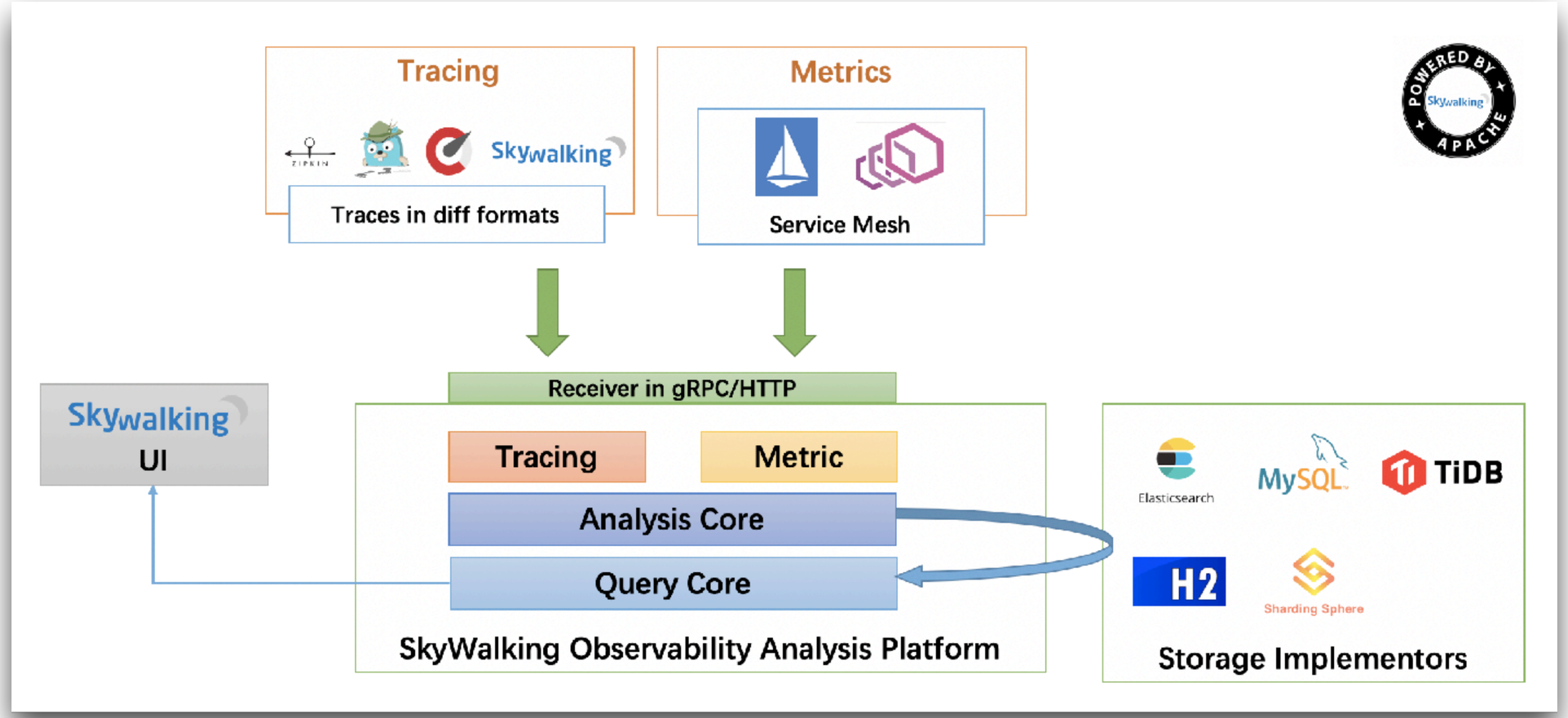
第 10 节

Skywalking调用链监控平台搭建

本课内容

- Skywalking架构简介
- 在本地Minikube中部署Skywalking监控平台

Skywalking架构简介



https://github.com/apache/skywalking

OAP部署文件

```yaml
apiVersion: v1
kind: Service
metadata:
  name: oap
  namespace: skywalking
  labels:
    service: oap
spec:
  ports:
    - port: 12800
      name: rest
    - port: 11800
      name: grpc
  selector:
    app: oap
```

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: oap
  namespace: skywalking
spec:
  replicas: 1
  selector:
    matchLabels:
      app: oap
      release: skywalking
  template:
    metadata:
      labels:
        app: oap
        release: skywalking
    spec:
      containers:
        - name: oap
          image: apache/skywalking-oap-server:6.6.0-es6
          imagePullPolicy: IfNotPresent
          ports:
            - containerPort: 11800
              name: grpc
            - containerPort: 12800
              name: rest
```

https://hub.docker.com/r/apache/skywalking-oap-server

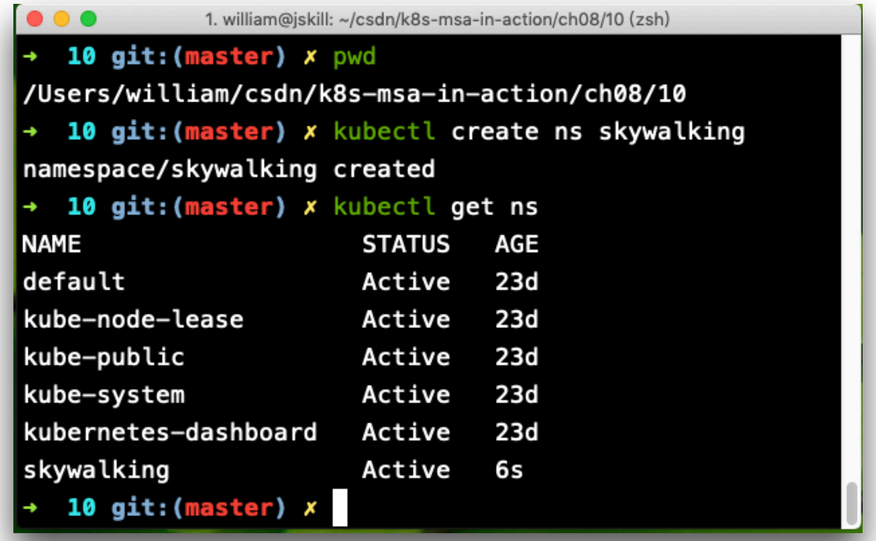
UI部署文件

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: ui-deployment
  namespace: skywalking
  labels:
    app: ui
spec:
  replicas: 1
  selector:
    matchLabels:
      app: ui
  template:
    metadata:
      labels:
        app: ui
    spec:
      containers:
        - name: ui
          image: apache/skywalking-ui:6.6.0
          ports:
            - containerPort: 8080
              name: page
          env:
            - name: SW_OAP_ADDRESS
              value: oap:12800
---
```

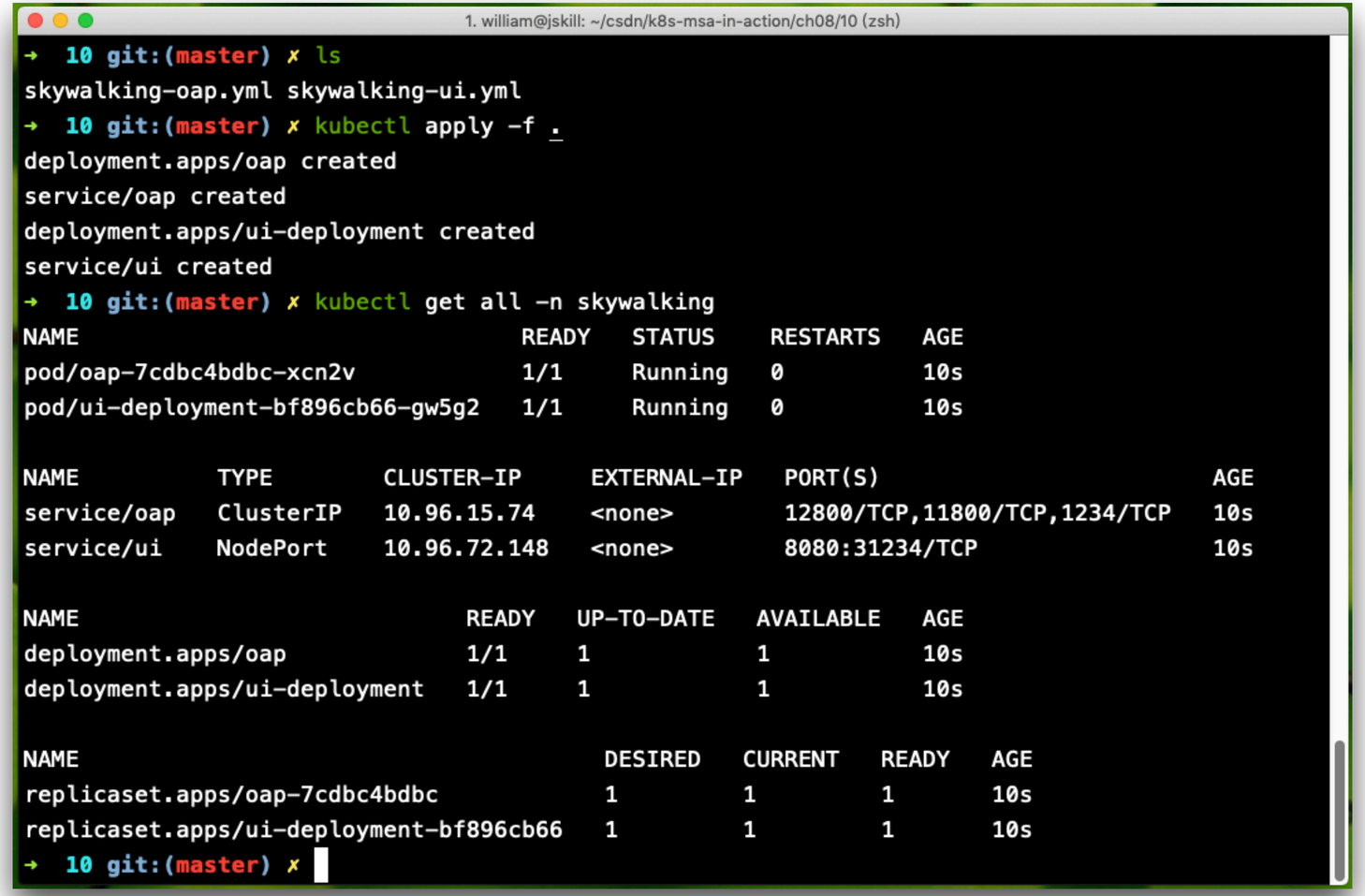
```yaml
apiVersion: v1
kind: Service
metadata:
  name: ui
  namespace: skywalking
  labels:
    service: ui
spec:
  ports:
    - port: 8080
      name: page
      nodePort: 31234
  type: NodePort
  selector:
    app: ui
```

https://hub.docker.com/r/apache/skywalking-ui

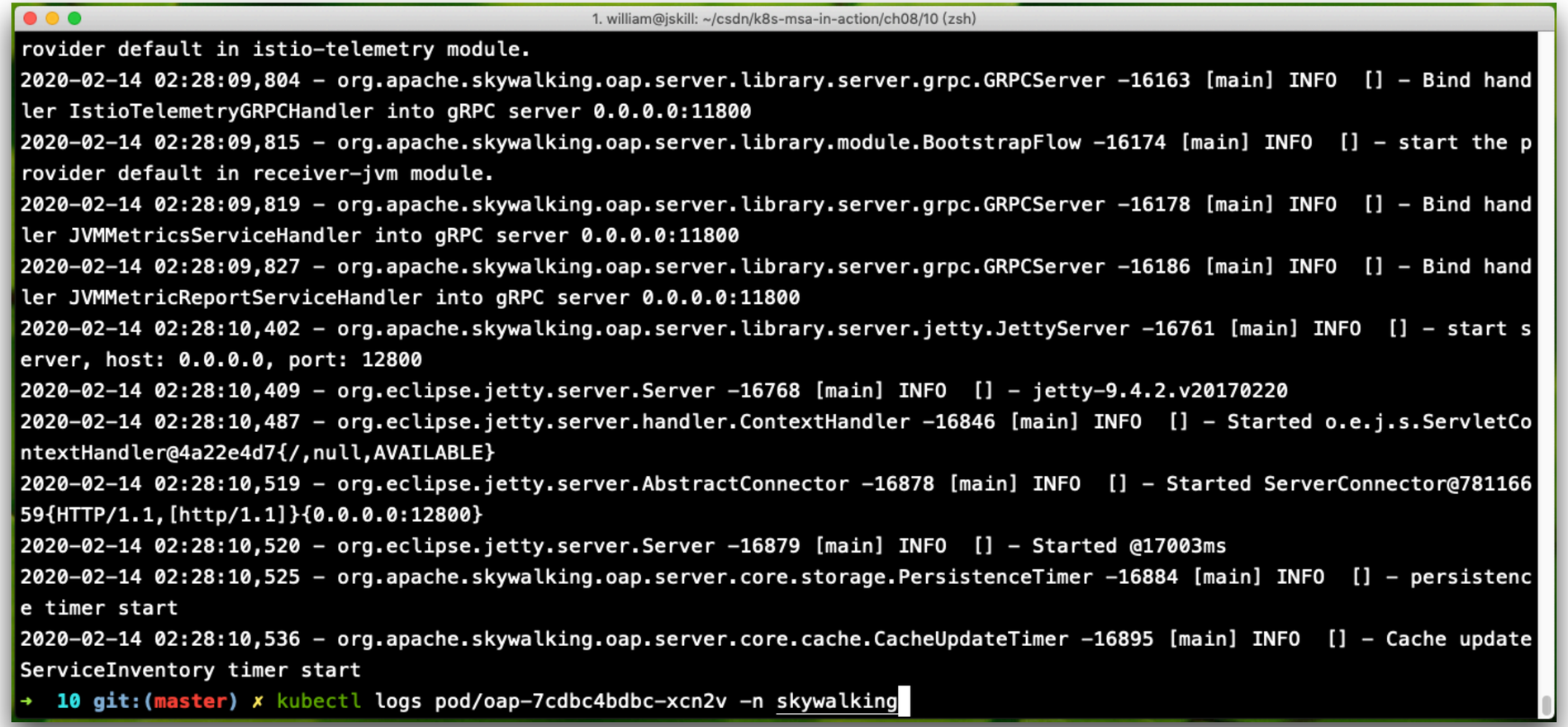
创建skywalking名字空间



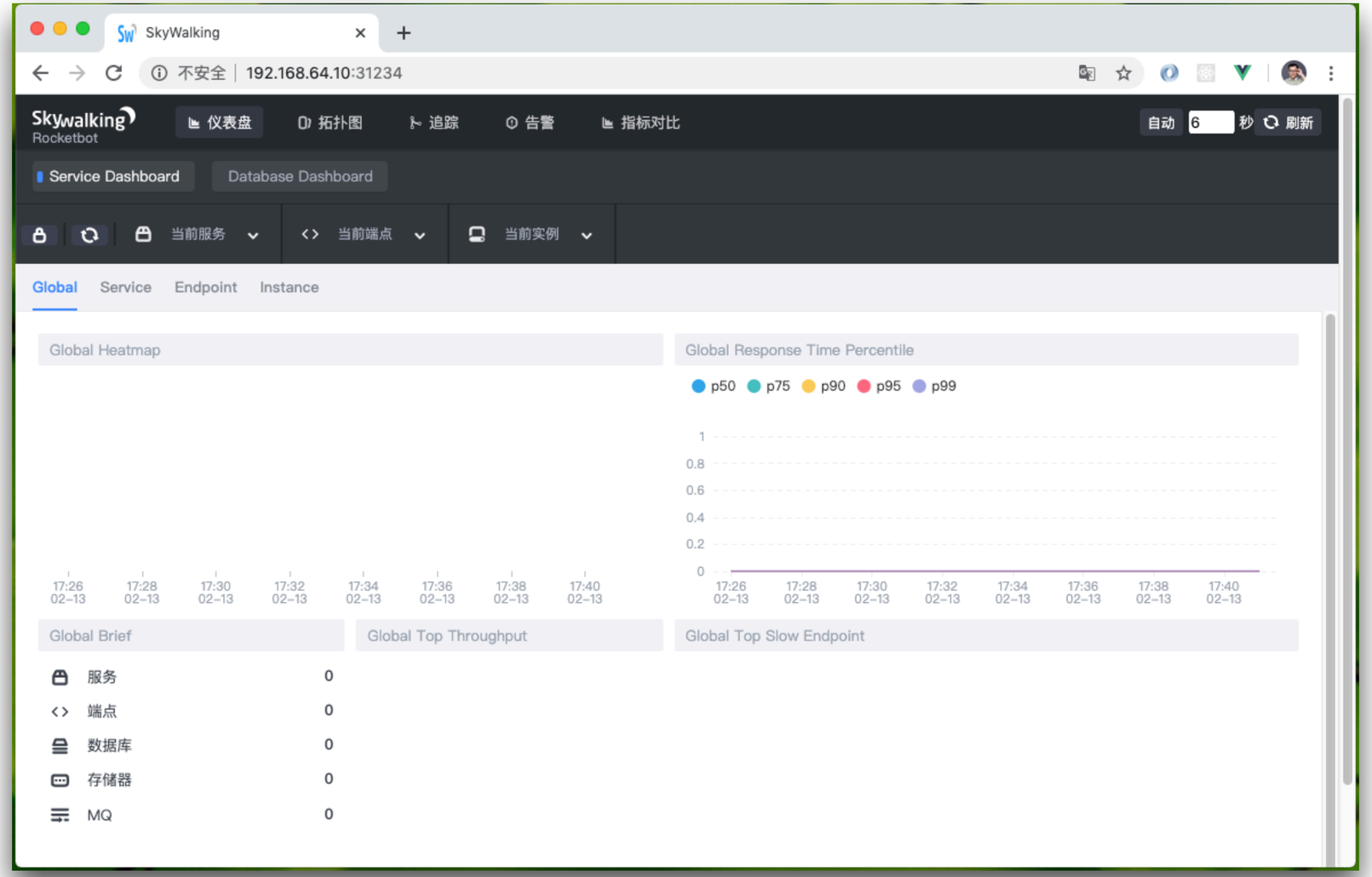
发布OAP和UI


1. william@jskill: ~/csdn/k8s-msa-in-action/ch08/10 (zsh)
→ 10 git:(master) ✗ ls
skywalking-oap.yml skywalking-ui.yml
→ 10 git:(master) ✗ kubectl apply -f .
deployment.apps/oap created
service/oap created
deployment.apps/ui-deployment created
service/ui created
→ 10 git:(master) ✗ kubectl get all -n skywalking
NAME READY STATUS RESTARTS AGE
pod/oap-7cdbc4bdbc-xcn2v 1/1 Running 0 10s
pod/ui-deployment-bf896cb66-gw5g2 1/1 Running 0 10s
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
service/oap ClusterIP 10.96.15.74 <none> 12800/TCP,11800/TCP,1234/TCP 10s
service/ui NodePort 10.96.72.148 <none> 8080:31234/TCP 10s
NAME READY UP-TO-DATE AVAILABLE AGE
deployment.apps/oap 1/1 1 1 10s
deployment.apps/ui-deployment 1/1 1 1 10s
NAME DESIRED CURRENT READY AGE
replicaset.apps/oap-7cdbc4bdbc 1 1 1 10s
replicaset.apps/ui-deployment-bf896cb66 1 1 1 10s
→ 10 git:(master) ✗

校验Pod启动日志


1. william@jskill: ~/csdn/k8s-msa-in-action/ch08/10 (zsh)
rovider default in istio-telemetry module.
2020-02-14 02:28:09,804 - org.apache.skywalking.oap.server.library.server.grpc.GRPCServer -16163 [main] INFO [] - Bind handler IstioTelemetryGRPCHandler into gRPC server 0.0.0.0:11800
2020-02-14 02:28:09,815 - org.apache.skywalking.oap.server.library.module.BootstrapFlow -16174 [main] INFO [] - start the provider default in receiver-jvm module.
2020-02-14 02:28:09,819 - org.apache.skywalking.oap.server.library.server.grpc.GRPCServer -16178 [main] INFO [] - Bind handler JVMMetricsServiceHandler into gRPC server 0.0.0.0:11800
2020-02-14 02:28:09,827 - org.apache.skywalking.oap.server.library.server.grpc.GRPCServer -16186 [main] INFO [] - Bind handler JVMMetricReportServiceHandler into gRPC server 0.0.0.0:11800
2020-02-14 02:28:10,402 - org.apache.skywalking.oap.server.library.server.jetty.JettyServer -16761 [main] INFO [] - start server, host: 0.0.0.0, port: 12800
2020-02-14 02:28:10,409 - org.eclipse.jetty.server.Server -16768 [main] INFO [] - jetty-9.4.2.v20170220
2020-02-14 02:28:10,487 - org.eclipse.jetty.server.handler.ContextHandler -16846 [main] INFO [] - Started o.e.j.s.ServletContextHandler@4a22e4d7{/,null,AVAILABLE}
2020-02-14 02:28:10,519 - org.eclipse.jetty.server.AbstractConnector -16878 [main] INFO [] - Started ServerConnector@7811665 9{HTTP/1.1,[http/1.1]}{0.0.0.0:12800}
2020-02-14 02:28:10,520 - org.eclipse.jetty.server.Server -16879 [main] INFO [] - Started @17003ms
2020-02-14 02:28:10,525 - org.apache.skywalking.oap.server.core.storage.PersistenceTimer -16884 [main] INFO [] - persistence timer start
2020-02-14 02:28:10,536 - org.apache.skywalking.oap.server.core.cache.CacheUpdateTimer -16895 [main] INFO [] - Cache update ServiceInventory timer start
→ 10 git:(master) ✗ kubectl logs pod/oap-7cdbc4bdbc-xcn2v -n skywalking

校验UI


SkyWalking
不安全 | 192.168.64.10:31234
Skywalking
Rocketbot
仪表盘
拓扑图
追踪
告警
指标对比
自动
6
秒
刷新
Service Dashboard
Database Dashboard
当前服务
当前端点
当前实例
Global
Service
Endpoint
Instance
Global Heatmap
Global Response Time Percentile
p50
p75
p90
p95
p99
1
0.8
0.6
0.4
0.2
0
17:26 02-13
17:28 02-13
17:30 02-13
17:32 02-13
17:34 02-13
17:36 02-13
17:38 02-13
17:40 02-13
Global Brief
Global Top Throughput
Global Top Slow Endpoint
服务 0
端点 0
数据库 0
存储器 0
MQ 0

本课小结

- Skywalking架构
  - OAP ~ Observability Analysis Platform
  - 多种存储后端 ~ 调试测试H2，生产ES
  - 客户端非侵入式探针Probe
- k8s部署参考
  - 定制部署 https://github.com/apache/skywalking-docker
  - chart部署 https://github.com/apache/skywalking-kubernetes
  - 配置文档：

    https://github.com/apache/skywalking/blob/6.x/docs/en/setup/backend/backend-ui-setup.md