Database Console Commands

DBCC (Database Console Commands) in SQL Server is a set of commands used for maintenance, validation, and status checking of databases, tables, indexes, and other SQL Server objects. Here's a summary of some key DBCC commands with examples and their outputs:

1. DBCC CHECKDB

- Purpose: Checks the logical and physical integrity of all the objects in a specified database.
- Syntax:



• **Output**: This will display a series of messages indicating if there are any consistency issues or if everything is fine. A typical output might look like:

```
DBCC results for 'AdventureWorks2019'.

Service Broker Msg 9675, State 1: Message Types analyzed: 14.

Service Broker Msg 9676, State 1: Service Contracts analyzed: 6.

DBCC results for 'AdventureWorks2019'.

No allocation or consistency errors were found in database 'AdventureWorks2019'.

DBCC execution completed. If DBCC printed error messages, contact your system administ
```

2. DBCC CHECKTABLE

- Purpose: Checks the integrity of a single table or indexed view.
- Syntax:

```
sql

DBCC CHECKTABLE (table_name)
```

• Example:

```
sql

DBCC CHECKTABLE ('AdventureWorks2019.Person.Person')
```

• Output: This will check the table and display any errors found. The output could be:

```
DBCC results for 'Person'.

There are 19972 rows in 137 pages for object 'Person'.

DBCC execution completed. If DBCC printed error messages, contact your system administ
```

3. DBCC CHECKALLOC

- Purpose: Verifies the consistency of disk space allocation structures for a specific database.
- Syntax:



Example:



• Output: The output will show whether there are allocation errors in the database.

```
DBCC results for 'AdventureWorks2019'.

No allocation errors found in database 'AdventureWorks2019'.

DBCC execution completed. If DBCC printed error messages, contact your system administ
```

4. DBCC SQLPERF

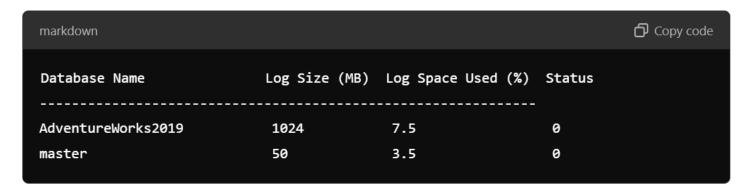
- Purpose: Provides statistics on transaction log space usage.
- Syntax:



• Example:

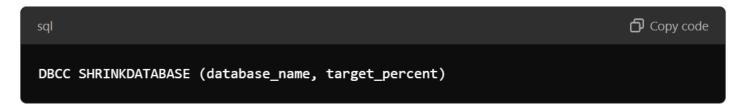


• Output: It will show how much of the transaction log is in use for each database.



5. DBCC SHRINKDATABASE

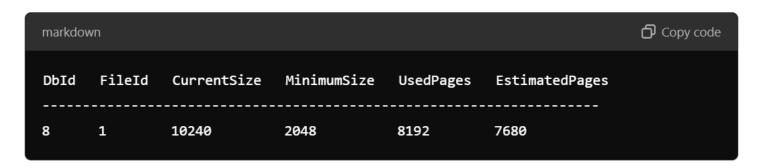
- Purpose: Shrinks the size of the data and log files in the specified database.
- Syntax:



Example:



• Output: It will shrink the database files and display the results showing the new size. The output will look like:



6. DBCC SHRINKFILE

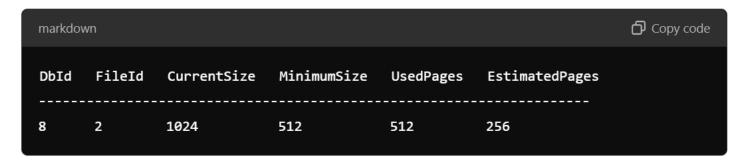
- Purpose: Shrinks the size of a specific data or log file.
- Syntax:



Example:



• Output: This command will reduce the size of the specified file. The output will be:



7. DBCC DROPCLEANBUFFERS

- **Purpose**: Clears the buffer cache, useful in testing the performance of queries with a "cold" cache.
- Syntax:



• **Output**: No result set is returned unless you use the WITH NO_INFOMSGS option. The buffer cache will be cleared silently.

8. DBCC FREEPROCCACHE

- **Purpose**: Clears the procedure cache, forcing SQL Server to recompile queries the next time they are executed.
- Syntax:



• Example:



• Output: This clears the cache and does not return a result set, but the cache will now be free.

9. DBCC CHECKIDENT

- Purpose: Checks the current identity value for a table and corrects it if necessary.
- Syntax:



• Example:



• Output: This will reset the identity value of the table to the specified value and display:



10. DBCC TRACEON and DBCC TRACEOFF

- Purpose: Enables or disables a specific trace flag for troubleshooting purposes.
- Syntax:

```
DBCC TRACEON (trace_flag)

DBCC TRACEOFF (trace_flag)
```

• Example:

```
DBCC TRACEON (3604) -- Displays output to the client
DBCC TRACEOFF (3604) -- Turns off the output
```

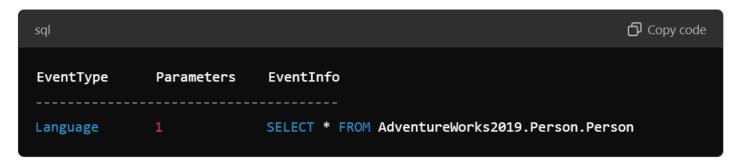
• Output: No output will be generated unless the trace flag produces it.

11. DBCC INPUTBUFFER

- Purpose: Displays the last statement sent from a client to SQL Server for a specific session.
- Syntax:



• Example:



• Output: This will display the last statement executed by the session.

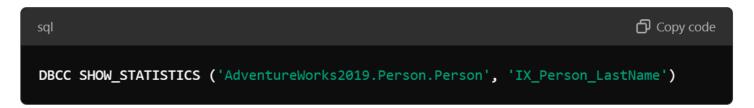
12. DBCC SHOW_STATISTICS

- Purpose: Displays statistics information for a table or indexed view.
- Syntax:

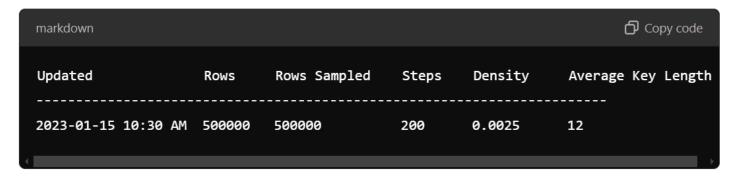
```
sql

DBCC SHOW_STATISTICS (table_or_indexed_view_name, target)
```

Example:



• **Output**: Displays the statistics for the specified index or table, showing data distribution for optimization.



These commands can be highly useful for maintaining database health, troubleshooting performance issues, and diagnosing integrity problems within your SQL Server environment.