PROMETHEUS

Prometheus:

Prometheus is an open-source system monitoring and alerting toolkit originally built at SoundCloud. It is now a standalone open source project . Prometheus joined the Cloud Native Computing Foundation in 2016 as the second hosted project, after Kubernetes.

Key features:

1. a multi-dimensional data model with time series data identified by metric name and key/value pairs
2. PromQL, a flexible query language to leverage this dimensionality
3. no reliance on distributed storage; single server nodes are autonomous
4. time series collection happens via a pull model over HTTP
5. pushing time series is supported via an intermediary gateway
6. targets are discovered via service discovery or static configuration
7. multiple modes of graphing and dashboarding support

Prometheus commands:

wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz

tar -xvf prometheus-2.47.1.linux-amd64.tar.gz

sudo mkdir -p /data /etc/prometheus

cd prometheus-2.47.1.linux-amd64/

sudo mv prometheus promtool /usr/local/bin/

sudo mv consoles/ console_libraries/ /etc/prometheus/

sudo mv prometheus.yml /etc/prometheus/prometheus.yml

sudo chown -R prometheus:prometheus /etc/prometheus/ /data/

cd

rm -rf prometheus-2.47.1.linux-amd64.tar.gz

prometheus --version

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

[Unit]

Description=Prometheus

Wants=network-online.target

After=network-online.target

StartLimitIntervalSec=500

StartLimitBurst=5

[Service]

User=prometheus

Group=prometheus

Type=simple

Restart=on-failure

RestartSec=5s

ExecStart=/usr/local/bin/prometheus \

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

  --storage.tsdb.path=/data \

  --web.console.templates=/etc/prometheus/consoles \

  --web.console.libraries=/etc/prometheus/console_libraries \

  --web.listen-address=0.0.0.0:9090 \

  --web.enable-lifecycle

[Install]

WantedBy=multi-user.target

sudo systemctl enable prometheus

sudo systemctl start prometheus

sudo systemctl status prometheus

journalctl -u prometheus -f --no-pager

sudo useradd \

    --system \

    --no-create-home \

    --shell /bin/false node_exporter

wget https://github.com/prometheus/node_exporter/releases/download/v1.6.1/node_exporter-1.6.1.linux-amd64.tar.gz

tar -xvf node_exporter-1.6.1.linux-amd64.tar.gz

[22-03-2025 12:12] +91 90928 13114: sudo mv \

  node_exporter-1.6.1.linux-amd64/node_exporter \

```
  /usr/local/bin/
rm -rf node_exporter*
node_exporter --version
sudo vim /etc/systemd/system/node_exporter.service
 [Unit]
Description=Node Exporter
Wants=network-online.target
After=network-online.target
StartLimitIntervalSec=500
StartLimitBurst=5
[Service]
User=node_exporter
Group=node_exporter
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/node_exporter \
    --collector.logind
[Install]
WantedBy=multi-user.target
sudo systemctl enable node_exporter
sudo systemctl start node_exporter
sudo systemctl status node_exporter
journalctl -u node_exporter -f --no-pager
sudo vim /etc/prometheus/prometheus.yml
- job_name: node_export
    static_configs:
      - targets: ["localhost:9100"]
- job_name: 'jenkins'
    metrics_path: '/prometheus'
    static_configs:
```

- targets: ['<jenkins-ip>:8080'

promtool check config /etc/prometheus/prometheus.yml

curl -X POST http://localhost:9090/-/reload

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

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

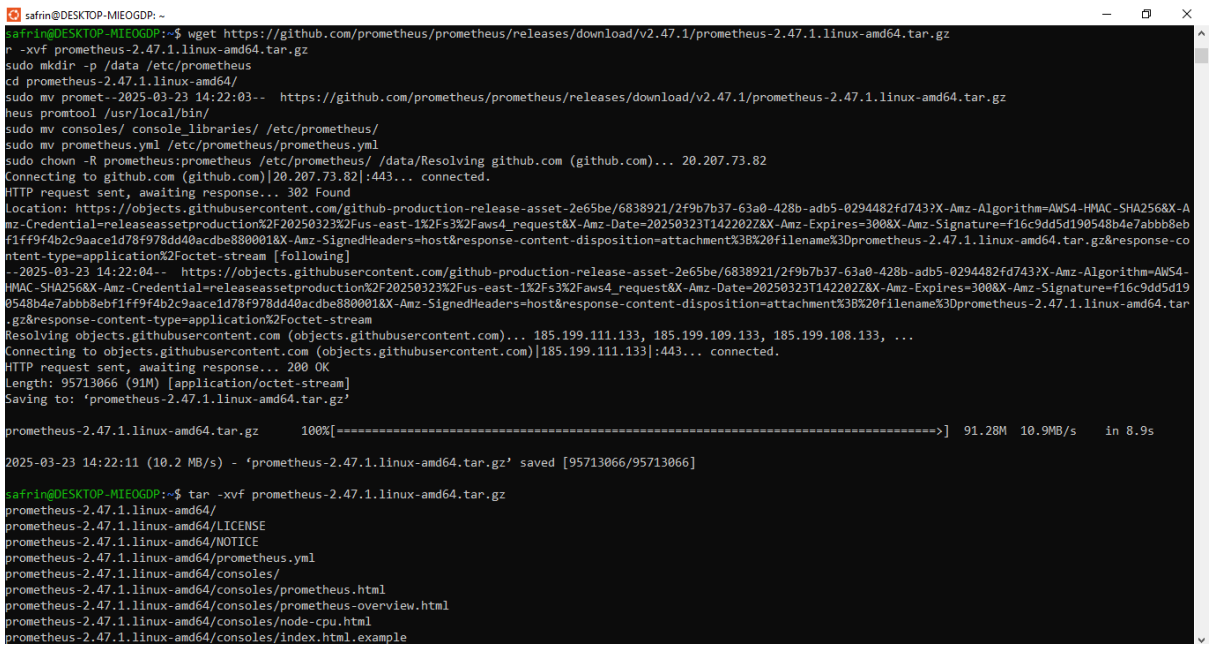
sudo apt-get -y install grafana

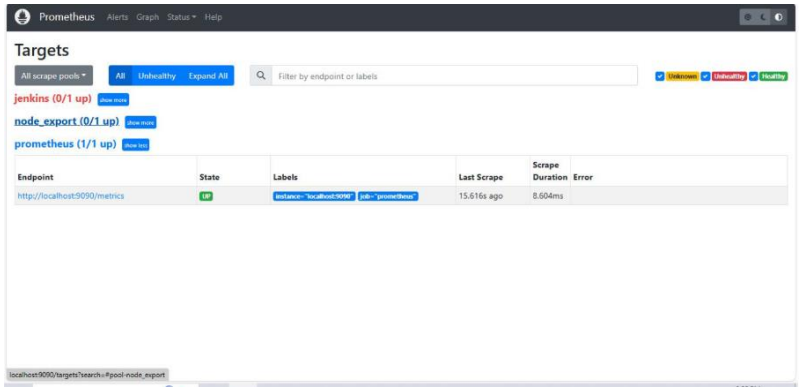
sudo systemctl enable grafana-server

sudo systemctl start grafana-server

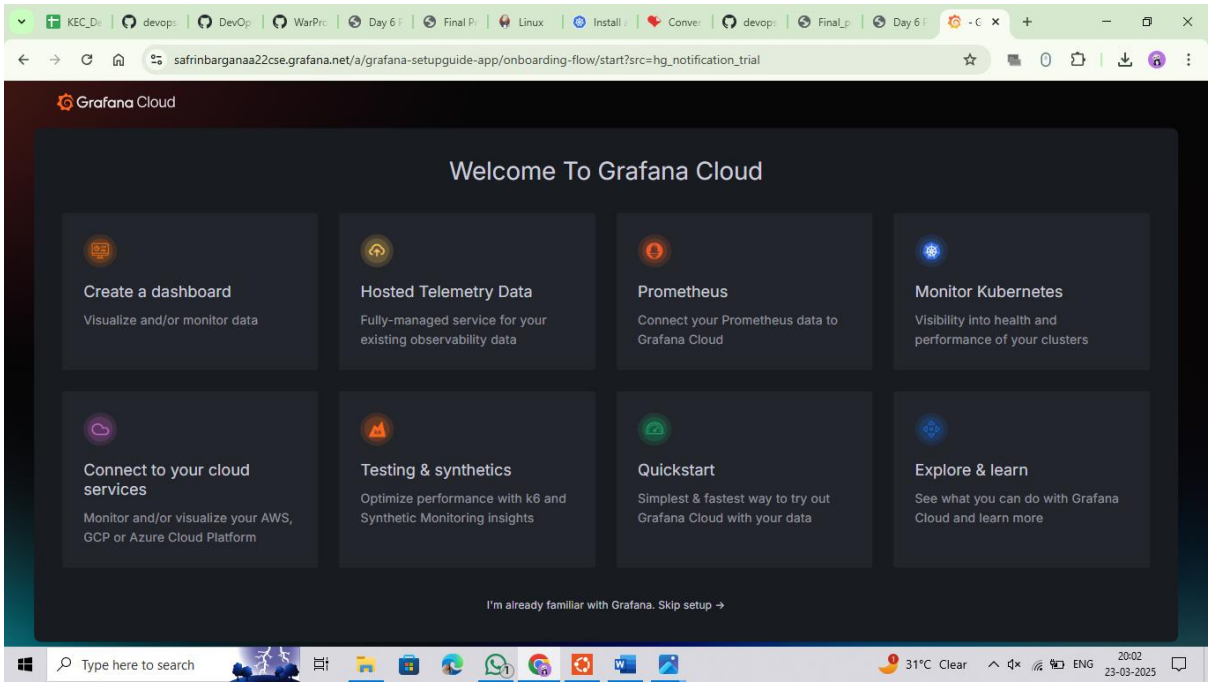
sudo systemctl status grafana-server

PROMETHEUS INSTALLATION:

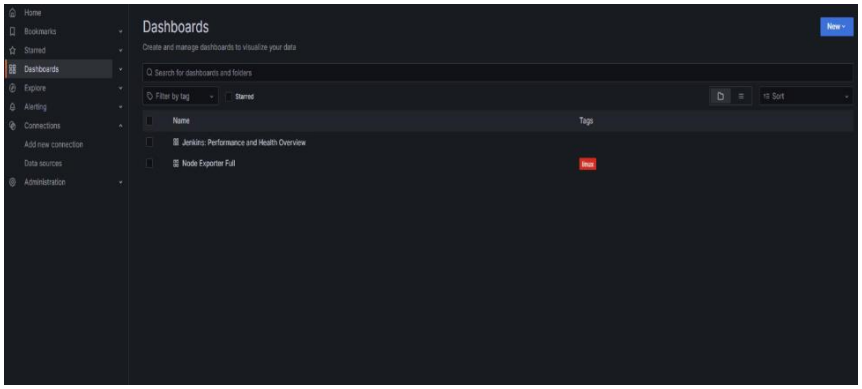


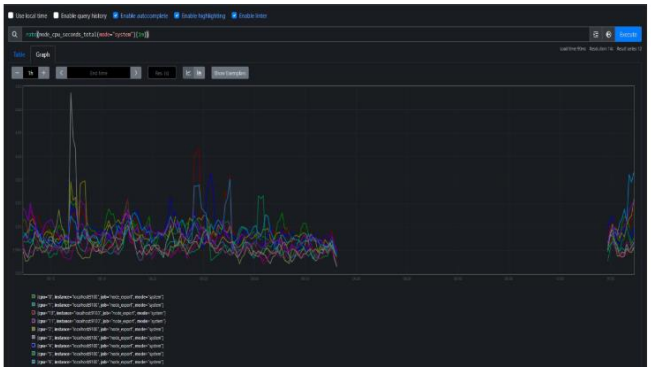


GRAFANA



DASHBOARD:


Home
Bookmarks
Starred
Dashboards
Explore
Alerting
Connections
Add new connection
Data sources
Administration
Dashboards
Create and manage dashboards to visualize your data
New
Search for dashboards and folders
Filter by tag
Starred
Sort
Name
Tags
Jenkins: Performance and Health Overview
Node Exporter Full
linux



Use local time
Enable query history
Enable autocomplete
Enable highlighting
Enable linter
node_load15
Execute
Table
Graph
1h
End time
Res. (s)
Show Exemplars