



**Amazon
Web Services**

INTEGRATED LINUX WITH GRAFANA AND GRAPH

prashantyadav91253@gmail.com



INSTALLING GRAFANA AND MAKING GRAPH

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- Launch Linux Ec2 instance
- Connect with Linux instance
- Install Prometheus
- Configure Prometheus
- Create a Systemd Service for Prometheus
- Start and Enable Prometheus
- Install and Configure Node Exporter
- Create a Systemd Service for Node Exporter
- Start and Enable Node Exporter
- Install Grafana
- Configure Grafana
- Monitor High CPU Utilization
- Graph



LAUNCH LINUX EC2 INSTANCE

1. Navigate to Ec2
2. Click on Launch Instances
3. Write Instance name
4. Select Ubuntu Linux
5. Create Key Pair(.ppk)
6. Click on Launch Instance
7. Connect to Linux with putty



Ubuntu

INSTALL AND CONFIGURE PROMETHEUS

1. Install Prometheus by running some commands

```
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

wget https://github.com/prometheus/prometheus/releases/download/v2.41.0/prometheus-2.41.0.linux-amd64.tar.gz
tar -xvzf prometheus-2.41.0.linux-amd64.tar.gz
sudo cp prometheus-2.41.0.linux-amd64/prometheus /usr/local/bin/
sudo cp prometheus-2.41.0.linux-amd64/promtool /usr/local/bin/
sudo cp -r prometheus-2.41.0.linux-amd64/consoles /etc/prometheus
sudo cp -r prometheus-2.41.0.linux-amd64/console_libraries /etc/prometheus
sudo chown -R prometheus:prometheus /usr/local/bin/prometheus /usr/local/bin/promtool
```


CONFIGURE PROMETHEUS

Create a configuration file at `/etc/prometheus/prometheus.yml` with the following content

```
global:
  scrape_interval: 15s

scrape_configs:
  - job_name: 'node'
    static_configs:
      - targets: ['localhost:9100']
```

CREATE A SYSTEMD SERVICE FOR PROMETHEUS

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

step1 :- Add the following content to the service file

```
[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
```


Start and Enable Prometheus:-

```
sudo systemctl daemon-reload
```

```
sudo systemctl start prometheus
```

```
sudo systemctl enable prometheus
```

INSTALL AND CONFIGURE NODE EXPORTER

1. Install Node Exporter

write some commands for installing node exporter

```
wget https://github.com/prometheus/node_exporter/releases/download/v1.4.0/node_exporter-1.4.0.linux-amd64.tar.gz
tar -xvzf node_exporter-1.4.0.linux-amd64.tar.gz
sudo cp node_exporter-1.4.0.linux-amd64/node_exporter /usr/local/bin/
sudo useradd --no-create-home --shell /bin/false node_exporter
sudo chown node_exporter:node_exporter /usr/local/bin/node_exporter
```

2. Create a Systemd Service for Node Exporter

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


Add the following content to the service file

```
[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
```

Start and Enable Node Exporter

```
sudo systemctl daemon-reload
```

```
sudo systemctl start node_exporter
```

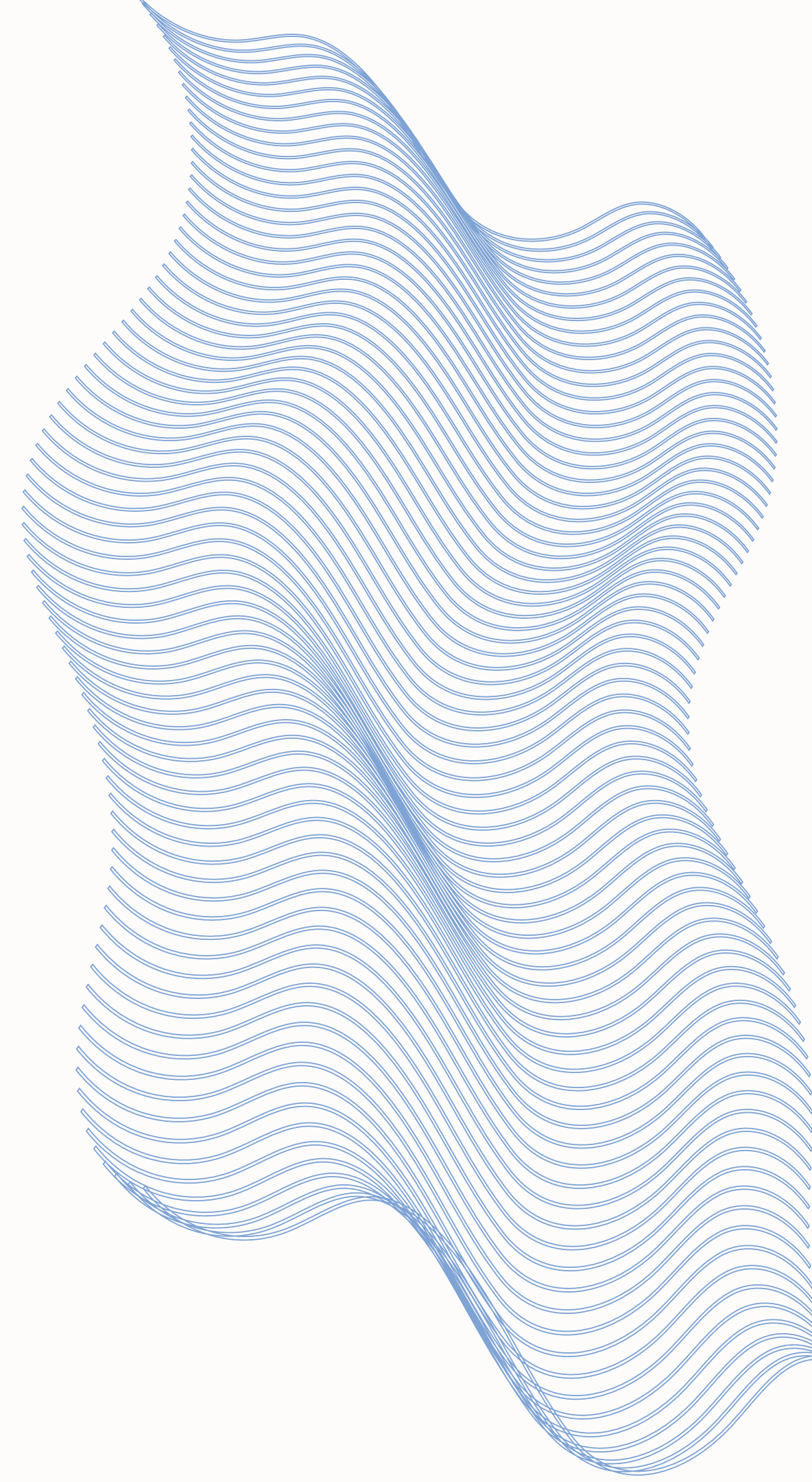
```
sudo systemctl enable node_exporter
```


INSTALL GRAFANA

1. Add Grafana Repository

```
sudo tee /etc/yum.repos.d/grafana.repo<<EOF  
[grafana]  
name=grafana  
baseurl=https://packages.grafana.com/oss/rpm  
repo_gpgcheck=1  
enabled=1  
gpgcheck=1  
gpgkey=https://packages.grafana.com/gpg.key  
sslverify=1  
sslcacert=/etc/pki/tls/certs/ca-bundle.crt  
EOF
```

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



Start and Enable Grafana

```
sudo systemctl start grafana-server  
sudo systemctl enable grafana-server
```

5. Configure grafana

* Access Grafana

1. Open your web browser and navigate to `http://<your-ec2-public-ip>:3000`
2. Log in with the default username and password (admin for both).

- *Add Prometheus Data Source**

- *Create a Dashboard**

- *node_cpu_seconds_total{mode="idle"}**

6. Monitor High CPU Utilization

-> Set Up Alerts (Optional)

In the Grafana panel settings, you can set up alerts to notify you when CPU utilization exceeds a certain threshold.

Result :-



**LET'S
CONNECT
WITH ME!**

**THANK
YOU!**

Name:- Saumya Kaushal

Phone no. :- +91 8737980772

Email :- saumyakaushal873@gmail.com