# CPD Práctica 4

## Jesús Manuel Pérez Terrón

### Parte Obligatoria:

```
    centos3:
    centos3: Complete!
[yo:centos kate$
[yo:centos kate$
[yo:centos kate$
[yo:centos kate$
[yo:centos kate$ vagrant ssh centos1
[[vagrant@centos1 ~]$ whoami
vagrant
[vagrant@centos1 ~]$ JTerron - acceso CentOS1
```

Vagrantfile

```
# -*- mode: ruby -*-
# vi: set ft=ruby :
#instalar hostmanager plugin
#
DIRCPD = '.'

disk1 = DIRCPD + "/disk1.vdi"
disk2 = DIRCPD + "/disk2.vdi"
disk3 = DIRCPD + "/disk3.vdi"

Vagrant.configure(2) do |config|
  config.vm.box = "centos/7"
  config.vm.provision "shell", inline: <<-SHELL
        sed -i 's/PasswordAuthentication no/PasswordAuthentication yes/' /etc/ssh/
sshd_config
        systemctl restart sshd.service
        yum update
        yum -y install epel-release net-tools
        # añado estas dos lineas para instalar gluster en etapa de provisioning - JTerron
        yum -y install centos-release-gluster7
        yum -y install glusterfs glusterfs-cli glusterfs-libs glusterfs-server
        echo "192.168.12.11 centos1" >> /etc/hosts
        echo "192.168.12.12 centos2" >> /etc/hosts
        echo "192.168.12.13 centos3" >> /etc/hosts
  SHELL
  config.vm.define :centos1 do |centos_config|
      centos_config.vm.hostname = "centos1.vm"
      centos_config.vm.network "private_network" , ip:"192.168.12.11"
      centos_config.vm.synced_folder ".","/vagrant"
      centos_config.vm.provider :virtualbox do |vb|
```

```
Vagrantfile
os3:    device-mapper.x86_64 7:1.02.164-7.el7_8.2

    centos3:    device-mapper-libs.x86_64 7:1.02.164-7.el7_8.2

    centos3:
    centos3: Complete!
[yo:centos kate$ vagrant ssh centos3
[[vagrant@centos3 ~]$ gluster
ERROR: failed to create logfile "/var/log/glusterfs/cli.log" (Permission denied)
ERROR: failed to open logfile /var/log/glusterfs/cli.log
[2020-10-14 10:59:53.396476] I [cli.c:846:main] 0-cli: Started running gluster with
on 7.8
[2020-10-14 10:59:53.402518] I [cli-cmd-volume.c:2096:cli_check_gsync_present] 0-:
plication not installed
Welcome to gluster prompt, type 'help' to see the available commands.
[gluster> exit
[[vagrant@centos3 ~]$
```

```
[vagrant@centos3 ~]$ sudo systemctl status glusterd.service
● glusterd.service - GlusterFS, a clustered file-system server
   Loaded: loaded (/usr/lib/systemd/system/glusterd.service; enabled; vendor preset: enab
led)
   Active: inactive (dead)
     Docs: man:glusterd(8)
[vagrant@centos3 ~]$ sudo systemctl start glusterd.service
[vagrant@centos3 ~]$ sudo systemctl status glusterd.service
● glusterd.service - GlusterFS, a clustered file-system server
   Loaded: loaded (/usr/lib/systemd/system/glusterd.service; enabled; vendor preset: enab
led)
   Active: active (running) since Wed 2020-10-14 11:12:26 UTC; 4s ago
     Docs: man:glusterd(8)
  Process: 4055 ExecStart=/usr/sbin/glusterd -p /var/run/glusterd.pid --log-level $LOG_LE
VEL $GLUSTERD_OPTIONS (code=exited, status=0/SUCCESS)
 Main PID: 4056 (glusterd)
   CGroup: /system.slice/glusterd.service
           └─4056 /usr/sbin/glusterd -p /var/run/glusterd.pid --log-level INFO

Oct 14 11:12:26 centos3.vm systemd[1]: Starting GlusterFS, a clustered file-system s.....
Oct 14 11:12:26 centos3.vm systemd[1]: Started GlusterFS, a clustered file-system server.
Hint: Some lines were ellipsized, use -l to show in full.
[vagrant@centos3 ~]$
```

```
[vagrant@centos1 ~]$ sudo gluster peer probe centos1
peer probe: success. Probe on localhost not needed
[vagrant@centos1 ~]$ sudo gluster peer probe centos2
peer probe: success. Host centos2 port 24007 already in peer list
[vagrant@centos1 ~]$ sudo gluster peer probe centos3
peer probe: success. Host centos3 port 24007 already in peer list
[vagrant@centos1 ~]$ JTerron
```

```
[vagrant@centos1 ~]$ sudo gluster peer status
Number of Peers: 2

Hostname: centos2
Uuid: 4052460d-048a-4cec-9b4c-67508601993f
State: Peer in Cluster (Connected)

Hostname: centos3
Uuid: 05a631ce-9727-4039-910b-3ab5de942790
State: Peer in Cluster (Connected)
[vagrant@centos1 ~]$
```

```
      end
    end
    # Para comprobar el estado del cluster visto desde peer3
    config.vm.provision "shell", inline: <<-SHELL
      gluster peer status
    SHELL
  end

end
```

```
==> centos3: Running provisioner: shell...
    centos3: Running: inline script
    centos3: Number of Peers: 2
    centos3:
    centos3: Hostname: centos1
    centos3: Uuid: 7f789b47-b176-4cb5-91f2-1438ced0544a
    centos3: State: Peer in Cluster (Connected)
    centos3:
    centos3: Hostname: centos2
    centos3: Uuid: 4052460d-048a-4cec-9b4c-67508601993f
    centos3: State: Peer in Cluster (Connected)
yo:centos kate$
```

```
[vagrant@centos1 ~]$ sudo 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
[vagrant@centos1 ~]$
```

```
yo:centos kate$ vagrant ssh centos1
Last login: Tue Oct 27 18:56:15 2020 from 10.0.2.2
[vagrant@centos1 ~]$ shutdown -h now
==== AUTHENTICATING FOR org.freedesktop.login1.power-off ===
Authentication is required for powering off the system.
Authenticating as: root
Password:
==== AUTHENTICATION COMPLETE ===
Connection to 127.0.0.1 closed by remote host.
Connection to 127.0.0.1 closed.
yo:centos kate$
yo:centos kate$
yo:centos kate$
yo:centos kate$ vagrant ssh centos3
Last login: Tue Oct 27 19:00:49 2020 from 10.0.2.2
^[[A[vagrant@centos3 ~]$ sudo su
[root@centos3 vagrant]# cd /gdatos1/
[root@centos3 gdatos1]# echo "Holaa centos 1 apagado" >> Hola_centos_1_apa
gado.txt
[root@centos3 gdatos1]# exit
exit
[vagrant@centos3 ~]$ exit
logout
Connection to 127.0.0.1 closed.
yo:centos kate$ vagrant ssh centos2
Last login: Tue Oct 27 18:58:15 2020 from 10.0.2.2
[vagrant@centos2 ~]$ ls -la /gluster/bricks/brick1/vol1/
.glusterfs/                Hola_centos_1_apagado.txt
Hola2.txt                  Hola.txt
```

```
yo:centos kate$ vagrant ssh centos1
Last login: Tue Oct 27 19:06:21 2020 from 10.0.2.2
[vagrant@centos1 ~]$ ls -la /gluster/bricks/brick1/vol1/
total 12
drwxr-xr-x.  3 root root  90 Oct 27 19:07 .
drwxr-xr-x.  3 root root  18 Oct 27 18:56 ..
drw-------. 10 root root 129 Oct 27 19:10 .glusterfs
-rw-r--r--.  2 root root   8 Oct 27 19:05 Hola2.txt
-rw-r--r--.  2 root root  23 Oct 27 19:07 Hola_centos_1_apagado.txt
-rw-r--r--.  2 root root   7 Oct 27 19:05 Hola.txt
[vagrant@centos1 ~]$
```

## Parte Opcional: Integrar el provisionamiento en el Vagrantfile

Este es el fichero Vagrantfile que resulta. Podría tener alguna errata o algún fallo. También las versiones usadas podrían dar algún problema en el futuro.

```
# -*- mode: ruby -*-
# vi: set ft=ruby :
#instalar hostmanager plugin
#
DIRCPD = '.'

disk1 = DIRCPD + "/disk1.vdi"
disk2 = DIRCPD + "/disk2.vdi"
disk3 = DIRCPD + "/disk3.vdi"

Vagrant.configure(2) do |config|
  config.vm.box = "centos/7"
  config.vm.provision "shell", inline: <<-SHELL
        sed -i 's/PasswordAuthentication no/PasswordAuthentication yes/'
/etc/ssh/sshd_config
        systemctl restart sshd.service
        yum update
        yum -y install epel-release net-tools
      # añado estas lineas para instalar gluster en etapa de
provisioning - JTerron
      yum -y install centos-release-gluster7
      yum -y install glusterfs glusterfs-cli glusterfs-libs
glusterfs-server
      systemctl enable glusterd.service
      systemctl start glusterd.service

        echo "192.168.12.11 centos1" >> /etc/hosts
        echo "192.168.12.12 centos2" >> /etc/hosts
        echo "192.168.12.13 centos3" >> /etc/hosts
  SHELL
  config.vm.define :centos1 do |centos_config|
      centos_config.vm.hostname = "centos1.vm"
      centos_config.vm.network "private_network" , ip:"192.168.12.11"
      centos_config.vm.synced_folder ".","/vagrant"
      centos_config.vm.provider :virtualbox do |vb|
          vb.name = "centos1"
          vb.customize ["modifyvm", :id, "--memory", "768"]
          vb.customize ["modifyvm", :id, "--cpus", "1"]
          unless File.exist?(disk1)
            vb.customize ['createhd', '--filename', disk1, '--size', 10
* 1024]
```

```
            vb.customize ['storageattach', :id, '--storagectl', 'IDE',
'--port', 1, '--device', 0, '--type', 'hdd', '--medium', disk1]
          end
      end
      config.vm.provision "shell", inline: <<-SHELL
        # Ahora los bricks
        (echo n; echo p; echo 1; echo 1; echo 2048; echo 20971519; echo
t; echo 8e; echo w) | fdisk /dev/sdb
        partprobe
        pvcreate /dev/sdb1
        vgcreate vg01 /dev/sdb1
        lvcreate -l 100%FREE -n lv01 vg01
        mkfs.xfs /dev/mapper//vg01-lv01
        mkdir -p /gluster/bricks/brick1
        echo "/dev/mapper/vg01-lv01 /gluster/bricks/brick1 xfs defaults
0 0" >> /etc/fstab
        mount -a
        mkdir /gluster/bricks/brick1/vol1
        # Esto se ejecuta en cualquiera de las máquinas y crea el
volumen:
        gluster volume create glustervol1 replica 2 transport tcp
centos1:/gluster/bricks/brick1/vol1 centos2:/gluster/bricks/brick1/vol1
        gluster volume start glustervol1
        gluster volume info glustervol1
      SHELL
  end

  config.vm.define :centos2 do |centos_config|
      centos_config.vm.hostname = "centos2.vm"
      centos_config.vm.network "private_network" , ip:"192.168.12.12"
      centos_config.vm.synced_folder ".","/vagrant"
      centos_config.vm.provider :virtualbox do |vb|
          vb.name = "centos2"
          vb.customize ["modifyvm", :id, "--memory", "768"]
          vb.customize ["modifyvm", :id, "--cpus", "1"]
          unless File.exist?(disk2)
            vb.customize ['createhd', '--filename', disk2, '--size', 10
* 1024]
            vb.customize ['storageattach', :id, '--storagectl', 'IDE',
'--port', 1, '--device', 0, '--type', 'hdd', '--medium', disk2]
          end
      end
      config.vm.provision "shell", inline: <<-SHELL
      # Ahora los bricks
      (echo n; echo p; echo 1; echo 1; echo 2048; echo 20971519; echo t;
echo 8e; echo w) | fdisk /dev/sdb
```

```
      partprobe
      pvcreate /dev/sdb1
      vgcreate vg01 /dev/sdb1
      lvcreate -l 100%FREE -n lv01 vg01
      mkfs.xfs /dev/mapper//vg01-lv01
      mkdir -p /gluster/bricks/brick1
      echo "/dev/mapper/vg01-lv01 /gluster/bricks/brick1 xfs defaults 0
0" >> /etc/fstab
      mount -a
      mkdir /gluster/bricks/brick1/vol1
      SHELL
  end

config.vm.define :centos3 do |centos_config|
      centos_config.vm.hostname = "centos3.vm"
      centos_config.vm.network "private_network" , ip:"192.168.12.13"
      centos_config.vm.synced_folder ".","/vagrant"
      centos_config.vm.provider :virtualbox do |vb|
          vb.name = "centos3"
          vb.customize ["modifyvm", :id, "--memory", "768"]
          vb.customize ["modifyvm", :id, "--cpus", "1"]
          unless File.exist?(disk3)
            vb.customize ['createhd', '--filename', disk3, '--size', 10
* 1024]
            vb.customize ['storageattach', :id, '--storagectl', 'IDE',
'--port', 1, '--device', 0, '--type', 'hdd', '--medium', disk3]
          end
      end
      # Para comprobar el estado del cluster visto desde peer3
      config.vm.provision "shell", inline: <<-SHELL
        gluster peer status
        mount -t glusterfs centos1:/glustervol1 /gdatos1
      SHELL
  end

end
```