

- **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

```

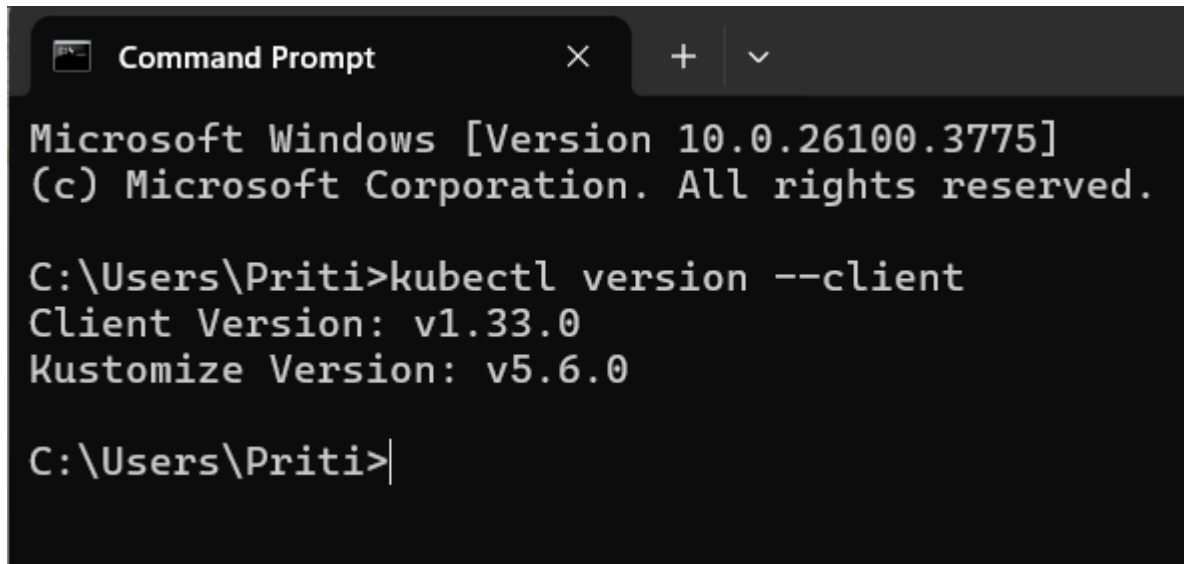
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Priti> 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    110      0  0:00:01  0:00:01 --:--:-- 110
100 58.8M 100 58.8M      0      0   598k      0  0:01:40  0:01:40 --:--:-- 467k
PS C:\Users\Priti> 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    154      0  --:--:--  --:--:--  --:--:-- 154
100 64    100 64      0      0     42      0  0:00:01  0:00:01 --:--:-- 42
PS C:\Users\Priti> CertUtil -hashfile kubectl.exe SHA256
SHA256 hash of kubectl.exe:
db6d96f65a86426e6c9484ca88a233aa7f160025f40c20b153c5bf4f9746c791
CertUtil: -hashfile command completed successfully.
PS C:\Users\Priti> type kubectl.exe.sha256
db6d96f65a86426e6c9484ca88a233aa7f160025f40c20b153c5bf4f9746c791
PS C:\Users\Priti> |

```

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



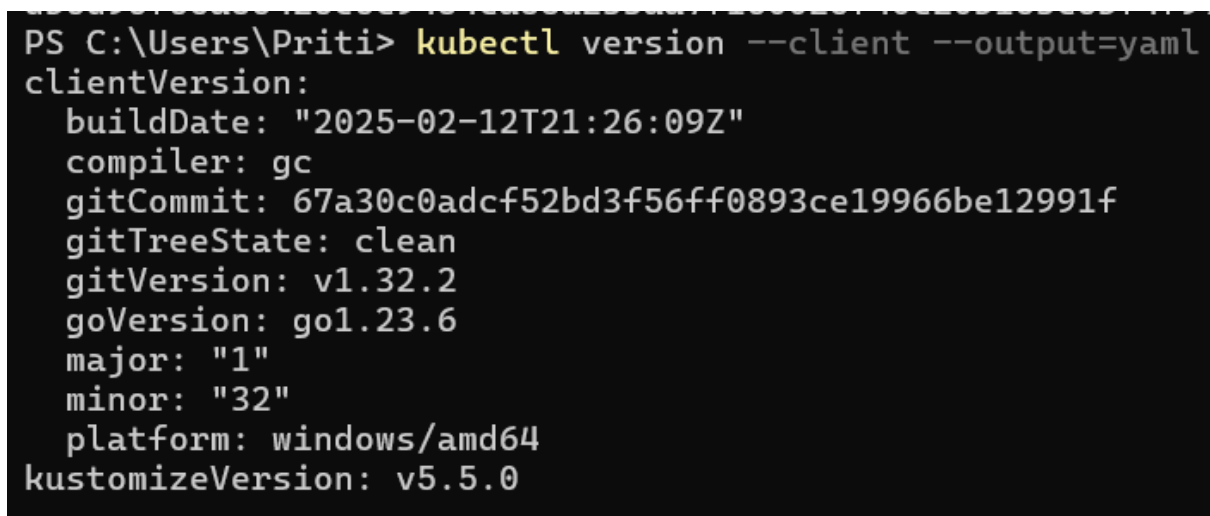
```

Microsoft Windows [Version 10.0.26100.3775]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Priti>kubectl version --client
Client Version: v1.33.0
Kustomize Version: v5.6.0

C:\Users\Priti>

```



```

PS C:\Users\Priti> kubectl version --client --output=yaml
clientVersion:
  buildDate: "2025-02-12T21:26:09Z"
  compiler: gc
  gitCommit: 67a30c0adcf52bd3f56ff0893ce19966be12991f
  gitTreeState: clean
  gitVersion: v1.32.2
  goVersion: go1.23.6
  major: "1"
  minor: "32"
  platform: windows/amd64
kustomizeVersion: 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>

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

```
C:\WINDOWS\system32> $oldPath =  
[Environment]::GetEnvironmentVariable('Path',  
[EnvironmentVariableTarget]::Machine)  
>> if ($oldPath.Split(';') -notcontains 'C:\minikube'){  
  
>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube' -f $oldPath),  
[EnvironmentVariableTarget]::Machine)  
>> }
```

### Check environmental path in minikube set

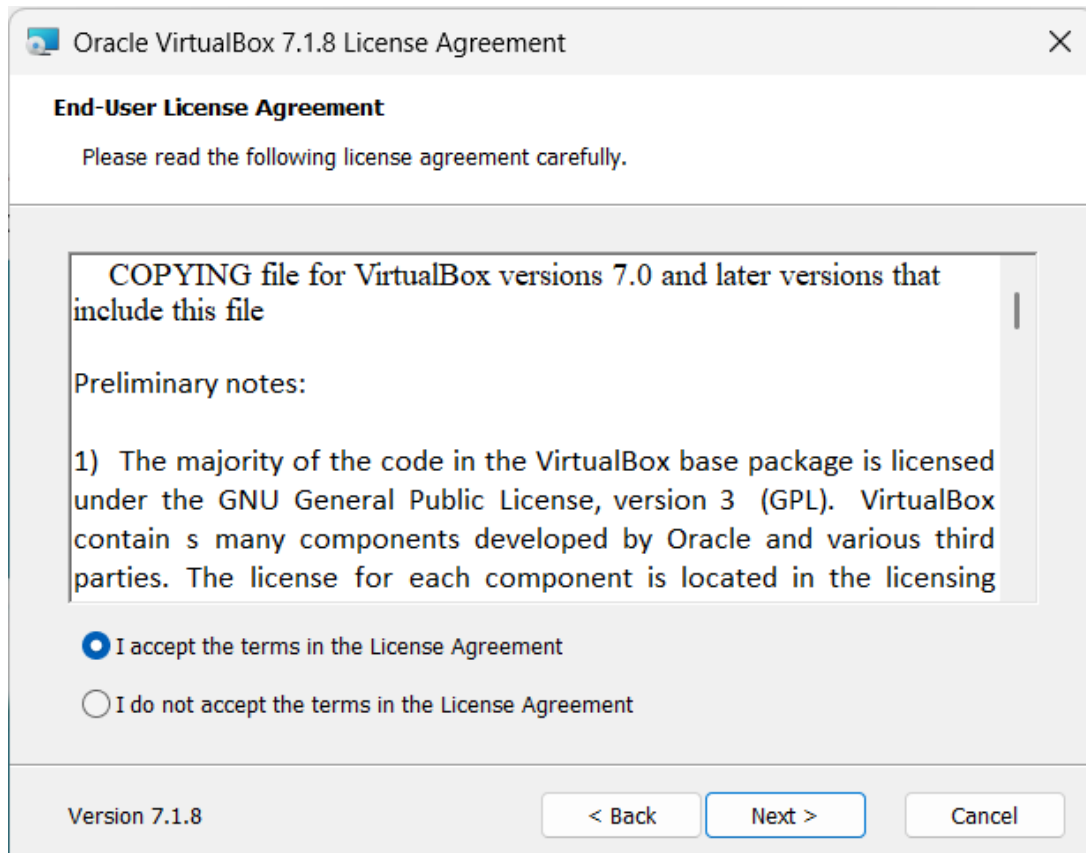
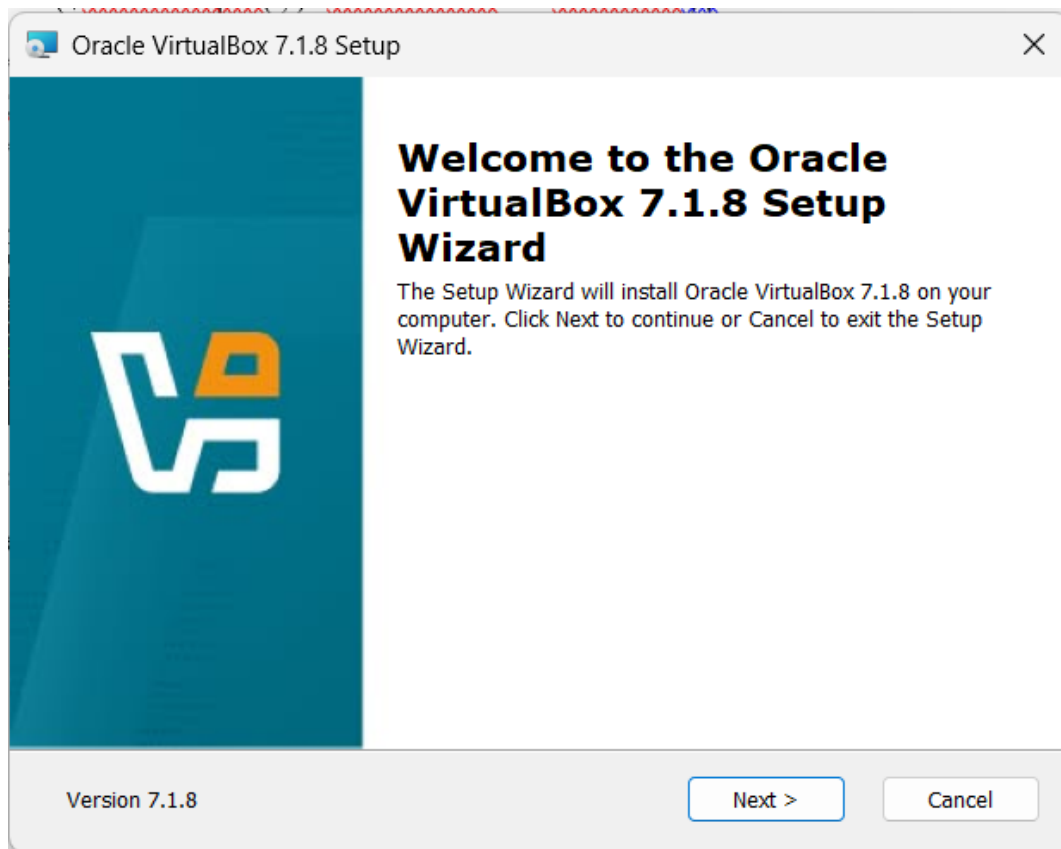
```
Administrator: Windows PowerShell  
Windows PowerShell  
Copyright (C) Microsoft $oldPath = [Environment]::GetEnvironmentVariable('Path', [EnvironmentVariableTarget]::Machine)  
>> if ($oldPath.Split(';') -notcontains 'C:\minikube'){  
>> [Environment]::SetEnvironmentVariable('Path', $('{0};C:\minikube'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

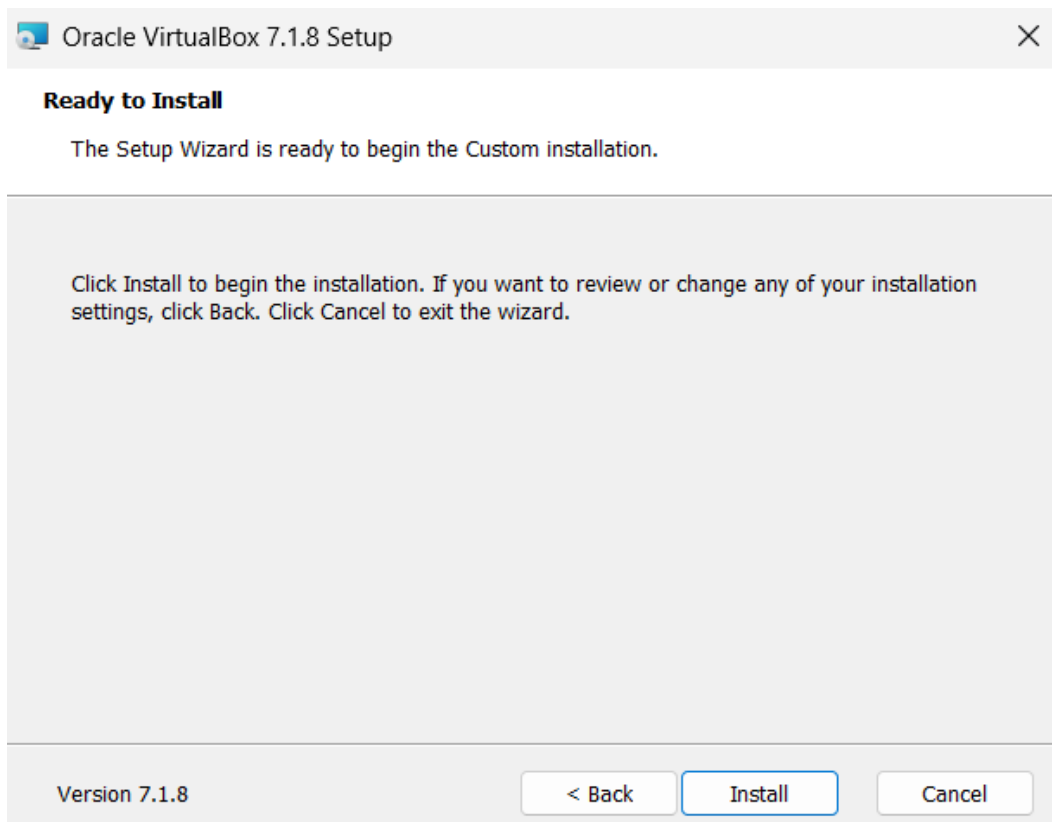
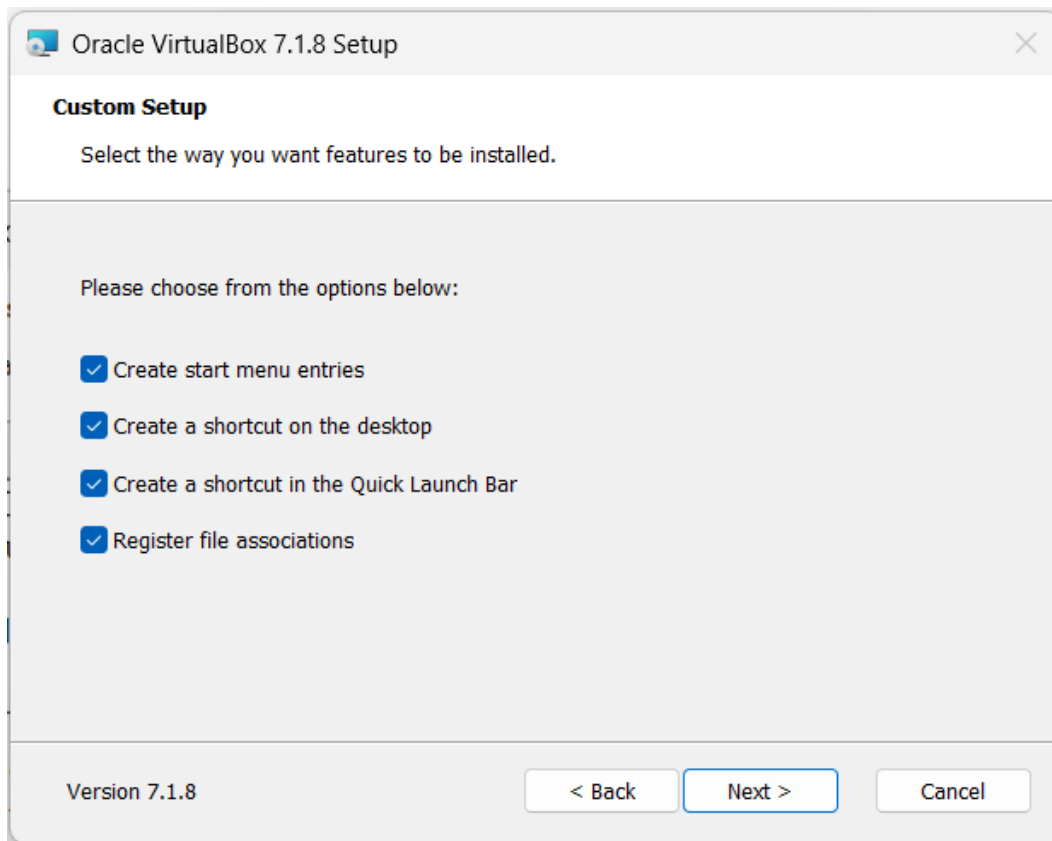
### Install virtual box:

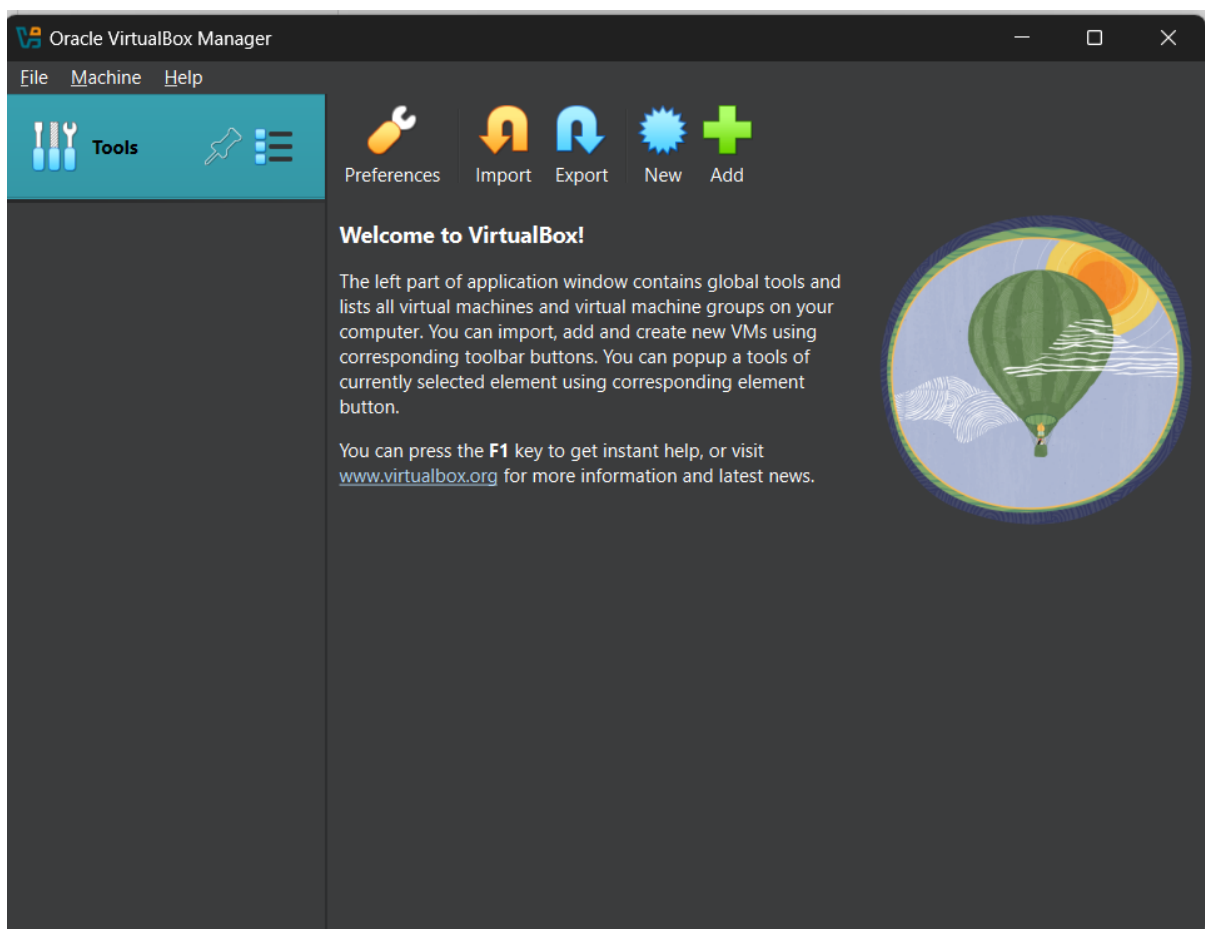
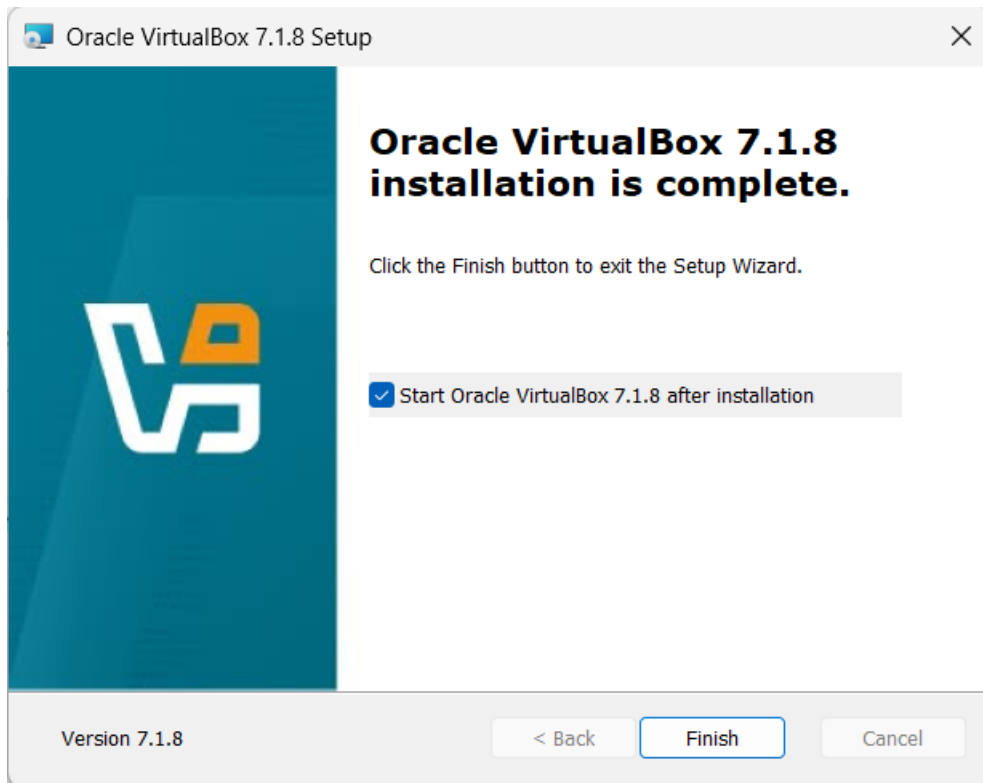
Search this link in browser- <https://www.virtualbox.org/wiki/Downloads>

Select windows hosts

Downloading virtual box is start\







**Open new command prompt**

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

## Check in virtual box

```
Command Prompt
Microsoft Windows [Version 10.0.26100.3775]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Priti>minikube version
minikube version: v1.35.0
commit: dd5d320e41b5451cdf3c01891bc4e13d189586ed-dirty

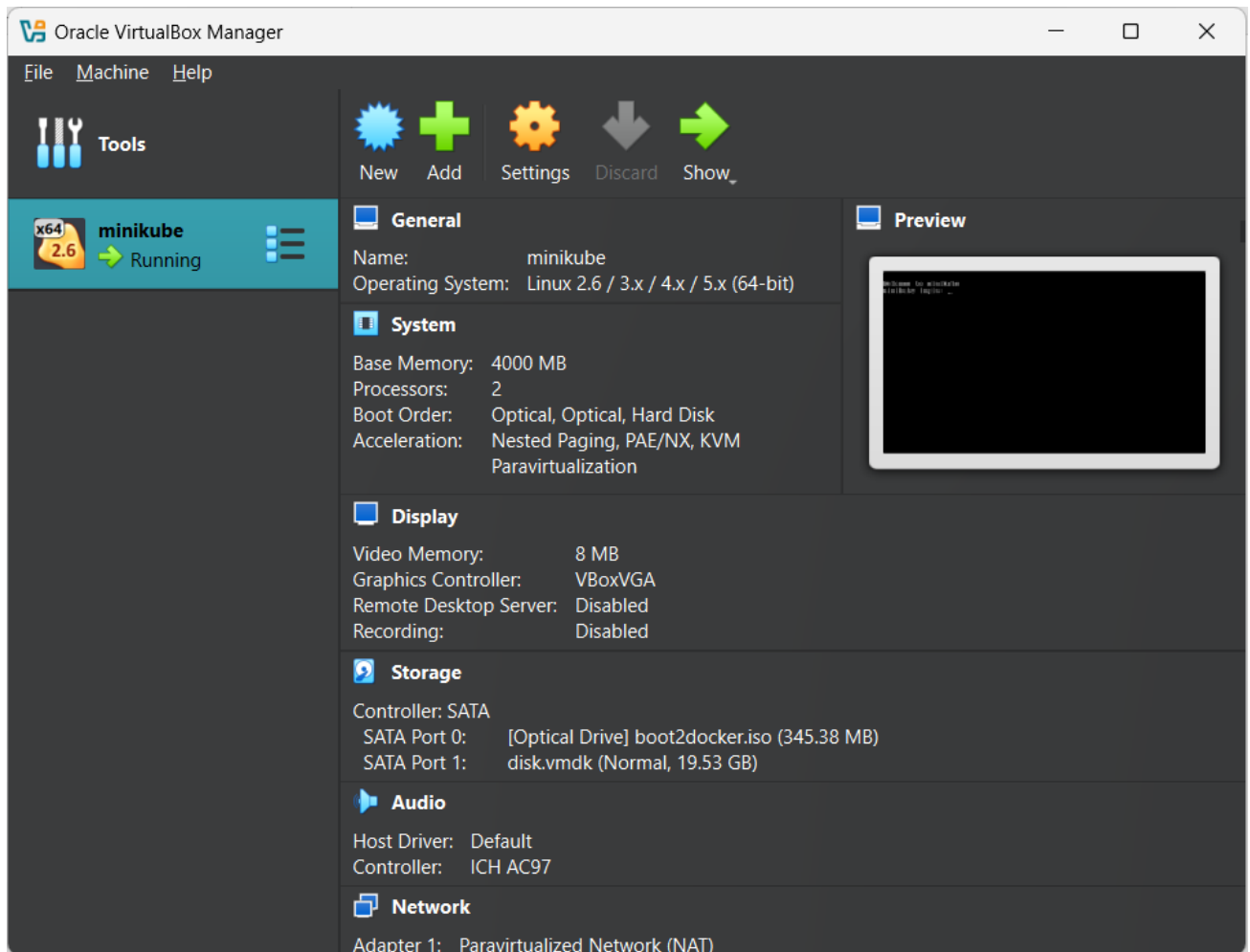
C:\Users\Priti>minikube start --driver=virtualbox
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3775 Build 26100.3775
- MINIKUBE_HOME=C:\minikube
* Using the virtualbox driver based on user configuration
```

```
* Downloading VM boot image ...
> minikube-v1.35.0-amd64.iso...: 65 B / 65 B [-----] 100.00% ? p/s 0s
> minikube-v1.35.0-amd64.iso: 345.38 MiB / 345.38 MiB 100.00% 5.96 MiB p/
* Starting "minikube" primary control-plane node in "minikube" cluster
* Downloading Kubernetes v1.32.0 preload ...
> preloaded-images-k8s-v18-v1...: 333.57 MiB / 333.57 MiB 100.00% 636.40
* Creating virtualbox VM (CPUs=2, Memory=4000MB, Disk=20000MB) ...
! StartHost failed, but will try again: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory
y
* Creating virtualbox VM (CPUs=2, Memory=4000MB, Disk=20000MB) ...
* Failed to start virtualbox VM. Running "minikube delete" may fix it: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory
```

```
X Exiting due to HOST_VIRT_UNAVAILABLE: Failed to start host: creating host: create: precreate: This computer doesn't have VT-X/AMD-v enabled. Enabling it in the BIOS is mandatory
* Suggestion: Virtualization support is disabled on your computer. If you are running minikube within a VM, try '--driver=docker'. Otherwise, consult your systems BIOS manual for how to enable virtualization.
* Related issues:
- https://github.com/kubernetes/minikube/issues/3900
- https://github.com/kubernetes/minikube/issues/4730
```

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

```
C:\Users\Priti>minikube start --no-vtx-check
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3775 Build 26100.3775
- MINIKUBE_HOME=C:\minikube
E0515 21:12:05.617516 9264 start.go:812] api.Load failed for minikube: filestore "minikube": Docker machine "minikube" does not exist. Use "docker-machine ls" to list machines. Use "docker-machine create" to add a new one.
* Using the virtualbox driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Creating virtualbox VM (CPUs=2, Memory=4000MB, Disk=20000MB) ...
! 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/
```



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

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

```
Command Prompt
- 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\Priti>minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
```

```
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-ffccb5874-94hkr         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-ffccb5874-94hkr         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
```

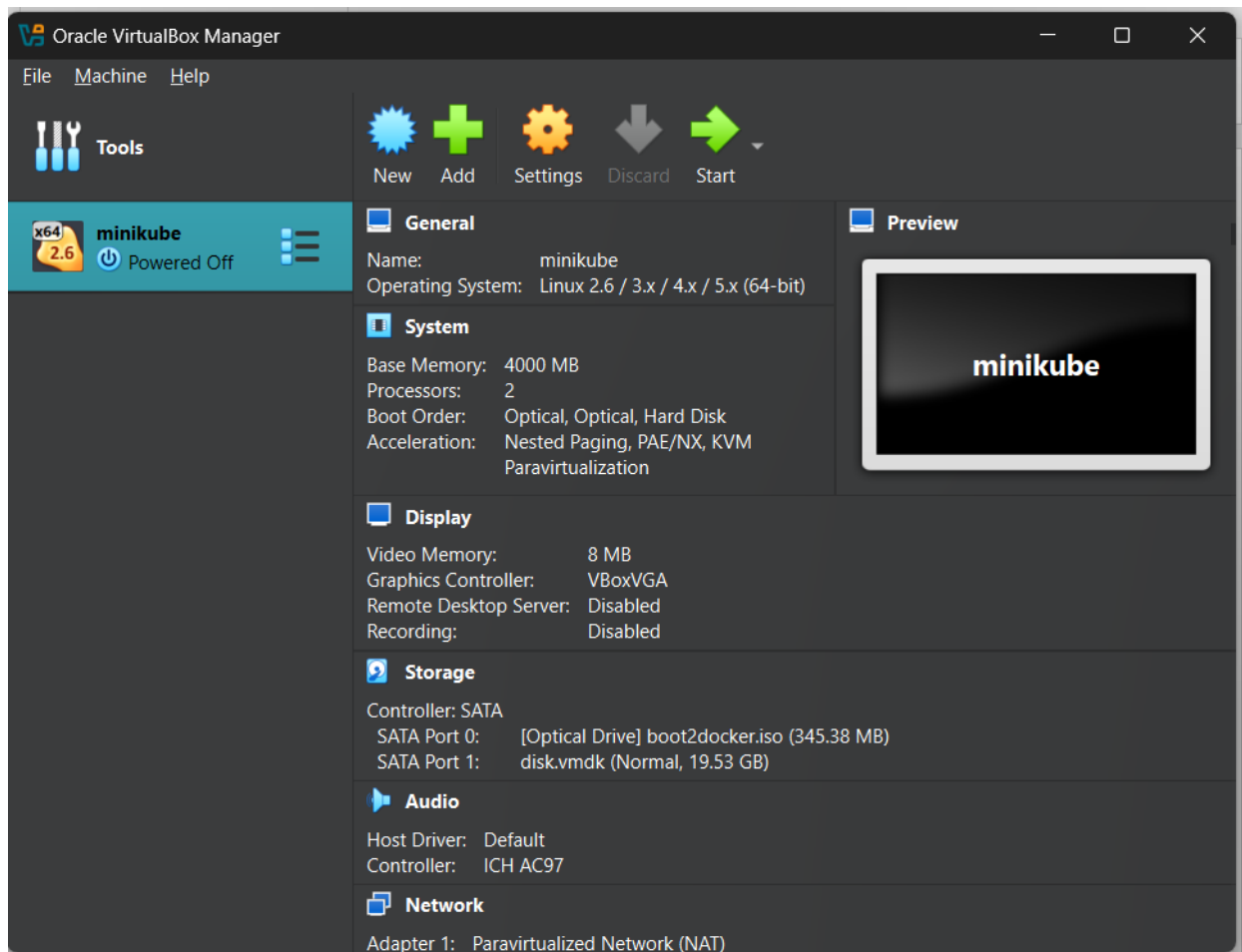
```
C:\Users\Priti>kubectl get deployments
No resources found in default namespace.
```

C:\Users\DYPATU>kubectl get pods

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

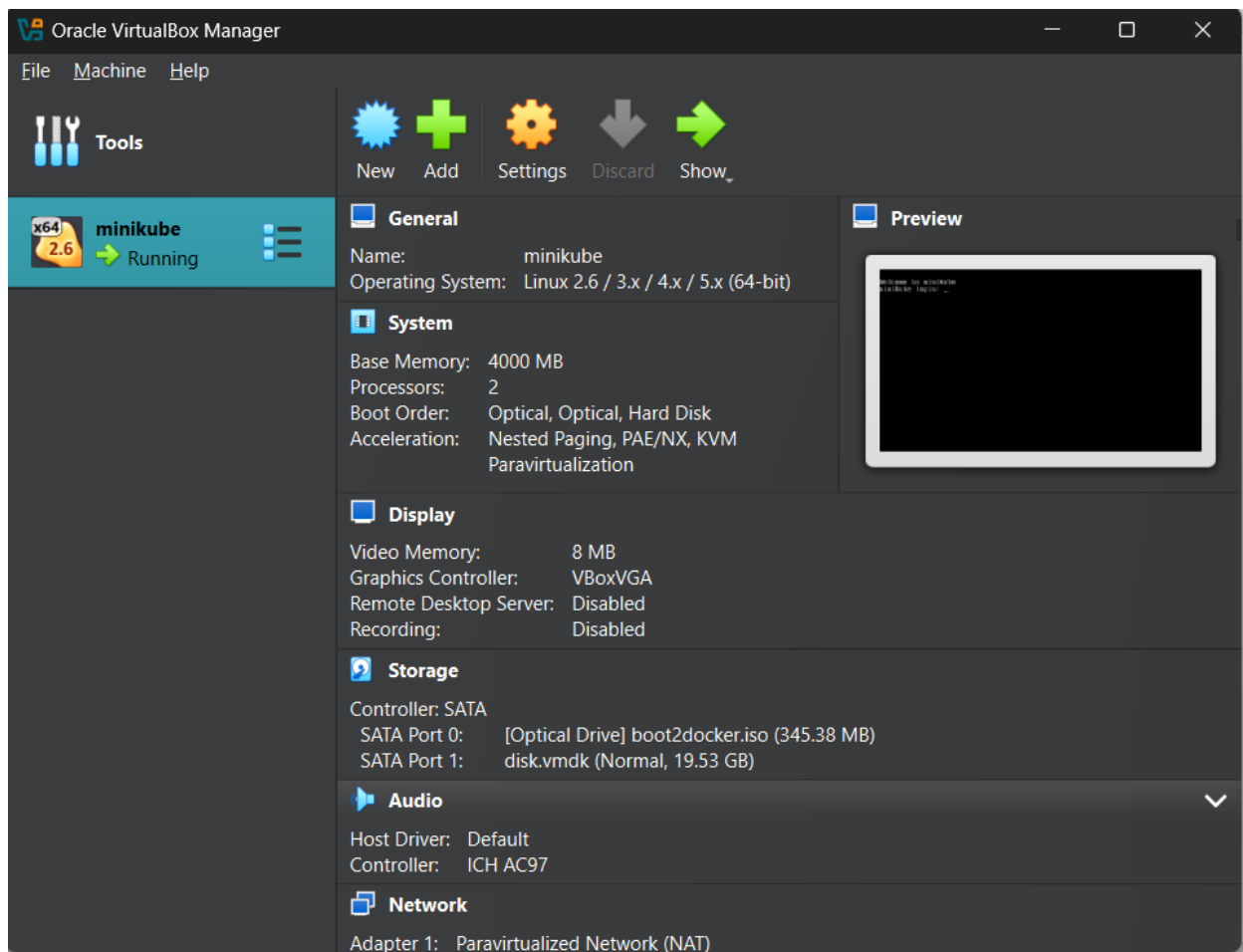
C:\Users\DYPATU>minikube stop

```
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
```