

#### #####What is NFS?

The Network File System (NFS) was developed to allow machines to mount a disk partition on a remote machine as if it were a local disk. It allows for fast, seamless sharing of files across a network. It also gives the potential for unwanted people to access your hard drive over the network.

#### #####vesion

NFSv4

#### #####Port numbers

2049 - NFS(nfsd, rpc.nfsd, rpc, portmap)

#### #####Daemons

nfsd The NFS daemon which services requests from NFS clients.

mountd The NFS mount daemon which carries out requests received from nfsd.

rpcbind This daemon allows NFS clients to discover which port the NFS server is using.

#### #####Install required packages(server & client)

# yum install \*nfs\* -y

#### #####SERVER

Create a Directory in server to share with client

#mkdir /nfsserver

#### #####config files

vi /etc/exports

ADD THIS LINE

/nfsserver Client-ip(rw,sync,no\_root\_squash)

#### #####firewall settings

config file

vi /etc/sysconfig/iptables

ADD THIS LINE

-A RH-Firewall-1-INPUT -s 192.168.1.0/24 -m state --state NEW -p tcp --dport 2049 -j ACCEPT

# service iptables restart(restart firewall after configutarion)

#### #####TCP Wrapper Configuration

##1) config file

vi /etc/hosts.deny

ADD THIS LINE

portmap:ALL

##2) config file

vi /etc/hosts.allow

ADD THIS LINE

portmap:TYPE YOUR NEWWORK IP HERE/24

#### #####IMP COMMANDS

#chkconfig nfs on (turn on nfs)

```
#chkconfig portmap on (turn on portmap)
#service portmap start (start portmap)
#service nfs start (start nfs)
#showmount -a (List all mount points)
#showmount -d (List mounted directory)
#showmount -e (Show the host 's exports list)
#showmount -e ip-of-server (Lists the available shares at the remote
server)
#exportfs -v : Displays a list of shares files and options on a server
#exportfs -a : Exports all shares listed in /etc/exports, or given name
#exportfs -u : Unexports all shares listed in /etc/exports, or given name
#exportfs -r : Refresh the server's list after modifying /etc/exports
#exportfs -f : In 'new' mode, flush everything out of the kernels
export table. Any clients that are active will get new entries added by
mountd when
```

they make their next request.

#### ####CLIENT SIDE COMMANDS

```
#showmount -e ip-of-nfs-server (to see list of shared foldes/files)
#mkdir /mnt/nfsmountpoint (to create a directory to mount nfs shared
directry in client)
#mount -t nfs 192.168.0.100:/nfsshare /mnt/nfsmountpoint
```

#### ####TO MOUNT PERMINENTLY

```
# vi /etc/fstab
```

#### #ADD THIS LINE

```
192.168.0.100:/nfsshare /mnt nfs defaults 0 0
```

#### ####TO UNMOUNT

```
#umount /mnt/nfsshare
```

#### ####mounting options

##### ##soft

If a file request fails, the NFS client will report an error to the process on the client machine requesting the file access. Some programs can handle this with composure, most won't. We do not recommend using this setting; it is a recipe for corrupted files and lost data.

You should especially not use this for mail disks --- if you value your mail, that is.

##### ##hard

The program accessing a file on a NFS mounted file system will hang when the server crashes.

The process cannot be interrupted or killed (except by a "sure kill") unless you also specify intr.

When the NFS server is back online the program will continue undisturbed from where it was. We recommend using hard,intr on all NFS mounted file systems.

```
#go to vi /etc/fstab to add sard / soft mount
```

Picking up the from previous example, the fstab entry would now look like:

#	device	mountpoint	fs-type	options
dump	fsckord			

```
192.168.0.100/nfsshare /mnt/nfsmountpoint nfs rw,hard,intr 0
0
```

##fsid=num – Forces the file handle and file attributes settings on the wire to be num, instead of a number derived from the major and minor number of the block device on the mounted file system.  
The value 0 has special meaning when used with NFSv4. NFSv4 has a concept of a root of the overall exported file system.  
The export point exported with fsid=0 is used as this root.