Lesson Description - Building a Prometheus Server

There are several ways you can go about installing and running Prometheus. In this lesson, we briefly discuss a few available options. We then walk through the process of installing Prometheus on an Ubuntu server using pre-compiled binaries.

Pre-compiled Prometheus binaries are available for download at prometheus.io/download/.

Prometheus source code can be found at github.com/prometheus/prometheus.

Relevant Documentation

- Prometheus Installation

Lesson Reference

Create a Cloud Playground server:

- Distribution: Ubuntu 18.04 Bionic Beaver LTS
- Size: Small
- Tag: Prometheus

Create a user, group, and directories for Prometheus:

```
sudo useradd –M –r –s /bin/false prometheus
```

```
sudo mkdir /etc/prometheus /var/lib/prometheus
```

Download and extract the pre-compiled binaries:

```
wget https://github.com/prometheus/prometheus/releases/download/
v2.16.0/prometheus–2.16.0.linux–amd64.tar.gz
```

```
tar xzf prometheus–2.16.0.linux–amd64.tar.gz prometheus–2.16.0.linux–
amd64/
```

Move the files from the downloaded archive to the appropriate locations and set ownership:

```
sudo cp prometheus-2.16.0.linux-amd64/{prometheus,promtool} /usr/local/bin/
```

```
sudo chown prometheus:prometheus /usr/local/bin/{prometheus,promtool}
```

```
sudo cp -r prometheus-2.16.0.linux-amd64/{consoles,console_libraries} /etc/prometheus/
```

```
sudo cp prometheus-2.16.0.linux-amd64/prometheus.yml /etc/prometheus/prometheus.yml
```

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

```
sudo chown prometheus:prometheus /var/lib/prometheus
```

Briefly test your setup by running Prometheus in the foreground:

```
prometheus --config.file=/etc/prometheus/prometheus.yml
```

Create a systemd unit file for Prometheus:

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

Define the Prometheus service in the unit file:

```
[Unit]
Description=Prometheus Time Series Collection and Processing Server
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 the Prometheus service:

```
sudo systemctl daemon-reload
```

```
sudo systemctl start prometheus
```

```
sudo systemctl enable prometheus
```

Make an HTTP request to Prometheus to verify it is able to respond:

```
curl localhost:9090
```

You can also access Prometheus in a browser using the server's public IP address: http://<PROMETHEUS_SERVER_PUBLIC_IP>:9090.