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Project C

NFS (Network File Share) Server Setup

Introduction:

NFS (**Network File Share**) is a protocol that allows you to share directories and files with other Linux clients in a network. The directory to be shared is usually created on the **NFS** server and files added to it.

Step 1: Install NFS Kernel Server in Ubuntu

The first step is to install the **nfs-kernel-server** package on the server.

```
project@ubuntu:~$ sudo apt update
[sudo] password for project:
Get:1 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Hit:2 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
Fetched 172 kB in 2s (85.7 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
422 packages can be upgraded. Run 'apt list --upgradable' to see them.
project@ubuntu:~$
```

Once the update is complete, proceed and install the **nfs-kernel-server** package

Step 2: Create an NFS Export Directory

The second step will be creating a directory that will be shared among client systems.

```
project@ubuntu:~$ sudo mkdir -p /mnt/nfs_share
project@ubuntu:~$
project@ubuntu:~$ sudo chown nobody:nogroup /mnt/nfs_share/
project@ubuntu:~$
project@ubuntu:~$ sudo chmod -R 777 /mnt/nfs_share/
project@ubuntu:~$
project@ubuntu:~$
```

Step 3: Grant NFS Share Access to Client Systems

Vim installation:

```
sudo: vim: command not found
project@ubuntu:~$ sudo apt-get install libncurses5-dev libncursesw5-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libc-dev-bin libc6 libc6-dbg libc6-dev libtinfo-dev linux-libc-dev manpages-dev
Suggested packages:
  glibc-doc ncurses-doc
The following NEW packages will be installed:
  libc-dev-bin libc6-dev libncurses5-dev libncursesw5-dev libtinfo-dev linux-libc-dev manpages-dev
The following packages will be upgraded:
  libc6 libc6-dbg
2 upgraded, 7 newly installed, 0 to remove and 420 not upgraded.
Need to get 6,331 kB/14.3 MB of archives.
After this operation, 31.9 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libc-dev-bin amd64 2.27-3ubuntu1.6 [71.9 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 linux-libc-dev amd64 4.15.0-201.212 [1,000 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libc6-dev amd64 2.27-3ubuntu1.6 [2,587 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtinfo-dev amd64 6.1-1ubuntu1.18.04 [81.3 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libncurses5-dev amd64 6.1-1ubuntu1.18.04 [174 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libncursesw5-dev amd64 6.1-1ubuntu1.18.04 [199 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 manpages-dev all 4.15-1 [2,217 kB]
Fetched 6,331 kB in 22s (283 kB/s)
Preconfiguring packages ...
(Reading database ... 127662 files and directories currently installed.)
```

```
Selecting previously unselected package libc6-dev:amd64.
Preparing to unpack .../2-libc6-dev_2.27-3ubuntu1.6_amd64.deb ...
Unpacking libc6-dev:amd64 (2.27-3ubuntu1.6) ...
Selecting previously unselected package libtinfo-dev:amd64.
Preparing to unpack .../3-libtinfo-dev_6.1-1ubuntu1.18.04_amd64.deb ...
Unpacking libtinfo-dev:amd64 (6.1-1ubuntu1.18.04) ...
Selecting previously unselected package libncurses5-dev:amd64.
Preparing to unpack .../4-libncurses5-dev_6.1-1ubuntu1.18.04_amd64.deb ...
Unpacking libncurses5-dev:amd64 (6.1-1ubuntu1.18.04) ...
Selecting previously unselected package libncursesw5-dev:amd64.
Preparing to unpack .../5-libncursesw5-dev_6.1-1ubuntu1.18.04_amd64.deb ...
Unpacking libncursesw5-dev:amd64 (6.1-1ubuntu1.18.04) ...
Selecting previously unselected package manpages-dev.
Preparing to unpack .../6-manpages-dev_4.15-1_all.deb ...
Unpacking manpages-dev (4.15-1) ...
Setting up libc6-dbg:amd64 (2.27-3ubuntu1.6) ...
Setting up linux-libc-dev:amd64 (4.15.0-201.212) ...
Setting up libtinfo-dev:amd64 (6.1-1ubuntu1.18.04) ...
Setting up libc-dev-bin (2.27-3ubuntu1.6) ...
Setting up manpages-dev (4.15-1) ...
Setting up libc6-dev:amd64 (2.27-3ubuntu1.6) ...
Setting up libncurses5-dev:amd64 (6.1-1ubuntu1.18.04) ...
Setting up libncursesw5-dev:amd64 (6.1-1ubuntu1.18.04) ...
Processing triggers for libc-bin (2.27-3ubuntu1.2) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
project@ubuntu:~$
```

project@ubuntu: ~

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```
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
project@ubuntu:~$ sudo apt install git
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git git-man liberror-perl
0 upgraded, 3 newly installed, 0 to remove and 420 not upgraded.
Need to get 4,751 kB of archives.
After this operation, 34.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 liberror-perl all 0.17025-1 [22.8 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git-man all 1:2.17.1-1ubuntu0.13 [805 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 git amd64 1:2.17.1-1ubuntu0.13 [3,923 kB]
Fetched 4,751 kB in 1s (8,353 kB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 131332 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17025-1_all.deb ...
Unpacking liberror-perl (0.17025-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.17.1-1ubuntu0.13_all.deb ...
Unpacking git-man (1:2.17.1-1ubuntu0.13) ...
Selecting previously unselected package git.
```

```
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
project@ubuntu:~$ sudo apt install make
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  make-doc
The following NEW packages will be installed:
  make
0 upgraded, 1 newly installed, 0 to remove and 420 not upgraded.
Need to get 154 kB of archives.
After this operation, 381 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 make amd64 4.1-9.1ubuntu1 [154 kB]
Fetched 154 kB in 0s (708 kB/s)
Selecting previously unselected package make.
(Reading database ... 132239 files and directories currently installed.)
Preparing to unpack .../make_4.1-9.1ubuntu1_amd64.deb ...
Unpacking make (4.1-9.1ubuntu1) ...
Setting up make (4.1-9.1ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
project@ubuntu:~$
```

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```
Setting up make (4.1-9.1ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
project@ubuntu:~$ sudo apt install build-essential
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  dpkg-dev fakeroot g++ g++-7 gcc gcc-7 libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl
  libasan4 libatomic1 libcilkrts5 libdpkg-perl libfakeroot libgcc-7-dev libitm1 liblsan0 libmpx2 libquadmath0
  libstdc++-7-dev libtsan0 libubsan0
Suggested packages:
  debian-keyring g++-multilib g++-7-multilib gcc-7-doc libstdc++6-7-dbg gcc-multilib autoconf automake libtool flex
  bison gcc-doc gcc-7-multilib gcc-7-locales libgcc1-dbg libgomp1-dbg libitm1-dbg libatomic1-dbg libasan4-dbg
  liblsan0-dbg libtsan0-dbg libubsan0-dbg libcilkrts5-dbg libmpx2-dbg libquadmath0-dbg bzr libstdc++-7-doc
The following NEW packages will be installed:
  build-essential dpkg-dev fakeroot g++ g++-7 gcc gcc-7 libalgorithm-diff-perl libalgorithm-diff-xs-perl
  libalgorithm-merge-perl libasan4 libatomic1 libcilkrts5 libfakeroot libgcc-7-dev libitm1 liblsan0 libmpx2
  libquadmath0 libstdc++-7-dev libtsan0 libubsan0
The following packages will be upgraded:
  libdpkg-perl
1 upgraded, 22 newly installed, 0 to remove and 419 not upgraded.
Need to get 25.0 MB of archives.
After this operation, 90.9 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libitm1 amd64 8.4.0-1ubuntu1~18.04 [27.9 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libatomic1 amd64 8.4.0-1ubuntu1~18.04 [9,192 B]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libasan4 amd64 7.5.0-3ubuntu1~18.04 [358 kB]
```

```
Processing triggers for ttbc-btn (2.27-3ubuntu1.2) ...
project@ubuntu:~$ sudo git clone https://github.com/vim/vim.git
Cloning into 'vim'...
remote: Enumerating objects: 164614, done.
remote: Counting objects: 100% (166/166), done.
remote: Compressing objects: 100% (99/99), done.
remote: Total 164614 (delta 89), reused 132 (delta 66), pack-reused 164448
Receiving objects: 100% (164614/164614), 196.30 MiB | 19.78 MiB/s, done.
Resolving deltas: 100% (139965/139965), done.
project@ubuntu:~$
```

```
project@ubuntu:~$ cd vim/src
project@ubuntu:~/vim/src$ sudo make
Makefile:291: auto/config.mk: No such file or directory
rm -f auto/config.cache
if test "X" != "Xclean" \
        -a "X" != "Xdistclean" \
        -a "X" != "Xautoconf" \
        -a "X" != "Xreconfig"; then \
    GUI_INC_LOC="" GUI_LIB_LOC="" \
        CC="" CPPFLAGS="" CFLAGS="" \
        LDFLAGS=""  srcdir="." \
        ./configure     \
            \
            \
            \
            \
            \
            \
            \
            \
            \
            \
            \
            \
            \
            ; \
fi
configure: creating cache auto/config.cache
```

```
                                        n                             top-file-validate tmp_gvim.desktop; fi
/usr/bin/desktop-file-validate
mv tmp_gvim.desktop gvim.desktop
make[1]: Leaving directory '/home/project/vim/src/po'
make[1]: Entering directory '/home/project/vim/src/po'
make[1]: Nothing to be done for 'converted'.
make[1]: Leaving directory '/home/project/vim/src/po'
project@ubuntu:~/vim/src$ sudo make install
if test -f /usr/local/bin/vim; then \
  mv -f /usr/local/bin/vim /usr/local/bin/vim.rm; \
  rm -f /usr/local/bin/vim.rm; \
fi
cp vim /usr/local/bin
strip /usr/local/bin/vim
chmod 755 /usr/local/bin/vim
cp vimtutor /usr/local/bin/vimtutor
chmod 755 /usr/local/bin/vimtutor
/bin/sh install-sh -c -d /usr/local/share/vim
chmod 755 /usr/local/share/vim
/bin/sh install-sh -c -d /usr/local/share/vim/vim90
chmod 755 /usr/local/share/vim/vim90
/bin/sh install-sh -c -d /usr/local/share/vim/vim90/doc
chmod 755 /usr/local/share/vim/vim90/doc
/bin/sh install-sh -c -d /usr/local/share/vim/vim90/print
chmod 755 /usr/local/share/vim/vim90/print
/bin/sh install-sh -c -d /usr/local/share/vim/vim90/colors
chmod 755 /usr/local/share/vim/vim90/colors
```

```
                              VIM - Vi IMproved

                              version 9.0.1182
                            by Bram Moolenaar et al.
                 Vim is open source and freely distributable

                            Become a registered Vim user!
                  type  :help register<Enter>   for information

                  type  :q<Enter>               to exit
                  type  :help<Enter>  or  <F1>  for on-line help
                  type  :help version9<Enter>   for version info



                                                      0,0-1          All
```

Step 3: Grant NFS Share Access to Client Systems


```
project@ubuntu:~/vim/src$ vim -v
>4;mproject@ubuntu:~/vim/src$ sudo vim /etc/exports
>4;mproject@ubuntu:~/vim/src$ cd
```

Explanation about the options used in the above command.

- **rw**: Stands for Read/Write.
- **sync**: Requires changes to be written to the disk before they are applied.
- **No_subtree_check**: Eliminates subtree checking.

```
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/etc/exports: the access control list for filesystems which may be exported
#              to NFS clients.  See exports(5).
#
# Example for NFSv2 and NFSv3:
# /srv/homes       hostname1(rw,sync,no_subtree_check) hostname2(ro,sync,no_subtree_check)
#
# Example for NFSv4:
# /srv/nfs4        gss/krb5i(rw,sync,fsid=0,crossmnt,no_subtree_check)
# /srv/nfs4/homes  gss/krb5i(rw,sync,no_subtree_check)
#
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"/etc/exports" 10L, 389B                                              1,1          All
```

Step 4: Export the NFS Share Directory

After granting access to the preferred client systems, export the NFS share directory and restart the NFS kernel server for the changes to come into effect.

```
>4;mproject@ubuntu:~/vim/src$ cd
project@ubuntu:~$ sudo exportfs -a
[sudo] password for project:
project@ubuntu:~$ sudo exportfs -a
project@ubuntu:~$ sudo systemctl restart nfs-kernel-server
project@ubuntu:~$
```

Step 5: Allow NFS Access through the Firewall

For the client to access the NFS share, you need to allow access through the firewall .Reload or enable the firewall (if it was turned off) and check the status of the firewall. Port **2049**, which is the default file share, should be opened.

```
project@ubuntu:~$ sudo ufw allow from 192.168.105.137/24 to any port nfs
[sudo] password for project:
WARN: Rule changed after normalization
Rule added
project@ubuntu:~$ sudo ufw enable
Firewall is active and enabled on system startup
project@ubuntu:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
2049                       ALLOW       192.168.105.0/24

project@ubuntu:~$
```

Install the NFS Client on the Client Systems

Step 1: Install the NFS-Common Package


```
File Edit View Search Terminal Help
fjwu@ubuntu:~$ sudo apt update
[sudo] password for fjwu:
Get:1 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Hit:2 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
Fetched 261 kB in 3s (82.7 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
85 packages can be upgraded. Run 'apt list --upgradable' to see them.
fjwu@ubuntu:~$
```

Install **nfs-common** packages .

```
File Edit View Search Terminal Help
fjwu@ubuntu:~$ sudo apt install nfs-common
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-5.4.0-132-generic linux-hwe-5.4-headers-5.4.0-132 linux-hwe-5.4-headers-5.4.0-42
  linux-image-5.4.0-132-generic linux-modules-5.4.0-132-generic linux-modules-extra-5.4.0-132-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  keyutils libnfsidmap2 libtirpc1 rpcbind
Suggested packages:
  open-iscsi watchdog
The following NEW packages will be installed:
  keyutils libnfsidmap2 libtirpc1 nfs-common rpcbind
0 upgraded, 5 newly installed, 0 to remove and 85 not upgraded.
Need to get 399 kB of archives.
After this operation, 1,364 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 keyutils amd64 1.5.9-9.2ubuntu2.1 [48.1 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libnfsidmap2 amd64 0.25-5.1 [27.2 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtirpc1 amd64 0.2.5-1.2ubuntu0.1 [75.7 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 rpcbind amd64 0.2.3-0.6ubuntu0.18.04.4 [42.1 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nfs-common amd64 1:1.3.4-2.1ubuntu5.5 [206 kB]
Fetched 399 kB in 1s (731 kB/s)
Selecting previously unselected package keyutils.
(Reading database ... 222232 files and directories currently installed.)
Preparing to unpack .../keyutils_1.5.9-9.2ubuntu2.1_amd64.deb ...
Unpacking keyutils (1.5.9-9.2ubuntu2.1) ...
Selecting previously unselected package libnfsidmap2:amd64.
Preparing to unpack .../libnfsidmap2_0.25-5.1_amd64.deb ...
```

Activate Windows
Go to Settings to activate Windows.

Step 2: Create an NFS Mount Point on Client


```
fjwu@ubuntu:~$ ifconfig

Command 'ifconfig' not found, but can be installed with:

sudo apt install net-tools
```

```
fjwu@ubuntu:~$ sudo apt install net-tools
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-5.4.0-132-generic linux-hwe-5.4-headers-5.4.0-132 linux-hwe-5.4-headers-5.4.0-42
  linux-image-5.4.0-132-generic linux-modules-5.4.0-132-generic linux-modules-extra-5.4.0-132-generic
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 85 not upgraded.
Need to get 194 kB of archives.
After this operation, 803 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 net-tools amd64 1.60+git20161116.90da8a0-1ubuntu1 [194 kB]
Fetched 194 kB in 1s (362 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 222364 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20161116.90da8a0-1ubuntu1_amd64.deb ...
Unpacking net-tools (1.60+git20161116.90da8a0-1ubuntu1) ...
Setting up net-tools (1.60+git20161116.90da8a0-1ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
fjwu@ubuntu:~$
```

Step 3: Mount NFS Share on Client System

```
fjwu@ubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.105.134  netmask 255.255.255.0  broadcast 192.168.105.255
        inet6 fe80::a96e:a5d7:ce3b:ca70  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:a1:6b:6b  txqueuelen 1000  (Ethernet)
        RX packets 146725  bytes 219422940 (219.4 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 34860  bytes 2204937 (2.2 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 309  bytes 29530 (29.5 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 309  bytes 29530 (29.5 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

fjwu@ubuntu:~$
```

```
fjwu@ubuntu:~$ sudo mount 192.168.105.134:/mnt/nfs_share /mnt/nfs_nfs_clientshare
mount.nfs: mount point /mnt/nfs_nfs_clientshare does not exist
fjwu@ubuntu:~$ mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=974580k,nr_inodes=243645,mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,noexec,relatime,size=199940k,mode=755)
/dev/sda1 on / type ext4 (rw,relatime,errors=remount-ro)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup on /sys/fs/cgroup/unified type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate)
cgroup on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,xattr,name=systemd)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids)
cgroup on /sys/fs/cgroup/net_cls,net_prio type cgroup (rw,nosuid,nodev,noexec,relatime,net_cls,net_prio)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer)
cgroup on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset)
cgroup on /sys/fs/cgroup/rdma type cgroup (rw,nosuid,nodev,noexec,relatime,rdma)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event)Activate Windows
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=26,pgrp=1,timeout=0,minproto=5,maxproto=5,direct,pipe_
ino=24824)
```

```
gvfsd-fuse on /run/user/1000/gvfs type fuse.gvfsd-fuse (rw,
fjwu@ubuntu:~$ sudo mkdir /mnt/mount_point
fjwu@ubuntu:~$ █
```

Step 4: Testing the NFS Share on Client System

```
fjwu@ubuntu:~$ sudo mount 192.168.105.134:/mnt/nfs_share /mnt/nfs_nfs_clientshare
```

```
fjwu@ubuntu:~$ cd /mnt/nfs_share/
```

To verify that our NFS setup is working, we are going to create a few files in the NFS share directory located in the server.

```
fjwu@ubuntu:~$ touch file1.txt file2.txt file3.txt
fjwu@ubuntu:~$
```

Now head back to the NFS client system and check if the files exist.

```
fjwu@ubuntu:~$ ls -l /mnt/nfs_clientshare/
total 0
```

```
total 0
-rw-rw-r-- 1 1002 1002 0 jan 8 20:36 file1.txt
-rw-rw-r-- 1 1002 1002 0 jan 8 20:36 file2.txt
-rw-rw-r-- 1 1002 1002 0 jan 8 20:36 file3.txt
project@client-server:~$
project@client-server:~$
```