

Monitoring Stack Installation on buzz.deome.loc

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Overview

This guide details the installation and configuration of a monitoring stack on *buzz.deome.loc* using Node Exporter, Prometheus, and Grafana. This setup will allow for system metrics collection, visualization, and alerting.

1. Node Exporter Installation (for System Metrics)

1. Download and Install Node Exporter:

- Navigate to the desired installation directory and download the latest Node Exporter release:

```
cd /usr/local/bin
wget https://github.com/prometheus/node_exporter/releases/download/v1.6.0/node_exporter-1.6.0.linux-amd64.tar.gz
tar xvfz node_exporter-1.6.0.linux-amd64.tar.gz
mv node_exporter-1.6.0.linux-amd64/node_exporter .
rm -rf node_exporter-1.6.0.linux-amd64*
```

2. Create a Systemd Service for Node Exporter:

- Create a new service file:

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

- Add the following configuration:

```
[Unit]
Description=Node Exporter
```

```
After=network.target
```

```
[Service]
```

```
User=node_exporter
```

```
ExecStart=/usr/local/bin/node_exporter
```

```
[Install]
```

```
WantedBy=default.target
```

3. Start and Enable Node Exporter:

- Enable and start Node Exporter:

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

4. Verify Node Exporter:

- Node Exporter should now be running on port `9100`. Check by navigating to `http://buzz.deome.loc:9100/metrics` in a web browser.

2. Prometheus Installation and Configuration

1. Download and Install Prometheus:

- Download the latest Prometheus release:

```
cd /usr/local/bin  
wget https://github.com/prometheus/prometheus/releases/download/v2.47.0/prometheus-2.47.0.linux-amd64.tar.gz  
tar xvfz prometheus-2.47.0.linux-amd64.tar.gz  
mv prometheus-2.47.0.linux-amd64/prometheus .  
mv prometheus-2.47.0.linux-amd64/promtool .  
rm -rf prometheus-2.47.0.linux-amd64*
```

2. Configure Prometheus:

- Create the configuration file:

```
sudo nano /usr/local/bin/prometheus.yml
```

- Add the following configuration:

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

```
scrape_configs:
  - job_name: 'node_exporter'

static_configs:
  - targets: ['localhost:9100']
```

3. Create a Systemd Service for Prometheus:

- Create a new service file:

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

- Add the following configuration:

```
[Unit]
Description=Prometheus
After=network.target

[Service]
User=prometheus
ExecStart=/usr/local/bin/prometheus --config.file=/usr/local/bin/prometheus.yml --
storage.tsdb.path=/var/lib/prometheus

[Install]
WantedBy=default.target
```

4. Start and Enable Prometheus:

- Enable and start Prometheus:

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

5. Verify Prometheus:

- Access Prometheus at `http://buzz.deome.loc:9090`.

3. Grafana Installation and Configuration

1. Install Grafana:

- Add the Grafana repository and install Grafana:

```
sudo apt update
sudo apt install -y software-properties-common
sudo add-apt-repository "deb https://packages.grafana.com/oss/deb stable main"
sudo apt update
```

```
sudo apt install grafana -y
```

2. Start and Enable Grafana:

- Enable and start Grafana:

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

3. Access Grafana:

- Grafana will be accessible at `http://buzz.deome.loc:3000`. Default login is `admin` / `admin` (you will be prompted to change the password upon first login).

4. Add Prometheus Data Source in Grafana:

- In Grafana:
 - Go to **Configuration > Data Sources > Add Data Source**.
 - Select **Prometheus** and set the URL to `http://localhost:9090`.
 - Save and test the data source.

4. Setting Up Basic Dashboards and Alerts

1. Import Node Exporter Dashboard:

- Grafana provides pre-made dashboards. For Node Exporter metrics, import dashboard ID `1860` from Grafana's dashboard library:
 - Go to **Create > Import** in Grafana.
 - Enter `1860` and follow the prompts to import the Node Exporter dashboard.

2. Create Alerts in Prometheus (Optional):

- Alerts can be set up in Prometheus for key metrics (e.g., CPU usage, memory).
- Edit the Prometheus configuration file to add alert rules, and restart Prometheus for changes to take effect.

5. Maintenance and Updates

1. Update the Stack:

- Periodically check for updates to Node Exporter, Prometheus, and Grafana:

```
sudo apt update && sudo apt upgrade -y
```

2. Data Backup:

- Regularly back up Grafana dashboards and Prometheus data as needed.

This setup guide provides a full configuration for a monitoring stack on *buzz.deome.loc* using Node Exporter, Prometheus, and Grafana. Let me know if there are additional steps or customizations you'd like!

