

Kubernetes Assignment 5 (1).pdf x Instances | EC2 | us-east-1 x 3.89.106.105:30926/apache x | +

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:

EC2 > Instances

Dashboard
EC2 Global View
Events
▼ Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
▼ Images
AMIs
AMI Catalog
▼ Elastic Block Store
Volumes
Consistent

Instances (1/3) info

Find Instance by attribute or tag (case-sensitive)

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
<input checked="" type="checkbox"/>	k8s-master	i-0fff51d8d37e8f20e	Running	t2.small	⌚ Initializing	View alarms +	us-east-1c
<input type="checkbox"/>	k8s-slave1	i-0801f9ea4f30366b7	Running	t2.small	⌚ Initializing	View alarms +	us-east-1c
<input type="checkbox"/>	k8s-slave2	i-02cef6dd5fde4e4b3	Running	t2.small	⌚ Initializing	View alarms +	us-east-1c

i-0fff51d8d37e8f20e (k8s-master)

INSTANCE ID
i-0fff51d8d37e8f20e

Public IPv4 address
172.31.28.252

Private IPv4 address
172.31.28.252

Public IPv4 DNS
ec2-3-89-106-105.compute-1.amazonaws.com

CloudShell Feedback

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01-05-2025

master x slave1 x slave2 x + v

```
customresourcedefinition.apiextensions.k8s.io/bgppeers.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/blockaffinities.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/caliconodestates.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/clusterinformations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/felixconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/globalnetworkpolicies.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/globalnetworksets.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/hostendpoints.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamconfigs.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamhandles.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ippools.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipreservations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/kubecontrollersconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/networkpolicies.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/networksets.crd.projectcalico.org created
clusterrole.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrole.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME                                STATUS    ROLES    AGE   VERSION
ip-172-31-28-252                    NotReady control-plane 74s   v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME                                STATUS    ROLES    AGE   VERSION
ip-172-31-19-2                      Ready     <none>    28s   v1.29.15
ip-172-31-21-55                     NotReady <none>    22s   v1.29.15
ip-172-31-28-252                    Ready     control-plane 8m38s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME                                STATUS    ROLES    AGE   VERSION
ip-172-31-19-2                      Ready     <none>    26s   v1.29.15
ip-172-31-21-55                     NotReady <none>    28s   v1.29.15
ip-172-31-28-252                    Ready     control-plane 8m44s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME                                STATUS    ROLES    AGE   VERSION
ip-172-31-19-2                      Ready     <none>    46s   v1.29.15
ip-172-31-21-55                     Ready     <none>    48s   v1.29.15
ip-172-31-28-252                    Ready     control-plane 9m4s   v1.29.15
ubuntu@ip-172-31-28-252:~$
```

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```
master x slave1 x slave2 x + v
customresourcedefinition.apiextensions.k8s.io/hostendpoints.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamblocks.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamconfigs.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamhandles.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ippools.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipreservations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/kubecontrollersconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/networkpolicies.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/networksets.crd.projectcalico.org created
clusterrole.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrole.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-28-252 NotReady control-plane 74s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-19-2 Ready <none> 20s v1.29.15
ip-172-31-21-55 NotReady <none> 22s v1.29.15
ip-172-31-28-252 Ready control-plane 8m38s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-19-2 Ready <none> 26s v1.29.15
ip-172-31-21-55 NotReady <none> 28s v1.29.15
ip-172-31-28-252 Ready control-plane 8m44s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-19-2 Ready <none> 46s v1.29.15
ip-172-31-21-55 Ready <none> 48s v1.29.15
ip-172-31-28-252 Ready control-plane 9m4s v1.29.15
ubuntu@ip-172-31-28-252:~$ sudo nano assignment5.yaml
ubuntu@ip-172-31-28-252:~$ kubectl apply -f assignment5.yaml
deployment.apps/nginx-deployment created
service/nginx-service created
deployment.apps/apache-deployment created
service/apache-service created
ingress.networking.k8s.io/web-ingress created
ubuntu@ip-172-31-28-252:~$ |

ip-172-31-28-252 Ready control-plane 8m44s v1.29.15
ubuntu@ip-172-31-28-252:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-19-2 Ready <none> 46s v1.29.15
ip-172-31-21-55 Ready <none> 48s v1.29.15
ip-172-31-28-252 Ready control-plane 9m4s v1.29.15
ubuntu@ip-172-31-28-252:~$ sudo nano assignment5.yaml
ubuntu@ip-172-31-28-252:~$ kubectl apply -f assignment5.yaml
deployment.apps/nginx-deployment created
service/nginx-service created
deployment.apps/apache-deployment created
service/apache-service created
ingress.networking.k8s.io/web-ingress created
ubuntu@ip-172-31-28-252:~$ kubectl apply -f https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v1.9.1/deploy/static/provider/baremetal/deploy.yaml
namespace/ingress-nginx created
serviceaccount/ingress-nginx created
serviceaccount/ingress-nginx-admission created
role.rbac.authorization.k8s.io/ingress-nginx created
role.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrole.rbac.authorization.k8s.io/ingress-nginx created
clusterrole.rbac.authorization.k8s.io/ingress-nginx-admission created
rolebinding.rbac.authorization.k8s.io/ingress-nginx created
rolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
configmap/ingress-nginx-controller created
service/ingress-nginx-controller created
service/ingress-nginx-controller-admission created
deployment.apps/ingress-nginx-controller created
job.batch/ingress-nginx-admission-create created
job.batch/ingress-nginx-admission-patch created
ingressclass.networking.k8s.io/nginx created
networkpolicy.networking.k8s.io/ingress-nginx-admission created
validatingwebhookconfiguration.admissionregistration.k8s.io/ingress-nginx-admission created
ubuntu@ip-172-31-28-252:~$ kubectl get pods -n ingress-nginx
NAME READY STATUS RESTARTS AGE
ingress-nginx-admission-create-wcd64 0/1 Completed 0 16s
ingress-nginx-admission-patch-5gdzh 0/1 Completed 0 16s
ingress-nginx-controller-5f5d9767d5-p7mj9 0/1 Running 0 16s
ubuntu@ip-172-31-28-252:~$ |
```

```
master x slave1 x slave2 x + v
deployment.apps/nginx-deployment created
service/nginx-service created
deployment.apps/apache-deployment created
service/apache-service created
ingress.networking.k8s.io/web-ingress created
ubuntu@ip-172-31-28-252:~$ kubectl apply -f https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v1.9.1/deploy/static/provider/baremetal/de
ploy.yaml
namespace/ingress-nginx created
serviceaccount/ingress-nginx created
serviceaccount/ingress-nginx-admission created
role.rbac.authorization.k8s.io/ingress-nginx created
role.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrole.rbac.authorization.k8s.io/ingress-nginx created
clusterrole.rbac.authorization.k8s.io/ingress-nginx-admission created
rolebinding.rbac.authorization.k8s.io/ingress-nginx created
rolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
configmap/ingress-nginx-controller created
service/ingress-nginx-controller created
service/ingress-nginx-controller-admission created
deployment.apps/ingress-nginx-controller created
job.batch/ingress-nginx-admission-create created
job.batch/ingress-nginx-admission-patch created
ingressclass.networking.k8s.io/nginx created
networkpolicy.networking.k8s.io/ingress-nginx-admission created
validatingwebhookconfiguration.admissionregistration.k8s.io/ingress-nginx-admission created
ubuntu@ip-172-31-28-252:~$ kubectl get pods -n ingress-nginx
NAME                                READY    STATUS    RESTARTS   AGE
ingress-nginx-admission-create-wcd64 0/1      Completed 0           16s
ingress-nginx-admission-patch-5gdzh 0/1      Completed 0           16s
ingress-nginx-controller-5f5d9767d5-p7mj9 0/1      Running   0           16s
ubuntu@ip-172-31-28-252:~$ kubectl get pods
NAME                                READY    STATUS    RESTARTS   AGE
apache-deployment-784dcc968c-kwgz6 1/1      Running   0           2m17s
apache-deployment-784dcc968c-nbmw7 1/1      Running   0           2m17s
apache-deployment-784dcc968c-vss9v 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-4zbx4 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-7dsgj 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-wbm92 1/1      Running   0           2m17s
ubuntu@ip-172-31-28-252:~$ |
```

```
master x slave1 x slave2 x + v
ubuntu@ip-172-31-28-252:~$ kubectl apply -f https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v1.9.1/deploy/static/provider/baremetal/de
ploy.yaml
namespace/ingress-nginx created
serviceaccount/ingress-nginx created
serviceaccount/ingress-nginx-admission created
role.rbac.authorization.k8s.io/ingress-nginx created
role.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrole.rbac.authorization.k8s.io/ingress-nginx created
clusterrole.rbac.authorization.k8s.io/ingress-nginx-admission created
rolebinding.rbac.authorization.k8s.io/ingress-nginx created
rolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx created
clusterrolebinding.rbac.authorization.k8s.io/ingress-nginx-admission created
configmap/ingress-nginx-controller created
service/ingress-nginx-controller created
service/ingress-nginx-controller-admission created
deployment.apps/ingress-nginx-controller created
job.batch/ingress-nginx-admission-create created
job.batch/ingress-nginx-admission-patch created
ingressclass.networking.k8s.io/nginx created
networkpolicy.networking.k8s.io/ingress-nginx-admission created
validatingwebhookconfiguration.admissionregistration.k8s.io/ingress-nginx-admission created
ubuntu@ip-172-31-28-252:~$ kubectl get pods -n ingress-nginx
NAME                                READY    STATUS    RESTARTS   AGE
ingress-nginx-admission-create-wcd64 0/1      Completed 0           16s
ingress-nginx-admission-patch-5gdzh 0/1      Completed 0           16s
ingress-nginx-controller-5f5d9767d5-p7mj9 0/1      Running   0           16s
ubuntu@ip-172-31-28-252:~$ kubectl get pods
NAME                                READY    STATUS    RESTARTS   AGE
apache-deployment-784dcc968c-kwgz6 1/1      Running   0           2m17s
apache-deployment-784dcc968c-nbmw7 1/1      Running   0           2m17s
apache-deployment-784dcc968c-vss9v 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-4zbx4 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-7dsgj 1/1      Running   0           2m17s
nginx-deployment-7c79c4bf97-wbm92 1/1      Running   0           2m17s
ubuntu@ip-172-31-28-252:~$ kubectl get services
NAME      TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
apache-service ClusterIP  10.109.141.87  <none>         80/TCP     2m35s
kubernetes ClusterIP  10.96.0.1      <none>         <none>        13m
nginx-service ClusterIP  10.101.138.10 <none>         80/TCP     2m35s
ubuntu@ip-172-31-28-252:~$ |
```

master

slave1

slave2

```
I0601 09:54:46.013762 7 leaderelection.go:255] successfully acquired lease ingress-nginx/ingress-nginx-leader
I0601 09:54:46.014077 7 status.go:84] "New leader elected" identity=ingress-nginx-controller-5f5d976d5-p7mj9"
I0601 09:54:46.018442 7 status.go:219] "POD is not ready" pod="ingress-nginx/ingress-nginx-controller-5f5d976d5-p7mj9" node="ip-172-31-21-55"
I0601 09:54:46.096387 7 controller.go:210] "Backend successfully reloaded"
I0601 09:54:46.096573 7 controller.go:221] "Initial sync, sleeping for 1 second"
I0601 09:54:46.097041 7 event.go:298] Event(v1.ObjectReference{Kind:"Pod", Namespace:"ingress-nginx", Name:"ingress-nginx-controller-5f5d976d5-p7mj9", UID:"381b9612-66cd-4e11-8bf6-4592d87667e4", APIVersion:"v1", ResourceVersion:"1875", FieldPath:""}): type: 'Normal' reason: 'RELOAD' NGINX reload triggered due to a change in configuration
ubuntu@ip-172-31-28-252:~$ sudo nano assignment5.yaml
ubuntu@ip-172-31-28-252:~$ sudo nano assignment5.yaml
ubuntu@ip-172-31-28-252:~$ kubectl delete deployment nginx-deployment apache-deployment
deployment.apps "nginx-deployment" deleted
deployment.apps "apache-deployment" deleted
ubuntu@ip-172-31-28-252:~$ kubectl delete service apache-service
service "apache-service" deleted
ubuntu@ip-172-31-28-252:~$ kubectl delete service nginx-service
service "nginx-service" deleted
ubuntu@ip-172-31-28-252:~$ kubectl delete ingress web-ingress
error: unknown command "delete" for "kubectl"

Did you mean this?
      delete
ubuntu@ip-172-31-28-252:~$ kubectl delete ingress web-ingress
ingress.networking.k8s.io "web-ingress" deleted
ubuntu@ip-172-31-28-252:~$ kubectl apply -f assignment5.yaml
deployment.apps/nginx-deployment created
service/nginx-service created
deployment.apps/apache-deployment created
service/apache-service created
ingress.networking.k8s.io/web-ingress created
ubuntu@ip-172-31-28-252:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
apache-deployment-784dccc968c-64bfb 1/1     Running   0           16s
apache-deployment-784dccc968c-llcrw 1/1     Running   0           16s
apache-deployment-784dccc968c-xwjz2 1/1     Running   0           16s
nginx-deployment-7c79c4bf97-h2t5w   1/1     Running   0           16s
nginx-deployment-7c79c4bf97-m9pgs    1/1     Running   0           16s
nginx-deployment-7c79c4bf97-mjji6    1/1     Running   0           16s
ubuntu@ip-172-31-28-252:~$ kubectl get ingress
NAME      CLASS  HOSTS                ADDRESS          PORTS   AGE
web-ingress  nginx   172.31.21.55         80              36s
ubuntu@ip-172-31-28-252:~$ kubectl get nodes --o wide
NAME                STATUS    ROLES    AGE   VERSION   INTERNAL-IP   EXTERNAL-IP   OS-IMAGE             KERNEL-VERSION   CONTAINER-RUNTIME
ip-172-31-19-2      Ready    <none>    18m   v1.29.15  172.31.19.2   <none>         Ubuntu 22.04.5 LTS   6.8.0-1024-aws   docker://28.1.1
ip-172-31-21-55     Ready    <none>    18m   v1.29.15  172.31.21.55  <none>         Ubuntu 22.04.5 LTS   6.8.0-1024-aws   docker://28.1.1
ip-172-31-28-252    Ready    control-plane 26m   v1.29.15  172.31.28.252 <none>         Ubuntu 22.04.5 LTS   6.8.0-1024-aws   docker://28.1.1
ubuntu@ip-172-31-28-252:~$ kubectl get svc -n ingress-nginx
NAME                                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)                                AGE
ingress-nginx-controller            NodePort    10.193.231.76 <none>         80:30926/TCP,443:31548/TCP           16m
ingress-nginx-controller-admission ClusterIP    10.96.4.244   <none>         443/TCP                                16m
ubuntu@ip-172-31-28-252:~$ |
```

Kubernetes Assignment-5 (1).pdf

Instances | EC2 | us-east-1

3.89.106.105:30926/apache

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⚠ Not secure

3.89.106.105:30926/apache

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⋮

🌈

📁 Dell

📁 aws

📁 DevOps

📁 AI

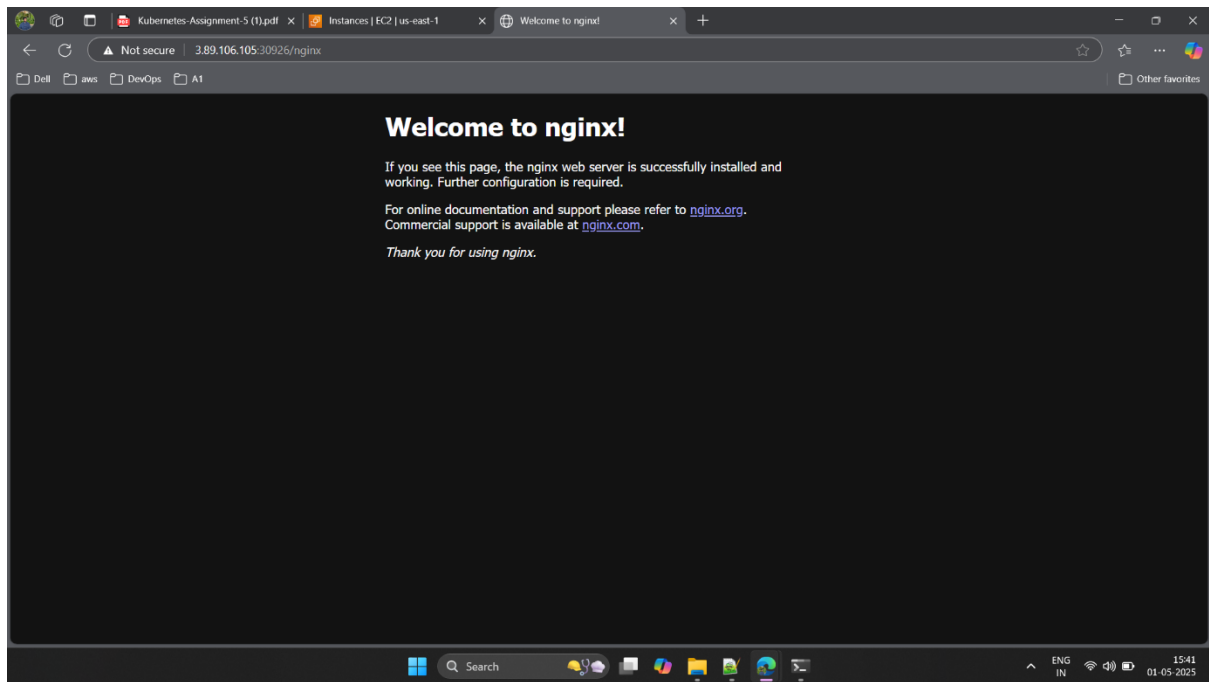
📁 Other favorites

It works!

Search

ENG IN

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commands:

```
kubectl apply -f assignment5.yaml
```

```
kubectl apply -f https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v1.9.1/deploy/static/provider/baremetal/deploy.yaml #install an Ingress controller manually
```

```
kubectl get pods -n ingress-nginx
```

```
kubectl get pods
```

```
kubectl get ingress
```

```
kubectl get nodes -o wide
```

```
kubectl get svc -n ingress-nginx
```

```
# access the services using your node's IP -> http://<node-ip>:port/nginx & http://<node-ip>:port/apache
```

```
kubectl delete service apache-service
```

```
kubectl delete service nginx-service
```

```
kubectl delete ingress web-ingress
```

```
sudo rm assignment5.yaml
```