

3. Install grafana server on same server as prometheus

- Add prometheus data source to grafana, should be connected through basic auth
- Screenshot of working data source config
- Import & apply dashboard for node_exporter
- Screenshot of dashboard of nodes with live metrics shown.

Installing latest OSS grafana on the same host where Prometheus service is installed(192.168.1.147)

```
sudo apt-get install -y apt-transport-https
```

```
sudo apt-get install -y software-properties-common wget
```

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

```
echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a  
/etc/apt/sources.list.d/grafana.list
```

```
sudo apt-get update
```

```
bibek@prometheus:/etc/prometheus$ wget -q -O - https://packages.grafana.com/gpg.  
key | sudo apt-key add -  
OK  
bibek@prometheus:/etc/prometheus$ echo "deb https://packages.grafana.com/oss/deb  
stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list  
deb https://packages.grafana.com/oss/deb stable main  
bibek@prometheus:/etc/prometheus$ sudo apt-get update  
Hit:1 http://np.archive.ubuntu.com/ubuntu focal InRelease  
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]  
Hit:3 https://artifacts.elastic.co/packages/7.x/apt stable InRelease  
Get:4 http://np.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]  
Get:5 https://download.docker.com/linux/ubuntu focal InRelease [57.7 kB]  
Get:6 http://np.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]  
Get:7 https://packages.grafana.com/oss/deb stable InRelease [12.1 kB]  
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadat  
a [25.7 kB]
```

```
sudo apt-get install grafana
```

```
(Reading database ... 179896 files and directories currently installed.)  
Preparing to unpack .../grafana_8.3.0_amd64.deb ...  
Unpacking grafana (8.3.0) ...  
Setting up grafana (8.3.0) ...  
Adding system user `grafana' (UID 135) ...  
Adding new user `grafana' (UID 135) with group `grafana' ...  
Not creating home directory `/usr/share/grafana'.  
### NOT starting on installation, please execute the following statements to  
figure grafana to start automatically using systemd  
sudo /bin/systemctl daemon-reload  
sudo /bin/systemctl enable grafana-server  
### You can start grafana-server by executing  
sudo /bin/systemctl start grafana-server  
Processing triggers for systemd (245.4-4ubuntu3.13) ...
```

Starting Grafana service

```
sudo systemctl start grafana-server.service
```

```
sudo systemctl status grafana-server.service
```

```
bibek@prometheus:/etc/apt/sources.list.d$ sudo systemctl start grafana-server.service
bibek@prometheus:/etc/apt/sources.list.d$ sudo systemctl status grafana-server.service
● grafana-server.service - Grafana instance
   Loaded: loaded (/lib/systemd/system/grafana-server.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2021-12-03 21:58:03 +0545; 2s ago
     Docs: http://docs.grafana.org
    Main PID: 20811 (grafana-server)
      Tasks: 5 (limit: 2299)
     Memory: 42.1M
    CGroup: /system.slice/grafana-server.service
            └─20811 /usr/sbin/grafana-server --config=/etc/grafana/grafana.ini

दिस ३ बर ०३ २१:५८:०६    prometheus grafana-server[20811]: t=2021-12-03T21:58:06+0545
```

Grafana is installed and running

Configuring grafana in prometheus job

```
sudo vi /etc/prometheus/prometheus.yml
```

```
- job_name: 'grafana'
  scrape_interval: 5s
  static_configs:
    - targets:
      - 192.168.1.147:3000
  basic_auth:
    username: admin
    password: 123456
```

Save and exit

Restarting the prometheus service

```
sudo systemctl restart prometheus.service
```

```
bibek@prometheus:/etc/prometheus$ sudo systemctl restart prometheus.service
bibek@prometheus:/etc/prometheus$ sudo systemctl status prometheus.service
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2021-12-03 22:00:46 +0545; 8s ago
     Main PID: 20909 (prometheus)
      Tasks: 7 (limit: 2299)
     Memory: 62.1M
    CGroup: /system.slice/prometheus.service
            └─20909 /usr/local/bin/prometheus --config.file /etc/prometheus/prometheus.yml

दिस ३ बर ०३ २२:००:५२    prometheus prometheus[20909]: ts=2021-12-03T16:15:52.999Z caller=main.go:240 level=info
दिस ३ बर ०३ २२:००:५३    prometheus prometheus[20909]: ts=2021-12-03T16:15:53.087Z caller=main.go:240 level=info
```

Prometheus service is running

Target of Prometheus which shows grafana is in UP state

Activities Firefox Web Browser दिसम्बर 3 22:02

Prometheus Time Series Grafana

localhost:9090/targets

Prometheus

Targets

All Unhealthy Collapse All

grafana (1/1 up) [show less](#)

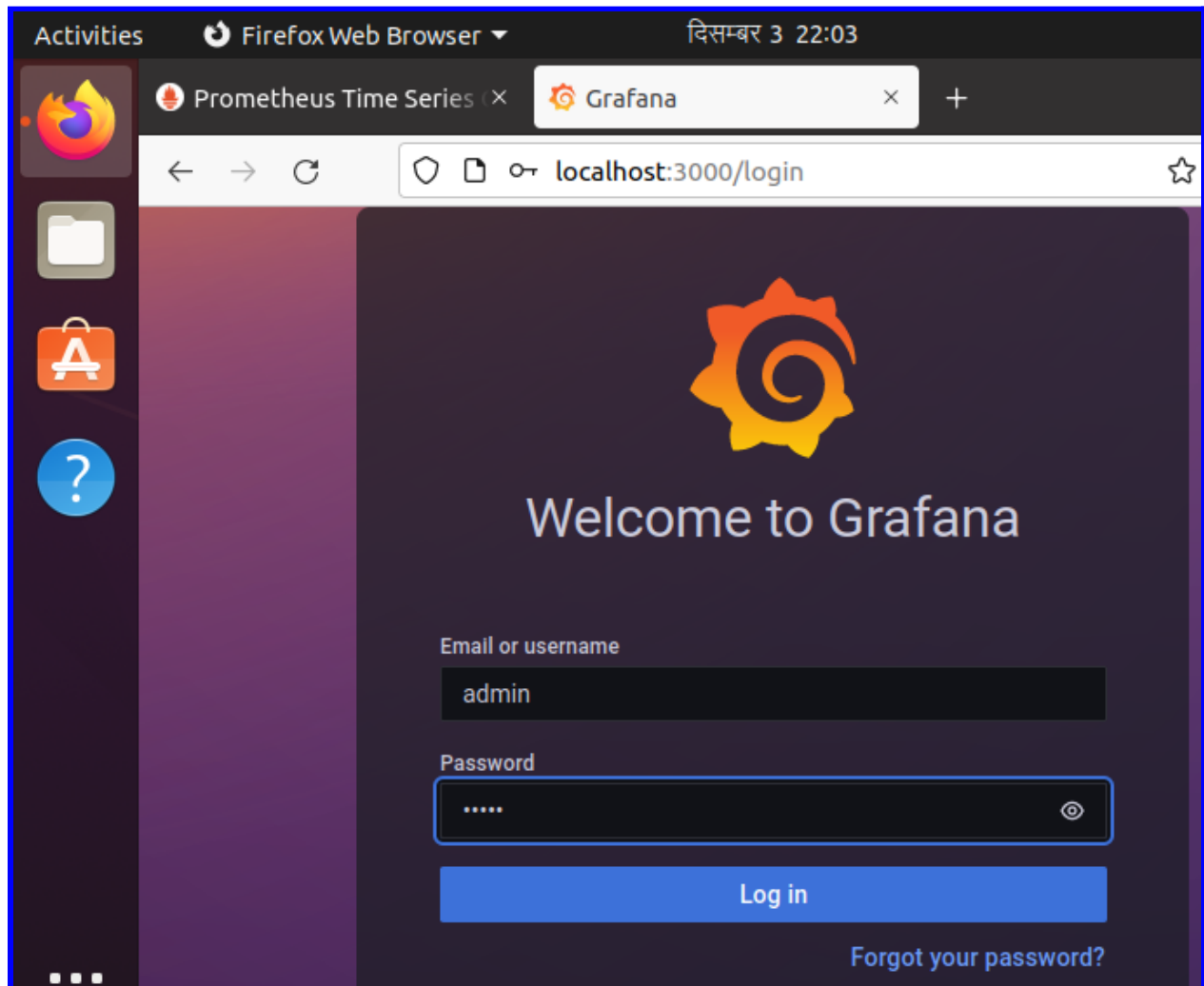
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://192.168.1.147:3000/metrics	UP	<code>instance="192.168.1.147:3000"</code> <code>job="grafana"</code>	2.406s ago	7.692ms	

node_exporter (1/1 up) [show less](#)

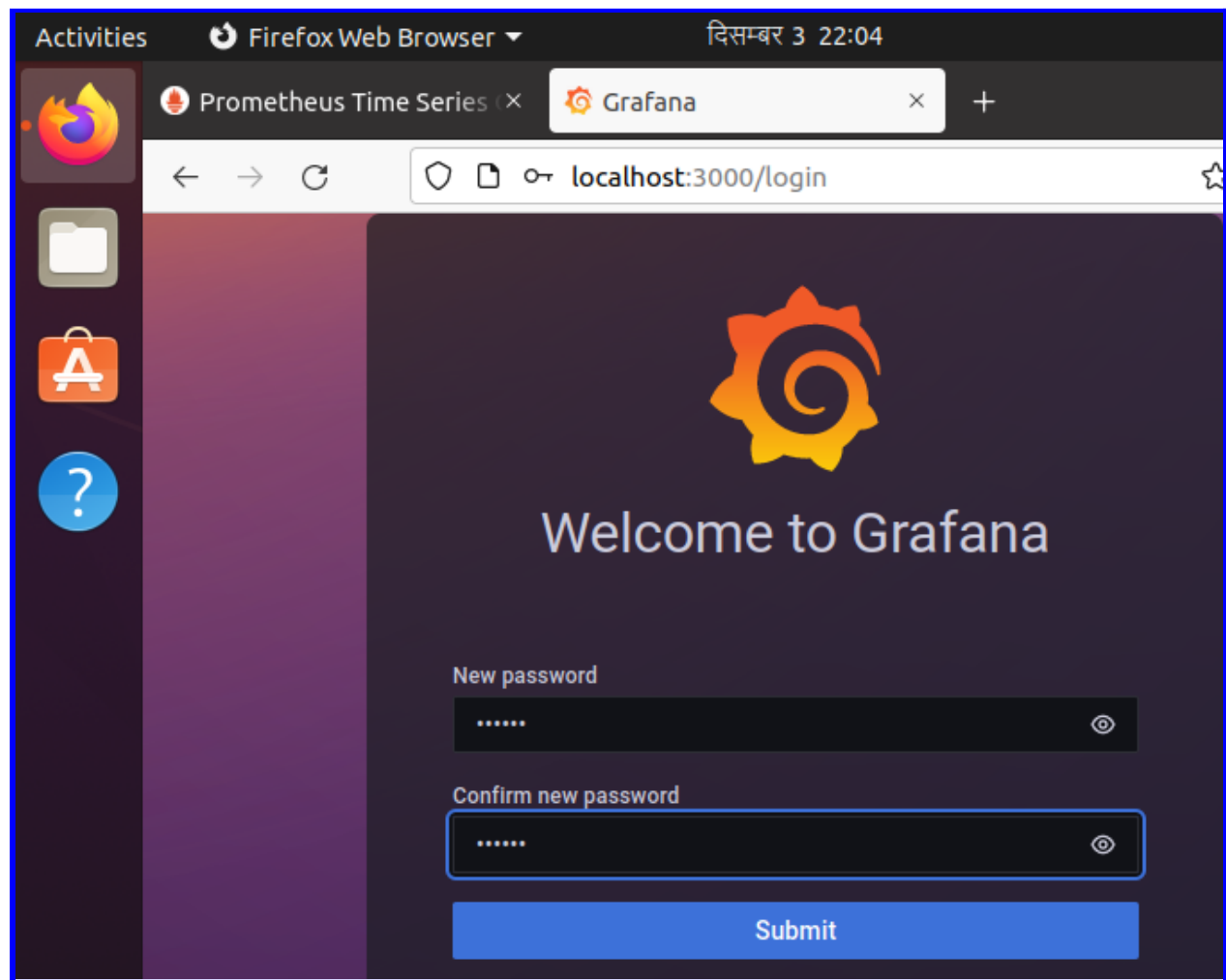
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://192.168.1.93:9100	UP	<code>instance="192.168.1.93:9100"</code>	1.557s	189.183ms	

Opening Grafana at port 3000

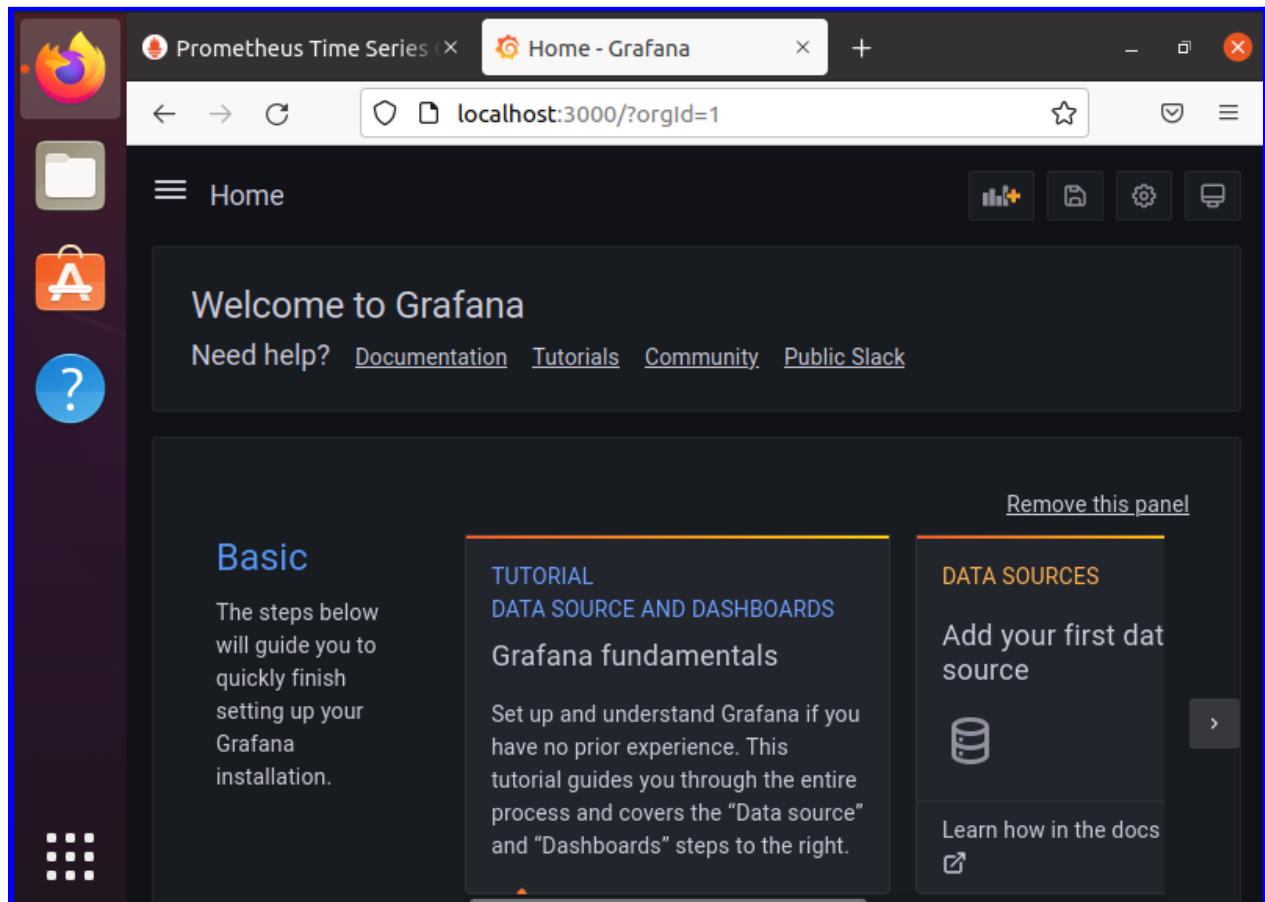
*Default username password is **admin***



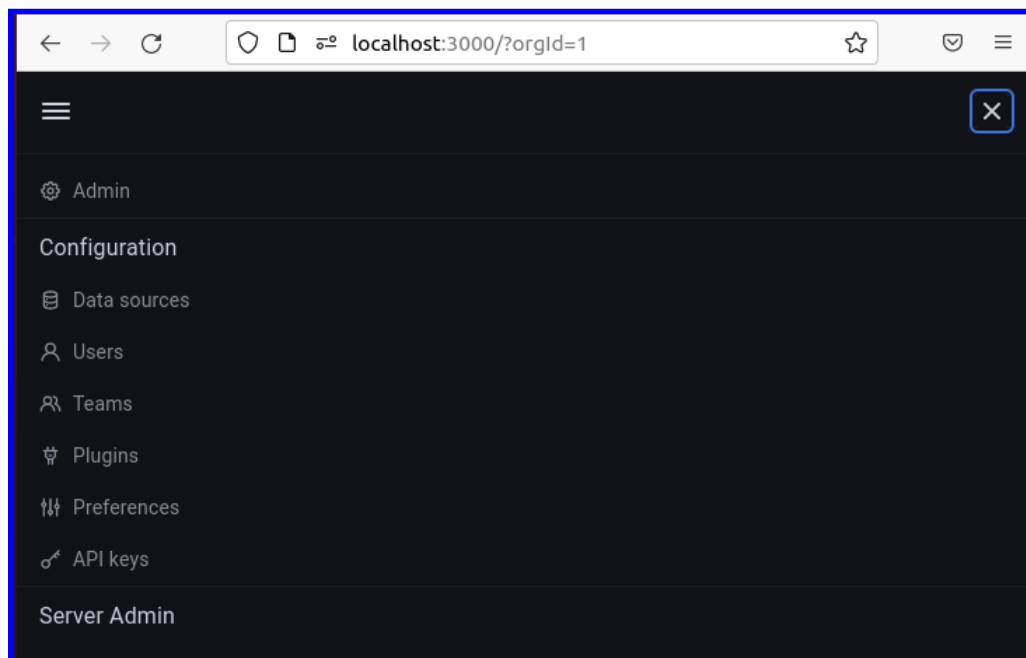
Changing default password



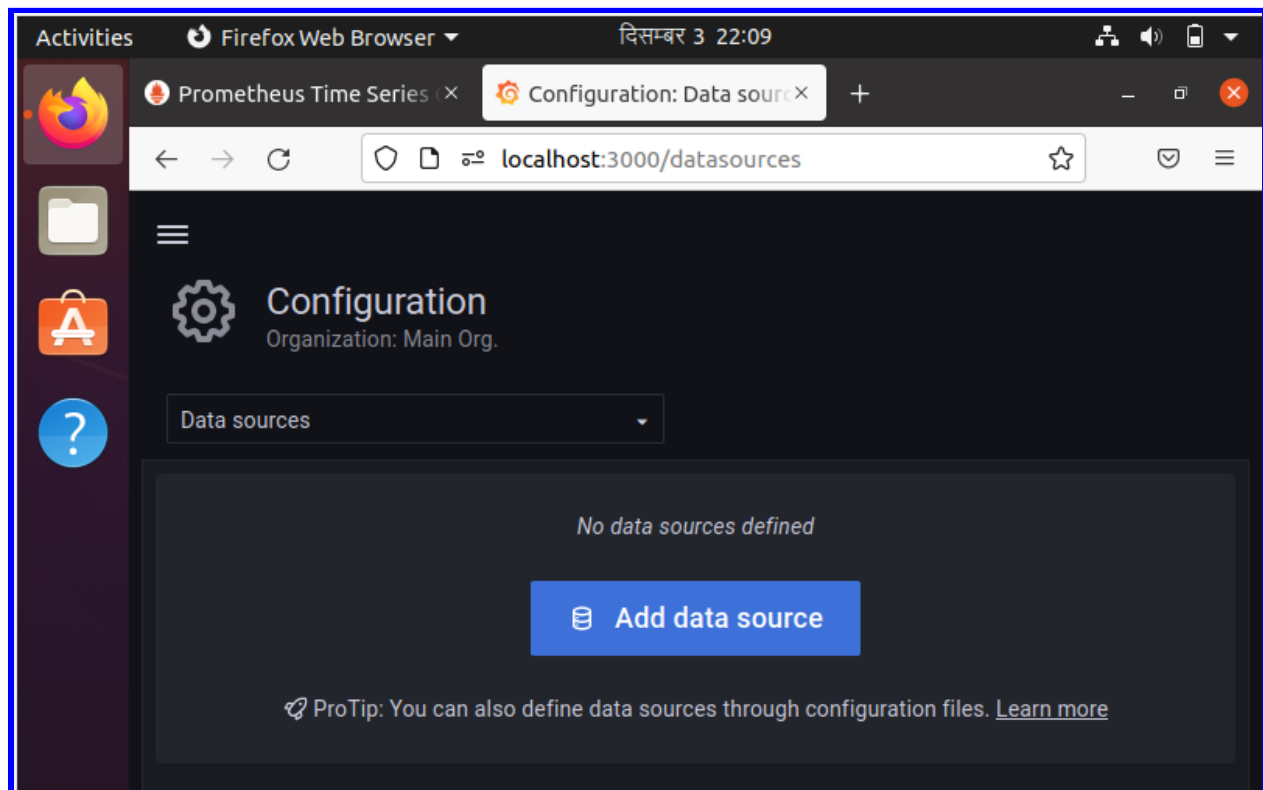
Default Welcome page of Grafana



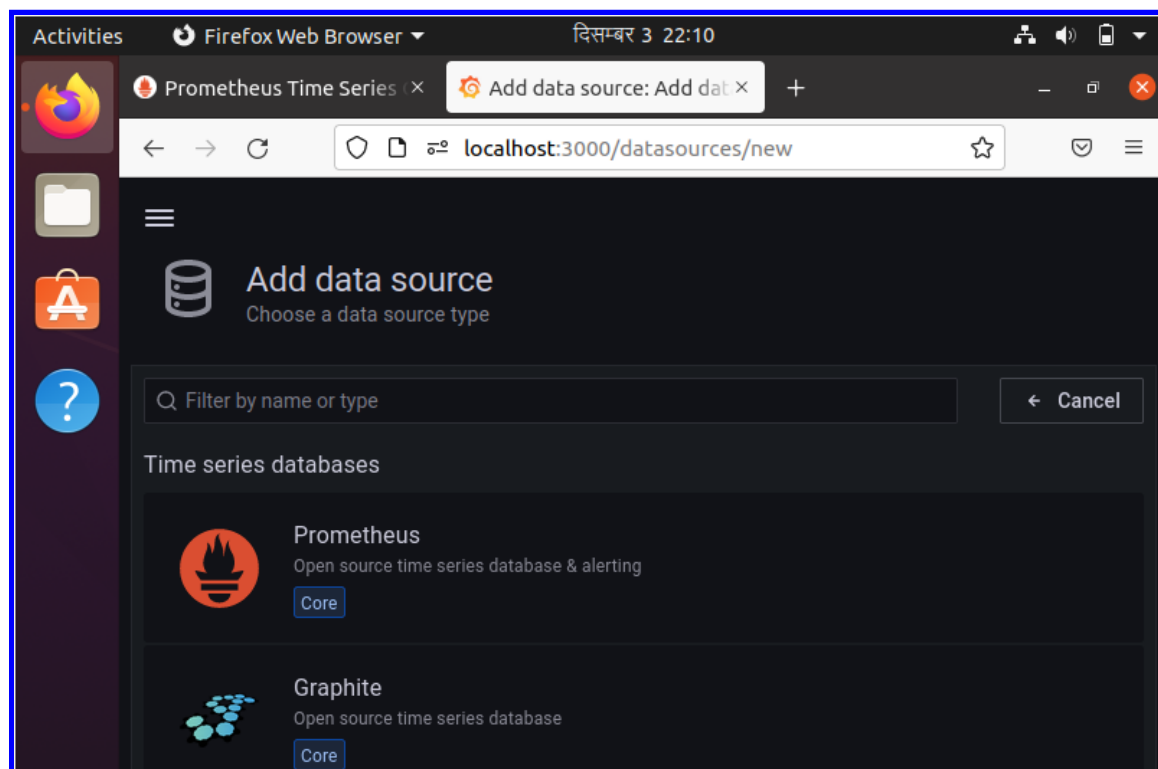
Adding Datasource Prometheus to Grafana (*configuration >> Datasources*)



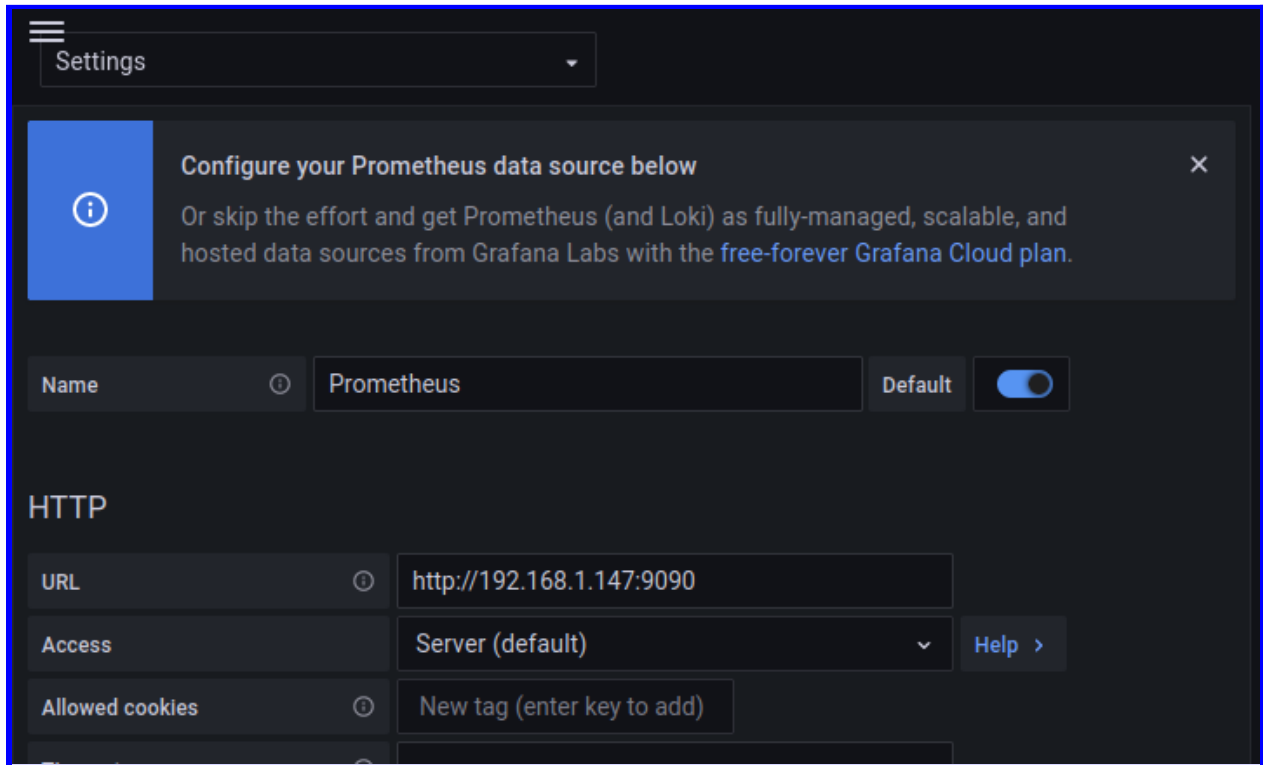
Add Data Source



Selecting Prometheus as Data Source



Giving the URL of Prometheus <IP:Port>



The screenshot shows the Grafana Settings page for a Prometheus data source. At the top, there is a 'Settings' dropdown menu. Below it, a blue information box contains the text: 'Configure your Prometheus data source below' and 'Or skip the effort and get Prometheus (and Loki) as fully-managed, scalable, and hosted data sources from Grafana Labs with the free-forever Grafana Cloud plan.' Below the information box, the 'Name' field is set to 'Prometheus' and the 'Default' toggle is turned on. Under the 'HTTP' section, the 'URL' field is set to 'http://192.168.1.147:9090', the 'Access' dropdown is set to 'Server (default)', and the 'Allowed cookies' field is set to 'New tag (enter key to add)'.

Settings

Configure your Prometheus data source below

Or skip the effort and get Prometheus (and Loki) as fully-managed, scalable, and hosted data sources from Grafana Labs with the free-forever Grafana Cloud plan.

Name Prometheus Default

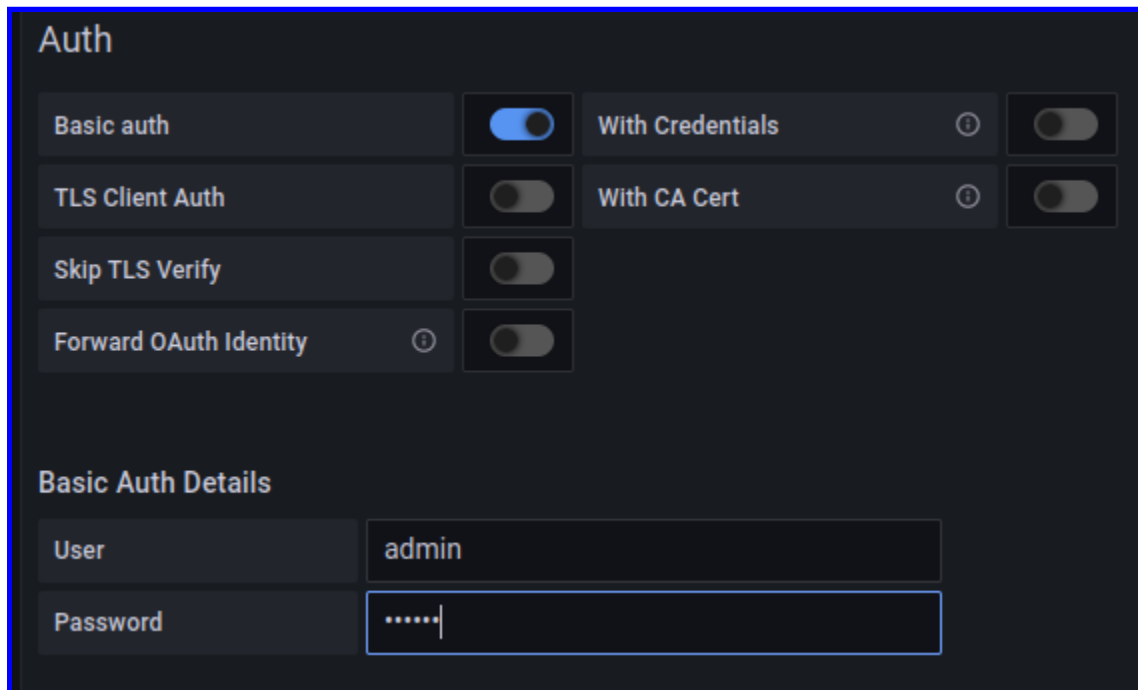
HTTP

URL http://192.168.1.147:9090

Access Server (default) Help >

Allowed cookies New tag (enter key to add)

Enabling Basic Auth and giving user name and Password



The screenshot shows the Grafana Auth settings page. Under the 'Auth' section, the 'Basic auth' toggle is turned on, and the 'With Credentials' toggle is turned off. The 'TLS Client Auth' toggle is turned off, and the 'With CA Cert' toggle is turned off. The 'Skip TLS Verify' toggle is turned off. The 'Forward OAuth Identity' toggle is turned off. Under the 'Basic Auth Details' section, the 'User' field is set to 'admin' and the 'Password' field is masked with dots.

Auth

Basic auth With Credentials

TLS Client Auth With CA Cert

Skip TLS Verify

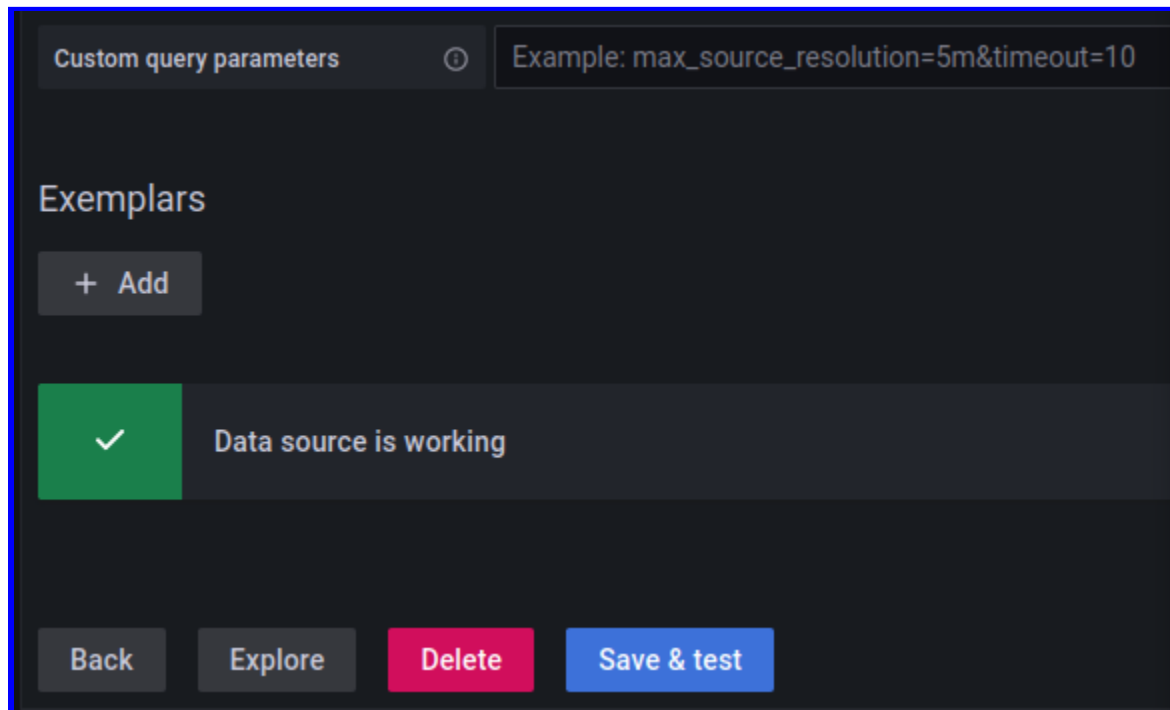
Forward OAuth Identity

Basic Auth Details

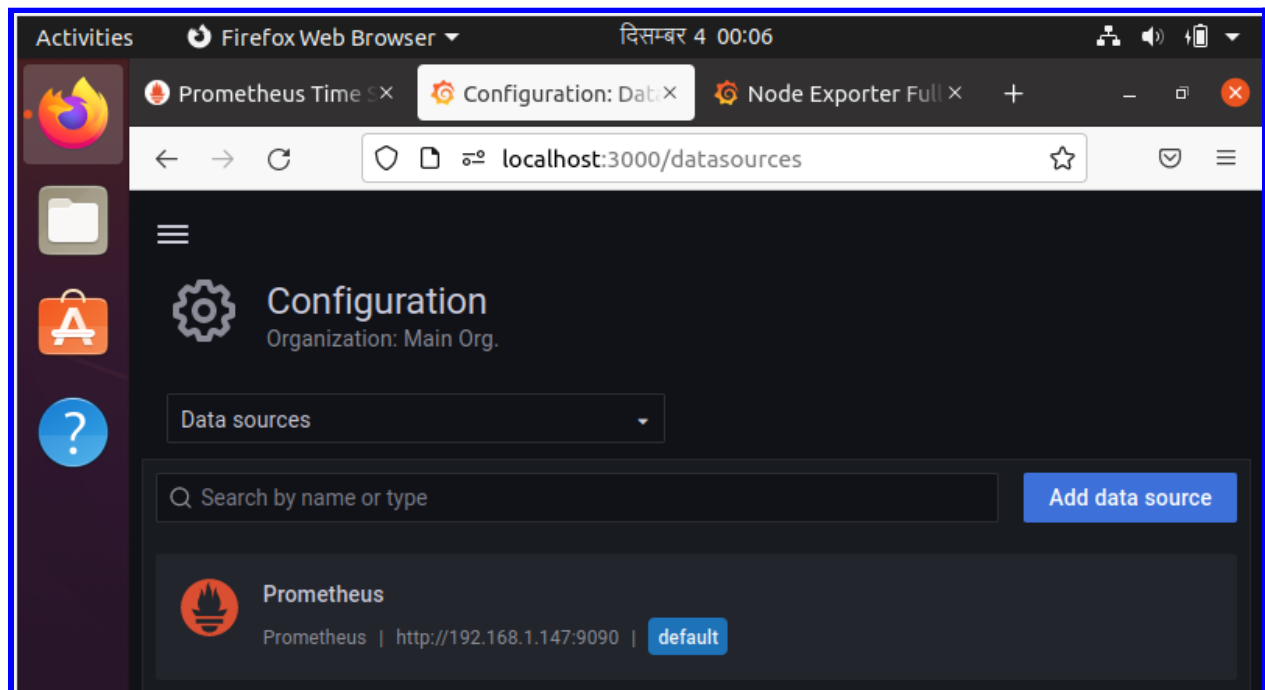
User admin

Password

Save & Test

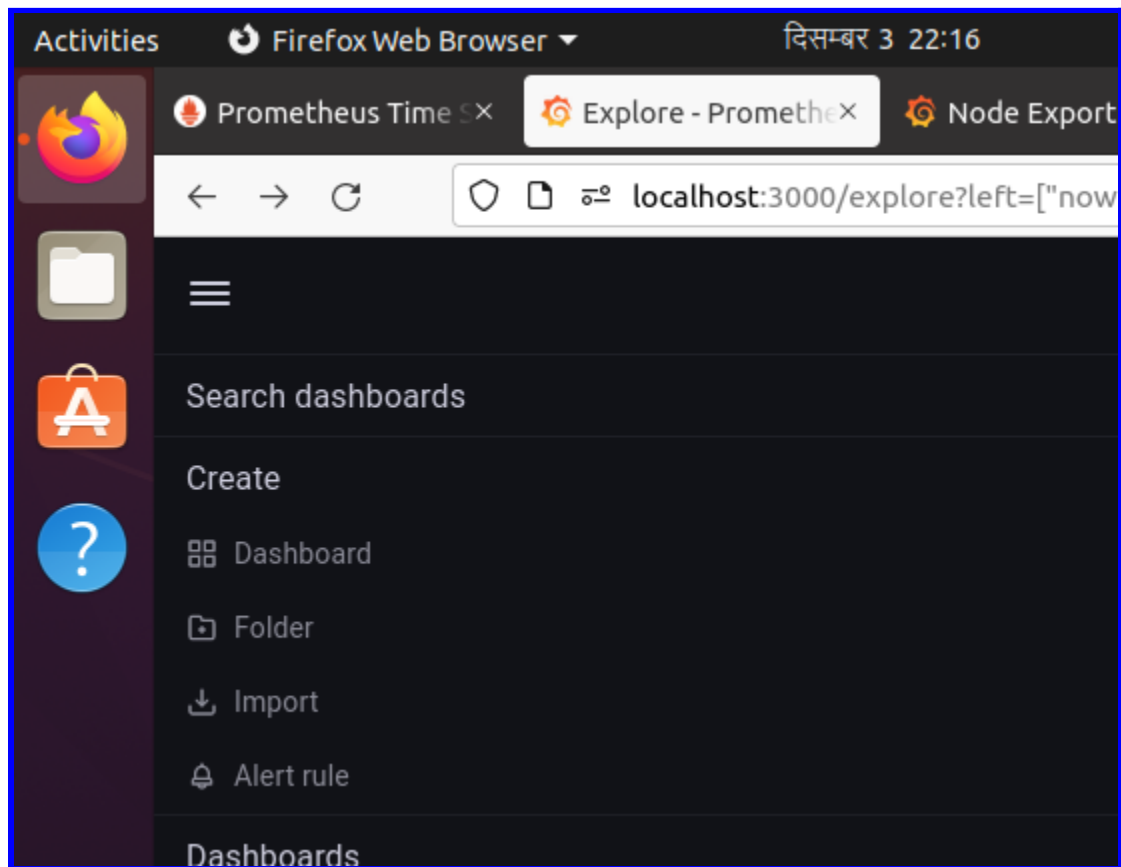


Data Source is working...

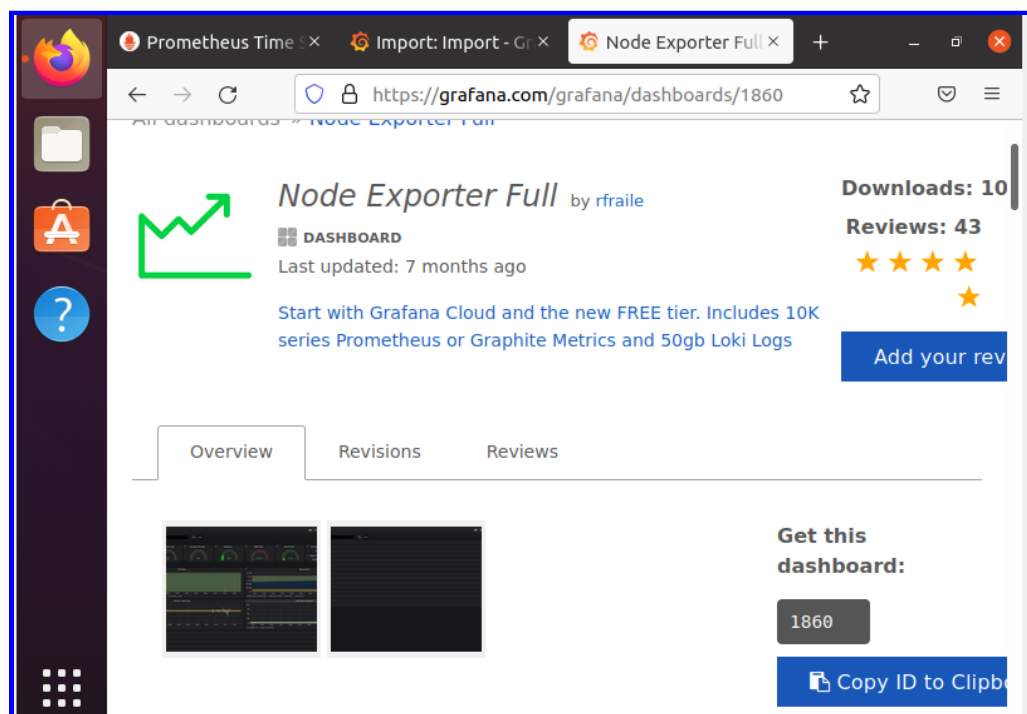


We can see the Prometheus configured as Data Source for grafana

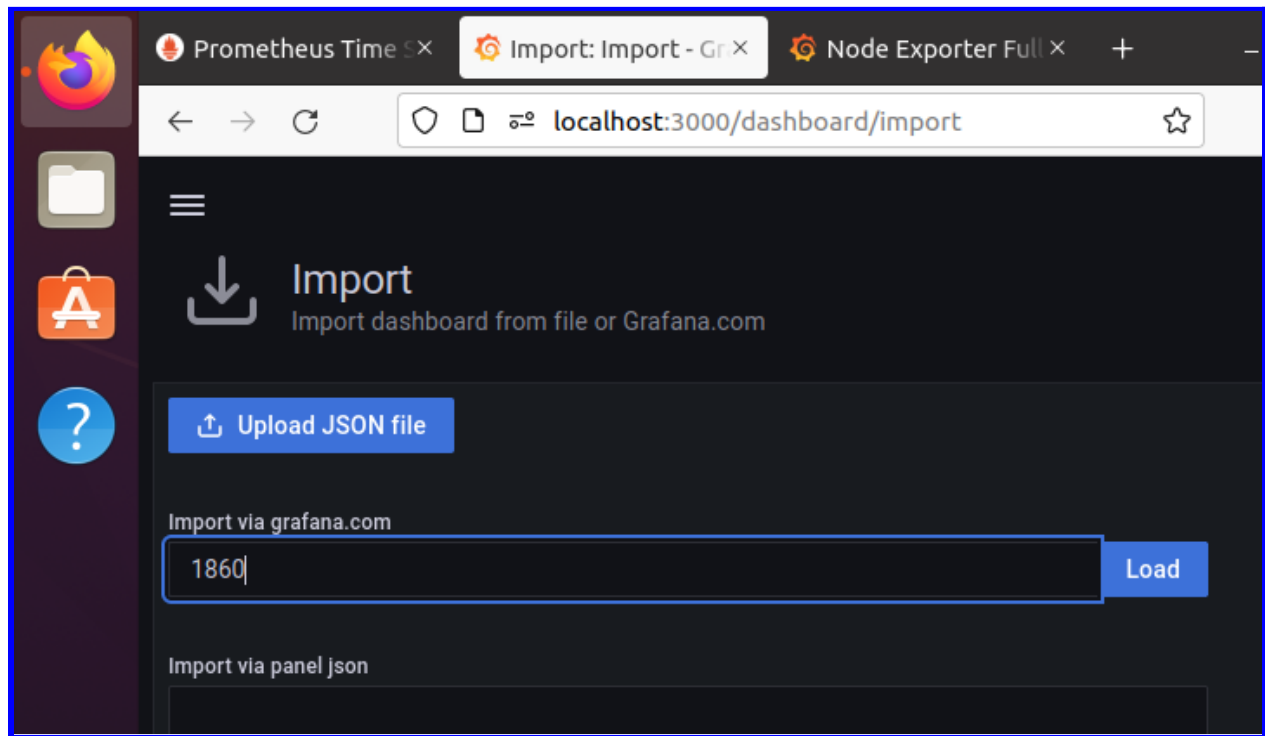
Importing Dashboard for Node-Exporter (Create >> Import)



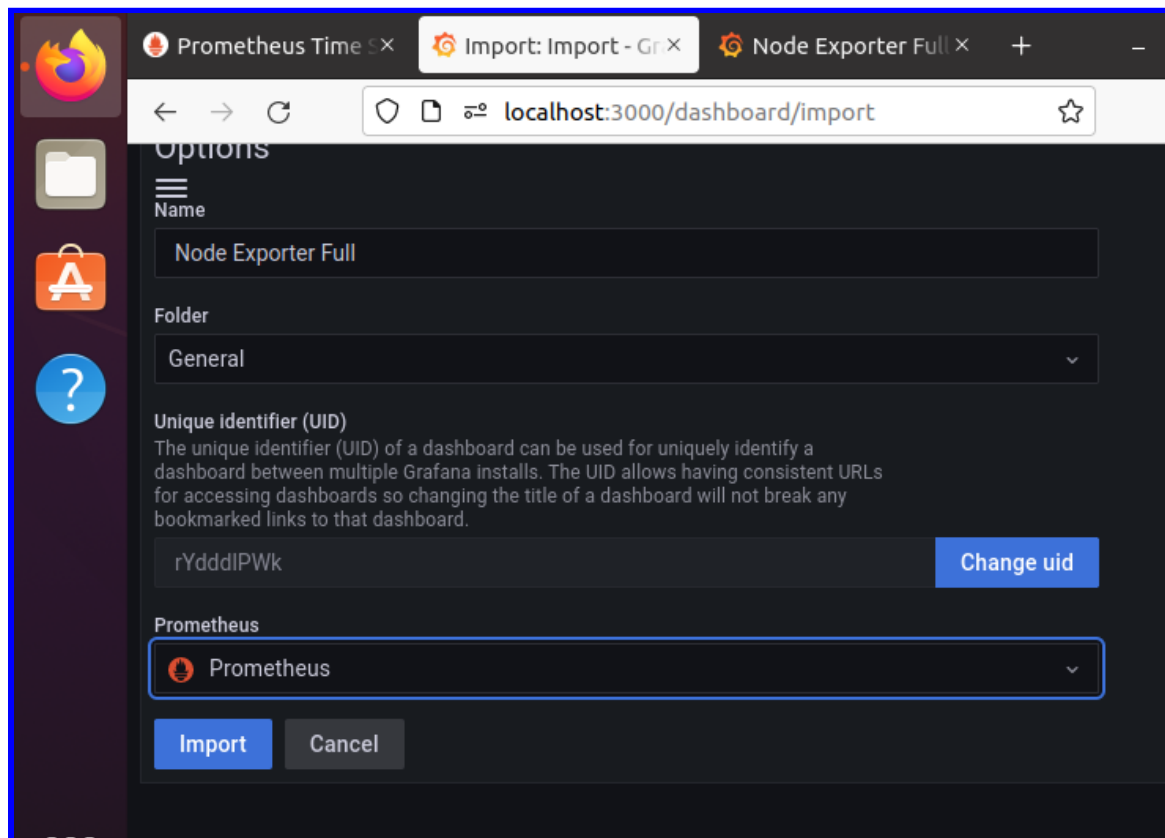
Importing Node-Exporter full (using its ID 1860)



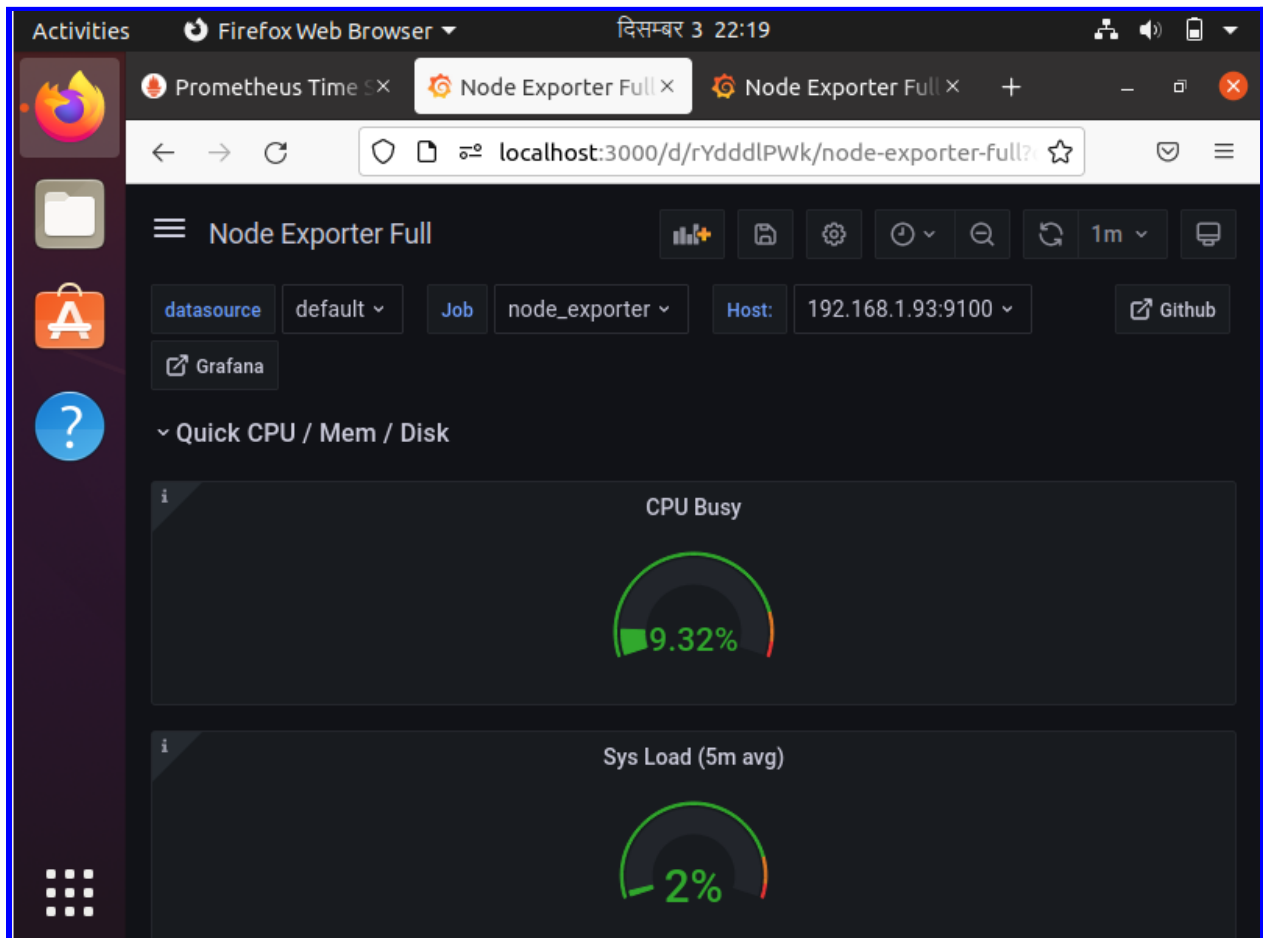
Loading the ID 1860



Importing Node-Exporter Full (Default folder - General, Default UUID)



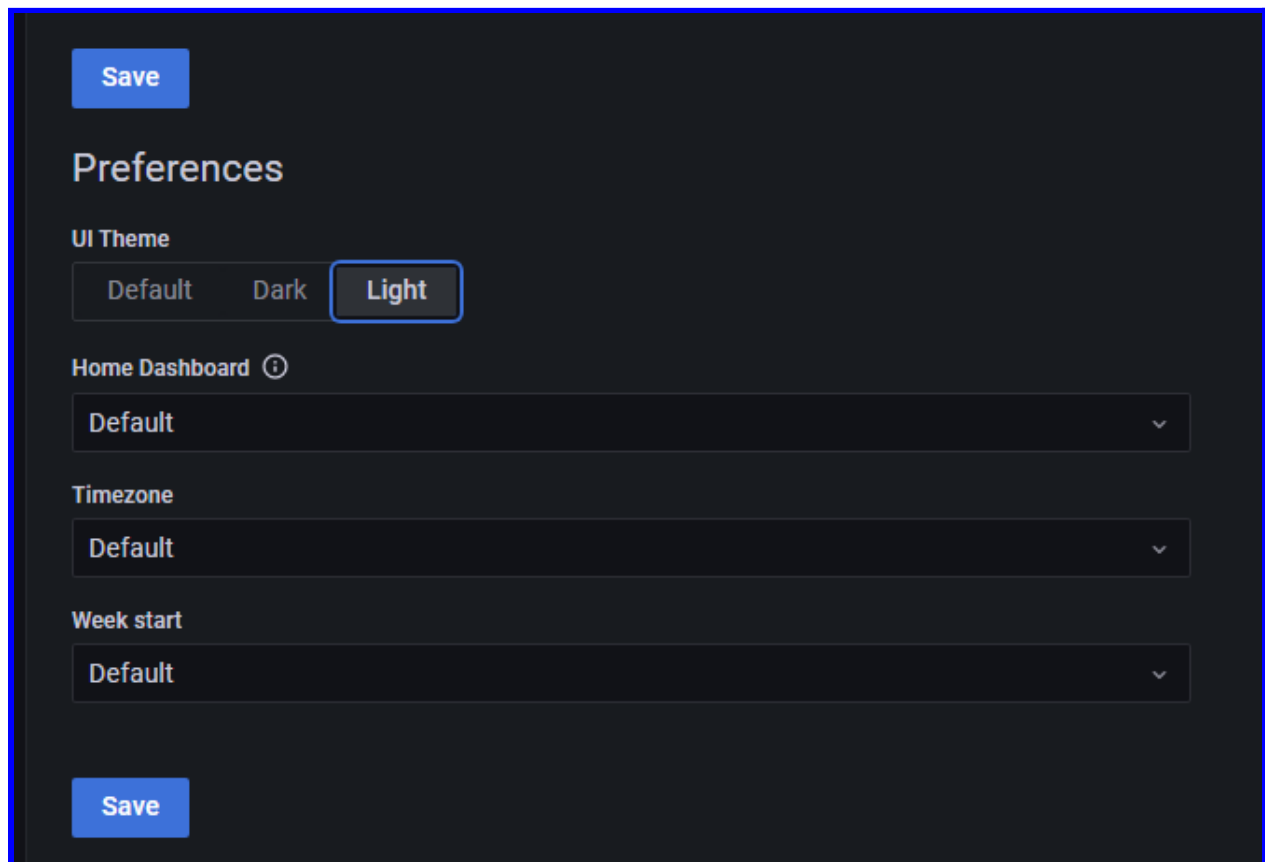
We can see the Metrics of Node Exporter Host (**192.168.1.93**)



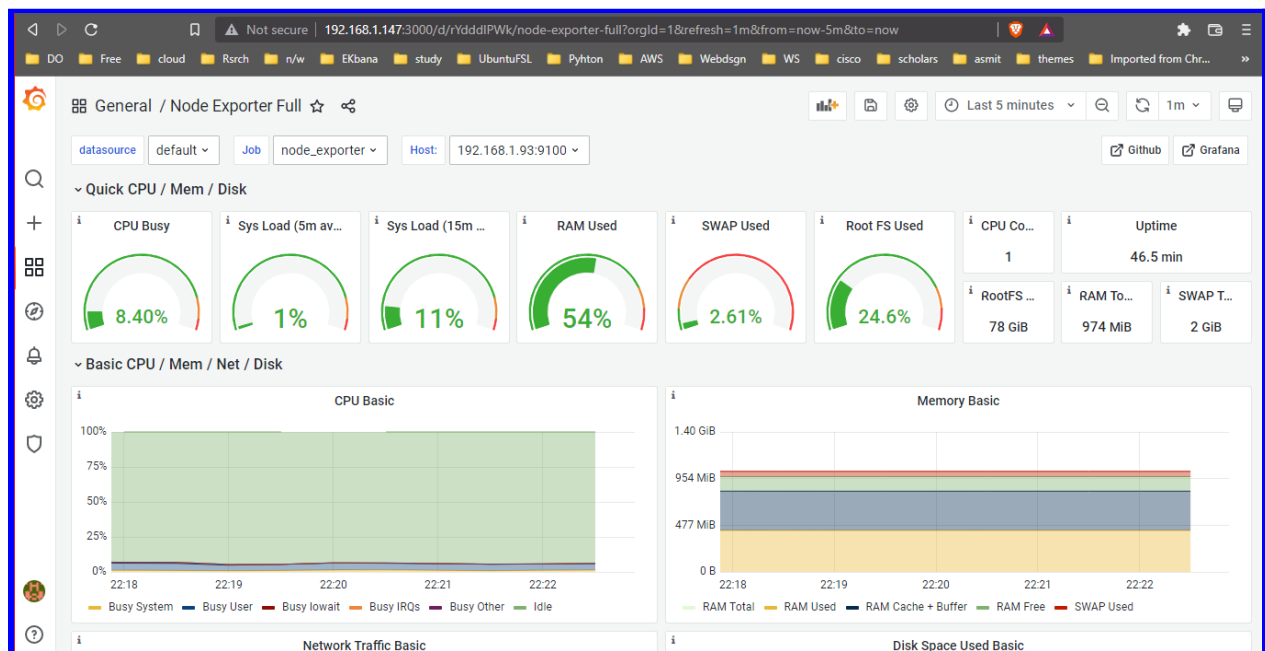
Metrics opened in Full screen on Windows host Via Host IP



Changing the theme colour to Light (preferences)



Screenshots of Metrics we got of the Node-Exporter Host (192.168.1.93)



Screenshots

