A CLOUD GURU

# Lesson Description - High Availability and Alertmanager

Alertmanager is a useful tool for handling Prometheus alerts, but what if your Alertmanager instance goes down? In such a scenario, you could miss out on critical alerts that need to be addressed. Luckily, Alertmanager can run in a multi-instance cluster, making it more highly available. In this lesson, we will explore what a highly available Alertmanager configuration looks like by setting up an additional Alertmanager instance to run in a cluster with our existing Alertmanager.

## Relevant Documentation

- Alertmanager — High Availability
- Alertmanager GitHub — High Availability

## Lesson Reference

**Install Alertmanager on a New Server**

Set up a new server. You may wish to give it a tag of `Prometheus 2` if you plan to use this same server for an additional Prometheus instance in the future.

Cloud Playground settings:

- Distribution: `Ubuntu 18.04 Bionic Beaver LTS`
- Size: `Small`
- Tag: `Prometheus 2`

Log in to the new server.

Create a user and group for Alertmanager:

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

Download and install the Alertmanager binaries, move the files into the appropriate locations, and set ownership:

```
wget https://github.com/prometheus/alertmanager/releases/download/
v0.20.0/alertmanager–0.20.0.linux–amd64.tar.gz
```

```
tar xvfz alertmanager-0.20.0.linux-amd64.tar.gz
```

```
sudo cp alertmanager-0.20.0.linux-amd64/{alertmanager,amtool} /usr/
local/bin/
```

```
sudo chown alertmanager:alertmanager /usr/local/bin/
{alertmanager,amtool}
```

```
sudo mkdir -p /etc/alertmanager
```

```
sudo cp alertmanager-0.20.0.linux-amd64/alertmanager.yml /etc/
alertmanager
```

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

Create a data directory for Alertmanager:

```
sudo mkdir -p /var/lib/alertmanager
```

```
sudo chown alertmanager:alertmanager /var/lib/alertmanager
```

Create a configuration file for `amtool`:

```
sudo mkdir -p /etc/amtool
```

```
sudo vi /etc/amtool/config.yml
```

Enter the following content in the `amtool` config file:

```
alertmanager.url: http://localhost:9093
```

Create a `systemd` unit file for Alertmanager:

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

For the `--cluster.peer` flag, enter the private IP address of your first Prometheus/ Alertmanager server:

```
[Unit]
Description=Prometheus 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/ \
  --cluster.peer=<ALERTMANAGER_1_SERVER_PRIVATE_IP>:9094

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

Start and enable the `alertmanager` service:

```
sudo systemctl enable alertmanager
```

```
sudo systemctl start alertmanager
```

Verify the service is running and you can reach it:

```
sudo systemctl status alertmanager
```

```
curl localhost:9093
```

### Configure Your Existing Alertmanager Instance to Run in a Cluster

Log in to your first Prometheus/Alertmanager server.

Edit the Alertmanager unit file:

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

Add a `--cluster.peer` flag to the `ExecStart` section. Include the private IP address of your second Alertmanager server:

```
...

ExecStart=/usr/local/bin/alertmanager \
  --config.file /etc/alertmanager/alertmanager.yml \
  --storage.path /var/lib/alertmanager/ \
  --cluster.peer=<ALERTMANAGER_2_SERVER_PRIVATE_IP>:9094

...
```

Reload and restart the `alertmanager` service:

```
sudo systemctl daemon-reload
```

```
sudo systemctl restart alertmanager
```

To verify your cluster is working, access *both* instances in a browser with the address `http://<PUBLIC_IP>:9093`.

One one instance, click **Silences** and create a new silence.

Click **Silences** on the other instance, and verify the silence you created appears.

### Configure Prometheus to Connect to Both Alertmanager Instances

Log in to the Prometheus server.

Edit the Prometheus configuration file:

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

Add the new Alertmanager (<ALERTMANAGER_2_PRIVATE_IP>:9093) to the list of Alertmanager targets.

```
alerting:
  alertmanagers:
  - static_configs:
    - targets: ["localhost:9093", "<ALERTMANAGER_2_PRIVATE_IP>:9093"]
```

Restart Prometheus to reload the config:

```
sudo systemctl restart prometheus
```

Access Prometheus Server in a browser at http://<PROMETHEUS_SERVER_PUBLIC_IP>:9090.

Click **Status** > **Runtime & Build Information**.

Verify both of your alert managers appear under the *Alertmanagers* section.