Maintenance Commands

Erin Stellato

@erinstellato | www.SQLskills.com

What This Module Covers

Commands to manage the SQL Server environment

Understanding effect of these commands on system performance

Effects of shrink commands

DBCC DROPCLEANBUFFERS

Removes all unchanged pages from the buffer pool

Can have a significant impact on performance, as data will need to be read from disk into memory to repopulate the buffer pool

Not recommended to run this command in a production environment

Requires sysadmin role

DBCC FREEPROCCACHE

Removes all entries from the procedure cache

Running this command against a production environment can affect performance, as subsequent queries will need to be compiled on their first execution

Not recommended to run this command in a production environment

Requires ALTER SERVER STATE

DBCC FREESYSTEMCACHE

Removes all unused cache entries from all/specific caches

Selectively remove cache for a Resource Governor pool or a memory clerk

Usually used for troubleshooting, although may be used regularly for ad hoc plan cache bloat

   - See Kimberly Tripp's blog post at http://bit.ly/Rj0MIP (zero, capital-i) for more details

Removing plans from cache can affect performance

Requires ALTER SERVER state

DBCC FREESESSIONCACHE

Remove entries from the distributed query connection cache, which is used by any distributed queries executed against the instance

Executing this command can affect performance

Requires sysadmin role

DBCC FLUSHPROCINDB

Removes all entries from the plan cache for a specific database

Undocumented command

Removing plans from cache for a database can affect the performance of queries against that database

Requires sysadmin or db_owner

DBCC SHRINKDATABASE

Removes free space from data and log files in a database

A database should not be shrunk regularly

- **Note:** AUTO_SHRINK should never be enabled

This operation can affect system performance (I/O, CPU, transaction log usage) and creates index fragmentation

Requires sysadmin role or db_owner

DBCC SHRINKFILE

Removes free space from a specific file

This command is frequently used to shrink the transaction log file

This operation can affect system performance (I/O, CPU, transaction log usage) and creates index fragmentation when executed against data files
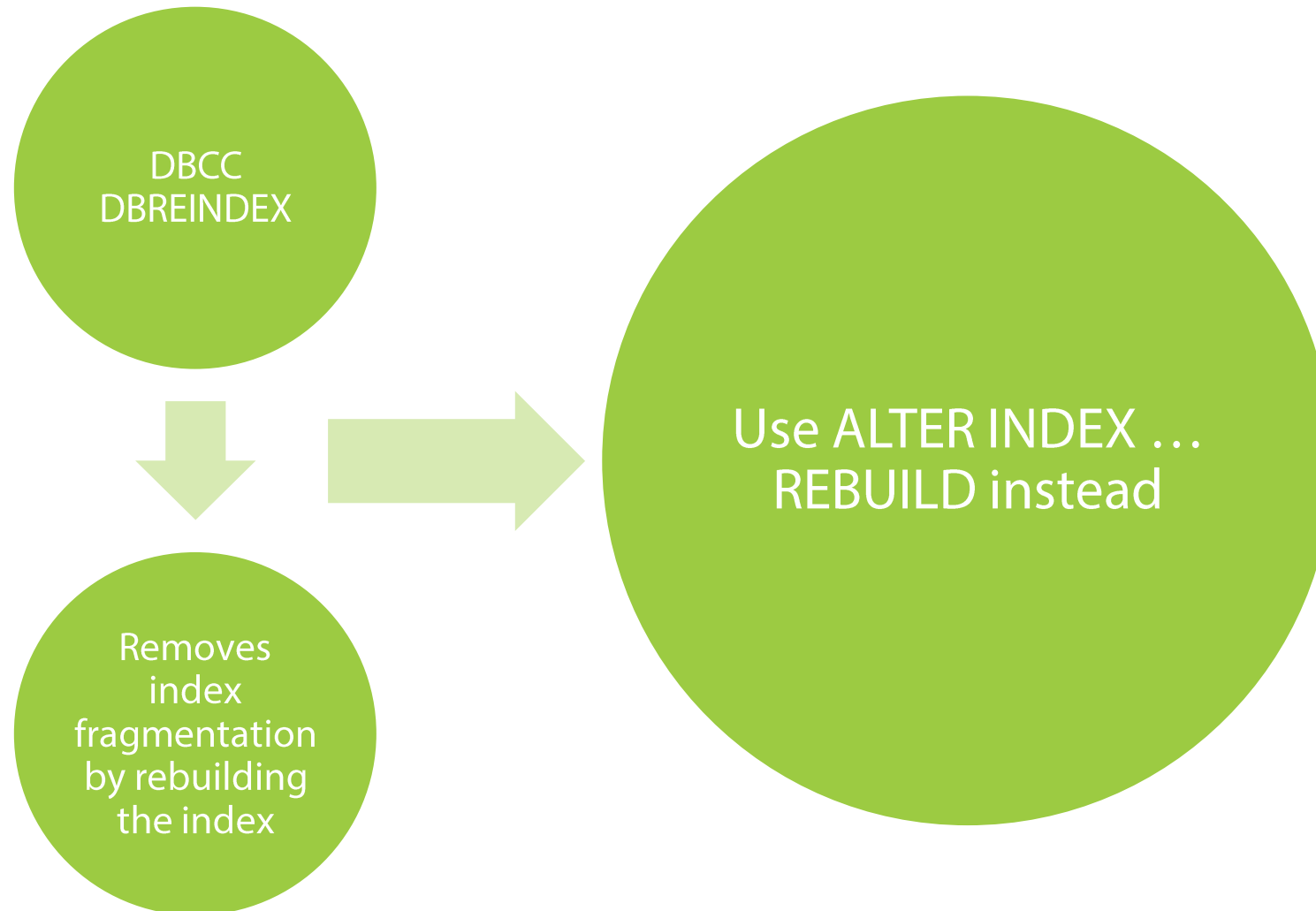
Requires sysadmin role or db_owner

DBCC UPDATEUSAGE

- Fixes incorrect page and row counts in the catalog views

- Running DBCC UPDATEUSAGE will affect performance as it reads through every page of the object(s) to calculate page and row counts

- Recommended to run this command after upgrading from SQL Server 2000
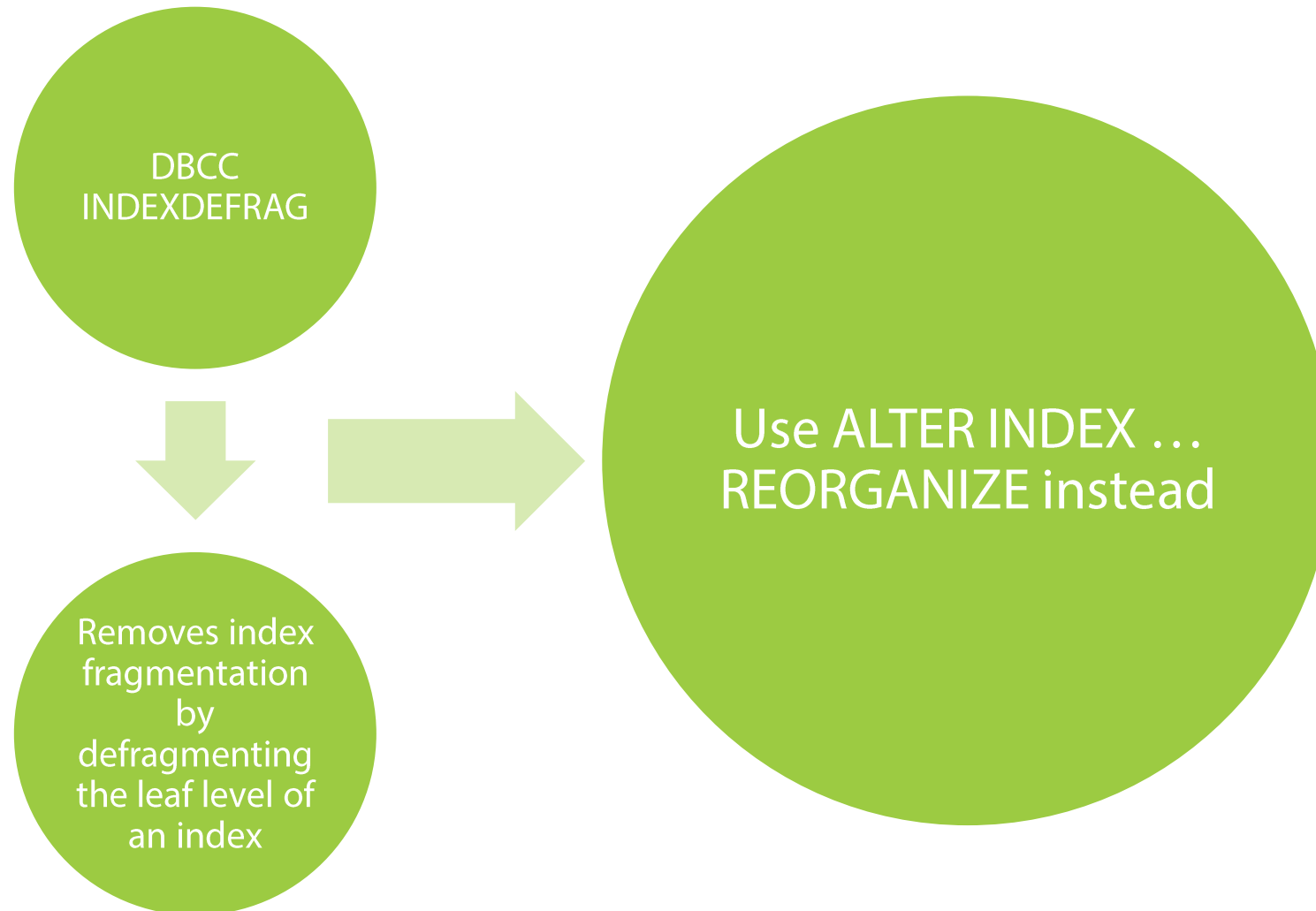
- Requires sysadmin or db_owner

DBCC CLEANTABLE

- Reclaims space in a table or indexed view after an in-row, variable-length column has been dropped (e.g. varchar, nvarchar, varchar(max), text)

- This command can affect system performance, particularly if it is run in one transaction which exclusively locks the table during execution

- Requires sysadmin, db_owner, or db_ddladmin role, or be the owner of the table or indexed view

Deprecated Commands

DBCC DBREINDEX

Removes index fragmentation by rebuilding the index

Use ALTER INDEX … REBUILD instead

Deprecated Commands

DBCC INDEXDEFRAG

Removes index fragmentation by defragmenting the leaf level of an index

Use ALTER INDEX … REORGANIZE instead

Using Maintenance Commands

Running some maintenance commands can create a performance issue

While data is not modified by any of these commands, it is essential to understand how they alter performance in your environment

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