Provision Baremetal using Cobbler

A. Configure the Kickstart file as per the requirement:

1. **Make selinux as permissive.**
   Selinux --permissive

2. **Create partition as per the requirement**

   Ex:
    # autopart
   part /boot --fstype xfs --size 1008 --ondisk=sda
   part / --fstype xfs --size 256000 --ondisk=sda

3. **Add redhat subscription and enable required rpm in post installation section**

   subscription-manager register --username=XXXX --password=XXXX --auto-attach
   yum -y install yum-utils
   subscription-manager repos --enable rhel-7-server-optional-rpms
   subscription-manager repos --enable rhel-7-server-extra-rpms
   NOTE: Avoid above steps by just adding yum-utils in %package section.

4. **Configure keybased login** (add in the post installation section)

   mkdir -m 0700 /root/.ssh/
   cat <<EOF >/root/.ssh/authorized_keys
   ssh-rsa
   AAAAB3NzaC1yc2EAAAADAQABAAABAQCtLjvyNp1B34cwV5Hwhr2W3xikxDELBLdYD
   tYa77ZNjtR2W0nrj9JxGG6RbHrPjCpn39VVB7IYdMceti95hl3/WcZQwX00Uxy640iBqR
   nX71dAYZ54VGn22QsBeGc+hVr/3+IHwS0tCKOdI6inIzBArWlZha9WAt9kJA3TDy+uOC
   VOc2DdhEA+kRlXzsm/OsMkPNWX6E2hx3Ry1/DbxUlyVAQi1y+bwm+4QVY0cVeTQC+
   Fe5Rfy7ESR0TznElesoNUHYgmMec6hbjLOHm3ZGAtdxhccPpnrcqA/1N56SyOjJDG9x
   W/aVOTNpaQd4b/unNpfEHK93uychQS5LL3v0Vx root@cobbler
   EOF

   ### set permissions
   chmod 0600 /root/.ssh/authorized_keys

   Note: provide public key to target server and use private key to login the target
   server

5. **Configure static IP**

   Provide IP Address, Gateway, Netmask, Name Server and static=True in the time of cobbler system creation.
   EX:
   cobbler system add --name=<pnda-edge> --mac=<00:25:B5:DD:01:4F> --profile=<generic> --hostname=<pnda-edge> --interface=eth0 --ip-address=<9.0.8.151> --subnet=<255.255.240.0> --gateway=<9.0.1.196> --name-servers=<9.0.1.70> --static=True

6. **Remove Duplicate interface file**
   Add after $SNIPPET('post_install_network_config')
   rm -f /etc/sysconfig/network-scripts/ifcfg-$IFNAME
   chkconfig NetworkManager off

B. Create profile

   cobbler profile add --name <generic> --distro <rhel-x86_64> --kickstart /var/lib/cobbler/kickstarts/<generic.ks>

C. Enable Mac address to get IP from the DHCP

   Add Dhcp Entry: /etc/cobbler/ dhcp.template

   host pnda-otsdb-0 { hardware ethernet 00:25:B5:DD:01:FF; }

D. Create system

   cobbler system add --name=<pnda-edge> --mac=<00:25:B5:DD:01:4F> --profile=<generic> --hostname=<pnda-edge> --interface=eth0 --ip-address=<9.0.8.151> --subnet=<255.255.240.0> --gateway=<9.0.1.196> --name-servers=<9.0.1.70> --static=True

Profile pnda_manager:

Kickstart filename: pnda_manager.ks

1. **Create cobbler profile:**

   cobbler profile add --name <pnda_manager> --distro rhel-x86_64 --kickstart
   /var/lib/cobbler/kickstarts/<pnda_manager.ks>

2. **Create Cobbler System:**

   pnda-mgr Node:
   cobbler system add --name=pnda-mgr-01 --mac=00:25:B5:DD:00:7F --profile=pnda_manager --
   hostname=pnda-mgr-01 --interface=eth0 --ip-address=9.0.8.130 --subnet=255.255.240.0 --
   gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-mgr-02 --mac=00:25:B5:DD:00:4F --profile=pnda_manager --
   hostname=pnda-mgr-02 --interface=eth0 --ip-address=9.0.8.137 --subnet=255.255.240.0 --
   gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-mgr-03 --mac=00:25:B5:DD:00:5F --profile=pnda_manager --
   hostname=pnda-mgr-03 --interface=eth0 --ip-address=9.0.8.131 --subnet=255.255.240.0 --
   gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-mgr-04 --mac=00:25:B5:DD:00:2F --profile=pnda_manager --
   hostname=pnda-mgr-04 --interface=eth0 --ip-address=9.0.8.138 --subnet=255.255.240.0 --
   gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

3. **Add Dhcp Entry:** /etc/cobbler/ dhcp.template

   host pnda-mgr-01 { hardware ethernet 00:25:B5:DD:00:7F; }
   host pnda-mgr-02 { hardware ethernet 00:25:B5:DD:00:4F; }
   host pnda-mgr-03 { hardware ethernet 00:25:B5:DD:00:5F; }
   host pnda-mgr-04 { hardware ethernet 00:25:B5:DD:00:2F; }

Profile datanode:

Partition:

Kickstart filename: datanode.ks

1. **Create cobbler profile:**

   cobbler profile add --name <datanode02> --distro rhel-x86_64 --kickstart
   /var/lib/cobbler/kickstarts/<datanode02.ks>
   cobbler profile add --name <datanode13> --distro rhel-x86_64 --kickstart
   /var/lib/cobbler/kickstarts/<datanode13.ks>

2. **Create Cobbler System:**

   Data Nodes:
   cobbler system add --name=pnda-DN-0 --mac-address=00:25:B5:DD:01:EF --profile=datanode02
   --hostname=pnda-DN-0 --interface=eth0 --ip-address=9.0.8.143 --subnet=255.255.240.0 --
   gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-DN-1 --mac-address=00:25:B5:DD:01:BF --
   profile=datanode13 --hostname=pnda-DN-1 --interface=eth0 --ip-address=9.0.8.144 --
   subnet=255.255.240.0 --gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-DN-2 --mac-address=00:25:B5:DD:01:CF --
   profile=datanode02 --hostname=pnda-DN-2 --interface=eth0 --ip-address=9.0.8.145 --
   subnet=255.255.240.0 --gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

   cobbler system add --name=pnda-DN-3 --mac-address=00:25:B5:DD:01:AF --
   profile=datanode13 --hostname=pnda-DN-3 --interface=eth0 --ip-address=9.0.8.146 --
   subnet=255.255.240.0 --gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

3. **Add Dhcp Entry:** /etc/cobbler/ dhcp.template

   host pnda-DN-0 { hardware ethernet 00:25:B5:DD:01:EF; }
   host pnda-DN-1 { hardware ethernet 00:25:B5:DD:01:BF; }
   host pnda-DN-2 { hardware ethernet 00:25:B5:DD:01:CF; }
   host pnda-DN-3 { hardware ethernet 00:25:B5:DD:01:AF; }

Profile zookeeper:

Kickstart filename: zookeeper.ks

1. **Create cobbler profile:**

    cobbler profile add --name <zookeeper> --distro rhel-x86_64 --kickstart
    /var/lib/cobbler/kickstarts/<zookeeper.ks>

2. **Create Cobbler System:**

    Zookeeper Nodes:
    cobbler system add --name=pnda-zk-0 --mac=00:25:B5:DD:00:3F --profile=zookeeper --
    hostname=pnda-zk-0 --interface=eth0 --ip-address=9.0.8.132 --subnet=255.255.240.0 --
    gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

    cobbler system add --name=pnda-zk-1 --mac=00:25:B5:DD:00:0F --profile=zookeeper --
    hostname=pnda-zk-1 --interface=eth0 --ip-address=9.0.8.133 --subnet=255.255.240.0 --
    gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

    cobbler system add --name=pnda-zk-2 --mac=00:25:B5:DD:00:1F --profile=zookeeper --
    hostname=pnda-zk-2 --interface=eth0 --ip-address=9.0.8.139 --subnet=255.255.240.0 --
    gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

3. **Add Dhcp Entry:** /etc/cobbler/ dhcp.template

    host pnda-zk-0 { hardware ethernet 00:25:B5:DD:00:3F; }
    host pnda-zk-1 { hardware ethernet 00:25:B5:DD:00:0F; }
    host pnda-zk-2 { hardware ethernet 00:25:B5:DD:00:1F; }

Profile kafka

Kickstart filename: kafka.ks

1. **Create cobbler profile:**
    cobbler profile add --name kafka --distro rhel-x86_64 --kickstart /var/lib/cobbler/kickstarts/kafka.ks

2. **Cobbler System:**

    Kafka Nodes:
    cobbler system add --name=pnda-kafka-0 --mac=00:25:B5:DD:00:8F --profile=kafka --
    hostname=pnda-kafka-0 --interface=eth0 --ip-address=9.0.8.147 --subnet=255.255.240.0 --
    gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

    cobbler system add --name=pnda-kafka-1 --mac=00:25:B5:DD:00:9F --profile=kafka --
    hostname=pnda-kafka-1 --interface=eth0 --ip-address=9.0.8.148 --subnet=255.255.240.0 --
    gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

cobbler system add --name=pnda-kafka-2 --mac=00:25:B5:DD:00:6F --profile=kafka --
hostname=pnda-kafka-2 --interface=eth0 --ip-address=9.0.8.149 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

3. **Add Dhcp Entry:** /etc/cobbler/ dhcp.template

host pnda-kafka-0 { hardware ethernet 00:25:B5:DD:00:8F; }
host pnda-kafka-1 { hardware ethernet 00:25:B5:DD:00:9F; }
host pnda-kafka-2 { hardware ethernet 00:25:B5:DD:00:6F; }

Profile generic & edge

Kickstart filename: generic.ks

1. **Create cobbler profile:**

cobbler profile add --name <generic> --distro rhel-x86_64 --kickstart
/var/lib/cobbler/kickstarts/<generic.ks>
cobbler profile add --name <edge> --distro rhel-x86_64 --kickstart
/var/lib/cobbler/kickstarts/<edge.ks>

2. **Cobbler System:**

Opentsdb Node:
cobbler system add --name=pnda-otsdb-0 --mac=00:25:B5:DD:01:FF --profile=generic --
hostname=pnda-otsdb-0 --interface=eth0 --ip-address=9.0.8.136 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

cobbler system add --name=pnda-otsdb-1 --mac=00:25:B5:DD:01:DF --profile=generic --
hostname=pnda-otsdb-1 --interface=eth0 --ip-address=9.0.8.141 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

Tools Node:
cobbler system add --name=pnda-tools --mac=00:25:B5:DD:01:9F --profile=generic --
hostname=pnda-tools --interface=eth0 --ip-address=9.0.8.142 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

Build Node:

cobbler system add --name=pnda-build --mac=00:25:B5:DD:01:5F --profile=generic --
hostname=pnda-build --interface=eth0 --ip-address=9.0.8.150 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

Edge Node:
cobbler system add --name=pnda-edge --mac=00:25:B5:DD:01:4F --profile=edge --
hostname=pnda-edge --interface=eth0 --ip-address=9.0.8.151 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

Hadoop manager Node:
cobbler system add --name=hadoop-mgr --mac=00:25:B5:DD:01:8F --profile=generic --
hostname=hadoop_manager --interface=eth0 --ip-address=9.0.8.134 --subnet=255.255.240.0 --
gateway=9.0.1.196 --name-servers=9.0.1.70 --static=True

3. **Add Dhcp Entry:** /etc/cobbler/ dhcp.template

   host pnda-otsdb-0 { hardware ethernet 00:25:B5:DD:01:FF; }
   host pnda-otsdb-1 { hardware ethernet 00:25:B5:DD:01:DF; }
   host pnda-tools { hardware ethernet 00:25:B5:DD:01:9F; }
   host pnda-build { hardware ethernet 00:25:B5:DD:01:5F; }
   host pnda-edge { hardware ethernet 00:25:B5:DD:01:4F; }
   host hadoop-mgr { hardware ethernet 00:25:B5:DD:01:8F; }