Lab Exercise 9– Creating Replicaset in Kubernetes

Below is a lab exercise that will help you understand and practice creating a Replicaset in Kubernetes:

Step 1: Create a ReplicaSet Configuration File

Create a file named replicaset.yaml with the following configuration:

```
! replicaset.yaml > {} spec > {} template > {} spec > [ ] containers > {} 0 > abc image
      io.k8s.api.apps.v1.ReplicaSet (v1@replicaset.json)
 1    apiVersion: apps/v1
 2    kind: ReplicaSet
 3    metadata:
 4      name: my-nginx-rs
 5    spec:
 6      replicas: 3
 7      selector:
 8        matchLabels:
 9          app: lbnginx
10      template:
11        metadata:
12          labels:
13            app: lbnginx
14        spec:
15          containers:
16          - name: nginx
17            image: nginx
```

Step 2: Apply the ReplicaSet Configuration

Apply the configuration to create the ReplicaSet:

```
/Users/vanshika/.zshenv:2: command not found: mysql
(base) vanshika@VANSHIKAs-MacBook-Air Kubernetes-Lab % kubectl apply -f replicaset.yaml

replicaset.apps/my-nginx-rs created
```

Step 3: View the ReplicaSet and Pods

View the created ReplicaSet and the associated Pods:

```
(base) vanshika@VANSHIKAs-MacBook-Air Kubernetes-Lab % kubectl get replicaset

NAME          DESIRED   CURRENT   READY   AGE
my-nginx-rs   3         3         3       71s
```

```
(base) vanshika@VANSHIKAs-MacBook-Air Kubernetes-Lab % kubectl get pods
NAME                READY   STATUS    RESTARTS        AGE
my-nginx-pod        1/1     Running   1 (9m10s ago)   41d
my-nginx-rs-2chjs   1/1     Running   0               108s
my-nginx-rs-8gcxt   1/1     Running   0               108s
my-nginx-rs-d9kwq   1/1     Running   0               108s
```

Step 4: Scale the ReplicaSet

Scale the ReplicaSet to 5 replicas:

```
(base) vanshika@VANSHIKAs-MacBook-Air Kubernetes-Lab % kubectl scale replicaset my-nginx-rs --replicas=5
replicaset.apps/my-nginx-rs scaled
```

Step 5: Delete the ReplicaSet

Delete the ReplicaSet:

```
kubectl delete replicaset my-replicaset
```

```
(base) vanshika@VANSHIKAs-MacBook-Air Kubernetes-Lab % kubectl delete replicaset my-replicaset
Error from server (NotFound): replicasets.apps "my-replicaset" not found
```

Conclusion

This exercise demonstrated how to create, manage, and update a ReplicaSet in Kubernetes. You learned how to scale the ReplicaSet, update the image, and delete the ReplicaSet from the cluster. Experiment further with different configurations and scaling options to deepen your understanding of managing ReplicaSets in Kubernetes.