IBM

Tivoli® software

IBM Tivoli OMEGAMON XE for DB2 on z/OS

Highlights

■ *Proactively manage performance and availability of IBM DB2 systems from a single, integrated interface*

■ *Leverage near- and long-term historical data to identify and respond to changes affecting application performance*

■ *Monitor global lock conflicts and workloads across the enterprise to adjust resources*

■ *View how threads and transactions from distributed applications interact with mainframe systems*

■ *Integrate information from IBM Tivoli OMEGAMON XE monitors across multiple platforms and third-party software into single views*

Because today's high-volume enterprise applications demand maximum performance and continuous availability, many companies depend on the power and availability of the DB2® database. To get the most out of your DB2 systems — including DB2 in a Parallel Sysplex® environment — it is crucial to rapidly analyze DB2 system elements and manage them effectively.

IBM Tivoli® OMEGAMON® XE for DB2 on z/OS® helps you manage the complexity that stems from the increasing workloads and demands on DB2 systems. From a single point of control, you can view comprehensive information and analysis of your DB2 systems, including DB2 in a Parallel Sysplex environment. The single interface of Tivoli OMEGAMON XE for DB2 also enables you to effectively manage interactions between DB2 and IBM CICS®, IBM IMS™ and other systems.

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View detailed information about:

- Application trace facility
- DB2 CICS threads
- DB2 CICS exceptions
- DB2 distributed database facility (DDF) statistics
- DB2 DDF conversation
- DB2 IMS regions
- DB2 IMS connections
- DB2 installation parameters
- DB2 storage resource manager (SRM) buffer pool activity
- DB2 SRM buffer pool detail
- DB2 SRM environmental descriptor manager (EDM) statistics
- DB2 SRM EDM pool activity
- DB2 SRM log manager
- DB2 SRM log statistics
- DB2 SRM subsystem
- DB2 SRM subsystem statistics
- DB2 utilities
- DB2 system states
- DB2 thread exceptions
- DB2 volume activity
- Global lock conflict
- Group object activity (GOA) local
- GOA local thread activity
- GOA local thread volume
- GOA local volume database
- GOA summary
- GOA thread activity summary
- GOA thread volume summary
- GOA volume database summary
- GOA volume summary
- Group buffer pool
- Group buffer pool connection
- Group buffer pool statistics
- Group buffer pool statistics detail
- Local DB2 lock conflict
- Local objects spacename
- Near-term statistics history
- Near-term thread history
- Stored procedures
- System overview
- Thread detail
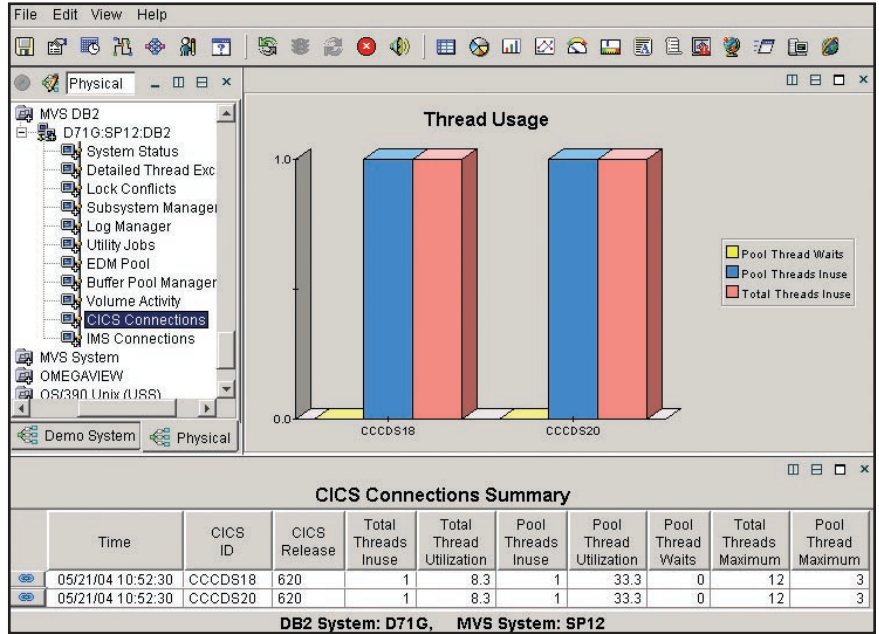- Thread enclave detail
- Thread statistics

Tivoli OMEGAMON XE for DB2 enables you to proactively manage your DB2 mainframe environment, tune for optimal performance and avoid costly downtime. With its intuitive browser interface, you can identify performance spikes and anomalies that might otherwise go unseen, take action in real time and automate frequent resolutions.

In addition to offering leading performance and availability management for DB2, Tivoli OMEGAMON XE for DB2 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.

Leverage granular, system-wide and historical perspectives to optimize DB2 operations

To achieve both granular and system-wide views of your DB2 operations, use Tivoli OMEGAMON XE for DB2 to collect and summarize information about key resources. Support for DB2, Version 8, enables you to exploit its new capabilities, including using stored procedures with Workload Manager, longer SQL statements and visibility into buffer pools above the 64-bit bar.

In a high-volume environment with rapid change, historical and real-time data collection and analysis help you predict and control your DB2 systems efficiently. With the near-term history capabilities in Tivoli OMEGAMON XE for DB2, you can immediately identify and respond to changes in workloads that may affect application performance — then proactively make the proper database adjustments to help prevent future problems. You can also collect and view long-term historical information to identify trends and plan for future database needs.

Tivoli OMEGAMON XE for DB2 on z/OS enables you to monitor the interaction of DB2 systems with CICS, IMS and other systems within a single interface, giving you the power to trace DB2 transactions from one system to another.

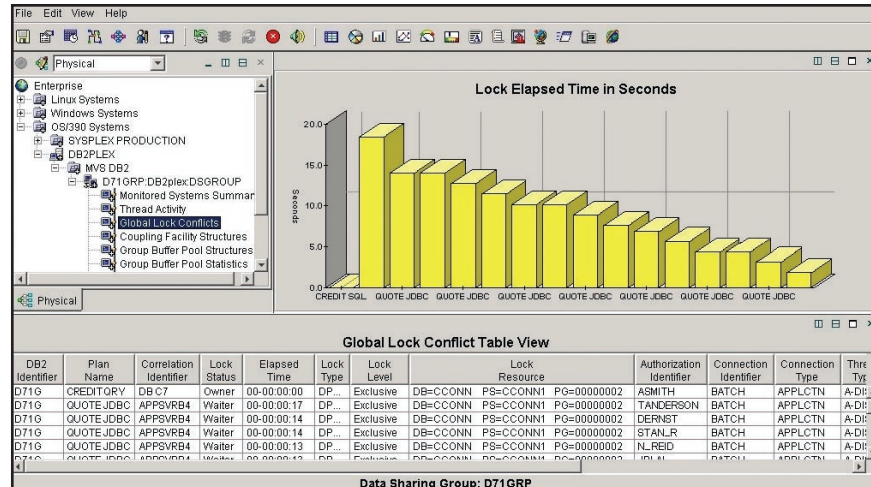## Simplify management with a single view of both DB2 and integrated systems

Tivoli OMEGAMON XE for DB2 empowers you to manage your end-to-end DB2 systems to provide a single view of summary and detailed information. When integrated with other Tivoli and third-party monitors, this single view can show you database usage across mainframe and distributed applications.

Monitoring the interaction of your DB2 systems with CICS, IMS and other systems within a single interface gives you the power to trace transactions from one system to another. For example, use the DB2 Thread Correlation to correlate DB2 IDs with CICS transactions. You can also see how threads or transactions from distributed applications interact with mainframe systems.

Quickly find and tune slow queries

When database queries take too long, Tivoli OMEGAMON XE for DB2 helps you determine why. Leverage object analysis to access detailed information on I/O, wait time and busy time for each DB2 thread. The application trace facility lets you track every step of a DB2 transaction to investigate poor performance. You can see resource use by individual user or application across multiple threads at every transaction step. This insight enables you to pinpoint the source of delays and quickly fine-tune for optimal performance.

Monitoring the performance of the DB2 environment also enables you to modify applications effectively. For example, the global lock conflict view shows you when an application is holding tables and rows in a database — and forcing other applications to wait. This allows you to modify the lock-related parameters to enable other applications to access the database concurrently. Managing DB2 in a Parallel Sysplex environment

The global lock conflict view shows you when an application is holding tables and rows in a database — and forcing other applications to wait. This allows you to modify the lock-related parameters to enable other applications to access the database concurrently.

also enables you to leverage detailed global locking information to optimize data sharing in the coupling facility.

Tivoli OMEGAMON XE for DB2 helps you monitor and tune how Workload Manager allocates and balances resources to find the source of performance problems quickly and adjust resources accordingly. You can gain visibility into, and control over, enclave usage. And you can analyze transaction rate information to identify

overloaded and underperforming workloads.

Optimize use of the coupling facility in Parallel Sysplex environments

Because Tivoli OMEGAMON XE for DB2 gives you a single point of control over your DB2 parallel data sharing environment, you have the information necessary to detect, isolate and resolve problems. To optimize the performance of the coupling facility in the Parallel Sysplex, you can analyze coupling

facility structures, participating member status and contention rates. Tivoli OMEGAMON XE for DB2 helps you pinpoint reasons why a data sharing group performs poorly, enabling you to make the necessary adjustments and proactively avoid false contention and application failures.

Simplify tasks to work smarter

All Tivoli OMEGAMON XE monitors, including Tivoli OMEGAMON XE for DB2, 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 DB2 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 DBAs, 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 for DB2 offers an intuitive browser-based interface that allows you to monitor the health of your DB2 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.

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.*

Software requirements

- DB2, Version 6 and above
- IBM MVS/ESA™; IBM OS/390®, Version 2.10; or z/OS, Version 1.1 and above
- OS/390, Version 2.7.0 SMP/E or above, available for use in foreground
- 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 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 4.3.3 and above
- HP-UX, Version 11.0 and above
- Sun Solaris, Version 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

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

IBM Tivoli OMEGAMON products for zSeries include:

Operating systems:

• IBM Tivoli OMEGAMON XE for Sysplex

• IBM Tivoli OMEGAMON XE for OS/390

• IBM Tivoli OMEGAMON XE for Linux®

• IBM Tivoli OMEGAMON XE for OS/390 USS

• IBM Tivoli OMEGAMON for VM

Data management:

• IBM Tivoli OMEGAMON XE for DB2 on z/OS

• IBM Tivoli OMEGAMON XE for IMS

• IBM Tivoli OMEGAMON XE for IMSplex

Host transaction processing:

• IBM Tivoli OMEGAMON XE for CICS

• IBM Tivoli OMEGAMON XE for CICSplex

Networking:

• IBM Tivoli OMEGAMON XE for Mainframe Networks

Storage management:

• IBM Tivoli OMEGAMON XE for Storage

Security:

• IBM Tivoli OMEGAMON XE for IBM Cryptographic Coprocessors

Integration:

• IBM Tivoli OMEGAMON DE for OS/390

before they impact service levels.

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business infrastructure management
solution that uses robust security
to connect employees, business