- **Paste in windows shell - :**
  curl.exe -LO "https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe"

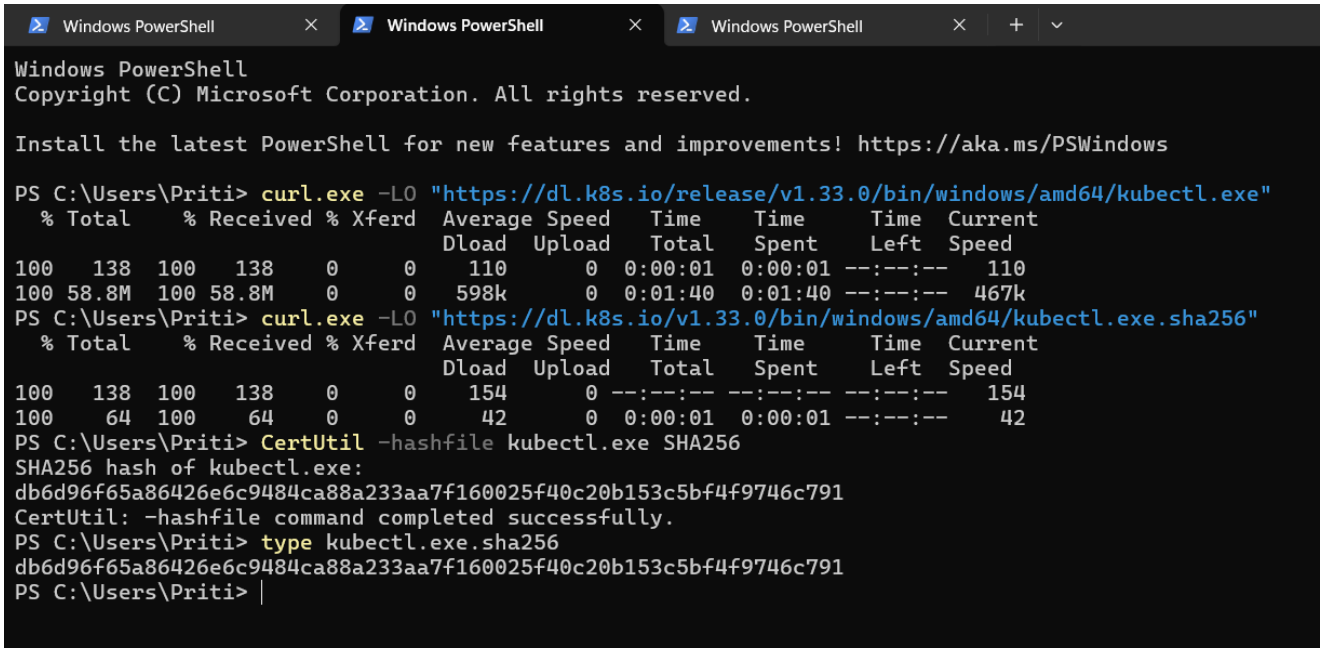
C:\kubectl> curl.exe -LO https://dl.k8s.io/release/v1.33.0/bin/windows/amd64/kubectl.exe C:\kubectl>dir

**Paste in shell - :**

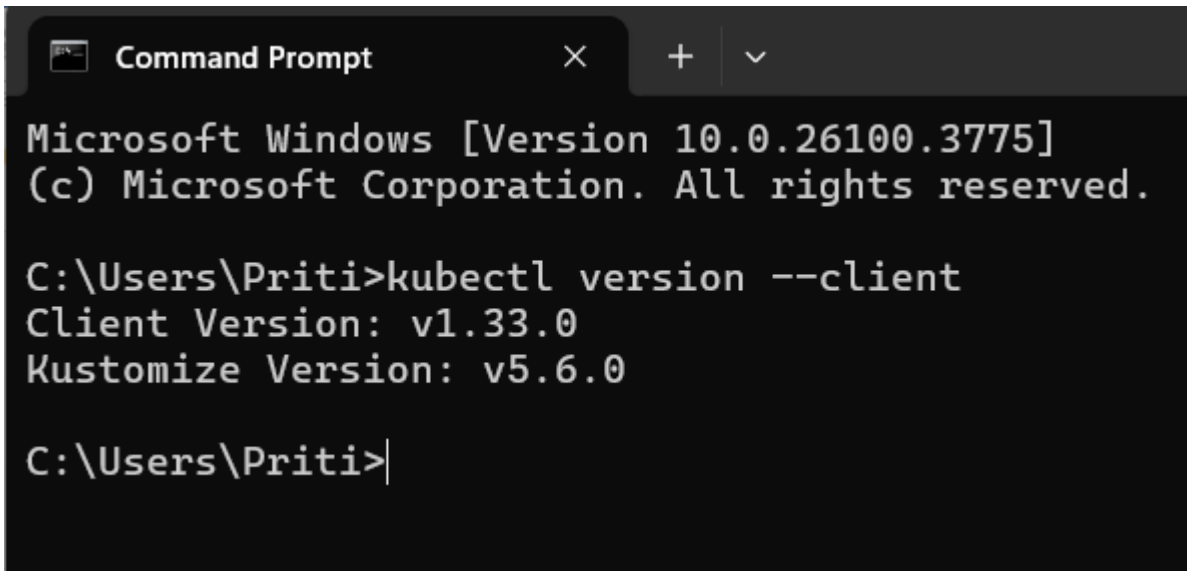
curl.exe -LO https://dl.k8s.io/v1.33.0/bin/windows/amd64/kubectl.exe.sha256

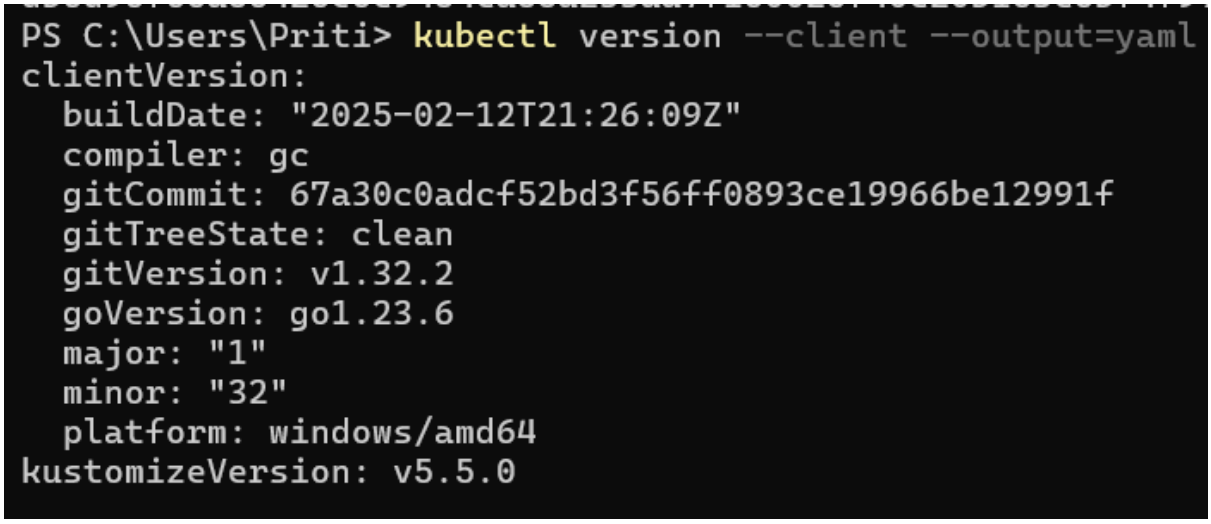
C:\kubectl> curl.exe -LO https://dl.k8s.io/v1.33.0/bin/windows/amd64/kubectl.exe.sha256

- 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-windowsamd64.exe' –UseBasicParsing

C:\minikube> dir

```
PS C:\Users\Priti> New-Item -Path 'c:\' -Name 'minikube' -ItemType Directory -Force


    Directory: C:\


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        15-05-2025     19:35                minikube


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

**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**

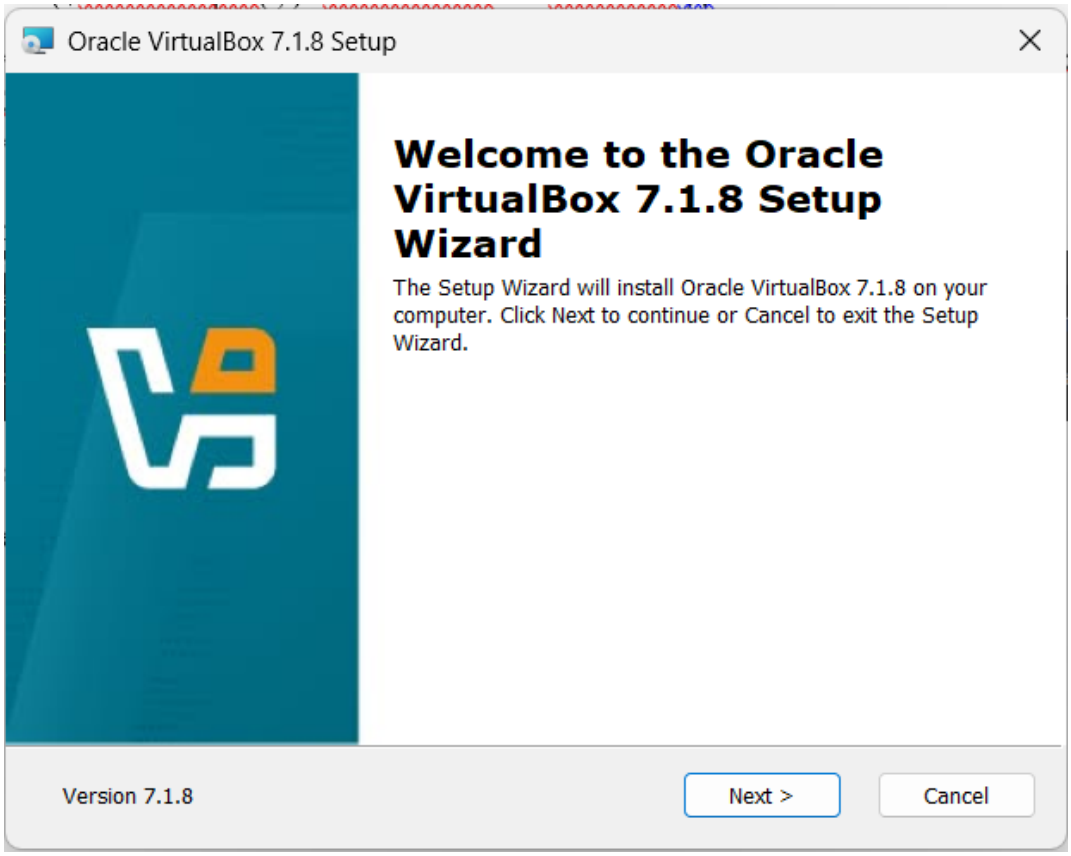
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft $oldPath = [Environment]::GetEnvironmentVariable('Path', [EnvironmentVariableTarget]::Machine)
>> if ($oldPath.Split(';') -inotcontains 'C:\minikube'){
>>   [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube'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

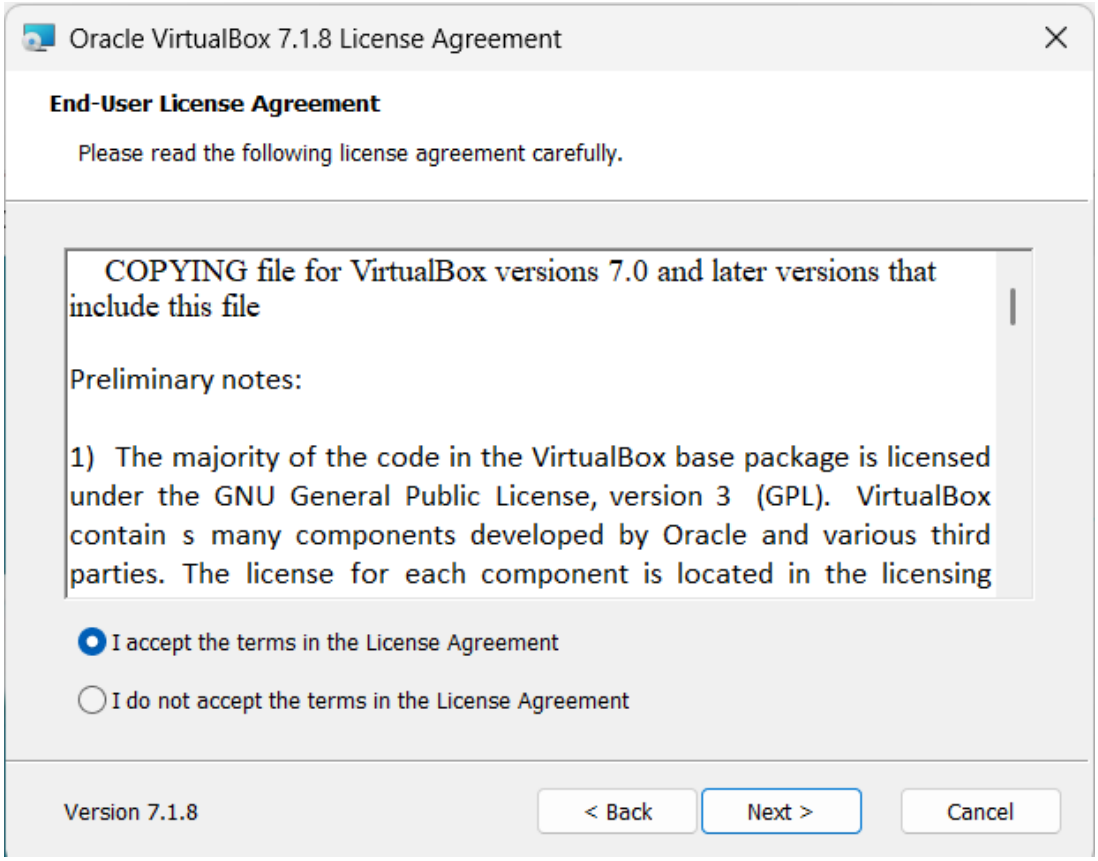
**Install virtual box:**

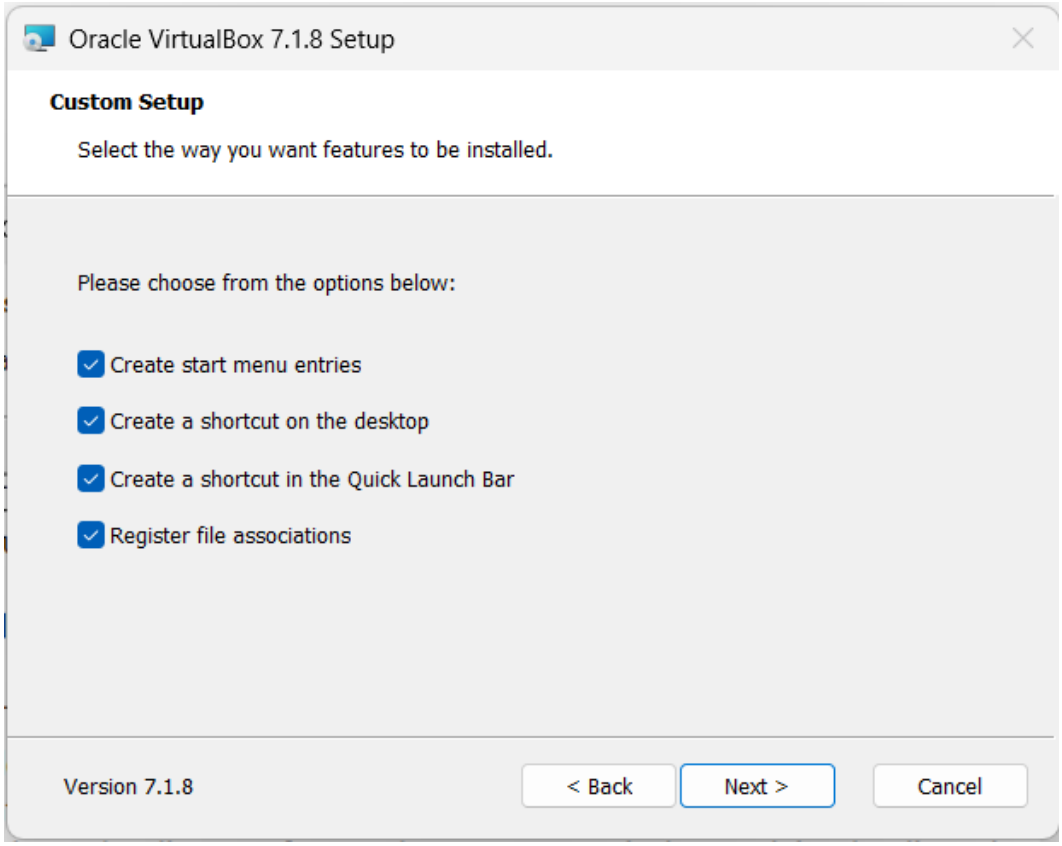
Search this link in browser- https://www.virtualbox.org/wiki/Downloads

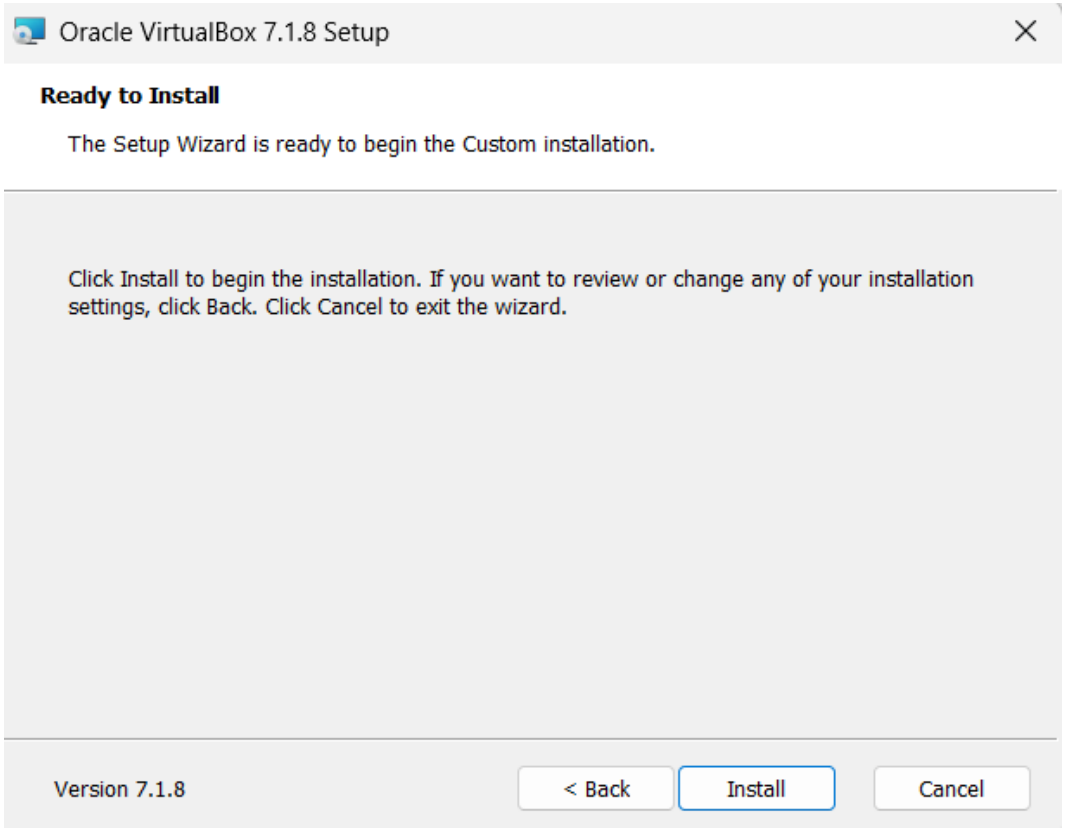
Select windows hosts

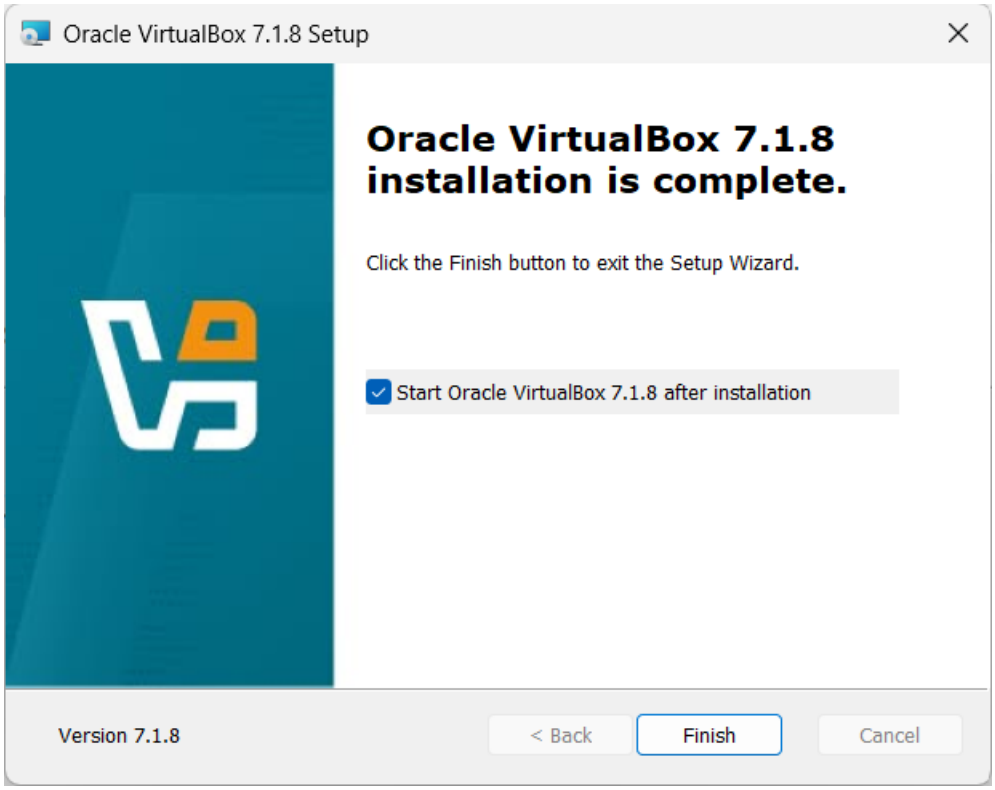
Downloading virtual box  is start\

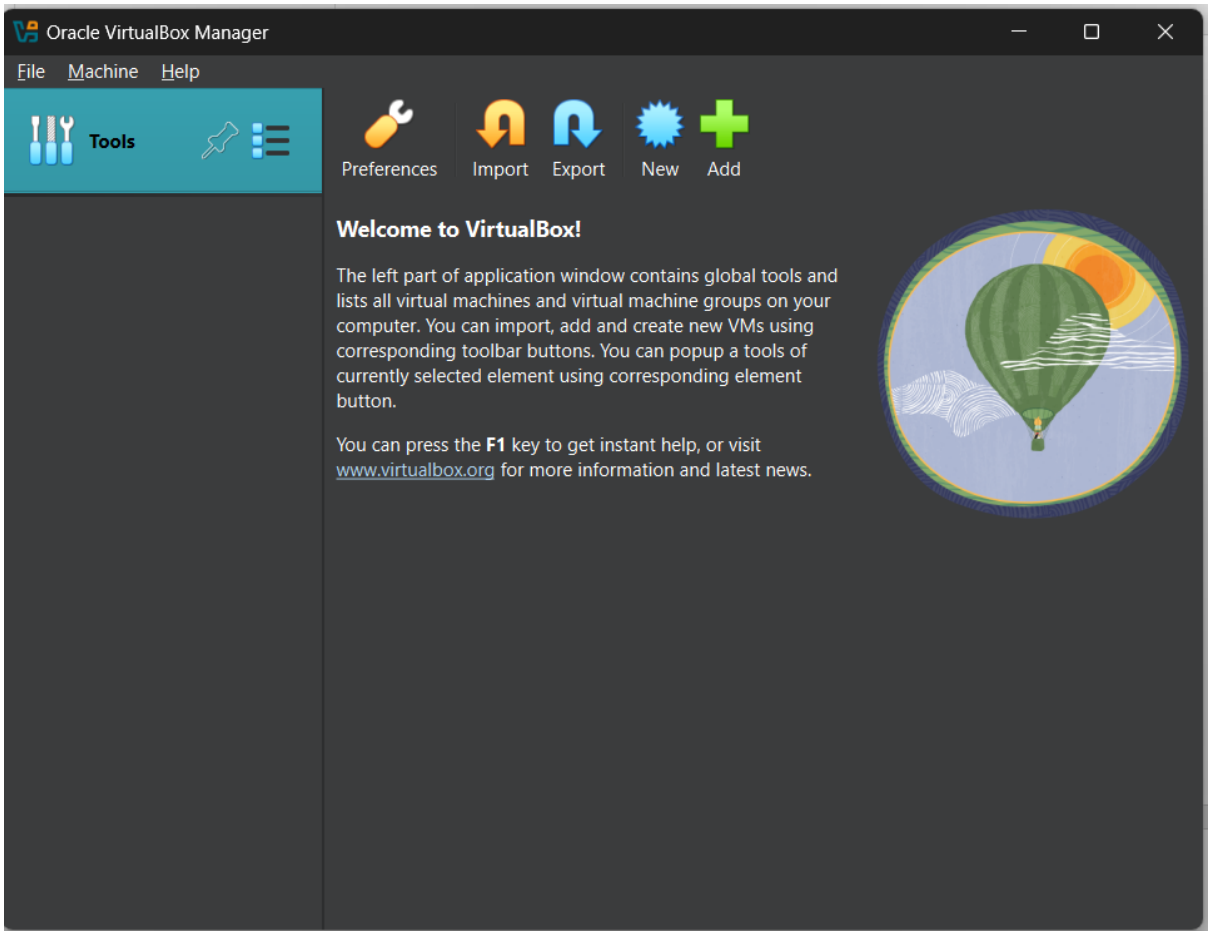



Oracle VirtualBox 7.1.8 Setup
Custom Setup
Select the way you want features to be installed.
Please choose from the options below:
Create start menu entries
Create a shortcut on the desktop
Create a shortcut in the Quick Launch Bar
Register file associations
Version 7.1.8
< Back
Next >
Cancel


Oracle VirtualBox 7.1.8 Setup
Ready to Install
The Setup Wizard is ready to begin the Custom installation.
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Version 7.1.8
< Back
Install
Cancel

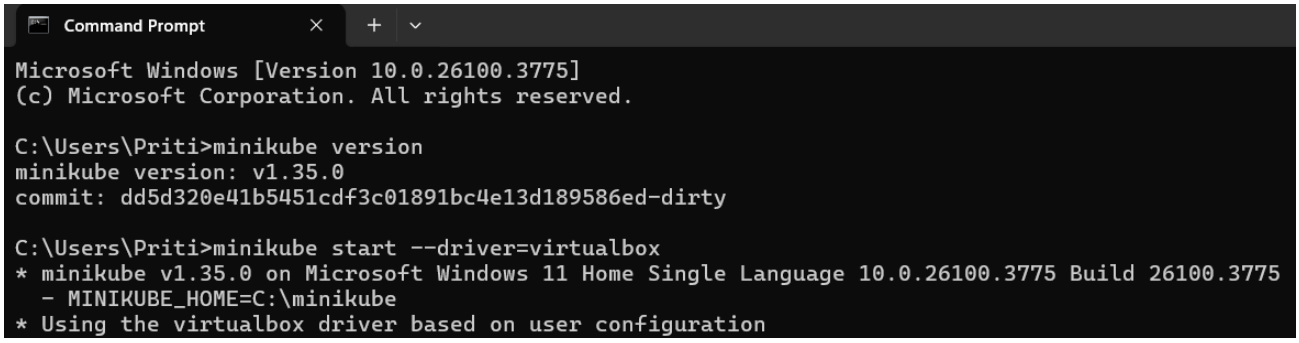


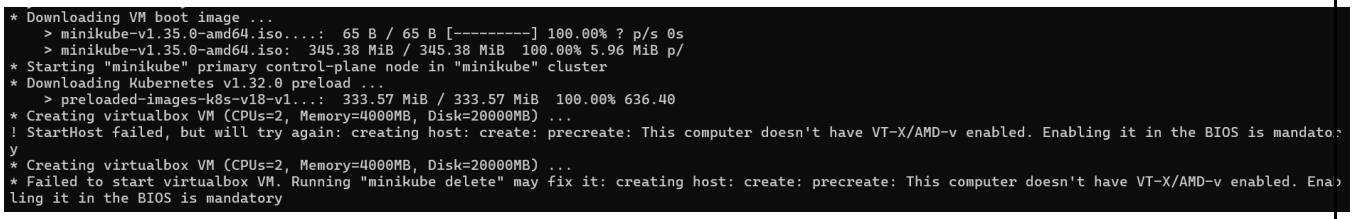



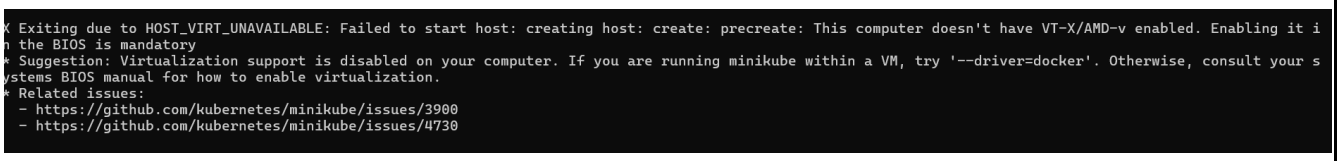

**Open new command prompt**

C:\Users\DYPATU>minikube start --driver=virtualbox

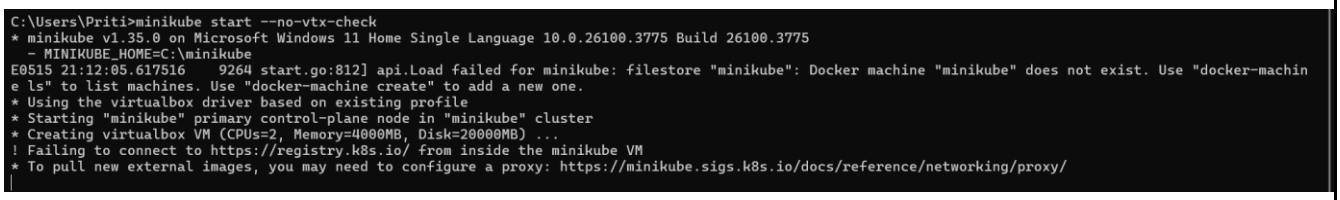
## Check in virtual box

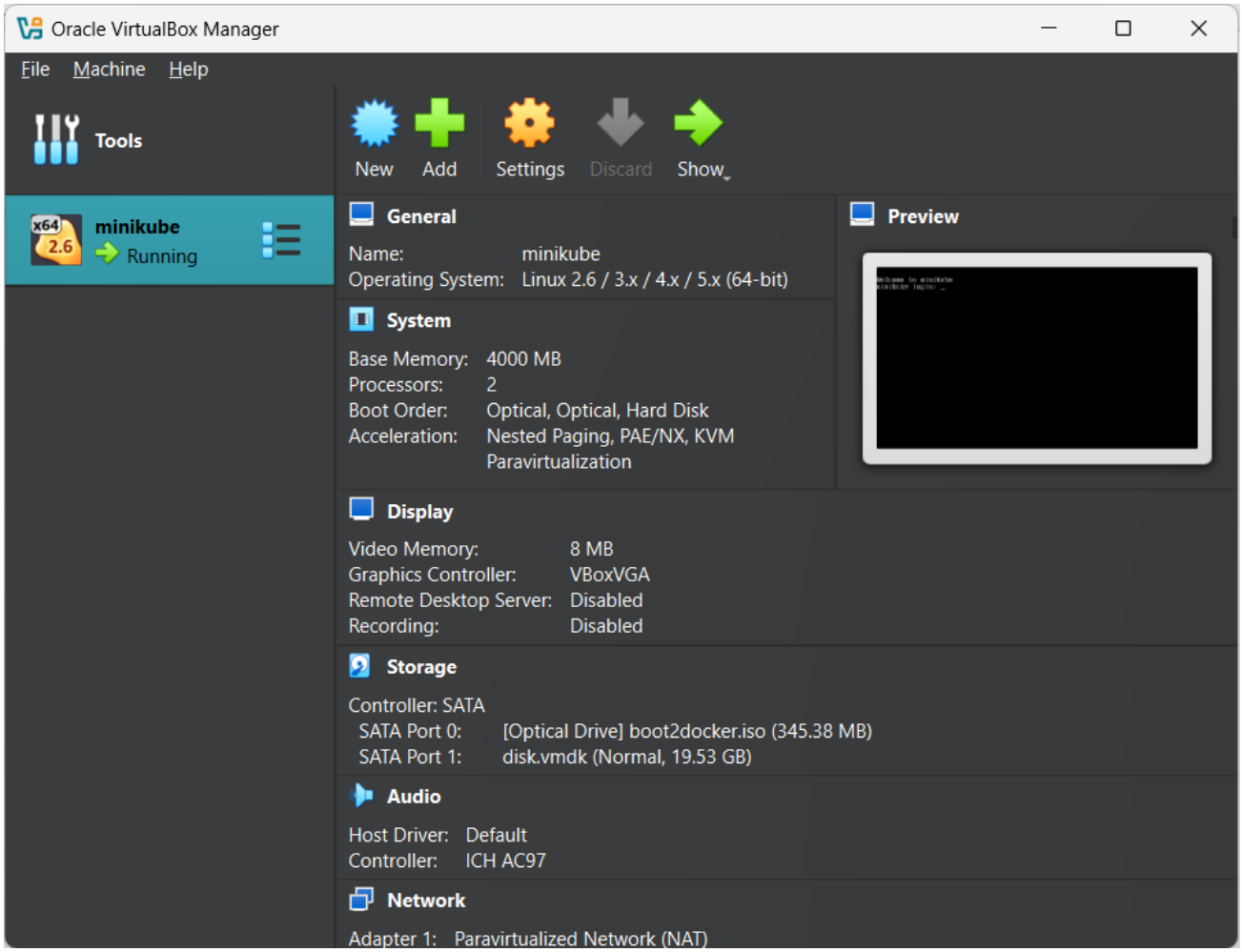



C:\Users\DYPATU>minikube start --no-vtx-check






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

C:\Users\DYPATU>minikube status


C:\Users\DYPATU>kubectl get nodes

```
C:\Users\Priti>kubectl get nodes
NAME       STATUS   ROLES           AGE     VERSION
minikube   Ready    control-plane   5m26s   v1.32.0

C:\Users\Priti>kubectl get po -A
NAMESPACE     NAME                               READY   STATUS    RESTARTS        AGE
kube-system   coredns-668d6bf9bc-kx88r           1/1     Running   0               5m
kube-system   coredns-668d6bf9bc-lqnt6           1/1     Running   0               5m1s
kube-system   etcd-minikube                      1/1     Running   0               5m32s
kube-system   kube-apiserver-minikube            1/1     Running   0               5m32s
kube-system   kube-controller-manager-minikube   1/1     Running   1 (5m36s ago)   5m32s
kube-system   kube-proxy-qt4fb                   1/1     Running   0               5m1s
kube-system   kube-scheduler-minikube            1/1     Running   0               5m31s
kube-system   storage-provisioner                1/1     Running   1 (4m9s ago)    4m50s
```

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\Priti>kubectl create deployment hello-minikube --image=kicbase/echo-server:1.0
deployment.apps/hello-minikube created

C:\Users\Priti>kubectl get pods
NAME                              READY   STATUS    RESTARTS   AGE
hello-minikube-ffcbb5874-94hkr   1/1     Running   0          3m41s

C:\Users\Priti>kubectl expose deployment hello-minikube --type=NodePort --port=8080
service/hello-minikube exposed

C:\Users\Priti>kubectl get pods
NAME                              READY   STATUS    RESTARTS   AGE
hello-minikube-ffcbb5874-94hkr   1/1     Running   0          5m21s

C:\Users\Priti>minikube service hello-minikube
|-----------|----------------|-------------|---------------------------|
| NAMESPACE |      NAME      | TARGET PORT |            URL            |
|-----------|----------------|-------------|---------------------------|
| default   | hello-minikube |        8080 | http://192.168.59.101:31861 |
|-----------|----------------|-------------|---------------------------|
* Opening service default/hello-minikube in default browser...
```

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

```
Request served by hello-minikube-ffcbb5874-94hkr

HTTP/1.1 GET /

Host: 192.168.59.101:31861
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9,en-IN;q=0.8
Connection: keep-alive
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0
```

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

Check in browser using given local host address

```
C:\Users\Priti>kubectl get pods
NAME                              READY   STATUS    RESTARTS   AGE
hello-minikube-ffcbb5874-94hkr   1/1     Running   0          5m21s

C:\Users\Priti>minikube service hello-minikube
|-----------|----------------|-------------|---------------------------|
| NAMESPACE |      NAME      | TARGET PORT |            URL            |
|-----------|----------------|-------------|---------------------------|
| default   | hello-minikube |        8080 | http://192.168.59.101:31861 |
|-----------|----------------|-------------|---------------------------|
* Opening service default/hello-minikube in default browser...

C:\Users\Priti>kubectl get pods
NAME                              READY   STATUS    RESTARTS   AGE
hello-minikube-ffcbb5874-94hkr   1/1     Running   0          10m
```

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

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

C:\Users\Priti>kubectl get pods
NAME                              READY   STATUS         RESTARTS   AGE
hello-minikube-ffcbb5874-94hkr   1/1     Running        0          13m
nginx                             0/1     ErrImagePull   0          77s
```

Open new command prompt (cmd)

C:\Users\DYPATU>kubectl get deployments

C:\Users\DYPATU>kubectl get service

```
C:\Users\Priti>kubectl get deployments
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
hello-minikube   1/1     1            1           14m

C:\Users\Priti>kubectl get service
NAME             TYPE        CLUSTER-IP    EXTERNAL-IP   PORT(S)          AGE
hello-minikube   NodePort    10.96.83.67   <none>        8080:31861/TCP   11m
kubernetes       ClusterIP   10.96.0.1     <none>        443/TCP          23m
```

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

C:\Users\DYPATU>kubectl get service

```
C:\Users\Priti>kubectl delete service hello-minikube
service "hello-minikube" deleted

C:\Users\Priti>kubectl get service
NAME         TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   24m
```

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

C:\Users\DYPATU>kubectl get deployments

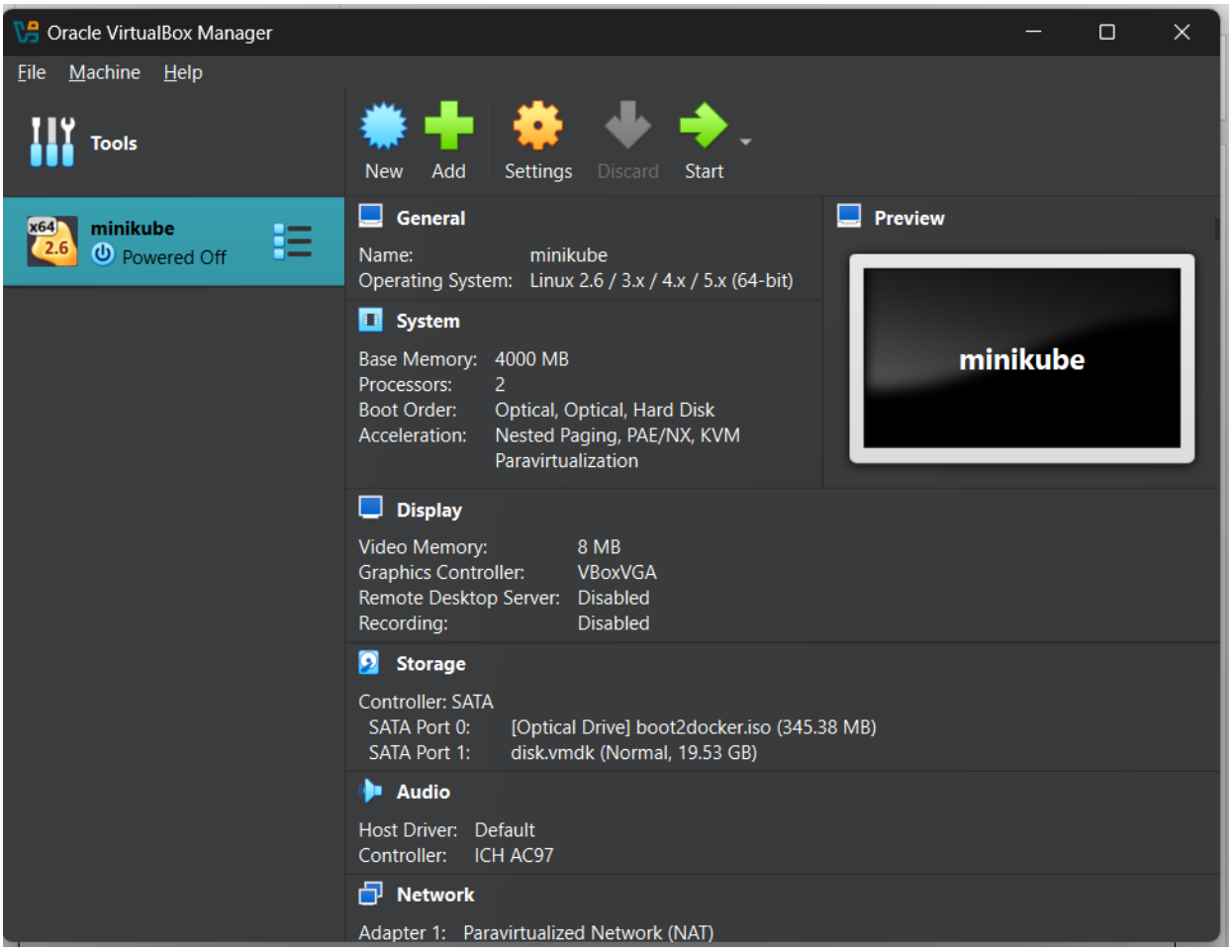
```
C:\Users\Priti>kubectl delete deployments hello-minikube
deployment.apps "hello-minikube" deleted

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

C:\Users\DYPATU>kubectl get pods

```
C:\Users\Priti>kubectl get pods
NAME    READY   STATUS    RESTARTS   AGE
nginx   1/1     Running   0          7m25s
```

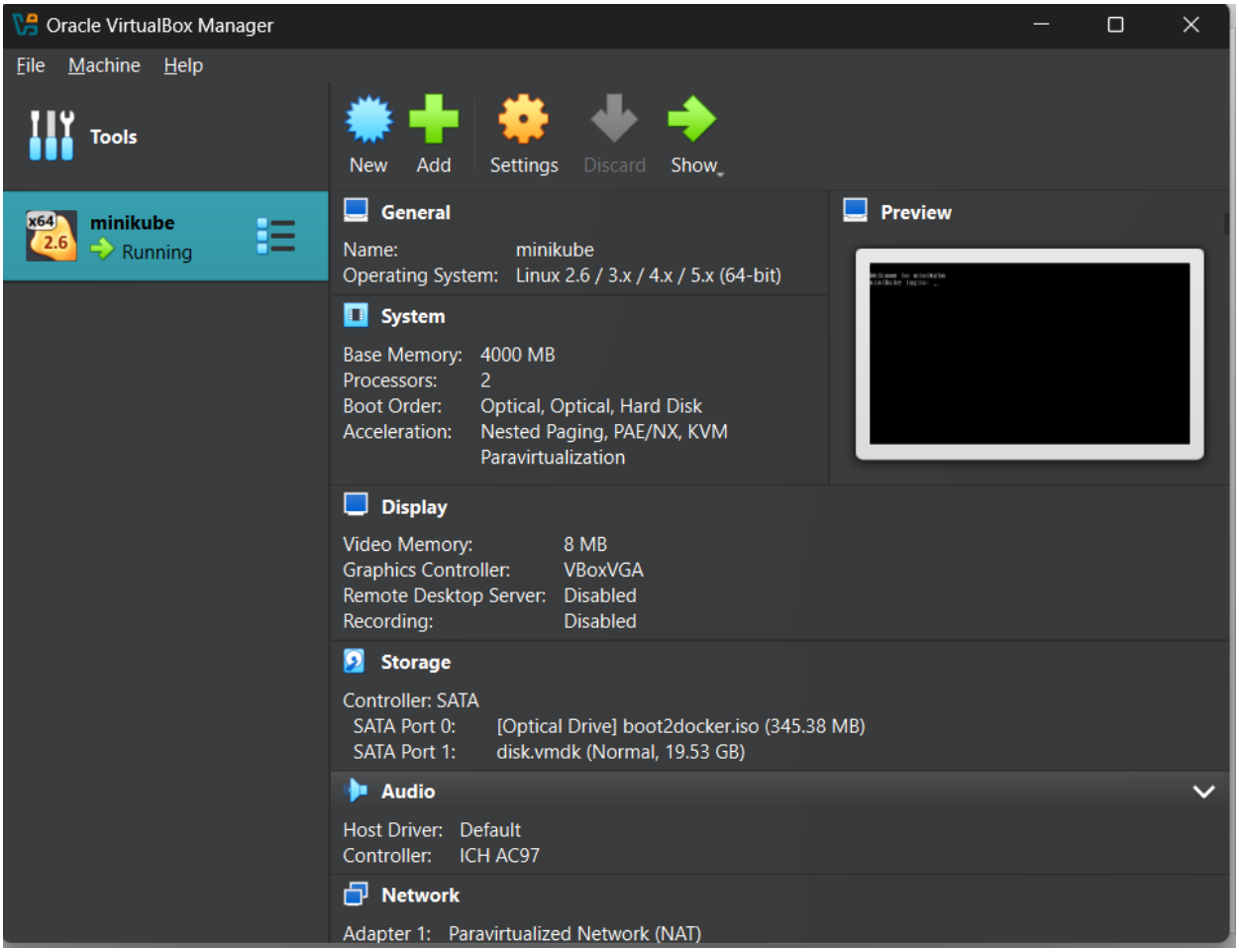
C:\Users\DYPATU>minikube stop

```
C:\Users\Priti>minikube stop
* Stopping node "minikube"  ...
* 1 node stopped.
```




C:\Users\DYPATU>minikube start

```
C:\Users\Priti>minikube start
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3775 Build 26100.3775
  - MINIKUBE_HOME=C:\minikube
* Using the virtualbox driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Restarting existing virtualbox VM for "minikube" ...
! Failing to connect to https://registry.k8s.io/ from inside the minikube VM
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
* Preparing Kubernetes v1.32.0 on Docker 27.4.0 ...
* Configuring bridge CNI (Container Networking Interface) ...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Verifying Kubernetes components...
* Enabled addons: storage-provisioner, default-storageclass
* kubectl not found. If you need it, try: 'minikube kubectl -- get pods -A'
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```




C:\Users\DYPATU>kubectl get po –A

```
C:\Users\Priti>kubectl get po -A
NAMESPACE     NAME                                 READY   STATUS    RESTARTS         AGE
default       nginx                                1/1     Running   1 (8m54s ago)    17m
kube-system   coredns-668d6bf9bc-kx88r             1/1     Running   1 (8m49s ago)    36m
kube-system   coredns-668d6bf9bc-lqnt6             1/1     Running   1 (8m49s ago)    36m
kube-system   etcd-minikube                        1/1     Running   1 (8m53s ago)    37m
kube-system   kube-apiserver-minikube              1/1     Running   1 (8m53s ago)    37m
kube-system   kube-controller-manager-minikube     1/1     Running   3 (2m30s ago)    37m
kube-system   kube-proxy-qt4fb                     1/1     Running   1 (8m54s ago)    36m
kube-system   kube-scheduler-minikube              1/1     Running   1 (8m54s ago)    37m
kube-system   storage-provisioner                  1/1     Running   3                36m
```