



EVIDEN

BullSequana Servers

MONGUI User's Guide

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Hardware

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Preface

This guide explains how to use the MONitoring Graphical User Interface (MONGUI) to manage BullSequana servers.

See The Bull support web site for the most up to date product information, documentation, firmware updates, software fixes and service offers:
<https://support.bull.com>

Intended Readers

This guide is intended for use by system administrators and operators.

Chapter 1. Installing MONGUI

1.1. Overview

The MONitoring Graphical User Interface (MONGUI) can be used to monitor multiple BullSequana SH, BullSequana EX or BullSequana S servers. The MONGUI package provides Zabbix templates with their associated scripts.

1.2. Installing MONGUI

This section explains how to install and update MONGUI on the system selected to host it.

Prerequisites

- The MONGUI_<version>.tar.gz package is available
- The following packages are installed:
 - Zabbix version 5.0 or higher
 - Python version 3.7 or higher
- Zabbix is installed and running

Procedure

1. Open a terminal window.
2. Go to the installation directory.
3. Extract the MONGUI file:

```
tar xzvf MONGUI-<version>.tar.gz
```

The templates are delivered in a sub-directory of the installation directory:
<install_dir>\zabbix\server\externalscripts.

1.3. Delivery content

On delivery, MONGUI contains:

- Two templates that allow Zabbix to be used to monitor BullSequana SH, BullSequana EX or BullSequana S servers:
 - `template_<server_range>_zbxv5.xml`
 - `template_<server-range>_Hosts-zbxv5.xml`

Where `<server_range>` can take the following values:

- BullSequanaSH for BullSequana SH servers
 - BullSequanaEdge for BullSequana EX servers
 - BullSequanaSeries for BullSequana S servers
- A set of scripts that allow to discover sensors and collect information

Chapter 2. Getting started with MONGUI

To monitor systems, the MONitoring Graphical User Interface (MONGUI) uses Zabbix. Zabbix is an enterprise-class open source distributed monitoring solution accessible via a web-based interface.

See The full Zabbix documentation
 <https://www.zabbix.com/documentation/current/en/manual>

2.1. Setting proxy configuration

The proxy variables are automatically copied in zabbix environment.

1. Edit the proxy configuration file.

Default: /etc/systemd/proxy.sh

2. Check the proxy variables.

```
export HTTP_PROXY=http://<proxy>:<port number>
export HTTPS_PROXY=https://<proxy>:<port number>
export NO_PROXY=127.0.0.1,localhost,<IP address>

export http_proxy=http://<proxy>:<port number>
export https_proxy=https://<proxy>:<port number>
export no_proxy=127.0.0.1,localhost,<IP address>
```

3. Set the variables as required.

2.2. Starting the Zabbix console

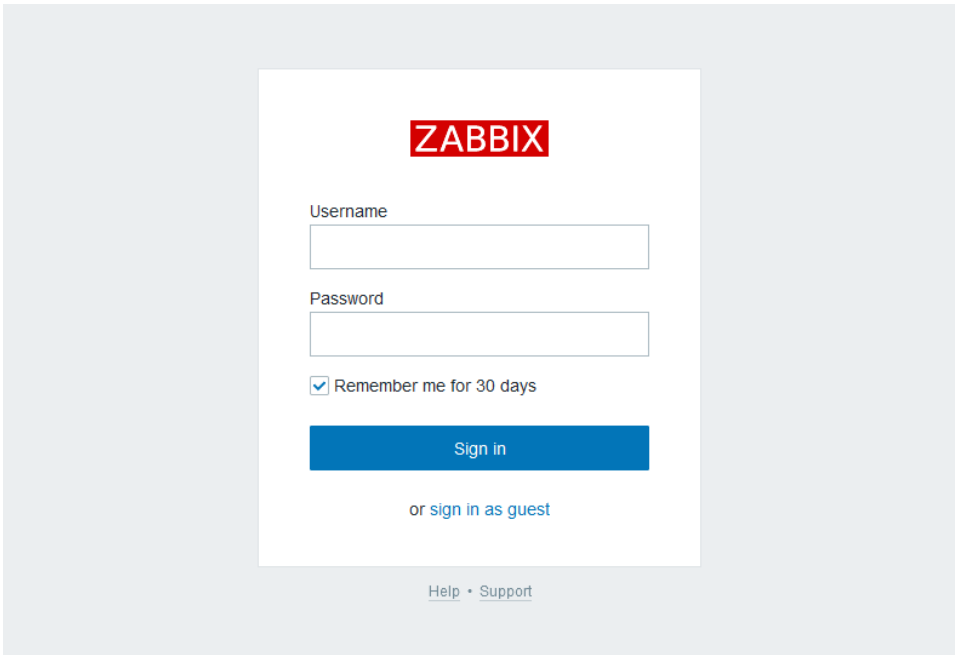
Prerequisite

Zabbix is running

Procedure

1. Open a web browser.
2. Connect to the Zabbix console by entering the name or IP address of the Zabbix console followed by the port number in the address bar, using the https protocol.

The authentication page opens.



Zabbix console	
Username	Default: Admin
Password	Default: zabbix

3. Complete the **Username** and **Password** fields.
4. Click **Log In**. The **Dashboard** page opens.

Important	It is strongly recommended to change the default user password once initial setup is completed, taking care to record the new account details for subsequent connections.
------------------	--

What to do if an incident occurs?

If the connection to the console cannot be made or if the web pages are displayed incorrectly, one of the following problems may be the cause:

- Network failure
- Incorrect network settings
- Incorrect browser settings (proxy configuration)

2.3. Installing the scripts

Data collection is performed by the Zabbix server using Python scripts.

1. Edit the Zabbix server configuration file `/etc/zabbix/zabbix_server.conf`.
2. Check the **ExternalScripts** parameter.
This parameter defines the location for external scripts.
Default: `/usr/lib/zabbix/externalscripts`
3. Copy the scripts in the ExternalScripts directory.

Important **In the ExternalScripts directory, another directory named openbmc must be created with read and write permissions.**

Available scripts

BullSequana SH and BullSequana EX servers

Script name	Description
<code><server_type>_openbmc_discovery</code>	Discovers enumerables like sensors
<code><server_type>_openbmc_frus_collect</code>	Collects FRU information
<code><server_type>_openbmc_frus_discovery</code>	Discovers enumerables like FRU
<code><server_type>_openbmc_frus_reader</code>	Reads FRU information previously collected
<code><server_type>_openbmc_fw_collect</code>	Collects firmware information
<code><server_type>_openbmc_fw_reader</code>	Reads firmware information previously collected
<code><server_type>_openbmc_network_collect</code>	Collects network information
<code><server_type>_openbmc_network_discovery</code>	Discovers enumerables like network
<code><server_type>_openbmc_network_reader</code>	Reads network information previously collected
<code><server_type>_openbmc_sensors_collect</code>	Collects sensors information
<code><server_type>_openbmc_sensors_reader</code>	Reads sensors information previously collected
<code><server_type>_openbmc_system_collect</code>	Collects system information
<code><server_type>_openbmc_system_reader</code>	Reads system information previously collected

Where `<server_type>` can take the following values:

- `mesca5` for BullSequana SH servers
- `ora` for BullSequana EX servers

BullSequana S servers

Script name	Description
mesca3_openbmc_discovery	Discovers enumerables like sensors
mesca3_openbmc_sensors_reader	Reads sensors information previously collected
ipmitoolsSensors	Collects sensors information

Important	The run time of the ipmitoolsSensors script may exceed the maximum value configurable. A workaround is to execute the script via the crontab every two minutes.
------------------	--

Chapter 3. Managing templates

Important It is strongly recommended not to modify the original templates. Copy the originals or create templates instead.

The server template is a set of entities (items, triggers, graphs, discovery rules) allowing efficient management of its devices.

The available MONGUI templates are template_<server_model>_zbxv5.xml where <server_type> can take the following values:

- BullSequanaSH for BullSequana SH servers
- BullSequanaEdge for BullSequana EX servers
- BullSequanaSeries for BullSequana S servers

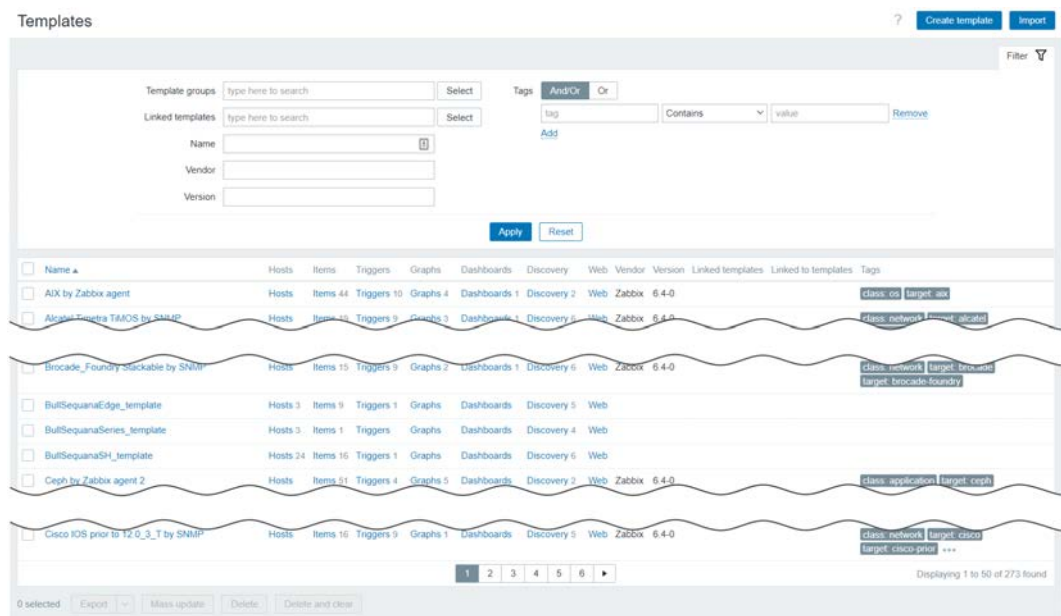
3.1. Installing the template

Prerequisites

The template_<server_model>_zbxv5.xml file is copied from <install_dir>\zabbix\server\externalscripts\ in a local directory on the client computer running the browser.

Procedure

1. From the **Data collection** menu, click the **Templates** tab. The **Templates** page opens.



2. Click **Import** at the top right of the page. The **Import** page opens.

Import ? ×

* Import file Aucun fichier choisi

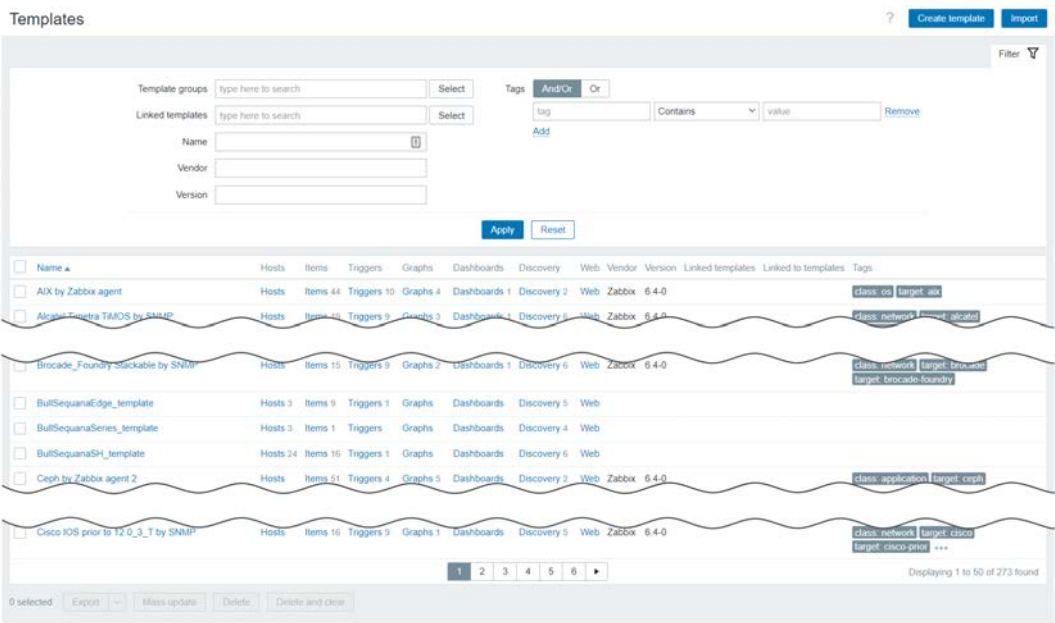
Advanced options ☒

Rules	Update existing	Create new	Delete missing
All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Template groups	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Host groups	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Templates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Value mappings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Template dashboards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Template linkage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Items	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Discovery rules	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Triggers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Graphs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Web scenarios	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

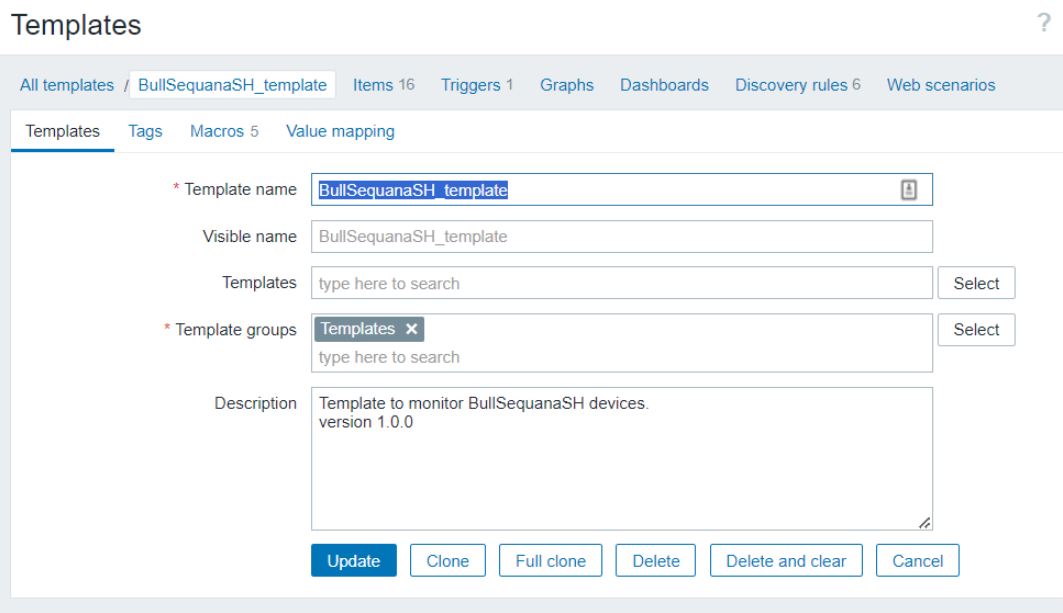
3. In the **Import file** field, click **Choose File** and indicate the path to the template.
4. Click **Import**.

3.2. Check the templates version

1. From the **Data collection** menu, click the **Templates** tab. The **Templates** page opens.



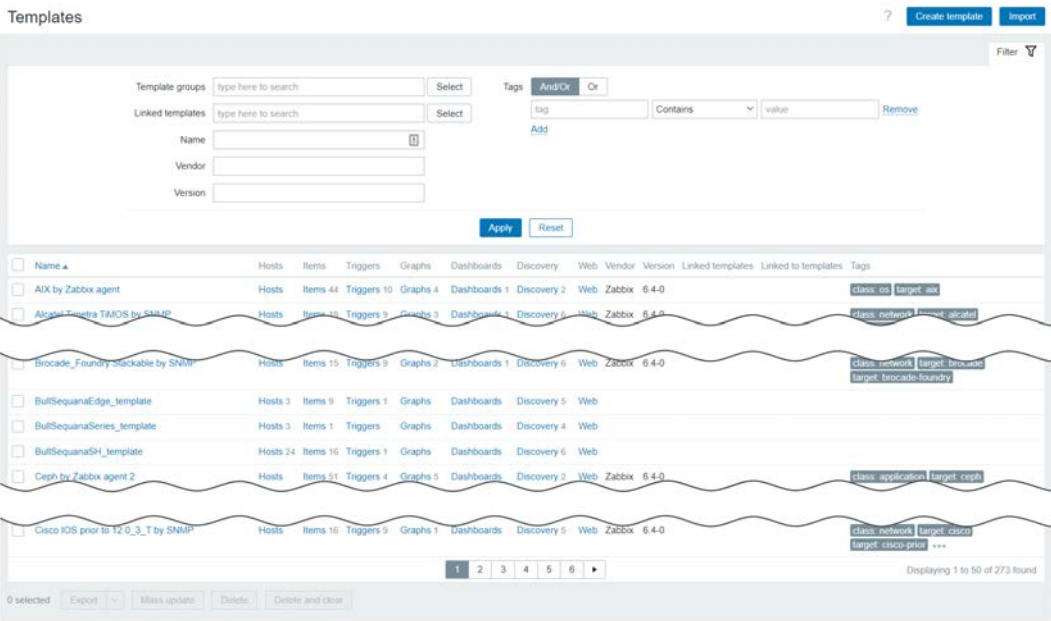
2. Select the <server_model>_template to check.



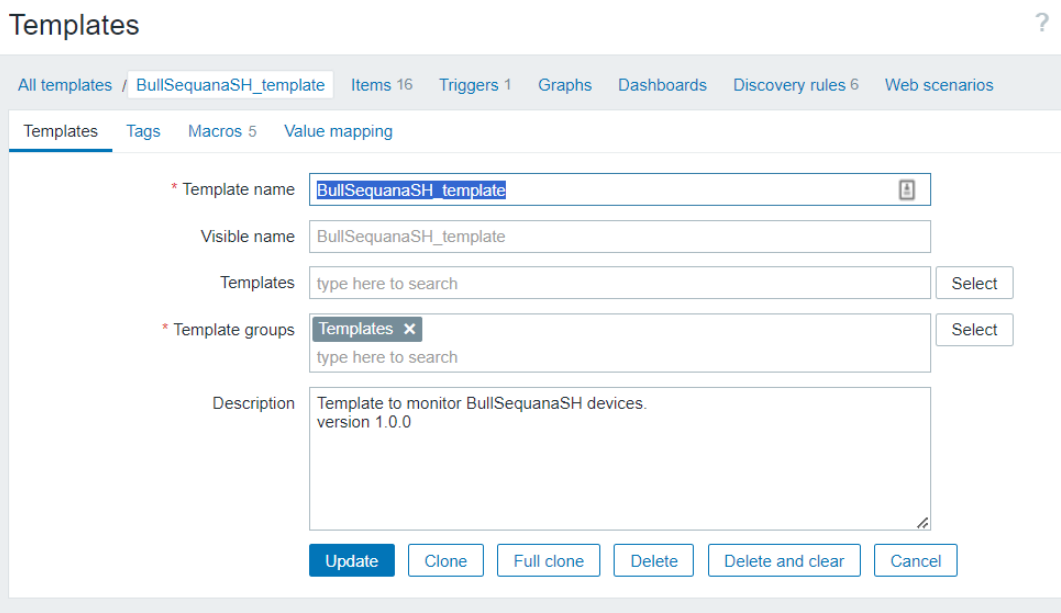
3. Check the version.

3.3. Template content

1. From the **Data collection** menu, click the **Templates** tab. The **Templates** page opens.



2. Click a <server_model>_template name in the list. A new page opens.



3. Click the **Items** tab. A new page opens.

Items

Create item

All templates / BullSequanaSH_template

Items 16

Triggers 1

Graphs

Dashboards

Discovery rules 0

Web scenarios

Filter

Host groups

type here to search

Select

Templates

BullSequanaSH... x

Select

Name

Key

Value mapping

type here to search

Select

Type

all

Type of information

all

History

Trends

Update interval

Tags

And/Or

Or

tag

Contains

value

Remove

Add

Status

all

Enabled

Disabled

Triggers

all

Yes

No

Inherited

all

Yes

No

Apply

Reset

Subfilter affects only filtered data

WITH TRIGGERS

Without triggers 15

With triggers 1

HISTORY

0 4 7d 11 3m 1

<input type="checkbox"/>	Name	Triggers	Key	Interval	History	Trends	Type	Status	Tags
<input type="checkbox"/>	System_serialNumber		mesca5_openbmc_system_reader[-f=\${OPENBMC}-system.json,-p=SerialNumber]	10m	7d		External check	Enabled	
<input type="checkbox"/>	System_partNumber		mesca5_openbmc_system_reader[-f=\${OPENBMC}-system.json,-p=PartNumber]	10m	7d		External check	Enabled	
<input type="checkbox"/>	System_model		mesca5_openbmc_system_reader[-f=\${OPENBMC}-system.json,-p=Model]	10m	7d		External check	Enabled	
<input type="checkbox"/>	System_manufacturer		mesca5_openbmc_system_reader[-f=\${OPENBMC}-system.json,-p=Manufacturer]	10m	7d		External check	Enabled	
<input type="checkbox"/>	System_collect		mesca5_openbmc_system_collect[-u=\${USER},-p=\${PASSWORD},-b=\${OPENBMC},-x=\${PORT}]	10m	0		External check	Enabled	
<input type="checkbox"/>	Thermal_collect		mesca5_openbmc_sensors_collect[-u=\${USER},-p=\${PASSWORD},-b=\${OPENBMC},-x=\${PORT},-m=Module \${MODNUMBER},-f=Thermal]	10m	0		External check	Enabled	
<input type="checkbox"/>	Power_collect		mesca5_openbmc_sensors_collect[-u=\${USER},-p=\${PASSWORD},-b=\${OPENBMC},-x=\${PORT},-m=Module \${MODNUMBER},-f=Power]	10m	0		External check	Enabled	
<input type="checkbox"/>	CEB_P_CPLD_version		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=CEB_P_CPLD,-p=Version]	10m	7d		External check	Enabled	
<input type="checkbox"/>	CEB_MAIN_FPGA_version		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=CEB_MAIN_FPGA,-p=Version]	10m	7d		External check	Enabled	
<input type="checkbox"/>	CEB_IO_FPGA_version		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=CEB_IO_FPGA,-p=Version]	10m	7d		External check	Enabled	
<input type="checkbox"/>	BMC_version	Triggers 1	mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=BMC,-p=Version]	10m	7d		External check	Enabled	
<input type="checkbox"/>	BMC_state		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=BMC,-p=Status,-s=State]	10m	7d		External check	Enabled	
<input type="checkbox"/>	BIOS_version		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=BIOS,-p=Version]	10m	7d		External check	Enabled	
<input type="checkbox"/>	BIOS_state		mesca5_openbmc_fw_reader[-f=\${OPENBMC}-Module \${MODNUMBER}-firmwares.json,-i=BIOS,-p=Status,-s=State]	10m	7d		External check	Enabled	
<input type="checkbox"/>	Firmwares_collect		mesca5_openbmc_fw_collect[-u=\${USER},-p=\${PASSWORD},-b=\${OPENBMC},-m=Module \${MODNUMBER},-x=\${PORT}]	10m	0		External check	Enabled	
<input type="checkbox"/>	Frus_collect		mesca5_openbmc_frus_collect[-u=\${USER},-p=\${PASSWORD},-b=\${OPENBMC},-m=Module \${MODNUMBER},-x=\${PORT}]	10m	90d		External check	Enabled	

Displaying 16 of 16 found

The items execute the external scripts provided by MONGUI. Some items are used to collect information, others are used to read specific data previously collected.

Note BullSequana S server has only one item to collect information from sensors.

4. Click the **Discovery rules** tab. A new page opens.

Discovery rules

Create discovery rule

All templates / BullSequanaSH_templateItems 10Triggers 1GraphsDashboardsDiscovery rules 0Web scenarios

Filter

<input type="checkbox"/>	Template	Name	Items	Triggers	Graphs	Hosts	Key	Interval	Type	Status
<input type="checkbox"/>	BullSequanaSH_template	Discover Fan Info	Item prototypes 5	Trigger prototypes 4	Graph prototypes 1	Host prototypes	mesca5_openbmc_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans]	1m	External check	Enabled
<input type="checkbox"/>	BullSequanaSH_template	Discover Fru Info	Item prototypes 1	Trigger prototypes	Graph prototypes	Host prototypes	mesca5_openbmc_fru_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-FRUs.json]	1m	External check	Enabled
<input type="checkbox"/>	BullSequanaSH_template	Discover Network Info	Item prototypes 5	Trigger prototypes	Graph prototypes	Host prototypes	mesca5_openbmc_network_discovery[-u={\$USER}-p={\$PASSWORD}-b={\$OPENBMC}-m=bmc{\$MODNUMBER}-x={\$PORT}]	1m	External check	Enabled
<input type="checkbox"/>	BullSequanaSH_template	Discover PowerSupplies Info	Item prototypes 1	Trigger prototypes	Graph prototypes 1	Host prototypes	mesca5_openbmc_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-Power.json-g PowerSupplies]	1m	External check	Enabled
<input type="checkbox"/>	BullSequanaSH_template	Discover Temperatures Info	Item prototypes 5	Trigger prototypes 4	Graph prototypes 1	Host prototypes	mesca5_openbmc_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Temperatures]	1m	External check	Enabled
<input type="checkbox"/>	BullSequanaSH_template	Discover Voltages Info	Item prototypes 5	Trigger prototypes 4	Graph prototypes 1	Host prototypes	mesca5_openbmc_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-Power.json-g Voltages]	1m	External check	Enabled

0 selectedEnableDisableDelete

Displaying 6 of 6 found

Discovery rules provide a way to automatically create items, triggers and graphs for different entities (Fans, Temperatures, Voltages...).

5. Click a Discovery rule name in the list. A new page opens.

Discovery rules

?

All templates / BullSequanaSH_templateDiscovery list / Discover Fan InfoItem prototypes 5Trigger prototypes 4Graph prototypes 1Host prototypes

Discovery rulePreprocessingLLD macrosFiltersOverrides

* NameDiscover Fan Info

TypeExternal check

* Keymesca5_openbmc_discovery[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.j

* Update interval1m

Custom intervals

TypeIntervalPeriodAction

FlexibleScheduling50s1-7:00:00-24:00Remove

Add

* Keep lost resources period30d

Description

Enabled

UpdateCloneTestDeleteCancel

6. Click **Item prototypes** tab to see the discovered items.

Item prototypes

Create item prototype

All templates / BullSequanaSH_templateDiscovery list / Discover Fan InfoItem prototypes 5Trigger prototypes 4Graph prototypes 1Host prototypes

<input type="checkbox"/>	Name	Key	Interval	History	Trends	Type	Create enabled	Discover	Tags
<input type="checkbox"/>	... [IFAN] LowerThresholdCritical	mesca5_openbmc_sensors_reader[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans-i={\$IFAN}-p=LowerThreshokCritical]	10s	90d	365d	External check	Yes	Yes	
<input type="checkbox"/>	... [IFAN] LowerThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans-i={\$IFAN}-p=LowerThreshokNonCritical]	10s	90d	365d	External check	Yes	Yes	
<input type="checkbox"/>	... [IFAN] Reading	mesca5_openbmc_sensors_reader[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans-i={\$IFAN}-p=Readin g]	10s	90d	365d	External check	Yes	Yes	
<input type="checkbox"/>	... [IFAN] UpperThresholdCritical	mesca5_openbmc_sensors_reader[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans-i={\$IFAN}-p=UpperThreshokCritical]	10s	90d	365d	External check	Yes	Yes	
<input type="checkbox"/>	... [IFAN] UpperThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={\$OPENBMC}-Module{\$MODNUMBER}-Thermal.json-g Fans-i={\$IFAN}-p=UpperThreshokNonCritical]	10s	90d	365d	External check	Yes	Yes	

0 selectedCreate enabledCreate disabledMass updateDelete

Displaying 5 of 5 found

- Click **Trigger prototypes** tab to see the discovered triggers.

For BullSequana EX and BullSequana SH servers four trigger prototypes are displayed.

Trigger prototypes

All templates / BullSequanaSH_template / Discovery list / Discover Fan Info / Item prototypes 5 / Trigger prototypes 4 / Graph prototypes 1 / Host prototypes

<input type="checkbox"/>	Severity	Name	Operational data	Expression	Create enabled	Discover	Tags
<input type="checkbox"/>	High	[FAN] lower critical threshold		<code>last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=Reading])<=last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=LowerThresholdCritical])</code>	Yes	Yes	
<input type="checkbox"/>	Warning	[FAN] lower non critical threshold		<code>last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=Reading])<=last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=LowerThresholdNonCritical])</code>	Yes	Yes	
<input type="checkbox"/>	High	[FAN] upper critical Threshold		<code>last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=Reading])>=last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=UpperThresholdCritical])</code>	Yes	Yes	
<input type="checkbox"/>	Warning	[FAN] upper non critical Threshold		<code>last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=Reading])>=last(BullSequanaSH_template/mesca5_opentmc_sensors_reader[-t(\$OPENBMC)-Module(\$MOONUMBER)-Thermal.json,-g=Fans,-i=[FAN],-p=UpperThresholdNonCritical])</code>	Yes	Yes	

Displaying 4 of 4 found

0 selected Create enabled Create disabled Mass update Delete

For every sensor, critical high and low triggers, corresponding to critical alarm thresholds, as well as warning high and low triggers, corresponding to warning alarm thresholds for the devices are enabled by default.

For BullSequana S servers two trigger prototypes are displayed.

Trigger prototypes

All templates / BullSequanaSeries_template / Discovery list / Discover Fans Info / Item prototypes 5 / Trigger prototypes 2 / Graph prototypes 1 / Host prototypes

<input type="checkbox"/>	Severity	Name	Operational data	Expression	Create enabled	Discover	Tags
<input type="checkbox"/>	High	[FAN] lower critical threshold		<code>last(BullSequanaSeries_template/mesca3_opentmc_sensors_reader[-t(\$OPENBMC)-ipmi-sensors.json,-g=RPM,-i=[FAN],-p=Reading])<=last(BullSequanaSeries_template/mesca3_opentmc_sensors_reader[-t(\$OPENBMC)-ipmi-sensors.json,-g=RPM,-i=[FAN],-p=Lower C])</code>	Yes	Yes	
<input type="checkbox"/>	High	[FAN] upper critical Threshold		<code>last(BullSequanaSeries_template/mesca3_opentmc_sensors_reader[-t(\$OPENBMC)-ipmi-sensors.json,-g=RPM,-i=[FAN],-p=Reading])>=last(BullSequanaSeries_template/sensors_reader[-t(\$OPENBMC)-ipmi-sensors.json,-g=RPM,-i=[FAN],-p=Upper C])</code>	Yes	Yes	

Displaying 2 of 2 found

0 selected Create enabled Create disabled Mass update Delete

For every sensor, critical high and low triggers, corresponding to critical alarm thresholds for the devices are enabled by default.

- Click **Graph prototypes** tab to see the discovered graphs.

Graph prototypes

All templates / BullSequanaSH_template / Discovery list / Discover Fan Info / Item prototypes 5 / Trigger prototypes 4 / Graph prototypes 1 / Host prototypes

<input type="checkbox"/>	Name	Width	Height	Graph type	Discover
<input type="checkbox"/>	[FAN]	900	200	Normal	Yes

Displaying 1 of 1 found

0 selected Delete

Chapter 4. Managing hosts

4.1. Installing the Hosts template

The Hosts template allows to add a host easily with a minimum of operations.

The available MONGUI Hosts templates are template_<server_model>_Hosts-zbxv5.xml where <server_model> can take the following values:

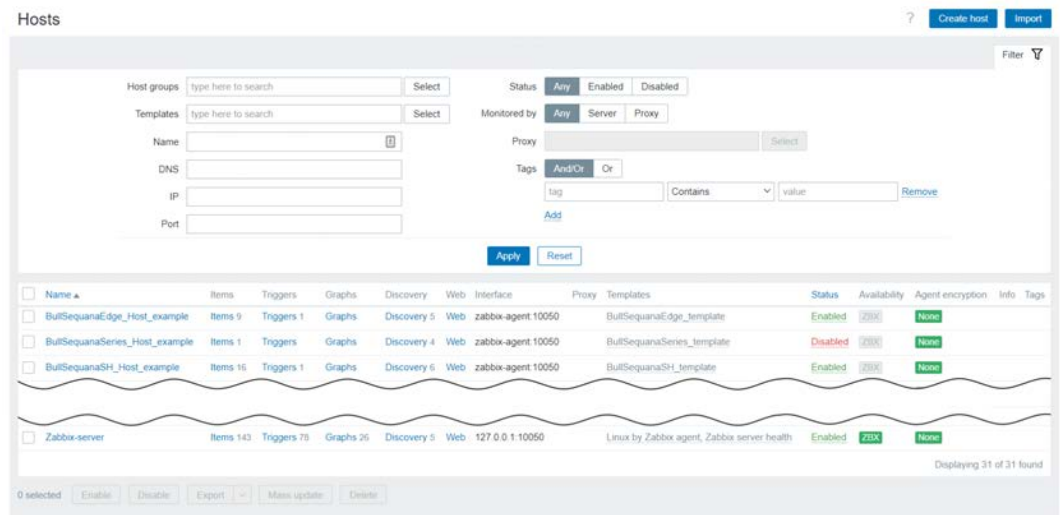
- BullSequanaSH for BullSequana SH servers
- BullSequanaEdge for BullSequana EX servers
- BullSequanaSeries for BullSequana S servers

Prerequisites

- The <server_model> template is imported
- The template_<server_model>_Hosts-zbxv5.xml file is copied from <install_dir>\zabbix\server\externalscripts\ to a local directory on the client computer running the browser

Procedure

1. From the **Data collection** menu, click the **Hosts** tab. The **Hosts** page opens.



2. Click **Import**. The **Import** page opens.

Import ? ×

* Import file Aucun fichier choisi

Advanced options ☒

Rules	Update existing	Create new	Delete missing
All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Host groups	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Hosts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Value mappings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Template linkage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Items	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Discovery rules	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Triggers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Graphs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Web scenarios	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

3. In the **Import file** field, click **Choose File** and indicate the path to the template_<server_model>_Hosts-zbxv5.xml file.
4. Select **Hosts** check boxes.
5. Click **Import**. A <server_model>_Host_example host is created.

4.2. Adding a host using the Hosts template

The <server_model>_Host_example allows to automatically configure a host:

- The Zabbix agent is configured to zabbix-agent:10050
- Automatic Inventory is configured
- Macros are prepared
- The <server_model> template is linked

Procedure

1. From the **Data Collection** menu, click the **Hosts** tab. The **Hosts** page opens.

Hosts

Create host Import

Filter

Host groups type here to search Select

Templates type here to search Select

Name

DNS

IP

Port

Status Any Enabled Disabled

Monitored by Any Server Proxy

Proxy

Tags And/Or Or

tag Contains value Remove

Add

Apply Reset

Name	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption	Info	Tags
BullSequanaEdge_Host_example	Items 9	Triggers 1	Graphs	Discovery 5	Web	zabbix-agent:10050		BullSequanaEdge_template	Enabled	20X	None		
BullSequanaSeries_Host_example	Items 1	Triggers	Graphs	Discovery 4	Web	zabbix-agent:10050		BullSequanaSeries_template	Disabled	20X	None		
BullSequanaSH_Host_example	Items 16	Triggers 1	Graphs	Discovery 6	Web	zabbix-agent:10050		BullSequanaSH_template	Enabled	20X	None		
Zabbix-server	Items 143	Triggers 75	Graphs 26	Discovery 5	Web	127.0.0.1:10050		Linux by Zabbix agent, Zabbix server health	Enabled	20X	None		

0 selected Enable Disable Export Mass update Delete

Displaying 31 of 31 found

2. Select a <server_model>_Host_example. A new page opens.

Host ? ×

Host IPMI Tags Macros 5 Inventory • Encryption Value mapping

Visible name

Templates

Name	Action
BullSequanaSH_template	Unlink Unlink and clear

* Host groups

Interfaces

Type	IP address	DNS name	Connect to	Port	Default
Agent	<input type="text"/>	zabbix-agent	IP <input type="radio"/> DNS <input checked="" type="radio"/>	10050	<input checked="" type="radio"/> Remove

[Add](#)

Description

Monitored by proxy

Enabled ☒

3. Click **Clone**.

4. Modify the **Host name**.

Note The host name may contain alphanumeric, spaces, dots, dashes and underscores. Leading and trailing spaces are not allowed.

5. Click the **Macros** tab.

Host ×

Host IPMI Tags Macros 5 Inventory • Encryption Value mapping

Host macros Inherited and host macros

Macro	Value		Description	
{MODNUMBER}	0	T	description	Remove
{OPENBMC}	XX.XX.XX.XX	T	description	Remove
{PASSWORD}	the_passwd	T	description	Remove
{PORT}	443	T	description	Remove
{USER}	the_user	T	description	Remove

[Add](#)

6. Complete the macros as required.

Macro	Value
{MODNUMBER}	Host module number
{OPENBMC}	Host OpenBMC address
{PASSWORD}	Host OpenBMC password
{PORT}	Host OpenBMC port
{USER}	Host OpenBMC username

7. Click **Update**.

4.3. Adding a host manually

4.3.1. Creating a host

1. From the **Data collection** menu, click the **Hosts** tab. The **Hosts** page opens.

The screenshot shows the Zabbix 'Hosts' management page. It features a top navigation bar with 'Create host' and 'Import' buttons. Below this is a filter section with various input fields and dropdown menus to refine the host list. The main area is a table of hosts, including examples like 'BullSequanaEdge_Host_example' and 'Zabbix-server'. Each row shows details like associated templates, status (Enabled/Disabled), and availability. At the bottom, there are controls for selecting and acting on the listed hosts.

2. On the right-hand side of the screen, click **Create host**. The **New host** page opens.

The screenshot displays the 'New host' configuration page in Zabbix. It includes tabs for different configuration aspects: Host, IPMI, Tags, Macros, Inventory, Encryption, and Value mapping. The 'Host' tab is selected, showing fields for 'Host name' (required), 'Visible name', 'Templates', 'Host groups', 'Interfaces', and a 'Description' text area. There are also dropdown menus for 'Monitored by proxy' and a checkbox for 'Enabled'. The page concludes with 'Add' and 'Cancel' buttons.

3. Complete the **Host name** field with the host BMC IP address.

Note The host name may contain alphanumeric characters, spaces, dots, dashes and underscores. Leading and trailing spaces are not allowed.

4. In the **Host groups** section, click **Select** and select **Zabbix servers**.
5. In the **Interfaces** section, perform the following actions:
- a. click **Add**.
 - b. Select **Agent** in the list.

A new Agent line is created.

The screenshot shows the 'New host' configuration page. The 'Interfaces' section is highlighted with a red box, showing a table with one entry: 'Agent' with IP address '127.0.0.1' and port '10050'. The 'Add' button is visible at the bottom right.

Type	IP address	DNS name	Connect to	Port	Default
Agent	127.0.0.1		IP	10050	<input checked="" type="radio"/> Remove

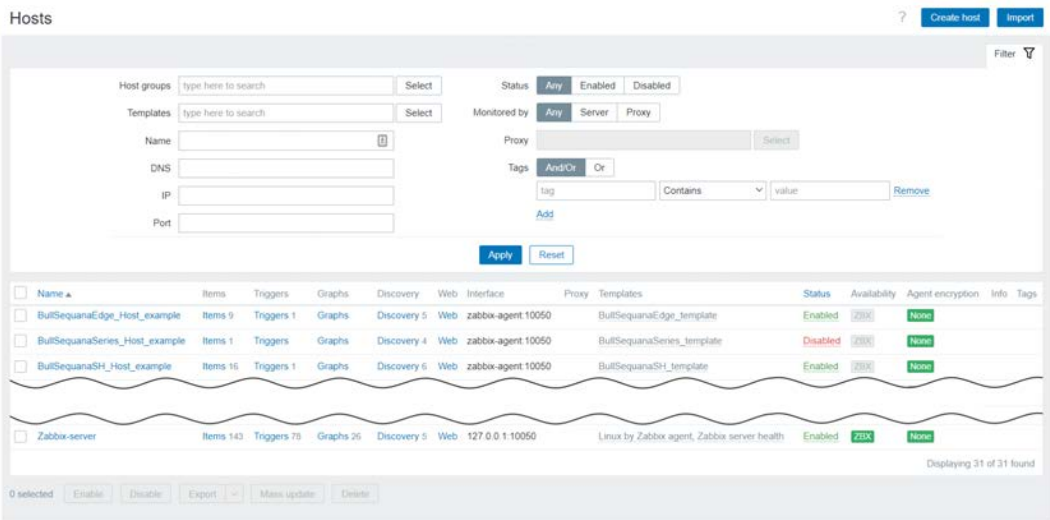
- c. Click **DNS**.
- d. Complete the following fields:

Field	Value
IP address	Clear this field and leave it empty.
DNS name	zabbix-agent
Port	10050

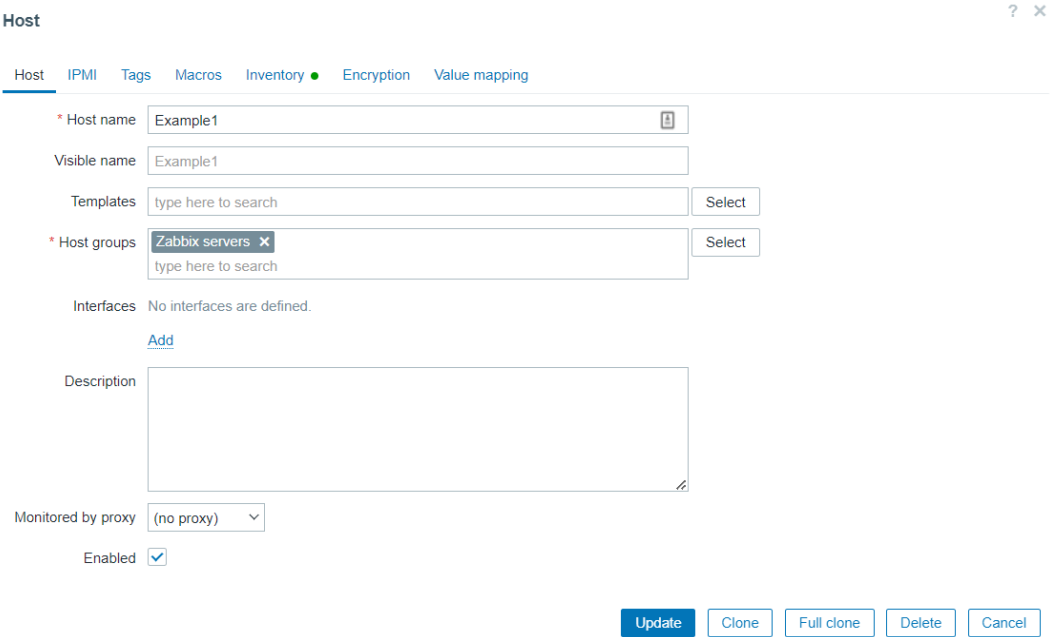
6. Click **Add**.

4.3.2. Linking a host to the template

1. From the **Data collection** menu, click the **Hosts** tab. The **Hosts** page opens.



2. Select a host name. A new page opens.



3. In the **Templates** section, click **Select**. The **Template** page opens.

Templates ×

Template group Templates × Select

☐

Brocade FC by SNMP

☐

Brocade_Foundry Nonstackable by SNMP

☐

Brocade_Foundry Stackable by SNMP

☐

BullSequanaEdge_template

☐

BullSequanaSeries_template

☒

BullSequanaSH_template

☐

Ceph by Zabbix agent 2

☐

Chassis by IPMI

☐

Cisco ASAv by SNMP

☐

Cisco Catalyst 3750V2-24FS by SNMP

☐

Cisco Catalyst 3750V2-24PS by SNMP

☐

Cisco Catalyst 3750V2-24TS by SNMP

☐

Cisco Catalyst 3750V2-48PS by SNMP

☐

Cisco Catalyst 3750V2-48TS by SNMP

☐

Cisco IOS by SNMP

☐

Cisco IOS prior to 12.0_3_T by SNMP

Select Cancel

4. Select the <server_model>_ template.

5. Click **Select**.

The template is displayed in the **Templates** field.

Host ? ×

Host IPMI Tags Macros Inventory Encryption Value mapping

* Host name Example1 ⓘ

Visible name Example1

Templates BullSequanaSH_template × Select
type here to search

* Host groups Zabbix servers × Select
type here to search

Interfaces No interfaces are defined.
[Add](#)

Description

Monitored by proxy (no proxy) ▼

Enabled ☒

Update Clone Full clone Delete Cancel

6. Click **Update**.

4.3.3. Adding macros on a host

Five macros must be added on a host.

1. From the **Data collection** menu, click the **Hosts** tab. The **Hosts** page opens.

Name	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption	Info	Tags
BuiltSequanaEdge_Host_example	Items 9	Triggers 1	Graphs	Discovery 5	Web	zabbix-agent 10050		BuiltSequanaEdge_template	Enabled	200%	None		
BuiltSequanaSeries_Host_example	Items 1	Triggers	Graphs	Discovery 4	Web	zabbix-agent 10050		BuiltSequanaSeries_template	Disabled	200%	None		
BuiltSequanaSH_Host_example	Items 16	Triggers 1	Graphs	Discovery 6	Web	zabbix-agent 10050		BuiltSequanaSH_template	Enabled	200%	None		

2. Select a host name. A new page opens.
3. Click the **Macros** tab.

Macro	Value	Description
{MACRO}	value	description

4. Add the macros:

Macro	Value
{ \$MODNUMBER }	Host module number
{ \$OPENBMC }	Host OpenBMC address
{ \$PASSWORD }	Host OpenBMC password
{ \$PORT }	Host OpenBMC port
{ \$USER }	Host OpenBMC username

For each macro:

- Complete the **Macro** and **Value** fields.
- Click **Add**.

Example

Host

Host IPMI Tags Macros 5 Inventory Encryption Value mapping

Host macros

Inherited and host macros

Macro	Value		Description	
{ \$MODNUMBER }	0	T	description	Remove
{ \$OPENBMC }	XX.XX.XX.XX	T	description	Remove
{ \$PASSWORD }	my@password	T	description	Remove
{ \$PORT }	443	T	description	Remove
{ \$USER }	root	T	description	Remove

Add

Update

Clone

Full clone

Delete

Cancel

5. Click **Update**

Chapter 5. Monitoring rsyslog

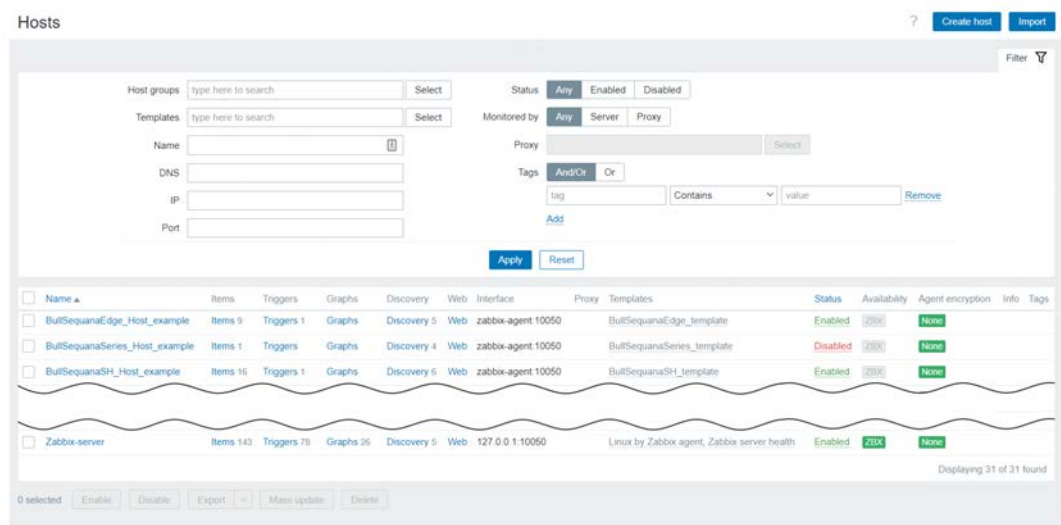
Zabbix can be used to analyze the log files of a host.

Prerequisites

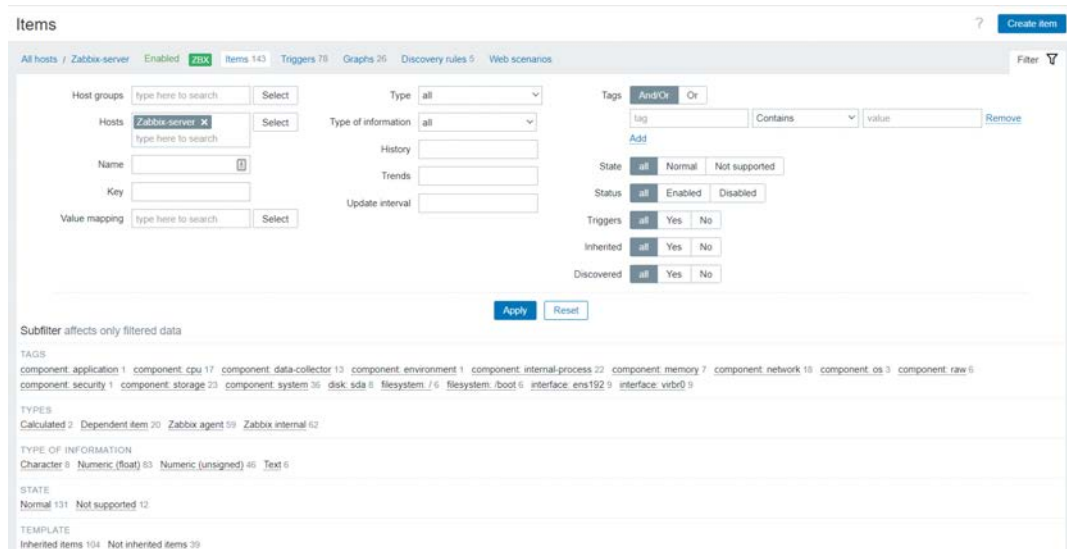
- The Zabbix agent is running on the host
- The Log monitoring item is set up for the host

Procedure

1. From the **Data collection** menu, click the **Hosts** tab. The **Hosts** page opens.



2. Click **Items** of the Zabbix-server line. The **Items** page opens.



- Click **Create item** and complete the required fields.

Items

All hosts / Zabbix server Enabled ZBX Items 137 Triggers 73 Graphs 26 Discovery rules 4 Web scenarios

Item Tags Preprocessing

* Name

Type

* Key

Type of information

* Host interface

* Update interval

Custom intervals

Type	Interval	Period	Action
Flexible	Scheduling	50s	1-7,00:00-24:00

[Add](#) [Remove](#)

* History storage period

Log time format

Description

Enabled ☒

- Click **Add**.
- Enable rsyslog on the Zabbix server side.
 - In `/etc/rsyslog.conf` file, uncomment or copy the following lines:


```
# Provides UDP syslog reception
# for parameters see http://www.rsyslog.com/doc/imudp.html
module(load="imudp") # needs to be done just once
input(type="imudp" port="514")

# Provides TCP syslog reception
# for parameters see http://www.rsyslog.com/doc/imtcp.html
module(load="imtcp") # needs to be done just once
input(type="imtcp" port="514")
```
 - Check the firewall configuration, the rsyslog default port 514 must be open for tcp and udp protocols.
 - Create your own rsyslog configuration file in `/etc/rsyslog.d` directory.

```
$template rsyslog_format54,"[<font color=red>%FROMHOST-IP%</font>]
%timegenerated% %hostname% %syslogfacility-text%:%syslogpriority-text%
%syslogtag%:msg:::drop-last-lf%\n"
$template RemoteBmcLogs54,"/var/log/rsyslog/zabbix54.log"
:FROMHOST-IP, isequal, "10.xx.xx.54" ?RemoteBmcLogs54;rsyslog_format54
& ~
```

- d. Restart the rsyslog service.

```
systemctl restart rsyslog.service
```

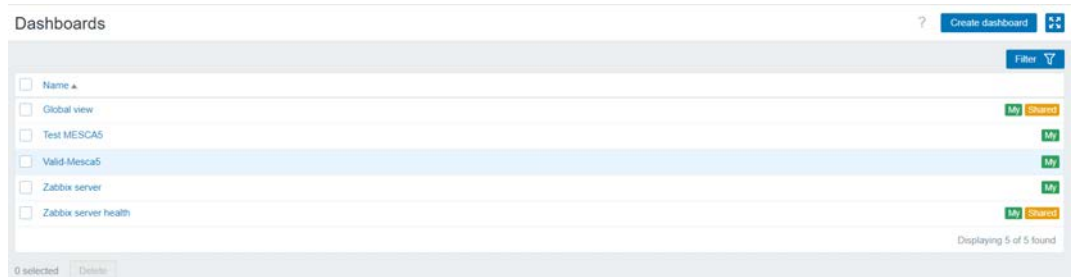
- e. Connect to the management controller of the host and check that the connection is logged in the rsyslog previously created.

```
[root@frcla009-vm rsyslog]# pwd /var/log/rsyslog
[root@frcla009-vm rsyslog]# more zabbix54.log
[<font color=red>10.xx.xx.54</font>] Jun 12 15:55:10 User user:info
'super' from host '10.xx.xx.xxx' logged in.
...
```


Chapter 6. Customizing the Zabbix console

6.1. Creating a dashboard

1. Click **Dashboard** in the menu. The **Dashboards** page opens.



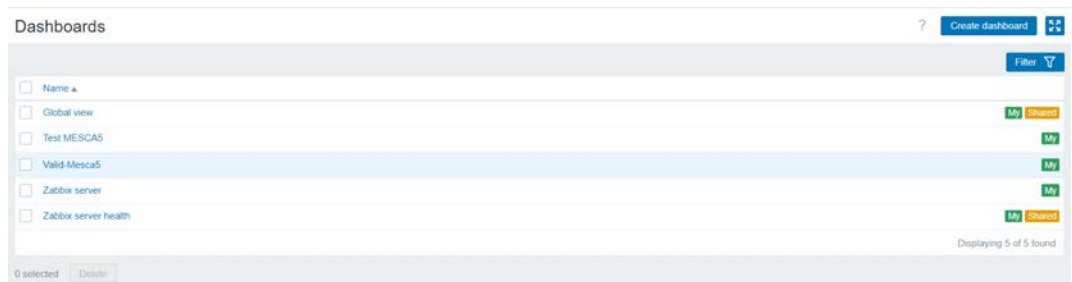
2. On the right-hand side of the screen, click **Create dashboard**. A **Dashboard properties** pop-up window opens.
3. In the **Owner** field, click **Select**.
4. Select an owner.

A screenshot of the 'Dashboard properties' pop-up window. It has a title bar with a close button. The form contains the following fields: 'Owner' with a dropdown menu showing 'Admin (Zabbix Administrator)' and a 'Select' button; 'Name' with a text input field containing 'New dashboard'; 'Default page display period' with a dropdown menu showing '30 seconds'; and 'Start slideshow automatically' with a checked checkbox. At the bottom right, there are 'Apply' and 'Cancel' buttons.

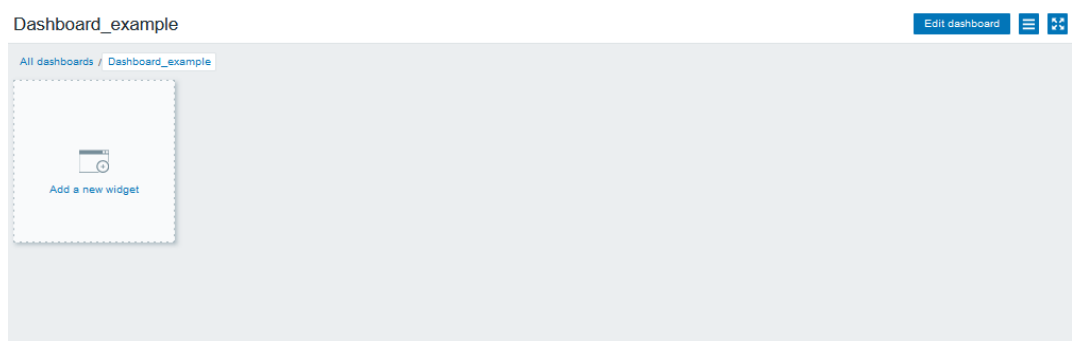
5. Complete the fields as required.
6. Click **Apply**.
7. Click **Save changes**.

6.2. Adding a graph to a dashboard

1. Click **Dashboard** in the menu. The **Dashboards** page opens.



2. Select a dashboard. A new page opens.



3. Click **Edit dashboard**.
4. Click **Add widget** in **Add** drop-down menu. The **Add widget** pop-up window opens.

5. From the **Type** drop-down list, select **Graph**.

Add widget

Type: Graph

Name: default

Refresh interval: Default (1 minute)

Graph area showing y-axis (0 to 1) and x-axis (time: 2-22 13:29 to 2-22 14:21).

Configuration panel (Data set 1 tab):

- Data set: host pattern (Select)
- Base color: Red
- Draw: Line (Points, Staircase, Bar)
- Width: 1
- Missing data: None (Connected, Treat as 0)
- Y-axis: Left (Right)
- Time shift: none

Buttons: Add, Cancel

6. Click the **Data set** tab.

7. Select the hosts to compare.

- a. In the **host pattern** field, click Select. A new page opens.

Hosts

Host group: MESCA5 server (Select)

Hosts list:

- ☐ Name
- ☐ MESCA5_12
- ☐ MESCA5_16
- ☐ MESCA5_17
- ☐ MESCA5_64
- ☐ MESCA5_78
- ☐ MESCA5_81

Buttons: Select, Cancel

- b. Select the required hosts.

- c. Click **Select**.

8. Select the item to display.
 - a. In the **item pattern** field, click **Select**. A new page opens.

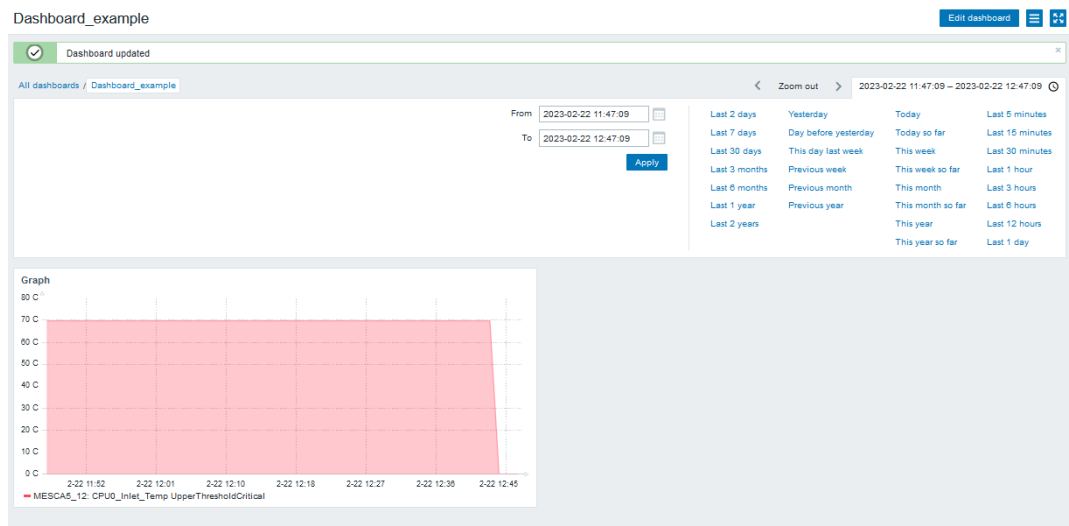
Items ✕

Host: MESCA5_12 ✕ Select

<input type="checkbox"/>	Name	Key	Type	Type of information	Status
<input type="checkbox"/>	CPU0_Inlet_Temp LowerThresholdCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=LowerThresholdCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp LowerThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=LowerThresholdNonCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp Reading	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=ReadingCelsius]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp UpperThresholdCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=UpperThresholdCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp UpperThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=UpperThresholdNonCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU1_Inlet_Temp LowerThresholdCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU1_Inlet_Temp,-p=LowerThresholdCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU1_Inlet_Temp LowerThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU1_Inlet_Temp,-p=LowerThresholdNonCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU1_Inlet_Temp Reading	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU1_Inlet_Temp,-p=ReadingCelsius]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU1_Inlet_Temp UpperThresholdCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU1_Inlet_Temp,-p=UpperThresholdCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU1_Inlet_Temp UpperThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={SOPENBMC}-Module{SMODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU1_Inlet_Temp,-p=UpperThresholdNonCritical]	External check	Numeric (float)	Enabled

Select Cancel

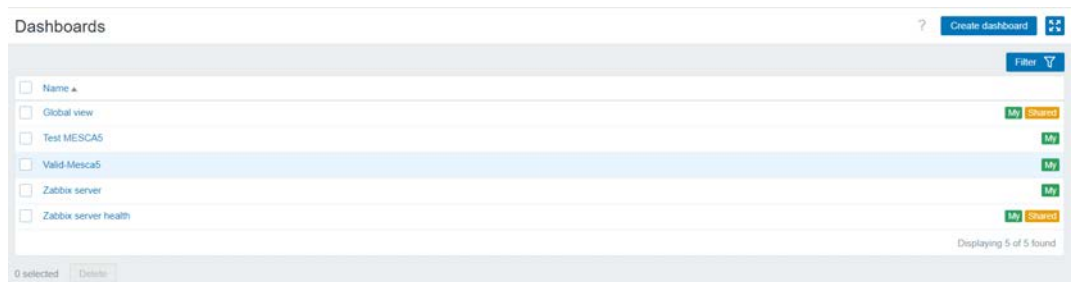
- b. Select the required items.
 - c. Click **Select**.
9. From the **Add widget** page, complete the fields as required.
10. Click **Add**. The selected graph is added to the dashboard.



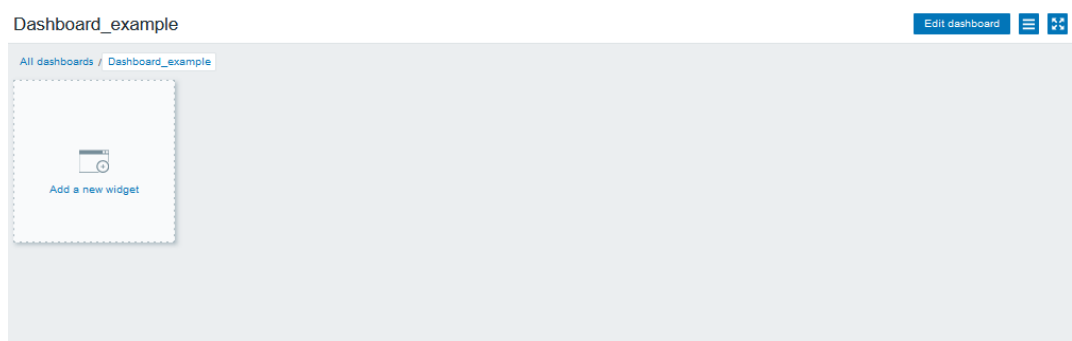
11. Click **Save changes**.

6.3. Adding a predefined graph prototype to a dashboard

1. Click **Dashboard** in the menu. The **Dashboards** page opens.



2. Select a dashboard. A new page opens.



3. Click **Edit dashboard**.
4. Click **Add widget** in **Add** drop-down menu. The **Add widget** pop-up window opens.

- From the **Type** drop-down list, select **Graph prototype**.
- In the **Source** field, select **Graph prototype**.

Add widget ×

Type Graph prototype Show header ☒

Name default

Refresh interval Default (1 minute)

Source Graph prototype Simple graph prototype

* Graph prototype type here to search Select

Show legend ☒

Dynamic item ☐

* Columns 2

* Rows 1

Add Cancel

- In the **Graph prototype** field, click **Select**. The **Graph prototypes** window opens.

Graph prototypes ×

Host MESCA5_12 Select

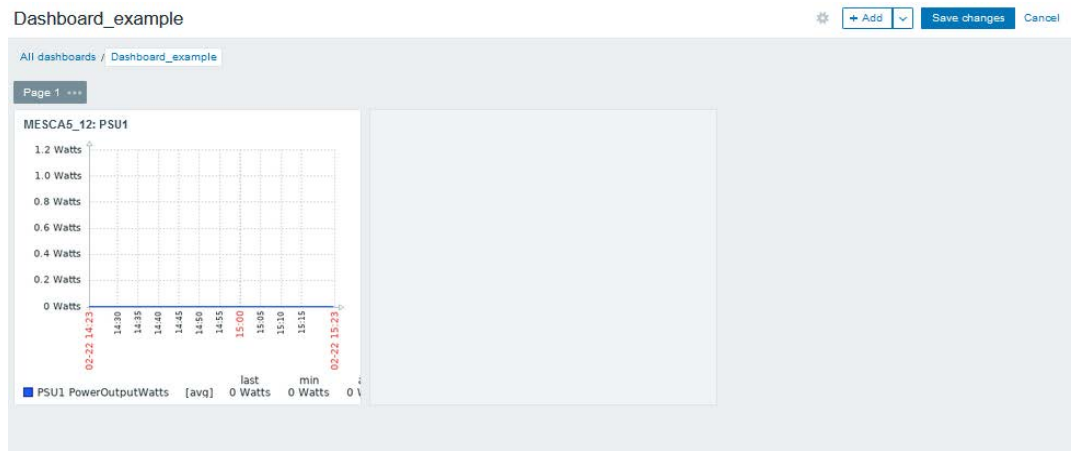
Name	Graph type
{#FAN}	Normal
{#POWERSUPPLIE}	Normal
{#TEMPERATURE}	Normal
{#VOLTAGE}	Normal

Cancel

- Select the required graph prototype.
- From the **Add widget** page, complete the **Columns** and **Rows** fields as required.

10. Click **Add**.

The selected graph prototype is added to the dashboard.

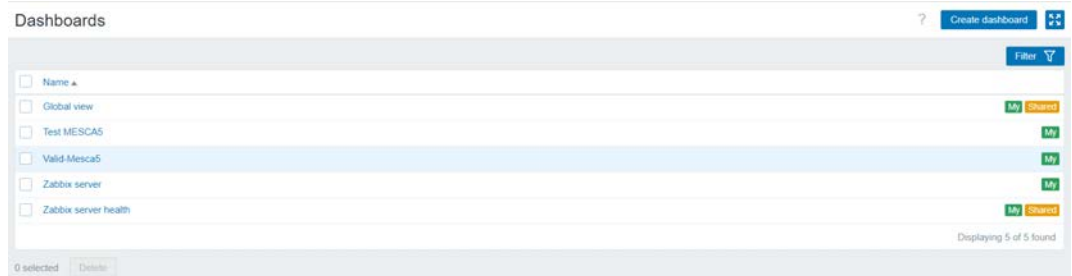


11. Click **Save changes**.

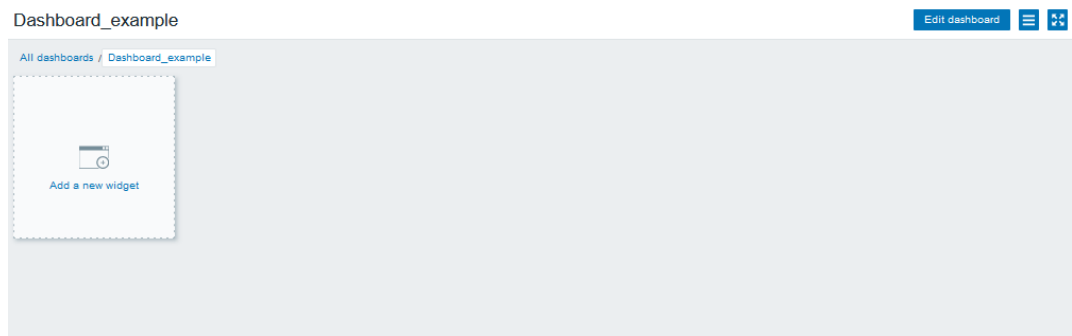
6.4. Adding a plain text to a dashboard

Note When it has been enabled, rsyslog is a type of plain text.

1. Click **Dashboard** in the menu. The **Dashboards** page opens.



2. Select a dashboard. A new page opens.



3. Click **Edit dashboard**.
4. Click **Add widget** in **Add** drop-down menu. The **Add widget** pop-up window opens.

5. From the **Type** drop-down list, select **Plain text**.

Add widget ✕

Type Plain text Show header ☒

Name default

Refresh interval Default (1 minute)

* Items type here to search Select

Items location Left Top

* Show lines 25

Show text as HTML ☐

Dynamic items ☐

Add Cancel

6. In the **Show lines** field, enter the number of lines to display.

7. In the **Items** field, click **Select**. The **Items** pop-up window opens.

Items ✕

Host MESCA5_12 Select

<input type="checkbox"/>	Name	Key	Type	Type of information	Status
<input type="checkbox"/>	BIOS_state	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=BIOS,-p=Status,-s=State]	External check	Text	Enabled
<input type="checkbox"/>	BIOS_version	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=BIOS,-p=Version]	External check	Text	Enabled
<input type="checkbox"/>	BMC_state	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=BMC,-p=Status,-s=State]	External check	Text	Enabled
<input type="checkbox"/>	BMC_version	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=BMC,-p=Version]	External check	Text	Enabled
<input type="checkbox"/>	CEB_IO_FPGA_version	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=CEB_IO_FPGA,-p=Version]	External check	Text	Enabled
<input type="checkbox"/>	CEB_MAIN_FPGA_version	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=CEB_MAIN_FPGA,-p=Version]	External check	Text	Enabled
<input type="checkbox"/>	CEB_P_CPLD_version	mesca5_openbmc_fw_reader[-f={OPENBMC}-Module{\$MODNUMBER}-firmwares.json,-i=CEB_P_CPLD,-p=Version]	External check	Text	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp LowerThresholdCritical	mesca5_openbmc_sensors_reader[-f={OPENBMC}-Module{\$MODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=LowerThresholdCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp LowerThresholdNonCritical	mesca5_openbmc_sensors_reader[-f={OPENBMC}-Module{\$MODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=LowerThresholdNonCritical]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp Reading	mesca5_openbmc_sensors_reader[-f={OPENBMC}-Module{\$MODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=ReadingCelsius]	External check	Numeric (float)	Enabled
<input type="checkbox"/>	CPU0_Inlet_Temp UpperThresholdCritical	mesca5_openbmc_sensors_reader[-f={OPENBMC}-Module{\$MODNUMBER}-Thermal.json,-g=Temperatures,-i=CPU0_Inlet_Temp,-p=UpperThresholdCritical]	External check	Numeric (float)	Enabled

Select Cancel

- a. Select the required items.
- b. Click **Select**.

- From the **Add widget** page, complete the fields as required.

Add widget ✕

Type Plain text ▼ Show header ☒

Name default

Refresh interval Default (1 minute) ▼

* Items MESCA5_12: BIOS_state ✕ Select
type here to search

Items location Left Top

* Show lines 25

Show text as HTML ☐

Dynamic items ☐

Add Cancel

- Click **Add**.

The plain text is added to the dashboard.

Dashboard_example ⚙ ➕ Add Save changes Cancel

All dashboards / Dashboard_example

Page 1 ⋮

MESCA5_12: BIOS_state		
Timestamp	Name	Value
2023-02-22 15:34:22	BIOS_state	"Enabled"
2023-02-22 15:24:19	BIOS_state	"Enabled"
2023-02-22 15:13:06	BIOS_state	"Enabled"
2023-02-22 15:04:00	BIOS_state	"Enabled"
2023-02-22 14:53:05	BIOS_state	"Enabled"

- From the **Dashboard** page, click **Save changes**.

6.5. Adding a map

1. From the **Monitoring** menu, click **Maps**. The **Maps** page opens.

Maps Create map Import

Filter

Name

Apply Reset

<input type="checkbox"/> Name	Width	Height	Actions
<input type="checkbox"/> BullSequanaSH map	800	600	Properties Constructor
<input type="checkbox"/> Local network	680	200	Properties Constructor
<input type="checkbox"/> My New Map	800	600	Properties Constructor

Displaying 3 of 3 found

0 selected Export Delete

2. On the right-hand side of the screen, click **Create Map**. The **Network maps** page opens.

Network maps

Map Sharing

* Owner Admin (Zabbix Administrator) Select

* Name

* Width

* Height

Background image No image

Automatic icon mapping <manual> [show icon mappings](#)

Icon highlight ☐

Mark elements on trigger status change ☐

Display problems Expand single problem Number of problems Number of problems and expand most critical one

Advanced labels ☐

Map element label type Label

Map element label location Bottom

Problem display All

Minimum severity Not classified Information Warning Average High Disaster

Show suppressed problems ☐

Name	URL	Element	Action
<input type="text"/>	<input type="text"/>	Host	Remove

[Add](#)

Add Cancel

3. Enter a name in the **Name** field.
4. Select the **Icon highlight** and **Mark elements on trigger status change** check boxes.

5. Complete the fields as required.

Network maps

Map Sharing

* Owner Admin (Zabbix Administrator) ✕ Select

* Name Map_example

* Width 800

* Height 600

Background image No image ▼

Automatic icon mapping <manual> ▼ [show icon mappings](#)

Icon highlight ☒

Mark elements on trigger status change ☒

Display problems Expand single problem Number of problems Number of problems and expand most critical one

Advanced labels ☐

Map element label type Label ▼

Map element label location Bottom ▼

Problem display All ▼

Minimum severity Not classified Information Warning Average High Disaster

Show suppressed problems ☐

Name	URL	Element	Action
		Host ▼	Remove

[Add](#) [Cancel](#)

6. Click **Add**.

The new map is created.

Maps Create map Import

✓ Network map added ✕

Filter ▼

Name

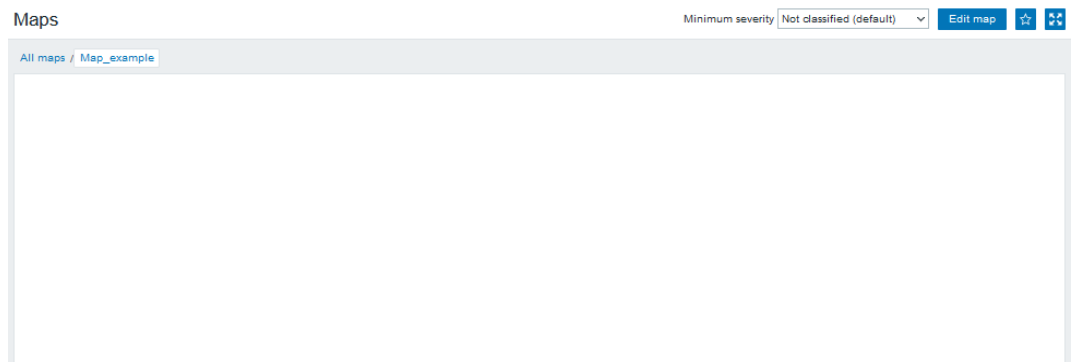
[Apply](#) [Reset](#)

<input type="checkbox"/>	Name ▲	Width	Height	Actions
<input type="checkbox"/>	BullSequanaSH map	800	600	Properties Constructor
<input type="checkbox"/>	Local network	680	200	Properties Constructor
<input type="checkbox"/>	Map_example	800	600	Properties Constructor
<input type="checkbox"/>	My New Map	800	600	Properties Constructor

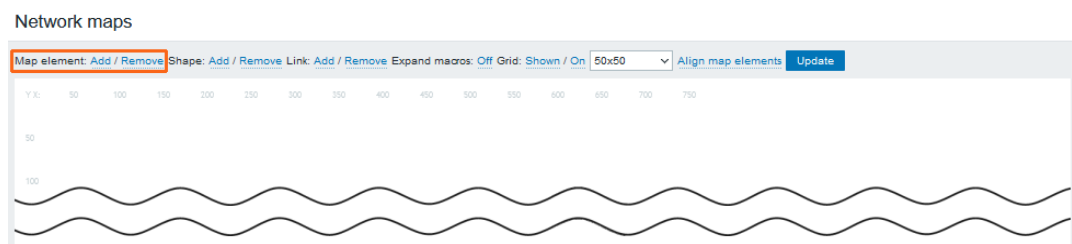
Displaying 4 of 4 found

0 selected [Export](#) [Delete](#)

7. From the **Maps** page, select the new map. The **Maps** page opens.

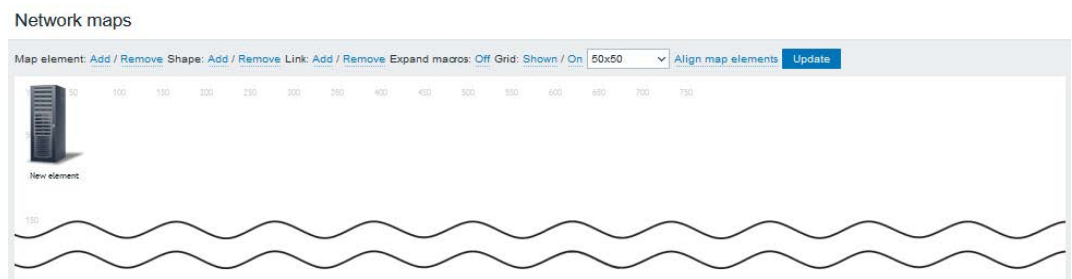


8. Click **Edit map**. The **Network maps** page opens.



9. From the **Map element** section, click **Add**.

A new element appears.



- Click on the new element. The **Map element** pop-up window opens.

Map element

Type

Label

Label location

Icons

Coordinates X Y

Name	URL	Action
<input type="text"/>	<input type="text"/>	Remove

[Add](#)

[Apply](#) [Remove](#) [Close](#)

- From the **Type** drop-down list, select **Host**.
- Enter a label in the **Label** field.
- In the **Host** field, click **Select**.
- Select the required host.

Hosts ✕

Host group [Select](#)

Name
MESCA5_12
MESCA5_16
MESCA5_17
MESCA5_64
MESCA5_78
MESCA5_81

[Cancel](#)

15. In the **Icons** section, from the **Default** drop-down list, select the required icon.

Map element

Type:

Label:

Label location:

* Host:

Tags:

Automatic icon selection: ☐

Icons:

Default	<input type="text" value="BullSequanaSH"/>
Problem	<input type="text" value="Default"/>
Maintenance	<input type="text" value="Default"/>
Disabled	<input type="text" value="Default"/>

Coordinates X: Y:

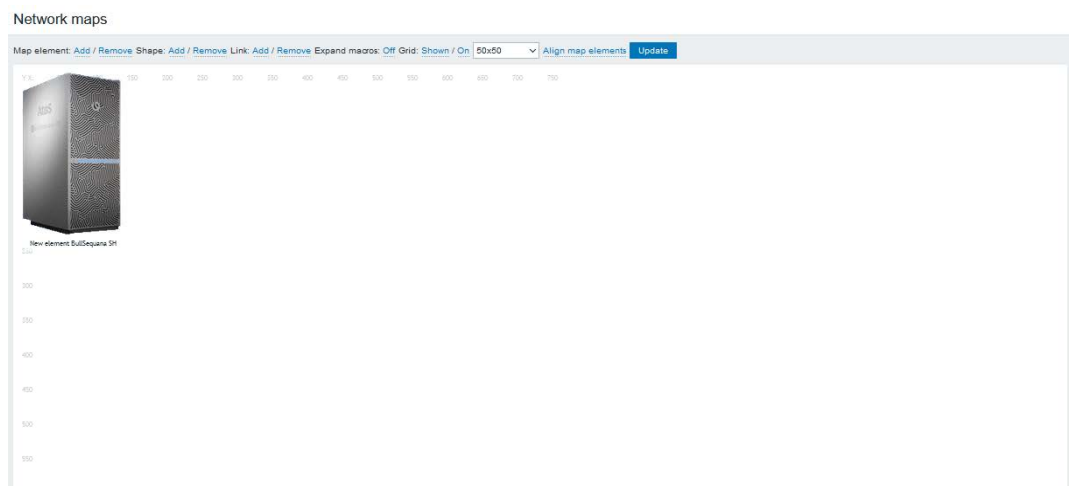
URLs:

Name	URL	Action
<input type="text"/>	<input type="text"/>	<input type="button" value="Remove"/>

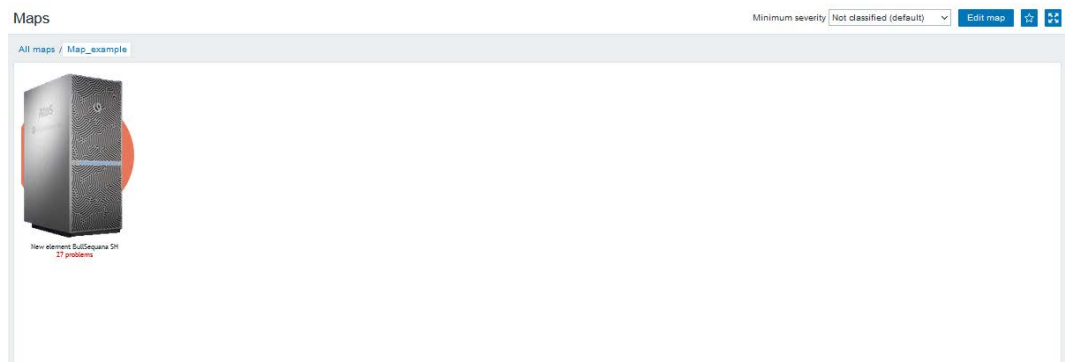
16. Click **Apply**.

17. Click **Close**.

18. From the **Network maps** page, click **Update**.



The highest problem severity color and the number of problems are displayed.



Chapter 7. Setting up emails alerts

7.1. Configuring an email media

1. From the **Alert** menu, click the **Media types** tab. The **Media types** page opens.

Media types Create media type Import

Name Status Any Enabled Disabled

Apply Reset

<input type="checkbox"/>	Name	Type	Status	Used in actions	Details	Action
<input type="checkbox"/>	Email	Email	Enabled	MESCA5_action	SMTP server: "XX.XX.XX.XX", SMTP helo: "mycompany.net", SMTP email: "user1@mycompany.net"	Test
<input type="checkbox"/>	SMS	SMS	Enabled		GSM modem: "/dev/ttyS0"	Test

0 selected Enable Disable Export Delete

Displaying 2 of 2 found

2. Click **Create media type**. A new page opens.

Media types

Media type Message templates Options

* Name

Type Email

* SMTP server

SMTP server port

* SMTP helo

* SMTP email

Connection security None STARTTLS SSL/TLS

Authentication None Username and password

Message format HTML Plain text

Description

Enabled ☒

Add Cancel

3. Complete the **Name** field.
4. Select **Email** from the **Type** drop-down list.
5. Complete the **SMTP server**, **SMTP helo** and **SMTP email** fields as required.

6. Click **Add** to complete changes.

The media type is created.

Example

Media types Create media type Import

Media type added

Status Any Enabled Disabled Filter

Apply Reset

<input type="checkbox"/>	Name	Type	Status	Used in actions	Details	Action
<input type="checkbox"/>	Email	Email	Enabled	MESCA5_action	SMTP server: "XX.XX.XX.XX", SMTP helo: "mycompany.net", SMTP email: "user1@mycompany.net"	Test
<input type="checkbox"/>	Email example	Email	Enabled		SMTP server: "mail.example.com", SMTP helo: "example.com", SMTP email: "zabbix@example.com"	Test
<input type="checkbox"/>	SMS	SMS	Enabled		GSM modem: "/dev/ttyS0"	Test

0 selected Enable Disable Export Delete Displaying 3 of 3 found

7. Click **Test** to send a test email.

7.2. Adding an email media for a user or a user group

1. From the menu, click the **Users** tab. The **Users** page opens.

Users

Create user

Filter

Username

Name

Last name

User roles

type here to search

Select

User groups

type here to search

Select

Apply

Reset

<input type="checkbox"/>	Username ▲	Name	Last name	User role	Groups	Is online?	Login	Frontend access	API access	Debug mode	Status	Provisioned	Info
<input type="checkbox"/>	Admin	Zabbix	Administrator	Super admin role	Internal, Zabbix administrators	Yes (2024-08-13 10:26:36)	OK	Internal	Enabled	Disabled	Enabled		
<input type="checkbox"/>	guest			Disabled role	Disabled, Guests, Internal	No	OK	Internal	Disabled	Disabled	Disabled		
<input type="checkbox"/>	User1			Admin role	Guests	No	OK	System default	Enabled	Disabled	Enabled		

0 selected

Previous row

Unblock

Delete

Displaying 3 of 3 found

2. Select the user required. A new page opens.
3. Click the **Media** tab.

Users

UserMediaPermissions

Media

Type	Send to	When active	Use if severity	Status	Action
Email	user1@mycompany.net	1-7,00.00-24.00	N I W A H D	Enabled	Edit Remove
Add					

Update

Delete

Cancel

4. In the **Media** section, click **Add**. The **Media** page opens.
- a. From the **Type** drop-down list, select the media type previously created.
 - b. Complete the fields as required.

Media

Type

Email example

* Send to

zabbix@example.com

Remove

Add

* When active

1-7,00:00-24:00

Use if severity

☒ Not classified

☒ Information

☒ Warning

☒ Average

☒ High

☒ Disaster

Enabled

☒

Add

Cancel

- c. Click **Add**.

Example

Users

User	Media 2	Permissions
Media		
Type	Send to	When active
Email	user1@mycompany.net	1-7,00:00-24:00
Email example	zabbix@example.com	1-7,00:00-24:00
Add		
Update		
Delete		
Cancel		

5. Click **Update** to complete changes.

Note The following steps are optional, they have to be done to add a user to a user group to send email to all users of this group.

6. From the **Users** menu, click the **User groups** tab. The **User groups** page opens.

User groups ? [Create user group](#)

Filter

Name Status **Any** Enabled Disabled

[Apply](#) [Reset](#)

<input type="checkbox"/> Name ▲	#	Members	Frontend access	Debug mode	Status
<input type="checkbox"/> Disabled	Users 1	guest	System default	Disabled	Disabled
<input type="checkbox"/> Enabled debug mode	Users		System default	Enabled	Enabled
<input type="checkbox"/> Guests	Users 1	guest	System default	Disabled	Enabled
<input type="checkbox"/> Internal	Users 2	Admin (Zabbix Administrator), guest	Internal	Disabled	Enabled
<input type="checkbox"/> No access to the frontend	Users		Disabled	Disabled	Enabled
<input type="checkbox"/> Test group	Users		System default	Disabled	Enabled
<input type="checkbox"/> Zabbix administrators	Users 1	Admin (Zabbix Administrator)	System default	Disabled	Enabled

Displaying 7 of 7 found

0 selected [Enable](#) [Disable](#) [Enable debug mode](#) [Disable debug mode](#) [Delete](#)

7. Select the user group required. A new page opens.

User groups ?

[User group](#) [Template permissions](#) [Host permissions](#) [Problem tag filter](#)

* Group name

Users [Select](#)

Frontend access

LDAP Server

Enabled ☒

Debug mode ☐

[Update](#) [Delete](#) [Cancel](#)

8. In the **Users** section, click Select. The **Users** pop-up windows opens.

Users ×

<input type="checkbox"/> Username	Name	Last name
<input type="checkbox"/> Admin	Zabbix	Administrator
<input type="checkbox"/> guest		
<input type="checkbox"/> Test		

[Select](#) [Cancel](#)

9. Select the user to be added in the list.

Users ×

<input type="checkbox"/>	Username	Name	Last name
<input type="checkbox"/>	Admin	Zabbix	Administrator
<input type="checkbox"/>	guest		
<input checked="" type="checkbox"/>	Test		

Select **Cancel**

10. Click **Select**.

The user is displayed in the **Users** field.

User groups ?

User group Template permissions Host permissions Problem tag filter

* Group name

Test group

Users

Test ×

type here to search

Select

Frontend access

System default ▼

LDAP Server

Default ▼

Enabled

☒

Debug mode

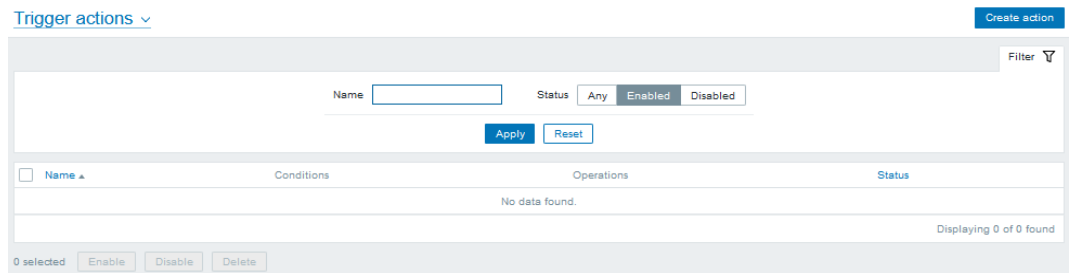
☐

Update **Delete** **Cancel**

11. Click **Update**

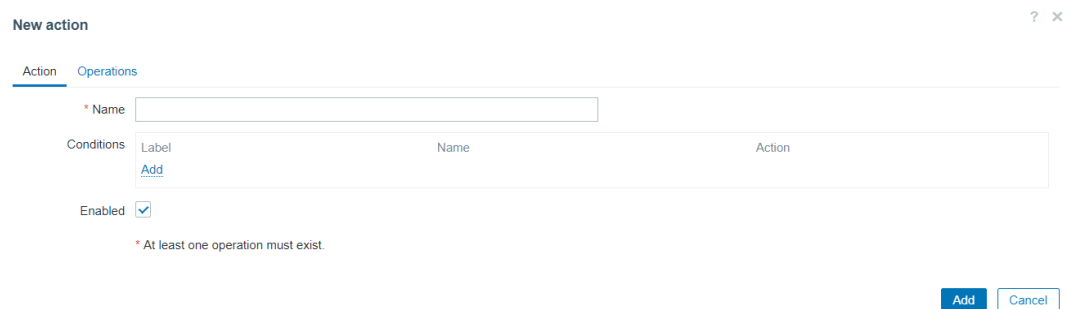
7.3. Creating a trigger action

1. From the **Alert** menu, click **Actions > Trigger actions**. The **Trigger actions** page opens.



The screenshot shows the 'Trigger actions' page. At the top, there is a 'Create action' button. Below it, a search bar with 'Name' and a status filter with options 'Any', 'Enabled', and 'Disabled'. There are 'Apply' and 'Reset' buttons. A table with columns 'Name', 'Conditions', 'Operations', and 'Status' is shown, but it is empty with the message 'No data found.' and 'Displaying 0 of 0 found'. At the bottom, there are buttons for '0 selected', 'Enable', 'Disable', and 'Delete'.

2. Click **Create action**. A **New action** pop-window opens.

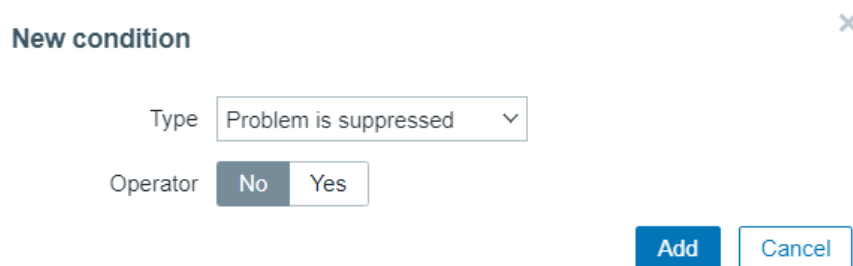


The screenshot shows the 'New action' pop-window. It has tabs for 'Action' and 'Operations'. The 'Name' field is required and empty. Below it, the 'Conditions' section has a table with columns 'Label', 'Name', and 'Action'. There is an 'Add' button in the 'Label' column. The 'Enabled' checkbox is checked. A note at the bottom says '* At least one operation must exist.' At the bottom right, there are 'Add' and 'Cancel' buttons.

3. Complete the **Name** field.

To set conditions for sending the mail, perform the following steps, otherwise go directly to step 7.

4. In the **Conditions** section, click **Add**. A **New condition** pop-up windows opens.



The screenshot shows the 'New condition' pop-up window. It has a 'Type' dropdown menu with 'Problem is suppressed' selected. Below it, the 'Operator' section has 'No' and 'Yes' buttons. At the bottom right, there are 'Add' and 'Cancel' buttons.

5. Choose **Type** in the drop-down list and complete condition value.

Example

New condition

Type

Operator

Severity

6. Click **Add**. The condition is displayed in the **Conditions** section.

New action

Action Operations

* Name

Conditions

Label	Name	Action
A	Trigger severity is greater than or equals <i>Warning</i>	Remove

[Add](#)

Enabled ☒

* At least one operation must exist.

7. Click the **Operations** tab.

New action

Action Operations

* Default operation step duration

Operations

Steps	Details	Start in	Duration	Action
Add				

Recovery operations

Details	Action
Add	

Update operations

Details	Action
Add	

Pause operations for symptom problems ☒

Pause operations for suppressed problems ☒

Notify about canceled escalations ☒

* At least one operation must exist.

8. In the **Operations** section, click **Add**. The **Operation details** pop-up window opens.

Operation details ✕

Operation Send message ▾

* At least one user or user group must be selected.

Send to user groups type here to search Select

Send to users type here to search Select

Send only to - All - ▾

Custom message ☐

Add Cancel

9. In the **Operation details** window, perform the following actions:
- Add the message recipient.
If the recipient is a user group:
 - In the **Send to User groups** section, click **Select**. The **User groups** pop-up window opens.
 - Select the user groups required.If the recipient is a user:
 - In the **Send to Users** section, click **Select**. The **Users** pop-up window opens.
 - Select the users required.


- b. From the **Send only to** drop-down list, select the media type previously created.

Operation details



Operation Send message


Steps - (0 - infinitely)

Step duration  (0 - use action default)

* At least one user or user group must be selected.

Send to user groups

Send to users

Send only to 

Custom message ☐

Label	Name	Action
Add		


- c. Custom the message if needed.

Operation details



Operation Send message


Steps - (0 - infinitely)

Step duration  (0 - use action default)

* At least one user or user group must be selected.

Send to user groups

Send to users

Send only to 

Custom message ☒

Subject

Message

Problem started at {EVENT.TIME} on {EVENT.DATE}

Problem name: {EVENT.NAME}

Host: {HOST.NAME}

Severity: {EVENT.SEVERITY}

Original problem ID: {EVENT.ID}

Label	Name	Action
Add		

d. Click **Add**.

Example

Actions

Action

Operations 1

* Default operation step duration

1h

Operations

Steps Details

Start in

Duration

Action

1

Send message to users: Admin (Zabbix Administrator) via Email example

Immediately

Default

Edit

Remove

Add

Recovery operations

Details

Action

Add

Update operations

Details

Action

Add

Pause operations for suppressed problems

☒

Notify about canceled escalations

☒

* At least one operation must exist.

Add

Cancel

10. Click **Add** to complete changes.

The action is created.

Example

Trigger actions ▼ Create action

✓ Action added

Filter

Name

Status

Any

Enabled

Disabled

Apply

Reset

<input type="checkbox"/>	Name	Conditions	Operations	Status
<input type="checkbox"/>	Action trigger example		Send message to users: Admin (Zabbix Administrator) via Email example	Enabled

0 selected

Enable

Disable

Delete

Displaying 1 of 1 found

An email will be sent for each problem having the minimum severity level.

Time	<input type="checkbox"/> Severity	Recovery time	Status	Info	Host	Problem
14:55:22	<input type="checkbox"/> Warning	15:04:45	RESOLVED		MESCA5_12	CPU0_Inlet_Temp lower non critical threshold

Problem CPU0_Inlet_Temp lower critical threshold

Problem started at 14:55:22 on 2023.02.10 Problem name: CPU0_Inlet_Temp lower critical threshold

Host: MESCA5_12

Severity: High

Original problem ID: 339198

