

# Data Access Utility – Recommended SQL Server Configuration Settings

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## Recovery Model

SQL Server offers three different “models” to control transaction logs. For optimal efficiency, it is recommended that the SQL Server instance and two databases (CCH\_ENT and DW\_RAW\_ETL) used with DAU are set to use the “Simple” recovery model.

The key benefits of using the “Simple” model are related to storage usage. In this model, backups of transaction logs are not taken, and SQL Server automatically overwrites transaction logs as the log file reaches its size limit. Since data stored in SQL Server for DAU is designed to mirror data stored in the CCH Access cloud, it is not necessary to have extensive transaction logs or backups of these logs; data can be pulled from CCH Access through a full load in the event of local data loss or corruption.

## File Sizing/Autogrowth

To minimize the chances of SQL Server encountering issues related to data and log file size limitations, a twofold approach is recommended. First, the machine hosting the SQL Server instance used with DAU should have several gigabytes of available storage space. Second, the data and log files associated with the two databases used with DAU (CCH\_ENT and DW\_RAW\_ETL) should be configured such that “Autogrowth” is enabled (and set to grow 10% as needed) and the maximum file size is as large as possible. This will allow the data and log files to grow as needed up to the file size limitation set for each file, minimizing the chance of encountering issues where a file is too small to support active transactions.

## Maintenance Plans

**NOTE: This recommendation only applies to the “Standard” and “Enterprise” editions of SQL Server (there is no support for maintenance plans in other editions).**

SQL Server offers the ability to [implement maintenance plans](#) as a method to automatically conduct common server maintenance tasks. It is recommended to implement a maintenance plan within the SQL Server instance used with DAU to ensure the instance and its databases are optimized for performance and general efficiency.

The recommended maintenance plan for SQL Server instances includes database integrity checks, history cleanup, maintenance cleanup, and maintenance reporting. In addition, this plan should be run at least once a week, though a nightly schedule may be necessary for firms

with larger datasets. The following sub-sections outline the recommended plan steps and their high-level configurations.

### History Cleanup

The History Cleanup task removes task history data from SQL Server. This can free up storage space on the machine hosting SQL Server and improve the performance of SQL Server overall. For use with DAU, all task history associated with the databases created and used by DAU (CCH\_ENT and DW\_RAW\_ETL) should be deleted.

### Maintenance Cleanup

The Maintenance Cleanup task removes backup data and maintenance plan text reports. For use with DAU, both backups and maintenance plan text reports should be deleted.

### Database Integrity Checks

Database integrity checks ensure that the structure and indexes of objects in SQL Server are as expected and error-free. At minimum, database integrity checks should be run against the two databases created and used by DAU (CCH\_ENT and DW\_RAW\_ETL). However, it is considered a best practice to run database integrity checks against all databases.

### Rebuild Indexes

Rebuilding the indexes can improve the performance of the databases associated with DAU (CCH\_ENT and DW\_RAW\_ETL). At minimum, the indexes in these databases should be rebuilt, though rebuilding all indexes across all database in SQL Server can improve the performance of queries made against databases overall.

### Update Statistics

Updating statistics allows statistics associated with tables and indexes to be “refreshed”. For DAU, statistics for all tables and indexes in the CCH\_ENT and DW\_RAW\_ETL databases should be updated.

### Maintenance Reporting

Once SQL Server maintenance has been completed, a report should be sent to individual(s) responsible for the SQL Server instance used with DAU. The most common way of accomplishing this (and the method recommended for DAU-related maintenance) is configuring a maintenance plan to automatically send an email once all other maintenance tasks have been completed, specifically if any errors are encountered during the maintenance process.