Step-by-Step Guide: Install Prometheus and Grafana on Ubuntu 24.04 LTS

1. **Update System**

sudo apt update && sudo apt upgrade -y

**2. Install Prometheus**

**a. Create a Prometheus user**

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

**b. Create directories**

**sudo mkdir /etc/prometheus /var/lib/prometheus**

**c. Set ownership**

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

**d. Download Prometheus (latest stable)**

**cd /tmp**

**wget https://github.com/prometheus/prometheus/releases/download/v2.52.0/prometheus-2.52.0.linux-amd64.tar.gz**

**tar xvf prometheus-2.52.0.linux-amd64.tar.gz**

**cd prometheus-2.52.0.linux-amd64**

**e. Move binaries**

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

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

**f. Move config files**

**sudo cp -r consoles console\_libraries /etc/prometheus**

**sudo cp prometheus.yml /etc/prometheus**

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

**g. Create systemd service**

**sudo vi /etc/systemd/system/prometheus.service**

**### paste the below script**

**[Unit]**

**Description=Prometheus**

**Wants=network-online.target**

**After=network-online.target**

**[Service]**

**User=prometheus**

**Group=prometheus**

**Type=simple**

**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=multi-user.target**

**h. Start Prometheus**

**sudo systemctl daemon-reexec**

**sudo systemctl daemon-reload**

**sudo systemctl enable prometheus**

**sudo systemctl start prometheus**

**Check status:**

sudo systemctl status prometheus

**3. Install Grafana**

**a. Add Grafana APT repo**

sudo apt install -y software-properties-common

**b. Add GPG key**

**cd**

sudo mkdir -p /usr/share/keyrings

curl -fsSL https://apt.grafana.com/gpg.key | sudo gpg --dearmor -o /usr/share/keyrings/grafana.gpg

**2. Add the Grafana repo manually**

**echo "deb [signed-by=/usr/share/keyrings/grafana.gpg] https://apt.grafana.com stable main" | sudo tee /etc/apt/sources.list.d/grafana.list > /dev/null**

**c. Install Grafana**

**sudo apt update**

**sudo apt install -y grafana**

**d. Start and enable Grafana**

**sudo systemctl daemon-reload**

**sudo systemctl enable grafana-server**

**sudo systemctl start grafana-server**

**Check status:**

**sudo systemctl status grafana-server**

**🔹 1. Create Node Exporter User**

**sudo useradd -rs /bin/false node\_exporter**

**🔹 2. Download Node Exporter**

**cd /tmp**

**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**

**cd node\_exporter-1.8.1.linux-amd64**

**sudo cp node\_exporter /usr/local/bin/**

**sudo chown node\_exporter:node\_exporter /usr/local/bin/node\_exporter**

**🔹 3. Create Systemd Service for Node Exporter**

**sudo vi /etc/systemd/system/node\_exporter.service**

**### paste the below script**

**[Unit]**

**Description=Node Exporter**

**Wants=network-online.target**

**After=network-online.target**

**[Service]**

**User=node\_exporter**

**Group=node\_exporter**

**Type=simple**

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

**[Install]**

**WantedBy=multi-user.target**

* **Enable and start the service:**

**sudo systemctl daemon-reload**

**sudo systemctl enable node\_exporter**

**sudo systemctl start node\_exporter**

**Verify it's running:**

**sudo systemctl status node\_exporter**

**🔹 4. Verify Node Exporter**

**curl** [**http://localhost:9100/metrics**](http://localhost:9100/metrics)

**🔹 5. Configure Prometheus to Scrape Node Exporter**

**Edit your Prometheus config:**

**sudo vi /etc/prometheus/prometheus.yml**

**#### remove the prometheus insde content paste the below script**

**# my global config**

**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:**

**- job\_name: 'prometheus'**

**static\_configs:**

**- targets: ['localhost:9090']**

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

**static\_configs:**

**- targets: ['localhost:9100']**

**🔹 6. Restart Prometheus**

**sudo systemctl restart prometheus**

**4. Access Web Interfaces**

* **Prometheus: http://<your-server-ip>:9090**
* **Grafana: http://<your-server-ip>:3000**
  + **Default login:**
    - **Username: admin**
    - **Password: admin (you’ll be prompted to change)**

**5. Add Prometheus Data Source to Grafana**

1. **Go to Grafana UI.**
2. **Menu → "Data Sources"**
3. **Add Prometheus**
4. **URL: http://localhost:9090**
5. **Save & test.**

* **Create the dashboard**
* **-- click on import**
* **Give dashboard url as 1860**
* **Then selct your promethous and crete it**