



MS SQL Server DBCC CHECKDB command



DBCC CHECKDB

- DBCC CHECKDB checks logical and physical integrity of all the objects in the specified database.
- DBCC CHECKDB includes all the three commands.
- DBCC CHECKALLOC – Checks the consistency of disk space allocation structures for a specified database.
- DBCC CHECKTABLE – Checks the integrity of all the pages and structures that make up the table or indexed view.
- DBCC CHECKCATALOG – Checks for catalog consistency within the specified database. The database must be online.
- check the validity database (physical as well logical) i.e. validates the contents of every indexed view in the database.
- Validates the Service Broker data in the database.



DBCC CHECKDB Syntax and Options

- *DBCC CHECKDB ('DatabaseName')*
- **NOINDEX** - Specifies that intensive checks of non clustered indexes for user tables should not be performed.
- **NO_INFOMSGS** - Suppresses all information messages.
- **PHYSICAL_ONLY** - Limits the checking to the integrity of the physical structure of the page and record headers and the allocation consistency of the database.
- **TABLOCK** - Causes DBCC CHECKDB to obtain locks instead of using an internal database snapshot. TABLOCK will cause DBCC CHECKDB to run faster on a database under heavy load, but decreases the concurrency available on the database while DBCC CHECKDB is running.
- **DATA_PURITY** - Causes DBCC CHECKDB to check the database for column values that are not valid or out-of-range. For example, DBCC CHECKDB detects columns with date and time values that are larger than or less than the acceptable range for the datetime data type; or decimal or approximate-numeric data type columns with scale or precision values that are not valid.



DBCC execution results

- The In-row data USED page count for object "tablename", index ID 2, partition ID 608313809829888, alloc unit ID 608313809829888 (type In-row data) is incorrect. Run DBCC UPDATEUSAGE. [SQLSTATE 42000] (Error 2508) The In-row data RSVD page count for object "tablename", index ID 2, par... The step failed.
- **DBCC UPDATEUSAGE** will correct the page and row count inaccuracies in the catalog views.
- Object ID 2088535921, index ID 0, partition ID 72345201021503994, alloc unit ID 72345201051571606 (type In-row data): Page (1:94299) could not be processed. See other errors for details. Msg 8939, Level 16, State 98, Line 1 Table error: Object ID 2088535921, index ID 0, partition ID 72345201021503994, alloc unit ID 72345201051571606 (type In-row data), page (1:94299). Test (IS_OFF (BUF_IOERR, pBUF->bstat)) failed. CHECKDB found 0 allocation errors and 2 consistency errors in table 'tablename' (object ID 2088535921). CHECKDB found 0 allocation errors and 2 consistency errors in database 'tablename'. repair_allow_data_loss is the minimum repair level for the errors found by DBCC CHECKDB (Database).
- The second error reports data corruption. The error mentions using repair_allow_data_loss as the minimum repair level. This means you can run the statement with this argument, but you may lose data.
- restoring to a backup if you can. You need to make sure the backup doesn't contain corrupted data and you want to make sure there is no data loss.
- **REPAIR_REBUILD** - Performs repairs that have no possibility of data loss. This can include quick repairs, such as repairing missing rows in non-clustered indexes, and more time-consuming repairs, such as rebuilding an index.
- **REPAIR_ALLOW_DATA_LOSS** - Tries to repair all reported errors. These repairs can cause some data loss.



DBCC CHECKDB Examples

- DBCC CHECKDB(N'AdventureWorks2016') WITH NO_INFOMSGS
- DBCC CHECKDB(N'AdventureWorks2016',**REPAIR_REBUILD**)
- DBCC CHECKDB(N'AdventureWorks2016',REPAIR_ALLOW_DATA_LOSS)
- Single User Mode
- ALTER DATABASE AdventureWorks2016 SET SINGLE_USER
- Multi User Mode
- ALTER DATABASE AdventureWorks2016 SET MULTI_USER