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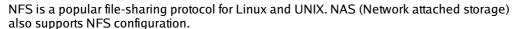
# Access NAS server using NFS protocol under Linux or UNIX

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Q. How do I access NAS server using NFS? I am using Redhat Linux (RHEL).

NFS [2] (Network File System) is a protocol originally developed by Sun Microsystems.

NFS used by UNIX and Linux oses as a distributed file system which allows a computer/server/workstation to access files over a network.





[1]

## **Linux NFS service**

In order to use NFS you need to run portmap service and rpc.statd and rpc.lockd daemons. Use following commands to start these services (RedHat/Fedora Linux):

```
# chkconfig portmap on
# chkconfig nfslock on
# /etc/init.d/portmap start
# /etc/init.d/nfslock start
```

Assuming that NAS is configured properly you need to type following command to access NAS (please refer our <u>sample configuration</u> [3] diagram):

```
# mkdir /backup
# mount -o tcp 202.54.20.111:/mountpoint /backup
```

Linux supports UDP by default and TCP as an option. TCP may improve performance in some cases (as a side effect it may increase the CPU load on the local server). If you want to use UDP just type following command:

```
# mount 202.54.20.111:/mount/point /backup
```

You can also mount NFS share by editing /etc/fstab file:

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

#### Append following line:

```
202.54.20.111:/mountpoint /backup nfs defaults 0 0
```

Save the file and exit to shell prompt. Try to pass following values to mount command improve NFS performance:

```
# mount -t nfs -o nocto, rsize=32768, wsize=32768 202.54.20.111:/mountpoint /backup
```

Where,

- rsize=32768,wsize=32768:This will make your nfs connection faster than with the default buffer size of 4096. risze is read size and wsize is write size.
- nocto: Suppress the retrieval of new attributes when creating a file.

There are few more options supported to tweak NFS please consult man page of nfs.

#### A note for FreeBSD users

NFS configuration is a relatively straightforward, all you need to do is open /etc/rc.conf and put following line (FreeBSD client system):

```
# vi /etc/rc.conf
```

### Append following line:

```
nfs_client_enable="YES"
```

Save the file and use mount command as follows:

```
# /etc/init.d/nfsclient start
```

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- # mkdir /backup
- # mount 202.54.20.111:/mountpoint /backup

There are few options supported to tweak NFS client under FreeBSD please consult man page of nfs/mount for more information.

See also:

- Connecting Linux or UNIX system to Network attached storage device [4]
- How do I access NAS server using automount? [5]
- Access NAS server using Windows 2000 or 2003 server [6]
- For more information consult man pages of mount and nfs

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URLs in this post:

- [1] Image: http://www.cyberciti.biz/faq/faq/category/linux/
- [2] NFS: http://en.wikipedia.org/wiki/Network\_file\_system
- [3] sample configuration: http://www.cyberciti.biz/faq/tips/connecting-linux-unix-system-network-attached-storage-device.html#samnetdiag
- [4] Connecting Linux or UNIX system to Network attached storage device: http://www.cyberciti.biz/faq/tips/connecting-linux-unix-system-network-attached-storage-device.html
- [5] How do I access NAS server using automount?: http://www.cyberciti.biz/faq/faqs/2006/05/how-do-i-access-nas-server-using.php
- [6] Access NAS server using Windows 2000 or 2003 server: http://www.cyberciti.biz/faq/faqs/2006/05/access-nas-server-using-windows-2000.php

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