

Maximizing SQL Server Performance

Using Symantec Indepth for SQL Server

Symantec® Indepth™ software for SQL Server is designed to keep Microsoft® SQL Server™ databases and related applications operating at peak performance levels. This software enhances the management of application performance by proactively monitoring, analyzing, and tuning SQL Server databases. In this way, Symantec Indepth for SQL Server helps database administrators optimize CPU utilization and correct potential performance degradation problems before they affect the response of business-critical applications.

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Large or small, organizations that use Microsoft SQL Server software all too often encounter performance problems. Such problems can be difficult to diagnose and costly to fix. Furthermore, requirements for increased productivity call upon many database administrators to manage a growing number of instances and databases—leaving them with little time to address performance problems that can affect business response.

In a resilient computing infrastructure, IT is aligned with business goals and responsive to changing business demands. Symantec Indepth for SQL Server enhances the efficiency of application performance management by providing a comprehensive view of application performance—capturing, measuring, and correlating performance metrics from critical system components. As a result, Indepth for SQL Server can help database

administrators maximize the performance of SQL Server environments and optimize CPU resource utilization, enabling IT organizations to meet critical business needs. This article explains the features and benefits of Indepth for SQL Server and how this software can enhance the efficiency of the application management process.

Control multiple SQL Server instances from a single console

Symantec Indepth for SQL Server features a multiple-instance dashboard that is designed to provide administrators with a view of the performance and availability of all SQL Server instances and databases from a single screen. The dashboard helps administrators identify relevant performance information across a SQL Server network in a matter of seconds, including where heavy

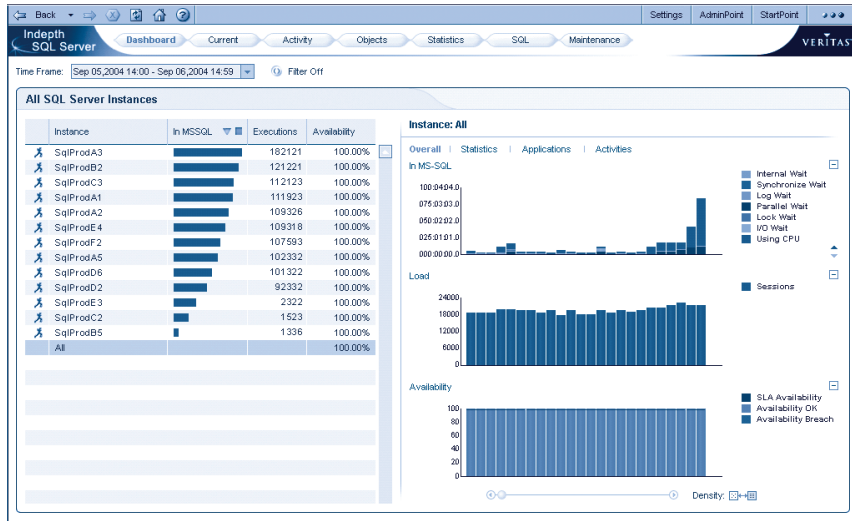


Figure 1. InDepth for SQL Server multiple-instance dashboard

processing loads may be bogging down the performance of databases, programs, statements, and batch jobs as well as which programs and statements are accessed by each user, program, remote system, and so forth.

When an application suffers from slow database response times, a tool such as Symantec InDepth for SQL Server can help administrators determine the root cause of the performance problem and identify the quickest way to correct the situation. InDepth for SQL Server is designed to offer the following capabilities:

- Correlate performance information from SQL Server sessions with user activity, program execution, batch jobs, database object activity, file and I/O activity, and so forth
- Correlate performance information with data about the database objects, tables, and indexes; storage layout and I/O activity on physical files; storage layout on central storage arrays such as Dell/EMC CX series arrays;¹ and data about enterprise resource planning (ERP) and customer relationship management (CRM) application servers, remote machines, and logged-on users
- Present the requisite information in a single, easy-to-understand screen display (see Figure 1), enabling database administrators to make an appropriate decision

Symantec InDepth for SQL Server also provides a built-in, intelligent index-recommendation mechanism called SmarTune. This mechanism features extensive capabilities for understanding and comparing execution plans as well as advanced tools to help resolve I/O, CPU, and locking problems. Consequently, InDepth for SQL Server is well suited for addressing performance problems and database tuning.

Increase productivity with continuous monitoring

Symantec InDepth for SQL Server continuously monitors the SQL Server environment—typically providing three samples per second—and captures performance data that enables current, short-term, and long-term performance analysis. To investigate a bottleneck such as a locked

session or a runaway process, administrators can use a present-time snapshot of database activity or review the performance data of a recent activity (see Figure 2).

InDepth for SQL Server stores the performance data it collects in an advanced, self-managed performance warehouse database. The performance warehouse not only allows administrators to investigate previous performance problems, but also helps administrators

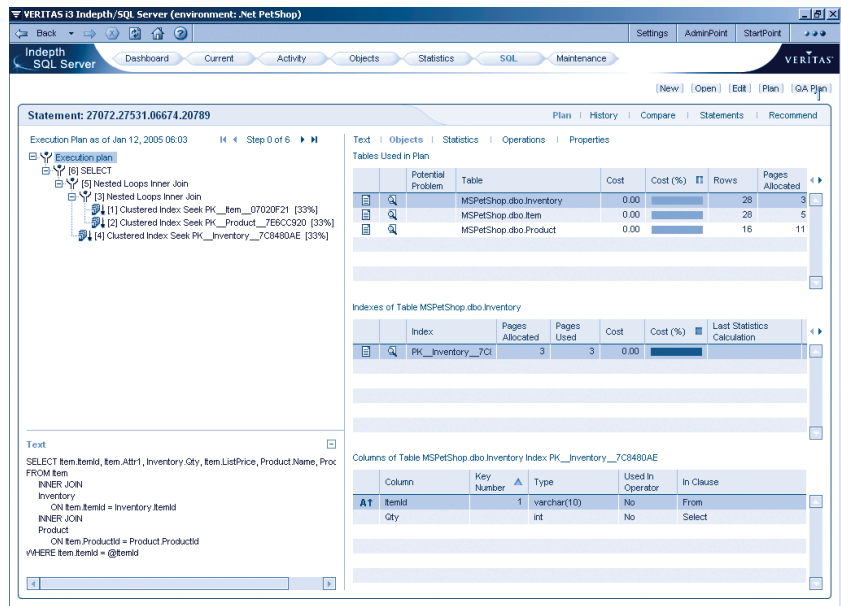


Figure 2. Statement tuning from the SQL workspace within InDepth for SQL Server

¹ Symantec offers Storage Extension for Dell/EMC CX series arrays as an add-on option to InDepth for SQL Server. This option is designed to extend the performance management of a SQL Server environment to the networked Dell/EMC storage.

identify performance trends that may require attention before they become problems.

Integrate third-party ERP and CRM applications

Symantec Indepth for SQL Server can be integrated into SAP, Siebel, and PeopleSoft software as well as other ERP and CRM solutions using specialized extensions (see Figure 3). These extensions are designed to reach beyond the borders of the SQL Server database and allow administrators to easily correlate database activity with application entities such as application users, dialog steps, views, panels, and so forth. Indepth for SQL Server also supports Microsoft COM+ (the enhanced version of the Microsoft Component Object Model) in a similar manner.

Deploy Indepth for SQL Server: An example scenario

This section provides an example deployment scenario for Symantec Indepth for SQL Server. In this example, an enterprise within the railroad industry reported experiencing severe performance problems in its SQL Server environment—problems that threatened to interfere with national train traffic. At first, the IT team was convinced the performance issue resulted from CPU limitations of the four-processor Intel® architecture-based servers.

As due diligence before requisitioning eight-processor servers, the IT team performed a performance analysis of the SQL Server environment using Indepth for SQL Server. The analysis showed that two problematic SQL statements were consuming more than 90 percent of the CPU resources. By using Indepth for SQL Server, administrators were able to quickly identify and correct a sorting problem, tuning the problematic SQL statements to boost performance dramatically. In this example scenario, using Indepth for SQL Server enabled the IT team to free considerable CPU resources on the servers and resolve the performance problem without having to purchase eight-processor Intel architecture-based servers. In addition, administrators reported that they were able to further optimize resources by relocating additional databases onto the four-processor servers.

Achieve peak performance with Indepth for SQL Server

Symantec Indepth for SQL Server performance management software is designed to help improve and manage application response times by proactively monitoring, analyzing, and tuning the Microsoft SQL Server environment. This software tool provides a comprehensive view of application performance by

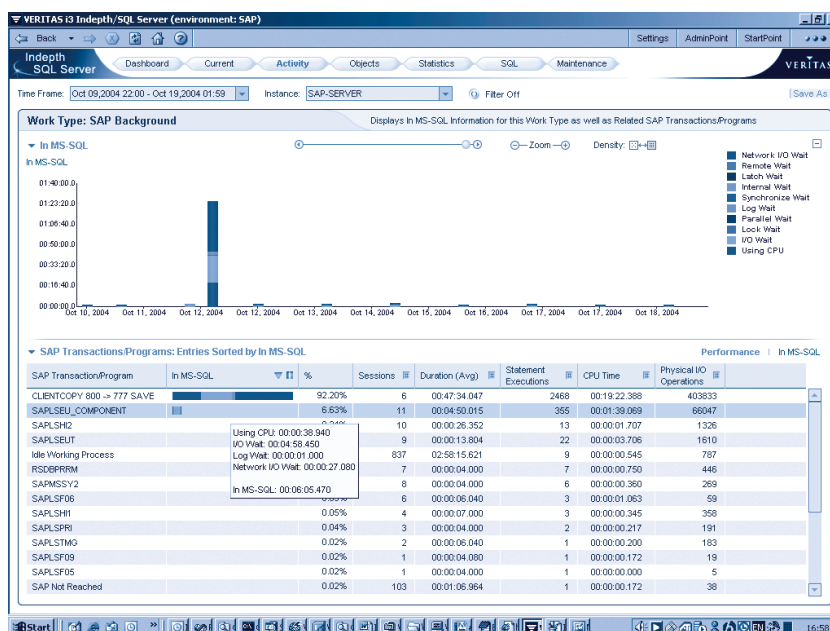


Figure 3. Indepth for SQL Server interface showing breakdown of SAP software transactions

capturing, measuring, and correlating performance metrics from each supporting tier of a SQL Server-based application infrastructure, including Web server, application server, database, and storage tiers. When problems are detected, Indepth for SQL Server helps pinpoint the cause and identify an effective course of action, while innovative SmartTune technology is designed to quickly correct the problem to enable peak system performance. Indepth for SQL Server helps streamline SQL Server operations, optimize CPU utilization, enhance application response time, and improve efficiency by providing administrators with a comprehensive view of application performance.

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