

EPAM Systems, RD Dep., RD Dep.

MTN.NIX.05.Zabbix.Basics

REVISION HISTORY					
Ver.	Description of Change	Author	Date	Approved	
				Name	Effective Date
1.0	Initial Version	Siarhei Beliakou	23/May/2017		

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Task. Zabbix. Basics

Testing Infrastructure:

Vagrantfile to spin up 2 VMs (virtualbox):

- zabbix server, provisioned by Vagrant provisioner
- 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>

Task:

You should install and configure Zabbix server and agents.

1. Using Zabbix UI:

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

192.168.56.141/zabbix.php?action=user.edit

ZABBIX Monitoring Inventory Reports Configuration Administration

General Proxies Authentication User groups **Users** Media types Scripts Queue

Users

User Media Permissions

* Alias Mikhail_Elizarov

Name Mikhail

Surname Elizarov

* Groups Project Owners X type here to search Select

* Password

* Password (once again)

Password is not mandatory for non internal authentication type.

Language English (en_GB)

Theme System default

Auto-login ☐

Auto-logout ☐ 15m

* Refresh 30s

* Rows per page 50

URL (after login)

Add Cancel

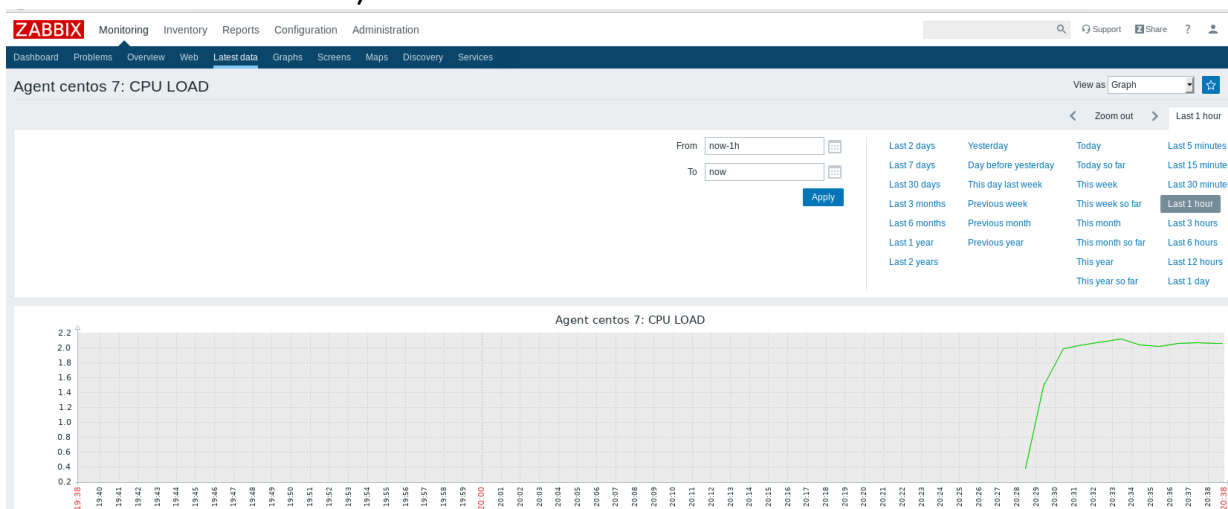
- Add 2nd VM to zabbix: create Project Hosts create Host in this group, enable ZABBIX Agent monitoring

Hosts configuration page in Zabbix. The 'Hosts' tab is active, showing a list of hosts. Two hosts are visible: 'Agent centos 7' and 'Zabbix server'. The 'Agent centos 7' host is selected, and its details are shown on the right. The details include Name, Templates, DNS, IP, Port, Monitored by (Any, Server, Proxy), Proxy, Tags, and a list of templates. The status is 'Enabled' and the agent encryption is 'NONE'.

- Assign to this host template of Linux

Host configuration page in Zabbix showing the 'Agent centos 7' host selected. The 'Templates' section shows 'Template OS Linux by Zabbix agent' assigned to the host. The status is 'Enabled' and the agent encryption is 'NONE'.

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



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

Triggers page in Zabbix showing a trigger named 'CPU HIGH'. The trigger is in a 'PROBLEM' state. The expression is '(Agent.system.cpu.util.min(1m))>(\$CPU_UTIL_CRIT)'. The status is 'Enabled'.

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

ZABBIX

Monitoring Inventory Reports Configuration Administration

Host groups Templates **Hosts** Maintenance Actions Event correlation Discovery Services

Triggers

All hosts / Agent centos 7 Enabled ZBX SNMP JMX IPMI Applications 16 Items 75 **Triggers 31** Graphs 15 Discovery rules 3

Trigger Tags Dependencies

* Name CPU HIGH

Operational data

Severity Not classified Information Warning Average **High** Disaster

* Expression {Agent:system.cpu.util.min(1m)}>{\$CPU.UTIL.CRIT}

Add

[Expression constructor](#)

OK event generation Expression Recovery expression None

PROBLEM event generation mode Single Multiple

OK event closes All problems All problems if tag values match

Allow manual close ☐

URL

Description

Enabled ☒

Update

Clone

Delete

Cancel

ZABBIX Monitoring Inventory Reports Configuration Administration

Host groups Templates Hosts Maintenance Actions Event correlation Discovery Services

Actions

Action Operations Recovery operations Update operations

* Default operation step duration: 60

Default subject: Problem: {EVENT.NAME}

Default message: Problem started at {EVENT.TIME} on {EVENT.DATE}
 Problem name: {EVENT.NAME}
 Host: {HOST.NAME}
 Severity: {EVENT.SEVERITY}
 Original problem ID: {EVENT.ID}
 {TRIGGER.URL}

Pause operations for suppressed problems: ☒

Operations

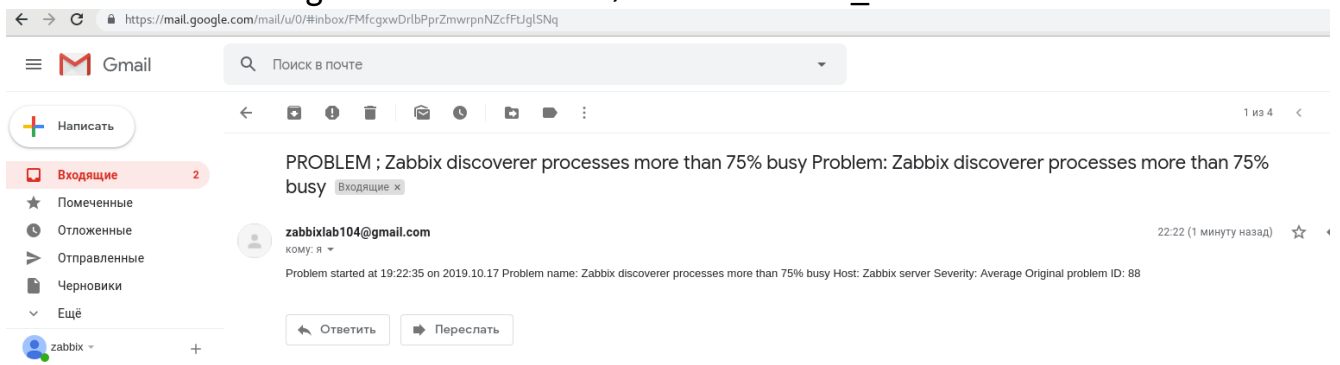
Steps	Details	Start in	Duration	Action
1	Send message to users: Mikhail_Elizarov (Mikhail Elizarov) via all media Send message to user groups: Project Owners via all media	Immediately	Default	Edit Remove

[New](#)

* At least one operation, recovery operation or update operation must exist.

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

For both VMs use vagrant box “sbeliakou/centos-7.3-x86_64-minimal”



2. Using Zabbix UI:

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

For VMs use vagrant box “sbeliakou/centos-7.3-x86_64-minimal”

ZABBIX Monitoring Inventory Reports Configuration Administration

Host groups Templates Hosts Maintenance Actions Event correlation Discovery Services

Selected actions deleted

Actions

Event source: Discovery [Create action](#)

Name: Status: ☒ Any ☐ Enabled ☐ Disabled [Filter](#)

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

Name	Conditions	Operations	Status
discovery network	Host IP equals 192.168.56.1-254	Add host Add to host groups: Linux servers, Project Hosts Link to templates: Template OS Linux by Prom, Template OS Linux by Zabbix agent Enable host	Enabled

Displaying 1 of 1 found

Host groups

Name

Apply

Reset

<input type="checkbox"/>	Name ▲	Hosts	Templates	Members
<input type="checkbox"/>	Discovered hosts	Hosts 1	Templates	192.168.56.144
<input type="checkbox"/>	Hypervisors	Hosts	Templates	
<input type="checkbox"/>	Linux servers	Hosts 2	Templates	192.168.56.144, Agent centos 7
<input type="checkbox"/>	Project Hosts	Hosts 3	Templates	192.168.56.144, Agent centos 7, Zabbix server

ZABBIX

Monitoring

Inventory

Reports

Configuration

Administration

Support

Share

Host groups

Templates

Hosts

Maintenance

Actions

Event correlation

Discovery

Services

Hosts

Group all

Create host

Import

Filter

Name

Monitored by

Any

Server

Proxy

Templates

type here to search

Select

DNS

IP

Port

Proxy

Select

Tags

And/Or

Or

tag

Contains

Equals

value

Remove

Add

Apply

Reset

<input type="checkbox"/>	Name ▲	Applications	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability	Agent encryption	Info	Tags
<input type="checkbox"/>	192.168.56.144	Applications 12	Items 50	Triggers 15	Graphs 11	Discovery 3	Web	192.168.56.144:10050		Template OS Linux by Zabbix agent (Template Module Linux block devices by Zabbix agent, Template Module Linux CPU by Zabbix agent, Template Module Linux filesystems by Zabbix agent, Template Module Linux generic by Zabbix agent, Template Module Linux memory by Zabbix agent, Template Module Linux network interfaces by Zabbix agent, Template Module Zabbix agent)	Enabled	ZBX SHMP JMX IPMI	NONE		
<input type="checkbox"/>	Agent centos 7	Applications 16	Items 75	Triggers 31	Graphs 15	Discovery 3	Web	192.168.56.142:10050		Template OS Linux by Zabbix agent (Template Module Linux block devices by Zabbix agent, Template Module Linux CPU by Zabbix agent, Template Module Linux filesystems by Zabbix agent, Template Module Linux generic by Zabbix agent, Template Module Linux memory by Zabbix agent, Template Module Linux network interfaces by Zabbix agent, Template Module Zabbix agent)	Enabled	ZBX SHMP JMX IPMI	NONE		
<input type="checkbox"/>	Zabbix server	Applications 17	Items 120	Triggers 63	Graphs 21	Discovery 3	Web	127.0.0.1:10050		Template App Zabbix Server, Template OS Linux by Zabbix agent (Template Module Linux block devices by Zabbix agent, Template Module Linux CPU by Zabbix agent, Template Module Linux filesystems by Zabbix agent, Template Module Linux generic by Zabbix agent, Template Module Linux memory by Zabbix agent, Template Module Linux network interfaces by Zabbix agent, Template Module Zabbix agent)	Enabled	ZBX SHMP JMX IPMI	NONE		