

## Description

Zabbix template for Microsoft SQL Server (MS SQL) for those, who need only MS SQL database engine service status and database status.

## Features

- MS SQL instance Low Level Discovery.
- MS SQL database Low Level Discovery.

## Supported versions

Tested on Microsoft SQL Server 2012, 2014 and 2016. It may work with earlier versions, but some items may be unsupported.

Tested on Zabbix 3.4.0. It may work with earlier versions, but some items (for example `service.info[service,<param>]`) may be unsupported.

## Assumptions

These templates are not a one-click solution. It may require some tinkering, so I assume that:

- You are familiar with a Microsoft Window OS.
- You are familiar with a Microsoft SQL server.
- You are familiar with a Zabbix.
- You have a correctly working Zabbix server and Zabbix agents.
- You have tested other Zabbix template with an item type "Active" and it works.

## Template includes

Templates:

- "Template Microsoft SQL Server DE Mini.xml" – Template for Microsoft SQL Server Database Engine.

Value mapping:

- "SQL Database status.xml" – Zabbix value mapping for Microsoft SQL Server Database status.

Scripts:

- "Discovery.mssql.databasesname.ps1" – PowerShell script for Low Level Discovery.
- "Discovery.mssql.databasesstatus.ps1" – PowerShell script for Low Level Discovery.
- "Discovery.mssql.instancename.ps1" – PowerShell script for Low Level Discovery.

User parameters"

- "mssql.databasesmini.userparams" – Example of user parameters.

## Deployment. Step by step

1. Import templates via Configuration >> Templates:
  - "Template Microsoft SQL Server DE Mini.xml"
2. Import value mappings via Administration >> General >> Value mapping:
  - "SQL Database status.xml"
3. Create the folder "MSSQL" in a directory ""C:\Zabbix\bin\".

4. Create the folder "DiscoveryDatabaseMini" in a directory ""C:\Zabbix\bin\MSSQL\".
5. Copy PowerShell scripts (\*.ps1) to a directory "C:\Zabbix\bin\MSSQL\DiscoveryDatabaseMini\".
6. Copy mssql.databasesmini.userparams.conf to a directory "C:\Zabbix\".
7. Modify file "zabbix\_agentd.win.conf" - add "Include=C:\Zabbix\ mssql.databasesmini.userparams.conf".
8. Grant rights for Zabbix Agent service account. It needs read rights on table master.sys. By default, Zabbix Agent service account is NT AUTHORITY\SYSTEM which is already in SQL Server.
9. If you need to monitor mirrored databases or databases in Always On, you will have to give Zabbix Agent's service account (NT AUTHORITY\SYSTEM by default) sysadmin rights. More about it [here](#).
10. Restart Zabbix Agent.
11. Add templates to a Host.

## Notes

MS SQL system databases (master, msdb etc.) are discovered and monitored by default. I saw templates, where system databases there excluded from discovery and monitoring, but I am against it. You need to know the status (Online, Offline) of system databases as well.

Items Update interval (30 seconds), History storage period (90 days) and Trend storage period (365 days) are set accordingly to the rule "as much as possible, for as long as possible". If you have ~10 instances with an average ~8 databases per instance you will be fine. But if you have more than that, you should check "Zabbix calculations for MS SQL template.xlsx". Enter your values and see how much disk space for a Zabbix database you will need. Also, depending on the number of processed values per second (NVS), you may consider upgrading your Zabbix server or increasing Items Update interval from 30 seconds to any value you feel comfortable. All calculations are based on Zabbix [manual](#) and they provide only average values, not the exact numbers.

## Contacts

Let me know if you find any errors. Or maybe you just have a great idea which really, really must be added to the templates.

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