**INSTALL GRAFANA AND PROMETHESUS USING 1 VM**

**STEP 1: Update and Install Dependencies**

sudo yum update -y

sudo yum install wget curl vim -y

**STEP 2: Create User & Directory Structure for Prometheus**

sudo useradd --no-create-home --shell /bin/false prometheus

sudo mkdir /etc/prometheus

sudo mkdir /var/lib/prometheus

sudo chown prometheus:prometheus /etc/prometheus /var/lib/prometheus

**STEP 3: Download and Install Prometheus**

**3.1 Download Prometheus**

cd /opt

wget https://github.com/prometheus/prometheus/releases/download/v2.51.1/prometheus-2.51.1.linux-amd64.tar.gz

tar -xvf prometheus-2.51.1.linux-amd64.tar.gz

mv prometheus-2.51.1.linux-amd64 prometheus

**3.2 Move binaries**

sudo cp prometheus/prometheus /usr/local/bin/

sudo cp prometheus/promtool /usr/local/bin/

**3.3 Set permissions**

sudo chown prometheus:prometheus /usr/local/bin/prometheus /usr/local/bin/promtool

**STEP 4: Create Prometheus Config File**

sudo vim /etc/prometheus/prometheus.yml

Paste the below content:

global:

scrape\_interval: 15s

evaluation\_interval: 15s

scrape\_configs:

- job\_name: "prometheus"

static\_configs:

- targets: ["localhost:9090"]

- job\_name: "node-exporter"

static\_configs:

- targets: ["localhost:9100"]

Then:

sudo chown prometheus:prometheus /etc/prometheus/prometheus.yml

**STEP 5: Create Prometheus Systemd Service**

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

Paste:

[Unit]

Description=Prometheus Monitoring

Wants=network-online.target

After=network-online.target

[Service]

User=prometheus

ExecStart=/usr/local/bin/prometheus \

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

--storage.tsdb.path=/var/lib/prometheus

[Install]

WantedBy=multi-user.target

**STEP 6: Start Prometheus**

sudo systemctl daemon-reexec

sudo systemctl daemon-reload

sudo systemctl enable prometheus

sudo systemctl start prometheus

sudo systemctl status prometheus

Visit:

http://<your-ec2-ip>:9090

**STEP 7: Install and Start Node Exporter**

**7.1 Download Node Exporter**

cd /opt

wget https://github.com/prometheus/node\_exporter/releases/download/v1.8.1/node\_exporter-1.8.1.linux-amd64.tar.gz

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

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

**7.2 Create Systemd Service**

sudo vim /etc/systemd/system/node\_exporter.service

Paste:

[Unit]

Description=Node Exporter

After=network.target

[Service]

User=nobody

ExecStart=/opt/node\_exporter/node\_exporter

[Install]

WantedBy=default.target

Then start it:

sudo systemctl daemon-reload

sudo systemctl enable node\_exporter

sudo systemctl start node\_exporter

sudo systemctl status node\_exporter

Check on browser:

http://<your-ec2-ip>:9100/metrics

**STEP 8: Install Grafana**

**8.1 Add Grafana Repo**

sudo tee /etc/yum.repos.d/grafana.repo <<EOF

[grafana]

name=Grafana OSS

baseurl=https://packages.grafana.com/oss/rpm

repo\_gpgcheck=1

enabled=1

gpgcheck=1

gpgkey=https://packages.grafana.com/gpg.key

EOF

**8.2 Install & Start Grafana**

sudo yum install grafana -y

sudo systemctl daemon-reexec

sudo systemctl daemon-reload

sudo systemctl enable grafana-server

sudo systemctl start grafana-server

sudo systemctl status grafana-server

Visit:

http://<your-ec2-ip>:3000

Default credentials:

* Username: admin
* Password: admin (you’ll be prompted to change it)

**STEP 9: Configure Prometheus in Grafana**

1. Go to **http://<your-ip>:3000**
2. Login
3. Go to **Settings → Data Sources**
4. Click **Add data source**
5. Choose **Prometheus**
6. Set **URL:** http://localhost:9090
7. Click **Save & Test**

**🔹 STEP 10: Create Dashboard**

1. Go to **Create → Dashboard**
2. Click **Add new panel**
3. In query box, try:

node\_cpu\_seconds\_total

1. Visualize, then click **Apply**
2. Save the dashboard

**OPTIONAL: Import Node Exporter Full Dashboard**

1. Go to: https://grafana.com/grafana/dashboards/1860
2. Copy the Dashboard ID: **1860**
3. In Grafana:
   * Click **+ > Import**
   * Paste the ID
   * Select Prometheus as data source
   * Click **Import**