

THE LINKS

SQLskills Immersion Event

IE1 – Internals and Performance

(links are grouped by module)

Module 1: Database Structures

Slide 47: <http://www.sqlskills.com/blogs/joe/post/A-small-scale-test-measuring-the-impact-of-data-compression-on-the-transaction-log.aspx>

Slide 84: <http://www.sqlskills.com/BLOGS/PAUL/category/Inside-the-Storage-Engine.aspx>

Slide 85:

<http://msdn.microsoft.com/en-us/library/dd894051.aspx>

<http://www.sqlskills.com/blogs/paul/category/Sparse-Columns.aspx>

<http://msdn.microsoft.com/en-us/library/cc949109.aspx>

<http://www.sqlskills.com/blogs/paul/category/FILESTREAM.aspx>

Module 2: Data Files

Slide 9: <http://msdn.microsoft.com/en-us/library/dd758814.aspx>

Slide 10: <http://www.sqlskills.com/BLOGS/PAUL/post/Tool-for-estimating-the-size-of-a-database.aspx>

Slide 11: <http://www.sqlskills.com/BLOGS/PAUL/post/Benchmarking-do-multiple-data-files-make-a-difference.aspx>

Slide 12: <http://www.microsoft.com/technet/prodtechnol/sql/2005/physdbstor.mspx>

Slide 13-16: <http://www.sqlskills.com/BLOGS/PAUL/post/physical-database-layout-vs-database-size.aspx>

Slide 17: <http://www.sqlskills.com/BLOGS/PAUL/category/Benchmarking.aspx>

Slide 18: [http://www.sqlskills.com/BLOGS/PAUL/post/Benchmarking-Multiple-data-files-on-SSDs-\(plus-Fusion-ios-latest-driver\).aspx](http://www.sqlskills.com/BLOGS/PAUL/post/Benchmarking-Multiple-data-files-on-SSDs-(plus-Fusion-ios-latest-driver).aspx)

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<http://www.sqlskills.com/BLOGS/PAUL/category/Buffer-Pool.aspx>

<http://support.microsoft.com/kb/912322/en-us>

Slide 27: <http://www.sqlskills.com/blogs/paul/post/Auto-shrink-e28093-turn-it-OFF!.aspx>

Slide 31: <http://bit.ly/x9a8Pa>

Slide 32: <http://www.sqlskills.com/BLOGS/PAUL/post/Importance-of-data-file-size-management.aspx>

Slide 35: <http://msdn.microsoft.com/en-us/library/ms175492.aspx>

Slide 36: <http://msdn.microsoft.com/en-us/library/ms345368.aspx>

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<http://support.microsoft.com/kb/917047>

<http://msdn.microsoft.com/en-us/library/ms175527.aspx>

Slide 43: <http://www.sqlskills.com/BLOGS/PAUL/post/Tempdb-configuration-survey-results.aspx>

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<http://www.microsoft.com/technet/prodtechnol/sql/2005/workingwithtempdb.mspx>

<http://www.sqlskills.com/BLOGS/PAUL/post/Misconceptions-around-TF-1118.aspx>

<http://www.sqlskills.com/BLOGS/PAUL/post/Comprehensive-tempdb-blog-post-series.aspx>

<http://msdn.microsoft.com/en-us/library/ms176029.aspx>

<http://msdn.microsoft.com/en-us/library/ms345368.aspx>

Using tempdb in RAM:

Module 3: Locking & Blocking

Slide 50: Adam Machanic's sp_WhoIsActive:

http://sqlblog.com/blogs/adam_machanic/archive/2012/03/22/released-who-is-active-v11-11.aspx

Slide 51: <http://www.sqlservercentral.com/articles/Blocking/64474/>

Module 4: Snapshot Isolation

SQL Server 2005 Row Versioning-Based Transaction Isolation: <http://msdn.microsoft.com/en-us/library/ms345124.aspx>

Module 5: Logging & Log Files

Slide 13: <http://msdn.microsoft.com/en-us/library/aa337560.aspx>

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<http://tinyurl.com/3ur7j5f>

<http://support.microsoft.com/kb/2455009/>

Slide 26: <http://www.sqlskills.com/BLOGS/PAUL/post/Log-file-configuration-metrics-for-17000-databases.aspx>

Slide 27: <http://www.sqlskills.com/BLOGS/PAUL/post/Inside-the-Storage-Engine-More-on-the-circular-nature-of-the-log.aspx>

Slide 39: [http://sqlskills.com/blogs/jonathan/post/An-XEvent-a-Day-\(23-of-31\)-e28093-How-it-Works-e28093-Multiple-Transaction-Log-Files.aspx](http://sqlskills.com/blogs/jonathan/post/An-XEvent-a-Day-(23-of-31)-e28093-How-it-Works-e28093-Multiple-Transaction-Log-Files.aspx)

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<http://www.sqlskills.com/BLOGS/PAUL/post/Bug-log-file-growth-broken-for-multiples-of-4GB.aspx>

<http://support.microsoft.com/kb/2633151>

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<http://www.sqlskills.com/blogs/jonathan/post/Does-the-tempdb-Log-file-get-Zero-Initialized-at-Startup.aspx>

<http://www.sqlskills.com/blogs/jonathan/post/TSQL-Tuesday-11-e28093-Misconceptions-The-Tempdb-Log-File-and-VLF-Counts.aspx>

Slide 42: <http://www.sqlskills.com/BLOGS/PAUL/post/Importance-of-proper-transaction-log-size-management.aspx>

Slide 43: <http://www.sqlskills.com/blogs/kimberly/post/8-Steps-to-better-Transaction-Log-throughput.aspx>

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<http://www.sqlskills.com/blogs/paul/category/Transaction-Log.aspx>

<http://technet.microsoft.com/en-us/magazine/2009.02.logging.aspx>

Module 6: Table Design

Blog post: Column order doesn't matter... generally, but - IT DEPENDS!

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Column-order-doesnt-matter-generally-but-IT-DEPENDS!.aspx>

Module 7: Index Internals

Blog post: Companion content for Chapter 6 (Index Internals) of SQL Server 2008 Internals:

[http://www.sqlskills.com/BLOGS/KIMBERLY/post/Companion-content-for-Chapter-6-\(Index-Internals\)-of-SQL-Server-2008-Internals.aspx](http://www.sqlskills.com/BLOGS/KIMBERLY/post/Companion-content-for-Chapter-6-(Index-Internals)-of-SQL-Server-2008-Internals.aspx)

What's a good clustering key?

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Ever-increasing-clustering-key-the-Clustered-Index-Debateagain!.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/The-Clustered-Index-Debate-Continues.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/GUIDs-as-PRIMARY-KEYs-and-or-the-clustering-key.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Disk-space-is-cheap.aspx>

Module 8: Index Fragmentation

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<http://support.microsoft.com/kb/329526>

<http://tinyurl.com/42o933d>

Slide 18: <http://www.sqlskills.com/blogs/jonathan/post/Tracking-Problematic-Pages-Splits-in-SQL-Server-2012-Extended-Events-e28093-No-Really-This-Time!.aspx>

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<http://www.microsoft.com/technet/prodtechnol/sql/2000/maintain/ss2kidbp.msp>

<http://www.microsoft.com/technet/prodtechnol/sql/2005/onlineindex.msp>

<http://ola.hallengren.com/>

<http://weblogs.sqlteam.com/tarad/archive/2009/11/03/DefragmentingRebuilding-Indexes-in-SQL-Server-2005-and-2008Again.aspx>

<http://sqlfool.com/2010/04/index-defrag-script-v4-0/>

Module 9: Data Access & Internals

Slide 42: http://www.sqlskills.com/BLOGS/KIMBERLY/category/sp_helpindex-rewrites.aspx

Module 10: Statistics

[Statistics Used by the Query Optimizer in Microsoft SQL Server 2008](#)

Blog post: Filtered indexes and filtered stats might become seriously out-of-date

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Filtered-indexes-and-filtered-stats-might-become-seriously-out-of-date.aspx>

SQLMag Q&A Post: STATISTICS_NORECOMPUTE—When would anyone want to use it?

http://www.sqlmag.com/blog/sql-server-questions-answered-28/sql-server-2008-r2/statistics_norecomputendashwhen-140855

SQLMag Q&A Post: How many steps should the histogram have?

<http://www.sqlmag.com/blog/sql-server-questions-answered-28/database-administration/steps-histogram-141236>

Slide 23: <http://ola.hallengren.com/>

Slide 29: <http://www.sqlskills.com/BLOGS/KIMBERLY/post/Filtered-indexes-and-filtered-stats-might-become-seriously-out-of-date.aspx>

Erin Stellato's links about auto update stats and plan invalidation:

Statistics and Recompilations: <http://erinstellato.com/2012/01/statistics-recompilations/>

Statistics and Recompilations, Part II: <http://erinstellato.com/2012/02/statistics-recompilations-part-ii/>

Module 11: Indexing Strategies

Slide 45: <http://msdn.microsoft.com/en-us/library/ms175088.aspx>

Hash joins and hash teams in Microsoft SQL Server by Goetz Graefe, Ross Bunker, Shaun Cooper

<http://t.co/KuH8gq3u>

Query Evaluation Techniques for Large Databases by Goetz Graefe

<http://www.csd.uoc.gr/~hy460/pdf/query.pdf>

Module 12: Partitioning

Slide 9: <http://www.sqlskills.com/blogs/Kimberly/post/MSDN-Webcast-QA-Index-Defrag-Best-Practices-Fragmentation-Deletes-and-the-e2809cSliding-Window-e2809d-Scenario-and-its-the-LAST-one!.aspx>

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<http://blogs.msdn.com/craigfr/archive/2006/11/27/introduction-to-partitioned-tables.aspx>

<http://blogs.msdn.com/sqlcat/archive/2006/02/17/Partition-Elimination-in-SQL-Server-2005.aspx>

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<http://msdn2.microsoft.com/en-us/library/ms345146.aspx>

<http://msdn.microsoft.com/en-us/library/dd578580.aspx>

SQLMag Q&A Post: Partitioned Tables v. Partitioned Views—Why are they even still around?

<http://www.sqlmag.com/blog/sql-server-questions-answered-28/sql-server-2008-r2/partitioned-tables-viewsndashwhy-142158>

SQLMag Q&A Post: Solutions to VLT concerns around statistics and maintenance!

<http://www.sqlmag.com/blog/sql-server-questions-answered-28/sql-server-2008-r2/solutions-vlt-concerns-statistics-maintenance-142233>

SQLMag Q&A Post: Did SQL Server eliminate any partitions?

<http://www.sqlmag.com/blog/sql-server-questions-answered-28/sql-server-2008-r2/sql-server-eliminate-partitions-142352>

SQLMag Q&A Post: How about Filtered Indexes instead of Partitioning?

<http://www.sqlmag.com/blog/sql-server-questions-answered-28/sql-server-2008-r2/filtered-indexes-partitioning-142387>