GlusterFS Practical

node 1 - 1GB Ram, 20 GB + 20 GB, NAT
node 2 - 1GB Ram, 20 GB + 20 GB, NAT
node 3 - 1GB Ram, 20 GB + 20 GB, NAT
} Storage

node 4 - 1GB Ram, 20 GB, — NAT — client

On node 1

vi /etc/hosts

```
192.168.44.132  node1.hpcsa.in
192.168.44.133  node2.hpcsa.in
192.168.44.134  node3.hpcsa.in
192.168.44.135  client.hpcsa.in
```

rsync /etc/hosts root@192.168.44.133:/etc/hosts
rsync /etc/hosts root@192.168.44.134:/etc/hosts
rsync /etc/hosts root@192.168.44.135:/etc/hosts.

Turn off firewall of all machine

systemctl stop firewalld.service
systemctl disable firewalld.service.

On Node 1, 2, 3

fdisk /dev/sdb
mkfs.ext4 /dev/sdb1

mkdir /mnt/disk1

mount /dev/sdb1 /mnt/disk1

lsblk → check disk1 is mounted on sdb1

yum install wget centos-release-gluster epel-release glusterfs-server.

systemctl start glusterd

systemctl enable glusterd

systemctl status glusterd

---

on node 1

gluster peer probe node2.hpcsa.in

gluster peer probe node3.hpcsa.in

gluster pool list

gluster peer status.

mkdir /mnt/disk1/diskvol → Run this on all node

gluster volume create gdisk1 replica 3 node1.hpcsa.in :/mnt/disk1/diskvol/gdisk1 node2.hpcsa.in :/mnt/disk1/diskvol/gdisk1 node3.hpcsa.in :/mnt/disk1/diskvol/gdisk1

gluster volume start gdisk1

gluster volume info gdisk1

↳ type is Repication

on client

yum install glusterfs fuse

mkdir /mnt/gdrive

mount -t glusterfs node1.hpcsa.in:/gdisk1 /mnt/gdrive

df -h

lsblk

cd /mnt/gdrive/

dd if=/dev/zero of=file.txt bs=1024 count=~~520040~~ 12367778675

File.txt File is created with size 8 GB, Now you can see same file.txt in all 3 nodes in path /mnt/disk1/diskvol/gdisk1/

Distributed

On Node 1

gluster volume create gdisk2 node1.hpcsa.in:/mnt/disk1/diskvol/gdisk2 node2.hpcsa.in:/mnt/disk1/diskvol/gdisk2 node3.hpcsa.in:/mnt/disk1/diskvol/gdisk2

gluster volume start gdisk2

gluster volume info gdisk2

↳ Type is Distributed

On client

```
#mkdir /mnt/gdrive2
# mount -t glusterfs node1.hpcsa.in:/gdisk2 <space> /mnt/gdrive2
#df -h
# cd /mnt/gdrive2
# dd if=/dev/zero of=file1.txt bs=1024 count=1024
```

Make more 4 files using same command

```
# ls
```

Hence you have 5 Files, Now all your 5 files are distributed in all 3 nodes randomly, you can check it in node1 matching path "/mnt/disk1/diskvol/gdisk2/"

Disperse

On node 1

```
# gluster volume create gdisk3 disperse 3 redundancy 1 node1.hpcsa.in:/mnt/disk1/diskvol/
gdisk3 node2.hpcsa.in:/mnt/disk1/diskvol/
gdisk3 node3.hpcsa.in:/mnt/disk1/diskvol/
gdisk3
```

gluster volume start gdisk3
gluster volume info gdisk3
↳ Type is Disperse

on client

mkdir /mnt/gdrive3
mount -t glusterfs node1.hpcsa.in:/gdisk3 <space> /mnt/gdrive3
df -h
cd /mnt/gdrive3
dd if=/dev/zero of=file.txt bs=1024 count=2000000
ls 2GB file.txt is created

In 2 Nodes file is will be stored in disperse mode & in remaining node parity of file will be store.