

Exercise 14

OpenShift: Working with Deployments

Q1.

a.

Create a deployment using `docker.io/dtg2468/rhel-ubi-9` using CLI method with the name “deploy1” and pod replicas as “4”.

b.

Create a deployment using `docker.io/dtg2468/custom-mysql:latest` using Dry Run approach with the name “deploy2” and pod replicas as “2”.

c.

Create a deployment using `quay.io/dtg2468/my-httpd:v1.0` using the OpenShift dashboard method with the name as “deploy3” and pod replicas as “3”.

Solutions

Q1.

a.

```
[root@workstation ~]# oc create deployment deploy1 --image docker.io/dtg2468/rhel-ubi-9 --replicas 4
Warning: would violate PodSecurity "restricted:v1.24": allowPrivilegeEscalation != false (container "rhel-ubi-9" must set securityContext.allowPrivilegeEscalation=false), unrestricted capabilities (container "rhel-ubi-9" must set securityContext.capabilities.drop=["ALL"]), runAsNonRoot != true (pod or container "rhel-ubi-9" must set securityContext.runAsNonRoot=true), seccompProfile (pod or container "rhel-ubi-9" must set securityContext.seccompProfile.type to "RuntimeDefault" or "Localhost")
deployment.apps/deploy1 created
[root@workstation ~]# oc get pods
```

NAME	READY	STATUS	RESTARTS	AGE
deploy1-f7f955fbd-nrcvw	0/1	ContainerCreating	0	3s
deploy1-f7f955fbd-s5rdf	0/1	ContainerCreating	0	3s
deploy1-f7f955fbd-sx6hh	0/1	ContainerCreating	0	3s
deploy1-f7f955fbd-vtr78	0/1	ContainerCreating	0	3s

```
[root@workstation ~]# oc get pods
```

NAME	READY	STATUS	RESTARTS	AGE
deploy1-f7f955fbd-6kq69	0/1	Completed	0	6s
deploy1-f7f955fbd-pnhr7	0/1	Completed	0	6s
deploy1-f7f955fbd-sbh24	0/1	Completed	0	6s
deploy1-f7f955fbd-sr7dl	0/1	Completed	0	6s

```
[root@workstation ~]#
```

b.

```
[root@workstation ~]# oc create deployment deploy2 --image docker.io/dtg2468/custom-mysql:latest --replicas 2 --dry-run=client -o yaml > deploy.yaml
[root@workstation ~]# vim deploy.yaml
```

```
apiVersion: apps/v1
kind: Deployment
metadata:
  creationTimestamp: null
  labels:
    app: deploy2
  name: deploy2
spec:
  replicas: 2
  selector:
    matchLabels:
      app: deploy2
  strategy: {}
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: deploy2
    spec:
      containers:
      - image: docker.io/dtg2468/custom-mysql:latest
        name: custom-mysql
        env:
          - name: MYSQL_ROOT_PASSWORD
            value: redhat
        resources: {}
status: {}
~
~
```

```
[root@workstation ~]# oc create -f deploy.yaml
Warning: would violate PodSecurity "restricted:v1.24": allowPrivilegeEscalation != false (container "custom-mysql" must set securityContext.allowPrivilegeEscalation=false), unrestricted capabilities (container "custom-mysql" must set securityContext.capabilities.drop=["ALL"]), runAsNonRoot != true (pod or container "custom-mysql" must set securityContext.runAsNonRoot=true), seccompProfile (pod or container "custom-mysql" must set securityContext.seccompProfile.type to "RuntimeDefault" or "Localhost")
deployment.apps/deploy2 created
[root@workstation ~]# oc get pods
```

NAME	READY	STATUS	RESTARTS	AGE
deploy2-77bdd88cc9-c4jwh	1/1	Running	0	6s
deploy2-77bdd88cc9-cgh7d	1/1	Running	0	6s

C.

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Cluster

Getting started resources

Set up your cluster

Finish setting up your cluster with recommended configurations.

Configure alert receivers

View all steps in documentation

Build with guided documentation

Follow guided documentation to build applications and familiarize yourself with key features.

Monitor your sample application

Get started with Quarkus using a Helm Chart

View all quick starts

Explore new admin features

Explore new features and resources within the admin perspective.

API Explorer

OperatorHub

See what's new in OpenShift 4.12

Details

View settings

Cluster API address

https://api.ocp4.example.com:6443

Cluster ID

26f5365f-1d3e-4723-adca-afc106c4d58

OpenShift Cluster Manager

Infrastructure provider

None

OpenShift version

4.12.0

Update channel

Not available

Control plane high availability

No (single master)

Status

View alerts

Cluster

Control Plane

Single master

Operators

Insights

Disabled

Dynamic Plugins

SamplesImageStreamImportFailing

Oct 1, 2023, 6:08 AM

Samples operator is detecting problems with imagestream image imports. You can look at the "openshift-samples" ClusterOperator object for details. Most likely there are issues with the external image registry hosting the images that needs to be investigated. Or you can consider marking samples operator Removed if you do not care about having sample imagestreams available. The list of ImageStreams for which samples operator is retrieving imports:

View details

Activity

View events

Ongoing

There are no ongoing activities.

Recent events

Pause

5:41 AM Back-off restarting failed co...

5:41 AM Back-off restarting failed co...

5:41 AM Back-off restarting failed co...

5:41 AM Back-off restarting failed co...

5:41 AM Started container rhel-ubi-9

5:41 AM Created container rhel-ubi-9

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PodDisruptionBudgets

Networking

Project: deep

Deployments

Create Deployment

Name

Search by name...

Name

Status

Labels

Pod selector

deploy1

4 of 4 pods

app=deploy1

Q app=deploy1

Deployment details



Name _____

Name
deploy3

Namespace

NS default

Labels

No labels

Pod selector

app=deploy3

Node selector

No selector

Tolerations

0 tolerations

Update strategy

RollingUpdate

Max unavailable

25% of 3 pods

Max surge

25% greater than 3 pods

Progress deadline seconds

600 seconds

Min ready seconds

Not configured

PodDisruptionBudgets

No PodDisruptionBudgets