

Microservices Advanced Session 2- Assignment

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Source Code: https://github.com/AnkitaKhurana/Microservices_Advanced_2

The repo contains

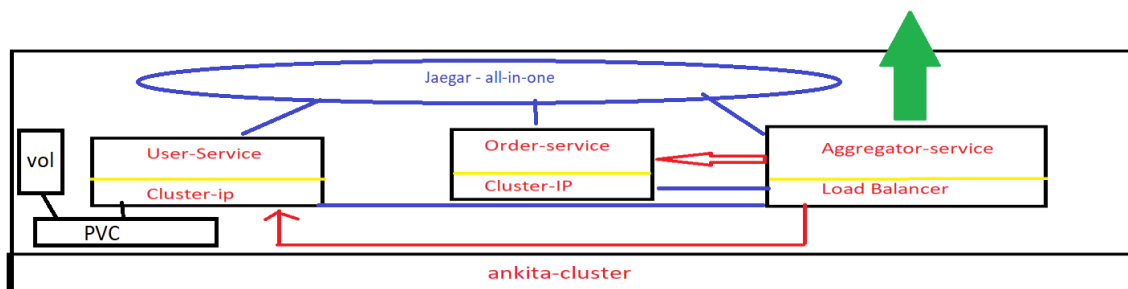
1. Services (User, order, aggregated) – (Node.js)
2. Deployment yml files for persistence volume claim, mysql deployment

Docker Hub image links:

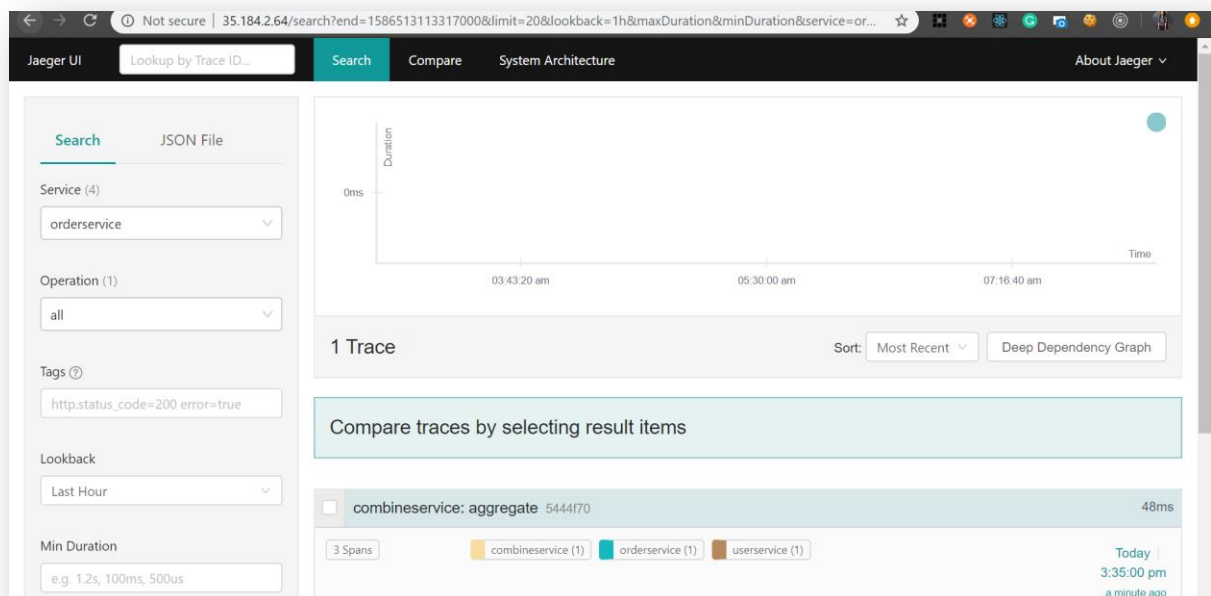
1. User-service Image: <https://hub.docker.com/r/ankitakhurana25/service-user>
2. Order-service image: <https://hub.docker.com/r/ankitakhurana25/service-order>
3. Aggregator-service image: <https://hub.docker.com/r/ankitakhurana25/service-aggregator>

Deployment using Kubernetes

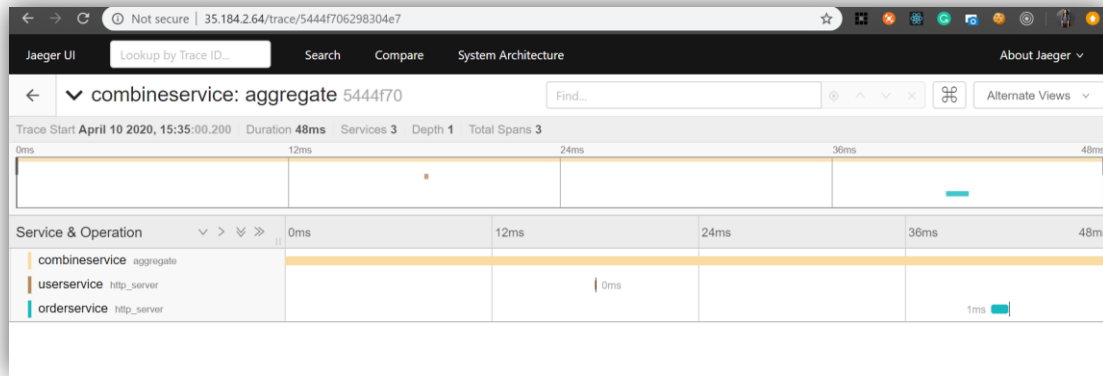
- The three services are deployed for this assignment. User and order service are accessible within the cluster using cluster-ip service type and aggregator service is exposed to the internet using load balance service type.
- User service uses mysql database using PVC.
- Distributed tracing is done using Jaeger, jaeger-client package is used for client-agent communication.



JAEGER UI



JAEGER UI – Aggregator service call



Deployments in Cluster

Workloads						
REFRESH + DEPLOY DELETE						
Workloads are deployable units of computing that can be created and managed in a cluster.						
Filter workloads						
<input type="checkbox"/>	Name ↑	Status	Type	Pods	Namespace	Cluster
<input type="checkbox"/>	combine-service	OK	Deployment	3/2	default	ankita-cluster
<input type="checkbox"/>	jaeger-new	OK	Deployment	1/1	default	ankita-cluster
<input type="checkbox"/>	mysql	OK	Deployment	1/1	default	ankita-cluster
<input type="checkbox"/>	order-service-new	OK	Deployment	3/3	default	ankita-cluster
<input type="checkbox"/>	user-service	OK	Deployment	3/3	default	ankita-cluster

Aggregator Service Call

```
{
  "user": {
    "name": "ankit",
    "email": "something@gmail.com",
    "id": 1,
    "orders": [
      {
        "orderId": 1,
        "orderAmount": 250,
        "orderDate": "14-Apr-2020"
      },
      {
        "orderId": 2,
        "orderAmount": 450,
        "orderDate": "15-Apr-2020"
      }
    ]
  }
}
```

Cluster Services

Services & Ingress							
REFRESH + CREATE INGRESS DELETE							
KUBERNETES SERVICES INGRESSES							
Services are sets of Pods with a network endpoint that can be used for discovery and load balancing. Ingresses are collections of rules for routing external HTTP(S) traffic to Services.							
Filter secrets and config maps							
<input type="checkbox"/>	Name ↑	Status	Type	Endpoints	Pods	Namespace	Cluster
<input type="checkbox"/>	combine-service-service	OK	Load balancer	34.68.36.196:80	2/2	default	ankita-cluster
<input type="checkbox"/>	jaeger-new-service	OK	Load balancer	35.184.2.64:80	1/1	default	ankita-cluster
<input type="checkbox"/>	mysql-service	OK	Load balancer	35.193.144.216:3306	1/1	default	ankita-cluster
<input type="checkbox"/>	order-service-new-service	OK	Cluster IP	10.101.10.160	3/3	default	ankita-cluster
<input type="checkbox"/>	user-service-service	OK	Cluster IP	10.101.5.41	3/3	default	ankita-cluster

Cluster Persistent Volume Claims

PERSISTENT VOLUME CLAIMS STORAGE CLASSES

Persistent volume claims are requests for storage of specific size and access mode.
[Learn more](#)

Filter persistent volume claims

?

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<input type="checkbox"/>	Name ↑	Phase	Volume	Storage class	Namespace	Cluster
<input type="checkbox"/>	mysql-volumeclaim	Bound	pvc-8863b56a-7960-11ea-a86b-42010a8001c0	standard	default	ankita-cluster

Cluster Configurations

Configuration REFRESH DELETE

Secrets are sensitive pieces of information, such as passwords, keys and tokens.
ConfigMaps are designed to store information that is not sensitive, such as environment variables, command-line arguments and configuration files.

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 Secrets respect access control and are not visible to users without read permissions

Is system object : False

 Filter secrets and config maps

<input type="checkbox"/>	Name ↑	Type	Namespace	Cluster
<input type="checkbox"/>	combine-service-config-zqdz	Config Map	default	ankita-cluster
<input type="checkbox"/>	default-token-5sqgr	Secret	kube-node-lease	ankita-cluster
<input type="checkbox"/>	default-token-kpf4r	Secret	observability	ankita-cluster
<input type="checkbox"/>	jaeger-operator-lock	Config Map	default	ankita-cluster
<input type="checkbox"/>	jaeger-operator-token-z5jm5	Secret	default	ankita-cluster
<input type="checkbox"/>	user-service-config-tqec	Config Map	default	ankita-cluster
<input type="checkbox"/>	user-service-config-yblz	Config Map	default	ankita-cluster