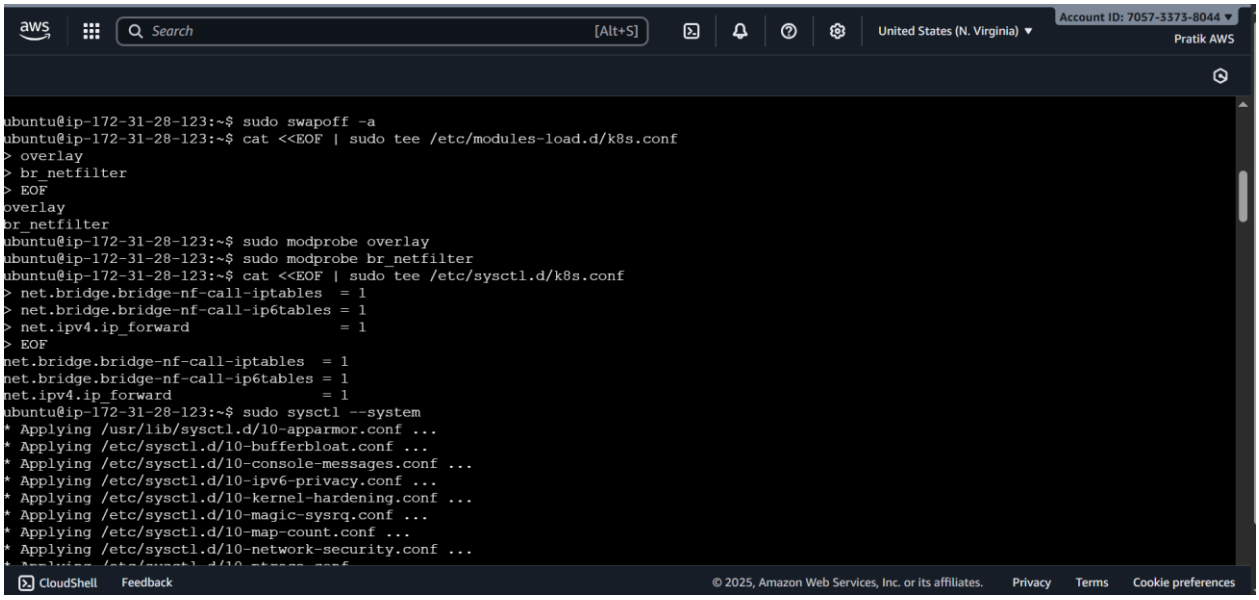
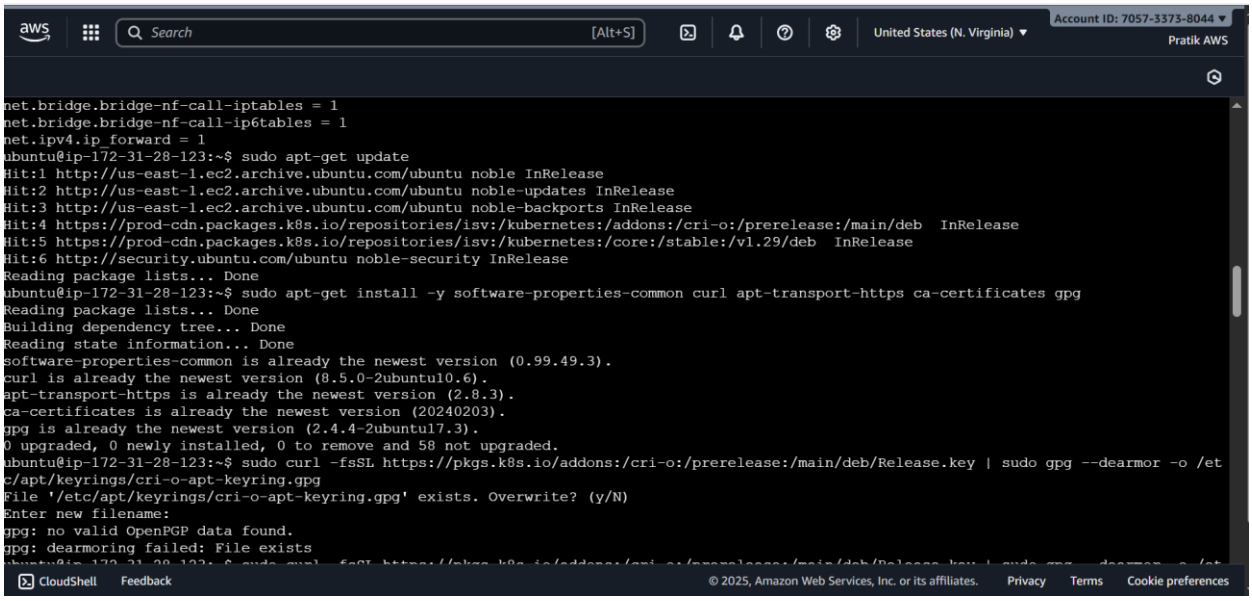
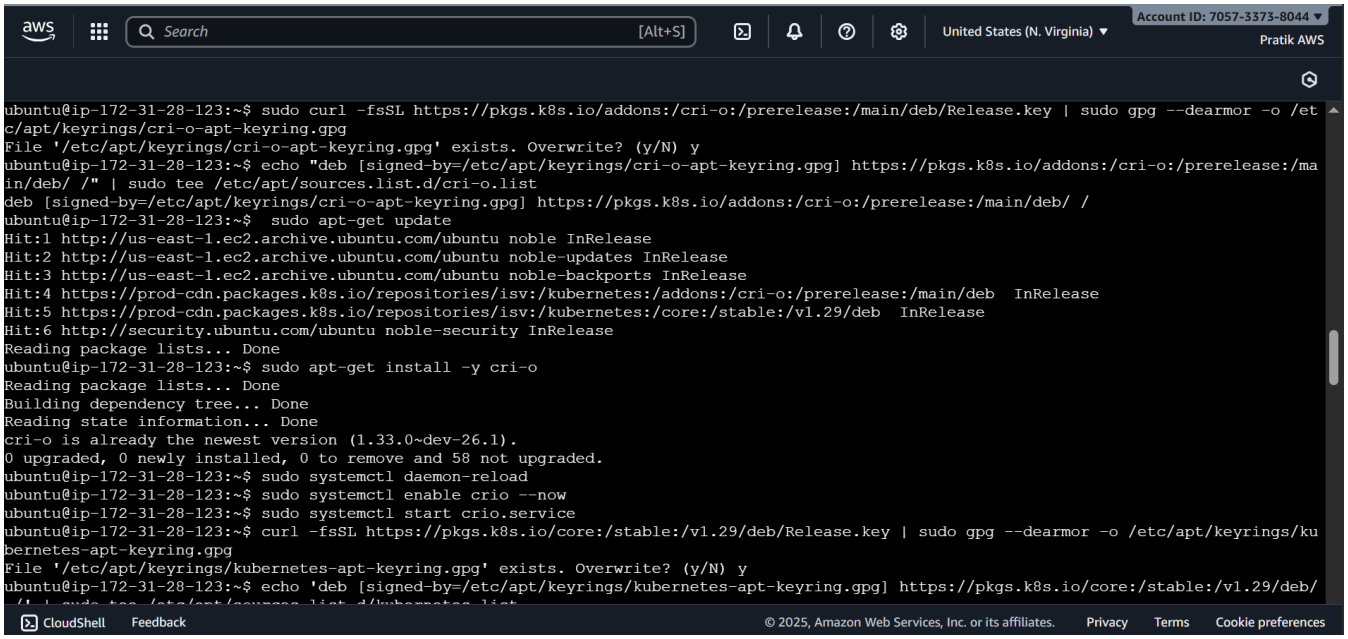
# A1)Kubernetes Installation

# *Master Node

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Account ID: 7057-3373-8044
Pratik AWS
ubuntu@ip-172-31-28-123:~$ sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
File '/etc/apt/keyrings/cri-o-apt-keyring.gpg' exists. Overwrite? (y/N) y
ubuntu@ip-172-31-28-123:~$ echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list
deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /
ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb InRelease
Hit:5 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.29/deb InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y cri-o
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
cri-o is already the newest version (1.33.0~dev-26.1).
0 upgraded, 0 newly installed, 0 to remove and 58 not upgraded.
ubuntu@ip-172-31-28-123:~$ sudo systemctl daemon-reload
ubuntu@ip-172-31-28-123:~$ sudo systemctl enable crio --now
ubuntu@ip-172-31-28-123:~$ sudo systemctl start crio.service
ubuntu@ip-172-31-28-123:~$ curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
File '/etc/apt/keyrings/kubernetes-apt-keyring.gpg' exists. Overwrite? (y/N) y
ubuntu@ip-172-31-28-123:~$ echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/
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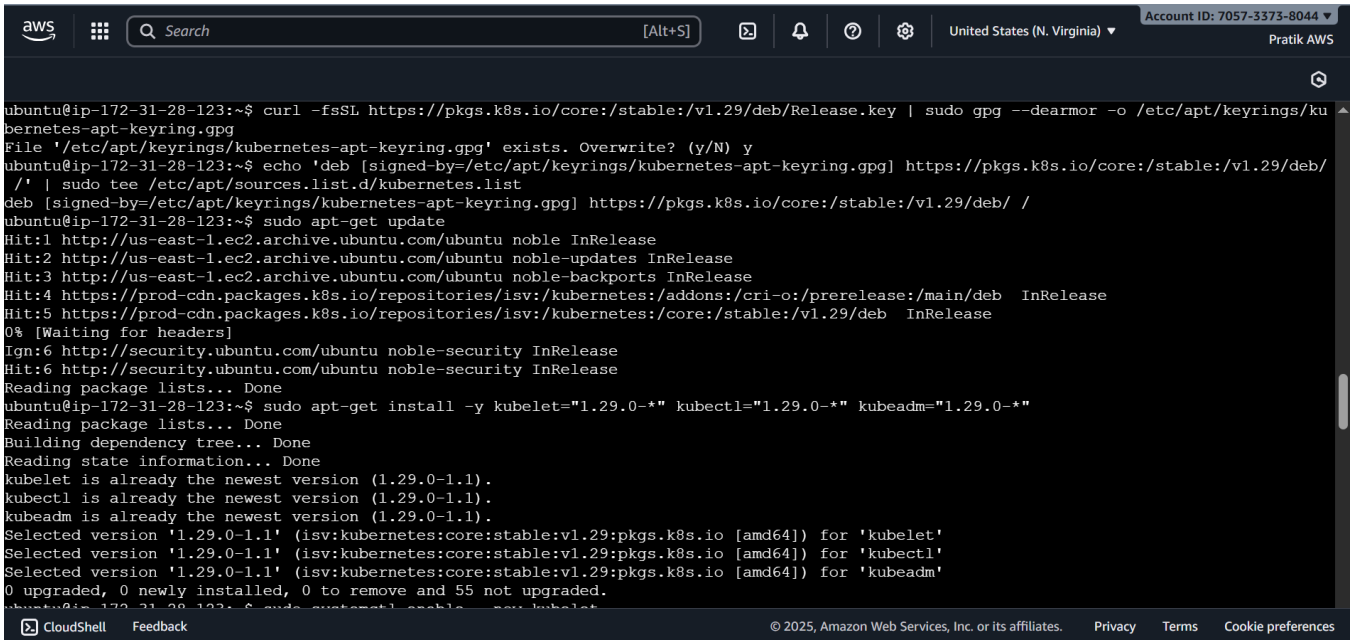
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ubuntu@ip-172-31-28-123:~$ curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
File '/etc/apt/keyrings/kubernetes-apt-keyring.gpg' exists. Overwrite? (y/N) y
ubuntu@ip-172-31-28-123:~$ echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /' | sudo tee /etc/apt/sources.list.d/kubernetes.list
deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /
ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb InRelease
Hit:5 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.29/deb InRelease
0% [Waiting for headers]
Ign:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
kubelet is already the newest version (1.29.0-1.1).
kubectl is already the newest version (1.29.0-1.1).
kubeadm is already the newest version (1.29.0-1.1).
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubelet'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubectl'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubeadm'
0 upgraded, 0 newly installed, 0 to remove and 55 not upgraded.
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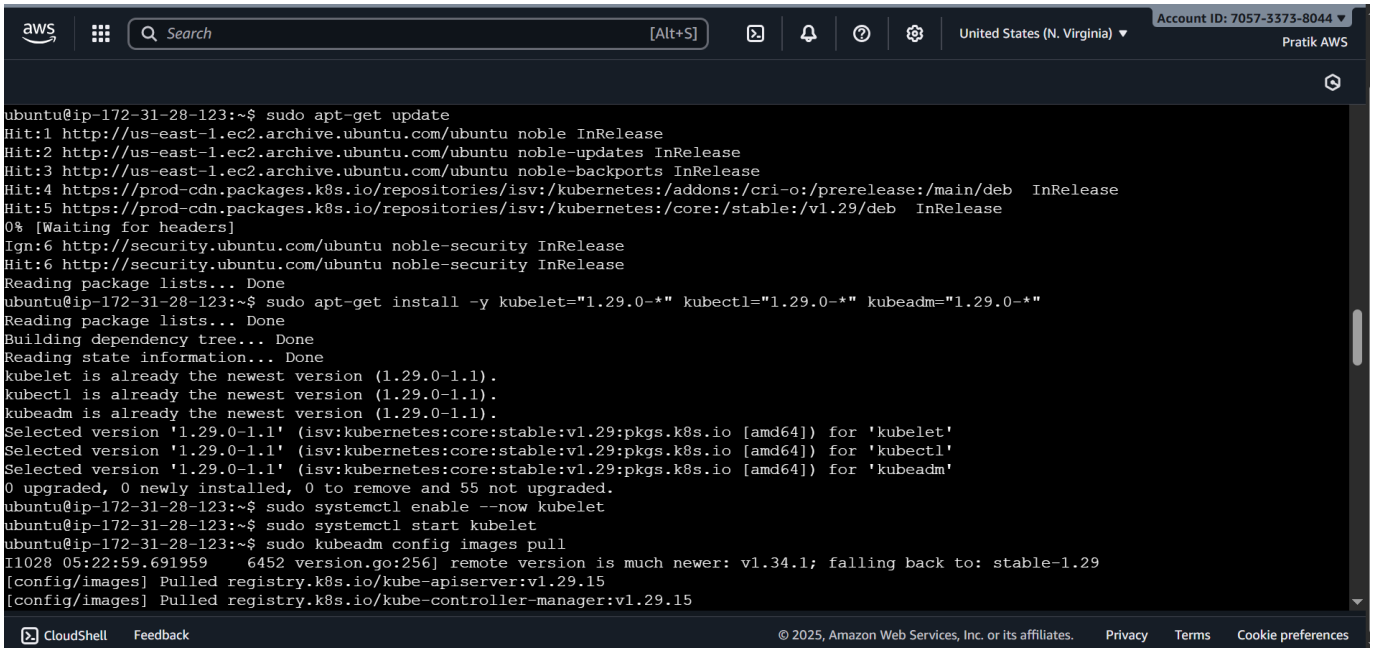
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ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb InRelease
Hit:5 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.29/deb InRelease
0% [Waiting for headers]
Ign:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
kubelet is already the newest version (1.29.0-1.1).
kubectl is already the newest version (1.29.0-1.1).
kubeadm is already the newest version (1.29.0-1.1).
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubelet'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubectl'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubeadm'
0 upgraded, 0 newly installed, 0 to remove and 55 not upgraded.
ubuntu@ip-172-31-28-123:~$ sudo systemctl enable --now kubelet
ubuntu@ip-172-31-28-123:~$ sudo systemctl start kubelet
ubuntu@ip-172-31-28-123:~$ sudo kubeadm config images pull
I1028 05:22:59.691959 6452 version.go:256] remote version is much newer: v1.34.1; falling back to: stable-1.29
[config/images] Pulled registry.k8s.io/kube-apiserver:v1.29.15
[config/images] Pulled registry.k8s.io/kube-controller-manager:v1.29.15
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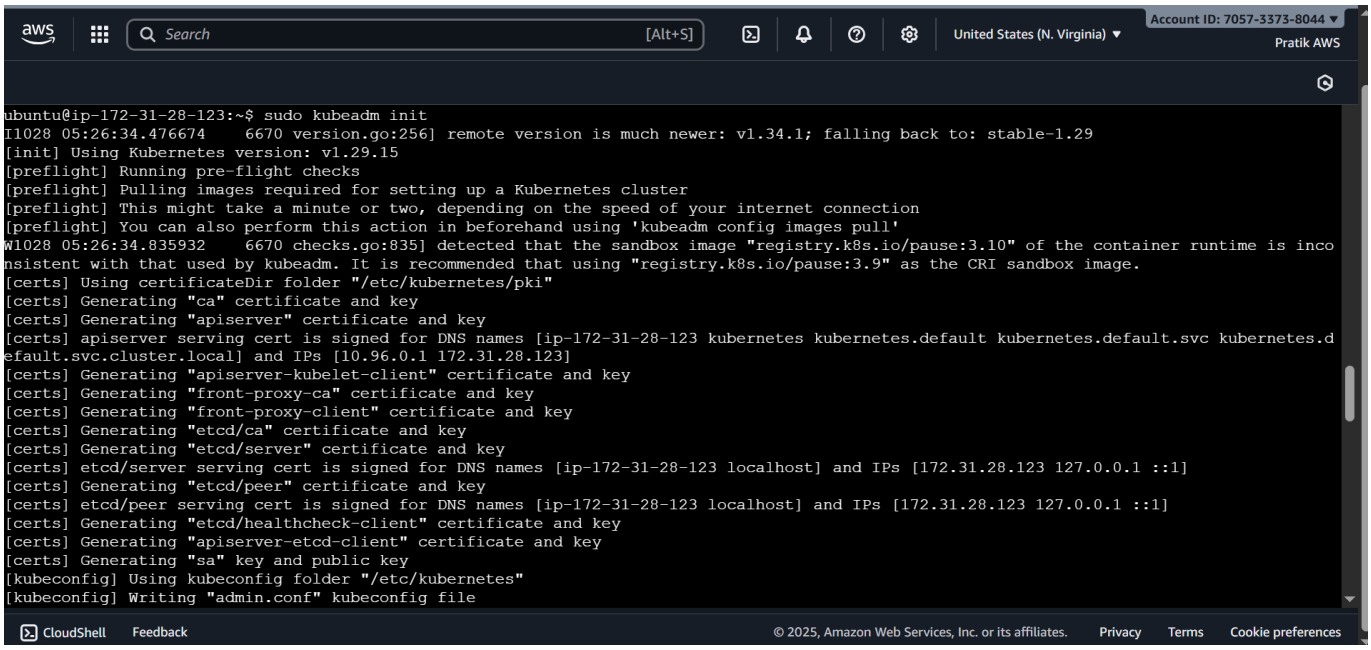
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ubuntu@ip-172-31-28-123:~$ sudo kubeadm init
I1028 05:26:34.476674 6670 version.go:256] remote version is much newer: v1.34.1; falling back to: stable-1.29
[init] Using Kubernetes version: v1.29.15
[preflight] Running pre-flight checks
[preflight] Pulling images required for setting up a Kubernetes cluster
[preflight] This might take a minute or two, depending on the speed of your internet connection
[preflight] You can also perform this action in beforehand using 'kubeadm config images pull'
W1028 05:26:34.835932 6670 checks.go:835] detected that the sandbox image "registry.k8s.io/pause:3.10" of the container runtime is inconsistent with that used by kubeadm. It is recommended that using "registry.k8s.io/pause:3.9" as the CRI sandbox image.
[certs] Using certificateDir folder "/etc/kubernetes/pki"
[certs] Generating "ca" certificate and key
[certs] Generating "apiserver" certificate and key
[certs] apiserver serving cert is signed for DNS names [ip-172-31-28-123 kubernetes kubernetes.default kubernetes.default.svc kubernetes.default.svc.cluster.local] and IPs [10.96.0.1 172.31.28.123]
[certs] Generating "apiserver-kubelet-client" certificate and key
[certs] Generating "front-proxy-ca" certificate and key
[certs] Generating "front-proxy-client" certificate and key
[certs] Generating "etcd/ca" certificate and key
[certs] Generating "etcd/server" certificate and key
[certs] etcd/server serving cert is signed for DNS names [ip-172-31-28-123 localhost] and IPs [172.31.28.123 127.0.0.1 ::1]
[certs] Generating "etcd/peer" certificate and key
[certs] etcd/peer serving cert is signed for DNS names [ip-172-31-28-123 localhost] and IPs [172.31.28.123 127.0.0.1 ::1]
[certs] Generating "etcd/healthcheck-client" certificate and key
[certs] Generating "apiserver-etcd-client" certificate and key
[certs] Generating "sa" key and public key
[kubeconfig] Using kubeconfig folder "/etc/kubernetes"
[kubeconfig] Writing "admin.conf" kubeconfig file
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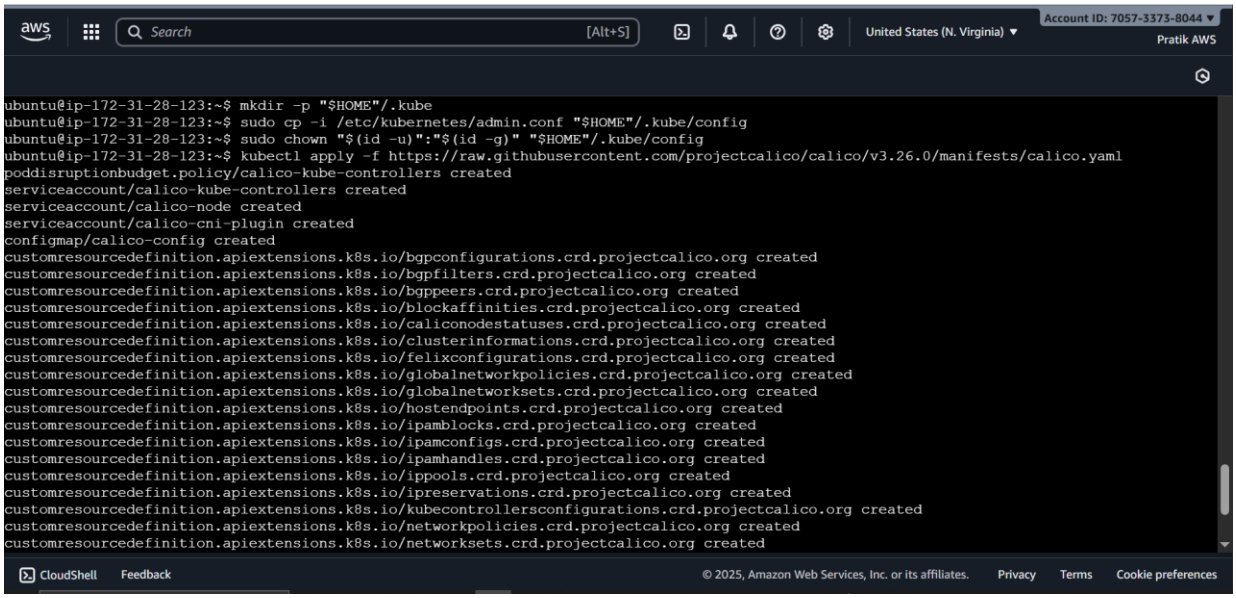
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ubuntu@ip-172-31-28-123:~$ mkdir -p "$HOME"/.kube
ubuntu@ip-172-31-28-123:~$ sudo cp -i /etc/kubernetes/admin.conf "$HOME"/.kube/config
ubuntu@ip-172-31-28-123:~$ sudo chown "$(id -u)":"$(id -g)" "$HOME"/.kube/config
ubuntu@ip-172-31-28-123:~$ kubectl apply -f https://raw.githubusercontent.com/projectcalico/calico/v3.26.0/manifests/calico.yaml
poddisruptionbudget.policy/calico-kube-controllers created
serviceaccount/calico-kube-controllers created
serviceaccount/calico-node created
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apiextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgpfilters.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgppeers.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/blockaffinities.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/caliconodestatuses.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/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
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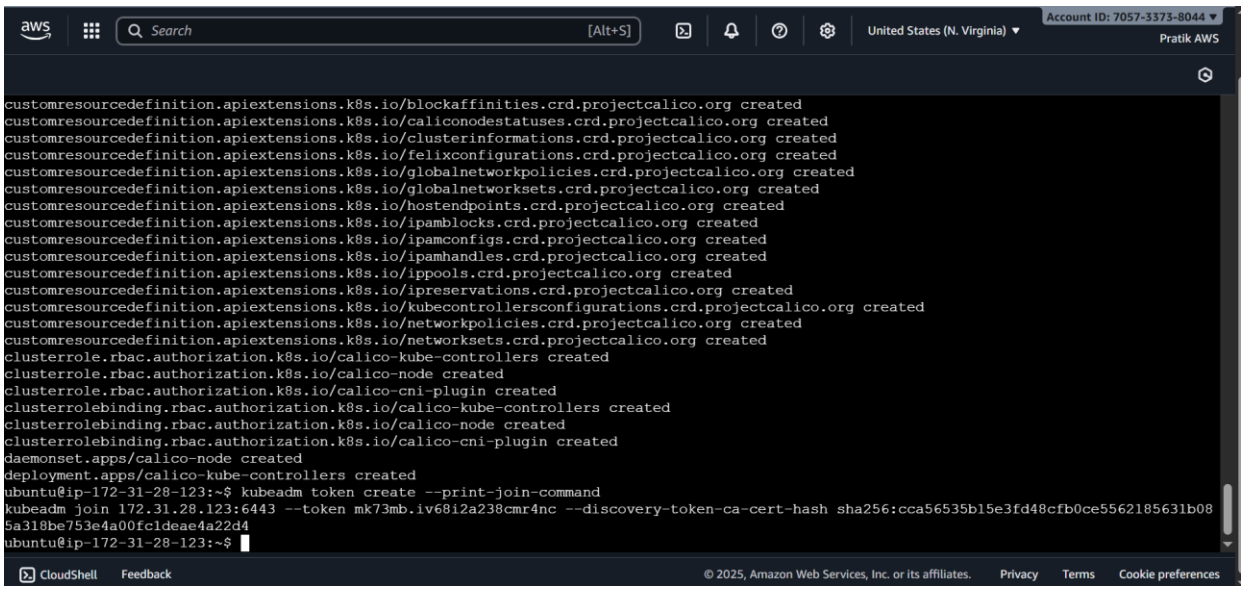
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customresourcedefinition.apiextensions.k8s.io/blockaffinities.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/caliconodestatuses.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/clusterinformations.crd.projectcalico.org 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/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
clusterrole.rbac.authorization.k8s.io/calico-cni-plugin created
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-31-28-123:~$ kubeadm token create --print-join-command
kubeadm join 172.31.28.123:6443 --token mk73mb.iv68i2a238cmr4nc --discovery-token-ca-cert-hash sha256:cca56535b15e3fd48cfb0ce5562185631b08
5a318be753e4a00fc1deae4a22d4
ubuntu@ip-172-31-28-123:~$
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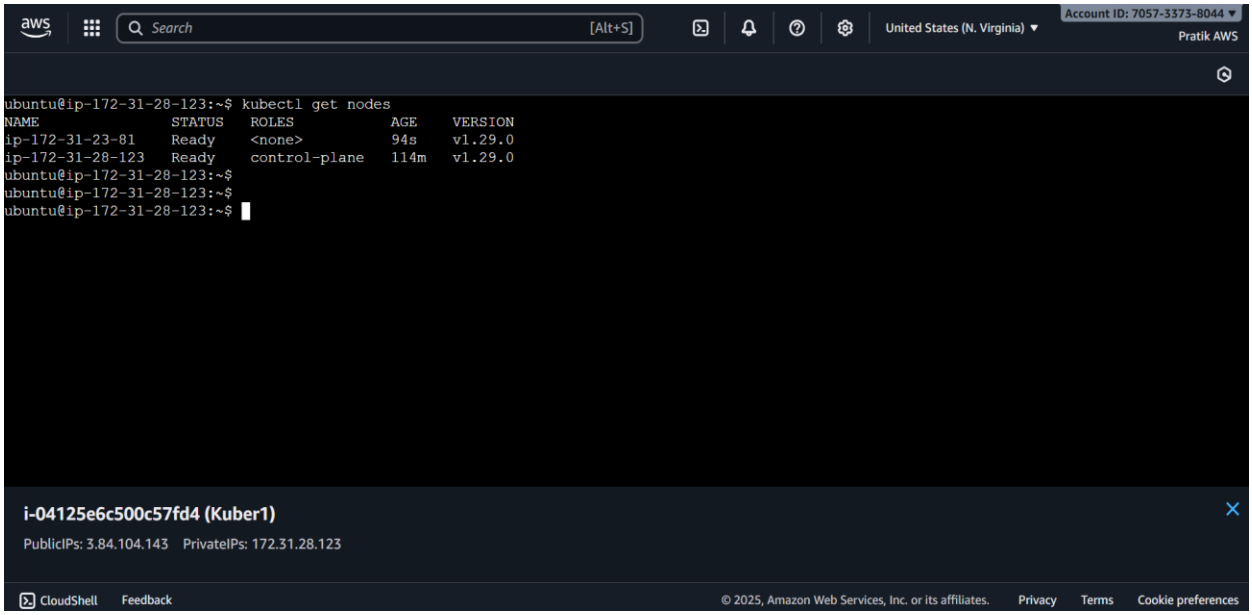
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Pratik AWS
ubuntu@ip-172-31-28-123:~$ kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-172-31-23-81 Ready <none> 94s v1.29.0
ip-172-31-28-123 Ready control-plane 114m v1.29.0
ubuntu@ip-172-31-28-123:~$
ubuntu@ip-172-31-28-123:~$
ubuntu@ip-172-31-28-123:~$
i-04125e6c500c57fd4 (Kuber1)
PublicIPs: 3.84.104.143 PrivateIPs: 172.31.28.123
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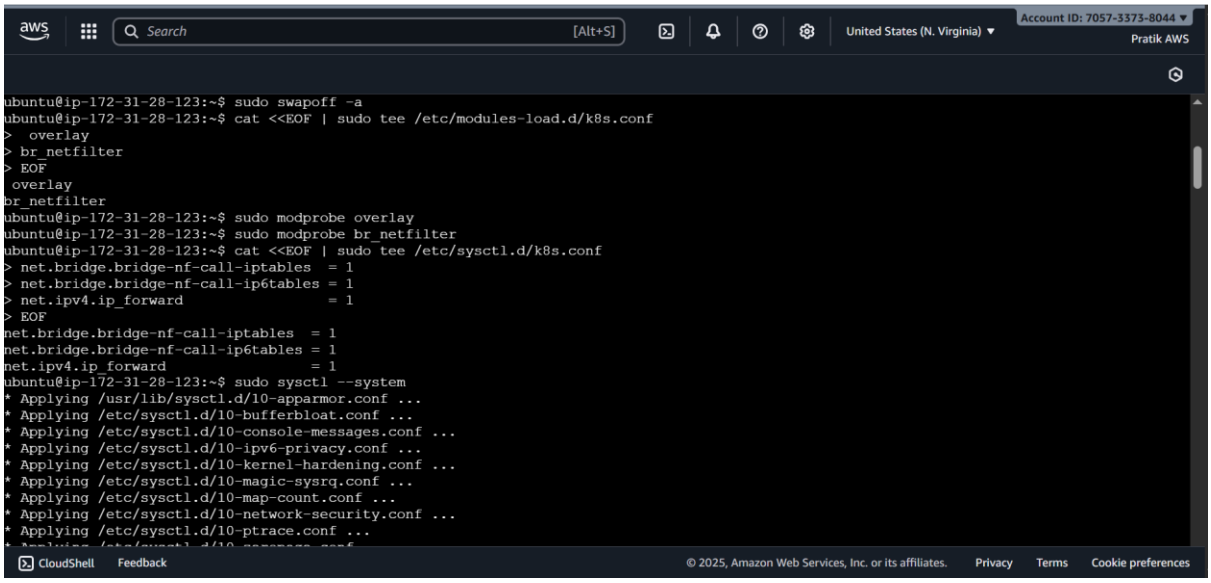
# *Worker Node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Pratik AWS
ubuntu@ip-172-31-28-123:~$ sudo swapoff -a
ubuntu@ip-172-31-28-123:~$ cat <<EOF | sudo tee /etc/modules-load.d/k8s.conf
> overlay
> br_netfilter
> EOF
overlay
br_netfilter
ubuntu@ip-172-31-28-123:~$ sudo modprobe overlay
ubuntu@ip-172-31-28-123:~$ sudo modprobe br_netfilter
ubuntu@ip-172-31-28-123:~$ cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
> net.bridge.bridge-nf-call-iptables = 1
> net.bridge.bridge-nf-call-ip6tables = 1
> net.ipv4.ip_forward = 1
> EOF
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
ubuntu@ip-172-31-28-123:~$ sudo sysctl --system
* Applying /usr/lib/sysctl.d/10-apparmor.conf ...
* Applying /etc/sysctl.d/10-bufferbloat.conf ...
* Applying /etc/sysctl.d/10-console-messages.conf ...
* Applying /etc/sysctl.d/10-ipv6-privacy.conf ...
* Applying /etc/sysctl.d/10-kernel-hardening.conf ...
* Applying /etc/sysctl.d/10-magic-sysrq.conf ...
* Applying /etc/sysctl.d/10-map-count.conf ...
* Applying /etc/sysctl.d/10-network-security.conf ...
* Applying /etc/sysctl.d/10-ptrace.conf ...
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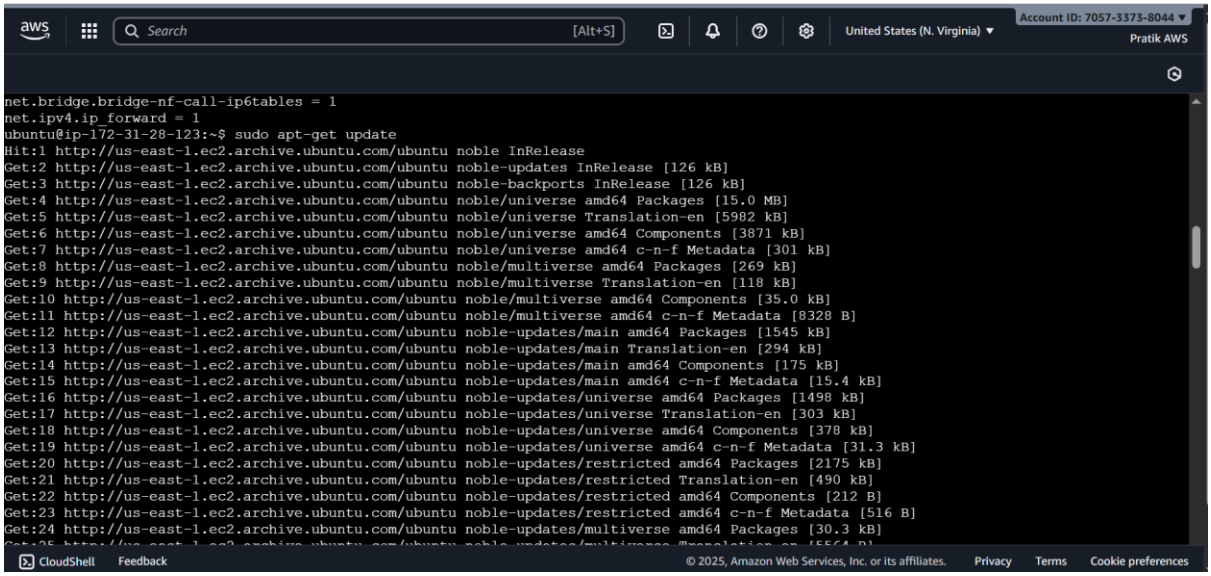
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net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1545 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [294 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [15.4 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1498 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [303 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [378 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [31.3 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2175 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [490 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/restricted amd64 c-n-f Metadata [516 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [30.3 kB]
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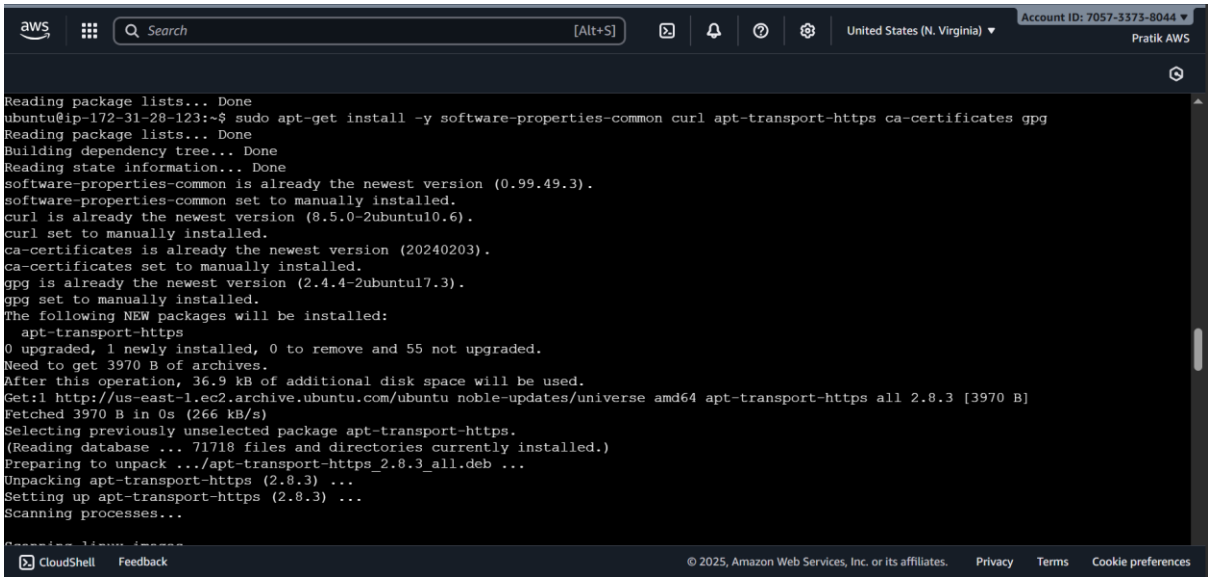
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Account ID: 7057-3373-8044
Pratik AWS
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.49.3).
software-properties-common set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
gpg is already the newest version (2.4.4-2ubuntu17.3).
gpg set to manually installed.
The following NEW packages will be installed:
apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 55 not upgraded.
Need to get 3970 B of archives.
After this operation, 36.9 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 apt-transport-https all 2.8.3 [3970 B]
Fetched 3970 B in 0s (266 kB/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 71718 files and directories currently installed.)
Preparing to unpack .../apt-transport-https_2.8.3_all.deb ...
Unpacking apt-transport-https (2.8.3) ...
Setting up apt-transport-https (2.8.3) ...
Scanning processes...
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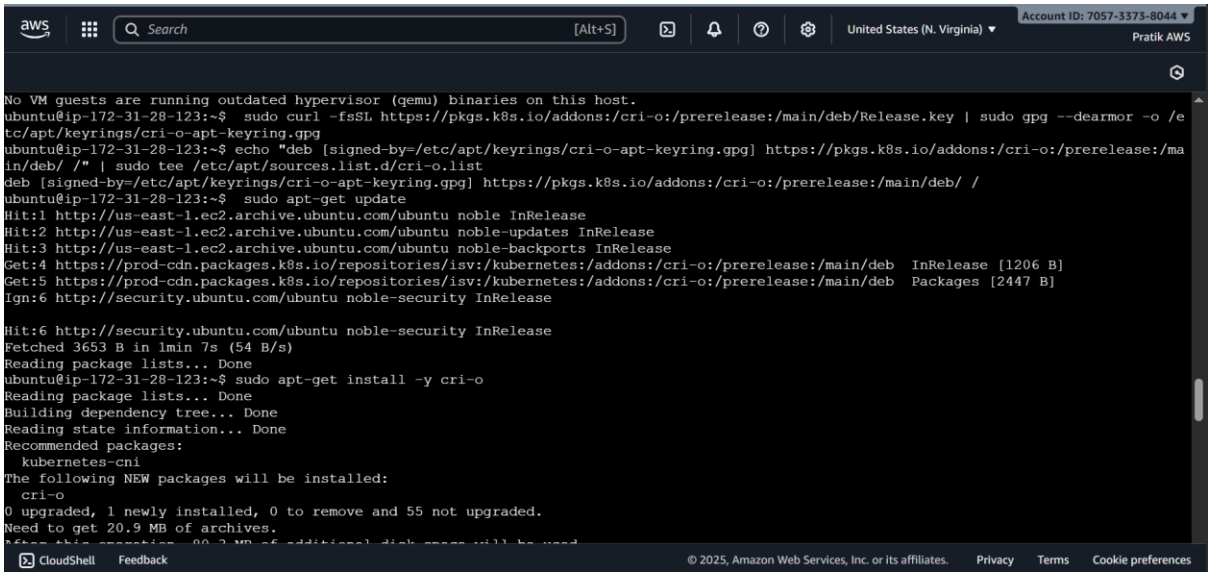
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No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-28-123:~$ sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
ubuntu@ip-172-31-28-123:~$ echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list
deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /
ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:4 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb InRelease [1206 B]
Get:5 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb Packages [2447 B]
Ign:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Fetched 3653 B in 1min 7s (54 B/s)
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y cri-o
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Recommended packages:
kubernetes-cni
The following NEW packages will be installed:
cri-o
0 upgraded, 1 newly installed, 0 to remove and 55 not upgraded.
Need to get 20.9 MB of archives.
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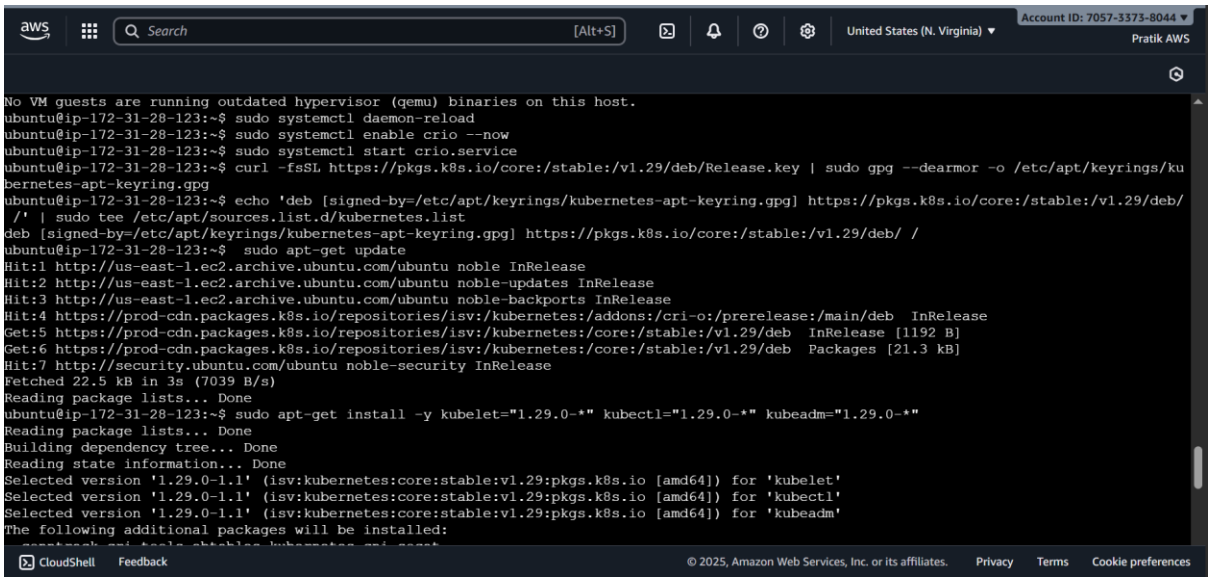
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No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-28-123:~$ sudo systemctl daemon-reload
ubuntu@ip-172-31-28-123:~$ sudo systemctl enable crio --now
ubuntu@ip-172-31-28-123:~$ sudo systemctl start crio.service
ubuntu@ip-172-31-28-123:~$ curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
ubuntu@ip-172-31-28-123:~$ echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /' | sudo tee /etc/apt/sources.list.d/kubernetes.list
deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /
ubuntu@ip-172-31-28-123:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/addons:/cri-o:/prerelease:/main/deb InRelease
Get:5 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.29/deb InRelease [1192 B]
Get:6 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.29/deb Packages [21.3 kB]
Hit:7 http://security.ubuntu.com/ubuntu noble-security InRelease
Fetched 22.5 kB in 3s (7039 B/s)
Reading package lists... Done
ubuntu@ip-172-31-28-123:~$ sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubelet'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubectl'
Selected version '1.29.0-1.1' (isv:kubernetes:core:stable:v1.29:pkgs.k8s.io [amd64]) for 'kubeadm'
The following additional packages will be installed:
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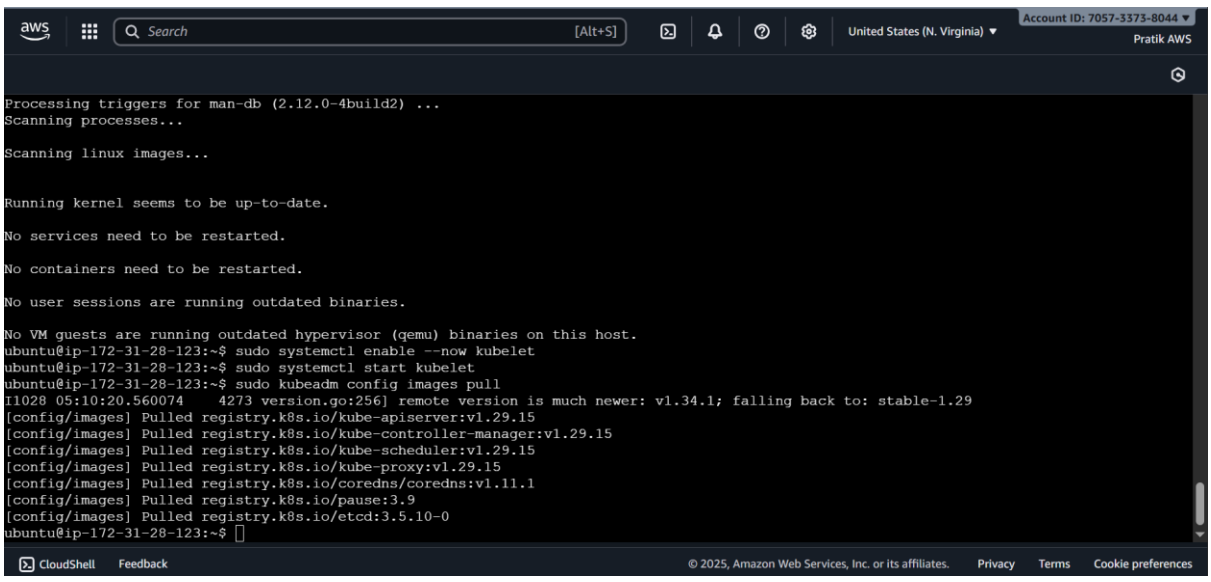
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Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-28-123:~$ sudo systemctl enable --now kubelet
ubuntu@ip-172-31-28-123:~$ sudo systemctl start kubelet
ubuntu@ip-172-31-28-123:~$ sudo kubeadm config images pull
I1028 05:10:20.560074 4273 version.go:256] remote version is much newer: v1.34.1; falling back to: stable-1.29
[config/images] Pulled registry.k8s.io/kube-apiserver:v1.29.15
[config/images] Pulled registry.k8s.io/kube-controller-manager:v1.29.15
[config/images] Pulled registry.k8s.io/kube-scheduler:v1.29.15
[config/images] Pulled registry.k8s.io/kube-proxy:v1.29.15
[config/images] Pulled registry.k8s.io/coredns/coredns:v1.11.1
[config/images] Pulled registry.k8s.io/pause:3.9
[config/images] Pulled registry.k8s.io/etcd:3.5.10-0
ubuntu@ip-172-31-28-123:~$
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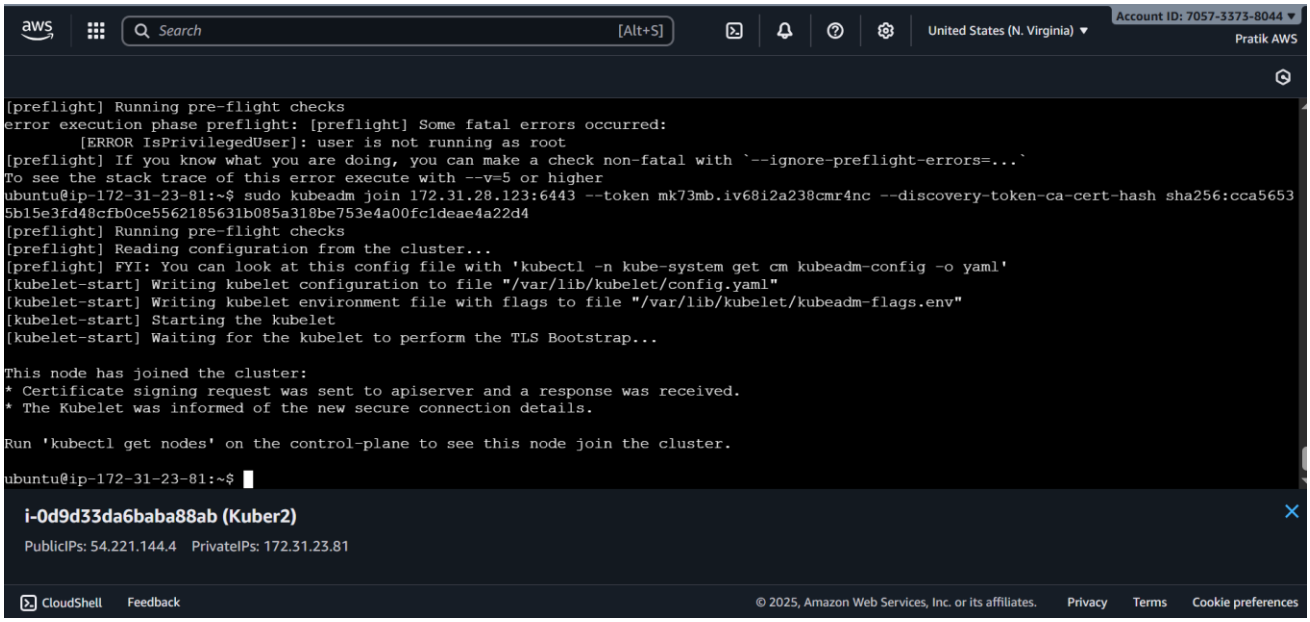
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Pratik AWS
[preflight] Running pre-flight checks
error execution phase preflight: [preflight] Some fatal errors occurred:
[ERROR IsPrivilegedUser]: user is not running as root
[preflight] If you know what you are doing, you can make a check non-fatal with `--ignore-preflight-errors=...`
To see the stack trace of this error execute with --v=5 or higher
ubuntu@ip-172-31-23-81:~$ sudo kubeadm join 172.31.28.123:6443 --token mk73mb.iv68i2a238cmr4nc --discovery-token-ca-cert-hash sha256:cca5653
5b15e3fd48cfb0ce5562185631b085a318be753e4a00fc1deae4a22d4
[preflight] Running pre-flight checks
[preflight] Reading configuration from the cluster...
[preflight] FYI: You can look at this config file with 'kubectl -n kube-system get cm kubeadm-config -o yaml'
[kubelet-start] Writing kubelet configuration to file "/var/lib/kubelet/config.yaml"
[kubelet-start] Writing kubelet environment file with flags to file "/var/lib/kubelet/kubeadm-flags.env"
[kubelet-start] Starting the kubelet
[kubelet-start] Waiting for the kubelet to perform the TLS Bootstrap...
This node has joined the cluster:
* Certificate signing request was sent to apiserver and a response was received.
* The Kubelet was informed of the new secure connection details.
Run 'kubectl get nodes' on the control-plane to see this node join the cluster.
ubuntu@ip-172-31-23-81:~$
i-0d9d33da6baba88ab (Kuber2)
PublicIPs: 54.221.144.4 PrivateIPs: 172.31.23.81
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