

1.

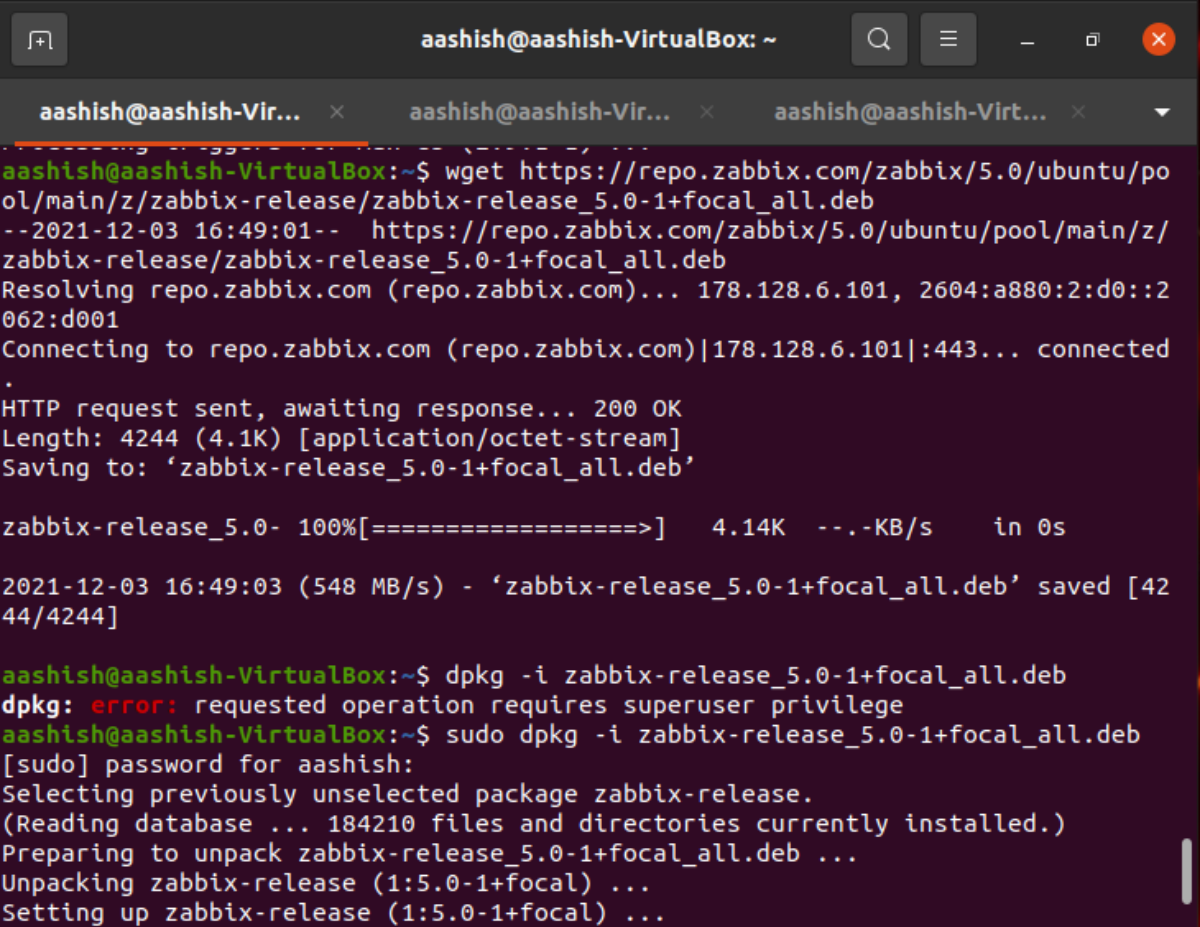
Install Zabbix Server 5 on VM that includes:

- Zabbix Server
- Database
- Apache
- PHP
- Zabbix Server-Modules for Apache & Database
- Zabbix Frontend

Answer:

Firstly, we install the zabbix repository configuration package as follows;

```
- wget  
https://repo.zabbix.com/zabbix/5.0/ubuntu/pool/main/z/zabbix-release/zabbix-re  
lease_5.0-1+focal_all.deb  
- sudo dpkg -i zabbix-release_5.0-1+ubuntu20.04_all.deb
```



```
aashish@aashish-VirtualBox: ~  
aashish@aashish-Vir... x aashish@aashish-Vir... x aashish@aashish-Virt... x  
aashish@aashish-VirtualBox:~$ wget https://repo.zabbix.com/zabbix/5.0/ubuntu/po  
ol/main/z/zabbix-release/zabbix-release_5.0-1+focal_all.deb  
--2021-12-03 16:49:01-- https://repo.zabbix.com/zabbix/5.0/ubuntu/pool/main/z/  
zabbix-release/zabbix-release_5.0-1+focal_all.deb  
Resolving repo.zabbix.com (repo.zabbix.com)... 178.128.6.101, 2604:a880:2:d0::2  
062:d001  
Connecting to repo.zabbix.com (repo.zabbix.com)|178.128.6.101|:443... connected  
.  
HTTP request sent, awaiting response... 200 OK  
Length: 4244 (4.1K) [application/octet-stream]  
Saving to: 'zabbix-release_5.0-1+focal_all.deb'  
  
zabbix-release_5.0- 100%[=====] 4.14K --.-KB/s in 0s  
  
2021-12-03 16:49:03 (548 MB/s) - 'zabbix-release_5.0-1+focal_all.deb' saved [42  
44/4244]  
  
aashish@aashish-VirtualBox:~$ dpkg -i zabbix-release_5.0-1+focal_all.deb  
dpkg: error: requested operation requires superuser privilege  
aashish@aashish-VirtualBox:~$ sudo dpkg -i zabbix-release_5.0-1+focal_all.deb  
[sudo] password for aashish:  
Selecting previously unselected package zabbix-release.  
(Reading database ... 184210 files and directories currently installed.)  
Preparing to unpack zabbix-release_5.0-1+focal_all.deb ...  
Unpacking zabbix-release (1:5.0-1+focal) ...  
Setting up zabbix-release (1:5.0-1+focal) ...
```

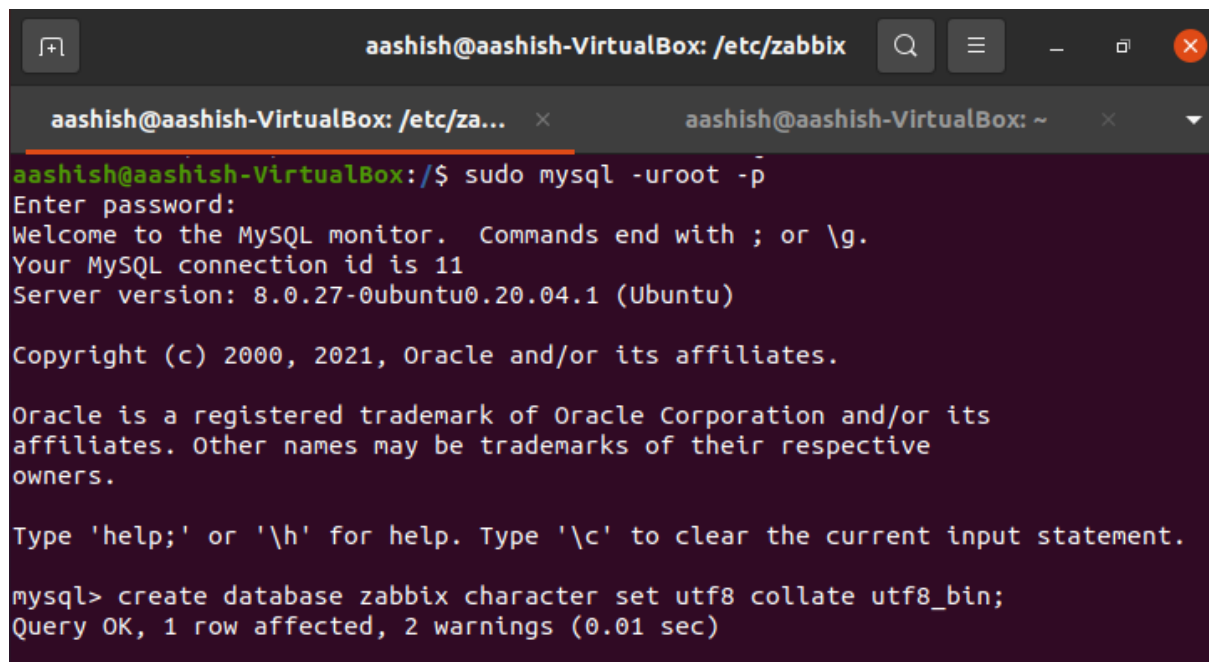
Next, to install the zabbix, we use the following command;

- **sudo apt update**
- **sudo apt install zabbix-server-mysql zabbix-frontend-php zabbix-apache-conf**

Then, we create initial database as follows;

- **sudo mysql -uroot -p**
- **create database zabbix character set utf8 collate utf8\_bin;**
- **create user zabbix@localhost identified by 'Lothey@@@123';**
- **grant all privileges on zabbix.\* to zabbix@localhost;**

After creating the database as follows we quit from the database.

A terminal window titled 'aashish@aashish-VirtualBox: /etc/zabbix' with a search bar and window controls. It shows the execution of 'sudo mysql -uroot -p', followed by the MySQL welcome message. The user enters the password and runs 'create database zabbix character set utf8 collate utf8\_bin;'. The output shows 'Query OK, 1 row affected, 2 warnings (0.01 sec)'.

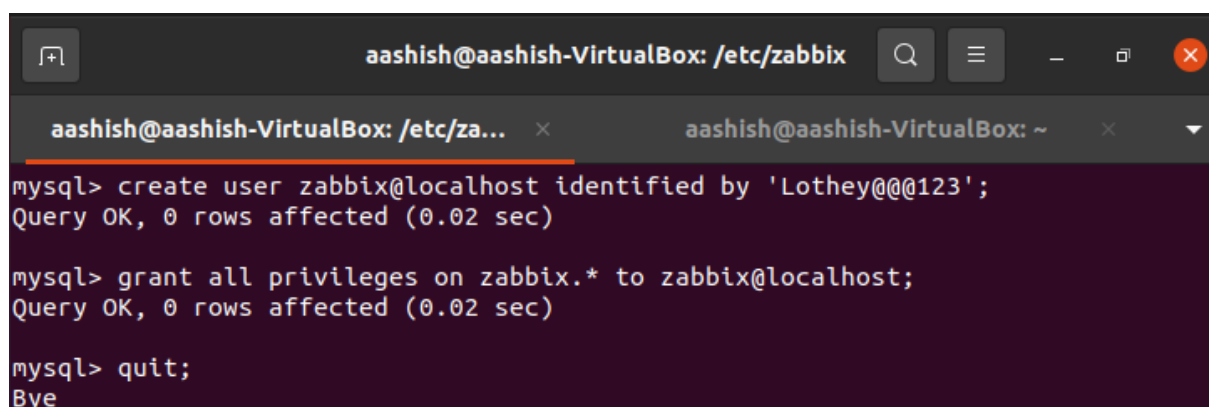
```
aashish@aashish-VirtualBox:/$ sudo mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.27-0ubuntu0.20.04.1 (Ubuntu)

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database zabbix character set utf8 collate utf8_bin;
Query OK, 1 row affected, 2 warnings (0.01 sec)
```

A terminal window titled 'aashish@aashish-VirtualBox: /etc/zabbix' with a search bar and window controls. It shows the execution of 'create user zabbix@localhost identified by 'Lothey@@@123';' and 'grant all privileges on zabbix.\* to zabbix@localhost;'. The output shows 'Query OK, 0 rows affected (0.02 sec)' for both. Finally, 'quit;' is entered, resulting in 'Bye'.

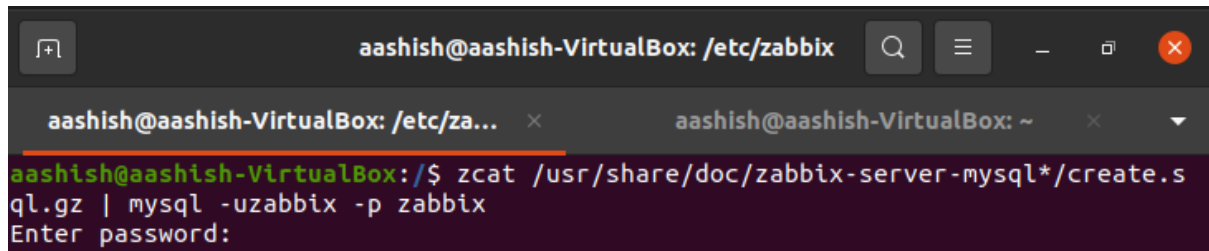
```
mysql> create user zabbix@localhost identified by 'Lothey@@@123';
Query OK, 0 rows affected (0.02 sec)

mysql> grant all privileges on zabbix.* to zabbix@localhost;
Query OK, 0 rows affected (0.02 sec)

mysql> quit;
Bye
```

Next, we set up the schema and import the data into the zabbix database using the following command;

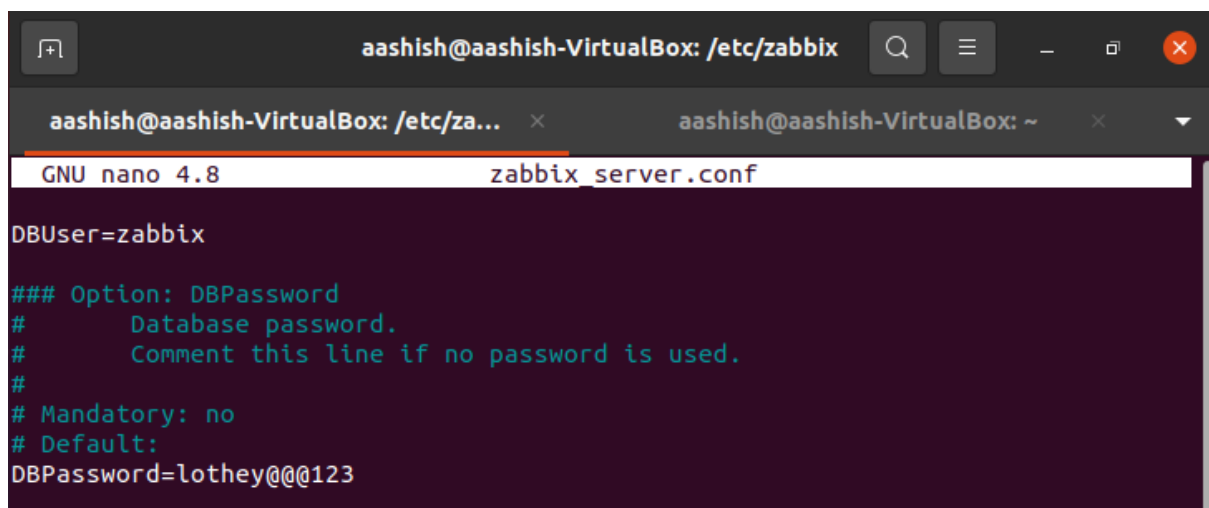
```
- zcat /usr/share/doc/zabbix-server-mysql*/create.sql.gz | mysql -uzabbix -p zabbix
```



```
aashish@aashish-VirtualBox: /etc/zabbix
aashish@aashish-VirtualBox: /etc/za... x aashish@aashish-VirtualBox: ~ x
aashish@aashish-VirtualBox:/$ zcat /usr/share/doc/zabbix-server-mysql*/create.s
ql.gz | mysql -uzabbix -p zabbix
Enter password:
```

Next, we edit the zabbix\_server.conf file in /etc/zabbix/ file using the text editor as follows;

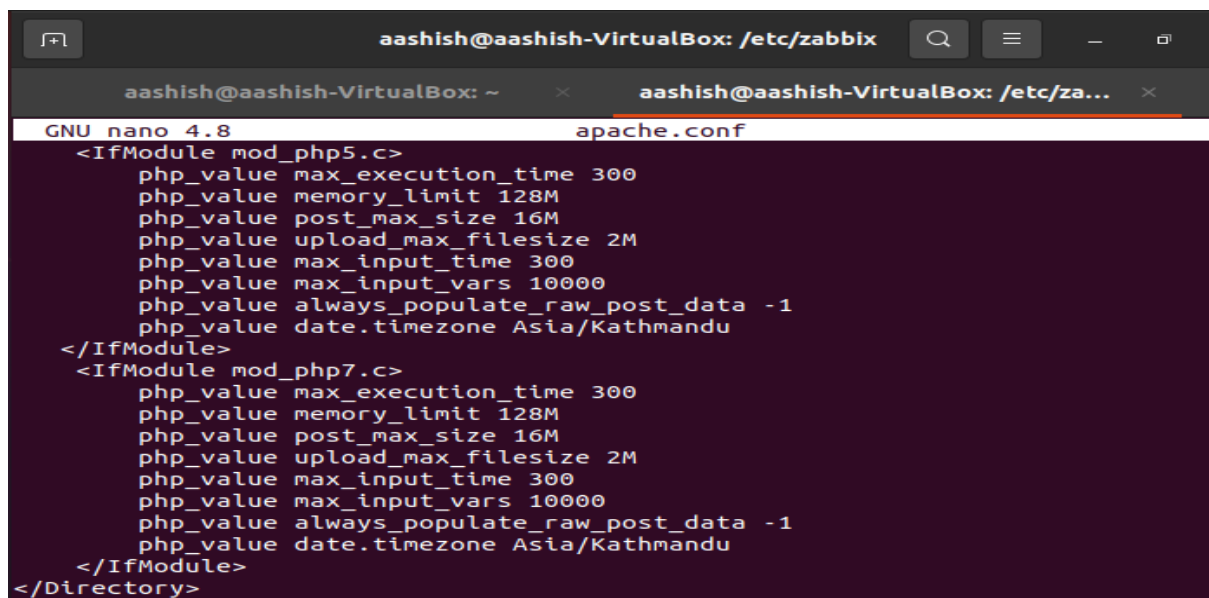
```
- sudo nano /etc/zabbix/zabbix_server.conf
```



```
aashish@aashish-VirtualBox: /etc/zabbix
aashish@aashish-VirtualBox: /etc/za... x aashish@aashish-VirtualBox: ~ x
GNU nano 4.8 zabbix_server.conf
DBUser=zabbix

### Option: DBPassword
# Database password.
# Comment this line if no password is used.
#
# Mandatory: no
# Default:
DBPassword=lothey@@@123
```

Next, we set the date timezone as Asia/Kathmandu in apache.conf file as follows;



```
aashish@aashish-VirtualBox: /etc/zabbix
aashish@aashish-VirtualBox: ~ x aashish@aashish-VirtualBox: /etc/za... x
GNU nano 4.8 apache.conf
<IfModule mod_php5.c>
    php_value max_execution_time 300
    php_value memory_limit 128M
    php_value post_max_size 16M
    php_value upload_max_filesize 2M
    php_value max_input_time 300
    php_value max_input_vars 10000
    php_value always_populate_raw_post_data -1
    php_value date.timezone Asia/Kathmandu
</IfModule>
<IfModule mod_php7.c>
    php_value max_execution_time 300
    php_value memory_limit 128M
    php_value post_max_size 16M
    php_value upload_max_filesize 2M
    php_value max_input_time 300
    php_value max_input_vars 10000
    php_value always_populate_raw_post_data -1
    php_value date.timezone Asia/Kathmandu
</IfModule>
</Directory>
```

Then, we start and enable zabbix-server, zabbix-agent and apache2 as follows;

- **sudo systemctl start zabbix-server zabbix-agent apache2**
- **sudo systemctl enable zabbix-server zabbix-agent apache2**

```
aashish@aashish-VirtualBox: ~  
aashish@aashish-VirtualBox:~$ sudo systemctl restart zabbix-server zabbix-agent apache2  
[sudo] password for aashish:  
aashish@aashish-VirtualBox:~$ sudo systemctl enable zabbix-server zabbix-agent apache2  
Synchronizing state of zabbix-server.service with SysV service script with /lib/systemd/systemd-sysv-install.  
Executing: /lib/systemd/systemd-sysv-install enable zabbix-server  
Synchronizing state of zabbix-agent.service with SysV service script with /lib/systemd/systemd-sysv-install.  
Executing: /lib/systemd/systemd-sysv-install enable zabbix-agent  
Synchronizing state of apache2.service with SysV service script with /lib/systemd/systemd-sysv-install.  
Executing: /lib/systemd/systemd-sysv-install enable apache2  
Created symlink /etc/systemd/system/multi-user.target.wants/zabbix-server.service → /lib/systemd/system/zabbix-server.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/zabbix-agent.service → /lib/systemd/system/zabbix-agent.service.
```

We verify the status of all as follows;

- **sudo systemctl status zabbix-server zabbix-agent apache2**

```
aashish@aashish-VirtualBox: ~  
aashish@aashish-VirtualBox:~$ sudo systemctl status zabbix-server zabbix-agent apache2  
● zabbix-server.service - Zabbix Server  
   Loaded: loaded (/lib/systemd/system/zabbix-server.service; vendor preset: enabled)  
   Active: active (running) since Fri 2021-12-03 18:33:13 AEST; 1min 1s ago  
     Main PID: 50693 (zabbix_server)  
        Tasks: 1 (limit: 5235)  
       Memory: 6.7M  
      CGroup: /system.slice/zabbix-server.service  
             └─50693 /usr/sbin/zabbix_server -c /etc/zabbix/zabbix_server.conf  
  
दि सम्बर 03 18:33:13 aashish-VirtualBox systemd[1]: Starting Zabbix Server: zabbix_server.  
दि सम्बर 03 18:33:13 aashish-VirtualBox systemd[1]: Started Zabbix Server: zabbix_server.  
  
● zabbix-agent.service - Zabbix Agent  
   Loaded: loaded (/lib/systemd/system/zabbix-agent.service; vendor preset: enabled)  
   Active: active (running) since Fri 2021-12-03 18:33:13 AEST; 1min 1s ago  
     Main PID: 50696 (zabbix_agentd)  
        Tasks: 6 (limit: 5235)  
       Memory: 4.4M  
      CGroup: /system.slice/zabbix-agent.service  
             └─50696 /usr/sbin/zabbix_agentd -f /etc/zabbix/zabbix_agentd.conf  
  
aashish@aashish-VirtualBox:~$ ^C
```

Hence, all the services are running.

