

# MySQL

## Abstract

This document describes how you can monitor an MySQL 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 MySQL 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\_mysql\_health plugin : /var/lib/shinken/libexec/check\_mysql\_health
2. Several host templates are ready to be used



### Note

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

## Setup the MySQL user account

Connect with a root account on your MySQL database. change 'password' with your mysql root password:

```
lin-srv-1:~# mysql -u root -ppassword
```

And create a shinken user:

```
GRANT usage ON *.* TO 'shinken'@'%' IDENTIFIED BY 'shinkenpassword';
```

It's a good thing to change the shinkenpassword to another password. Then you need to update the **/etc/shinken/resource.d/mysql.cfg**

```
$MYSQLUSER$=shinken  
$MYSQLPASSWORD$=shinkenpassword
```

## Test the connection

To see if the connection to the MySQL server is ok, just launch :



```
/var/lib/shinken/libexec/check_mysql_health --hostname "srv-lin-1" --username "shinken"  
--password "shinkenpassword" --mode connection-time
```

## What is checked with the templates

## Public templates

### mysql

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

Every MySQL templates (except Mysql-connection-method) use it as a parent template.

Check	Detail	Check range	Default Warning	Default Critical
connection	Time to connect to the server	0 to n	1	5
restart	Time the server is running	0 to n	10:	5:
slow_queries	slow_queries	0 to n	0.1	1
tmp_disk_tables	Percent of temp tables created on disk	0 to n	25	50

### mysql-full

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



#### Warning

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

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

### mysql-connection-method

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

### mysql-cluster

This template gives informations about the MySQL cluster.

### mysql-innoDB

This template gives informations about innoDB buffers and logwaits.

Check	Detail	Check range	Default Warning	Default Critical
bufferpool_hitrate	InnoDB buffer pool hitrate	0 to n	99:	95:
bufferpool_wait_free	InnoDB buffer pool waits for clean page available	0 to n	1	10
log_waits	InnoDB log waits because of a too small log buffer	0 to n	1	10

### mysql-MyISAM

This template gives informations about MyISAM key cache hitrate.

Check	Detail	Check range	Default Warning	Default Critical
keycache-hitrate	MyISAM key cache hitrate	0 to n	99:	95:

### mysql-performance

This template gives informations about the global server performance.

Check	Detail	Check range	Default Warning	Default Critical
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index_usage	Usage of indexes	0 to n	90:	80:
long_running_procs	long running processes	0 to n	10	20
table_lock_contention	Table lock contention	0 to n	1	2
tablecache_hitrate	Table cache hitrate	0 to n	99:	95:
threadcache_hitrate	Hit rate of the thread-cache	0 to n	10	20

### mysql-query-cache

This template gives informations about query cache.

Check	Detail	Check range	Default Warning	Default Critical
qcache_hitrate	Query cache hitrate	0 to n	90:	80:
qcache_lowmem_prunes	Query cache entries pruned because of low memory	0 to n	1	10

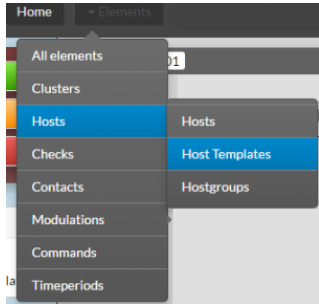
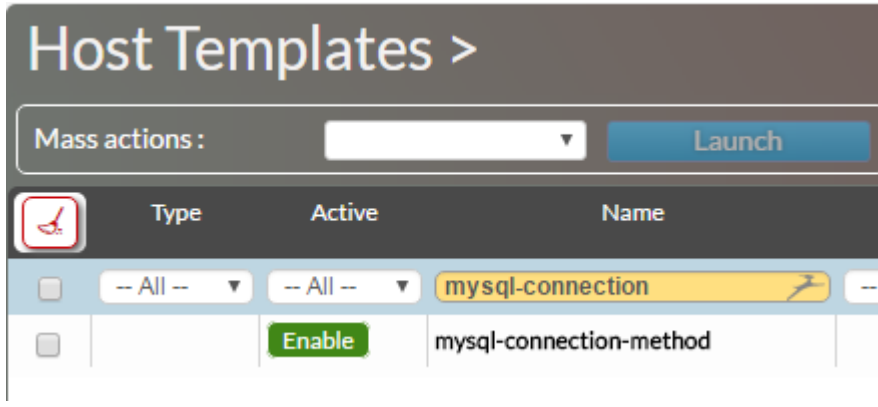
### mysql-usage

This template gives informations about MySQL server usage.

Check	Detail	Check range	Default Warning	Default Critical
open_files	Percent of opened files	0 to n	80	95
threads_connected	Number of currently open connections	0 to n	10	20

## How to

### Configuration of Mysql-connection-method host template

<p>Click on <b>Hosts</b> then on <b>Hosts Templates</b> in the <b>Elements</b> menu</p>	
<p>In the Name field, type <b>mysql-connection</b>.</p> <p>Then clic on <b>mysql-connection-method</b></p>	
<p>Clic on <b>Data</b> tab</p>	

You can setup the following DATA :

- `MYSQLPASSWORD` : the MySQL password of the user used to connect to database
- `MYSQLUSER` : the MySQL user name used to connect to database

The screenshot shows the 'Host Template > mysql-connection-method' configuration page. On the left, there is a sidebar menu with 'Data [ 2 / 2 ]' selected. The main area is titled 'Local data & inherited from template' and contains a table with the following data:

Local to the element	Name	Value
local [ 2 / 2 ]	MYSQLPASSWORD	<code>\$MYSQLPASSWORD\$</code>
	MYSQLUSER	<code>\$MYSQLUSER\$</code>



You can also set the user and password directly in `/etc/shinken/resource.d/mysql.cfg`

```
$MYSQLUSER$=shinken  
$MYSQLPASSWORD$=shinkenpassword
```

## Attach a MySQL template to you host

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

The screenshot shows the 'Elements' menu in the Nagios interface. The menu is open, showing a list of options: 'All elements', 'Clusters', 'Hosts', 'Checks', 'Contacts', 'Modulations', 'Commands', and 'Timeperiods'. The 'Hosts' option is highlighted in blue. To the right of the menu, a secondary list shows 'Hosts', 'Host Templates', and 'Hostgroups'.

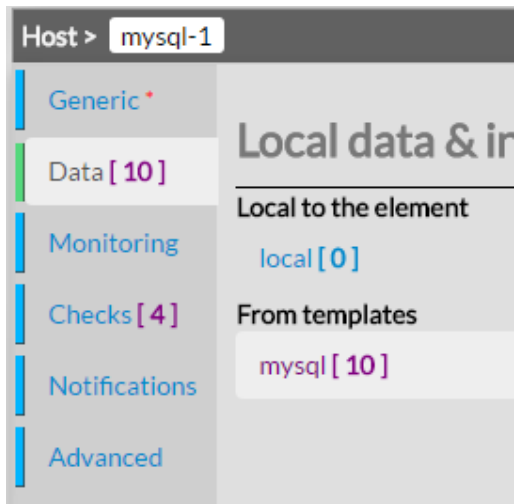
Add the chosen MySQL host template to the *Host Templates to inherit* field.

For example the MySQL host template.

Host Templates to inherit

mysql [ 4 checks ] x

Click on the **Data** tab



Check if the Following data are ok.

MSSQLPASSWORD

MSSQLUSER