



E N T R É

**BEST PRACTICES:
SERVER MAINTENANCE**



LT-1658 17185

MS SQL DATABASE

Below is an overview of recommended Entré database maintenance best practices and how frequently they should be performed. For any additional information on these practices or how to perform them, refer to the Microsoft links below.

Microsoft Maintenance Tasks

<https://technet.microsoft.com/en-us/library/2008.08.database.aspx?f=255&MSPPEror=-2147217396>

How to Set Up Maintenance Tasks Using Maintenance Plan Wizard

<https://docs.microsoft.com/en-us/sql/relational-databases/maintenance-plans/use-the-maintenance-plan-wizard>

Rebuild/Reorganize Indexes

As data is added, indexes become inaccurate because data is added to the end instead of in order. It is a maintenance best practice to reorganize daily and rebuild weekly. Reorganizing is faster and puts less overhead on the system. Rebuilding takes more system resources and automatically updates statistics.

DAILY & WEEKLY

Update Statistics

MS SQL tries to optimize its performance by making the most used data the most readily available. “Statistics” is defined as which data is used and how often. Updating statistics allows MS SQL to come up with query plans to find data the fastest. Those statistics can be set to auto update or run nightly. You will want to update statistics manually after performing a database reorganization.

NIGHTLY

Check for Free Space

If auto grow is turned on, then you need to ensure that it is set to as close to 10% as possible. Also, ensure there is enough actual drive space to accommodate that growth.

WEEKLY

Check Disk Drive Contention

Ensure that there is not too much disk drive contention weekly. Ideally, data files and log files are on different physical disks. You can use Windows Performance Monitor to monitor the disks and ensure that the read and write cue lengths are always less than 1. If the cue length is longer than 1, the disk is receiving more requests for data than it can process. This will slow down performance significantly.

WEEKLY

Database Integrity Check

Use the DBCC Check to verify the health of the database in general. Also, run the DBCC check table and check ALLOC and the DBCC check catalog. These commands verify that the database is not corrupt.

WEEKLY

Manually Look for Indexes

Which indexes a database needs depends on how you use Entré. Over time, you may find that you can add indexes to improve performance. You can use SQL's built-in functionality to find what tables need additional indexes.

MONTHLY

Parallelism

When you run a SQL query it will try to spread that query across all four processor cores. This can aid performance to an extent, but occasionally those processors can not handle anything else while this is happening. If one query is tying up the processor for too long, that core can not process anything else while it is happening. To see this, look at the weight states for threads on the SQL server and you will see CX packets. A CX packet is the state of the thread when there is not a core available to process the thread.

MONTHLY



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