



*The World's Largest Community
of SQL Server Professionals*

Free Software for SQL Server DBAs

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My Assumptions About You

- You may be a SQL Server DBA or developer.
- You have at least 6 months experience using SQL Server.
- You have a desire to learn about tools that will help you become a better DBA.

Take Advantage of Free Software

- Many DBAs and developers have given of their time to create and share useful tools that can make your job a little easier.
- Because these are free programs, they are not well advertised, and many of them remain hidden gems.
- “You often get what you pay for” may or may not apply to the software discussed here. Some of the free software is done very well, and is very useful. Other software may not be as slick or polished, but still may meet your needs.

Some Warnings About Free Software

- Some of the software is very stable, and other software is not. Because of this, you will want to use free software on workstations or test servers, generally not on production servers.
- Some of the software is updated regularly, while other software is not updated often, if ever.
- Some is well documented, and others are not. Mostly not.
- Some software has support, others do not. If you have a problem or question about the software, checking out the forum at the software's website (if they have one), or contacting the author, is usually your best option.

Free Software

- PAL (Performance Analysis for Logs)
- RML Utilities for SQL Server
- ClearTrace
- SQL Server DBA Dashboard
- SQL Spy 6 Live Monitoring
- SQL Nexus
- Internals Viewer for SQL Server
- SSMS Tool Pack
- SQLIO
- SQLSim
- Other Misc. Software

PAL (Performance Analysis for Logs)

- Analyzes Performance Monitor logs and creates HTML-based reports showing where selected counters have exceeded specified thresholds.
- Great reference for what OS and SQL Server counters to monitor, along with recommended thresholds.
- pal.codeplex.com (6-29-2009)
- New 2.0 alpha version (11-1-2009)
- Demo in Performance Monitor, then in PAL

RML Utilities for SQL Server

- Replay Markup Language (RML) Analyzes SQL Server trace files and produces reports showing how SQL Server is performing, including such detail as what application, database, user, or query is causing the problem.
- It also offers stress and replay capabilities.
- <http://www.microsoft.com/downloads/details.aspx?familyid=7EDFA95A-A32F-440F-A3A8-5160C8DBE926&displaylang=en> (version 9.01.0109)
- Demo ReadTrace and Reporter

ClearTrace

- Provides a GUI interface to do basic analysis of Profiler Trace files, including the ability to identify which users, applications, and databases use the most resources.
- Works with SQL Server 2005 and 2008.
- www.cleardata.biz/cleartrace/default.aspx (2008.34)
- Demo

SQL Server DBA Dashboard

- A reporting tool to help DBAs and developers quickly identify resource usage and what is using those resources. The dashboard does this through a series of graphs and reports which are integrated into Management Studio.
- <http://www.sqlserverexamples.com/v2/Products/tabid/76/Default.aspx> (Version 1.1)
- Must register at website to download.
- Demo from SSMS

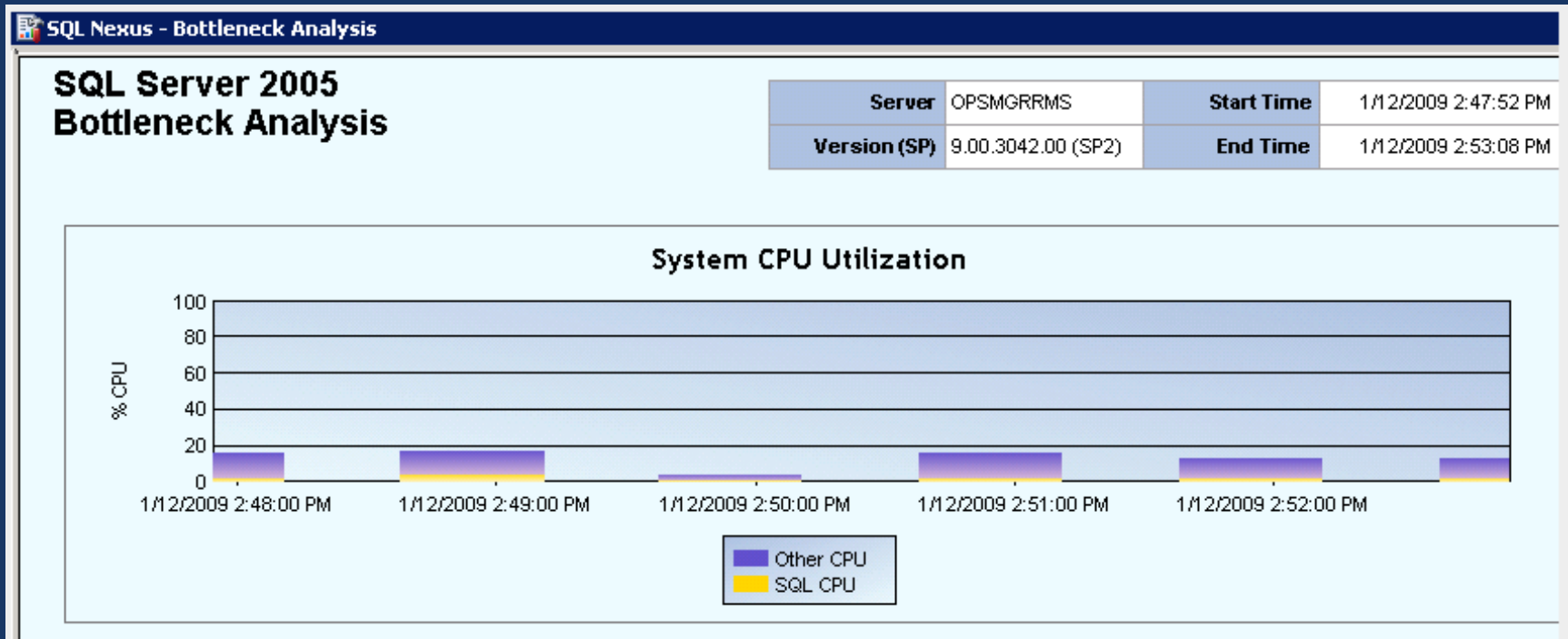
SQL SPY 6 Live Monitoring

- Provides live monitoring of many SQL Server indicators, such as, connections, CPU, database activity, DML monitor, index activity, index contention, job execution history, statistics, trace events, and more.
- Works with SQL Server 2005 and 2008.
- Must register at website to download software.
- www.ispysql.com (10-15-2009)
- Demo

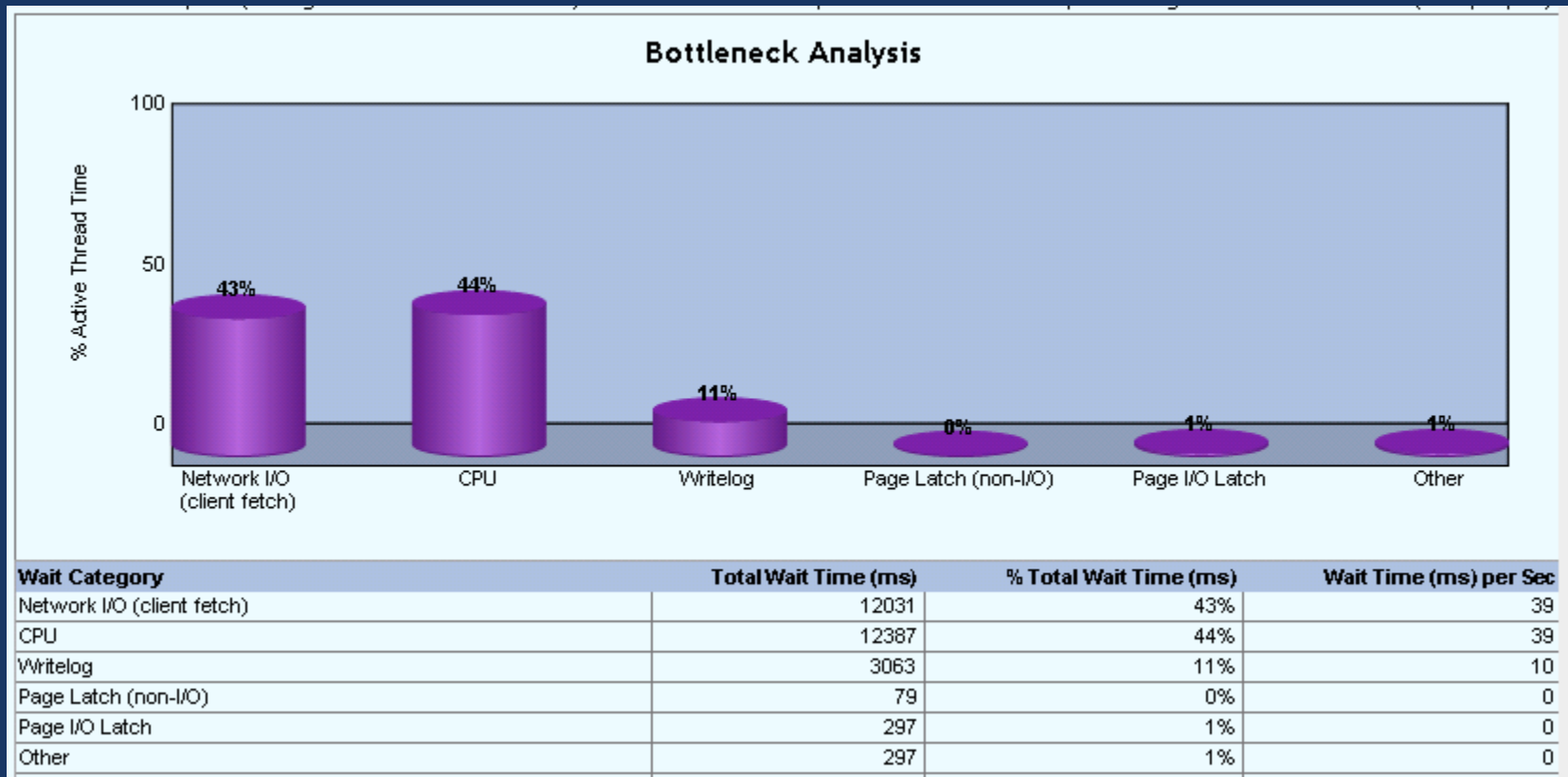
SQL Nexus

- Takes data collected from SQLDiag and converts it into reports to help make it easier to identify and troubleshoot SQL Server-related problems.
- Works with SQL Server 2000, 2005, 2008 (mostly).
- sqlnexus.codeplex.com (8-24-2009)
- Demo

SQL Nexus Bottleneck Reports #1



SQL Nexus Bottleneck Reports #12



Internals Viewer for SQL Server

- This SSMS add-in allows you to view how data is physically allocated, organized, and stored in a database, including the MDF and LDF files.
- Different versions for SQL Server 2005 and SQL Server 2008.
- internalsviewer.codeplex.com (12-28-2008)
- Demo

SSMS Tools Pack

- SSMS Add-on that adds various enhancements, such as Query Execution History, Snippets, Database History, Format T-SQL, and much more.
- Works with SQL Server 2005 and 2008.
- www.ssmstoolspack.com/Main.aspx (1.7)
- Demo

SQLIO Disk Subsystem Benchmark Tool

- Designed to help determine the I/O capacity (test the limits) of a specific SQL Server hardware I/O configuration.
- Many options available to test the capacity of virtually any I/O subsystem.
- www.microsoft.com/DOWNLOADS/details.aspx?familyid=9A8B005B-84E4-4F24-8D65-CB53442D9E19&displaylang=en (4/4/2005)
- Demo

Common SQLIO Parameters

| Option | Description |
|--------|---|
| -o | Specify the number of outstanding I/O requests. Increasing the queue depth may result in a higher total throughput. However, increasing this number too high may result in problems (described in more detail below). Common values for this are 8, 32, and 64. |
| -LS | Capture disk latency information. Capturing latency data is recommended when testing a system. |
| -k | Specify either R or W (read or write). |
| -s | Duration of test (seconds). For initial tests, running for 5-10 minutes per I/O size is recommended to get a good idea of I/O performance. |
| -b | Size of the IO request in bytes. |
| -f | Type of IO to issue. Either 'random' or 'sequential'. |
| -F | Name of the file which will contain the test files to run SQLIO against. |

SQLSim

- Used to simulate SQL Server activity on a hardware I/O subsystem. Simulates read, write, checkpoint, backup, sort, and read-ahead activities.
- Used to stress I/O subsystems, especially to identify potential hardware or driver problems that could cause corruption
- Does not require SQL Server to be installed.
- Simulates SQL Server 2008, 2005, 2000, and 7.0.
- GUI and command-line versions.
- support.microsoft.com/kb/231619 (3-16-2008)
- Demo

For SQL Server 2005

- SQL Server 2005 Performance Dashboard Reports
 - <http://www.microsoft.com/downloads/details.aspx?familyid=1D3A4A0D-7E0C-4730-8204-E419218C1EFC&displaylang=en>
- SQL Server 2005 Best Practices Analyzer
 - <http://www.microsoft.com/downloads/details.aspx?familyid=DA0531E4-E94C-4991-82FA-F0E3FBD05E63&displaylang=en>
- SQL Server Health and History Tool (SQLH2) Performance Collector
 - <http://www.microsoft.com/downloads/details.aspx?familyid=64983AF0-7902-427E-9B41-7C2E8FDCC140&displaylang=en>
- DMVStats
 - www.codeplex.com/sqldmvstats

SQL Server Express Free Tools

- SQL Server 2005 Management Studio Express
 - www.microsoft.com/downloads/details.aspx?FamilyId=C243A5AE-4BD1-4E3D-94B8-5A0F62BF7796&displaylang=en
- SQL Server 2008 Management Studio Express
 - www.microsoft.com/Downloads/details.aspx?familyid=08E52AC2-1D62-45F6-9A4A-4B76A8564A2B&displaylang=en
- SSMS Tools Pack for 2005/2008 Express
 - www.ssmstoolspack.com/Download.aspx
- Profiler for 2005/2008 Express Edition
 - sqlprofiler.googlepages.com

Useful Database Maintenance Scripts

- SQL Server 2005 and 2008 - Backup, Integrity Check and Index Optimization
 - ola.hallengren.com
- Index Defrag Script, v3.0
 - sqlfool.com/2009/06/index-defrag-script-v30
- YourSQLDBA
 - www.grics.qc.ca/YourSqlDba/index_en.shtml

Other Useful Free Tools

- Sysinternals
 - technet.microsoft.com/en-us/sysinternals/default.aspx
- List of Security Tools from SQLServer.com
 - www.sqlsecurity.com/Tools/FreeTools/tabid/65/Default.aspx
- Microsoft Network Monitor
 - www.microsoft.com/downloads/details.aspx?familyid=983B941D-06CB-4658-B7F6-3088333D062F&displaylang=en
- Windows Performance Analysis Tools
 - msdn.microsoft.com/en-us/performance/cc825801.aspx
- SQL Server 2008 Extended Events Manager
 - www.codeplex.com/ExtendedEventManager

Takes Aways From This Session

- Free software can help make you more productive, at no out-of-pocket cost to you or your organization.
- Most free software is not well documented, and will require a learning curve.
- Free software covers a wide variety of features, but doesn't cover the entire spectrum of DBA-related utilities that you might need. Third-party, paid software, will always have its place.
- The only way to know if a free tool will be useful to you is to download it, install it, and give it a try.

Questions and Answers

- Please ask your questions clearly and loudly.
- If you don't get your questions answered now, see me after the session, or e-mail me at:
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