Troubleshoot Prometheus DB space usage on Ezmeral Unified Analytics

Table of contents

Issue

Prometheus DB volume usage increases normally, but is reaching the limits of the underlying Ezmeral Data Fabric volume.

Environment

Ezmeral Unified Analytics v1.5.x

Cause

By default, the Prometheus PV (Persistent Volume) is set to 200GB and the Prometheus deployment is configured with the following retention values (whichever triggers first will be used):

```
$ kubectl get prometheus kubeprom-prometheus -n prometheus -o yaml | grep retention
 retention: 60d
 retentionSize: 180GB
```

If the underlying persistent storage is not sized appropriately, normal Prometheus DB growth can consume the available space.

Resolution

To quickly recover space in the underlying volume, edit kubeprom-prometheus and specify lower retention values:

```
$ kubectl edit prometheus kubeprom-prometheus -n prometheus
```

In the below example, I reduced the retention from 60d to 7d:

```
$ kubectl get prometheus kubeprom-prometheus -n prometheus -o yaml | grep retention
 retention: 7d
 retentionSize: 180GB
```

Editing the pod causes Kubernetes to gracefully restart the prometheus-kubeprom-prometheus-0 pod and the new retention values are reflected in the options passed to the 'prometheus-kubeprom-prometheus-0' pod in the ps output:

```
$ ps -ef | grep prometheus

  1 1000   14h50 /bin/prometheus --web.console.templates=/etc/prometheus/consoles --
web.console.libraries=/etc/prometheus/console_libraries --
config.file=/etc/prometheus/config_out/prometheus.env.yaml --web.enable-lifecycle --
web.external-url=http://kubeprom-prometheus.prometheus:9090 --web.route-prefix=/ --
log.level=debug --storage.tsdb.retention.time=7d --storage.tsdb.retention.size=180GB --
storage.tsdb.path=/prometheus --storage.tsdb.wal-compression --
web.config.file=/etc/prometheus/web_config/web-config.yaml
```

The change in retention days should trigger volume cleanup after a few minutes.