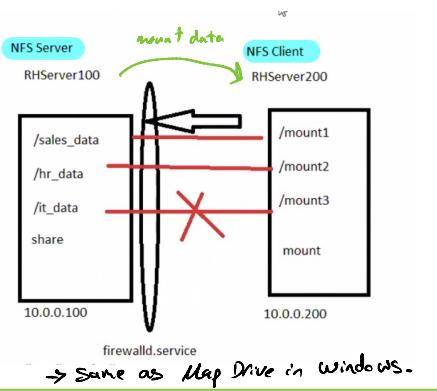
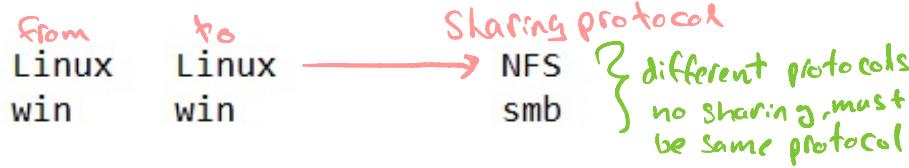


Access network-attached storage

NFS (Network File System) sharing Service



NFS Server configuration :

1- configure firewall allow traffic for nfs

firewall-cmd --add-service=nfs → for sharing

firewall-cmd --add-service=mountd → for mounting

firewall-cmd --add-service=rpc-bind → for security while sharing

2- Create Shared Directories:

mkdir /sales_data

mkdir /hr_data

mkdir /it_data

touch /hr_data/report1

touch /hr_data/report2

touch /hr_data/report3

touch /sales_data/report4

touch /sales_data/report5

touch /sales_data/report6

touch /it_data/report7

touch /it_data/report8

touch /it_data/report9

3- add shared folders to configuration file /etc/exports

vim /etc/exports

/sales_data	10.0.0.200(rw)	only this IP can access this data with this permissions.
/hr_data	10.0.0.0/8(rw)	
/it_data	10.0.0.201(rw)	

remember:
There is two permission settings
① Sharing permissions
② Security permissions: local permission
* What will be applied is the most restricted.

4- Enable and start nfs service

systemctl enable nfs-server.service → permanent

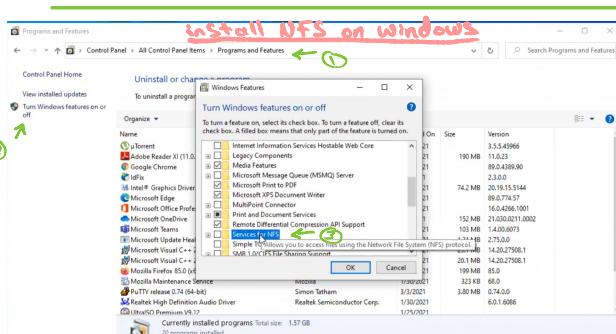
systemctl start nfs-server.service → permanent run time

systemctl status nfs-server.service

5- View shared folders :

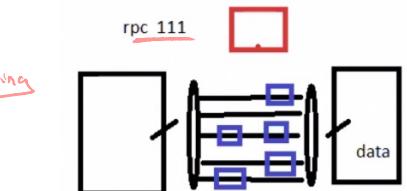
showmount -e 10.0.0.100

my Server



install NFS on windows

> Yum install Samba .



The idea behind rpc-bind: Firstly open the port 111 then decide both for port range to start sharing (big range). Data transfer randomly on the range of ports so it is difficult for a hacker to capture data.

NFS Client configuration :

1- View shared folders :

```
# showmount -e 10.0.0.100,
```

target server

2- create mount directories

```
# mkdir /it  
# mkdir /sales  
# mkdir /hr
```

3- mount shared folders to mount points:

```
# mount -t nfs 10.0.0.100:/hr_data /hr  
# mount -t nfs 10.0.0.100:/sales_data /sales  
# mount -t nfs 10.0.0.100:/it_data /it  
# df -h → to see the mounted data
```

vim /etc/fstab → to do my configuration permanently.

10.0.0.100:/hr_data	/hr	nfs	defaults	0	0
10.0.0.100:/sales_data	/sales	nfs	defaults	0	0

mount -a → either we write this command to read my config from the file fstab or just reload the file. →

chmod 0+w /file → we give permission to other when we share a folder, so we want other people edit it also.

why NFS is better than Samba?

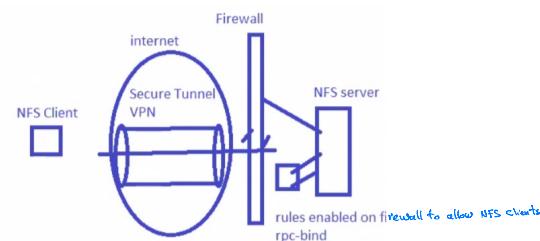
- NFS:
① only root can mount data
② I can specific who can read/edit the data.
③ NFS works internet - why? because you need a range of ports to transfer data, firewall will not allow this range of ports to public.

run time, for permanent configuration

do

permanent

reload /etc/fstab



2- Firewall Configuration firewalld.service

```
# systemctl status firewalld.service
```

```
firewall-cmd
```

```
# firewall-cmd --add-service=nfs  
# firewall-cmd --add-service=nfs --permanent  
# firewall-cmd --add-service=rpc-bind --permanent  
# firewall-cmd --add-service=mountd --permanent  
# firewall-cmd --add-service=http --permanent  
# firewall-cmd --list-services  
# firewall-cmd --reload  
# firewall-cmd --list-services
```



```
# firewall-cmd --add-port=8000/tcp  
# firewall-cmd --add-port=8000/tcp --permanent  
# firewall-cmd --remove-port=8000/tcp  
# firewall-cmd --list-ports
```

run time
permanent

must reload all permanent configuration

zones
firewall-cmd --set-default-zone=public
firewall-cmd --list-all → Show your current zone.
firewall-cmd --set-default-zone=drop → to close all ports.
firewall-cmd --list-all-zones → Show all zones.

enter a zone:

- enable your services.
- enable your custom setting.

So if you want these services, just enter the zone. Services will be enable.

* كل سيرفر كل سيرفر له مجموعه مجموعه المقامات هذه الاشارة
Zone وروتات يملك هذه المجموعات التي على هذه الـ Zone

```
# netstat -n |grep 22  
# netstat -n |grep ESTABLISHED
```

```
root@RHSERVER100:~# firewall-cmd --set-default-zone=drop  
success  
root@RHSERVER100:~# firewall-cmd --add-service=https --permanent  
success  
root@RHSERVER100:~# firewall-cmd --reload  
success  
root@RHSERVER100:~# firewall-cmd --list-services  
https  
root@RHSERVER100:~# firewall-cmd --set-default-zone=public  
success  
root@RHSERVER100:~# firewall-cmd --list-services  
https  
root@RHSERVER100:~# firewall-cmd --set-default-zone=drop  
success  
root@RHSERVER100:~# firewall-cmd --list-services  
https  
root@RHSERVER100:~#
```