Experiment 6

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Batch-A6

Kubernetes: Deploying a Simple Application

Steps for Installation:

- **install kubectl search in browser**
- first tab install tool
    click install on windows
- **set path in shell:**
    C:\WINDOWS\system32> cd..
    C:\WINDOWS> cd ..
    C:\> cd kubectl
- **Paste in windows shell - :**
    curl.exe -LO "https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe"

 C:\kubectl> curl.exe -LO https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe
 C:\kubectl>dir
   Paste in shell - :
  curl.exe -LO https://dl.k8s.io/v1.33.0/bin/windows/amd64/kubectl.exe.sha256

 C:\kubectl> curl.exe -LO https://dl.k8s.io/v1.33.0/bin/windows/amd64/kubectl.exe.sha256

- C:\kubectl> CertUtil -hashfile kubectl.exe SHA256

- C:\kubectl> type kubectl.exe.sha256

- C:\kubectl> $(Get-FileHash -Algorithm SHA256 .\kubectl.exe).Hash -eq $(Get-Content
  .\kubectl.exe.sha256)

- Set edit environmental path
    C:\kubectl

- **Open command prompt(cmd):-**
    Type command –
        kubectl version --client
- C:\Users\DYPATU>kubectl version --client

- **Install minikube**
    Search in browser
    Install minikube
        Create folder C:\
            Minikube
Open windows shell
    Set path of minikube
C:\Users\DYPATU>   cd..
C:\Users> cd..
 C:\> cd minikube
C:\minikube>
Paste link

 C:\minikube> New-Item -Path 'c:\' -Name 'minikube' -ItemType Directory –Force

>> Invoke-WebRequest -OutFile 'c:\minikube\minikube.exe' -Uri
'https://github.com/kubernetes/minikube/releases/latest/download/minikube-windows-
amd64.exe' –UseBasicParsing

C:\minikube> dir

Open windows shell run as administrator:
Paste in shell
    $oldPath = [Environment]::GetEnvironmentVariable('Path',
[EnvironmentVariableTarget]::Machine)
>> if ($oldPath.Split(';') -inotcontains 'C:\minikube'){
>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube' -f $oldPath),
[EnvironmentVariableTarget]::Machine)
>> }

 C:\WINDOWS\system32> $oldPath = [Environment]::GetEnvironmentVariable('Path',
[EnvironmentVariableTarget]::Machine)
>> if ($oldPath.Split(';') -inotcontains 'C:\minikube'){

>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube' -f $oldPath), [EnvironmentVariableTarget]::Machine)
>> }

Check environmental path in minikube set

Install virtual box:

Search this link in browser- https://www.virtualbox.org/wiki/Downloads

Select windows hosts
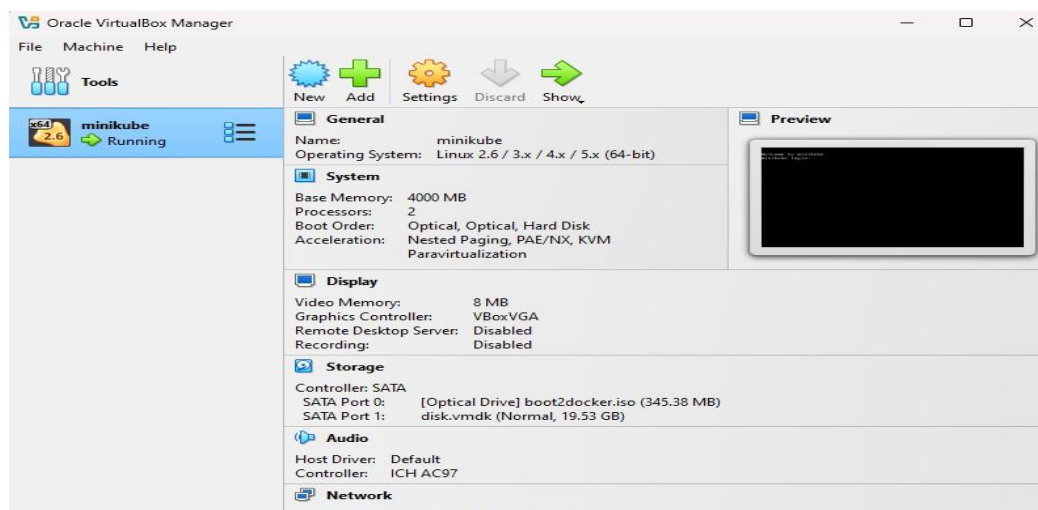
Downloading virtual box is start\

Open new command prompt

C:\Users\DYPATU>minikube start --driver=virtualbox
C:\Users\DYPATU>minikube start --no-vtx-check
Check in virtual box

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C:\Users\DYPATU>minikube config set driver virtualbox

C:\Users\DYPATU>minikube status

C:\Users\DYPATU>kubectl get nodes

C:\Users\DYPATU>kubectl get po –A

C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl create deployment hello-minikube --image=kicbase/echo-server:1.0

deployment.apps/hello-minikube created


C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl expose deployment hello-minikube --type=NodePort --port=8080

C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl get services hello-minikube

C:\Users\DYPATU>minikube service hello-minikube –url

     Check in browser using given local host address

C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl run nginx –image=nginx

C:\Users\DYPATU>kubectl get pods

C:\Users\DYPATU>kubectl get pods

   Open new command prompt (cmd)

C:\Users\DYPATU>kubectl get deployments

C:\Users\DYPATU>kubectl get service

C:\Users\DYPATU>kubectl delete service hello-minikube

C:\Users\DYPATU>kubectl get service

C:\Users\DYPATU>kubectl delete deployments hello-minikube

C:\Users\DYPATU>kubectl get deployments

C:\Users\DYPATU>kubectl get pods
```

C:\Users\DYPATU>minikube stop

C:\Users\DYPATU>minikube start

C:\Users\DYPATU>kubectl --get po -A

C:\Users\DYPATU>kubectl get po –A