

Installation of Zabbix server for Ubuntu 16.04 and ubuntu 16.10

Zabbix server :

Zabbix is an Open Source, high-level enterprise software designed to monitor and keep track of networks, servers and applications in real time. Built in a server-client model, Zabbix can collect different type of data than are used to create historical graphics and output performance or load trends of the monitored targets.

The server has the ability to check standard networking services (HTTP, FTP, SMTP, IMAP etc) without the need to install extra software on the monitored hosts.

However, in order to gather data and create statistics about local services or other specific system resources that run on remote instances, such as CPU, disks, internal system process, RAM, etc, you need to install and configure a Zabbix agent.

1. Install a LAMP stack :

Zabbix will need web server, a data base and PHP in order to correctly function, setting up a LAMP stack (linux, Apache, MySQL, and PHP) fulfills all of these requirements.

```
sudo apt-get install lamp-server^
```

2. Adding Apt Repository

Before installing Zabbix first configure zabbixzone rpm repository in our system using following commands.

Latest version of Zabbix 3.2

- a. wget http://repo.zabbix.com/zabbix/3.2/ubuntu/pool/main/z/zabbix-release/zabbix-release_3.2-1+xenial_all.deb
- b. sudo dpkg -i zabbix-release_3.2-1+xenial_all.deb
- c. sudo apt-get update

3. Install Zabbix Server

After adding zabbix apt repository in your system use following command to install Zabbix using mysql database.

```
sudo apt-get install zabbix-server-mysql zabbix-frontend-php
```

4. Updating time zone

-timedatectl list-timezones

Update timezone in php configuration file /etc/php/7.0/apache2/php.ini.

Like below

[Date]

; <http://php.net/date.timezone>

date.timezone = 'continent/city'

5. Create Database Schema

Now create a database schema for your zabbix server. First use following commands to create mysql database and user for your zabbix server

```
#mysql -u root -p
```

```
mysql CREATE DATABASE zabbix;
```

```
mysql GRANT ALL on zabbix.* to zabbix@localhost IDENTIFIED BY 'password';
```

```
mysql FLUSH PRIVILEGES;
```

```
mysql quit;
```

Now restart zabbix database schema in newly created database

```
#cd /usr/share/doc/zabbix-server-mysql
```

```
#zcat create.sql.gz | mysql -u root -p zabbix
```

6. Edit Zabbix Configuration File

Now edit zabbix server configuration file /etc/zabbix/zabbix_server.conf in your favorite text editor and update following entries.

```
DBHost=localhost
```

```
DBName=zabbix
```

```
DBUser=zabbix
```

```
DBPassword=password
```

7. Zabbix creates its own apache configuration file /etc/zabbix/apache.conf.

Use following command to restart Apache service.

```
# systemctl restart apache2
```

```
#sudo service apache2 restart
```

```
#sudo -s
```

```
# apt-get install php7.0-bcmath php7.0-mbstring php7.0-xml*
```

```
# systemctl restart apache2
```

8. - <http://IP-address/zabbix>

You will be presented with a login screen. The default credentials are as follows:

Username = admin

Password = zabbix



Zabbix Agent :

A native Zabbix agent, developed in C language, may run on various supported platforms, including Linux, UNIX and Windows, and collect data such as CPU, memory, disk and network interface usage from a device.

Supported platforms :

Zabbix agent is supported for:

- Linux
- IBM AIX
- FreeBSD
- NetBSD
- OpenBSD
- HP-UX
- Mac OS X
- Solaris: 9, 10, 11
- Windows: all desktop and server versions since 2000

Zabbix network discovery is based on the following information:

- IP ranges
- Availability of external services (, SSH, WEB, POP3, IMAP, TCP, etc)
- Information received from Zabbix agent (only unencrypted mode is supported)
- Information received from SNMP agent

Installing zabbix agent in openwrt

- Goto to openwrt folder (Package is already available as part of openwrt calmer code base)
 - make menuconfig -> adminstartion -> zabbix**
 - save and exit**
- make
- Load the router image

ZABBIX HOST DISCOVERY AND AUTOREGISTRATION

1. Modify `/etc/zabbix/zabbix_agentd.conf` for auto-registering of the zabbix-agent (router config file)

- a. server = <IP-address> of zabbix server
- b. ServerActive=<IP-address> of zabbix server
- c. `/etc/init.d/zabbix_agentd` restart

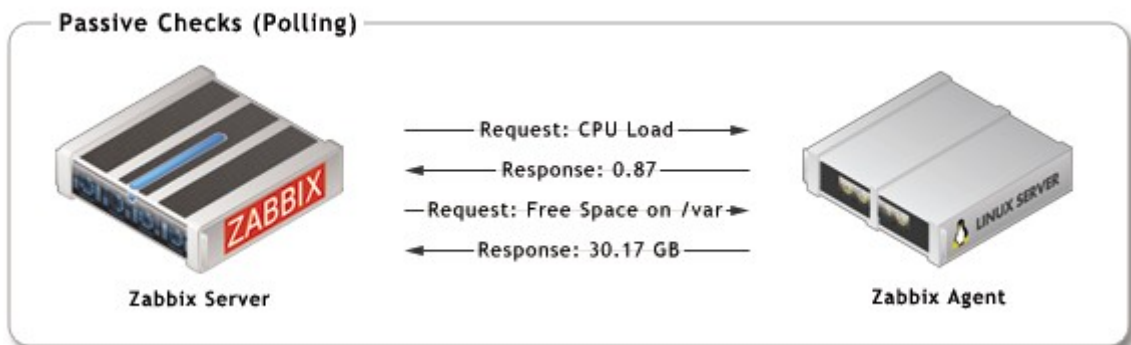
2. Active agent auto-registration:

It is possible to allow active Zabbix agent auto-registration, after which the server can start monitoring them. This way new hosts can be added for monitoring without configuring them manually on the server.

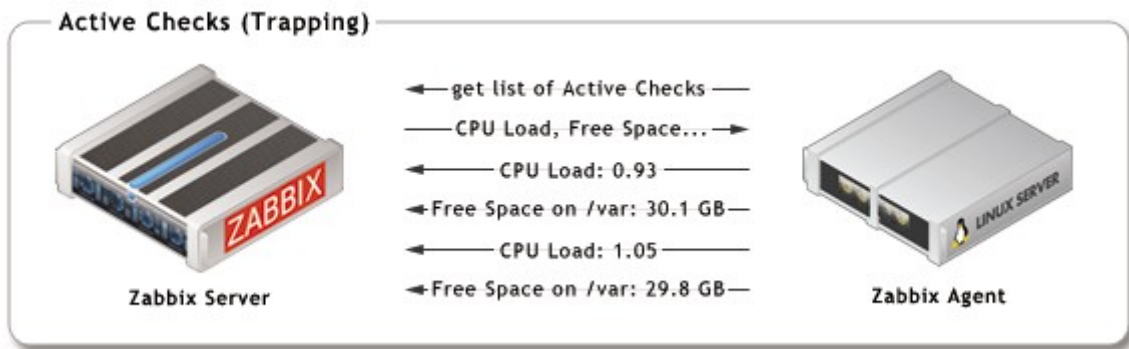
3. Polling and trapping support:

Zabbix agents support both passive (polling) and active checks (trapping).

- In a passive check, a Zabbix server (or proxy) requests a value from Zabbix agent, for example, CPU load, the agent processes the request and returns the value to Zabbix server (or proxy).



- In an active check, a Zabbix agent requests from Zabbix server (or proxy) a list of active checks and sends the results in periodically.



Configuration done on Zabbix server for the auto registering of the Zabbix agent :

ZABBIX Monitoring Inventory Re 1 Configuration Administration

Host groups Templates Hosts Maint 2 Actions Event correlation Discovery Zabbix Server

Actions 3 Event source Auto registration Create action

Action 4 ons

Name Register Linux Hosts

Label	Name	Action
A	Host metadata like Linux	Remove

New condition
Host metadata like

Enabled

Action Operations 5

Default subject Auto registration: {HOST.HOST}

Default message
Host name: {HOST.HOST}
Host IP: {HOST.IP}
Agent port: {HOST.PORT}

Operations Details Action

Add host Edit Remove

Add to host groups: Linux servers Edit Remove

Link to templates: Template OS Linux Edit Remove

Zabbix 3.2.1. © 2001-

Action to automatically add hosts when the Zabbix agent logs in