

# New points in SQL 2008 (Part 1)

SQL Server 2008 will be released around February 2008, along with new versions of Visual Studio and Windows. CTP (Community Technology Preview) of SQL 2008 is now available on the internet and you can download it from the Microsoft URL. In this article we will highlight some of the new features and benefits of SQL Server 2008

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## **The SQL Server 2000 support ends**

Help for SQL 2000 is coming to an end. Features and benefits included in the support include the ability to submit product change requests, security upgrades, hotfixes, free support and fee support. This assistance will expire on April 8, 2008 for a series of SQL Server 2000 64-bit Edition, SQL Server 2000 Developer, SQL Server 2000 Enterprise, SQL Server 2000 Standard, SQL Server 2000 CE, and SQL Server. 2000 Workgroup Edition. Extended support including premium security and paid support will continue until 2013. Description of support phases can be found at Microsoft URL: 'Microsoft Support Lifecycle' and 'Microsoft Support Lifecycle Policy FAQ'. Some agents will not continue to sell SQL 2000 in December 2007. No version of SQL 2000 is supported on Vista, including SQL 2000 Express.

## **Main areas**

One of the first things that gets noticed when considering Microsoft SQL Server 2008 is the new jargon feature and the benefits in the main group or areas. There are four main areas: Enterprise Data Platform, Dynamic Development, Beyond Relational Database, and Pervasive Insight. In the lesson we will rely on this grouping to create a reference that makes the lesson easier to understand.

## **Data platform for businesses**

The grouping of enterprise data platforms is sometimes referred to as Mission Critical Platform, Mission Critical Platform including core SQL Server Engine features and benefits including data encryption, resource management, System analysis and server management features.

## **Encode**

There are several encryption options; The first option called Transparent Data Encryption - transparent data

encryption. In SQL Server 2008, the entire database can be encrypted using SQL Engine. This method encrypts all data and log files for the database. By using this method, all indexes and tables are also encrypted.



The next encryption feature is Backup Encryption. SQL Server 2008 has a method of encrypting backups to avoid exposing and interfering with others' data. In addition, backup recovery can be limited to specific users.

Finally, there are some new options for External Key Management. If you are involved in credit card processing or PCI (prepaid card), then SQL Server 2008 will support Hardware Security Modules (HSM) - hardware security module. These modules are third-party hardware solutions that are used to store the Key in a location different from the data they protect.

### **Expertise**

In addition to standard authentication for logon / logoff and allowed changes, SQL Server 2008 allows checking for changes or accessing data. Authentication is configured by TSQL statements as in this example: `AUDATE UPDATE (Salary) ON Employee TO MyAuditFolder WHERE Salary > 200000`

### **Data Compression**

Normally, data compression is related to storage on hard drives, with smaller physical files, the number of backups is reduced. While this is true for SQL Server Data Compression, the main goal is to reduce the size of Fact Table. The advantages of data compression are listed below:

1. Improve query performance by reducing I / O and speeding up hit buffers
2. Provides compression ratios from 2X to 7X for real DW data
3. Live with other features
4. Suitable for both data and indexes

According to Microsoft, using data compression will increase CPU performance, the overall system performance will be improved because of reduced I / O.

### **Resource management**

Resource Governor - in SQL Server 2008 is also a new point. The Governor is used to restrict users or groups of users from controlling high-level resource classes. Items that can be checked include CPU bandwidth, timeout time, exception times, lock times, and idle times. If a Resource Governor threshold level is reached, the system can trigger an event or stop the process. Along with it, there are a series of steps related to using the Resource

Governor, which we will cover in later articles.

## Hot Plug CPU

In SQL Server 2008, additional CPUs can be added if the system hardware supports it.

## Data performance

The number of performance counters in SQL Server 2008 has been extended compared to the previous version. IO and memory performance counters are a pair that can be selected to test performance. Data that has been selected by the counter will be saved in the central data storage center. Microsoft states that running the default performance setting related to tests will cost less than 5% of memory and CPU resources.

There is a Performance Dashboard tool that can read saved performance data. In addition, basic and historical comparisons can be made and used to create trigger actions.

What's new in SQL Server 2008 is the Performance Studio. Studio is one of the performance tools. Together they can be used for inspection, troubleshooting, adjustment and reporting. The Data Collector component of the Studio can be configured. It supports a number of selection methods including TSQL queries, SQL Trace, and Perfmon Counters. Data can also be selected by programming. When data is selected, there are general reporting options. Microsoft lists six client-side features of Performance Studio:

1. Bulletin board
2. Test performance
3. Analyze current and historical data
4. Recommendations for performance tuning
5. The report is based on a set of data sets
6. Report based on MDW

## Setting

The SQL Server 2008 installer also has many enhancements. Configuration data and 'engine' bits are separate so it can create a basic unconfigured system disk distribution to some servers more easily. Installation can update the latest updates from the Microsoft website. Another feature is the ability to install SQL Server, service packs and patches. Along with this feature is the ability to uninstall service packs.

## Conclude

There are many significant features and benefits that come from it in SQL Server 2008. In **Part 2** of this series, we will introduce you to Development - Deployment and Integration, Integration - integration. , Business Intelligence - business information and new data types.

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