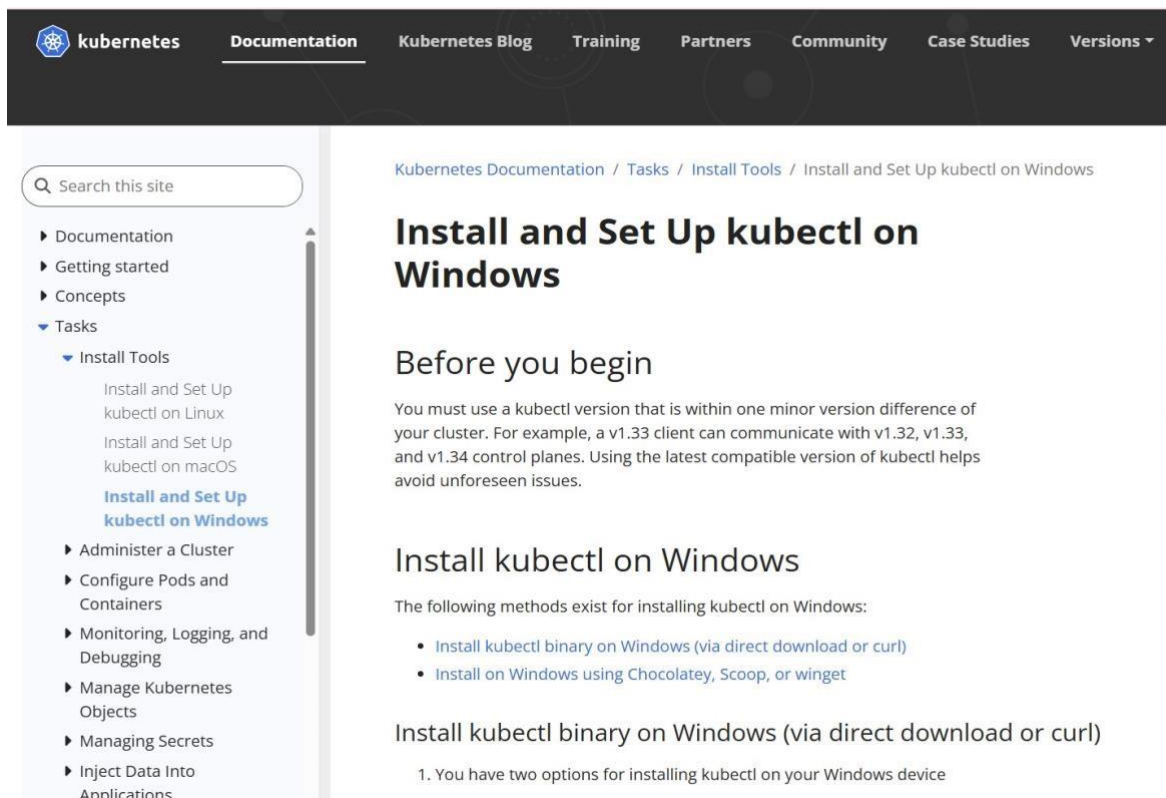


## Experiment No -6

### 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 - :

```
C:\kubectl> curl.exe -LO
```

```
https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe
```

#### in shell - :

```
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>dir Paste
```

C:\kubectl> type kubectl.exe.sha256

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

```
Administrator: Windows PowerShell (x86)
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\WINDOWS\system32> cd..
PS C:\WINDOWS> cd..
PS C:\> cd kubectl
PS C:\kubectl> curl.exe -LO "https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe"
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
             Dload  Upload   Total   Spent    Left   Speed
100  138  100  138    0     0   149      0  --:--:-- --:--:-- --:--:--   149
100 58.8M  100 58.8M    0     0 2596k      0  0:00:23 0:00:23 --:--:-- 3797k
PS C:\kubectl> dir

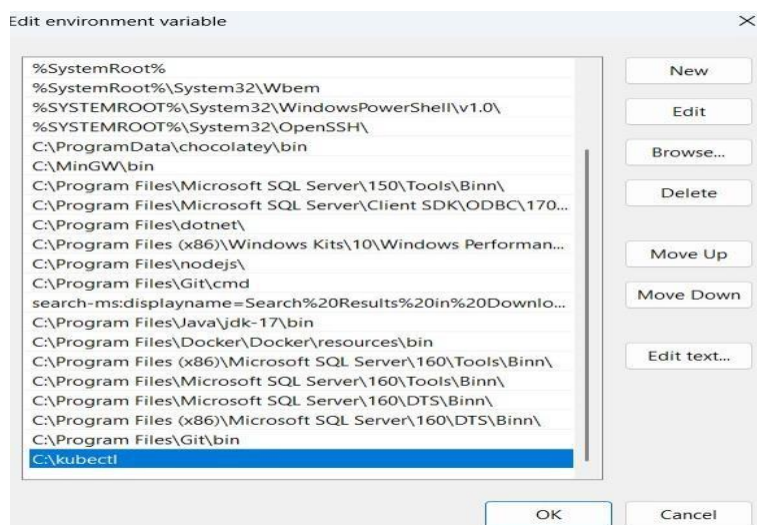
Directory: C:\kubectl

Mode                LastWriteTime         Length Name
----                -
-a-----          5/15/2025   9:40 PM         61703168 kubectl.exe

PS C:\kubectl> curl.exe -LO "https://dl.k8s.io/v1.33.0/bin/windows/amd64/kubectl.exe.sha256"
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
             Dload  Upload   Total   Spent    Left   Speed
100  138  100  138    0     0   174      0  --:--:-- --:--:-- --:--:--   175
100  64  100  64    0     0    56      0  0:00:01 0:00:01 --:--:--   228
PS C:\kubectl> CertUtil -hashfile kubectl.exe SHA256
SHA256 hash of kubectl.exe:
db6d96f65a86426e6c9484ca88a233aa7f160025f40c20b153c5bf4f9746c791
CertUtil: -hashfile command completed successfully.
PS C:\kubectl> type kubectl.exe.sha256
db6d96f65a86426e6c9484ca88a233aa7f160025f40c20b153c5bf4f9746c791
PS C:\kubectl> $(Get-FileHash -Algorithm SHA256 .\kubectl.exe).Hash -eq $(Get-Content .\kubectl.exe.sha256)
True
```

Set edit environmental path

C:\kubectl

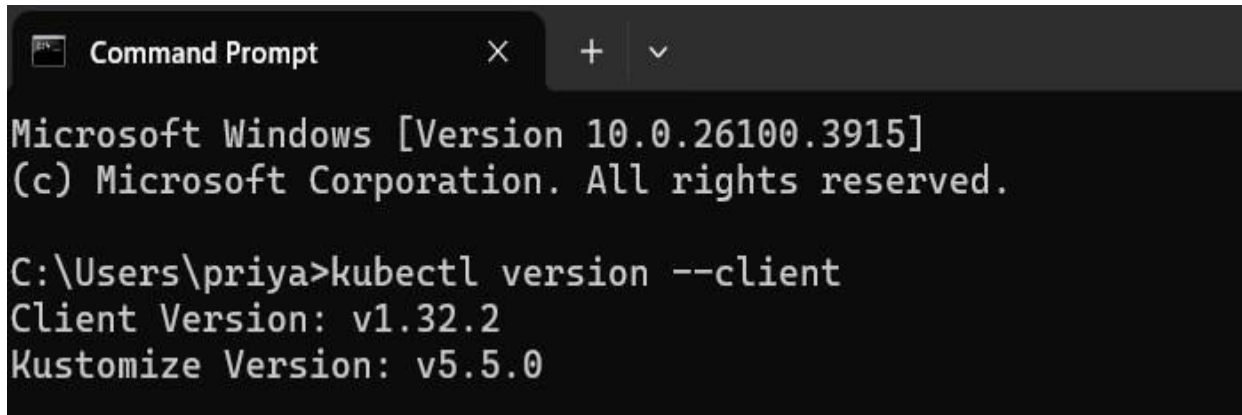


Open command prompt(cmd):-

Type command –

kubectl version --client

C:\Users\DYPATU>kubectl version --client

A screenshot of a Windows Command Prompt window. The title bar says 'Command Prompt'. The window shows the following text: 'Microsoft Windows [Version 10.0.26100.3915] (c) Microsoft Corporation. All rights reserved. C:\Users\priya>kubectl version --client Client Version: v1.32.2 Kustomize Version: v5.5.0'.

```
Microsoft Windows [Version 10.0.26100.3915]
(c) Microsoft Corporation. All rights reserved.

C:\Users\priya>kubectl version --client
Client Version: v1.32.2
Kustomize Version: v5.5.0
```

**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>

```
Administrator: Windows PowerShell (x86)
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\WINDOWS\system32> New-Item -Path 'c:\' -Name 'minikube'

-ItemType Directory -Force

Directory: C:\

Mode                LastWriteTime         Length Name
----                -
d-----          5/15/2025   9:56 PM             minikube

PS C:\WINDOWS\system32> Invoke-WebRequest -OutFile 'c:\minikube\minikube.exe' -Uri 'https://github.com/kubernetes/minikube/releases/latest/download/minikube-windows-amd64.exe' -UseBasicParsing
PS C:\WINDOWS\system32> cd..
PS C:\WINDOWS> cd..
PS C:\> cd minikube
PS C:\minikube> dir

Directory: C:\minikube

Mode                LastWriteTime         Length Name
----                -
-a----          5/15/2025   9:58 PM    125837824 minikube.exe
```

## Open windows shell run as administrator:

### Paste in shell

```
$oldPath = [Environment]::GetEnvironmentVariable('Path',
[EnvironmentVariableTarget]::Machine)
>> if ($oldPath.Split(';') -notcontains 'C:\minikube'){
>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube' -f $oldPath),
[EnvironmentVariableTarget]::Machine)
>> }
```

```
PS C:\minikube> $oldPath = [Environment]::GetEnvironmentVariable('Path', [EnvironmentVariableTarget]::Machine)
>> if ($oldPath.Split(';') -notcontains 'C:\minikube'){
>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube' -f $oldPath), [EnvironmentVariableTarget]::Machine)
>> }
```

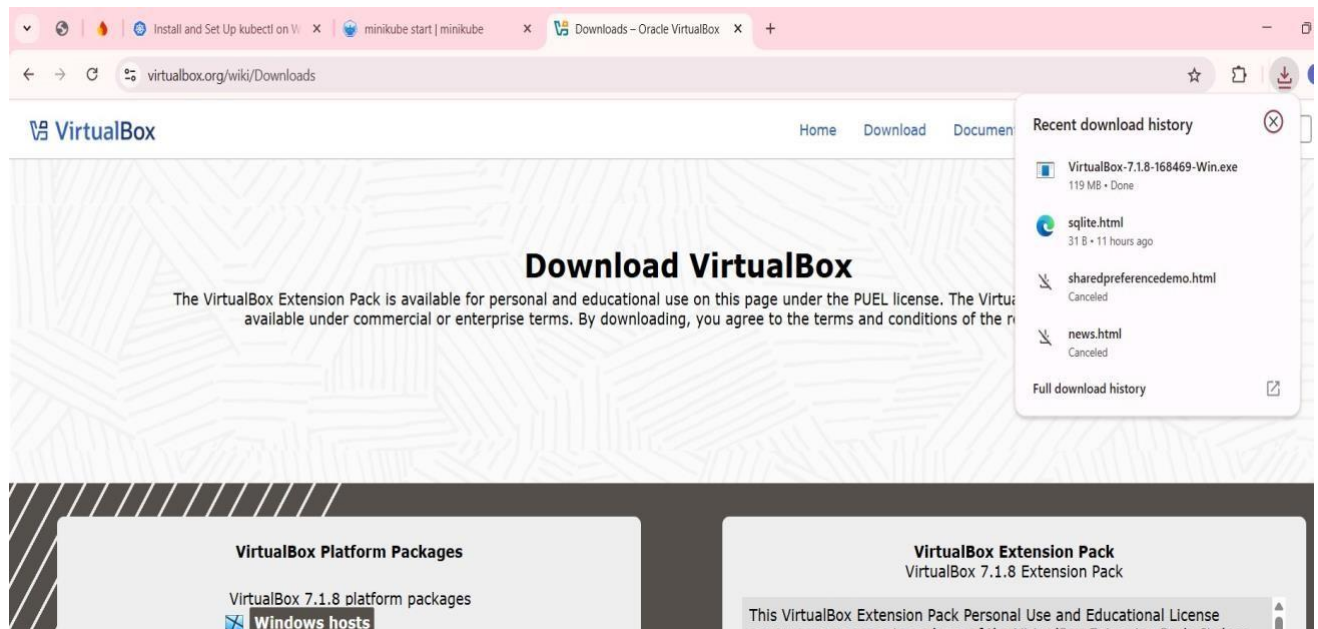
### Check environmental path in minikube set

## Install virtual box:

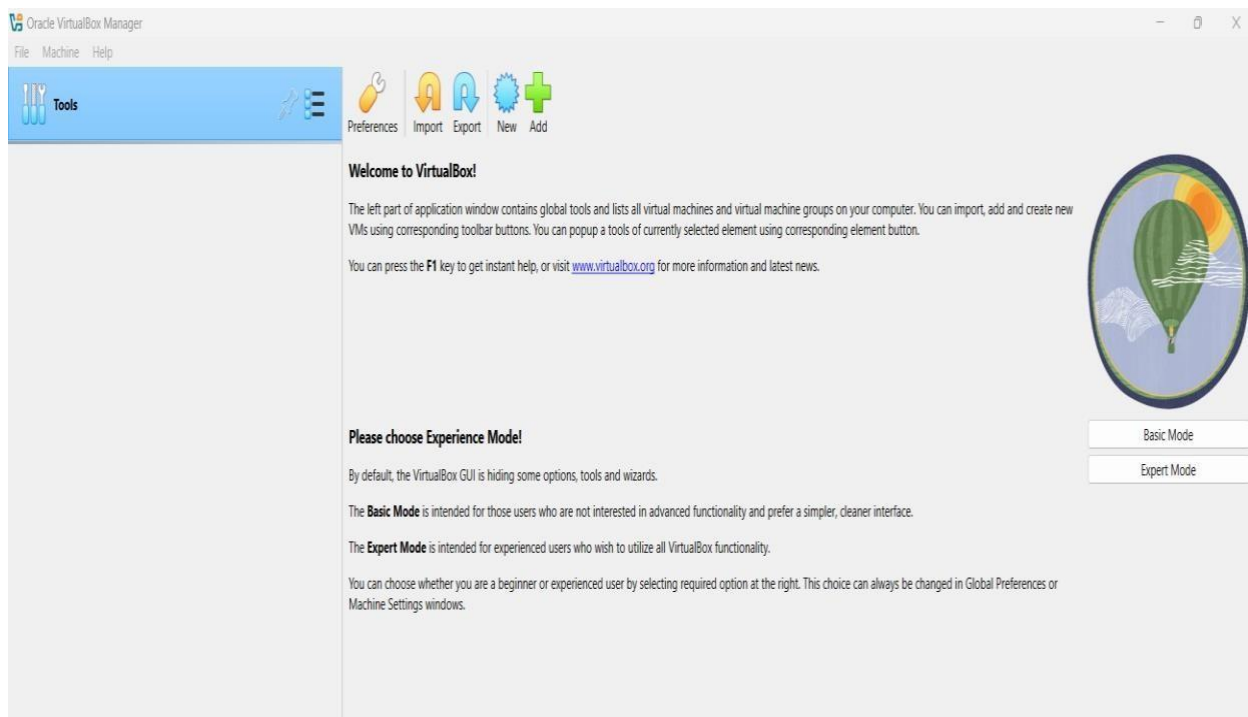
Search this link in browser- <https://www.virtualbox.org/wiki/Downloads>

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

```

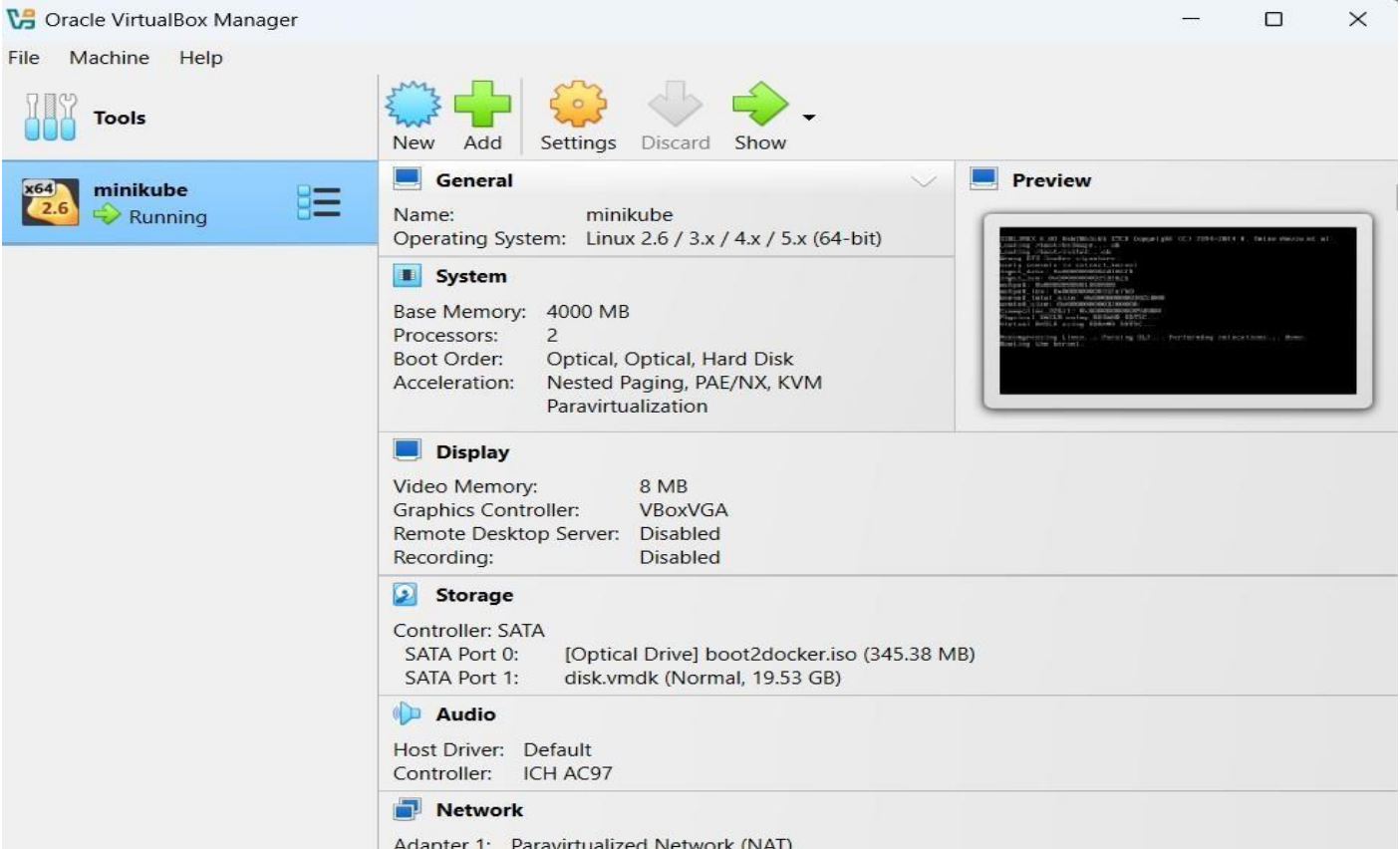
Microsoft Windows [Version 10.0.26100.3915]
(c) Microsoft Corporation. All rights reserved.

C:\Users\priya>minikube start --driver=virtualbox
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3915 Build 26100.3915
* Using the virtualbox driver based on user configuration
* Downloading VM boot image ...
E0515 22:20:40.874004 23116 iso.go:90] Unable to download https://storage.googleapis.com/minikube/iso/minikube
/iso/minikube-v1.35.0-amd64.iso?checksum=file:https://storage.googleapis.com/minikube/iso/minikube-v1.35.0-amd64
: Mode:2 Umask:----- Detectors:[0x633f340 0x633f340 0x633f340 0x633f340 0x633f340 0x633f340 0x633f340] Deco
00615820 tar.xz:0xc000615830 tar.zst:0xc000615840 tbz2:0xc000615810 tgz:0xc000615820 txz:0xc000615830 tzst:0xc00
c0007866e0 https:0xc000786730] Dir:false ProgressListener:0x62e2040 Insecure:false DisableSymlinks:false Options
s.com/minikube/iso/minikube-v1.35.0-amd64.iso.sha256": dial tcp: lookup storage.googleapis.com: no such host
* Downloading VM boot image ...

```

```
C:\Users\priya>minikube start --no-vtx-check
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3915 Build 26100.3915
* Automatically selected the virtualbox driver
* Downloading VM boot image ...
```

## Check in virtual box



```
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:\Windows\System32>minikube config set driver virtualbox
! These changes will take effect upon a minikube delete and then a minikube start
```

```
C:\Windows\System32>minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
```

```
C:\Windows\System32>kubectl get nodes
NAME          STATUS    ROLES          AGE      VERSION
minikube      Ready     control-plane   6m14s    v1.32.0
```

```
C:\Windows\System32>kubectl get po -A
NAMESPACE     NAME                                     READY   STATUS    RESTARTS   AGE
kube-system    coredns-668d6bf9bc-x9nhm              1/1     Running   0           14m
kube-system    etcd-minikube                          1/1     Running   0           14m
kube-system    kube-apiserver-minikube                1/1     Running   0           14m
kube-system    kube-controller-manager-minikube        1/1     Running   0           14m
kube-system    kube-proxy-k4279                       1/1     Running   0           14m
kube-system    kube-scheduler-minikube                1/1     Running   0           14m
kube-system    storage-provisioner                    1/1     Running   1 (13m ago) 14m
```

```
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:\Windows\System32>kubectl create deployment hello-minikube --image="kicbase/echo-server:1.0"
deployment.apps/hello-minikube created
```

```
C:\Windows\System32>kubectl get pods
NAME                                     READY   STATUS    RESTARTS   AGE
hello-minikube-ffcbb5874-p7cr9          1/1     Running   0           15s
```

```
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

```
C:\Windows\System32>kubectl run hello-minikube --image=kicbase/echo-server:1.0 --port=8080
pod/hello-minikube created

C:\Windows\System32>kubectl expose pod hello-minikube --type=NodePort --port=8080
service/hello-minikube exposed

C:\Windows\System32>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
hello-minikube                      1/1     Running   0           87s
hello-minikube-ffcbb5874-p7cr9      1/1     Running   0           20m

C:\Windows\System32>kubectl get services hello-minikube
NAME            TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
hello-minikube  NodePort    10.99.94.185 <none>        8080:30603/TCP   88s

C:\Windows\System32>minikube service hello-minikube -url
Error: unknown shorthand flag: 'u' in -url
See 'minikube service --help' for usage.

C:\Windows\System32>minikube service hello-minikube --url
http://192.168.59.100:30603
```

Check in browser using given local host address



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

C:\Users\DYPATU>kubectl get pods

```
Command Prompt
Microsoft Windows [Version 10.0.26100.3915]
(c) Microsoft Corporation. All rights reserved.

C:\Users\priya>kubectl run nginx --image=nginx
pod/nginx created

C:\Users\priya>kubectl get pods
NAME                                READY   STATUS              RESTARTS   AGE
hello-minikube                      1/1     Running             0           8m34s
hello-minikube-ffcbb5874-p7cr9      1/1     Running             0           27m
nginx                               0/1     ContainerCreating   0           13s
```

Open new command prompt (cmd)

C:\Users\DYPATU>kubectl get deployments

C:\Users\DYPATU>kubectl get service

```
Command Prompt
Microsoft Windows [Version 10.0.26100.3915]
(c) Microsoft Corporation. All rights reserved.

C:\Users\priya>kubectl get deployments
NAME            READY   UP-TO-DATE   AVAILABLE   AGE
hello-minikube  1/1     1             1           28m

C:\Users\priya>kubectl get service
NAME            TYPE        CLUSTER-IP    EXTERNAL-IP   PORT(S)          AGE
hello-minikube  NodePort    10.99.94.185  <none>        8080:30603/TCP   9m3s
kubernetes      ClusterIP   10.96.0.1     <none>        443/TCP          55m
```

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\priya>kubectl delete service hello-minikube
service "hello-minikube" deleted
```

```
C:\Users\priya>kubectl get service
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes    ClusterIP      10.96.0.1     <none>         443/TCP    56m
```

```
C:\Users\priya>kubectl delete deployments hello-minikube
deployment.apps "hello-minikube" deleted
```

```
C:\Users\priya>kubectl get deployments
No resources found in default namespace.
```

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

```
C:\Users\DYPATU>minikube stop
```

```
C:\Users\priya>kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
hello-minikube 1/1     Running   0          14m
nginx          1/1     Running   0          6m23s
```

```
C:\Users\priya>minikube stop
E0516 04:56:15.366496 15148 daemonize_windows.go:38] error terminating scheduled
chedule-stop service for profile minikube: NewSession: new client: new client: Error
using: docker, &{[] [C:\Users\priya\.minikube\machines\minikube\id_rsa]}: open C:\
be\id_rsa: Access is denied.
* Stopping node "minikube" ...
* 1 node stopped.
```

```
C:\Users\DYPATU>minikube start
```

```
C:\Users\priya>minikube start
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3915
* Using the virtualbox driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Restarting existing virtualbox VM for "minikube" ...
```

