Lesson 08 Demo 02

Creating Namespace and Workloads in an AKS Cluster

Objective: To create namespaces and workloads such as pods and deployments in an AKS cluster, effectively organizing and managing applications

Tools required: Azure management tools

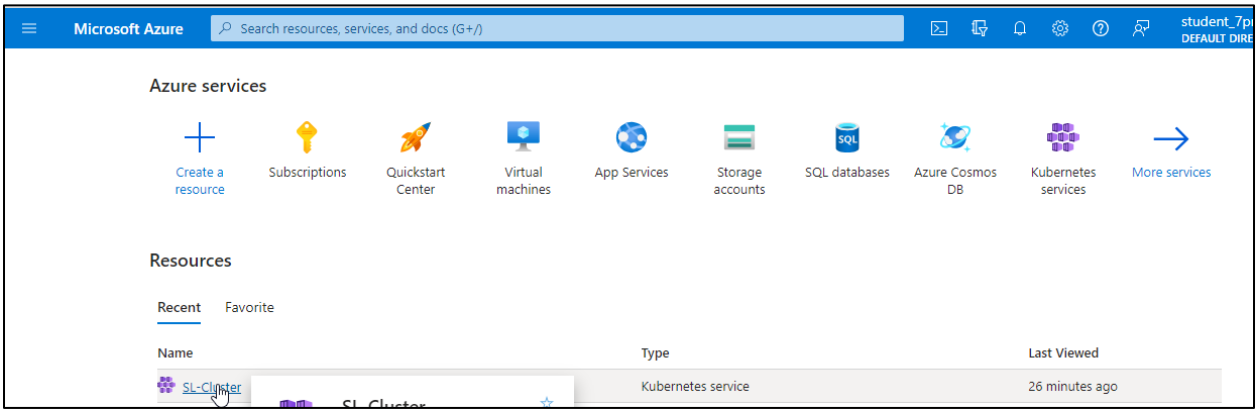
Prerequisites: An AKS cluster should already be set up (refer to the steps provided in Lesson 08, Demo 01 for guidance).

Steps to be followed:

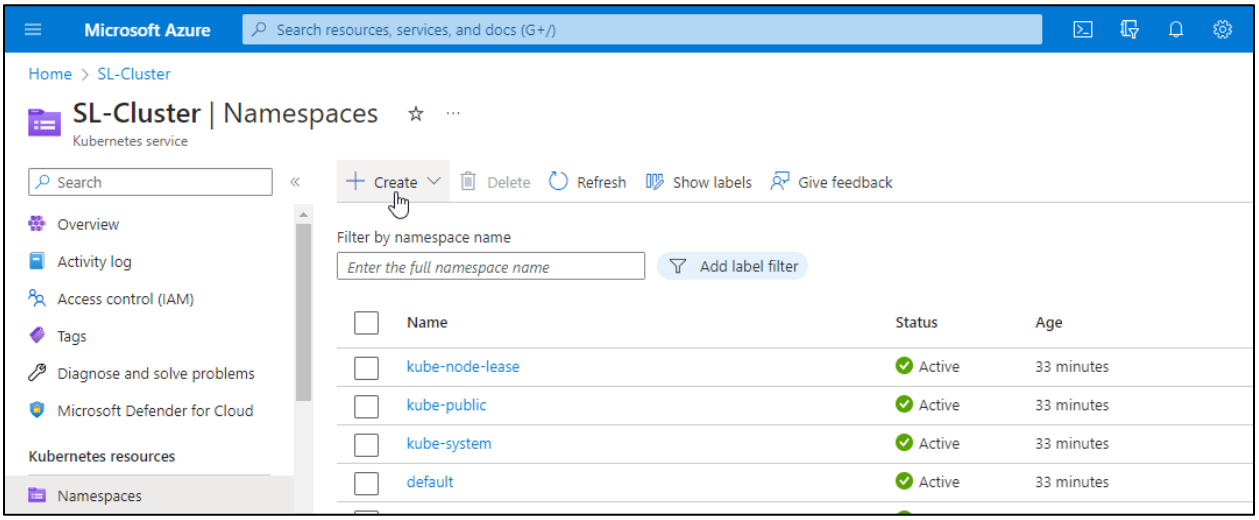
1. Create a namespace
2. Create workloads such as pods and deployments

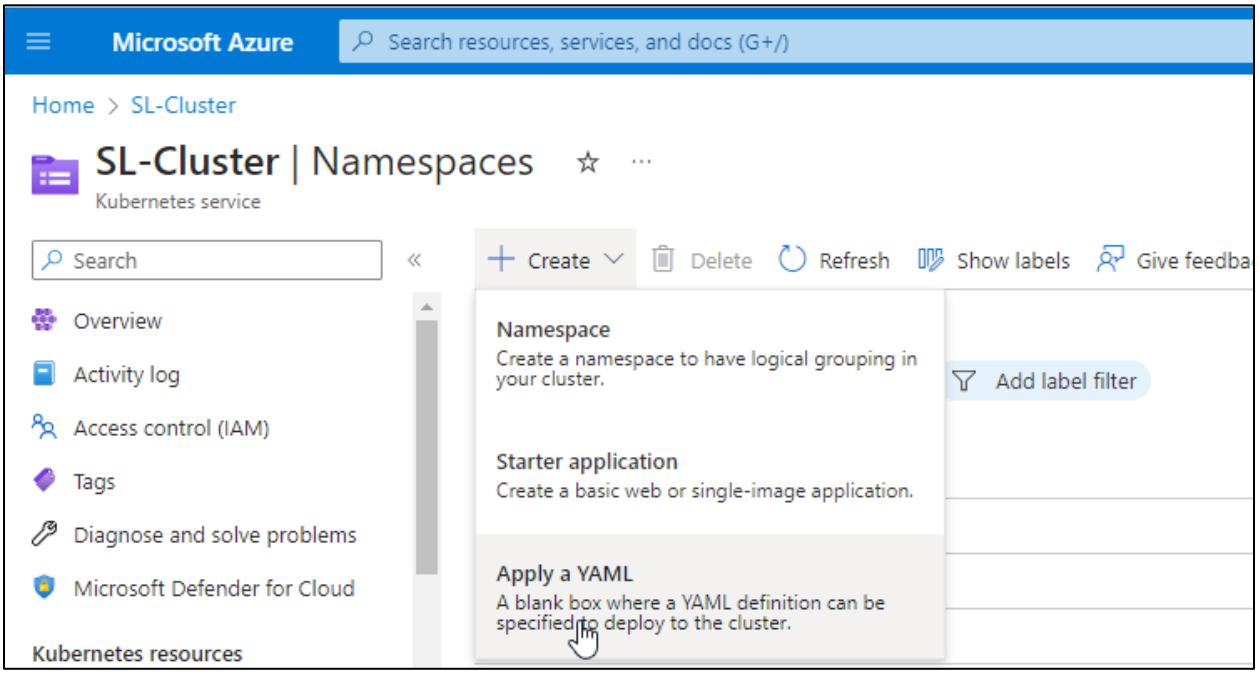
Step 1: Create a namespace

1.1 In the Azure portal, navigate to the cluster that you have created



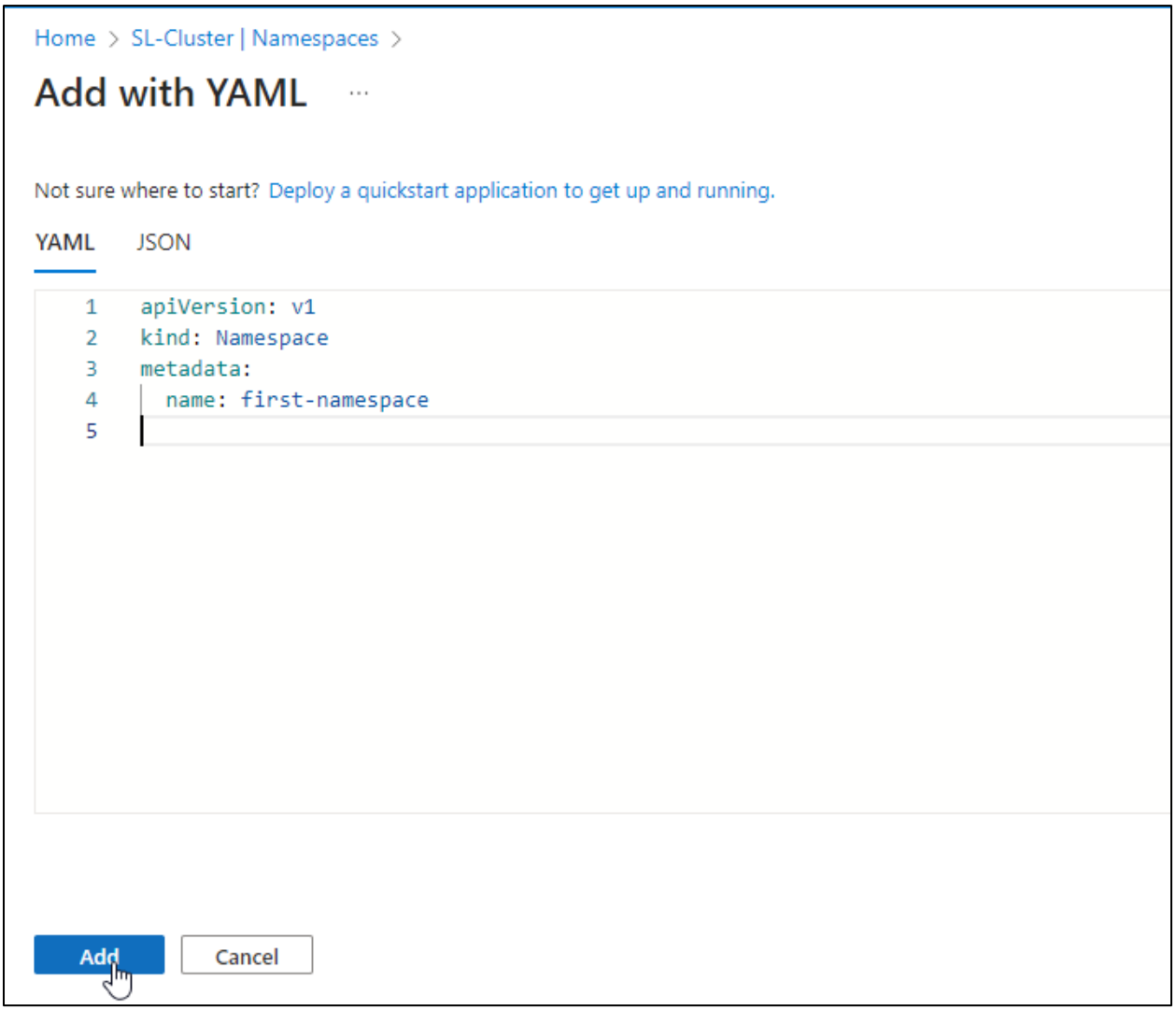
1.2 On the cluster page, navigate to the **Namespaces** section on the left; then click on **Create** and select **Apply a YAML**

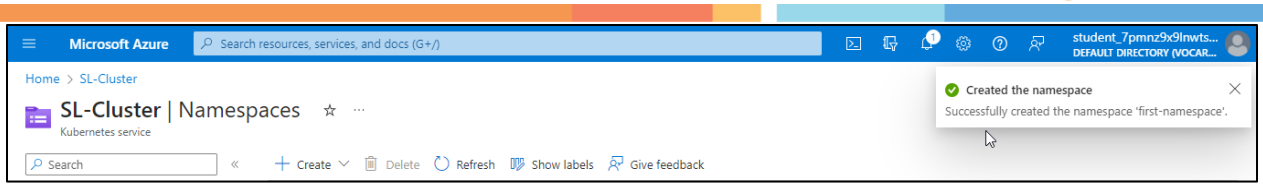




1.3 Add the following code in the YAML section and click on **Add**:

apiVersion: v1
kind: Namespace
metadata:
name: first-namespace

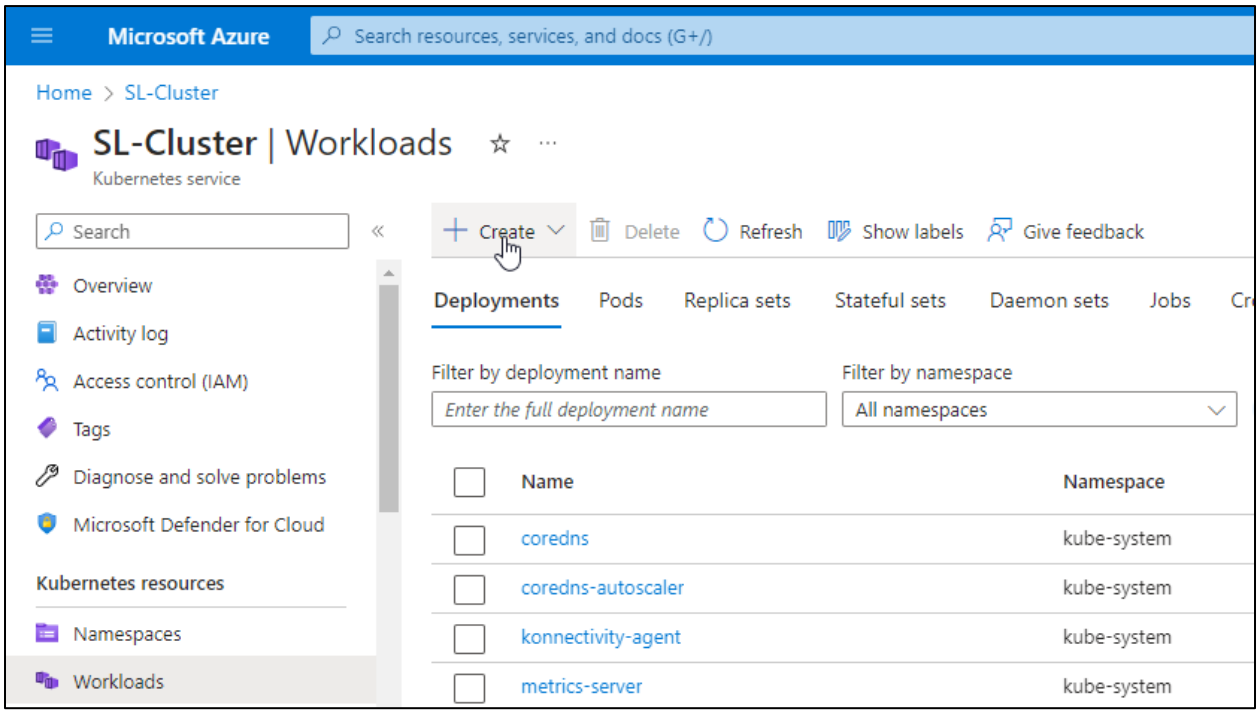


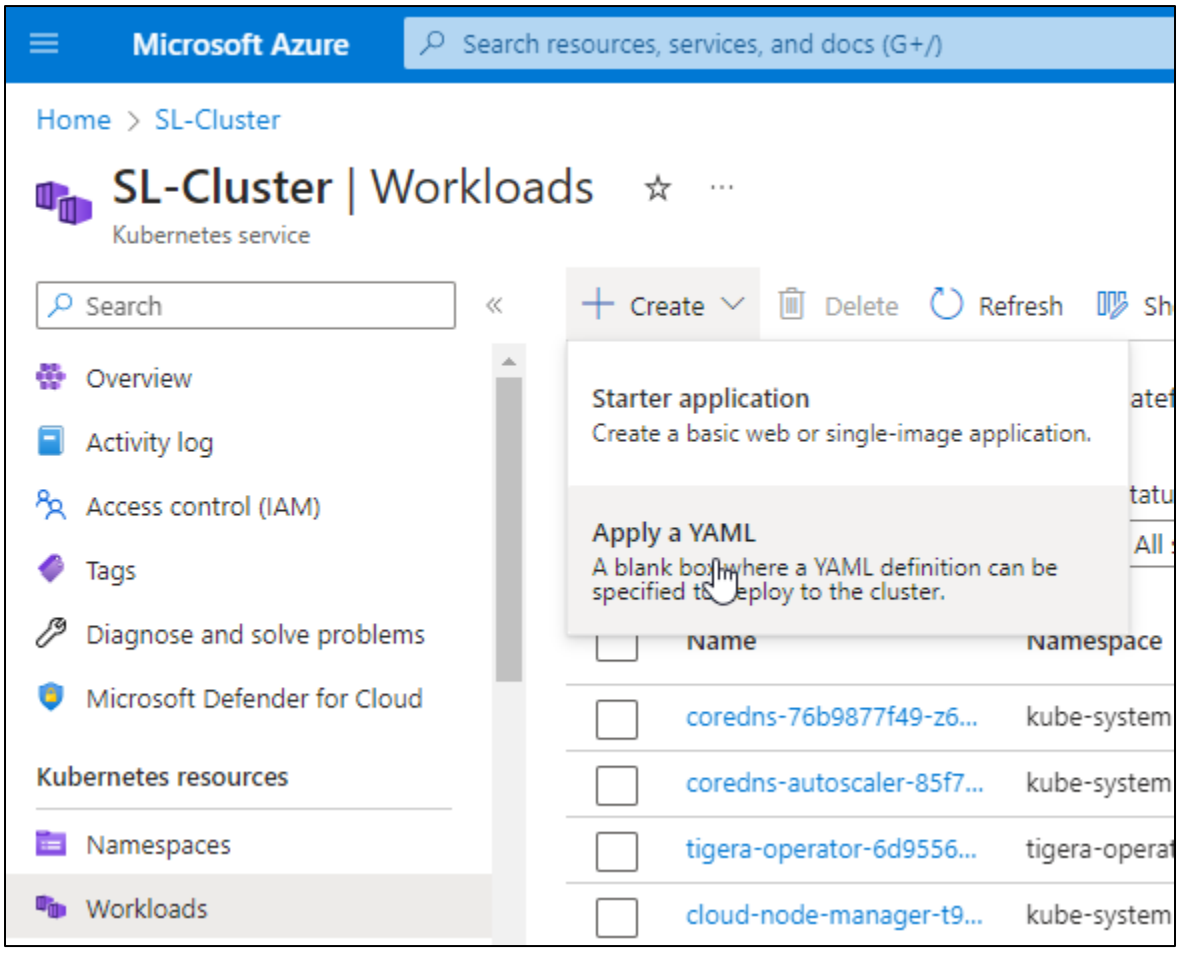


The namespace is successfully created.

Step 2: Create workloads such as pods and deployments

2.1 Navigate back to the cluster, go to **Workloads**, select the **Pods** tab, click on **Create**, and click on **Apply with YAML**




Microsoft Azure
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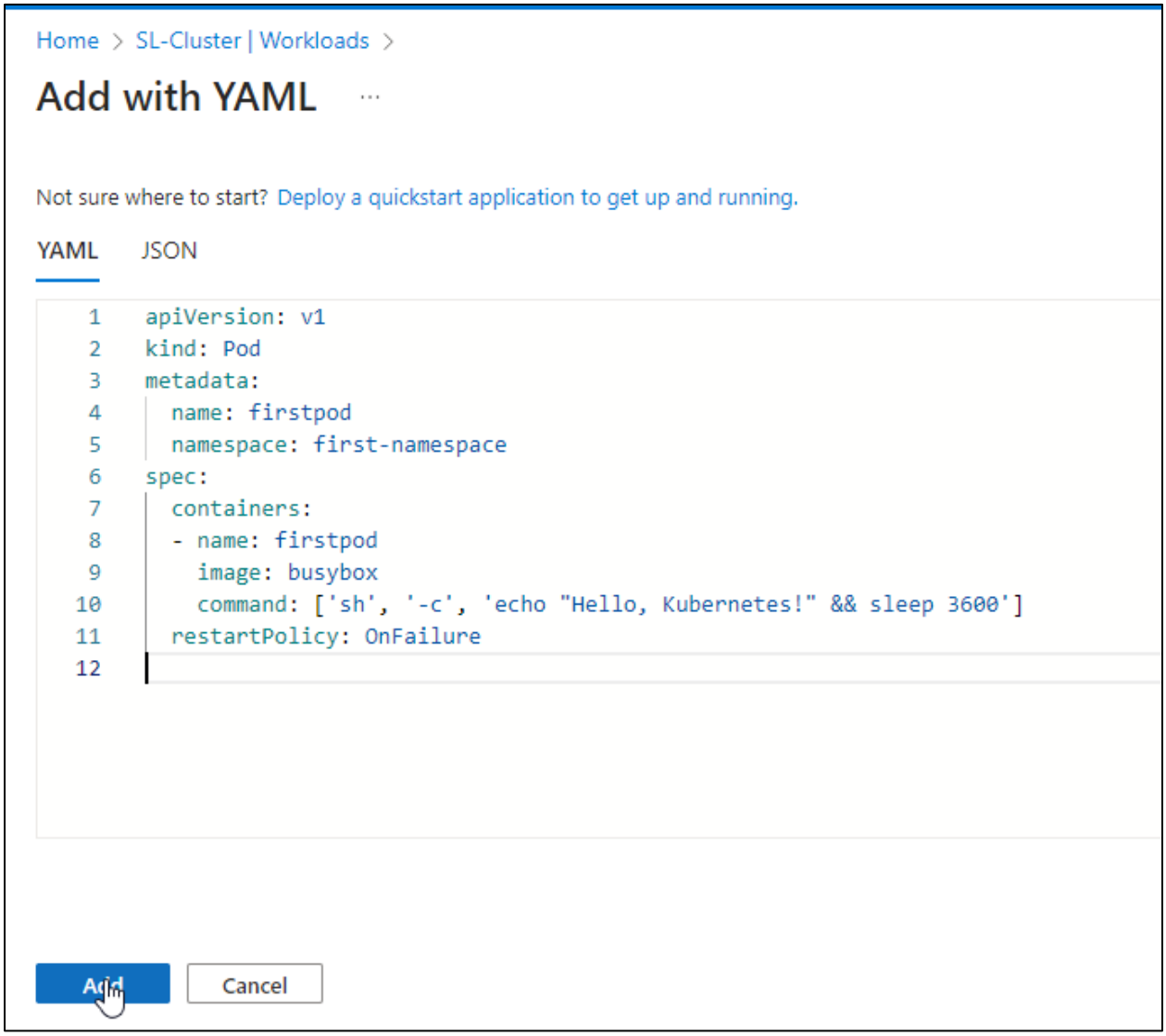
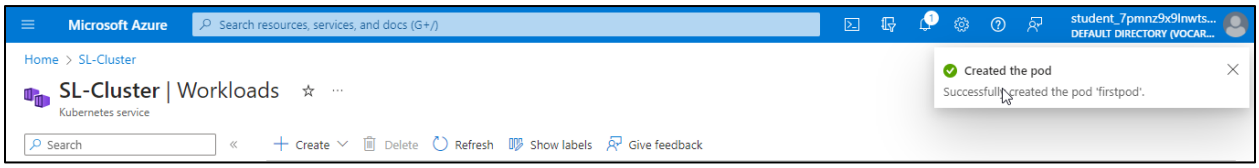
Kubernetes resources
Namespaces
Workloads
Create
Delete
Refresh
Starter application
Create a basic web or single-image application.
Apply a YAML
A blank box where a YAML definition can be specified to deploy to the cluster.
Name
Namespace
coredns-76b9877f49-z6...
kube-system
coredns-autoscaler-85f7...
kube-system
tigera-operator-6d9556...
cloud-node-manager-t9...
kube-system

2.2 Add the following code in the YAML section and click on **Add**:

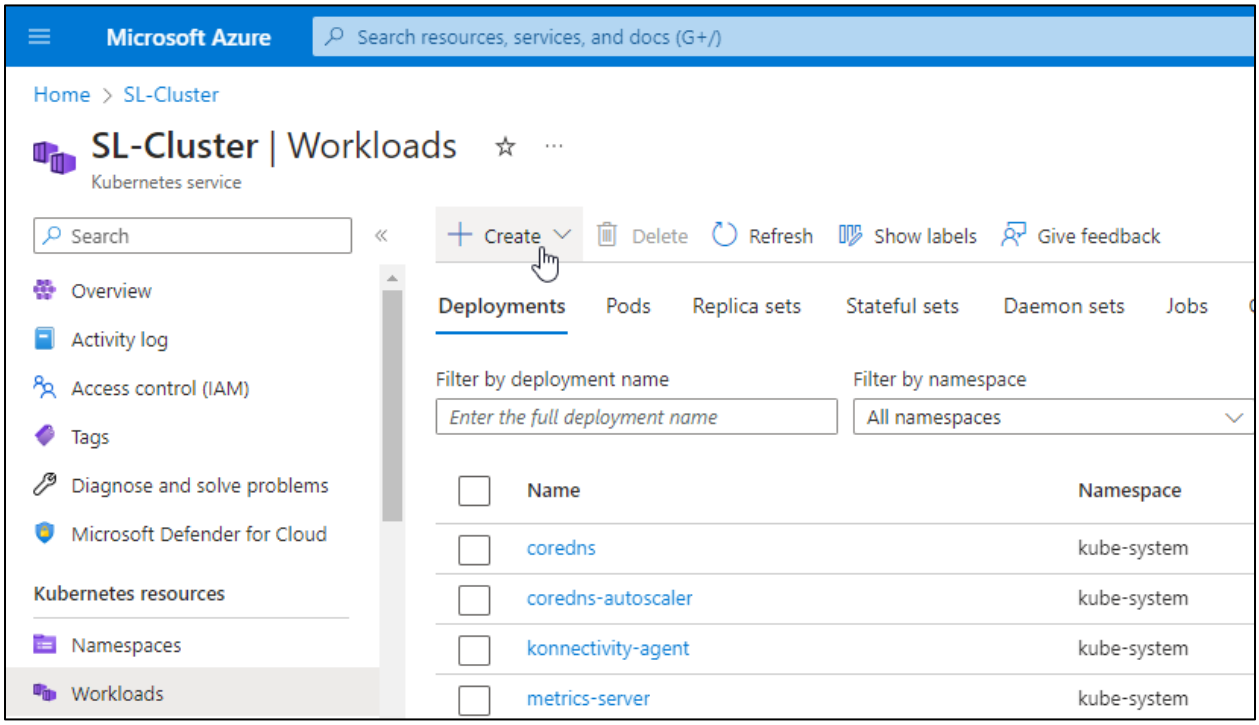
```
apiVersion: v1
kind: Pod
metadata:
name: firstpod
namespace: first-namespace
spec:
containers:
- name: firstpod
 image: busybox
 command: ['sh', '-c', 'echo "Hello, Kubernetes!" && sleep 3600']
 restartPolicy: OnFailure
```





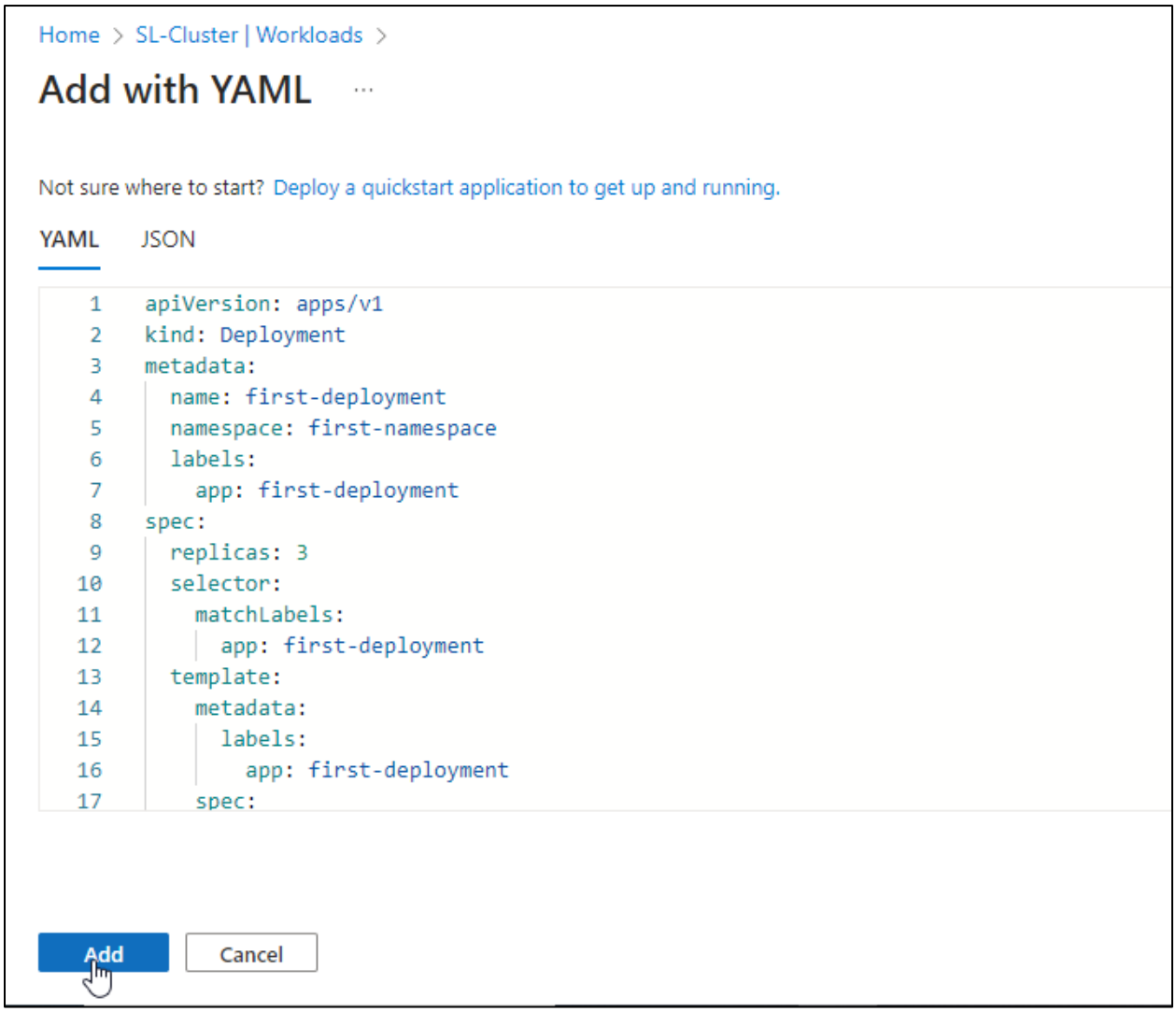
The pod is successfully created.

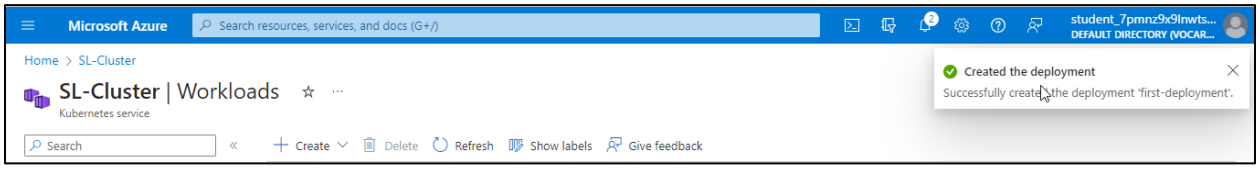
2.3 Now, navigate back to the **Workloads** section, click on **Deployments**, and click on **Create**



2.4 Add the following code in the YAML section and click on **Add**:

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: first-deployment
  namespace: first-namespace
  labels:
    app: first-deployment
spec:
  replicas: 3
  selector:
    matchLabels:
      app: first-deployment
  template:
    metadata:
      labels:
        app: first-deployment
    spec:
      containers:
      - name: first-deployment
        image: nginx:1.14.2
        ports:
        - containerPort: 80
```





The deployment is created successfully.

By following these steps, you have successfully created the namespaces and workloads in an AKS cluster.