IBM Tivoli OMEGAMON XE on z/OS

Getting the most out of your z/OS® and OS/390® systems is crucial. New applications in the data center are continually increasing the volume of workloads and the complexity of transactions. Managing your mainframe systems effectively can help you obtain maximum performance with minimal downtime.

With IBM Tivoli® OMEGAMON® XE on z/OS, you can quickly and easily get detailed analysis of every element of your Parallel Sysplex®, z/OS and OS/390 systems. You can tune and optimize Workload Manager, service classes and resources. From one screen, you can leverage multiple views of your z/OS and OS/390 operations — and their interactions with other components — to simplify systems management.

Highlights

- **Proactively manage performance and availability of IBM z/OS and IBM OS/390 systems from a single, integrated interface**
- **Leverage a single focal point to adjust and fine-tune Workload Manager performance**
- **View interaction between z/OS and other systems, databases and applications to determine impact on performance**
- **Maximize availability of the IBM Parallel Sysplex environment with coupling facility status and related resource metrics**
- **Integrate information from IBM Tivoli OMEGAMON XE monitors across multiple platforms and third-party software into a single view**
View detailed information about:

- 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
- User response time
- Workloads
- XCF

With Tivoli OMEGAMON XE on z/OS, you can exploit the full capabilities of z/OS and OS/390. Minimize wait times for key mainframe resources — and the time you spend diagnosing sources of slowdowns. Quickly identify and solve system delays using bottleneck analysis to obtain a detailed picture of resource use across CPUs, LPARs, I/O, enqueue, page-in and more. View performance in real time and usage trends in historical perspective. Then leverage tools that store the best practices of the industry and your organization to resolve problems — or establish an automated response to frequent situations.

In addition to offering leading performance and availability management for z/OS and OS/390, Tivoli OMEGAMON XE on z/OS integrates with other Tivoli products. You can use these integrated products to deploy true end-to-end availability management and help prevent threats to system performance before they impact service levels.
Use detailed resource metrics as a foundation for enhanced workload management

Tivoli OMEGAMON XE on z/OS enables you to view your z/OS and OS/390 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 Workload Manager service classes with great precision:

- Measure how well a workload achieves the goal you predefine in 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.
- 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.
- 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 and OS/390 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 down through DASD — to manage competing demands on your shared resources.

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

- Measure response times (including XCF path status, global enqueue delays and swap status, and GRS response times).
- Issue alerts when response times exceed thresholds you define.
- Isolate contention factors that affect communication among your z/OS and OS/390 systems and shared resources.
- Tune the coupling facility and its structures to optimize resource utilization.
- Optimize mean time to resolution for performance problems in a shared DASD environment.

Simplify management with a single view of your z/OS and OS/390 systems

Tivoli OMEGAMON XE on z/OS empowers you to manage your z/OS and OS/390 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 components — mainframe and distributed. 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 offers ways to speed response times, simplify management and ease problem resolution. To maximize the availability of your coupling facility resources for your applications, use Tivoli OMEGAMON XE on z/OS to track:

- Connectivity and resource status of each z/OS and OS/390 system and 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 — 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 and OS/390 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 create 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 your z/OS, OS/390 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.

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.

**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

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### Software requirements

- z/OS, Versions 1.3, 1.4, 1.5 and 1.6
- 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)
- 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 an 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 zSeries® 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 zSeries 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
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. You can:

- **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.

IBM Tivoli OMEGAMON products for zSeries include:

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Achieve end-to-end zSeries management
Tivoli OMEGAMON zSeries infrastructure management solutions from IBM help customers 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 an entire IT infrastructure. These advanced zSeries 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, businesses can continually adjust their end-to-end zSeries infrastructures to deliver high performance and ultimately 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

Tivoli software from IBM
An integral part of the comprehensive IBM on demand infrastructure solution, Tivoli technology management software helps traditional enterprises, emerging on demand businesses and Internet businesses worldwide maximize their existing and future technology investments. Backed by world-class IBM services, support and research, Tivoli software provides a seamlessly integrated and flexible on demand business infrastructure management solution that uses robust security to connect employees, business partners and customers.