

1. Install Zabbix Server 5 on VM that includes:
 - Zabbix Server
 - Database
 - Apache
 - PHP
 - Zabbix Server-Modules for Apache & Database
 - Zabbix Frontend

Installing required dependencies:

```
sudo apt install php php-mbstring php-gd php-xml php-bcmath php-ldap php-mysql  
libapache2-mod-php
```

I already had an apache2 server running at port 8088 and mysql service is also running.

(It can be manually installed as:

```
sudo apt-get install apache2
```

```
Sudo apt install mysql-server )
```

Here is the status of my apache and mysql servers.

```
root@batman:~# systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-11-30 12:33:05 +0545; 13min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 1088 (apache2)
    Tasks: 6 (limit: 9110)
   Memory: 13.4M

root@batman:~# systemctl status mysql
● mysql.service - MySQL Community Server
   Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-11-30 12:33:07 +0545; 13min ago
     Main PID: 1014 (mysqld)
    Status: "Server is operational"
    Tasks: 38 (limit: 9110)
```

So zabbix repository is configured and downloaded using following commands:

```
wget
```

```
https://repo.zabbix.com/zabbix/5.0/ubuntu/pool/main/z/zabbix-release/zabbix-release_5.0-  
1+focal_all.deb
```

```
sudo dpkg -i zabbix-release_5.0-1+focal_all.deb
```

```
sudo apt update
```

```
sudo apt install zabbix-server-mysql zabbix-frontend-php zabbix-agent  
zabbix-apache-conf
```

At first, we have to configure mysql password using command:

```
sudo mysql_secure_installation
```

```

root@batman:~# sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.
The 'validate_password' component is installed on the server.
The subsequent steps will run with the existing configuration
of the component.
Please set the password for root here.

New password:

Re-enter new password:

```

Now a database is to be created for the zabbix server. So we login to mysql as root user and request the following queries:

mysql -u root -p

```

CREATE DATABASE zabbixdb character set utf8 collate utf8_bin;
CREATE USER 'zabbix'@'localhost' IDENTIFIED BY 'password';
GRANT ALL PRIVILEGES ON zabbixdb.* TO 'zabbix'@'localhost' WITH GRANT OPTION;
FLUSH PRIVILEGES;

```

```

mysql> CREATE USER 'zabbix'@'localhost' IDENTIFIED BY 'password';
Query OK, 0 rows affected (0.03 sec)

mysql> GRANT ALL PRIVILEGES ON zabbixdb.* TO 'zabbix'@'localhost' WITH GRANT OPTION;
Query OK, 0 rows affected (0.01 sec)

mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.00 sec)

```

After database configuration, the default schema of zabbix database is loaded:

```

cd /usr/share/doc/zabbix-server-mysql
zcat create.sql.gz | mysql -u zabbix -p zabbixdb

```

And zabbix server is configured with following content:

sudo nano /etc/zabbix/zabbix_server.conf

```

"DBHost=localhost
DBName=zabbixdb
DBUser=zabbix
DBPassword=password"

```

```

DBHost=localhost
DBName=zabbixdb

```

```

DBUser=zabbix
DBPassword=password

```

Timezone is set within apache php configuration file as:

Nano /etc/php/7.4/apache2/php.ini

```
[Date]
; Defines the default timezone used by the date functions
; http://php.net/date.timezone
date.timezone = 'Asia/Kathmandu'
```

Now zabbix-server and agent are enabled and started using commands:

sudo systemctl enable zabbix-server

sudo systemctl restart zabbix-server

sudo systemctl enable zabbix-agent

sudo systemctl restart zabbix-agent

```
root@batman:/usr/share/doc/zabbix-server-mysql# systemctl status zabbix-server
● zabbix-server.service - Zabbix Server
   Loaded: loaded (/lib/systemd/system/zabbix-server.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-11-30 15:47:54 +0545; 30min ago
     Main PID: 20377 (zabbix_server)
        Tasks: 1 (limit: 9110)
       Memory: 2.2M
```

```
root@batman:/usr/share/doc/zabbix-server-mysql# systemctl status zabbix-agent
● zabbix-agent.service - Zabbix Agent
   Loaded: loaded (/lib/systemd/system/zabbix-agent.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-11-30 16:02:32 +0545; 16min ago
     Process: 21747 ExecStart=/usr/sbin/zabbix_agentd -c $CONFFILE (code=exited, status=0/SUCCESS)
     Main PID: 21749 (zabbix_agentd)
```

Apache server is restarted using command:

sudo systemctl restart apache2

And the firewall is configured to allow ports 10050 and 10051.

Sudo ufw allow 10050/tcp

Sudo ufw allow 10051/tcp

Ufw reload

When we access the server, 192.168.1.67:8088 we can see apache page running:

And 192.168.1.67:8088/zabbix starts initialization for the zabbix server.

2. Provide screenshot of
 - Running Zabbix Server service,

```
root@batman:/usr/share/doc/zabbix-server-mysql# systemctl status zabbix-server
● zabbix-server.service - Zabbix Server
   Loaded: loaded (/lib/systemd/system/zabbix-server.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-11-30 15:47:54 +0545; 30min ago
     Main PID: 20377 (zabbix_server)
       Tasks: 1 (limit: 9110)
      Memory: 3.2M
```

- Database config parameter in server config file

```
DBHost=localhost
DBName=zabbixdb
DBUser=zabbix
DBPassword=password
```

- Server Dashboard

