

# Práctica 5

## CPD

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## Ejercicio 1.

```
vagrant@ubuntu-bionic:~$ uname -a
Linux ubuntu-bionic 4.15.0-38-generic #41-Ubuntu SMP Wed Oct 10 10:59:38 UTC 201
8 x86_64 x86_64 x86_64 GNU/Linux
vagrant@ubuntu-bionic:~$
```

Creación de **Ubuntu bionic** y acceso con **Vagrant**.

## Ejercicio 2.

```
root@valkyrie:v1# VAGRANT_DISABLE_STRICT_DEPENDENCY_ENFORCEMENT=1 vagrant plugin
install vagrant-hostmanager
Installing the 'vagrant-hostmanager' plugin. This can take a few minutes...
Fetching: fog-core-1.43.0.gem (100%)
Fetching: vagrant-hostmanager-1.8.9.gem (100%)
Installed the plugin 'vagrant-hostmanager (1.8.9)'!
```

Instalamos el plugin **vagrant-hostmanager**

```
centos3: From : /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
centos3: Running transaction check
centos3: Running transaction test
centos3: Transaction test succeeded
centos3: Running transaction
centos3: Installing : epel-release-7-11.noarch
1/2
centos3:
centos3: Installing : net-tools-2.0-0.22.20131004git.el7.x86_64
2/2
centos3:
centos3: Verifying : net-tools-2.0-0.22.20131004git.el7.x86_64
1/2
centos3:
centos3: Verifying : epel-release-7-11.noarch
2/2
centos3:
centos3:
centos3: Installed:
centos3: epel-release.noarch 0:7-11 net-tools.x86_64 0:2.0-0.22.201310
04git.el7
centos3:
centos3: Complete!
root@valkyrie:v2#
```

Ejecutamos **vagrant up** para crear las tres máquinas virtuales Centos.

```
root@valkyrie:v2# vagrant ssh centos
centos1 centos2 centos3
root@valkyrie:v2# vagrant ssh centos1
[vagrant@centos1 ~]$ 
vagrant ssh centos2
vagrant@centos2:~
File Edit View Search Terminal Help
root@valkyrie:v2# vagrant ssh centos3
[vagrant@centos3 ~]$ 
V) Instalación de GlusterFS en las máquinas virtuales
```

Comprobamos que tenemos acceso a las tres máquinas virtuales.

```
[root@centos1 vagrant]# systemctl enable glusterd.service
Created symlink from /etc/systemd/system/multi-user.target.wants/glusterd.service to /usr/lib/systemd/system/glusterd.service.
[root@centos1 vagrant]# systemctl start glusterd.service
[root@centos1 vagrant]# 
Complete!
[root@centos2 vagrant]# systemctl enable glusterd.service
Created symlink from /etc/systemd/system/multi-user.target.wants/glusterd.service to /usr/lib/systemd/system/glusterd.service.
[root@centos2 vagrant]# systemctl start glusterd.service
[root@centos2 vagrant]#
```

```
[root@centos1 vagrant]# gluster peer probe centos2
peer probe: success.
[root@centos1 vagrant]# gluster peer status
Number of Peers: 1

Hostname: centos2
Uuid: 9e91798b-8a57-491f-86d5-7ee85133f0e9
State: Peer in Cluster (Connected)
[root@centos1 vagrant]#
```

Creamos la partición.

```
Command (m for help): n
Partition type:
   p   primary (0 primary, 0 extended, 4 free)
   e   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.
[root@centos1 vagrant]#
```

```
[root@centos1 vagrant]# pvcreate /dev/sdb1
Physical volume "/dev/sdb1" successfully created.
[root@centos1 vagrant]# vgcreate vg01 /dev/sdb1
Volume group "vg01" successfully created
[root@centos1 vagrant]# lvcreate -l 100%FREE -n lv01 vg01
Logical volume "lv01" created.
[root@centos1 vagrant]# mkfs.xfs /dev/mapper/vg01-lv01
meta-data=/dev/mapper/vg01-lv01 isize=512    agcount=4, agsize=655104 blks
        =                               sectsz=512   attr=2, projid32bit=1
        =                               crc=1       finobt=0, sparse=0
data      =                               bsize=4096   blocks=2620416, imaxpct=25
        =                               sunit=0     swidth=0 blks
naming    =version 2                       bsize=4096   ascii-ci=0 ftype=1
log       =internal log                   bsize=4096   blocks=2560, version=2
        =                               sectsz=512   sunit=0 blks, lazy-count=1
realtime  =none                           extsz=4096   blocks=0, rtextents=0
[root@centos1 vagrant]#
```

```
#
# /etc/fstab
# Created by anaconda on Sun Sep 30 19:58:21 2018
#
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
UUID=b5b20816-947c-4616-b15a-abaae4afe31b / ext4 defaults 1 1
/swapfile none swap defaults 0 0

/dev/mapper/vg01-lv01 /gluster/bricks/brick1 xfs defaults 0 0
```

Editamos el fichero `/etc/fstab`

```
[root@centos1 vagrant]# mount -a
[root@centos1 vagrant]# gluster peer probe centos2
peer probe: success. Host centos2 port 24007 already in peer list
[root@centos1 vagrant]# gluster peer status
Number of Peers: 1

Hostname: centos2
Uuid: 9e91798b-8a57-491f-86d5-7ee85133f0e9
State: Peer in Cluster (Connected)
[root@centos1 vagrant]# gluster pool list


| UUID                                 | Hostname  | State     |
|--------------------------------------|-----------|-----------|
| 9e91798b-8a57-491f-86d5-7ee85133f0e9 | centos2   | Connected |
| 6c0eb89e-29f3-4d66-8846-78f6d6db25c0 | localhost | Connected |


[root@centos1 vagrant]#
```

Comprobamos que seguimos teniendo conexión con **centos2**.

```
[root@centos1 vagrant]# gluster volume create glustervol1 replica 2 transport tcp centos1:/gluster/bricks/brick1/vol1 centos2:/gluster/bricks/brick1/vol1 force
volume create: glustervol1: success: please start the volume to access data
[root@centos1 vagrant]#
[root@centos1 vagrant]#
[root@centos1 vagrant]# gluster volume start glustervol1
volume start: glustervol1: success
[root@centos1 vagrant]#
```

Añadimos **'force'** al comando.

```
[root@centos1 vagrant]# gluster volume info glustervol1

Volume Name: glustervol1
Type: Replicate
Volume ID: 8e80936b-a8e2-41cc-8a58-47f4a3414376
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:
transport.address-family: inet
nfs.disable: on
performance.client-io-threads: off
[root@centos1 vagrant]#
```

```
[root@centos3 vagrant]# mkdir /gdatos1/HOLA
[root@centos3 vagrant]# touch /gdatos1/HOLA/hola.txt
[root@centos3 vagrant]#

[root@centos1 vagrant]# ls -lR /gluster/bricks/brick1/vol1/
/gluster/bricks/brick1/vol1/:
total 0
drwxr-xr-x. 2 root root 22 Oct 31 17:13 HOLA

/gluster/bricks/brick1/vol1/HOLA:
total 0
-rw-r--r--. 2 root root 0 Oct 31 17:13 hola.txt
[root@centos1 vagrant]#
```

Creamos en **centos3** el directorio **HOLA** con el archivo **hola.txt**

```
2[root@centos2 vagrant]# ls -lR /gluster/bricks/brick1/vol1/
/gluster/bricks/brick1/vol1/:
total 8
drwxr-xr-x. 2 root root 4096 Oct 31 17:13 HOLA

/gluster/bricks/brick1/vol1/HOLA:
total 4
-rw-r--r--. 2 root root 0 Oct 31 17:13 hola.txt
[root@centos2 vagrant]#
vagrant]#
```

Vemos que tanto en **centos1** como en **centos2** nos aparecen los archivos creados en **centos3**.

```

[root@centos1 vagrant]# shutdown -h now
Connection to 127.0.0.1 closed by remote host.
Connection to 127.0.0.1 closed.
root@valkyrie:v2#

```

root@centos3:/home/vagrant

```

File Edit View Search Terminal Help
[root@centos3 vagrant]# touch /gdatos1/HOLA/hola2.txt
[root@centos3 vagrant]#

```

Apagamos la máquina **centos1** y creamos un nuevo fichero en **centos3**, **hola2.txt**

```

[root@centos2 vagrant]# ls -lR /gluster/bricks/brick1/vol1/
/gluster/bricks/brick1/vol1/:
total 8
drwxr-xr-x. 2 root root 4096 Oct 31 17:15 HOLA

/gluster/bricks/brick1/vol1/HOLA:
total 8
-rw-r--r--. 2 root root 0 Oct 31 17:15 hola2.txt
-rw-r--r--. 2 root root 0 Oct 31 17:13 hola.txt
[root@centos2 vagrant]#

```

Vemos que en **centos2** nos aparece el nuevo archivo creado.

```

root@valkyrie:v2# vagrant ssh centos1
Last login: Wed Oct 31 16:54:13 2018 from 10.0.2.2
[vagrant@centos1 ~]$
[vagrant@centos1 ~]$
[vagrant@centos1 ~]$ ls -lR /gluster/bricks/brick1/vol1/
/gluster/bricks/brick1/vol1/:
total 0
drwxr-xr-x. 2 root root 39 Oct 31 17:17 HOLA

/gluster/bricks/brick1/vol1/HOLA:
total 0
-rw-r--r--. 2 root root 0 Oct 31 17:15 hola2.txt
-rw-r--r--. 2 root root 0 Oct 31 17:13 hola.txt
[vagrant@centos1 ~]$

```

Iniciamos **centos1** y comprobamos que efectivamente también nos aparece el archivo creado.