Create 3 VM Machines as 1 Master and 2 Client.

1. Add two adapters NAT and HOST only.
2. Stop Firewall and Selinux.
3. Add IP’s in host-file.
4. yum install nfs-utils.x86\_64
5. yum install epel-release.noarch –y

on Master Node:

hostnamectl set-hostname pbs-master

3 vim /etc/selinux/config

4 systemctl stop firewalld.service

5 systemctl disable firewalld.service

6 reboot

7 ip a

8 vim /etc/hosts

9 rsync /etc/hosts root@client1:/etc/hosts

10 vim /etc/hosts

11 rsync /etc/hosts root@client1:/etc/hosts

12 rsync /etc/hosts root@pbs-client1:/etc/hosts

13 rsync /etc/hosts root@pbs-client2:/etc/hosts

14 ssh-keygen

15 ssh-copy-id root@pbs-client1

16 ssh-copy-id root@pbs-client2

17 yum install git

18 yum group install "Development Tools"

19 git clone https://github.com/openpbs/openpbs.git

20 cd openpbs/

21 ls

22 ll

23 cd

24 mv /root/openpbs/ /root/openpbs-23.06.06

25 cd openpbs-23.06.06/

31 systemctl status firewalld.service

32 yum group list

33 yum install -y rpmdevtools

#next command

1. [root@pbs-master ~]# tar -cvf /root/rpmbuild/SOURCES/openpbs-23.06.06.tar.gz openpbs-23.06.06
2. [root@pbs-master ~]# cd openpbs-23.06.06/
3. [root@pbs-master openpbs-23.06.06]# yum install libtool-ltdl-devel hwloc-devel libXt-devel libedit-devel libical-devel ncurses-devel postgresql-devel postgresql-contrib python3-devel tcl-devel tk-devel zlib-devel expat-devel openssl-devel –y
4. [root@pbs-master openpbs-23.06.06]# rpmbuild -ba openpbs.spec
5. [root@pbs-master x86\_64]# yum install openpbs-server-23.06.06-0.x86\_64.rpm
6. chmod 4755 /opt/pbs/sbin/pbs\_iff /opt/pbs/sbin/pbs\_rcp
7. systemctl start pbs.service
8. systemctl enable pbs.service
9. systemctl status pbs.service
10. . /etc/profile.d/pbs.sh
11. qstat –B

ON PBS\_CLIENT1:

1. yum install git
2. git clone <https://github.com/openpbs/openpbs.git>
3. [root@pbs-client1 ~]# cd openpbs/
4. [root@pbs-client1 openpbs]# yum install autoconf automake libtool –y
5. [root@pbs-client1 openpbs]# ./autogen.sh
6. @pbs-client1 openpbs]# ./configure
7. [root@pbs-client1 openpbs]# yum install libtool-ltdl-devel hwloc-devel libXt-devel libedit-devel libical-devel ncurses-devel postgresql-devel postgresql-contrib python3-devel tcl-devel tk-devel zlib-devel expat-devel openssl-devel –y
8. [root@pbs-client1 openpbs]# mkdir /opt/pbs
9. [root@pbs-client1 openpbs]# ./configure –prefix=/opt/pbs/
10. [root@pbs-client1 openpbs]# make
11. [root@pbs-client1 openpbs]# make install
12. [root@pbs-client1 openpbs]# . /opt/pbs/etc/pbs.sh
13. [root@pbs-client1 openpbs]# chmod +x /opt/pbs/etc/pbs.sh
14. [root@pbs-client1 openpbs]# export PATH=${PATH}:/opt/pbs/bin/
15. [root@pbs-master x86\_64]# scp /etc/pbs.conf root@pbs-client1:/etc/ (COPY FROM MASTER TO CLIENT1)
16. [root@pbs-client1 openpbs]# vim /etc/pbs.conf

PBS\_EXEC=/opt/pbs

PBS\_SERVER=pbs-master

PBS\_START\_SERVER=0

PBS\_START\_SCHED=0

PBS\_START\_COMM=0

PBS\_START\_MOM=1

PBS\_HOME=/var/spool/pbs

PBS\_CORE\_LIMIT=unlimited

PBS\_SCP=/bin/scp

1. [root@pbs-client1 openpbs]# systemctl start pbs
2. [root@pbs-client1 openpbs]# systemctl enable pbs
3. [root@pbs-client1 openpbs]# qstat –B

ON MASTER AND CLIENT2:

1. [root@pbs-master ~]# yum install nfs-utils.x86\_64 –y
2. [root@pbs-master ~]# systemctl start nfs
3. [root@pbs-master ~]# systemctl enable nfs

ON MASTER:

1. [root@pbs-master ~]# chmod 777 /root/rpmbuild/RPMS/x86\_64/
2. [root@pbs-master ~]# vi /etc/exports

/root/rpmbuild/RPMS/x86\_64/ 10.10.10.152(rw,sync,no\_root\_squash)

1. [root@pbs-master ~]# exportfs –avr
2. [root@pbs-master ~]# showmount –e

ON CLIENT 2:

1. [root@pbs-client2 ~]# mkdir /root/pbs
2. [root@pbs-client2 ~]# mount -t nfs 10.10.10.152:/root/rpmbuild/RPMS/x86\_64/ /root/pbs
3. [root@pbs-client2 ~]# df –TH
4. [root@pbs-client2 ~]# cd /root/pbs/
5. [root@pbs-client2 pbs]# yum install openpbs-execution-23.06.06-0.x86\_64.rpm
6. [root@pbs-client1 openpbs]# scp /etc/pbs.conf root@pbs-client2:/etc/ (Copy file from NODE1)
7. [root@pbs-client2 openpbs]# systemctl start pbs
8. [root@pbs-client2 openpbs]# systemctl enable pbs
9. [root@pbs-client2 pbs]# vim /var/spool/pbs/mom\_priv/config

$logevent 0x1ff

#$clientname pbs-client2

$restrict\_user\_maxsysid 999

1. [root@pbs-client2 pbs]# systemctl restart pbs

On CLIENT1:

1. [root@pbs-client1 openpbs]# vim /var/spool/pbs/mom\_priv/config

$logevent 0x1ff

#$clientname pbs-client1

$restrict\_user\_maxsysid 999

ON Master:

1. [root@pbs-master ~]# vim /var/spool/pbs/server\_priv/nodes

pbs-client1 np = 1

pbs-client2 np = 1

1. [root@pbs-master ~]# systemctl restart pbs.service
2. [root@pbs-master ~]# qmgr

Qmgr: create node pbs-client1

Qmgr: create node pbs-client2

1. [root@pbs-master ~]# pbsnodes –a
2. [root@pbs-master ~]# su - vm
3. [vm@pbs-master ~]$ qsub –I
4. qstat –f (in new terminal)

Queue creation in PBS:

On Master:

1. qmgr
2. Qmgr: create queue pbs-queue queue\_type=execution
3. Qmgr: set queue pbs-queue enabled=True
4. Qmgr: set queue pbs-queue started=True
5. Qmgr: set queue pbs-queue resources\_default.nodes=1
6. Qmgr: set queue pbs-queue resources\_default.walltime=3600
7. Qmgr: set server default\_queue=pbs-queue
8. Qmgr: p s
9. [root@pbs-master ~]# su – vm
10. [vm@pbs-master ~]$ qsub - I