Tivoli software

IBM Tivoli OMEGAMON XE on z/OS

Highlights

- Proactively manage performance and availability of IBM z/OS systems from a single, integrated interface
- Leverage a single focal point to adjust and fine-tune IBM Workload Manager performance
- View interaction between z/OS and other systems, databases and applications to determine impact on performance
- Use system resources to their fullest extent and view and control z/OS workloads for efficient processing
- Maximize availability of the IBM Parallel Sysplex environment with coupling facility status and related resource metrics
- Reduce overhead by using the zIIP processor for some processing as well as other techniques with Resource Management Facility (RMF)

Getting the most out of your z/OS® systems is crucial. New applications in the data center continually increase the volume of workloads and the complexity of transactions. Managing your mainframe systems effectively can help you obtain maximum performance with minimal downtime.

IBM Tivoli® OMEGAMON® XE on z/OS addresses this need by helping you to quickly and effectively maximize the efficiency of your z/OS system. The software uses the zIIP processor and RMF for some aspects of data collection, and it enables you to easily run components on Linux on System z to leverage an Integrated Facility for Linux (IFL).

With Tivoli OMEGAMON XE on z/OS, you can also exploit the full capabilities of z/OS, using it to minimize wait times for key mainframe resources and the time you spend diagnosing sources of slowdowns. Tivoli OMEGAMON XE on z/OS can also help to quickly identify and solve system delays using bottleneck analysis to:

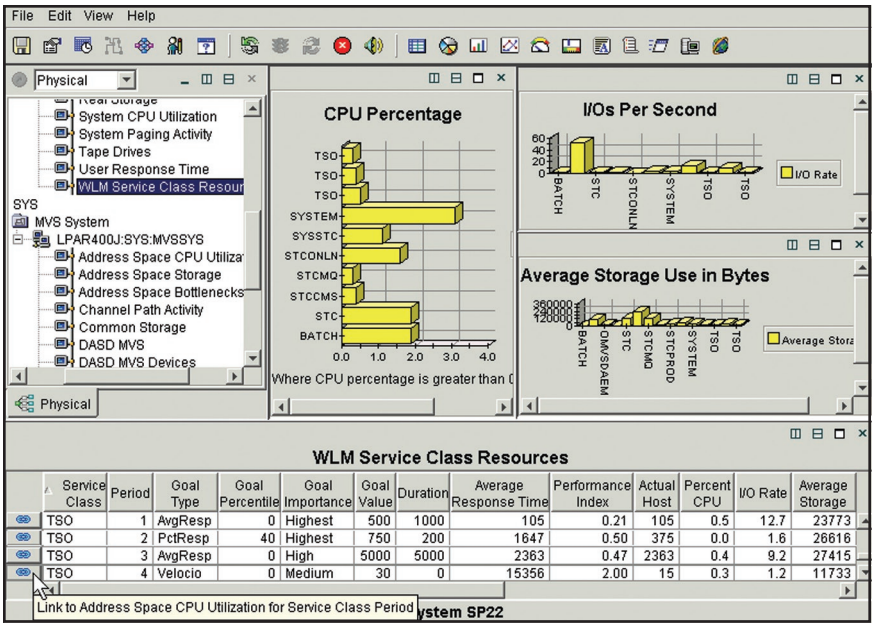
- Obtain a detailed picture of resource use across CPUs and LPARs.
- Report on specialty engines, I/O, enqueue and page-in.
- View UNIX® System Services and file systems, and more.
- View performance in real time and usage trends in historical perspective.

You can use the software to resolve problems by leveraging tools that store industry and organizational best practices. You can even use the tools to establish automated responses to frequent situations.

In addition to offering leading performance and availability management for z/OS, Tivoli OMEGAMON XE on z/OS integrates with other Tivoli products to deploy true end-to-end availability management and help prevent threats to system performance before they impact service levels.

View detailed information about the following:

- Address space (including 64-bit virtual addresses) CPU utilization
- Bottleneck analysis (including I/O and enqueue details)
- Channel paths
- Coupling facility structure workspaces
- Coupling facility system workspaces
- Cross-system coupling facility (XCF)
- Cross-system direct access storage device (DASD) support
- DASD
- Enclaves
- Enqueues
- Global resource serialization (GRS) ring systems
- Impact analysis
- Logical partition (LPAR) clusters
- Operator alerts
- Paging
- Real storage and virtual (common) storage utilization
- Report classes
- Resource groups
- Service classes
- Service class periods
- Service definition
- System CPU utilization
- Tape drives
- UNIX System Services
- User response time
- Workloads
- XCF



View Workload Manager service class resources to fine-tune your system and make adjustments so that your most important workloads achieve their performance objectives.

Use detailed resource metrics as a foundation for enhanced workload management

Tivoli OMEGAMON XE on z/OS enables you to view your z/OS operations at a number of levels, from individual address spaces within a class to system-wide information. Within a Parallel Sysplex, you can access service-class information and enterprise-level statistics and trends.

A particular strength of Tivoli OMEGAMON XE on z/OS is how it helps you manage workloads in alignment with your business priorities. Tivoli OMEGAMON XE on z/OS helps you manage and tune IBM Workload Manager service classes with great precision to:

- Measure how well a workload achieves predefined goals in IBM Workload Manager.
- Track performance (response time or velocity) of service class hosts.
- Gain visibility into, and control over, enclave usage.
- Analyze transaction rates to identify overloaded and underperforming workloads.
- Identify costly looping address spaces.
- Identify dangerous spin locks.
- View resource use among address spaces, including CPU, storage and I/O.
- Use Intelligent Resource Director (IRD) support to identify and set business priorities to help allocate resources.
- Identify and correct bottlenecks on your system that hinder workload processing.
- Leverage impact analysis to understand how one workload can impact other workloads.

With Tivoli OMEGAMON XE on z/OS, you can fine-tune your workload management, from service definition to workload performance to resource optimization.

Manage dynamic workloads in a Parallel Sysplex environment

Within a Parallel Sysplex environment, shared resources enable z/OS systems to support competing workloads. Significant demands on these resources can impair performance. Tivoli OMEGAMON XE on z/OS provides you with the pertinent I/O subsystem information from the channel to DASD, so you can manage competing demands on your shared resources.

With Tivoli OMEGAMON XE on z/OS, you can:

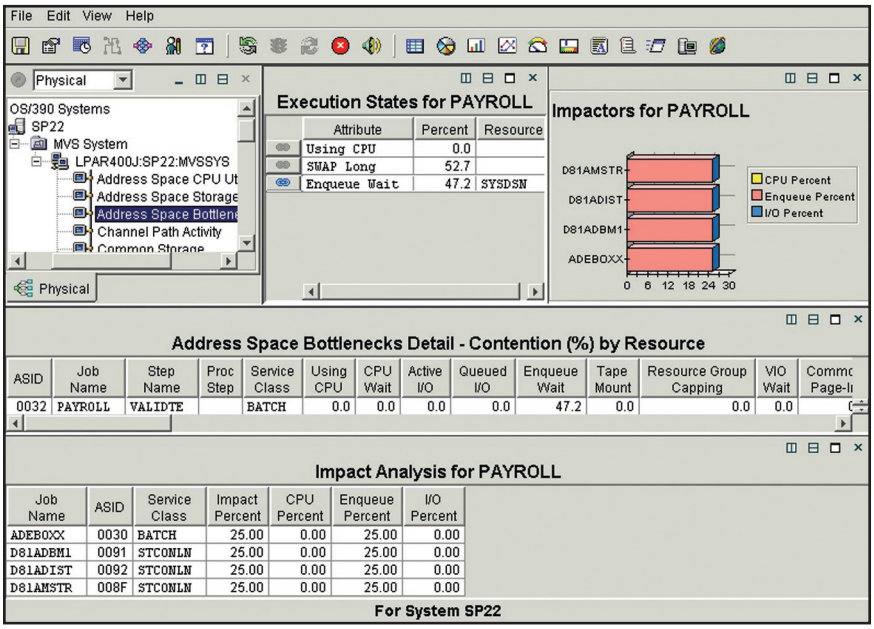
- Measure response times, including cross-system coupling facility path status, global enqueue delays and swap status, and global resource serialization response times.
- Issue alerts when response times exceed thresholds you define.
- Isolate contention factors that affect communication among your z/OS systems and shared resources.
- Tune the coupling facility and its structures to optimize resource utilization.
- Optimize mean time to resolution (MTTR) for performance problems in a shared DASD environment.

Simplify management with a single view of your z/OS systems

Tivoli OMEGAMON XE on z/OS empowers you to manage your z/OS systems, including the Parallel Sysplex environment. Today's mainframe systems deeply intertwine with Web applications, systems, databases and architectures. That's why the single view in Tivoli OMEGAMON XE on z/OS also reveals how each of those systems interacts with IBM DB2® databases, IBM CICS® and other mainframe and distributed components. With all the information in one place, you can easily find and resolve problems.

Maximize the value of the coupling facility in Parallel Sysplex environments

The coupling facility in the Parallel Sysplex helps speed response times, simplify management and ease problem resolution. To maximize the availability of coupling facility resources for your applications, use Tivoli OMEGAMON XE on z/OS to track:



Bottleneck analysis pinpoints excessive wait times, while impact analysis shows you where competing resources are causing delays so you can identify and resolve issues swiftly.

- Connectivity and resource status of each z/OS system.
- Address space that works with the Parallel Sysplex and uses the coupling facility.
- Synchronous and asynchronous rates that help you evaluate the coupling facility as a whole.
- Resource degradation and contention rates for specific coupling facility structures to identify those that need attention before they threaten critical systems.

Tivoli OMEGAMON XE on z/OS also enables you to view XCF data in conjunction with transport class data and tune your Parallel Sysplex XCF configurations to optimize communication between the LPARs in a Parallel Sysplex environment.

Simplify tasks to work smarter

All Tivoli OMEGAMON XE monitors, including Tivoli OMEGAMON XE on z/OS, help increase productivity by enabling you to customize your workspace to speed problem identification and quickly leverage existing expertise. Features include:

- **Customizable workspaces** — Instantly pull together dynamic tables and graphs to help pinpoint performance issues across all your z/OS systems and related applications. You can see resource allocation down to a granular level from multiple perspectives. Data collection and displays can be tailored to specific users, such as operators, performance analysts and systems programmers.
- **Take Action** — Resolve recurring problems by running built-in scripts or easily creating new scripts from included templates.
- **Expert Advice** — Mouse over an alert to receive a detailed explanation of the problem and potential fixes. Use knowledge out of the box or edit the feature to preserve solutions specific to your environment.

Access data from anywhere

Like all Tivoli OMEGAMON monitors, Tivoli OMEGAMON XE on z/OS offers an intuitive, browser-based interface that allows you to monitor the health of z/OS and other systems from almost any location. The shared look and feel across many Tivoli OMEGAMON interfaces virtually eliminates the need for special training.

Tivoli OMEGAMON monitors run on a client workstation with minimal consumption of run-time resources. The server contains common management information, including states, objects, situations and thresholds, user-persistent workspaces and other data. You can also distribute client changes in a single step to deliver the most current version to browser-based clients.

Software requirements:

- z/OS, Versions 1.3, 1.4, 1.5 and 1.6
- IBM OS/390®, Version 2.10
- ISPF, Version 4.3 or above
- TSO/E, Version 2.6 or above
- For TSO user session, a minimum region size of 4,600K (recommended region size is 6,000K)
- Data Facility Storage Management Subsystem (DFSMS), Version 1.4 or above
- REXX

IBM MVS Interlink support for products based on CT/Engine, Version 350, and support for all three MVS Interlink interfaces:

- TCP/IP native interface, Version 4.1
- High-performance native sockets (HPNS) interface, Version 5.2
- Inter-user communication vehicle (IUCV) interface, Version 5.2

For emitting alerts to a Simple Network Management Protocol (SNMP) monitor, TCP/IP for MVS must be installed on the MVS system.

IBM Tivoli Management Server for Distributed Systems on z/OS supported platforms:

- Microsoft® Windows® 2000
- Windows XP
- IBM AIX®, Version 4.3 and above
- HP-UX, Version 11.0 and above
- Sun Solaris, Version 5.7 and above

IBM Tivoli Management Portal for System z server supported platforms:

- Windows XP Professional Edition with Service Pack 1 or above
- Windows 2000 with Service Pack 3 or above
- Windows Server 2003

IBM Tivoli Management Portal for System z client supported platforms:

- Desktop client on Windows XP, Windows 2000 or Windows 2003
- Browser client running Internet Explorer, Version 6 or above, on Windows XP, Windows 2000 or Windows 2003

Add power to situation definition

Tivoli OMEGAMON software helps you create complex thresholds, situations and alerts, without deep scripting or coding skills. The Tivoli OMEGAMON XE situation editor offers the precision to say, "If condition A or F occurs with C and H, but not with B, alert me," providing unmatched flexibility and granular control. The situation editor also allows you to view a graphical representation of alerts, so you know that implementation has been successful.

Use automation to respond promptly to problems

The complex thresholds you define in Tivoli OMEGAMON XE monitors also facilitate automated responses for quick problem resolution and less repetition of manual tasks. Tivoli OMEGAMON XE monitors use situational analysis to examine a series of thresholds and related alerts — rather than a single event — in relation to each other, which helps eliminate false alerts and gives you more insight into the problem. Reflex automation supports your policies and business rules by taking the necessary actions when those levels are surpassed.

IBM Tivoli OMEGAMON products for System z include:

Operating systems:
- IBM Tivoli OMEGAMON XE on z/OS
- IBM Tivoli OMEGAMON for z/VM® Linux®

Data management:
- IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS
- IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS
- IBM Tivoli OMEGAMON XE for IMS on z/OS

Host transaction processing:
- IBM Tivoli OMEGAMON XE for CICS on z/OS
- IBM Tivoli OMEGAMON XE for CICS Transaction Gateway on z/OS

Networking:
- IBM Tivoli OMEGAMON XE for Mainframe Networks

Storage management:
- IBM Tivoli OMEGAMON XE for Storage on z/OS

Integration:
- IBM Tivoli OMEGAMON DE on z/OS

Meet your data and transaction security requirements

Data security is a growing concern, and IBM Cryptographic Coprocessors offer state-of-the-art, high-performing data encryption, while offloading cryptographic processing from the host CPU. Tivoli OMEGAMON XE on z/OS provides real-time performance metrics for IBM Cryptographic Coprocessors, helping you verify that your cryptographic coprocessors are configured properly to meet the performance levels of your high security applications.

Maximize the value of your IT investments with a single point of control

The ability to integrate information from Tivoli OMEGAMON XE monitors and third-party software into a single view enables you to identify and track problems across all your enterprise platforms. This helps you make decisions quickly, efficiently and proactively. Use Tivoli OMEGAMON XE on z/OS to:

- Build infrastructure views that deliver IT information tailored to the user's responsibilities.
- Correlate reports to reveal an overall application view of performance and availability.
- Automate application-wide responses based on your policies and business rules.

Achieve end-to-end IBM System z management

Tivoli OMEGAMON System z® infrastructure management solutions from IBM can help you achieve a true on demand computing environment. Composed of integrated, industry-leading monitors and consoles, Tivoli OMEGAMON solutions provide an end-to-end view across your entire IT infrastructure.

These advanced System z infrastructure management solutions help businesses meet the demands of increasing data center volume, complexity and volatility by helping IT quickly identify, isolate and fix problems before they impact customers. With Tivoli OMEGAMON software, organizations can continually adjust their end-to-end System z infrastructures to deliver high performance and help prevent threats to system performance before they impact service levels.

For more information

To learn more about Tivoli performance and availability solutions and integrated solutions from IBM, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/tivoli

About Tivoli software from IBM

Tivoli software offers a service management platform for organizations to deliver quality service by providing visibility, control and automation — visibility to see and understand the workings of their business; control to effectively manage their business, minimize risk and protect their brand; and automation to optimize their business, reduce the cost of operations and deliver new services more rapidly. Unlike IT-centric service management, Tivoli software delivers a common foundation for managing, integrating and aligning both business and technology requirements. Tivoli software is designed to quickly address an organization's most pressing service management needs and help proactively respond to changing business demands. The Tivoli portfolio is backed by world-class IBM Services, IBM Support and an active ecosystem of IBM Business Partners. Tivoli clients and Business Partners can also leverage each other's best practices by participating in independently run IBM Tivoli User Groups around the world — visit www.tivoli-ug.org

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