

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

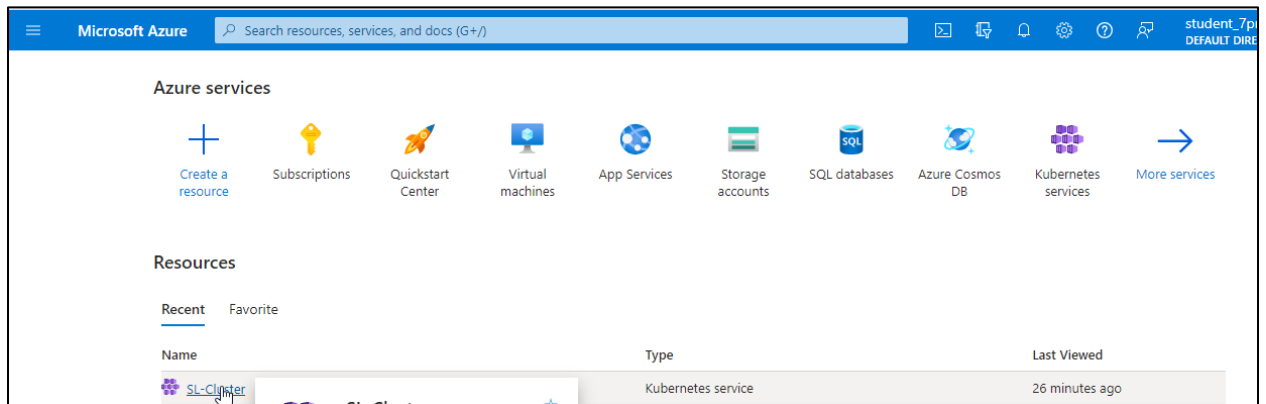
Prerequisites: An AKS cluster should already be set up (refer to the steps provided in Lesson 08, Demo 01 for guidance).

Steps to be followed:

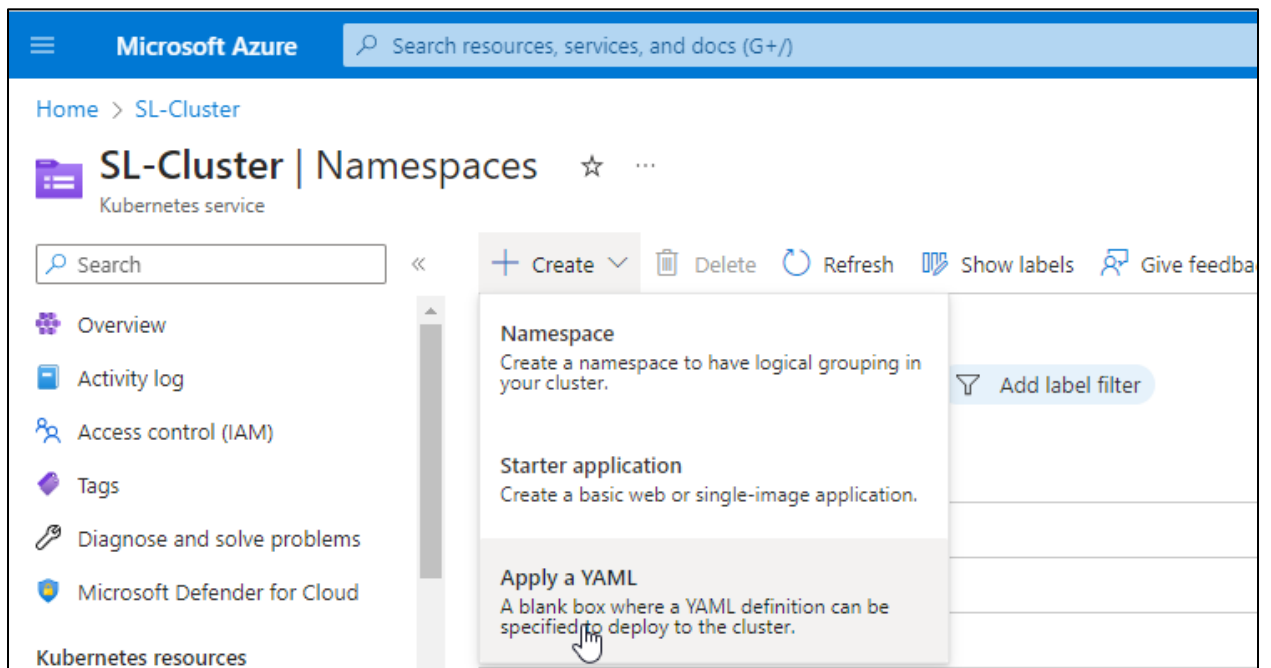
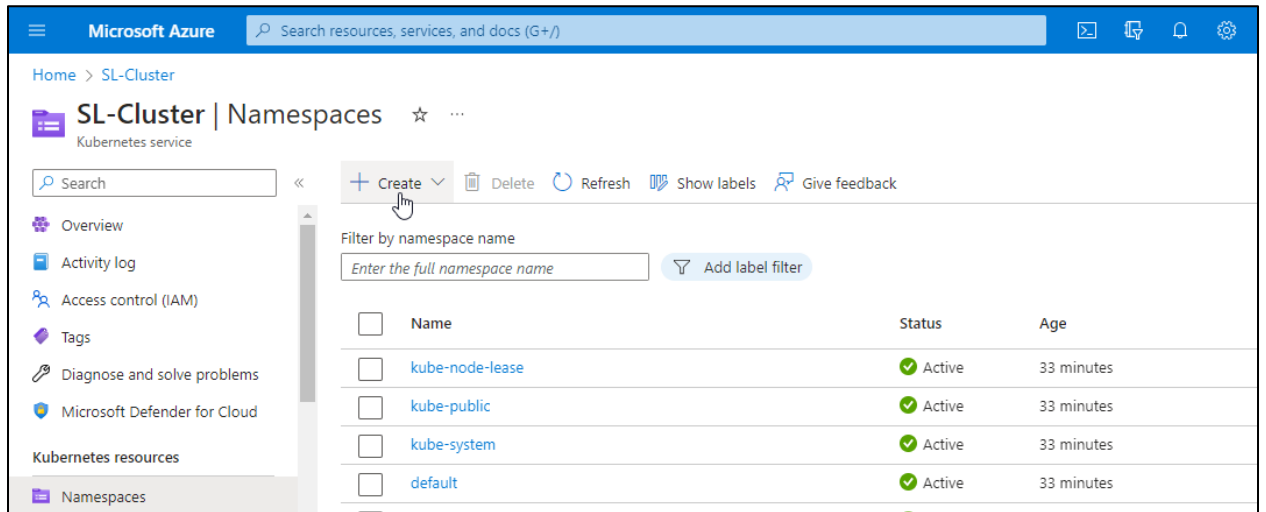
1. Create a namespace
2. Create workloads such as pods and deployments

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

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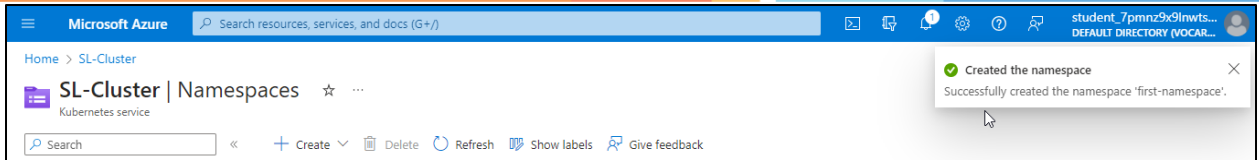
Add with YAML ...

Not sure where to start? [Deploy a quickstart application to get up and running.](#)

YAML JSON

```
1  apiVersion: v1
2  kind: Namespace
3  metadata:
4    name: first-namespace
5
```

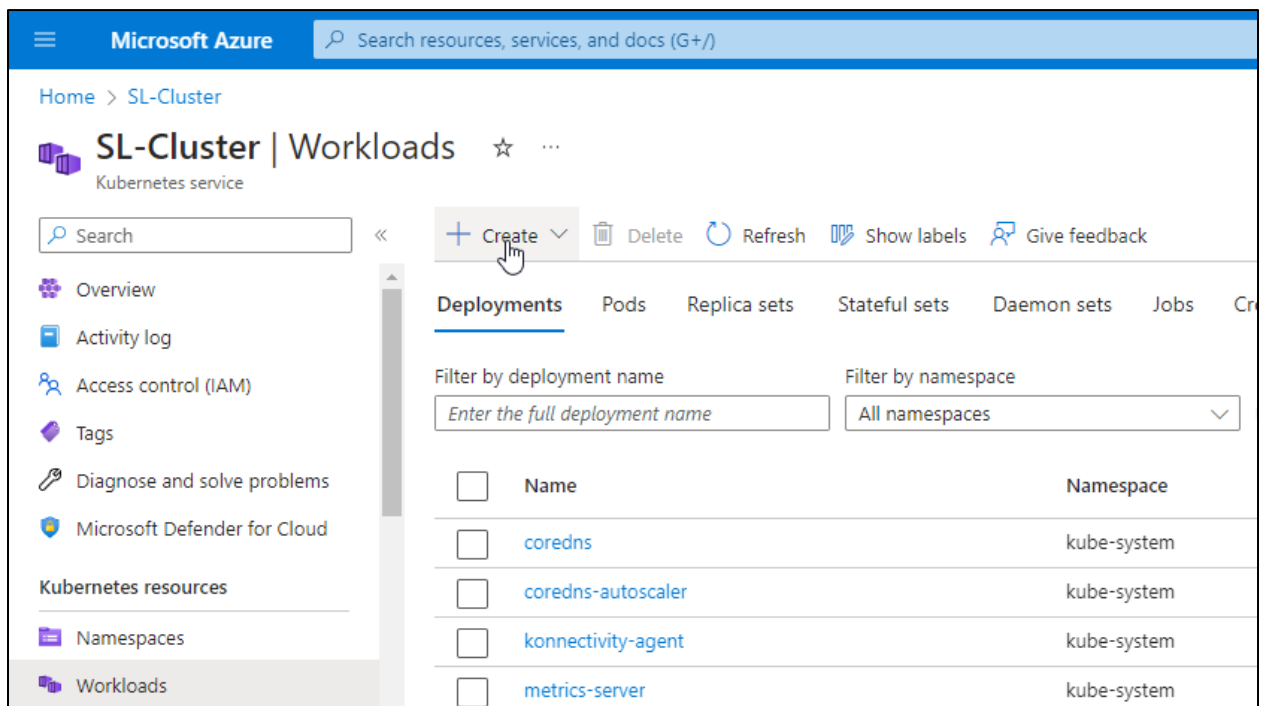
Add Cancel



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**



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SL-Cluster | Workloads

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Namespaces

Workloads

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.

<input type="checkbox"/>	name	namespace
<input type="checkbox"/>	coredns-76b9877f49-z6...	kube-system
<input type="checkbox"/>	coredns-autoscaler-85f7...	kube-system
<input type="checkbox"/>	tigera-operator-6d9556...	tigera-operat
<input type="checkbox"/>	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

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Add with YAML ...

Not sure where to start? [Deploy a quickstart application to get up and running.](#)

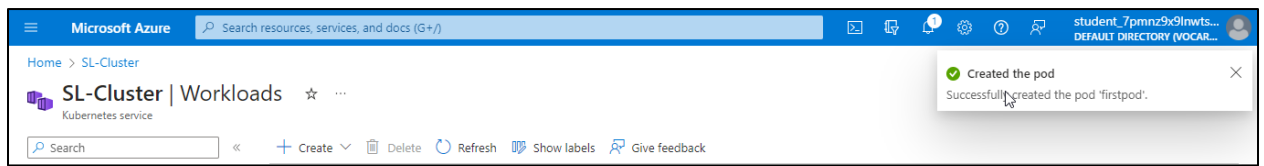
YAML

JSON

```
1  apiVersion: v1
2  kind: Pod
3  metadata:
4    name: firstpod
5    namespace: first-namespace
6  spec:
7    containers:
8      - name: firstpod
9        image: busybox
10       command: ['sh', '-c', 'echo "Hello, Kubernetes!" && sleep 3600']
11       restartPolicy: OnFailure
12
```

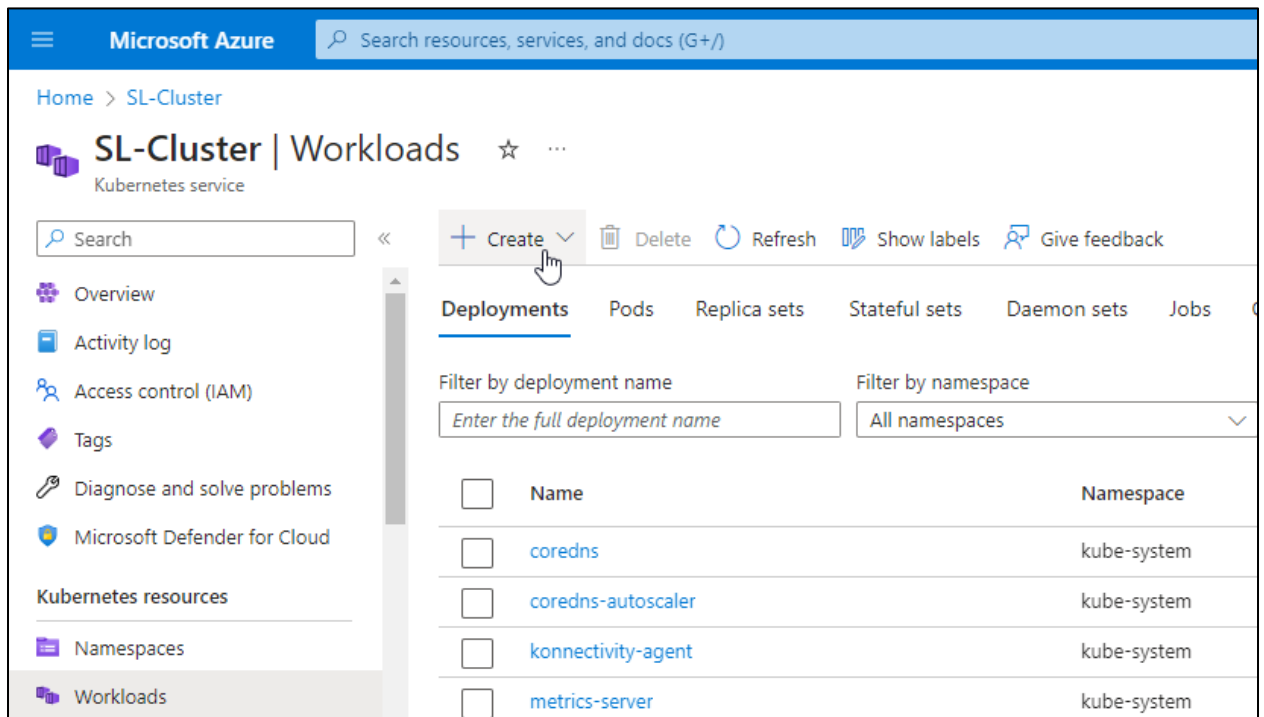
Add

Cancel



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
```


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Add with YAML ...

Not sure where to start? [Deploy a quickstart application to get up and running.](#)

YAML JSON

```

1  apiVersion: apps/v1
2  kind: Deployment
3  metadata:
4    name: first-deployment
5    namespace: first-namespace
6    labels:
7      app: first-deployment
8  spec:
9    replicas: 3
10   selector:
11     matchLabels:
12       app: first-deployment
13   template:
14     metadata:
15       labels:
16         app: first-deployment
17   spec:

```

Add Cancel

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SL-Cluster | Workloads ☆ ...

Kubernetes service

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Created the deployment
Successfully created the deployment 'first-deployment'.

The deployment is created successfully.

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