**Lesson 6 Demo 8**

**Deny All Traffic from Other Namespaces**

**Objective:** Learn to create a network policy that blocks the traffic from other namespaces while allowing the traffic from the same namespace to pass through.

**Tools required:** kubectl

**Prerequisites:** kubectl must be installed

Steps to be followed:

1. Starting a web service
2. Creating a YAML file for the network policy
3. Creating a new namespace
4. Verifying the network policy
5. Cleaning up the created resources

**Step 1: Starting a web service**

1. Start a web service in the default namespace by running the following command:

**kubectl run web --namespace=default --image=nginx --labels="app=web" --expose --port=80**

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**Step 2: Creating a YAML file for the network policy**

1. Create a new YAML file by using the following command:

**vi deny-from-other-namespaces.yaml**

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1. Save the following manifest to **deny-from-other-namespaces.yaml** and apply it to the cluster:

**kind: NetworkPolicy**

**apiVersion: networking.k8s.io/v1**

**metadata:**

**namespace: default**

**name: deny-from-other-namespaces**

**spec:**

**podSelector:**

**matchLabels:**

**ingress:**

**- from:**

**- podSelector: {}**

Shape

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1. Create a network policy to deny the services for other namespaces:

**kubectl apply -f deny-from-other-namespaces.yaml**

**kubectl get networkpolicy**

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**Step 3: Creating a new namespace**

1. To create a new namespace **ckad**, use the following command:

**kubectl create namespace ckad**

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**Step 4: Verifying the network policy**

1. Run the following command to verify the network policy for the namespace **ckad**:

**kubectl run test-$RANDOM --namespace=ckad --rm -i -t --image=alpine -- sh**

/ # **wget -qO- --timeout=2** [**http://web.default**](http://web.default)

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It blocks the traffic from the **ckad** namespace.

|  |
| --- |
| **Note:** Type **exit** and press enter to exit the command prompt. |

1. Any Pod in the default namespace should work fine. Run the following command to verify the network policy for the default namespace:

**kubectl run test-$RANDOM --namespace=default --rm -i -t --image=alpine -- sh**

/ # **wget -qO- --timeout=2** [**http://web.default**](http://web.default)

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**Step 5: Cleaning up the created resources**

1. To delete the Pod, run the following command:

**kubectl delete pod web -n default**

1. To delete the service, run the following command:

**kubectl delete service web -n default**

1. To delete the network policy, run the following command:

**kubectl delete networkpolicy deny-from-other-namespaces -n default**

1. To delete the namespace, run the following command:

**kubectl delete namespace ckad**

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Hence, denying all the traffic from other namespaces and cleaning up the created resources have been completed successfully.