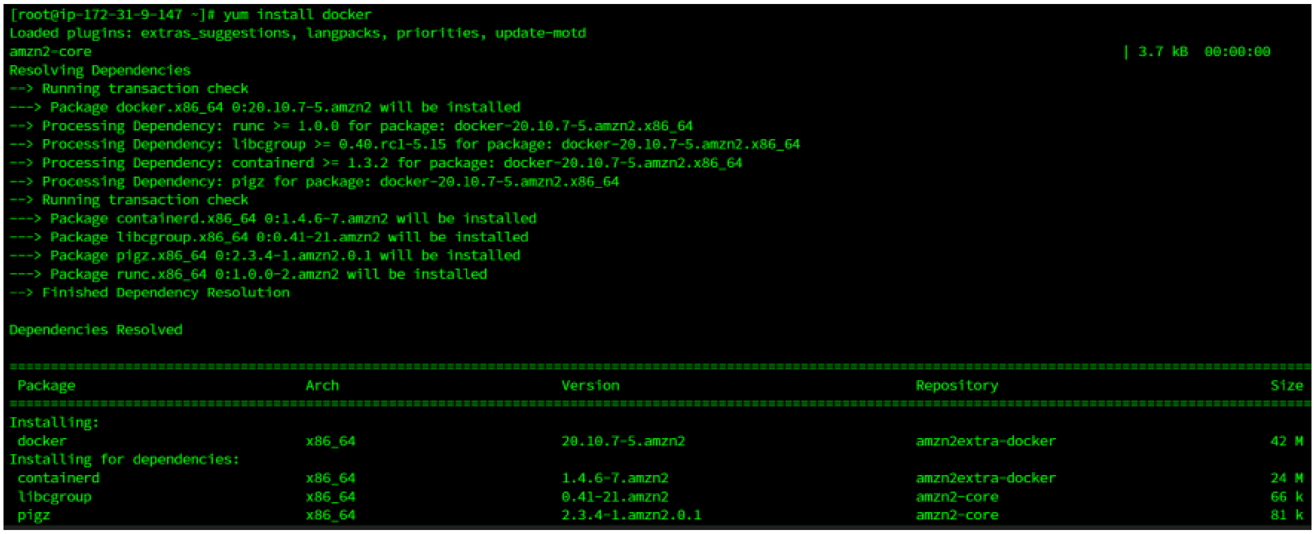
Install Docker on Linux -

As I'm using Amazon Linux2, I can install docker with a

yum install docker –y



Start docker service - **systemctl start docker**

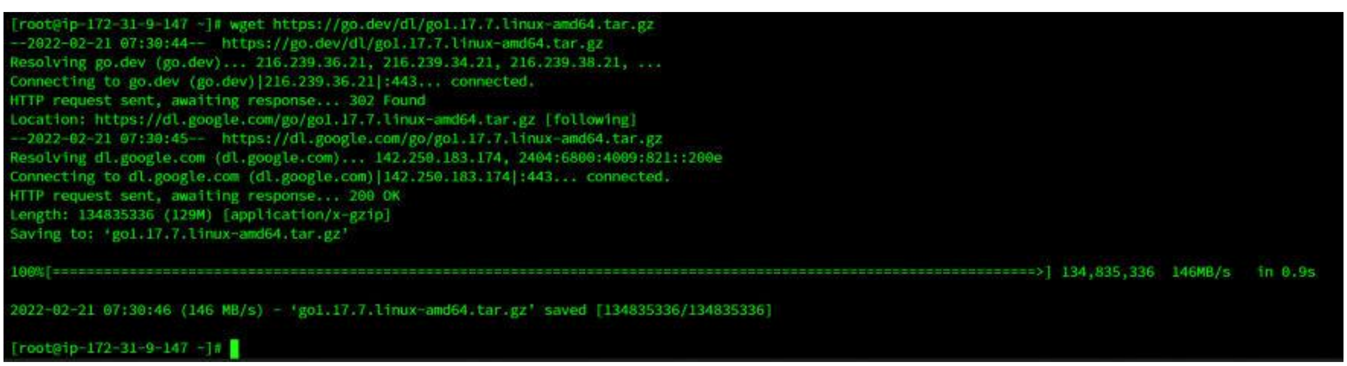
For Docker Installations - https://docs.docker.com/engine/install/

Install Go -

Go to https://go.dev/dl/

Copy the link of go tarfile for linux platform

Install using wget



Extract it using - **tar zxf go1.17.7.linux-amd64.tar.gz -C /usr/local**

Add **/usr/local/go/bin** to the PATH variable.

export **PATH=$PATH:/usr/local/go/bin** and add it to .bashrc file to make it permanent and make that file executable using **chmod +x ~/.bashrc**

Install KinD

go install sigs.k8s.io/kind@v0.11.1

You can replace v0.11.1 with the latest stable kind version

Move the KinD Binary to /usr/local/bin -

- You can find the kind binary inside the directory /usr/local/go/bin
- Move it to /usr/local/bin - **mv /usr/local/go/bin/kind /usr/local/bin**
- Make sure you have a path setup **for /usr/local/bin**

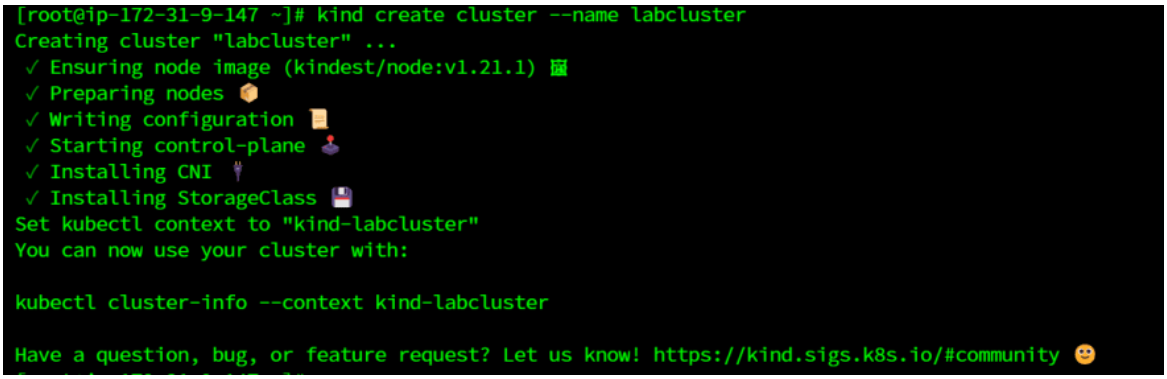
export **PATH=$PATH:/usr/local/bin** and add it to .bashrc file to make it permanent and make that file executable using **chmod +x ~/.bashrc**

Install Latest Version of Kubectl:

curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"
chmod +x kubectl
mv kubectl /usr/local/bin

Create a cluster with kind

kind create cluster --name labcluster



kubectl get nodes -o wide

```
[root@ip-172-31-9-147 ~]# kubectl get node -o wide
NAME                       STATUS   ROLES                  AGE   VERSION   INTERNAL-IP   EXTERNAL-IP   OS-IMAGE       KERNEL-VERSION                CONTAINER-RUNTIME
labcluster-control-plane   Ready    control-plane,master   8m3s  v1.21.1   172.18.0.2    <none>        Ubuntu 21.04   5.10.96-90.460.amzn2.x86_64   containerd://1.5.2
```

You are now running KinD successfully in Linux
Once done you can delete the cluster using
kind delete cluster

Multi-Node Cluster -

Create a config file kind-example-config.yaml
kind: Cluster
apiVersion: kind.x-k8s.io/v1alpha4
nodes:

- role: control-plane
- role: worker
- role: worker

Create KinD cluster with the config

kind create cluster --config kind-cluster-config.yaml

```
[root@ip-172-31-9-147 ~]# kind create cluster --config kind-cluster-config.yaml
Creating cluster "kind" ...
 ✓ Ensuring node image (kindest/node:v1.21.1) 🖼
 ✓ Preparing nodes 📦📦📦
 ✓ Writing configuration 📜
 ✓ Starting control-plane 🕹️
 ✓ Installing CNI 🔌
 ✓ Installing StorageClass 💾
 ✓ Joining worker nodes 🚜
Set kubectl context to "kind-kind"
You can now use your cluster with:

kubectl cluster-info --context kind-kind

Have a nice day! 👋
```

You now have a running KinD Cluster with one master and two worker nodes.
kubectl get nodes -o wide

```
[root@ip-172-31-9-147 ~]# kubectl get nodes -o wide
NAME                 STATUS   ROLES                  AGE     VERSION   INTERNAL-IP   EXTERNAL-IP   OS-IMAGE       KERNEL-VERSION                CONTAINER-RUNTIME
kind-control-plane   Ready    control-plane,master   3m47s   v1.21.1   172.18.0.4    <none>        Ubuntu 21.04   5.10.96-90.460.amzn2.x86_64   containerd://1.5.2
kind-worker          Ready    <none>                 3m18s   v1.21.1   172.18.0.5    <none>        Ubuntu 21.04   5.10.96-90.460.amzn2.x86_64   containerd://1.5.2
kind-worker2         Ready    <none>                 3m12s   v1.21.1   172.18.0.3    <none>        Ubuntu 21.04   5.10.96-90.460.amzn2.x86_64   containerd://1.5.2
```