



→ **‘GlusterFS’** → **Replicación de Volúmenes** → **‘HA’**.

→ **Notaciones.**

→ Indica que debe hacerse para **ambos** ‘Servidores’.

[root@srv1 ~]# → Solo para el **srv1**.

[root@srv2 ~]# → Solo para el **srv2**.

→ **Estructura inicial.**

→ **srv1**

...

/dev/mapper/vg_bricks-lv_brickpool--01	/bricks/repBrick-01	xf	defaults	1 2
srv1.enermol.lan:/repVol-01	/srv/repVol-01/	glusterfs	_netdev	1 2
#srv2:/repVol-01	/srv/nfsganesha	nfs	_netdev	1 2

...

→ **srv2**

...

/dev/mapper/vg_bricks-lv_brickpool--02	/bricks/repBrick-02	xf	defaults	1 2
srv2.enermol.lan:/repVol-01	/srv/repVol-01/	glusterfs	_netdev	1 2
#srv1:/repVol-01	/srv/nfsganesha	nfs	_netdev	1 2

...

https://pgstef.github.io/2018/02/07/introduction_to_postgresql_automatic_failover.html

https://clusterlabs.github.io/PAF/Quick_Start-CentOS-8.html

systemctl restart glusterd.service nfs-ganesha.service

systemctl status glusterd.service nfs-ganesha.service

● **glusterd.service - GlusterFS, a clustered file-system server**

Loaded: loaded (/usr/lib/systemd/system/glusterd.service; enabled; vendor preset: enabled)

Active: active (running) since Sun 2020-03-29 10:47:49 CEST; 30min ago

Docs: man:glusterd(8)

Process: 2649 ExecStart=/usr/sbin/glusterd -p /var/run/glusterd.pid --log-level \$LOG_LEVEL
\$GLUSTERD_OPTIONS (code=exited, status=0/SUCCESS)

Main PID: 2651 (glusterd)

Tasks: 40 (limit: 17948)

Memory: 34.4M

CGroup: /system.slice/glusterd.service

└─1581 /usr/sbin/glusterfsd -s srv1.enermol.lan --volfile-id repVol-01.srv1.enermol.lan.bricks-repBrick-01-data -p /var/run/gluster/vols/repVol-01/srv1.enermol.lan-bricks-repBrick-01-data.pid -S /v>

└─2651 /usr/sbin/glusterd -p /var/run/glusterd.pid --log-level INFO

└─2735 /usr/sbin/glusterfs -s localhost --volfile-id shd/repVol-01 -p

/var/run/gluster/shd/repVol-01/repVol-01-shd.pid -l /var/log/glusterfs/glustershd.log -S

/var/run/gluster/2a584450718f1fdd.socket>



```
mar 29 10:47:45 srv1.enermol.lan systemd[1]: Starting GlusterFS, a clustered file-system server...
mar 29 10:47:49 srv1.enermol.lan systemd[1]: Started GlusterFS, a clustered file-system server.
```

- **nfs-ganesha.service - NFS-Ganesha file server**

```
Loaded: loaded (/usr/lib/systemd/system/nfs-ganesha.service; enabled; vendor preset: disabled)
Active: active (running) since Sun 2020-03-29 10:47:45 CEST; 30min ago
Docs: http://github.com/nfs-ganesha/nfs-ganesha/wiki
Process: 2650 ExecStop=/bin/dbus-send --system --dest=org.ganesha.nfsd --type=method_call
/org/ganesha/nfsd/admin org.ganesha.nfsd.admin.shutdown (code=exited, status=0/SUCCESS)
Process: 2671 ExecStart=/bin/bash -c ${NUMACTL} ${NUMA_OPTS} /usr/bin/ganesha.nfsd $
{OPTIONS} ${EPOCH} (code=exited, status=0/SUCCESS)
Main PID: 2674 (ganesha.nfsd)
Tasks: 30 (limit: 17948)
Memory: 23.6M
CGroup: /system.slice/nfs-ganesha.service
└─2674 /usr/bin/ganesha.nfsd -L /var/log/ganesha/ganesha.log -f /etc/ganesha/ganesha.conf
-N NIV_EVENT
```

```
mar 29 10:47:45 srv1.enermol.lan systemd[1]: Starting NFS-Ganesha file server...
mar 29 10:47:45 srv1.enermol.lan systemd[1]: Started NFS-Ganesha file server.
mar 29 10:47:45 srv1.enermol.lan ganesha.nfsd[2674]: libnfsidmap: res_querydomain() failed for
_nfsv4idmapdomain.enermol.lan: Unknown host
mar 29 10:47:45 srv1.enermol.lan ganesha.nfsd[2674]: libnfsidmap: using (default) domain:
enermol.lan
mar 29 10:47:45 srv1.enermol.lan ganesha.nfsd[2674]: libnfsidmap: Realms list: 'ENERMOL.LAN'
mar 29 10:47:45 srv1.enermol.lan ganesha.nfsd[2674]: libnfsidmap: loaded plugin
/usr/lib64/libnfsidmap/nsswitch.so for method nsswitch
```

mount -a

[root@srv1 ~]# **lsblk**

```
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda                                  8:0  0  40G  0 disk
├─sda1                               8:1  0   1G  0 part /boot
├─sda2                               8:2  0  39G  0 part
├─cl-root                            253:0  0  36G  0 lvm /
└─cl-swap                            253:1  0  3,1G  0 lvm [SWAP]
sdb                                  8:16  0  40G  0 disk
├─vg_bricks-lv_brickpool--01 253:2  0  40G  0 lvm /bricks/repBrick-01
sr0                                  11:0  1   7G  0 rom
```

[root@srv1 ~]# **df -hT**

S.ficheros	Tipo	Tamaño Usados	Disp	Uso%	Montado en
devtmpfs	devtmpfs	1,4G	0	1,4G	0% /dev
tmpfs	tmpfs	1,4G	38M	1,4G	3% /dev/shm
tmpfs	tmpfs	1,4G	8,7M	1,4G	1% /run
tmpfs	tmpfs	1,4G	0	1,4G	0% /sys/fs/cgroup



```

/dev/mapper/cl-root          xfs          36G  2,9G  34G  8% /
/dev/mapper/vg_bricks-lv_brickpool--01 xfs          40G  318M  40G  1% /bricks/repBrick-01
/dev/sda1                   ext4         976M  191M  719M  21% /boot
tmpfs                       tmpfs        284M   0 284M  0% /run/user/0
srv1.enermol.lan:/repVol-01 fuse.glusterfs 40G  728M  40G  2% /srv/repVol-01
srv2:/repVol-01             nfs4         40G  728M  40G  2% /srv/nfsganesha

```

[root@srv2 ~]# lsblk

```

NAME                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda                  8:0  0   40G  0 disk
├─sda1               8:1  0    1G  0 part /boot
├─sda2               8:2  0   39G  0 part
│ └─cl-root          253:0 0    36G  0 lvm /
│ └─cl-swap          253:1 0   3,1G  0 lvm [SWAP]
sdb                  8:16  0   40G  0 disk
└─vg_bricks-lv_brickpool--02 253:2 0    40G  0 lvm /bricks/repBrick-01
sr0                  11:0  1    7G  0 rom

```

[root@srv2 ~]# df -hT

```

S.ficheros          Tipo          Tamaño Usados  Disp Uso% Montado en
devtmpfs            devtmpfs      1,4G   0 1,4G  0% /dev
tmpfs               tmpfs         1,4G   53M 1,4G  4% /dev/shm
tmpfs               tmpfs         1,4G   8,7M 1,4G  1% /run
tmpfs               tmpfs         1,4G   0 1,4G  0% /sys/fs/cgroup
/dev/mapper/cl-root xfs           36G  2,9G  34G  8% /
/dev/mapper/vg_bricks-lv_brickpool--02 xfs           40G  318M  40G  1% /bricks/repBrick-02
/dev/sda1           ext4          976M  191M  719M  21% /boot
tmpfs               tmpfs         284M   0 284M  0% /run/user/0
srv2.enermol.lan:/repVol-01 fuse.glusterfs 40G  728M  40G  2% /srv/repVol-01
srv1:/repVol-01    nfs4          40G  728M  40G  2% /srv/nfsganesha

```

[root@srv1 ~]# pcs status

```

Cluster name: cluster-odoo
Stack: corosync
Current DC: srv2.enermol.lan (version 2.0.2-3.el8_1.2-744a30d655) - partition with quorum
Last updated: Sun Mar 29 11:02:30 2020
Last change: Sun Mar 29 11:02:24 2020 by root via crm_resource on srv1.enermol.lan

```

```

2 nodes configured
2 resources configured

```

Online: [[srv1.enermol.lan](#) [srv2.enermol.lan](#)]

Full list of resources:

```

pgsql-vip (ocf::heartbeat:IPaddr2): Started srv1.enermol.lan
pgsql-alt-vip (ocf::heartbeat:IPaddr2): Started srv1.enermol.lan

```



Daemon Status:

```
corosync: active/enabled
pacemaker: active/enabled
pcsd: active/enabled
```

```
[root@srv1 ~]# pcs resource
```

```
pgsql-vip (ocf::heartbeat:IPaddr2): Started srv1.enermol.lan
pgsql-alt-vip (ocf::heartbeat:IPaddr2): Started srv1.enermol.lan
```

```
[root@srv1 ~]# rm /srv/repVol-01/* -f
```

```
[root@srv1 ~]# ls /srv/repVol-01
```

→ **Instalación de 'postgresql'**

```
# firewall-cmd --permanent --add-service={postgresql,high-availability}
# firewall-cmd --reload
```

```
# dnf update -y
```

```
# dnf module list postgresql
```

Última comprobación de caducidad de metadatos hecha hace 0:00:52, el dom 29 mar 2020 12:16:20 CEST.

CentOS-8 - AppStream

Name	Stream	Profiles
Summary		
postgresql	9.6	client, server [d]
PostgreSQL server and client module		
postgresql	10 [d]	client, server [d]
PostgreSQL server and client module		
postgresql	12	client, server
PostgreSQL server and client module		

Leyenda: [d] predeterminado, [e] activo, [x] inactivo, [i] instalado

```
# dnf -qy module disable postgresql:{9.6,10}
```

```
# dnf module enable postgresql:12 -y
```

Última comprobación de caducidad de metadatos hecha hace 0:02:48, el dom 29 mar 2020 12:16:20 CEST.

Dependencias resueltas.

```
=====
=====
=====
Paquete                Arquitectura          Versión
Repositorio            Tam.
=====
```



Activando flujos de módulos:

postgresql 12

Resumen de la transacción

¿Está de acuerdo [s/N]?: s

¡Listo!

dnf module list postgresql

Última comprobación de caducidad de metadatos hecha hace 0:03:11, el dom 29 mar 2020 12:16:20 CEST.

CentOS-8 - AppStream

Name	Stream	Profiles
Summary		
postgresql	9.6	client, server [d]
PostgreSQL server and client module		
postgresql	10 [d]	client, server [d]
PostgreSQL server and client module		
postgresql	12 [e]	client, server
PostgreSQL server and client module		

Leyenda: [d] predeterminado, [e] activo, [x] inactivo, [i] instalado

dnf install postgresql* -y

dnf module info postgresql

Última comprobación de caducidad de metadatos hecha hace 0:20:56, el dom 29 mar 2020 12:16:20 CEST.

```

Name       : postgresql
Stream     : 10 [d]
Version    : 8000020190628020724
Context    : 55190bc5
Architecture : x86_64
Profiles   : client, server [d]
Default profiles : server
Repo       : AppStream
Summary    : PostgreSQL server and client module
Description : PostgreSQL is an advanced Object-Relational database management system (DBMS). The postgresql-server package contains the programs needed to create and run a PostgreSQL server, which will in turn allow you to create and maintain PostgreSQL databases. The base postgresql package contains the client programs that you'll need to access a PostgreSQL DBMS server.

```



Artifacts : postgresql-0:10.6-1.module_el8.0.0+15+f57f353b.src
: postgresql-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-contrib-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-contrib-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-debugsource-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-docs-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-docs-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-plperl-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-plperl-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-plpython3-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-plpython3-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-pltcl-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-pltcl-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-server-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-server-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-server-devel-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-server-devel-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-static-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-test-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-test-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-test-rpm-macros-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-upgrade-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-upgrade-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-upgrade-devel-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64
: postgresql-upgrade-devel-debuginfo-0:10.6-1.module_el8.0.0+15+f57f353b.x86_64

Name : postgresql
Stream : 9.6
Version : 8000020190628020724
Context : 55190bc5
Architecture : x86_64
Profiles : client, server [d]
Default profiles : server
Repo : AppStream
Summary : PostgreSQL server and client module
Description : PostgreSQL is an advanced Object-Relational database management system (DBMS). The postgresql-server package contains the programs needed to create and run a PostgreSQL server, which will in turn allow you to create and maintain PostgreSQL databases. The base postgresql package contains the client programs that you'll need to access a PostgreSQL DBMS server.

Artifacts : postgresql-0:9.6.10-1.module_el8.0.0+16+7a9f6089.src
: postgresql-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-contrib-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-contrib-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-debugsource-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64



```
: postgresql-docs-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-docs-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-plperl-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-plperl-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-plpython3-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-plpython3-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-pltcl-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-pltcl-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-server-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-server-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-server-devel-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-server-devel-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-static-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-test-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-test-debuginfo-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
: postgresql-test-rpm-macros-0:9.6.10-1.module_el8.0.0+16+7a9f6089.x86_64
```

```
Name      : postgresql
Stream    : 12 [e] [a]
Version   : 8010020200205032101
Context   : cdc1202b
Architecture : x86_64
Profiles  : client, server
Repo      : AppStream
Summary   : PostgreSQL server and client module
Description : PostgreSQL is an advanced Object-Relational database management system (DBMS).
The postgresql-server package contains the programs needed to create and run a PostgreSQL server,
which will in turn allow you to create and maintain PostgreSQL databases. The base postgresql
package contains the client programs that you'll need to access a PostgreSQL DBMS server.
Artifacts : pgsaudit-0:1.4.0-4.module_el8.1.0+273+979c16e6.src
: pgsaudit-0:1.4.0-4.module_el8.1.0+273+979c16e6.x86_64
: pgsaudit-debuginfo-0:1.4.0-4.module_el8.1.0+273+979c16e6.x86_64
: pgsaudit-debugsource-0:1.4.0-4.module_el8.1.0+273+979c16e6.x86_64
: postgres-decoderbufs-0:0.10.0-2.module_el8.1.0+273+979c16e6.src
: postgres-decoderbufs-0:0.10.0-2.module_el8.1.0+273+979c16e6.x86_64
: postgres-decoderbufs-debuginfo-0:0.10.0-2.module_el8.1.0+273+979c16e6.x86_64
: postgres-decoderbufs-debugsource-0:0.10.0-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-0:12.1-2.module_el8.1.0+273+979c16e6.src
: postgresql-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-contrib-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-contrib-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-debugsource-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-docs-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-docs-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-plperl-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-plperl-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
```




```
: postgresql-plpython3-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-plpython3-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-pltcl-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-pltcl-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-server-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-server-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-server-devel-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-server-devel-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-static-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-test-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-test-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-test-rpm-macros-0:12.1-2.module_el8.1.0+273+979c16e6.noarch
: postgresql-upgrade-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-upgrade-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-upgrade-devel-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
: postgresql-upgrade-devel-debuginfo-0:12.1-2.module_el8.1.0+273+979c16e6.x86_64
```

→ **Para:** → 'srv1'.

```
[root@srv1 ~]# mkdir -p /srv/repVol-01/pgsql/data
[root@srv1 ~]# chown -R postgres:postgres /srv/repVol-01/pgsql/data/
[root@srv1 ~]# chmod 0750 -R /srv/repVol-01/pgsql/data/
```

```
[root@srv1 ~]# su - postgres
[postgres@srv1 ~]$ vim /var/lib/pgsql/.bash_profile
[ -f /etc/profile ] && source /etc/profile
```

```
PGDATA=/srv/repVol-01/pgsql/data/
export PGDATA
cd /srv/repVol-01/pgsql/data/
[postgres@srv1 ~]$ exit
logout
```

```
[root@srv1 ~]# vim /usr/lib/systemd/system/postgresql.service
```

```
...
#Environment=PGDATA=/var/lib/pgsql/data
Environment=PGDATA=/srv/repVol-01/pgsql/data/
...
```

```
[root@srv1 ~]# systemctl daemon-reload
```

```
[root@srv1 ~]# su - postgres
[postgres@srv1 ~]$ cd /srv/repVol-01/pgsql/data/
[postgres@srv1 data]$ pwd
/srv/repVol-01/pgsql/data
[postgres@srv1 data]$ /usr/pgsql-12/bin/initdb -D /srv/repVol-01/pgsql/data/
```




Los archivos de este cluster serán de propiedad del usuario «postgres». Este usuario también debe ser quien ejecute el proceso servidor.

El cluster será inicializado con configuración regional «es_ES.UTF-8». La codificación por omisión ha sido por lo tanto definida a «UTF8». La configuración de búsqueda en texto ha sido definida a «spanish».

Las sumas de verificación en páginas de datos han sido desactivadas.

```
corrigiendo permisos en el directorio existente /srv1/repVol-01/pgsql/data ... hecho
creando subdirectorios ... hecho
seleccionando implementación de memoria compartida dinámica ...posix
seleccionando el valor para max_connections ... 100
seleccionando el valor para shared_buffers ... 128MB
seleccionando el huso horario por omisión ... Europe/Madrid
creando archivos de configuración ... hecho
ejecutando script de inicio (bootstrap) ... hecho
realizando inicialización post-bootstrap ... hecho
sincronizando los datos a disco ... hecho
```

initdb: precaución: activando el método de autenticación «trust» para conexiones locales
Puede cambiar esto editando **pg_hba.conf** o usando el parámetro **-A**,
o **--auth-local** y **--auth-host** la próxima vez que ejecute **initdb**.

Completado. Ahora puede iniciar el servidor de bases de datos usando:

```
pg_ctl -D /srv/repVol-01/pgsql/data/ -l archivo_de_registro start
```

```
[postgres@srv1 data]$ exit
logout
```

```
[root@srv1 ~]# ls /srv/repVol-01/pgsql/data/
base  pg_commit_ts  pg_hba.conf  pg_logical  pg_notify  pg_serial  pg_stat  pg_subtrans
pg_twophase  pg_wal  postgresql.auto.conf
global  pg_dynshmem  pg_ident.conf  pg_multixact  pg_replslot  pg_snapshots  pg_stat_tmp
pg_tblspc  PG_VERSION  pg_xact  postgresql.conf
```

```
[root@srv2 ~]# ls /srv/repVol-01/pgsql/data/
base  pg_commit_ts  pg_hba.conf  pg_logical  pg_notify  pg_serial  pg_stat  pg_subtrans
pg_twophase  pg_wal  postgresql.auto.conf
global  pg_dynshmem  pg_ident.conf  pg_multixact  pg_replslot  pg_snapshots  pg_stat_tmp
pg_tblspc  PG_VERSION  pg_xact  postgresql.conf
```

```
[root@srv1 ~]# vim /srv/repVol-01/pgsql/data/pg_hba.conf
```

```
...
# IPv4 local connections:
host all all 127.0.0.1/32 trust
```



```
host all all 192.168.10.0/24 trust
...
```

```
[root@srv1 ~]# vim /srv/repVol-01/pgsql/data/postgresql.conf
```

```
...
listen_addresses = '*'          # what IP address(es) to listen on;
                                # comma-separated list of addresses;
                                # defaults to 'localhost'; use '*' for all
                                # (change requires restart)
port = 5432                     # (change requires restart)
...
```

```
[root@srv1 ~]# systemctl status postgresql.service
```

```
● postgresql.service - PostgreSQL database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql.service; disabled; vendor preset: disabled)
   Active: inactive (dead)
```

```
[root@srv1 ~]# vim /usr/lib/systemd/system/postgresql.service
```

```
# It's not recommended to modify this file in-place, because it will be
# overwritten during package upgrades. It is recommended to use systemd
# "dropin" feature; i.e. create file with suffix .conf under
# /etc/systemd/system/UNITNAME.service.d directory overriding the
# unit's defaults. Look at systemd.unit(5) manual page for more info.
```

```
[Unit]
Description=PostgreSQL database server
After=network.target
```

```
[Service]
Type=notify
```

```
User=postgres
Group=postgres
```

```
# Where to send early-startup messages from the server (before the logging
# options of postgresql.conf take effect)
# This is normally controlled by the global default set by systemd
# StandardOutput=syslog
```

```
# Disable OOM kill on the postmaster
OOMScoreAdjust=-1000
# ... but allow it still to be effective for child processes
# (note that these settings are ignored by Postgres releases before 9.5)
Environment=PG_OOM_ADJUST_FILE=/proc/self/oom_score_adj
Environment=PG_OOM_ADJUST_VALUE=0
```

```
#Environment=PGDATA=/var/lib/pgsql/data
```



Environment=PGDATA=/srv/repVol-01/pgsql/data/

```
ExecStartPre=/usr/libexec/postgresql-check-db-dir %N
# Even though the $PGDATA variable is exported (postmaster would accept that)
# use the -D option here so PGDATA content is printed by /bin/ps and by
# 'systemctl status'.
ExecStart=/usr/bin/postmaster -D ${PGDATA}
ExecReload=/bin/kill -HUP $MAINPID
KillMode=mixed
KillSignal=SIGINT

# No artificial start/stop timeout (rhbz#1525477, pgrpms#2786).
TimeoutSec=0
```

[Install]

WantedBy=multi-user.target

[root@srv1 ~]# systemctl start postgresql.service

[root@srv1 ~]# systemctl status postgresql.service

```
● postgresql.service - PostgreSQL database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2020-03-29 14:07:36 CEST; 31min ago
   Process: 3161 ExecStartPre=/usr/libexec/postgresql-check-db-dir postgresql (code=exited,
status=0/SUCCESS)
   Main PID: 3163 (postmaster)
     Tasks: 8 (limit: 17948)
    Memory: 28.8M
   CGroup: /system.slice/postgresql.service
           └─3163 /usr/bin/postmaster -D /srv1/repVol-01/pgsql/data/
             └─3166 postgres: logger
               └─3259 postgres: checkpointer
                 └─3260 postgres: background writer
                   └─3261 postgres: walwriter
                     └─3262 postgres: autovacuum launcher
                       └─3263 postgres: stats collector
                         └─3264 postgres: logical replication launcher
```

```
mar 29 14:07:25 srv1.enermol.lan systemd[1]: Starting PostgreSQL database server...
mar 29 14:07:25 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:25.871 CEST [3163] LOG:
iniciando PostgreSQL 12.1 on x86_64-redhat-linux-gnu, compiled by gcc (GCC) 8.3.1 20190507
(Red Hat 8.3.1-4), 64-bit
mar 29 14:07:25 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:25.872 CEST [3163] LOG:
escuchando en la dirección IPv4 «0.0.0.0», port 5432
mar 29 14:07:25 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:25.872 CEST [3163] LOG:
escuchando en la dirección IPv6 «:::», port 5432
mar 29 14:07:25 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:25.897 CEST [3163] LOG:
```



```

escuchando en el socket Unix «/var/run/postgresql/.s.PGSQL.5432»
mar 29 14:07:25 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:25.920 CEST [3163] LOG:
escuchando en el socket Unix «/tmp/.s.PGSQL.5432»
mar 29 14:07:26 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:26.273 CEST [3163] LOG:
redirigiendo la salida del registro al proceso recolector de registro
mar 29 14:07:26 srv1.enermol.lan postmaster[3163]: 2020-03-29 14:07:26.273 CEST [3163] HINT:
La salida futura del registro aparecerá en el directorio «log».
mar 29 14:07:36 srv1.enermol.lan systemd[1]: Started PostgreSQL database server.

```

```
[root@srv1 ~]# su - postgres -c "createuser -s odoo -p 5432"
```

```
[root@srv1 ~]# su - postgres
```

```
Último inicio de sesión:dom mar 29 14:40:42 CEST 2020en pts/0
```

```
[postgres@srv1 ~]$ psql
```

```
psql (12.1)
```

```
Digite «help» para obtener ayuda.
```

```
postgres=# \du
```

Lista de roles

Nombre de rol	Atributos	Miembro de
odoo	Superusuario, Crear rol, Crear BD	{ }
postgres	Superusuario, Crear rol, Crear BD, Replicación, Ignora RLS	{ }

```
postgres=# exit
```

```
[root@srv1 ~]# systemctl stop postgresql.service
```

```
→ Para: → 'srv2'.
```

```
[root@srv2 ~]# ls /srv/repVol-01/pgsql/data
```

```
total 43
drwx-----. 20 postgres postgres 4096 mar 29 14:44 .
drwxr-xr-x. 3 root root 18 mar 29 12:54 ..
drwx-----. 5 postgres postgres 41 mar 29 13:22 base
-rw-----. 1 postgres postgres 30 mar 29 14:07 current_logfiles
drwx-----. 2 postgres postgres 4096 mar 29 14:40 global
drwx-----. 2 postgres postgres 32 mar 29 13:56 log
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_commit_ts
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_dynshmem
-rw-----. 1 postgres postgres 4586 mar 29 13:31 pg_hba.conf
-rw-----. 1 postgres postgres 1636 mar 29 13:22 pg_ident.conf
drwx-----. 4 postgres postgres 68 mar 29 14:44 pg_logical
drwx-----. 4 postgres postgres 36 mar 29 13:22 pg_multixact
drwx-----. 2 postgres postgres 18 mar 29 14:07 pg_notify
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_replslot
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_serial
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_snapshots
```



```
drwx-----. 2 postgres postgres 63 mar 29 14:44 pg_stat
drwx-----. 2 postgres postgres 6 mar 29 14:44 pg_stat_tmp
drwx-----. 2 postgres postgres 18 mar 29 13:22 pg_subtrans
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_tblspc
drwx-----. 2 postgres postgres 6 mar 29 13:22 pg_twophase
-rw-----. 1 postgres postgres 3 mar 29 13:22 PG_VERSION
drwx-----. 3 postgres postgres 60 mar 29 13:22 pg_wal
drwx-----. 2 postgres postgres 18 mar 29 13:22 pg_xact
-rw-----. 1 postgres postgres 88 mar 29 13:22 postgresql.auto.conf
-rw-----. 1 postgres postgres 26625 mar 29 13:55 postgresql.conf
-rw-----. 1 postgres postgres 53 mar 29 14:07 postmaster.opts
```

```
[root@srv1 ~]# su - postgres
```

```
[postgres@srv2 ~]$ vim /var/lib/pgsql/.bash_profile
```

```
[ -f /etc/profile ] && source /etc/profile
```

```
PGDATA=/srv/repVol-01/pgsql/data/
```

```
export PGDATA
```

```
[postgres@srv2 ~]$ exit
```

```
logout
```

```
[root@srv2 ~]# vim /usr/lib/systemd/system/postgresql.service
```

```
...
```

```
#Environment=PGDATA=/var/lib/pgsql/data
```

```
Environment=PGDATA=/srv/repVol-01/pgsql/data/
```

```
...
```

```
[root@srv2 ~]# systemctl daemon-reload
```

```
[root@srv2 ~]# ls /srv/repVol-01/pgsql/data/
```

```
base pg_commit_ts pg_hba.conf pg_logical pg_notify pg_serial pg_stat pg_subtrans
```

```
pg_twophase pg_wal postgresql.auto.conf
```

```
global pg_dynshmem pg_ident.conf pg_multixact pg_replslot pg_snapshots pg_stat_tmp
```

```
pg_tblspc PG_VERSION pg_xact postgresql.conf
```

```
[root@srv2 ~]# vim /srv/repVol-01/pgsql/data/pg_hba.conf
```

```
...
```

```
# IPv4 local connections:
```

```
host all all 127.0.0.1/32 md5
```

```
host all all 192.168.10.0/24 md5
```

```
...
```

```
[root@srv2 ~]# vim /srv/repVol-01/pgsql/data/postgresql.conf
```

```
...
```

```
listen_addresses = '*' # what IP address(es) to listen on;
```

```
# comma-separated list of addresses;
```



```
        # defaults to 'localhost'; use '*' for all
        # (change requires restart)
port = 5432        # (change requires restart)
...
```

```
[root@srv2 ~]# systemctl status postgresql.service
```

```
● postgresql.service - PostgreSQL database server
  Loaded: loaded (/usr/lib/systemd/system/postgresql.service; disabled; vendor preset: disabled)
  Active: inactive (dead)
```

```
[root@srv2 ~]# vim /usr/lib/systemd/system/postgresql.service
```

```
# It's not recommended to modify this file in-place, because it will be
# overwritten during package upgrades. It is recommended to use systemd
# "dropin" feature; i.e. create file with suffix .conf under
# /etc/systemd/system/UNITNAME.service.d directory overriding the
# unit's defaults. Look at systemd.unit(5) manual page for more info.
```

```
[Unit]
Description=PostgreSQL database server
After=network.target
```

```
[Service]
Type=notify
```

```
User=postgres
Group=postgres
```

```
# Where to send early-startup messages from the server (before the logging
# options of postgresql.conf take effect)
# This is normally controlled by the global default set by systemd
# StandardOutput=syslog
```

```
# Disable OOM kill on the postmaster
OOMScoreAdjust=-1000
# ... but allow it still to be effective for child processes
# (note that these settings are ignored by Postgres releases before 9.5)
Environment=PG_OOM_ADJUST_FILE=/proc/self/oom_score_adj
Environment=PG_OOM_ADJUST_VALUE=0
```

```
#Environment=PGDATA=/var/lib/pgsql/data
Environment=PGDATA=/srv/repVol-01/pgsql/data/
```

```
ExecStartPre=/usr/libexec/postgresql-check-db-dir %N
# Even though the $PGDATA variable is exported (postmaster would accept that)
# use the -D option here so PGDATA content is printed by /bin/ps and by
# 'systemctl status'.
```



```
ExecStart=/usr/bin/postmaster -D ${PGDATA}
ExecReload=/bin/kill -HUP $MAINPID
KillMode=mixed
KillSignal=SIGINT
```

```
# No artificial start/stop timeout (rhz#1525477, pgrpms#2786).
TimeoutSec=0
```

```
[Install]
WantedBy=multi-user.target
```

```
[root@srv2 ~]# systemctl start postgresql.service
```

```
[root@srv2 ~]# systemctl status postgresql.service
```

```
● postgresql.service - PostgreSQL database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2020-03-29 19:03:46 CEST; 8s ago
   Process: 7479 ExecStartPre=/usr/libexec/postgresql-check-db-dir postgresql (code=exited,
status=0/SUCCESS)
   Main PID: 7482 (postmaster)
     Tasks: 8 (limit: 17948)
    Memory: 18.5M
   CGroup: /system.slice/postgresql.service
           └─7482 /usr/bin/postmaster -D /srv2/repVol-01/pgsql/data/
             └─7491 postgres: logger
               └─7498 postgres: checkpointer
                 └─7499 postgres: background writer
                   └─7500 postgres: walwriter
                     └─7501 postgres: autovacuum launcher
                       └─7502 postgres: stats collector
                         └─7503 postgres: logical replication launcher
```

```
mar 29 19:03:39 srv2.enermol.lan systemd[1]: Starting PostgreSQL database server...
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.157 CEST [7482] LOG:
iniciando PostgreSQL 12.1 on x86_64-redhat-linux-gnu, compiled by gcc (GCC) 8.3.1 20190507
(Red Hat 8.3.1-4), 64-bit
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.158 CEST [7482] LOG:
escuchando en la dirección IPv4 «0.0.0.0», port 5432
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.158 CEST [7482] LOG:
escuchando en la dirección IPv6 «:::», port 5432
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.166 CEST [7482] LOG:
escuchando en el socket Unix «/var/run/postgresql/.s.PGSQL.5432»
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.201 CEST [7482] LOG:
escuchando en el socket Unix «/tmp/.s.PGSQL.5432»
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.575 CEST [7482] LOG:
redirigiendo la salida del registro al proceso recolector de registro
mar 29 19:03:40 srv2.enermol.lan postmaster[7482]: 2020-03-29 19:03:40.575 CEST [7482] HINT:
```




La salida futura del registro aparecerá en el directorio «log».
mar 29 19:03:46 srv2.enermol.lan systemd[1]: Started PostgreSQL database server.

```
[root@srv2 ~]# su - postgres
```

```
Último inicio de sesión:dom mar 29 14:40:42 CEST 2020en pts/0
```

```
[postgres@srv2 ~]$ psql
```

```
psql (12.1)
```

```
Digite «help» para obtener ayuda.
```

```
postgres=# \du
```

Lista de roles

Nombre de rol	Atributos	Miembro de
odoo	Superusuario, Crear rol, Crear BD	{}
postgres	Superusuario, Crear rol, Crear BD, Replicación, Ignora RLS	{}

```
postgres=# exit
```

```
[root@srv2 ~]# systemctl stop postgresql.service
```

```
# pcs constraint
```

```
Location Constraints:
```

```
Resource: pgsq1-vip
```

```
Enabled on:
```

```
Node: srv1.enermol.lan (score:INFINITY)
```

```
Node: srv1.enermol.lan (score:INFINITY) (role:Started)
```

```
Resource: postgresql
```

```
Enabled on:
```

```
Node: srv1.enermol.lan (score:INFINITY)
```

```
Node: srv1.enermol.lan (score:INFINITY) (role:Started)
```

```
Ordering Constraints:
```

```
Colocation Constraints:
```

```
pgsq1-vip with postgresql (score:+INFINITY)
```

```
Ticket Constraints:
```

```
→ Instalación → 'pgadmin4'
```

```
# dnf install https://download.postgresql.org/pub/repos/yum/reporpms/EL-8-x86\_64/pgdg-redhat-repo-latest.noarch.rpm -y
```

```
# dnf --enablerepo=PowerTools install pgadmin4 -y
```

```
# systemctl start httpd
```

```
# cp /etc/httpd/conf.d/pgadmin4.conf.sample /etc/httpd/conf.d/pgadmin4.conf
```

```
# mkdir -p /srv/repVol-01/var/lib/pgadmin4/
```

```
# mkdir -p /srv/repVol-01/var/log/pgadmin4/
```



```
# vim /usr/lib/python3.6/site-packages/pgadmin4-web/config_distro.py
HELP_PATH = '/usr/share/doc/pgadmin4-docs/en_US/html'
UPGRADE_CHECK_ENABLED = False
```

```
LOG_FILE = '/srv/repVol-01/var/log/pgadmin4/pgadmin4.log'
SQLITE_PATH = '/srv/repVol-01/var/lib/pgadmin4/pgadmin4.db'
SESSION_DB_PATH = '/srv/repVol-01/var/lib/pgadmin4/sessions'
STORAGE_DIR = '/srv/repVol-01/var/lib/pgadmin4/storage'
```

```
# python3 /usr/lib/python3.6/site-packages/pgadmin4-web/setup.py
NOTE: Configuring authentication for SERVER mode.
```

Enter the email address and password to use for the initial pgAdmin user account:

Email address: **info@enermol.lan**

Password:

Retype password:

pgAdmin 4 - Application Initialisation

=====

```
# chown -R apache:apache /srv/repVol-01/var/lib/pgadmin4
# chown -R apache:apache /srv/repVol-01/var/log/pgadmin4
# systemctl restart postgresql.service httpd.service
```

```
# firewall-cmd --permanent --zone public --add-service={http,https}
# firewall-cmd --reload
# systemctl restart postgresql.service httpd.service
```

```
# su - postgres
[postgres@srv2 ~]$ psql
psql (12.1)
Digite «help» para obtener ayuda.
postgres=# alter user postgres with password 'postgres';
postgres=# exit
```



<http://192.168.10.150/pgadmin4/>



The image displays the pgAdmin 4 dashboard. The top navigation bar includes "Archivo", "Objeto", "Herramientas", and "Ayuda". The left sidebar shows a tree view of the server structure: "Servers (1)" > "srv1:enermol:lan" > "Bases de Datos (1)" > "postgres" > "Catálogos", "Contenedores de Datos Foráneos", "Conversiones", "Disparadores por evento", "Esquemas", "Extensiones", "Lenguajes", "Roles de Login/Grupos", and "Tablespaces".

The main dashboard area contains several monitoring charts:

- Database sessions:** A line chart showing "Totales", "Activa", and "Inactiva" sessions over time.
- Transacciones por segundo:** A line chart showing "Transacciones", "Cometer", and "Retroceder" rates.
- Tuplas Insertadas:** A line chart showing "Inserciones", "Actualizaciones", and "Borrados".
- Tuplas Leídas:** A line chart showing "Recuperado" and "Retornado".
- Bloqueo I/O:** A line chart showing "Leídas" and "Tocadas".

Below the charts is the "Actividad del servidor" section, which includes a search bar and a table of active sessions:

Sesiones	Bloqueos	Transacciones Preparadas	Search					
PID	Usuario	Aplicación	Cliente	Inicio del backend	Estado	Wait event	PIDs Bloqueando	
4531	postgres	pgAdmin 4 - DB postgres	192.168.99.106	2020-03-30 19:03:05 CEST	active			



```
# vim /etc/httpd/conf.d/status.conf
```

```
<Location /server-status>  
SetHandler server-status  
Order deny,allow  
Deny from all  
Allow from 127.0.0.1  
Allow from ::1  
</Location>
```

```
[root@srv1 ~]# pcs resource create apache ocf:heartbeat:apache  
configfile=/etc/httpd/conf/httpd.conf statusurl="http://localhost/server-status" op monitor  
interval=1min
```

```
[root@srv1 ~]# pcs constraint location apache prefers srv1.enermol.lan  
[root@srv1 ~]# pcs constraint order pgsq-vip then apache  
[root@srv1 ~]# pcs constraint colocation add apache with pgsq-vip score=+INFINITY
```

```
[root@srv1 ~]# pcs resource create postgresql systemd:postgresql  
[root@srv1 ~]# pcs constraint location postgresql prefers srv1.enermol.lan  
[root@srv1 ~]# pcs constraint colocation add pgsq-vip with postgresql score=+INFINITY  
[root@srv1 ~]# pcs constraint order set pgsq-vip postgresql sequential=false require-all=true
```



RECURSOS:

<https://linuxconfig.org/how-to-install-packages-on-redhat-8>
<https://linuxize.com/post/how-to-install-postgresql-on-centos-8/>
<https://computingforgeeks.com/how-to-install-postgresql-12-on-centos-7/>
<https://tecmint.com/install-postgresql-centos8/>
<https://www.tecmint.com/install-postgresql-and-pgadmin-in-centos-8/>
https://wiki.postgresql.org/wiki/SEPostgreSQL_SELinux_Overview
https://linux.die.net/man/8/postgresql_selinux
https://www.systutorials.com/docs/linux/man/8-postgresql_selinux/

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