

ManageEngine Free Tools User Manual



Free SQL Health Monitor 1.0

[MSSQL 2008 and MSSQL 2005 Performance Monitor]

Table of Contents

OVERVIEW.....	2
FEATURES	3
DOCUMENTS	7
FAQ.....	10

Overview

Free SQL Monitoring

Database offers high levels of performance and scalability today and databases are widely used to store data for mission-critical applications. Data volumes are exploding with data streaming from various sources such as mails, Web logs, business applications and other important archives. Because of all these reasons, the database together with the host servers, need to be up and running all the time. Any outages or performance degradation in the database servers, will affect the applications and resulting revenue. Hence it becomes imperative to monitor and manage those database servers continuously.

The "ManageEngine SQL Health Monitor" free tool will address this monitoring requirement. The ManageEngine SQL Health Monitor tool, monitors important parameters of MS SQL database. The tool fetches comprehensive data about the MS SQL database servers and presents them as visually elegant graphs and reports. The relevant data, graphs and reports are displayed in a desktop tool dashboard providing wealth of information about the real-time functioning of the Database.

The "ManageEngine SQL Health Monitor" tool can monitor two MS SQL servers simultaneously. The best part is that the tool is made available, absolutely FREE of cost.

MS SQL Monitoring

SQL Server performance monitoring tool, with alerting and diagnostics capability, allows you to manage your SQL Servers continuously. Tool gives comprehensive performance data about MS SQL servers. Using the tool, administrator can also set threshold values for CPU, memory usage, Disk usage and for MS SQL performance parameter such as pages read, page writes, buffer cache. If at all, the MS SQL servers behave abnormally, any counter exceeds the threshold value then alert signals will be shown in the dashboard Tool. The DB administrator can then effortlessly manage, database and the host servers, to bring back to normal functioning state

Key Benefits

- Monitor Performance and Availability of SQL Servers version - MS SQL 2005 server and MS SQL 2008 server
- Auto discovery of SQL servers in the network
- Agent-less monitoring of SQL Servers
- Alert DB administrator based on threshold setting

The ManageEngine Free SQL Health Monitor tool serves as a smart desktop tool that continuously monitors MS SQL database and host server, giving real-time monitoring capability. The tool will enable your organization to scale database operations with confidence and improved IT efficiency. For any MS SQL database monitoring need, this tool comes handy for DB Administrator (DBA).

Features

MS SQL Monitoring

ManageEngine SQL Health Monitor helps the DB administrators to monitor MS SQL servers. Tool's ability includes server performance monitoring to ensure the CPU Utilization, Memory, Disk, Bandwidth are within permissible limits and monitoring SQL Database server performance metrics

- Real-time MS SQL performance monitoring tool.
- Ensures MS SQL servers are up and running in the network.
- Provides a glimpse of server view and shows resource utilized is in optimal limit or it has exceeded the limit.
- Rich dashboard view shows sql server resources.
- Alert the administrator when resources like CPU, Memory, Disk, SQL cache exceeding the threshold value.

Important Parameter Monitored are

- General Windows Server details
- SQL Server General Statistics
- SQL Server Buffer Details
- SQL Server Memory Details
- Locks and Latches details
- SQL Server Database Details

General Windows Server details

CPU Utilization

Monitors CPU usage at regular interval - It helps administrator to know that if CPUs are running at full capacity or are they are underutilized.

Memory Utilization

Checks the Memory utilized at periodic intervals of your windows system. Get alerted when the memory usage is high .

Disk Utilization

Maintain a margin of available disk space. Get notified when the disk space falls below the margin. Disk with partition views is also available. Disk read /write details also available.

SQL Server Session Statistics

Active Database connections

This shows the number of active database connections.

Logins per second

Total number of logins started per second. If it is greater than 2, it indicates that the application is not currently using the connection pooling.

Logouts per second.

Total number of logout operations started per second.

Batch Requests per second

Number of Transact-SQL command batches received per second.

SQL Compilations per second

Number of compilations per second. Indicates the number of times the compile code path is entered. It should be less than 10% of Batch Requests per second.

SQL Recompilations per second

Number of statement recompiles per second. This value should be less than 10% of SQL compilations per second.

SQL Server Buffer Details

Buffer Cache Hit Ratio

Percentage of pages found in the buffer cache without having to read from disk. It is preferred to be above 90%.

Checkpoint pages per second

Number of pages flushed to disk per second by a checkpoint or other operation that require all the dirty pages to be flushed.

Lazy writes per second

Number of buffers written per second by the buffer manager's Lazy writer. Lazy writer is a system process that flushes out batches of dirty, aged buffers and makes them available to user process.

Page reads per second

Number of physical database page reads issued. 80 to 90 per second is normal.

Page writes per second

Number of physical database page writes issued per second. 80 to 90 per second is normal.

Total Pages

The Number of Pages in the buffer pool.

Free pages

Total number of pages on all free lists. Below 640 indicates that the SQL Server is running low on physical memory.

SQL Server Memory Details

Granted Workspace Memory

Total amount of memory currently granted for executing processes such as hash, sort, bulk copy, and index creation operations.

Maximum Workspace Memory

Maximum amount of memory available for executing processes

Optimizer Memory

Total amount of dynamic memory the server is using for query optimization.

SQL Cache Memory

Total amount of dynamic memory the server is using for the dynamic SQL cache.

Target Server Memory

Total amount of dynamic memory the server can consume.

Total Server Memory

The committed memory from the buffer pool.

Locks and Latches details

Deadlocks per second

Number of lock requests per second that resulted in deadlock. This value should be zero.

Lock Waits per second

Number of lock requests per second that require caller to wait.

Latch Waits per second

Number of latch requests that could not be granted immediately.

Average Latch Wait time

Average latch wait time for latch requests that had to wait.

SQL Server Database Details

Active Transactions

Number of Active Transactions for the database.

Database Size

Cumulative size of all data files in the database.

Log files used

Percentage of space in the log that is in use.

Log cache Hit ratio

Percentage of Log cache reads satisfied from the log cache.

Transactions per second

Number of transactions started for the database per second.

Documents

Free SQL Monitoring

The Free ManageEngine SQL Health Monitor tool helps an administrator to monitor MS SQL 2005 Server, MS SQL 2008 servers

This tool makes connection with MS SQL servers and generates easy to visualize desktop reports and graphs. Using the tool ,Administrator can monitor up to 2 MS SQL server simultaneously.

Getting Started

ManageEngine SQL Health Monitor helps an administrator to view server resources and SQL database performance parameter.

Discovery of MS SQL server

Start the tool, Discovery feature of tool, automatically discovers MS SQL servers across the network and populates in the discovery wizard. To monitor the performance counters of discovered SQL server, select the particular sql server shown in the wizard and click "select" button, then give the username, password to make connection to the server. or you can skip the discovery, by clicking skip button, this will take you to setting window, from there, administrator can make connection.

Server Setting

To add the server details, click the 'setting' icon and enter the following information :

- System Name/IP
- Domain/Workgroup
- User Name
- Password

We can use the domain user name/password. Once server is added , Tool will populate server details view

Administrator can view following details in tree

- Server Details View
- MS SQL Details view
- Database details

Server Details View

Once server added , Tool will populate server details view Administrator can see server resources details like CPU Utilization ,Memory Utilization ,Storage Details and status of the application running on the server, network status information, MS SQL version.

MS SQL server Details

MS SQL database performance parameters are shown DBA can see parameter like Buffer details, Memory details, Lock and latches information and SQL statistics such as login, logout, active database connection status

Database details

DBA can also see the individual database parameters like Active transaction, Database size of log file used ,cache hit ratio status.

DashBoard View

The SQL Health Monitor tool has a Dashboard view to show the important parameter indicators of the server such as Memory utilization, CPU usage, Disk utilization. Important performance parameter of the MS SQL database such as page write, page read ,buffer cache hit ratio and also tool will show the status of the performance indicators.

Delete Server

To delete the server, choose the "delete server" icon in the tree view of the corresponding server.

Refresh Server

To know the current status of the server, choose the 'Refresh Server' icon

Threshold Settings

Using this tool, administrator can edit the warning and critical threshold values for Memory, Disk Space and CPU usage and for important SQL parameter such as Pages, Cache, Memory details

Click on the "Settings" icon to edit the threshold values for warning and Critical thresholds

For Host server

- CPU Threshold
- Memory Threshold
- Disk Space Threshold

For sql database thresholds

- Page reads
- Page write
- Free pages
- SQL cache memory
- Buffer cache hit ratio

Refresh Interval

The added Windows servers will be refreshed at regular interval(Refresh Interval) which is configurable.

Click the "submit" button to save the settings and to start the SQL performance monitoring.

Retaining Settings

The following details are saved in the disk so that the parameters can be reused when the tool is restarted. During the restart of the tool, tool will automatically connects to server and will populate performance counters.

Following configurations are stored internally

- Connection information
- Server Name
- Domain Name
- User Name
- Password [Encrypted using Triple DES] encryption standard used.
- Warning and Critical Threshold values for SQL paramters
- CPU threshold values
- Memory threshold values
- Disk Usage threshold
- Page write threshold
- Page read threshold
- Free pages
- SQL cache memory
- Buffer cache hit ratio

And Refresh Interval

System Requirements

Hardware requirement:

- Atleast 3 MB of Disk space before installation
- Less than 10 MB of Disk space after installation
- Atleast 512 MB RAM.

Software Requirements:

- Microsoft Windows operating System Windows XP , Windows Vista, Windows 7
- Microsoft .NET Framework 2.0/3.0/3.5

Note: If you do not have Microsoft .NET Framework, please download the required version from

- <http://www.microsoft.com/downloads/details.aspx?FamilyID=0856EACB-4362-4B0D-8EDD-AAB15C5E04F5&displaylang=en> (Microsoft .NET Framework 2.0)
- <http://www.microsoft.com/downloads/details.aspx?familyid=10CC340B-F857-4A14-83F5-25634C3BF043&displaylang=en> (Microsoft .NET Framework 3.0)

FAQ

Unable to connect to the host server ?

Please check host server is running properly and check host server is behind firewall and also port 443 is accessible. If the server is behind firewall and if not accessible, then open the port by configuring firewall.

I have downloaded the tool but it is not running. what should i do?

Please check Dot Net Platform is installed in your system. Run the utility available in the bin directory, DotNetUtilities.exe , It will tell you the Dot Net version. If Dot Net platform is not available in the system, download the platform. Please see the software requirements page for downloading the platform.

Can I Monitor 1 SQL server alone?

Tool monitors 2 SQL server simultaneously. Yes, 1 server alone can be monitored also.

Can I monitor more than 2 servers simultaneously?

To monitor more server please visit - http://www.manageengine.com/products/applications_manager/sql/index.html or send mail to free-tools@manageengine.com

Contact us

For more information and queries, please send a mail to free-tools@manageengine.com . You can also post your queries under the topic "<http://forums.manageengine.com/free-tools>" in Forums .