

Monitoring Tools

Requirements:

1. Multi-cluster monitoring **COMPLETED**
2. Visualisation **COMPLETED**
3. Metrics + Traces (what kind of metrics are supported resources, traffic, service mesh health)
4. Open-source tools (easy integration with Kubernetes + Istio cluster)

Tools:

Prometheus <https://prometheus.io/>

1. For collecting metrics as time series data.

Jaeger <https://www.jaegertracing.io/>

1. Generates traces for requests that can be used in root cause analysis.

Kiali <https://kiali.io/>

1. Kiali uses Prometheus and Jaeger data to visualise, validate and configure Istio service mesh.

Integration With Istio:

Kiali supports visualisation of multi-cluster meshes in Istio (<https://kiali.io/docs/features/multi-cluster/>)

1. Prometheus: <https://istio.io/latest/docs/ops/integrations/prometheus/>
2. Kiali: <https://istio.io/latest/docs/ops/integrations/kiali/>
3. Enable remote access to Kiali: <https://istio.io/latest/docs/tasks/observability/gateways/>

Deploying resource for remote access of Kiali GUI (deployed within Istio-system namespaces)

```
kubectl apply -f kiali-vs.yaml
kubectl apply -f kiali-gateway.yaml
kubectl apply -f kiali-dr.yaml
```

Deploying resource for remote access of Grafana GUI (deployed within Istio-system namespaces)

```
kubectl apply -f grafana-vs.yaml
kubectl apply -f grafana-gateway.yaml
kubectl apply -f grafana-dr.yaml
```

Test:

Multi Cluster Visualisation : 3 clusters (2 edge/fog clusters and one cloud cluster)
[Screen Recording 2023-01-02 at 8.42.12 pm.mov](#)