

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”

| | | | | | | |
|--------------------------|-----------------------|---------|---------------------------------|----------------|----------|---------|
| <input type="checkbox"/> | Project Owners | Users 1 | Yury_Kachatkou (Yury Kacahtkou) | System default | Disabled | Enabled |
| <input type="checkbox"/> | Zabbix administrators | Users 1 | Admin (Zabbix Administrator) | System default | Disabled | Enabled |

0 selected Enable Disable Enable debug mode Disable debug mode Delete Displaying 2

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

User groupPermissions

Group nameProject Owners

Users

In group

Yury_Kachatkou (Yury Kacahtkou)

Other groups

All

Admin (Zabbix Administrator)

guest

Frontend access

System default

Enabled

☒

Debug mode

☐

Update

Delete

Cancel

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

Hosts

All hosts / **zabbix_agent** Enabled ZBX SNMP JMX IPMI Applications 10 Items 50 Triggers 19 Graphs 9 Discovery rules 2 Web scenarios

Host Templates IPMI Macros Host inventory Encryption

Host name: zabbixagent

Visible name: zabbix_agent

Groups: In groups: Project Hosts

Other groups: Discovered hosts, Hypervisors, Linux servers, Templates, Virtual machines, Zabbix servers

New group:

Agent interfaces:

| IP address | DNS name | Connect to | Port | Default |
|----------------|----------|------------|-------|---|
| 192.168.56.156 | | IP DNS | 10050 | <input checked="" type="radio"/> Remove |

- Assign to this host template of Linux

| | | | | | | | | | | | | | | |
|---|-----------------|----------|-------------|----------|-------------|-----|-----------------------|---|---------|-----|------|-----|------|------|
| <input type="checkbox"/> zabbix_agent | Applications 10 | Items 50 | Triggers 19 | Graphs 9 | Discovery 2 | Web | 192.168.56.156: 10050 | Template OS Linux (Template App Zabbix Agent) | Enabled | ZBX | SNMP | JMX | IPMI | NONE |
| Displaying 2 of 2 found | | | | | | | | | | | | | | |
| 0 selected Enable Disable Export Mass update Delete | | | | | | | | | | | | | | |

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

| zabbix_agent | | - other - (4 Items) | | | | | | | | | | | |
|--------------------------|-----------------------------|---------------------|---------------------|-------------|---------|-----------------------|--|--|--|--|--|--|--|
| <input type="checkbox"/> | CPU Load | | 2019-10-17 16:35:27 | 0.32 | +0.32 | Graph | | | | | | | |
| <input type="checkbox"/> | Free space on file systems, | | 2019-10-17 16:35:28 | 16794353664 | | Graph | | | | | | | |
| <input type="checkbox"/> | Memory load | | 2019-10-17 16:35:27 | 526594048 | +253952 | Graph | | | | | | | |
| <input type="checkbox"/> | Network load | | 2019-10-17 16:35:29 | 1003330 | +3078 | Graph | | | | | | | |

| <input type="checkbox"/> Wizard | Name | Triggers | Key | Interval | History | Trends | Type | Applications | Status | Info |
|---------------------------------|-----------------------------|----------|----------------------|----------|---------|--------|--------------|--------------|---------|------|
| <input type="checkbox"/> | Network load | | net.if.total[eth1] | 5s | 90d | 365d | Zabbix agent | | Enabled | |
| <input type="checkbox"/> | CPU Load | | system.cpu.load | 5s | 90d | 365d | Zabbix agent | | Enabled | |
| <input type="checkbox"/> | Free space on file systems, | | vfs.fs.size[, free] | 5s | 90d | 365d | Zabbix agent | | Enabled | |
| <input type="checkbox"/> | Memory load | | vm.memory.size[used] | 5s | 90d | 365d | Zabbix agent | | Enabled | |

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

Trigger [Dependencies](#)

| | | | |
|--|---|--|------------------------------------|
| Name | <input type="text" value="CPU load is too high"/> | | |
| Severity | <div>Not classified Information Warning Average High Disaster</div> | | |
| Expression | <input type="text" value="{zabbixagent:system.cpu.load.last()}>2"/> | | <input type="button" value="Add"/> |
| Expression constructor | | | |
| OK event generation | <div>Expression Recovery expression None</div> | | |
| PROBLEM event generation mode | <div>Single Multiple</div> | | |
| OK event closes | <div>All problems All problems if tag values match</div> | | |
| Tags | <div><div><input type="text" value="tag"/> <input type="text" value="value"/></div> Remove</div> <div>Add</div> | | |
| Allow manual close | <input type="checkbox"/> | | |
| URL | <input type="text"/> | | |
| Description | <input type="text"/> | | |
| Enabled | <input checked="" type="checkbox"/> | | |

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

PROBLEM: CPU load is too high Входящие x



yury.kachatkou@gmail.com

КОМУ: я ▼

Trigger: CPU load is too high

Trigger status: PROBLEM

Trigger severity: High

Trigger URL:

Item values:

1. CPU Load (zabbix_agent:system.cpu.load): 2.04
2. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN*
3. *UNKNOWN* (*UNKNOWN*:*UNKNOWN*): *UNKNOWN*

Original event ID: 63

Несортированные

Соцсети

Промоакции

| | |
|---|---|
| я | OK: CPU load is too high - Trigger: CPU load is too high Trigger status: OK Trigger severity: High Trigger URL: Item values: 1. CPU Loa |
| я | PROBLEM: CPU load is too high - Trigger: CPU load is too high Trigger status: PROBLEM Trigger severity: High Trigger URL: Item val |

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”)

| <input type="checkbox"/> Name ▲ | Conditions | Operations | Status |
|---|---|--|-------------------------|
| <input type="checkbox"/> Auto discovery. Linux servers. | Uptime/Downtime >= 60 Discovery status = Up Service type = Zabbix agent | Add host Add to host groups: Project Hosts Link to templates: Template OS Linux | Enabled |
| <input type="checkbox"/> Remove Lost Servers | Uptime/Downtime >= 300 Discovery status = Down | Remove host | Enabled |

Displaying 2 of 2 found

| <input type="checkbox"/> Name ▲ | Conditions | Operations | Status |
|--|------------|---|-------------------------|
| <input type="checkbox"/> Active Agent Registration | | Add to host groups: Project Hosts Link to templates: Template OS Linux | Enabled |

Displaying 1 of 1 found

selected

Enable

Disable

Delete

| <input type="checkbox"/> Name ▲ | Applications | Items | Triggers | Graphs | Discovery | Web | Interface | Templates | Status | Availability | Agent encryption | Inf |
|--|---------------------------------|--------------------------|-----------------------------|---------------------------|-----------------------------|---------------------|-----------------------|---|-------------------------|---|----------------------|-----|
| <input type="checkbox"/> zabbixclient | Applications 10 | Items 32 | Triggers 15 | Graphs 5 | Discovery 2 | Web | 192.168.56.156: 10050 | Template OS Linux (Template App Zabbix Agent) | Enabled | ZBX SNMP JMX IPMI | NONE | |
| <input type="checkbox"/> Zabbix server | Applications 12 | Items 79 | Triggers 48 | Graphs 14 | 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 | |

Displaying 2 of 2 found

0 selected

Enable

Disable

Export

Mass update

Delete

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