File Server (NFS) on Oracle Linux

- Node2 change mac add to separate the VMs = **NFS server**
- Node1 = **NFS client**
- `server` → NFS **host** (exports the shared folder)
- `client` → NFS **client** (mounts and accesses that folder)

Why NFS

- Shared storage between multiple VMs (centralized data).
- Easy file transfer or config sharing.
- Simpler backup management (only on server).

Step 0 — Make sure both can reach each other

On **client**:

```
ping -c3 <server ip>
```

On **server**:

```
ping -c3 <client ip >
```

configure the **NFS export** on Server and **mount** it on Node1.

🗂️ Step 1 — Install NFS packages

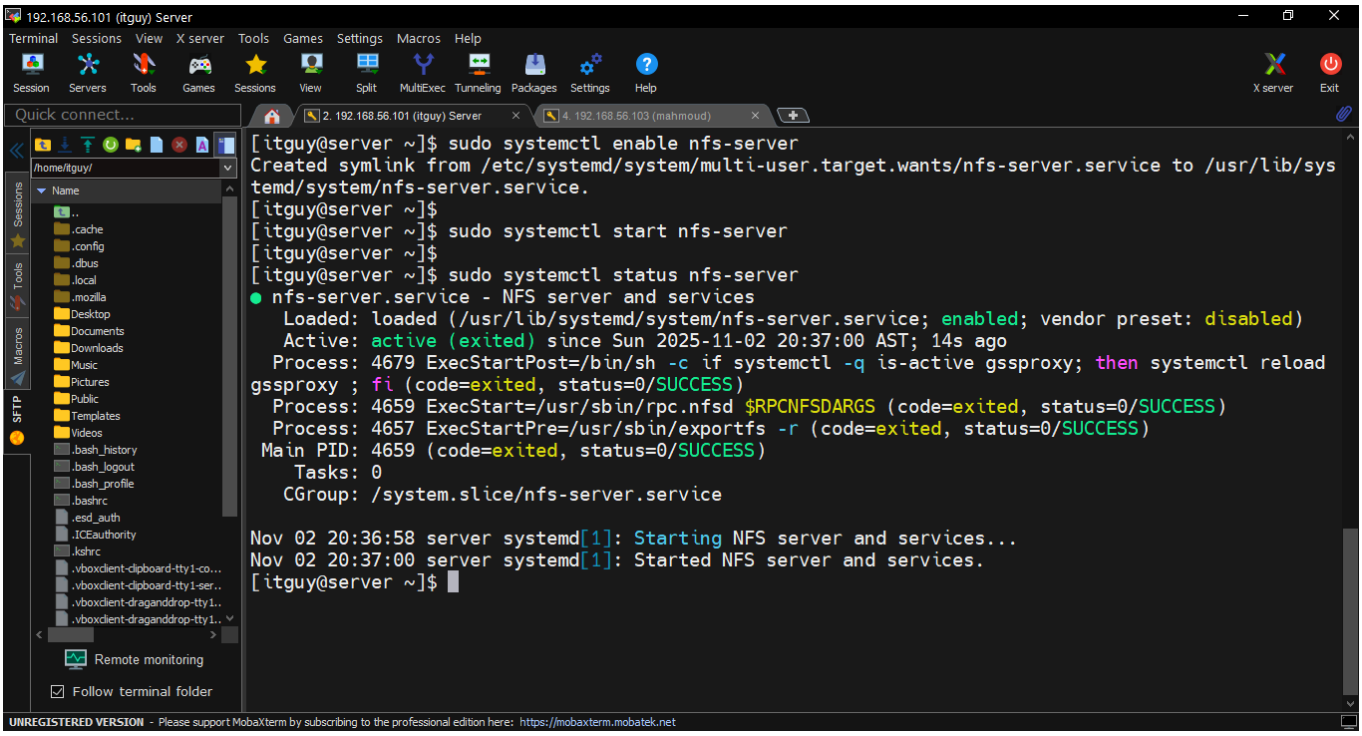
On the Server VM

```
sudo dnf install nfs-utils -y
```

On the Client VM

```
sudo dnf install nfs-utils -y
```

Step 2 — Enable and start NFS services (on the server) :



🧩 Step 3 — Enable and start NFS services (on the server)

```
sudo systemctl enable nfs-server
sudo systemctl start nfs-server
sudo systemctl status nfs-server
```

✅ It should show `active (running)`.

🧩 Step 4 — Create a shared directory

```
sudo mkdir -p /srv/nfs/shared
sudo chown -R nfsnobody:nfsnobody /srv/nfs/shared
sudo chmod 777 /srv/nfs/shared
ls -ld /srv/nfs/share
```

```
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Desktop
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Documents
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Downloads
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Music
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Pictures
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Public
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Templates
drwxr-xr-x. 2 itguy itguy 6 Oct 23 16:03 Videos
[itguy@server ~]$ sudo mkdir -p /srv/nfs/share
[itguy@server ~]$ sudo chown -R nfsnobody:nfsnobody /srv/nfs/share/
[itguy@server ~]$ sudo chmod 777 /srv/nfs/share/
[itguy@server ~]$ cd /srv/nfs
```

You can also put a test file there:

```
echo "Hello from NFS server" | sudo tee /srv/nfs/share/test 101.txt
```

```
[itguy@server nfs]$ ll
total 0
drwxrwxrwx. 2 nfsnobody nfsnobody 6 Nov  2 20:47 share
[itguy@server nfs]$ cd share
[itguy@server share]$ cd
[itguy@server ~]$ echo "Hello from the NFS Server" |sudo tee /srv/nfs/share/test101.txt
[sudo] password for itguy:
Hello from the NFS Server
[itguy@server ~]$
```

🧩 Step 5 — Configure NFS exports

Edit `/etc/exports`:

```
sudo nano /etc/exports
```

Add a line like this (replace IP if needed):

```
/srv/nfs/shared  *(rw,sync,no_root_squash) #"*" means all clients ip

/srv/nfs_share 192.168.56.0/24(rw,sync,no_root_squash)  #Limits access to
machines in that subnet (for example, your host-only network).
```

```
[itguy@server ~]$ cat /etc/exports
/srv/nfs/shared  *(rw,sync,no_root_squash)
```

Then apply:

```
sudo exportfs -r
```

```
sudo exportfs -v
```

```
[itguy@server ~]$ sudo nano /etc/exports
[itguy@server ~]$ sudo exportfs -r
[itguy@server ~]$ sudo exportfs -v
/srv/nfs/share  <world>(sync,wdelay,hide,no_subtree_check,sec=sys,rw,secure,no_root_squash,no_all_s
quash)
```

```
sudo showmount -e
```

You should see:

```
[itguy@server ~]$ sudo showmount -e
Export list for server:
/srv/nfs/share *
```

```
Export list for server:
/srv/nfs/share *
```

Step 6 — On the client side

1 Create a mount point:

```
sudo mkdir -p /mnt/nfs_share
```

2 Mount the NFS share:

```
sudo mount -t nfs <server ip > :/srv/nfs/share /mnt/nfs_share
```

3 Verify:

```
df -h | grep nfs
```

You should see the mount.

4 Check files:

```
ls /mnt/nfs_share
```

```
cat /mnt/nfs/test101.txt
```

Step 7 — Make it permanent (optional)

Add this line to `/etc/fstab` on the client:

```
server:/srv/nfs/shared  /mnt/nfs  nfs  defaults  0  0
```

Then test:

```
sudo mount -a
```

Summary

Role	Command Highlights
Server	`yum install nfs-utils`, `mkdir /srv/nfs/shared`, configure `/etc/exports`
Client	`yum install nfs-utils`, `mount server:/srv/nfs/shared /mnt/nfs`
Verify	`showmount -e`, `df -h`, `cat /mnt/nfs/test.txt`

https://github.com/Mahmoudsherif18