

```
>> How to add new node? - minikube start --nodes=2 / minikube start --nodes=2 --embed-certs

>> minikube image list
>> docker images
>> minikube image load kubernetes-test-app:latest

>> kubectl apply -f deployment.yaml (from project directory)
>> kubectl delete deployment kubernetes-test-app (conditional)

>> kubectl get pods -A
>> kubectl get nodes -A

>> kubectl delete pod <pod name/id>
>> minikube service kubernetes-test-app
>> minikube dashboard

>> kubectl get endpoints
>> kubectl get service

** Load Balancing **
>> kubectl get pods
>> kubectl logs -f <pod-id>
>> Postman -> Collection -> Runs -> Performance -> Run Performance Test -> Performance -> (Fixed -> 10Users -> 1min)

>> minikube stop

for status: ImagePullBackOff issue
>> docker tag kubernetes-test-app:latest vikash95/kubernetes-test-app:latest
>> docker push vikash95/kubernetes-test-app:latest
```

Workloads

Workloads

- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets

Service

- Ingresses
- Ingress Classes
- Services

Config and Storage

- Config Maps
- Persistent Volume Claims

Running: 1

Deployments

Running: 2

Pods

Running: 1

Replica Sets

Deployments

Name	Images	Labels	Pods	Created ↑
● <a href="#">kubernetes-test-app</a>	kubernetes-test-app:latest	-	2 / 2	23 minutes ago

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created ↑
● <a href="#">kubernetes-test-app-654ff4f565-49zy9</a>	kubernetes-test-app:latest	app: kubernetes-test-app pod-template-hash: 654ff4f565	minikube	Running	0	-	-	12 minutes ago

User → request

Feature Flag

Img

Dockerhub

ANS-ECR

Control Plane - Shared DB  
- Resource Mgr  
- API Server  
- ETCD (DB)

WN KUBERNETES  
K-Proxy  
Scheduler  
DT DP

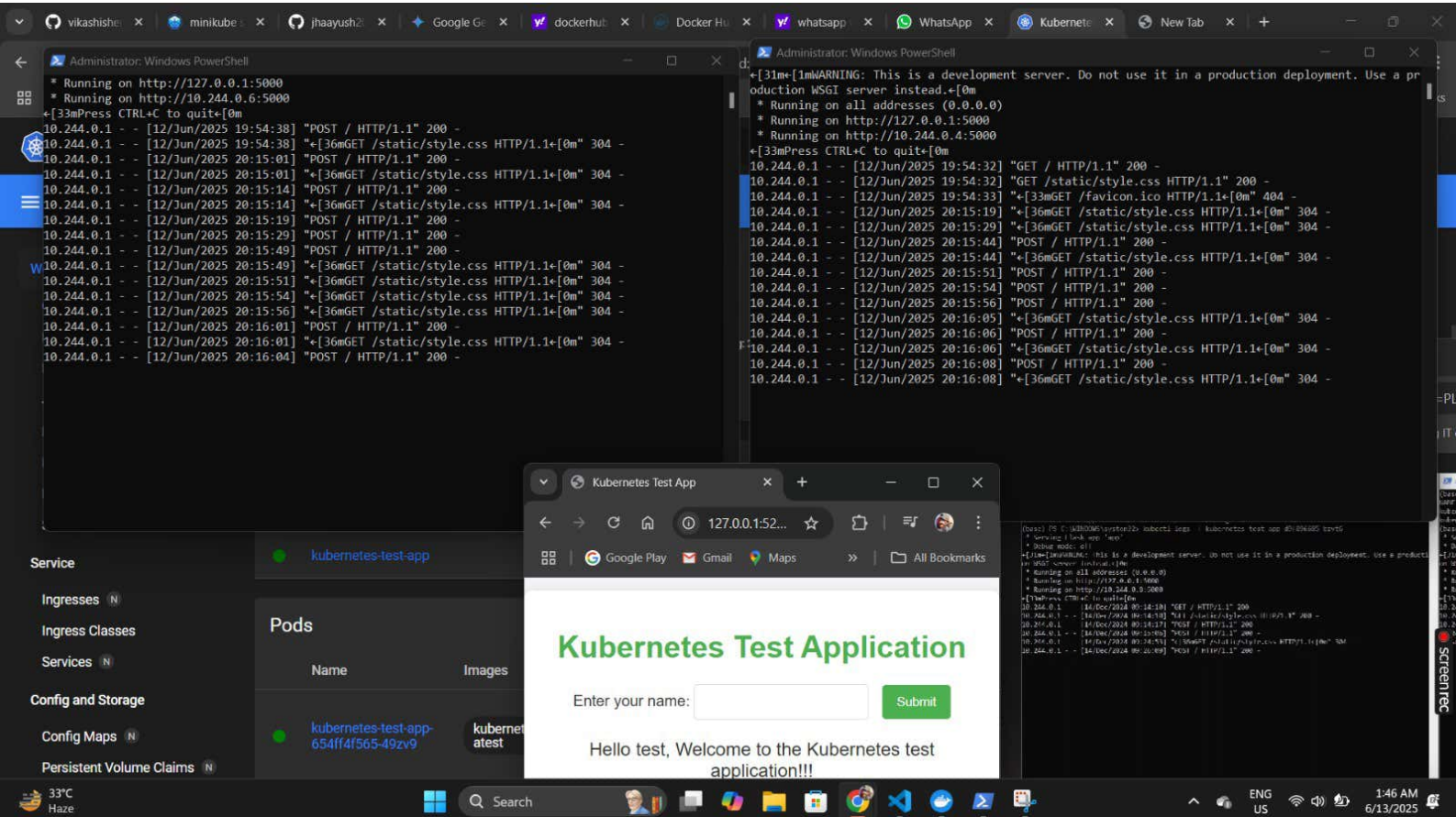
WN K8S  
KP  
App DP

WN K8S  
KP  
DT DP

100GB Ingress Express

Gmail

Youtube  
Cluster  
Google



HomeWorkspacesAPI Network

Search PostmanCtrl K

Postman

Invite

Upgrade

Ayush Shaurya Jha's WorkspaceNewImport

Getting startedPOST k8s-testKubernetes-Mini-PrcKubernetes-Mini-Prc

No environment

Collections

Environments

Flows

History

Kubernetes-Mini-Project

POST k8s-test

Kubernetes-Mini-Project (#1)

Run Again

Compare runs

Share

Kubernetes-Mini-Project · 10 VU · Jun 13, 2025 02:10:51 (1 min) · Fixed

SummaryErrors

Total requests sent564

Requests/second8.41

Avg. response time36 ms

P9050 ms

P9552 ms

P99237 ms

Error rate0.00 %

Filter by requests

Avg. response

100%90%80%70%60%50%40%30%20%10%0%

02:10:5202:10:5902:11:0602:11:1302:11:2002:11:2702:11:3402:11:4102:11:4802:11:55

185 ms12 req/s160140120100806040200

Requests/secondAvg. responseError rateVirtual users

Performance details for 02:11:38 - 02:11:40

Clear Filter

Overall 11 requests/s38 ms0.00 %10 VU

#RequestTotal requestsRequests/sError %Resp. time (Avg. ms)Min ( ...)

1POST k8s-test2110.500.0038

OnlineFind and replaceConsole

PostbotRunnerStart ProxyCookiesVaultTrash



```
Administrator: Windows PowerShell
PS D:\> kubectll get pods -A
NAMESPACE      NAME                                READY   STATUS    RESTARTS   AGE
kube-system     coredns-674b8bbfcf-lbpv5          1/1     Running   1 (88s ago) 3h50m
kube-system     etcd-minikube                      1/1     Running   1 (88s ago) 3h50m
kube-system     kube-apiserver-minikube            1/1     Running   1 (88s ago) 3h50m
kube-system     kube-controller-manager-minikube   1/1     Running   1 (88s ago) 3h50m
kube-system     kube-proxy-pwj7c7                  1/1     Running   1 (88s ago) 3h50m
kube-system     kube-scheduler-minikube            1/1     Running   1 (88s ago) 3h50m
kube-system     storage-provisioner                1/1     Running   2 (67s ago) 3h50m
PS D:\> kebecctl get nodes -A
kebecctl : The term 'kebecctl' is not recognized as the name of a cmdlet, function, script file, or operable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ kebecctl get nodes -A
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (kebecctl:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS D:\> kubectll get nodes -A
NAME              STATUS    ROLES    AGE   VERSION
minikube          Ready     control-plane 3h51m v1.33.1
PS D:\> minikube image list
registry.k8s.io/pause:3.10
registry.k8s.io/kube-scheduler:v1.33.1
registry.k8s.io/kube-proxy:v1.33.1
registry.k8s.io/kube-controller-manager:v1.33.1
registry.k8s.io/kube-apiserver:v1.33.1
registry.k8s.io/etcd:3.5.21-0
registry.k8s.io/coredns/coredns:v1.12.0
gcr.io/k8s-minikube/storage-provisioner:v5
PS D:\> docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
kubernetes-test-app latest       3e2deb6789f9      4 hours ago     196MB
gcr.io/k8s-minikube/kicbase v0.0.47     8311be96a0a8      3 weeks ago     1.86GB
gcr.io/k8s-minikube/kicbase <none>      6ed579c9292b      3 weeks ago     1.86GB
PS D:\> minikube image load kubernetes-test-app:latest
PS D:\> minikube image list
registry.k8s.io/pause:3.10
registry.k8s.io/kube-scheduler:v1.33.1
registry.k8s.io/kube-proxy:v1.33.1
registry.k8s.io/kube-controller-manager:v1.33.1
registry.k8s.io/kube-apiserver:v1.33.1
registry.k8s.io/etcd:3.5.21-0
registry.k8s.io/coredns/coredns:v1.12.0
gcr.io/k8s-minikube/storage-provisioner:v5
```

```
Administrator: Windows PowerShell

PS D:\> kubectl get pods -A
NAMESPACE      NAME                                     READY   STATUS    RESTARTS   AGE
default        kubernetes-test-app-654ff4f565-c6blm  1/1     Running   0           8m8s
default        kubernetes-test-app-654ff4f565-fl9jc   1/1     Running   0           8m8s
kube-system    coredns-674b8bbfcf-lbpv5             1/1     Running   1 (38m ago) 4h27m
kube-system    etcd-minikube                         1/1     Running   1 (38m ago) 4h27m
kube-system    kube-apiserver-minikube               1/1     Running   1 (38m ago) 4h27m
kube-system    kube-controller-manager-minikube      1/1     Running   1 (38m ago) 4h27m
kube-system    kube-proxy-pwjc7                     1/1     Running   1 (38m ago) 4h27m
kube-system    kube-scheduler-minikube               1/1     Running   1 (38m ago) 4h27m
kube-system    storage-provisioner                   1/1     Running   2 (37m ago) 4h27m

PS D:\> kubectl get nodes -A
NAME      STATUS   ROLES    AGE   VERSION
minikube  Ready    control-plane  4h28m  v1.33.1

PS D:\> kubectl delete pod kubernetes-test-app-654ff4f565-c6blm
pod "kubernetes-test-app-654ff4f565-c6blm" deleted

PS D:\>
PS D:\>
PS D:\> kubectl get pods -A
NAMESPACE      NAME                                     READY   STATUS    RESTARTS   AGE
default        kubernetes-test-app-654ff4f565-49zv9  1/1     Running   0           79s
default        kubernetes-test-app-654ff4f565-fl9jc   1/1     Running   0           12m
kube-system    coredns-674b8bbfcf-lbpv5             1/1     Running   1 (42m ago) 4h31m
kube-system    etcd-minikube                         1/1     Running   1 (42m ago) 4h31m
kube-system    kube-apiserver-minikube               1/1     Running   1 (42m ago) 4h31m
kube-system    kube-controller-manager-minikube      1/1     Running   1 (42m ago) 4h31m
kube-system    kube-proxy-pwjc7                     1/1     Running   1 (42m ago) 4h31m
kube-system    kube-scheduler-minikube               1/1     Running   1 (42m ago) 4h31m
kube-system    storage-provisioner                   1/1     Running   2 (42m ago) 4h31m

PS D:\> minikube service kubernetes-test-app
|-----|-----|-----|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| default | kubernetes-test-app | No node port |
|-----|-----|-----|-----|
* service default/kubernetes-test-app has no node port
! Services [default/kubernetes-test-app] have type "ClusterIP" not meant to be exposed, however for local development minikube allows you to access this !
* Starting tunnel for service kubernetes-test-app.
|-----|-----|-----|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|-----|-----|-----|
| default | kubernetes-test-app | http://127.0.0.1:52095 |
|-----|-----|-----|-----|
* Opening service default/kubernetes-test-app in default browser...
```

Copilot



## Kubernetes Test Application

Enter your name:

Hello test, Welcome to the Kubernetes test application!!!



```

PS D:\> kubectl get endpoints
Warning: v1 Endpoints is deprecated in v1.33+; use discovery.k8s.io/v1 EndpointSlice
NAME                               ENDPOINTS                               AGE
kubernetes                         192.168.49.2:8443                       4h44m
kubernetes-test-app               10.244.0.4:5000,10.244.0.6:5000        24m
PS D:\> kubectl get srvcices
Error: the server doesn't have a resource type "srvcices"
PS D:\> kubectl get services
NAME                               TYPE               CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
kubernetes                         ClusterIP          10.96.0.1       <none>           443/TCP          4h44m
kubernetes-test-app               ClusterIP          10.97.105.135   <none>           8080/TCP          24m
PS D:\> kubectl get pods
NAME                               READY   STATUS    RESTARTS   AGE
kubernetes-test-app-654ff4f565-49zv9  1/1     Running   0           24m
kubernetes-test-app-654ff4f565-fl9jc  1/1     Running   0           35m
PS D:\> kubernetes logs -f kubernetes-test-app-654ff4f565-49zv9
kubernetes : The term 'kubernetes' is not recognized as the name of a cmdlet, function, script
File, or operable program. Check the spelling of the name, or if a path was included, verify that
the path is correct and try again.
At line:1 char:1
+ kubernetes logs -f kubernetes-test-app-654ff4f565-49zv9
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (kubernetes:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS D:\> kubectl logs -f kubernetes-test-app-654ff4f565-49zv9
* Serving Flask app 'app'
* Debug mode: off
-[-31m-[-1mWARNING: This is a development server. Do not use it in a production deployment. Use a pro
duction WSGI server instead.-[-0m

```

```
PS D:\> kubectl logs -f kubernetes-test-app-654ff4f565-49zv9
* Serving Flask app 'app'
* Debug mode: off
[31m[1mWARNING: This is a development server. Do not use it in a production deployment. Use a pro
duction WSGI server instead.[0m
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://10.244.0.6:5000
[33mPress CTRL+C to quit[0m
0.244.0.1 - - [12/Jun/2025 19:54:38] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 19:54:38] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:01] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:15:01] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:14] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:15:14] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:19] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:15:29] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:15:49] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:15:49] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:51] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:54] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:15:56] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:16:01] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:16:01] "[36mGET /static/style.css HTTP/1.1[0m" 304 -
0.244.0.1 - - [12/Jun/2025 20:16:04] "POST / HTTP/1.1" 200 -
0.244.0.1 - - [12/Jun/2025 20:40:54] "POST / HTTP/1.1" 200 -
```