```yaml
kind: Namespace
metadata:
  name: "iti-devops"
spec:

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl apply -f nameSpace.yml
namespace/iti-devops created
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl get namespaces
NAME                   STATUS   AGE
default                Active   29d
iti-devops             Active   14s
kube-node-lease        Active   29d
kube-public            Active   29d
kube-system            Active   29d
kubernetes-dashboard   Active   26d
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab#
```

```yaml
kind: ServiceAccount
metadata:
  name: iti-sa-devops
  namespace: iti-devops
automountServiceAccountToken: true
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl apply -f serviceAccount.yml
serviceaccount/iti-sa-devops created
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl get ServiceAccount -n iti-devops
NAME           SECRETS   AGE
default        0         8m37s
iti-sa-devops  0         32s
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab#
```

```yaml
kind: ClusterRole
metadata:
  # "namespace" omitted since ClusterRoles are not namespaced
  name: cluster-role-devops
rules:
- apiGroups: [""]
  resources: ["configMaps","secrets","endpoints","nodes","pods","services","namespaces","events","serviceAccounts"]
  verbs: ["get","watch","list","create","patch","update"]
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl apply -f clusterRole.yml
clusterrole.rbac.authorization.k8s.io/cluster-role-devops created
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl get ClusterRole
NAME                                                                   CREATED AT
admin                                                                  2022-12-31T11:20:20Z
cluster-admin                                                          2022-12-31T11:20:20Z
cluster-role-devops                                                    2023-01-29T15:00:20Z
edit                                                                   2022-12-31T11:20:20Z
kubeadm:get-nodes                                                      2022-12-31T11:20:22Z
kubernetes-dashboard                                                   2023-01-03T00:30:42Z
system:aggregate-to-admin                                              2022-12-31T11:20:20Z
system:aggregate-to-edit                                               2022-12-31T11:20:20Z
system:aggregate-to-view                                               2022-12-31T11:20:20Z
system:auth-delegator                                                  2022-12-31T11:20:20Z
system:basic-user                                                      2022-12-31T11:20:20Z
system:certificates.k8s.io:certificatesigningrequests:nodeclient       2022-12-31T11:20:20Z
system:certificates.k8s.io:certificatesigningrequests:selfnodeclient   2022-12-31T11:20:20Z
system:certificates.k8s.io:kube-apiserver-client-approver              2022-12-31T11:20:20Z
system:certificates.k8s.io:kube-apiserver-client-kubelet-approver      2022-12-31T11:20:20Z
system:certificates.k8s.io:kubelet-serving-approver                    2022-12-31T11:20:20Z
system:certificates.k8s.io:legacy-unknown-approver                     2022-12-31T11:20:20Z
system:controller:attachdetach-controller                              2022-12-31T11:20:20Z
system:controller:certificate-controller                               2022-12-31T11:20:20Z
system:controller:clusterrole-aggregation-controller                   2022-12-31T11:20:20Z
system:controller:cronjob-controller                                   2022-12-31T11:20:20Z
system:controller:daemon-set-controller                                2022-12-31T11:20:20Z
system:controller:deployment-controller                                2022-12-31T11:20:20Z
system:controller:disruption-controller                                2022-12-31T11:20:20Z
system:controller:endpoint-controller                                  2022-12-31T11:20:20Z
```

```yaml
# This cluster role binding allows anyone in the "manager" group to read secrets in any namespace.
kind: ClusterRoleBinding
metadata:
  name: cluster-role-binding-devops
  namespace: iti-devops
subjects:
- kind: ServiceAccount
  name: iti-sa-devops
  namespace: iti-devops
roleRef:
  kind: ClusterRole
  name: cluster-role-devops
  apiGroup: rbac.authorization.k8s.io
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl apply -f binding.yml
clusterrolebinding.rbac.authorization.k8s.io/cluster-role-binding-devops created
root@ahmed-Lenovo-Y520-15IKBN:/home/ahmed/Downloads/Sprints/k8s/day-5/lab# kubectl get ClusterRoleBinding -n iti-devops
NAME                                                   ROLE                                                                          AGE
cluster-admin                                          ClusterRole/cluster-admin                                                     29d
cluster-role-binding-devops                            ClusterRole/cluster-role-devops                                               28s
kubeadm:get-nodes                                      ClusterRole/kubeadm:get-nodes                                                 29d
kubeadm:kubelet-bootstrap                              ClusterRole/system:node-bootstrapper                                          29d
kubeadm:node-autoapprove-bootstrap                     ClusterRole/system:certificates.k8s.io:certificatesigningrequests:nodeclient  29d
kubeadm:node-autoapprove-certificate-rotation          ClusterRole/system:certificates.k8s.io:certificatesigningrequests:selfnodeclient  29d
kubeadm:node-proxier                                   ClusterRole/system:node-proxier                                               29d
kubernetes-dashboard                                   ClusterRole/cluster-admin                                                     26d
minikube-rbac                                          ClusterRole/cluster-admin                                                     29d
storage-provisioner                                    ClusterRole/system:persistent-volume-provisioner                              29d
system:basic-user                                      ClusterRole/system:basic-user                                                 29d
system:controller:attachdetach-controller              ClusterRole/system:controller:attachdetach-controller                         29d
system:controller:certificate-controller               ClusterRole/system:controller:certificate-controller                          29d
system:controller:clusterrole-aggregation-controller   ClusterRole/system:controller:clusterrole-aggregation-controller              29d
system:controller:cronjob-controller                   ClusterRole/system:controller:cronjob-controller                              29d
system:controller:daemon-set-controller                ClusterRole/system:controller:daemon-set-controller                           29d
system:controller:deployment-controller                ClusterRole/system:controller:deployment-controller                           29d
system:controller:disruption-controller                ClusterRole/system:controller:disruption-controller                           29d
system:controller:endpoint-controller                  ClusterRole/system:controller:endpoint-controller                             29d
system:controller:endpointslice-controller             ClusterRole/system:controller:endpointslice-controller                        29d
system:controller:endpointslicemirroring-controller    ClusterRole/system:controller:endpointslicemirroring-controller               29d
system:controller:ephemeral-volume-controller          ClusterRole/system:controller:ephemeral-volume-controller                     29d
system:controller:expand-controller                    ClusterRole/system:controller:expand-controller                               29d
```

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What Is Kubernetes Deployment?

A Deployment is a Kubernetes resource object used for declarative application updates. Deployments allow you to define the lifecycle of applications, including the container images they use, the number of pods and the manner of updating them. Deployments are fully managed by the backend in Kubernetes, with the entire update process being server side, with no client involvement. They ensure that a specified number of pods are always running and available. The entire update process is recorded, with versioning to provide options for pausing, resuming or rolling back to previous version

What Is Kubernetes StatefulSet?

A StatefulSet is a workload API object for managing stateful applications. Usually, Kubernetes users are not concerned with how pods are scheduled, although they do require pods to be deployed in order, to be attached to persistent storage volumes, and to have unique, persistent network IDs that are retained through rescheduling. StatefulSets can help achieve these objectives. Like Deployments, StatefulSets manage the pods based on the same container specifications. However, they differ from deployments in that they maintain sticky identities for each pod. Pods may be created from an identical spec, but they are not interchangeable and are thus assigned unique identifiers that persist through rescheduling.