Configure a Linux Server and transfer files to windows client. (Setting up NFS File Server)

The mounted file system is known as **NFS mount.**

Setting Up NFS Server:

(1) Verify the package of NFS whether installed as shown below:

```
[root@localhost Packages]# rpm -qa | grep nfs
nfs-utils-lib-1.1.5-1.el6.i686
nfs4-acl-tools-0.3.3-5.el6.i686
nfs-utils-1.2.2-7.el6.i686
[root@localhost Packages]#
```

(2) If not installed on your system, then execute the following command:

```
[root@localhost home]# cd /home/
[root@localhost home]# mkdir servernfs
[root@localhost home]# cd servernfs
[root@localhost servernfs]# cat>newfile
hello tyit.
```

(3) Verify IP address of the linux machine to be setup as NFS Server:

```
[root@localhost Packages]# ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:0C:29:A6:40:2D
          inet addr:192.168.1.3  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fea6:402d/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:9 errors:0 dropped:0 overruns:0 frame:0
          TX packets:21 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:828 (828.0 b)  TX bytes:3578 (3.4 KiB)
          Interrupt:19 Base address:0x2000
```

(4) Make a directory to be exported, create few files into it and give it full permission, as follows:

```
[root@localhost ~]# cd /media/RHEL_6.0\ i386\ Disc\ 1/Packages/
[root@localhost Packages]# rpm -ivh nfs*
warning: nfs4-acl-tools-0.3.3-5.el6.i686.rpm: Header V3 RSA/SHA256 Signature, ke
y ID fd431d51: NOKEY
Preparing...                ########################################### [100%]
        package nfs-utils-lib-1.1.5-1.el6.i686 is already installed
        package nfs-utils-1:1.2.2-7.el6.i686 is already installed
        package nfs4-acl-tools-0.3.3-5.el6.i686 is already installed
[root@localhost Packages]#
```

(5) Open the configuration file of NFS, i.e, /etc/exports and write the following lines under it: **[root@diamond ~] # vi /etc/exports.**

```
/home/servernfs * (rw,sync)
~
~
```

The above entry says that server export directory has been exported to the network 192.168.1.3

(6) Save and quit the file. Restart the service of nfs and enable it from boot as shown below

```
exportfs: incompatible duplicated export entries:
exportfs:       *:/home/servernfs (0x424) [IGNORED]
exportfs:       *:/home/servernfs (0x425)
                                                           [  OK  ]
Starting NFS quotas:                                       [  OK  ]
Starting NFS daemon:                                       [  OK  ]
Starting NFS mountd:                                       [  OK  ]
[root@localhost servernfs]# service nfs restart
Shutting down NFS mountd:                                  [  OK  ]
Shutting down NFS daemon:                                  [  OK  ]
Shutting down NFS quotas:                                  [  OK  ]
Shutting down NFS services:                                [  OK  ]
Starting NFS services:  exportfs: No options for /home/servernfs *: suggest *(sy
nc) to avoid warning
exportfs: No host name given with /home/servernfs (rw,sync), suggest *(rw,sync)
to avoid warning
exportfs: incompatible duplicated export entries:
exportfs:       *:/home/servernfs (0x424) [IGNORED]
exportfs:       *:/home/servernfs (0x425)
                                                           [  OK  ]
Starting NFS quotas:                                       [  OK  ]
Starting NFS daemon:                                       [  OK  ]
Starting NFS mountd:                                       [  OK  ]
[root@localhost servernfs]#
```

:

(7) Stop the Firewalls and check the status whether it is stopped.

```
[root@localhost servernfs]# service iptables stop
iptables: Flushing firewall rules:                         [  OK  ]
iptables: Setting chains to policy ACCEPT: filter          [  OK  ]
iptables: Unloading modules:                               [  OK  ]
[root@localhost servernfs]# service iptables status
iptables: Firewall is not running.
[root@localhost servernfs]#
```

(8) Showmount command shows you all shared directories in given IP address.(Server)

```
[root@localhost servernfs]# showmount -e 192.168.1.3
Export list for 192.168.1.3:
/home/servernfs *
[root@localhost servernfs]#
```

(9) Stop the ftp service - vsftpd services and NFS services clash with each other.

```
[root@localhost servernfs]# service vsftpd stop
Shutting down vsftpd:                                      [FAILED]
[root@localhost servernfs]# service vsftpd status
vsftpd is stopped
```

(10) Give full permissions to the shared folder.

```
[root@localhost servernfs]# chmod -R 777 /home/servernfs/
[root@localhost servernfs]#
```

NFS Client: As NFS Client make a directory /nfsclient and mount the server exported directory on it, as shown:

```
[root@localhost ~]# cd /home/
[root@localhost home]# ls
clientdir  pracs2  q1  test  [redacted]  tyit
[root@localhost home]# mkdir clientnfs
[root@localhost home]# mount -t nfs 192.168.1.3:/home/servernfs/ /home/clientnfs
/
[root@localhost home]#
```

On listing, it show up the content of server export directory.

```
[root@localhost home]# cd clientnfs/
[root@localhost clientnfs]# ls
newfile
[root@localhost clientnfs]#
```