**Monitoring Task**

**Task** **Description**:

Install Prometheus and Grafana on a Linux EC2 machine, connect Prometheus to Grafana, and create a dashboard to view metrics.

**Step1: Lauch the EC2 instance with Ubuntu AMI.**

A screenshot of a computer

AI-generated content may be incorrect.

Configure security groups to allow inbound traffic on ports 9090 (Prometheus) and 3000 (Grafana).

A screenshot of a computer

AI-generated content may be incorrect.

**Step 2: Install Prometheus**

**2.1 Create a Prometheus user**

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

**2.2 Download and extract Prometheus:**

cd /tmp

curl -LO https://github.com/prometheus/prometheus/releases/latest/download/prometheus-2.48.1.linux-amd64.tar.gz

tar xvf prometheus-2.48.1.linux-amd64.tar.gz

cd prometheus-2.48.1.linux-amd64

**2.3 Move binaries:**

sudo mv prometheus /usr/local/bin/

sudo mv promtool /usr/local/bin/

**2.4 Set up directories and permissions:**

sudo mkdir -p /etc/prometheus /var/lib/prometheus

sudo mv consoles console\_libraries /etc/prometheus

sudo mv prometheus.yml /etc/prometheus/

sudo chown -R prometheus:prometheus /etc/prometheus /var/lib/Prometheus

**2.5 Create a systemd service:**

sudo tee /etc/systemd/system/prometheus.service > /dev/null <<EOF

[Unit]

Description=Prometheus

After=network.target

[Service]

User=prometheus

ExecStart=/usr/local/bin/prometheus \\

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

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

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

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

[Install]

WantedBy=default.target

EOF

**2.6 Start Prometheus:**

sudo systemctl daemon-reexec

sudo systemctl daemon-reload

sudo systemctl enable --now prometheus

**2.7 Check status:**

sudo systemctl status Prometheus

A screen shot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

**Step 3: Install Grafana**

**3.1 Add Grafana APT repository:**

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

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

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

sudo apt-get update

**3.2 Install Grafana:**

sudo apt-get install grafana -y

**3.3 Start Grafana:**

sudo systemctl enable --now grafana-server

Access via: http://your-ec2-public-ip:3000  
Default login: admin / admin

A screenshot of a computer

AI-generated content may be incorrect.

**Step 4: Connect Prometheus to Grafana**

* Log into Grafana at 15.206.166.183:3000
* Go to “Configuration” → “Data Sources”
* Click “Add data source” → Choose “Prometheus”
* Set the URL to: http://localhost:9090
* Click “Save & Test”

A screenshot of a computer

AI-generated content may be incorrect.

**Step 5: Install node exporter**

**5.1 edit the Prometheus.yml for node exporter**

- job\_name: 'node\_exporter\_metrix'

static\_configs:

- targets: ['localhost:9100']

**5.2 restart the Prometheus service.**

A black screen with white text

AI-generated content may be incorrect.

5.3 Now check the node exporter status in Prometheus portal.

A screenshot of a computer

AI-generated content may be incorrect.

Its showing down because we haven’t install it yet.

* 1. **Download Node Exporter**

cd /tmp

curl -LO <https://github.com/prometheus/node_exporter/releases/download/v1.8.0/node_exporter-1.8.0.linux-amd64.tar.gz>

**5.5 Extract the archive:**

tar xvf node\_exporter-1.8.0.linux-amd64.tar.gz

cd node\_exporter-1.8.0.linux-amd64

* 1. **Move the binary:**

sudo mv node\_exporter /usr/local/bin/

* 1. **Create a dedicated user**

sudo useradd --no-create-home --shell /bin/false node\_exporter

* 1. **Create a systemd service file:**

sudo tee /etc/systemd/system/node\_exporter.service > /dev/null <<EOF

[Unit]

Description=Node Exporter

After=network.target

[Service]

User=node\_exporter

ExecStart=/usr/local/bin/node\_exporter

[Install]

WantedBy=default.target

EOF

* 1. **Start and enable the service:**

sudo systemctl daemon-reload

sudo systemctl enable --now node\_exporter

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

Now node\_exporter UP in Prometheus portal as well.

A screenshot of a computer

AI-generated content may be incorrect.

**Step 6: Create a Dashboard in Grafana**

* Go to “Dashboards” → “New” → “Add new panel”
* In the query editor:
* Choose Prometheus as the data source.
* Use a basic query like:

node\_cpu\_seconds\_total

* Choose visualization (Graph, Gauge, etc.)
* Save the dashboard.

A screenshot of a computer

AI-generated content may be incorrect.

Also we can import using IDs.

A screenshot of a computer

AI-generated content may be incorrect.

Use ID 1860 for node\_exporter.

A screenshot of a computer

AI-generated content may be incorrect.

And import.

A screenshot of a computer

AI-generated content may be incorrect.

Its my localhost which has Prometheus and Grafana