

Prometheus and Grafana Installation & Setup on Amazon Linux 2023

This guide explains how to install and configure **Prometheus** and **Grafana** on **Amazon Linux 2023**, run Prometheus as a systemd service, and visualize metrics using Grafana dashboards.

Prerequisites

- Amazon Linux 2023 EC2 instance
- Sudo/root access
- Required ports open in Security Group:
 - **9090** – Prometheus
 - **3000** – Grafana
 - **9100** – Node Exporter (targets)
 - **9117, 9121, 9104** – Exporters (Apache, Redis, MariaDB)

Prometheus Installation

1. Create Prometheus User and Directories

```
sudo useradd --no-create-home prometheus
sudo mkdir /etc/prometheus
sudo mkdir /var/lib/prometheus
```

2. Download and Install Prometheus Binary

```
wget https://github.com/prometheus/prometheus/releases/download/v2.49.1/
prometheus-2.49.1.linux-amd64.tar.gz

tar -xvf prometheus-2.49.1.linux-amd64.tar.gz

sudo cp prometheus-2.49.1.linux-amd64/prometheus /usr/local/bin/
sudo cp prometheus-2.49.1.linux-amd64/promtool /usr/local/bin/
sudo cp -r prometheus-2.49.1.linux-amd64/consoles /etc/prometheus/
sudo cp -r prometheus-2.49.1.linux-amd64/console_libraries /etc/prometheus/
```

3. Prometheus Configuration

Create the configuration file:

```
sudo nano /etc/prometheus/prometheus.yml
```

prometheus.yml

```
global:
  scrape_interval: 15s
  evaluation_interval: 15s

alerting:
  alertmanagers:
    - static_configs:
        - targets:

rule_files:

scrape_configs:
  - job_name: "prometheus"
    static_configs:
      - targets: ["localhost:9090"]

  - job_name: "app1"
    static_configs:
      - targets: ["10.0.26.248:9100"]

  - job_name: "app2"
    static_configs:
      - targets: ["10.0.36.58:9100"]

  - job_name: "analytics"
    static_configs:
      - targets: ["10.0.50.231:9100"]

  - job_name: "DB1"
    static_configs:
      - targets: ["10.0.74.68:9100"]

  - job_name: "DB2"
    static_configs:
      - targets: ["10.0.91.253:9100"]

  - job_name: "app1-nginx"
    static_configs:
      - targets: ["10.0.26.248:9100"]
```

```

static_configs:
  - targets: ["10.0.26.248:9117"]

  - job_name: "app2-htpd"
    static_configs:
      - targets: ["10.0.36.58:9117"]

  - job_name: "analytics_redis"
    static_configs:
      - targets: ["10.0.50.231:9121"]

  - job_name: "db1_mariadb"
    static_configs:
      - targets: ["10.0.74.68:9104"]

  - job_name: "db2_mariadb"
    static_configs:
      - targets: ["10.0.91.253:9104"]

```

4. Create Prometheus Systemd Service

```
sudo nano /etc/systemd/system/prometheus.service
```

```

[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

```

5. Set Ownership and Permissions

```
sudo chown prometheus:prometheus /etc/prometheus
sudo chown prometheus:prometheus /usr/local/bin/prometheus
sudo chown prometheus:prometheus /usr/local/bin/promtool
sudo chown -R prometheus:prometheus /etc/prometheus/consoles
sudo chown -R prometheus:prometheus /etc/prometheus/console_libraries
sudo chown -R prometheus:prometheus /var/lib/prometheus
```

6. Start and Enable Prometheus

```
sudo systemctl daemon-reload
sudo systemctl enable prometheus
sudo systemctl start prometheus
sudo systemctl status prometheus
```

7. Access Prometheus UI

Open your browser:

```
http://<EC2_PUBLIC_IP>:9090
```

Grafana Installation

1. Update System Packages

```
sudo yum update -y
```

2. Add Grafana Repository

```
sudo nano /etc/yum.repos.d/grafana.repo
```

```
[grafana]
name=grafana
baseurl=https://packages.grafana.com/oss/rpm
enabled=1
```

```
gpgcheck=1  
gpgkey=https://packages.grafana.com/gpg.key  
sslverify=1  
sslcacert=/etc/pki/tls/certs/ca-bundle.crt
```

3. Install Grafana

```
sudo yum install grafana -y
```

4. Start and Enable Grafana

```
sudo systemctl daemon-reload  
sudo systemctl start grafana-server  
sudo systemctl status grafana-server  
sudo systemctl enable grafana-server.service
```

5. Access Grafana UI

Open your browser:

```
http://<EC2_PUBLIC_IP>:3000
```

Default credentials:

- **Username:** admin
- **Password:** admin

You will be prompted to set a new password on first login.

Configure Prometheus as Grafana Data Source

1. Login to Grafana
2. Go to **Settings → Data Sources**
3. Click **Add data source**
4. Select **Prometheus**
5. Set URL:

```
http://localhost:9090
```

6. Click **Save & Test**
-

Import Grafana Dashboard

1. Go to **Dashboards → Import**
2. Enter Dashboard ID:

```
1860
```

1. Select Prometheus data source
2. Click **Import**

This dashboard provides Node Exporter system metrics.

Install node-exporter

node-exporter.sh

```
wget https://github.com/prometheus/node\_exporter/releases/download/v1.5.0/node\_exporter-1.5.0.linux-amd64.tar.gz
```

```
tar -xf node_exporter-1.5.0.linux-amd64.tar.gz
```

```
sudo mv node_exporter-1.5.0.linux-amd64/node_exporter /usr/local/bin
```

```
rm -rv node_exporter-1.5.0.linux-amd64*
```

```
sudo useradd -rs /bin/false node_exporter
```

```
sudo cat <\<EOF | sudo tee /etc/systemd/system/node_exporter.service
```

```
[Unit]
```

```
Description=Node Exporter
```

```
After=network.target
```

```
[Service]
```

```
User=node_exporter
```

```
Group=node_exporter

Type=simple

ExecStart=/usr/local/bin/node_exporter

[Install]

WantedBy=multi-user.target

EOF

sudo cat /etc/systemd/system/node_exporter.service

sudo systemctl daemon-reload && sudo systemctl enable node_exporter

sudo systemctl start node_exporter.service && sudo systemctl status node_exporter.service --no-pager
```

Conclusion

You have successfully:

- Installed and configured Prometheus on Amazon Linux 2023
- Configured Prometheus as a systemd service
- Installed Grafana and connected it to Prometheus
- Imported a ready-made monitoring dashboard

Happy Monitoring 