

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.

The image shows two screenshots of the Zabbix web interface. The top screenshot is the 'Global view' dashboard, displaying system information and problems. The bottom screenshot is the 'Hosts' configuration page, showing a form to add a new host and a table of existing hosts.

**Global view dashboard:**

- System information:**

Parameter	Value	Details
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled/templates)	84	1 / 0 / 83
Number of items (enabled/disabled/not supported)	92	86 / 0 / 6
Number of triggers (enabled/disabled [problem/ok])	51	51 / 0 [0 / 51]
Number of users (online)	3	1
Required server performance, new values per second	1.31	

- Problems by severity:** No data found.
- Problems table:**

Time	Info	Host	Problem • Severity	Duration	Ack	Actions	Tags
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**Hosts configuration page:**

  - Form fields:** Name, Templates, DNS, IP, Port, Monitored by (Any, Server, Proxy), Proxy, Tags (And/Or, Or), Contains, Equals, value, Remove, Add, Apply, Reset.
  - Hosts table:**

Name	Applications	Items	Triggers	Graphs	Discovery	Web	Interface	Templates	Status	Availability	Agent encryption	Info	Tags
Project Hosts	Applications 11	Items 50	Triggers 18	Graphs 9	Discovery 2	Web	192.168.56.33: 10050	Template OS Linux (Template App Zabbix Agent)	Enabled	ZBX SNMP JMX IPMI	NONE		
Zabbix server	Applications 11	Items 92	Triggers 51	Graphs 15	Discovery 2	Web	127.0.0.1: 10050	Template App Zabbix Server, Template OS Linux (Template App Zabbix Agent)	Enabled	ZBX SNMP JMX IPMI	NONE		

  - Buttons:** Enable, Disable, Export, Mass update, Delete.

### 1. Using Zabbix UI:

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

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

**ZABBIX** Monitoring Inventory Reports Configuration Administration

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

## Users

User Media Permissions

\* Alias

andrei

Name

andrei

Surname

svhedau

\* 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)

- Assign to this host template of Linux

The screenshot shows the Zabbix web interface for configuring hosts. The 'Hosts' section is active, displaying a form to add a new host. The form includes fields for Name, Templates (with a search bar), DNS, IP, Port, Monitored by (Any, Server, Proxy), Proxy, and Tags (And/Or, Contains, Equals, value, Add, Remove). Below the form is a table of existing hosts:

Name	Applications	Items	Triggers	Graphs	Discovery	Web	Interface	Templates	Status	Availability	Agent encryption	Info	Tags
Project Hosts	Applications 10	Items 34	Triggers 15	Graphs 5	Discovery 2	Web	192.168.56.33: 10050	Template OS Linux (Template App Zabbix Agent)	Enabled	20X	SNMP7, SNMP, IPMI	NONE	
Zabbix server	Applications 11	Items 70	Triggers 48	Graphs 11	Discovery 2	Web	127.0.0.1: 10050	Template App Zabbix Server, Template OS Linux (Template App Zabbix Agent)	Enabled	20X	SNMP7, SNMP, IPMI	NONE	

At the bottom, there are buttons for '0 selected', 'Enable', 'Disable', 'Export', 'Mass update', and 'Delete'.

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

APPLICATIONS

CPU +14 Filesystems 0 General +5 Memory +5 Network interfaces 0 OS +8 Performance +14 Personal Processes +2 Security +2 Zabbix agent +3

TYPE OF INFORMATION

Character 0 Numeric (float) 2 Numeric (unsigned) 2

TEMPLATE

Inherited items 0 Not inherited items 4

WITH TRIGGERS

Without triggers 4 With triggers 0

HISTORY

7d 0 3m 4

INTERVAL

30s 4 1m 0 10m 0 1h 0

Wizard	Name	Triggers	Key	Interval	History	Trends	Type	Applications	Status	Info
...	CPU Load		system.cpu.load[percpu,avg1]	30s	90d	365d	Zabbix agent	CPU, Performance, Personal	Enabled	
...	Free Space		vfs.fs.size[/,pfree]	30s	90d	365d	Zabbix agent	Filesystems, Personal	Enabled	
...	memory		vm.memory.size	30s	90d	365d	Zabbix agent	Memory, Personal	Enabled	
...	Network load		net.if.total[eth1]	30s	90d	365d	Zabbix agent	Network interfaces, Personal	Enabled	

0 selected Enable Disable Check now Clear history Copy Mass update Delete

Displaying 4 of 4 found

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

Global view

All dashboards / Global view

System information			Problems by severity						
Parameter	Value	Details	Host group	Disaster	High	Average	Warning	Information	Not classified
Zabbix server is running	Yes	localhost:10051	Discovered hosts		1				
Number of hosts (enabled/disabled/templates)	85	2 / 0 / 83	Linux servers		1				
Number of items (enabled/disabled/not supported)	142	136 / 0 / 6	Zabbix servers		1				
Number of triggers (enabled/disabled [problem/ok])	69	69 / 0 [1 / 68]							
Number of users (online)	3	1							
Required server performance, new values per second	2								

Problems

Time	Info	Host	Problem • Severity	Duration	Ack	Actions	Tags
18:00:49		Project Hosts	CPU LOAD	37s	No		

Time Recovery time Status Duration Ack Tags

18:00:49 37s No

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

Name	Conditions	Operations	Status
CPU Load message	Trigger severity equals High Trigger name contains CPU LOAD	Send message to users: andrei (andrei.svshedau) via Email Send message to user groups: Project Owners via Email	Enabled
Report problems to Zabbix administrators		Send message to user groups: Zabbix administrators via all media	Disabled

1 selected Enable Disable Delete

Displaying 2 of 2 found

general
Proxies
Authentication
User groups
Users
Media types
Scripts
Queue

Media types

Media typeOptions

NameEmail

TypeEmail

SMTP serversmtp.gmail.com

SMTP server port465

SMTP helogmail.com

SMTP emailasoi20182022@gmail.com

Connection security
None
STARTTLS
SSL/TLS

SSL verify peer☐

SSL verify host☐

Authentication
None
Username and password


Usernameasoi20182022@gmail.com

Password
Change password

Message format
HTML
Plain text


Enabled☒


Update
Clone
Delete
Cancel


to me

Problem started at 15:27:49 on 2019.10.17  
Problem name: CPU LOAD  
Host: Project Hosts  
Severity: High

Original problem ID: 44


Reply


Forward

## 2. Using Zabbix UI:

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

\* Name

Type of calculation  A and B

Label	Name
A	Discovery status equals <i>Up</i>
B	Service type equals <i>Zabbix agent</i>

New condition

<input type="text" value="Host IP"/>	<input type="text" value="equals"/>	<input type="text" value="192.168.0.1-127,192.168.2.1"/>
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[Add](#)

Enabled ☒

\* At least one operation must exist.

\* Name

Discovery by proxy

\* IP range

\* Update interval

\* Checks

Zabbix agent "system.uname"	<a href="#">Edit</a> <a href="#">Remove</a>
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[New](#)

Device uniqueness criteria

☒ IP address  
☐ Zabbix agent "system.uname"

Host name

☐ DNS name  
☒ IP address  
☐ Zabbix agent "system.uname"

Visible name

☒ Host name  
☐ DNS name  
☐ IP address  
☐ Zabbix agent "system.uname"

Enabled ☒