Below I mention all the commands I run in each instance.

* + - Commands for all nodes: -
      * Sudo su-
      * Hostnamectl set-hostname <MNorWN1orWN2orWN3>
      * 1. yum update -y
      * 2. swapoff -a
      * 3. sed -i '/ swap / s/^\(.\*\)$/#/g' /etc/fstab
      * 4. getenforce
      * 5. setenforce 0
      * 6. sed -i 's/^SELINUX=enforcing$/SELINUX=permissive/' /etc/selinux/config
      * 7. cat <<EOF | sudo tee /etc/modules-load.d/k8s.conf

Overlay

br\_netfilter

EOF

* + - * 8. modprobe overlay
      * 9. modprobe br\_netfilter
      * 10. 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

* + - * 11. sysctl --system
      * We have to install CRI-O container runtime.
        + 1. VERSION=1.22
        + echo $VERSION
        + 2. curl -L -o /etc/yum.repos.d/devel:kubic:libcontainers:stable.repo https://download.opensuse.org/repositories/devel:kubic:libcontainers:stable/CentOS\_8/devel:kubic:libcontainers:stable.repo
        + 3. curl -L -o /etc/yum.repos.d/devel:kubic:libcontainers:stable:crio:${VERSION}.repo https://download.opensuse.org/repositories/devel:kubic:libcontainers:stable:cri-o:${VERSION}/CentOS\_8/devel:kubic:libcontainers:stable:cri-o:${VERSION}.repo
        + 4. dnf -y install cri-o cri-tools
        + 5. systemctl enable --now crio
        + 6. systemctl status crio
      * We have to install Kubernetes.
        + 1. cat <<EOF | sudo tee /etc/yum.repos.d/kubernetes.repo

[kubernetes]

name=Kubernetes

baseurl=https://pkgs.k8s.io/core:/stable:/v1.30/rpm/

enabled=1

gpgcheck=1

gpgkey=https://pkgs.k8s.io/core:/stable:/v1.30/rpm/repodata/repomd.xml.key

EOF

* + - * + 2. dnf install -y kubelet kubeadm kubectl --disableexcludes=kubernetes
        + 3. systemctl enable --now kubelet
        + 4. systemctl status kubelet
    - Commands for Master Node: -
      * + This below command no. 1 will make a node master node. And you need to put the instance public IP in command.
        + 1. sudo kubeadm init --control-plane-endpoint <Public\_IP>:6443
        + You’ll get an output in which you get the two tockens. One will make a node ‘control plane’ and another to make the nodes as a worker node
        + 1. mkdir -p $HOME/.kube
        + 2. cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
        + 3. chown $(id -u):$(id -g) $HOME/.kube/config
        + 4. export KUBECONFIG=/etc/kubernetes/admin.conf
    - Commands for Worker Node: -
      * + Do this on workers only.
        + sudo kubeadm join <public\_IP>:6443 --token <random\_key> --discovery-token-ca-cert-hash sha256:<random\_key>





