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| Zabbix monitoring  Setup and configuration |
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## Introduction

Zabbix is an enterprise class open-source monitoring solution for networks, servers, virtual machines, cloud services and applications. It collects metrics and data and displays them in a GUI frontend page, where you can observe the data as graphs, configure and manage your machines, and much more

## Requirements

Zabbix and especially Zabbix database may require significant CPU resources depending on number of monitored parameters and chosen database engine. Apart from that, minimum hardware requirements are as follow:

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Zabbix server can only be run in a Linux operating system, but it can track any machine regardless of the OS.

Additionally, we will follow the official Zabbix documentation:

* https://www.zabbix.com/documentation/current/en/manual

to properly implement the service to our architecture.

## Installing Zabbix

### Install the Zabbix repository

In a terminal, run the following commands

# wget https://repo.zabbix.com/zabbix/6.0/ubuntu/pool/main/z/zabbix-release/zabbix-release\_6.0-1+ubuntu20.04\_all.deb  
# dpkg -i zabbix-release\_6.0-1+ubuntu20.04\_all.deb  
# apt update

This will update your packet manager with the Zabbix repository so you can install all the required programs more easily.

### Install the server, frontend, and agent

Run the following command

# apt install zabbix-server-mysql zabbix-frontend-php zabbix-apache-conf zabbix-sql-scripts zabbix-agent

This installs the required programs to run all the Zabbix functionalities

### Create an initial database

Make sure that the database server is up and running, then run the following on your database host

# mysql -uroot -p

[password]

mysql> create database zabbix character set utf8mb4 collate utf8mb4\_bin;

mysql> create user zabbix@localhost identified by '[password]';

mysql> grant all privileges on zabbix.\* to zabbix@localhost;

mysql> quit;

This will create a database in your host that stores all the data from your tracked machines.

On Zabbix server host, import initial schema and data. You will be prompted to enter your newly created password.

# zcat /usr/share/doc/zabbix-sql-scripts/mysql/server.sql.gz | mysql -uzabbix -p Zabbix

### Configure the database for Zabbix server

Edit the file /etc/zabbix/zabbix\_server.conf and change the following:

DBPassword=password

This will allow the database to communicate with the server and frontend

### Start the Zabbix Server and agent processes

Start Zabbix server and agent processes and make it start at system boot.

# systemctl restart zabbix-server zabbix-agent httpd php-fpm

# systemctl enable zabbix-server zabbix-agent httpd php-fpm

### Configure Frontend

Connect to your newly installed Zabbix frontend: http://server\_ip\_or\_name/zabbix

Now, we will follow the page’s installation wizard

Frontend configuration welcoming screen


Firstly, we will check if all the software pre-requisites are met

Graphical user interface, application

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Enter details for connecting to the database. Zabbix database must already be created.

Graphical user interface, application, Word

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A Zabbix server name is optional, if submitted it will be displayed in the menu bar and title pages. Then, set the default time zone and theme

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Review a summary of the settings

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## Installing Zabbix agent

To monitor clients, you need to install an agent in the target machine. The agent gathers operational information locally and reports data to Zabbix server for further processing. In case of failures (such as a hard disk running full or a crashed service process), Zabbix server can actively alert the administrators of the particular machine that reported the failure.

Because we are working only with Windows Machines, we will follow the installation of the Zabbix agent for Windows.

### Install the MSI package

The Zabbix agent can be installed on Windows using an installation wizard. We download it from the Zabbix page, and run it

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After clicking next and agreeing to the Terms of Service, we continue to the configuration

Graphical user interface, text, application, email

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The Host Name field will be the name by which this machine will be recognized by Zabbix. Under the Zabbix server IP/DNS, you enter the IP or DNS name of the server. The listen port can be left as is, unless you’ve changed this field in the configuration file for the server. If you’re using a proxy, specify the IP address of it under the field.

Finally, we can leave the last two checkboxes blank. Then, click on next

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This screens displays all the features that will be installed. Click on next to proceed

Graphical user interface, text, application, email

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The installation is now finished, and you can click on Install to finish the installation.

### Adding the host to the frontend

To now see all the data from your host, you have to add it to the frontend. To do that, first go to the configuration tab and select the ‘Hosts’ section.

A screenshot of a phone

Description automatically generated with medium confidence

Now, click the ‘Create host’ button in the top right corner of the screen. Then, we’re greeted with the following screen

Graphical user interface, application

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Firstly, you need to enter the Host Name under the required field. Notice that the name has to coincide with the one chosen during the agent installation.

Now, choose a group this machine will belong to by clicking the ‘Select’ button next to the ‘Groups’ field.

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These groups are the default created provided by Zabbix. You can make your own group to store the host if you need to.

After that, you need to specify the IP address or DNS name of the host under the ‘Interfaces’ field. The port field is left as it is unless you’ve specified otherwise in the agent installation.

Now, click on the ‘Templates’ tab on the top left.

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On this screen, click on the ‘Select’ button next to the search field.

Graphical user interface, text, application, email

Description automatically generated

We now have to specify which kind of template we want, so click on the ‘Select’ button next to the search field.

Graphical user interface, application

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Choose ‘Templates/Operating systems’

Graphical user interface

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Then, choose ‘Template OS Windows by Zabbix agent’ and click on ‘Select’.

You’ve finalized the configuration! Click on the ‘Add’ button to add the host to the server and monitor its activity.