

Pack MSSQL

Abstract

This document describes how you can monitor an MSSQL database server such as:

- Connection time
- The number of connections
- Cache hit
- etc

There are some steps you'll need to follow in order to monitor a new database machine:

- Understand what is already available (in the Shinken Enterprise installation)
- Setup the MSSQL user account
- Test the connection to the database
- Setup your server host definition

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What is already available in the Shinken Installation

To make your life a bit easier, a few configuration tasks have already been done for you:

1. Installation of check_mssql_health plugin : `/var/lib/shinken/libexec/check_mssql_health`
2. Several host templates are ready to be used



We suppose here that the MSSQL server you want to monitor is named `srv-win-1` and is a Windows. Please change the configuration and commands according with the real name of your server.

Setup the MSSQL user account

Create the database user

Look at the labs.consol.de/lang/en/nagios/check_mssql_health/ page about how to configure your user connection.

Test the connection

To see if the connection to the MSSQL server is ok using a domain user, just launch :



```
/var/lib/shinken/libexec/check_mssql_health --server "srv-win-1" --username "shinkendom\\shinken" --password "shinkenpassword" --mode connection-time
```

Manage more than 1 database on the same host

Some checks presents in MSSQL templates provided by Shinken Enterprise use the "Duplicate For Each" functionality.

For each database name listed in the DATA "DATABASES", check will be duplicated. An host, having 2 databases, will then have in double each checks with the datababase name in the check.

Example

Let's look an example: an host has the following:

- The data "DATABASES" set to "DB1,DB2,DB3"
- The MSSQL template attached on it.
- Let's consider the Mssql-\$KEYS-database-free check. It will then have 2 checks:
 - Mssql-DB1-database-free
 - Mssql-DB2-database-free

Each check able to be used on a database base will be indicated with a scope "database".

What is checked with the templates

Public templates

mssql

This is the very basic MSSQL template allowing to know if your MSSQL database server is running and usable.

Every MSSQL templates (except Mssql-connection-method) use it as a parent template.

Check	Detail	Scope	Check range	Default Warning	Default Critical
database-free	Free space in database	database	0 to 100%	2%	5%
free-list-stalls	Requests per second that had to wait for a free page	server	0 to n	4	10
page-life-expectancy	Seconds a page is kept in memory before being flushed	server	0 to n	300:	180:
total-server-memory	The amount of memory that SQL Server has allocated to it	server	0 to n	1000000	5000000

mssql-full

Contains all MSSQL host templates listed in the Shinken Administrators templates.

Warning

Using the *mssql-full* template will require a lot of resources on your poller daemon. We advise to use only needed templates.

Shinken Administrator templates (can't be seen by other users)

mssql-connection-method

This template describes the method to connect to MSSQL server. Every MSSQL templates use it as a parent template.

mssql-availability

This template gives informations about the database availability.

Check	Detail	Scope	Check range	Default Warning	Default Critical
connection	Time to connect to the server	server	0 to n sec	1	2

mssql-backup-age

This template gives informations about the backup age of your databases.

Check	Detail	Scope	Check range	Default Warning	Default Critical
database-backup-age	Elapsed time (in hours) since a database was last backed up	database	0 to n hours	48	72

mssql-batch-requests

This template gives informations about the batch requests.

Check	Detail	Scope	Check range	Default Warning	Default Critical
batch-requests	Batch requests per second	server	0 to n	100	200

mssql-checkpoint-pages

This template gives informations about the checkpoint pages.

Check	Detail	Scope	Check range	Default Warning	Default Critical
checkpoint-pages	Dirty pages flushed to disk per second. (usually by a checkpoint)	server	0 to n	100	500

mssql-compilations

This template gives informations about compilations.

Check	Detail	Scope	Check range	Default Warning	Default Critical
sql-initcompilations	Initial compilations per second	server	0 to n	100	200
sql-recompilations	Re-Compilations per second	server	0 to n	1	10

mssql-full-scans

This template gives informations about the full scans.

Check	Detail	Scope	Check range	Default Warning	Default Critical
full-scans	Full table scans per second	server	0 to n	100	500

mssql-latch

This template gives informations about the latches.

Check	Detail	Scope	Check range	Default Warning	Default Critical
latches-wait-time	Average time for a latch to wait before the request is met	server	0 to n	1	5
latches-waits	Number of latch requests that could not be granted immediately	server	0 to n	10	50

mssql-lazy-writes

This template gives informations about the lazy writes.

Check	Detail	Scope	Check range	Default Warning	Default Critical
lazy-writes	Lazy writes per second	server	0 to n	20	40

mssql-locks

This template gives informations about locks.

Check	Detail	Scope	Check range	Default Warning	Default Critical
locks-deadlock	The number of deadlocks per second	server	0 to n	1	5
locks-timeouts	The number of locks per second that timed out	server	0 to n	1	5
locks-waits	The number of locks per second that had to wait	server	0 to n	100	500

mssql-server-performance

This template gives informations about MSSQL server performance.

Check	Detail	Scope	Check range	Default Warning	Default Critical
cpu-busy	Cpu busy in percent	server	0 to n	80	90
io-busy	IO busy in percent	server	0 to n	80	90
mem-pool-data-buffer-hit-ratio	Data Buffer Cache Hit Ratio	server	0 to n	90:	80:

mssql-transactions

This template gives informations about databases transactions.

Check	Detail	Scope	Check range	Default Warning	Default Critical
transactions	Transactions per second (per database)	database	0 to n	10000	50000

mssql-usage

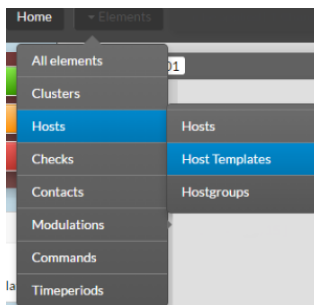
This template gives informations about the database usage.

Check	Detail	Scope	Check range	Default Warning	Default Critical
connected-users	Number of currently connected users	server	0 to n	50	80

How to

Configuration of Mssql-connection-method host template

Click on **Hosts** then on **Hosts Templates** in the **Elements** menu



In the Name field, type **mssql-connection**.

Then clic on **mssql-connection-method**

The screenshot shows the 'Host Templates' management interface. At the top, there is a search bar and a 'Launch' button. Below that is a table with columns for 'Type', 'Active', and 'Name'. A search filter 'mssql-connection' is applied. The table shows one entry: 'mssql-connection-method' with an 'Enable' button next to it.

Clic on **Data** tab

You can setup the following DATA :

- **DATABASES** : the name (s) of the database (s) to be monitored.
- **MSSQLPASSWORD** : the MSSQL password of the user used to connect to database
- **MSSQLUSER** : the MSSQL user name used to connect to database

The screenshot shows the configuration page for the 'mssql-connection-method' host template. The 'Data' tab is selected, showing a table of local data and inherited values. The table has columns for 'Local to the element', 'Name', and 'Value'.

Local to the element	Name	Value
local [3 / 3]	DATABASES	DB-UNSET
	MSSQLPASSWORD	\$MSSQLPASSWORD\$
	MSSQLUSER	\$MSSQLUSER\$

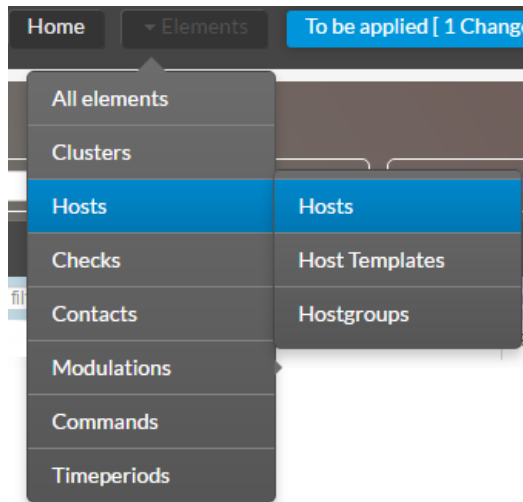
The parameters specific to each server, such as **database name** for example, has to be done in the host's data itself.



It's a best practice to use the same database monitoring user on every MSSQL server monitored. Doing so, you can configure the database user /password only once in the host template **mssql-connection-method**.

Attach a MSSQL template to you host

Click on **Hosts** in the **Elements** menu

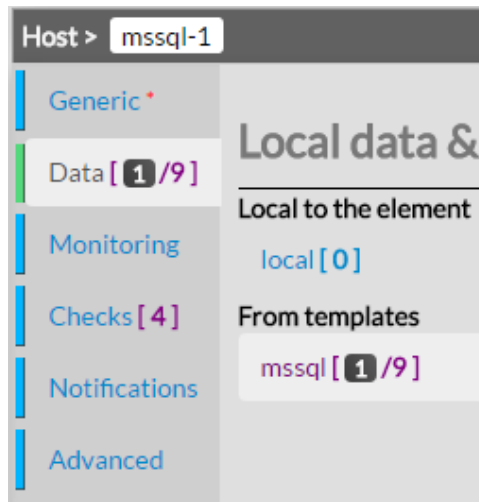


Add the chosen Oracle host template to the *Host Templates to inherit* field.

For example the *Oracle* host template.

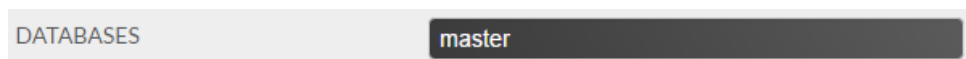


Click on the **Data** tab

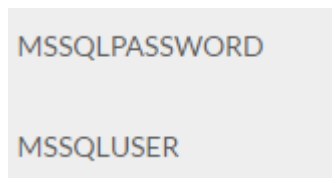


Look for the field *DATABASES* in the **From templates** data

Type the name of the database to be monitoring



Check if the Following data are ok.



You can monitor multiple database on the same host in typing the name of the database name separated by a comma.

Exemple : DB1,DB2,DB3

