**SQL Server DBA reference guide**

Use this guide to navigate a SQL server triage and performance troubleshooting at a basic level

Included are the commands to be executed to get the information on what is happening with the SQL server at a given time and information to show the overall health and issues with a given SQL instance.

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**When do you need this:** Execute the below commands when to check what queries/sessions are running right now on a SQL instance

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sp\_WhoIsActive - What is running right now?

Use for:

- speed

- lock information

http://whoisactive.com/docs/

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EXEC dbo.sp\_WhoIsActive @get\_locks = 1, @get\_plans = 1;

**When do you need this:** Execute the below commands if and when you inherit a SQL server and not sure of the health of it. The output will provide a wide range of information like when a backup was run on the databases, if there is any corruption or urgent issues you need to worry about.

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sp\_Blitz - SQL Server health check

https://www.brentozar.com/blitz/

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EXEC dbo.sp\_Blitz @CheckServerInfo = 1,

@CheckUserDatabaseObjects = 0

EXEC dbo.sp\_Blitz @CheckServerInfo = 1,

@CheckUserDatabaseObjects = 0,

@OutputType = 'markdown';

**When do you need this:** Execute the below commands when you get a complaint that a SQL server is running slow or a particular job/user session is running slower than usual. The output of the command will show you what the server is waiting on (wait stats).

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sp\_BlitzFirst - Troubleshoot slow SQL Servers

https://www.brentozar.com/askbrent/

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EXEC dbo.sp\_BlitzFirst;

EXEC dbo.sp\_BlitzFirst @OutputDatabaseName = 'DBAUtility',

@OutputSchemaName = 'dbo',

@OutputTableName = 'BlitzFirst',

@OutputTableNameFileStats = 'BlitzFirstFileStats',

@OutputTableNameWaitStats = 'BlitzFirstWaitStats',

@OutputTableNamePerfmonStats = 'BlitzFirstPerfmonStats',

@OutputTableNameBlitzCache = 'BlitzFirstBlitzCache',

@ExpertMode = 1,

@SinceStartup = 1;

EXEC dbo.sp\_BlitzFirst @ExpertMode = 1,

@SinceStartup = 1,

@AsOf = '2020-10-28 15:03';

EXEC dbo.sp\_BlitzFirst @SinceStartup = 1, @OutputType = 'Top10';

/\* Top 6 wait types in most scenarios: \*/

**1. CXCONSUMER/CXPACKET/LATCH\_EX:**

**\* Check CTFP & MAXDOP: BrentOzar.com/go/cxpacket**

**\* sp\_BlitzCache @SortOrder = 'reads'**

**\* sp\_BlitzCache @SortOrder = 'cpu'**

**2. SOS\_SCHEDULER\_YIELD**

**\* sp\_BlitzCache @SortOrder = 'cpu'**

**3. PAGEIOLATCH%**

**\* sp\_BlitzCache @SortOrder = 'reads'**

**4. RESOURCE\_SEMAPHORE**

**\* sp\_BlitzCache @SortOrder = 'memory grant'**

**5. LCK%**

**\* sp\_BlitzLock**

**\* sp\_BlitzIndex @GetAllDatabases = 1 /\* look for "Aggressive Indexes" \*/**

**6. WRITELOG**

**\* sp\_BlitzCache @SortOrder = 'writes'**

**When do you need this:** Execute the below commands if you are doing any kind of performance tuning engagement or want to find the badly performing queries.

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sp\_BlitzCache - Find your worst-performing queries

https://www.brentozar.com/blitzcache/

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EXEC dbo.sp\_BlitzCache;

EXEC dbo.sp\_BlitzCache @SortOrder = 'cpu', @MinutesBack = 90;

EXEC dbo.sp\_BlitzCache @SortOrder = 'executions';

EXEC dbo.sp\_BlitzCache @SortOrder = 'cpu', @ExportToExcel = 1;

**When do you need this:** Execute the below commands if and when you want to find information on any missing indexes, heaps, excessively indexes tables, and unused indexes that can be dropped.

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sp\_BlitzIndex - Index sanity test

https://www.brentozar.com/blitzindex/

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EXEC dbo.sp\_BlitzIndex @GetAllDatabases = 1;

EXEC dbo.sp\_BlitzIndex @DatabaseName = 'StackOverflow2010',

@SchemaName = 'dbo',

@TableName = 'Votes';

EXEC dbo.sp\_BlitzIndex @GetAllDatabases = 1,

@OutputDatabaseName = 'DBA',

@OutputSchemaName = 'dbo',

@OutputTableName = 'BlitzIndex',

@Mode = 2;

EXEC dbo.sp\_BlitzIndex @GetAllDatabases = 1, @Mode = 3;

EXEC dbo.sp\_BlitzIndex @Mode = 1;

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sp\_BlitzLock - Troubleshooting deadlocks

https://www.brentozar.com/archive/2017/12/introducing-sp\_blitzlock-troubleshooting-sql-server-deadlocks/

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EXEC dbo.sp\_BlitzLock

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Use Dedicated Admin Connection (DAC) during emergencies!

https://www.brentozar.com/archive/2011/08/dedicated-admin-connection-why-want-when-need-how-tell-whos-using/

https://www.sqlshack.com/sql-server-dedicated-admin-connection-dac-how-to-enable-connect-and-use/

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URLs

http://FirstResponderKit.org

https://www.brentozar.com/archive/2016/05/dbcc-checkdb-reports-corruption/

https://www.brentozar.com/archive/2020/06/updating-statistics-causes-parameter-sniffing/

https://www.brentozar.com/archive/2018/07/tsql2sday-how-much-plan-cache-history-do-you-have/

https://www.brentozar.com/archive/2018/05/how-to-create-deadlocks-and-troubleshoot-them/

https://www.mssqltips.com/sqlservertip/6456/improve-sql-server-extended-events-systemhealth-session/

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