

Mount an NFS share.

[Link](#)

First, create an NFS Share on your host

With OMV for example.

The location of the files to share. The share will be accessible at /export/. Clients allowed to mount the file system, e.g. 192.168.178.0/24. Please check the [manual page](https://manpages.debian.org/nfs-kernel-server/exports.5.html) for more details.
`192.168.1.0/24`

Permission
`Read/Write`

Extra options
`subtree_check,insecure`

Please check the [manual page](https://manpages.debian.org/nfs-kernel-server/exports.5.html) for more details.

Installing NFS Client Packages

To mount an NFS share on a Linux system first you'll need to install the NFS client package. The package name differs between Linux distributions.

Installing NFS client on Ubuntu and Debian:

```
sudo apt update
sudo apt install nfs-common
```

Manually Mounting an NFS File Systems

Mounting a remote NFS share is the same as mounting regular file systems.

To mount an NFS file system on a given mount point, use the `mount` command in the following form:

```
`` bash mount [OPTION...] NFS_SERVER:EXPORTED_DIRECTORY MOUNT_POINT ``
```

Use the steps below to manually mount a remote NFS share on your Linux system:

- First, create a directory to serve as the mount point for the remote NFS share:

```
sudo mkdir /mnt/OrbiterVideo
```

Mount point is a directory on the local machine where the NFS share is to be mounted.

- Mount the NFS share by running the following command as root or user with sudo privileges:

```
sudo mount -t nfs orbiter:/Video /mnt/OrbiterVideo
```

Where `orbiter` is the LAN Name of the NFS server, `/Video` is the directory that the server is exporting and `/mnt/OrbiterVideo` is the local mount point.

Can be with IP adress

```
`` sudo mount -t nfs 10.10.0.10:/Video /mnt/OrbiterVideo ``
```

Automatically Mounting NFS File Systems with `/etc/fstab`

```
nano /etc/fstab
```

Add line

```
orbiter:/Video /mnt/OrbiterVideo nfs defaults 0 0
```

Unmounting NFS File Systems

The `umount` command detaches (unmounts) the mounted file system from the directory tree.

To detach a mounted NFS share, use the `umount` command followed by either the directory where it has been mounted or remote share:

```
umount orbiter:/Video
#or
umount /mnt/OrbiterVideo
```

Permission problems ?

```
sudo chown -R root:root path/to/Video
sudo chmod -R 755 path/to/Video
```

Extensive explications from ChatGPT

To address this "Permission denied" error, let's go through a few key steps to ensure your NFS share is correctly configured for root-level access between your two Debian machines.

Steps to Resolve "Permission Denied" Error:

1. Verify NFS Export Permissions on the Server Side On the NFS server (the machine hosting the `/Video` folder), make sure the directory is exported with the correct permissions in `/etc/exports`. Add or update the relevant line in `/etc/exports` to ensure the client machine has both read and write permissions and that root squashing is disabled.

```
/Video *(rw,no_root_squash,sync)
```

- **rw:** Allows read and write access.
- **no_root_squash:** Allows the root user on the client to maintain root privileges on the share.
- **sync:** Ensures changes are committed to disk before reporting success. After updating `/etc/exports`, apply the changes by running:

```
sudo exportfs -ra
```

2. Restart the NFS Service Restart the NFS server to apply any configuration changes:

```
sudo systemctl restart nfs-kernel-server
```

3. Mount the NFS Share on the Client Side Ensure the client machine mounts the NFS share with the correct permissions. Since an entry was added in `/etc/fstab`, remount it with:

```
sudo mount -a
```

Alternatively, mount manually for testing:

```
sudo mount -t nfs orbiter:/Video /mnt/OrbiterVideo
```

4. Check Ownership and Permissions on the NFS Share On the NFS server, ensure that the `/Video` directory has permissions allowing the root user on the client to write to it.

```
sudo chown -R root:root /Video  
sudo chmod -R 755 /Video # Adjust permissions as needed
```

5. Test File Creation After mounting, try creating a file in `/mnt/OrbiterVideo` on the client as the root user:

```
sudo touch /mnt/OrbiterVideo/testfile
```

Additional Troubleshooting Tips

- If permission issues persist, re-check `root_squash` settings and permissions on the `/Video` directory.
- Ensure both machines synchronize UID/GID settings if user-level permissions are required.

Revision #13

Created 21 July 2023 20:56:38 by Admin

Updated 13 November 2024 16:24:46 by Admin