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RHEL/CentOS 7 GlusterFS

Pre requisites

SSH:

```
ssh-keygen
ssh-copyid #only from one node
yum install -y ansible
```

Configure /etc/hosts:

```
192.168.122.194 gluster2
192.168.122.208 gluster3
192.168.122.22  gluster1
```

Configure Chrony:

```
yum install -y chrony
systemctl start chronyd
systemctl enable chronyd
```

GlusterFS installation

If CentOS

```
yum install -y centos-release-gluster
yum install -y glusterfs-server
```

If RHEL

TBD

On both SO

```
systemctl start glusterd
systemctl enable glusterd
firewall-cmd --add-service=glusterfs
firewall-cmd --add-service=glusterfs --permanent
(echo o; echo n; echo p; echo l; echo; echo; echo w) | fdisk /dev/sda
mkfs.xfs /dev/sda1
mkdir -p /data/gluster
echo "/dev/sda1 /data/gluster xfs defaults 0 0" | tee --append /etc/fstab
mount -a
```

```
mkdir -p /data/gluster/gv0
```

On one node:

```
gluster peer probe gluster2
gluster peer probe gluster3
gluster volume create gv0 replica 2 arbiter 1 gluster1:/data/gluster/gv0
gluster2:/data/gluster/gv0 gluster3:/data/gluster/gv0
gluster volume start gv0
```

Remove volume

On one node:

```
gluster volume stop gv0
gluster volume delete gv0
```

On all nodes:

```
setfattr -x trusted.glusterfs.volume-id /data/gluster/gv0/
setfattr -x trusted.gfid /data/gluster/gv0/
rm -rf /data/gluster/gv0/.glusterfs
```

NFS Ganesha

```
yum install -y nfs-ganesha-gluster nfs-ganesha
yum install -y pcs fence-agents-all
firewall-cmd --add-service=nlm --add-service=nfs --add-service=rpc-bind -
--add-service=high-availability --add-service=mountd --add-service=rquota
firewall-cmd --add-service=nlm --add-service=nfs --add-service=rpc-bind
--add-service=high-availability --add-service=mountd --add-service=rquota --
permanent
sed -i '/STATD_PORT/s/^#//' /etc/sysconfig/nfs
systemctl restart nfs-config
systemctl restart rpc-statd
gluster volume set gv0 nfs.disable on
passwd hacluster
systemctl start pcsd.service
systemctl enable pcsd.service
pcs cluster auth gluster1 gluster2 gluster3
gluster volume set all cluster.enable-shared-storage enable
```

Ansible

Inventory:

```
[tareastodos]
192.168.122.95
192.168.122.244
192.168.122.150
[tareasunnodo]
192.168.122.95
```

Playbook:

```
---

- name: Prepare all nodes gluster software
  hosts: tareastodos
  tasks:

  - name: Configure /etc/hosts
    lineinfile:
      path: /etc/hosts
      line: "{{ item.line }}"
    with_items:
      - { line: '192.168.122.95 gluster1' }
      - { line: '192.168.122.244 gluster2' }
      - { line: '192.168.122.150 gluster3' }

  - name: Install chrony
    yum:
      name: chrony
      state: present

  - name: Enable chronyd
    systemd:
      name: chronyd
      state: started
      enabled: yes

  - name: Install centos-release-gluster
    yum:
      name: centos-release-gluster
      state: present

  - name: Install glusterfs-server
    yum:
      name: glusterfs-server
      state: present

  - name: Enable glusterd
    systemd:
      name: glusterd
      state: started
      enabled: yes
```

```
- name: Disable firewalld
systemd:
  name: firewalld
  state: stopped
  enabled: no

- name: Create mount point
file:
  path: /data/gluster/
  state: directory

- name: Configure /etc/fstab
lineinfile:
  path: /etc/fstab
  line: '/dev/sdb1 /data/gluster xfs defaults 0 0'

- name: Create partitions
parted:
  device: /dev/sdb
  number: 1
  state: present
  part_end: 4.9GiB

- name: Format partition
filesystem:
  fstype: xfs
  dev: /dev/sdb1

- name: Create partitions
command: "{{ item }}"
with_items:
  - 'mount -a'

- name: Create mount point
file:
  path: /data/gluster/gv0
  state: directory

- name: Configure gluster
hosts: tareasunnodo
tasks:

- name: Configure gluster vg0
command: "{{ item }}"
with_items:
  - gluster peer probe gluster2
  - gluster peer probe gluster3
  - gluster volume create gv0 replica 2 arbiter 1
gluster1:/data/gluster/gv0 gluster2:/data/gluster/gv0
gluster3:/data/gluster/gv0
  - gluster volume start gv0
```

Revisar

- <https://github.com/nfs-ganesha/nfs-ganesha/wiki/NFS-Ganesha-and-High-Availability>
- <https://jamesnbr.wordpress.com/2017/01/26/glusterfs-and-nfs-with-high-availability-on-centos-7/>

References

- https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html-single/system_administrators_guide/index#sect-Using_chrony
- <https://www.itzgeek.com/how-tos/linux/centos-how-tos/install-and-configure-glusterfs-on-centos-7-rhel-7.html>
- https://access.redhat.com/documentation/en-us/red_hat_gluster_storage/3.5/html/installation_guide/port_information
- <https://docs.gluster.org/en/latest/Administrator%20Guide/arbiter-volumes-and-quorum/>
- <https://docs.gluster.org/en/latest/Administrator%20Guide/Managing%20Volumes/#deleting-volumes>
- <https://joejulian.name/post/glusterfs-path-or-a-prefix-of-it-is-already-part-of-a-volume/>
- https://access.redhat.com/documentation/en-us/red_hat_gluster_storage/3.5/html/administration_guide/sect-Native_Client
- https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/high_availability_add-on_administration/ch-startup-haaa

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