# TSQL Benchmarking and SQL Server Toolkit

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# TSQL Benchmarking

Benchmark tools for SQL Server: [HammerDB](), [RML Utilities for SQL Server](), [SQLStress](), [Dell Benchmark Factory]()

[How to Benchmark Alternative SQL Queries to Find the Fastest Query]() by Luka Seder

TSQL is not best programming language:

- no packages

- No indexed loop - only WHILE loop

- No implicit cursor loops (instead: DEALLOCATE!)...

# sp_BenchmarkTSQL

https://github.com/ktaranov/sqlserver-kit/blob/master/Stored_Procedure/sp_BenchmarkTSQL.sql

- Name Convention

- `CREATE AND ALTER` instead `DROP AND CREATE`

- Self documented in powershell style

- `RAISERROR` instead `PRINT`

- License MIT

# SQL Server Tools and Utilities

https://github.com/ktaranov/sqlserver-kit/tree/master/Utilities
List of 275 SQL Server paid and free Utilities and Tools

- Docs Overview SQL Tools

- Azure Data Studio

- DataGrip

- PlanExploer

# Total Commander

https://www.ghisler.com/

- Incredible Search

- Hot keys

- Rename files

- Compare directories

# Autohotkey

The ultimate automation scripting language for Windows
[https://www.autohotkey.com/](https://www.autohotkey.com/)

- Autotype option

- Always on top `^SPACE:: Winset, Alwaysontop, , A`

- Complex solution

- Convert text: `Ctrl+Win+L`, `Ctrl+Win+U`, `SHIFT+CTL+K`

# EmEditor

EmEditor is a fast, lightweight, yet extensible, easy-to-use text editor for Windows.

- LARGE FILE SUPPORT (Easily handle files up to 248 GB)

- Compare Documents

- Regular Expressions

- Awesome csv support

# SSMS

- [SSMS Version](#)

- [SSMS Addins](#) (ApexSQL Search, SSMS Boost and 31 more)

- [SSMS Tips](#)

- [SSMS Alternatives](#)

- [SSMS Book](#) (by SDU)

# SDU Tools

https://sqldownunder.com/pages/sdu-tools

Tools for comparing databases, tables, finding unused indexes, manipulating strings, performance tuning, converting data, and so much more on pure TSQL.

- DATABASE AND TABLE COMPARISON TOOLS

- GENERAL FUNCTIONS

- DATABASE UTILITIES

- SCRIPTING FUNCTIONS

- DATA CONVERSION FUNCTIONS...

# SQL Server must reading list: beginning level

- [Как работает реляционная БД](#) by Дмитрий Калугин-Балашов

- [Understanding how SQL Server executes a query](#) by Remus Rusanu

- [Slow in the Application, Fast in SSMS?](#) by Erland Sommarskog ([Russian version](#) by Dmitry Pilugin)

- [The Curse and Blessings of Dynamic SQL](#) by Erland Sommarskog

# SQL Server must reading list: advanced level

- Pilugin blogs: http://www.queryprocessor.ru/ and http://www.queryprocessor.com/

- Bren Ozar blog (Batch Mode For Row Store: What Does It Help With? and https://youtu.be/KfdfNRrIsU0)

- Niko Neugebauer - master of Columnstore indexes

- SQLShack

# SQL Server must reading list: expert level

- My web resources

- Brent Ozar Feedly list

# SQL Server Trace Flags, Latch and Waits libraries

Detailed list of documented and undocumented Microsoft SQL Server trace flags (**593 trace flags**)
[https://github.com/ktaranov/sqlserver-kit/blob/master/SQL Server Trace Flag.md](https://github.com/ktaranov/sqlserver-kit/blob/master/SQL Server Trace Flag.md)

- ⚠ Warning!

- Scope: global, session or query

- Use "-T" option for global flags

- Undocumented flags

- Recommended flags

# sp_WhoIsActive

http://whoisactive.com/docs/

sp_whoisactive is a comprehensive activity monitoring stored procedure that works for all versions of SQL Server from 2005 through 2017.

- How to Log Activity Using sp_whoisactive

- Logging Activity Using sp_WhoIsActive – Take 2

- **"-" NOT FULLY OPEN SOURCE**

# Brent Ozar SQL Server First Responder Kit

https://github.com/BrentOzarULTD/SQL-Server-First-Responder-Kit

**NO COMMENTS - YOU MUST USE THIS Stored Procedures (especially sp_BlitzInMemoryOLTP)**

# SQL Server Ola Hallengren's Maintenance Solution

[https://github.com/olahallengren/sql-server-maintenance-solution](https://github.com/olahallengren/sql-server-maintenance-solution)
SQL Server Backup, Integrity Check, and Index and Statistics Maintenance

Alternative:

- [Minion Backup](#)

- [Minion CheckDB](#)

- [Minion Index Maintenance](#)

# Powershell and SQL Server

https://github.com/ktaranov/sqlserver-kit#powershell-and-sql-server

- dbatools

- SQLPSX

- ReportingServicesTools - Reporting Services Powershell Tools

- PowerUpSQL - A PowerShell Toolkit for Attacking SQL Server

Spoon of tar: most modules do not support Powershell 6 (no cross platform) and no good IDE.

# How to ask help

Lazy method: https://t.me/sqlcom or https://t.me/sql_ninja

1. Create question on stackoverflow
Include:

- Operation system with detailed version (Windows, Ubuntu, Macos etc.).

- Relation database type (SQL Server preferred, Orcale, MySQL, PostgreSQL, SQLite etc.) with detailed version.

# LeaRn Python and R

- Build in from SQL Server 2016 (R) and SQL Server 2017 (Python)

- Awesome community

- Libraires (R) and packages (Python) for solving any problem

- Open source (FREE) and cross platform

- [ML BIGDATA HADOOP Jirachi](#) ...

# Start own open source project or contribute

https://github.com/ktaranov/github-stump

1. Create account on **Github** or Gitlab or Bitbucket (if you also need free private repo)

2. Install GIT

3. Install GIT GUI Client. For Windows i recommend Git Extensions, for Mac GitKraken

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- ~~Dima Pilugin~~ Paul Randal

- Satya Nadella

- and [all SQL Server awesome Community](#)