



DevOps Lab

ZABBIX

Home tasks

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TASK

1. Server configuration 5.x - VM, Tf + provision (filly provisioned setup)

```
root@zabbix-server:/home/dzmitry_mezhva
[root@zabbix-server dzmitry_mezhva]# systemctl status zabbix-server
● zabbix-server.service - Zabbix Server
   Loaded: loaded (/usr/lib/systemd/system/zabbix-server.service; enabled; vendor preset: disabled)
   Active: active (running) since Tue 2020-09-15 17:33:02 UTC; 2h 41min ago
   Process: 13711 ExecStop=/bin/kill -SIGTERM $MAINPID (code=exited, status=0/SUCCESS)
   Process: 13714 ExecStart=/usr/sbin/zabbix_server -c $CONFFILE (code=exited, status=0/SUCCESS)
  Main PID: 13716 (zabbix_server)
   CGroup: /system.slice/zabbix-server.service
           └─13716 /usr/sbin/zabbix_server -c /etc/zabbix/zabbix_server.conf
             └─13717 /usr/sbin/zabbix_server: configuration syncer [synced configuration in 0.032792 sec, idle 6...
               └─13718 /usr/sbin/zabbix_server: housekeeper [deleted 0 hist/trends, 0 items/triggers, 0 events, 0 ...
                 └─13719 /usr/sbin/zabbix_server: timer #1 [updated 0 hosts, suppressed 0 events in 0.001061 sec, id...
                   └─13720 /usr/sbin/zabbix_server: http poller #1 [got 0 values in 0.000688 sec, idle 5 sec]
                     └─13721 /usr/sbin/zabbix_server: discoverer #1 [processed 0 rules in 0.000822 sec, idle 60 sec]
                       └─13722 /usr/sbin/zabbix_server: history syncer #1 [processed 0 values, 0 triggers in 0.000049 sec,...
                         └─13723 /usr/sbin/zabbix_server: history syncer #2 [processed 0 values, 0 triggers in 0.000023 sec,...
                           └─13724 /usr/sbin/zabbix_server: history syncer #3 [processed 2 values, 1 triggers in 0.002467 sec,...
                             └─13725 /usr/sbin/zabbix_server: history syncer #4 [processed 0 values, 0 triggers in 0.000043 sec,...
                               └─13726 /usr/sbin/zabbix_server: escalator #1 [processed 0 escalations in 0.001465 sec, idle 3 sec]...
                                 └─13727 /usr/sbin/zabbix_server: proxy poller #1 [exchanged data with 0 proxies in 0.000041 sec, id...
                                   └─13728 /usr/sbin/zabbix_server: self-monitoring [processed data in 0.000060 sec, idle 1 sec]
                                     └─13729 /usr/sbin/zabbix_server: task manager [processed 0 task(s) in 0.000449 sec, idle 5 sec]
                                       └─13730 /usr/sbin/zabbix_server: poller #1 [got 0 values in 0.000021 sec, idle 1 sec]
                                         └─13731 /usr/sbin/zabbix_server: poller #2 [got 0 values in 0.000023 sec, idle 1 sec]
```

In my case, I configured zabbix server without zabbix-agent component, consequently I have a problem «Zabbix agent is not available (for 3m)» in zabbix server UI.

Time	Severity	Recovery time	Status	Info	Host	Problem
22:36:37	Average		PROBLEM		Zabbix server	Zabbix agent is not available (for 3m)

2. Agent configuration - VM, tf + provision

```
root@zabbix-client:~
[root@zabbix-client ~]# systemctl status zabbix-agent
● zabbix-agent.service - Zabbix Agent
   Loaded: loaded (/usr/lib/systemd/system/zabbix-agent.service; enabled; vendor preset: disabled)
   Active: active (running) since Tue 2020-09-15 07:46:58 UTC; 8h ago
   Process: 7545 ExecStop=/bin/kill -SIGTERM $MAINPID (code=exited, status=0/SUCCESS)
   Process: 7547 ExecStart=/usr/sbin/zabbix_agentd -c $CONFFILE (code=exited, status=0/SUCCESS)
  Main PID: 7549 (zabbix_agentd)
   CGroup: /system.slice/zabbix-agent.service
           └─7549 /usr/sbin/zabbix_agentd -c /etc/zabbix/zabbix_agentd.conf
             └─7550 /usr/sbin/zabbix_agentd: collector [idle 1 sec]
               └─7551 /usr/sbin/zabbix_agentd: listener #1 [waiting for connection]
                 └─7552 /usr/sbin/zabbix_agentd: listener #2 [waiting for connection]
                   └─7553 /usr/sbin/zabbix_agentd: listener #3 [waiting for connection]
                     └─7554 /usr/sbin/zabbix_agentd: active checks #1 [idle 1 sec]

Sep 15 07:46:58 zabbix-client systemd[1]: Starting Zabbix Agent...
Sep 15 07:46:58 zabbix-client zabbix_agentd[7547]: zabbix_agentd [7547]: Warning: both Hostname and Hostna...ver]
Sep 15 07:46:58 zabbix-client systemd[1]: Started Zabbix Agent.
Hint: Some lines were ellipsized, use -l to show in full.
[root@zabbix-client ~]#
```

3. Add agent to server (manually) - linux templ

Zabbix Server: Configuration of x +

Не защищено | 35.192.201.76/zabbix/hosts.php?form=update&hostid=10331

ZABBIX << >>

Zabbix Server

Monitoring
Inventory
Reports
Configuration
Host groups

Hosts

All hosts / zabbix-client Enabled **ZBX** SNMP JMX IPMI Applications 14 Items 63 Triggers 22 Graphs 13 Discovery rules 3 Web scenarios

Host Templates IPMI Tags Macros Inventory Encryption

Linked templates Name Action
Template OS Linux by Zabbix agent Unlink Unlink and clear

Link new templates type here to search Select

Update Clone Full clone Delete Cancel

Zabbix Server: Hosts x +

Не защищено | 35.192.201.76/zabbix/zabbix.php?action=host.view

ZABBIX << >>

Zabbix Server

Monitoring
Dashboard
Problems
Hosts
Overview
Latest data
Screens
Maps
Discovery
Services
Inventory

Hosts

Name type here to search Select

Host groups type here to search Select

IP type here to search

DNS type here to search

Port type here to search

Status Any Enabled Disabled

Tags And/Or Or tag Contains Equals value Remove

Show hosts in maintenance ☒ Show suppressed problems ☐

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

Apply Reset

Name	Interface	Availability	Tags	Problems	Status	Latest data	Problems	Graphs	Screens	Web
zabbix-client	10.128.15.195: 10050	ZBX SNMP JMX IPMI			Enabled	Latest data	Problems	Graphs 13	Screens 2	Web

Displaying 1 of 1 found

Zabbix Server: Custom graphs x +

Не защищено | 35.192.201.76/zabbix/zabbix.php?action=charts.view&filter_set=1&filter_hostids%5B0%5D=10331

ZABBIX << >>

Zabbix Server

Monitoring
Dashboard
Problems
Hosts
Overview
Latest data
Screens
Maps
Discovery
Services
Inventory
Reports
Configuration
Administration
Support
Share
Help
User settings

zabbix-client: Interface eth0: Network traffic

Interface eth0: Bits received	last	min	avg	max
[avg]	4.94 Kbps	2.64 Kbps	3.17 Kbps	8.6 Kbps
Interface eth0: Bits sent	[avg]	2.41 Kbps	2.03 Kbps	2.45 Kbps
Interface eth0: Outbound packets with errors	[avg]	0	0	0
Interface eth0: Inbound packets with errors	[avg]	0	0	0
Interface eth0: Outbound packets discarded	[avg]	0	0	0
Interface eth0: Inbound packets discarded	[avg]	0	0	0

zabbix-client: CPU jumps

Context switches per second	last	min	avg	max
[avg]	146.8078	95.3341	133.982	179.873
Interrupts per second	[avg]	85.073	61.4789	80.5919

4. Setup email server - gmail

Zabbix Server: Configuration of x +

Не защищено | 35.192.201.76/zabbix/zabbix.php?action=mediatype.list

ZABBIX << >>

Zabbix Server

Monitoring
Inventory
Reports
Configuration
Administration
General
Proxies
Authentication
User groups
Users
Media types
Scripts
Queue

Media types

Create media type Import

Name type here to search Select

Status Any Enabled Disabled

Apply Reset

Name	Type	Status	Used in actions	Details	Action
Discord	Webhook	Enabled			Test
Email	Email	Enabled		SMTP server: "mail.example.com", SMTP helo: "example.com", SMTP email: "zabbix@example.com"	Test
Email (HTML)	Email	Enabled		SMTP server: "mail.example.com", SMTP helo: "example.com", SMTP email: "zabbix@example.com"	Test
Gmail	Email	Enabled	Load average	SMTP server: "smtp.gmail.com", SMTP helo: "gmail.com", SMTP email: "dzmityr.mezhva@gmail.com"	Test
Jira	Webhook	Enabled			Test
Jira ServiceDesk	Webhook	Enabled			Test
Jira with CustomFields	Webhook	Enabled			Test
Mattermost	Webhook	Enabled			Test
MS Teams	Webhook	Enabled			Test
Opsgenie	Webhook	Enabled			Test
OTRS	Webhook	Enabled			Test

5. Test alert

The screenshot displays the Zabbix web interface. The top section shows the 'Trigger actions' configuration page. A trigger action is defined for the condition 'Load average' with the operation 'Send message to users: dmezha (Dzmitry Mezhva) via Gmail' and 'Send message to user groups: DevOpsLab via Gmail'. The status is 'Enabled'.

The bottom section shows the 'Problems' page. A problem is listed for the host 'zabbix-client' with the message 'Load average is too high (per CPU load over 1.5 for 5m)'. The severity is 'Average' and the status is 'PROBLEM'. A notification is shown for the user 'dmezha (Dzmitry Mezhva)' via Gmail, with the subject 'PROBLEM: Load average is too high (per CPU load over 1.5 for 5m)' and the message 'Notification from zabbix-client. Trigger: Load average is too high (per CPU load over 1.5 for 5m). Trigger status: PROBLEM. Trigger severity: Average'.

6. Agent registration (automated)

```
root@zabbix-client:~
# Mandatory: no
# Range: 0-255 characters
# Default:
# oostMetadata=system.uname

### Option: HostMetadataItem
# Optional parameter that defines an item used for getting host metadata.
# Host metadata is used at host auto-registration process.
# During an auto-registration request an agent will log a warning message if
# the value returned by specified item is over limit of 255 characters.
# This option is only used when HostMetadata is not defined.

# Mandatory: no
# Default:
HostMetadataItem=system.uname
```


The first screenshot shows the 'Autoregistration actions' configuration page. A new action is being created with the name 'Add to host groups: Linux servers' and the link to templates 'Template OS Linux by Zabbix agent'. The status is set to 'Enabled'.

The second screenshot shows the 'Hosts' configuration page for a host named 'Zabbix client'. The IP address is 10.128.15.195, and the port is 10050. The host is enabled and has the 'Zabbix client' template assigned.

The third screenshot shows the 'Hosts' configuration page for a host named 'Zabbix client'. The IP address is 10.128.15.195, and the port is 10050. The host is enabled and has the 'Zabbix client' template assigned. The 'Linked templates' section shows the 'Template OS Linux by Zabbix agent' template linked to the host.

I configured zabbix client so that it can connect to zabbix server automated. You can just create autoregistration action for this like above.

EXTRA TASK

1. Setup ldap configuration
2. Custom check (userdata)