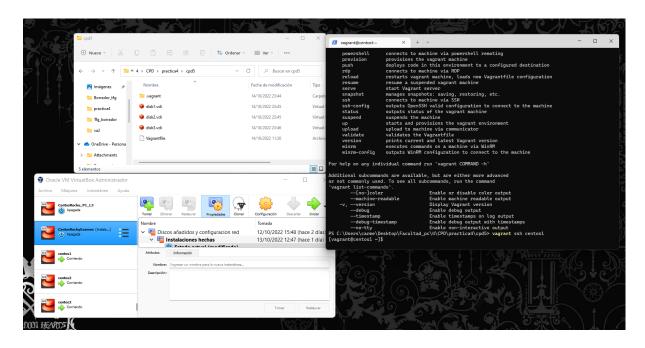
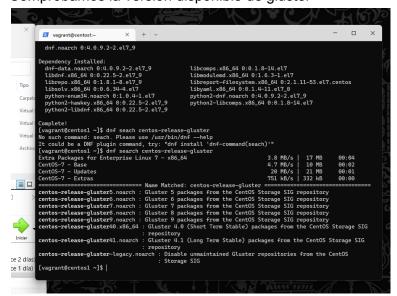
Práctica 4: Vagrant

IV) Creación de las 3 máquinas virtuales



V)Instalación de glusterFS

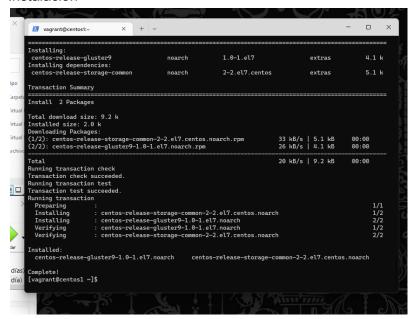
Instalamos dnf en la máquina Comprobamos la versión disponible de gluster



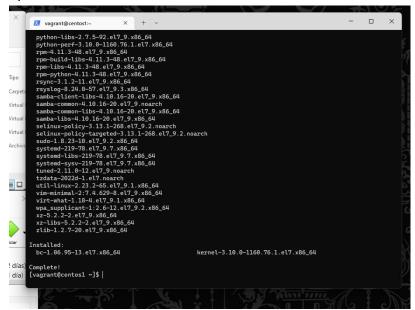
He instalamos la última versión en los nodo1, nodo2 y nodo3

Nodo1

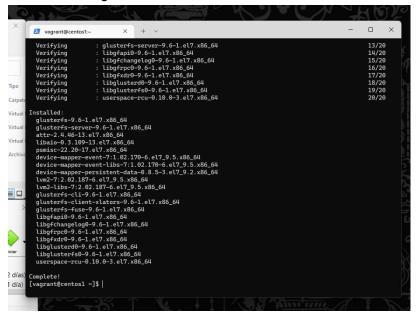
Instalación



Update

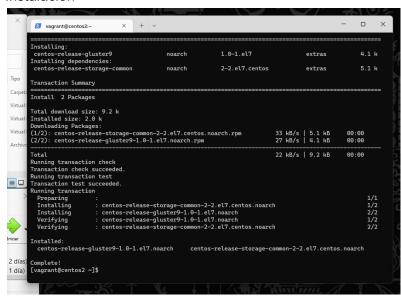


Instalación de gluster

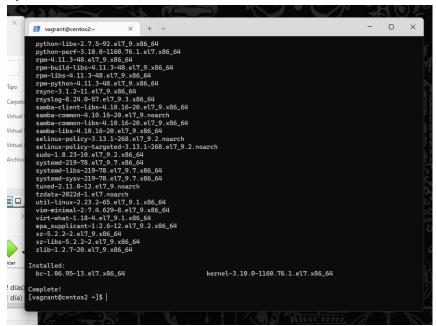


Nodo2

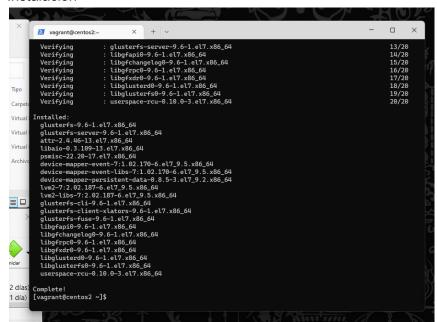
Instalación



Update



Instalación



Nodo3

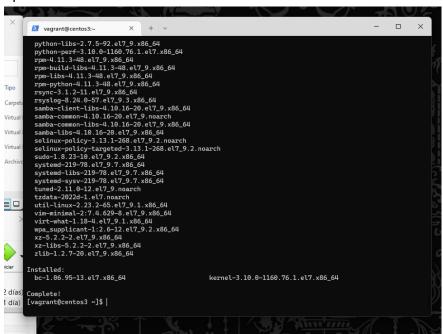
Instalación

```
× + -

≥ vagrant@centos3:~

          =====
Installing:
centos-release-gluster9
Installing dependencies:
centos-release-storage-common
                                                                                                                             1.0-1.el7
                                                                                                                                                                                extras
                                                                                                                                                                                                                 4.1 k
                                                                                            noarch
                                                                                                                             2-2.el7.centos
                                                                                                                                                                               extras
                                                                                                                                                                                                                 5.1 k
Гіро
           Transaction Summary
           Install 2 Packages
            Total download size: 9.2 k
Installed size: 2.0 k
Downloading Packages:
(1/2): centos-release-gluster9-1.0-1.el7.noarch.rpm
(2/2): centos-release-storage-common-2-2.el7.centos.noarch.rpm
/irtual l
                                                                                                                                                             26 kB/s | 4.1 kB
32 kB/s | 5.1 kB
                                                                                                                                                                                                       00:00
00:00
                                                                                                                                                             33 kB/s | 9.2 kB
                                                                                                                                                                                                        00:00
            Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing
Installing : centos-
Unifying : centos-
                                                                                                                                                                                                                    1/1
1/2
2/2
1/2
2/2
                                                :
centos-release-storage-common-2-2.el7.centos.noarch
centos-release-gluster9-1.0-1.el7.noarch
centos-release-gluster9-1.0-1.el7.noarch
centos-release-storage-common-2-2.el7.centos.noarch
               Verifying
Verifying
Installed: centos-release-gluster9-1.0-1.el7.noarch centos-release-storage-common-2-2.el7.centos.noarch
 días Complete!
día) [vagrant@centos3 ~]$ |
```

Update



Instalación

VI) Iniciamos el servicio

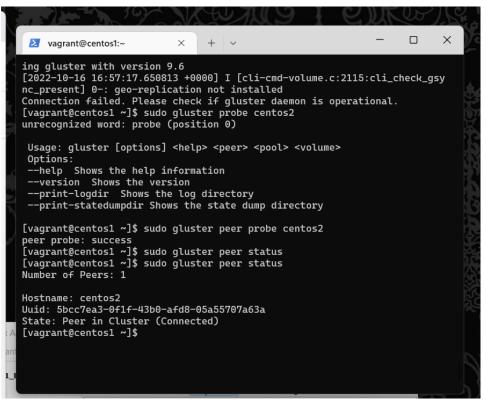
Centos 1

Centos2

```
vagrant@centos2:~
                               X
                                     + ~
     AUTHENTICATION COMPLETE ===
[vagrant@centos2 ~]$ systemctl glusterfs status
Unknown operation 'glusterfs'.
[vagrant@centos2 ~]$ systemctl glusterd status
Unknown operation 'glusterd'.
[vagrant@centos2 ~]$ systemctl status glusterd
  glusterd.service - GlusterFS, a clustered file-system server
   Loaded: loaded (/usr/lib/systemd/system/glusterd.service; enabled; ven
dor preset: disabled)
   Active: active (running) since Sun 2022-10-16 16:53:22 UTC; 21s ago
     Docs: man:glusterd(8)
  Process: 2639 ExecStart=/usr/sbin/glusterd -p /var/run/glusterd.pid --l
og-level $LOG_LEVEL $GLUSTERD_OPTIONS (code=exited, status=0/SUCCESS)
 Main PID: 2640 (glusterd)
   CGroup: /system.slice/glusterd.service

L2640 /usr/sbin/glusterd -p /var/run/glusterd.pid --log-le...
[vagrant@centos2 ~]$
```

Probamos la conexión



Quitamos el servidor

```
[vagrant@centos1 ~]$ sudo gluster peer detach centos2
All clients mounted through the peer which is getting detached need to be remounted using one of the other active peers in the trusted storage poo all to ensure client gets notification on any changes done on the gluster configuration and if the same has been done do you want to proceed? (y/n) y peer detach: success
-[vagrant@centos1 ~]$
```

VII)Creación de los bricks

Partición

```
X
 vagrant@centos1:~
Be careful before using the write command.
Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x038d4a6d.
Command (m for help): n
Partition type:
   p primary (0 primary, 0 extended, 4 free)
      extended
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-20971519, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-20971519, default 20971519):
Using default value 20971519
Partition 1 of type Linux and of size 10 GiB is set
Command (m for help): t
Selected partition 1
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LVM'
Command (m for help): w
The partition table has been altered!
Calling ioctl() to re-read partition table.
Syncing disks.
[vagrant@centos1 ~]$
```

Creacion de los volúmenes

```
[vagrant@centos1 ~]$ sudo pvcreate /dev/sdb1
Physical volume "/dev/sdb1" successfully created.
[vagrant@centos1 ~]$ sudo vgcreate vg01 /dev/sdb1
Volume group "vg01" successfully created
```

```
X
  vagrant@centos1:~
   Run 'lvcreate --help' for more information.
[vagrant@centos1 ~]$ vcreate -L 100%FREE -n lv01 vg01
   WARNING: Running as a non-root user. Functionality may be unavailable.
   Can't parse size argument.
Invalid argument for --size: 100%FREE
Invalid argument for --size: 100%FREE
Error during parsing of command line.

[vagrant@centos1 ~]$ sudo lvcreate -l 100%FREE -n lv01 vg01
Logical volume "lv01" created.

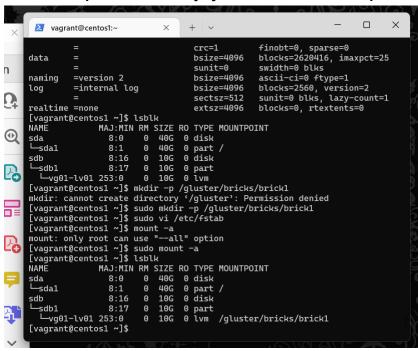
[vagrant@centos1 ~]$ mkfs.xfs /dev/mapper/vg01-lv01

mkfs.xfs: cannot open /dev/mapper/vg01-lv01: Permission denied

[vagrant@centos1 ~]$ sudo mkfs.xfs /dev/mapper/vg01-lv01

meta-data=/dev/mapper/vg01-lv01 isize=512 agcount=4, agsize
                                                                          agcount=4, agsize=655104 bl
                                                                          attr=2, projid32bit=1
finobt=0, sparse=0
blocks=2620416, imaxpct=25
                                                     sectsz=512
                                                     crc=1
                                                     bsize=4096
data
                                                     sunit=0
                                                                          swidth=0 blks
                                                                          ascii-ci=0 ftype=1
blocks=2560, version=2
sunit=0 blks, lazy-count=1
                                                     bsize=4096
              =version 2
naming
                                                     bsize=4096
              =internal log
                                                      sectsz=512
realtime =none
                                                      extsz=4096
                                                                          blocks=0, rtextents=0
[vagrant@centos1 ~]$ lsblk
NAME
                      MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
                                        40G
                         8:0
                                     0
                                                 0 disk
sda
 ∟sda1
                                     0
                                         40G
                                                 0 part /
                          8:1
                          8:16
                                     0
                                          10G
                                                  0 disk
sdb
                          8:17
                                         10G
                                                  0
   -sdb1
                                     0
                                                     part
    └vg01-lv01 253:0
                                                     lvm
                                     0
                                          10G
                                                  0
[vagrant@centos1 ~]$
```

Creamos el punto de montaje y montamos todas las particiones



Centos2

```
[vagrant@centos2 ~]$ partprobe
[vagrant@centos2 ~]$ sudo pvcreate /dev/sdb1
   Physical volume "/dev/sdb1" successfully created.
[vagrant@centos2 ~]$ sudo vgcreate vg01 /dev/sdb1
   Volume group "vg01" successfully created
[vagrant@centos2 ~]$ sudo lvcreate -l 100%FREE -n lv01 vg01
   Logical volume "lv01" created.
[vagrant@centos2 ~]$ sudo mkfs.xfs /dev/mapper/vg01-lv01
meta-data=/dev/mapper/vg01-lv01 isize=512 agcount=4, ags
ks
                                                                                                     agcount=4, agsize=655104 bl
                                                                         sectsz=512 attr=2, projid32bit=1
crc=1 finobt=0, sparse=0
bsize=4096 blocks=2620416, imaxpct=25
data
                                                                         sunit=0
                                                                                                     swidth=0 blks
 naming =version 2
                                                                         bsize=4096
                                                                                                     ascii-ci=0 ftype=1
                                                                         bsize=4096 blocks=2560, version=2
sectsz=512 sunit=0 blks, lazy-count=1
extsz=4096 blocks=0, rtextents=0
                   =internal log
realtime =none
  ∟sdb1 8:17
_ ∟vg01−lv01 253:0
                                                  0 10G
0 10G
                                                                    0 part
0 lvm
                                   8:17
 [vagrant@centos2 ~]$
```

Montamos

```
[vagrant@centos2 ~]$ sudo mkdir -p /gluster/bricks/brick1
[vagrant@centos2 ~]$ sudo vi /etc/fstab
[vagrant@centos2 ~]$ sudo mount -a
[vagrant@centos2 ~]$ lsblk
                   MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
8:0 0 40G 0 disk
NAMÉ
sda
∟sda1
                      8:1
                               0 40G
                                           0 part /
sdb
                      8:16
                                0
                                    10G
                                           0 disk
                                0 10G 0 part
                      8:17
∟sdb1
   └─vg01-lv01 253:0
                                0 10G 0 lvm /gluster/bricks/brick1
[vagrant@centos2 ~]$
```

VIII) Creamos el FS

```
\Box
                                                                                                                    X
                                                + ~
  vagrant@centos1:~
                                          ×
[vagrant@centos1 ~]$ lsblk

NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT

sda 8:0 0 40G 0 disk

Lsda1 8:1 0 40G 0 part /

4b 8:16 0 10G 0 disk

- 10G 0 part
                                    0 10G 0 part
0 10G 0 lvm /gluster/bricks/brick1
└vg01-lv01 253:0 0 10G 0 lvm /gluster/brick
[vagrant@centos1 ~]$ sudo gluster peer probe centos2
peer probe: success
[vagrant@centos1 ~]$ sudo gluster peer status
Number of Peers: 1
Hostname: centos2
Uuid: 5bcc7ea3-0f1f-43b0-afd8-05a55707a63a
State: Peer in Cluster (Connected)
[vagrant@centos1 ~]$ gluster pool list
ERROR: failed to create logfile "/var/log/glusterfs/cli.log" (Permission
denied)
ERROR: failed to open logfile /var/log/glusterfs/cli.log

[2022-10-16 17:14:48.663904 +0000] I [cli.c:840:main] 0-cli: Started runn

ing gluster with version 9.6

[2022-10-16 17:14:48.667203 +0000] I [cli-cmd-volume.c:2115:cli_check_gsy
[vagrant@centos1 ~]$ sudo gluster pool list
                                                                Hostname
5bcc7ea3-0f1f-43b0-afd8-05a55707a63a
                                                                                          Connected
                                                                centos2
a884e24e-2d09-4ddc-b1d3-04e08fb14843
[vagrant@centos1 ~]$
                                                                 localhost
                                                                                         Connected
```

Creamos los sistemas de ficheros en las unidades /dev/sdb

```
[vagrant@centos1 ~]$ sudo gluster volume create glustervol1 replica 2 transport tcp c entos1:/gluster/bricks/brick1/vol1 centos2:/gluster/bricks/brick1/vol1 Replica 2 volumes are prone to split-brain. Use Arbiter or Replica 3 to avoid this. S ee: http://docs.gluster.org/en/latest/Administrator%20Guide/Split%20brain%20and%20way s%20to%20deal%20with%20it/.
Do you still want to continue?
(y/n) y
volume create: glustervol1: success: please start the volume to access data
[vagrant@centos1 ~]$ sudo gluster volume start glustervol1
volume start: glustervol1: success
[vagrant@centos1 ~]$
```

```
[vagrant@centos1 ~]$ sudo gluster volume info glustervol1

Volume Name: glustervol1
Type: Replicate
Volume ID: dfff22fb-52a7-41eb-af58-cef290b2c29d
Status: Started
Snapshot Count: 0
Number of Bricks: 1 x 2 = 2
Transport-type: tcp
Bricks:
Brick1: centos1:/gluster/bricks/brick1/vol1
Brick2: centos2:/gluster/bricks/brick1/vol1
Options Reconfigured:
cluster.granular-entry-heal: on
storage.fips-mode-rchecksum: on
transport.address-family: inet
nfs.disable: on
performance.client-io-threads: off
[vagrant@centos1 ~]$
```

IX) Instalación del cliente en Centos3

Creamos un directorio como punto de montaje

```
[vagrant@centos3 ~]$ sudo mkdir /gdatos1
mkdir: cannot create directory '/gdatos1': File exists
[vagrant@centos3 ~]$ sudo mount -t glusterfs centos1:/glustervol1 /gdatos1
[vagrant@centos3 ~]$
centos3
```

Comprobación

```
[vagrant@centos3 gdatos1]$ sudo mkdir directorio1
[vagrant@centos3 gdatos1]$ sudo touch fichero1
[vagrant@centos3 gdatos1]$ ls
directorio1 fichero1
[vagrant@centos3 gdatos1]$ exit
logout
Connection to 127.0.0.1 closed.
PS C:\Users\carme\Desktop\Facultad_pc\4\CPD\practica4\cpd5> vagrant ssh centos1
Last login: Sun Oct 16 17:49:46 2022 from 10.0.2.2
[vagrant@centos1 ~]$ sudo shutdown -h now
Connection to 127.0.0.1 closed by remote host.
Connection to 127.0.0.1 closed.
PS C:\Users\carme\Desktop\Facultad_pc\4\CPD\practica4\cpd5>
```

```
PS C:\Users\carme\Desktop\Facultad_pc\4\CPD\practica4\cpd5> vagrant ssh centos1
Last login: Sun Oct 16 18:05:36 2022 from 10.0.2.2
[vagrant@centos1 ~]$ cd /gluster/bricks/brick1/vol1
[vagrant@centos1 vol1]$ ls
directorio1 directorio2 fichero1 fichero2
[vagrant@centos1 vol1]$
```