IBM Software Group

OMEGAMON XE V4.1 New Features And Migration Considerations

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Tivoli software

e 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

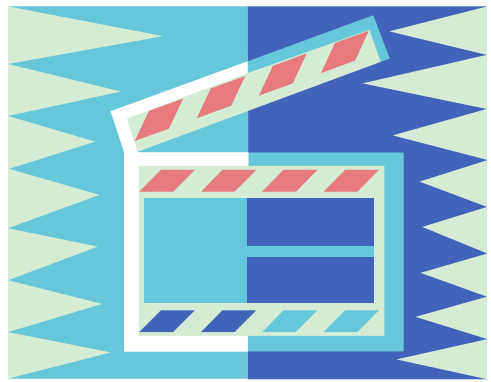
- z/OS V4.1.0 *(First Quarter 2007 availability)*
- CICS on z/OS V4.1.0
- IMS on z/OS V4.1.0
- DB2 Performance Expert on z/OS V4.1.0
- DB2 Performance Monitor on z/OS V4.1.0
- Mainframe Networks V4.1.0
- Storage on z/OS V4.1.0
- z/VM and Linux V4.1.0 - *(A New Tivoli Solution)*

- 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

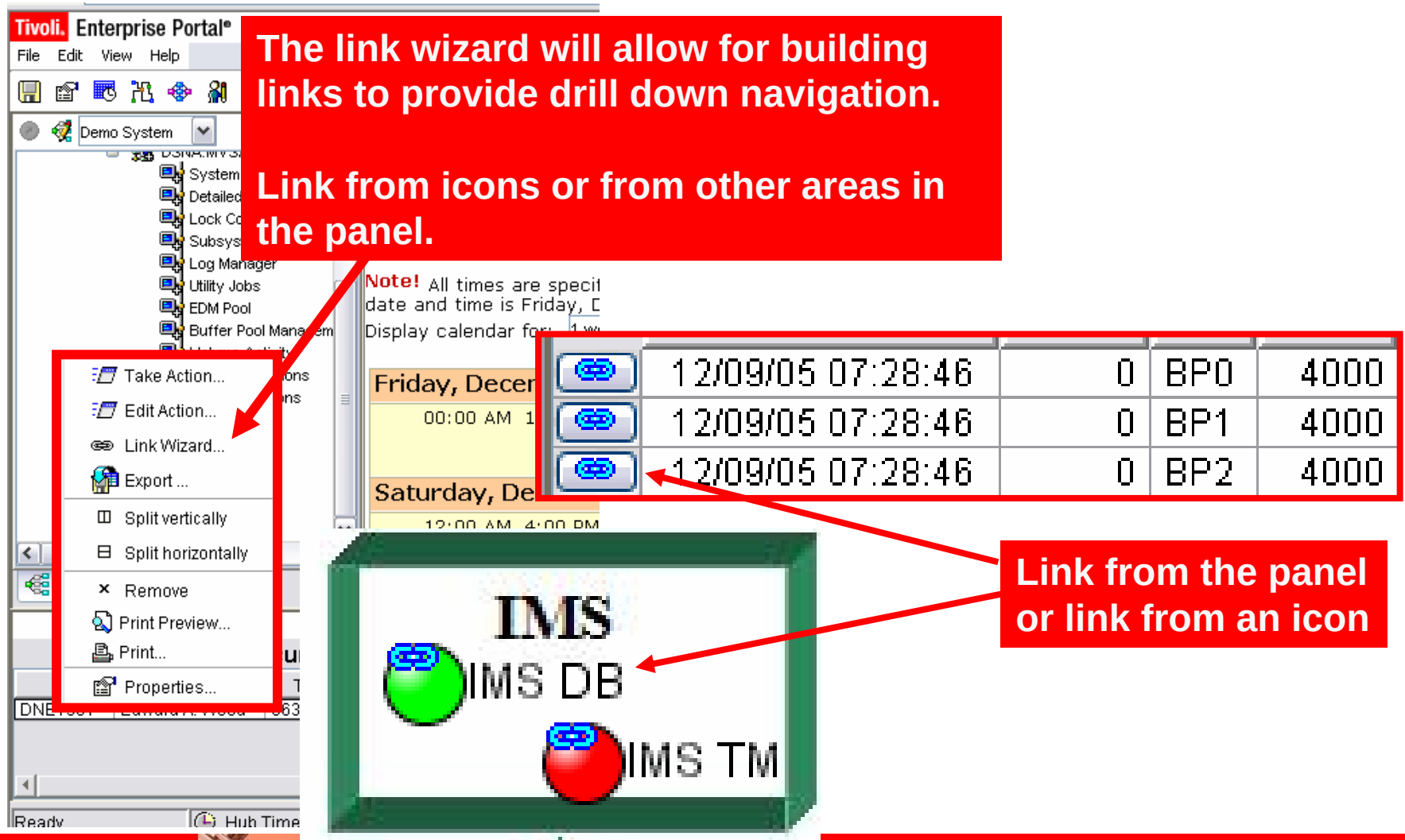
- Customer Satisfaction
  - Globalization
  - Exploitation of new OS and middleware releases
  - Customer Enhancements
- Portfolio Simplification
  - Candle Management Workstation and OMEGAMON II continued movement to TEP
  - Merging of functionality in product suites where it makes sense
- Integration
  - 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.

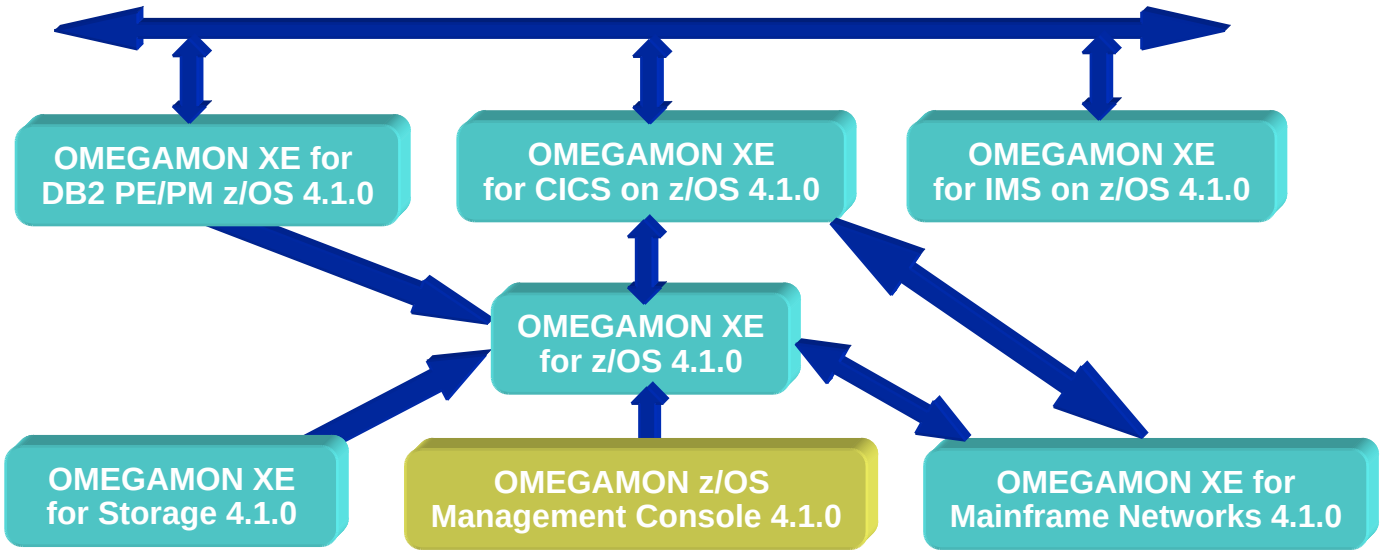
Link from the panel or link from an icon

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**

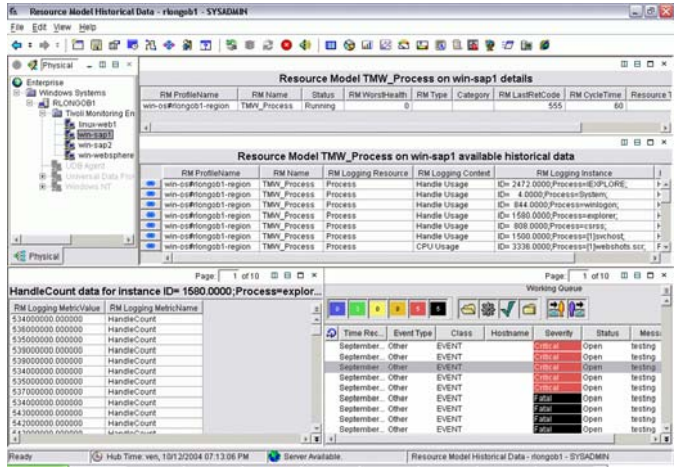
Solution: **Dynamic Workspace Linking**
Product provided links & user customized



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***

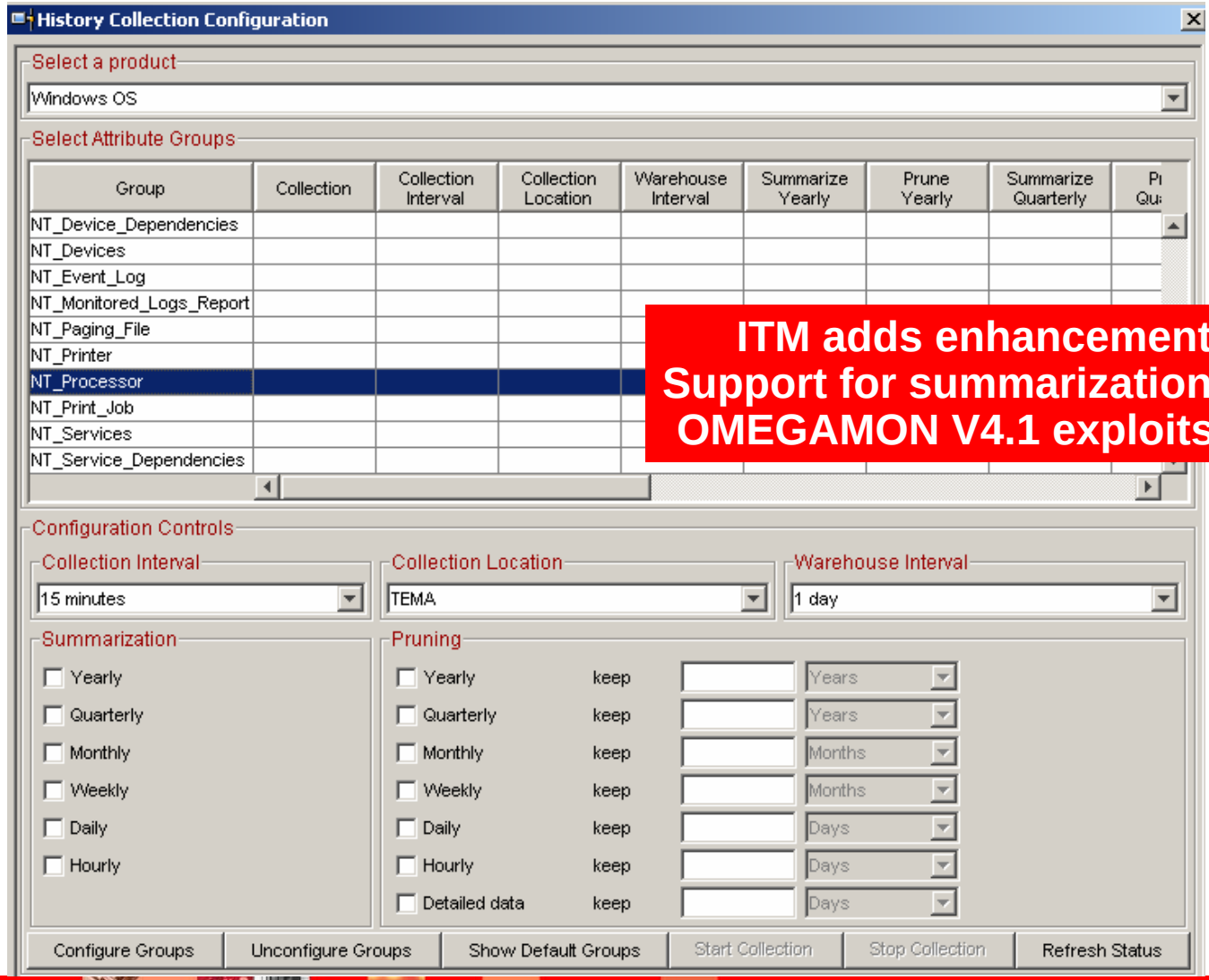


Platforms	Databases	Web Infrastructure	Business Integration	Applications	Messaging & Collaboration	Virtual Servers & Clustering
UNIX	DB2	WebSphere (z/OS & Distribute)	CICS	SAP, mySAP.com	Exchange	Citrix
Windows	Oracle	IIS	IMS	.NET		VMware
Linux	MS SQL	iPlanet	WebSphere MQ	Siebel	Lotus Domino	MS Virtual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

About ITM6

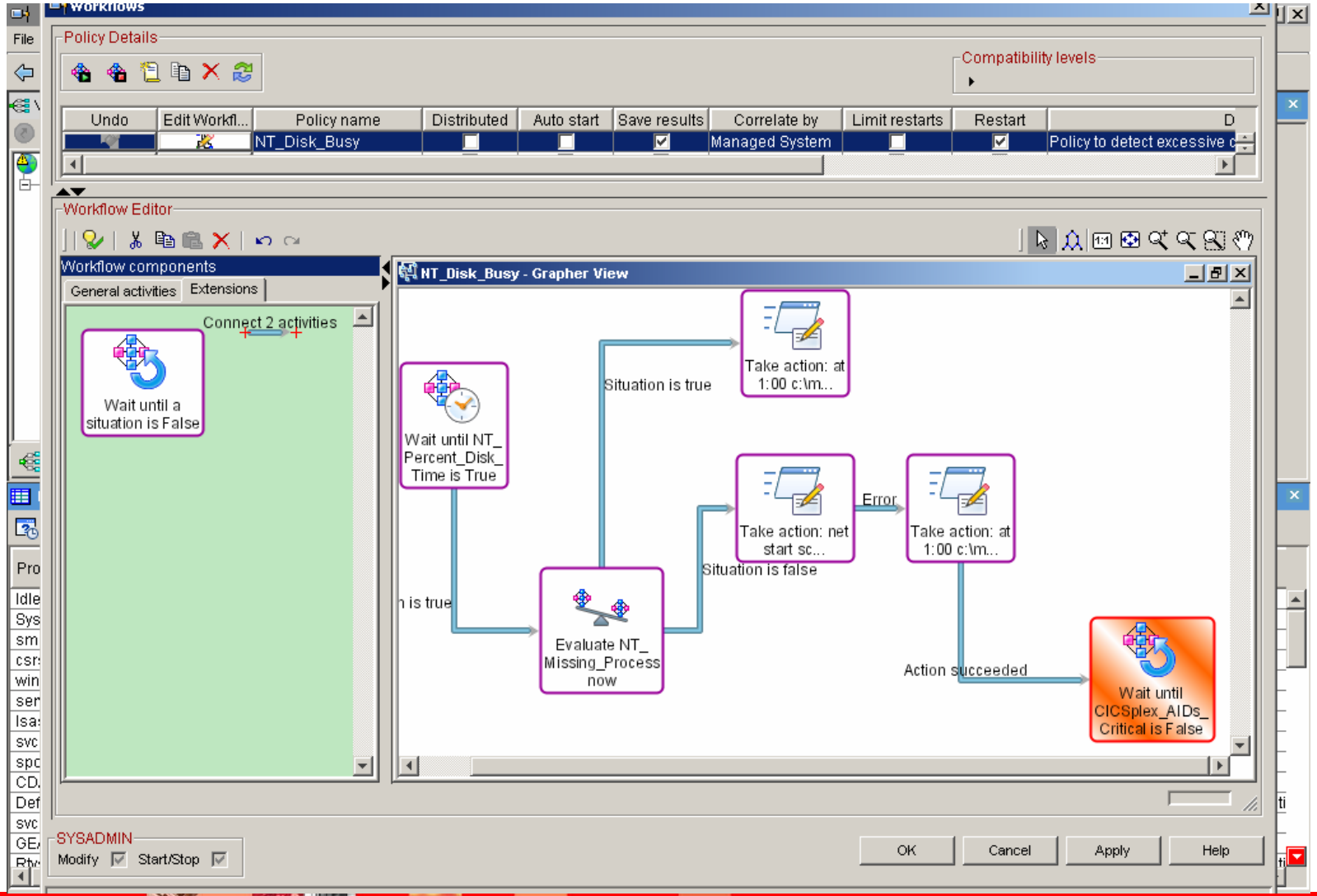
- ITM6 is an integration of Tivoli monitoring technologies
- ITM6 adds capability to the TEP
  - History capabilities
  - Policy enhancements
  - A more fully integrated portal
- OMEGAMON XE V4.1 adds exploitation for ITM6 capabilities
  - ITM6 included as part of the packaging
- OMEGAMON V3.1 z/OS installation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

ITM6 Historical Enhancements



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

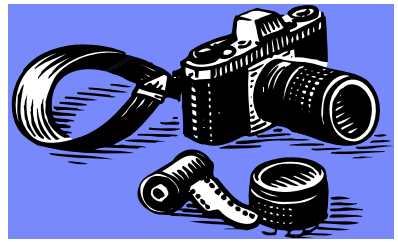
Policy Enhancements



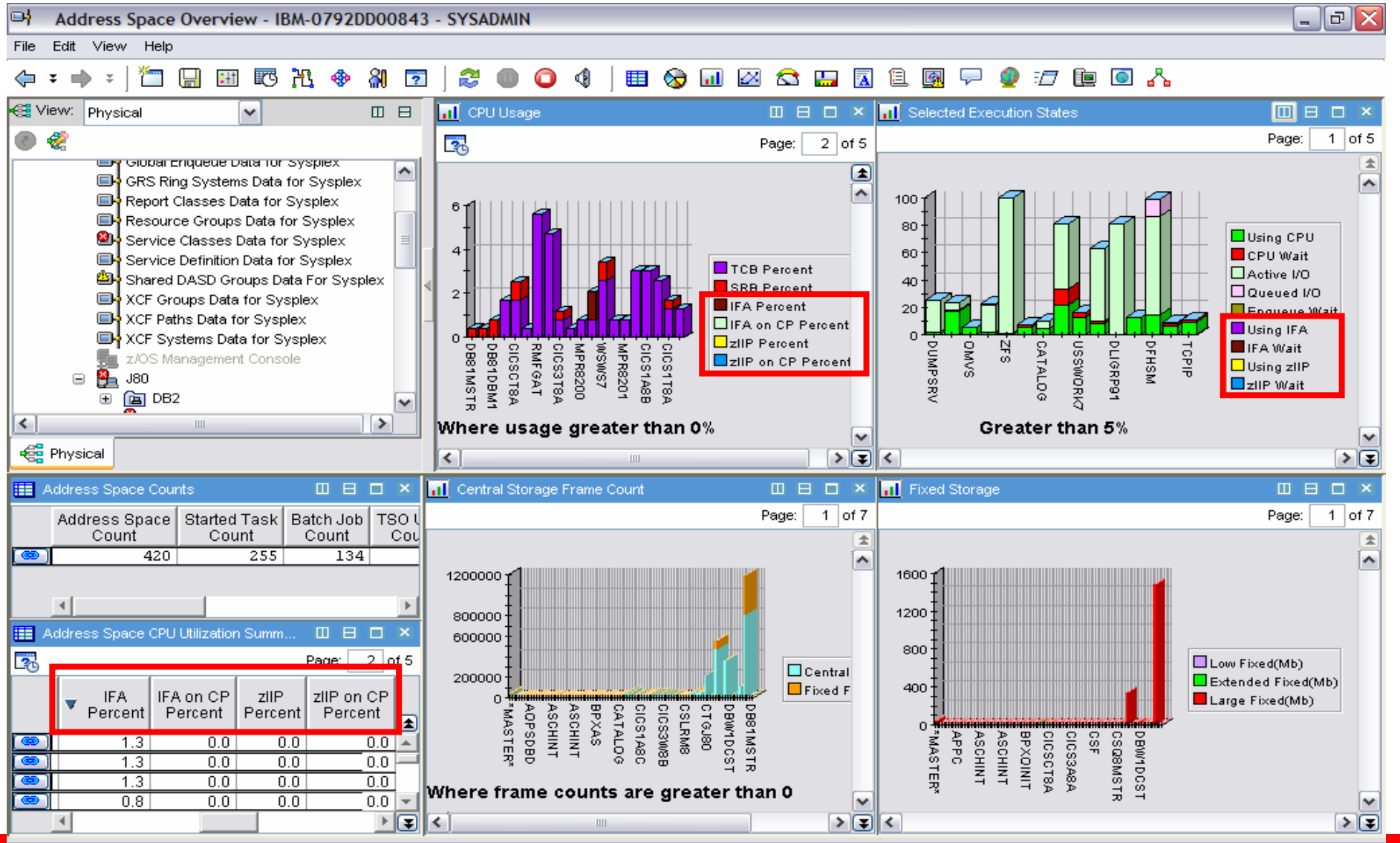
OMEGAMON V4.1 Enhancements

OMEGAMON XE on z/OS v4.1.0
Highlights at a Glance

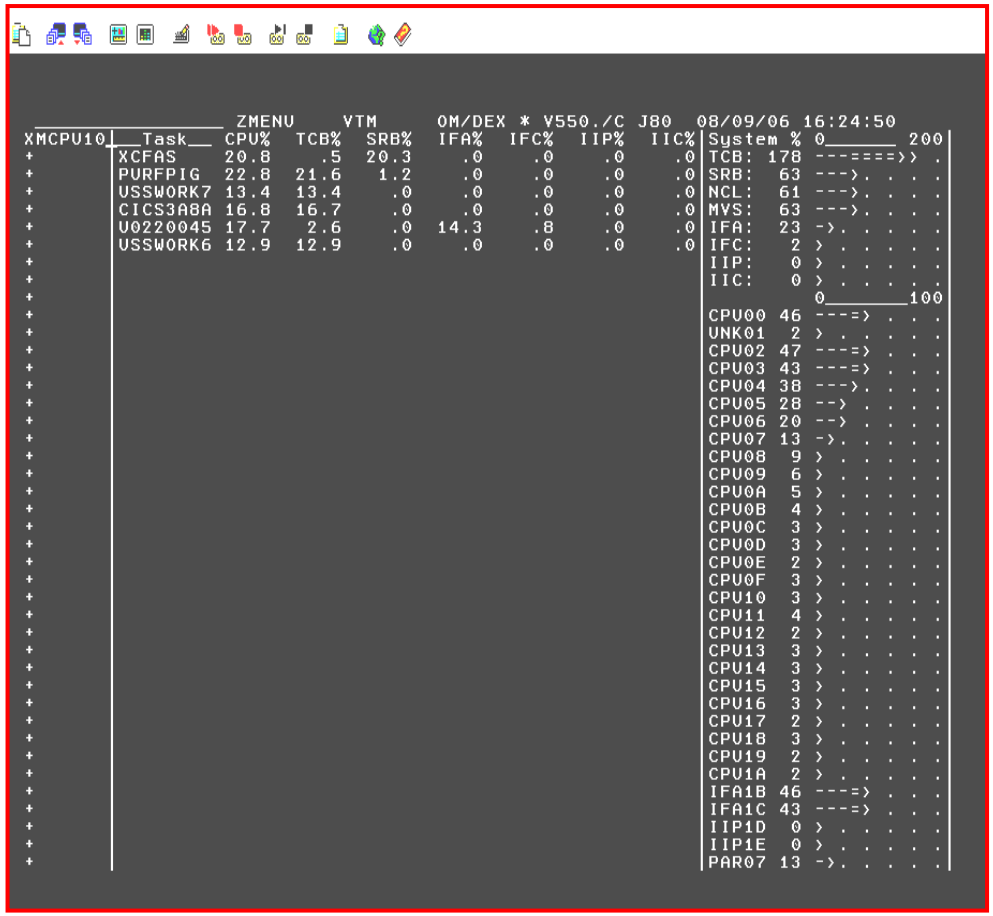
- zIIP processor usage and reporting – back fit to v310 as well (July 06)
- Basic RMF III launch, optional RMF collection for CF data
- Integration:
  - Enclave DB2 and z/OS transplex, DWL to OMEGAMON XEs, NetView on z/OS and z/OS Management Console (zMC)
- I/O rate by address space from CUA
- Real Storage 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



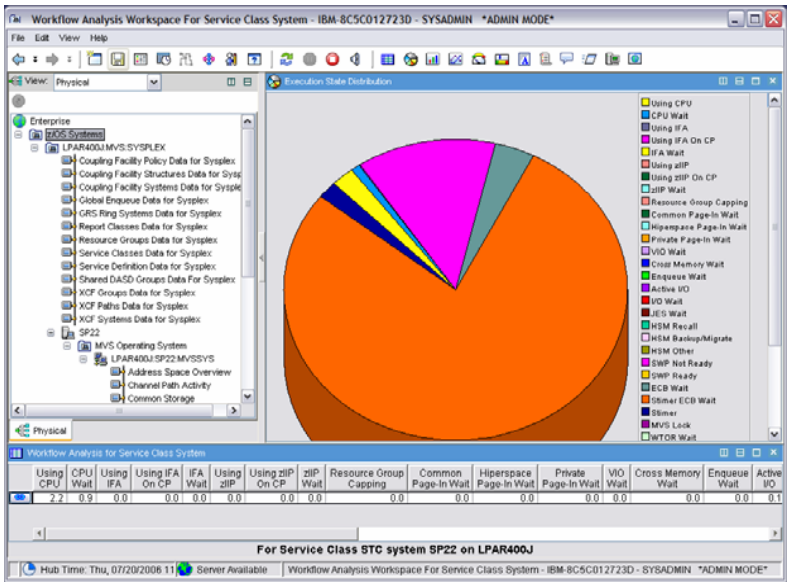
Currently available zIIP and zAAP data in OMEGAMON "Classic"



Command output where zAAP and zIIP data is available

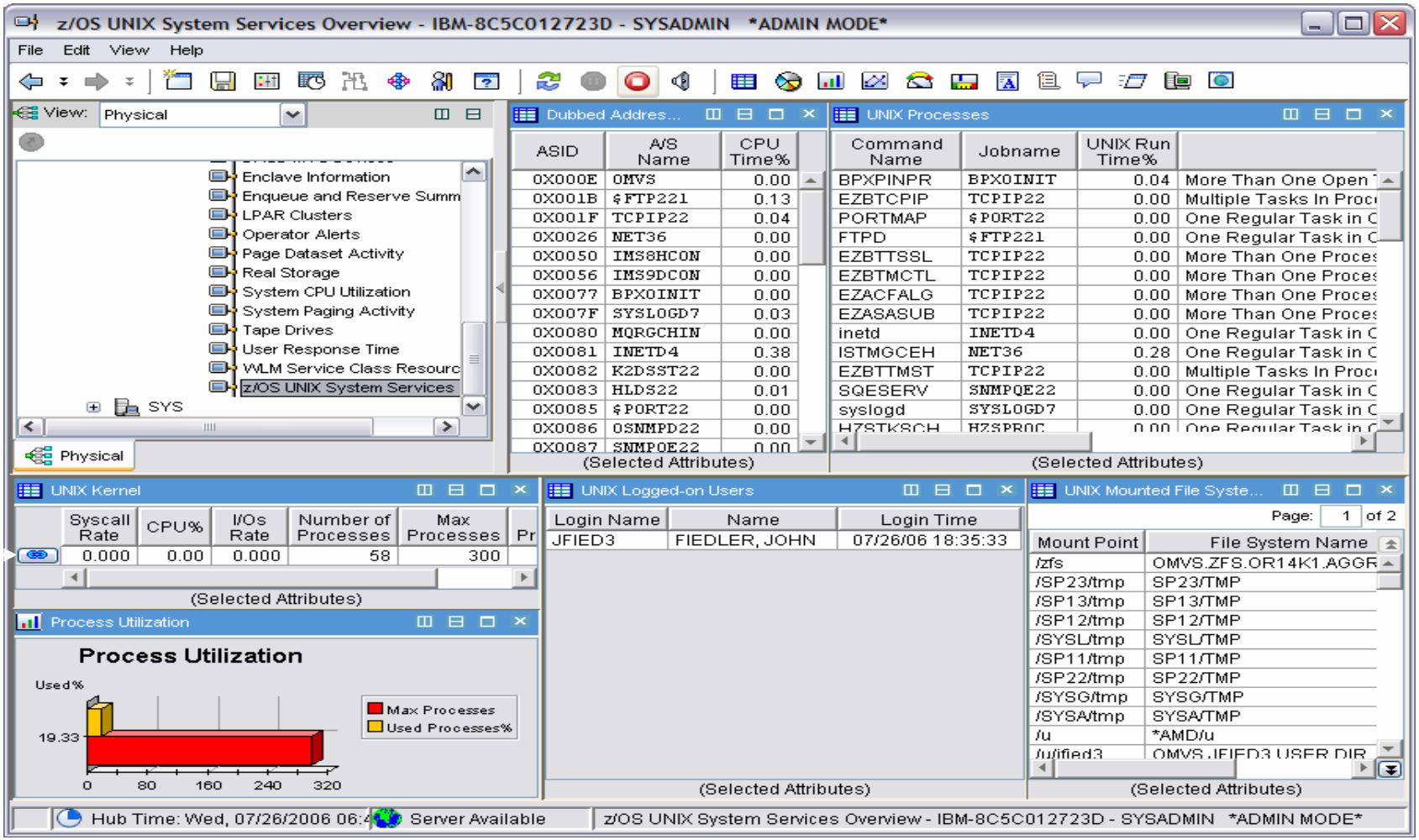
- SIFA IFA% and IFA% on CP by address space and enclaves
- SIIP zIIP% and zIIP% on CP by address space and enclaves
- MCPU Added IFA and zIIP Utilization by address space, enclaves and processor
- DEX Added IFA/zIIP execution delay reasons to address space bottleneck analysis
- IANL Added IFA/zIIP impactors 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



Provides links to seven z/OS UNIX Systems Services workspaces

OMEGAMON XE for CICS on z/OS v4.1.0
Highlights at a Glance

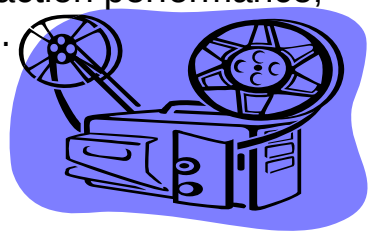
- **Continued Expansion Of CICS TS Support**
  - URIMAP summary, global counts and details for CICS web clients
  - Web Service analysis reports for Web Service Details, Virtual Host Detail, Pipeline Detail, Document Template Detail
  - Business Transaction Services (BTS) support for long running processes, 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

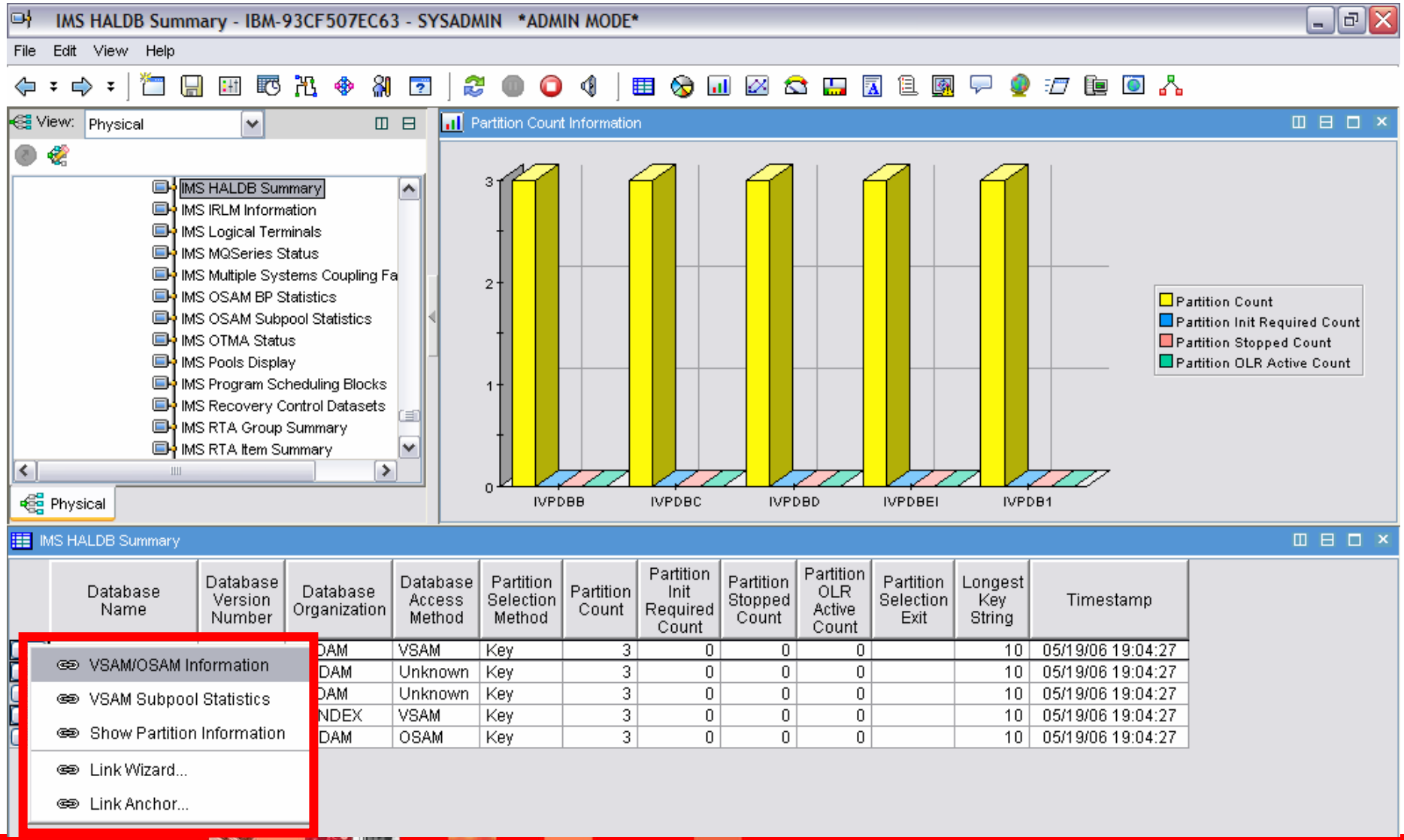
- Business Transaction Services (BTS) Analysis
  - ProcessType Detail
  - Process Name Detail
  - Container Detail
  - Activity Detail
- Enqueue Analysis
  - Enqueue Pool Details
- Enterprise Java Analysis
  - CORBASERVER Details
  - DJAR Details
  - Enterprise Java Bean Details
  - Request Model Details
- 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

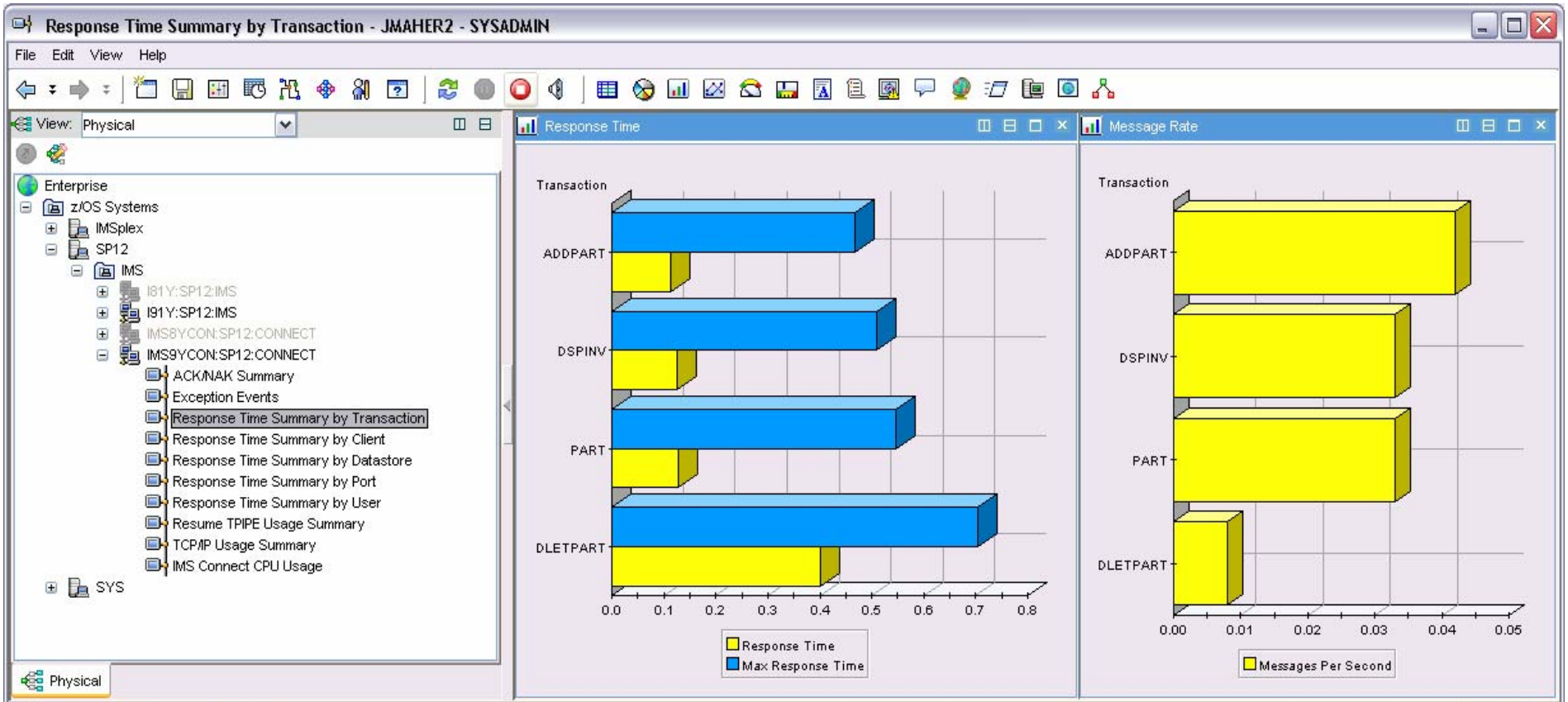
- TRF reporting capability has increased precision expanding transactions to the millisecond
- DL/I call reporting for full function and Fast Path WFI regions - accumulation of all call types issued by an application during the processing of a transaction and the number of each call type issued by an 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



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



Tran Code	Collection Level	Collection Interval	Response Time	Max Response Time	Message Count	Input Pre-OTMA Time	Input Read Socket Time	Input Read Exit Time	Input SAF Time	Process OTMA Time	Output Confirm Time	Output Post-OTMA Time	Output XMIT Exit Time	Messages Per Second	Time Outs	Identification Name	NAK Count
DLETPART	Maximum	900	0.401	0.704	8	0.000	0.396	0.000	0.000	0.315	0.080	0.000	0.000	0.008	0	IMS9YCON	0
PART	Maximum	900	0.127	0.546	30	0.000	0.122	0.000	0.000	0.040	0.081	0.000	0.000	0.033	0	IMS9YCON	0
DSPINV	Maximum	900	0.125	0.510	30	0.000	0.121	0.000	0.000	0.040	0.080	0.000	0.000	0.033	0	IMS9YCON	0
ADDPART	Maximum	900	0.113	0.467	38	0.000	0.106	0.000	0.000	0.025	0.080	0.000	0.000	0.042	0	IMS9YCON	0

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

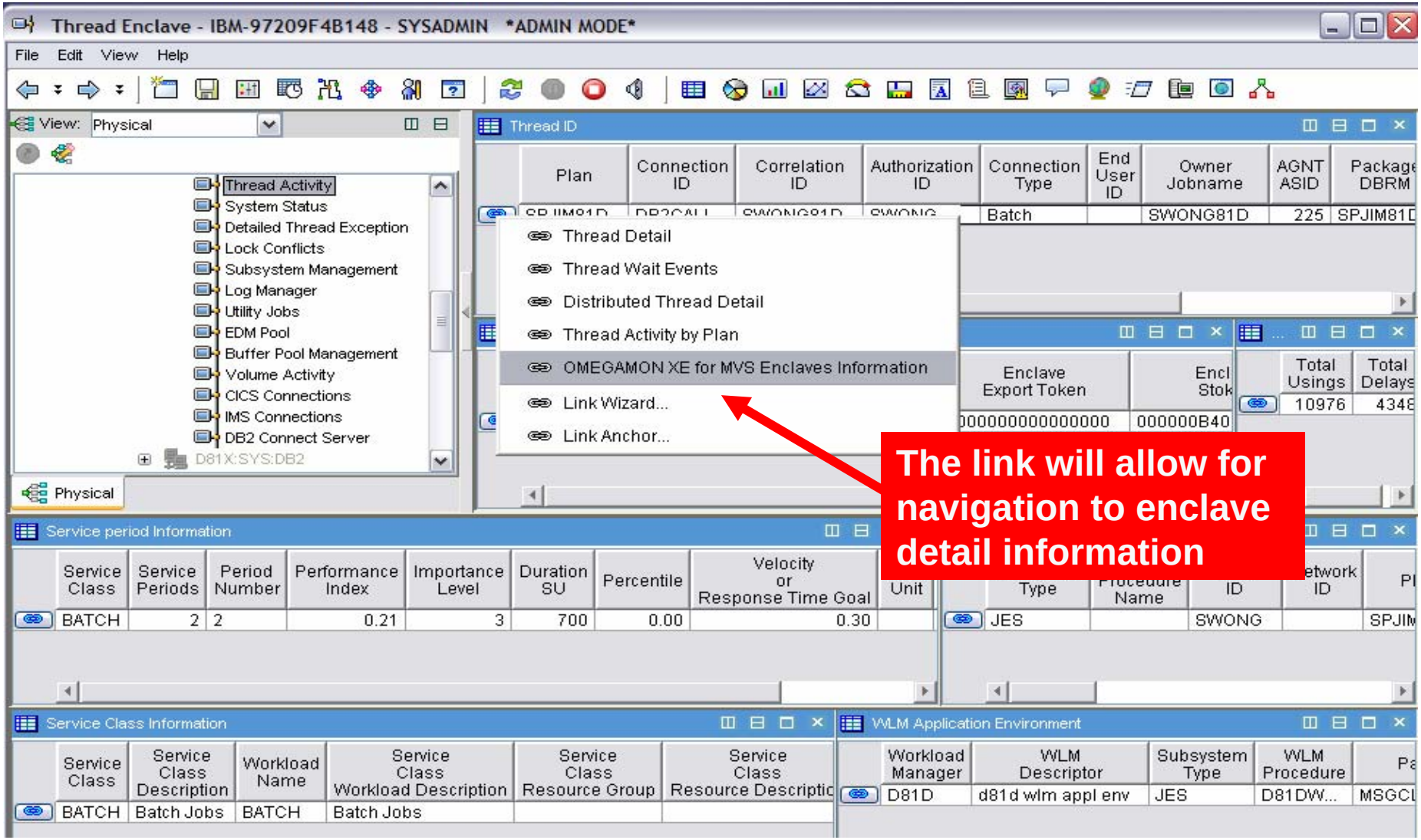
- Dynamic Workspace Linkage (DWL)

  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

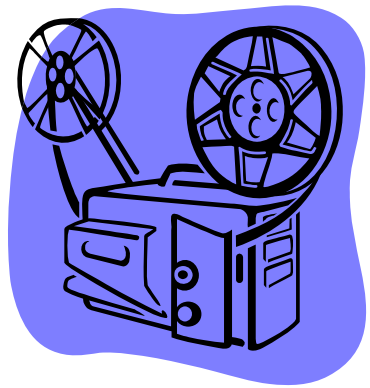
Note: ( ) shipped also with V3.1.0 since GA

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

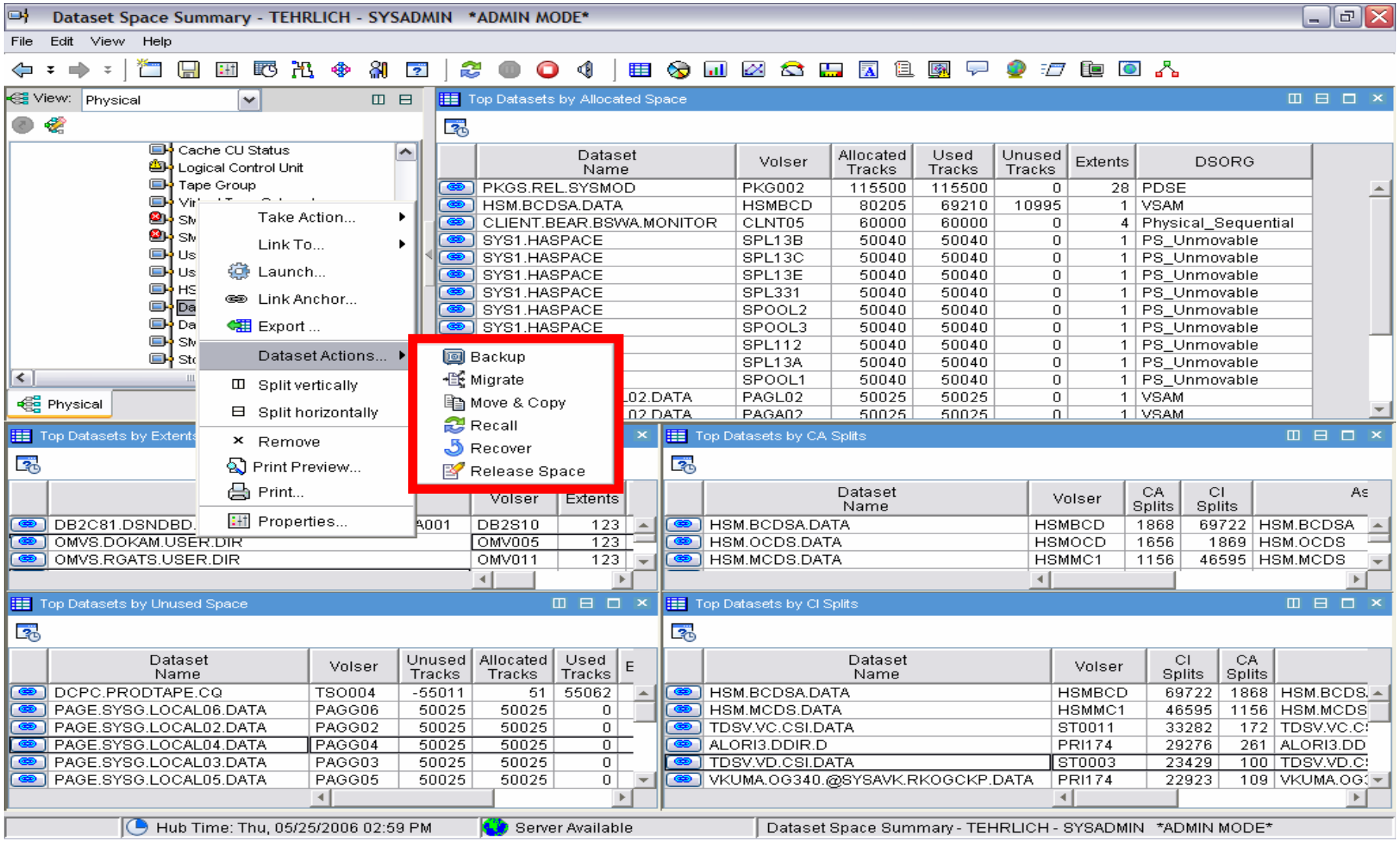


OMEGAMON XE for Storage on z/OS v4.1.0
Highlights at a Glance

- 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)



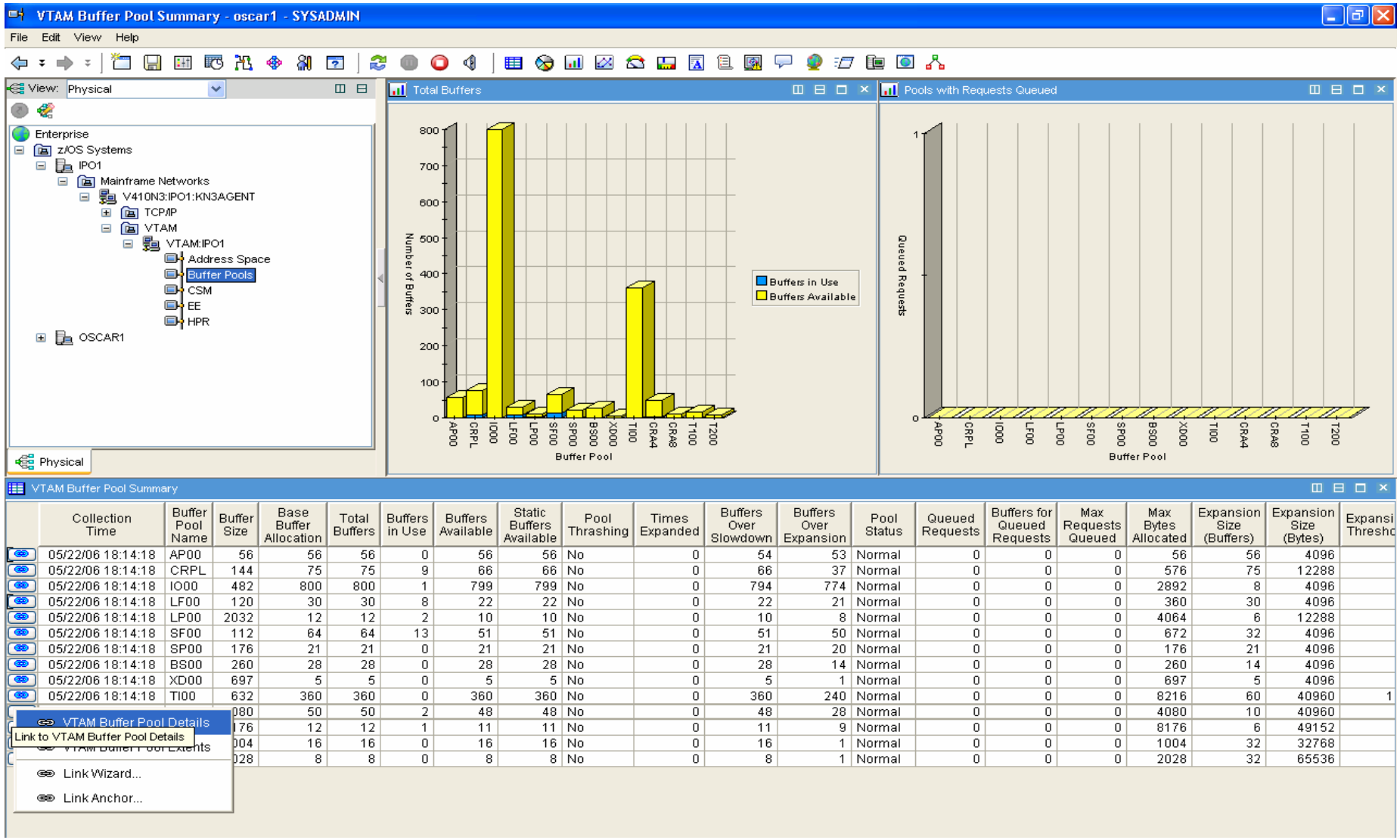
Dataset Space Summary and Storage Toolkit



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

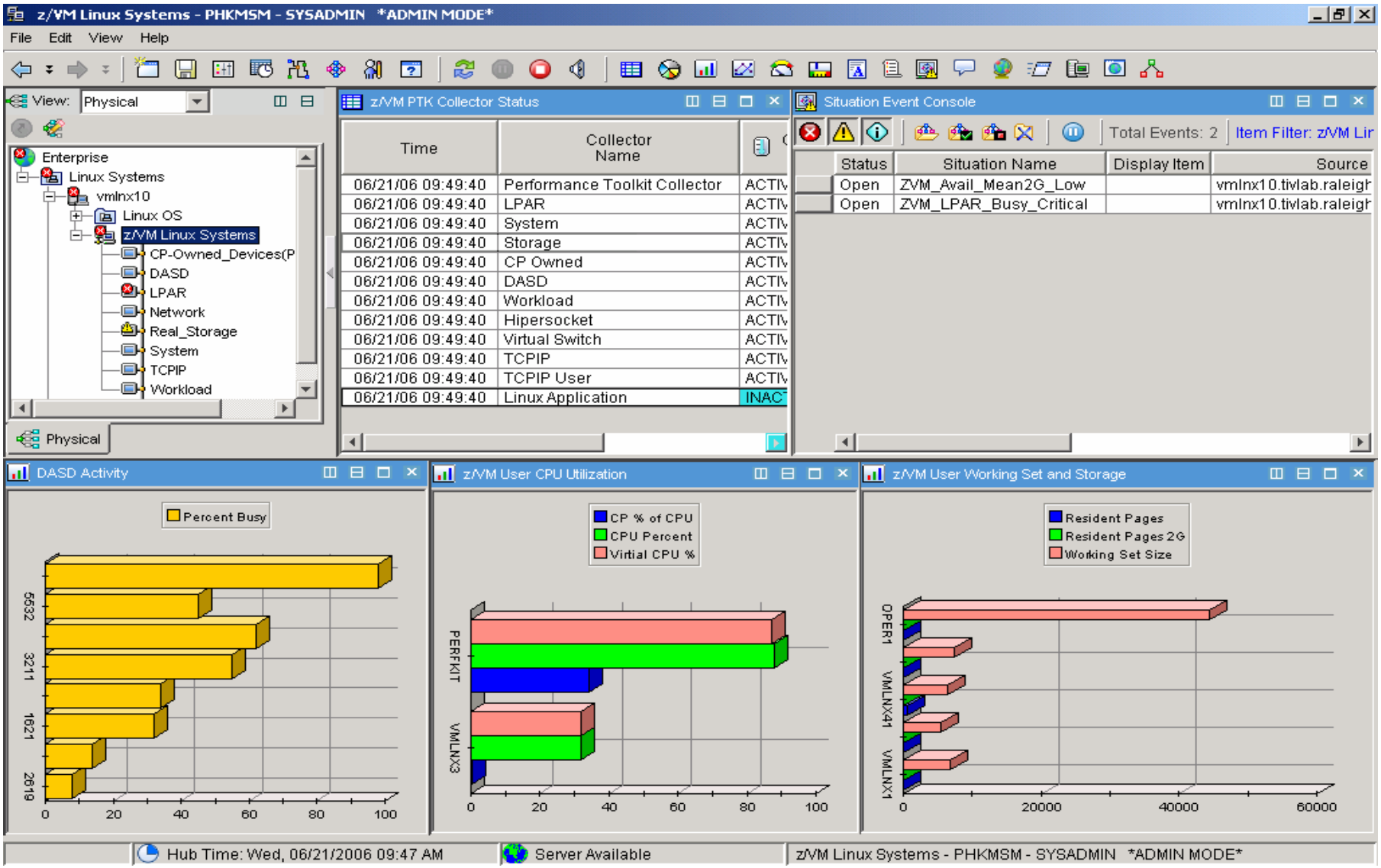


A New OMEGAMON Offering
OMEGAMON XE on z/VM and Linux V4.1.0

- 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

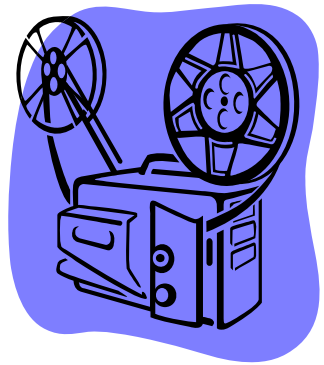
Integrated Linux and zVM Monitoring

OM XE z/VM and Linux Default Workspace

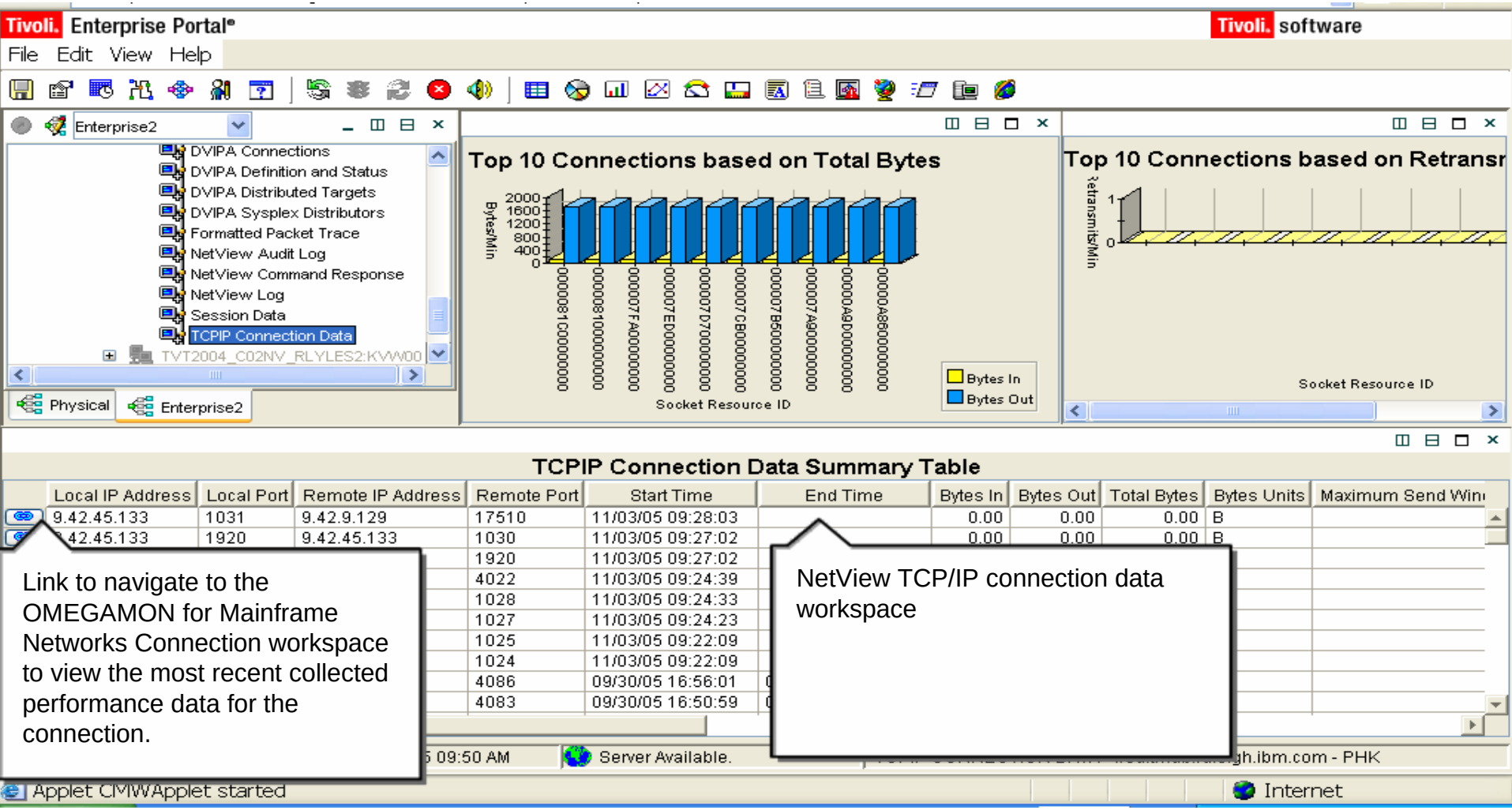


IBM OMEGAMON z/OS Management Console v4.1.0
Highlights at a Glance

- 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



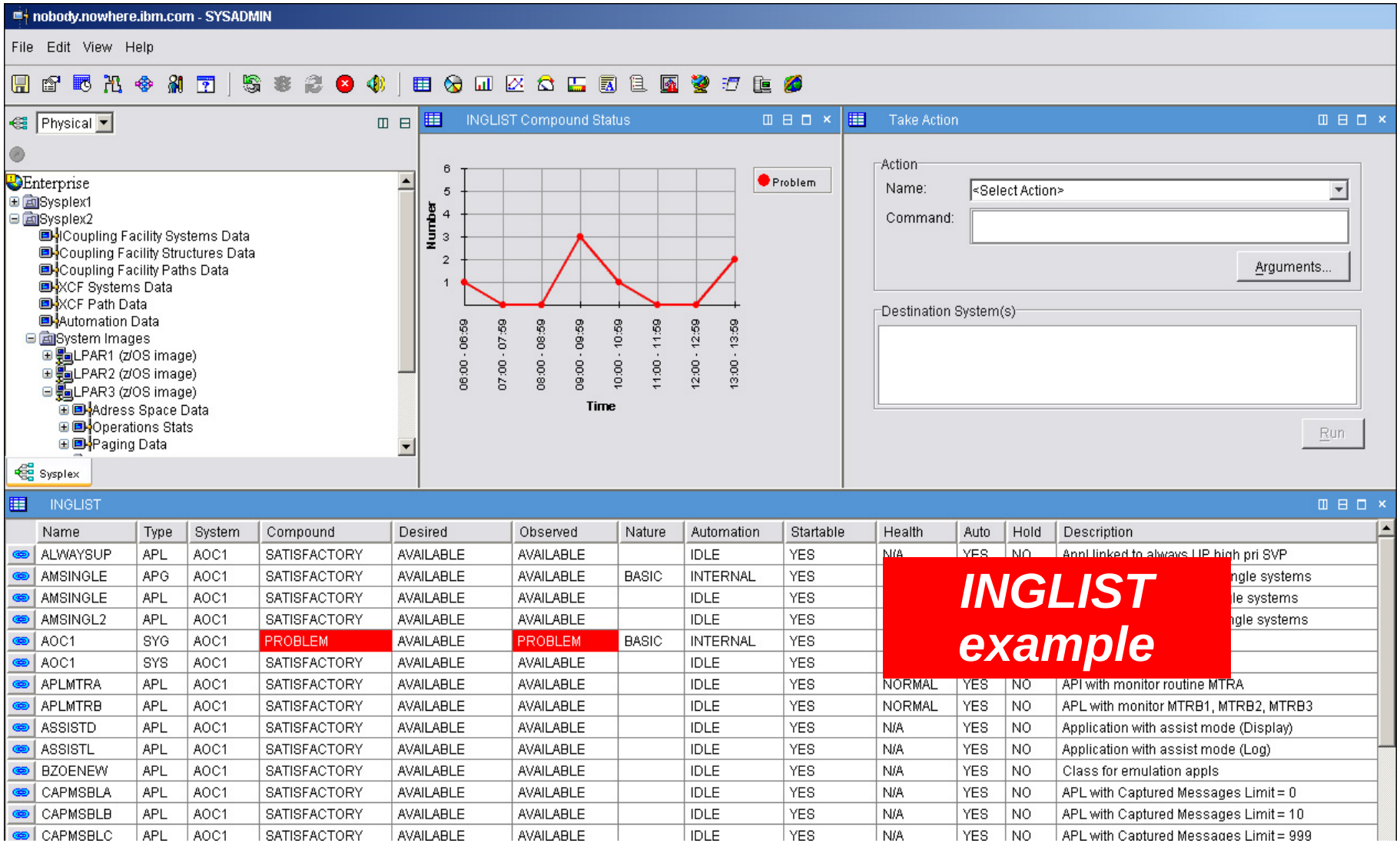
Tivoli NetView for z/OS 5.2 – Integration With The TEP Example - NetView TCP/IP Connection Data Workspace



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

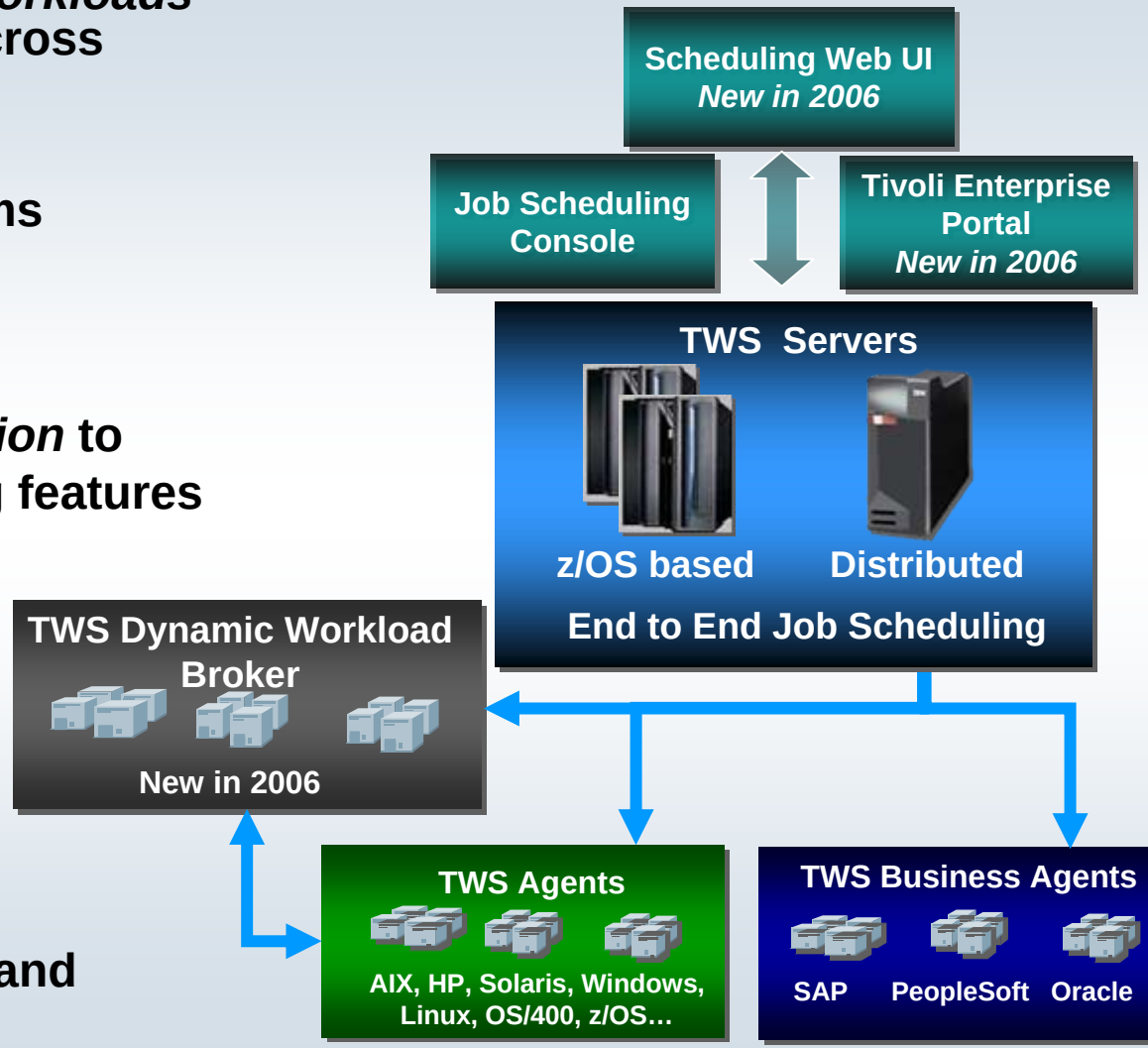
NetView TCP/IP connection data workspace

SA Automation Integration With TEP



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**

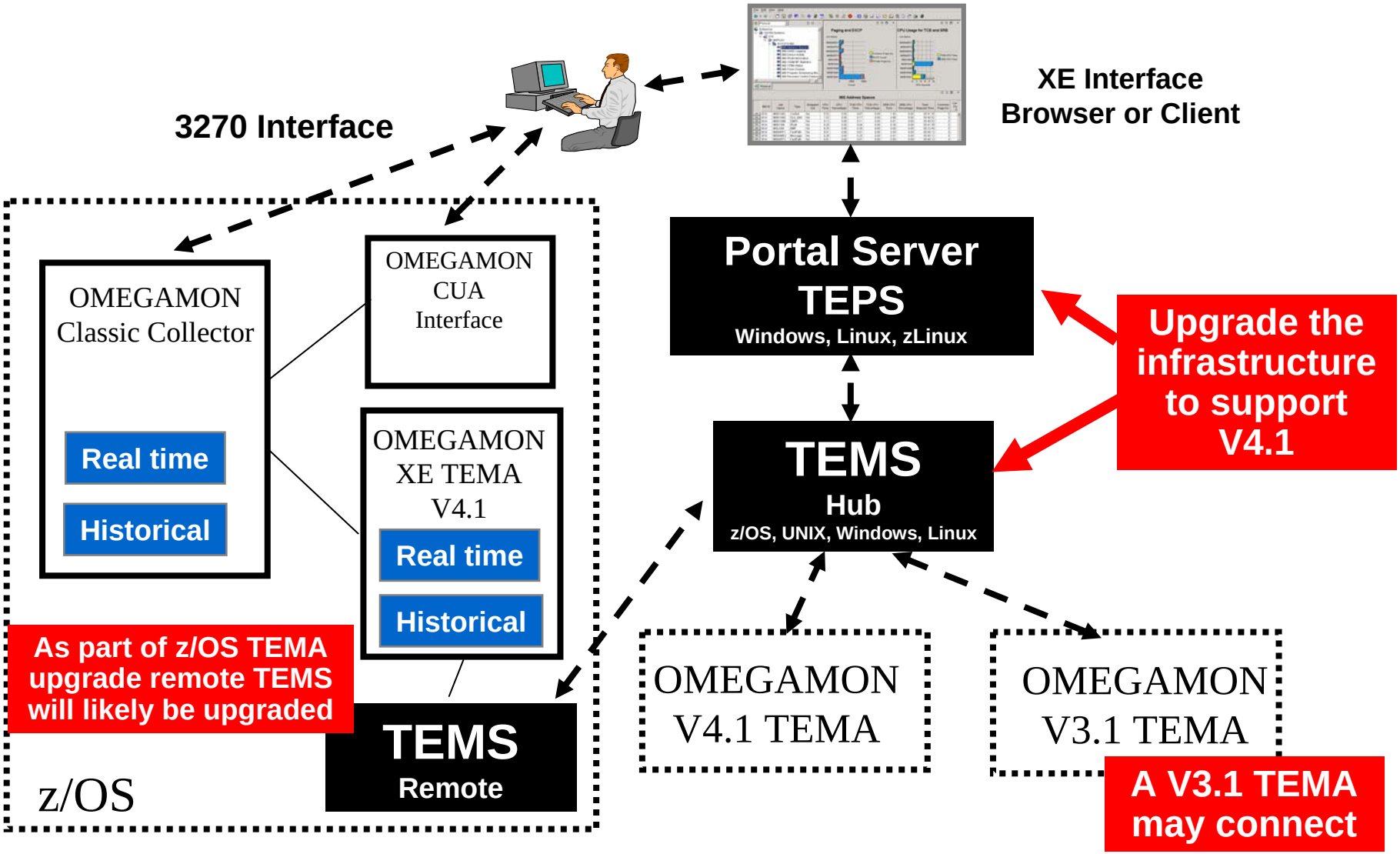


OMEGAMON V4.1 Migration Considerations

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



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***