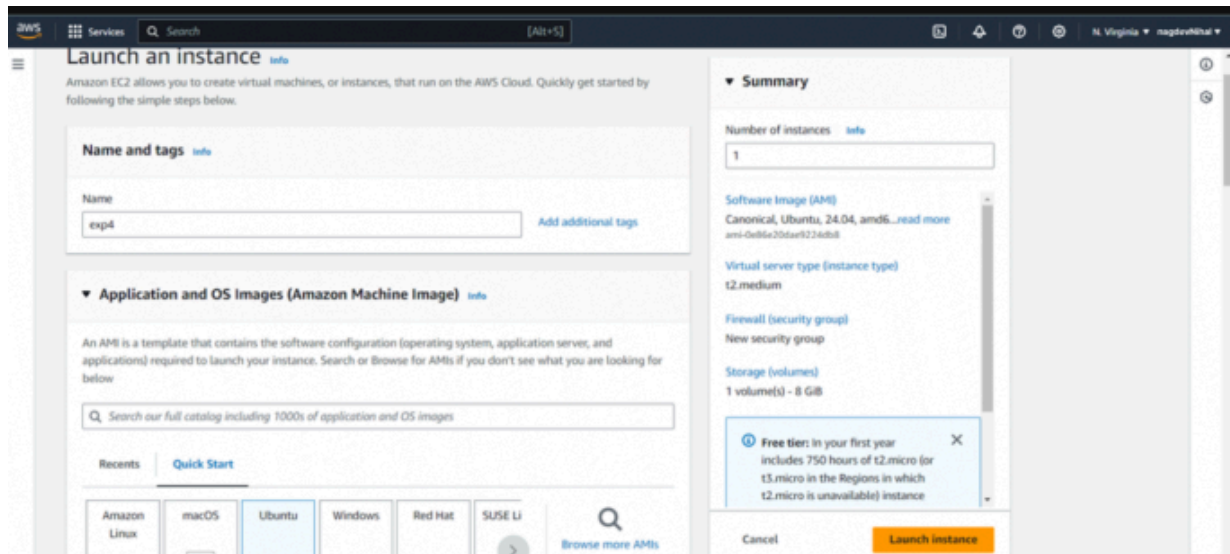


## EXP 4



```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-82-74:/home/ubuntu# sudo mkdir -p /etc/docker
root@ip-172-31-82-74:/home/ubuntu# cat <<EOF | sudo tee /etc/docker/daemon.json
{
  "exec-opts": ["native.cgroupdriver=systemd"]
}
EOF
{
  "exec-opts": ["native.cgroupdriver=systemd"]
}
root@ip-172-31-82-74:/home/ubuntu# |
```

```
Executing: /usr/lib/systemd/systemd-sysv-install enable docker
root@ip-172-31-82-74:/home/ubuntu# sudo systemctl daemon-reload
root@ip-172-31-82-74:/home/ubuntu# sudo systemctl restart docker
root@ip-172-31-82-74:/home/ubuntu# |
```

```
root@ip-172-31-82-74:/home/ubuntu# curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.31/deb/Release.key |
sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
root@ip-172-31-82-74:/home/ubuntu# |
```

```
$ ssh -l "exp4.per" ubuntu33.86.229.12
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1012-aws x64)
Documentation: https://help.ubuntu.com https://landscape.canonical.com
Support: https://ubuntu.com/pro
System information as of Thu Sep 26 08:56:36 UTC 2024

System load: 0.12
Processes: 156
Usage of /: 55.3% of 6.7108
Memory usage: 19%
Swap usage: 17%
Users logged in: 1
IPv4 address for enx0: 172.31.82.74

Expanded Security Maintenance for Applications is not enabled.
145 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Thu Sep 26 08:12:50 2024 from 125.99.93.18

$ curl -I http://127.0.0.1:8080
HTTP/1.1 200 OK
Server: nginx/1.14.2
Date: Thu, 26 Sep 2024 08:57:26 GMT
Content-Type: text/html
Content-Length: 612
Last-Modified: Tue, 04 Dec 2018 14:44:49 GMT
Connection: keep-alive
ETag: "5c069761-264"
Accept-Ranges: bytes
```

```
$ kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/k
namespace/kube-flannel created
clusterrole.rbac.authorization.k8s.io/flannel created
clusterrolebinding.rbac.authorization.k8s.io/flannel created
serviceaccount/flannel created
configmap/kube-flannel-cfg created
daemonset.apps/kube-flannel-ds created

$ kubectl apply -f https://k8s.io/examples/application/deployment.yaml
deployment.apps/nginx-deployment created

$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-d556bf558-g4c1n    0/1     Pending   0           17s
nginx-deployment-d556bf558-21904    0/1     Pending   0           17s

$ POD_NAME=$(kubectl get pods -l app=nginx -o jsonpath="{.items[0].metadata.name}")

$ kubectl port-forward $POD_NAME 8080:80
error: unable to forward port because pod is not running. Current status=Pending

$ kubectl taint nodes --all node-role.kubernetes.io/control-plane-

$ kubectl get nodes
NAME                STATUS   ROLES    AGE   VERSION
ip-172-31-82-74     Ready    control-plane 24s   v1.31.1

$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-d556bf558-21904    1/1     Running   0           32s

$ kubectl port-forward $POD_NAME 8080:80
Forwarding from 127.0.0.1:8080 -> 8080
Forwarding from [::1]:8080 -> 8080
Handling connection for 8080
```

```
root@ip-172-31-82-74:/home/ubuntu# kubectl get nodes
NAME                STATUS   ROLES    AGE   VERSION
ip-172-31-82-74     Ready    control-plane 5m24s   v1.31.1
root@ip-172-31-82-74:/home/ubuntu# kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-d556bf558-g4c1n    1/1     Running   0           3m27s
nginx-deployment-d556bf558-z19p4    1/1     Running   0           3m27s
root@ip-172-31-82-74:/home/ubuntu# POD_NAME=$(kubectl get pods -l app=nginx -o jsonpath="{.items[0].met
adata.name}")
root@ip-172-31-82-74:/home/ubuntu# kubectl port-forward $POD_NAME 8080:80
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::1]:8080 -> 80
```

```
root@ip-172-31-82-74:/home/ubuntu# kubectl get nodes
NAME                STATUS   ROLES    AGE   VERSION
ip-172-31-82-74     Ready    control-plane 5m24s   v1.31.1
root@ip-172-31-82-74:/home/ubuntu# |
```

```

root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml
namespace/kube-flannel created
clusterrole.rbac.authorization.k8s.io/flannel created
clusterrolebinding.rbac.authorization.k8s.io/flannel created
serviceaccount/flannel created
configmap/kube-flannel-cfg created
daemonset.apps/kube-flannel-ds created
root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f https://k8s.io/examples/application/deployment.yaml
deployment.apps/nginx-deployment created
root@ip-172-31-82-74:/home/ubuntu# kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-d556bf558-g4cln    0/1     Pending   0           17s
nginx-deployment-d556bf558-zl9p4    0/1     Pending   0           17s
root@ip-172-31-82-74:/home/ubuntu# POD_NAME=$(kubectl get pods -l app=nginx -o jsonpath="{.items[0].metadata.name}")
root@ip-172-31-82-74:/home/ubuntu# kubectl port-forward $POD_NAME 8080:80
error: unable to forward port because pod is not running. Current status=Pending
root@ip-172-31-82-74:/home/ubuntu#

```

```

root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f https://k8s.io/examples/application/deployment.yaml
deployment.apps/nginx-deployment created
root@ip-172-31-82-74:/home/ubuntu#

```

```

root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f https://k8s.io/examples/application/deployment.yaml
deployment.apps/nginx-deployment created
root@ip-172-31-82-74:/home/ubuntu# kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
nginx-deployment-d556bf558-g4cln    0/1     Pending   0           17s
nginx-deployment-d556bf558-zl9p4    0/1     Pending   0           17s
root@ip-172-31-82-74:/home/ubuntu#

```

```

root@ip-172-31-82-74:/home/ubuntu# mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f
https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml
error: flag needs an argument: 'f' in -f
See 'kubectl apply --help' for usage.
bash: https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml: No such file or directory
root@ip-172-31-82-74:/home/ubuntu# kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml
namespace/kube-flannel created
clusterrole.rbac.authorization.k8s.io/flannel created
clusterrolebinding.rbac.authorization.k8s.io/flannel created
serviceaccount/flannel created
configmap/kube-flannel-cfg created
daemonset.apps/kube-flannel-ds created
root@ip-172-31-82-74:/home/ubuntu#

```