

THE LINKS

SQLskills Immersion Event

IE2 – Performance Tuning

(links are grouped by module)

Module 1: SQL Server IO

Slide 6: <http://www.sqlskills.com/BLOGS/PAUL/post/Log-file-configuration-metrics-for-17000-databases.aspx>

Slide 7: <http://www.microsoft.com/technet/prodtechnol/sql/2005/physdbstor.mspix>

Slide 8: <http://www.sqlskills.com/BLOGS/PAUL/post/Benchmarking-do-multiple-data-files-make-a-difference.aspx>

Slides 9-12: <http://www.sqlskills.com/BLOGS/PAUL/post/physical-database-layout-vs-database-size.aspx>

Slide 13: <http://www.sqlskills.com/BLOGS/PAUL/category/Benchmarking.aspx>

Slide 18: <http://www.sqlskills.com/blogs/kimberly/post/8-Steps-to-better-Transaction-Log-throughput.aspx>

Slide 19: <http://sqlcat.com/technicalnotes/archive/2008/12/09/diagnosing-transaction-log-performance-issues-and-limits-of-the-log-manager.aspx>

Slide 25: <http://www.sqlskills.com/BLOGS/PAUL/post/Importance-of-choosing-the-right-LOB-storage-technique.aspx>

Slide 30: <http://msdn.microsoft.com/en-us/library/ms345368.aspx>

Slide 31: <http://msdn.microsoft.com/en-us/library/ms175527.aspx>

Slide 37: <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.mspix>

<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>

Craig Freedman's Halloween Protection post:

<http://blogs.msdn.com/b/craigfr/archive/2008/02/27/halloween-protection.aspx>

Module 3: IO for DBAs

Slide 24: <http://support.microsoft.com/kb/234656>

Slide 27: <http://support.microsoft.com/kb/976618>

Module 4: SQLIOS

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<http://support.microsoft.com/kb/920093>

http://www.vmware.com/files/pdf/sql_server_virt_bp.pdf

Slide 37: <http://support.microsoft.com/kb/907877>

Module 5: Waits and Queues

Slide 17: <http://www.sqlskills.com/BLOGS/PAUL/post/Wait-statistics-or-please-tell-me-where-it-hurts.aspx>

Slide 32:

<http://www.sqlskills.com/BLOGS/PAUL/post/Wait-statistics-or-please-tell-me-where-it-hurts.aspx>

http://blogs.msdn.com/b/sql_service_broker/archive/2008/12/01/service-broker-wait-types.aspx

<http://blogs.msdn.com/b/psssql/archive/2009/11/03/the-sql-server-wait-type-repository.aspx>

<http://technet.microsoft.com/en-us/library/ms179984.aspx>

Module 7: Query Plan Analysis

Aaron Bertrand's fix to the XML Showplan SQL Server Management Studio bug -

http://sqlblog.com/blogs/aaron_bertrand/archive/2011/10/28/getting-graphical-showplan-back-in-sql-server-2008-r2.aspx

Paul White's technique for disabling and enabling rules –

http://sqlblog.com/blogs/paul_white/archive/2010/07/31/inside-the-optimiser-constructing-a-plan-part-4.aspx

Module 8: CPU Performance Tuning

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<http://download.microsoft.com/download/D/B/D/DBDE7972-1EB9-470A-BA18-58849DB3EB3B/TShootPerfProbs2008.docx>

<http://msdn.microsoft.com/en-us/library/ee151608.aspx>

Module 9: Plan Cache and Index Analysis

Slide 14: <http://msdn.microsoft.com/en-us/library/cc645887.aspx>

Slide 47: <http://www.sqlskills.com/BLOGS/KIMBERLY/post/RemovingDuplicateIndexes.aspx>

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

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

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<http://www.sqlskills.com/blogs/Kimberly/category/Indexes.aspx>

<http://www.sqlskills.com/blogs/paul/category/Indexes-From-Every-Angle.aspx>

Slide 56: http://sqlserverpedia.com/wiki/Find_Missing_Indexes

Slide 61

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Procedure-cache-and-optimizing-for-adhoc-workloads.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Plan-cache-adhoc-workloads-and-clearing-the-single-use-plan-cache-bloat.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Clearing-the-cache-are-there-other-options.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Statement-execution-and-why-you-should-use-stored-procedures.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/category/Optimizing-Procedural-Code.aspx>

<http://msdn.microsoft.com/en-us/magazine/ee236412.aspx>

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http://sqlblog.com/blogs/jonathan_kehayias/archive/2010/01/08/finding-implicit-column-conversions-in-the-plan-cache.aspx

http://sqlblog.com/blogs/tibor_karaszi/archive/2009/04/28/match-those-types.aspx

Other KB articles often discussed during this module:

- 914288: [How to generate a script of the necessary database metadata to create a statistics-only database in SQL Server 2005 and in SQL Server 2008](#)
- 243586: [Troubleshooting stored procedure recompilation](#)
- 263889: [Description of SQL Server blocking caused by compile locks \(SQL Server 2000\)](#)

Optimizing Procedural Code category (lots of content in this category)

<http://www.sqlskills.com/BLOGS/KIMBERLY/category/Optimizing-Procedural-Code.aspx>

I've added a few numbers as the best order to correlate with what we discussed in class (they're listed below in the order you'll see them in the category pane on the left hand side after going to the link above):

- (5) Clearing the cache - are there other options?
- (4) Plan cache, adhoc workloads and clearing the single-use plan cache bloat
- (3) Plan cache and optimizing for adhoc workloads
- (2) Statement execution and why you should use stored procedures
- (6) Using the OPTION (RECOMPILE) option for a statement
- (1) EXEC and sp_executesql - how are they different?
- (7) Little Bobby Tables, SQL Injection and EXECUTE AS

More about SPs (in the same category)

Understanding TempDB, table variables v. temp tables and Improving throughput for TempDB
GrokTalks have been posted!

Stored Procedure Parameters giving you grief in a multi-purpose procedure?

Stored Procedures are NOT evil... but they can be frustrating!

Module 10: Memory Performance Tuning

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<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Procedure-cache-and-optimizing-for-adhoc-workloads.aspx>

<http://www.sqlskills.com/BLOGS/KIMBERLY/post/Plan-cache-adhoc-workloads-and-clearing-the-single-use-plan-cache-bloat.aspx>

Potential Lock Pages in Memory bug:

<http://blogs.msdn.com/b/psssql/archive/2012/03/20/setfileiooverlappedrange-can-lead-to-unexpected-behavior-for-sql-server-2008-r2-or-sql-server-2012-denali.aspx>

Module 12: Collecting Performance Data

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<http://blogs.msdn.com/b/bartd/archive/tags/sql+deadlocks/>

http://sqlblog.com/blogs/jonathan_kehayias/archive/tags/Deadlock/default.aspx

http://www.sqlservercentral.com/Authors/Articles/Jonathan_Kehayias/244648/

<http://www.sqlshare.com/Search.aspx?terms=deadlock>

Slide 69: <http://theskythelimit.blogspot.com/2008/03/fix-difference-of-two-datetime-columns.html>

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[http://www.sqlskills.com/BLOGS/KIMBERLY/post/Microsoft-eLearning-Resources-Clinic-10259-\(SQL-2008-DBIS\).aspx](http://www.sqlskills.com/BLOGS/KIMBERLY/post/Microsoft-eLearning-Resources-Clinic-10259-(SQL-2008-DBIS).aspx)

<http://www.sqlservercentral.com/articles/Product+Reviews/66278/>

Per Jon's discussion on blocking and deadlocking from Michael J Swart:

- A New Way to Examine Blocked Process Reports
 - <http://michaeljswart.com/2011/04/a-new-way-to-examine-blocked-process-reports/>
- SQL Server Blocked Process Report Viewer
 - <http://sqlblockedprocesses.codeplex.com/Wikipage?ProjectName=sqlblockedprocesses>
- T-SQL Tuesday #17: Using Apply to Demystify Deadlocks
 - <http://www.sqlsoldier.com/wp/sqlserver/tsqltuesday17usingapplytodemystifydeadlocks>

Thomas Kejser on queue:

- Implementing Message Queues in Relational Databases
 - <http://blog.kejser.org/2012/05/25/implementing-message-queues-in-relational-databases/>