



# IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS

## Highlights

- Monitor, analyze and tune the performance of IBM DB2 Universal Database and IBM DB2 applications on z/OS
- Improve productivity with robust views of performance
- Quickly and easily identify performance bottlenecks using predefined rules of thumb
- Enjoy substantial breadth and depth of monitoring DB2 environments by combining batch-reporting capabilities with real-time monitoring and historical tracking functions
- Support an enterprise-wide integrated systems management strategy activated by the IBM Tivoli OMEGAMON XE family
- Store performance data and analysis tools in a performance warehouse

## Elevate database performance to new levels

The database that houses your vital corporate and customer-related data is an integral piece of the IT foundation that allows you to respond to the demands of today's marketplace. To gain the most business value from these critical assets, your database must perform at peak levels.

Fortunately, IBM makes it easier than ever by automating analysis of your database performance in real time. IBM Tivoli® OMEGAMON® XE for DB2® Performance Expert on z/OS® gives you a single, comprehensive tool to help assess the efficiency of — and optimize performance from — your DB2 Universal Database™ on z/OS environment. The software combines the sophisticated reporting, monitoring and buffer pool analysis features of the

IBM Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS and IBM DB2 Buffer Pool Analyzer products. It also adds expert database analysis functions to help you maximize performance and enhance productivity.

## Control the information management platform

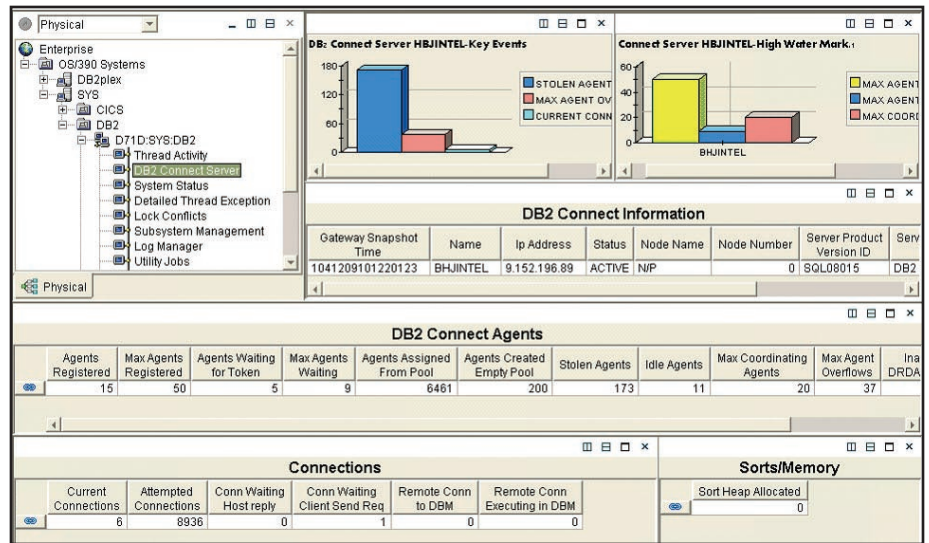
The robust graphical data views in Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS inform your IT staff about the state of your DB2 subsystem and its applications. The software collects trace data and provides performance counters and separate data views of relevant database statistics, such as:

- Buffer or environmental descriptor manager (EDM) pool usage.
- Structured query language (SQL) activities.
- Locking or log manager information.

Additionally, Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS gives you granular control over the routine operations of the DB2 subsystem to allow for maximum performance. Examples include:

- Monitoring of data-sharing groups for threads and statistical information.
- Drilling down from views of thread activities to the SQL and locked resource levels to understand the progress or status of the applications.
- Displaying locking conflicts — allowing you to discover more thread details or cancel a specific thread.
- Tracking near-term performance history to see problems that might otherwise go unnoticed and predict future problems.
- Conducting object analysis of database disks, tables, table spaces and other elements to tune performance.

With Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS, you can monitor IBM DB2 Connect™ to manage the connections between desktop applications and data on mainframe systems. Additionally, you can track



The ability to see DB2 Connect metrics for a connecting DB2 Gateway helps you determine where stolen agents or MAXAGENT overflows indicate that system resources can be used more efficiently so you can adjust related parameters.

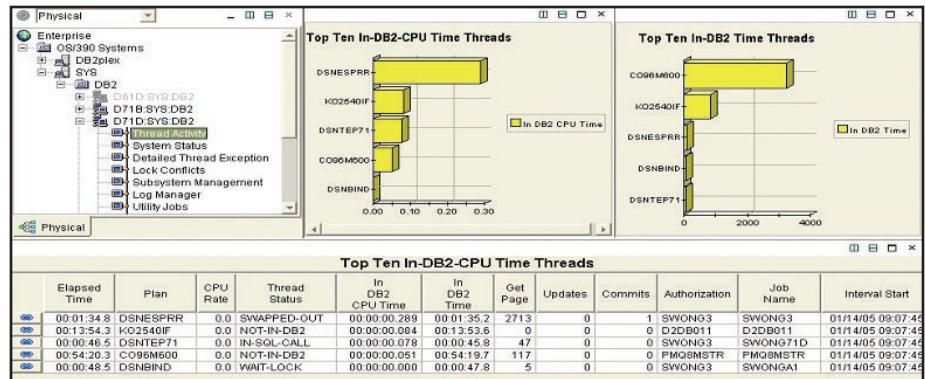
communications between DB2 Connect and the host thread for remote applications, measure the throughput of established connections and present the results through the end-user interface. By having a complete picture of how database system resources function, you can rapidly pinpoint performance issues within DB2 software and DB2 Connect for fast problem resolution.

### Obtain instant access to detailed reports

Use the software to analyze a wide range of specialized reports and tailor Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS to your unique business needs. For instance, in a particular database application, you can find out the elapsed time to perform a query, the read-and-write activity involved, the locks obtained and the SQL statements executed.

Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS reports provide you with greater insight to help maximize performance. Report sets include:

- Accounting with TOP processing, which is a user-defined list of the top-10 resource consumers.
- Statistics in long and short formats.
- SQL activity, such as scan and I/O activities, and tables and indexes accessed.
- Locking and suspension details from the internal resource lock manager (IRLM).
- I/O activity volumes and service times, as well as active and archive logs.
- System parameters and associated change descriptions for DB2 software.
- Utility activity for bind activities and utility execution.
- Audits of access to DB2 resources.
- DB2 trace records in time sequence, in an easy-to-read format.
- Access to paths used, as well as the join, union and sort steps of SQL statements.



Tivoli OMEGAMON XE for DB2 on z/OS products show you threads that use the most in-DB2-CPU time, to help you fine-tune for improved performance.

### Use autonomic computing for efficient operations

To help you maximize database efficiency, Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS includes a performance warehouse, which stores database performance data and analysis tools in a DB2 table. Using the performance warehouse, you can analyze the data in the performance database with rules that you define to quickly and easily identify performance bottlenecks and many other potential issues.

Examples of these “rules of thumb” analysis functions include identifying when prefetch has been disabled because of no buffer and when the write engine is not available. Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS ships with a wide range of expert rules and SQL performance queries.

When used with DB2 Connect, the performance warehouse helps you realize the software’s self-managing

capabilities. To help optimize products, it also allows you to define, schedule and run a variety of automated processes:

- Converting and loading reports (or other save-or-file data sets that exist on the host) in a separate database table — a performance database.
- Saving DB2 trace-and-report data in the performance database for further investigation and trend analysis.
- Configuring and scheduling the report-and-load process from the workstation GUI.
- Performing automatic upgrades of the performance database tables if the product supports new fields.

#### **Help optimize system resources and access to data**

DB2 buffer pools support sophisticated data access and modification processes. Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS helps you manage buffer pools — allowing you to gain the most from your system resources. The software provides information about current buffer pool behavior and uses simulation to anticipate future behavior. Recommended

changes to buffer pools can help you optimize memory use, CPU cycles, online response times and batch time.

To help accelerate query response times, Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS provides detailed statistical reports, so you can assess buffer pool function and object use. Obtain individual and group buffer pool information by creating filters that extract trace data for specified buffer pools, objects, plans and time periods. Then you can quickly prioritize and sort the resulting information to develop comprehensive DB2 summaries and analysis.

#### **Protect your investment**

If you already use DB2 Universal Database, Version 8, you can take advantage of the support in Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS to:

- View new DB2, Version 8 counters at the end-user interface.
- Display long names in online displays and reports.

Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS is part of the IBM portfolio of performance management tools, which includes Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS and IBM DB2 Performance Expert for Multiplatforms for the Linux®, UNIX® and Microsoft® Windows® environments.

Additionally, Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS software is backed by IBM services and support to help you achieve maximum return on your investment.

#### **Help maximize the value of your IT investments with a single point of control**

Performance and availability problems aren't limited to a single platform, so Tivoli OMEGAMON XE solutions identify and track problems across your enterprise. Tivoli OMEGAMON DE allows you to see information from multiple Tivoli OMEGAMON XE monitors and third-party software — in a single location. This helps you make decisions quickly, efficiently and proactively.

## Requirements and supported software

- DB2 Universal Database on z/OS, Version 7 or later, running under z/OS, Version 1.4 or higher (including related IBM SMP/E, interactive system productivity facility [ISPF], IBM TSO, IBM DFSMS, IBM DFSORT™ and TCP/IP support)
- For online monitoring: IBM VTAM®, ISPF, Windows 2000 or Windows XP
- For the performance warehouse or for SQL activity tracing: IBM DB2 Runtime Client, Version 8 (or a DB2 product that includes it)
- For integration with DB2 Visual Explain: IBM DB2 Administration Client, Version 8 or later, or any other DB2 Universal Database, Version 8 or later
  - IBM AIX®, Version 5.1 or later
  - HP-UX, Version 11i or later
  - Sun Solaris, Version 8 or later
  - Linux Kernel, Version 2.4.10 or later
  - Windows 2000 Service Pack 2, Windows XP
- For the Web client, the IBM Tivoli Enterprise Portal Server requires Java™ RTE 1.5.0 and the Tivoli Enterprise Portal requires Java RTE 1.3.1\_04
- Additional support for IBM IMS™, Versions 7.1, 8.1 and 9.1; and CICS, Versions 2.2 and 2.3

Tivoli OMEGAMON DE provides data integration between Tivoli OMEGAMON XE solutions that you can use to:

- Correlate reports in customizable workspaces.
- Build business and technical views that deliver IT information to users at the level best suited to their responsibilities.
- Allow policy-based, automated response to correlated data.

For example, you can use Tivoli OMEGAMON DE with Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS to allow end-to-end or IBM Transplex® monitoring, such as of a unit of work or an IBM CICS® transaction throughout the managed enterprise.

### For more information

Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS is part of the IBM portfolio of performance management tools that includes Tivoli OMEGAMON XE for DB2 Performance Monitor on z/OS.

To learn more about Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS, please contact your IBM representative or IBM Business Partner, or visit [ibm.com/software/data/db2imstools](http://ibm.com/software/data/db2imstools). You can also access product information, hints and tips, frequently asked questions, IBM Redbooks, and IBM tools specialists and IBM Business Partner services at [ibm.com/software/data/db2imstools/support.html](http://ibm.com/software/data/db2imstools/support.html).

When ordering Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS, please refer to program number 5655-P07.

### About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage information technology (IT) resources, tasks and processes in order to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while reducing costs. Tivoli's portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT lifecycle management, and is backed by world-class IBM services, support and research.



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