

You should install and configure Zabbix server and agents.

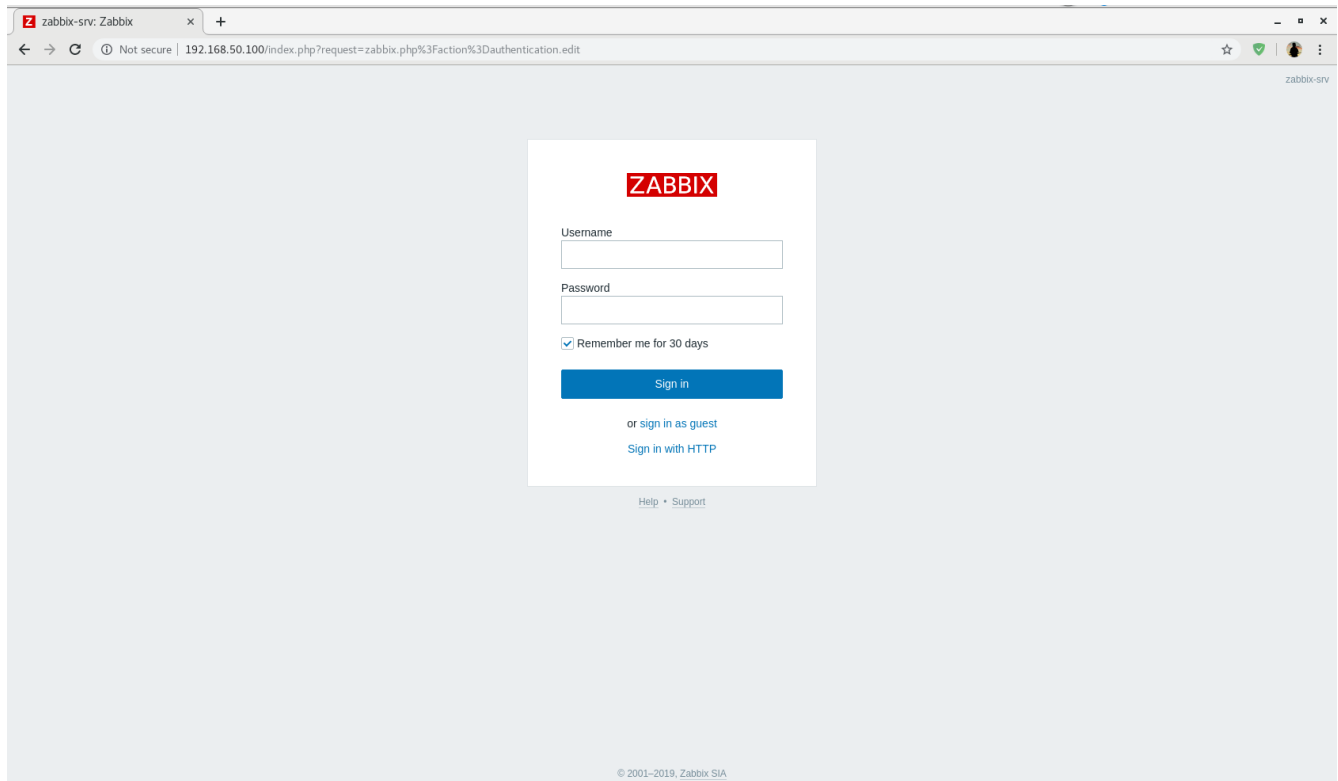
Testing Infrastructure:

Vagrantfile to spin up 2 VMs (virtualbox):

1. Zabbix server, provisioned by Vagrant provisioner
2. Zabbix agents on both VMs, provisioned by Vagrant provisioner

Configure zabbix to work on the server directly without /zabbix

`http://zabbix-server/zabbix -> http://zabbix-server`



Picture 1

Using Zabbix UI:

- Create User group “Project Owners”

zabbix-srv: Configuration

192.168.50.100/zabbix/usergrps.php?form=create

ZABBIX Monitoring Inventory Reports Configuration Administration

General Proxies Authentication User groups Users Media types Scripts Queue

### User groups

User group Permissions Tag filter

\* Group name

Users

Frontend access

Enabled ☒

Debug mode ☐

Picture 2.1

zabbix-srv: Configuration

192.168.50.100/zabbix/usergrps.php

ZABBIX Monitoring Inventory Reports Configuration Administration

General Proxies Authentication User groups Users Media types Scripts Queue

Group added

### User groups

Filter

Name  Status

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

Displaying 6 of 6 found

0 selected

Picture 2.2

- Create User (example “Siarhei Beliakou”), assign user to “Project Owners”, set email

The screenshot shows the Zabbix Administration interface, specifically the 'Users' page. The 'User' tab is selected. The form contains the following fields and options:

- \* Alias: HKanonik
- Name: Hleb
- Surname: Kanonik
- \* Groups: Project Owners (selected), with a search box below it.
- \* Password: [masked]
- \* Password (once again): [masked]
- Language: English (en\_GB) (dropdown)
- Theme: System default (dropdown)
- Auto-login: ☐
- Auto-logout: ☐ 35m
- \* Refresh: 30s
- \* Rows per page: 50
- URL (after login): [empty]

Buttons: Add, Cancel

Below the form, a note states: "Password is not mandatory for non internal authentication type."

Picture 3.1

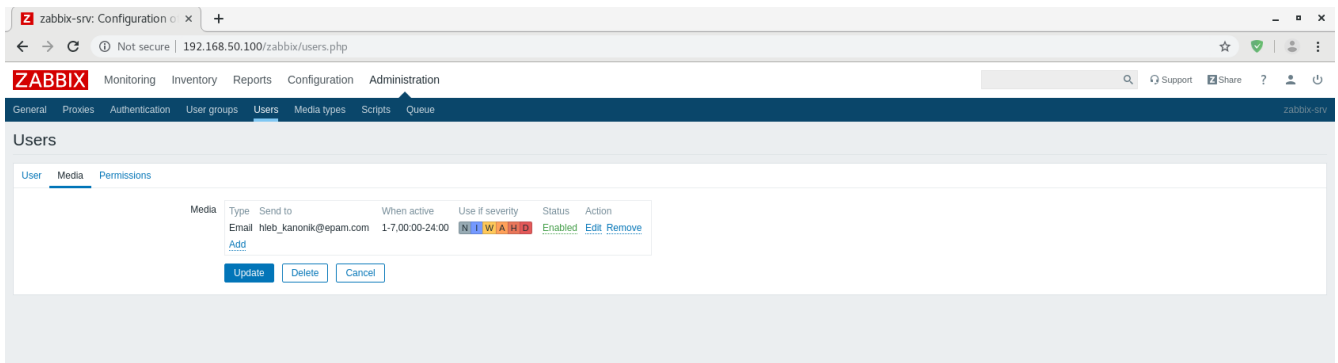
The screenshot shows the Zabbix Administration interface, specifically the 'Users' page. The 'Media' tab is selected. A modal form titled 'Media' is open, showing the configuration for a media type.

Media configuration fields:

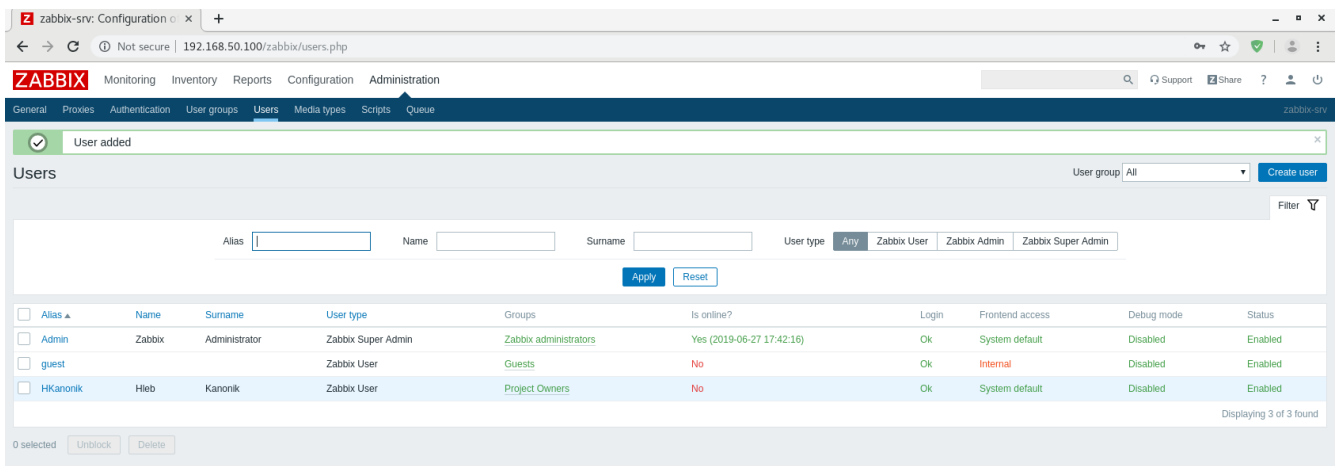
- Type: Email (dropdown)
- \* Send to: hleb\_kanonik@epam.com (text input, with a Remove button)
- \* When active: 1-7,00:00-24:00 (text input)
- Use if severity: ☒ Not classified, ☒ Information, ☒ Warning, ☒ Average, ☒ High, ☒ Disaster
- Enabled: ☒

Buttons: Add, Cancel

Picture 3.2

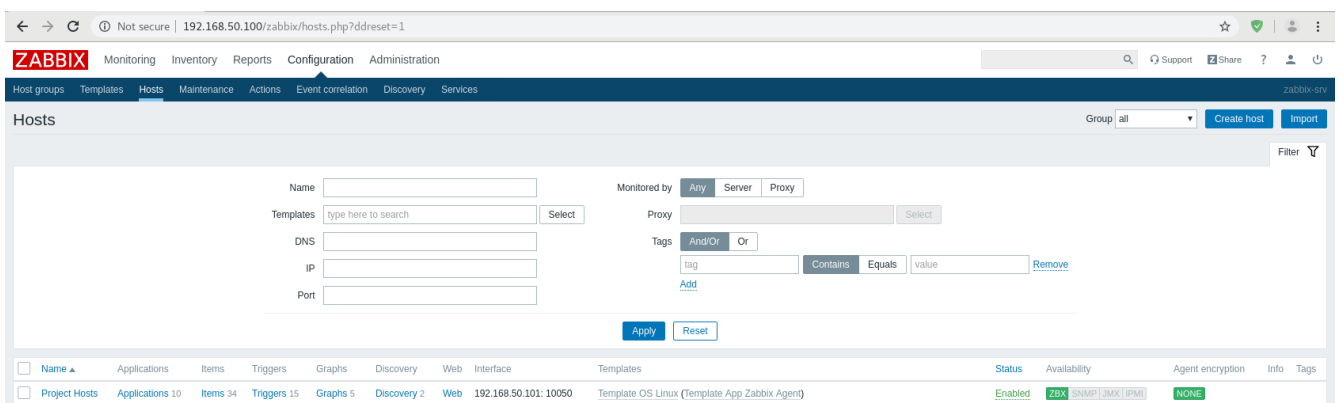


Picture 3.3



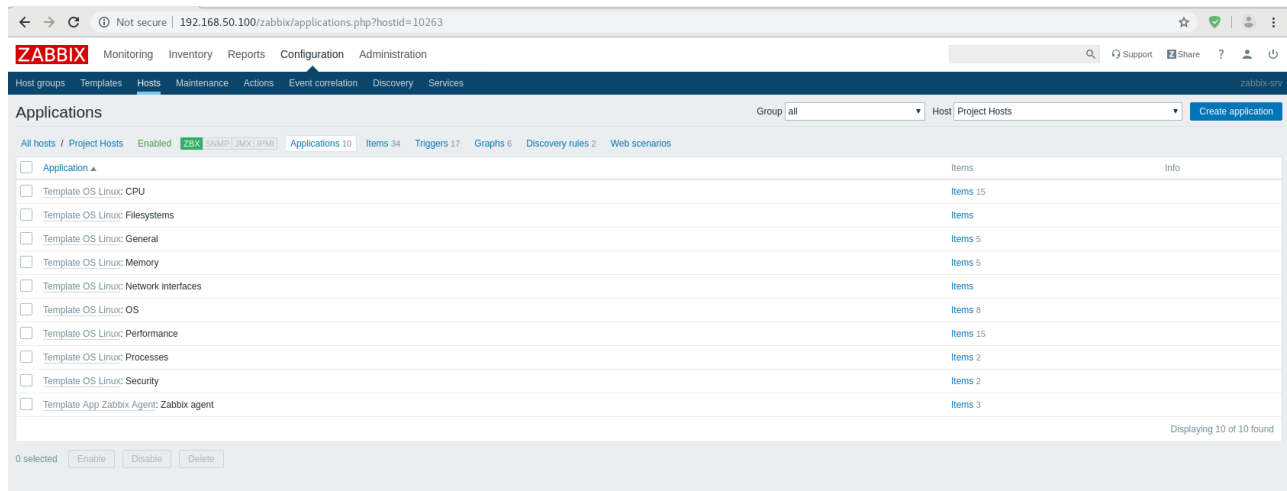
Picture 3.4

- Add 2nd VM to zabbix: create Host group (“Project Hosts”), create Host in this group, enable ZABBIX Agent monitoring



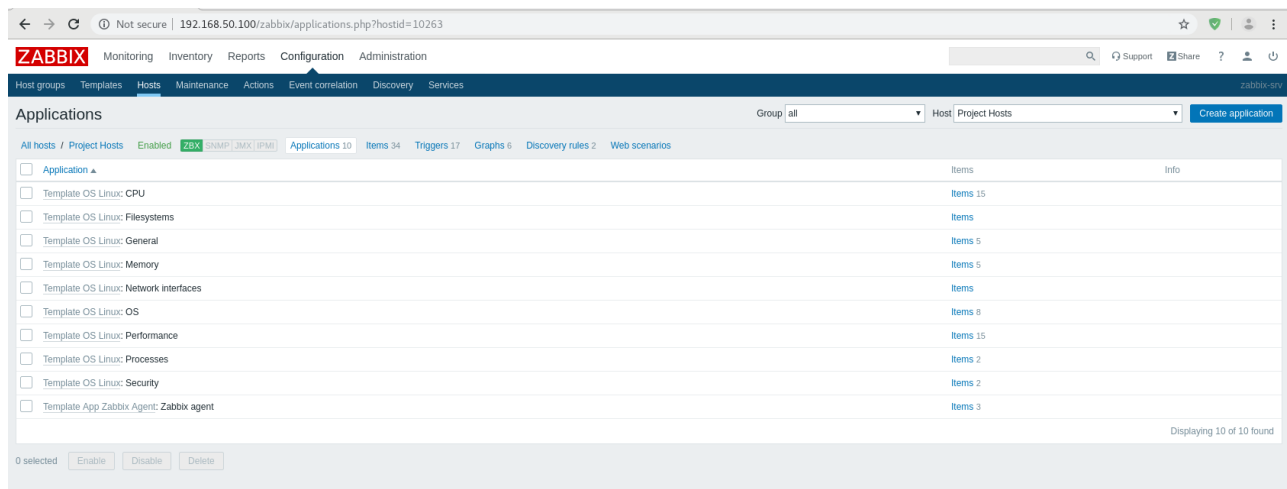
Picture 4

- Assign to this host template of Linux

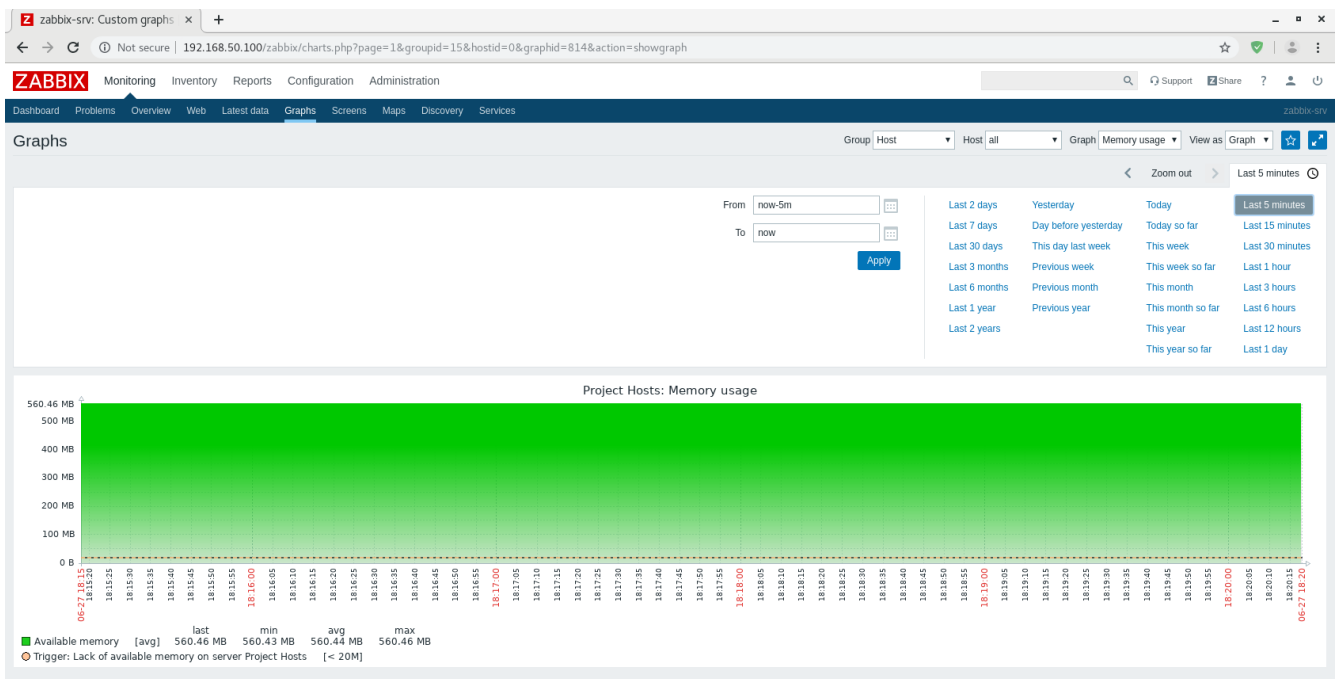


Picture 5

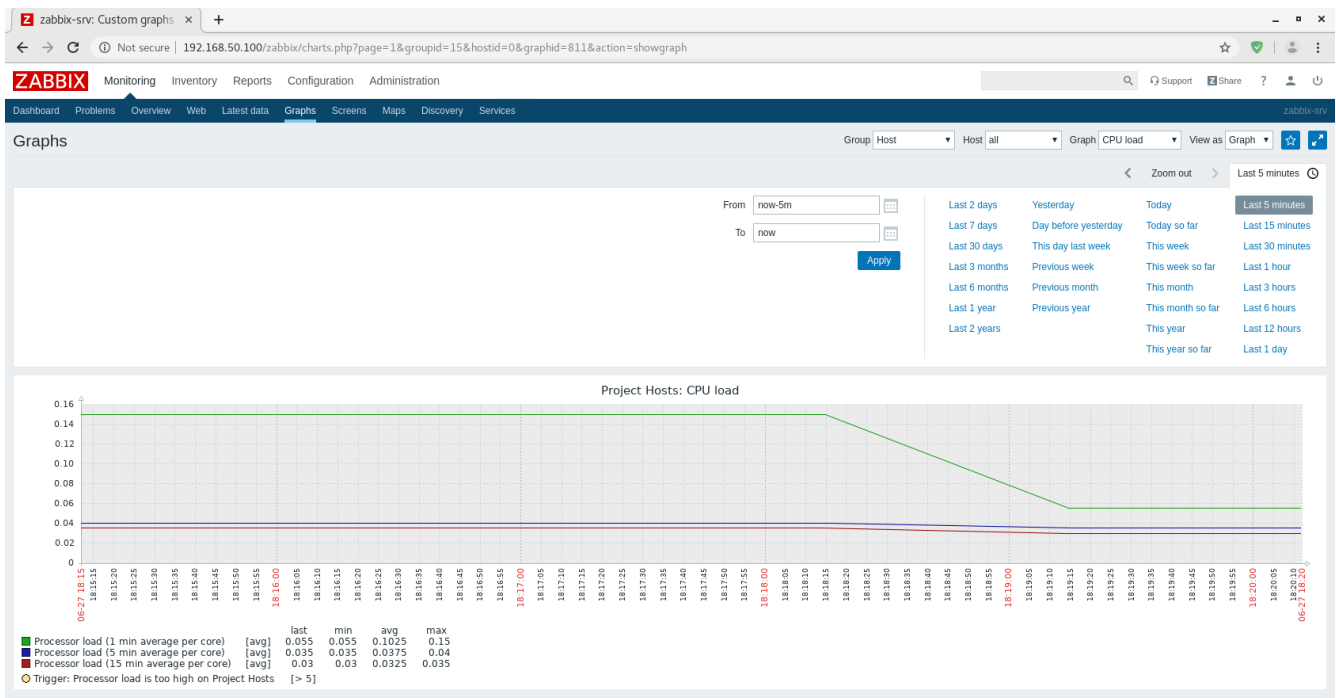
- Create custom checks (CPU Load, Memory load, Free space on file systems, Network load)



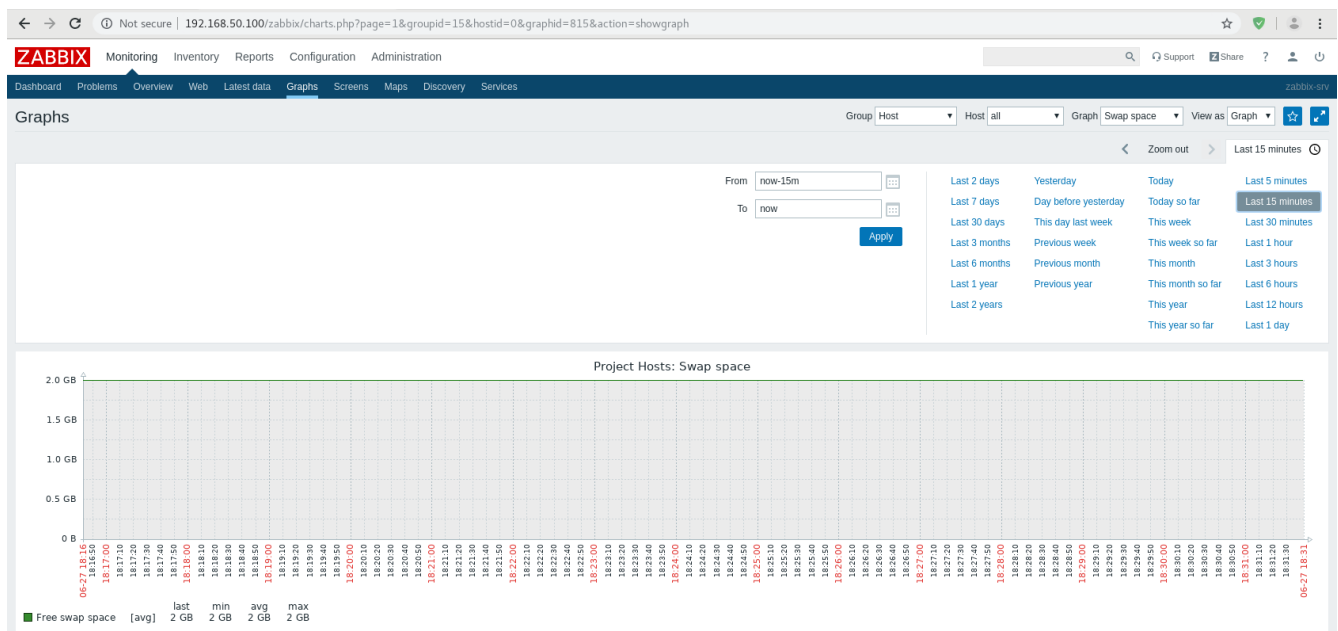
Picture 5.1



Picture 5.2



Picture 5.3



Picture 5.4

- Create trigger with Severity HIGH, check if it works (Problem/Recovery)

zabbix-srv: Configuration

192.168.50.100/zabbix/triggers.php

SupportShare

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

Host groupsTemplatesHostsMaintenanceActionsEvent correlationDiscoveryServices

zabbix-srv

Triggers

All hostsProject HostsEnabledZBXSNMPJMXIPMIApplications 10Items 34Triggers 15Graphs 5Discovery rules 2Web scenarios

TriggerTagsDependencies

\* Name

false trigger

Severity

Not classifiedInformationWarningAverageHighDisaster

\* Expression

[Template OS Linux:system.swap.size[,pfree].last(#10.1)]<1

Add

Expression constructor

OK event generation

ExpressionRecovery expressionNone

PROBLEM event generation mode

SingleMultiple

OK event closes

All problemsAll problems if tag values match

Allow manual close

☐

URL

https://unix.stackexchange.com/questions/59450/swap-usage-too-high

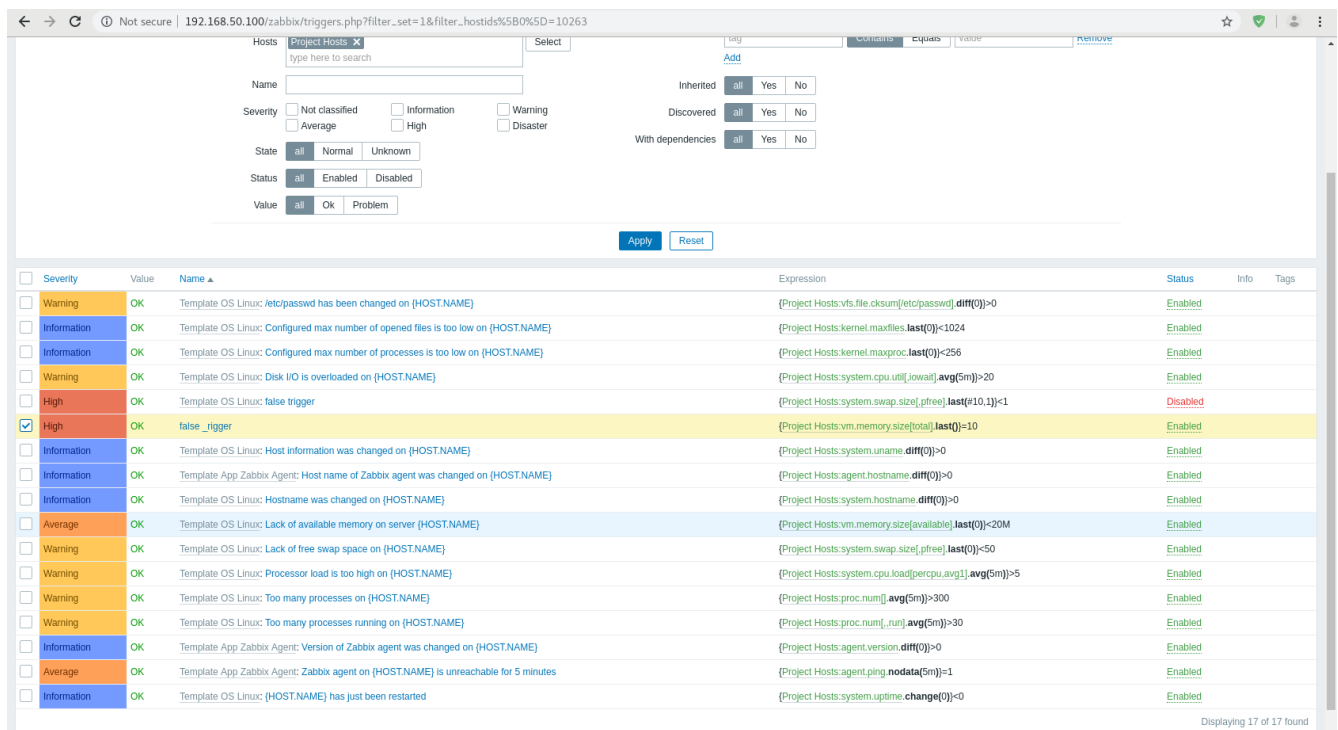
Description

Resolve problem

Enabled

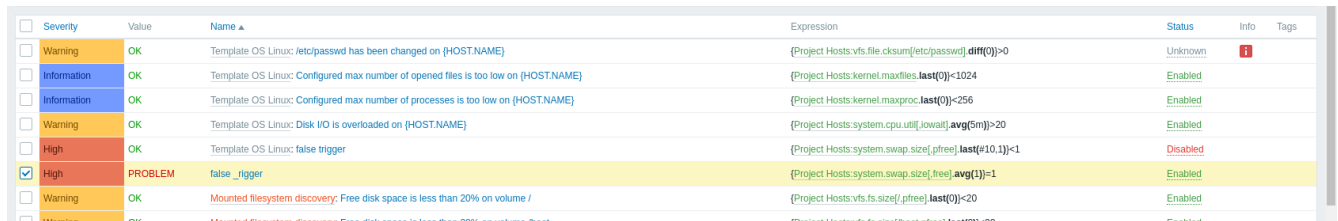
☒

AddCancel

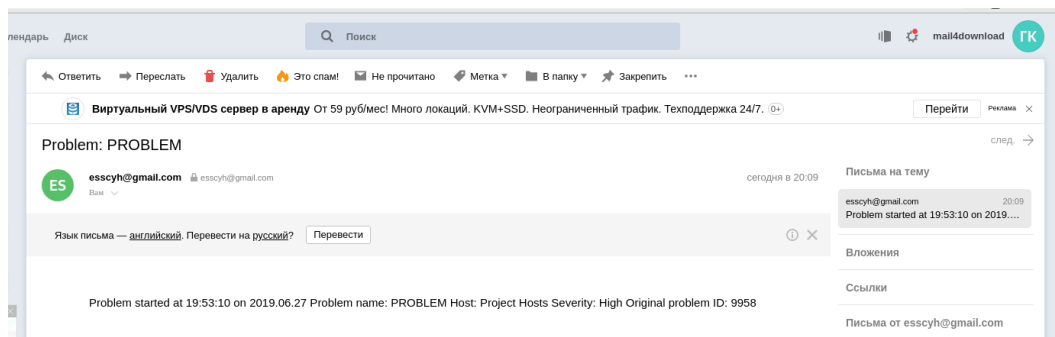


Picture 6.2

- Create Action to inform “Project Owners” if HIGH triggers happen



Picture 7.1



Picture 7.2



Configure “Network discovery” so that, 2nd VM will be joined to Zabbix (group “Project Hosts”, Template “Template OS Linux”)

The screenshot shows the Zabbix 4.2.4 Configuration page for Discovery rules. The browser address bar shows the URL `192.168.50.100/discoveryconf.php?form=update&druleid=3`. The page has a navigation bar with tabs: Monitoring, Inventory, Reports, Configuration, and Administration. The Configuration tab is active, and the sub-tab is Discovery. The page title is "Discovery rules".

The form contains the following fields and options:

- Name:** `lqn network`
- Discovery by proxy:** `No proxy`
- IP range:** `192.168.50.1-254`
- Update interval:** `300s`
- Checks:** `Zabbix agent "system.uname"` (with `Edit` and `Remove` links, and a `New` link below)
- Device uniqueness criteria:** `IP address` (selected)
- Host name:** `DNS name` (selected)
- Visible name:** `Host name` (selected)
- Enabled:** ☒

At the bottom of the form are buttons: `Update`, `Clone`, `Delete`, and `Cancel`. The footer of the page reads: "Zabbix 4.2.4. © 2001–2019, Zabbix SIA".

Picture 8.1

The screenshot shows the Zabbix 4.2.4 Configuration page for Actions. The browser address bar shows the URL `192.168.50.100/actionconf.php`. The page has a navigation bar with tabs: Monitoring, Inventory, Reports, Configuration, and Administration. The Configuration tab is active, and the sub-tab is Actions. The page title is "Actions".

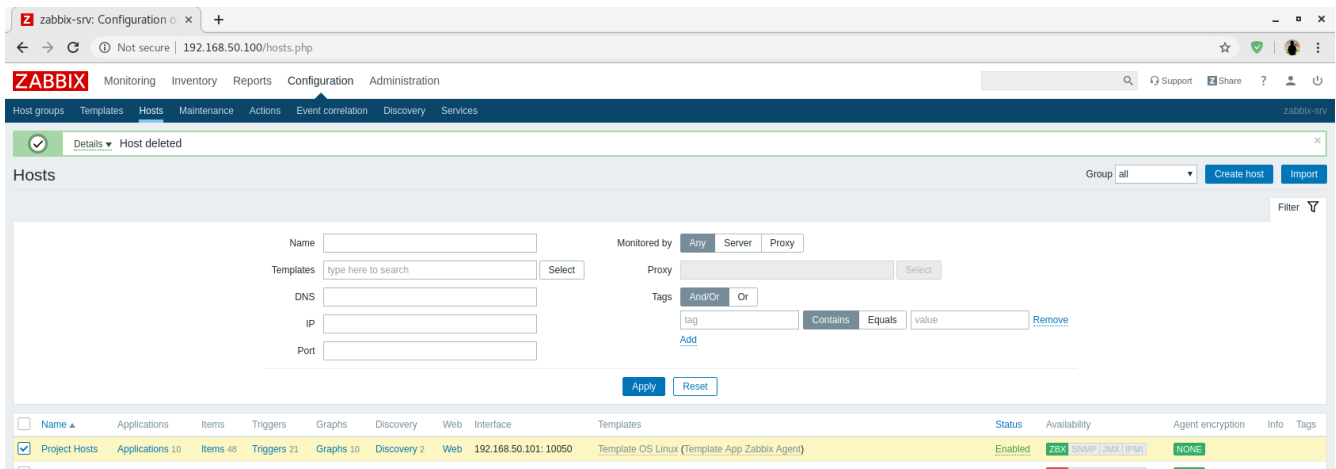
The form contains the following fields and options:

- Name:** `Auto discovery. Linux servers`
- Type of calculation:** `And/Or` (selected)
- Conditions:** A table with 3 columns: Label, Name, and Action.

Label	Name	Action
A	Uptime/Downtime is greater than or equals 600	<code>Remove</code>
B	Discovery status equals Up	<code>Remove</code>
C	Service type equals Zabbix agent	<code>Remove</code>
D	Host IP equals 192.168.50.1-127,192.168.2.1	<code>Remove</code>
- New condition:** `Host IP` (selected) `equals` (selected) `192.168.0.1-127,192.168.2.1` (with an `Add` link below)
- Enabled:** ☒

At the bottom of the form are buttons: `Add` and `Cancel`. A note at the bottom reads: "At least one operation must exist."

Picture 8.2



Picture 8.3

## Task 2

- Configure the agent for replying to the specific server in passive and active mode.
- Use `zabbix_sender` to send data to server manually (use `zabbix_sender` with key `-vv` for maximal verbosity).

```
vagrant@zabbix-agent:~
vagrant@zabbix-agent:~ 108x29
[vagrant@zabbix-agent ~]$ zabbix_sender -z 192.168.50.100 -s "Project Hosts" -k system.cpu.switches -o 1
Response from "192.168.50.100:10051": "processed: 0; failed: 1; total: 1; seconds spent: 0.000079"
sent: 1; skipped: 0; total: 1
[vagrant@zabbix-agent ~]$
```

Picture 9

- Use `zabbix_get` as data receiver and examine zabbix agent sending's.

```
vagrant@zabbix-srv:~ 108x29
[vagrant@zabbix-srv ~]$ zabbix_get -s 192.168.50.101 -p 10050 -k "system.cpu.util[,idle]"
99.983314
[vagrant@zabbix-srv ~]$
```

Picture 10