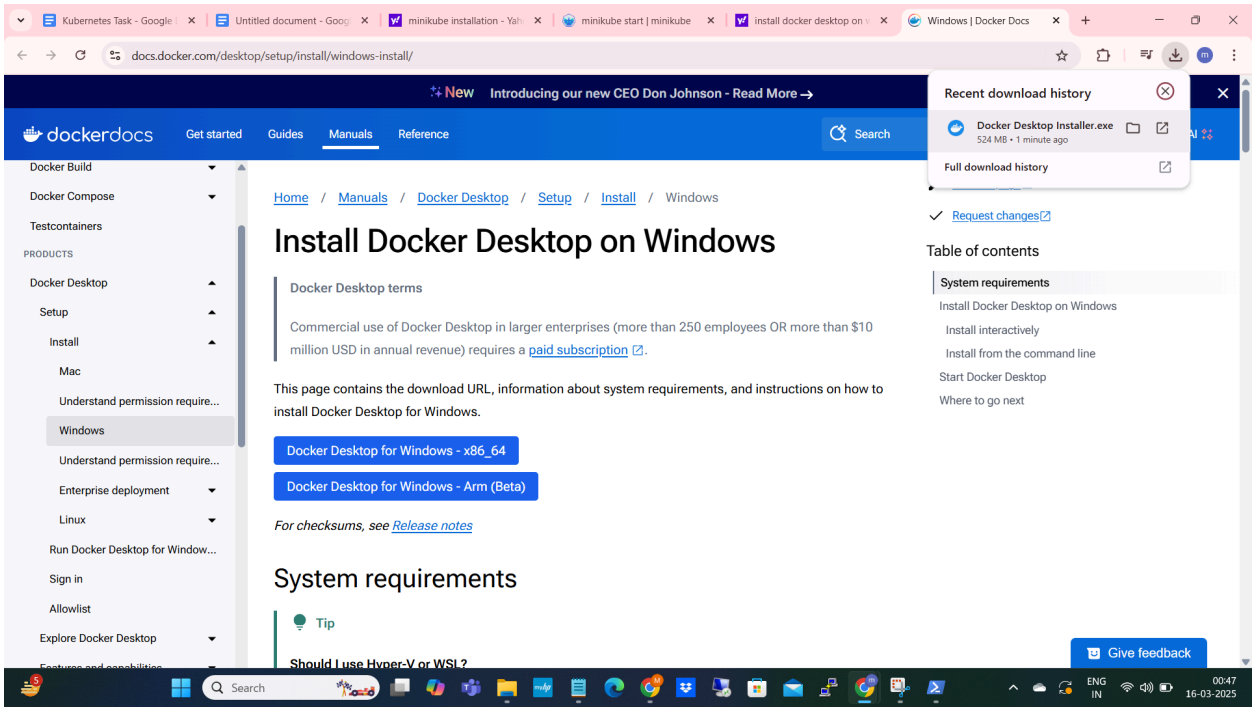
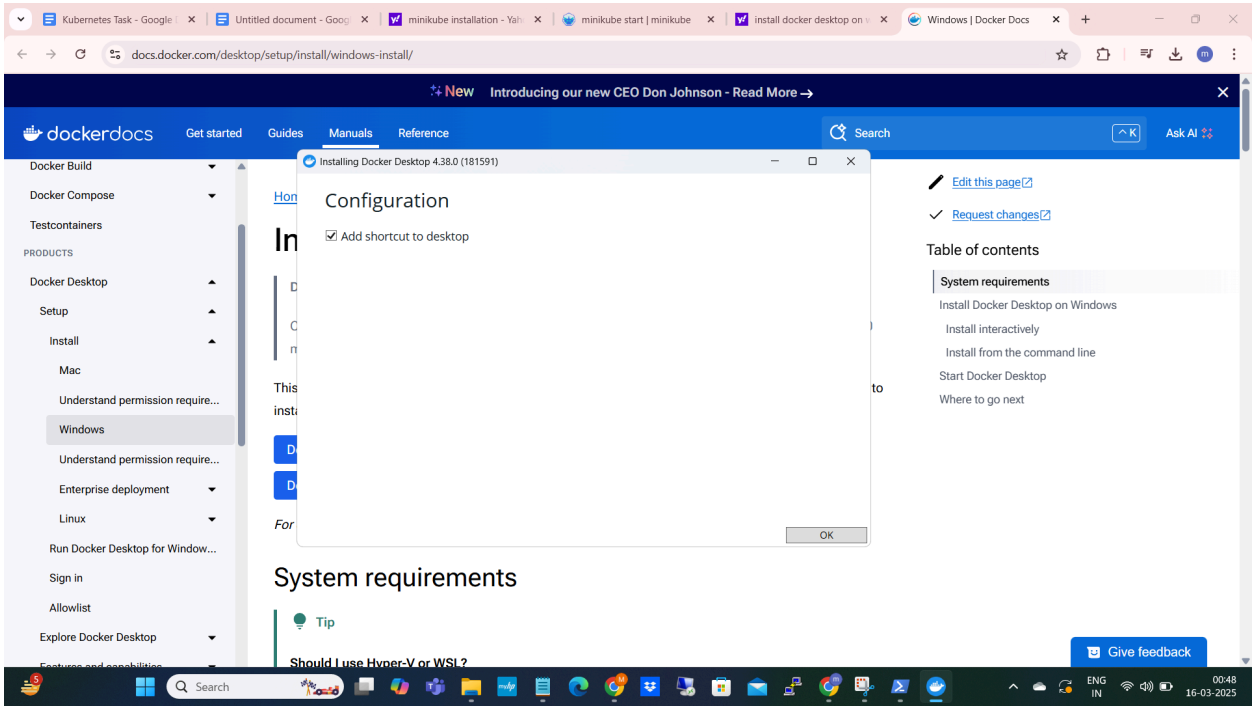
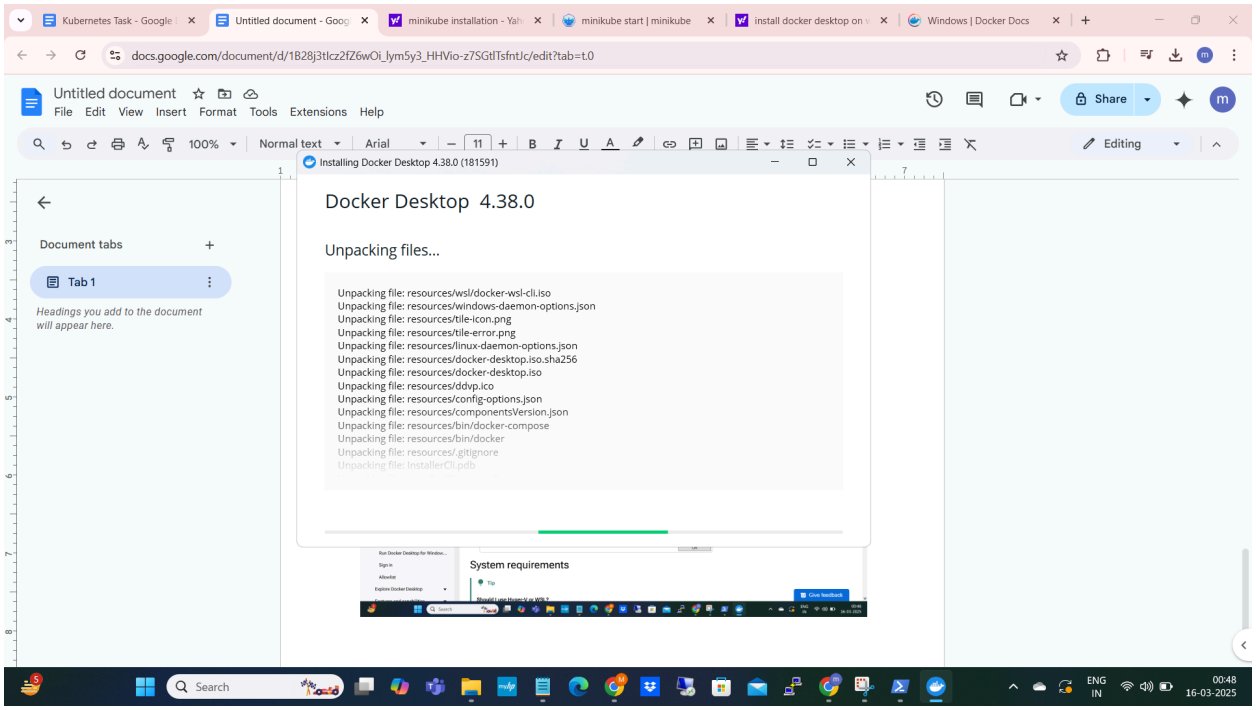
Kubernetes Task

Install Docker Desktop:
Download .exe file






Kubernetes Task - Google
Untitled document - Goog
minikube installation - Yah
minikube start | minikube
install docker desktop on
Windows | Docker Docs
docs.google.com/document/d/1B28j3tlcz2fZ6wOi_lym5y3_HHVio-z7SGtlTsfntJc/edit?tab=t.0
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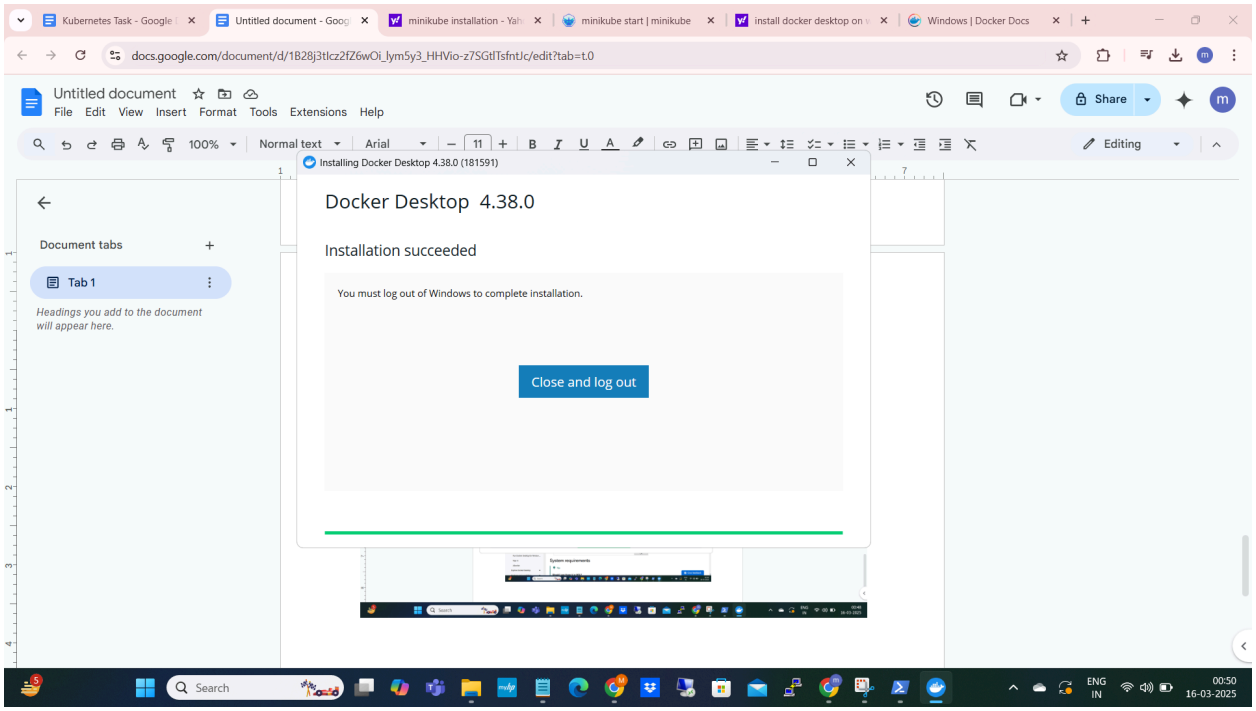
Tab 1
Headings you add to the document will appear here.
Installing Docker Desktop 4.38.0 (181591)
Docker Desktop 4.38.0
Unpacking files...
Unpacking file: resources/wsl/docker-wsl-cli.iso
Unpacking file: resources/windows-daemon-options.json
Unpacking file: resources/tile-icon.png
Unpacking file: resources/tile-error.png
Unpacking file: resources/linux-daemon-options.json
Unpacking file: resources/docker-desktop.iso.sha256
Unpacking file: resources/docker-desktop.iso
Unpacking file: resources/ddvp.ico
Unpacking file: resources/config-options.json
Unpacking file: resources/componentsVersion.json
Unpacking file: resources/bin/docker-compose
Unpacking file: resources/bin/docker
Unpacking file: resources/.gitignore
Unpacking file: InstallerCli.pdb
System requirements
Search
ENG
IN
00:48
16-03-2025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docs.google.com/document/d/1B28j3tlcz2fZ6wOi_lym5y3_HHVio-z7SGtlTsfntJc/edit?tab=t.0
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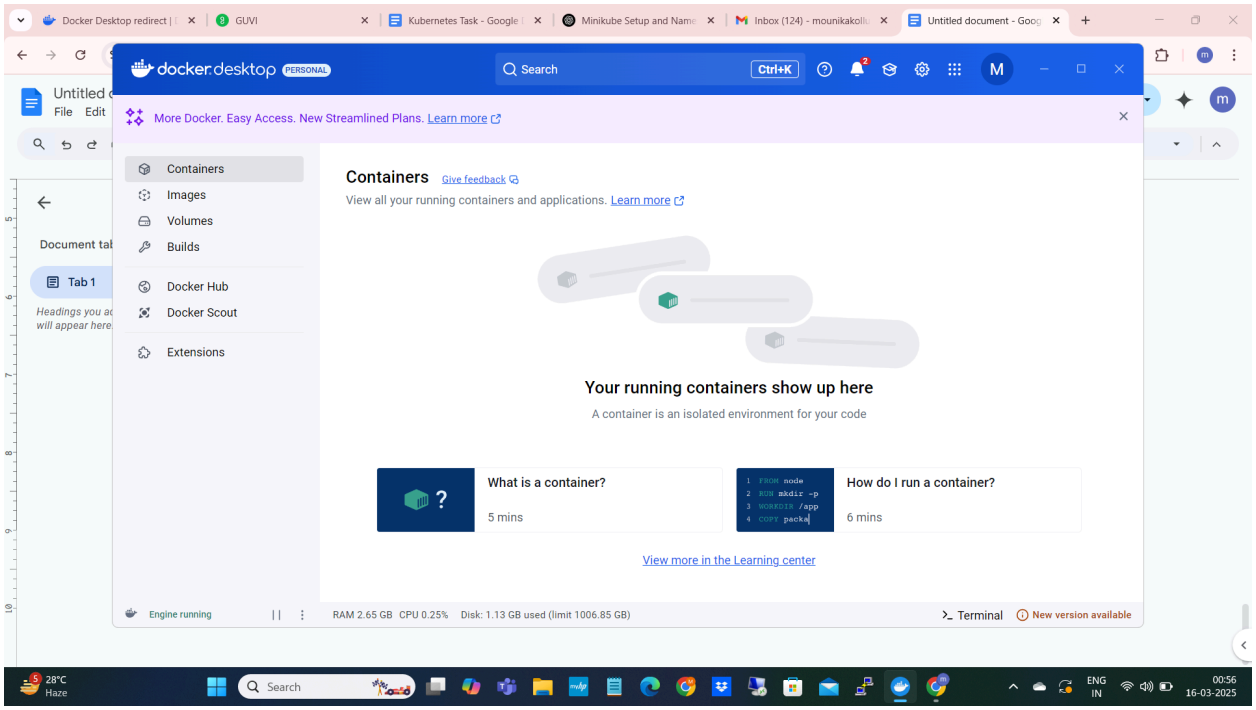
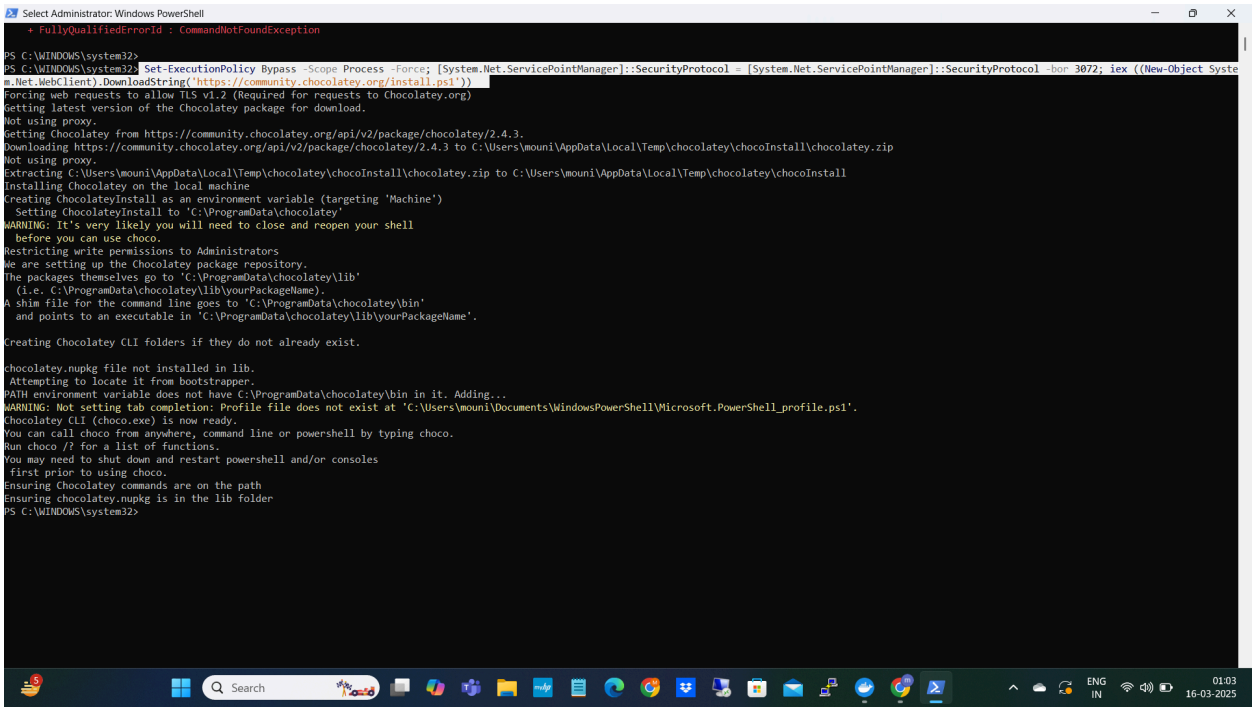
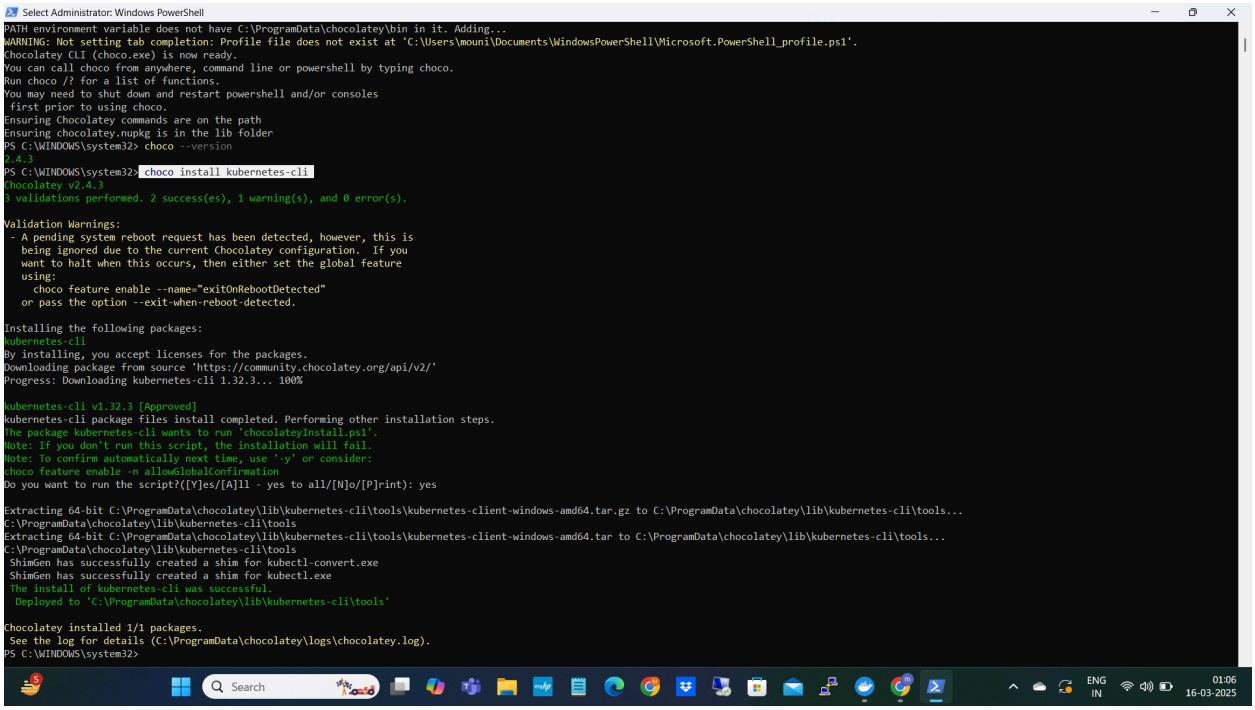
File Edit View Insert Format Tools Extensions Help
Share
Editing
Document tabs
Tab 1
Headings you add to the document will appear here.
Installing Docker Desktop 4.38.0 (181591)
Docker Desktop 4.38.0
Installation succeeded
You must log out of Windows to complete installation.
Close and log out
Search
ENG
IN
00:50
16-03-2025



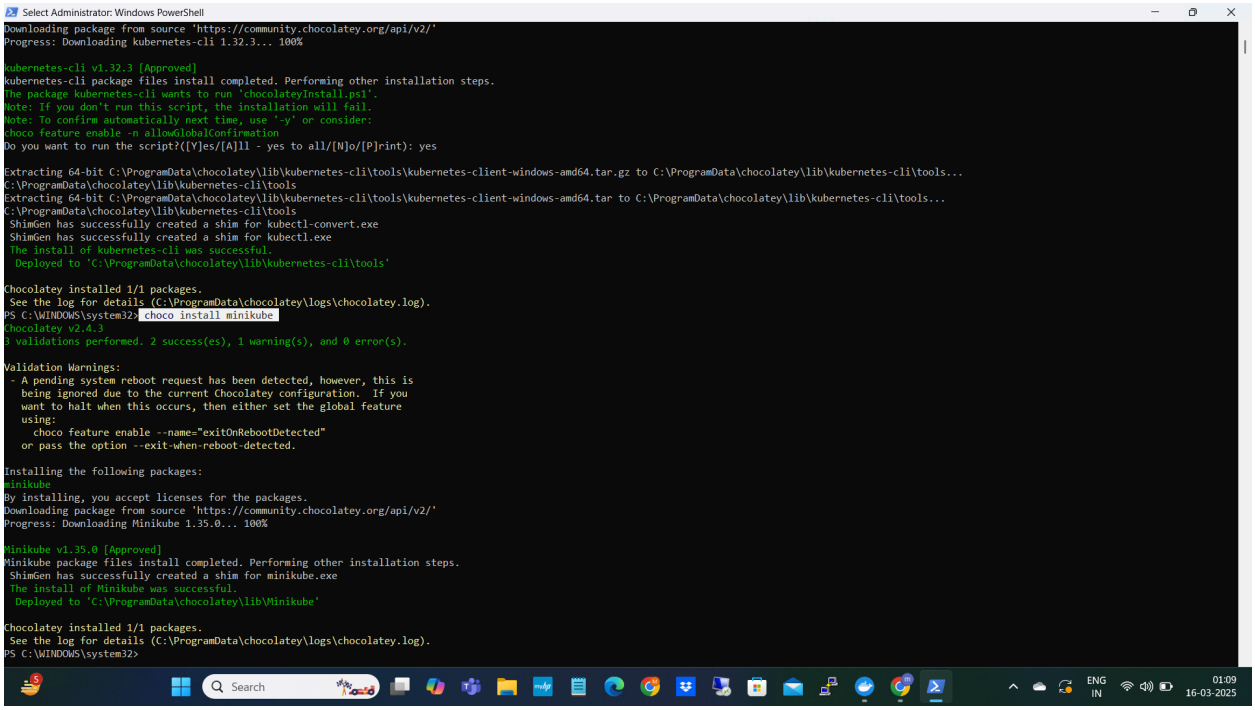
Install Chocolatey:
$ Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))



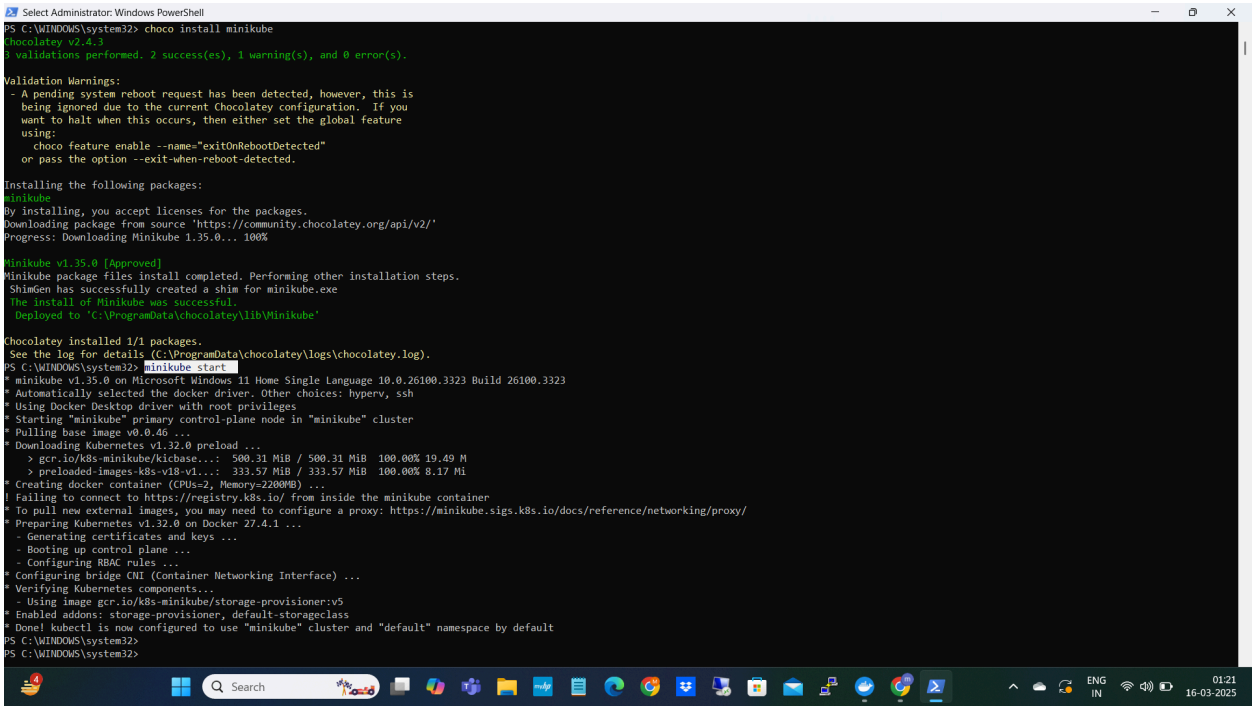
Install kubectl using chocolatey
$ choco install kubernetes-cli

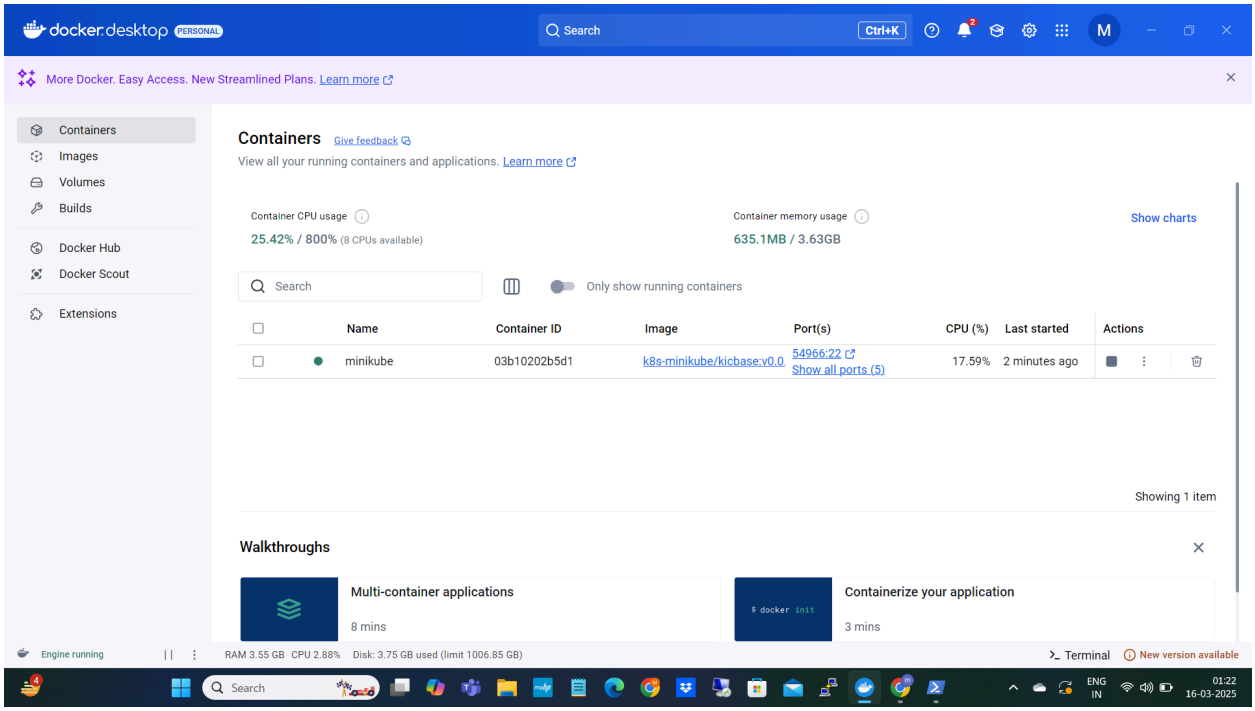


Install Minikube:
$ choco install minikube

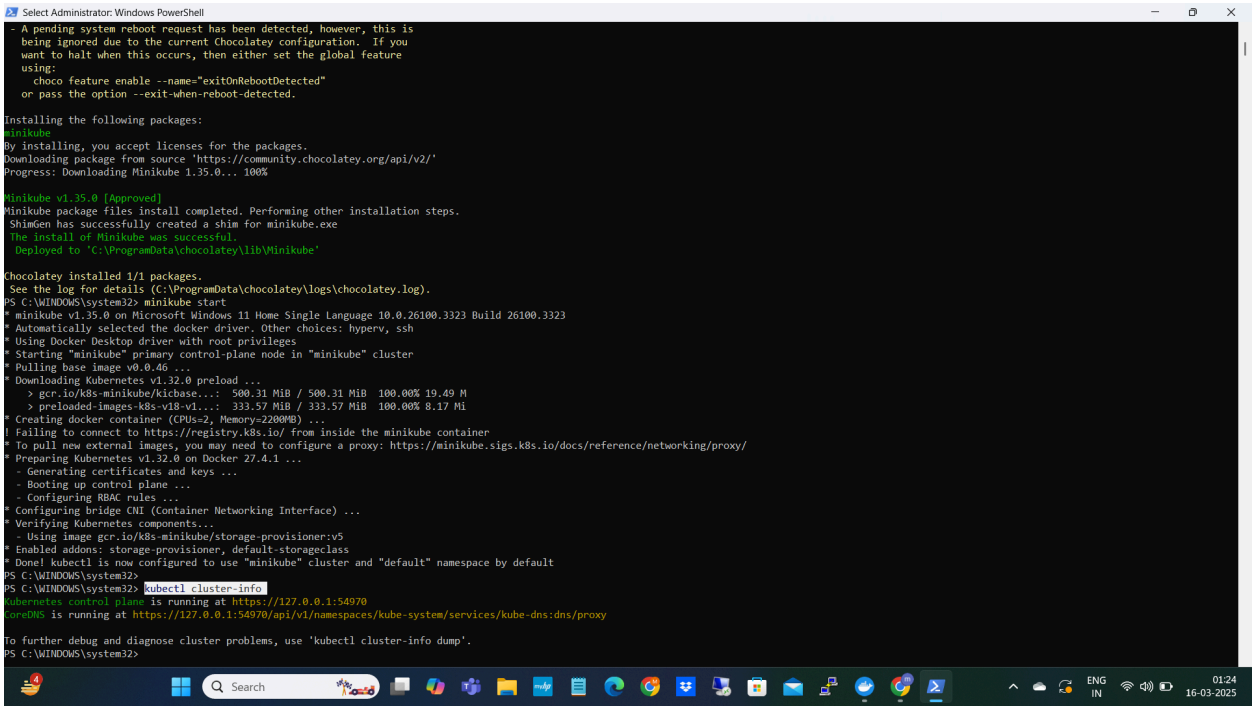


Start Minikube:
$ minikube start

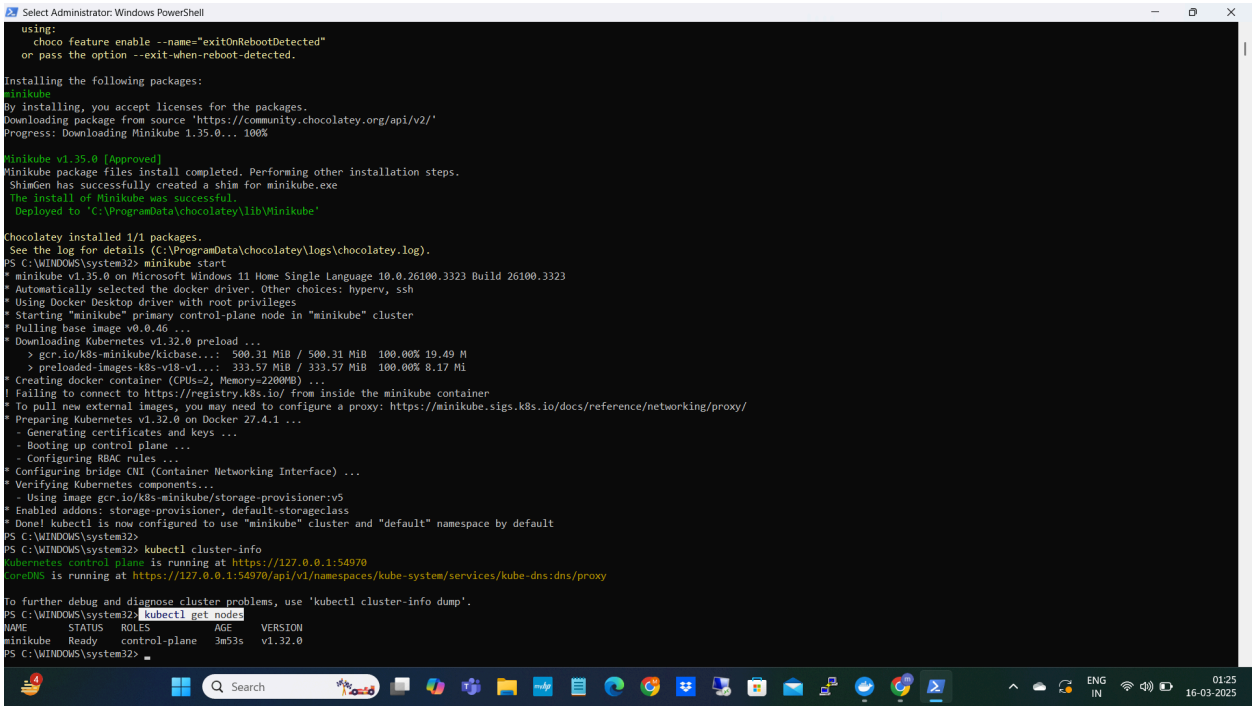




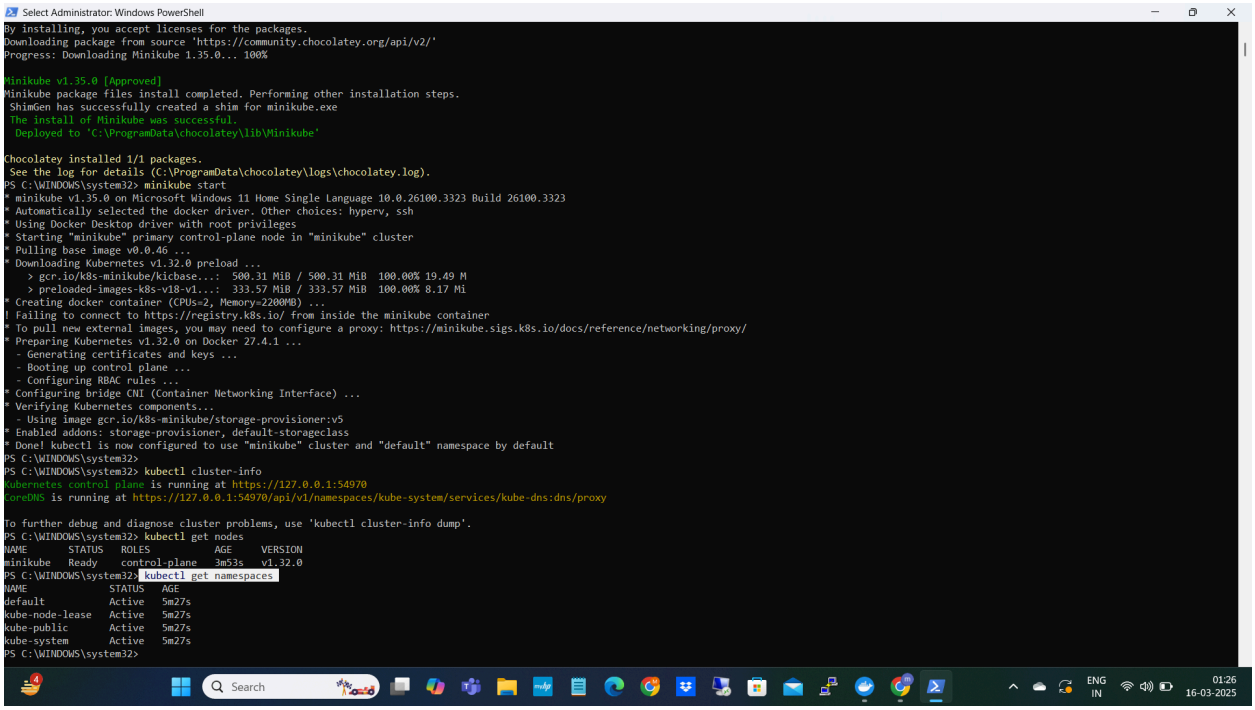
Check info about mini kube cluster if any
$ kubectl cluster-info



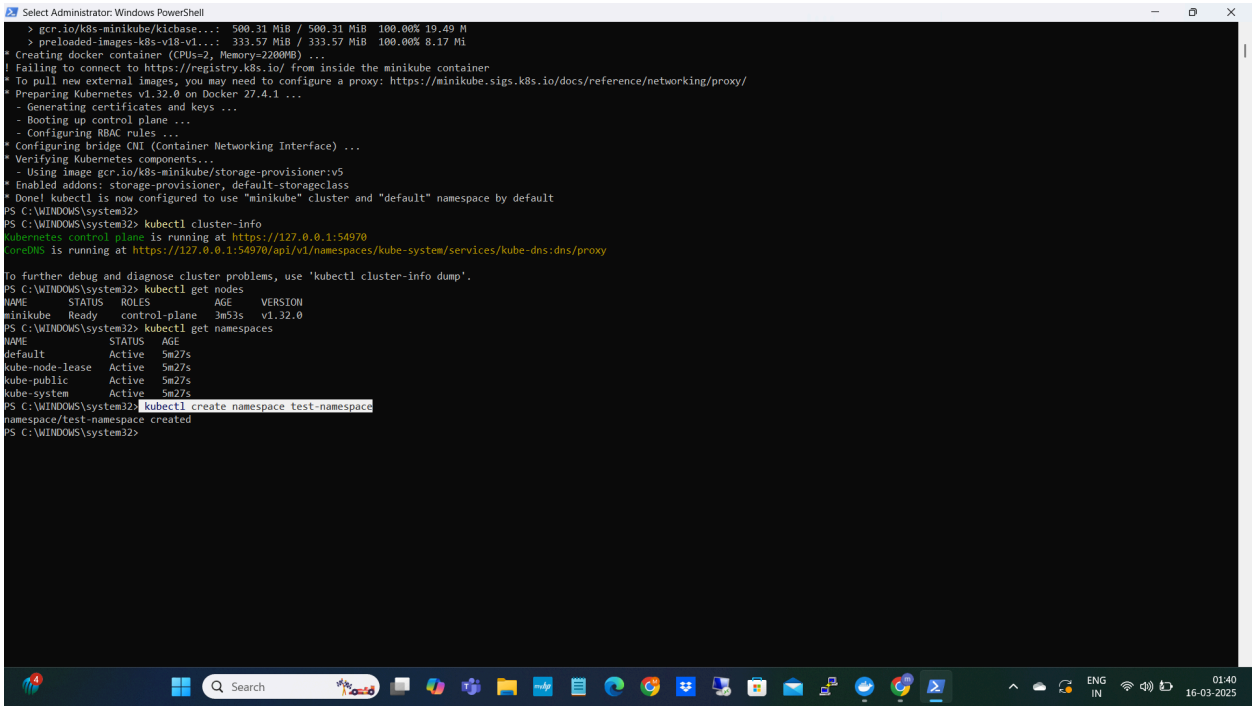
Check the Running nodes:
$ kubectl get nodes



Check Namespaces:
$ kubectl get namespaces

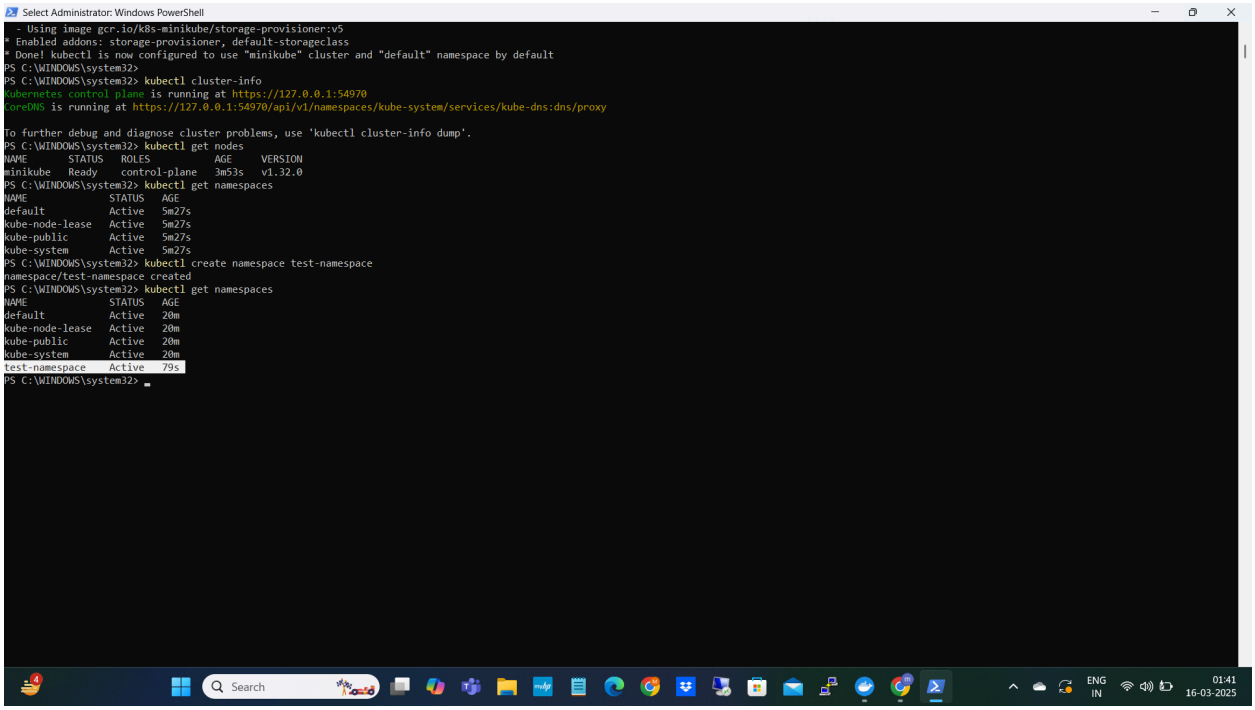


Create a Namespace
$ kubectl create namespace test-namespace



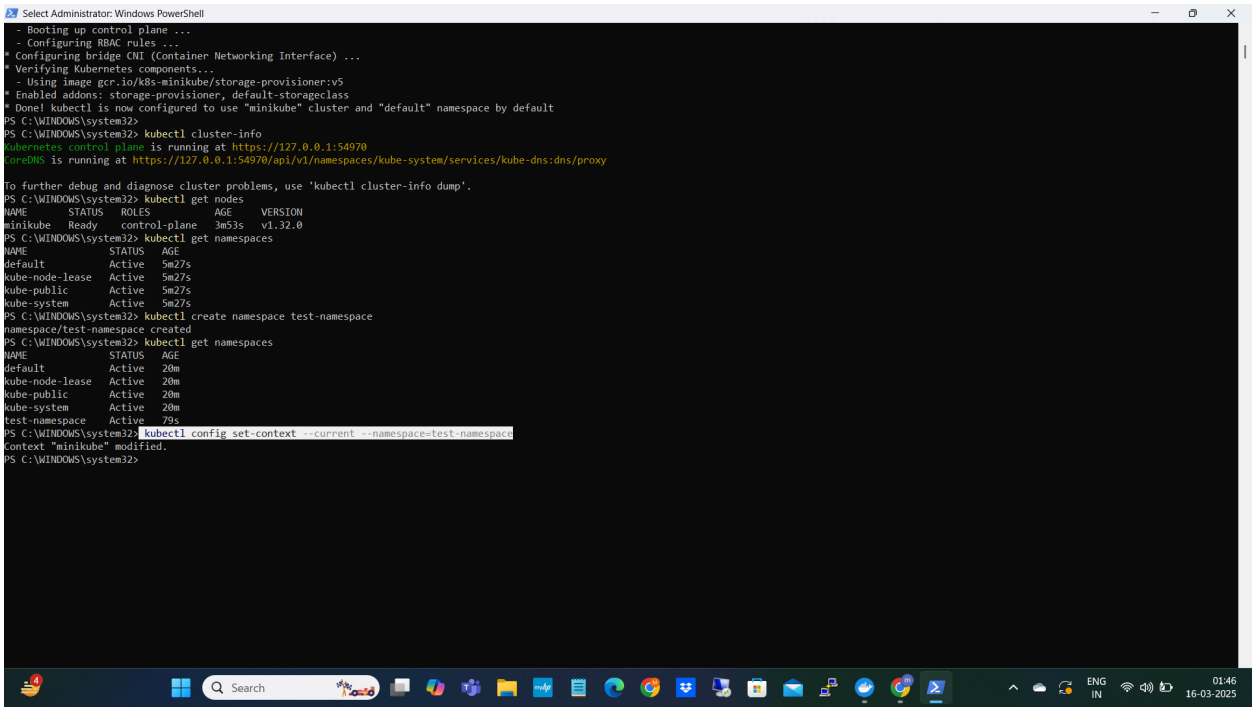
Check the test-namespace is created

$ kubectl get namespaces

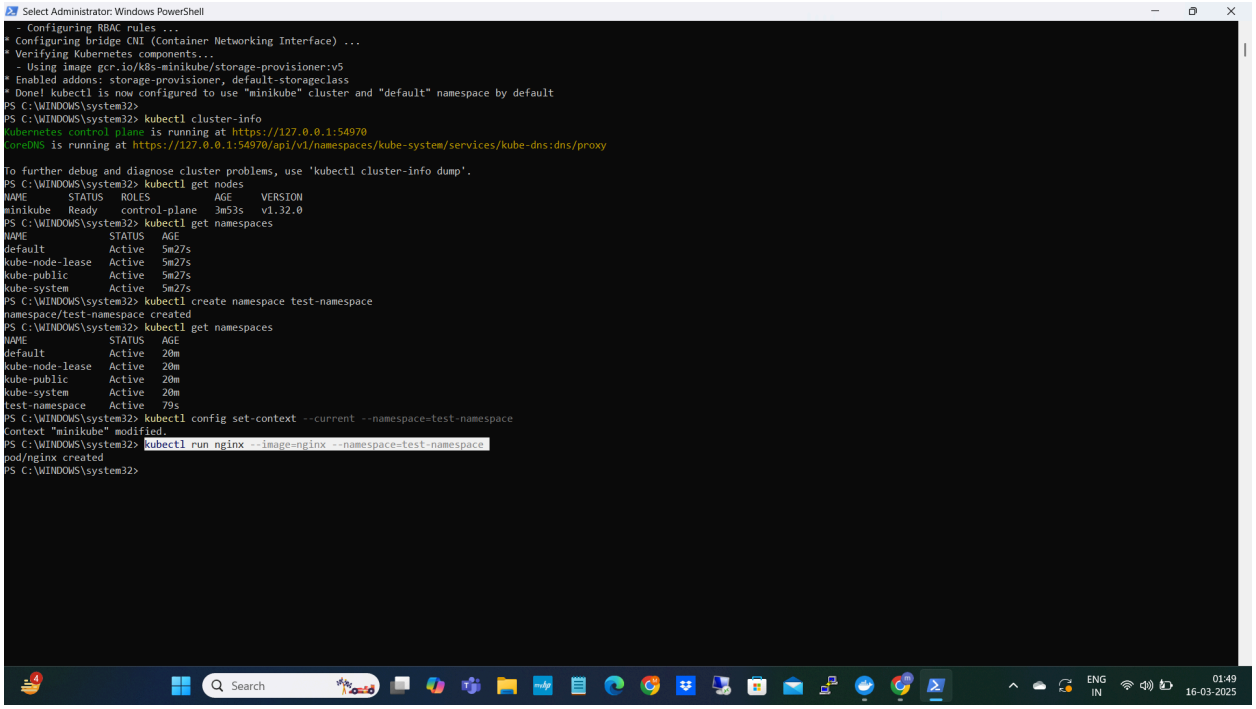


To use or operate within the test-namespace:

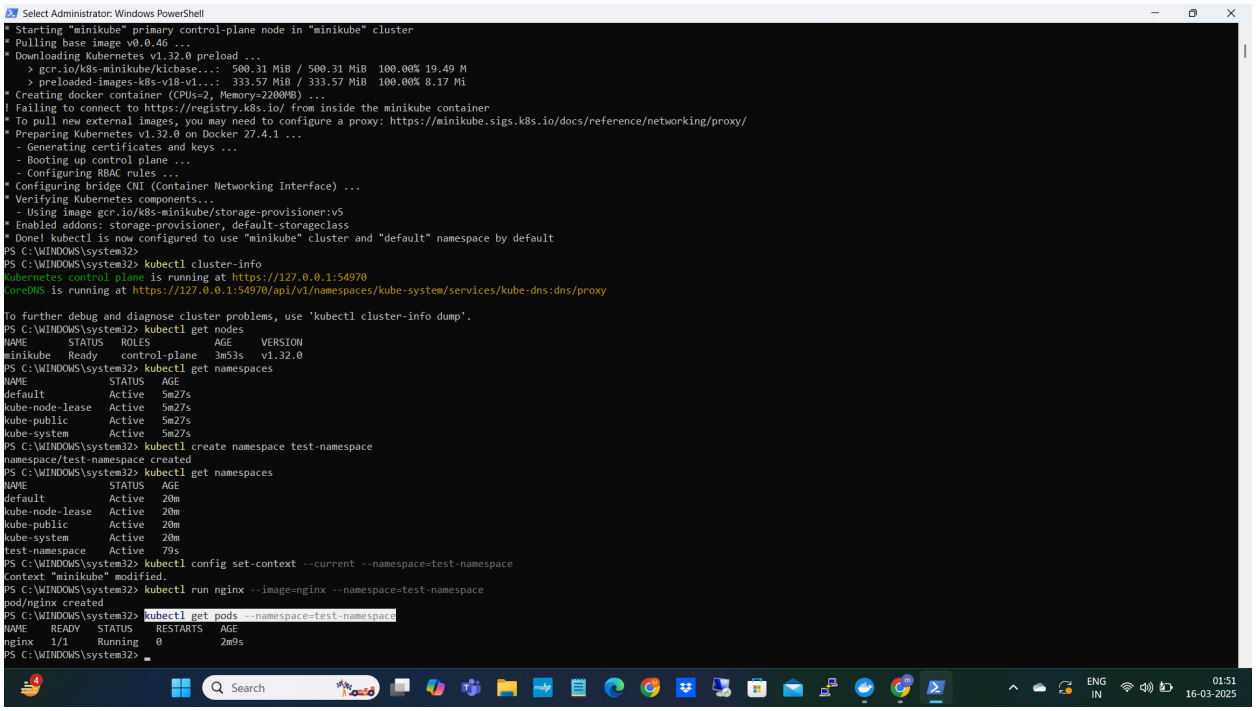
$ kubectl config set-context --current --namespace=test-namespace



Create Resources inside the test-namespace
Create a pod using nginx image:
$ kubectl run nginx --image=nginx --namespace=test-namespace

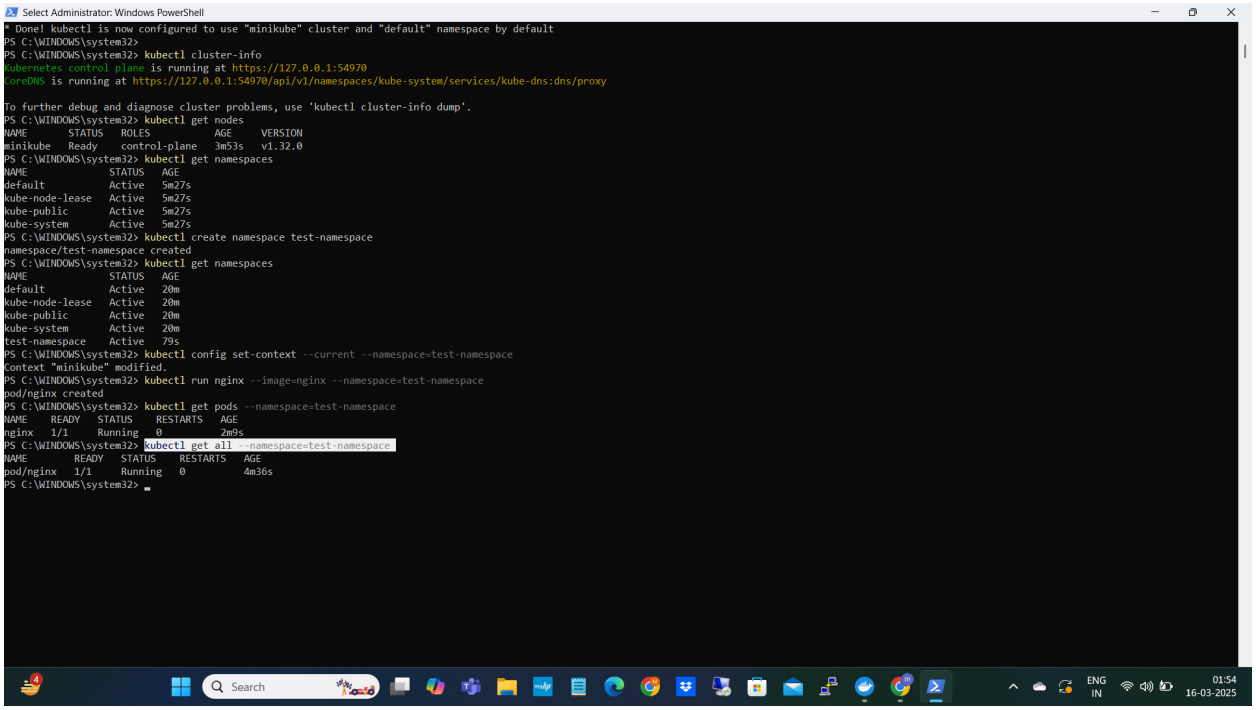


Verify the pod creation in the test-namespace
$ kubectl get pods --namespace=test-namespace



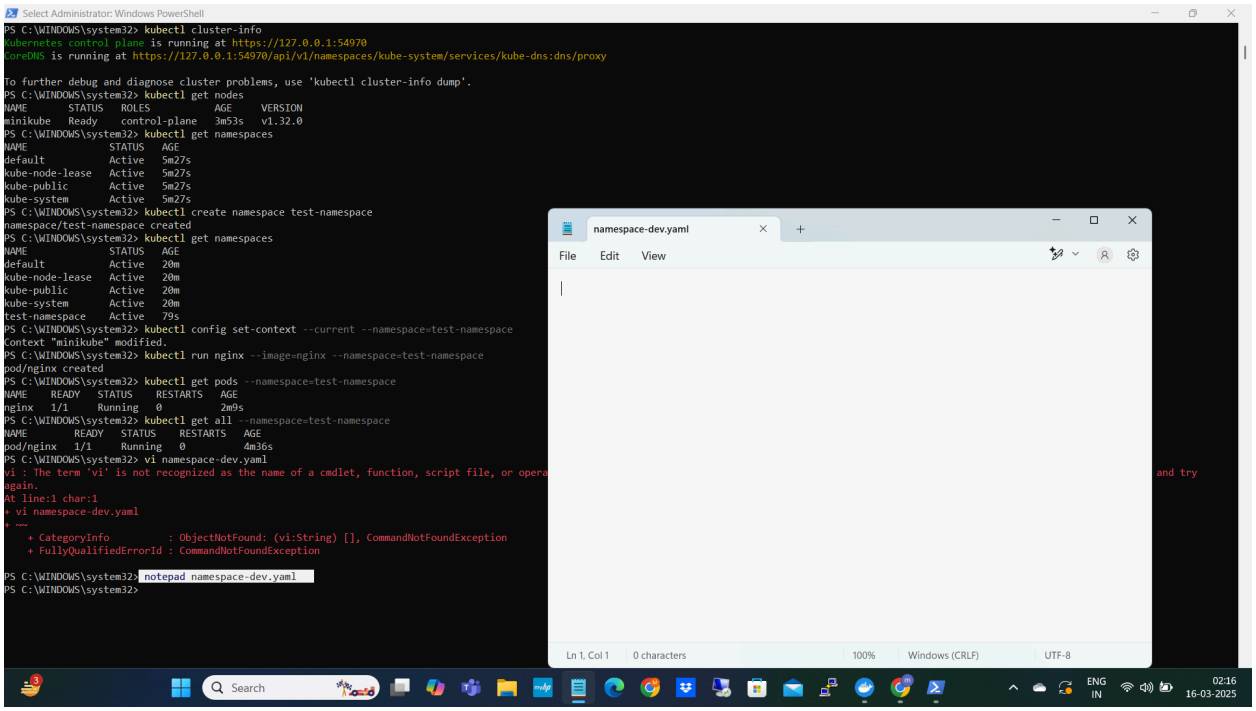
Nginx pod created inside the test-namespace

List all resources inside a namespace
$ kubectl get all --namespace=test-namespace

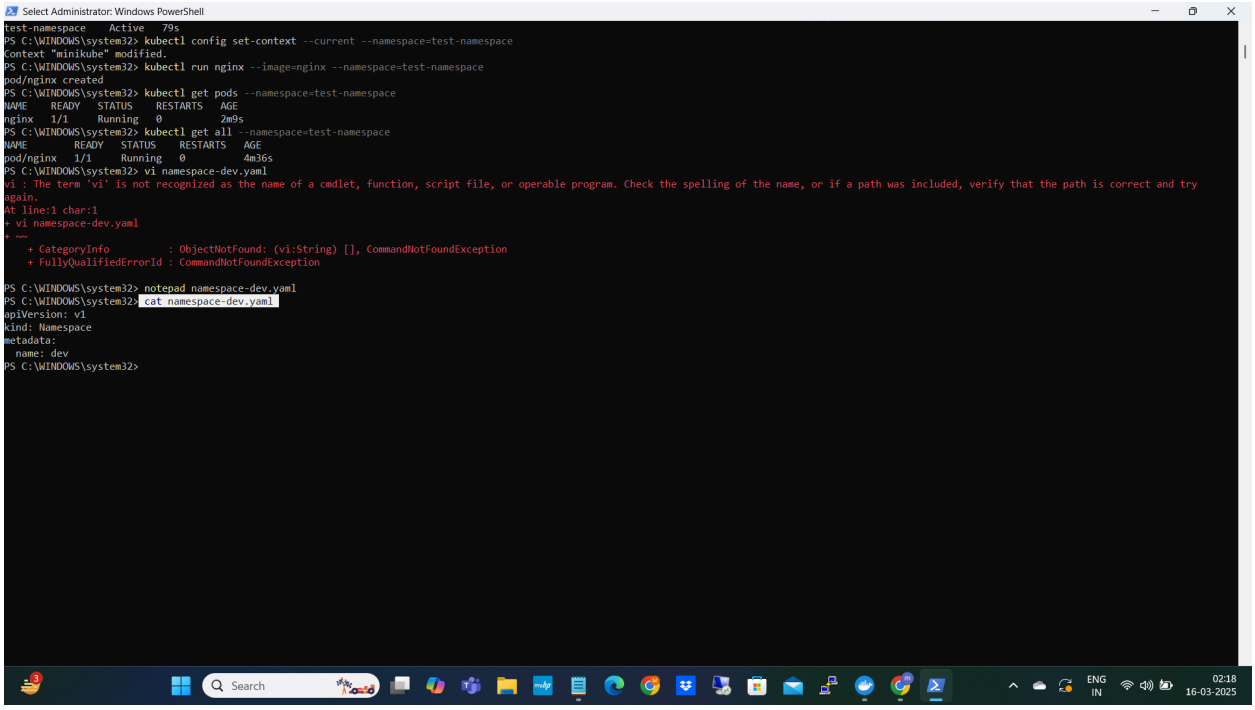


Create Namespace using yaml file:

Lets create dev and prod name spaces using yaml files
$ notepad namespace-dev.yaml

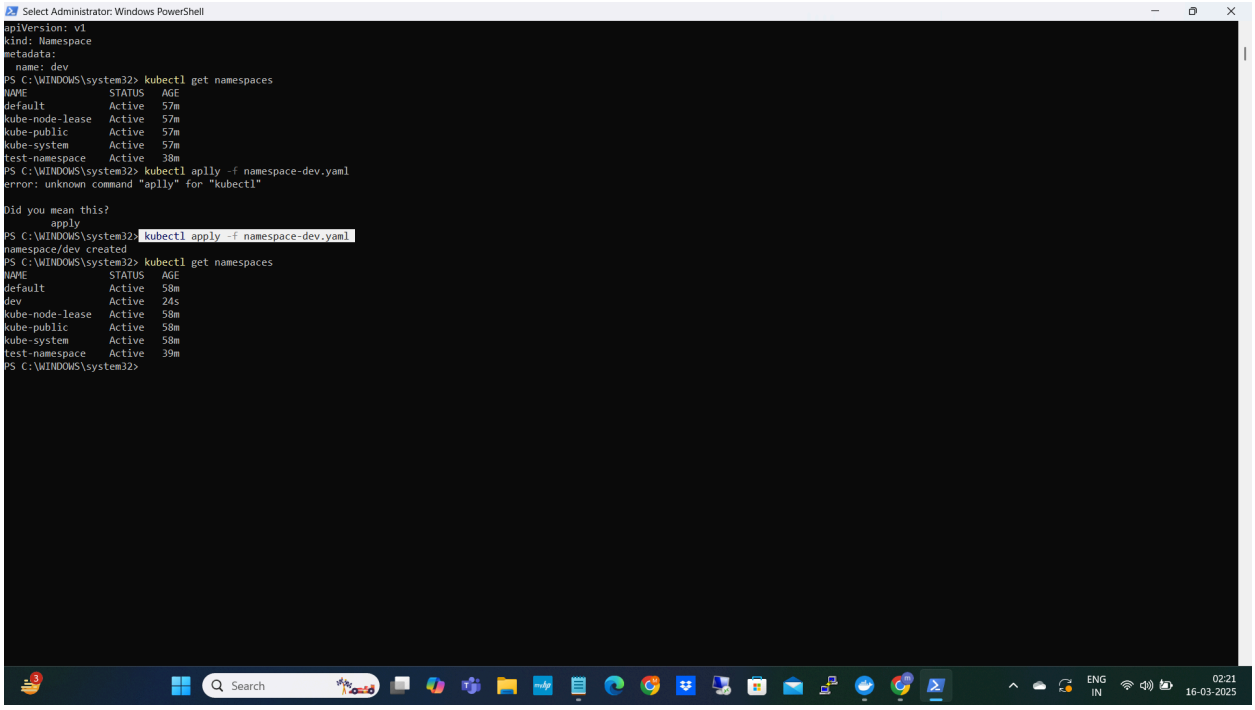


$ cat namespace-dev.yaml



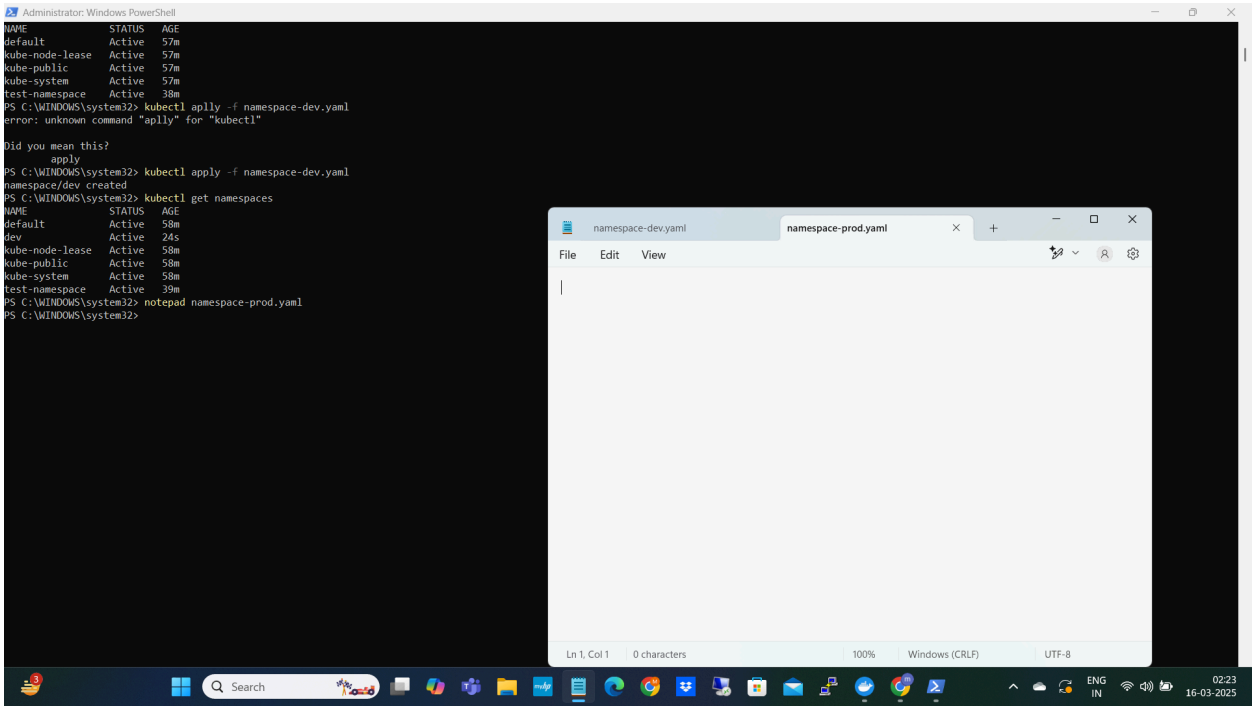
Executeor apply yaml file to create dev namespace

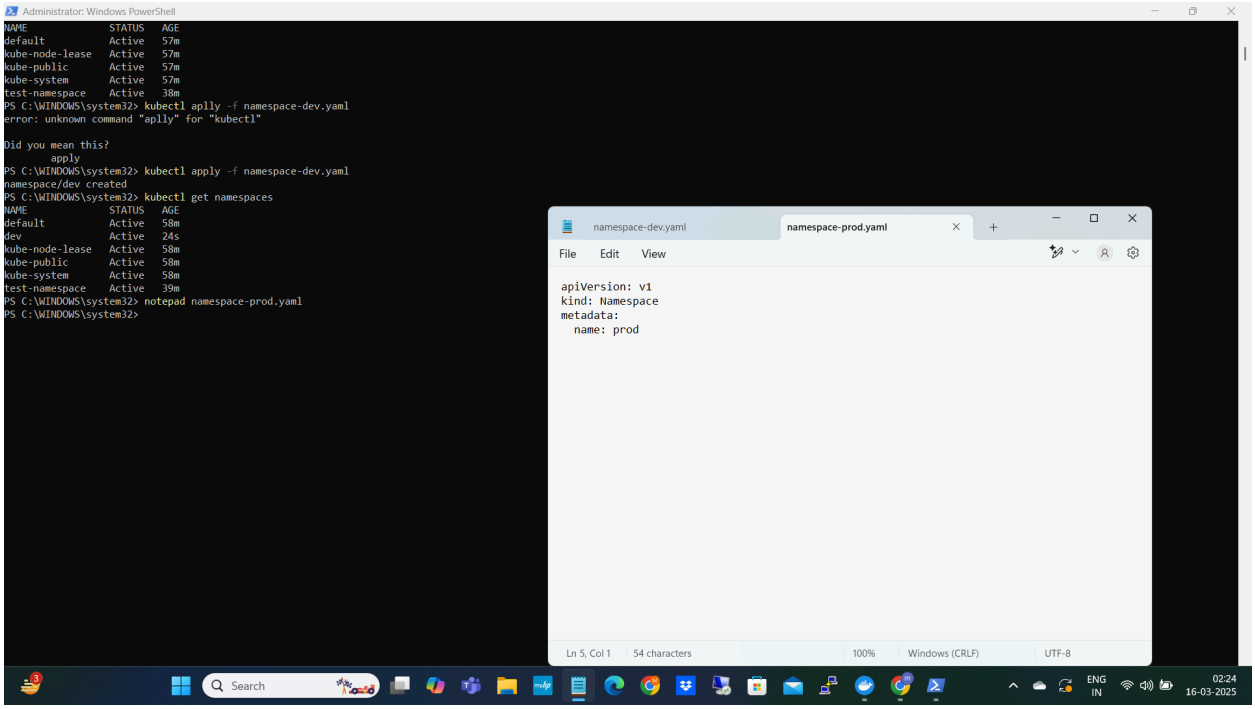
$ kubectl apply -f namespace-dev.yaml



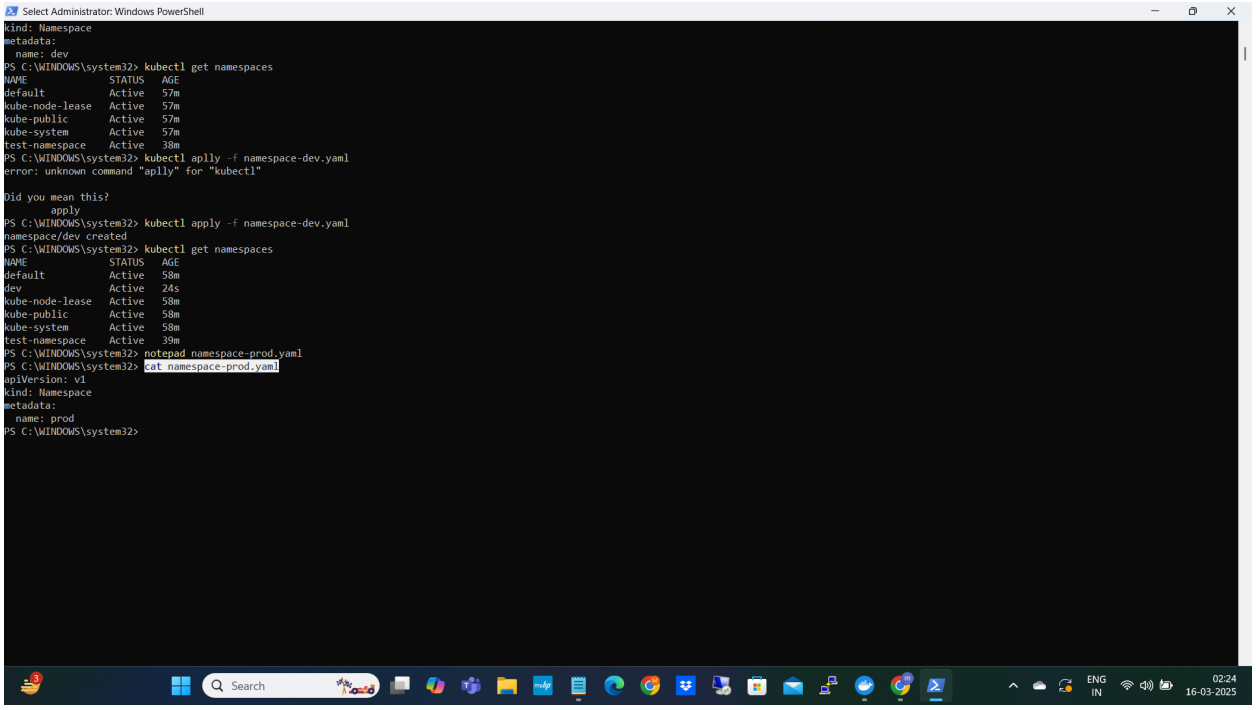
Create namespace prod

$ notepad namespace-prod.yaml



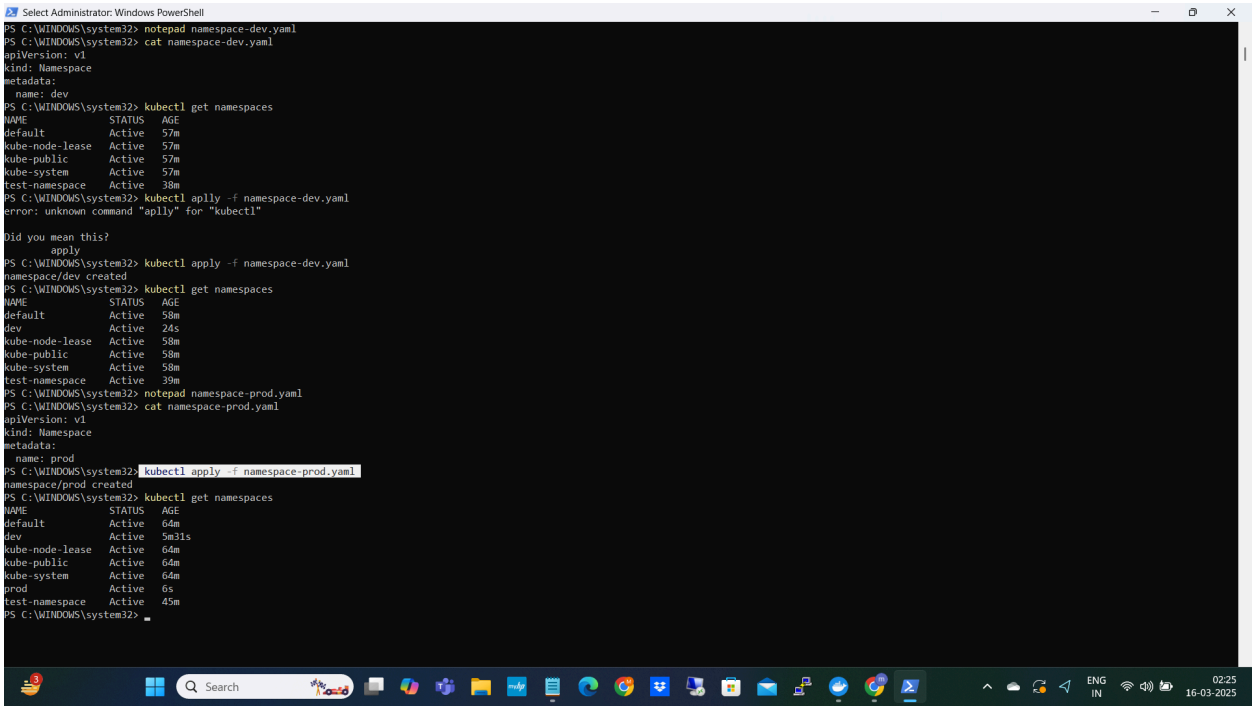


$ cat namespace-prod.yaml

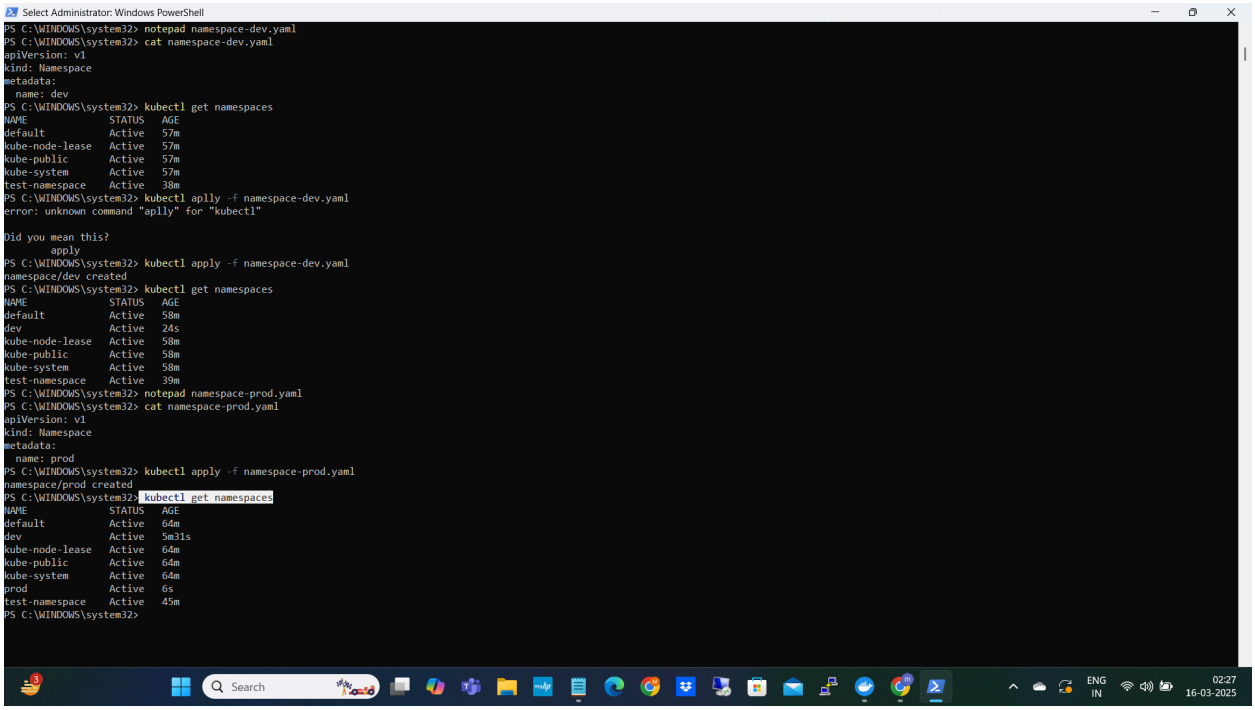


Execute or apply yaml file to create prod namespace

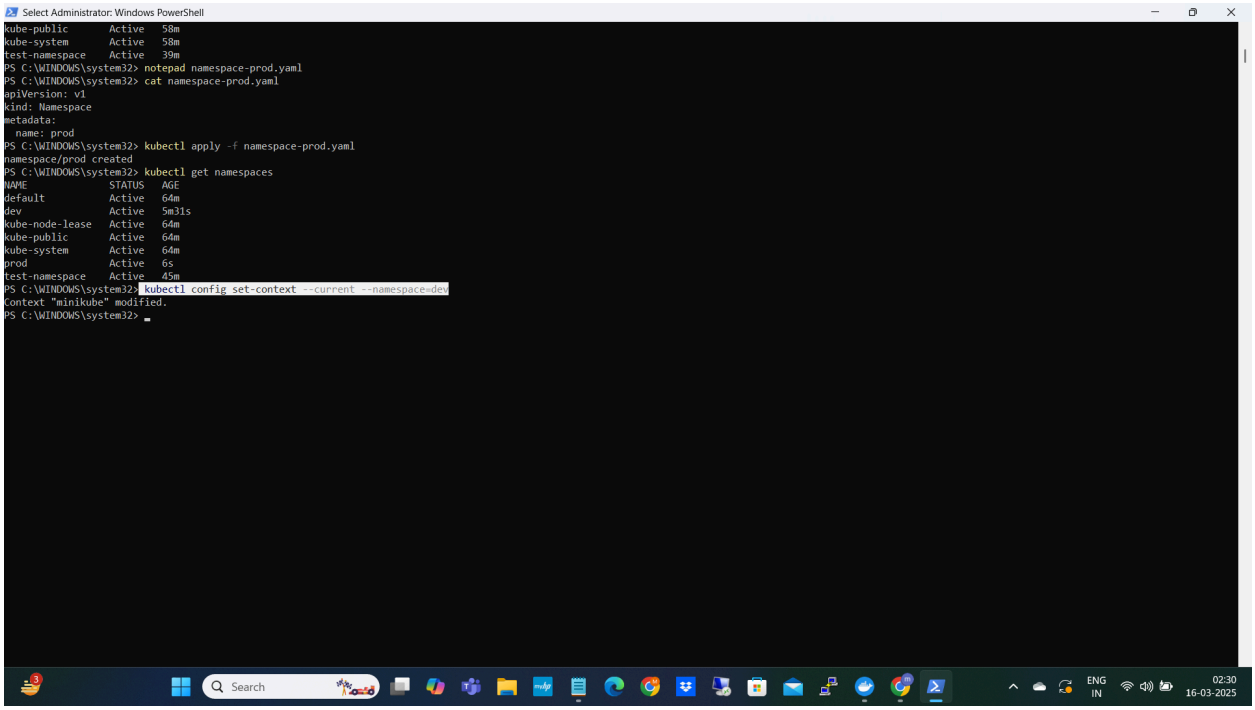
$ kubectl apply -f namespace-prod.yaml



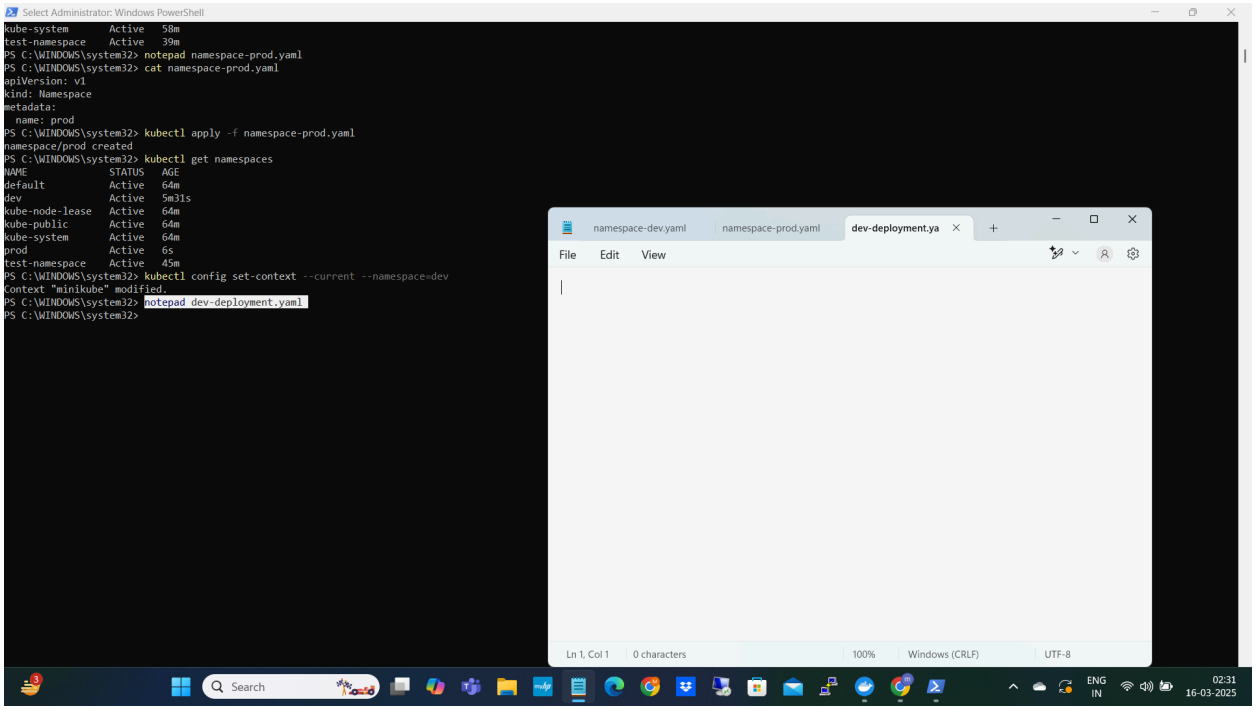
Check both dev and prod namespaces are created
$ kubectl get namespaces

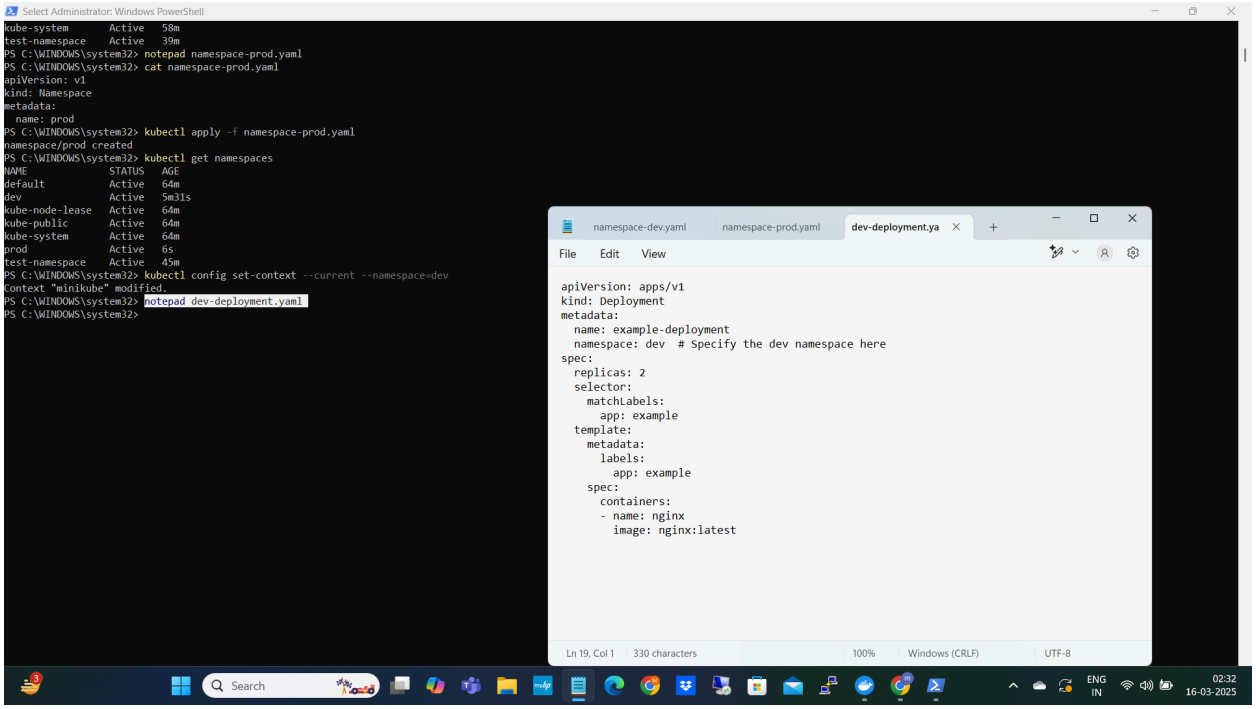


Set namespace as default to operate with in the namespace
$ kubectl config set-context --current --namespace=dev

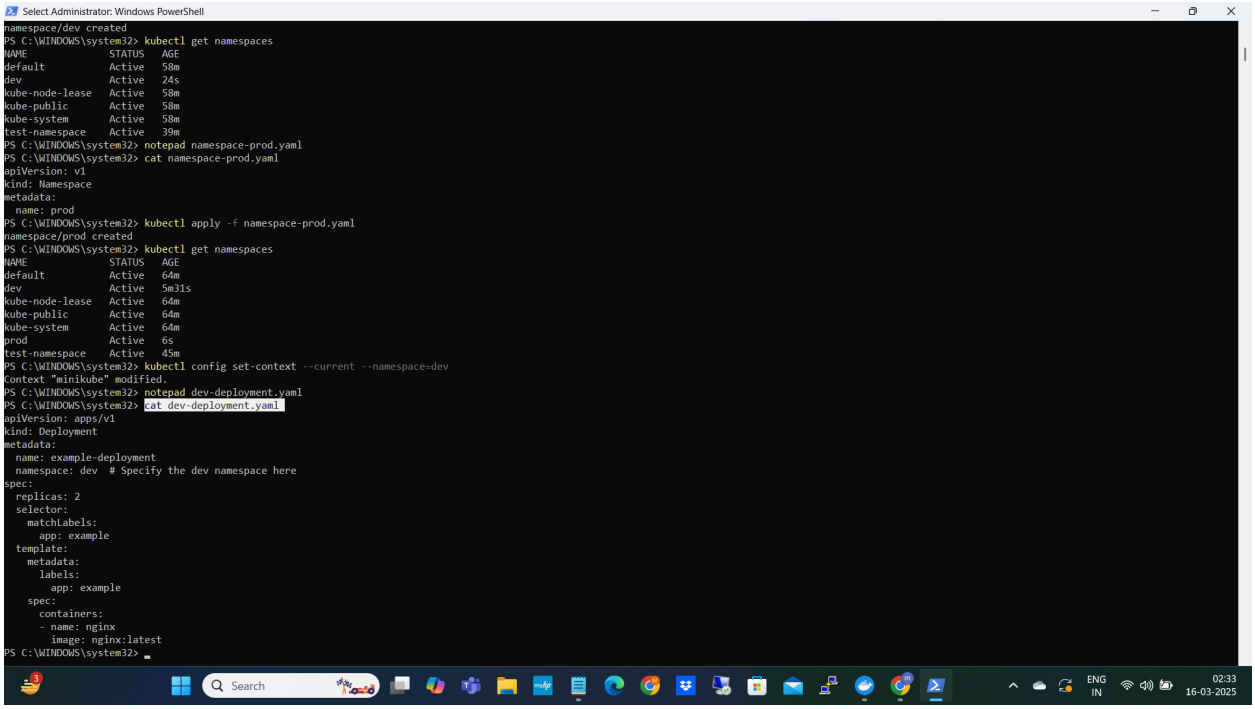


Create deployment in the dev namespace
$ notepad dev-deployment.yaml



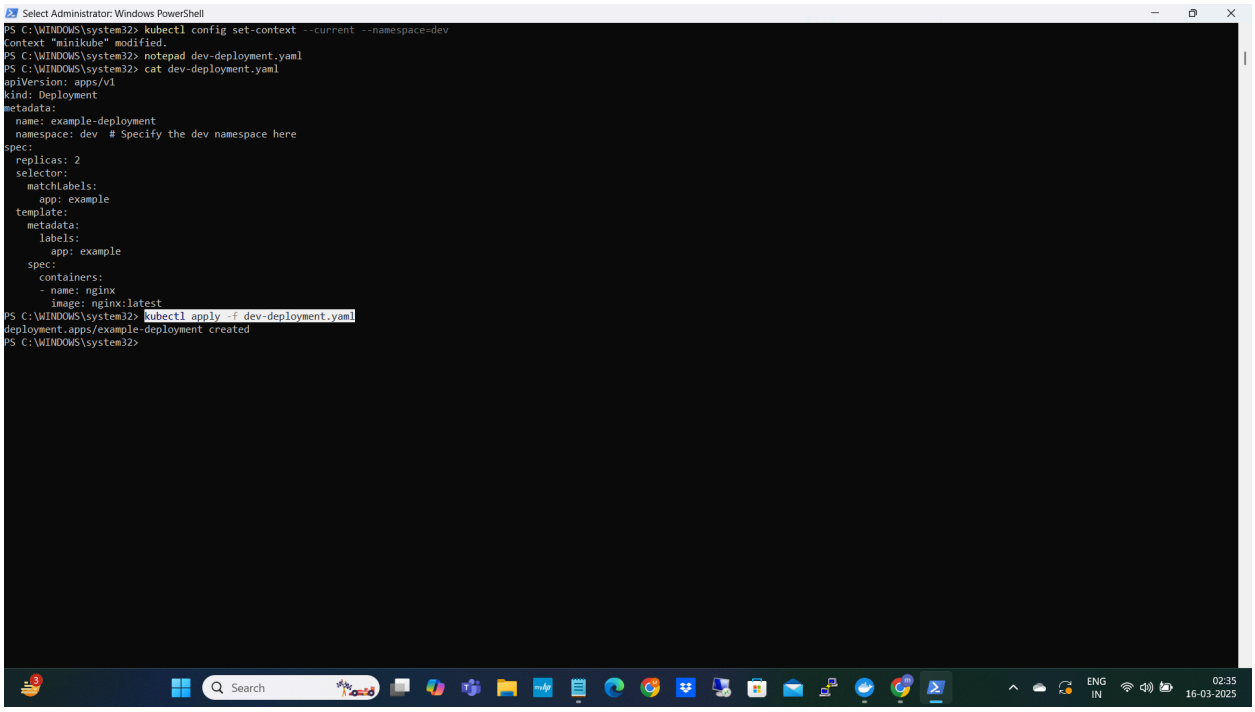


$ cat dev-deployment.yaml



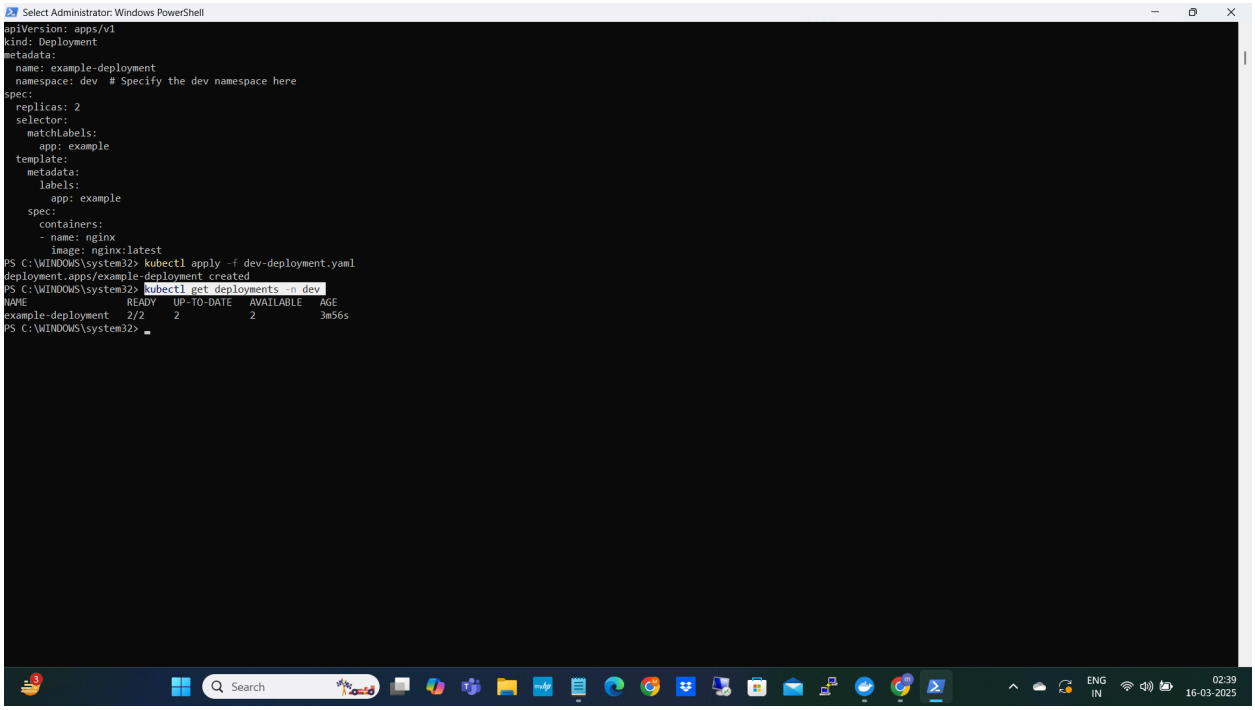
Create deployment by applying or executing dev-deployment.yaml file

$ kubectl apply -f dev-deployment.yaml

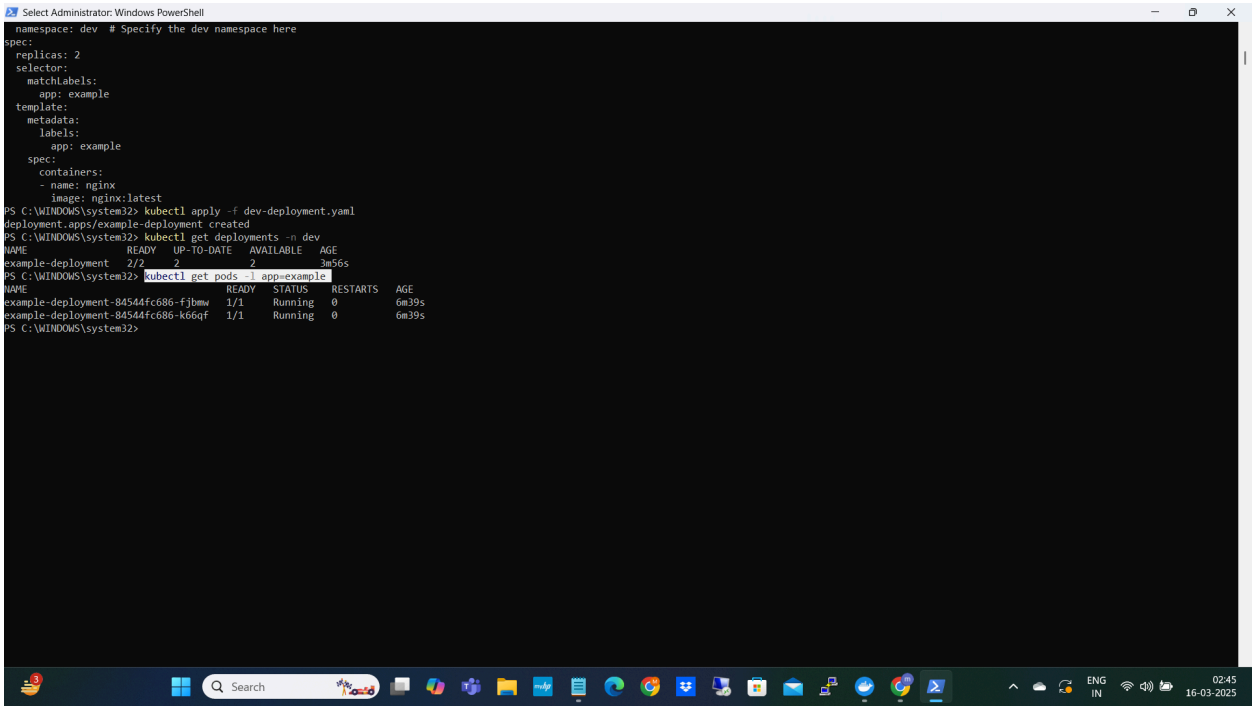


This will deploy the nginx pod in the dev namespace

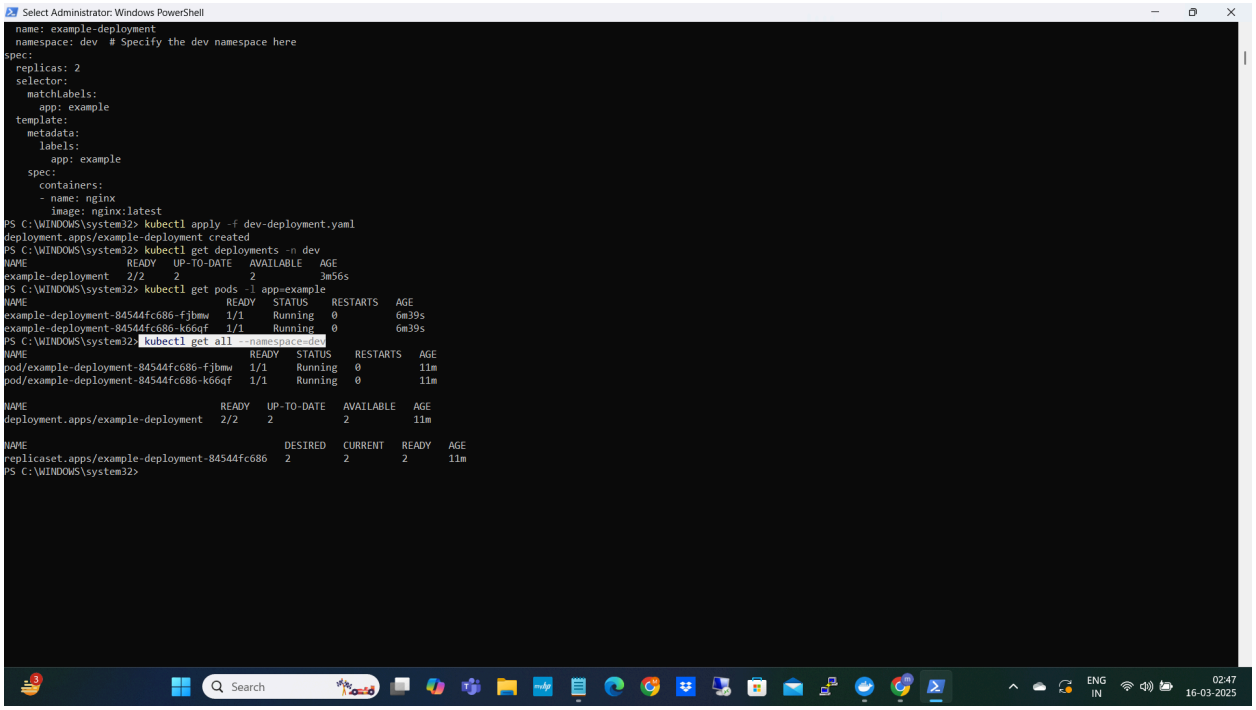
Verify the deployment in the dev namespace
$ kubectl get deployments -n dev



List all the pods with in the label example
$ kubectl get pods -l app=example

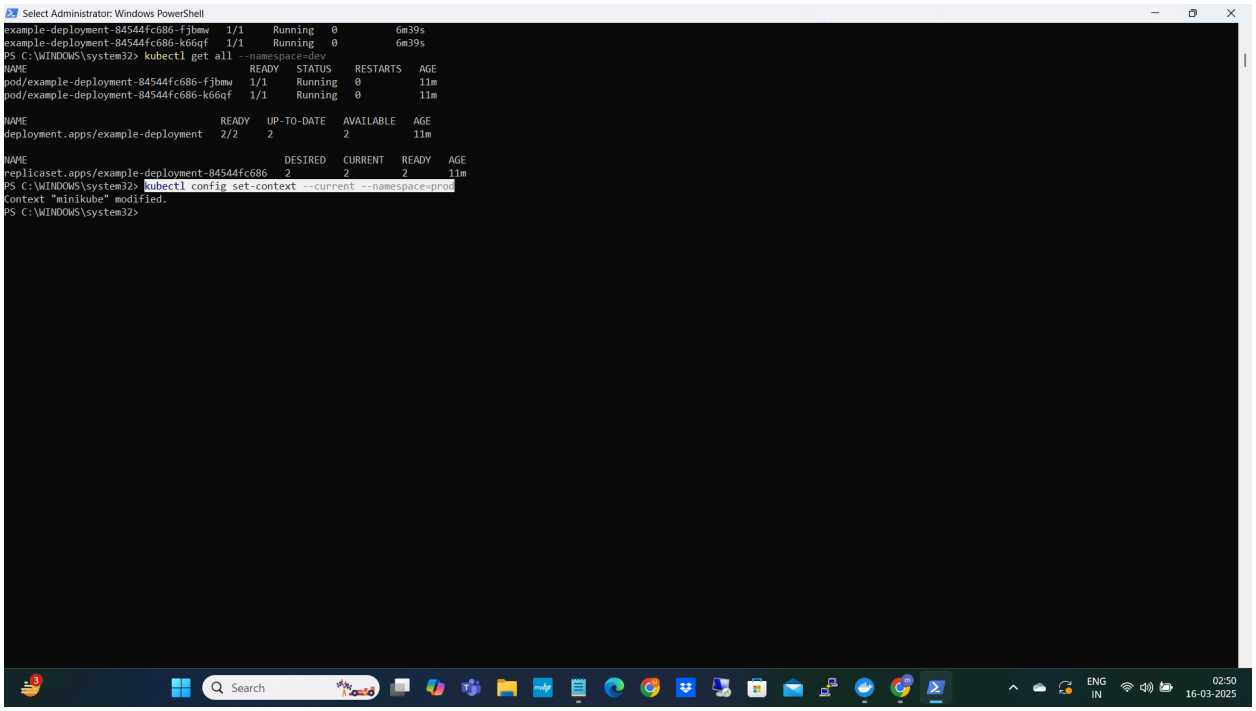


Get all resources inside the dev namespace
$ kubectl get all --namespace=dev

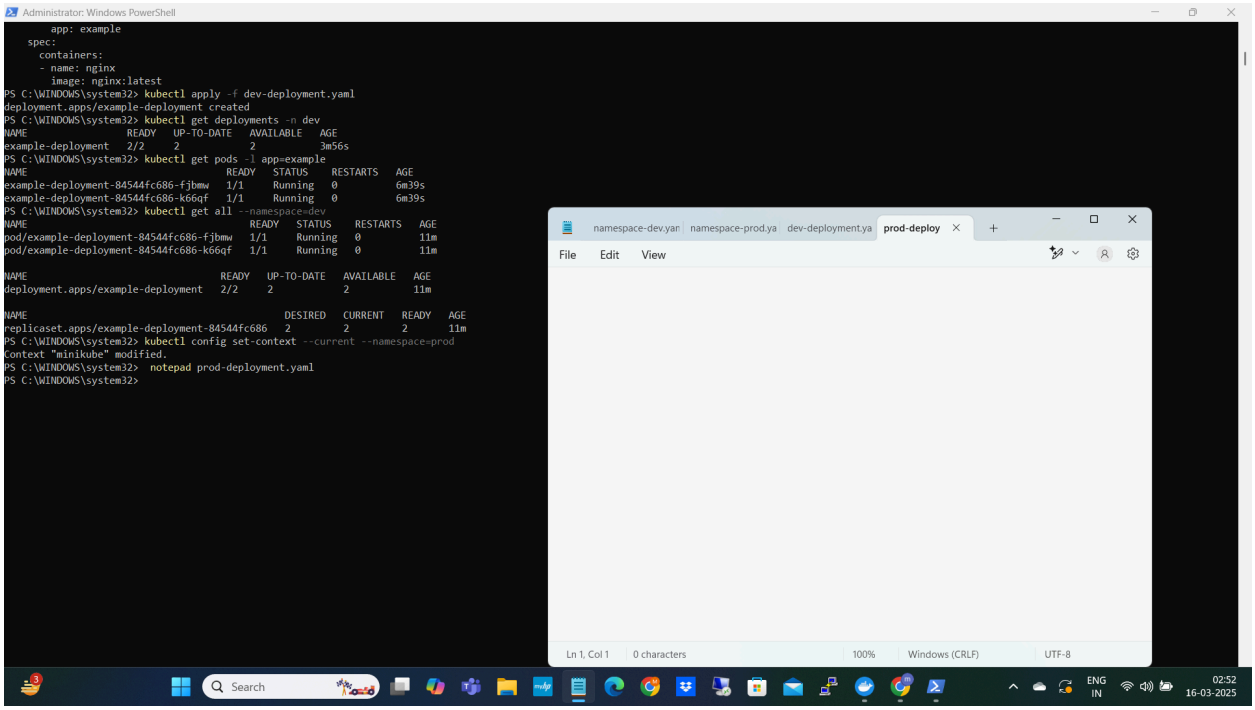


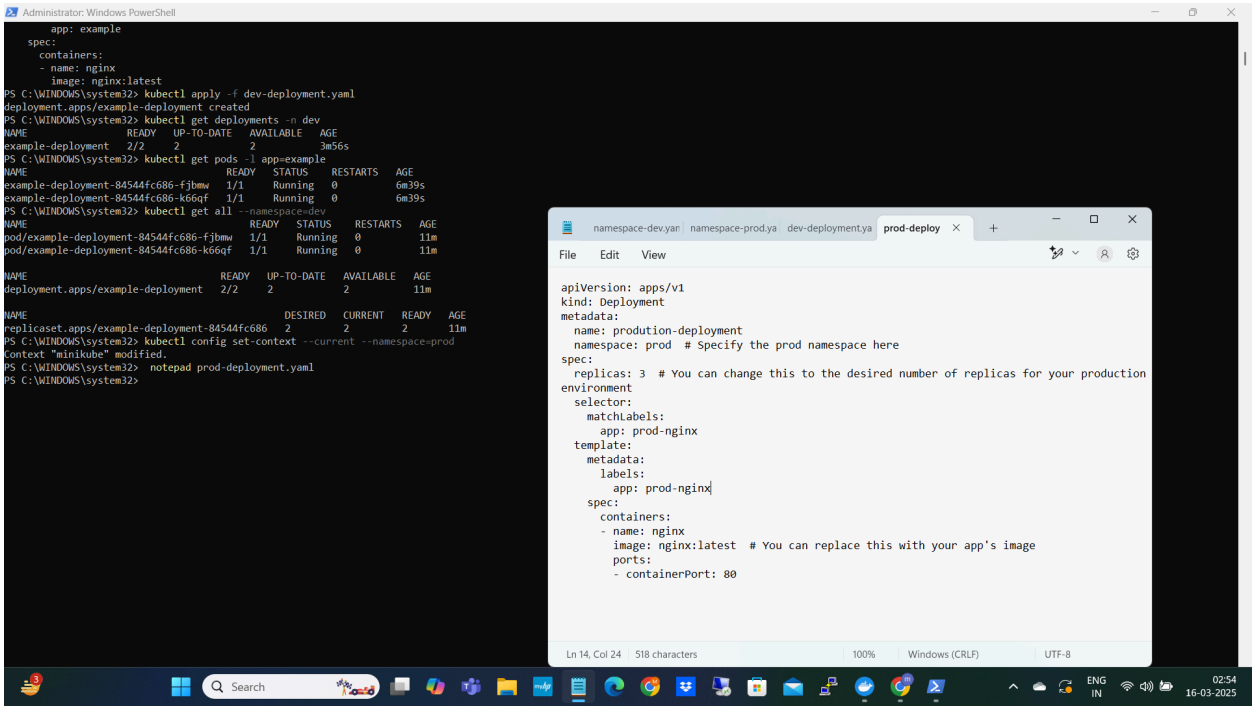
Here we can see
Pods, deployments and also replicasets

Let's switch to the prod namespace
$ kubectl config set-context --current --namespace=prod

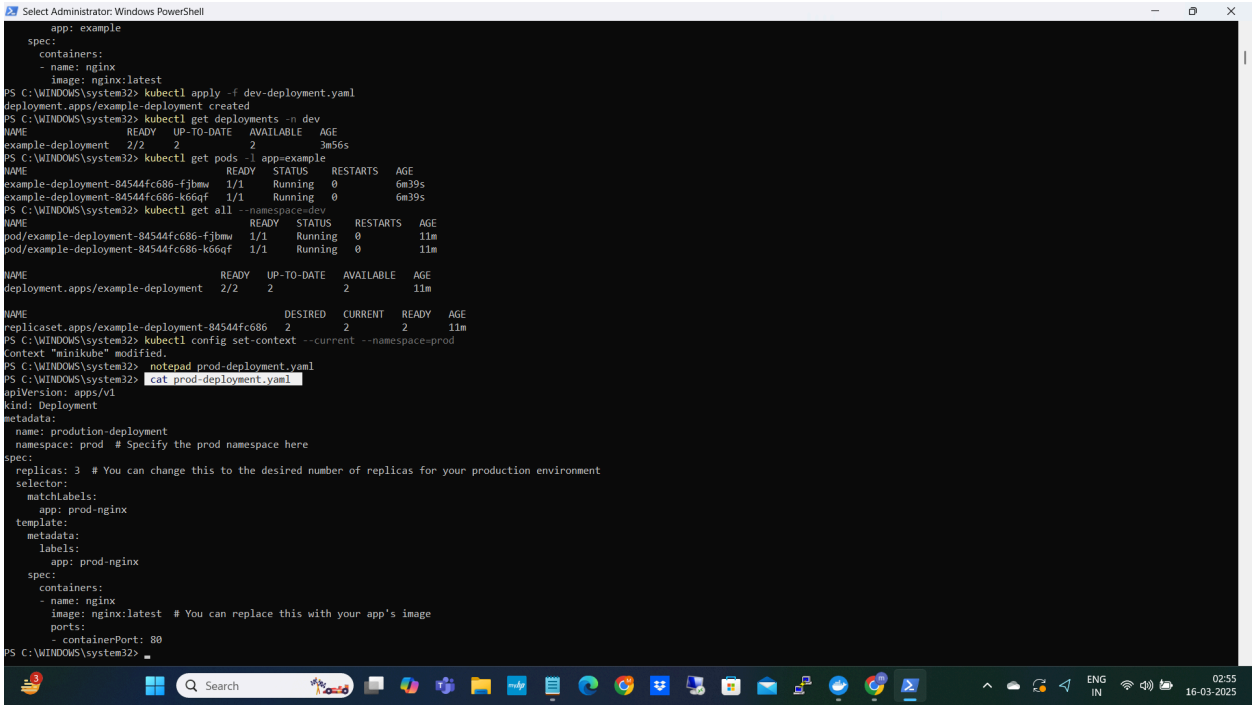


Create prod-deployment.yaml file
$ notepad prod-deployment.yaml



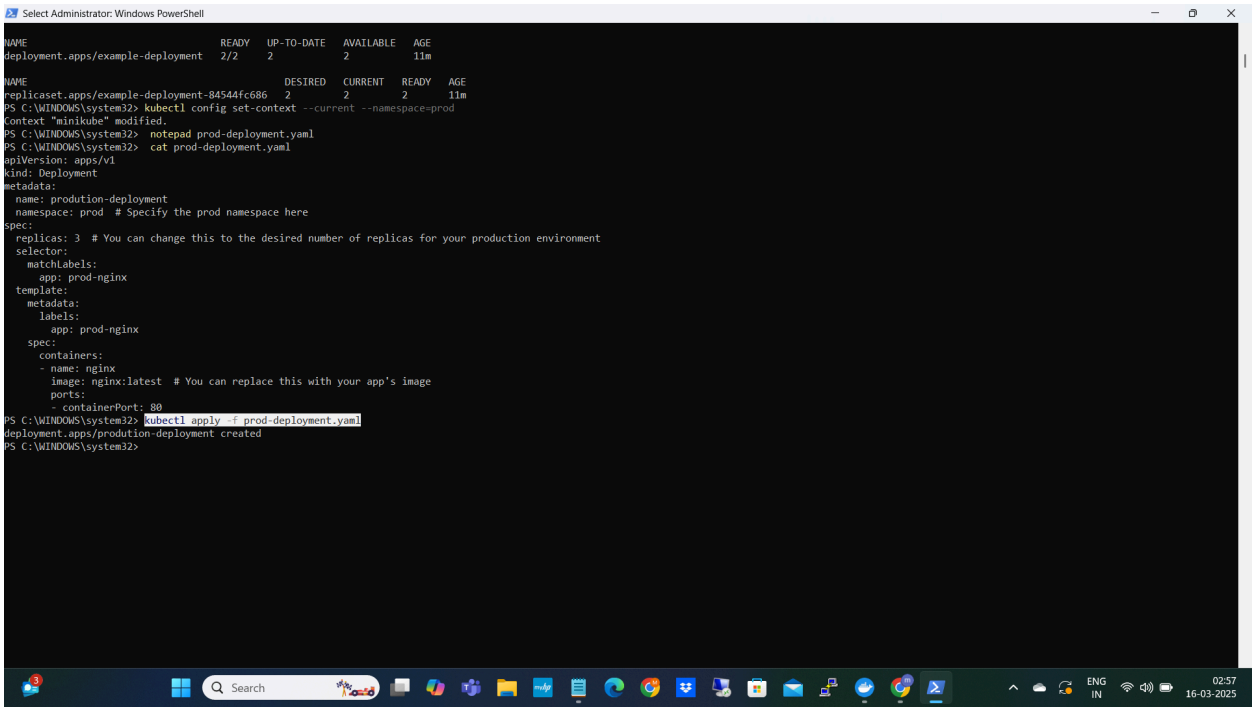


$ cat prod-deployment.yaml

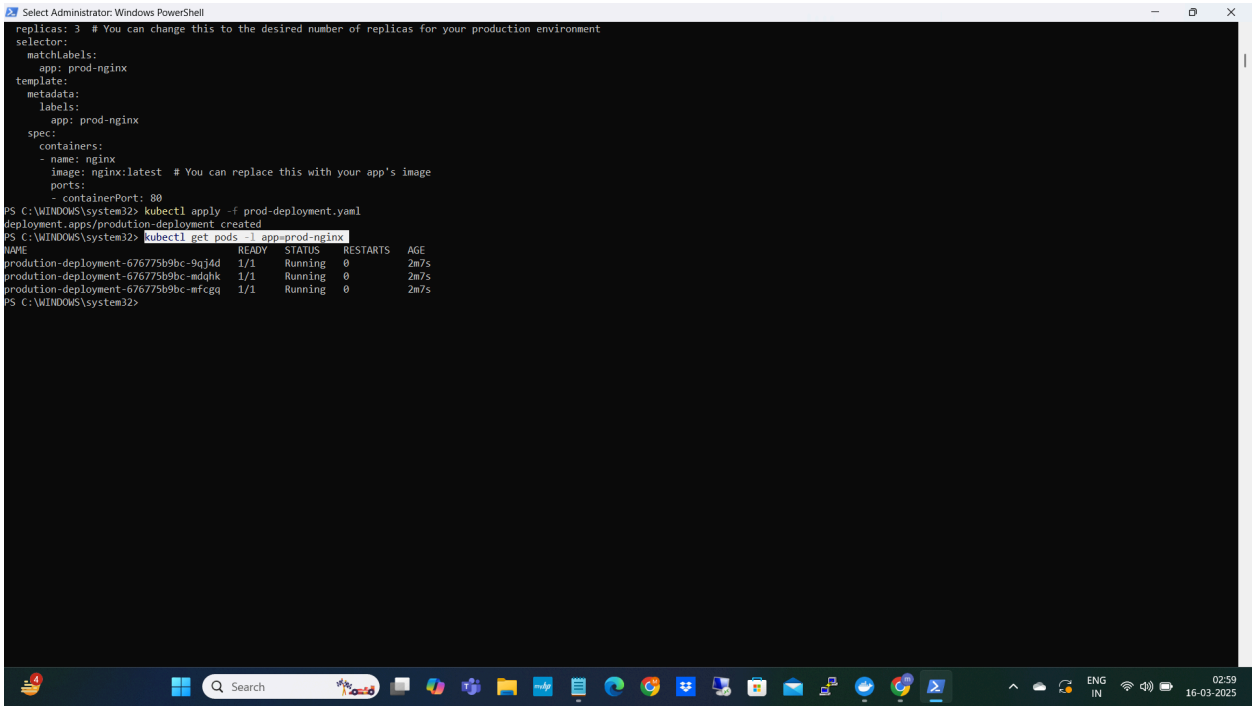


To create or apply deployment

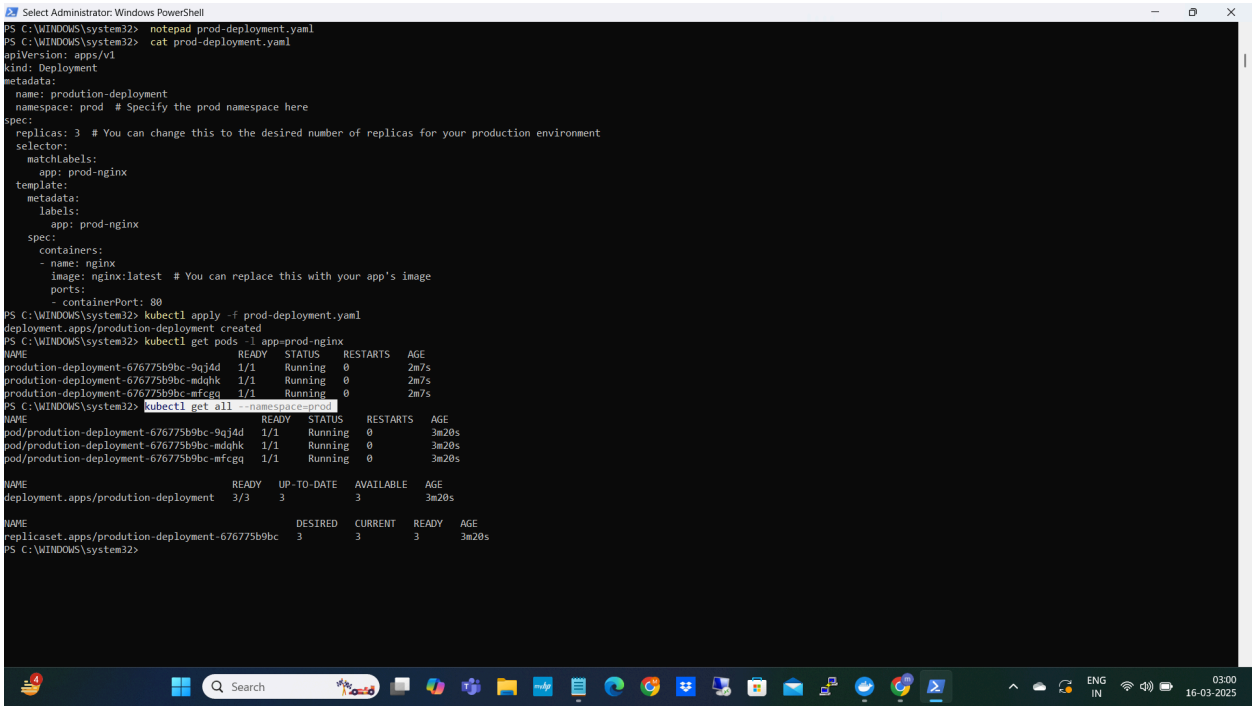
$ kubectl apply -f prod-deployment.yaml



List all the pods with in the label prod-nginx
$ kubectl get pods -l app=prod-nginx

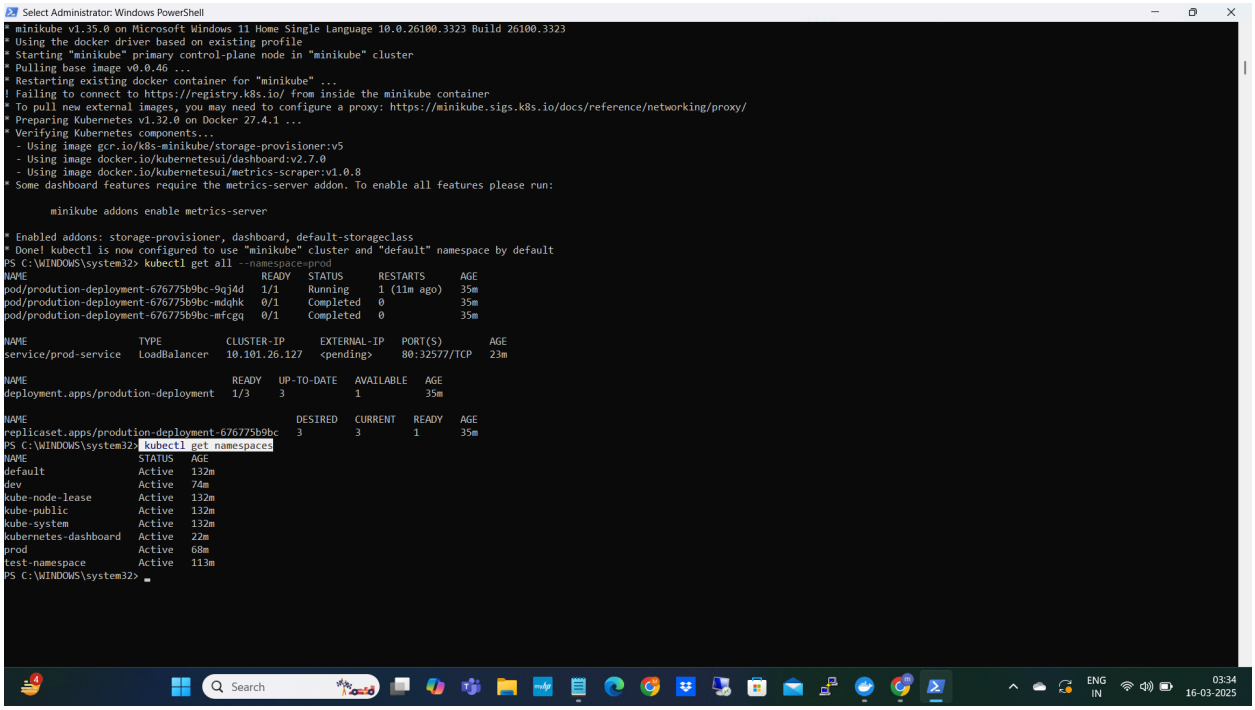


Get all resources inside the prod namespace
kubectl get all --namespace=prod

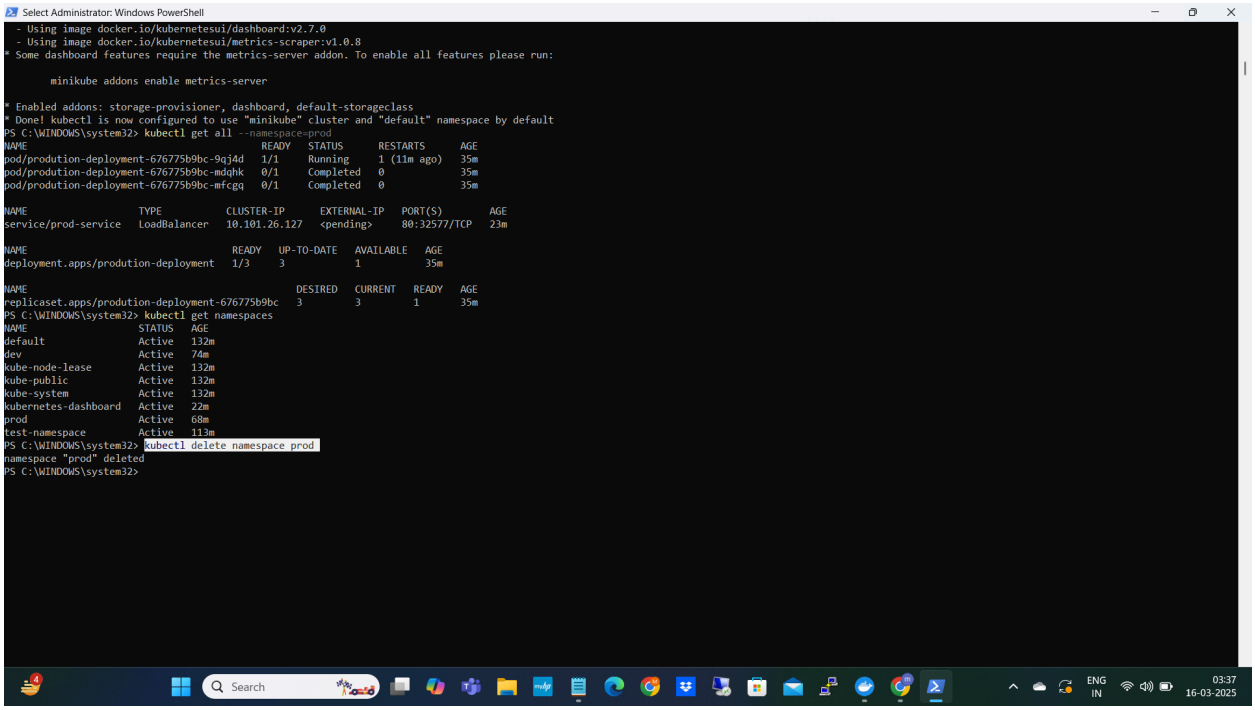


We can see pods, deployment and replica set

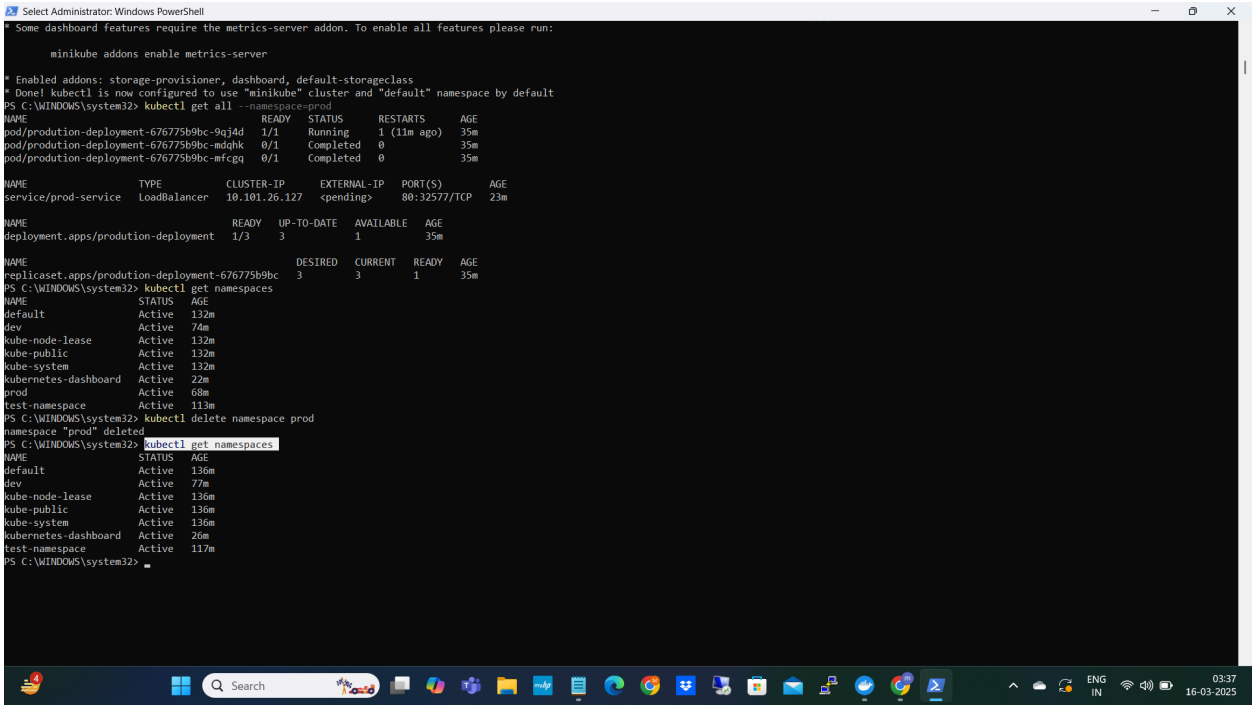
List all the namespaces:
$ kubectl get namespaces



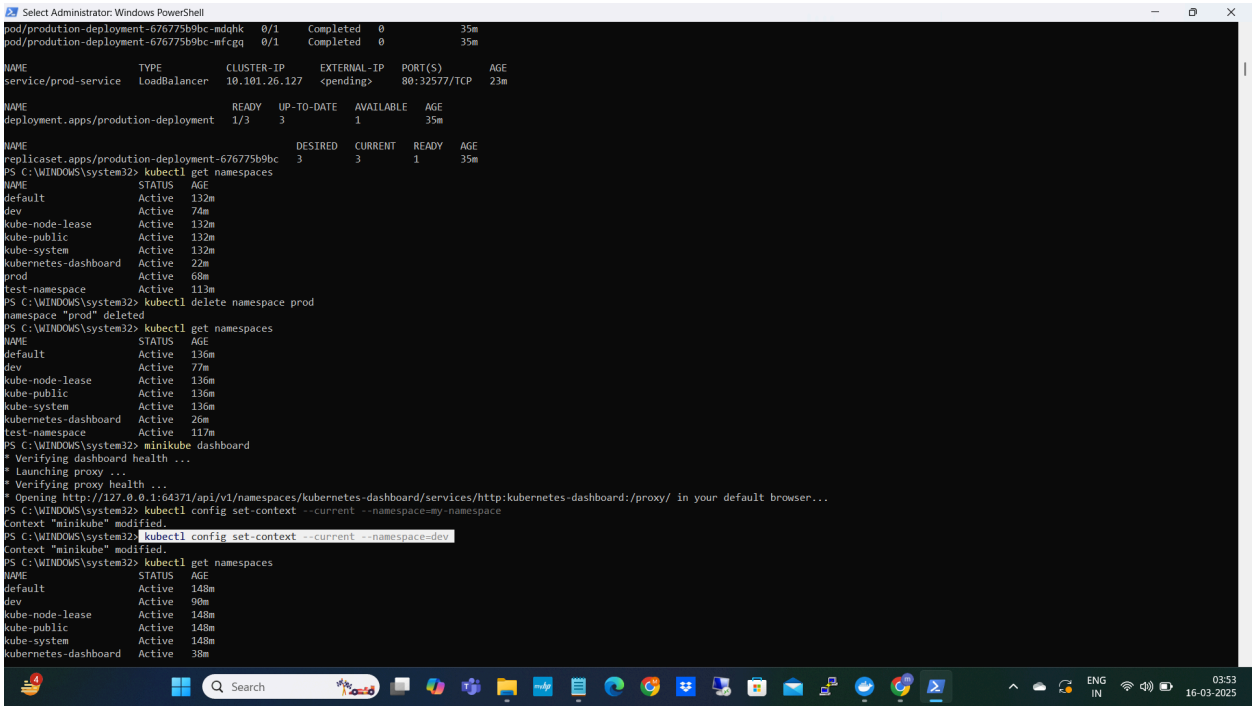
To delete name spaces:
$ kubectl delete namespace prod



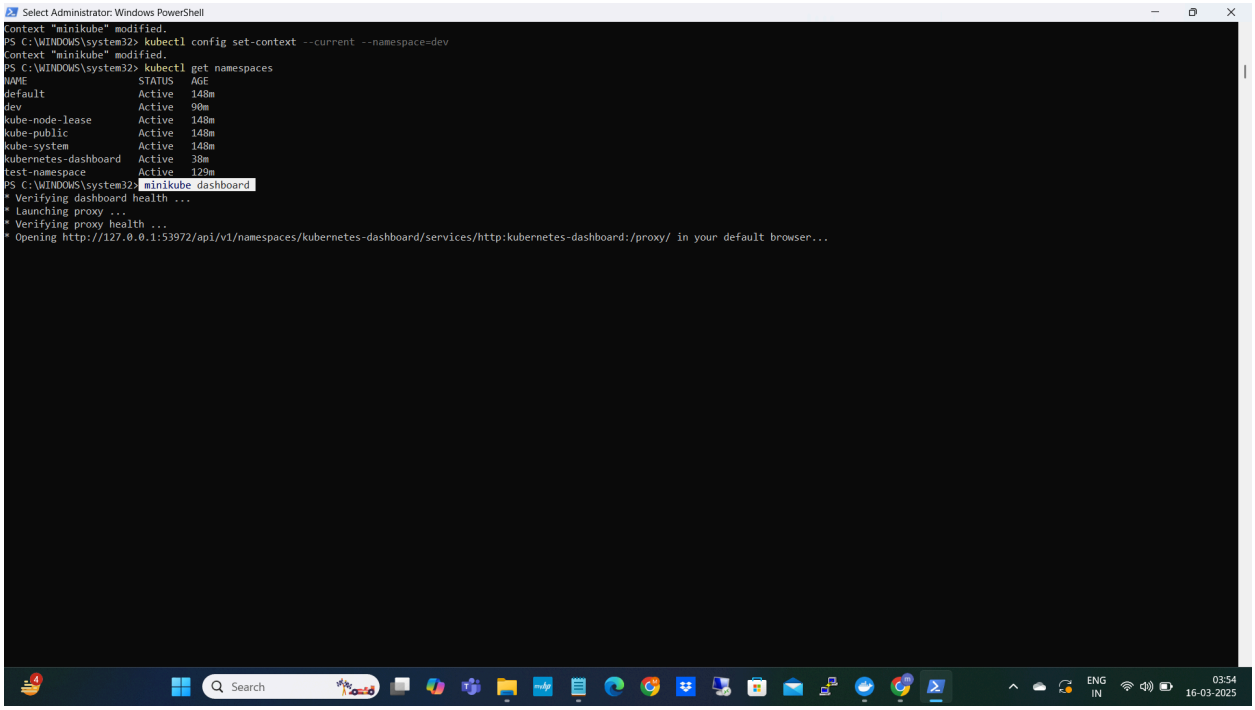
List all the namespaces **‘prod-namespace’ is** deleted



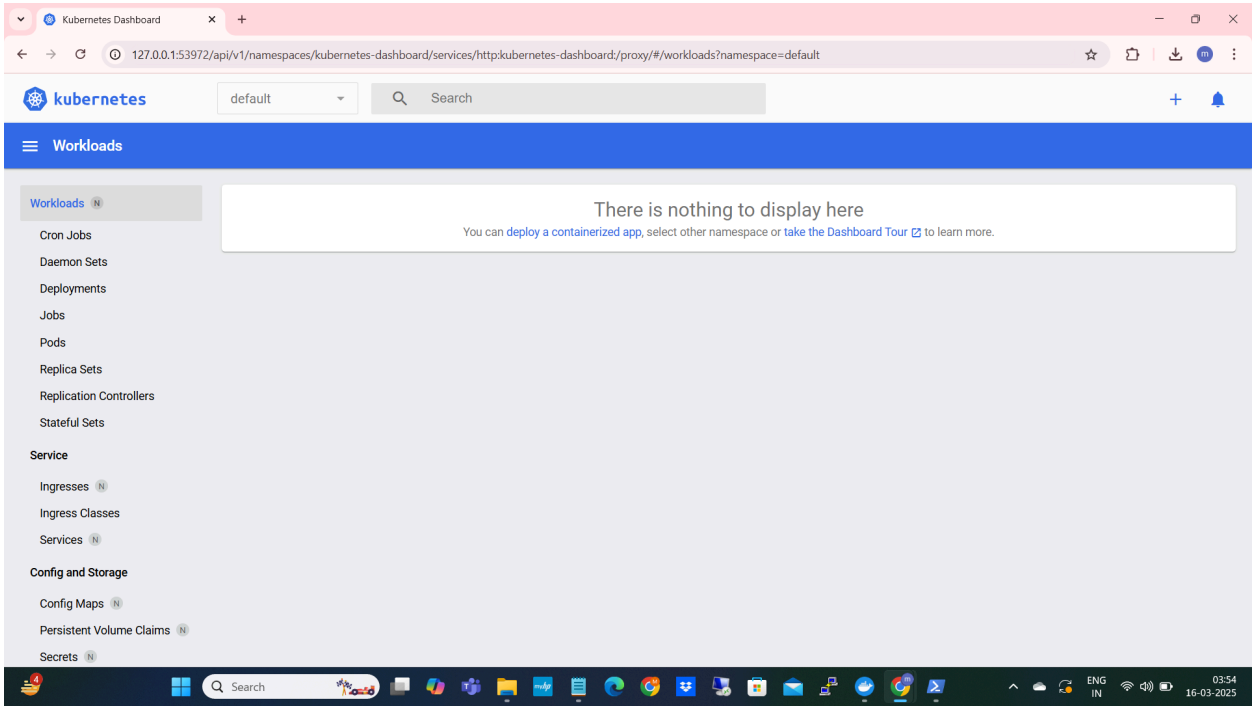
Switch to dev namespace and check the dashboard



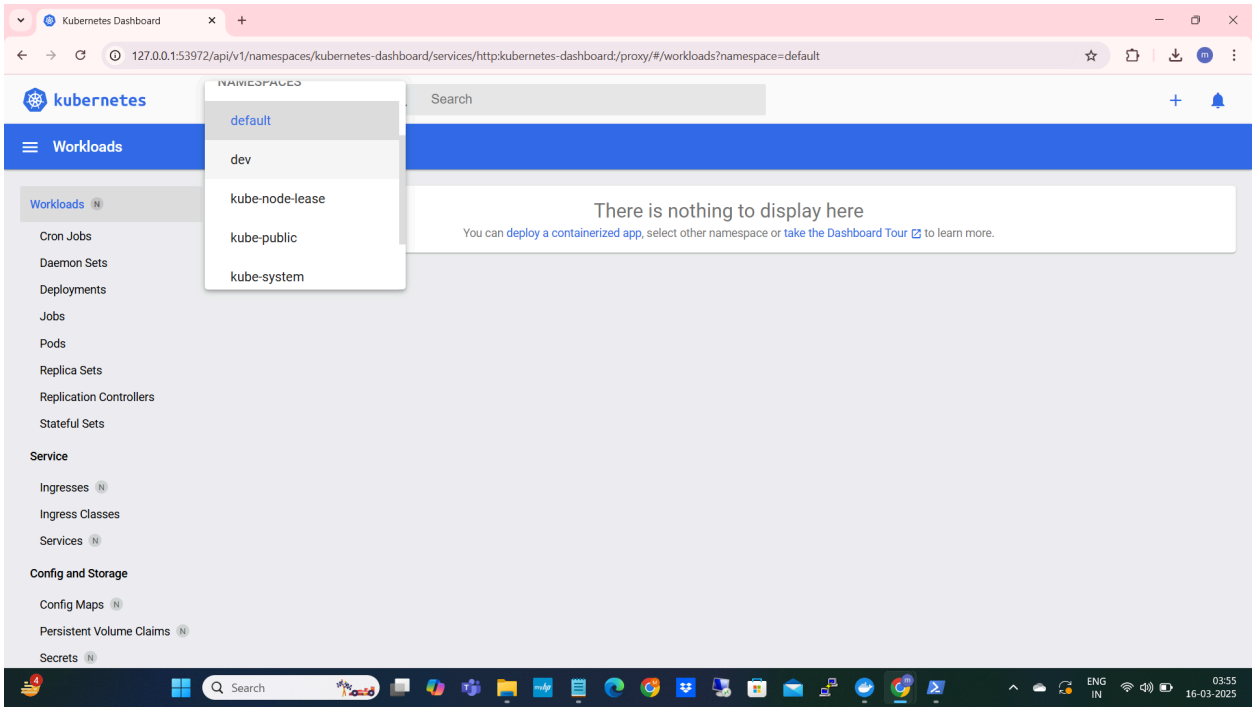
Minikube dashboard launch
$ minikube dashboard

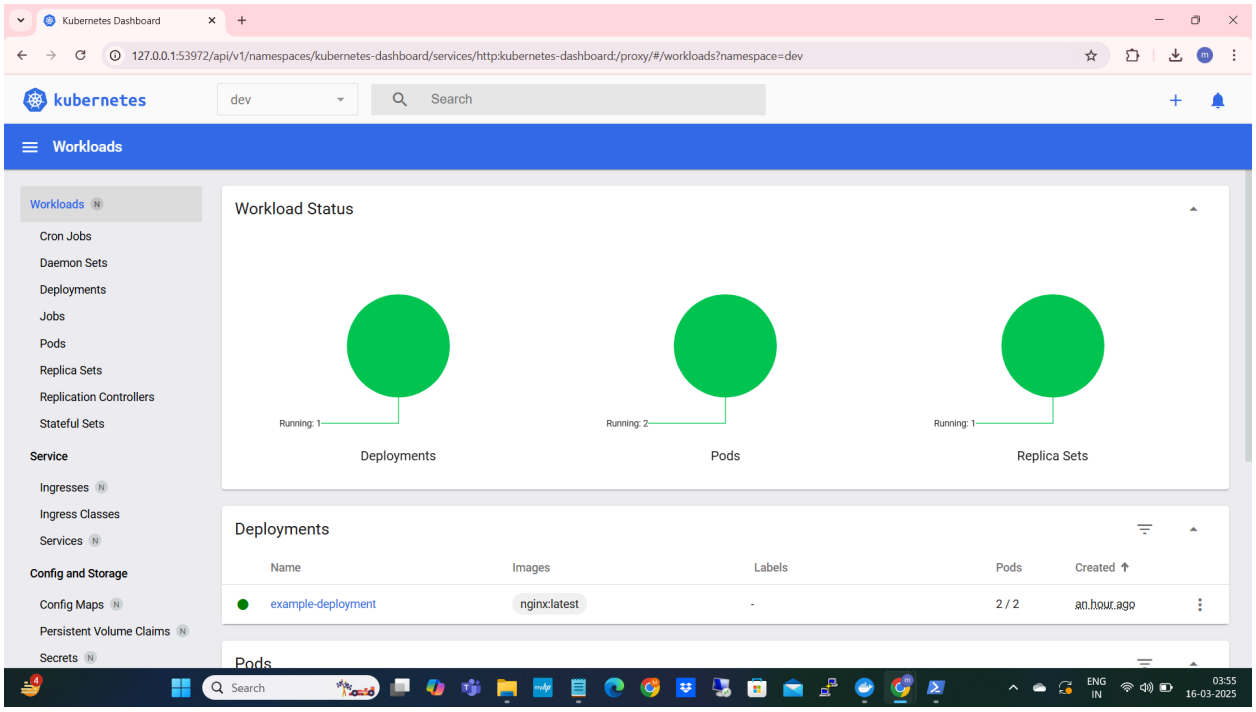


It can launch kubernetes dashboard

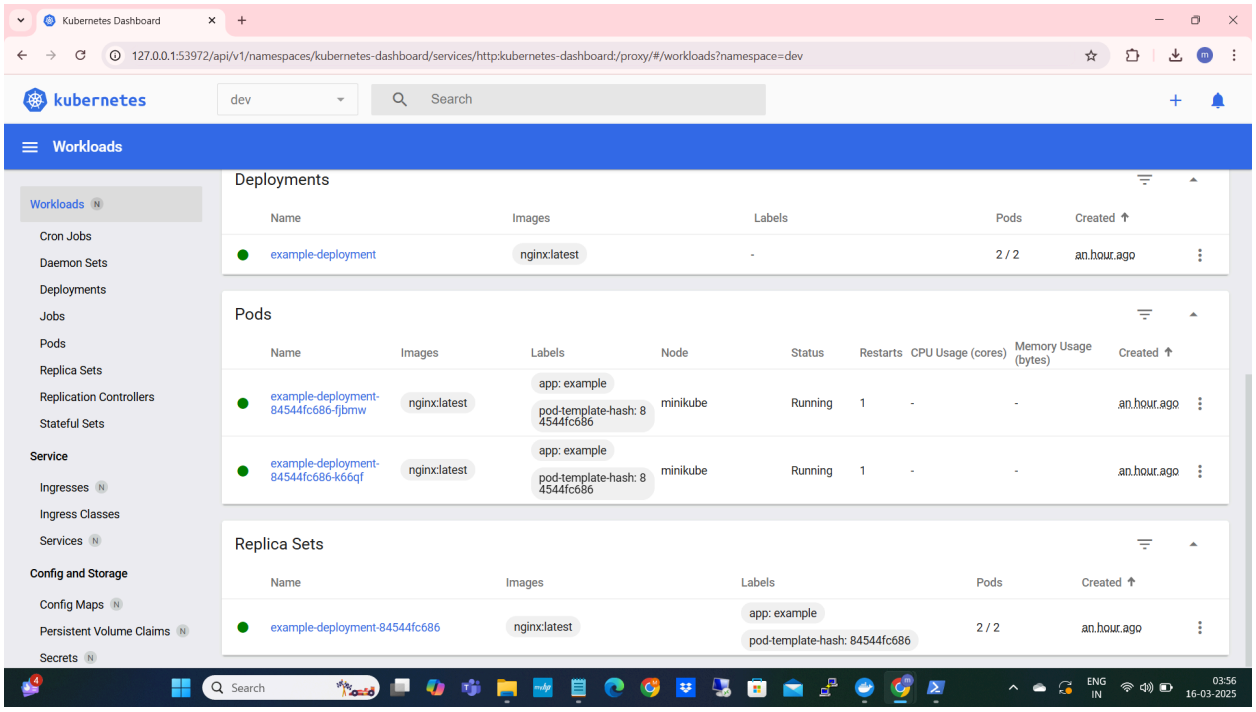


Select the **dev** namespace:

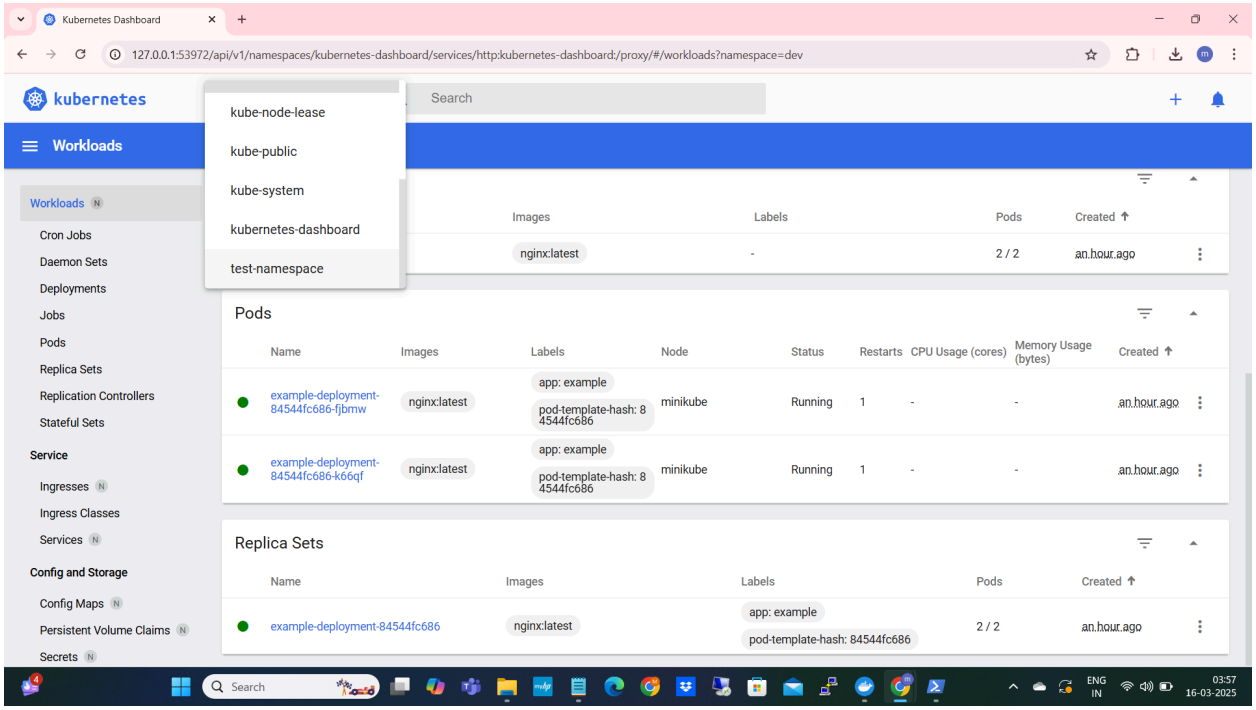




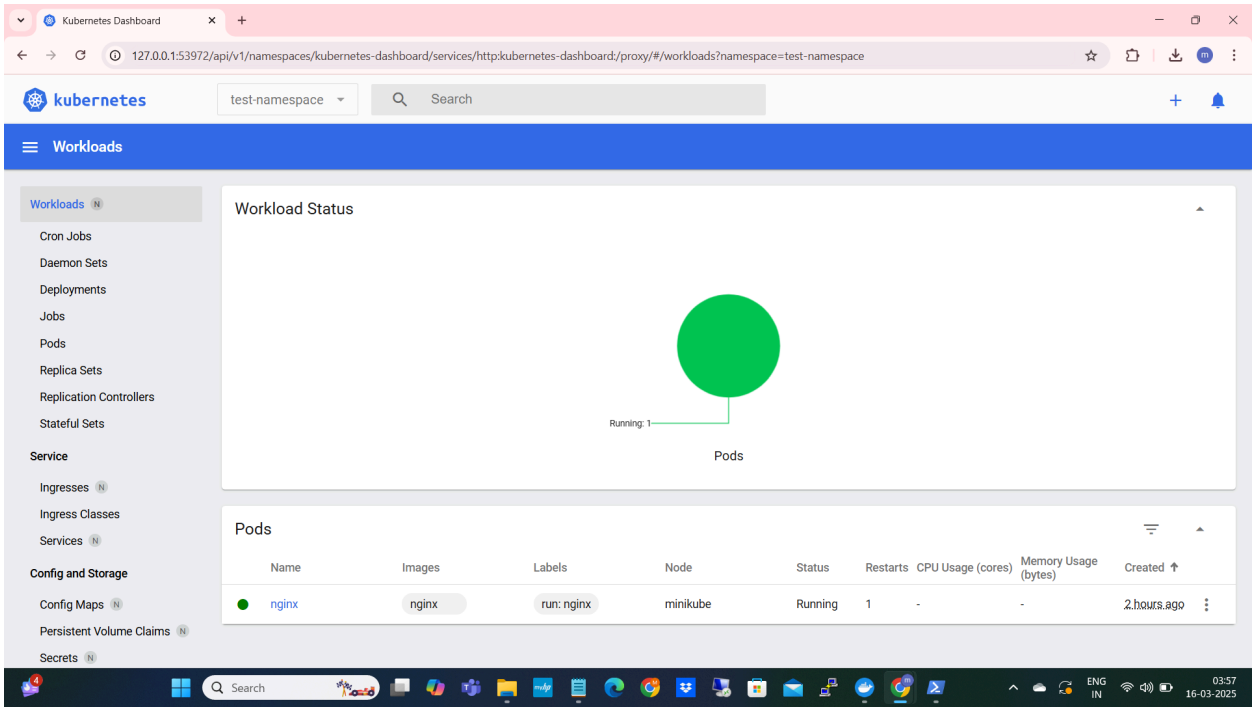
Here we can see the resources inside the **dev** namespace:



Select **test-namespace**:

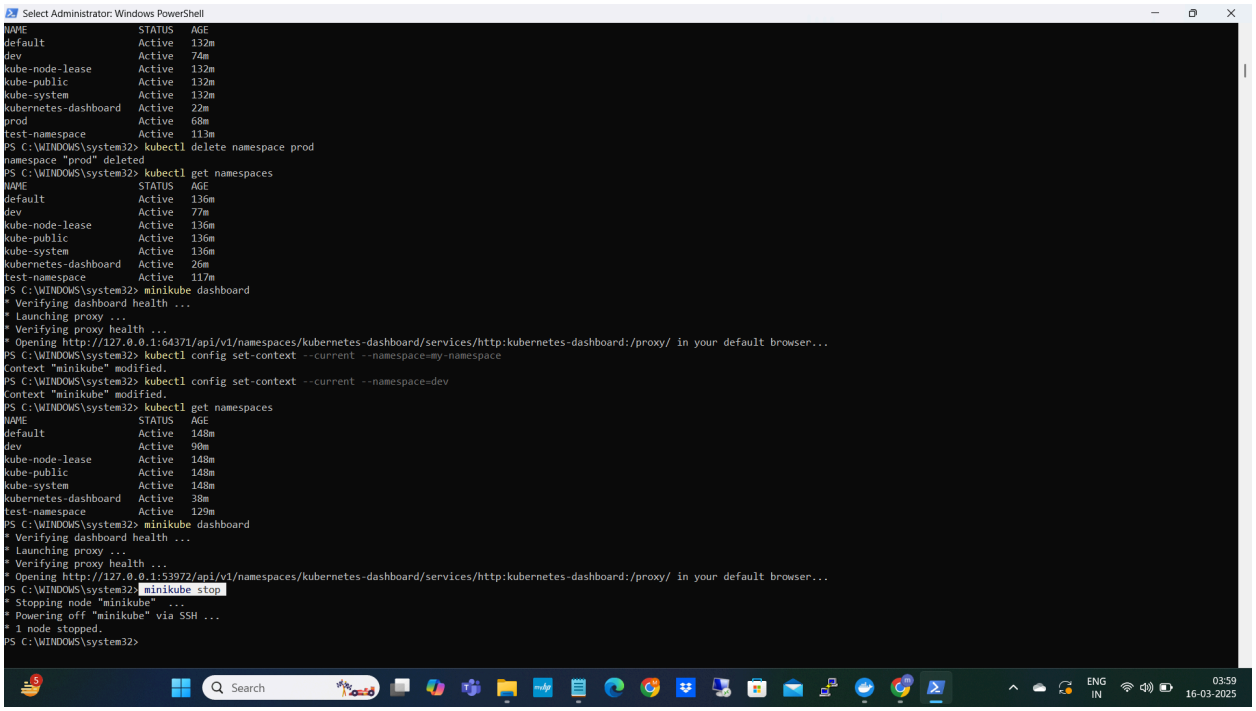


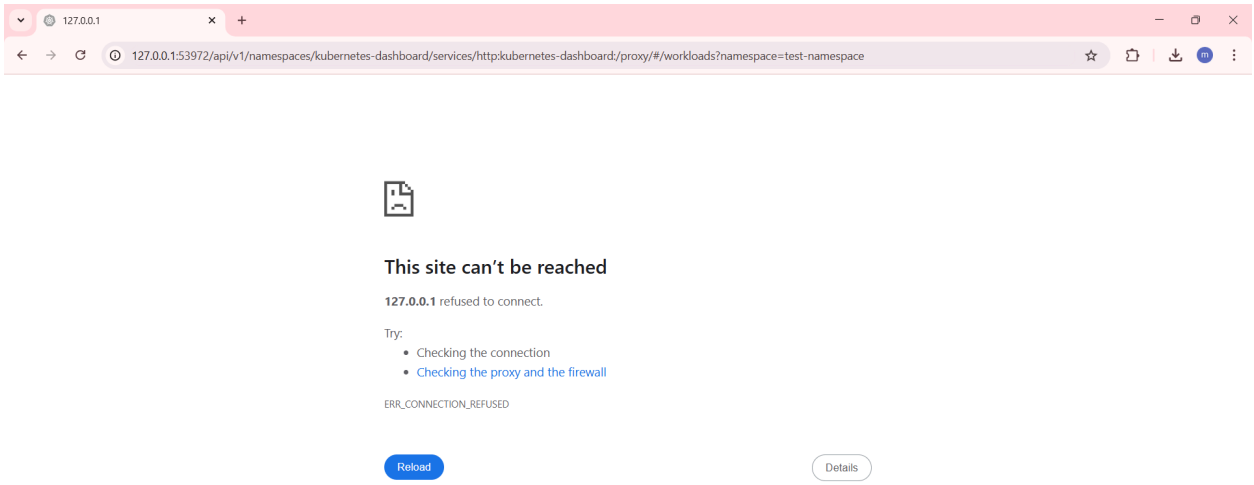
Here we can see the resources with in it



Stop minikube

$ minikube stop





As minikube stopped dashboard is unreachable

Docker container also stopped