**THE KUBERNETES**

zskhan@DESKTOP-QNBLJ0H:~$ kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

Unable to connect to the server: dial tcp: lookup raw.githubusercontent.com on 172.20.224.1:53: read udp 172.20.235.130:53862->172.20.224.1:53: i/o timeout

///////**Fire wall issue** – Better to turn off the firewall to make the installation possible.

zskhan@DESKTOP-QNBLJ0H:~$ kubectl apply -f https://raw.githubusercontent.com/kubernetes/dashboard/v2.2.0/aio/deploy/recommended.yaml

namespace/kubernetes-dashboard created

serviceaccount/kubernetes-dashboard created

service/kubernetes-dashboard created

secret/kubernetes-dashboard-certs created

secret/kubernetes-dashboard-csrf created

secret/kubernetes-dashboard-key-holder created

configmap/kubernetes-dashboard-settings created

role.rbac.authorization.k8s.io/kubernetes-dashboard created

clusterrole.rbac.authorization.k8s.io/kubernetes-dashboard created

rolebinding.rbac.authorization.k8s.io/kubernetes-dashboard created

clusterrolebinding.rbac.authorization.k8s.io/kubernetes-dashboard created

deployment.apps/kubernetes-dashboard created

service/dashboard-metrics-scraper created

deployment.apps/dashboard-metrics-scraper created

/////////////////////////////////////////////////////////////////////////////////////////

**Namespaces** are Kubernetes objects which **partition** a single Kubernetes cluster into multiple virtual clusters. Each Kubernetes namespace provides the scope for Kubernetes Names it contains; which means that by using the combination of an object name and a Namespace, each object gets a unique identity across the cluster.

By default, a Kubernetes cluster is created with the following three namespaces:

**default**: By default all the resource created in Kubernetes cluster are created in the default namespace. By default the default namespace can allow applications to run with unbounded CPU and memory requests/limits (**Until someone set resource quota for the default namespace**).

**kube-public:** Namespace for resources that are publicly readable by all users. This namespace is generally reserved for cluster usage.

**kube-system**: It is the Namespace for objects created by Kubernetes systems/control plane.

//////////////////////////////////////////////////////////////////////////////////////////

zskhan@DESKTOP-QNBLJ0H:~$ kubectl get ns

OR

zskhan@DESKTOP-QNBLJ0H:~$ kubectl get namespaces

///// nodes

NAME STATUS AGE

default Active 14m

kube-node-lease Active 15m

kube-public Active 15m

kube-system Active 15m

kubernetes-dashboard Active 31s

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get all

zskhan@DESKTOP-QNBLJ0H:~$ kubectl --nampespace kubernetes-dashboard get all

NAME READY STATUS RESTARTS AGE

pod/dashboard-metrics-scraper-79c5968bdc-l87sg 1/1 Running 0 114s

pod/kubernetes-dashboard-9f9799597-sjs68 1/1 Running 0 114s

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

service/dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 114s

service/kubernetes-dashboard ClusterIP 10.111.222.70 <none> 443/TCP 115s

NAME READY UP-TO-DATE AVAILABLE AGE

deployment.apps/dashboard-metrics-scraper 1/1 1 1 114s

deployment.apps/kubernetes-dashboard 1/1 1 1 114s

NAME DESIRED CURRENT READY AGE

replicaset.apps/dashboard-metrics-scraper-79c5968bdc 1 1 1 114s

replicaset.apps/kubernetes-dashboard-9f9799597 1 1 1 114s

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard describe service kubernetes-dashboard

Name: kubernetes-dashboard

Namespace: kubernetes-dashboard

Labels: k8s-app=kubernetes-dashboard

Annotations: <none> //meta data

Selector: k8s-app=kubernetes-dashboard

Type: **ClusterIP**

IP: 10.111.222.70

Port: <unset> 443/TCP

//// METHOD OF PORT FORWARDING

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard port-forward kubernetes-dashboard-9f9799597-sjs68 8000:8443

Forwarding from 127.0.0.1:8000 -> 8443

Forwarding from [::1]:8000 -> 8443

zskhan@DESKTOP-QNBLJ0H:~$ kubectl proxy

Starting to serve on 127.0.0.1:8001

^C

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get all

NAME READY STATUS RESTARTS AGE

pod/dashboard-metrics-scraper-79c5968bdc-l87sg 1/1 Running 0 19m

pod/kubernetes-dashboard-9f9799597-sjs68 1/1 Running 0 19m

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

service/dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 19m

service/kubernetes-dashboard ClusterIP 10.111.222.70 <none> 443/TCP 19m

NAME READY UP-TO-DATE AVAILABLE AGE

deployment.apps/dashboard-metrics-scraper 1/1 1 1 19m

deployment.apps/kubernetes-dashboard 1/1 1 1 19m

NAME DESIRED CURRENT READY AGE

replicaset.apps/dashboard-metrics-scraper-79c5968bdc 1 1 1 19m

replicaset.apps/kubernetes-dashboard-9f9799597 1 1 1 19m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard edit svc kubernetes-dashboard

error: services "kubernetes-dashboard" is invalid

A copy of your changes has been stored to "/tmp/kubectl-edit-8dj3j.yaml"

///////////////////////////////////////////////////////////////////

# Please edit the object below. Lines beginning with a '#' will be ignored,

# and an empty file will abort the edit. If an error occurs while saving this file will be

# reopened with the relevant failures.

#

apiVersion: v1

kind: Service

metadata:

annotations:

kubectl.kubernetes.io/last-applied-configuration: |

{"apiVersion":"v1","kind":"Service","metadata":{"annotations":{},"labels":{"k8s-app":"kubernetes-dashboard"},"name":"kubernetes-dashboard","namespace":"kubernetes-dashboard"},"spec":{"ports":[{"port":443,"targetPort":8443}],"selector":{"k8s-app":"kubernetes-dashboard"}}}

creationTimestamp: "2021-05-03T06:51:32Z"

labels:

k8s-app: kubernetes-dashboard

name: kubernetes-dashboard

namespace: kubernetes-dashboard

resourceVersion: "5255"

selfLink: /api/v1/namespaces/kubernetes-dashboard/services/kubernetes-dashboard

uid: f106ea60-3259-480a-80a2-79421774e0ff

spec:

clusterIP: 10.111.222.70

externalTrafficPolicy: Cluster

ports:

- nodePort: 31778 Add this

port: 443

protocol: TCP

targetPort: 8443

selector:

k8s-app: kubernetes-dashboard

sessionAffinity: None

type: NodePort add this

status:

loadBalancer:

ingress:

hostname: localhost

"/tmp/kubectl-edit-er3kp.yaml" 34L, 1197C

///////////////////////////////////////////////////////////////////

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 28m

kubernetes-dashboard ClusterIP 10.111.222.70 <none> 443/TCP 28m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 30m

kubernetes-dashboard ClusterIP 10.111.222.70 <none> 443/TCP 30m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 30m

kubernetes-dashboard ClusterIP 10.111.222.70 <none> 443/TCP 30m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard edit svc kubernetes-dashboard

service/kubernetes-dashboard edited

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 32m

kubernetes-dashboard NodePort 10.111.222.70 <none> 443:31778/TCP 32m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard edit svc kubernetes-dashboard

error: services "kubernetes-dashboard" is invalid

A copy of your changes has been stored to "/tmp/kubectl-edit-9d24c.yaml"

error: Edit cancelled, no valid changes were saved.

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard edit svc kubernetes-dashboard

Edit cancelled, no changes made.

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard get svc

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

dashboard-metrics-scraper ClusterIP 10.110.83.229 <none> 8000/TCP 34m

kubernetes-dashboard NodePort 10.111.222.70 <none> 443:31778/TCP 34m

zskhan@DESKTOP-QNBLJ0H:~$ kubectl get nodes -o wide

zskhan@DESKTOP-QNBLJ0H:~$ kubectl get nodes --output wide

NAME STATUS ROLES AGE VERSION INTERNAL-IP EXTERNAL-IP OS-IMAGE KERNEL-VERSION CONTAINER-RUNTIME

docker-desktop Ready master 49m v1.19.7 192.168.65.4 <none> Docker Desktop 5.4.72-microsoft-standard-WSL2 docker://20.10.5

zskhan@DESKTOP-QNBLJ0H:~$ cat /etc/hosts

# This file was automatically generated by WSL. To stop automatic generation of this file, add the following entry to /etc/wsl.conf:

# [network]

# generateHosts = false

127.0.0.1 localhost

127.0.1.1 DESKTOP-QNBLJ0H.localdomain DESKTOP-QNBLJ0H

﻿

192.168.1.105 host.docker.internal

192.168.1.105 gateway.docker.internal

127.0.0.1 kubernetes.docker.internal

# The following lines are desirable for IPv6 capable hosts

::1 ip6-localhost ip6-loopback

fe00::0 ip6-localnet

ff00::0 ip6-mcastprefix

ff02::1 ip6-allnodes

ff02::2 ip6-allrouters

///////////////////////

MAC

xeeshankhan@Xeeshans-MacBook-Air ~ % cat /etc/hosts

##

# Host Database

#

# localhost is used to configure the loopback interface

# when the system is booting. Do not change this entry.

##

127.0.0.1 localhost

255.255.255.255 broadcasthost

::1 localhost

# Added by Docker Desktop

# To allow the same kube context to work on the host and the container:

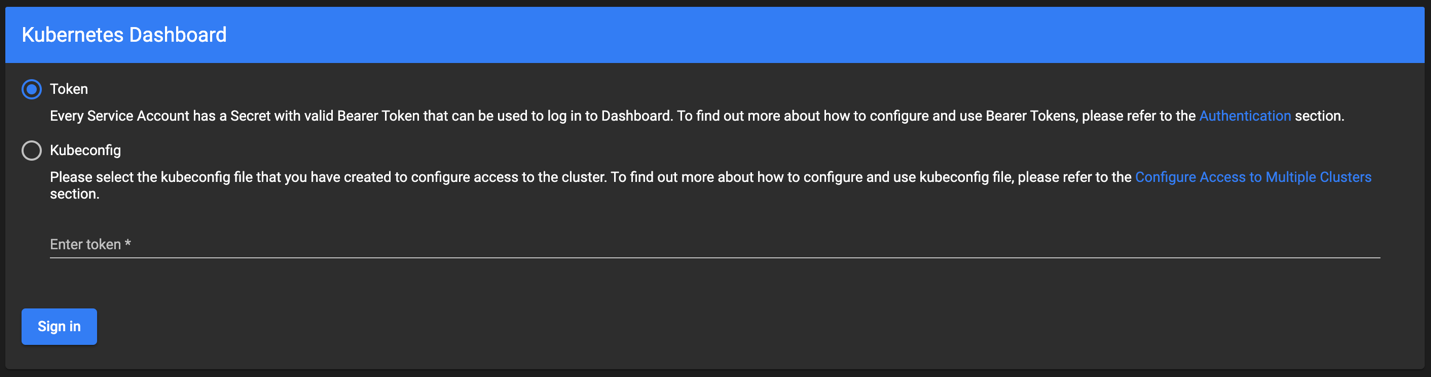
127.0.0.1 kubernetes.docker.internal

/////////////////////

xeeshankhan@Xeeshans-MacBook-Air ~ % **kubectl proxy**

Starting to serve on 127.0.0.1:8001

//////////////////////////////////



zskhan@DESKTOP-QNBLJ0H:~$ **kubectl -n kubernetes-dashboard describe sa kubernetes-dashboard**

Name: kubernetes-dashboard

Namespace: kubernetes-dashboard

Labels: k8s-app=kubernetes-dashboard

Annotations: <none>

Image pull secrets: <none>

Mountable secrets: kubernetes-dashboard-token-2pckw

Tokens: **kubernetes-dashboard-token-2pckw**

Events: <none>

zskhan@DESKTOP-QNBLJ0H:~$ kubectl -n kubernetes-dashboard describe secret kubernetes-dashboard-token-2pckw

Name: kubernetes-dashboard-token-2pckw

Namespace: kubernetes-dashboard

Labels: <none>

Annotations: kubernetes.io/service-account.name: kubernetes-dashboard

kubernetes.io/service-account.uid: a93194bc-25c6-4572-8967-7c5314b16968

Type: kubernetes.io/service-account-token

Data

====

token: eyJhbGciOiJSUzI1NiIsImtpZCI6IkhXSzQzZ01qclZOOWM4TmdBLVh6ZDdMRHdxQjBZMVozbHNXUHNHZF90d3cifQ..SR1np-H3pJUUvwuAQ5XkgJjEZkeNTylecS4DfmvL23PdxWQwq3j0excI1Ll1ZcFrNeL4JR7hXOCOAwq53HyHCX64-RVRFLvAxtjl6YbEx9lCQlPj2HCFZX40nUsS5ojn9KUKJnRPvPw7hV-yrFLct5xie9hDm0eBXwsLC32jh9r-M5IfUyZRjDZfPBOec51Drk\_bZEggInNY68-wP\_KfoFZKfYqneTvqozSqfmd68QuIyoyJdpIlao2l9wb9-FxPo0p3KhvwYZzbOvSmMvI5mEZ31VM\_9DPsTukzlKk-XI7YIaqO7fKFncPGuLcuvjM4Ds3CkTFsV\_Dof10C-od9Rg

ca.crt: 1066 bytes

namespace: 20 bytes

zskhan@DESKTOP-QNBLJ0H:~$

//////////////////////////////////////////////////////

apiVersion: v1

kind: Namespace

metadata:

name: <insert-namespace-name-here>

**NEW Version RBAC**

Last login: Fri Dec 16 20:07:21 on ttys000

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl get namespaces

NAME STATUS AGE

default Active 19h

kube-node-lease Active 19h

kube-public Active 19h

kube-system Active 19h

kubernetes-dashboard Active 19h

zsk Active 18h

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl -n kubernetes-dashboard describe sa kubernetes-dashboard

Name: kubernetes-dashboard

Namespace: kubernetes-dashboard

Labels: k8s-app=kubernetes-dashboard

Annotations: <none>

Image pull secrets: <none>

Mountable secrets: kubernetes-dashboard-token-69g8k

Tokens: kubernetes-dashboard-token-69g8k

Events: <none>

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl -n kubernetes-dashboard describe secret kubernetes-dashboard-token-69g8k

Name: kubernetes-dashboard-token-69g8k

Namespace: kubernetes-dashboard

Labels: <none>

Annotations: kubernetes.io/service-account.name: kubernetes-dashboard

kubernetes.io/service-account.uid: acbe9e9a-1d94-4d26-b00c-84f7508ce01a

Type: kubernetes.io/service-account-token

Data

====

ca.crt: 1099 bytes

namespace: 20 bytes

token: eyJhbGciOiJSUzI1NiIsImtpZCI6IlNpdTZZakVGQnY3NVRvbURZblByb3RDYXQ4RndyZ3Zza3UxUG9LbWZONzgifQ..fSnBc0iofX1fl96t0LlBDH2GteyJ6P9sw36PSg2m\_PmurryELKF9zETjVX0QFu4kSz6YCNeRjcr\_PlRVSKtJgYNJhXPYN1CIQl2G1uw7u2VKYRMK5MeAGIlRhNY0JcMk0QpTQp\_iZBoN7kLEQ5chSoimYxXNomcSWHl2DPLnu9s1yPhtMq7txNCSVf189T2HPr0aLNcXEb-w9ybNOud9CLAPouiLIzvtMHX50cK8jj6UhJET-7plAyWwyL0UT5s\_1LYgDFjvXK3dK9qMP3VZPxsErPsvsm2VcaJtL7CLQNL5OcBpLFh9NxGVhtFkXwOKfDkIK5JiQVOQJ5fOgFBTaw

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl create clusterrolebinding serviceaccounts-cluster-admin --clusterrole=cluster-admin --group=system:serviceaccounts

clusterrolebinding.rbac.authorization.k8s.io/serviceaccounts-cluster-admin created

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl get secrets

NAME TYPE DATA AGE

default-token-7l6kq kubernetes.io/service-account-token 3 20h

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl get sa

NAME SECRETS AGE

default 1 20h

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl -n kubernetes-dashboard describe sa kubernetes-dashboard

Name: kubernetes-dashboard

Namespace: kubernetes-dashboard

Labels: k8s-app=kubernetes-dashboard

Annotations: <none>

Image pull secrets: <none>

Mountable secrets: kubernetes-dashboard-token-69g8k

Tokens: kubernetes-dashboard-token-69g8k

Events: <none>

xeeshankhan@Xeeshans-MacBook-Air ~ % kubectl -n kubernetes-dashboard describe secret kubernetes-dashboard-token-69g8k

Name: kubernetes-dashboard-token-69g8k

Namespace: kubernetes-dashboard

Labels: <none>

Annotations: kubernetes.io/service-account.name: kubernetes-dashboard

kubernetes.io/service-account.uid: acbe9e9a-1d94-4d26-b00c-84f7508ce01a

Type: kubernetes.io/service-account-token

Data

====

ca.crt: 1099 bytes

namespace: 20 bytes

token: eyJhbGciOiJSUzI1NiIsImtpZCI6IlNpdTZZakVGQnY3NVRvbURZblByb3RDYXQ4RndyZ3Zza3UxUG9LbWZONzgifQ..fSnBc0iofX1fl96t0LlBDH2GteyJ6P9sw36PSg2m\_PmurryELKF9zETjVX0QFu4kSz6YCNeRjcr\_PlRVSKtJgYNJhXPYN1CIQl2G1uw7u2VKYRMK5MeAGIlRhNY0JcMk0QpTQp\_iZBoN7kLEQ5chSoimYxXNomcSWHl2DPLnu9s1yPhtMq7txNCSVf189T2HPr0aLNcXEb-w9ybNOud9CLAPouiLIzvtMHX50cK8jj6UhJET-7plAyWwyL0UT5s\_1LYgDFjvXK3dK9qMP3VZPxsErPsvsm2VcaJtL7CLQNL5OcBpLFh9NxGVhtFkXwOKfDkIK5JiQVOQJ5fOgFBTaw

xeeshankhan@Xeeshans-MacBook-Air ~ %

