

Problem Statement

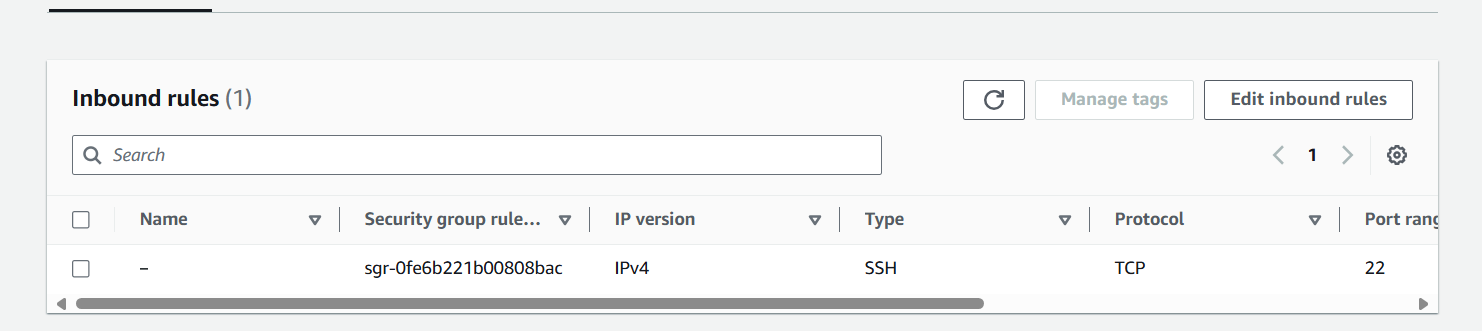
Integrate Grafana with Linux server

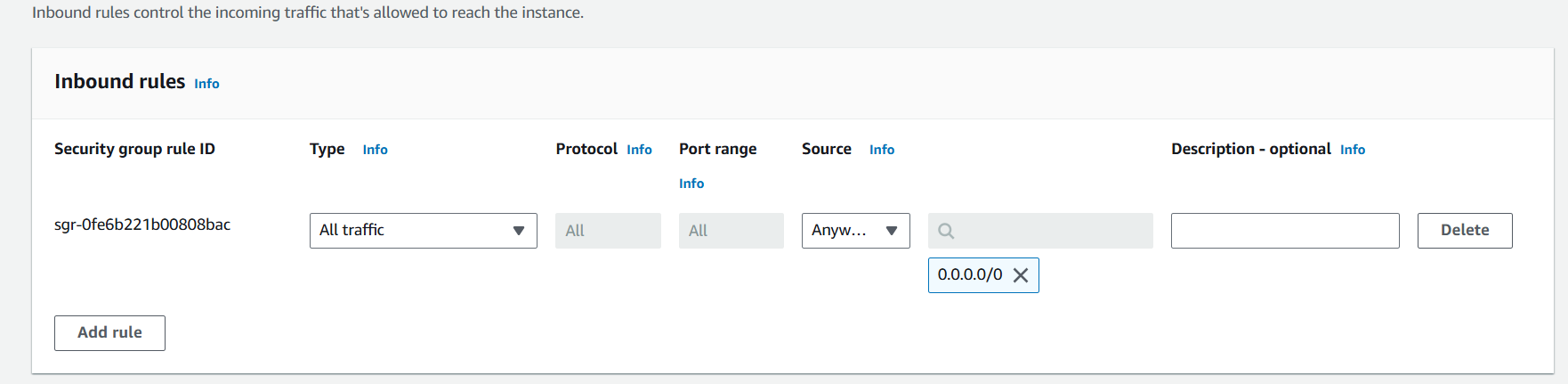
Overview

* Create a EC2 instance.
* Install Prometheus.
* Install node exporter.
* Install Grafana.
* View dashboard using stress.

Solution

Creating a EC2 instance

* Login to AWS console and create a EC2 instance.
* Give instance name: Garfana-linux.
* Give select instance type Ubuntu linux.
* Create key pair. Leave else as default.
* Create instance.
* Click on EC2 instance. Go to security and select security group.
* Edit inbound rule. Delete predefined rule.
* 
* Add a new rule and select Type- All traffic.
* And source- IPv4. Save changes.



* Save else as default.
* Login to your instance in putty.
* Switch to root user using – sudo -i.

Install Prometheus

* Install Prometheus using these commands.

wget <https://github.com/prometheus/prometheus/releases/download/v2.53.0/prometheus-2.53.0.linux-amd64.tar.gz>

* To view installation run “ls” command.
* Create file using this command.

tar xzf prometheus-2.53.0.linux-amd64.tar.gz

* Check file is created by ls command.
* Move the file using -mv prometheus-2.53.0.linux-amd64 /etc/prometheus
* Run -nano /etc/systemd/system/prometheus.service
* Enter this into file

[Unit]

Description=Prometheus

Wants=network-online.target

After=network-online.target

[Service]

ExecStart=/etc/prometheus/prometheus --config.file=/etc/prometheus/prometheus.yml

Restart=always

[Install]

WantedBy=multi-user.target

* Save it using crtl+O, press enter.
* Exit using Ctrl+X.
* Run these command.

systemctl daemon-reload

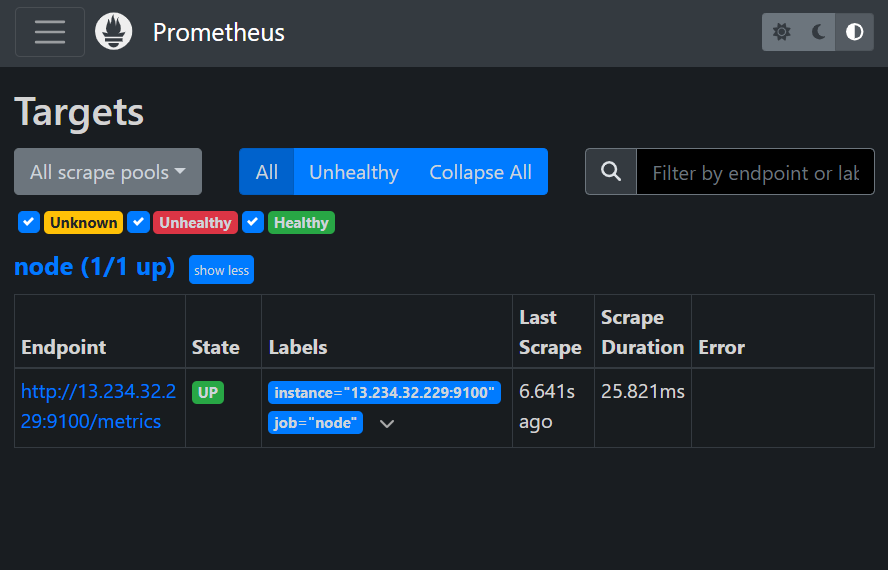
systemctl restart prometheus

systemctl enable prometheus

* Check status using

systemctl status prometheus

* Make sure the status is Active.
* Open the web UI using public IP with 9090 port. <http://intsanceip:9090>
* You will see a Prometheus UI.



* Make sure the status is showing UP.

Installing node exporter

* Install node exporter using this command

wget <https://github.com/prometheus/node_exporter/releases/download/v1.8.1/node_exporter-1.8.1.linux-amd64.tar.gz>

* Run these commands

-ls

-tar xzf node\_exporter-1.8.1.linux-amd64.tar.gz

-ls

-mv node\_exporter-1.8.1.linux-amd64 /etc/node\_exporter

-nano etc/systemd/system/node\_exporter.service

-mv node\_exporter-1.8.1.linux-amd64 /etc/node\_exporter

-nano etc/systemd/system/node\_exporter.service

* Enter this in file

[Unit]

Description=Node Exporter

Wants=network-online.target

After=network-online.target

[Service]

ExecStart=/etc/node\_exporter/node\_exporter

Restart=always

[Install]

WantedBy=multi-user.target

* Restart and enable node exporter. Check status is active

systemctl daemon-reload

systemctl restart node\_exporter

systemctl enable node\_exporter

systemctl status node\_exporter

* Edit Prometheus scrap file using.

rm -rf /etc/prometheus/prometheus.yml

nano /etc/prometheus/prometheus.yml

* Enter this in file

global:

scrape\_interval: 15s

scrape\_configs:

- job\_name: node

static\_configs:

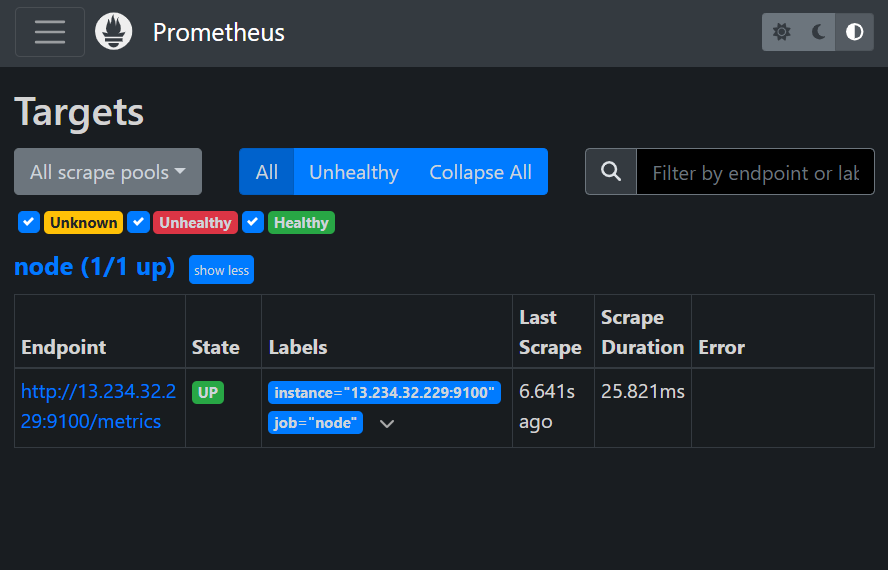
- targets: ['localhost:9100']

* Replace local host with your IP. Save and exit.
* check status is active.

systemctl restart prometheus

systemctl status prometheus

* In Prometheus web Ui you see in target section 1 node with UP status.



Install Grafana

* Install Grafana using these command.

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

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

sudo apt-get install -y gnupg2

sudo apt-key adv --fetch-keys <https://packages.grafana.com/gpg.key>

sudo apt update

sudo apt install grafana

* Enable and check status.

sudo systemctl start grafana-server

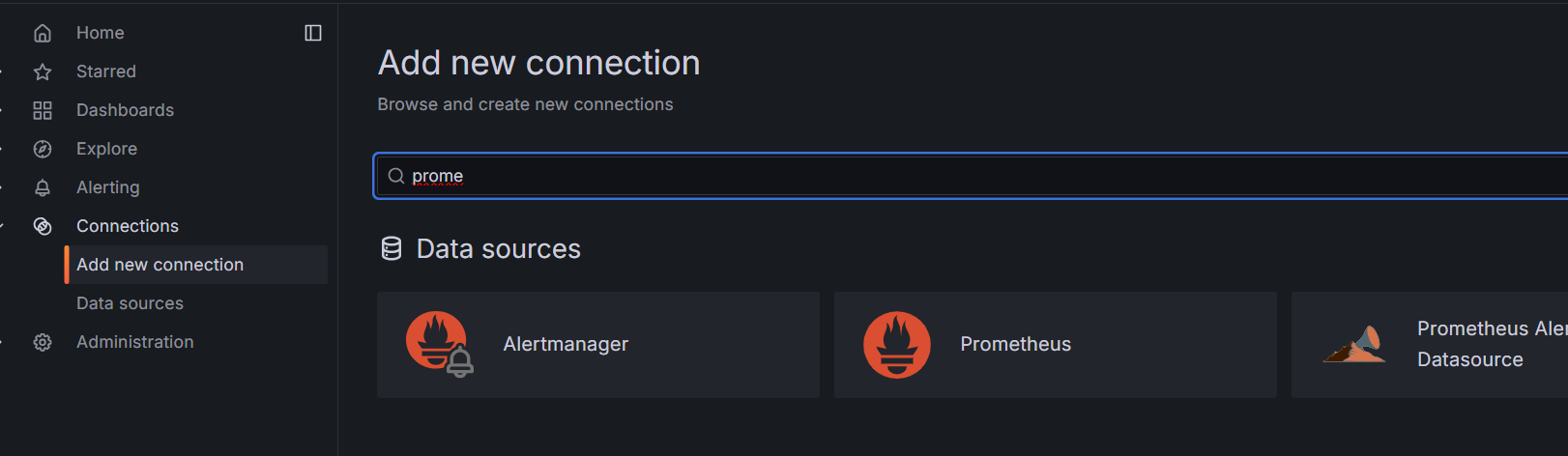
sudo systemctl enable grafana-server

systemctl status grafana-server

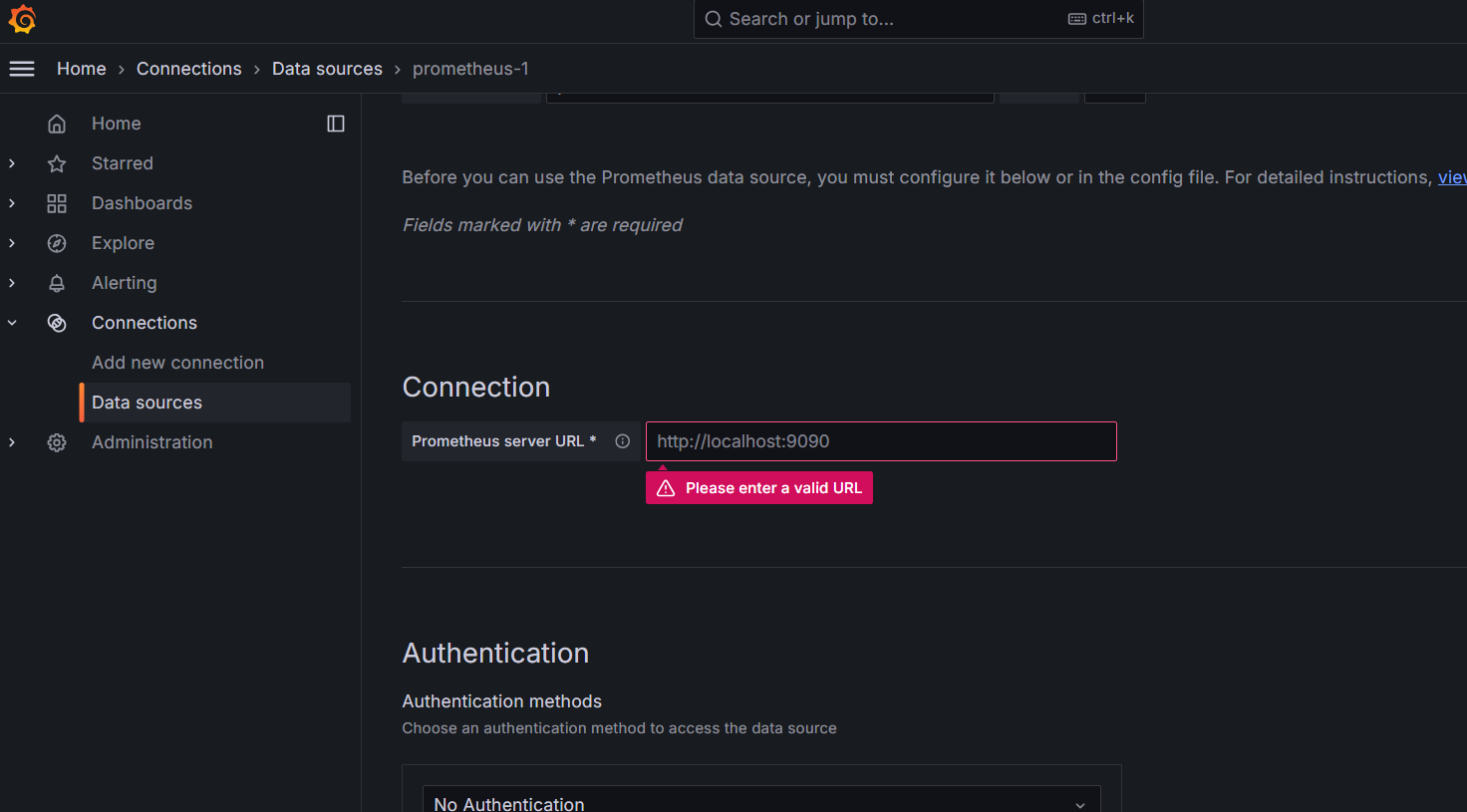
* Open Grafana web ui using ip address with 3000 port. <http://instanceip:3000>



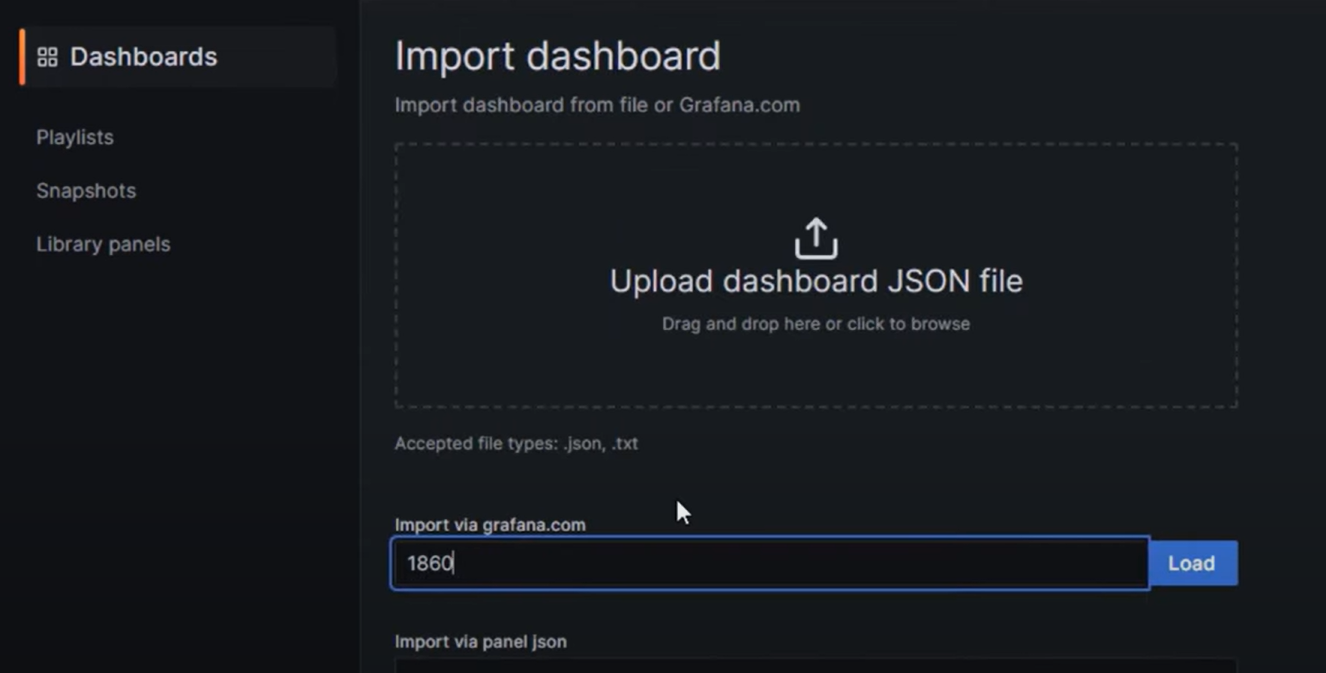
* You will see this window in web.
* Enter email-admin and password admin.
* Set new password.
* Click on menu in the top left corner.
* Go to connections and add new connections search prometheus data source.



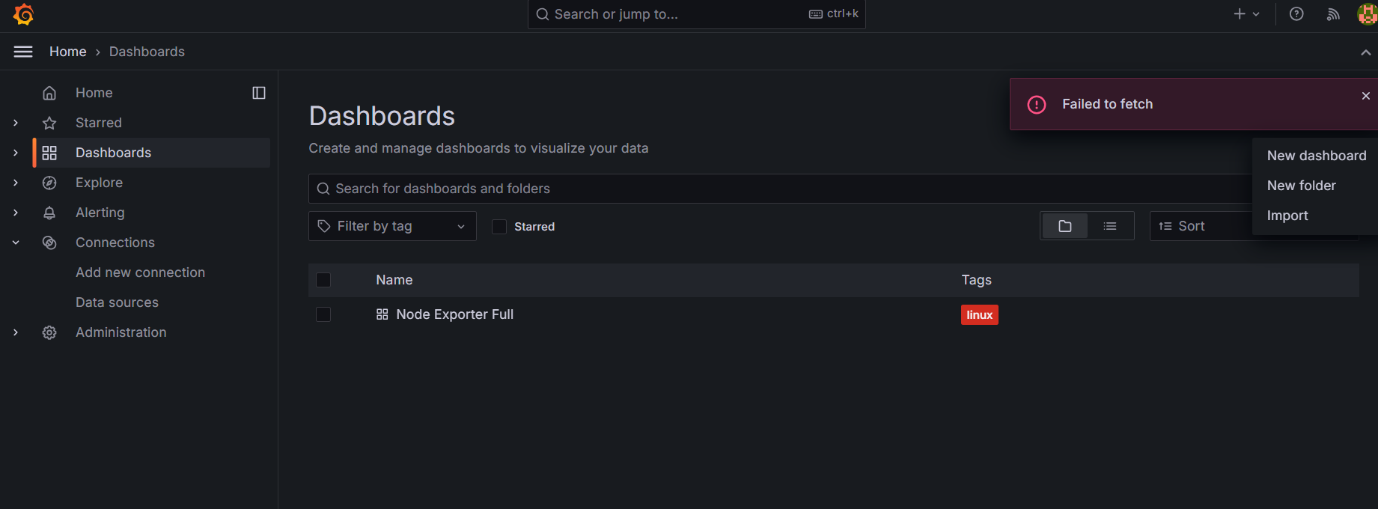
* Paste your prometheus url in url section.

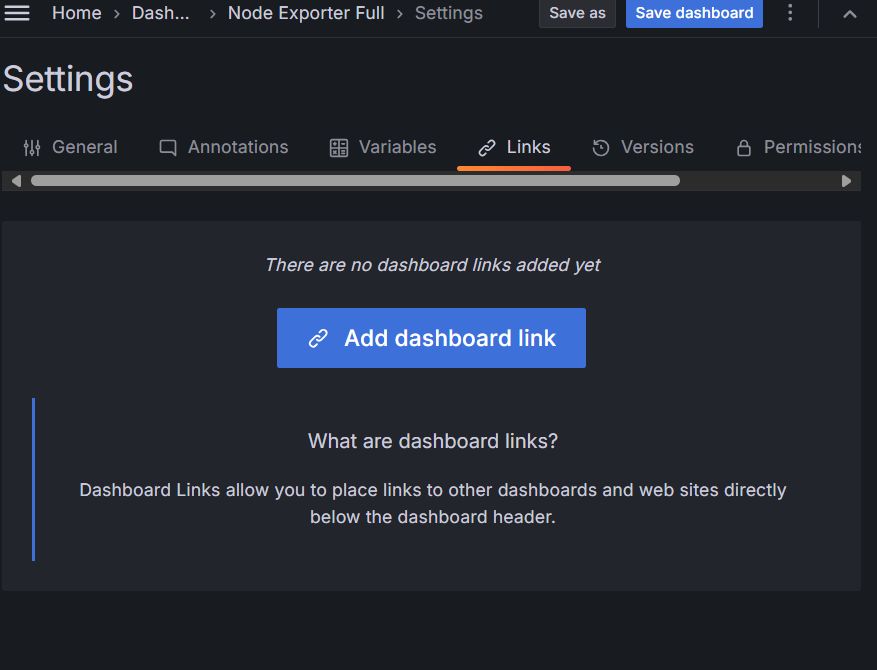


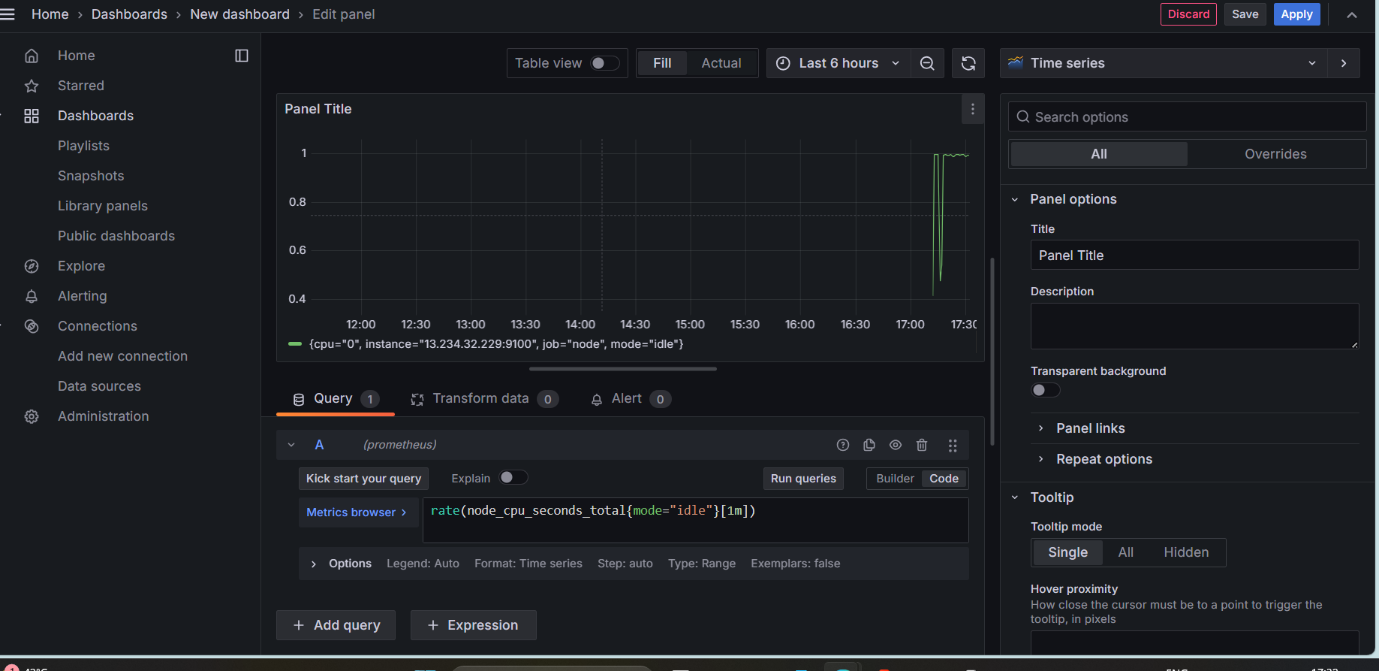
* Leave else as default and save it.
* Now go to dash board. Add new dashboard and enter the same as shown in the image



* You will see a new added dashboard.



* Goto setting in links section add dashboard link.
* You will see this dashboard.



* In query section run this query as shown in image.
* In your linux instance run stress command

sudo apt install stress

stress --cpu 4 --timeout 300

* You can see graph in Grafana dashboard.

