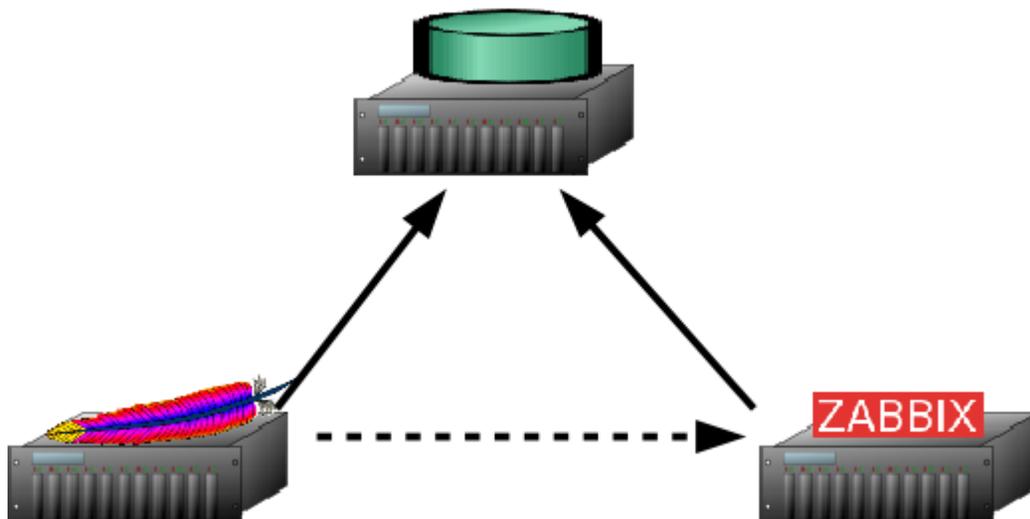
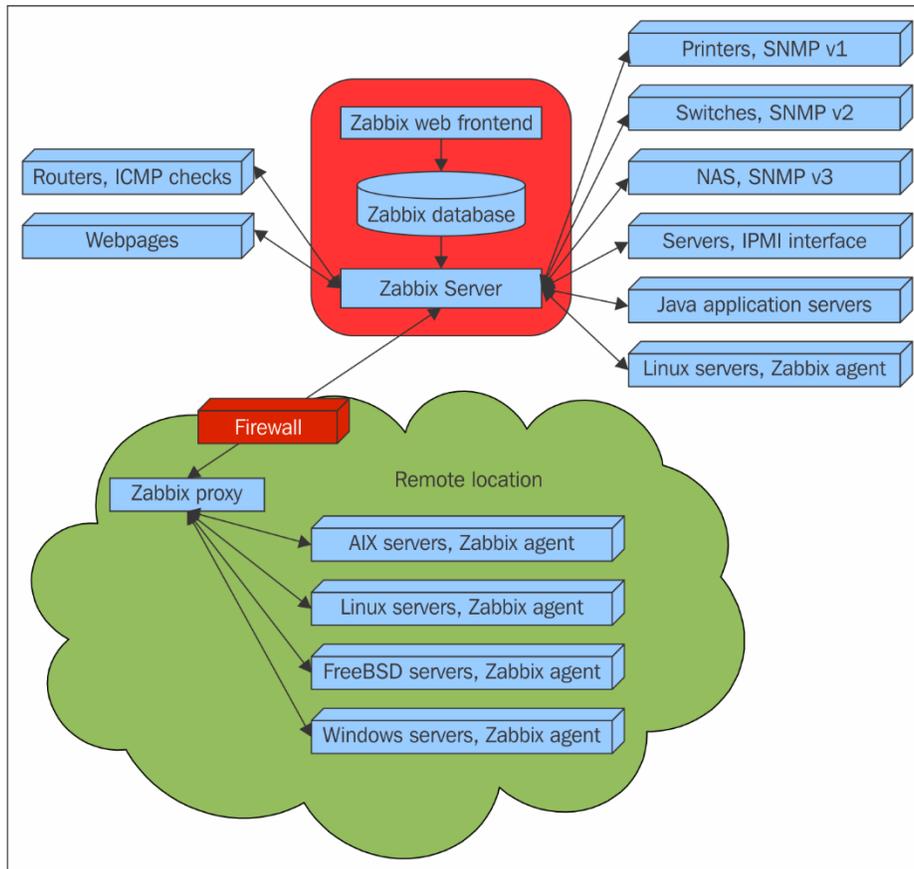


Chapter 1: Getting Started with Zabbix



Dashboard



Favourite graphs

No graphs added.

[Graphs](#)

Favourite screens

No screens added.

[Screens](#) [Slide shows](#)

Favourite maps

No maps added.

[Maps](#)

Status of Zabbix

PARAMETER	VALUE	DETAILS
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	60	17 / 2 / 41
Number of items (enabled/disabled/not supported)	327	258 / 1 / 68
Number of triggers (enabled/disabled [problem/ok])	36	36 / 0 [13 / 23]
Number of users (online)	4	2
Required server performance, new values per second	8.37	

Updated: 22:59:38

System status

HOST GROUP DISASTER HIGH AVERAGE WARNING INFORMATION NOT CLASSIFIED

ZABBIX

Welcome

[Check of pre-requisites](#)[Configure DB connection](#)[Zabbix server details](#)[Pre-installation summary](#)[Install](#)

Welcome to

Zabbix 3.0

[Back](#)[Next step](#)



Check of pre-requisites

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

	CURRENT VALUE	REQUIRED	
PHP version	5.4.20	5.4.0	OK
PHP option "memory_limit"	128M	128M	OK
PHP option "post_max_size"	32M	16M	OK
PHP option "upload_max_filesize"	16M	2M	OK
PHP option "max_execution_time"	600	300	OK
PHP option "max_input_time"	600	300	OK
PHP option "date.timezone"	Europe/Riga		OK
PHP databases support	MySQL		OK
PHP bcmath	on		OK

Back

Next step



Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database. Press "Next step" button when done.

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

Database type

Database host

Database port 0 - use default port

Database name

User

Password

Back

Next step

ZABBIX

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

Zabbix server details

Please enter the host name or host IP address and port number of the Zabbix server, as well as the name of the installation (optional).

Host	<input type="text" value="localhost"/>
Port	<input type="text" value="10051"/>
Name	<input type="text"/>

[Back](#)

[Next step](#)

ZABBIX

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

Pre-installation summary

Please check configuration parameters. If all is correct, press "Next step" button, or "Back" button to change configuration parameters.

Database type	MySQL
Database server	localhost
Database port	default
Database name	zabbix
Database user	zabbix
Database password	*****
Zabbix server	localhost
Zabbix server port	10051
Zabbix server name	Zabbix One

[Back](#)

[Next step](#)

ZABBIX

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Install

Details Cannot create the configuration file.
Unable to create the configuration file.

Alternatively, you can install it manually:

1. [Download the configuration file](#)
2. Save it as "/srv/www/htdocs/zabbix/conf/zabbix.conf.php"

Back

Finish

ZABBIX

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Install

Congratulations! You have successfully installed Zabbix frontend.

Configuration file "/srv/www/htdocs/zabbix/conf/zabbix.conf.php" created.

Back

Finish

ZABBIX

Username

Password

Remember me for 30 days

[or sign in as guest](#)

ZABBIX Monitoring Inventory Reports Configuration Administration [Share](#) [?](#) [User](#) [Power](#)

[Dashboard](#) [Overview](#) [Web](#) [Latest data](#) [Triggers](#) [Events](#) [Graphs](#) [Screens](#) [Maps](#) [Discovery](#) [IT services](#) [Zabbix One](#)

Dashboard

Favourite graphs [...](#) [^](#)

No graphs added.

[Graphs](#)

Favourite screens [...](#) [^](#)

No screens added.

[Screens](#) [Slide shows](#)

Favourite maps [...](#) [^](#)

No maps added.

[Maps](#)

Status of Zabbix [...](#) [^](#)

PARAMETER	VALUE	DETAILS
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	39	0 / 1 / 38
Number of items (enabled/disabled/not supported)	0	0 / 0 / 0
Number of triggers (enabled/disabled [problem/ok])	0	0 / 0 [0 / 0]
Number of users (online)	2	1
Required server performance, new values per second	0	

Updated: 00:17:38

System status [...](#) [^](#)

HOST GROUP	DISASTER	HIGH	AVERAGE	WARNING	INFORMATION	NOT CLASSIFIED
No data found.						

[Zabbix One: Dashboard](#) [+](#)

[<](#) [>](#) [⏪](#) [⏩](#) [🔄](#) [🏠](#) [🌐](#) 192.168.56.10/zabbix/zabbix.php

PARAMETER	VALUE	DETAILS
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	39	0 / 1 / 38
Number of items (enabled/disabled/not supported)	0	0 / 0 / 0
Number of triggers (enabled/disabled [problem/ok])	0	0 / 0 [0 / 0]
Number of users (online)	2	1
Required server performance, new values per second	0	

<input type="checkbox"/> NAME ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	DISCOVERY	WEB
<input type="checkbox"/> Zabbix server	Applications 11	Items 63	Triggers 42	Graphs 10	Discovery 2	Web

Chapter 2: Getting Your First Notification

The screenshot displays the Zabbix web interface. At the top, there is a navigation bar with the Zabbix logo and menu items: Monitoring, Inventory, Reports, Configuration, and Administration. A search bar and utility icons (Share, Help, User, Power) are also present. Below the navigation bar is a secondary menu with options: Dashboard, Overview, Web, Latest data, Triggers, Events, Graphs, Screens, Maps, Discovery, IT services, and Zabbix One.

The main content area is titled "Dashboard" and contains several widgets:

- Favourite graphs:** A section with the text "No graphs added." and a "Graphs" link.
- Favourite screens:** A section with the text "No screens added." and links for "Screens" and "Slide shows".
- Favourite maps:** A section with the text "No maps added." and a "Maps" link.
- Status of Zabbix:** A table showing system parameters.

PARAMETER	VALUE	DETAILS
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	39	0 / 1 / 38
Number of items (enabled/disabled/not supported)	0	0 / 0 / 0
Number of triggers (enabled/disabled [problem/ok])	0	0 / 0 [0 / 0]
Number of users (online)	2	1
Required server performance, new values per second	0	

Updated: 02:27:55
- System status:** A table with columns: HOST GROUP, DISASTER, HIGH, AVERAGE, WARNING, INFORMATION, NOT CLASSIFIED.

No data found.

Updated: 02:27:56
- Host status:** A table with columns: HOST GROUP, WITHOUT PROBLEMS, WITH PROBLEMS, TOTAL.

No data found.

Updated: 02:27:56
- Last 20 issues:** A table with columns: HOST, ISSUE, LAST CHANGE, AGE, INFO, ACK, ACTIONS.

No data found.

0 of 0 issues are shown Updated: 02:27:56
- Web monitoring:** A table with columns: HOST GROUP, OK, FAILED, UNKNOWN.

No data found.

Updated: 02:27:56



Monitoring

Inventory

Reports

Configuration

Administration

Password

Language

Theme

Auto-login

Auto-logout (min 90 seconds)

Refresh (in seconds)

Rows per page

URL (after login)

Frontend messaging

Message timeout (seconds)

Play sound

<input type="checkbox"/> Recovery	<input type="text" value="alarm_ok"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> Not classified	<input type="text" value="no_sound"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> Information	<input type="text" value="alarm_information"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> Warning	<input type="text" value="alarm_warning"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> Average	<input type="text" value="alarm_average"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> High	<input type="text" value="alarm_high"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input type="checkbox"/> Disaster	<input type="text" value="alarm_disaster"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>

INTERFACE	TEMPLATES	STATUS	AVAILABILITY	AGENT ENCRYPTION	INFO
127.0.0.1: 10050	Template App MySQL, Template App Zabbix Server, Template OS Linux (Template App Zabbix Agent)	Disabled	ZBX SNMP JMX IPMI	NONE	

NAME ▲	TRIGGERS	KEY	INTERVAL	HISTORY	TRENDS	TYPE	APPLICATIONS	STATUS	INFO
Template App Zabbix Agent: Agent ping	Triggers 1	agent.ping	1m	7d	365d	Zabbix agent	Zabbix agent	Enabled	
Template OS Linux: Available memory	Triggers 1	vm.memory.size[available]	1m	7d	365d	Zabbix agent	Memory	Enabled	
Template OS Linux: Checksum of /etc/passwd	Triggers 1	vfs.file.cksum[/etc/passwd]	1h	7d	365d	Zabbix agent	Security	Enabled	
Template OS Linux: Context switches per second		system.cpu.switches	1m	7d	365d	Zabbix agent	CPU, Performance	Enabled	

Status of Zabbix

PARAMETER	VALUE	DETAILS
Zabbix server is running	No	localhost:10051
Number of hosts (enabled/disabled/templates)	39	0 / 1 / 38
Number of items (enabled/disabled/not supported)	0	0 / 0 / 0
Number of triggers (enabled/disabled [problem])	0	0 / 0 [0 / 0]
Number of users (online)	2	1
Required server performance, new values per second	0	

Host name

Visible name

Groups In groups

- Linux servers

Other groups

- Database servers
- Discovered hosts
- Hypervisors
- Network devices
- Templates
- UPS devices
- Virtual machines
- Web servers
- Windows servers
- Zabbix servers

Name

Type

Key

Host interface

Type of information

Filter ▲

Host groups Name

Hosts Show items without data

Application Show details

NAME ▲

LAST CHECK

LAST VALUE

- other - (1 item)

CPU load

2016-02-16 20:44:55 0.05



Monitoring

Inventory

Reports

Configuration

Administration



Share



Dashboard

Overview

Web

Latest data

Triggers

Events

Graphs

Screens

Maps

Discovery

IT services

Zabbix One

A test host: CPU load

Graph



Filter ▲

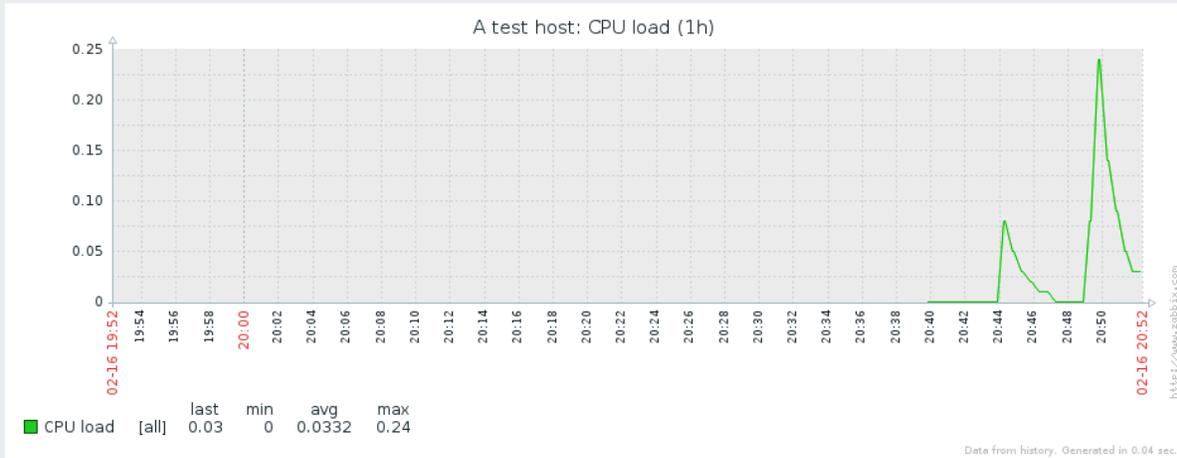
Zoom: [5m](#) [15m](#) [30m](#) **[1h](#)** [2h](#) [3h](#) [6h](#) [12h](#) [1d](#) [3d](#) [7d](#) [14d](#) [1m](#) [3m](#) [6m](#) [1y](#) [All](#)

2016-02-16 19:52 - 2016-02-16 20:52 (now!)

◀ ▶ ⏪ ⏩

◀◀ [1y](#) [6m](#) [1m](#) [7d](#) [1d](#) [12h](#) [1h](#) [5m](#) | [5m](#) [1h](#) [12h](#) [1d](#) [7d](#) [1m](#) [6m](#) [1y](#) ▶▶

1h fixed



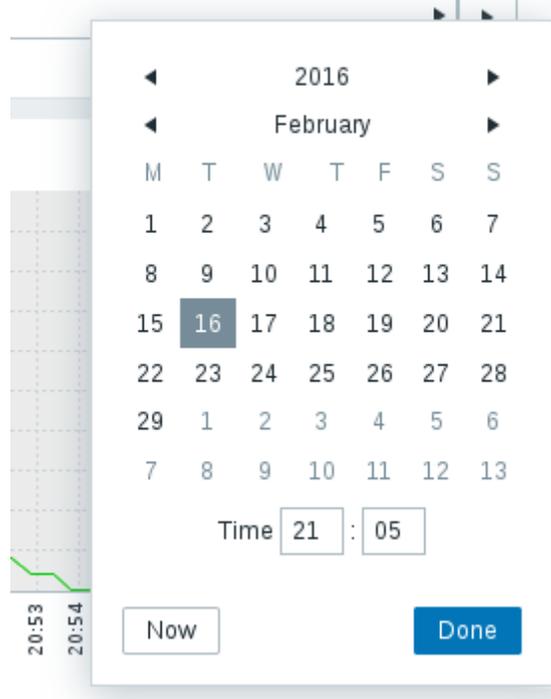
Zabbix 3.0.0. © 2001–2016, Zabbix SIA

Zoom: [5m](#) [15m](#) [30m](#) **[1h](#)** [2h](#) [3h](#) [6h](#) [12h](#) [1d](#) [3d](#) [7d](#) [14d](#) [1m](#) [3m](#) [6m](#) [1y](#) [All](#)



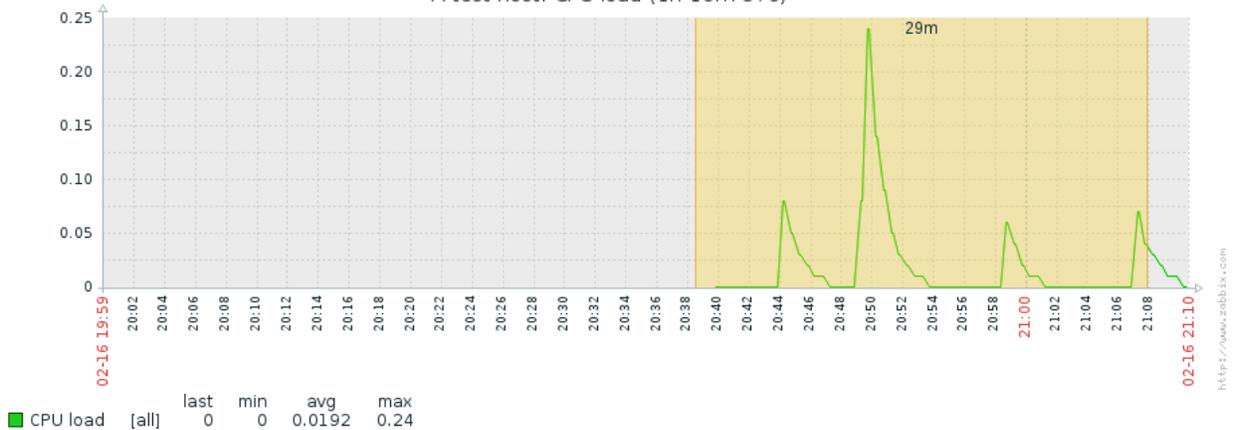
◀◀ [1y](#) [6m](#) [1m](#) [7d](#) [1d](#) [12h](#) [1h](#) [5m](#) | [5m](#) [1h](#) [12h](#) [1d](#) [7d](#) [1m](#) [6m](#) [1y](#) ▶▶

2016-02-16 20:05 - 2016-02-16 21:05 (now!)



A calendar and time picker interface. The calendar shows the month of February 2016, with the 16th highlighted. Below the calendar, there are input fields for the time, currently set to 21:05. There are 'Now' and 'Done' buttons at the bottom.

A test host: CPU load (1h 10m 37s)



Data from history. Generated in 0.05 sec.

Name

Expression

SEVERITY	STATUS	INFO	LAST CHANGE ▼	AGE	ACK	HOST	NAME
Not classified	OK		2016-02-16 22:28:55	13s	Yes	A test host	CPU load too high on A test host for last 3 minutes

Filter ▲

Triggers status:

Acknowledge status:

Events:

Minimum trigger severity:

Age less than: 14 days

Filter by name:

Filter by application:

Filter by host inventory:

[Add](#)

Show hosts in maintenance:

Show details:

Name:

Type:

SMTP server:

SMTP server port:

SMTP helo:

SMTP email:

Connection security: None STARTTLS SSL/TLS

Authentication: None Normal password

Enabled:

User Media Permissions

Media

TYPE	SEND TO	WHEN ACTIVE	USE IF SEVERITY	STATUS	ACTION
Add					

Type

Send to

When active

Use if severity Not classified
 Information
 Warning
 Average
 High
 Disaster

Enabled

Action **Conditions** **Operations**

Name

Default subject

Default message

Recovery message

Enabled

Default operation step duration (minimum 60 seconds)

Action operations

STEPS	DETAILS	START IN	DURATION (SEC)	ACTION
New				

Operation details

Steps	<input type="text" value="1"/> - <input type="text" value="1"/>						
Step duration	<input type="text" value="0"/> (minimum 60 seconds, 0 - use action default)						
Operation type	Send message <input type="button" value="v"/>						
Send to User groups	<table><thead><tr><th>USER GROUP</th><th>ACTION</th></tr></thead><tbody><tr><td>Add</td><td></td></tr></tbody></table>	USER GROUP	ACTION	Add			
USER GROUP	ACTION						
Add							
Send to Users	<table><thead><tr><th>USER</th><th>ACTION</th></tr></thead><tbody><tr><td>Add</td><td></td></tr></tbody></table>	USER	ACTION	Add			
USER	ACTION						
Add							
Send only to	<input type="button" value="- All -"/> <input type="button" value="v"/>						
Default message	<input type="checkbox"/>						
Conditions	<table><thead><tr><th>LABEL</th><th>NAME</th><th>ACTION</th></tr></thead><tbody><tr><td>New</td><td></td><td></td></tr></tbody></table>	LABEL	NAME	ACTION	New		
LABEL	NAME	ACTION					
New							
	Add Cancel						

Operation details

Steps -

Step duration (minimum 60 seconds, 0 - use action default)

Operation type

Send to User groups

USER GROUP	ACTION
Add	

Send to Users

USER	ACTION
Admin (Zabbix Administrator)	Remove
Add	

Send only to

Default message

Conditions

LABEL	NAME	ACTION
New		

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

Operation details

Steps -

Step duration (minimum 60 seconds, 0 - use action default)

Operation type

Send to User groups

USER GROUP	ACTION
Add	

Send to Users

USER	ACTION
Admin (Zabbix Administrator)	Remove
Add	

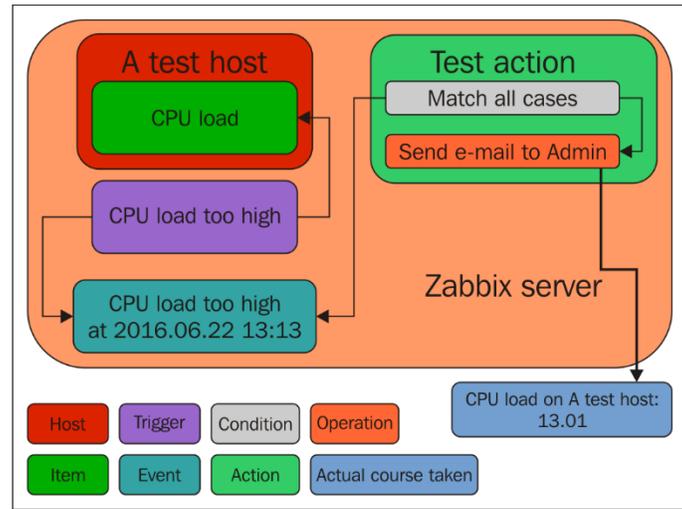
Send only to

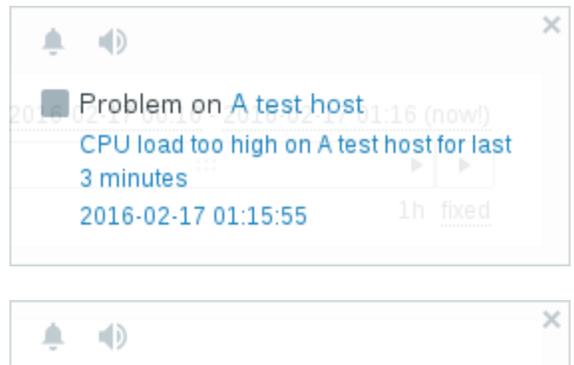
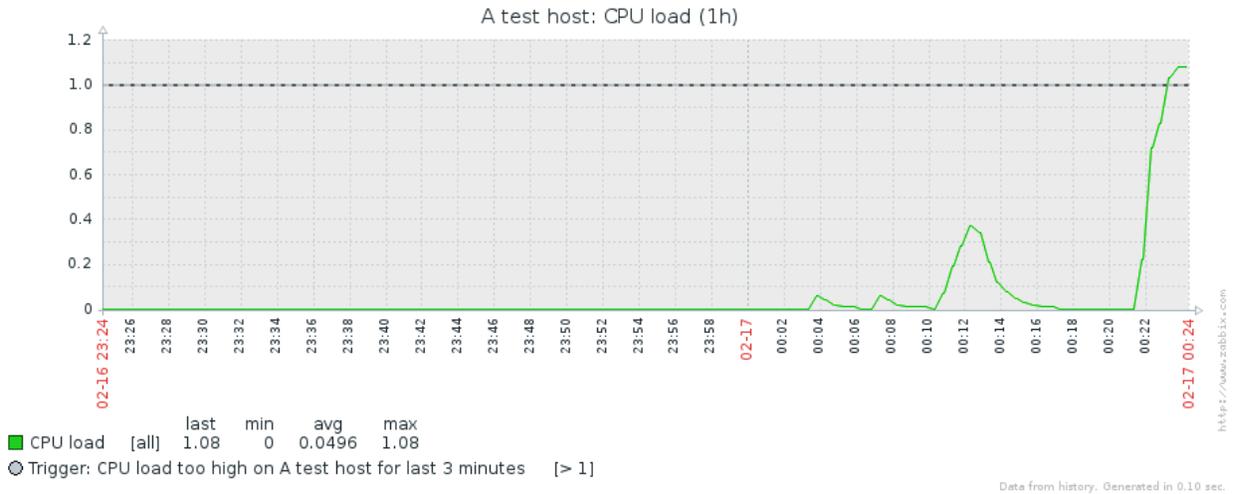
Default message

Conditions

LABEL	NAME	ACTION
New		

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





Frontend messaging

Message timeout (seconds)

Play sound

Trigger severity

<input checked="" type="checkbox"/> Recovery	<input type="text" value="alarm_ok"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> Not classified	<input type="text" value="no_sound"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> Information	<input type="text" value="alarm_information"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> Warning	<input type="text" value="alarm_warning"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> Average	<input type="text" value="alarm_average"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> High	<input type="text" value="alarm_high"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>
<input checked="" type="checkbox"/> Disaster	<input type="text" value="alarm_disaster"/>	<input type="button" value="Play"/>	<input type="button" value="Stop"/>

SEVERITY	STATUS	INFO	LAST CHANGE ▼	AGE	ACK	HOST	NAME
Not classified	PROBLEM		2016-02-17 01:27:25	5m 54s	No 3	A test host	CPU load too high on A test host for last 3 minutes

- Zabbix agent
- Zabbix agent (active)
- Simple check
- SNMPv1 agent
- SNMPv2 agent
- SNMPv3 agent
- SNMP trap
- Zabbix internal
- Zabbix trapper
- Zabbix aggregate
- External check
- Database monitor
- IPMI agent
- SSH agent
- TELNET agent
- JMX agent
- Calculated

Search: A test host

Hosts														
HOST	IP	DNS	LATEST DATA	TRIGGERS	EVENTS	GRAPHS	SCREENS	WEB	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	DISCOVERY	WEB
A test host	127.0.0.1		Latest data	Triggers	Events	Graphs	Screens	Web	Applications	Items 1	Triggers 1	Graphs	Discovery	Web
Displaying 1 of 1 found														
Host groups														
HOST GROUP	LATEST DATA		TRIGGERS		EVENTS		GRAPHS	WEB	HOSTS		TEMPLATES			
No data found.														
Displaying 0 of 0 found														
Templates														
TEMPLATE	APPLICATIONS		ITEMS		TRIGGERS		GRAPHS	SCREENS	DISCOVERY		WEB			
No data found.														
Displaying 0 of 0 found														





Chapter 3: Monitoring with Zabbix Agents and Basic Protocols

Host name

Visible name

Groups

In groups

- Linux servers

Other groups

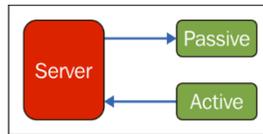
- Database servers
- Discovered hosts
- Hypervisors
- Network devices
- Templates
- UPS devices
- Virtual machines
- Web servers
- Windows servers
- Zabbix servers

New group

Agent interfaces

IP ADDRESS	DNS NAME	CONNECT TO	PORT	DEFAULT
<input type="text" value="192.168.56.11"/>	<input type="text"/>	<input type="button" value="IP"/> <input type="button" value="DNS"/>	<input type="text" value="10050"/>	<input type="button" value="Remove"/>

[Add](#)



Name

Type

Key

Host interface

Type of information

Data type

Units

Use custom multiplier

Update interval (in sec)

Custom intervals

TYPE	INTERVAL	PERIOD	ACTION
<input type="button" value="Flexible"/> <input type="button" value="Scheduling"/>	<input type="text" value="50"/>	<input type="text" value="1-7,00:00-24:00"/>	<input type="button" value="Remove"/>

[Add](#)

History storage period (in days)

Standard items

Type

KEY	NAME
agent.hostname	Agent host name. Returns string
agent.ping	Agent availability check. Returns nothing - unavailable; 1 - available
agent.version	Version of Zabbix agent. Returns string
kernel.maxfiles	Maximum number of opened files supported by OS. Returns integer
kernel.maxproc	Maximum number of processes supported by OS. Returns integer
net.dns[<ip>,<zone>,<type>,<timeout>,<count>,<protocol>]	Checks if DNS service is up. Returns 0 - DNS is down (server did not respond or DNS resolution failed); 1 - DNS is up

Details

Item added

Created: Item "Web server status" on "Another host".

AVAILABILITY

ZBX SNMP JMX IPMI

Enabled

ZBX SNMP JMX IPMI

NONE

Get value from agent failed: cannot connect to [[192.168.56.11]:10050]: [111] Connection refused

Filter ▲

Host groups
type here to search

Hosts
type here to search

Application

Name

Show items without data

Show details

<input type="checkbox"/> HOST	NAME ▲	LAST CHECK	LAST VALUE	CHANGE
▼	<u>Another host</u>	- other - (1 Item)		
<input type="checkbox"/>	Web server status	2016-02-20 00:58:56	1	Graph
▼	<u>A test host</u>	- other - (1 Item)		
<input type="checkbox"/>	CPU load	2016-02-20 00:58:55	0	Graph

Details

Cannot add item

Item with key "net.tcp.service[http,,80]" already exists on "Another host".

HOST	NAME ▲	LAST CHECK	LAST VALUE
Another host	- other - (2 Items)		
	SSH server status	2016-02-20 01:17:57	1
	Web server status	2016-02-20 01:17:56	1

Name

Type

Key

Type of information

Data type

Units

Use custom multiplier

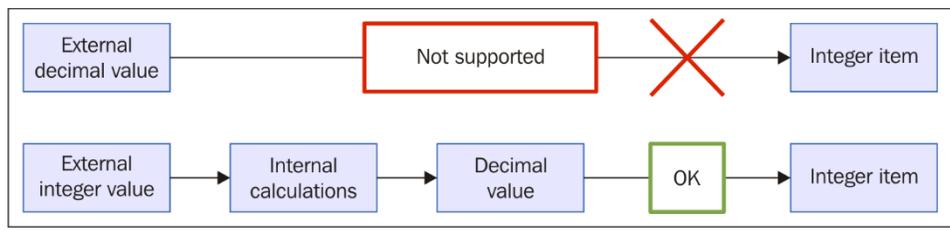
Update interval (in sec)

History storage period (in days)

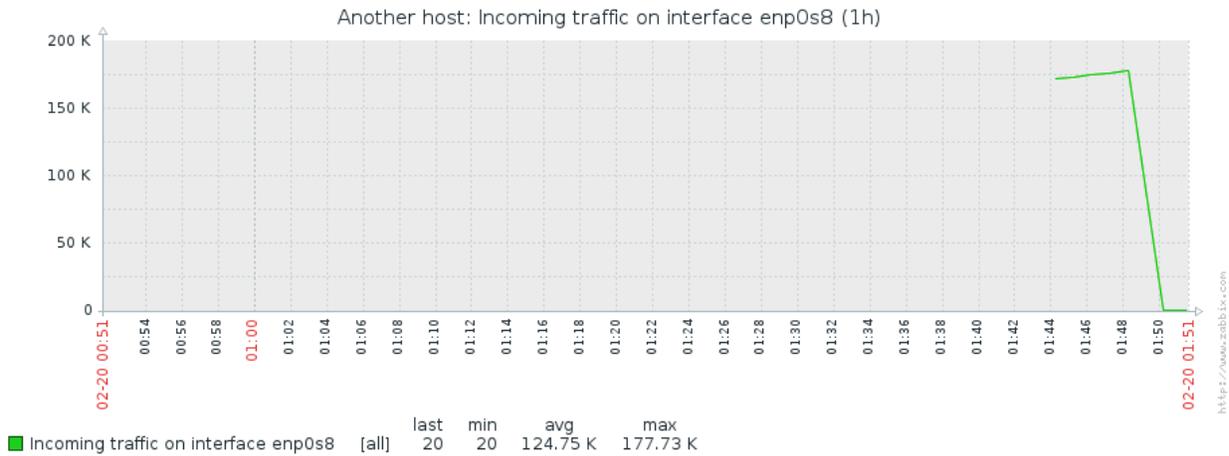
[net.if.in\[if,<mode>\]](#) Incoming traffic statistics on network interface. Returns integer

HOST	NAME ▲	LAST CHECK	LAST VALUE
Another host	- other - (3 Items)		
	Incoming traffic on interface eth0		

HOST	NAME ▲	LAST CHECK	LAST VALUE	CHANGE
Another host	- other - (3 Items)			
	Incoming traffic on interface enp0s8	2016-02-20 01:45:20	173013	+1296



HOST	NAME ▲	LAST CHECK	LAST VALUE	CHANGE
Another host	- other - (3 items)			
	Incoming traffic on interface enp0s8	2016-02-20 01:50:20	29	-177700



Another host: Incoming traffic on interface enp0s8

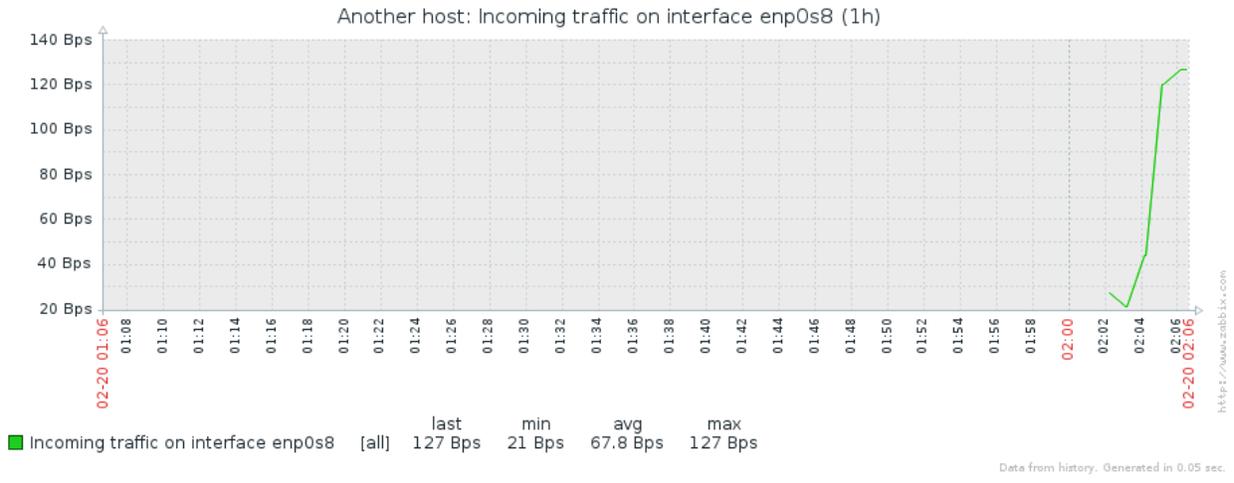
500 latest values As plain text

TIMESTAMP	VALUE
2016-02-20 01:56:19	29
2016-02-20 01:55:19	20
2016-02-20 01:54:19	29
2016-02-20 01:53:19	21
2016-02-20 01:52:19	27
2016-02-20 01:51:19	20
2016-02-20 01:50:20	29
2016-02-20 01:48:20	177729

3 selected Enable Disable Clear history Copy Mass update Delete

Incoming traffic on interface enp0s8

2016-02-20 02:02:19 27 Bps



[All hosts](#) / [Another host](#) Enabled ZBX SNMP JMX IPMI Applications Items 3 Triggers Graphs Discovery rules Web scenarios

Filter ▲

Host group <input type="text" value="type here to search"/> <input type="button" value="Select"/>	Type <input type="text" value="all"/>	Type of information <input type="text" value="all"/>	State <input type="text" value="all"/>
Host Another host <input type="button" value="Select"/>	Update interval (in sec) <input type="text"/>	History (in days) <input type="text"/>	Status <input type="text" value="all"/>
Application <input type="text"/> <input type="button" value="Select"/>		Trends (in days) <input type="text"/>	Triggers <input type="text" value="all"/>
Name like <input type="text"/>			Template <input type="text" value="all"/>
Key like <input type="text"/>			

Subfilter affects only filtered data

TYPES
[Zabbix agent 3](#) Zabbix agent (active) 1

TYPE OF INFORMATION
[Numeric \(float\) 1](#) [Numeric \(unsigned\) 3](#)

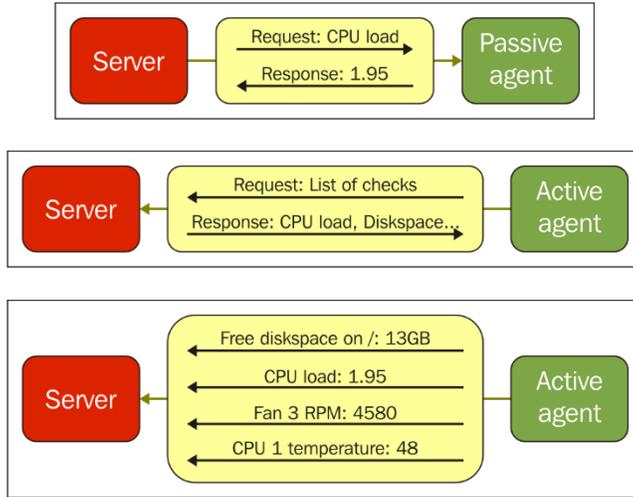
WITH TRIGGERS
[Without triggers 3](#) With triggers 1

HISTORY
[7 3](#) 90 1

INTERVAL
[30 1](#) 60 3

TYPES
[Zabbix agent +3](#) Zabbix agent (active) 1

TYPE OF INFORMATION
 Numeric (float) 0 Numeric (unsigned) 1



Name

Type

Key

Name

Type

Key

Host interface

User name

Password

Type of information

Units

Use custom multiplier

ICMP ping performance	2016-02-25 20:30:34	0.59 ms
Incoming traffic on interface enp0s8	2016-02-25 20:43:58	64 Bps
Incoming traffic on interface lo	2016-02-25 20:43:58	40 Bps

Overview

Group all Type Data Hosts location Top  

Filter 

ITEMS	ANOTHER HOST	A TEST HOST
CPU load		0.21
ICMP ping performance	0.48 ms	
Incoming traffic on interface enp0s8	74 Bps	
Incoming traffic on interface lo	40 Bps	
SMTP server status	1	
SSH server status	1	
Web server status	1	
Zabbix agent version	2.5.1	

3 selected Enable Disable Clear history Copy Mass update Delete

Type Original

Host interface Original

SNMP community Original

Context name Original

Security name Original

Security level Original

Authentication protocol Original

Authentication passphrase Original

Privacy protocol Original

Privacy passphrase Original

Port Original

Type of information Original

Data type Original

Units Original

Authentication method Original

User name Original

Public key file Original

Private key file Original

Password Original

Custom multiplier (0 - Disabled) Original

Update interval (in sec) Original

Custom intervals Original

History storage period (in days) Original

Trend storage period (in days) Original

Status Original

Log time format Original

Store value Original

Show value Original

Allowed hosts Original

Replace applications Original

Add new or existing applications Original

Description Original

Update

Cancel

Value mapping

<input type="checkbox"/> NAME ▲	VALUE MAP
<input type="checkbox"/> APC Battery Replacement Status	1 ⇒ unknown 2 ⇒ notInstalled 3 ⇒ ok 4 ⇒ failed 5 ⇒ highTemperature 6 ⇒ replaceImmediately 7 ⇒ lowCapacity
<input type="checkbox"/> APC Battery Status	1 ⇒ unknown 2 ⇒ batteryNormal 3 ⇒ batteryLow
<input type="checkbox"/> Dell Open Manage System Status	1 ⇒ Other 2 ⇒ Unknown 3 ⇒ OK 4 ⇒ NonCritical 5 ⇒ Critical 6 ⇒ NonRecoverable

Show value [show value mappings](#)

SMTP server status	2016-02-25 21:20:00	Down (0)
SSH server status	2016-02-25 21:19:57	Up (1)
Web server status	2016-02-25 21:19:56	Up (1)

ANOTHER HOST

0.62 ms

41 Bps

40 Bps

Down (0)

Up (1)

Up (1)

Custom intervals

TYPE	INTERVAL	PERIOD	ACTION
Flexible Scheduling	3600	6-7,00:00-24:00	Remove
Add			

3 selected [Enable](#) [Disable](#) [Clear history](#) [Copy](#) [Mass update](#) [Delete](#)

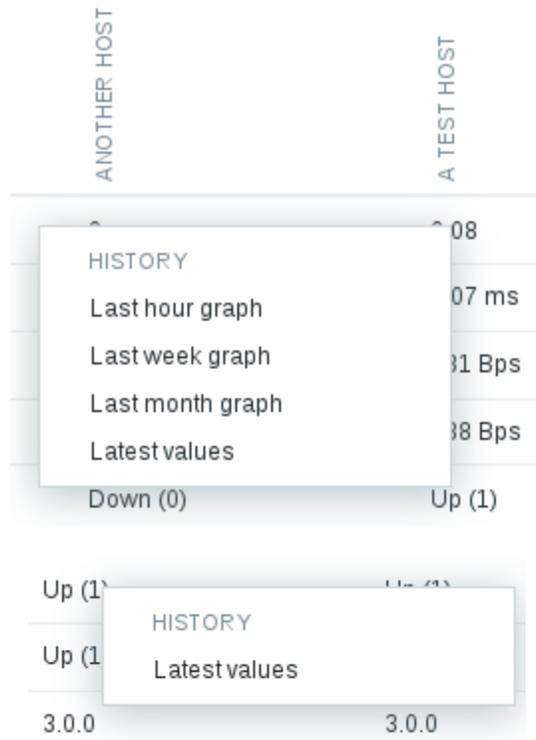
Target type

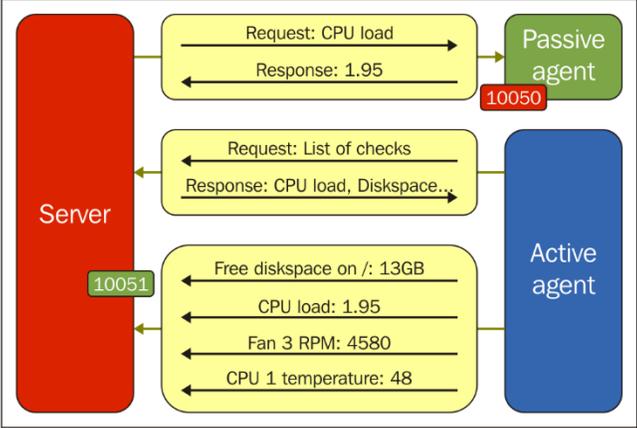
Group

Target Another host
 A test host

[Copy](#) [Cancel](#)

ITEMS	ANOTHER HOST	A TEST HOST
CPU load	0	0.19
ICMP ping performance	0.76 ms	0.07 ms
Incoming traffic on interface enp0s8	53 Bps	859 Bps
Incoming traffic on interface lo	41 Bps	194 Bps
SMTP server status	Down (0)	Up (1)
SSH server status	Up (1)	Up (1)
Web server status	Up (1)	Up (1)
Zabbix agent version	3.0.0	3.0.0

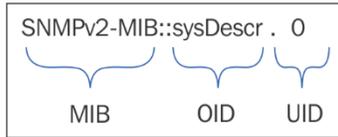




Custom intervals

TYPE	INTERVAL	PERIOD	ACTION
Flexible	Scheduling	wd1h9	Remove
Add			

Chapter 4: Monitoring SNMP Devices



Host name

Visible name

Groups

In groups

- SNMP devices

Other groups

- Database servers
- Discovered hosts
- Hypervisors
- Linux servers
- Network devices
- Templates
- UPS devices
- Virtual machines
- Web servers
- Windows servers

New group

Agent interfaces

IP ADDRESS	DNS NAME	CONNECT TO	PORT	DEFAULT
<input type="text" value="127.0.0.1"/>	<input type="text"/>	<input type="button" value="IP"/> <input type="button" value="DNS"/>	<input type="text" value="10050"/>	<input type="radio"/> Remove

[Add](#)

SNMP interfaces

<input type="text" value="192.168.56.11"/>	<input type="text"/>	<input type="button" value="IP"/> <input type="button" value="DNS"/>	<input type="text" value="161"/>	<input type="radio"/> Remove
--	----------------------	--	----------------------------------	--

Use bulk requests

[Add](#)

Name

Type

Key

Host interface

SNMP OID

SNMP community

Port

Type of information

Update interval (in sec)

TYPE	APPLICATIONS	STATUS	INFO
SNMPv1 agent		Not supported	

✕

snmp_parse_oid(): cannot parse OID "PowerNet-MIB::upsAdvIdentSerialNumber.0".

Serial number 2016-03-16 22:27:40 XA123PO

LAST CHECK	LAST VALUE	CHANGE
------------	------------	--------

2016-03-18 19:40:07	37 Bps	-2 Bps
---------------------	--------	--------

SNMP interfaces

Use bulk requests

Name

Type

Key

Select

Host interface

Type of information

SNMP trap tests	2016-03-18 23:17:48	23:17:46 2016/03/18 PDU INF...
-----------------	---------------------	--------------------------------

SNMP trap fallback	2016-03-18 23:33:04	23:33:03 2016/03/18 PDU INF...
--------------------	---------------------	--------------------------------

SNMP trap tests	2016-03-18 23:17:48	23:17:46 2016/03/18 PDU INF...
-----------------	---------------------	--------------------------------

TIMESTAMP

VALUE

2016-03-18 23:33:04	23:33:03 2016/03/18 PDU INFO:	
	community	public
	receivedfrom	UDP: [127.0.0.1]:54642->[127.0.0.1]:162
	errorindex	0
	errorstatus	0
	requestid	108168159

Type of information

TIMESTAMP	VALUE
2016-03-19 00:14:56	<pre> 00:14:55 2016/03/19 PDU INFO: messageid 0 transactionid 11 requestid 973564866 notificationtype INFORM version 1 receivedfrom UDP: [127.0.0.1]:40852->[127.0.0.1]:162 community public errorstatus 0 errorindex 0 VARBINDS: DISMAN-EVENT-MIB::sysUpTimeInstance type=67 value=Timeticks: (3054527) 8:29:05.27 SNMPv2-MIB::snmpTrapOID.0 type=6 value=OID: NET-SNMP-MIB::netsnmpExperimental NET-SNMP-MIB::netsnmpExperimental type=4 value=STRING: "some other trap" </pre>

Details Cannot copy items x

Cannot find host interface on "Another host" for item key "snmptrap[test]".

Details Items copied x

- Created: Item "SNMP trap tests" on "Another host".
- Created: Item "SNMP trap fallback" on "Another host".

Other configuration parameters

Refresh unsupported items (in sec)

Group for discovered hosts

Default host inventory mode Disabled Manual Automatic

User group for database down message

Log unmatched SNMP traps

Received SNMP traps 2016-03-19 00:41:52 localhost "test" NET-SNMP-MI...

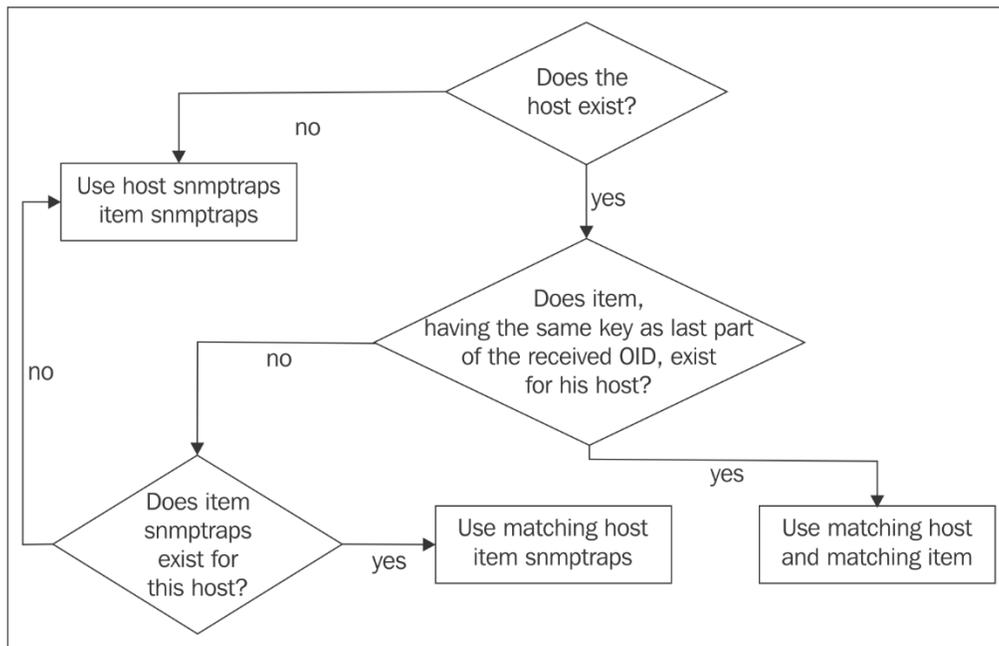
TIMESTAMP	VALUE
2016-03-19 00:41:52	localhost "test" NET-SNMP-MIB::netsnmpExperimental

TIMESTAMP	VALUE
2016-03-19 00:44:31	localhost "another" NET-SNMP-MIB::netsnmpExperimental
2016-03-19 00:41:52	localhost "test" NET-SNMP-MIB::netsnmpExperimental

TIMESTAMP	VALUE
2016-03-19 00:47:09	localhost "A Very Important Failure" NET-SNMP-MIB::netSnmExperimental
2016-03-19 00:44:31	localhost "another" NET-SNMP-MIB::netSnmExperimental
2016-03-19 00:41:52	localhost "test" NET-SNMP-MIB::netSnmExperimental

Another host - **other** - (1 Item)

snmptraps 2016-03-19 11:35:34 192.168.56.11 "test" NET-SNM...



Experimental SNMP trap 2016-03-20 03:12:07 192.168.56.11 "test" NET-SNM...



Chapter 5: Managing Hosts, Users and Permissions

Host groups				Create host group
<input type="checkbox"/> NAME ▲	HOSTS	TEMPLATES	MEMBERS	INFO
<input type="checkbox"/> Discovered hosts	Hosts	Templates		
<input type="checkbox"/> Hypervisors	Hosts	Templates		
<input type="checkbox"/> Linux servers	Hosts 2	Templates	Another host, A test host	
<input type="checkbox"/> SNMP devices	Hosts 2	Templates	SNMP device, snmptraps	
<input type="checkbox"/> Templates	Hosts	Templates 38	Template App FTP Service , Template App HTTP Service , Template App HTTPS Service , Template App IMAP Service , Template App LDAP Service , Template App MySQL , Template App NNTP Service , Template App NTP Service , Template App POP Service , Template App SMTP Service , Template App SSH Service , Template App Telnet Service , Template App Zabbix Agent , Template App Zabbix Proxy , Template App Zabbix Server , Template ICMP Ping , Template IPMI Intel SR1530 , Template IPMI Intel SR1630 , Template JMX Generic , Template JMX Tomcat , Template OS AIX , Template OS FreeBSD , Template OS HP-UX , Template OS Linux , Template OS Mac OS X , Template OS OpenBSD , Template OS Solaris , Template OS Windows , Template SNMP Device , Template SNMP Disks , Template SNMP Generic , Template SNMP Interfaces , Template SNMP OS Linux , Template SNMP OS Windows , Template SNMP Processors , Template Virt VMware , Template Virt VMware Guest , Template Virt VMware Hypervisor	
<input type="checkbox"/> Virtual machines	Hosts	Templates		
<input type="checkbox"/> Zabbix servers	Hosts 1	Templates	Zabbix server	

Displaying 8 of 8 found

Group name

Hosts Hosts in Other hosts | Group

Another host
A test host
SNMP device

◀

▶

snmptraps

Test group	Hosts 3	Templates	Another host, A test host, SNMP device
Linux servers	Hosts 2	Templates	Another host, A test host
SNMP devices	Hosts 2	Templates	SNMP device, snmptraps

Host name

Visible name

Groups In groups

- SNMP devices
- Test group**

Other groups

- Discovered hosts
- Hypervisors
- Linux servers
- Templates
- Virtual machines
- Zabbix servers

Enabled

NAME ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	DISCOVERY	WEB	INTERFACE	TEMPLATES	STATUS	AVAILABILITY
Another host	Applications	Items 12	Triggers	Graphs	Discovery	Web	192.168.56.11:10050		Enabled	ZBX SNMP JMX IPMI
A test host	Applications	Items 10	Triggers 1	Graphs	Discovery	Web	127.0.0.1:10050		Enabled	ZBX SNMP JMX IPMI
SNMP device	Applications	Items 2	Triggers	Graphs	Discovery	Web	127.0.0.1:10050		Enabled	ZBX SNMP JMX IPMI
snmptraps	Applications	Items 1	Triggers	Graphs	Discovery	Web	127.0.0.1:10050		Enabled	ZBX SNMP JMX IPMI
Zabbix server	Applications 13	Items 77	Triggers 43	Graphs 12	Discovery 2	Web 1	127.0.0.1:10050	Template App MySQL, Template App Zabbix Server, Template OS Linux (Template App Zabbix Agent)	Disabled	ZBX SNMP JMX IPMI

All hosts / **A test host** Enabled **ZBX** SNMP JMX IPMI Applications Items 10

Host Templates IPMI Macros **Host inventory** Encryption

Disabled **Manual** Automatic

Type

Type (Full details)

Disabled **Manual** Automatic

Type

Type (Full details)

Inventory mode Disabled **Manual** Automatic

Type snmp

Type (Full details) Original

TYPE	HOST COUNT ▼
test	2
snmp	2

HOST ▲	GROUP	NAME	TYPE	OS	SERIAL NUMBER A
SNMP device	SNMP devices, Test group		snmp		
snmptraps	SNMP devices, Test group		snmp		

Filter ▲

Field Type exactly

Filter Reset

Overview Details

Host name [SNMP device](#)

Agent interfaces	IP ADDRESS	DNS NAME	CONNECT TO	PORT
	127.0.0.1		IP	10050

SNMP interfaces	192.168.56.11		IP	161
-----------------	----------------------	--	-----------	------------

Monitoring [Web](#) [Latest data](#) [Triggers](#) [Events](#) [Graphs](#) [Screens](#)

Configuration [Host](#) [Applications](#) [Items 2](#) [Triggers](#) [Graphs](#) [Discovery](#) [Web](#)

Cancel

HOST ▲	GROUP	NAME	TYPE	OS	SERIAL NUMBER A	TAG	MAC ADDRESS A
SNMP device	SNMP devices, Test group		snmp	Linux (http://www.kernel.org)			
snmptraps	SNMP devices, Test group		snmp				

Displaying 2 of 2 found

Disabled Manual **Automatic**

Type test

Type (Full details)

Name

Alias

OS

OS (Full details) ← Full OS name

Type test

OS (Full details) Linux testhost 3.11.10-29-default #1 SMP Thu Mar 5 16:24:00 UTC 2015 (338c513) x86_64

Software application A 3.0.0

Cancel

Name Normal maintenance

Maintenance type With data collection

Active since 2016 - 03 - 23 00 : 00

Active till 2017 - 03 - 24 00 : 00

Description We keep data during this maintenance

Add Cancel

Details Cannot add maintenance ×
At least one host or group should be selected.

Hosts in maintenance

In maintenance

Other hosts | Group Linux servers

A test host

Another host

◀
▶

Maintenance period

Period type One time only

Date 2016 - 03 - 23 02 : 45

Maintenance period length 0 Days 1 Hours 0 Minutes

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

NAME ▲	TYPE	ACTIVE SINCE	ACTIVE TILL	STATE	DESCRIPTION
Normal maintenance	With data collection	2016-03-23 00:00	2017-03-24 00:00	Active	We keep data during this maintenance

HOST	NAME	DESCRIPTION
A test host 🚨	CPU load too high on A test host for last 3 minutes	Add

Normal maintenance [Maintenance with data collection]
We keep data during this maintenance

1 found

Last 20 issues

HOST	ISSUE	LAST CHANGE	AGE	INFO	ACK	ACTIONS
A test host 🚨	CPU load too high on A test host for last 3 minutes	2016-03-23 02:55:55	6m 33s		No	

1 of 1 issue is shown Updated: 03:02:28

Dashboard filter [Enabled](#)

Host groups

Hosts Show hosts in maintenance

Triggers with severity 
 Not classified
 Information
 Warning
 Average
 High
 Disaster

Trigger name like

Problem display

Name

Maintenance type

Active since - - : 

Active till - - : 

Description

Maintenance period

Period type

Date - - : 

Maintenance period length Days Hours Minutes

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

NAME ▲	TYPE	ACTIVE SINCE	ACTIVE TILL	STATE	DESCRIPTION
Maintenance with all data dropped	No data collection	2016-03-23 00:00	2017-03-24 00:00	Active	We don't need no data
Normal maintenance	With data collection	2016-03-23 00:00	2017-03-24 00:00	Active	We keep data during this maintenance

Maintenance period

Period type

Every day(s)

At (hour:minute) :

Maintenance period length Days Hours Minutes

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

Maintenance period

Period type

Every week(s)

Day of week

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

At (hour:minute) :

Maintenance period length Days Hours Minutes

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

Maintenance period

Period type	<input type="text" value="Monthly"/>
Month	<input type="checkbox"/> January <input type="checkbox"/> July <input type="checkbox"/> February <input type="checkbox"/> August <input type="checkbox"/> March <input type="checkbox"/> September <input type="checkbox"/> April <input type="checkbox"/> October <input type="checkbox"/> May <input type="checkbox"/> November <input type="checkbox"/> June <input type="checkbox"/> December
Date	<input type="text" value="Day"/> <input type="text" value="Day of week"/>
Day of month	<input type="text" value="13"/>
At (hour:minute)	<input type="text" value="13"/> : <input type="text" value="0"/>
Maintenance period length	<input type="text" value="0"/> Days <input type="text" value="1"/> Hours <input type="text" value="0"/> Minutes
Add Cancel	

Maintenance period

Period type

Month January July
 February August
 March September
 April October
 May November
 June December

Date

Day of week

Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Sunday

At (hour:minute) :

Maintenance period length Days Hours Minutes

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

- First
- Second
- Third
- Fourth
- Last

Default authentication Internal **LDAP** HTTP

LDAP host

Port

Base DN

Search attribute

Bind DN

Bind password

Test authentication [must be a valid LDAP user]

Login

User password

ALIAS ▲	NAME	SURNAME	USER TYPE	GROUPS	IS ONLINE?	LOGIN	FRONTEND ACCESS	DEBUG MODE	STATUS
Admin	Zabbix	Administrator	Zabbix Super Admin	Zabbix administrators	Yes (2016-03-24 12:15:03)	Ok	System default	Disabled	Enabled
guest			Zabbix User	Guests	No (2016-03-23 02:35:08)	Ok	System default	Disabled	Enabled

No access to the frontend

Zabbix administrators

- English (en_GB)
- English (en_US)
- Czech (cs_CZ)
- French (fr_FR)
- Italian (it_IT)
- Korean (ko_KR)
- Japanese (ja_JP)
- Polish (pl_PL)
- Portuguese (pt_BR)
- Russian (ru_RU)
- Slovak (sk_SK)
- Ukrainian (uk_UA)

Alias

Name

Surname

Groups

- Zabbix administrators

Password

Language

Theme

Auto-login

Auto-logout (min 90 seconds)

Refresh (in seconds)

Rows per page

URL (after login)

Password

- Zabbix User
- Zabbix Admin
- Zabbix Super Admin

	READ-WRITE	READ ONLY	DENY
Host groups			<ul style="list-style-type: none"> Discovered hosts Hypervisors Linux servers SNMP devices Templates Test group Virtual machines Zabbix servers
Hosts			<ul style="list-style-type: none"> Another host A test host SNMP device snmptraps Template App FTP Service Template App HTTP Service Template App HTTPS Service Template App IMAP Service Template App LDAP Service Template App MySQL

NAME ▲	#	MEMBERS	FRONTEND ACCESS	DEBUG MODE	STATUS
Disabled	Users		System default	Disabled	Disabled
Enabled debug mode	Users		System default	Enabled	Enabled
Guests	Users 1	guest	System default	Disabled	Enabled
No access to the frontend	Users		Disabled	Disabled	Enabled
Zabbix administrators	Users 2	Admin (Zabbix Administrator) , monitoring_user (monitoring user)	System default	Disabled	Enabled

System default
Internal
Disabled

User group **Permissions**

Composing permissions	READ-WRITE	READ ONLY	DENY
	<input type="button" value="Add"/> <input type="button" value="Delete selected"/>	<input type="button" value="Add"/> <input type="button" value="Delete selected"/>	<input type="button" value="Add"/> <input type="button" value="Delete selected"/>

Calculated permissions

Host groups	READ-WRITE	READ ONLY	DENY
			<ul style="list-style-type: none"> Discovered hosts Hypervisors Linux servers SNMP devices Templates Test group Virtual machines Zabbix servers
Hosts			<ul style="list-style-type: none"> Another host A test host SNMP device snmptraps Template App FTP Service Template App HTTP Service Template App HTTPS Service Template App IMAP Service Template App LDAP Service Template App MySQL
	<input type="button" value="Add"/>	<input type="button" value="Cancel"/>	

Composing permissions

READ-WRITE	READ ONLY	DENY
SNMP devices	Linux servers	
<input type="button" value="Add"/> <input type="button" value="Delete selected"/>	<input type="button" value="Add"/> <input type="button" value="Delete selected"/>	<input type="button" value="Add"/> <input type="button" value="Delete selected"/>

Calculated permissions

Host groups	READ-WRITE	READ ONLY	DENY
	SNMP devices	Linux servers	Discovered hosts Hypervisors Templates Test group Virtual machines Zabbix servers
Hosts	SNMP device snmptraps	Another host A test host	Template App FTP Service Template App HTTP Service Template App HTTPS Service Template App IMAP Service Template App LDAP Service Template App MySQL Template App NNTP Service Template App NTP Service Template App POP Service Template App SMTP Service

Our users [Users 1](#) [monitoring_user \(monitoring user\)](#) [System default](#) [Disabled](#) [Enabled](#)

User type

ZABBIX Monitoring Inventory Reports Configuration

Host groups Templates **Hosts** Maintenance Actions Discovery IT services Zabbix One

Hosts Group

NAME	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	DISCOVERY	WEB	INTERFACE	TEMPLATES	STATUS	AVAILABILITY	AGENT ENCRYPTION	INFO
No data found.												

Displaying 0 of 0 found

0 selected

ALIAS	NAME	SURNAME	USER TYPE	GROUPS	IS ONLINE?	LOGIN	FRONTEND ACCESS	DEBUG MODE	STATUS
Admin	Zabbix	Administrator	Zabbix Super Admin	Zabbix administrators	Yes (2016-03-24 16:01:12)	Ok	System default	Disabled	Enabled
advanced_user	advanced	user	Zabbix Admin	Zabbix administrators	No	Ok	System default	Disabled	Enabled
guest			Zabbix User	Guests	No	Ok	System default	Disabled	Enabled
monitoring_user	monitoring	user	Zabbix User	Our users , Zabbix administrators	Yes (2016-03-24 16:01:08)	Ok	System default	Disabled	Enabled

Groups

Our users
Zabbix administrators

Add

Zabbix user type \ Permissions	Zabbix User	Zabbix Admin	Zabbix Super Admin
Read-write	Read only	Full	Full
Read only	Read only	Read only	Full
Deny	None	None	Full

[NAME ▲](#) [APPLICATIONS](#) [ITEMS](#) [TRIGGERS](#) [GRAPHS](#) [DISCOVERY](#) [WEB](#) [INTERFACE](#) [TEMPLATES](#) [STATUS](#)

[Another host](#) [Applications](#) [Items 12](#) [Triggers](#) [Graphs](#) [Discovery](#) [Web](#) 192.168.56.11: 10050

[In maintenance](#)



Chapter 6: Detecting Problems with Triggers

Item

Function

Last of (T) Time

Time shift Time

N

Severity

Trigger [Dependencies](#)

Name

Expression

[Expression constructor](#)

Multiple PROBLEM events generation

Description

URL

Severity

Enabled

TRIGGERS	ANOTHER HOST	A TEST HOST
CPU load too high on A test host for last 3 minutes		
SMTP service is down		

{ Another host : net.tcp.service[smtp] .last() } = 0

Host name Item key with parameters Trigger function with parameters (empty here) Operator and comparison value

Item

Function

Last of (T)

Time shift Time

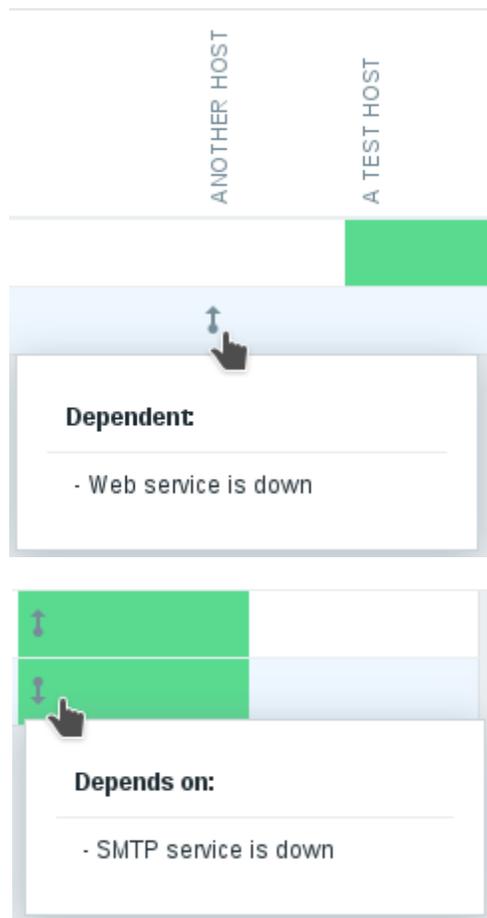
N

Trigger Dependencies

Dependencies	NAME	ACTION
	Another host: SMTP service is down	Remove
	Add	

SEVERITY	NAME ▲	EXPRESSION
Average	SMTP service is down	{Another host:net.tcp.service[smtp].last()}=0
Average	Web service is down Depends on: Another host: SMTP service is down	{Another host:net.tcp.service[http,,80].last()}=0

TRIGGERS	ANOTHER HOST	A TEST HOST
CPU load too high on A test host for last 3 minutes		
SMTP service is down	↓	
Web service is down	↓	

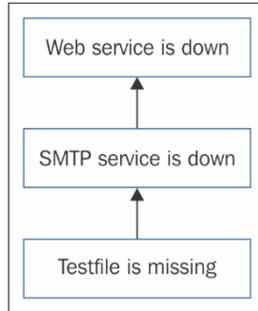


SEVERITY	STATUS	INFO	LAST CHANGE ▾	AGE	ACK	HOST	NAME	DESCRIPTION
Average			2016-04-05 15:49:01	3s	No 1	Another host	↓ Web service is down	Show
Average	PROBLEM		2016-04-05 15:51:00	3s	No 8	Another host	↑ SMTP service is down	Add

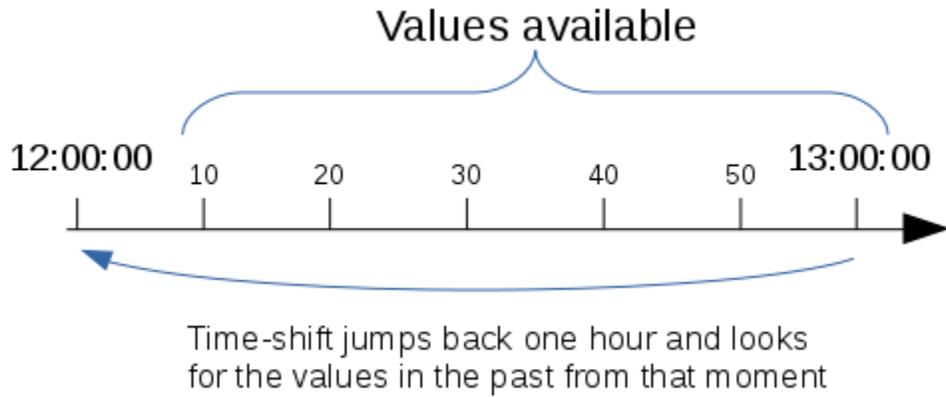
Dependent:
- Web service is down

Dependencies

NAME	ACTION
Another host: Testfile is missing	Remove
Add	



SEVERITY	STATUS	INFO	LAST CHANGE ▼	AGE	ACK	HOST	NAME	DESCRIPTION
Warning	OK		2016-04-05 16:12:25	1m 4s	No 1	Another host	↑ Testfile is missing	Add
Average	PROBLEM		2016-04-05 15:51:00	22m 29s	No 8	Another host	↓ ↑ SMTP service is down	Add



Trigger severities

Not classified	<input type="text" value="Not classified"/>	<input type="text" value="97AAB3"/>
Information	<input type="text" value="Information"/>	<input type="text" value="7499FF"/>
Warning	<input type="text" value="Warning"/>	<input type="text" value="FFC859"/>
Average	<input type="text" value="Average"/>	<input type="text" value="FFA059"/>
High	<input type="text" value="High"/>	<input type="text" value="E97659"/>
Disaster	<input type="text" value="Disaster"/>	<input type="text" value="E45959"/>

Info Custom severity names affect all locales and require manual translation!

Trigger displaying options

Unacknowledged PROBLEM events	<input type="text" value="DC0000"/>	<input type="checkbox"/> blinking
Acknowledged PROBLEM events	<input type="text" value="DC0000"/>	<input type="checkbox"/> blinking
Unacknowledged OK events	<input type="text" value="00AA00"/>	<input type="checkbox"/> blinking
Acknowledged OK events	<input type="text" value="00AA00"/>	<input type="checkbox"/> blinking

Display OK triggers for seconds

On status change triggers blink for seconds

Event details

Event source details	
Host	Another host
Trigger	Incorrect clock on Another host
Severity	Warning
Expression	{Another host:system.localtime.fuzzytime(30)}=0
Event generation	Normal
Disabled	No

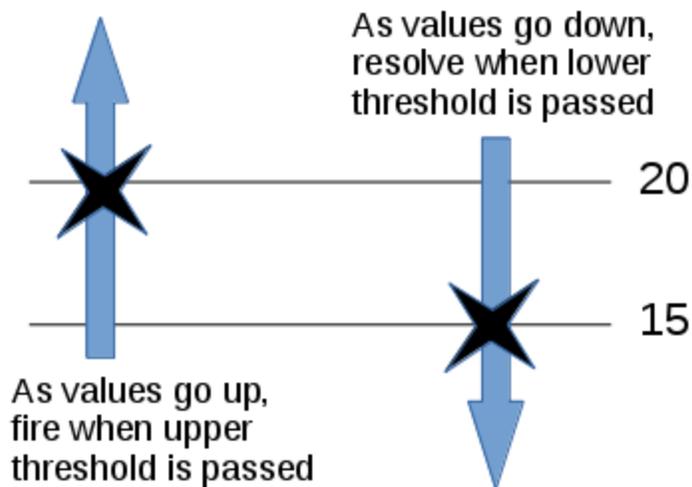
Event details	
Event	Incorrect clock on Another host
Time	2016-04-08 00:26:56
Acknowledged	No

Acknowledges		
TIME	USER	MESSAGE
No data found.		

Message actions							
STEP	TIME	TYPE	STATUS	RETRIES LEFT	RECIPIENT(S)	MESSAGE	INFO
1	2016-04-08 00:26:57	Email	Sent		Admin (Zabbix Administrator) user@company.tld	PROBLEM: Incorrect clock on Another host Trigger: Incorrect clock on Another host Trigger status: PROBLEM Trigger severity: Warning Trigger URL: Item values: 1. Local time (Another host:system.localtime): 2016.04.07 13:29:23 2. *UNKNOWN* (*UNKNOWN*: *UNKNOWN*): *UNKNOWN* 3. *UNKNOWN* (*UNKNOWN*: *UNKNOWN*): *UNKNOWN* Original event ID: 335	

Command actions				
STEP	TIME	STATUS	COMMAND	ERROR
No data found.				

Event list [previous 20]						
TIME	STATUS	DURATION	AGE	ACK	ACTIONS	
2016-04-08 00:26:56	PROBLEM	32m 9s	32m 9s	No	1	



No hysteresis

Hysteresis

Time ↑

Timestamp	Value
2010.Mar.10 19:35:19	12
2010.Mar.10 19:34:49	16
2010.Mar.10 19:34:19	18
2010.Mar.10 19:33:49	20
2010.Mar.10 19:33:19	21
2010.Mar.10 19:32:48	19
2010.Mar.10 19:32:18	22
2010.Mar.10 19:31:48	18
2010.Mar.10 19:31:18	21
2010.Mar.10 19:30:48	19
2010.Mar.10 19:30:18	16
2010.Mar.10 19:29:48	13

Release

Problem

Release

Problem

Release

Problem

Release

No release

No problem

No release

No problem

No release

Problem

x

Chapter 7: Acting Upon Monitored Conditions

Action Conditions Operations

Type of calculation A and B

Conditions	LABEL	NAME	ACTION
	A	Maintenance status not in <i>maintenance</i>	Remove
	B	Trigger value = <i>PROBLEM</i>	Remove

New condition

[Add](#)

Conditions	LABEL	NAME	ACTION
	A	Maintenance status not in <i>maintenance</i>	Remove
	B	Trigger value = <i>PROBLEM</i>	Remove
	C	Host group = <i>Important SNMP hosts</i>	Remove

USER GROUP	ACTION
Our users	Remove

[Add](#)

Send to User groups

TIME	HOST	DESCRIPTION	STATUS	SEVERITY	DURATION	ACK	ACTIONS
2016-04-13 04:02:56	snmptraps	SNMP trap has arrived on snmptraps	PROBLEM	Information	34s	No	
2016-04-13 04:02:30	Another host	SNMP trap has arrived on Another host	OK	Information	1m 25s	No	
2016-04-13 04:00:56	Another host	SNMP trap has arrived on Another host	PROBLEM	Information	1m 34s	No	1 1

Type of calculation A or (B and C) ...

- And/Or
- And
- Or
- Custom expression**

Type

Send to

When active

Use if severity Not classified
 Information
 Warning
 Average
 High
 Disaster

Enabled

TIME	HOST	DESCRIPTION	STATUS	SEVERITY	DURATION	ACK	ACTIONS
2016-04-13 08:16:04	snmptraps	SNMP trap has arrived on snmptraps	PROBLEM	Information	56s	No	1 1

RECIPIENT(S)	MESSAGE	STATUS	INFO
monitoring_user (monitoring user) monitoring_user@company.tld	<p>Subject: PROBLEM: SNMP trap has arrived on snmptraps</p> <p>Message: Trigger: SNMP trap has arrived on snmptraps Trigger status: PROBLEM Trigger severity: Information Trigger URL:</p> <p>Item values:</p> <ol style="list-style-type: none"> Received SNMP traps (snmptraps:snmptraps): 192.168.56.11 "Critical Error" NET-SNMP-MIB::netSnmpExperimental *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* <p>Original event ID: 374</p>	Sent	
advanced_user (advanced user)	<p>Subject: PROBLEM: SNMP trap has arrived on snmptraps</p> <p>Message: Trigger: SNMP trap has arrived on snmptraps Trigger status: PROBLEM Trigger severity: Information Trigger URL:</p> <p>Item values:</p> <ol style="list-style-type: none"> Received SNMP traps (snmptraps:snmptraps): 192.168.56.11 "Critical Error" NET-SNMP-MIB::netSnmpExperimental *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN* <p>Original event ID: 374</p>	Not sent	

Recovery message

Recovery subject

Action operations	STEPS	DETAILS	START IN	DURATION (SEC)	ACTION
	1	Send message to users: Admin (Zabbix Administrator) via all media	Immediately	Default	Edit Remove
	New				

Steps -

Step duration (minimum 60 seconds, 0 - use action default)

Default operation step duration (minimum 60 seconds)

Action operations	STEPS	DETAILS	START IN	DURATION (SEC)
	1 - 5	Send message to users: Admin (Zabbix Administrator) via all media	Immediately	60
	6 - 0	Send message to users: Admin (Zabbix Administrator) via all media	00:05:00	Default
	New			

Operation details

Steps -

Step duration (minimum 60 seconds, 0 - use action default)

Operation type Send message ▾

Send to User groups

USER GROUP	ACTION
Add	

Send to Users

USER	ACTION
monitoring_user (monitoring user)	Remove
Add	

Send only to - All - ▾

Default message

Subject

Message

Trigger: {TRIGGER.NAME}
 Trigger status: {TRIGGER.STATUS}
 Trigger severity: {TRIGGER.SEVERITY}
 Trigger URL: {TRIGGER.URL}
 {ESC.HISTORY}

LABEL	NAME	ACTION
A	Event acknowledged = <i>Not Ack</i>	Remove
New		

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

STEPS DETAILS

		START IN	DURATION (SEC)
1 - 5	Send message to users: Admin (Zabbix Administrator) via all media	Immediately	60
6 - 0	Send message to users: Admin (Zabbix Administrator) via all media	00:05:00	Default
6	Send message to users: advanced_user (advanced user) via all media	00:05:00	Default
9	Send message to users: monitoring_user (monitoring user) via all media	00:20:00	Default

Default operation step duration (minimum 60 seconds)

STEPS	DETAILS	START IN	DURATION (SEC)
2 - 6	Send message to users: Admin (Zabbix Administrator) via all media	00:30:00	60
7 - 0	Send message to users: Admin (Zabbix Administrator) via all media	00:35:00	Default
7	Send message to users: advanced_user (advanced user) via all media	00:35:00	Default
9	Send message to users: monitoring_user (monitoring user) via all media	01:35:00	Default

[New](#)

STEPS	DETAILS	START IN	DURATION (SEC)
1 - 5	Send message to users: Admin (Zabbix Administrator) via all media	Immediately	60
6 - 0	Send message to users: Admin (Zabbix Administrator) via all media	00:05:00	Default
6	Send message to users: advanced_user (advanced user) via all media	00:05:00	Default
9	Send message to users: monitoring_user (monitoring user) via all media	00:20:00	Default

START IN

00:30:00

00:35:00

00:35:00

01:35:00

Name

Type

Script name

PARAMETER	ACTION
<input type="text" value="{ALERT.MESSAGE}"/>	Remove

[Add](#)

Enabled

Add

Cancel

Type

Send to

When active

Use if severity

- Not classified
- Information
- Warning
- Average
- High
- Disaster

Enabled

Conditions

LABEL	NAME	ACTION
A	Maintenance status not in <i>maintenance</i>	Remove
B	Trigger value = <i>PROBLEM</i>	Remove
C	Host = <i>Another host</i>	Remove
D	Trigger name like <i>Web service is down</i>	Remove

- SCRIPTS
- Detect operating system
- Ping
- Traceroute
- GO TO
- Host inventory
- Latest data
- Triggers
- Graphs
- Host screens

```

PING 192.168.56.11 (192.168.56.11) 56(84) bytes of data.
64 bytes from 192.168.56.11: icmp_seq=1 ttl=64 time=0.293 ms
64 bytes from 192.168.56.11: icmp_seq=2 ttl=64 time=0.268 ms
64 bytes from 192.168.56.11: icmp_seq=3 ttl=64 time=0.363 ms

--- 192.168.56.11 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 1998ms
rtt min/avg/max/mdev = 0.268/0.308/0.363/0.040 ms

```

NAME ▲	TYPE	EXECUTE ON	COMMANDS	USER GROUP	HOST GROUP	HOST ACCESS
Detect operating system	Script	Server	sudo /usr/bin/nmap -O {HOST.CONN} 2>&1	Zabbix administrators	All	Read
Ping	Script	Server	/bin/ping -c 3 {HOST.CONN} 2>&1	All	All	Read
Traceroute	Script	Server	/usr/bin/traceroute {HOST.CONN} 2>&1	All	All	Read

```

Starting Nmap 6.40 ( http://nmap.org ) at 2016-04-16 02:27 EEST
Nmap scan report for 192.168.56.11
Host is up (0.00042s latency).
Not shown: 996 filtered ports
PORT      STATE SERVICE
22/tcp    open  ssh
25/tcp    open  smtp
80/tcp    open  http
443/tcp   closed https
MAC Address: 08:00:27:DD:4E:9E (Cadmus Computer Systems)
Aggressive OS guesses: Netgear DG834G WAP or Western Digital WD TV media player (94%), Linux 2.6.32 (94%), Linux 2.6.32 - 3.9 (93%),
Crestron XPanel control system (93%), Linux 2.6.31 (92%), Linux 3.0 (92%), Linux 3.1 (90%), Linux 3.2 (90%), Linux 2.6.32 - 2.6.35
(90%), Linux 2.6.32 - 3.2 (90%)
No exact OS matches for host (test conditions non-ideal).
Network Distance: 1 hop

OS detection performed. Please report any incorrect results at http://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 8.55 seconds

```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	129216	3536	2076	S	0,000	1,444	0:04.24	systemd
2	root	20	0	0	0	0	S	0,000	0,000	0:00.04	kthreadd
3	root	20	0	0	0	0	S	0,000	0,000	0:03.39	ksoftirqd+
5	root	0	-20	0	0	0	S	0,000	0,000	0:00.00	kworker/0+
6	root	20	0	0	0	0	S	0,000	0,000	0:03.32	kworker/u+
7	root	rt	0	0	0	0	S	0,000	0,000	0:00.00	migration+
8	root	20	0	0	0	0	S	0,000	0,000	0:00.00	rcu_bh
9	root	20	0	0	0	0	S	0,000	0,000	0:00.00	rcuob/0
10	root	20	0	0	0	0	S	0,000	0,000	0:08.40	rcu_sched
11	root	20	0	0	0	0	S	0,000	0,000	0:25.93	rcuos/0

Execution confirmation ✕

Reboot this system?

Name

Type

Execute on

Commands

Command

Description

User group

Host group

Required host permissions

Enable confirmation

Confirmation text

HOST	DESCRIPTION	STATUS	SEVERITY
Another host	Web service is down	OK	Average
Another host		PROBLEM	Average
Another host		Reboot	Warning

SCRIPTS

- Detect operating system
- Management ▶
- Ping
- Top CPU using processes
- Traceroute

GO TO

- Host inventory
- Latest data
- Triggers
- Graphs
- Host screens

Operation type Remote command ▼

TARGET ACTION

[New](#)

Target list

Type Global script ▼

Script name Management/Reboot Select

Target type Hosts ▼

Group Linux servers ▼

Target Another host A test host

Copy Cancel

No media defined for user "advanced user (advanced_user)"

Name

Type

Execute on Zabbix agent Zabbix server

Commands

Chapter 8: Simplifying Complex Configuration with Templates

Template name

Visible name

Groups In groups

Other groups

- Discovered hosts
- Hypervisors
- Important SNMP hosts
- Linux servers
- SNMP devices
- Templates
- Test group
- Virtual machines
- Zabbix servers

New group

Target type

Group

Target C_Template_Linux

Details Items copied x

- Created: Item "Web server status" on "C_Template_Linux".
- Created: Item "SSH server status" on "C_Template_Linux".

NAME ▲	TRIGGERS	KEY
CPU load	Triggers 1	system.cpu.load
Full OS name		system.uname
ICMP ping performance		icmppingsec
Incoming traffic on interface lo		net.if.in[lo]
Incoming traffic on interface enp0s8		net.if.in[enp0s8]
SMTP server status	Triggers 1	net.tcp.service[smtp]
SNMP trap fallback	Triggers 1	snmptrap.fallback
SNMP trap tests		snmptrap[test]
SSH server status	Triggers 1	net.tcp.service[ssh]
Web server status	Triggers 1	net.tcp.service[http,,80]
Zabbix agent version		agent.version

NAME ▲	TRIGGERS	KEY
CPU load		system.cpu.load
Experimental SNMP trap		netSnmpExperimental2
ICMP ping performance		icmppingsec
Incoming traffic on interface enp0s8		net.if.in[enp0s8]
Incoming traffic on interface lo		net.if.in[lo]
Local time	Triggers 1	system.localtime
SMTP server status	Triggers 1	net.tcp.service[smtp]
SNMP trap fallback		snmptrap.fallback
snmptraps	Triggers 1	snmptraps2
SNMP trap tests		snmptrap[test]
SSH server status		net.tcp.service[ssh]
Testfile exists	Triggers 1	vfs.file.exists[/tmp/testfile]
Web server status	Triggers 1	net.tcp.service[http,,80]
Zabbix agent version		agent.version

Link new templates

C_Template_Linux X

Select

[Add](#)

Linked templates

NAME	ACTION
C_Template_Linux	Unlink

Details

Host updated

- Created: Item "Experimental SNMP trap" on "A test host".
- Created: Item "snmptraps" on "A test host".
- Created: Item "Local time" on "A test host".
- Created: Item "Testfile exists" on "A test host".
- Updated: Item "CPU load" on "A test host".
- Updated: Item "Web server status" on "A test host".

- Updated: Trigger "Web service is down" on "A test host".
- Updated: Trigger "SMTP service is down" on "A test host".
- Created: Trigger "SNMP trap has arrived on {HOST.NAME}" on "A test host".

NAME ▲	TRIGGERS	KEY
C_Template_Linux: CPU load	Triggers 1	system.cpu.load
C_Template_Linux: Experimental SNMP trap		netSnmpExperimental2
Full OS name		system.uname
C_Template_Linux: ICMP ping performance		icmppingsec

Parent items [C_Template_Linux](#)

Name

Type

Key

Host interface

User name

Password

Type of information

Data type

Units

TEMPLATES ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	SCREENS	DISCOVERY	WEB	LINKED TEMPLATES	LINKED TO
C_Template_Linux	Applications	Items 14	Triggers 5	Graphs	Screens	Discovery	Web		A test host
Template App LDAP Service	Applications 1	Items 1	Triggers 1	Graphs	Screens	Discovery	Web		
Template App MySQL	Applications 1	Items 14	Triggers 1	Graphs 2	Screens 1	Discovery	Web		Zabbix server

In

Other | group

- A test host
- Another host

-

TEMPLATES ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	SCREENS	DISCOVERY	WEB	LINKED TEMPLATES	LINKED TO
C_Template_Linux	Applications	Items 14	Triggers 5	Graphs	Screens	Discovery	Web		Another host, A test host

Details

Item updated

- Updated: Item "SMTP server status" on "C_Template_Linux".
- Updated: Item "SMTP server status" on "Another host".
- Updated: Item "SMTP server status" on "A test host".

Update interval (in sec)

Custom intervals	TYPE	INTERVAL	PERIOD	ACTION
	<input type="checkbox"/> Flexible <input checked="" type="checkbox"/> Scheduling	<input type="text" value="50"/>	<input type="text" value="1-7,00:00-24:00"/>	Remove
	Add			

History storage period (in days)

Details

Trigger added

- Created: Trigger "CPU load too high on A test host for last 3 minutes" on "C_Template_Linux".
- Updated: Trigger "CPU load too high on A test host for last 3 minutes" on "A test host".
- Created: Trigger "CPU load too high on A test host for last 3 minutes" on "Another host".
- Created: Trigger "Critical error from SNMP trap" on "C_Template_Linux".
- Updated: Trigger "Critical error from SNMP trap" on "A test host".
- Created: Trigger "Critical error from SNMP trap" on "Another host".

NAME ▲

C_Template_Linux: CPU load too high on A test host for last 3 minutes

HOST NAME

A test host CPU load too high on A test host for last 3 minutes

Another host CPU load too high on Another host for last 3 minutes

Template macros Inherited and template macros

MACRO	VALUE	
<input data-bbox="456 384 813 422" type="text" value="{CPU_LOAD_THRESHOLD}"/>	= <input data-bbox="850 384 1300 422" type="text" value="1"/>	Remove

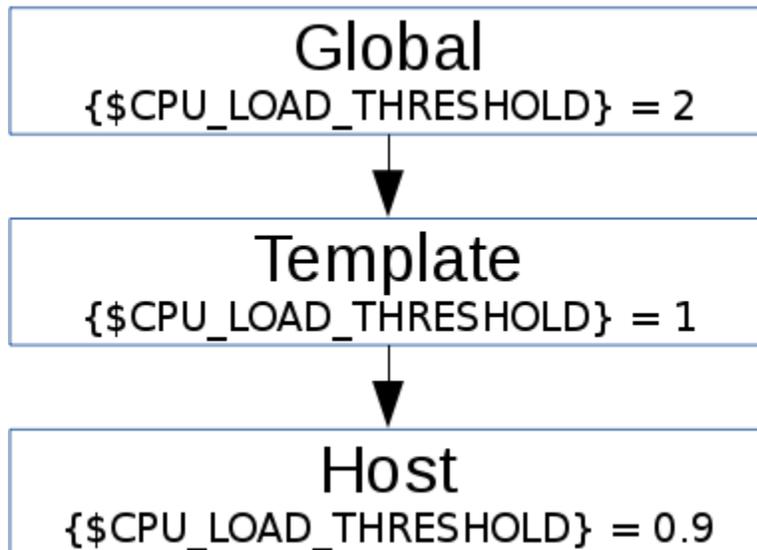
[Add](#)

HOST	NAME
A test host	CPU load too high on A test host for last 3 minutes (over 0.9)
Another host	CPU load too high on Another host for last 3 minutes (over 1)

Macros

MACRO	VALUE	
<input data-bbox="477 953 834 991" type="text" value="{SNMP_COMMUNITY}"/>	= <input data-bbox="872 953 1321 991" type="text" value="public"/>	Remove

[Add](#)



Template name

Visible name

Groups In groups

Details Cannot update host

Template "C_Template_Linux" with item key "net.tcp.service[smtp]" already linked to host.

[Host](#) [Templates](#) [IPMI](#) [Inventory](#) [Encryption](#)

Link templates

Replace
 Clear when unlinking

Details Items deleted

- Deleted: Trigger "SMTP service is down" on "C_Template_Linux".
- Deleted: Trigger "Testfile is missing" on "C_Template_Linux".
- Deleted: Item "SMTP server status" on "C_Template_Linux".
- Deleted: Item "Testfile exists" on "C_Template_Linux".

[Host](#) [Templates](#) [IPMI](#) [Inventory](#) [Encryption](#)

Link templates

Replace
 Clear when unlinking

TEMPLATES ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	SCREENS	DISCOVERY	WEB	LINKED TEMPLATES	LINKED TO
C_Template_Email	Applications	Items 2	Triggers 2	Graphs	Screens	Discovery	Web		Another host, A test host
C_Template_Linux	Applications	Items 12	Triggers 5	Graphs	Screens	Discovery	Web		Another host, A test host

[Host](#)
[Templates](#)
[IPMI](#)
[Macros](#)
[Host inventory](#)
[Encryption](#)

Linked templates

NAME	ACTION
C_Template_Email	Unlink Unlink and clear
C_Template_Linux	Unlink Unlink and clear

Link new templates

[Add](#)

Details

Host updated

- Unlinked: Trigger "SMTP service is down" on "A test host".
- Unlinked: Trigger "Testfile is missing" on "A test host".
- Unlinked: Item "SMTP server status" on "A test host".
- Unlinked: Item "Testfile exists" on "A test host".
- Templates "C_Template_Email" unlinked from hosts "A test host".

[SMTP server status](#)

[C_Template_Linux: SNMP trap fallback](#)

[C_Template_Linux: snmptraps](#)

[C_Template_Linux: SNMP trap tests](#)

[C_Template_Linux: SSH server status](#)

[Testfile exists](#)

Details Host updated

- Deleted: Trigger "SMTP service is down" on "A test host".
- Deleted: Trigger "Testfile is missing" on "A test host".
- Deleted: Item "SMTP server status" on "A test host".
- Deleted: Item "Testfile exists" on "A test host".
- Templates "C_Template_Email" unlinked from hosts "A test host".

NAME ▲	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	DISCOVERY	WEB	INTERFACE	TEMPLATES
Another host	Applications	Items 14	Triggers 8	Graphs	Discovery	Web	192.168.56.11: 10050	C_Template_Email, C_Template_Linux
A test host	Applications	Items 13	Triggers 6	Graphs	Discovery	Web	127.0.0.1: 10050	C_Template_Linux

Link templates

Replace
 Clear when unlinking

Templates Group Custom templates ▼

<input type="checkbox"/> NAME
<input checked="" type="checkbox"/> C_Template_Email
<input checked="" type="checkbox"/> C_Template_Linux

[Template](#)
 [Linked templates](#)
 [Macros](#)

Linked templates

NAME	ACTION
C_Template_Email	Unlink
C_Template_Linux	Unlink

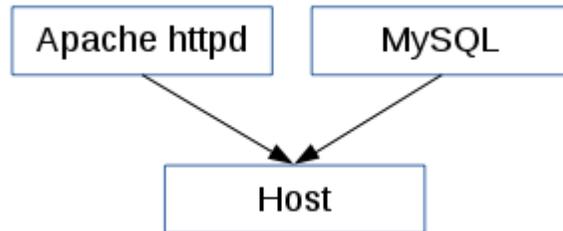
Link new templates

[Add](#)

TEMPLATES

C_Template_Email_Server (C_Template_Email, C_Template_Linux)

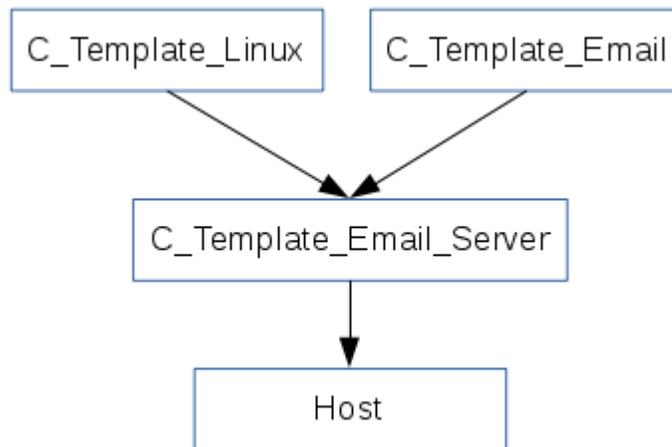
Parent items C_Template_Email ⇒ C_Template_Email_Server



Host macros Inherited and host macros

MACRO	EFFECTIVE VALUE	TEMPLATE VALUE
{CPU_LOAD_THRESHOLD}	= 1	Change = C_Template_Linux: "1"
{SNMP_COMMUNITY}	= public	Change

[Add](#)

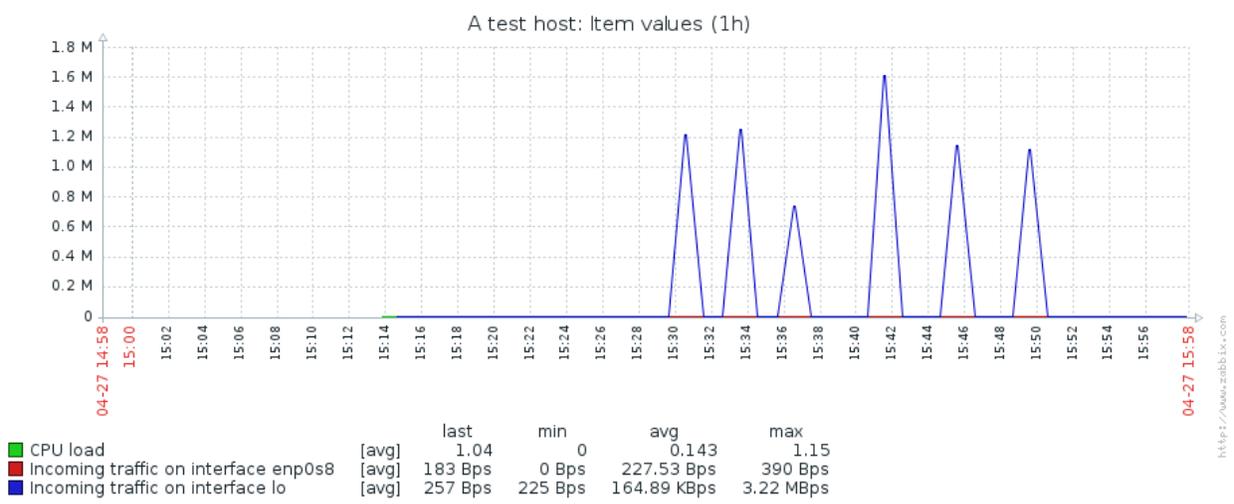


Chapter 9: Visualizing the Data with Graphs and Maps

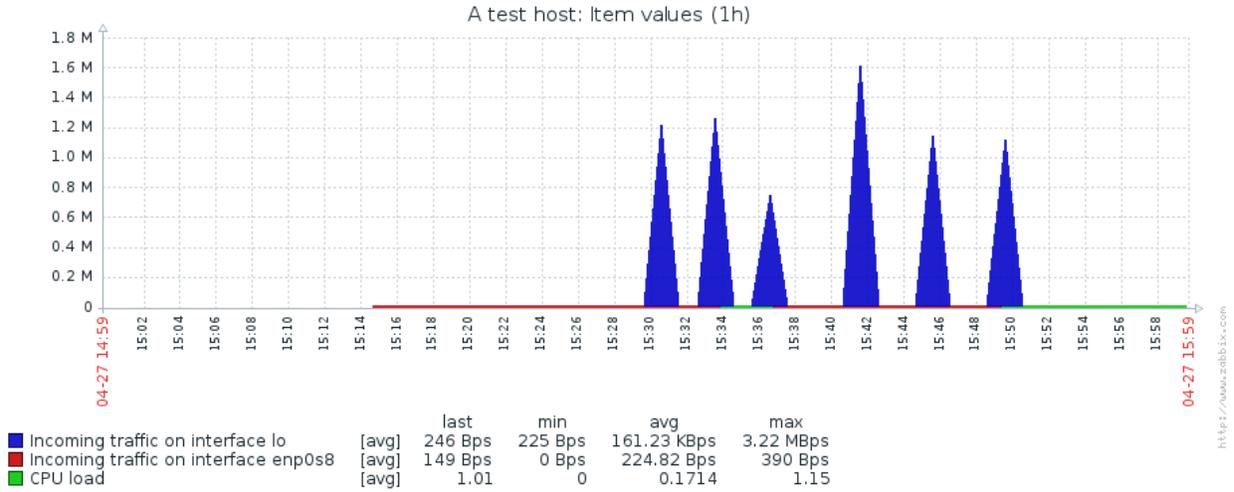
NAME ▲	LAST CHECK	LAST VALUE	CHANGE
- other - (13 Items)			
CPU load	2016-04-27 15:15:25	0	Graph
Experimental SNMP trap			History
Full OS name	2016-04-27 15:15:22	Linux testhost 3.12.53-40-defa...	History
ICMP ping performance	2016-04-27 15:15:32	0.04 ms	Graph

▼ A test host - other - (13 Items)

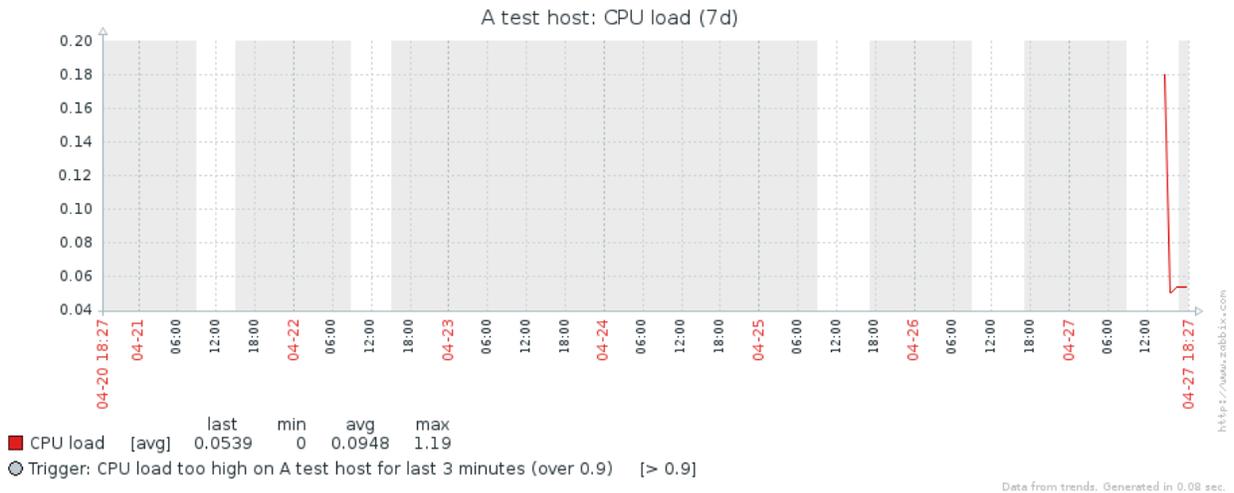
- CPU load
- Experimental SNMP trap
- Full OS name
- ICMP ping performance
- Incoming traffic on interface enp0s8
- Incoming traffic on interface lo



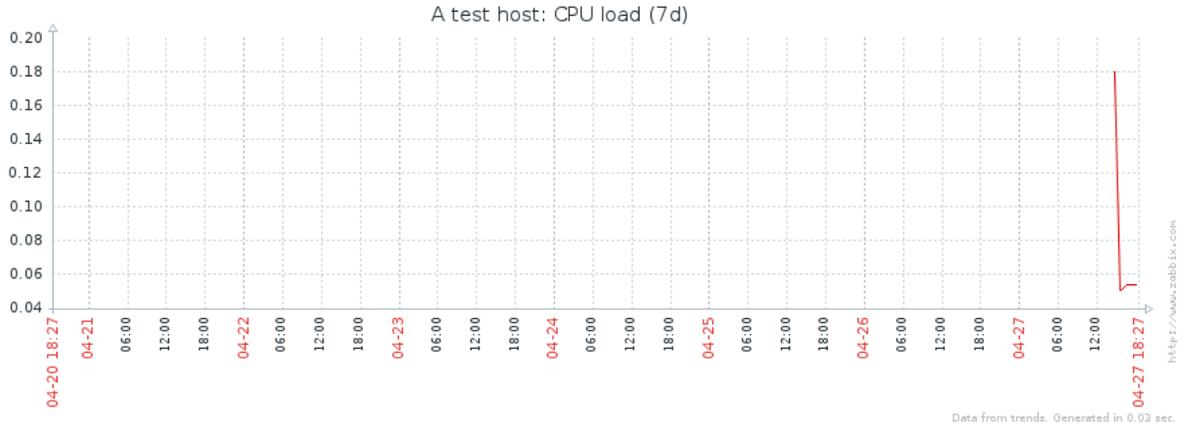
Graph type Normal Stacked



COLOUR
ACTION

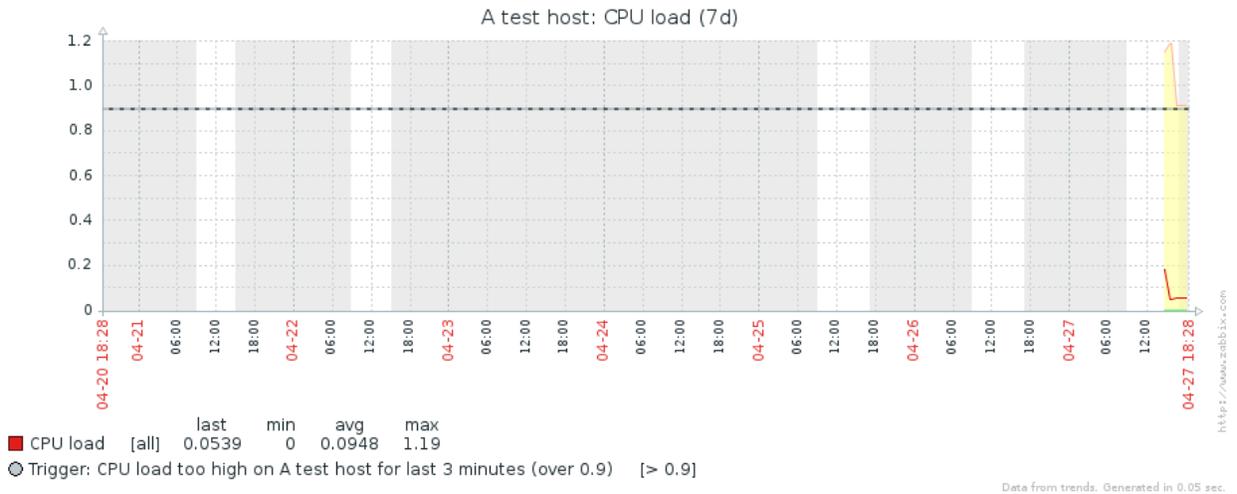


Working time



FUNCTION

- avg
- all
- min
- avg
- max

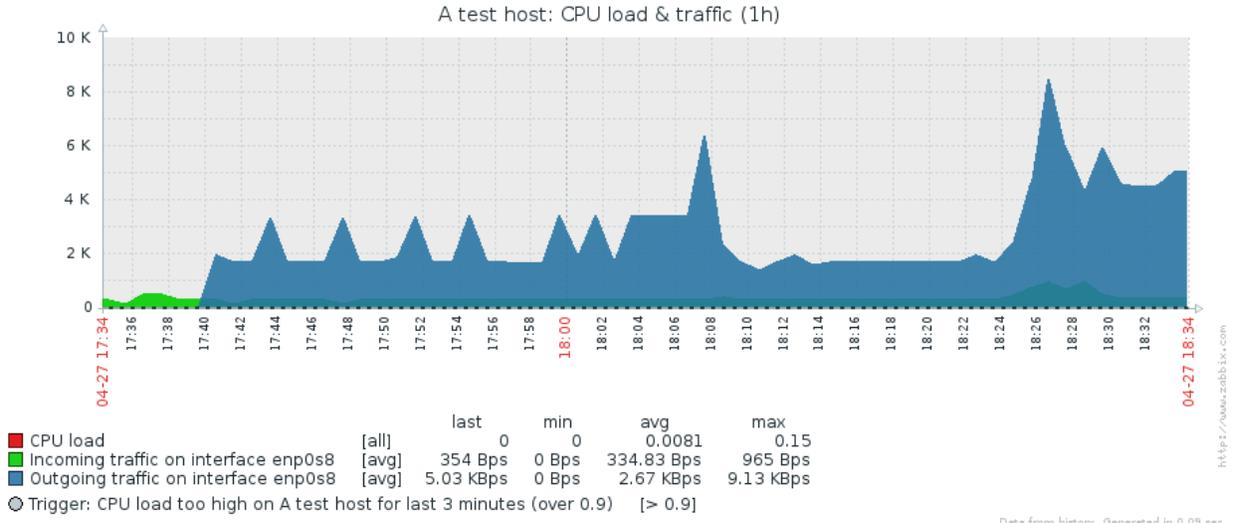


Host C_Template_Linux

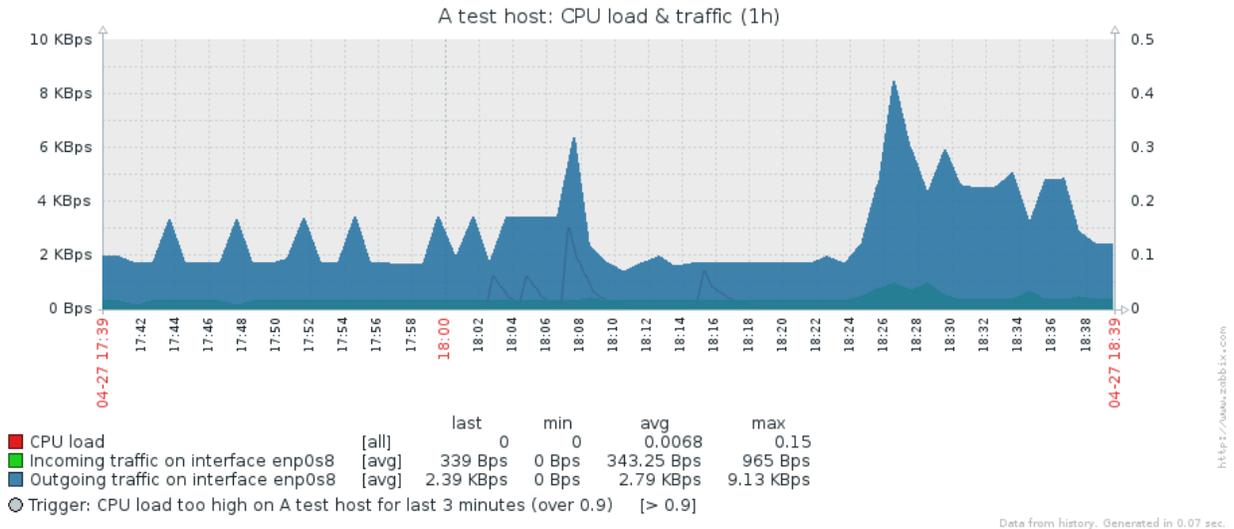
You can not switch hosts for current selection.

Items	NAME	FUNCTION	DRAW STYLE	Y AXIS SIDE	COLOUR	ACTION
1:	C_Template_Linux: CPU load	all	Line	Left	DD0000	Remove
2:	C_Template_Linux: Incoming traffic on interface enp0s8	avg	Line	Left	F63100	Remove
3:	C_Template_Linux: Outgoing traffic on interface enp0s8	avg	Line	Left	2774A4	Remove

[Add](#)



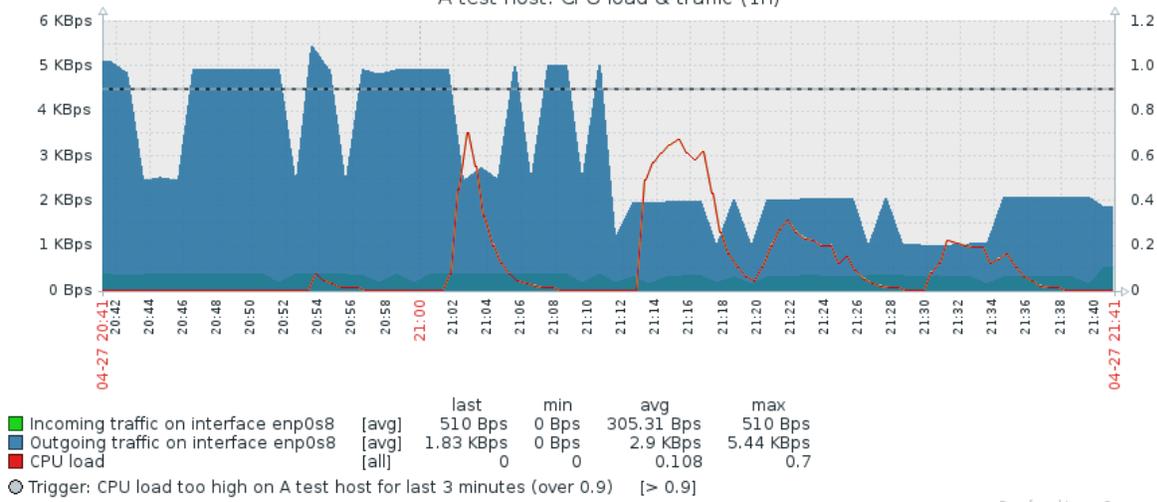
NAME	FUNCTION	DRAW STYLE	Y AXIS SIDE
C_Template_Linux: CPU load	all	Line	Right



Items	NAME	FUNCTION	DRAW STYLE	Y AXIS SIDE	COLOUR	ACTION
2:	C_Template_Linux: Incoming traffic on interface enp0s8	avg	Filled region	Left	00CC00	Remove
3:	C_Template_Linux: Outgoing traffic on interface enp0s8	avg	Filled region	Left	2774A4	Remove
1:	C_Template_Linux: CPU load	all	Line	Right	DD0000	Remove

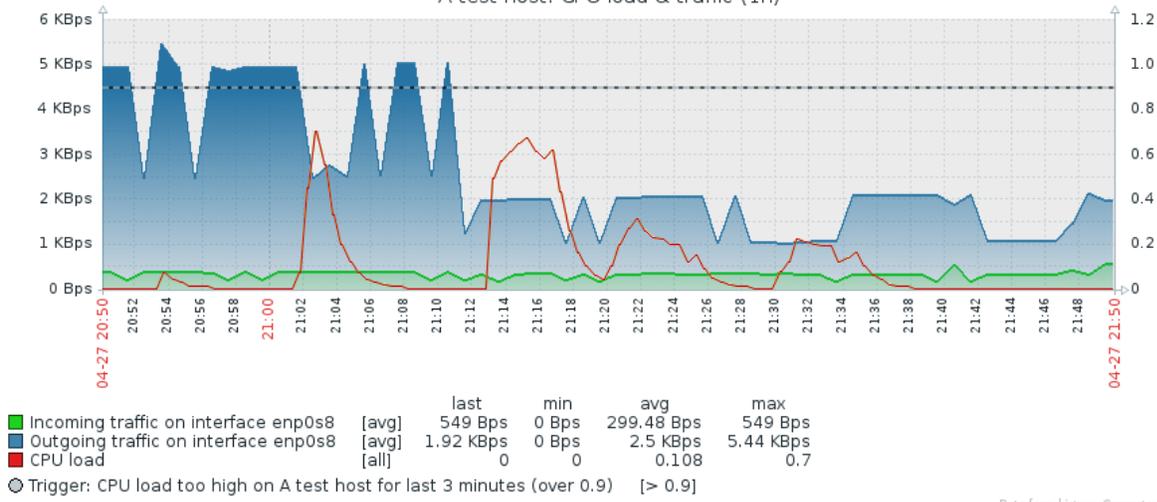
[Add](#)

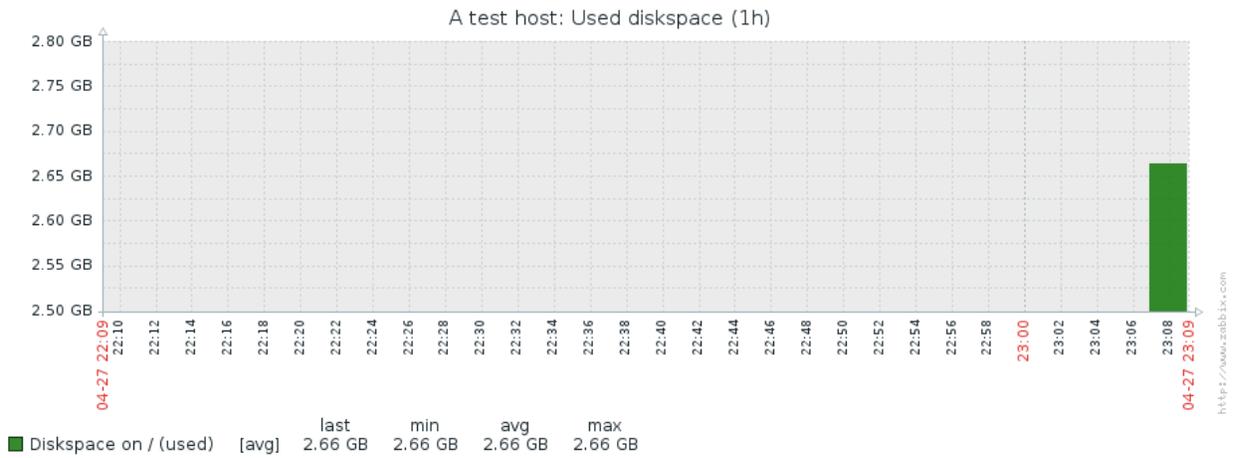
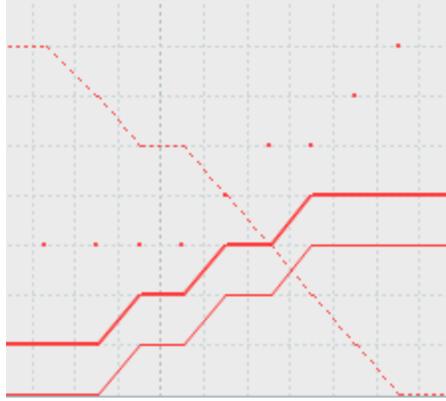
A test host: CPU load & traffic (1h)



NAME	FUNCTION	DRAW STYLE
1: C_Template_Linux: Incoming traffic on interface enp0s8	avg	Gradient line
2: C_Template_Linux: Outgoing traffic on interface enp0s8	avg	Gradient line

A test host: CPU load & traffic (1h)

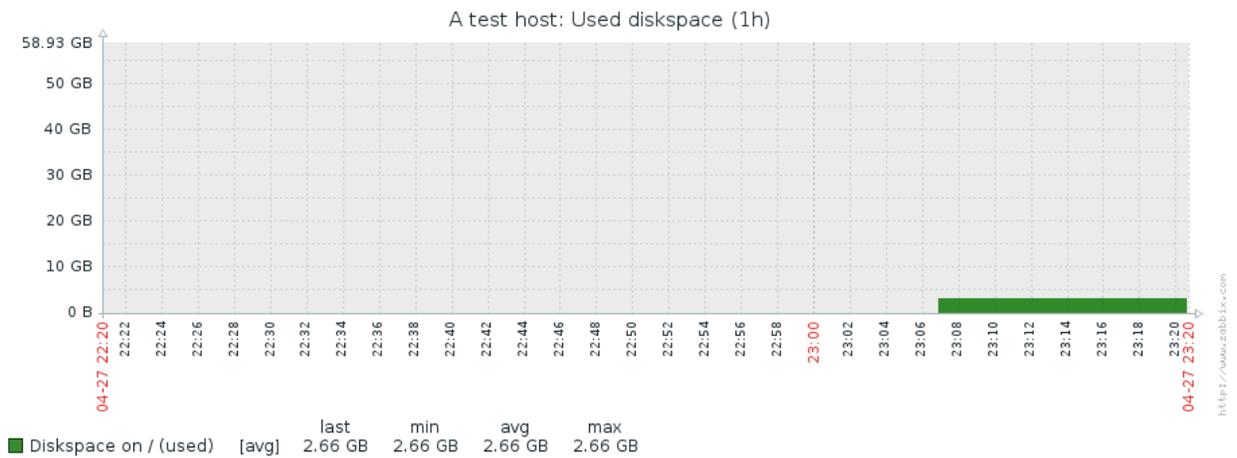




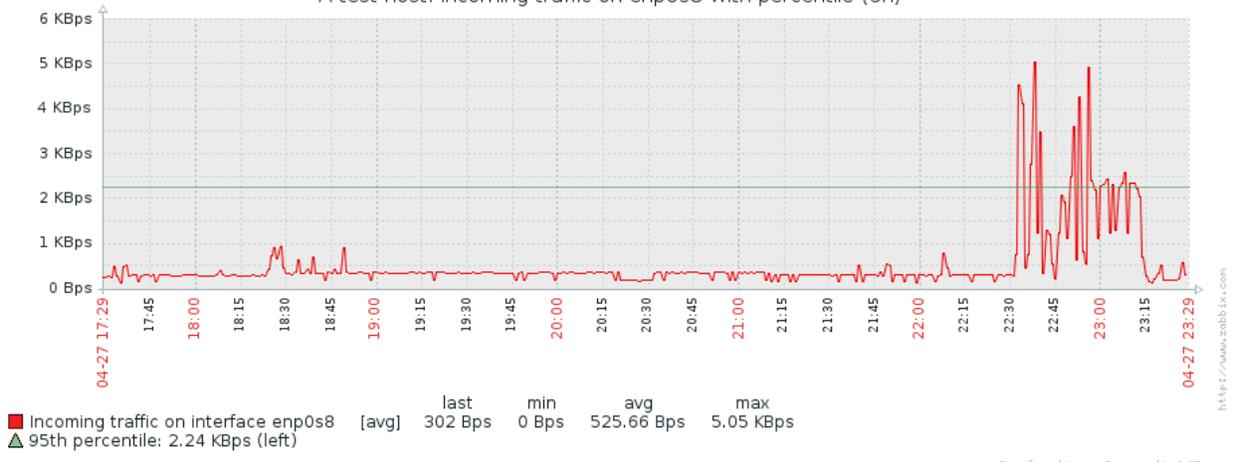
Diskspace on / (total) 2016-04-27 23:10:56 58.93 GB

Y axis MIN value Fixed 0.0000

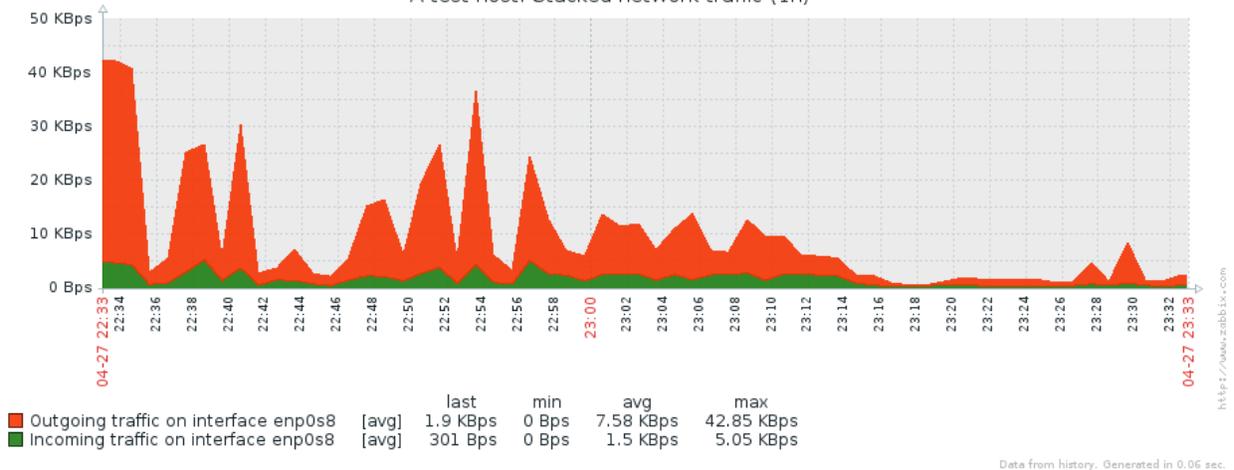
Y axis MAX value Item C_Template_Linux: Diskspace on / (total) Select



A test host: Incoming traffic on enp0s8 with percentile (6h)



A test host: Stacked network traffic (1h)



TYPE

Simple ▼

Simple ▼
 Simple
 Graph sum

NAME

C_Template_Linux: Diskspace on / (total)

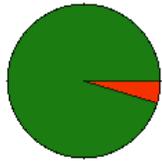
C_Template_Linux: Diskspace on / (used)

TYPE

Graph sum ▼

Simple ▼

A test host: Used diskspace (pie) (1h)



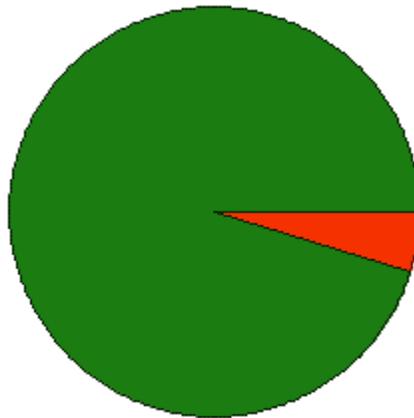
Value: 2.66 GB (4.52%)
Value: 58.93 GB (100%)

Diskspace on / (used) [avg]
Diskspace on / (total) [avg]

Data from history. Generated in 0.01 sec.

http://www.zabbix.com

A test host: Used diskspace (pie) (1h)



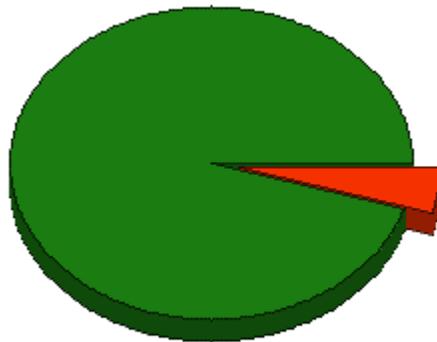
Value: 2.66 GB (4.52%)
Value: 58.93 GB (100%)

Diskspace on / (used) [avg]
Diskspace on / (total) [avg]

Data from history. Generated in 0.01 sec.

http://www.zabbix.com

A test host: Used diskspace (pie) (1h)



Value: 2.66 GB (4.52%)
Value: 58.93 GB (100%)

Diskspace on / (used) [avg]
Diskspace on / (total) [avg]

Data from history. Generated in 0.04 sec.

http://www.zabbix.com

Icon: [Add](#) / [Remove](#) Link:



Map element

Type

Label

Label location

Host

Application

Automatic icon selection

Icons	Default	<input type="text" value="Server_(64)"/>
	Problem	<input type="text" value="Default"/>
	Maintenance	<input type="text" value="Default"/>
	Disabled	<input type="text" value="Default"/>

Coordinates X Y

NAME	URL	ACTION
<input type="text"/>	<input type="text"/>	Remove
Add		



Grid: [Shown / On](#) 50x50 [Align icons](#)

Grid: [Shown / On](#) 50x50

- 20x20
- 40x40
- 50x50
- 75x75
- 100x100

First map



<http://www.zabbix.com>

2016-04-29 11:37:19

A context menu is open over a server icon. The menu is divided into two sections: "SCRIPTS" and "GO TO".

- SCRIPTS**
 - Detect operating system
 - Management
 - Ping
 - Top CPU using processes
 - Traceroute
- GO TO**
 - Host inventory
 - Latest data
 - Triggers
 - Graphs
 - Host screens

NAME ▼	TRIGGERS	KEY
Link /tmp/severity1		vfs.file.exists[/tmp/severity1]
Link /tmp/severity2		vfs.file.exists[/tmp/severity2]
Link /tmp/severity3		vfs.file.exists[/tmp/severity3]

Warning	Latency too high on {HOST.NAME}	{C_Template_Linux:vfs.file.exists[/tmp/severity1].lastf})=0
Average	Link down for 5 minutes on {HOST.NAME}	{C_Template_Linux:vfs.file.exists[/tmp/severity2].lastf})=0
High	Link down for 10 minutes on {HOST.NAME}	{C_Template_Linux:vfs.file.exists[/tmp/severity3].lastf})=0

Mass update elements

Selected elements

TYPE	NAME
Host	A test host
Host	Another host

Label

Label location

Default ▼

Automatic icon selection

Icon (default)

Cloud_(24) ▼

Icon (problem)

Default ▼

Icon (maintenance)

Default ▼

Icon (disabled)

Default ▼

Apply

Remove

Close



Links

FROM	TO	LINK INDICATORS	ACTION
A test host	Another host		Edit

<input type="checkbox"/>	Latency too high on A test host	Warning
<input type="checkbox"/>	Link down for 5 minutes on A test host	Average
<input type="checkbox"/>	Link down for 10 minutes on A test host	High

Links

FROM	TO	LINK INDICATORS	ACTION
A test host	Another host		Edit

Label

Type (OK)

Colour (OK)

Link indicators

TRIGGER	TYPE	COLOUR	ACTION
A test host: Latency too high on A test host	<input type="text" value="Line"/>	<input type="text" value="EEEE00"/>	Remove
A test host: Link down for 5 minutes on A test host	<input type="text" value="Dashed line"/>	<input type="text" value="FFA000"/>	Remove
A test host: Link down for 10 minutes on A test host	<input type="text" value="Bold line"/>	<input type="text" value="DD0000"/>	Remove

[Add](#)

First map



http://www.zabbix.com

First map



<http://www.zabbix.com>

2016-05-01 09:37:18

First map



<http://www.zabbix.com>

2016-05-01 09:40:37



First map

A test host - 127.0.0.1
CPU load: 0.37
OK



Incoming traffic: 1.17 KBps
Outgoing traffic: 0 Bps



Another host
OK

http://www.zabbix.com

2016-05-01 13:45:19

{HOST.NAME} - {HOST.IP}



Expand macros: Off

A test host - 127.0.0.1



A test host - 127.0.0.1
0

A test host - 127.0.0.1
CPU load: 0.03

Slow link

Incoming traffic: 903 Bps
Outgoing traffic: 1.18 KBps

A test host - 127.0.0.1
CPU load: 0
1 Problem



First map

A test host - 127.0.0.1
CPU load: 0
1 Problem



Incoming traffic: 0 Bps
Outgoing traffic: 0 Bps



Another host
DISABLED

http://www.zabbix.com

2016-05-01 11:09:03

First map

A test host - 127.0.0.1
CPU load: 0
1 Problem



Incoming traffic: 0 Bps
Outgoing traffic: 13.43 KBps



Another host
DISABLED

http://www.zabbix.com

2016-05-01 11:14:23



- Host
- Map
- Trigger
- Host group
- Image

URLs

NAME	URL	ACTION
<input type="text"/>	<input type="text"/>	Remove
Add		

A test host - 127.0.0.1
CPU load: 0.06
3 Problems
1 Unacknowledged



Minimum trigger severity Not classified Information Warning Average High Disaster

Minimum severity Disaster

Map element

Type Host

Label `{HOST.NAME} - {HOST.IP}`
`CPU load: {{HOST.HOST}:system.cpu.load.last0}`

Label location Top

Host A test host X Select

Application Select

Name

Upload Browse...

Add Cancel

Name

Upload Browse...

Add Cancel

ZABBIX

A test host - 127.0.0.1
CPU load: 0



Incoming traffic: 0 Bps
Outgoing traffic: 0 Bps



Another host

Background image

▾





Name

Mappings

	INVENTORY FIELD	EXPRESSION	ICON	ACTION
1:	Software application A	^3.0	Zabbix logo	Remove
Default			Hub_(48)	

Mass update elements

Selected elements

TYPE	NAME
Host	A test host
Host	Another host

Label

Label location Default ▾

Automatic icon selection

Icon (default) Cloud_(24) ▾

Icon (problem) Default ▾

Icon (maintenance) Default ▾

Icon (disabled) Default ▾



Owner

Name

Width

Height

Background image

Automatic icon mapping [show icon mappings](#)

Icon highlight

Mark elements on trigger status change

Expand single problem

Advanced labels

Icon label type

Icon label location

Problem display

Minimum trigger severity

URLs

NAME	URL	ELEMENT	ACTION
<input type="text"/>	<input type="text"/>	<input type="text" value="Host"/>	Remove

[Add](#)



Advanced labels

Host group label type

Host label type

Trigger label type

Map label type

Image label type

Map element

Type

Show

Area type

Placing algorithm

Label

Label location

Host group

Host group elements



A test host
OK



Another host
3 Problems

Map element

Type

Show

Area type

Area size Width Height

Placing algorithm

Label

Host group elements



FUNCTION

avg
min
avg
max
last

Map **Sharing**

Type Private **Public**

Type Private **Public**

List of user group shares

USER GROUPS	PERMISSIONS	ACTION
Add		

List of user shares

USERS	PERMISSIONS	ACTION
monitoring_user (monitoring user)	Read-only Read-write	Remove
advanced_user (advanced user)	Read-only Read-write	Remove
Add		

Owner Admin (Zabbix Administrator)

NAME ▲	WIDTH	HEIGHT	ACTIONS
First map	600	225	Properties Constructor
Host group elements	800	600	Properties Constructor

01 **02** **03** **04**
05 **06** **07** **08**

FUNCTION

avg	▼
min	
avg	
max	
last	

Chapter 10: Visualizing the Data with Screens and Slideshows

Owner

Name

Columns

Rows

+

+

+

+

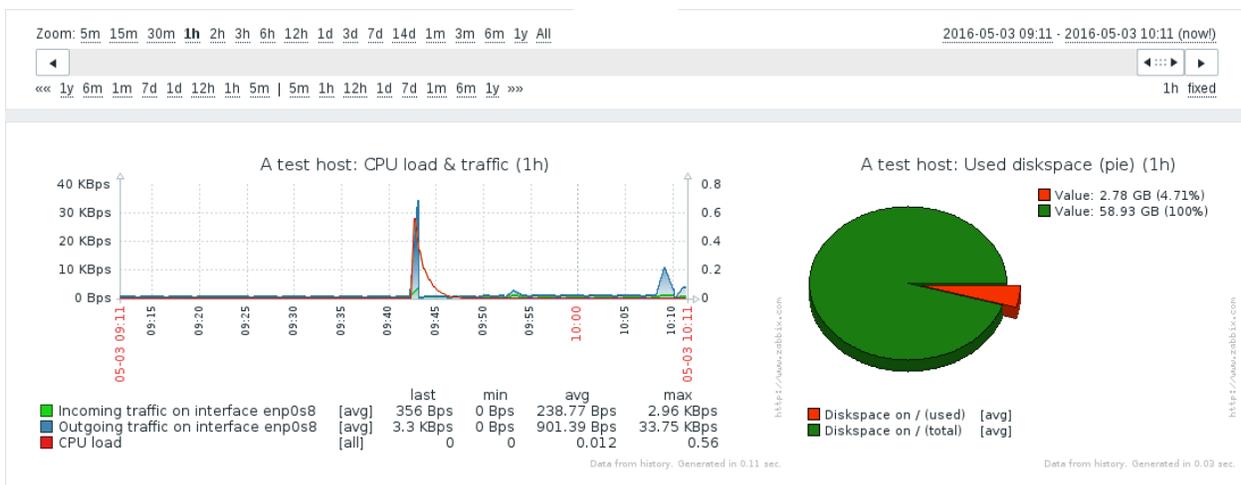
Change

-

+

-

-



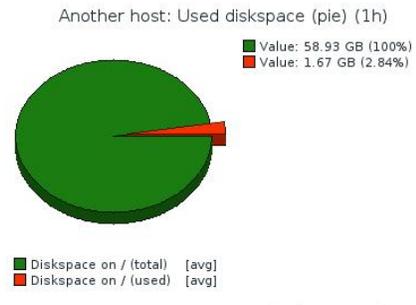
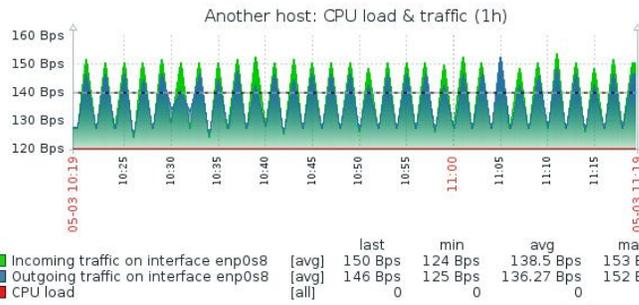
Dynamic item

Screens Group Host

[All screens](#) / [Local servers](#)

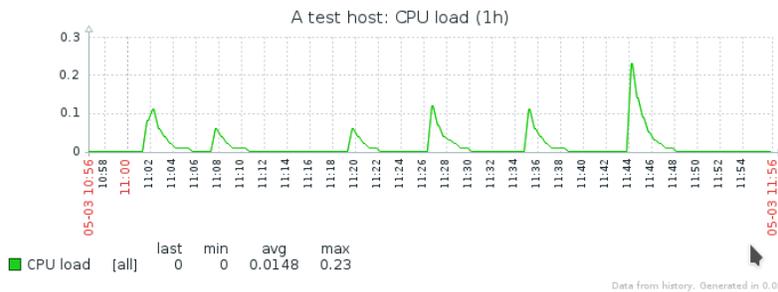
All screens / Local servers

Filter ▼



2016-05-02 15:21:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 15:10:00	Another host	SMTP service is down	OK	Average
		SMTP service is down	PROBLEM	Average
		SMTP service is down	OK	Average
		SMTP service is down	PROBLEM	Average
		SMTP service is down	OK	Average

Updated: 11:56:37



Change

Triggers info

20 Ok
0 Not classified
0 Information
0 Warning
0 Average
0 High
0 Disaster

Updated: 12:28:31

Triggers overview

Group: Linux servers

TRIGGERS

TRIGGER	ANOTHER HOST	A TEST HOST
CPU load too high on (HOST.NAME) for last 3 minutes (over {\$CPU_LOAD_THRESHOLD})		
Critical error from SNMP trap		
Incorrect clock on (HOST.NAME)		
Latency too high on (HOST.NAME)		
Link down for 10 minutes on (HOST.NAME)		
Link down for 5 minutes on (HOST.NAME)		
One SSH service is down		
SMTP service is down	1	
SNMP trap has arrived on (HOST.NAME)		
Testfile is missing	1	
Web service is down		

Updated: 12:28:31

History of events

TIME	HOST	DESCRIPTION	VALUE	SEVERITY
2016-05-03 09:43:00	Another host	SMTP service is down	OK	Average
2016-05-03 09:42:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-03 01:57:00	Another host	SMTP service is down	OK	Average
2016-05-03 01:05:04	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 22:48:00	Another host	SMTP service is down	OK	Average
2016-05-02 22:47:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 22:14:00	Another host	SMTP service is down	OK	Average
2016-05-02 22:13:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 20:30:00	Another host	SMTP service is down	OK	Average
2016-05-02 20:29:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 19:50:30	Another host	SMTP service is down	OK	Average
2016-05-02 19:50:04	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 18:14:30	Another host	SMTP service is down	OK	Average
2016-05-02 18:14:04	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 18:36:00	Another host	SMTP service is down	OK	Average
2016-05-02 18:35:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 16:14:00	Another host	SMTP service is down	OK	Average
2016-05-02 16:13:34	Another host	SMTP service is down	PROBLEM	Average
2016-05-02 15:22:00	Another host	SMTP service is down	OK	Average
2016-05-02 15:21:34	Another host	SMTP service is down	PROBLEM	Average

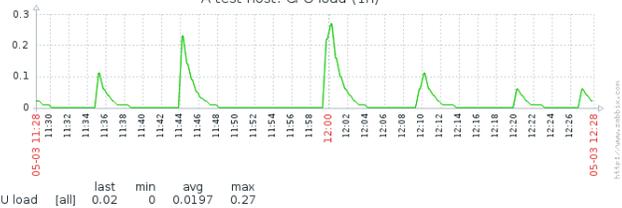
Updated: 12:28:31

Zabbix server info

Users (online): 4(1)
Logged in as Admin
Zabbix server is running
Hosts (m/n/t): 47(51/41)
Items (m/d/n): 47(46/0/1)
Triggers (e/d/p/o): 20(20/0)/0/20

Updated: 12:28:31

A test host: CPU load (1h)

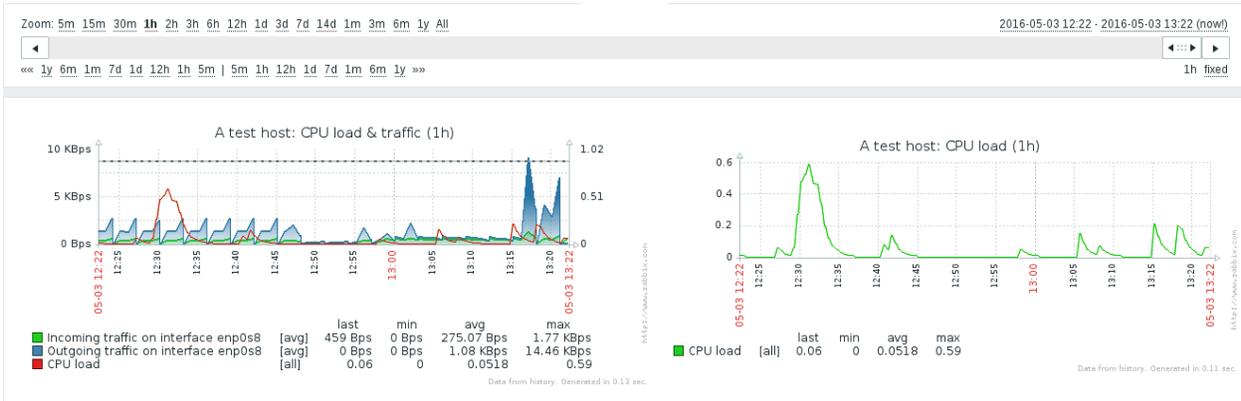


Data from history. Generated in 0.05 sec.

- Action log
- Clock
- Data overview
- Graph**
- Graph prototype
- History of events
- Host group issues
- Host issues
- Hosts info
- Map
- Plain text
- Screen
- Server info
- Simple graph
- Simple graph prototype
- System status
- Triggers info
- Triggers overview
- URL

- Clock
- Graph**
- Graph prototype
- Plain text
- Simple graph
- Simple graph prototype
- URL

- SCRIPTS
- Detect operating system
 - Management ▶
 - Ping
 - Top CPU using processes
 - Traceroute
-
- GO TO
- Host inventory
 - Latest data
 - Triggers
 - Graphs
 - Host screens



Owner

Name

Default delay (in seconds)

SCREEN	DELAY	ACTION
1 Local servers	<input type="text" value="default"/>	Remove
2 Experimental screen	<input type="text" value="5"/>	Remove

[Add](#)

Slide shows Group Host

- REFRESH TIME MULTIPLIER
- x0.25
 - x0.5
 - ✓ x1
 - x1.5
 - x2
 - x3
 - x4
 - x5

Auto-login

Auto-logout (min 90 seconds)

Refresh (in seconds)

Rows per page

URL (after login)

Chapter 11: Advanced Item Monitoring

Name

Type ▼

Key

Type of information ▼

Update interval (in sec)

First logfile 2016-05-09 10:01:05 2016-08-13 13:03:05 third log ...

TIMESTAMP	LOCAL TIME	VALUE
2016-05-09 10:01:05		2016-08-13 13:03:05 third log entry
2016-05-09 10:01:05		2016-08-13 13:02:04 second log entry
2016-05-09 10:01:05		2016-08-13 13:01:03 a log entry

Second logfile 2016-05-09 11:42:15 2016-08-13 13:04:05 fourth log...

TIMESTAMP	LOCAL TIME	VALUE
2016-05-09 13:56:55		2015-12-31 03:00:00 rotated second
2016-05-09 13:56:25		2016-08-30 03:00:00 rotated first

Multiple PROBLEM events generation

TIMESTAMP	LOCAL TIME	VALUE
2016-05-09 14:25:01		15445
2016-05-09 14:25:01		5445
2016-05-09 14:25:01		445

Log time format

TIMESTAMP	LOCAL TIME	VALUE
2016-05-09 15:31:52	2016-05-09 15:30:13	2016-05-09 15:30:13 a timestamped log entry

Selected

as Red
as Red
as Green
as Blue

Items list

A test host: Second logfile

Select rows with value like

Selected

Diskspace on / (free) 2016-05-09 17:40:05 56.16 GB

HOST	NAME ▲	LAST CHECK	LAST VALUE
<u>Another host</u>	- other - (1 Item)		
	CPU load	2016-05-09 21:06:34	0.94
<u>A test host</u>	- other - (2 Items)		
	Average system load for both servers	2016-05-09 21:06:06	0.46
	CPU load	2016-05-09 21:06:25	0.01

Name

Type

Key

Type of information

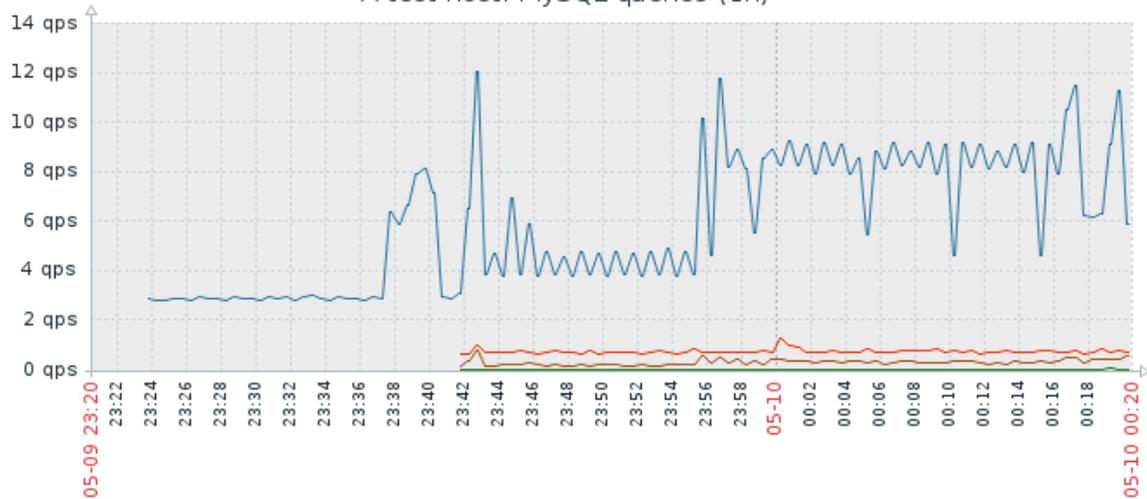
HOST	NAME ▲	LAST CHECK	LAST VALUE
<u>Another host</u>	- other - (1 item)		
	CPU load	2016-05-09 21:16:34	1.06
<u>A test host</u>	- other - (3 items)		
	Average system load for both servers	2016-05-09 21:16:36	0.54
	Average system load for Linux servers	2016-05-09 21:16:37	0.54
	CPU load	2016-05-09 21:16:55	0

	Open connections	2016-05-09 21:55:55	33
	Open connections	2016-05-10 05:14:53	48
	Open connections in ESTABLISHED state	2016-05-10 05:14:23	2
	Open connections in TIME_WAIT state	2016-05-10 05:14:23	45

NAME ▲	LAST CHECK	LAST VALUE
MySQL (1 item)		
MySQL select queries per second	2016-05-09 23:36:52	2.96 qps

NAME ▲	TRIGGERS	KEY
MySQL delete queries per second		mysql.queries[delete]
MySQL insert queries per second		mysql.queries[insert]
MySQL update queries per second		mysql.queries[update]
MySQL select queries per second		mysql.queries[select]

A test host: MySQL queries (1h)



		last	min	avg	max
MySQL delete queries per second	[avg]	0 qps	0 qps	0.0009 qps	0.0665 qps
MySQL insert queries per second	[avg]	0.7313 qps	0.6315 qps	0.7403 qps	1.23 qps
MySQL select queries per second	[avg]	5.88 qps	2.79 qps	5.92 qps	12.07 qps
MySQL update queries per second	[avg]	0.5651 qps	0.133 qps	0.2954 qps	0.7647 qps

Data from history. Generated in 0.07 sec.

Certificate expiry time on www.zabbix.com

2016-05-09 23:59:21

2019-01-02 12:35:38

Name

Mappings

VALUE	MAPPED TO	ACTION
<input type="text" value="0"/>	= <input type="text" value="Expires soon"/>	Remove
<input type="text" value="1"/>	= <input type="text" value="Does not expire yet"/>	Remove
Add		

Certificate expiry status for www.zabbix.com

2016-05-10 00:31:22

Does not expire yet (1)

NAME ▲	LAST CHECK	LAST VALUE	CHANGE
--------	------------	------------	--------

- other - (1 item)

Amount of persons in the room	2016-05-10 00:35:18	2	+1
-------------------------------	---------------------	---	----

Allowed hosts

Name

Type

Key

Host interface

Authentication method

User name

Password

Executed script

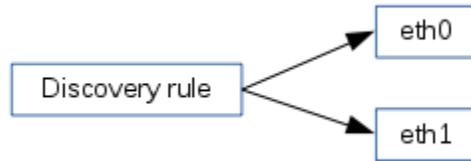
Filter ▲

Items list

Select rows with value like

Selected

Chapter 12: Automating Configuration



Name

Type

Key

Update interval (in sec)

KEY	INTERVAL	TYPE	STATUS	INFO
net.if.discovery	2m	Zabbix agent	Enabled	✖

Cannot create item: item with the same key "net.if.in[enp0s8]" already exists.
 Cannot create item: item with the same key "net.if.in[lo]" already exists.

Name

Type

Key

Interface discovery: Incoming traffic on lo

Interface discovery: Incoming traffic on enp0s8

Interface discovery: Incoming traffic on enp0s3

Warning	<u>Interface discovery</u> : Incoming traffic too high for enp0s3 on {HOST.NAME}	{A test host:net.if.in[enp0s3].last()}>5K
Warning	<u>Interface discovery</u> : Incoming traffic too high for enp0s8 on {HOST.NAME}	{A test host:net.if.in[enp0s8].last()}>5K
Warning	<u>Interface discovery</u> : Incoming traffic too high for lo on {HOST.NAME}	{A test host:net.if.in[lo].last()}>5K

Items	NAME	FUNCTION	DRAW STYLE	Y AXIS SIDE	COLOUR	ACTION
1:	C_Template_Linux: Incoming traffic on {#IFNAME}	avg	Gradient line	Left	1A7C11	Remove
2:	C_Template_Linux: Outgoing traffic on {#IFNAME}	avg	Gradient line	Left	F63100	Remove

[Add](#) [Add prototype](#)

Interface discovery: Traffic on enp0s3

Interface discovery: Traffic on enp0s8

Interface discovery: Traffic on lo

Discovery rule **Filters**

Type of calculation

Filters	LABEL	MACRO	REGULAR EXPRESSION	ACTION
A		{#IFNAME}	matches ^([^\.^\ ^\^o] o.+)\$	Remove

[Add](#)

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

The item is not discovered anymore and will be deleted in 29d 23h 57m (on 2016-06-10 at 05:54). ✕

Keep lost resources period (in days)

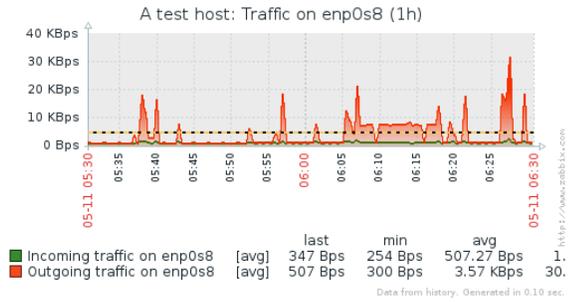
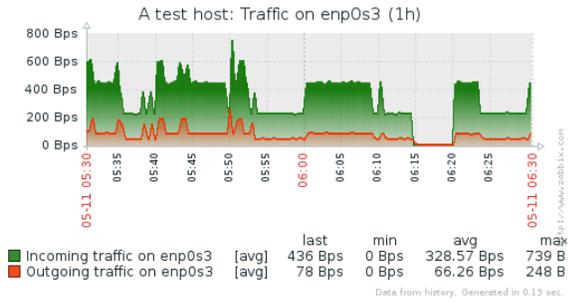
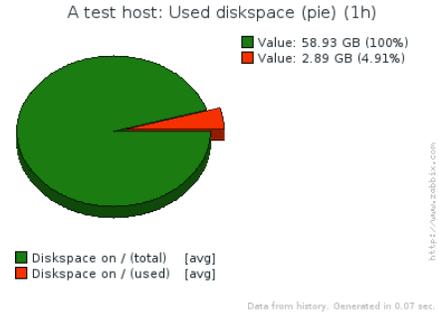
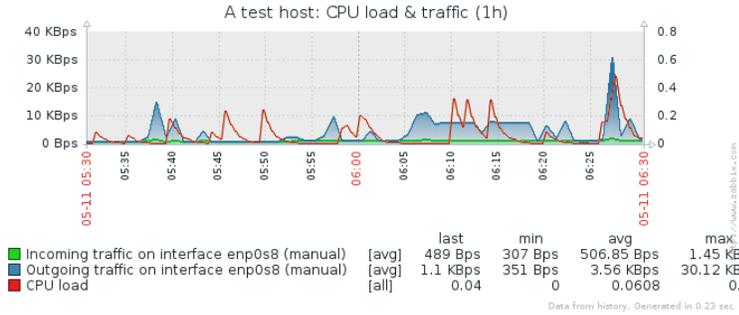
Filesystem discovery: Free space on /

Resource

Graph prototype [Select](#)

Max columns

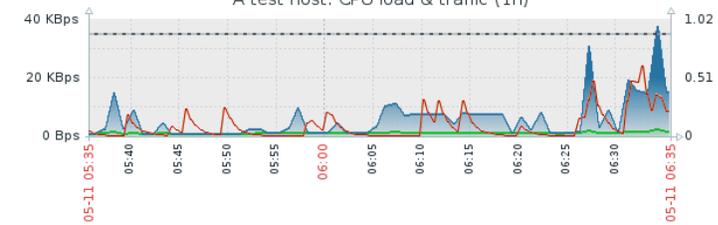
Width





Debug

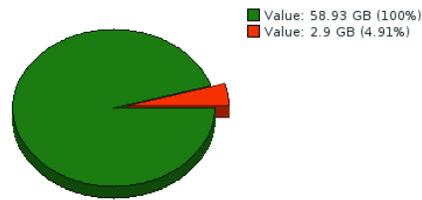
A test host: CPU load & traffic (1h)



█ Incoming traffic on interface enp0s8 (manual)	[avg]	865 Bps	307 Bps	572.83 Bps	1.68
█ Outgoing traffic on interface enp0s8 (manual)	[avg]	14.56 kBps	351 Bps	5.2 kBps	37.15
█ CPU load	[all]	0.21	0	0.0869	

Data from history. Generated in 0.25 sec.

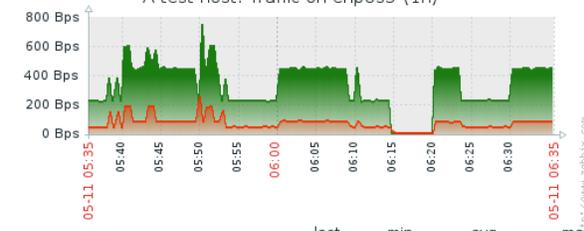
A test host: Used disk space (pie) (1h)



█ Diskspace on / (total)	[avg]	58.93 GB (100%)
█ Diskspace on / (used)	[avg]	2.9 GB (4.91%)

Data from history. Generated in 0.09 sec.

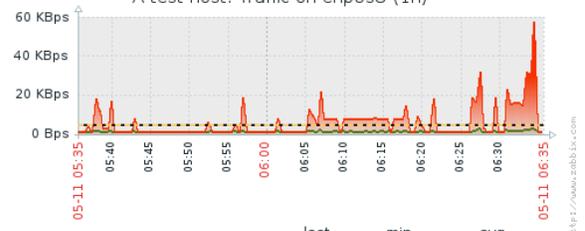
A test host: Traffic on enp0s3 (1h)



█ Incoming traffic on enp0s3	[avg]	444 Bps	0 Bps	325.49 Bps	739 B
█ Outgoing traffic on enp0s3	[avg]	73 Bps	0 Bps	63.92 Bps	248 B

Data from history. Generated in 0.19 sec.

A test host: Traffic on enp0s8 (1h)



█ Incoming traffic on enp0s8	[avg]	346 Bps	254 Bps	573.46 Bps	1.
█ Outgoing traffic on enp0s8	[avg]	535 Bps	300 Bps	5.25 kBps	56.

Data from history. Generated in 0.15 sec.

Graph prototype

- Clock
- Graph
- Graph prototype
- Plain text
- Simple graph
- Simple graph prototype
- URL

Name

Type

Key

Host interface

SNMP OID

SNMP community

Port

Update interval (in sec)

[SNMP interface discovery](#): Incoming traffic on interface enp0s3 (SNMP LLD) lld.ifInOctets[enp0s3]

[SNMP interface discovery](#): Incoming traffic on interface lo (SNMP LLD) lld.ifInOctets[lo]

[SNMP interface discovery](#): Incoming traffic on interface enp0s8 (SNMP LLD) lld.ifInOctets[enp0s8]

[MySQL database discovery](#): Database information_schema size mysql.db.size[information_schema]

[MySQL database discovery](#): Database zabbix size mysql.db.size[zabbix]

NAME ▲	LAST CHECK	LAST VALUE
MySQL (6 Items)		
Database information_schema size	2016-05-11 10:45:42	144 KB
Database zabbix size	2016-05-11 10:45:42	77.89 MB

Character string included
 Any character string included
 Character string not included
 Result is TRUE
 Result is FALSE



Name

EXPRESSION TYPE	EXPRESSION	DELIMITER	CASE SENSITIVE	ACTION
Result is FALSE	<input type="text" value="^!o\$"/>		<input type="checkbox"/>	Remove
Add				

[Expressions](#) **Test**

Test string

[Test expressions](#)

Result	EXPRESSION TYPE	EXPRESSION	RESULT
	Character string included	A	TRUE
	Result is TRUE	^[0-9]	TRUE
	Result is FALSE	[0-9]\$	FALSE
	Combined result		FALSE

[Add](#)

[Cancel](#)

[File systems for discovery](#) 1 » `^(btrfs|ext2|ext3|ext4|jfs|reiser|xfs|ufs|jfs2|vxfs|hfs|ntfs|fat32|zfs)$` [Result is TRUE]

[Network interfaces for discovery](#) 1 » `^!o$` [Result is FALSE]

2 » `^Software Loopback Interface` [Result is FALSE]

[Storage devices for SNMP discovery](#) 1 » `^(Physical memory|Virtual memory|Memory buffers|Cached memory|Swap space)$` [Result is FALSE]

Name

Discovery by proxy

IP range

Delay (in sec)

Checks [Edit](#) [Remove](#)
[New](#)

Device uniqueness criteria IP address

Enabled

DISCOVERED DEVICE ▲	MONITORED HOST	UPTIME/DOWNTIME	ICMP PING
A test discovery (2 devices)			
192.168.56.10 (testhost)		00:23:22	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>
192.168.56.11	Another host	00:23:20	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>
	Checks	<input type="text" value="ICMP ping"/> Edit Remove <input type="text" value="SMTP"/> Edit Remove <input type="text" value="FTP"/> Edit Remove	

DISCOVERED DEVICE ▲	MONITORED HOST	UPTIME/DOWNTIME	ICMP PING	SMTP
A test discovery (2 devices)				
192.168.56.10 (testhost)		02:07:13	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>
192.168.56.11	Another host	02:07:11	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>	<div style="width: 100%; height: 15px; background-color: #28a745;"></div>

ICMP PING	SMTP
<div style="background-color: #28a745; color: white; padding: 5px; text-align: center;"> UPTIME 2h 7m 13s </div>	

- Discovery check
- Discovery object
- Discovery rule
- Discovery status
- Host IP
- Proxy
- Received value
- Service port
- Service type
- Uptime/Downtime

Action Conditions **Operations**

Action operations

DETAILS

Add to host groups: Linux servers

[New](#)

ACTION

[Edit](#) [Remove](#)

Add

Cancel

In groups

Discovered hosts
Linux servers

Send message

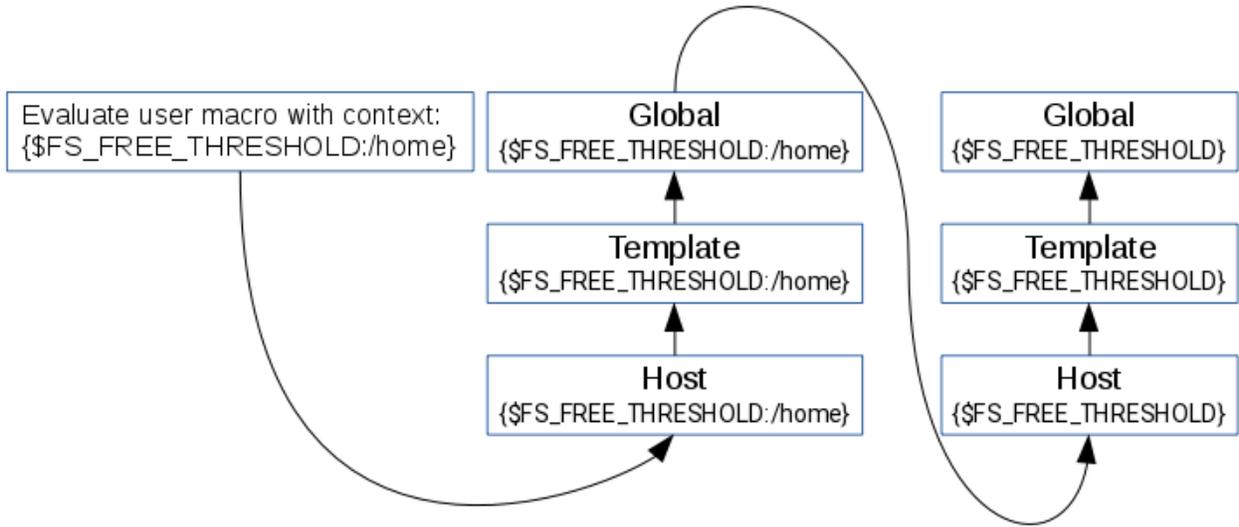
- Remote command
- Add host
- Remove host
- Add to host group
- Remove from host group
- Link to template
- Unlink from template
- Enable host
- Disable host
- Set host inventory mode

Device uniqueness criteria

IP address

Zabbix agent "system.uname"

Host metadata
Host name
Proxy



Chapter 13: Monitoring Web Pages

Name

URL

Post

Variables

Headers

Follow redirects

Retrieve only headers

Timeout

Required string

Required status codes

Steps	NAME	TIMEOUT	URL	REQUIRED	STATUS CODES	ACTION
⋮	1: First page	15 sec	http://www.openstreetmap.org/	OpenStreetMap is a map of the world, created by people like you	200	Remove
⋮	2: Traces	15 sec	http://www.openstreetmap.org/traces/	Public GPS traces	200	Remove
	Add					

HOST	NAME ▲	NUMBER OF STEPS	LAST CHECK	STATUS
OpenStreetMap	Main page	2	2016-05-13 00:46:22	OK

Details of web scenario: Main page



STEP	SPEED	RESPONSE TIME	RESPONSE CODE	STATUS
First page	31.29 KBps	429.7ms	200	OK
Traces	80.01 KBps	302.5ms	200	OK Debug
TOTAL		732.2ms		OK

Filter ▲

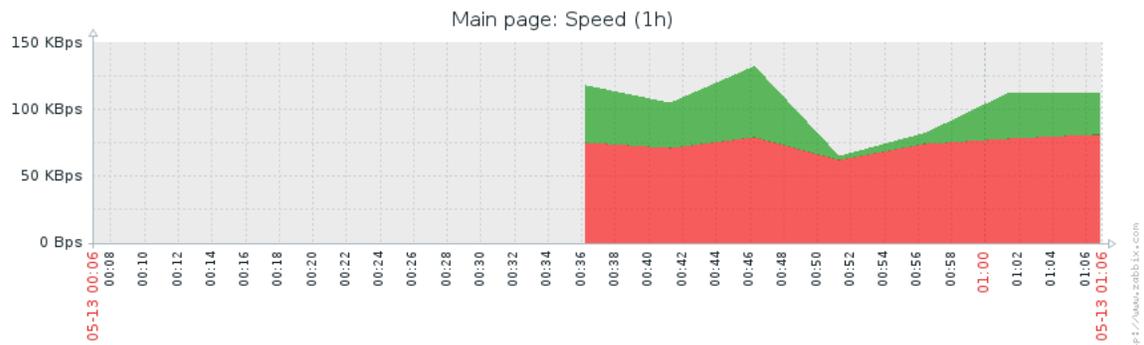
Zoom: 5m 15m 30m 1h All

2016-05-13 00:31 - 2016-05-13 01:06 (now)



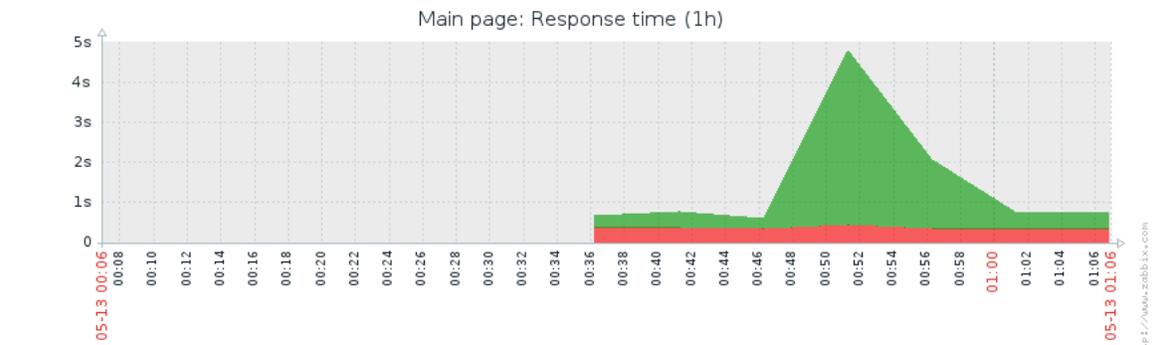
«« 1h 5m | 5m 1h »»

35m fixed



	last	min	avg	max
Download speed for step "First page" of scenario "Main page".	[avg] 31.29 KBps	3.09 KBps	29.39 KBps	53.07 KBps
Download speed for step "Traces" of scenario "Main page".	[avg] 80.01 KBps	61.4 KBps	73.68 KBps	80.01 KBps

Data from history. Generated in 0.07 sec.



	last	min	avg	max
Response time for step "First page" of scenario "Main page".	[avg] 429.7ms	253.4ms	1s 120.01ms	4s 348.1ms
Response time for step "Traces" of scenario "Main page".	[avg] 302.5ms	302.5ms	338.64ms	409.5ms

Data from history. Generated in 0.06 sec.

NAME ▲	LAST CHECK	LAST VALUE
Webpage (9 Items)		
Download speed for scenario "Main page".	2016-05-13 01:16:37	28.78 KBps
Download speed for step "First page" of scenario "Main page".	2016-05-13 01:16:37	3.16 KBps
Download speed for step "Traces" of scenario "Main page".	2016-05-13 01:16:37	54.41 KBps
Failed step of scenario "Main page".	2016-05-13 01:16:37	0
Last error message of scenario "Main page".		
Response code for step "First page" of scenario "Main page".	2016-05-13 01:16:37	200
Response code for step "Traces" of scenario "Main page".	2016-05-13 01:16:37	200
Response time for step "First page" of scenario "Main page".	2016-05-13 01:16:37	4s 257.7ms
Response time for step "Traces" of scenario "Main page".	2016-05-13 01:16:37	439.2ms

Chromium 37.0 (Linux)

Opera

- Opera 25.0 (Windows)
- Opera 25.0 (Mac)
- Opera 12.16 (Linux)
- Opera Mobile 12.02
- Opera Mini 9.80

Safari

- Safari 7.0.6 (Mac)
- Safari 5.1.7 (Windows)
- Safari 6.0 (iPad)
- Safari 5.0.2 (iPhone)

Others

- Zabbix
- Konqueror 4.14.2
- Lynx 2.8.8rel.2
- Links 2.8
- Android Webkit Browser 4.4.4
- Googlebot 2.1
- other ...

HTTP proxy

Steps

	NAME	TIMEOUT	URL	REQUIRED	STATUS CODES	ACTION
⋮	1: First page	15 sec	http://127.0.0.1/zabbix/index.php	Zabbix SIA	200	Remove
⋮	2: Log in	15 sec	http://127.0.0.1/zabbix/index.php		200	Remove
⋮	3: Check login	15 sec	http://127.0.0.1/zabbix/index.php	top-nav-profile	200	Remove
⋮	4: Log out	15 sec	http://127.0.0.1/zabbix/index.php?reconnect=1&sid={sid}		200	Remove
⋮	5: Check logout	15 sec	http://127.0.0.1/zabbix/index.php	Sign in	200	Remove
	Add					

Details of web scenario: Zabbix frontend



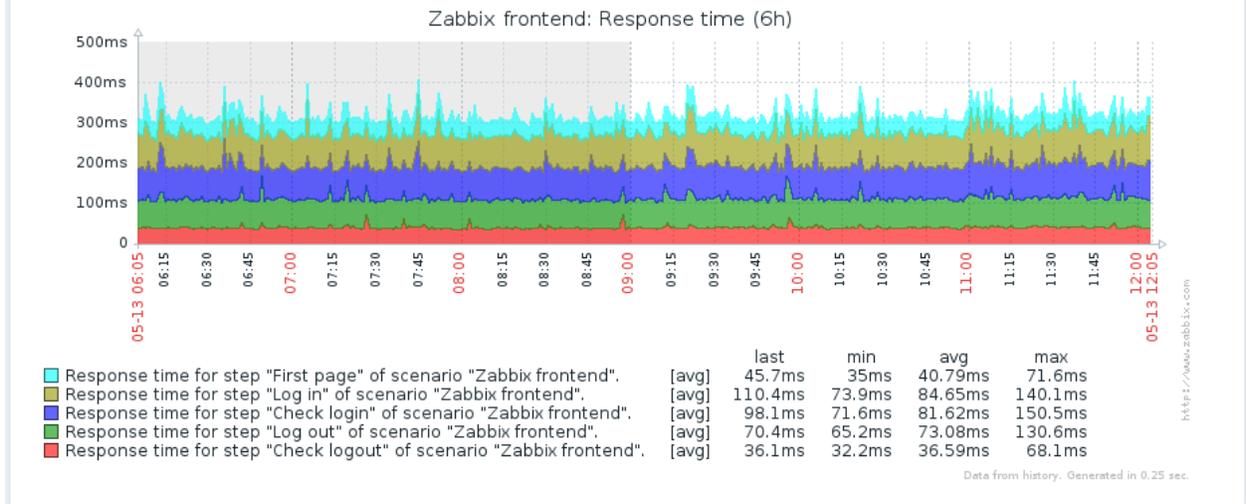
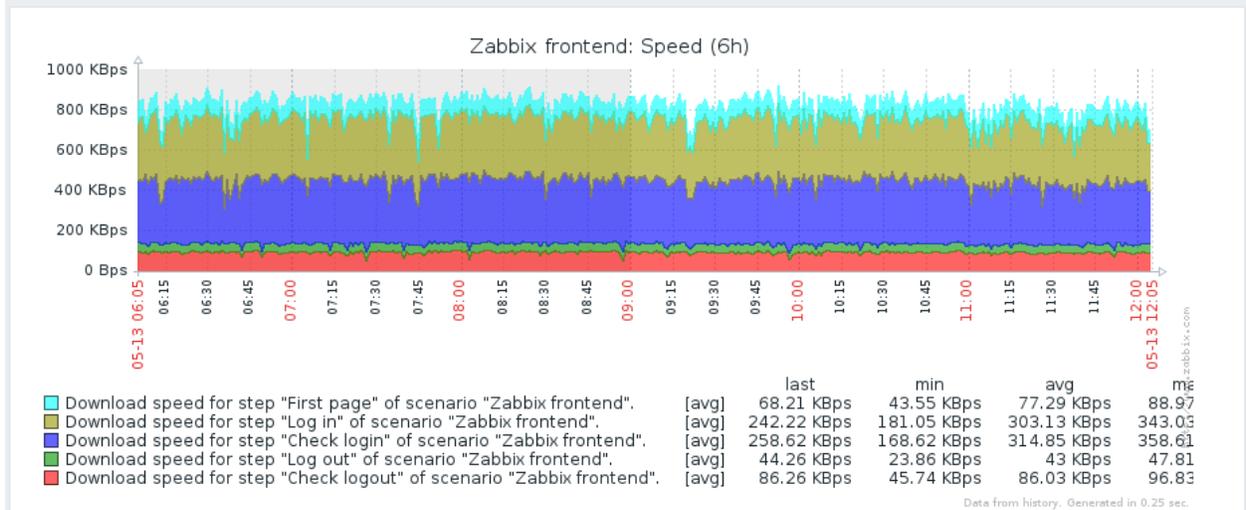
STEP	SPEED	RESPONSE TIME	RESPONSE CODE	STATUS
First page	68.21 KBps	45.7ms	200	OK
Log in	242.22 KBps	110.4ms	200	OK
Check login	258.62 KBps	98.1ms	200	OK
Log out	44.26 KBps	70.4ms	200	OK
Check logout	86.26 KBps	36.1ms	200	OK
TOTAL		360.7ms		OK

Filter ▲

Zoom: [5m](#) [15m](#) [30m](#) [1h](#) [2h](#) [3h](#) [6h](#) [All](#)

2016-05-13 06:05 - 2016-05-13 12:05 (now!)

Navigation controls: back, forward, search, and zoom buttons. Current view: 6h fixed.



NAME ▲	LAST CHECK	LAST VALUE
OSM (3 Items)		
OpenStreetMap is	2016-05-13 13:41:21	a map of the world
OpenStreetMap main page	2016-05-13 13:41:20	HTTP/1.1 200 OK Date: Fri, 13 May 2016 10:41:20 GMT ...
OpenStreetMap main page load time	2016-05-13 13:41:21	604.8ms

Scenario Steps Authentication

HTTP authentication

SSL verify peer

SSL verify host

SSL certificate file

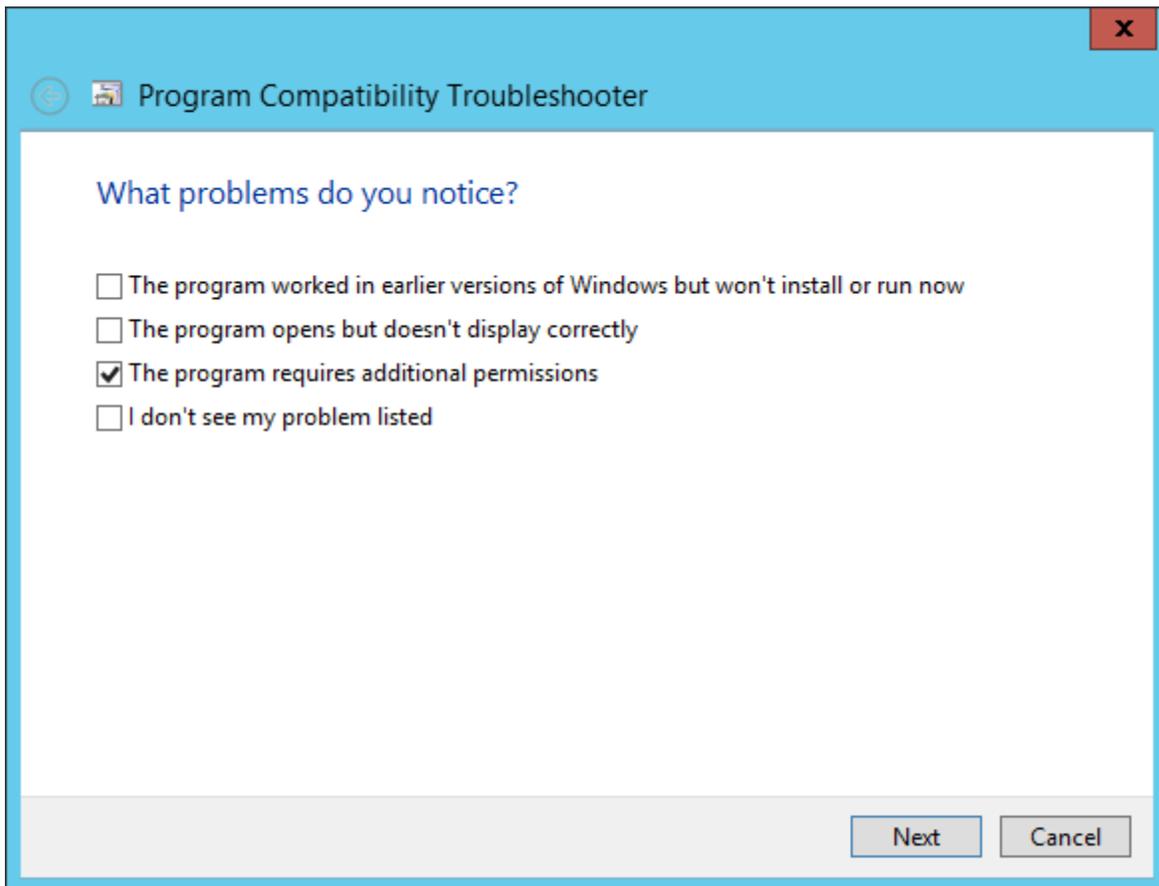
SSL key file

SSL key password

HTTP authentication



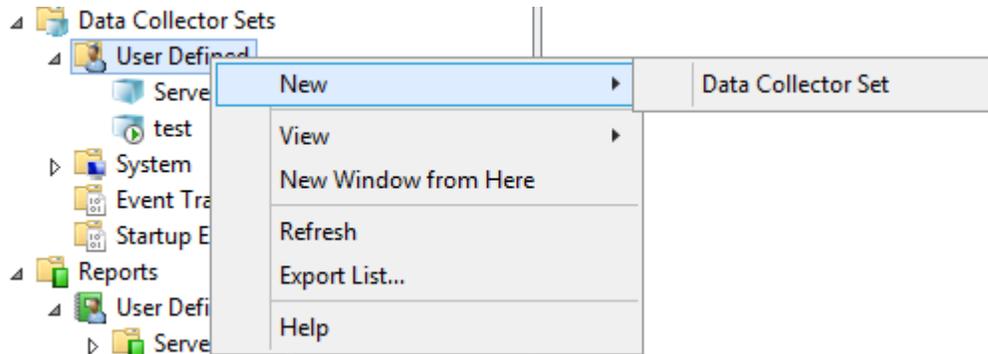
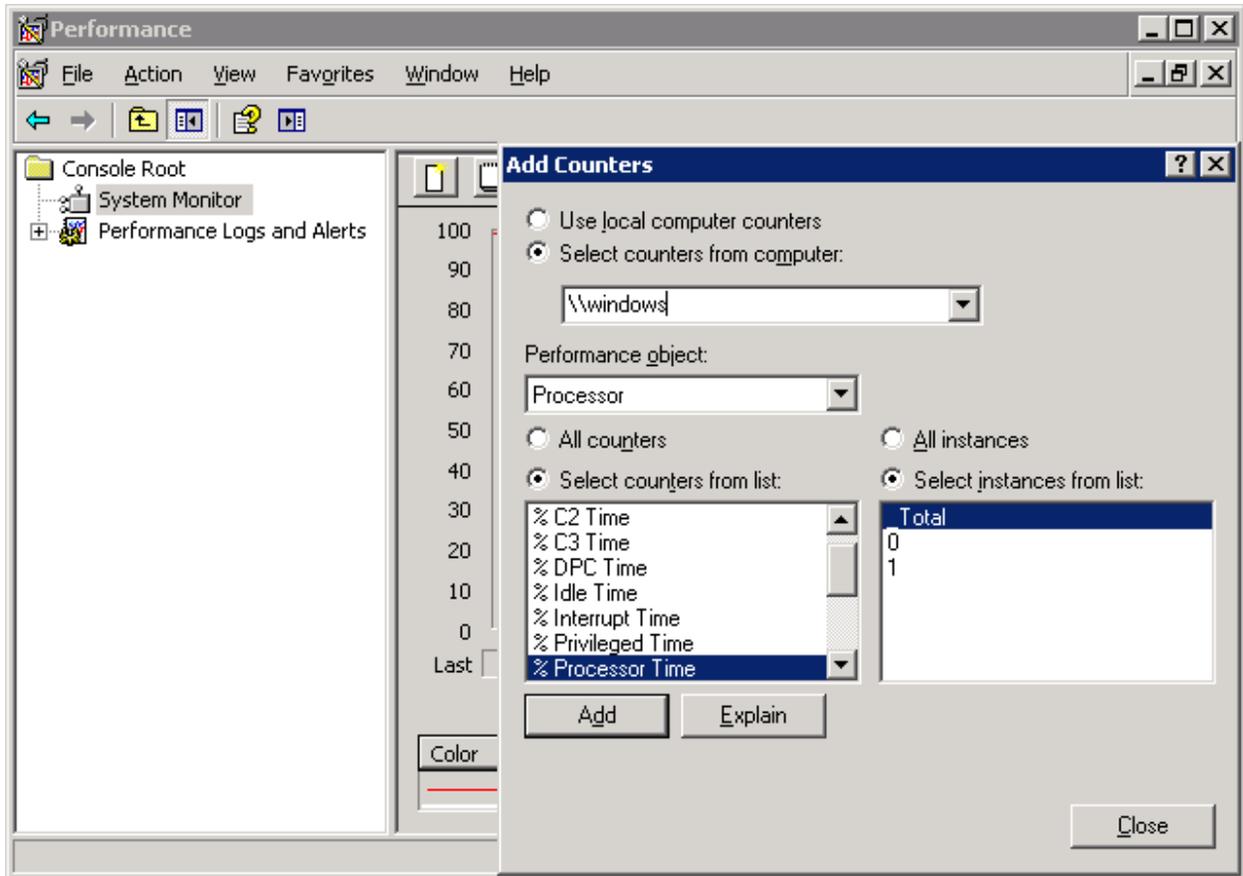
Chapter 14: Monitoring Windows

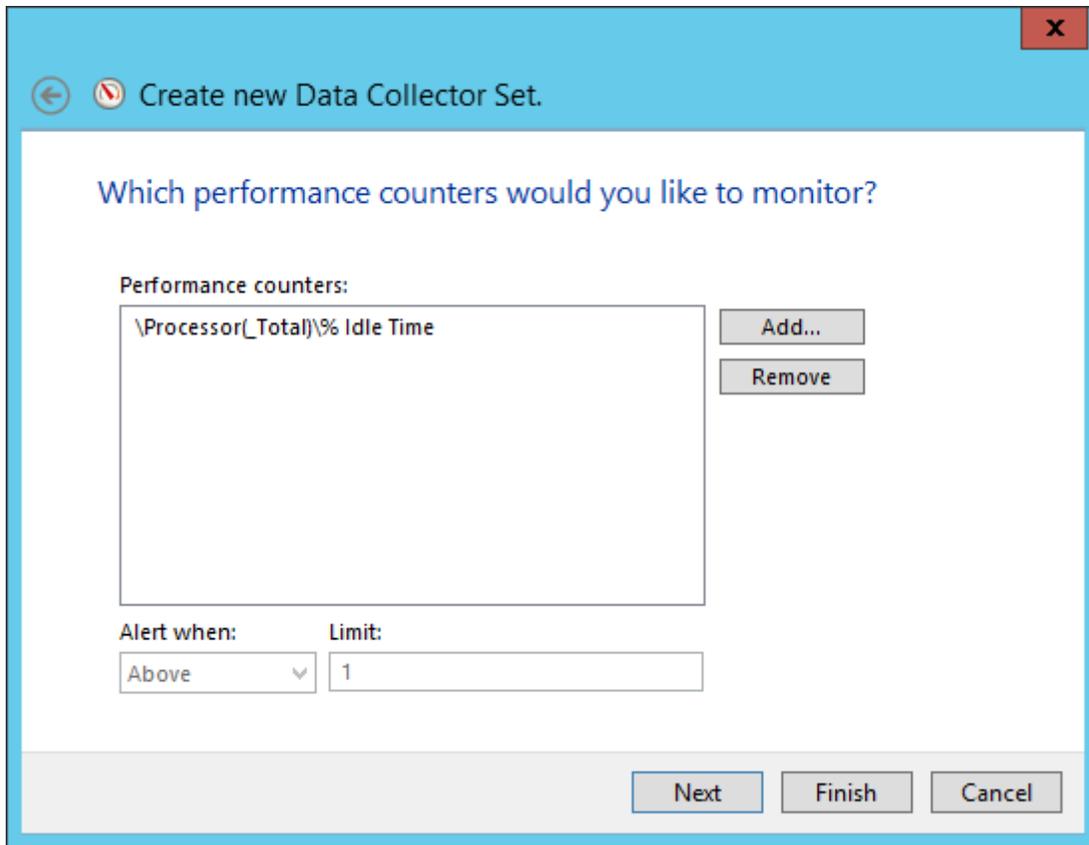


Name	Description	Status	Startup Type	Log On As
Zabbix Agent	Provides system monitoring		Automatic	Local System

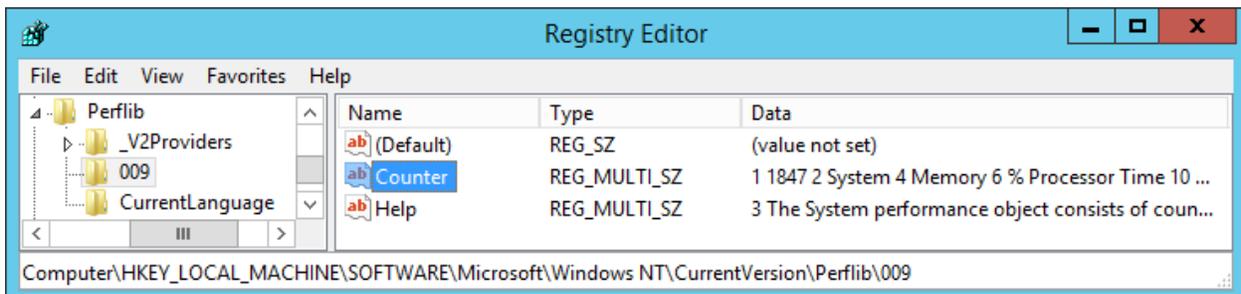
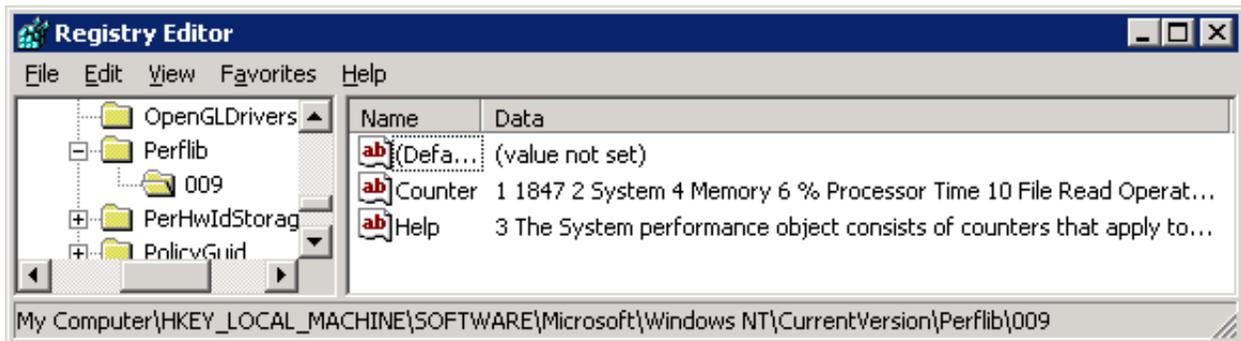
Name	Description	Status	Startup Type	Log On As
Zabbix Agent	Provides system monitoring	Running	Automatic	Local System

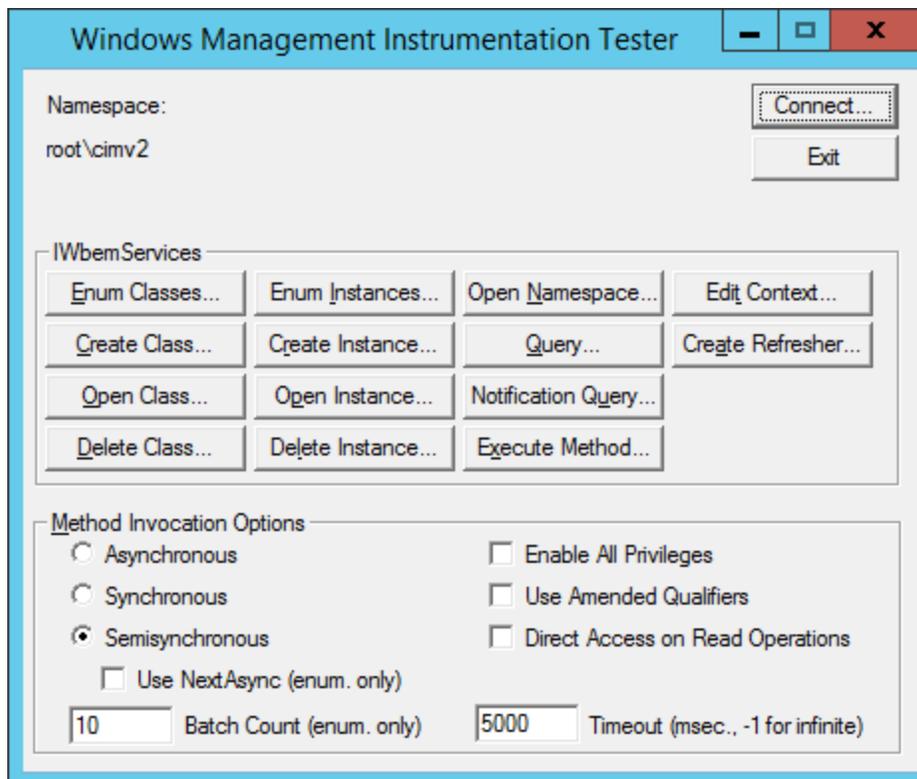
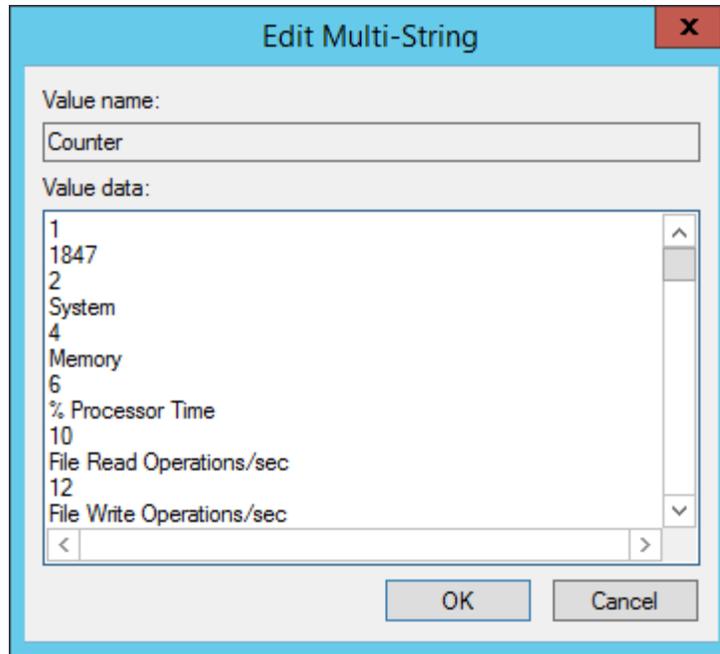
HOST	NAME ▲	LAST CHECK	LAST VALUE
<u>Windows host</u>	- other - (1 Item)		
	CPU load	2016-05-14 17:15:52	0.07

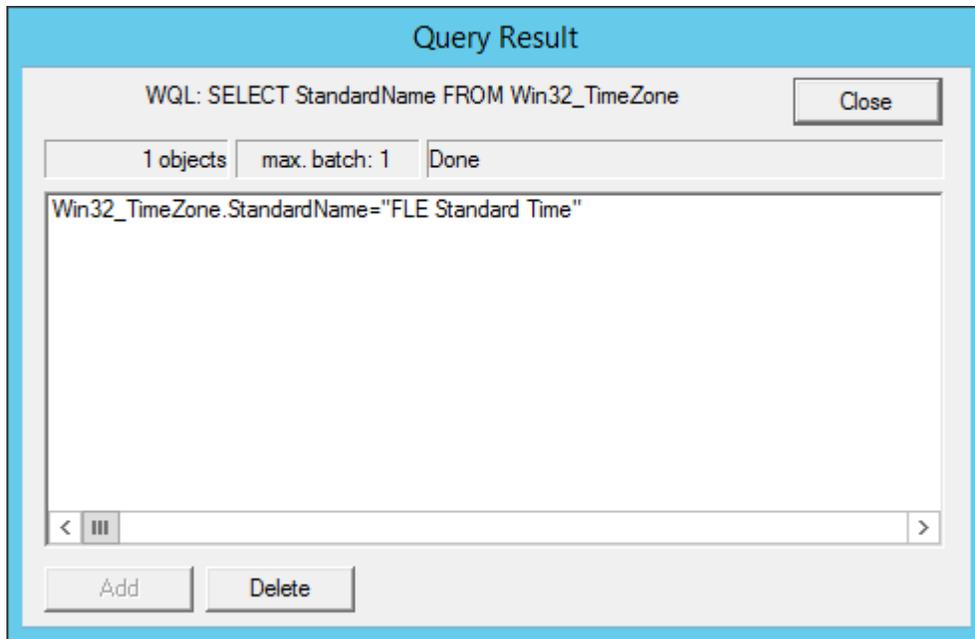




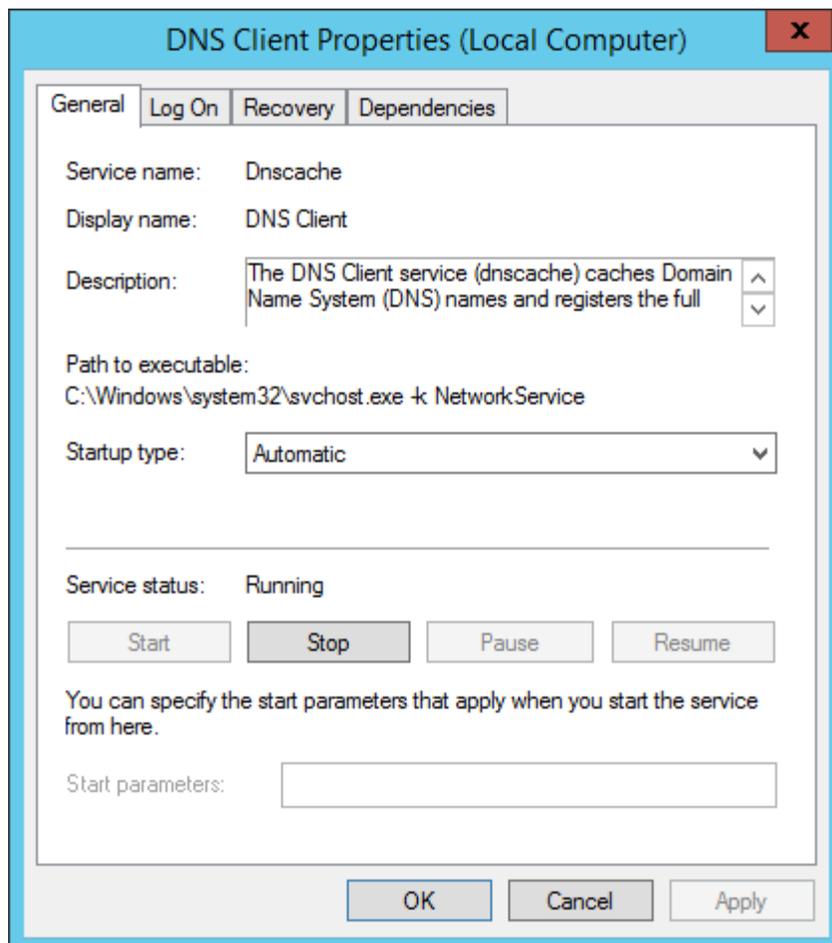
CPU idle time, % 2016-05-14 17:20:24 97.42 %







Time zone 2016-05-14 18:06:54 FLE Standard Time



DNS client service state

2016-05-14 18:20:25 0

Windows service state

- 0 ⇒ Running
- 1 ⇒ Paused
- 2 ⇒ Start pending
- 3 ⇒ Pause pending
- 4 ⇒ Continue pending
- 5 ⇒ Stop pending
- 6 ⇒ Stopped
- 7 ⇒ Unknown
- 255 ⇒ No such service

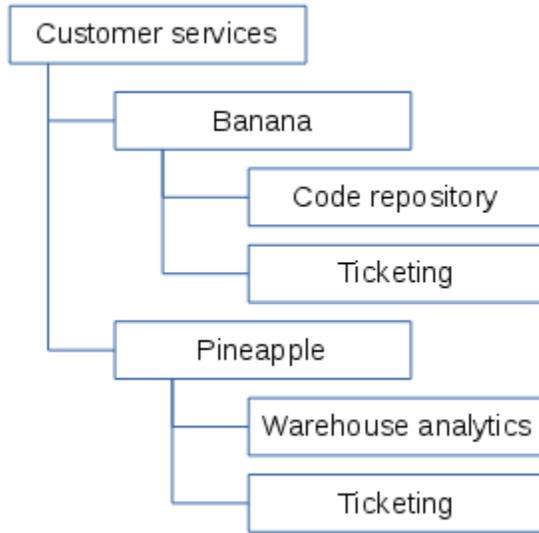
NS client service state

2016-05-14 18:23:55 Running (0)

SEVERITY	STATUS	INFO	LAST CHANGE ▼	AGE	ACK	HOST	NAME
Warning	PROBLEM		2016-05-14 19:09:25	20s	No 1	Windows host	DNS client service down on Windows host
		<u>Windows service discovery</u> : Service SysMain description					service.info[SysMain,description]
		<u>Windows service discovery</u> : Service swprv description					service.info[swprv,description]
		<u>Windows service discovery</u> : Service TabletInputService description					service.info[TabletInputService,description]
		<u>Windows service discovery</u> : Service svsvc description					service.info[svsvc,description]
		<u>Windows service discovery</u> : Service SystemEventsBroker description					service.info[SystemEventsBroker,description]
		<u>Windows service discovery</u> : Service SSDPSRV description					service.info[SSDPSRV,description]
		Service ADWS description	2016-05-14 19:21:58				This service provides a Web Service interface to instances of the directory ser...
		Service AeLookupSvc description	2016-05-14 19:21:59				Processes application compatibility cache requests for applications as they a...
		Service ALG description	2016-05-14 19:22:00				Provides support for 3rd party protocol plug-ins for Internet Connection Sharing
		Service AppHostSvc description	2016-05-14 19:22:01				Provides administrative services for IIS, for example configuration history and ...
		Service AppIDSvc description	2016-05-14 19:22:02				Determines and verifies the identity of an application. Disabling this service w...

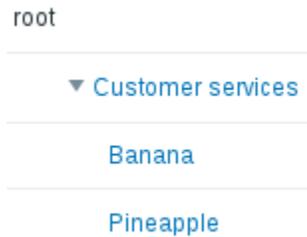
TIMESTAMP	LOCAL TIME	SOURCE	SEVERITY	EVENT ID	VALUE
2016-05-14 19:34:38	2016-05-14 19:34:37	Microsoft-Windows- Security-Auditing	Success Audit	4634	<p>An account was logged off.</p> <p>Subject:</p> <p> Security ID:</p> <p> Account Name:</p> <p> Account Domain:</p> <p> Logon ID:</p> <p>Logon Type:</p> <p>This event is generated when ID value. Logon IDs are only</p>

Chapter 15: High Level Business Service Monitoring



NAME ▲	TRIGGERS	KEY	INTERVAL	HISTORY	TRENDS	TYPE	APPLICATIONS
Code repository service		code_repo		90d	365d	Zabbix trapper	IT services
Ticketing service		ticketing		90d	365d	Zabbix trapper	IT services
Warehouse analytics service		warehouse_analytics		90d	365d	Zabbix trapper	IT services

SEVERITY	NAME ▲	EXPRESSION
High	Code repository down	{IT services:code_repo.lastf()}=0
High	Ticketing down	{IT services:ticketing.lastf()}=0
High	Warehouse analytics down	{IT services:warehouse_analytics.lastf()}=0



Name

Parent service

Status calculation algorithm

Calculate SLA, acceptable SLA (in %)

Trigger

Sort order (0->999)

Details Cannot update service ✕

Service "Ticketing" is already hardlinked to a different service.

SERVICE	ACTION	STATUS CALCULATION	TRIGGER
root	Add child		
▼ Customer services	Add child	Problem, if at least one child has a problem	
▼ Banana	Add child	Problem, if at least one child has a problem	
Code repository	Add child Delete	Problem, if at least one child has a problem	Code repository down
Ticketing	Add child Delete	Problem, if at least one child has a problem	Ticketing down
▼ Pineapple	Add child	Problem, if at least one child has a problem	
Ticketing	Add child Delete	Problem, if at least one child has a problem	Ticketing down
Warehouse analytics	Add child Delete	Problem, if at least one child has a problem	Warehouse analytics down

SERVICE	STATUS	REASON	PROBLEM TIME	SLA / ACCEPTABLE SLA
root				
▼ Customer services	OK			
▼ Banana	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	2.3810 97.6190 / 99.0500
Code repository - Code repository down	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	0.5952 99.4048 / 99.0500
Ticketing - Ticketing down	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	1.7857 98.2143 / 99.0500
▼ Pineapple	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	1.7857 98.2143 / 99.0500
Ticketing - Ticketing down	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	1.7857 98.2143 / 99.0500
Warehouse analytics - Warehouse analytics down	OK		<div style="width: 100%; height: 10px; background-color: green;"></div>	0.0000 100.0000 / 99.0500



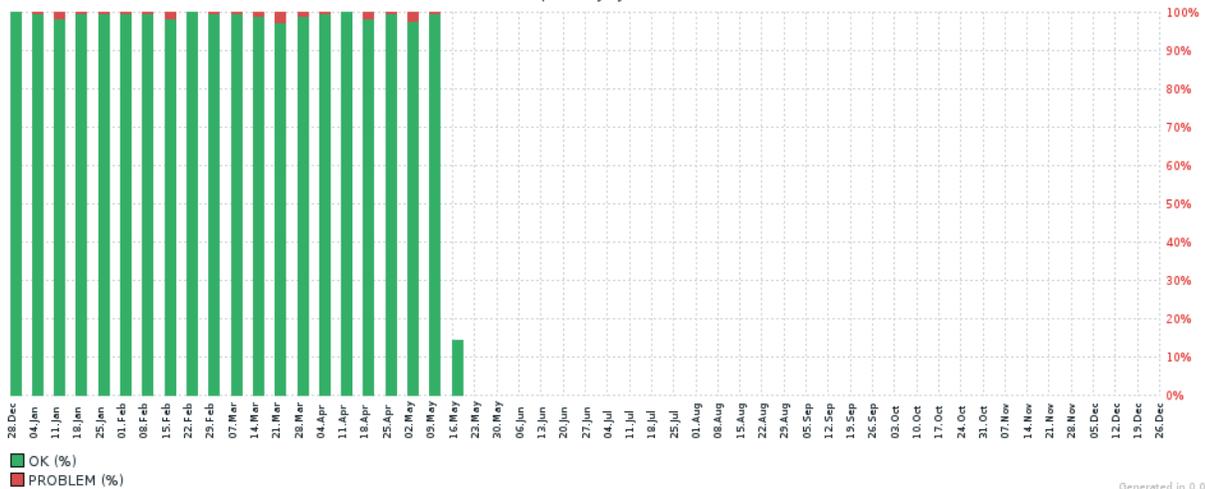
- Today
- This week
- This month
- This year
- Last 24 hours
- Last 7 days
- Last 30 days
- Last 365 days

YEAR	OK	PROBLEMS	DOWNTIME	SLA	ACCEPTABLE SLA
2016	134d 0h 4m	2d 7h 0m		98.3186	99.0500
2015	360d 18h 0m	4d 6h 0m		98.8356	99.0500
2014	365d 0h 0m			100.0000	99.0500
2013	365d 0h 0m			100.0000	99.0500
2012	366d 0h 0m			100.0000	99.0500
2011	365d 0h 0m			100.0000	99.0500

Period Year

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

Code repository (year 2016)



Period type

Note

From - - : 

Till - - : 

[Add](#)

Period type

From :

Till :

[Add](#)

Chapter 16: Monitoring IPMI Devices

NAME ▲	LAST CHECK	LAST VALUE
- other - (1 Item)		
System Fan 2	2016-05-18 12:26:49	3348 RPM

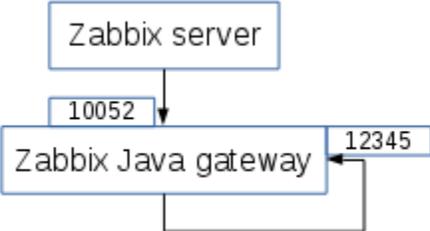


Chapter 17: Monitoring Java Applications

JMX interfaces

127.0.0.1		IP	DNS	12345	<input type="radio"/> Remove
-----------	--	----	-----	-------	------------------------------

[Add](#)



JMX interfaces

127.0.0.1		IP	DNS	12345	<input checked="" type="radio"/> Remove
-----------	--	----	-----	-------	---

[Add](#)

Chapter 18: Monitoring VMware

NAME ▲	LAST CHECK	LAST VALUE
CPU (5 Items)		
CPU cores	2015-11-02 10:49:58	4
CPU frequency	2015-11-02 10:49:56	2.53 GHz
CPU model	2015-11-02 10:49:57	Intel(R) Xeon(R) CPU
CPU threads	2015-11-02 10:49:59	8
CPU usage	2015-11-02 10:59:51	61 MHz
Datastore (2 Items)		
Average read latency of the datastore datastore1	2015-11-02 10:59:44	0
Average write latency of the datastore datastore1	2015-11-02 10:59:45	0

NAME ▲	LAST CHECK	LAST VALUE
CPU (2 Items)		
CPU usage	2015-11-02 11:17:14	10 MHz
Number of virtual CPUs	2015-11-02 11:17:13	1
Disks (4 Items)		
Average number of kilobytes read from the disk Hard disk 1	2015-11-02 11:16:50	0 Bps
Average number of kilobytes written to the disk Hard disk 1	2015-11-02 11:16:52	1 KBps
Average number of reads from the disk Hard disk 1	2015-11-02 11:16:51	0
Average number of writes to the disk Hard disk 1	2015-11-02 11:16:53	0
Filesystems (4 Items)		
Free disk space on /	2015-11-02 11:16:54	2.64 GB
Free disk space on / (percentage)	2015-11-02 11:16:55	68.03 %
Total disk space on /		
Used disk space on /	2015-11-02 11:16:57	1.24 GB

NAME ▲	TRIGGERS	KEY
Event log		vmware.eventlog[{\$URL}]
Full name		vmware.fullname[{\$URL}]
Version		vmware.version[{\$URL}]

Host name

Visible name

Groups

type here to search

Group prototypes

[Add](#)

Host name

Visible name

HOST

A test virtual machine
(ca2642f7-345c-40ee-b8f6-75341cc8c84c)

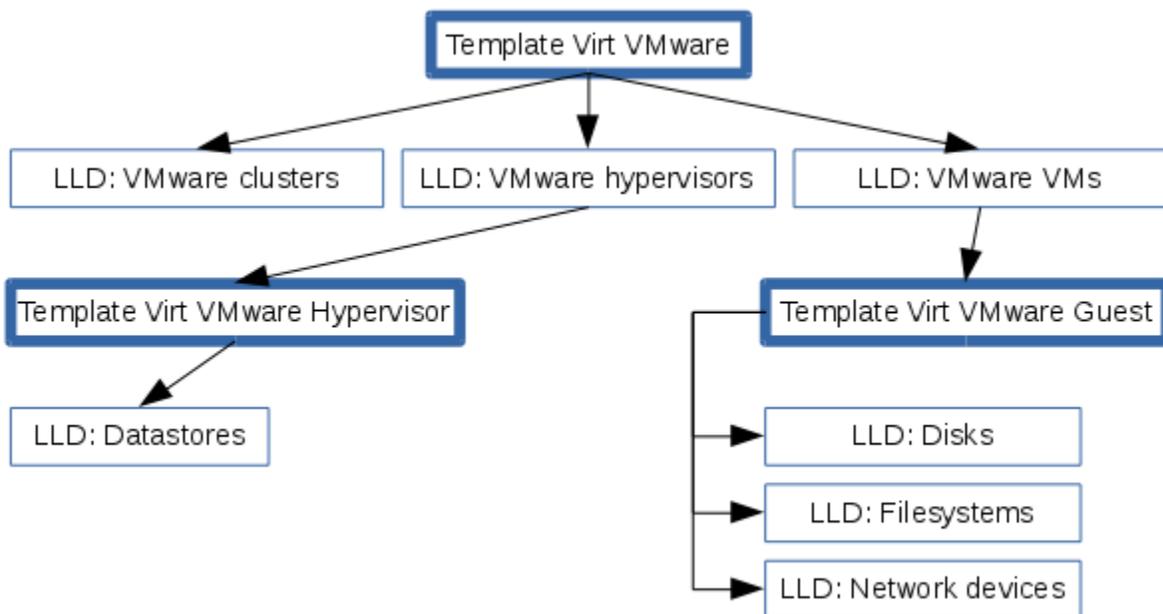
Groups
type here to search

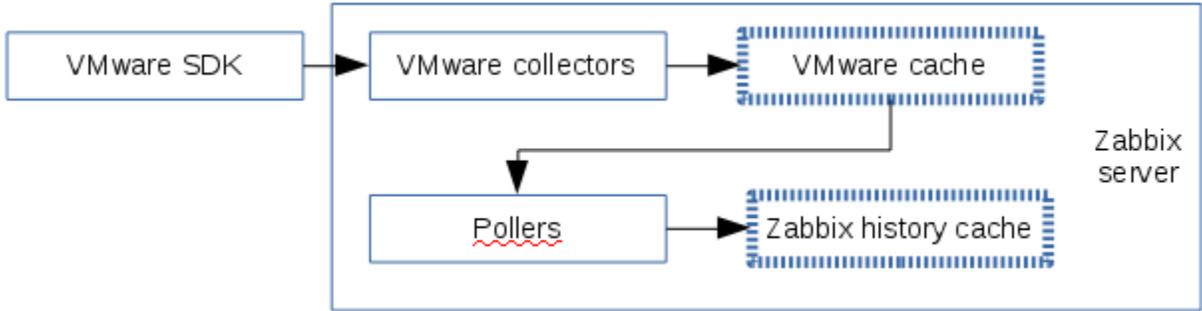
Group prototypes

[Remove](#)

[Remove](#)

[Add](#)





Chapter 19: Using Proxies to Monitor Remote Locations

Proxy name

Proxy mode

Hosts Proxy hosts

- Another host

Other hosts

- A test host discovered !
- IPMI host
- IT services
- OpenStreetMap
- Register me
- SNMP device
- snmptraps
- VMware
- Windows host

Description

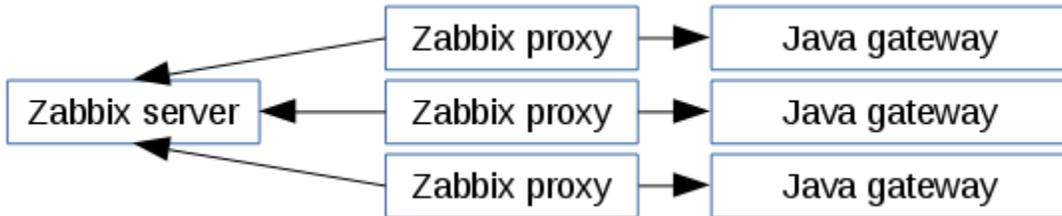
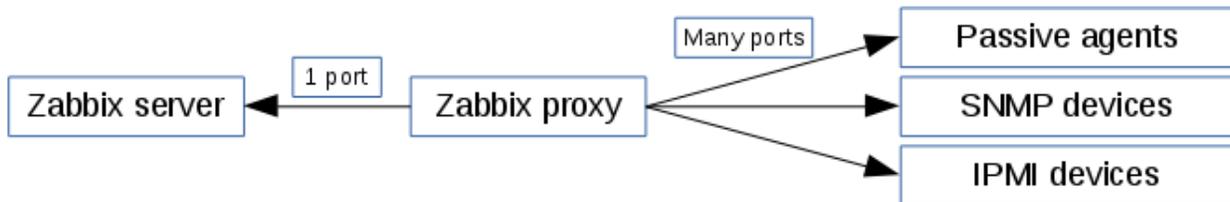
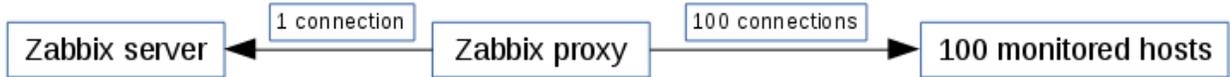
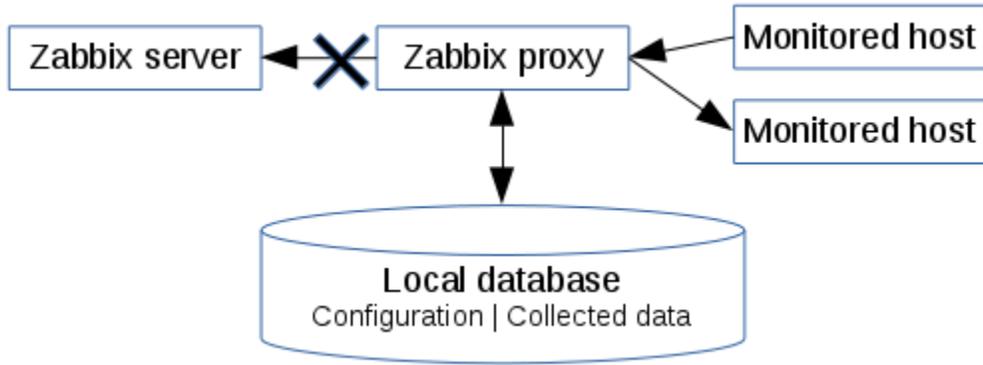
NAME ▲

First proxy: Another host

A test host

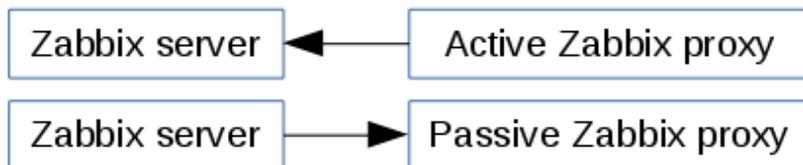
IPMI host

Monitored by proxy
Enabled



NAME ▲	LAST CHECK	LAST VALUE
- other - (1 Item)		
First proxy: last access	2015-11-24 17:14:59	2015-11-20 17:27:53

NAME ▲	LAST CHECK	LAST VALUE
- other - (1 Item)		
First proxy: buffer size	2015-11-26 14:44:59	0



Proxy name

Proxy mode

Interface	IP ADDRESS	DNS NAME	CONNECT TO	PORT
	<input type="text" value="192.168.56.11"/>	<input type="text"/>	<input type="text" value="IP"/> <input type="text" value="DNS"/>	<input type="text" value="10051"/>



Chapter 20: Encrypting Zabbix Traffic

Host Templates IPMI Macros Host inventory **Encryption**

Connections to host **No encryption** PSK Certificate

Connections from host No encryption
 PSK
 Certificate

PSK identity

PSK

Add Cancel

NONE NONE **PSK** CERT

INTERFACE TEMPLATES STATUS AVAILABILITY AGENT ENCRYPTION INFO

127.0.0.1: 10050 C_Template_Linux Enabled **ZBX** **SNMP** JMX IPMI **NONE**

Received empty response from Zabbix Agent at [127.0.0.1]. Assuming that agent dropped connection because of access permissions.

Chapter 21: Working Closely with Data

Zoom: [5m](#) [15m](#) [30m](#) **[1h](#)** [2h](#) [3h](#) [6h](#) [12h](#) [1d](#) [3d](#) [7d](#) [14d](#) [1m](#) [3m](#) [All](#)



«« [1m](#) [7d](#) [1d](#) [12h](#) [1h](#) [5m](#) | [5m](#) [1h](#) [12h](#) [1d](#) [7d](#) [1m](#) »»

TIMESTAMP	VALUE
2016-06-03 19:19:55	0.02
2016-06-03 19:19:25	0.03
2016-06-03 19:18:55	0.05

```
A test host: Incoming traffic on enp0s8
2015-11-29 06:43:49 1448772229 175
2015-11-29 06:43:19 1448772199 169
```

Details

- Created: Item "POP3 server status" on "C_Template_Email".
- Created: Item "POP3 server status" on "C_Template_Email_Server".
- Created: Item "POP3 server status" on "Another host".

C_Template_Email: [POP3 server status](#)

net.tcp.service[pop3]

Mapping things

foo ⇒ bar
this ⇒ that

```
MariaDB [zabbix]> select * from users limit 2;
+-----+-----+-----+-----+-----+
| userid | alias | name  | surname | passwd |
+-----+-----+-----+-----+-----+
|      1 | Admin | Zabbix | Administrator | 5fce1b3e34b520afeffb37ce08c7cd66 |
|      2 | guest |      |      | d41d8cd98f00b204e9800998ecf8427e |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Chapter 22: Zabbix Maintenance

Status of Zabbix

PARAMETER	VALUE	DETAILS
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	59	16 / 2 / 41
Number of items (enabled/disabled/not supported)	318	250 / 1 / 67
Number of triggers (enabled/disabled [problem/ok])	36	36 / 0 [13 / 23]
Number of users (online)	4	2
Required server performance, new values per second	8.1	

Zabbix performance (1 Item)

Expected NVPS	2015-12-09 11:36:46	8.13 NVPS
---------------	---------------------	-----------

Zabbix performance (2 Items)

Expected NVPS	2015-12-09 13:17:46	8.17 NVPS
---------------	---------------------	-----------

Real NVPS	2015-12-09 13:17:47	1.29 NVPS
-----------	---------------------	-----------

NAME ▲	LAST CHECK	LAST VALUE
--------	------------	------------

- other - (1 Item)

Zabbix server uptime	2015-12-09 20:04:49	00:34:27
----------------------	---------------------	----------

NAME ▲	LAST CHECK	LAST VALUE
--------	------------	------------

- other - (1 Item)

Zabbix configuration cache, % free	2015-12-09 20:45:20	95.92 %
------------------------------------	---------------------	---------

NAME ▲	LAST CHECK	LAST VALUE
--------	------------	------------

Zabbix process busy rates (1 Item)

Zabbix busy process poller rate	2015-12-11 08:52:51	0.69 %
---------------------------------	---------------------	--------

Templates

TEMPLATE	APPLICATIONS	ITEMS	TRIGGERS	GRAPHS	SCREENS	DISCOVERY	WEB
Template App Zabbix Agent	Applications 1	Items 3	Triggers 3	Graphs	Screens	Discovery	Web
Template App Zabbix Proxy	Applications 1	Items 21	Triggers 19	Graphs 4	Screens 1	Discovery	Web
Template App Zabbix Server	Applications 1	Items 30	Triggers 26	Graphs 5	Screens 1	Discovery	Web

Displaying 3 of 3 found

Amount of unsupported items

2015-12-11 17:02:52 58

A test host

- **other** - (1 Item)

Unsupported item count

2015-12-13 09:06:24 2

New condition

Event type = Trigger in "unknown" state

[Add](#)

Database error

The frontend does not match Zabbix database. Current database version (mandatory/optional): 3000000/3000000. Required mandatory version: 3000001. Contact your system administrator.

Retry

Events and alerts

Enable internal housekeeping

Trigger data storage period (in days)

Internal data storage period (in days)

Network discovery data storage period (in days)

Auto-registration data storage period (in days)

TIME	USER	IP	RESOURCE	ACTION	ID	DESCRIPTION	DETAILS
2015-12-12 14:06:12	Admin	127.0.0.1	User	Login	1		
2015-12-12 14:06:12	Admin	127.0.0.1	User	Logout	1		Manual Logout
2015-12-12 14:05:11	Admin	127.0.0.1	User	Login	1		
2015-12-12 14:05:11	Admin	127.0.0.1	User	Logout	1		Manual Logout
2015-12-12 14:04:10	Admin	127.0.0.1	User	Login	1		
2015-12-12 14:04:10	Admin	127.0.0.1	User	Logout	1		Manual Logout

Filter ▲

User

Action

Resource

...

	Older	Newer	Agent	Proxy	Server
Agent				Y	Y
Proxy			N		N
Server			N	N	

Appendix A: Troubleshooting

No Images

Appendix B: Being Part of the Community

