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# **NFS- Network File System**

* It is a sever-client protocol for sharing files between computers over a network.
* It allows to mount file system on a remote computer and user on remote computer can access file system as if local file system.
* Here, server and client can have different OS other than Windows because NFS is not compatible with Windows. Like, server OS can be Linux and client OS can be UNIX.
* Access is granted by IP address. Username and password is not required.
* NFS uses port no 2049.
* Say, we have server-client environment as follow:

Server’s IP: 192.168.5.2

Client’s IP: 192.168.5.3

## **NFS Server Configuration:**

* Make sure, 3 packages nfs, rpcbind/Portmap and xinetd are installed and if not then installed by yum.

Command: rpm -qa nfs\*

Command: rpm -qa rpcbind\*

Command: rpm -qa xinetd\*

* All 3 services must run at boot.

Command: chkconfig nfs on

Command: chkconfig rpcbind on

Command: chkconfig xinetd on

* Give full permission to directories/files those are supposed to share over a network.

Example: mkdir /jariwala

chmod 777 /jariwala

* Add the entry of files/directories to be shared in file /etc/exports.

Command: vi /etc/exports



Here, /jariwala directory will be shared over the network 192.168.5.0/24 with read & write permissions.

We can mount file systems like /home, /var, /tmp as well.

* Restart nfs service.

Command: service nfs restart

* Reexport directories those are shared,

Command: exportfs -r

* To list out shared files/directories,

Command: showmount -e

**NFS Client Configuration**:

* Make sure client machine is able to ping server machine.
* To check shared files/directories on server machine,

Command: showmount -e <IP of server machine>

Example: showmount -e 192.168.5.2

* Mount shared folder of server machine to client machine.

Command: **mount -t nfs** <IP of server machine>**:**<shared directory path> <mount point on client machine>

Example: mount -t nfs 192.168.5.2:/jariwala /mnt

Here, /jariwala shared directory will be mounted on /mnt on client machine.

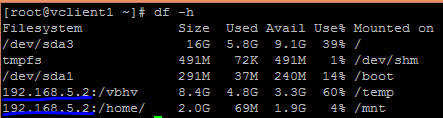
* To unmount shared directory,

Command: umount < mount point on client machine>

Example: umount /mnt

* If shared files/directories need to be mounted permanently, even at boot then add entry in /etc/fstab or configure autofs.
* Mounted points on client machine can be checked by,

Command: df -h



* Unmount file system even when NFS server is unreachable,

Command: umount -f <mount point> unmount forcefully

Command: umount -l <mount point> lazy unmount

Command: umount -r <mount point> remount read only and then unmount