

# Prometheus & Grafana Setup

## 1. Install Prometheus

### Create Prometheus User

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

### Download and Extract Prometheus

```
wget
https://github.com/prometheus/prometheus/releases/download/v2.34.0/prometheus-2.34.0.linux-amd64.tar.gz

tar xf prometheus-2.34.0.linux-amd64.tar.gz
cd prometheus-2.34.0.linux-amd64
```

### Copy Binaries and Create Necessary Directories

```
sudo cp prometheus promtool /usr/local/bin
sudo mkdir /etc/prometheus /var/lib/prometheus
sudo cp -r prometheus.yml consoles console_libraries /etc/prometheus
sudo chown prometheus.prometheus /var/lib/prometheus
```

### Create Prometheus Systemd Service

```
sudo vi /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
Restart=always
```

```
[Install]
WantedBy=multi-user.target
```

## Enable and Start Prometheus Service

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

## 2. Install Grafana

### Add Grafana Repository

```
echo "deb https://packagecloud.io/grafana/stable/debian/ stretch
main" | sudo tee -a /etc/apt/sources.list.d/grafana.list
```

```
curl -sSL https://packagecloud.io/gpg.key | sudo apt-key add -
sudo apt update
```

### Install Grafana

```
sudo apt-get install -y gnupg2 curl software-properties-common
curl https://packages.grafana.com/gpg.key | sudo apt-key add -
sudo add-apt-repository "deb https://packages.grafana.com/oss/deb
stable main"
```

```
sudo apt update
sudo apt-get install grafana
```

## 3. Configure Nginx for Prometheus

### Create Authentication Credentials

```
sudo echo "nama:$(openssl passwd -apr1 Nama123)" | sudo tee -a
/etc/nginx/prometheus.htpasswd
```

## Configure Nginx Site

```
sudo vi /etc/nginx/sites-available/prometheus

server {
    listen 80;
    server_name prometheus.blablabla.com;
}

server {
    listen 443 ssl;
    server_name prometheus.blablabla.com;

    location / {
        proxy_pass http://localhost:9090;
        proxy_set_header Host $host;
        auth_basic "My Prometheus";
        auth_basic_user_file /etc/nginx/prometheus.htpasswd;
    }
}
```

## Enable and Restart Nginx

```
sudo ln -s /etc/nginx/sites-available/prometheus
/etc/nginx/sites-enabled/prometheus

sudo systemctl restart nginx
```

## 4. Install Node Exporter

### Download and Extract Node Exporter

```
curl -LO
https://github.com/prometheus/node\_exporter/releases/download/v1.3.1/
node\_exporter-1.3.1.linux-amd64.tar.gz
```

```
sha256sum node_exporter-1.3.1.linux-amd64.tar.gz
tar xvf node_exporter-1.3.1.linux-amd64.tar.gz
```

### Create Node Exporter User and Set Permissions

```
sudo useradd --no-create-home --shell /bin/false node_exporter
sudo cp node_exporter-1.3.1.linux-amd64/node_exporter /usr/local/bin
sudo chown node_exporter:node_exporter /usr/local/bin/node_exporter
```

## Create Node Exporter Systemd Service

```
sudo vi /etc/systemd/system/node_exporter.service
```

```
[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 Node Exporter Service

```
sudo systemctl daemon-reload
sudo systemctl enable node_exporter
sudo systemctl start node_exporter
```

## 5. Configure Prometheus to Scrape Node Exporter Metrics

### Update Prometheus Configuration

```
sudo vi /etc/prometheus/prometheus.yml
```

```
global:
  scrape_interval: 15s
  scrape_timeout: 10s
  evaluation_interval: 15s

scrape_configs:
  - job_name: prometheus
    static_configs:
      - targets:
        - localhost:9090
  - job_name: node_exporter
    static_configs:
      - targets:
        - localhost:9100
```

## Restart Prometheus

```
sudo systemctl restart prometheus
```

## 6. Install and Configure Alert Manager

### Create Alert Manager User

```
sudo useradd --no-create-home --shell /bin/false alertmanager
```

### Download and Extract Alert Manager

```
wget
https://github.com/prometheus/alertmanager/releases/download/v0.24.0/alertmanager-0.24.0.linux-amd64.tar.gz
```

```
tar xf alertmanager-0.24.0.linux-amd64.tar.gz
cd alertmanager-0.24.0.linux-amd64
```

### Copy Binaries and Create Necessary Directories

```
sudo cp alertmanager amtool /usr/local/bin
sudo mkdir -p /etc/alertmanager/templates /var/lib/alertmanager
sudo chown alertmanager.alertmanager /var/lib/alertmanager
```

### Create Alert Manager Configuration

```
sudo vi /etc/alertmanager/alertmanager.yml
```

```
global:
  smtp_smarthost: 'email-smtp.us-east-1.amazonaws.com:465'
  smtp_from: 'menamdeopawar@gmail.com'
  smtp_auth_username: 'User-Name'
  smtp_auth_password: 'SMTP-AUTH-PASSWORD'
  smtp_require_tls: false

route:
  repeat_interval: 30m
  receiver: MYTEAM

receivers:
  - name: MYTEAM
    email_configs:
```

```
- to: menamdeopawar@gmail.com
  send_resolved: true
```

## Create Alert Manager Systemd Service

```
sudo vi /etc/systemd/system/alertmanager.service
```

```
[Unit]
Description=Alertmanager
Wants=network-online.target
After=network-online.target

[Service]
User=alertmanager
Group=alertmanager
Type=simple
ExecStart=/usr/local/bin/alertmanager \
    --config.file /etc/alertmanager/alertmanager.yml \
    --storage.path /var/lib/alertmanager
Restart=always

[Install]
WantedBy=multi-user.target
```

## Enable and Start Alert Manager Service

```
sudo systemctl daemon-reload
sudo systemctl enable alertmanager
sudo systemctl start alertmanager
```