IBM

Tivoli® software

IBM Tivoli OMEGAMON XE for IMS and IBM Tivoli OMEGAMON XE for IMSplex

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Highlights

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

■ *Track and optimize both resource usage and transaction processing*

■ *View coupling facility statistics to identify factors affecting the performance of IBM Parallel Sysplex environments*

■ *Monitor workload balancing using shared queue support and data sharing to minimize the impact of locks on shared databases*

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

The world's largest companies depend on the integrity of IMS™ technology to shoulder their most crucial high-volume database access and storage needs. For your company to leverage the benefits of IMS — especially in the Parallel Sysplex® environment — it is crucial to effectively manage your IMS systems for high performance.
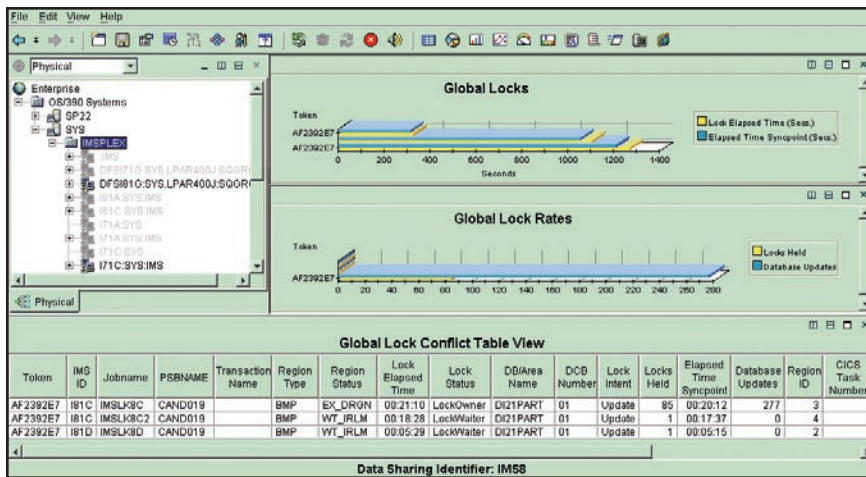
With IBM Tivoli® OMEGAMON® XE for IMS and IBM Tivoli OMEGAMON XE for IMSplex, you can deploy a powerful management tool to help you optimize the performance and availability of your vital IMS systems. The intuitive browser interface enables you to clearly see and understand application and system events. From a single point of control, you can view comprehensive information and analysis across multiple IMS subsystems — or across your IMSplex environment.

ON DEMAND BUSINESS™

View detailed information about:

- Address spaces for IMS regions
- Dependent region execution information
- Buffer pool statistics for virtual storage access method (VSAM) and overflow sequential access method (OSAM)
- Direct access storage device (DASD) logging
- I/O device activity
- Tivoli OMEGAMON XE messages that reflect the health of your environment
- IMS system exceptions
- IMS system-wide information
- Internal resource lock manager (IRLM)
- Database global lock conflicts
- Open Transaction Manager Access (OTMA) status information
- Pool utilization
- Program scheduling blocks (PSBs)
- Recovery control (RECON) datasets
- Transaction summary
- Transaction detail
- VSAM/OSAM databases
- Fast Path system information and balancing group statistics
- Fast Path information and statistics on data entry databases (DEDBs), main storage databases (MSDBs), and virtual storage option (VSO) data spaces and areas
- External subsystems
- Extended Recovery Facility (XRF) status
- Logical terminals
- IMS system datasets
- Coupling facility data sharing and shared queue statistics
- IMS startup parameters
- IBM MQSeries® status
- Multiple systems coupling
- Response time analysis
- IMS shared queue summary and details
- Online Transaction Reporting Facility (TRF) by class and Data Language I (DLI) calls

Tivoli OMEGAMON XE for IMS allows you to maintain subsecond transaction processing by measuring internal IMS response times. Quickly solve system delays by analyzing IBM MVS™ resources used by IMS address spaces and internal IMS resource usage, such as IMS pools and database buffer pools. Within IMSplex environments, Tivoli OMEGAMON XE for IMSplex enables you to see coupling facility structure statistics, shared queue counts and database lock conflicts that help you stay ahead of potential delays or outages.

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

File Edit View Help

Physical

Enterprise
OS/390 Systems
SP22
SYS
IMSPLEX
IMS
DFSI71G:SYS.LPAR400J:SQQR
DFSI81G:SYS.LPAR400J:SQQR
I81A:SYS:IMS
I81C:SYS:IMS
I71A:SYS
I71A:SYS:IMS
I71C:SYS
I71C:SYS:IMS

Physical

Global Locks

Token

AF2392E7
AF2392E7

0   200   400   600   800   1000   1200   1400
Seconds

Lock Elapsed Time (Secs.)
Elapsed Time Syncpoint (Secs.)

Global Lock Rates

Token

AF2392E7

0   20   40   60   80   100 120 140 160 180 200 220 240 260 290

Locks Held
Database Updates

Global Lock Conflict Table View

Token	IMS ID	Jobname	PSBNAME	Transaction Name	Region Type	Region Status	Lock Elapsed Time	Lock Status	DB/Area Name	DCB Number	Lock Intent	Locks Held	Elapsed Time Syncpoint	Database Updates	Region ID	CICS Task Number
AF2392E7	I81C	IMSLK8C	CAND019		BMP	EX_DRGN	00:21:10	LockOwner	DI21PART	01	Update	85	00:20:12	277	3	
AF2392E7	I81C	IMSLK8C2	CAND019		BMP	WT_IRLM	00:18:28	LockWaiter	DI21PART	01	Update	1	00:17:37	0	4	
AF2392E7	I81D	IMSLK8D	CAND019		BMP	WT_IRLM	00:05:29	LockWaiter	DI21PART	01	Update	1	00:05:15	0	2	

Data Sharing Identifier: IMS8

Database locks identify applications that are holding a lock and those waiting for the lock. Monitoring these locks helps detect potential application bottlenecks so you can take appropriate action.

Measure resource usage and optimize transaction processing

To help you achieve both granular and system-wide views of your IMS operations, Tivoli OMEGAMON XE for IMS monitors collect and summarize information about key resources, such as enqueue, I/O, CPU, paging rates, pool storage and buffer pool metrics. In addition to usage data, the software includes a transaction reporting facility that enables you to measure queuing and service times within IMS and IMS internal response times.

Quickly access exception analysis information

To manage your IMS workloads effectively, Tivoli OMEGAMON XE for IMS provides detailed information to evaluate exception conditions. This data can be included in workspaces or reports — in both charts and table views.

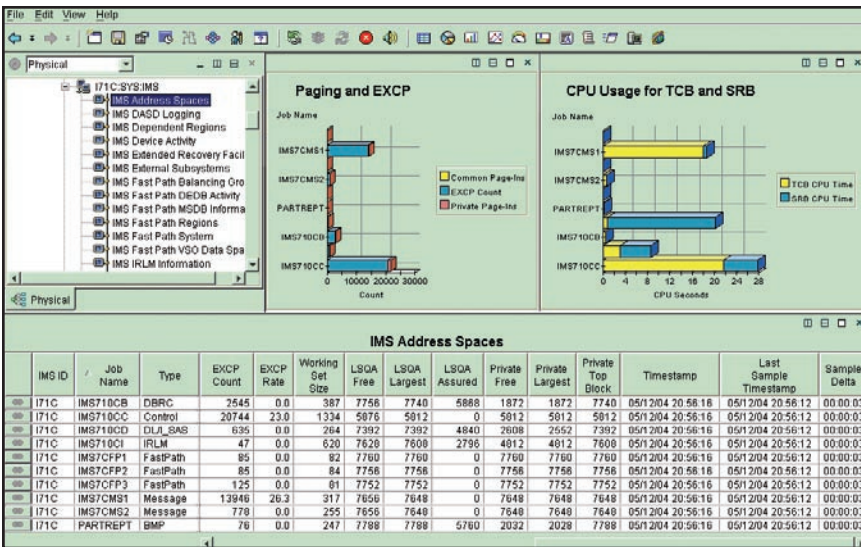### Simplify management with a single view of your IMS systems

Tivoli OMEGAMON XE for IMS monitors empower you to manage your IMS systems, including IMS systems running in a Parallel Sysplex environment. From a single interface, you can display all IMS regions for a given IMS system. And because the information is in one place, you can quickly and easily find and resolve problems.

The interface enables you to access information from each MVS image and IMS subsystem, including address spaces, DASD logging, device activity, pool display, dependent regions, system summary, transaction summary and detail, database activity and external subsystems. You can also view IMS interactions with IBM z/OS® resources.

Optimize use of the coupling facility in IMSplex environments

Tivoli OMEGAMON XE for IMSplex gives you a single point of control over IMS in Parallel Sysplex environments. You can see coupling facility data sharing and shared-queue structure statistics, shared-queue counts and data-sharing lock conflicts to help identify factors that affect performance.

IMS Address Spaces

IMS ID	Job Name	Type	EXCP Count	EXCP Rate	Working Set Size	LSQA Free	LSQA Largest	LSQA Assured	Private Free	Private Largest	Private Top Block	Timestamp	Last Sample Timestamp	Sample Delta
I71C	IMS710CB	DBRC	2545	0.0	387	7756	7740	5888	1872	1872	7740	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS710CC	Control	20744	23.0	1334	5076	5012	0	5012	5012	5012	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS710CD	DL/I_SAS	635	0.0	264	7392	7392	4840	2608	2552	7392	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS710CI	IRLM	47	0.0	620	7628	7608	2796	4612	4612	7608	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS7CFP1	FastPath	85	0.0	82	7760	7760	0	7760	7760	7760	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS7CFP2	FastPath	85	0.0	84	7756	7756	0	7756	7756	7756	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS7CFP3	FastPath	125	0.0	81	7752	7752	0	7752	7752	7752	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS7CMS1	Message	13946	26.3	317	7656	7648	0	7648	7648	7648	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	IMS7CMS2	Message	778	0.0	255	7656	7648	0	7648	7648	7648	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03
I71C	PARTREPT	BMP	76	0.0	247	7788	7788	5760	2032	2028	7788	05/12/04 20:56:16	05/12/04 20:56:12	00:00:03

IMS regions can be viewed from an MVS perspective. Factors such as paging rates, CPU consumption and EXCPs can have a major impact on transaction throughput. For example, high CPU and EXCPs and lack of storage can indicate a potential application problem.

Tivoli OMEGAMON for IMS monitors speed problem identification by quickly highlighting the number of transactions on the shared queues waiting to be processed. The software's coupling facility workspaces identify when coupling facility shared-queue structures are becoming full — before incoming messages are rejected.

Additionally, the monitors provide key information about the data sharing structures — such as global and false contention rates as well as usage statistics — to determine when data sharing lock and cache structures are becoming full.

Simplify tasks to work smarter

All Tivoli OMEGAMON XE monitors, including Tivoli OMEGAMON XE for IMS monitors, 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 IMS 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 for IMS monitors offer an intuitive browser-based interface that allows you to monitor the health of your IMS 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 all 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

- IMS, Versions 7.1, 8.1 and 9.1

- IBM MVS/ESA™; IBM OS/390®, Version 2.9 and above; 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 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 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 can 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.

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

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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.