NAS:- File Based Storage
Sharing Service NFS Network File System - SMB Simple Messeage Block

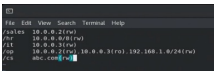
Linux system and Linux System NFS Service
Linux system and Windows System SMB Service

NFS Server
Sharing
File Server
Service nfs-server.service
Firewall Allow NFS Traffic
Configuration File /etc/exports

NFS Client
Mount shared Directory → mounting runtime only.
mount command /etc/fstab → mounting permanant.

1- Configure NFS Server → on server

```
# mkdir /sales
# mkdir /hr
# mkdir /it
# vim /etc/exports
/sales  10.0.0.2(rw)
/hr     10.0.0.0/8(rw)
/it     10.0.0.3(rw)
```



ro read only rw writable

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

# systemctl enable nfs-server.service
# systemctl start nfs-server.service
# systemctl status nfs-server.service
# showmount -e 10.0.0.1
```

→ allow service to do mount
→ allow secure traffic
→ Show all available shared files.
exclude

2- Configure NFS Client

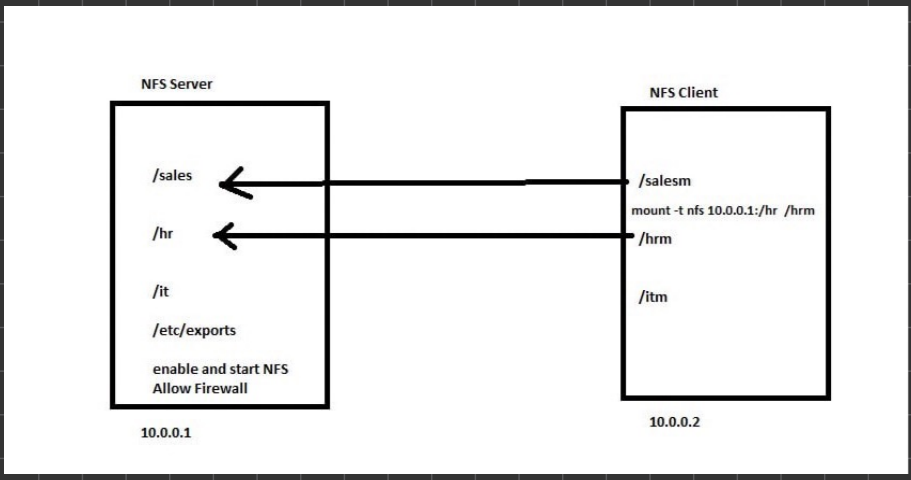
```
# mount -t nfs 10.0.0.1:/hr /hrm                    run time mount

# vim /etc/fstab                                    permanent  mount
10.0.0.1:/hr     /hrm     nfs     defaults          0          0
10.0.0.1:/sales  /salesm  nfs     defaults          0          0
# mount -a
```

on client

```
[root@redhat-server01 ~]# showmount -e 10.0.0.1
Export list for 10.0.0.1:
/hr    10.0.0.0/8
/it    10.0.0.3
/sales 10.0.0.2
[root@redhat-server01 ~]# mkdir /salesm
[root@redhat-server01 ~]# mkdir /hrm
[root@redhat-server01 ~]# mkdir /itm
[root@redhat-server01 ~]# mount -t nfs 10.0.0.1:/hr /hrm
[root@redhat-server01 ~]# ls /hrm/
hr_report1  hr_report2  hr_report3
[root@redhat-server01 ~]# ls /hrm/
hr_report1  hr_report2  hr_report3  hr_report4
[root@redhat-server01 ~]# mount -t nfs 10.0.0.1:/sales /salesm
[root@redhat-server01 ~]# ls /salesm/
sales_report1  sales_report2  sales_report3
[root@redhat-server01 ~]# mount -t nfs 10.0.0.1:/it /itm
mount.nfs: mounting 10.0.0.1:/it failed, reason given by server: No such file or directory
[root@redhat-server01 ~]#
```

```
[root@redhat-server01 ~]# df -h
Filesystem              Size  Used Avail Use% Mounted on
devtmpfs                1.9G     0  1.9G   0% /dev
tmpfs                   1.9G     0  1.9G   0% /dev/shm
tmpfs                   1.9G   10M  1.9G   1% /run
tmpfs                   1.9G     0  1.9G   0% /sys/fs/cgroup
/dev/mapper/rhel-root    46G  4.4G   41G  10% /
/dev/nvme0n1p1         1014M  180M  835M  18% /boot
tmpfs                   376M  1.2M  375M   1% /run/user/42
tmpfs                   376M  4.6M  372M   2% /run/user/0
/dev/sr0                7.4G  7.4G     0 100% /run/media/root/RHEL-8-1-0-BaseOS-x86_64
10.0.0.1:/hr             46G  4.4G   41G  10% /hrm
10.0.0.1:/sales          46G  4.4G   41G  10% /salesm
[root@redhat-server01 ~]#
```



root@redhat-server01:~

File Edit View Search Terminal Help

```
#
# /etc/fstab
# Created by anaconda on Fri Mar 18 10:41:19 2022
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
/dev/mapper/rhel-root   /                       xfs     defaults        0 0
UUID=b762a03f-371e-4e78-a889-6e884ba20e16 /boot                   xfs     defaults        0 0
/dev/mapper/rhel-swap   swap                    swap    defaults        0 0
10.0.0.1:/hr    /hrm    nfs     defaults        0       0
10.0.0.1:/sales /salesm nfs     defaults        0       0
```

permanant mounting

SAMBA - Service

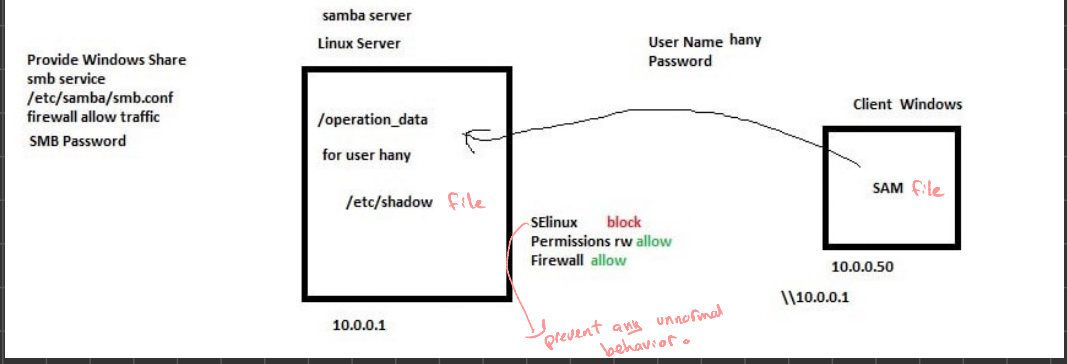
```
Configure samba Server:
# yum install samba*                                        install samba package
# firewall-cmd --add-service=samba --permanent              allow firewall traffic
# firewall-cmd --reload
# mkdir /operations
# touch /operations/op_report1.txt
# touch /operations/op_report2.txt
# touch /operations/op_report3.txt

# vim /etc/samba/smb.conf                                   add share informations to share folder
[operations]
        comment = for operation team only
        path = /operations
        browseable = yes
        read only = no
        valid users = hany, root, ali, @Group : by default all users are valid.

# smbpasswd -a hany                                         set smp password for user hany
                                                            → hany will use it, when connect to shared files
# testparam                                                 check smb.conf file syntax
# systemctl enable smb.service                              enable and start smb service
# systemctl start smb.service

# chmod -R o+w /operations                                  allow write permissions
# setenforce 0                                              set selinux to permissive mode

from windows client     \\10.0.0.1
```


samba server
Linux Server
Provide Windows Share
smb service
/etc/samba/smb.conf
firewall allow traffic
SMB Password
User Name hany
Password
/operation_data
for user hany
/etc/shadow file
10.0.0.1
Client Windows
SAM file
10.0.0.50
\\10.0.0.1
SElinux block
Permissions rw allow
Firewall allow
prevent any unnormal behavior.