

```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$ minikube addons enable ingress
ingress is an addon maintained by Kubernetes. For any concerns contact minikube on GitHub.
You can view the list of minikube maintainers at: https://github.com/kubernetes/minikube/blob/master/OWNERS
  ▪ Using image k8s.gcr.io/ingress-nginx/kube-webhook-certgen:v1.1.1
  ▪ Using image k8s.gcr.io/ingress-nginx/kube-webhook-certgen:v1.1.1
  ▪ Using image k8s.gcr.io/ingress-nginx/controller:v1.2.1
Verifying ingress addon...
```

```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ns
NAME                STATUS   AGE
default             Active  23h
ingress-nginx       Active  6m10s
kube-node-lease     Active  23h
kube-public         Active  23h
kube-system         Active  23h
teama               Active  22h
testing             Active  18h
[ec2-user@ip-172-31-46-175 ~]$
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Select ec2-user@ip-172-31-46-175:~  
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ns  
NAME                STATUS   AGE  
default             Active  23h  
ingress-nginx       Active  6m10s  
kube-node-lease     Active  23h  
kube-public         Active  23h  
kube-system         Active  23h  
teama               Active  22h  
testing            Active  18h  
[ec2-user@ip-172-31-46-175 ~]$ kubectl get po -n ingress-nginx  
NAME                                READY   STATUS    RESTARTS   AGE  
ingress-nginx-admission-create-zj9p  0/1     Completed  0           7m  
ingress-nginx-admission-patch-8hdwq  0/1     Completed  1           7m  
ingress-nginx-controller-5959f988fd-4rkxn 1/1     Running    0           7m  
[ec2-user@ip-172-31-46-175 ~]$
```

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Select ec2-user@ip-172-31-46-175:~  
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ns  
NAME                STATUS   AGE  
default             Active  23h  
ingress-nginx       Active  6m10s  
kube-node-lease     Active  23h  
kube-public         Active  23h  
kube-system         Active  23h  
teama               Active  22h  
testing            Active  18h  
[ec2-user@ip-172-31-46-175 ~]$ kubectl get po -n ingress-nginx  
NAME                                READY   STATUS    RESTARTS   AGE  
ingress-nginx-admission-create-zj9p  0/1     Completed  0           7m  
ingress-nginx-admission-patch-8hdwq  0/1     Completed  1           7m  
ingress-nginx-controller-5959f988fd-4rkxn 1/1     Running    0           7m  
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ingress  
No resources found in default namespace.  
[ec2-user@ip-172-31-46-175 ~]$
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```
Select ec2-user@ip-172-31-46-175:~$ kubectl get ns
NAME                STATUS   AGE
default             Active   23h
ingress-nginx       Active   6m10s
kube-node-lease     Active   23h
kube-public         Active   23h
kube-system         Active   23h
teama               Active   22h
testing            Active   18h
[ec2-user@ip-172-31-46-175 ~]$ kubectl get po -n ingress-nginx
NAME                                READY   STATUS    RESTARTS   AGE
ingress-nginx-admission-create-zj9p9 0/1     Completed 0           7m
ingress-nginx-admission-patch-8hdwq 0/1     Completed 1           7m
ingress-nginx-controller-5959f988fd-4rkxn 1/1     Running   0           7m
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ingress
No resources found in default namespace.
[ec2-user@ip-172-31-46-175 ~]$ kubectl create deploy mysearchd --image=httpd
deployment.apps/mysearchd created
[ec2-user@ip-172-31-46-175 ~]$ kubectl expose deploy/mysearchd --type=NodePort --port=80
service/mysearchd exposed
[ec2-user@ip-172-31-46-175 ~]$ kubectl get svc
NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes          ClusterIP   10.96.0.1    <none>        443/TCP          22h
mysearchd           NodePort    10.105.190.10 <none>        80:30113/TCP     8s
[ec2-user@ip-172-31-46-175 ~]$
```

```
Select ec2-user@ip-172-31-46-175:~$ kubectl get ns
NAME                STATUS   AGE
default             Active   23h
ingress-nginx       Active   6m10s
kube-node-lease     Active   23h
kube-public         Active   23h
kube-system         Active   23h
teama               Active   22h
testing            Active   18h
[ec2-user@ip-172-31-46-175 ~]$ kubectl get po -n ingress-nginx
NAME                                READY   STATUS    RESTARTS   AGE
ingress-nginx-admission-create-zj9p9 0/1     Completed 0           7m
ingress-nginx-admission-patch-8hdwq 0/1     Completed 1           7m
ingress-nginx-controller-5959f988fd-4rkxn 1/1     Running   0           7m
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ingress
No resources found in default namespace.
[ec2-user@ip-172-31-46-175 ~]$ kubectl create deploy mysearchd --image=httpd
deployment.apps/mysearchd created
[ec2-user@ip-172-31-46-175 ~]$ kubectl expose deploy/mysearchd --type=NodePort --port=80
service/mysearchd exposed
[ec2-user@ip-172-31-46-175 ~]$ kubectl get svc
NAME                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes          ClusterIP   10.96.0.1    <none>        443/TCP          22h
mysearchd           NodePort    10.105.190.10 <none>        80:30113/TCP     8s
[ec2-user@ip-172-31-46-175 ~]$ minikube ip
192.168.49.2
[ec2-user@ip-172-31-46-175 ~]$ curl http://192.168.49.2:30113
<html><body><h1>It works!</h1></body></html>
[ec2-user@ip-172-31-46-175 ~]$
```

```
ec2-user@ip-172-31-46-175:~$ kubectl create deploy mymaild --image=vimal13/apache-webserver-php
deployment.apps/mymaild created
[ec2-user@ip-172-31-46-175 ~]$ kubectl get deploy
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
mydeploy  1/1     1            1           81m
mymaild   1/1     1            1           9s
mysearchd 1/1     1            1           2m16s
[ec2-user@ip-172-31-46-175 ~]$ kubectl expose deploy/mymaild --type=NodePort --port=80
service/mymaild exposed
[ec2-user@ip-172-31-46-175 ~]$ kubectl get svc
NAME      TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
kubernetes ClusterIP  10.96.0.1    <none>        443/TCP          22h
mymaild   NodePort  10.102.218.84 <none>        80:32059/TCP     4s
mysearchd NodePort  10.105.190.10 <none>        80:30113/TCP     119s
[ec2-user@ip-172-31-46-175 ~]$ curl http://192.168.49.2:32059
<body bgcolor='aqua'>
<pre>

welcome to vimal web server for testingeth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.17.0.8 netmask 255.255.0.0 broadcast 172.17.255.255
    ether 02:42:ac:11:00:08 txqueuelen 0 (Ethernet)
    RX packets 4 bytes 330 (330.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 3 bytes 182 (182.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    loop txqueuelen 1000 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
```

```
ec2-user@ip-172-31-46-175/etc$ cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6

192.168.49.2 www.kanna.com
```

```
Select ec2-user@ip-172-31-46-175/etc
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1        localhost localhost.localdomain localhost6 localhost6.localdomain6

192.168.49.2    www.kanna.com
```

```
Select ec2-user@ip-172-31-46-175/etc
[ec2-user@ip-172-31-46-175 etc]$ curl http://www.kanna.com:32059
<body bgcolor='aqua'>
<pre>

welcome to vimal web server for testingeth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
  inet 172.17.0.8  netmask 255.255.0.0  broadcast 172.17.255.255
  ether 02:42:ac:11:00:08  txqueuelen 0  (Ethernet)
  RX packets 11  bytes 859 (859.0 B)
  RX errors 0  dropped 0  overruns 0  frame 0
  TX packets 8  bytes 1480 (1.4 KiB)
  TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0


lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
  inet 127.0.0.1  netmask 255.0.0.0
  loop txqueuelen 1000  (Local Loopback)
  RX packets 0  bytes 0 (0.0 B)
  RX errors 0  dropped 0  overruns 0  frame 0
  TX packets 0  bytes 0 (0.0 B)
  TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

</pre>
[ec2-user@ip-172-31-46-175 etc]$
```


```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$ the host file exist in vim /etc/hosts
```

```
Select ec2-user@ip-172-31-46-175:~
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: mywebpath
spec:
  rules:
  - host: www.kanna.com
    http:
      paths:
      - path: /search
        pathType: Prefix
        backend:
          service:
            name: mysearchd
            port:
              number: 80
```

```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl create -f ingress_nginx.yml
ingress.networking.k8s.io/mywebpath created
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$
```



```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl create -f ingress_nginx.yml
ingress.networking.k8s.io/mywebpath created
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ingress
NAME          CLASS    HOSTS          ADDRESS          PORTS    AGE
mywebpath     nginx    www.kanna.com  192.168.49.2     80       47s
[ec2-user@ip-172-31-46-175 ~]$
```



```
ec2-user@ip-172-31-46-175:~$ kubectl describe ingress/mywebpath
NAME: mywebpath
CLASS: nginx
HOSTS: www.kanna.com
ADDRESS: 192.168.49.2
PORTS: 80
AGE: 47s
Rules:
  Host      Path      Backends
  ----      -
  www.kanna.com  /search  mysearchd:80 (172.17.0.7:80)
Annotations: <none>
Events:
  Type     Reason      Age          From              Message
  ----     -
  Normal   Sync        82s (x2 over 84s)  nginx-ingress-controller  Scheduled for sync
[ec2-user@ip-172-31-46-175 ~]$
```

```
ec2-user@ip-172-31-46-175:~$ kubectl get ingress mywebpath -o yaml
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: mywebpath
spec:
  rules:
  - host: www.kanna.com
    http:
      paths:
      - path: /search
        pathType: Prefix
        backend:
          service:
            name: mysearchd
            port:
              number: 80
      - path: /mail
        pathType: Prefix
        backend:
          service:
            name: mymaild
            port:
              number: 80
```



```
ec2-user@ip-172-31-46-175:~$ cat ingress.yaml
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: mywebpath
spec:
  rules:
  - host: www.kanna.com
    http:
      paths:
      - path: /search
        pathType: Prefix
        backend:
          service:
            name: mysearchd
            port:
              number: 80
      - path: /mail
        pathType: Prefix
        backend:
          service:
            name: mymaild
            port:
              number: 80
```

```
Normal Sync 82s (x2 over 84s) nginx-ingress-controller Scheduled for sync
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl apply -f ingress_nginx.yml
error: error parsing ingress_nginx.yml: error converting YAML to JSON: yaml: line 16: did not find expected key
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl apply -f ingress_nginx.yml
error: error parsing ingress_nginx.yml: error converting YAML to JSON: yaml: line 16: did not find expected '-' indicator
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ingress_nginx.yml
[ec2-user@ip-172-31-46-175 ~]$ kubectl apply -f ingress_nginx.yml
Warning: resource ingresses/mywebpath is missing the kubectrl.kubernetes.io/last-applied-configuration annotation which is requ:
ly be used on resources created declaratively by either kubectrl create --save-config or kubectrl apply. The missing annotation i
ingress.networking.k8s.io/mywebpath configured
[ec2-user@ip-172-31-46-175 ~]$ kubectl get ingress
NAME          CLASS    HOSTS          ADDRESS          PORTS    AGE
mywebpath     nginx    www.kanna.com  192.168.49.2     80       12m
[ec2-user@ip-172-31-46-175 ~]$ kubectl describe ingress/mywebpath
Name:          mywebpath
Labels:        <none>
Namespace:     default
Address:       192.168.49.2
Ingress Class: nginx
Default backend: <default>
Rules:
  Host      Path      Backends
  ----      -
  www.kanna.com
            /search   mysearchd:80 (172.17.0.7:80)
            /mail     mymaild:80 (172.17.0.8:80)
Annotations:  <none>
Events:
```

```
Select ec2-user@ip-172-31-46-175:~  
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/search  
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">  
<html><head>  
<title>404 Not Found</title>  
</head><body>  
<h1>Not Found</h1>  
<p>The requested URL was not found on this server.</p>  
</body></html>  
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/mail  
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">  
<html><head>  
<title>404 Not Found</title>  
</head><body>  
<h1>Not Found</h1>  
<p>The requested URL /mail was not found on this server.</p>  
</body></html>  
[ec2-user@ip-172-31-46-175 ~]$
```

```
Select ec2-user@ip-172-31-46-175:~  
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/search  
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">  
<html><head>  
<title>404 Not Found</title>  
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<h1>Not Found</h1>  
<p>The requested URL was not found on this server.</p>  
</body></html>  
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/mail  
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">  
<html><head>  
<title>404 Not Found</title>  
</head><body>  
<h1>Not Found</h1>  
<p>The requested URL /mail was not found on this server.</p>  
</body></html>  
[ec2-user@ip-172-31-46-175 ~]$
```

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Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/search
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
<p>The requested URL was not found on this server.</p>
</body></html>
[ec2-user@ip-172-31-46-175 ~]$ curl http://www.kanna.com/mail
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
<p>The requested URL /mail was not found on this server.</p>
</body></html>
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$ the above process worked since they are connecting and error is due to we didnt set a homepage
```

```
Select ec2-user@ip-172-31-46-175:~
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$
[ec2-user@ip-172-31-46-175 ~]$ https://kubernetes.io/docs/tasks/access-application-cluster/ingress-minikube/ - link for ex
```

```
ec2-user@ip-172-31-46-175:~  
apiVersion: networking.k8s.io/v1  
kind: Ingress  
metadata:  
  name: example-ingress  
  annotations:  
    nginx.ingress.kubernetes.io/rewrite-target: /$1  
spec:  
  rules:  
    - host: www.kanna.com  
      http:  
        paths:  
          - path: /  
            pathType: Prefix  
            backend:  
              service:  
                name: web  
                port:  
                  number: 80
```

```
Select ec2-user@ip-172-31-46-175:~  
[ec2-user@ip-172-31-46-175 ~]$  
[ec2-user@ip-172-31-46-175 ~]$  
[ec2-user@ip-172-31-46-175 ~]$  
[ec2-user@ip-172-31-46-175 ~]$  
[ec2-user@ip-172-31-46-175 ~]$  
[ec2-user@ip-172-31-46-175 ~]$ kubectl create deployment web --image=gcr.io/google-samples/hello-app:1.0  
deployment.apps/web created  
[ec2-user@ip-172-31-46-175 ~]$ kubectl expose deployment web --type=NodePort --port=8080  
service/web exposed  
[ec2-user@ip-172-31-46-175 ~]$ kubectl delete ingress --all  
ingress.networking.k8s.io "mywebpath" deleted  
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ex-ingress.yml  
[ec2-user@ip-172-31-46-175 ~]$ kubectl create -f ex-ingress.yml  
error: error parsing ex-ingress.yml: error converting YAML to JSON: yaml: line 31: mapping values are not allowed in this context  
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ex-ingress.yml  
[ec2-user@ip-172-31-46-175 ~]$ kubectl create -f ex-ingress.yml  
ingress.networking.k8s.io/example-ingress created  
[ec2-user@ip-172-31-46-175 ~]$ sudo vim ex-ingress.yml  
[ec2-user@ip-172-31-46-175 ~]$ [ec2-user@ip-172-31-46-175 ~]$
```