Promethes ,Grafana and Node_exporter

Ports number are

1)Promethes=9090

2)Grafana:-3000

3)Node_exporter:- 9100

monitoring applications..

node exports 9090 port

promethes 9100 port (data source) pomql

grafana human readble form for more easier data understanding

promethes 9100 port (data source)

pomql query language. to query on grafan..

node export is some what same as anisble

but here node sends data to master

we need to install nodeexporter on each

node and master also ...

promethes 9100

data flow .....

node export

|

promethes

|

grafna

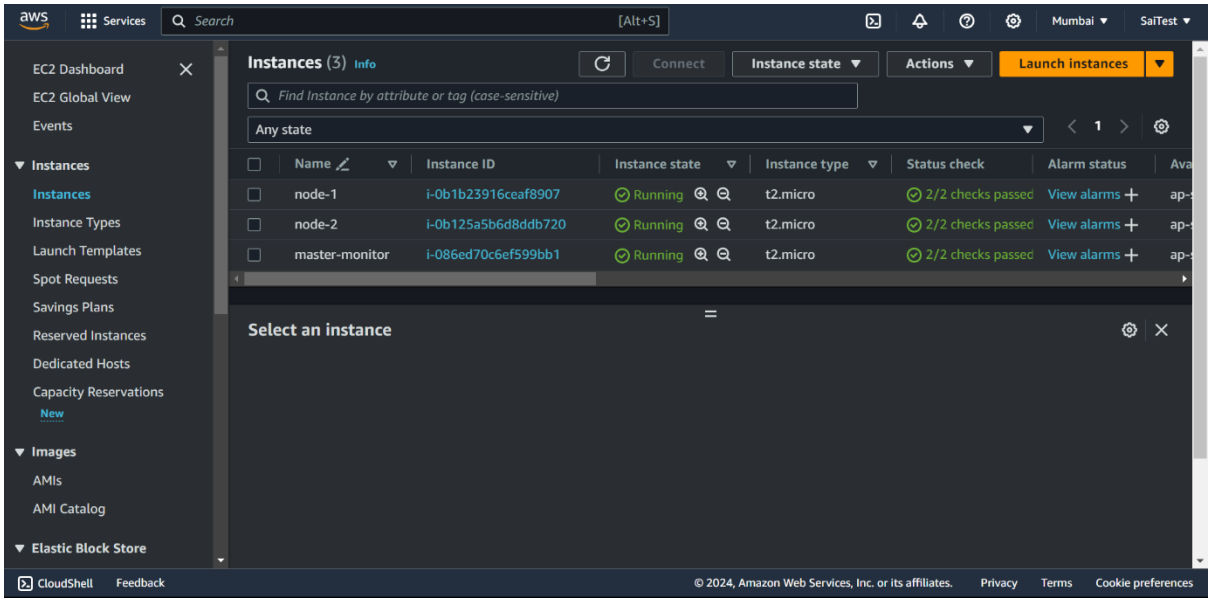
first make 1 master and 2 nodes

1 for master install node_export,promethes,grafana

2 nodes launch and install node_exporter on it ..

run 2 query..

All 3 instance should have a security group in which port 9090,3000,9100,22,80,443 are in inbound



Go in master install

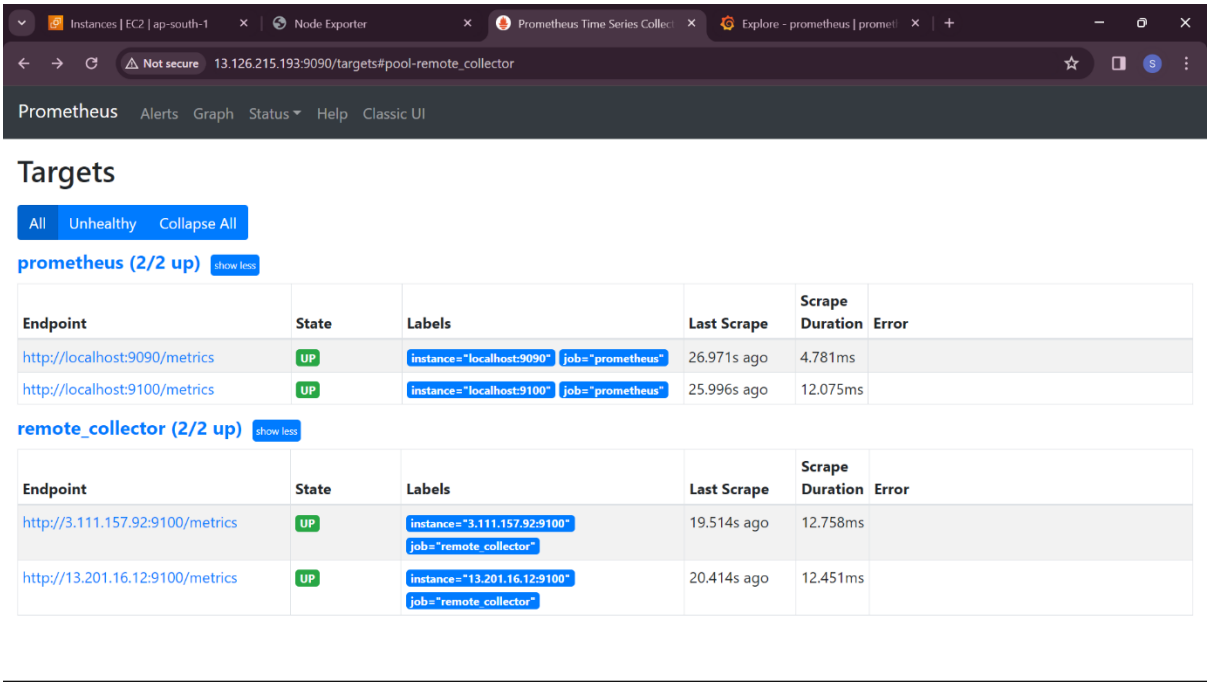
1) Promethes from link
   Link :- https://www.fosstechnix.com/how-to-install-prometheus-on-ubuntu-20-04-lts/

   Run all 12 steps as which are given below
2) Change the files **/etc/promethes/promethes.yml**
   /etc/prometheus/prometheus.yml

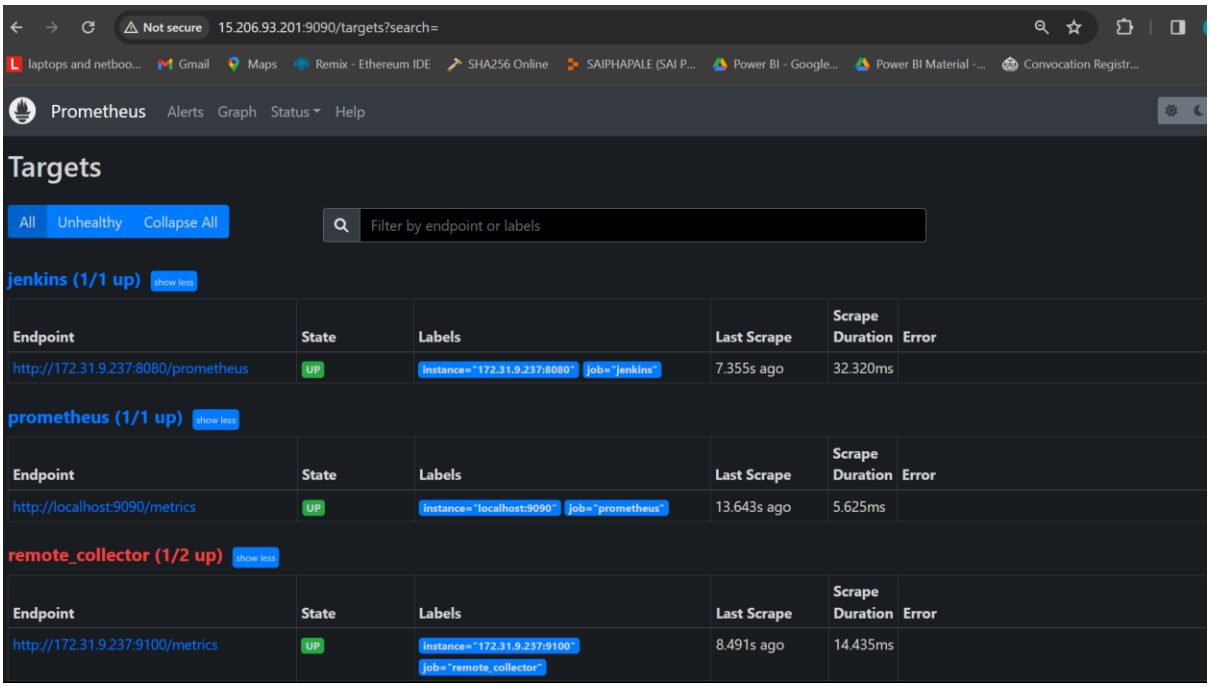
   # my global config/etc/prometheus
   global:
    scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
    evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
    # scrape_timeout is set to the global default (10s).

   # Alertmanager configuration
   alerting:
    alertmanagers:
    - static_configs:

```
    - targets:
      # - alertmanager:9093

# Load rules once and periodically evaluate them according to the global
'evaluation_interval'.
rule_files:
  # - "first_rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this
config.
  - job_name: 'prometheus'

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ['localhost:9090' , 'localhost:9100']

  - job_name: "remote_collector"
    scrape_interval: 10s
    static_configs:
      - targets: ["13.201.16.12:9100" , "3.111.157.92:9100"]  ### these are public ips of node-1
and node-2


## to add configurations
  - job_name: 'jenkins'
    metrics_path: '/prometheus'
    static_configs:
      - targets: ["172.31.9.237:8080"] ##target ip of Jenkins in which node exporter is installed..
```



Jenkins Node is addes….



3) Install node_export from official document
Link :- https://www.fosstechnix.com/install-prometheus-node-exporter-on-linux/

These steps should be executed properly
And the file should be modify properly which is **sudo vim /etc/systemd/system/node_exporter.service**

sudo vim /etc/systemd/system/node_exporter.service

```
[Unit]
Description=Node Exporter
Wants=network-online.target
After=network-online.target

[Service]
User=node_exporter
Group=node_exporter
Type=simple
Restart=always
RestartSec=10s
ExecStart=/usr/local/bin/node_exporter
    --collector.mountstats \
    --collector.logind \
    --collector.processess \
    --collector.ntp \
    --collector.systemd \
    --collector.tcpstat \
    --collector.wifi \


[Install]
WantedBy=multi-user.target
```

Now we should go in node-1 and node-2 and install node_export same as above but not fully just do some steps which I have mention below

Link :- https://www.linode.com/docs/guides/how-to-install-prometheus-and-grafana-on-ubuntu/

Refer from **How to Install and Configure Node Exporter on the Client**

1) wget https://github.com/prometheus/node_exporter/releases/download/v1.5.0/node_exporter-1.5.0.linux-amd64.tar.gz

2) tar xvfz node_exporter-*.tar.gz

3) sudo mv node_exporter-1.5.0.linux-amd64/node_exporter /usr/local/bin

4) rm -r node_exporter-1.5.0.linux-amd64*

5) node_exporter

6) sudo useradd -rs /bin/false node_exporter

7) sudo vi /etc/systemd/system/node_exporter.service

```
[Unit]
Description=Node Exporter
Wants=network-online.target
After=network-online.target

[Service]
User=node_exporter
Group=node_exporter
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/node_exporter

[Install]
WantedBy=multi-user.target
```

:wq! Save it

8) sudo systemctl enable node_exporter

9) sudo systemctl daemon-reload
10) sudo systemctl start node_exporter
11) sudo systemctl status node_exporter

`http://local_ip_addr:9100 you can see node_exporter`

`refers only till` How to Configure Prometheus to Monitor Client Nodes

Now Go in Master

Intsall Grafana from official document

Link:- https://grafana.com/docs/grafana/latest/setup-grafana/installation/debian/

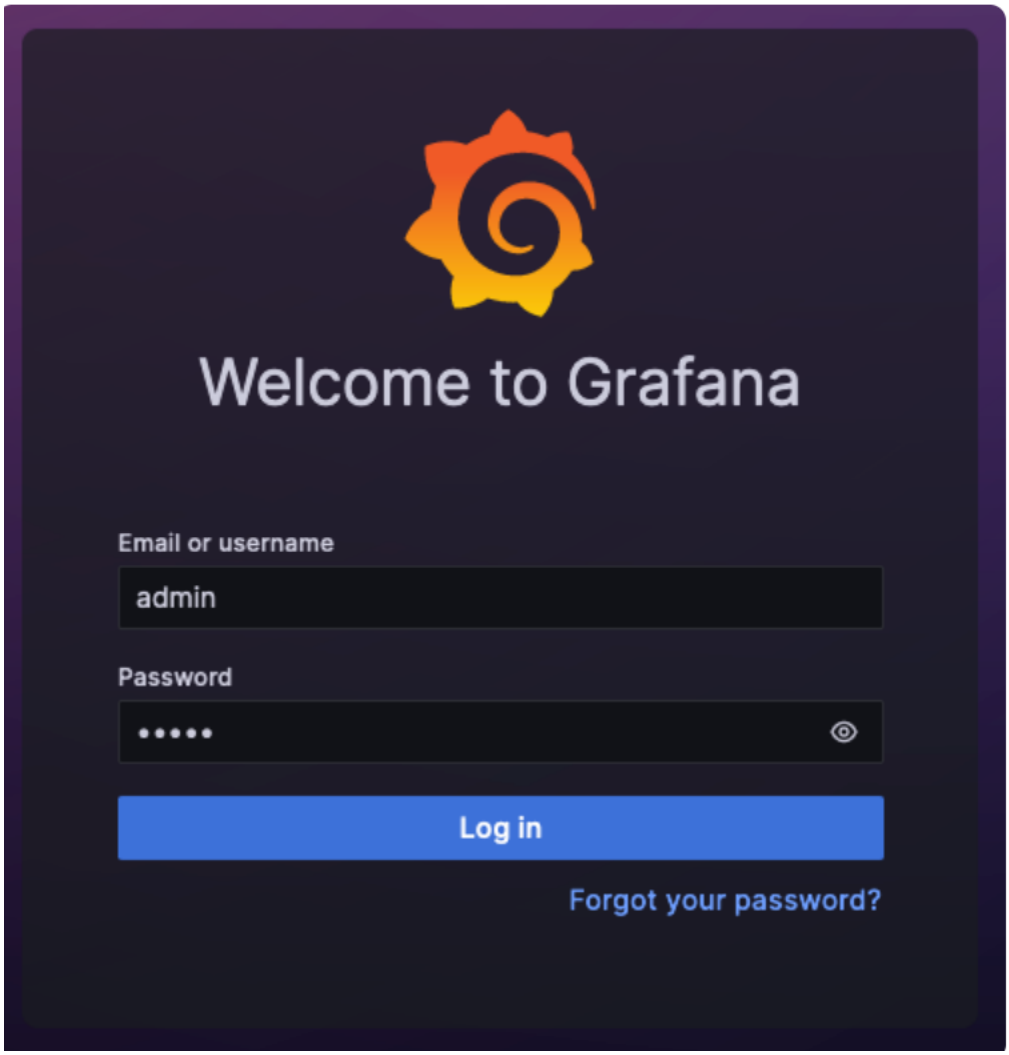
Then check Grafana is working or not

systemctl status grafana-server.service -> to check

systemctl start grafana-server.service → to start

systemctl enable grafana-server.service -> to enable

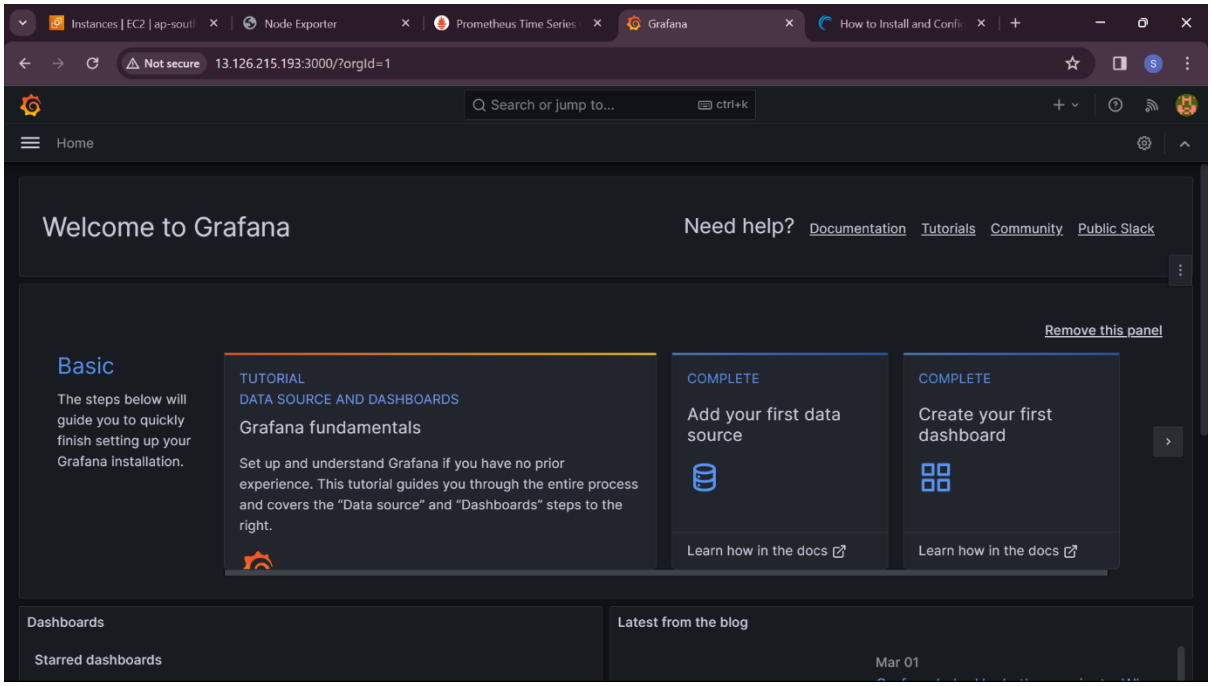
http:<ip-address> :3000 to go in Grafana



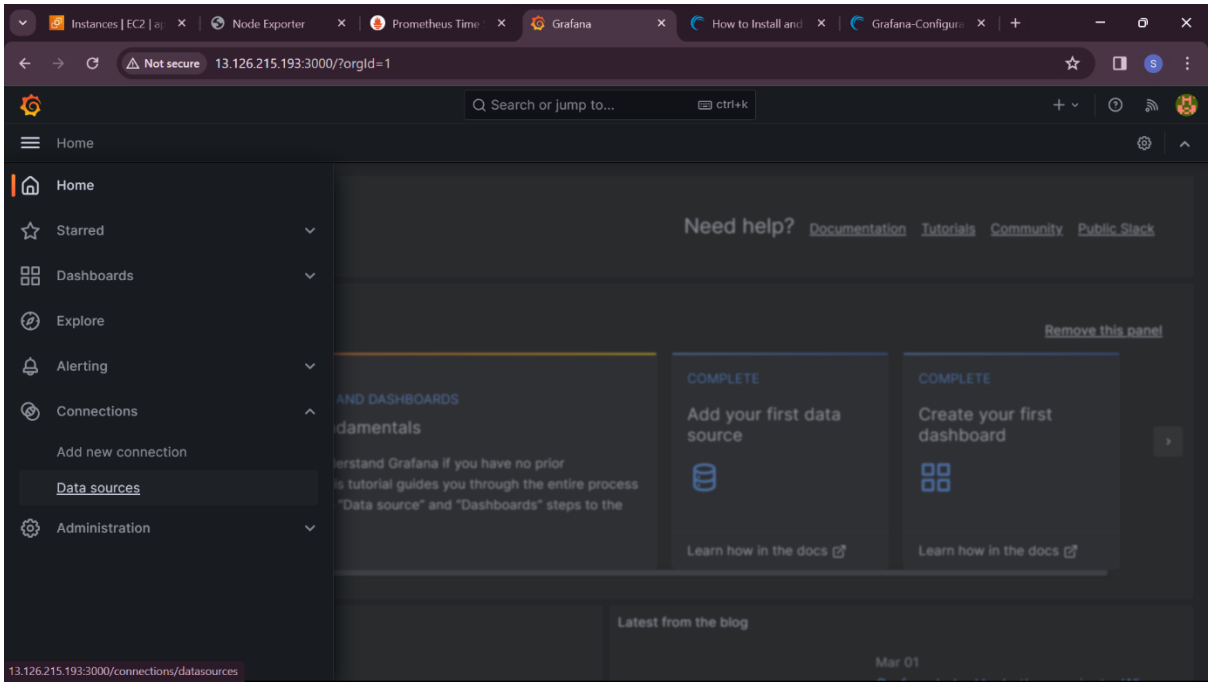
First time insert "**admin**" as username and password …

And after that Grafana asks for password that we can set anything we want ….

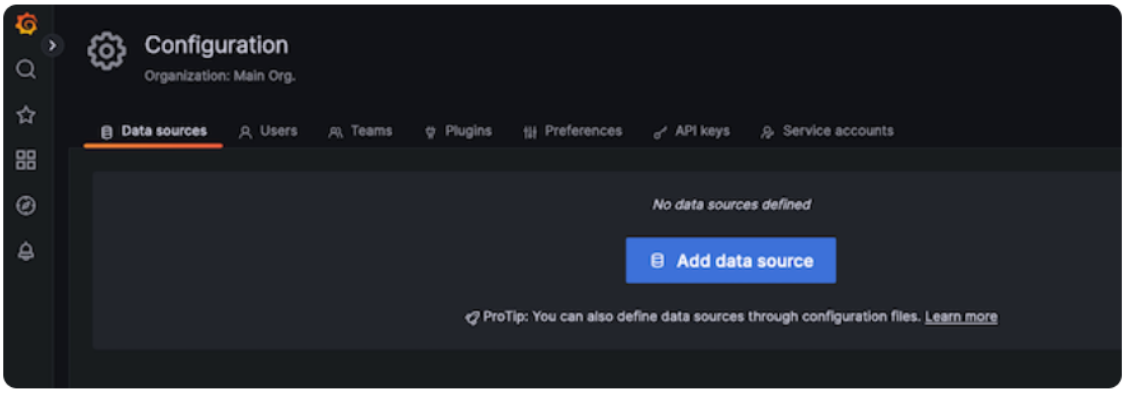
Home page of Grafana is



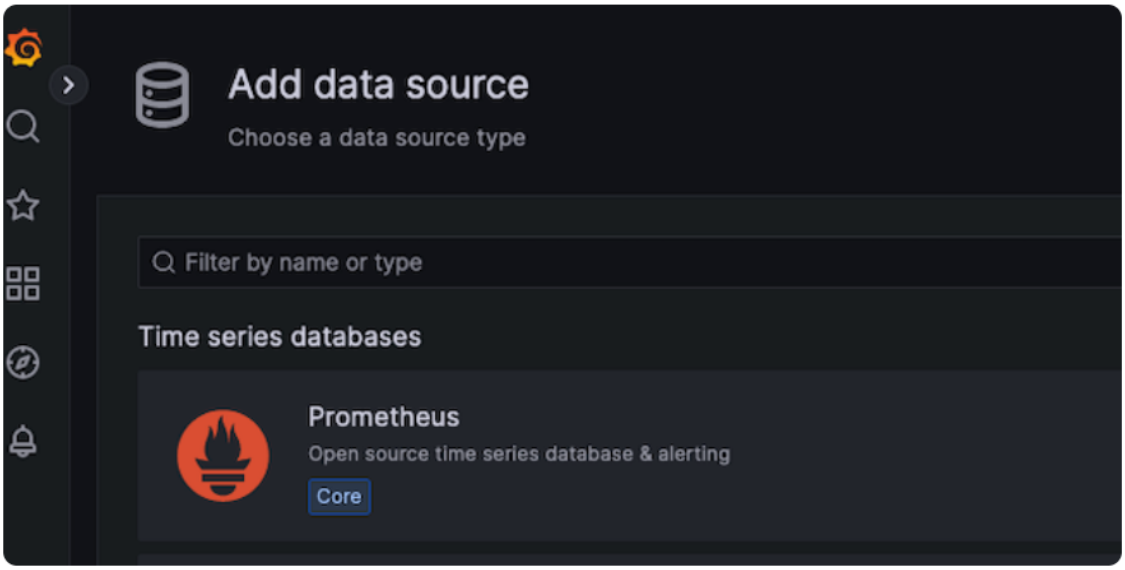
Choose datasource



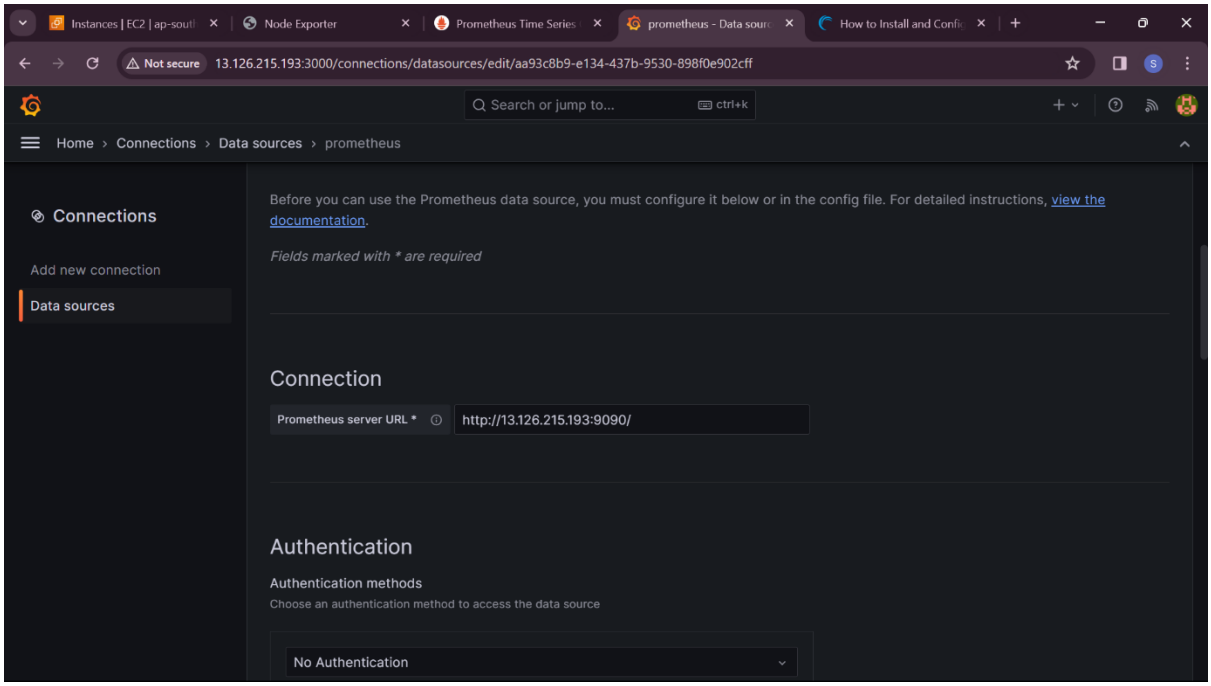
Next choose Prometheus



5. Choose **Prometheus** as the data source.

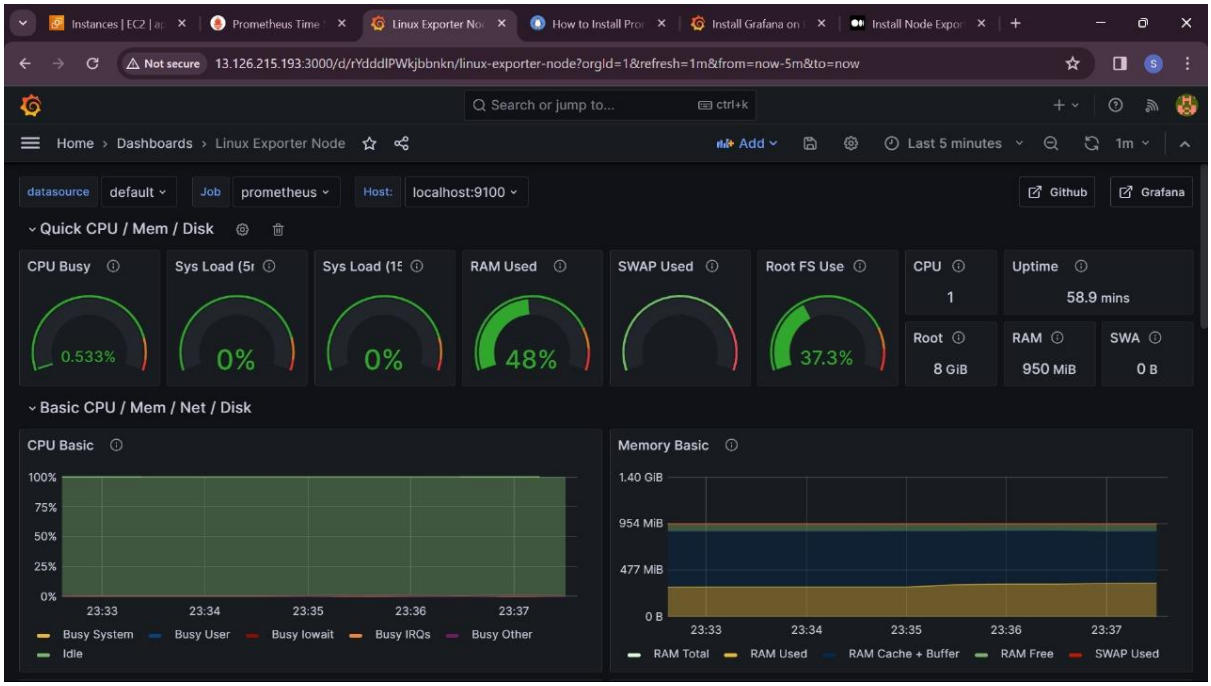


Enter Url for Promethes server



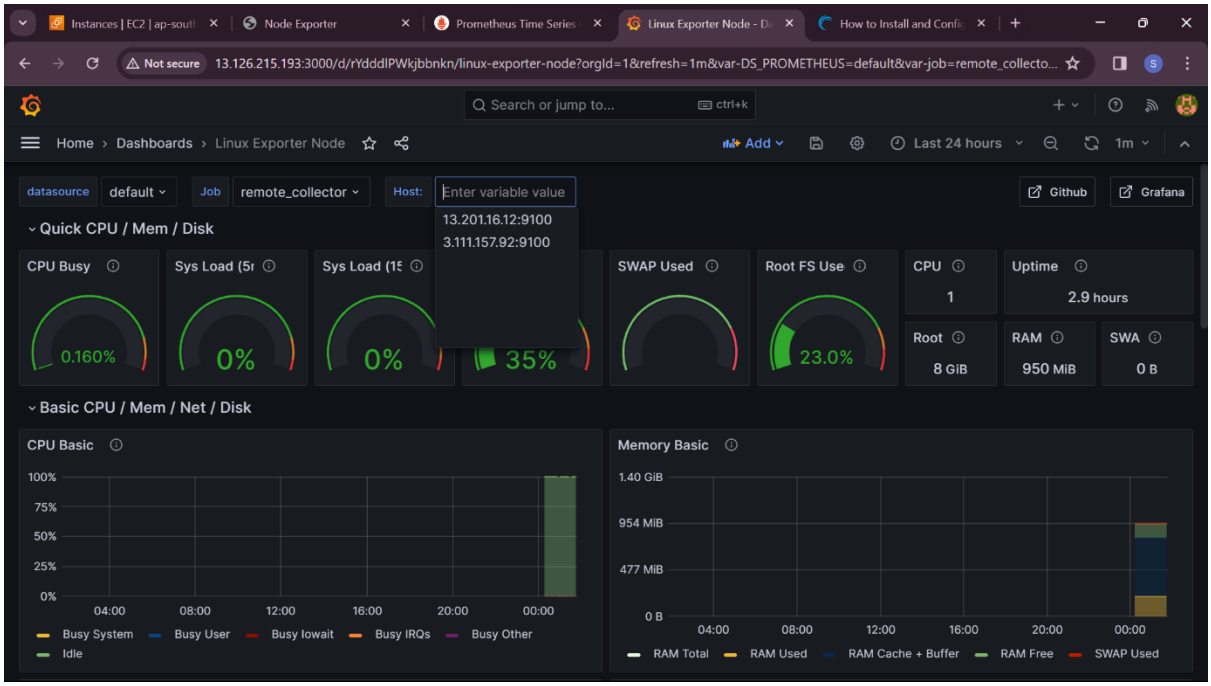
After that let all settings be default bro and click on save and test button

Now we can see our Grafana Dashboard… it is for our localhost means it is basically monitoring the Master .

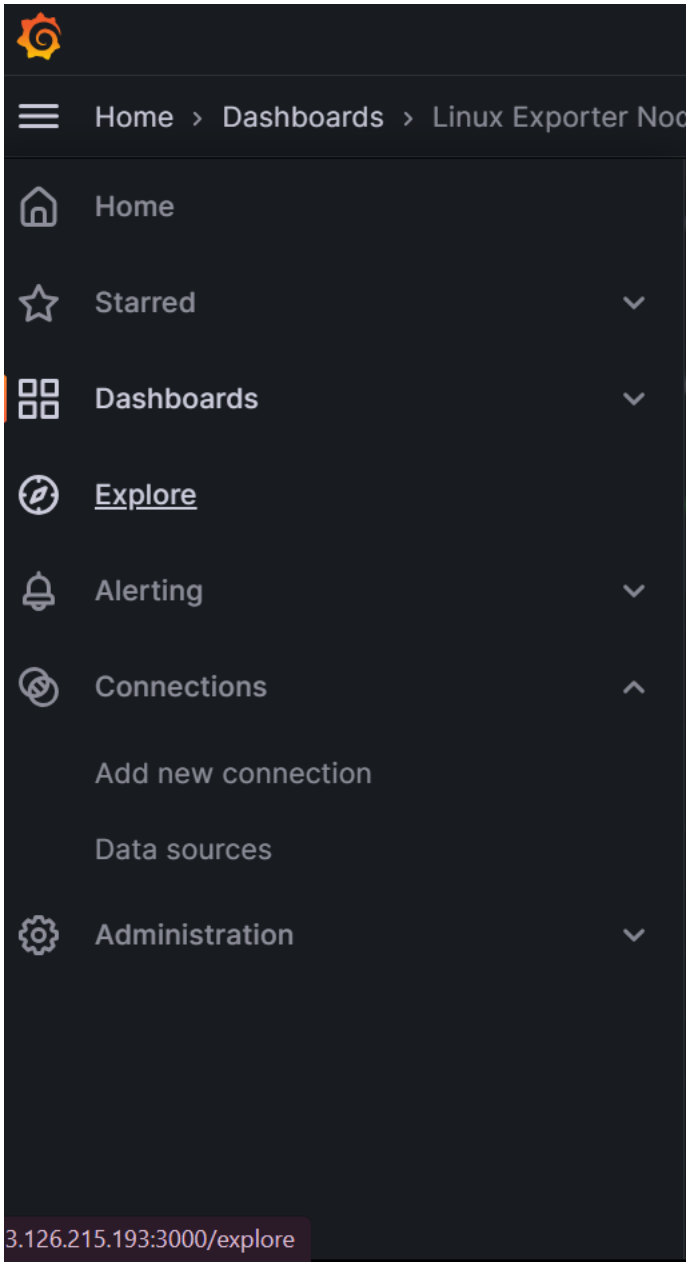


For seeing the node-1 and node-2 select the data source = Prometheus , job = remote-controller (name) ,

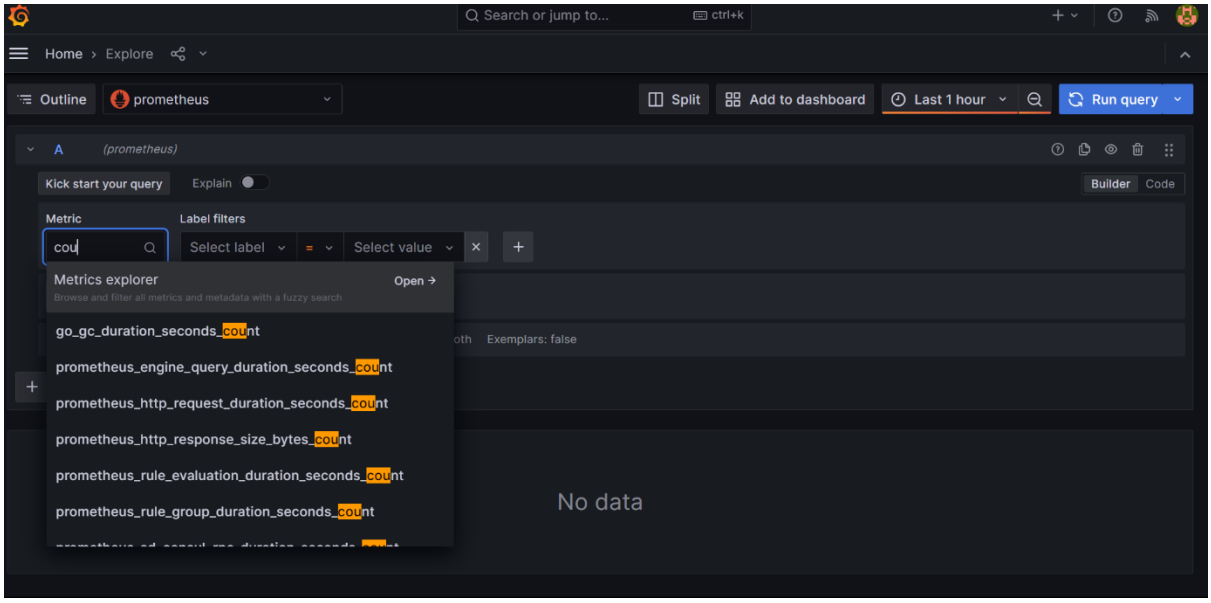
host : 13.201.16.12 (node-1 public ip) , 3.111.157.92 (node-2 public ip)



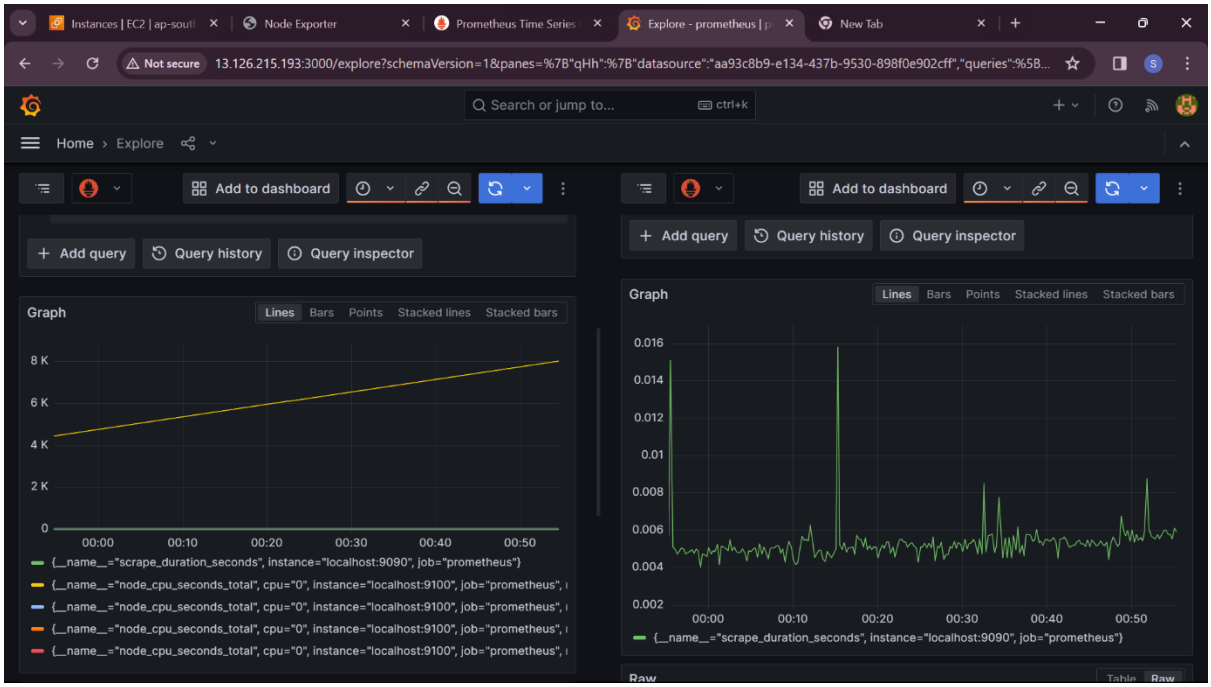
You can also run query in Grafana select Explore



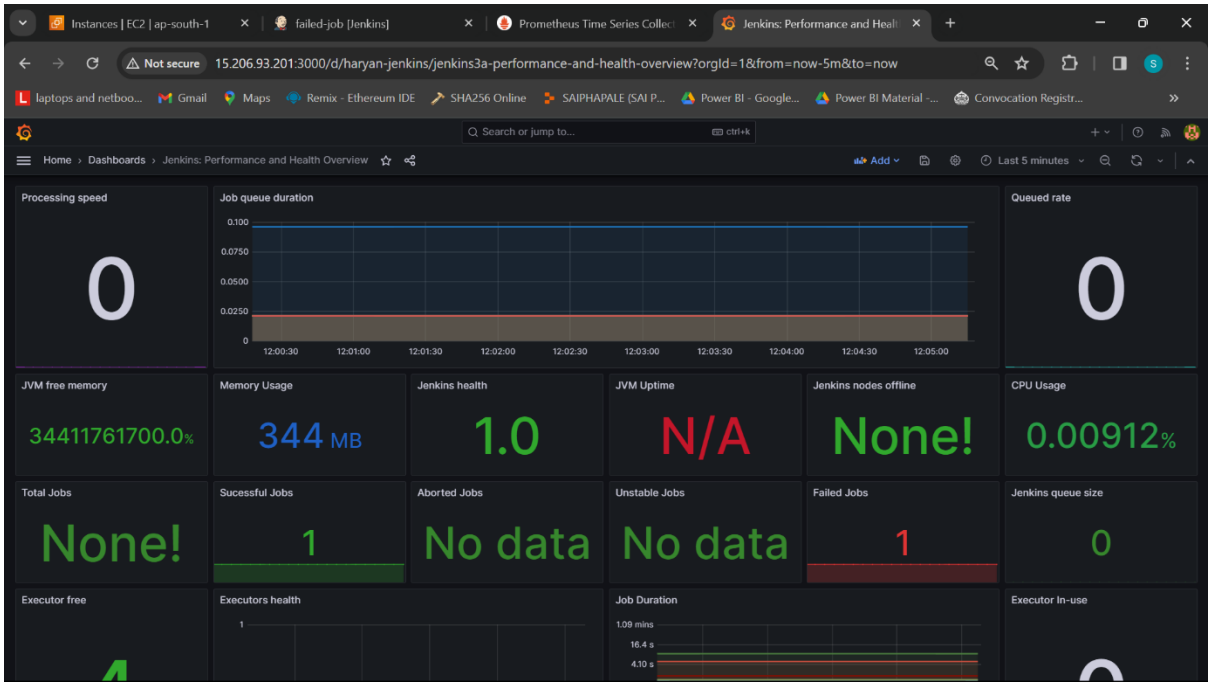
You can run any command using the Grafana metric eg cpu



We can also run two commands parallelly using spilt feature of Grafana



Left side is some disk command right side is some cpu command



Jenkins dashboard

Dashboard id for Jenkins is “ **9966** ”

Important Tip:-

This links is only for monitoring an ec2 instance

Link :- https://youtu.be/DuYnPOq4D6w?si=nMJumC8jNbQ7zxiF

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This link is monitoring Jenkins server

Link :-https://youtu.be/0XcZcODU_90?si=9knsGQM4YL-zIaNF

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