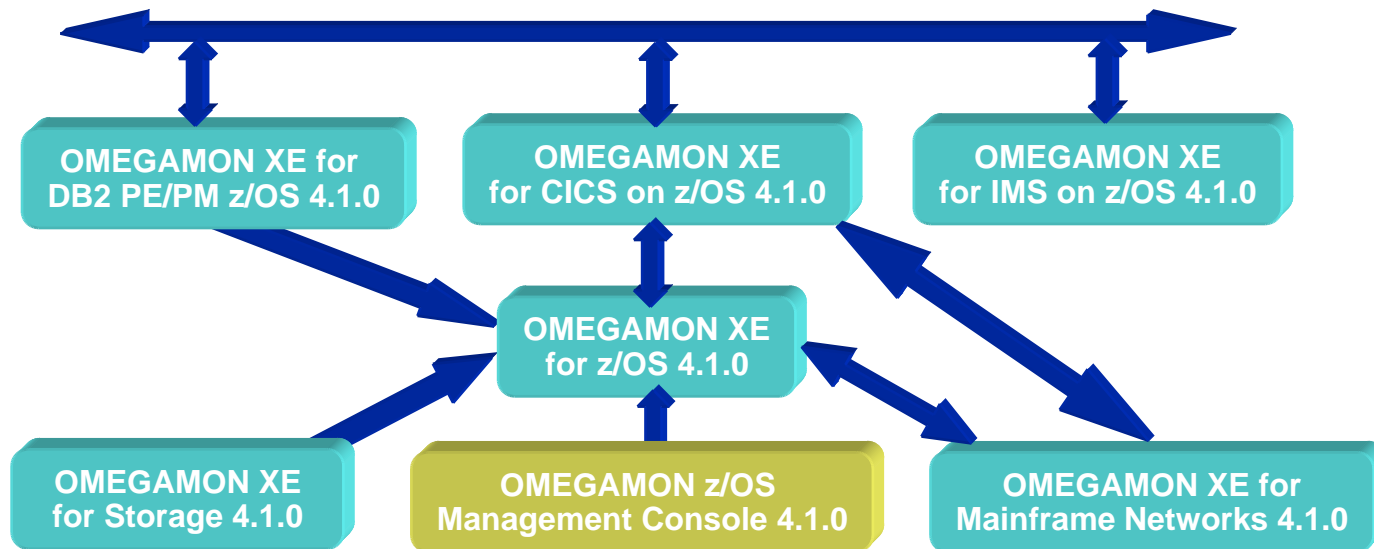
IMS
IMS DB
IMS TM

V4.1 Adds Dynamic Workspace Linking Functionality

Problem: How do I quickly find a potential problem that requires multiple monitoring products?

Scenario: Dynamically link in context between IMS and CICS

Solution: Dynamic Workspace Linking
Product provided links & user customized

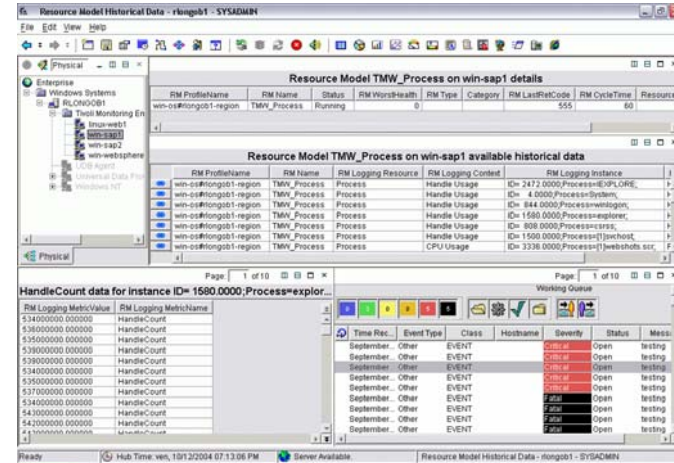


Understanding ITM6 Capabilities



Tivoli Monitoring Capabilities with ITM 6.1

- Single Portal Presenting combined end to end Resource monitoring DM, ITM5, OMEGAMON (zSeries and Distributed) and ITM 6.
- All delivered through the Tivoli Enterprise Portal
- This is an integration of ITM 5 and ITM 6 monitors
- Integration is the key**



Platforms	Databases	Web Infrastructure	Business Integration	Applications	Messaging & Collaboration	Virtual Servers & Clustering
UNIX	DB2	WebSphere (z/OS & Distribute)	CICS	SAP, mySAP.com	Exchange	Citrix
Windows						
Linux	Oracle	IIS	IMS	.NET	Lotus Domino	VMware
z/OS	MS SQL					iPlanet
OS/400		Sybase	Apache	WAS MQ Integrator	Siebel	
Netware	Informix	WebLogic	HACMP Clustering			
Active Directory						



About ITM6

- ITM6 is an integration of Tivoli monitoring technologies
- ITM6 adds capability to the TEP
 - ▶ History capabilities
 - ▶ Policy enhancements
 - ▶ A more fully integrated portal
- OMEGAMON XE V4.1 adds exploitation for ITM6 capabilities
 - ▶ ITM6 included as part of the packaging
- OMEGAMON V3.1 z/OS installation required the addition of ITM6 FMIDs



ITM6 Historical Enhancements

History Collection Configuration

Select a product
Windows OS

Select Attribute Groups

Group	Collection	Collection Interval	Collection Location	Warehouse Interval	Summarize Yearly	Prune Yearly	Summarize Quarterly	Pr Qu:
NT_Device_Dependencies								
NT_Devices								
NT_Event_Log								
NT_Monitored_Logs_Report								
NT_Paging_File								
NT_Printer								
NT_Processor								
NT_Print_Job								
NT_Services								
NT_Service_Dependencies								

Configuration Controls

Collection Interval: 15 minutes

Collection Location: TEMA

Warehouse Interval: 1 day

Summarization

- Yearly
- Quarterly
- Monthly
- Weekly
- Daily
- Hourly

Pruning

- Yearly keep [] Years
- Quarterly keep [] Years
- Monthly keep [] Months
- Weekly keep [] Months
- Daily keep [] Days
- Hourly keep [] Days
- Detailed data keep [] Days

Configure Groups | Unconfigure Groups | Show Default Groups | Start Collection | Stop Collection | Refresh Status

ITM adds enhancements to TDW Support for summarization and pruning OMEGAMON V4.1 exploits this feature



Policy Enhancements

The screenshot displays the Tivoli Policy Manager interface, specifically the Workflow Editor for the 'NT_Disk_Busy' policy. The interface is divided into several sections:

- Policy Details:** Shows the policy name 'NT_Disk_Busy', its status (Distributed, Auto start), and other settings like 'Save results' (checked), 'Correlate by' (Managed System), and 'Restart' (checked).
- Workflow Editor:** Contains a 'Workflow components' pane on the left with 'General activities' and 'Extensions' tabs. A 'Connect 2 activities' tool is visible.
- Grapher View:** The main workspace showing a flowchart:
 - Start:** 'Wait until a situation is False' activity.
 - Condition:** 'Wait until NT_Percent_Disk_Time is True' activity.
 - Evaluation:** 'Evaluate NT_Missing_Process now' activity.
 - Branching:**
 - If 'Situation is true', the flow goes to 'Take action: at 1:00 c:\m...'.
 - If 'Situation is false', the flow goes to 'Take action: net start sc...'.
 - Error Handling:** An 'Error' path from the 'net start' action leads to another 'Take action: at 1:00 c:\m...' activity.
 - Completion:** An 'Action succeeded' path from the 'net start' action leads to 'Wait until CICSplex_AIDs_Critical is F false'.
- Bottom Panel:** Shows the user 'SYSADMIN' and checkboxes for 'Modify', 'Start/Stop', and 'Apply'.

OMEGAMON V4.1 Enhancements



OMEGAMON XE on z/OS v4.1.0

Highlights at a Glance

- zIIP processor usage and reporting – back fit to v310 as well (July 06)
- Basic RMF III launch, optional RMF collection for CF data
- Integration:
 - ▶ Enclave DB2 and z/OS transplex, DWL to OMEGAMON XEs, NetView on z/OS and z/OS Management Console (zMC)
- I/O rate by address space from CUA
- Real Storage information from CUA
- Tape drive situation support
- z/OS Exploitation
 - ▶ CF structure duplexing reporting
 - ▶ Plex wide zAAP support
- Merging of OM XE for USS into OM XE on z/OS



zIIP And zAAP Support In OMEGAMON XE For z/OS V3.1

Address Space Overview - IBM-0792DD00843 - SYSADMIN

File Edit View Help

View: Physical

- 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
- J80
- DB2

CPU Usage Page: 2 of 5

Where usage greater than 0%

Selected Execution States Page: 1 of 5

Greater than 5%

Address Space Counts

Address Space	Address Space Count	Started Task Count	Batch Job Count	TSO Count
	420	255	134	

Address Space CPU Utilization Summary Page: 2 of 5

Address Space	IFA Percent	IFA on CP Percent	zIIP Percent	zIIP on CP Percent
	1.3	0.0	0.0	0.0
	1.3	0.0	0.0	0.0
	1.3	0.0	0.0	0.0
	0.8	0.0	0.0	0.0

Central Storage Frame Count Page: 1 of 7

Where frame counts are greater than 0

Fixed Storage Page: 1 of 7

Currently available zIIP and zAAP data in OMEGAMON "Classic"

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+XMCPU10 Task      ZMENU  VTM      OM/DEX * V550./C J80 08/09/06 16:24:50
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
+      CPU%  TCB%  SRB%  IFA%  IFC%  IIP%  IIC%  System % 0-----> 200
+      XCFAS  20.8   .5  20.3   .0   .0   .0   .0   TCB: 178 ----->
+      PURFIG 22.8  21.6  1.2   .0   .0   .0   .0   SRB: 63  ----->
+      USSW07 13.4  13.4   .0   .0   .0   .0   .0   NCL: 61  ----->
+      CICS3A8A 16.8  16.7   .0   .0   .0   .0   .0   MVS: 63  ----->
+      U0220045 17.7   2.6   .0  14.3   .8   .0   .0   IFA: 23  ->
+      USSW06 12.9  12.9   .0   .0   .0   .0   .0   IFC: 2   >
+                                           IIP: 0   >
+                                           IIC: 0   >
+                                           0-----> 100
+
+      CPU00 46 ----->
+      UNK01 2   >
+      CPU02 47 ----->
+      CPU03 43 ----->
+      CPU04 38 ----->
+      CPU05 28 -->
+      CPU06 20 -->
+      CPU07 13 ->
+      CPU08 9   >
+      CPU09 6   >
+      CPU0A 5   >
+      CPU0B 4   >
+      CPU0C 3   >
+      CPU0D 3   >
+      CPU0E 2   >
+      CPU0F 3   >
+      CPU10 3   >
+      CPU11 4   >
+      CPU12 2   >
+      CPU13 3   >
+      CPU14 3   >
+      CPU15 3   >
+      CPU16 3   >
+      CPU17 2   >
+      CPU18 3   >
+      CPU19 2   >
+      CPU1A 2   >
+      IFA1B 46 ----->
+      IFA1C 43 ----->
+      IIP1D 0   >
+      IIP1E 0   >
+      PAR07 13 ->

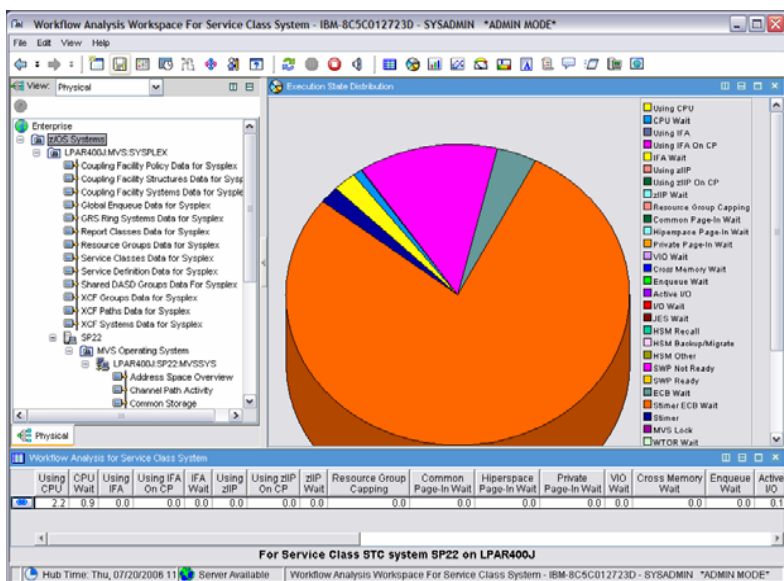
```

Command output where zAAP and zIIP data is available

- ▶ SIFA IFA% and IFA% on CP by address space and enclaves
- ▶ SIIP zIIP% and zIIP% on CP by address space and enclaves
- ▶ MCPU Added IFA and zIIP Utilization by address space, enclaves and processor
- ▶ DEX Added IFA/zIIP execution delay reasons to address space bottleneck analysis
- ▶ IANL Added IFA/zIIP impactors to address space impact analysis
- ▶ SYS Added IFA/zIIP configuration information to system environment details
- ▶ AENV Added IFA/zIIP percentages to address space environment details
- ▶ TRAC Added IFA/zIIP to address space resource utilization by time-slice
- ▶ XACB Added IFA/zIIP missing processor exceptions to XACB LIST=XCPU

Additional zIIP and zAAP data available in OMEGAMON XE on z/OS Version 4.1.0 (1st Quarter 2007)

- Sysplex-level Workspaces where zAAP and zIIP data will be available



- ▶ Address Spaces Workspace for Service Class Period
- ▶ Address Spaces Workspace for Service Class
- ▶ Address Space Workspace for Report Class
- ▶ Workflow Analysis Workspace for Service Class
- ▶ Workflow Analysis Workspace for Service Class Period
- ▶ Workflow Analysis Workspace for Service Class System
- ▶ Workflow Analysis Workspace for Service Class Period System
- ▶ Resource Groups Data for Sysplex
- ▶ Service Classes Workspace for Resource Group

- Address space and resource group zAAP and zIIP data is available in both real-time and historical workspaces. Workflow Analysis data is real-time only.

V4.1 Provides Integration of UNIX System Services into OMEGAMON For z/OS

The screenshot displays the 'z/OS UNIX System Services Overview' window. The interface includes a navigation tree on the left with 'z/OS UNIX System Services' selected. The main area is divided into several panels:

- UNIX Processes:** A table listing processes with columns for ASID, A/S Name, CPU Time%, Command Name, Jobname, and UNIX Run Time%.

ASID	A/S Name	CPU Time%	Command Name	Jobname	UNIX Run Time%
0X000E	OMVS	0.00	BPXPINPR	BPX0INIT	0.04
0X001B	FTP221	0.13	EZBTCPIP	TCPIP22	0.00
0X001F	TCPIP22	0.04	PORTMAP	PORT22	0.00
0X0026	NET36	0.00	FTPD	FTP221	0.00
0X0050	IMS8HCON	0.00	EZBTTSSL	TCPIP22	0.00
0X0056	IMS9DCON	0.00	EZBTMCTL	TCPIP22	0.00
0X0077	BPX0INIT	0.00	EZACFALG	TCPIP22	0.00
0X007F	SYSLOGD7	0.03	EZASASUB	TCPIP22	0.00
0X0080	MQRGCHIN	0.00	inetd	INETD4	0.00
0X0081	INETD4	0.38	ISTMGCEH	NET36	0.28
0X0082	K2D5ST22	0.00	EZBTMST	TCPIP22	0.00
0X0083	HLDS22	0.01	SQESERV	SNMPQE22	0.00
0X0085	PORT22	0.00	syslogd	SYSLOGD7	0.00
0X0086	OSNMPD22	0.00	H7STKSCH	HZSPROC	0.00
0X0087	SNMPQE22	0.00			
- UNIX Kernel:** A summary table showing Syscall Rate (0.000), CPU% (0.00), I/Os Rate (0.000), Number of Processes (58), and Max Processes (300).
- UNIX Logged-on Users:** A table showing a single user: JFIED3 (FIEDLER, JOHN) with a login time of 07/26/06 18:35:33.
- UNIX Mounted File Systems:** A list of mount points and file system names, including /zfs, /SP23/tmp, /SP13/tmp, /SP12/tmp, /SYSL/tmp, /SP11/tmp, /SP22/tmp, /SYSG/tmp, /SYSA/tmp, /u, and /u/ified3.
- Process Utilization:** A bar chart titled 'Process Utilization' showing 'Used Processes%' at 19.33% and 'Max Processes' at 320.

The status bar at the bottom indicates 'Hub Time: Wed, 07/26/2006 06:4' and 'Server Available'.

Provides links to seven z/OS UNIX Systems Services workspaces



OMEGAMON XE for CICS on z/OS v4.1.0

Highlights at a Glance

- **Continued Expansion Of CICS TS Support**
 - ▶ URIMAP summary, global counts and details for CICS web clients
 - ▶ Web Service analysis reports for Web Service Details, Virtual Host Detail, Pipeline Detail, Document Template Detail
 - ▶ Business Transaction Services (BTS) support for long running processes, type, name, container, activity
 - ▶ Recovery Manager UOW reporting for application performance tuning
 - ▶ Enqueue pool details for recovery
 - ▶ Enterprise Java analysis reporting and Enterprise Java analysis report, Request model
- **Dynamic Workspace Linking**
 - ▶ CICS Transaction -> DB2 Thread, CICS Transaction Analysis data,
 - ▶ DB2 Thread Exception Detail report, Shared Temporary Storage queue data -> CF Structures Data for Sysplex workspace, Log Stream Analysis data -> Coupling Facility Structures Data for Sysplex workspace
- **CUA Migration to XE – SLA and ATF**
- **Integration with CICS PA**



New Reports To Exploit CICS TS 3.1 Functionality

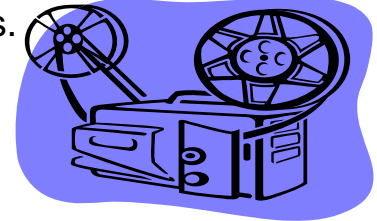
- Business Transaction Services (BTS) Analysis
 - ▶ ProcessType Detail
 - ▶ Process Name Detail
 - ▶ Container Detail
 - ▶ Activity Detail
- Enqueue Analysis
 - ▶ Enqueue Pool Details
- Enterprise Java Analysis
 - ▶ CORBASERVER Details
 - ▶ DJAR Details
 - ▶ Enterprise Java Bean Details
 - ▶ Request Model Details
- Exit Program Analysis
 - ▶ Exit Program Detail
- Recovery Manager Analysis
 - ▶ Recovery Manager Summary
 - ▶ Unit-of-work Link Detail
 - ▶ Unit-of-work DSN Failure
- URIMAP Analysis
 - ▶ URIMAP Summary
 - ▶ URIMAP Global Counts
 - ▶ URIMAP Details
- Web Services Analysis
 - ▶ Web Service Detail
 - ▶ Virtual Host Detail
 - ▶ Pipeline Detail
 - ▶ Document Template Detail
- Work Request Analysis
 - ▶ Work Request Details



OMEGAMON XE for IMS on z/OS v4.1.0

Highlights at a Glance

- TRF reporting capability has increased precision expanding transactions to the millisecond
- DL/I call reporting for full function and Fast Path WFI regions - accumulation of all call types issued by an application during the processing of a transaction and the number of each call type issued by an application during transaction processing
- Migration from classic: region occupancy %s has been added to Dependent Region statistics
- HALDB support – DB summaries, partition details, VSAM / OSAM statistics.
- DBCTL detailed thread reporting for monitoring activity allowing the detection and prevention of application bottlenecks and response time problems.
- Enhanced IMS Connect reporting expanding capability to provide summary of transaction performance, details about every transaction processed and auto-discovery of IMS Connect tasks.
- Product provided Dynamic Workspace Links (DWL) to other OMEGAMONs (DB2 and CICS) have been added for greater integration.



OMEGAMON XE For IMS V4.1 Adds Support For HALDB

IMS HALDB Summary - IBM-93CF507EC63 - SYSADMIN *ADMIN MODE*

File Edit View Help

View: Physical

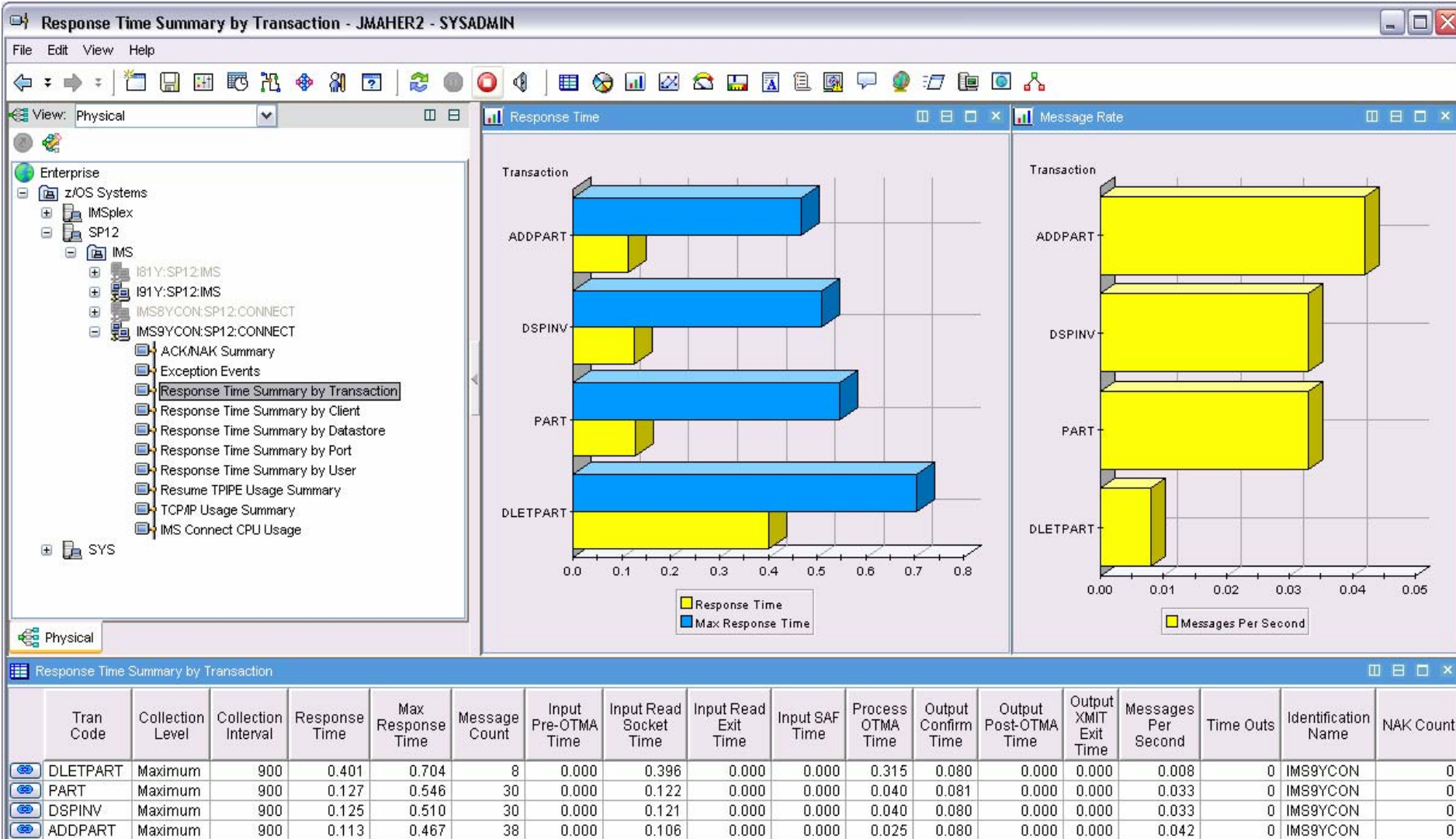
Partition Count Information

Database Name	Database Version Number	Database Organization	Database Access Method	Partition Selection Method	Partition Count	Partition Init Required Count	Partition Stopped Count	Partition OLR Active Count	Partition Selection Exit	Longest Key String	Timestamp
VSAM/OSAM Information		DAM	VSAM	Key	3	0	0	0		10	05/19/06 19:04:27
VSAM Subpool Statistics		DAM	Unknown	Key	3	0	0	0		10	05/19/06 19:04:27
Show Partition Information		NDEX	VSAM	Key	3	0	0	0		10	05/19/06 19:04:27
		DAM	OSAM	Key	3	0	0	0		10	05/19/06 19:04:27

- Partition Count
- Partition Init Required Count
- Partition Stopped Count
- Partition OLR Active Count

IMS HALDB Summary

OMEGAMON XE For IMS V4.1 Adds More IMS Connect Information



OMEGAMON XE for DB2 PM/PE on z/OS v4.1.0

Highlights at a Glance

- ❖ Support for zIIP processor usage that is being introduced on the System z9 platform from a DB2 perspective
 - ❖ Integration with SQL PA from OMEGAMON Classic
 - ❖ ATF: Allow extended collection time and externalize FLUSH parameter
 - ❖ Enhanced Thread Overview: Show additional LOCK information and Changed Pages in all Group Buffer Pools.
 - ❖ Statistics Spreadsheet output (IFCID 225)
 - ❖ IFCID 225 (DBM1 Virtual Storage) - Show current virtual storage usage below and above 2 GB on Classic end user interface
 - ❖ Usability improvements in OMEGAMON Classic – Tab key usage on selected panels
-
- Dynamic Workspace Linkage (DWL)
 - DB2 -> z/OS, DB2 <-> CICS, DB2 <-> IMS
 - Agent Versioning
 - NLS support
 - French, German, Italian, Spanish, Portuguese, Chinese (simple & traditional), Japanese, Korean
 - DB2 Version 9 support

Note: (❖) shipped also with V3.1.0 since GA



DB2 Thread Enclave workspace has a link to z/OS Enclave Information

The screenshot shows the 'Thread Enclave - IBM-97209F4B148 - SYSADMIN *ADMIN MODE*' application window. The left sidebar shows a tree view with 'Thread Activity' selected. The main area displays a table of thread information. A context menu is open over a row, listing several options. A red arrow points to the option 'OMEGAMON XE for MVS Enclaves Information'.

Plan	Connection ID	Correlation ID	Authorization ID	Connection Type	End User ID	Owner Jobname	AGNT ASID	Package DBRM
SPJIM81D	DB2CALL	SWONG81D	SWONG	Batch		SWONG81D	225	SPJIM81D

Enclave Export Token	Encl Stok	Total Usings	Total Delays
0000000000000000	000000B40	10976	4348

Service Class	Service Periods	Period Number	Performance Index	Importance Level	Duration SU	Percentile	Velocity or Response Time Goal	Unit	Type	Procedure Name	ID	network ID	PI
BATCH	2	2	0.21	3	700	0.00	0.30		JES		SWONG		SPJIM

Service Class	Service Class Description	Workload Name	Service Class Workload Description	Service Class Resource Group	Service Class Resource Description
BATCH	Batch Jobs	BATCH	Batch Jobs		

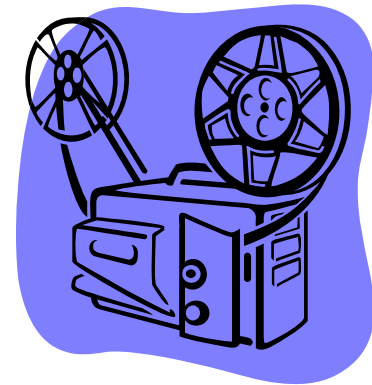
Workload Manager	WLM Descriptor	Subsystem Type	WLM Procedure	Pe
D81D	d81d wlm appl env	JES	D81DW...	MSGCL

The link will allow for navigation to enclave detail information

OMEGAMON XE for Storage on z/OS v4.1.0

Highlights at a Glance

- New storage toolkit for DFHSM and DFDSS functions for database administrators in the TEP interface provide capability to quickly create commands or schedule actions to maintain and administer DASD storage.
- Top ten volume reports
- New dataset attribute database allows versatile and granular reporting capabilities at the dataset level that you can administer via the new storage toolkit function.
- New problem solving workspaces adding to your problem determination capabilities – Intelligent situation analysis
- Integration:
 - ▶ DWL to other OMEGAMON XE on z/OS
 - ▶ Launch of Total Productivity Center (TPC)



Dataset Space Summary and Storage Toolkit

Dataset Space Summary - TEHRLICH - SYSADMIN *ADMIN MODE*

File Edit View Help

View: Physical

Top Datasets by Allocated Space

Dataset Name	Volser	Allocated Tracks	Used Tracks	Unused Tracks	Extents	DSORG
PKGS.REL.SYSMOD	PKG002	115500	115500	0	28	PDSE
HSM.BCDSA.DATA	HSMBCD	80205	69210	10995	1	VSAM
CLIENT.BEAR.BSWA.MONITOR	CLNT05	60000	60000	0	4	Physical_Sequential
SYS1.HASPACE	SPL13B	50040	50040	0	1	PS_Unmovable
SYS1.HASPACE	SPL13C	50040	50040	0	1	PS_Unmovable
SYS1.HASPACE	SPL13E	50040	50040	0	1	PS_Unmovable
SYS1.HASPACE	SPL331	50040	50040	0	1	PS_Unmovable
SYS1.HASPACE	SPOOL2	50040	50040	0	1	PS_Unmovable
SYS1.HASPACE	SPOOL3	50040	50040	0	1	PS_Unmovable
	SPL112	50040	50040	0	1	PS_Unmovable
	SPL13A	50040	50040	0	1	PS_Unmovable
	SPOOL1	50040	50040	0	1	PS_Unmovable
	PAGL02	50025	50025	0	1	VSAM
	PAGA02	50025	50025	0	1	VSAM

Dataset Actions...

- Take Action...
- Link To...
- Launch...
- Link Anchor...
- Export ...
- Dataset Actions...**
 - Backup
 - Migrate
 - Move & Copy
 - Recall
 - Recover
 - Release Space
- Split vertically
- Split horizontally
- Remove
- Print Preview...
- Print...
- Properties...

Top Datasets by Extents

Dataset Name	Volser	Extents
DB2C81.DSNDDB.	A001	123
OMVS.DOKAM.USER.DIR	OMV005	123
OMVS.RGATS.USER.DIR	OMV011	123

Top Datasets by CA Splits

Dataset Name	Volser	CA Splits	CI Splits	As
HSM.BCDSA.DATA	HSMBCD	1868	69722	HSM.BCDSA
HSM.OCDS.DATA	HSMOCD	1656	1869	HSM.OCDS
HSM.MCDS.DATA	HSMMC1	1156	46595	HSM.MCDS

Top Datasets by Unused Space

Dataset Name	Volser	Unused Tracks	Allocated Tracks	Used Tracks	E
DCPC.PRODTAPE.CQ	TSO004	-55011	51	55062	
PAGE.SYSG.LOCAL06.DATA	PAGG06	50025	50025	0	
PAGE.SYSG.LOCAL02.DATA	PAGG02	50025	50025	0	
PAGE.SYSG.LOCAL04.DATA	PAGG04	50025	50025	0	
PAGE.SYSG.LOCAL03.DATA	PAGG03	50025	50025	0	
PAGE.SYSG.LOCAL05.DATA	PAGG05	50025	50025	0	

Top Datasets by CI Splits

Dataset Name	Volser	CI Splits	CA Splits	
HSM.BCDSA.DATA	HSMBCD	69722	1868	HSM.BCDS.
HSM.MCDS.DATA	HSMMC1	46595	1156	HSM.MCDS
TDSV.VC.CSI.DATA	ST0011	33282	172	TDSV.VC.C:
ALORI3.DDIR.D	PRI174	29276	261	ALORI3.DD
TDSV.VD.CSI.DATA	ST0003	23429	100	TDSV.VD.C:
VKUMA.OG340.@SYSAVK.RKOGCKP.DATA	PRI174	22923	109	VKUMA.OG:

Hub Time: Thu, 05/25/2006 02:59 PM Server Available Dataset Space Summary - TEHRLICH - SYSADMIN *ADMIN MODE*

OMEGAMON XE for Mainframe Networks on z/OS v4.1.0

Highlights at a Glance

- New performance reports for VTAM buffer pool and address space workspaces and SNA information
- Enhanced FTP records as provided by the z/OS Communications Server Network Management Interface resulting in performance improvement.
- TN3270 server session workspaces providing performance and availability metrics for systems running z/OS version 1.8.
- Advanced historical reporting using both new Tivoli Enterprise Portal workspaces and raw SQL queries against the Tivoli Data Warehouse
- Enhancements to Enterprise Extender (EE) reporting, reporting as in the previous release, but also High Performance Router (HPR) connections that do not flow over EE connections, using the HPR wildcarding function available through the z/OS version 1.8 NMI
- DWL to OMEGAMON XE on z/OS and NetView on z/OS for greater integration.



New VTAM Buffer Pool Summary Workspace

VTAM Buffer Pool Summary - oscar1 - SYSADMIN

File Edit View Help

View: Physical

Enterprise

- z/OS Systems
 - IPO1
 - Mainframe Networks
 - V410N3:IPO1:KN3AGENT
 - TCP/IP
 - VTAM
 - VTAM:IPO1
 - Address Space
 - Buffer Pools**
 - CSM
 - EE
 - HPR

- OSCAR1

Physical

Total Buffers

Buffer Pool	Buffers in Use	Buffers Available
AP00	0	56
CRPL	9	75
IO00	1	799
LF00	8	22
LP00	2	10
SF00	13	51
SP00	0	21
BS00	0	28
XD00	0	5
TI00	0	360
CR44	2	48
CR48	1	11
TI00	0	16
TI00	0	8
TI00	0	1
TI200	0	1

Pools with Requests Queued

Buffer Pool	Queued Requests
AP00	0
CRPL	0
IO00	0
LF00	0
LP00	0
SF00	0
SP00	0
BS00	0
X000	0
TI00	0
CR44	0
CR48	0
TI00	0
TI00	0
TI200	0

VTAM Buffer Pool Summary

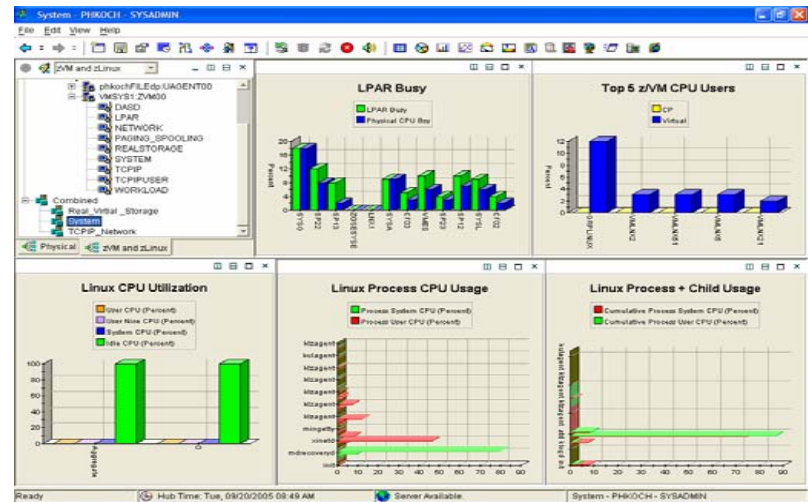
Collection Time	Buffer Pool Name	Buffer Size	Base Buffer Allocation	Total Buffers	Buffers in Use	Buffers Available	Static Buffers Available	Pool Thrashing	Times Expanded	Buffers Over Slowdown	Buffers Over Expansion	Pool Status	Queued Requests	Buffers for Queued Requests	Max Requests Queued	Max Bytes Allocated	Expansion Size (Buffers)	Expansion Size (Bytes)	Expansion Thresh
05/22/06 18:14:18	AP00	56	56	56	0	56	56	No	0	54	53	Normal	0	0	0	56	56	4096	
05/22/06 18:14:18	CRPL	144	75	75	9	66	66	No	0	66	37	Normal	0	0	0	576	75	12288	
05/22/06 18:14:18	IO00	482	800	800	1	799	799	No	0	794	774	Normal	0	0	0	2892	8	4096	
05/22/06 18:14:18	LF00	120	30	30	8	22	22	No	0	22	21	Normal	0	0	0	360	30	4096	
05/22/06 18:14:18	LP00	2032	12	12	2	10	10	No	0	10	8	Normal	0	0	0	4064	6	12288	
05/22/06 18:14:18	SF00	112	64	64	13	51	51	No	0	51	50	Normal	0	0	0	672	32	4096	
05/22/06 18:14:18	SP00	176	21	21	0	21	21	No	0	21	20	Normal	0	0	0	176	21	4096	
05/22/06 18:14:18	BS00	260	28	28	0	28	28	No	0	28	14	Normal	0	0	0	260	14	4096	
05/22/06 18:14:18	XD00	697	5	5	0	5	5	No	0	5	1	Normal	0	0	0	697	5	4096	
05/22/06 18:14:18	TI00	632	360	360	0	360	360	No	0	360	240	Normal	0	0	0	8216	60	40960	1
080			50	50	2	48	48	No	0	48	28	Normal	0	0	0	4080	10	40960	
VTAM Buffer Pool Details		176	12	12	1	11	11	No	0	11	9	Normal	0	0	0	8176	6	49152	
Link to VTAM Buffer Pool Details		004	16	16	0	16	16	No	0	16	1	Normal	0	0	0	1004	32	32768	
VTAM Buffer Pool Details		028	8	8	0	8	8	No	0	8	1	Normal	0	0	0	2028	32	65536	

- Link Wizard...
- Link Anchor...

A New OMEGAMON Offering OMEGAMON XE on z/VM and Linux V4.1.0

- Combined Offering
- Monitors zVM and Linux on System z
- Provides workspaces that display
 - Overall System Health
 - Workload metrics for logged-in users
 - Individual device metrics
 - LPAR Data
- Composite views of zLinux on VM
- Leverages the VM Performance Toolkit

***Integrated
Linux and zVM
Monitoring***



OM XE z/Vm and Linux Default Workspace

z/Vm Linux Systems - PHKMSM - SYSADMIN *ADMIN MODE*

File Edit View Help

View: Physical

Enterprise

- Linux Systems
 - vmInx10
 - Linux OS
 - z/Vm Linux Systems
 - CP-Owned_Devices(P)
 - DASD
 - LPAR
 - Network
 - Real_Storage
 - System
 - TCPIP
 - Workload

Physical

z/Vm PTK Collector Status

Time	Collector Name	Status
06/21/06 09:49:40	Performance Toolkit Collector	ACTIV
06/21/06 09:49:40	LPAR	ACTIV
06/21/06 09:49:40	System	ACTIV
06/21/06 09:49:40	Storage	ACTIV
06/21/06 09:49:40	CP Owned	ACTIV
06/21/06 09:49:40	DASD	ACTIV
06/21/06 09:49:40	Workload	ACTIV
06/21/06 09:49:40	Hipersocket	ACTIV
06/21/06 09:49:40	Virtual Switch	ACTIV
06/21/06 09:49:40	TCPIP	ACTIV
06/21/06 09:49:40	TCPIP User	ACTIV
06/21/06 09:49:40	Linux Application	INAC

Situation Event Console

Total Events: 2 | Item Filter: z/Vm Lir

Status	Situation Name	Display Item	Source
Open	ZVM_Avail_Mean2G_Low		vmInx10.tivlab.raleigh
Open	ZVM_LPAR_Busy_Critical		vmInx10.tivlab.raleigh

DASD Activity

Percent Busy

z/Vm User CPU Utilization

CP % of CPU, CPU Percent, Virtual CPU %

z/Vm User Working Set and Storage

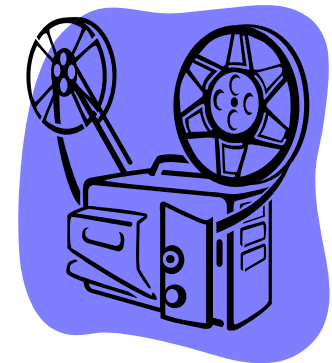
Resident Pages, Resident Pages 2G, Working Set Size

Hub Time: Wed, 06/21/2006 09:47 AM | Server Available | z/Vm Linux Systems - PHKMSM - SYSADMIN *ADMIN MODE*

IBM OMEGAMON z/OS Management Console v4.1.0

Highlights at a Glance

- Coupling Facility status extra details and policy name
- Coupling Facility Resource Manager (CFRM) status for contention issues
- LPAR Cluster status details
- Unix System Services dubbed address spaces that are running from a z/OS perspective
- Unix System Services processes running on the system
- DWL to OMEGAMON XE on z/OS for better integration and problem determination



Tivoli NetView for z/OS 5.2 – Integration With The TEP Example - NetView TCP/IP Connection Data Workspace

Tivoli Enterprise Portal | Tivoli software

File Edit View Help

Enterprise2

- DVIPA Connections
- DVIPA Definition and Status
- DVIPA Distributed Targets
- DVIPA Sysplex Distributors
- Formatted Packet Trace
- NetView Audit Log
- NetView Command Response
- NetView Log
- Session Data
- TCP/IP Connection Data**

TVT2004_C02NV_RLYLES2:KVVW00

Physical Enterprise2

Top 10 Connections based on Total Bytes

Bytes/Min

Socket Resource ID

Bytes In
Bytes Out

Top 10 Connections based on Retransmissions

Retransmissions/Min

Socket Resource ID

TCP/IP Connection Data Summary Table

Local IP Address	Local Port	Remote IP Address	Remote Port	Start Time	End Time	Bytes In	Bytes Out	Total Bytes	Bytes Units	Maximum Send Win
9.42.45.133	1031	9.42.9.129	17510	11/03/05 09:28:03		0.00	0.00	0.00	B	
9.42.45.133	1920	9.42.45.133	1030	11/03/05 09:27:02		0.00	0.00	0.00	B	
	1920		4022	11/03/05 09:27:02						
	1028		1027	11/03/05 09:24:39						
	1027		1025	11/03/05 09:24:33						
	1027		1025	11/03/05 09:24:23						
	1024		1025	11/03/05 09:22:09						
	4086		4086	11/03/05 09:22:09						
	4086		4086	09/30/05 16:56:01						
	4083		4083	09/30/05 16:50:59						

Link to navigate to the OMEGAMON for Mainframe Networks Connection workspace to view the most recent collected performance data for the connection.

NetView TCP/IP connection data workspace

09:50 AM Server Available. gh.ibm.com - PHK

Applet CMWApplet started Internet

SA Automation Integration With TEP

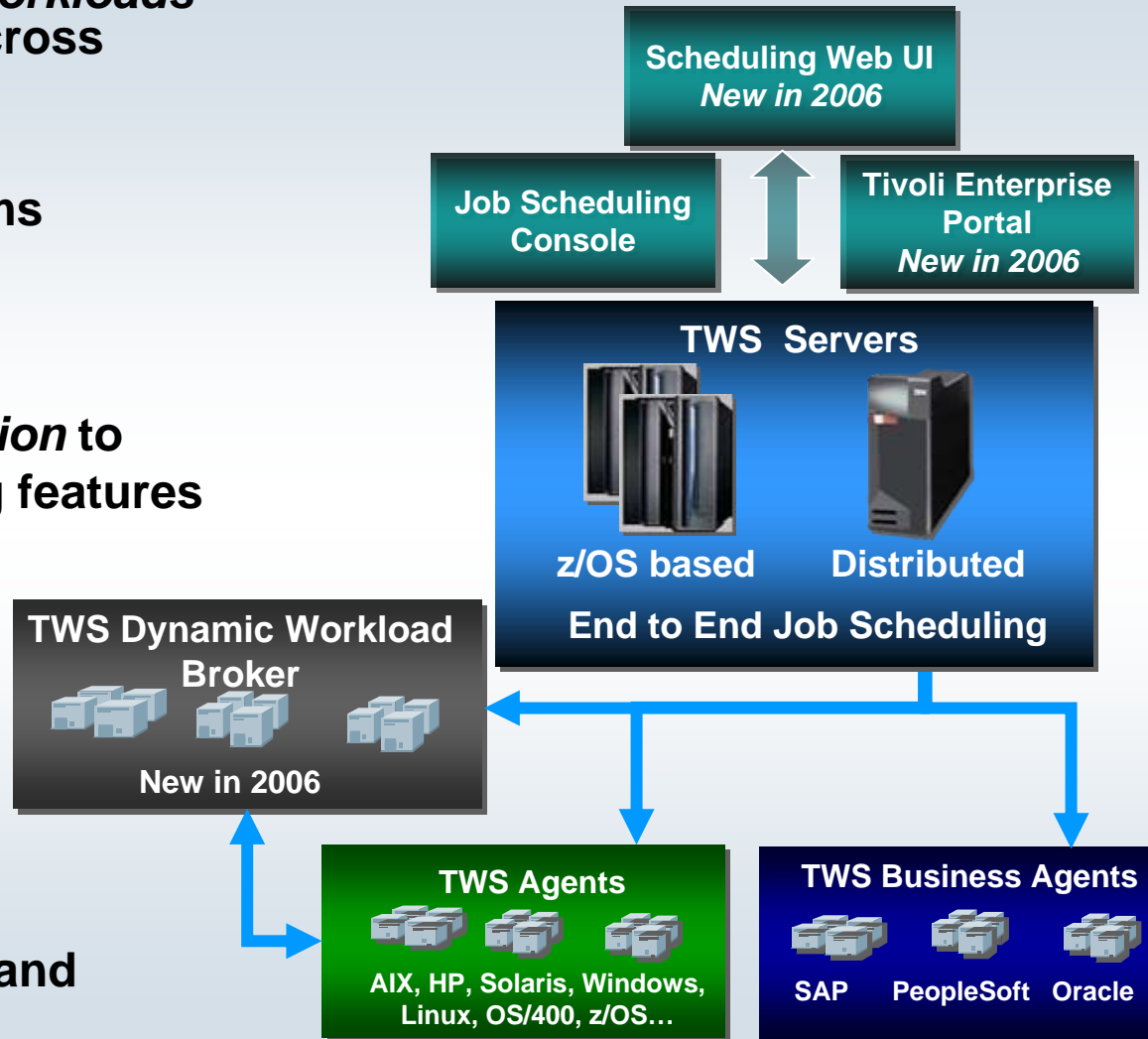
The screenshot displays the Tivoli Enterprise Portal (TEP) interface for monitoring system automation. The main window is titled 'INGLIST Compound Status' and features a line graph showing the number of problems over time. The graph shows a peak of 3 problems at 09:00-09:59. Below the graph is a table of system compounds. One compound, 'AOC1', is highlighted in red, indicating a 'PROBLEM' status. The 'Take Action' panel on the right allows for selecting an action and running it against the destination system(s).

Name	Type	System	Compound	Desired	Observed	Nature	Automation	Startable	Health	Auto	Hold	Description
ALWAYSUP	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	Appl linked to always UP high pri SVP
AMSINGLE	APG	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE	BASIC	INTERNAL	YES				ingle systems
AMSINGLE	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES				ingle systems
AMSINGL2	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES				ingle systems
AOC1	SYG	AOC1	PROBLEM	AVAILABLE	PROBLEM	BASIC	INTERNAL	YES				
AOC1	SYS	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES				
APLMTRA	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	NORMAL	YES	NO	API with monitor routine MTRA
APLMTRB	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	NORMAL	YES	NO	APL with monitor MTRB1, MTRB2, MTRB3
ASSISTD	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	Application with assist mode (Display)
ASSISTL	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	Application with assist mode (Log)
BZOENEW	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	Class for emulation appls
CAPMSBLA	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	APL with Captured Messages Limit = 0
CAPMSBLB	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	APL with Captured Messages Limit = 10
CAPMSBLC	APL	AOC1	SATISFACTORY	AVAILABLE	AVAILABLE		IDLE	YES	N/A	YES	NO	APL with Captured Messages Limit = 999

**INGLIST
example**

IBM Tivoli Workload Scheduler

- **Single solution to integrate workloads** from multiple applications, across multiple platforms.
- **Improves availability and integrity** of production systems
- **High Availability and Fault Tolerant** architecture.
- **Enhanced TWS-WLM integration** to support new WLM scheduling features
- **New TEP integration** to monitor the status of TWS critical jobs
- **Dynamic real-time workload automation** in addition to traditional calendar and event-based scheduling
- **New Critical Path Monitoring** and management feature for TWS



OMEGAMON V4.1 Migration Considerations

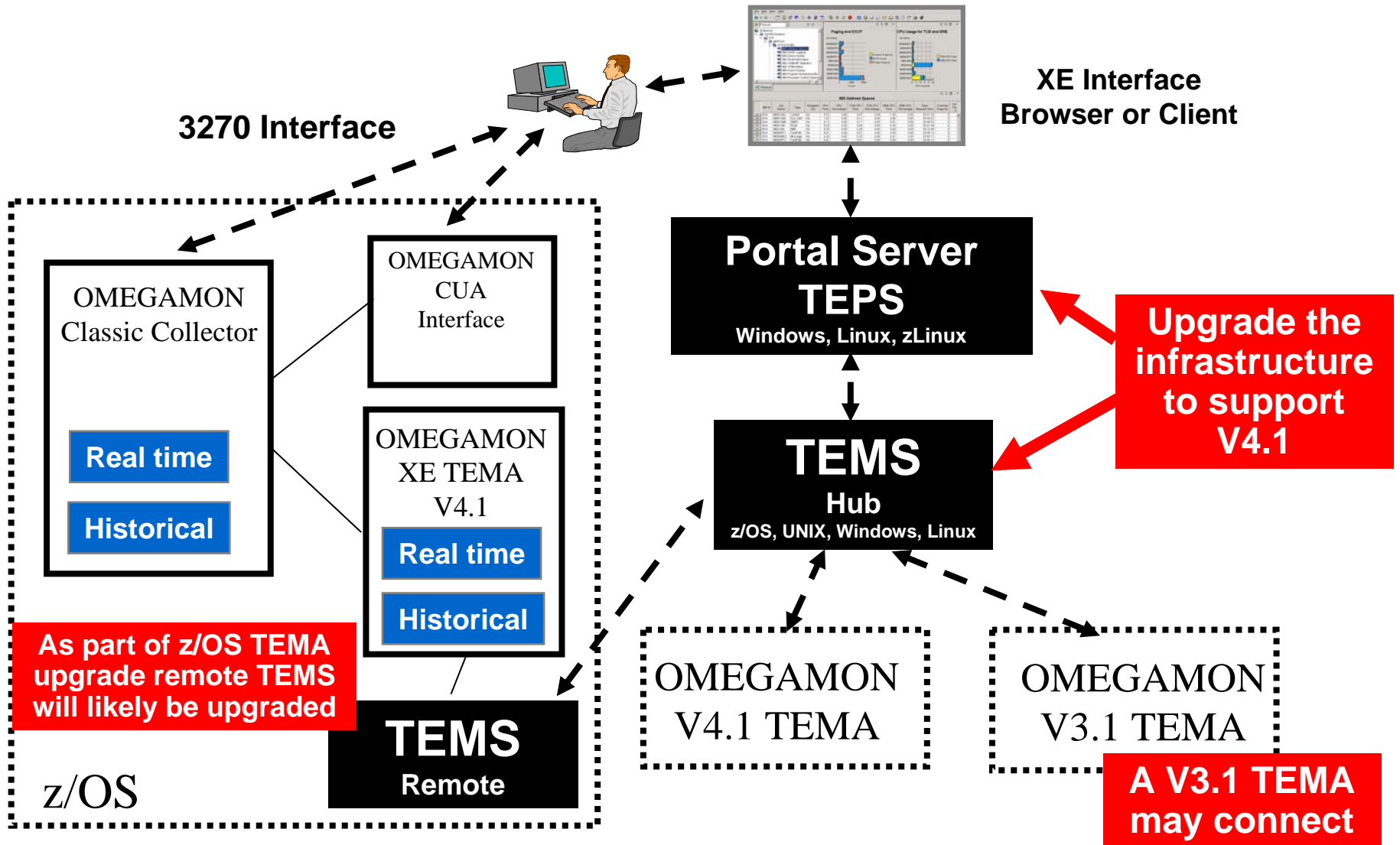


OMEGAMON V4.1 Migration/Upgrade Strategies

- Components to be considered during upgrade planning
 - ▶ Tivoli Enterprise Management Server (TEMS) – Hub and Remote TEMS
 - ▶ Tivoli Enterprise Portal Server (TEPS)
 - ▶ Tivoli Enterprise Monitoring Agents (TEMA) – the OMEGAMON agents
- OMEGAMON V4.1 supporting infrastructure allows agent versioning
 - ▶ The ability to run a combination of V3.1 and V4.1 TEMAs reporting to the same TEPS and TEMS infrastructure
- Two primary upgrade strategies
 - ▶ ‘Big Bang’ approach – upgrade everything at once
 - May be OK in smaller environments – not feasible in large environments
 - ▶ ‘Phased Migration’ approach – upgrade a portion at a time
 - Requires more planning
 - Will typically need to upgrade infrastructure first (see next slide)



In A Combination V3.1 And V4.1 Environment Upgrade The Infrastructure First



As part of z/OS TEMA upgrade remote TEMS will likely be upgraded

Upgrade the infrastructure to support V4.1

A V3.1 TEMA may connect

Phased Migration Approach - Considerations

- SMP/E And INSTLIBs - To clone or not to clone?
 - ▶ Installation of OMEGAMON V4.1 will receive new V4.1 SMP/E FMIDs into the OMEGAMON CSI
 - Once a V4.1 is received and applied the ICAT configuration tool will only see the V4.1 versions
 - ▶ If there is a need to be able to do maintenance on the V3.1 versions while the V4.1 is being rolled out
 - Cloning the ICAT INSTLIBs and SMP/E files may be necessary in this scenario
 - ▶ If it is not necessary to apply fixes to V3.1 during the migration the V4.1 may be received into the existing installation environment
- Delivery of V4.1 code
 - ▶ Products may be ordered from ShopzSeries
 - Delivery may be electronic or physical media
 - Information on ordering from ShopzSeries is available at the following URL
 - <http://www-1.ibm.com/support/docview.wss?uid=swg21225816&rs=2271>



Review The Relevant Information

- Download and review the V4.1 Upgrade Roadmap Guide
 - ▶ Contains useful information on various upgrade scenarios
 - ▶ http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.omegamon.xe_ims.doc/welcome.htm
- Review documentation on the V4.1 OMEGMONs
 - ▶ Documentation is available for download from the web
 - ▶ <http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp>
- Have access to the appropriate fixpacks
 - ▶ Fixpacks may be downloaded via the web
 - http://www-306.ibm.com/software/support/index_A_Z.html#1
 - <http://www-1.ibm.com/support/docview.wss?rs=203&uid=swg27008514>



Summary

- **End-to-end management**
- **Aligned with IT Service Management**
- **Delivering comprehensive solutions that address your key IT challenges**

