GRAFANA SETUP WITH INFLUXDB

1. Task Requirement:

- Garfana
- InfluxDB

2. Environment Details:

- **OS:** Ubuntu 20.04

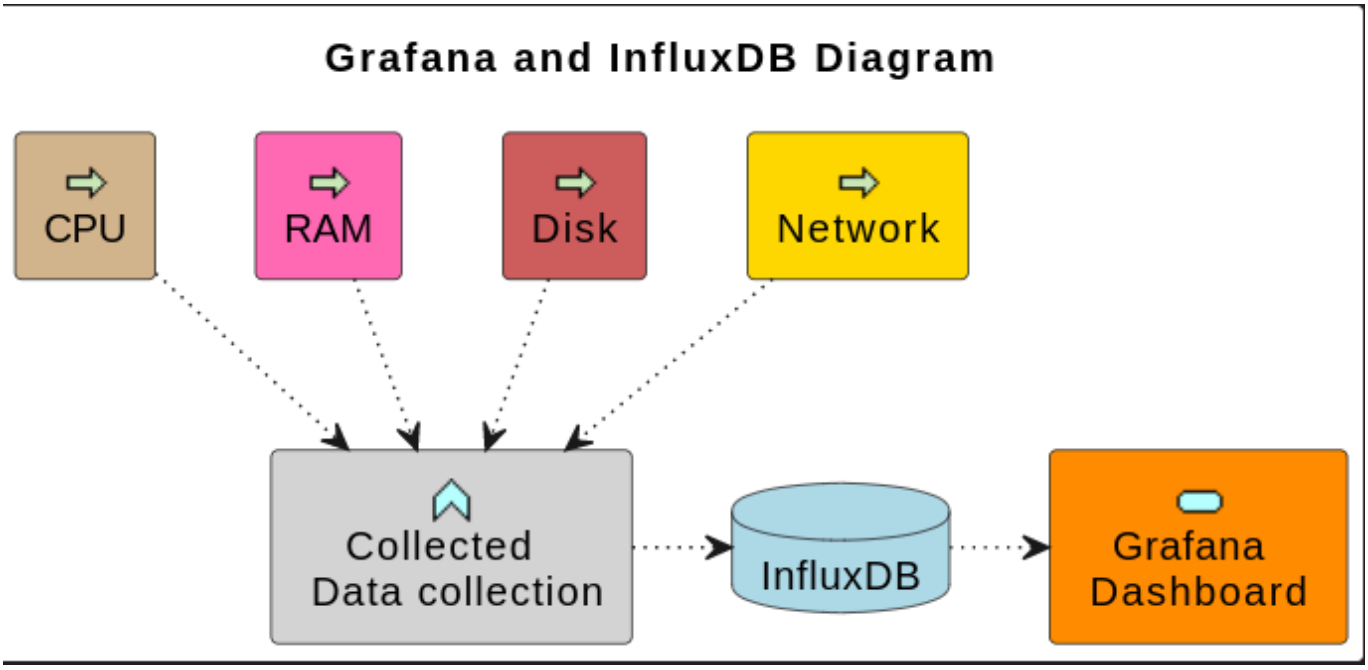
3. Tool and Technologies:

- Garfana
- InfluxDB

4 . Definition of Tool:

- **Garfana:** Grafana is an open-source, web-based platform used for monitoring, visualization, and observability of data from various sources.
- **InfluxDB:** InfluxDB is an open-source, high-performance time-series database designed for efficiently storing, querying, and visualizing time-stamped data.

Architecture Diagram



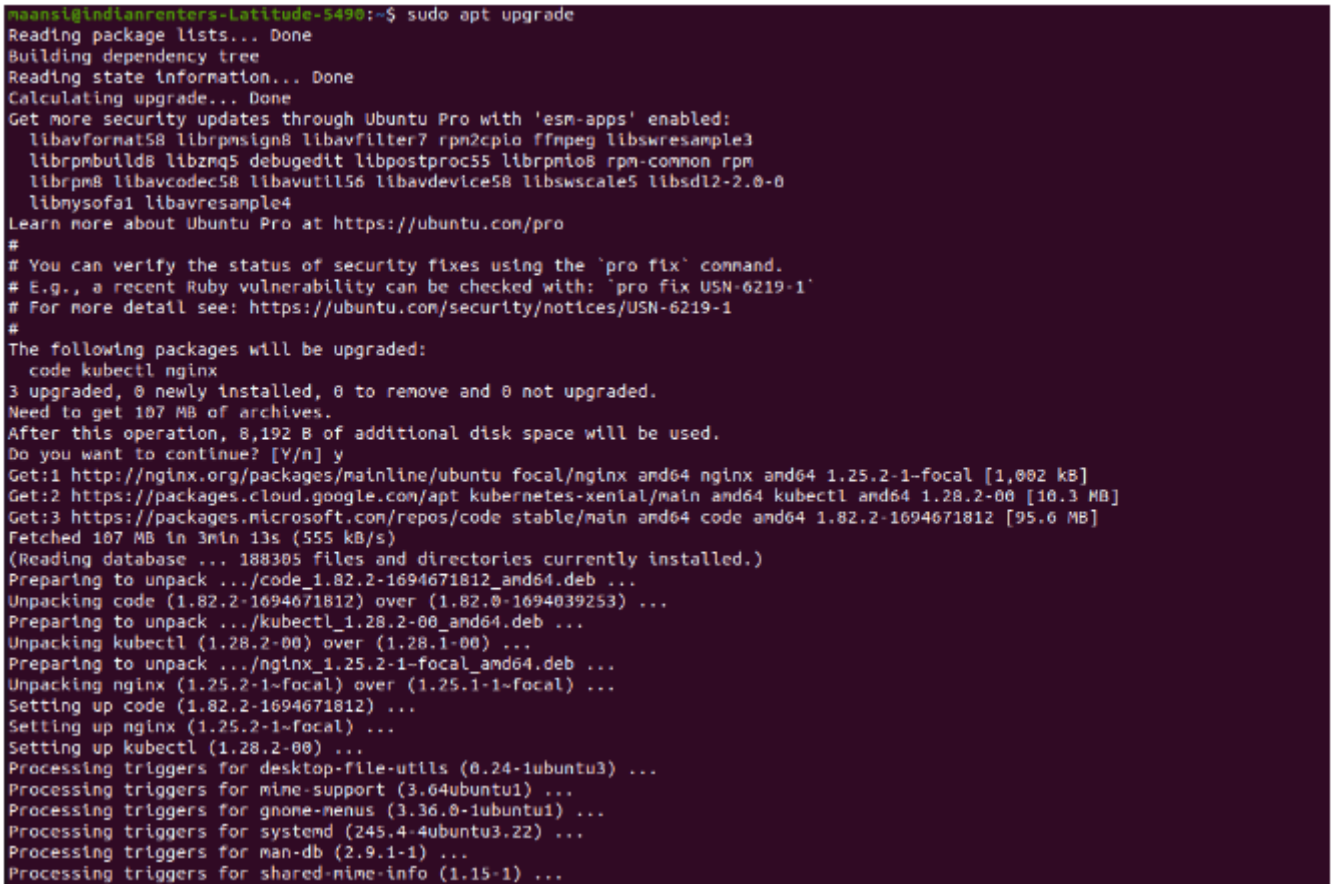
5 . Command for the Setup or Configuration

Step 1 Update Your System

```
sudo apt update
```

- **Sudo:** This command is used to superuser (root) privileges.
- **Apt:** This is the package management command-line tool used on Debianbased distributions to handle packages.
- **Update:** The "Update" command is used to refresh or update information, such as software updates, to make sure it is current.

```
sudo apt upgrade
```

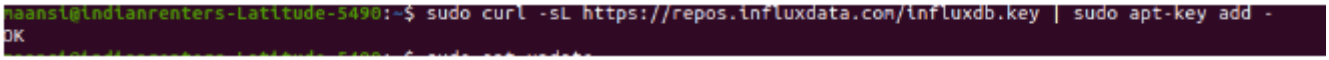


- **Upgrade**:The upgrade command is used to update or improve to a newer or better version.

Step 2: Install InfluxDB

Add the InfluxDB repository and GPG key:

```
 sudo curl -sL https://repos.influxdata.com/influxdb.key | sudo apt-key add
-
```



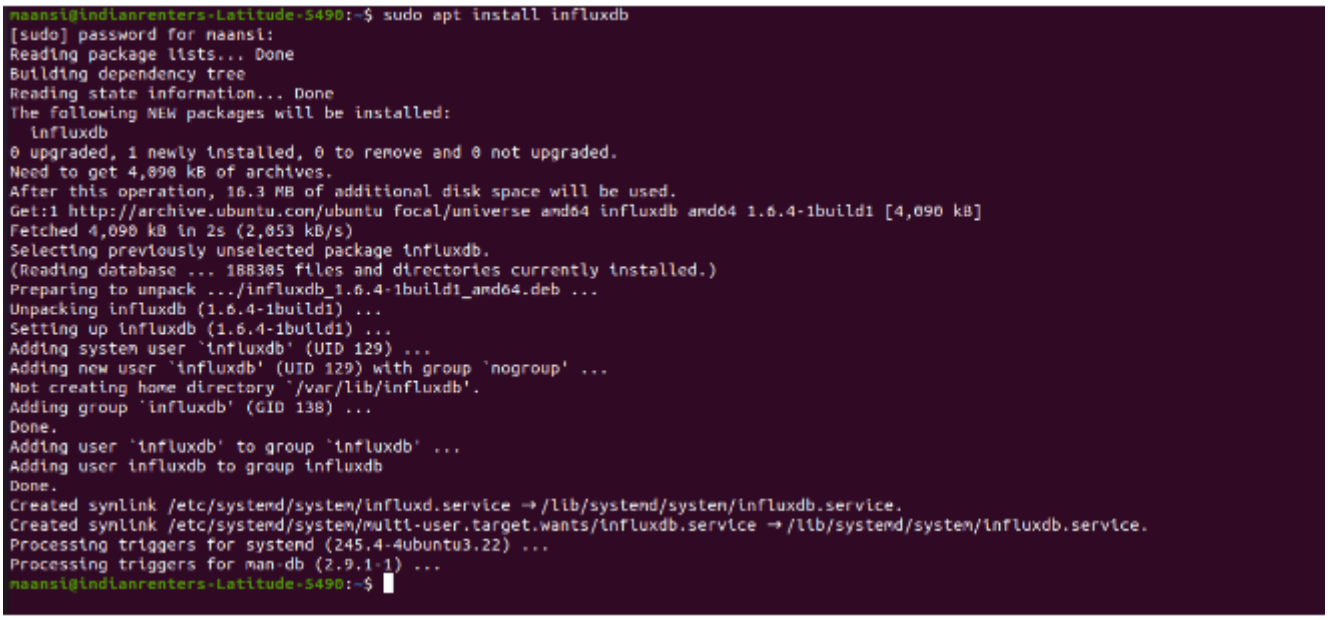
- **-s:** stands for **"silent"** or **"quiet."**
- **-L:** stands for **"location."**
- **Curl:** A command-line tool used to transfer data from or to a server.
- **https://repos.influxdata.com/influxdb.key:** This is the URL from which curl will download a file. It's fetching a file named influxdb.key from the repos.influxdata.com website over HTTPS.
- **|:** This is a pipe . It takes the output from the command on the (the curl command) and uses it as input for the command on the right.
- **sudo apt-key add:** This command adds a new GPG key to the APT keyring. The key is taken from the input (in this case, the output of the curl command). The GPG key is used to verify the integrity and origin of packages from the repository

```
echo "deb https://repos.influxdata.com/ubuntu focal stable" |sudo tee
/etc/apt/sources.list.d/influxdb.list
```

- **echo:** This command simply prints the string inside the quotes.
- **deb:** Indicates that it's a binary repository (for compiled software).
- https://repos.influxdata.com/ubuntu: Specifies the web address of the repository server.
- **tee:** The tee command is used to write a standard input to standard output and a file.
- **focal:** Represents the version of Ubuntu for which the repository is intended (e.g., Ubuntu 20.04 is named "Focal Fossa").
- **stable:** Names the repository component, typically referring to stable releases of software.

```
sudo apt update
```


```
sudo apt install influxdb
```



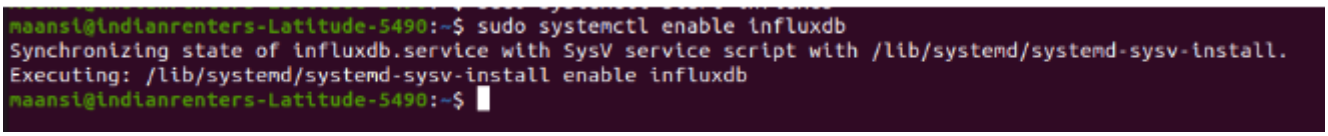
- **install:** This tells the package manager to install the InfluxDB package.
- **influxdb:** This is the name of the InfluxDB package.

Step 3. Start and enable InfluxDB

```
sudo systemctl start influxdb
```

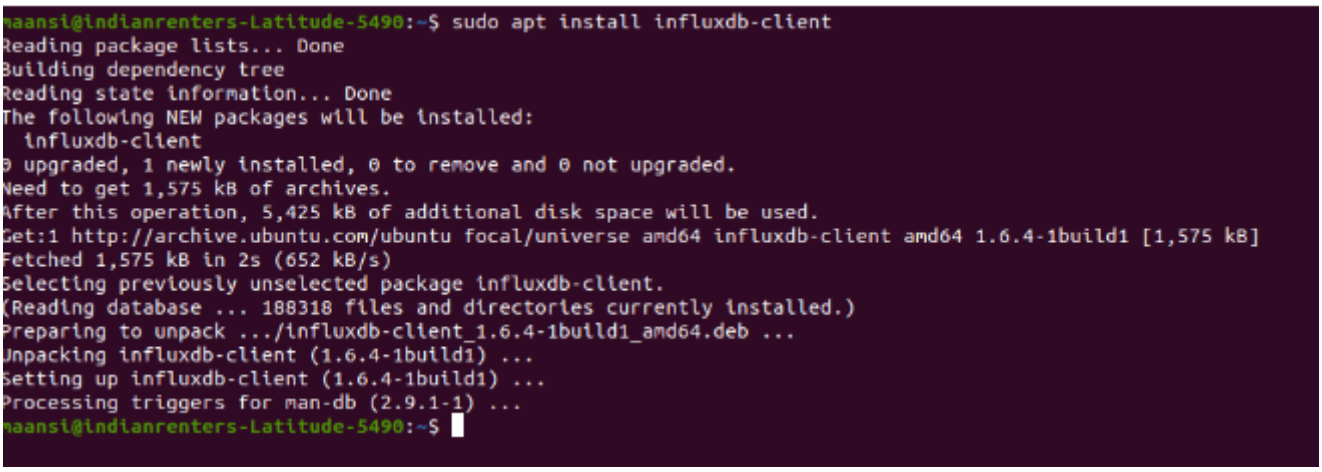
- **systemctl:** This is the name of the systemd service manager.
- **start:** This tells the systemd service manager to start the InfluxDB service.
- **influxdb:** This is the name of the InfluxDB service.

```
 sudo systemctl enable influxdb
```



- **enable:** This tells systemctl to enable the InfluxDB service.

```
sudo apt install influxdb-client
```



- **Influxdb-client:** This is the name of the influxdb client package.

Step 4: Configure InfluxDB

```
influx
```

> **Inside the InfluxDB CLI, run the following commands to create a database and user. Replace your username and yourpassword with your desired username and password:**

```
CREATE DATABASE "mydb"
```

```
USE mydb
```

```
CREATE USER "maansi" WITH PASSWORD '1234' WITH ALL PRIVILEGES
Exit the InfluxDB CLI:
```

```
exit
```

```
maansi@indianrenters-Latitude-5490:~$ influx
Connected to http://localhost:8086 version 1.6.4
InfluxDB shell version: 1.6.4
> CREATE DATABASE "mydb"
>
> USE mydb
Using database mydb
> CREATE USER "maansi" WITH PASSWORD '1234' WITH ALL PRIVILEGES
> exit
maansi@indianrenters-Latitude-5490:~$
```

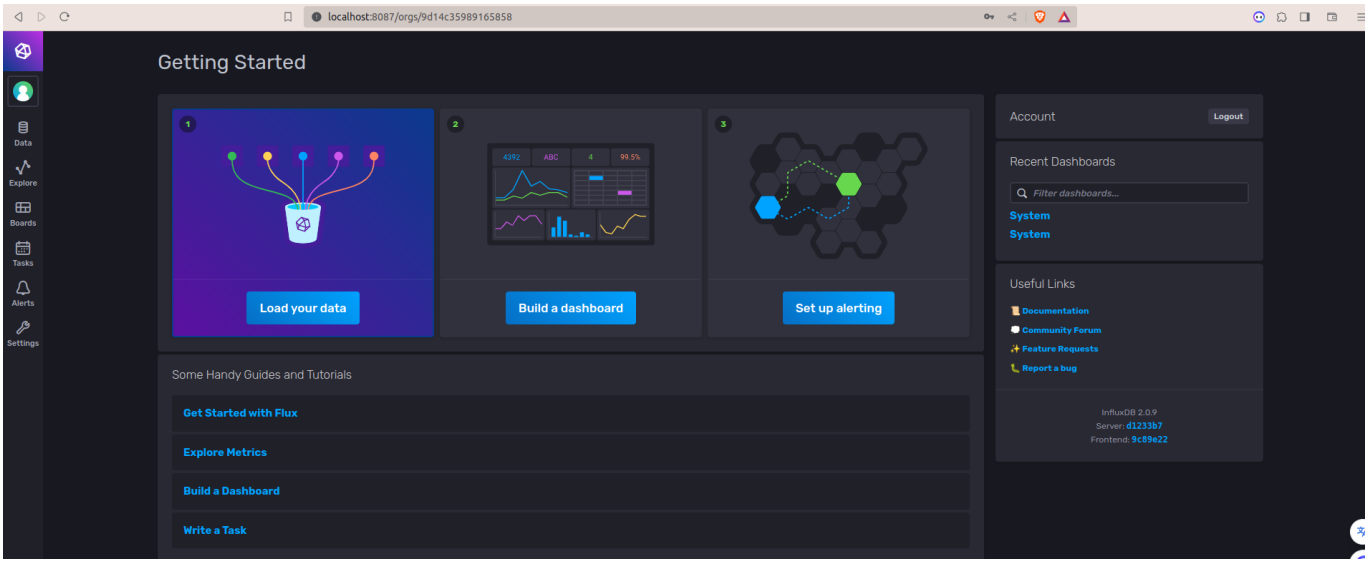
Save and exit the configuration file, then restart InfluxDB

```
sudo systemctl restart influxdb
```

```
maansi@indianrenters-Latitude-5490:~$ sudo systemctl restart influxdb
maansi@indianrenters-Latitude-5490:~$
```

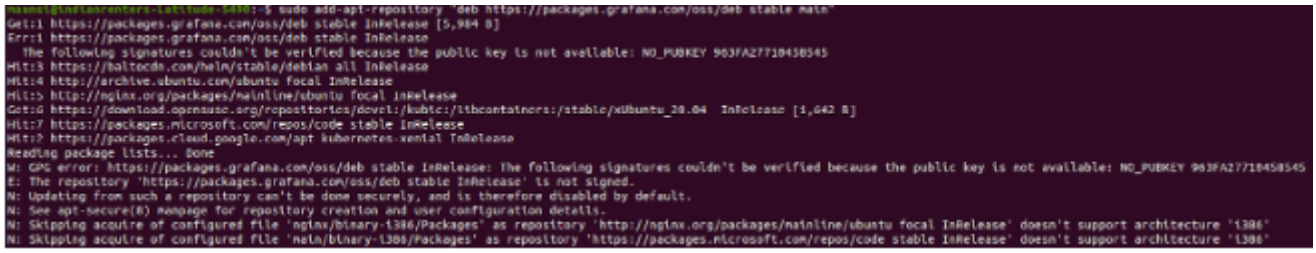
Step 5: Access InfluxDB Web Interface

By default, InfluxDB runs on port 8086. Open your web browser and navigate to



Step 6: Install Grafana

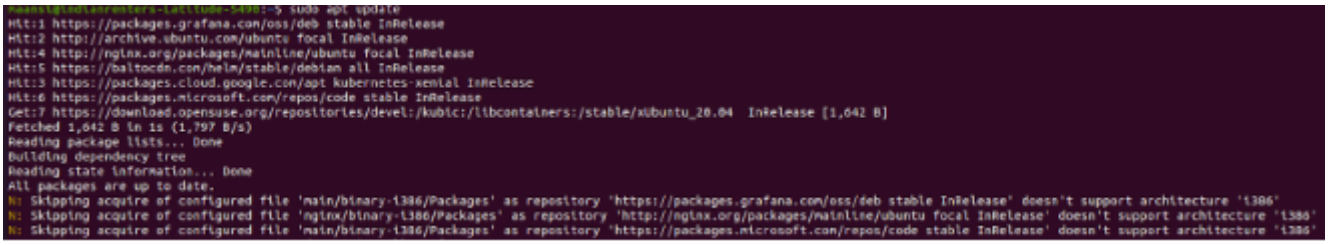
```
sudo add-apt-repository "deb https://packages.grafana.com/oss/deb stable
main"
```



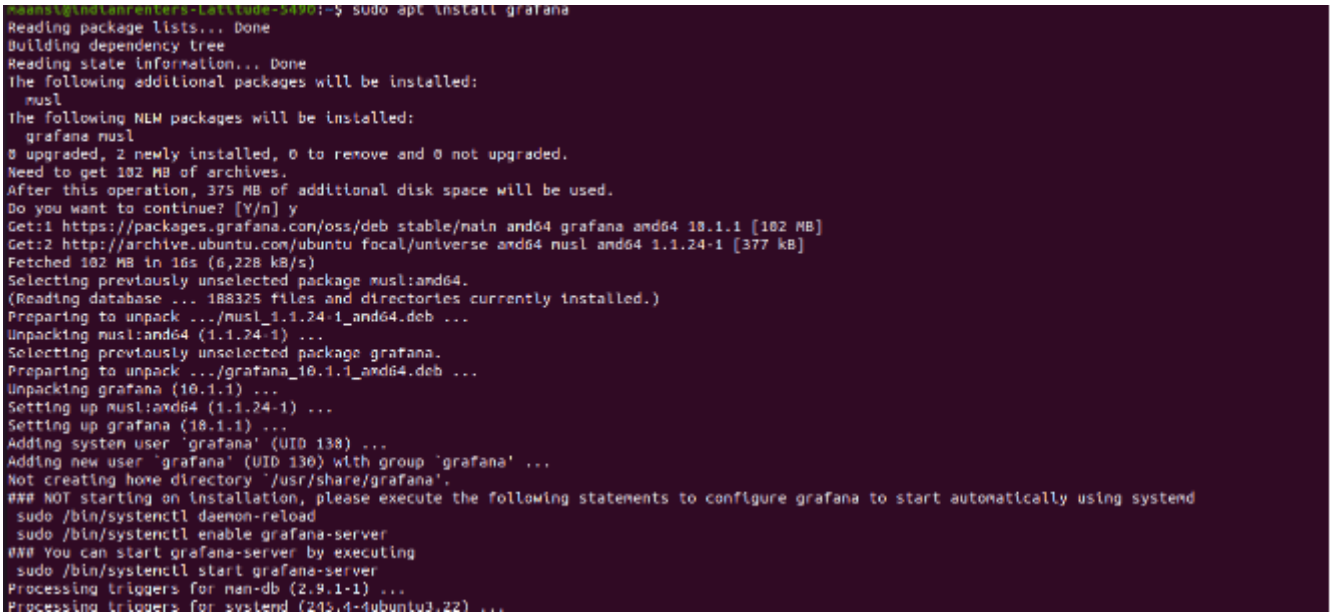

```
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys
963FA27710458545
```


```
wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
```

```
sudo apt update
```



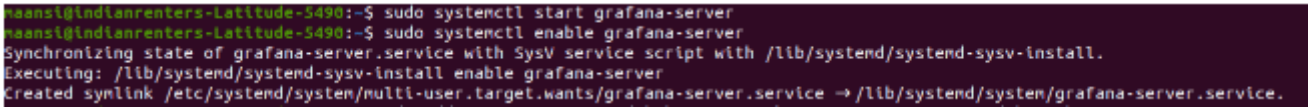

```
sudo apt install grafana
```



Step 6. Start and enable Grafana

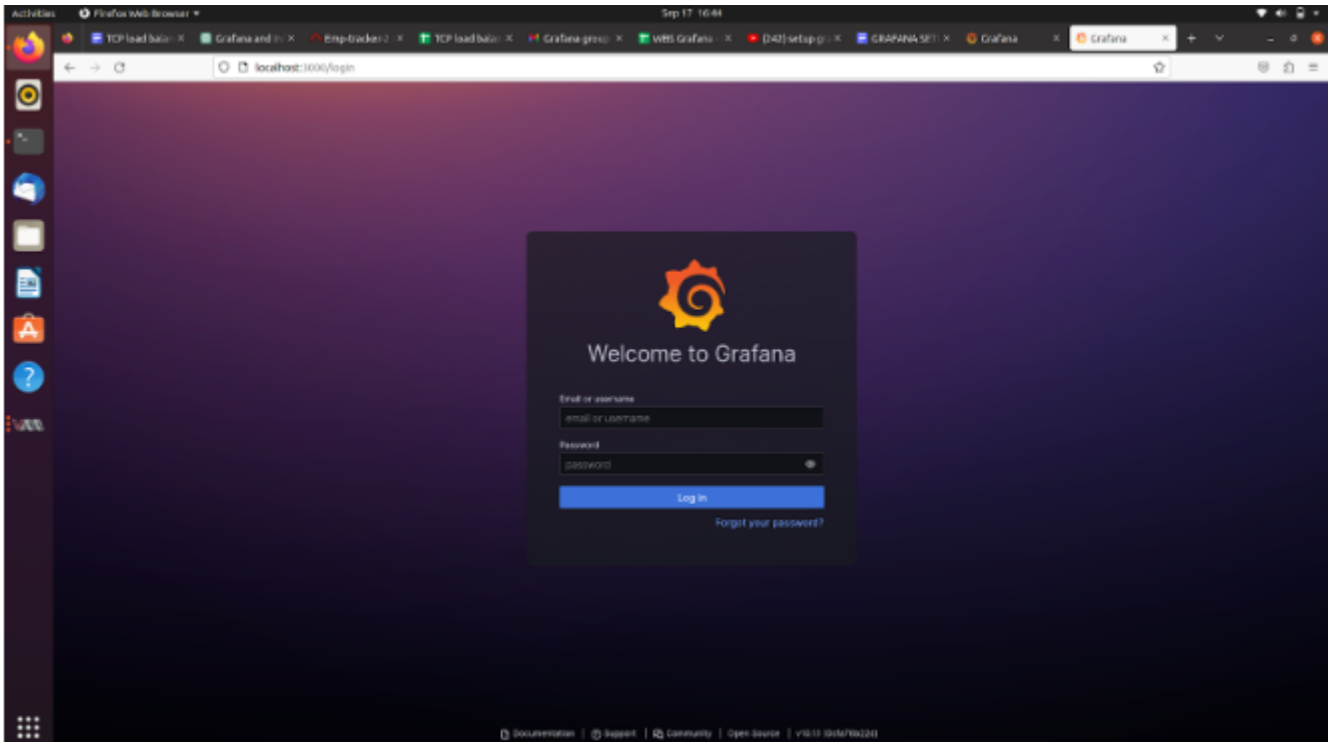
```
sudo systemctl start grafana-server
```

```
sudo systemctl enable grafana-server
```

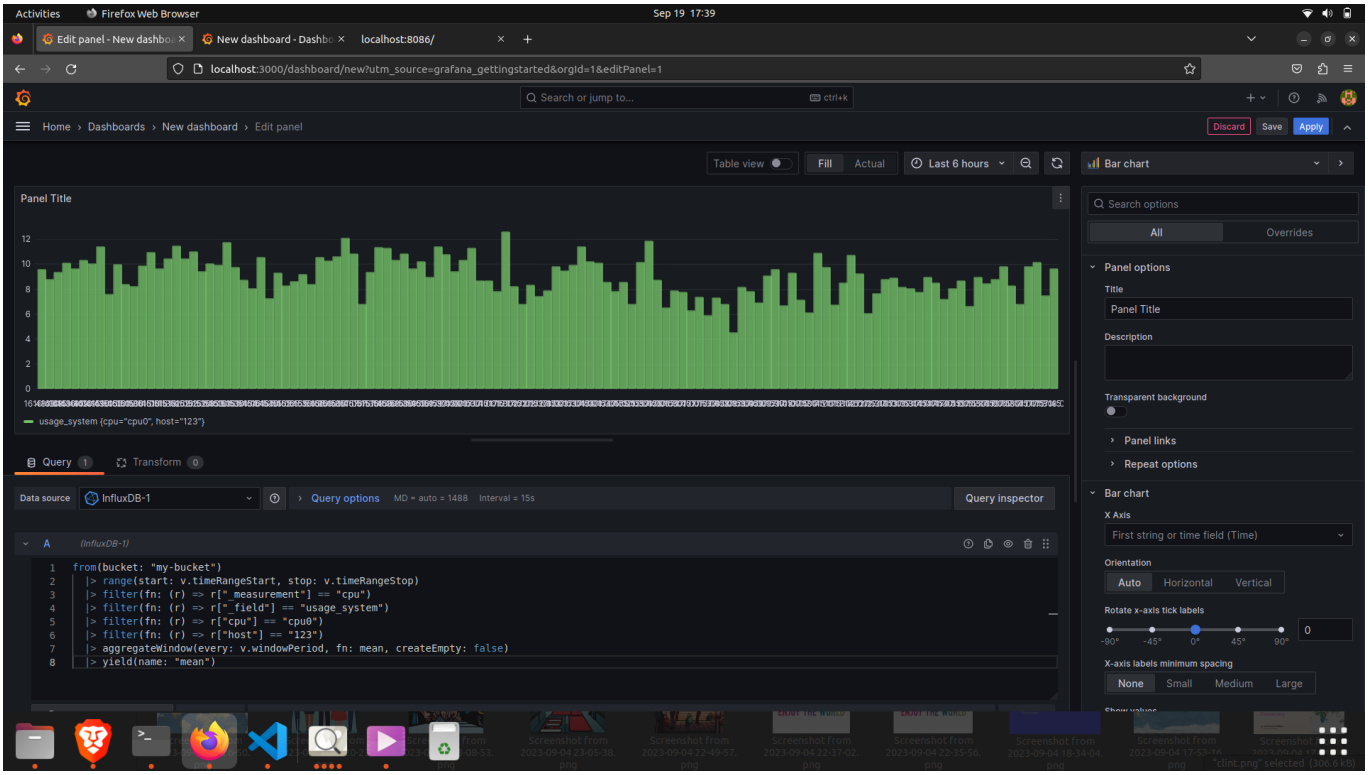


Step 7: Access Grafana Web Interface

By default, Grafana runs on port 3000. Open your web browser and navigate to http://localhost:3000



Step 8: Grafana Dashboard



6. Reference Link

- https://www.youtube.com/watch?v=siyIExDV0fw&ab_channel=VamsiA