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Monitoring HPE GreenLake Servers running GPU using Grafana and Prometheus

Overview

HPE GreenLake provides a cloud-native platform for managing and monitoring infrastructure with built-in tools and dashboards. While GreenLake offers comprehensive native monitoring capabilities, organizations can also leverage the GreenLake API to integrate with popular open-source tools like Grafana and Prometheus. This approach enables teams to consolidate monitoring data across hybrid environments, utilize existing observability workflows, and create customized dashboards tailored to specific operational needs.

Kubernetes and Helm Setup

Environment Verification

Before proceeding with the monitoring setup, verify that your Kubernetes cluster has the necessary components installed. The following shows a working environment with the GPU Operator and Prometheus monitoring stack deployed:

Services running in the gpu-operator namespace: - `gpu-operator`: Core service for GPU management (ClusterIP: 10.233.44.80:8080) - `nvidia-dcgm-exporter`: DCGM metrics exporter for Prometheus integration (ClusterIP: 10.233.15.59:9400)

Helm releases: - `gpu-operator-1753140595` (v25.3.2) in the `gpu-operator` namespace - `kube-prometheus-stack` (76.3.0) in the `monitoring` namespace

You can verify your setup using the following commands:

```
wsl=> k get svc -n gpu-operator
NAME                   TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)    AGE
gpu-operator           ClusterIP   10.233.44.80   <none>        8080/TCP   78d
nvidia-dcgm-exporter   ClusterIP   10.233.15.59   <none>        9400/TCP   78d

wsl=> helm list -A
NAME                    NAMESPACE       REVISION        UPDATED
                                STATUS          CHART                               APP
    VERSION
gpu-operator-1753140595 gpu-operator    4               2025-08-14 19:20:42.329819669 -0700
    MST deployed        gpu-operator-v25.3.2            v25.3.2
kube-prometheus-stack   monitoring      5               2025-08-15 13:06:31.169338089 -0700
    MST deployed        kube-prometheus-stack-76.3.0    v0.84.1
hjma@HSTHJMA02:~
```

> **Note** this is important