

Module 2: Kubernetes Architecture

Demo-2

edureka!

edureka!

© Brain4ce Education Solutions Pvt. Ltd.

Setting up Kubernetes Dashboard

To be performed on Master VM

Step 1: Next, we will install the dashboard. To install the Dashboard, run the following command:

```
kubectl create -f
https://raw.githubusercontent.com/kubernetes/dashboard/mas
ter/src/deploy/recommended/kubernetes-dashboard.yaml
```

```
edureka@kmaster:~$ kubectl create -f https://raw.githubusercontent.com/kuberne
-dashboards.yaml
secret "kubernetes-dashboard-certs" created
serviceaccount "kubernetes-dashboard" created
role.rbac.authorization.k8s.io "kubernetes-dashboard-minimal" created
rolebinding.rbac.authorization.k8s.io "kubernetes-dashboard-minimal" created
deployment.apps "kubernetes-dashboard" created
service "kubernetes-dashboard" created
```

Step 2: Your dashboard is now ready with it's the pod in the running state.

kube-system	etcd-kmaster	1/1	Running	0
kube-system	kube-apiserver-kmaster	1/1	Running	0
kube-system	kube-controller-manager-kmaster	1/1	Running	0
kube-system	kube-dns-86f4d74b45-ggg8z	3/3	Running	0
kube-system	kube-proxy-85tp2	1/1	Running	0
kube-system	kube-scheduler-kmaster	1/1	Running	0
kube-system	kubernetes-dashboard-7d5dcdb6d9-bbmmr	1/1	Running	0

Step 3:

1. By default dashboard will not be visible on the Master VM. Run the following command in the command line:

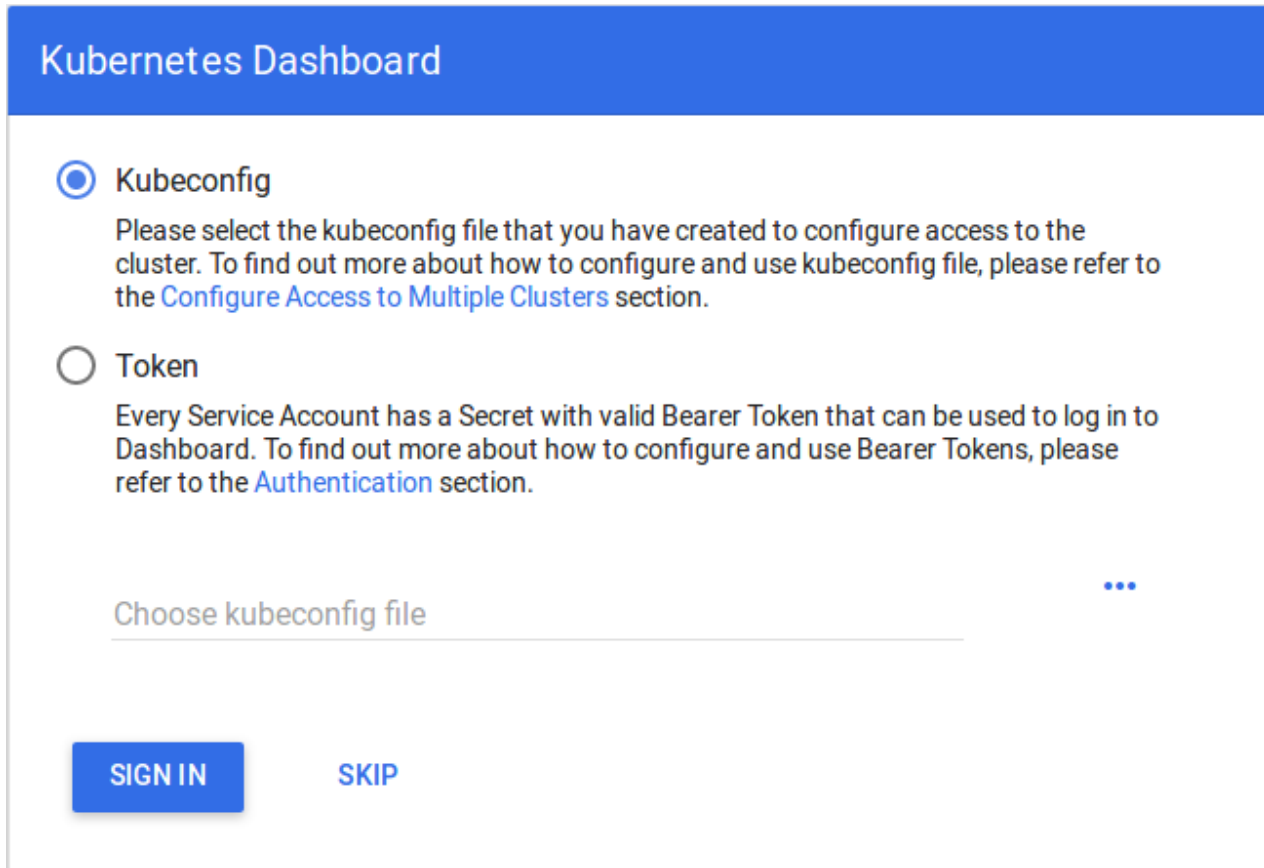
```
kubectl proxy
```

```
edureka@kmaster:~$ kubectl proxy
Starting to serve on 127.0.0.1:8001
```

2. To view the dashboard in the browser, navigate to the following address in the browser of your Master VM.

```
http://localhost:8001/api/v1/namespaces/kube-
system/services/https:kubernetes-dashboard:/proxy/
```

3. You will be prompted with this page, to enter the credentials.

The image shows the Kubernetes Dashboard login page. At the top is a blue header with the text "Kubernetes Dashboard". Below the header, there are two radio button options. The first option, "Kubeconfig", is selected and has a description: "Please select the kubeconfig file that you have created to configure access to the cluster. To find out more about how to configure and use kubeconfig file, please refer to the [Configure Access to Multiple Clusters](#) section." The second option, "Token", is unselected and has a description: "Every Service Account has a Secret with valid Bearer Token that can be used to log in to Dashboard. To find out more about how to configure and use Bearer Tokens, please refer to the [Authentication](#) section." Below these options is a text input field labeled "Choose kubeconfig file" with a dropdown arrow icon to its right. At the bottom left is a blue "SIGN IN" button, and at the bottom right is a blue "SKIP" button.

Step 4: In this step, we will create the service account for the dashboard and get its credentials. Run the following commands:

Note: Run all these commands in a new terminal, or your kubectl proxy command will stop.

1. This command will create service account for dashboard in the default namespace.

```
kubectl create serviceaccount dashboard -n default
```

2. This command will add the cluster binding rules to your dashboard account

```
kubectl create clusterrolebinding dashboard-admin -n
default \
  --clusterrole=cluster-admin \
  --serviceaccount=default:dashboard
```

3. This command will give you the token required for your dashboard login.

```
kubectl get secret $(kubectl get serviceaccount dashboard -
o jsonpath="{.secrets[0].name}") -o
jsonpath="{.data.token}" | base64 --decode
```

```
edureka@kmaster:~$ kubectl get secret $(kubectl get serviceaccount dashboard -
jsonpath="{.secrets[0].name}") -o jsonpath="{.data.token}" | base64 --decode
eyJhbGciOiJSUzI1NiIsImtpZCI6IiJ9.eyJpc3MiOiJrdWJlcm5ldGVzL3NlcnZpY2VhY2NvdW50Iiwia3ViZXJuZXRlcy5pby9zZXJ2aWNlYWNjb3VudC9uYW1lc3BhY2UiOiJkZWZhdWx0Iiwia3ViZXJuZXRlcy5pby9zZXJ2aWNlYWNjb3VudC9zZWNyZXQubmFtZSI6ImRhc2hib2FyZC10b2tlbi1iOTRocSIiImt1YmVybmV0ZXMuaW8vc2VydmljZWJjY291bnQvc2VydmljZS1hY2NvdW50Lm5hbWUiOiJkYXNoYm9hcmQ1LCJrdWJlcm5ldGVzLmVlL3NlcnZpY2VhY2NvdW50L3NlcnZpY2UtYWNjb3VudC51aWQiOiJhYm91Y2VlImS01YWE0LTExZGtOGY3YS0wODAwMjdmODlkZWQ1LCJzdWIiOiJzeXN0ZW06c2VydmljZWJjY291bnQ6ZGVmYXVsdDpkYXNoYm9hcmQifQ.wKPkL0jENDmJ4l74LhQNCHIQ2Gs2jUlo0vYdk4pkU4vN8iB54x7I9Bq0YUIuJw_zEZqjnWYQdjndu2DAMtXwC_5uILO4SaTTL_bVaRVrb0oVCxxElaUyHQfppzEL8-EJNXXGUuIqzvzYr8zkYRTaAqTicjb3tXBlIcRg5Ru-moN7IdPxXwaerWjdJWiH96h_VRm05myiCoX_gTBHztWQ00sdg0WuFf2fTodCO-e516vxBzN0ThKdzGKBE2m7FenwXcCLTkZwHUhUK6yZuJq_vDpON1P7ARqQYnwXjh6eHzKgJ9b8rf41D6m6DmlS0vgd0SCPfwjkZ_ppv_tl-XVPdTQedureka@kmaster:~$
```

4. Copy this token and paste it in Dashboard Login Page, by selecting token option.

Kubernetes Dashboard

☐ Kubeconfig

Please select the kubeconfig file that you have created to configure access to the cluster. To find out more about how to configure and use kubeconfig file, please refer to the [Configure Access to Multiple Clusters](#) section.

☒ **Token**


Every Service Account has a Secret with valid Bearer Token that can be used to log in to Dashboard. To find out more about how to configure and use Bearer Tokens, please refer to the [Authentication](#) section.

Enter token

.....

SIGN IN SKIP

5. You have successfully logged in your dashboard!

 **kubernetes**

Search

Overview

Cluster

Namespaces

Nodes

Persistent Volumes

Roles


Storage Classes

Namespace

default

Discovery and Load Balancing

Services

Name	Labels	Cluster IP	Internal endpoints
 kubernetes	<div>component: apiserver</div> <div>provider: kubernetes</div>	10.96.0.1	kubernetes:443 TCP kubernetes:0 TCP

Config and Storage

edureka!