Objective:

This task involves setting up a Samba file server on an Ubuntu Linux system to share files with Windows clients. You will also create a case study documenting the process, configurations, and potential use cases.

Scenario:

Your team requires a file server accessible to both Linux and Windows clients. This task involves setting up a Samba file server on Ubuntu and creating a case study detailing the configuration process.

Constraints:

- Create a Samba file server on ubuntu.example.com
- share the files with Windows client.

Completion Criteria:

- A Samba file server is successfully configured on the Ubuntu system.
- Windows clients can access and modify files on the shared directory.
- A comprehensive case study documenting the process is created.

Samba is an open-source software suite that enables file and print sharing between Linux/Unix and Windows systems. It implements the SMB/CIFS protocol, allowing seamless interoperability and network communication between different operating systems, making it possible to share directories, files, and printers across a mixed network environment.

Update the System

```
root@ubuntu:~# apt update
Get:1 https://download.docker.com/linux/ubuntu focal InRelease [57.7 kB]
Hit:2 http://in.archive.ubuntu.com/ubuntu focal InRelease
Get:3 https://download.docker.com/linux/ubuntu focal/stable amd64 Packages [48.8
 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease [128 kB]
Hit:5 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:6 http://in.archive.ubuntu.com/ubuntu focal-security InRelease
Fetched 234 kB in 8s (29.8 kB/s)
```

- Install Samba

```
root@ubuntu:~# apt install samba

Reading package lists... Done
Building dependency tree
Reading state information... Done
samba is already the newest version (2:4.15.13+dfsg-0ubuntu0.20.04.7).
0 upgraded, 0 newly installed, 0 to remove and 78 not upgraded.
```

- Try creating, editing, and deleting files in the shared directory from both the Linux and Windows systems to

```
root@ubuntu:~# mkdir -p /srv/samba/shared
root@ubuntu:~# chown nobody:nogroup /srv/samba/shared
root@ubuntu:~# chmod 2775 /srv/samba/shared
```

- Configure Samba Settings for Shared Folder

```
root@ubuntu:~# cat /etc/samba/smb.conf | tail -n 5
path = /srv/samba/shared
browsable = yes
read only = no
guest ok = yes
force user = nobody
root@ubuntu:~#
```

• path: Specifies the directory to be shared.

• read only: Controls whether users can modify the contents of the shared folder. Setting this directive to no grants permission to modify the files.

• browsable: Determines whether the share will be visible in file managers (like Ubuntu's default file manager) under "Network" when set to yes.

- Now that we have our new share configured, save it and restart Samba for it to take effect.

```
root@ubuntu:~# systemctl enable smbd
Synchronizing state of smbd.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable smbd
root@ubuntu:~# systemctl restart smbd
```

- Update the firewall rules to allow Samba traffic.

```
root@ubuntu:~# ufw allow 'Samba'
Skipping adding existing rule
Skipping adding existing rule (v6)
root@ubuntu:~#
```

- On Windows, open up File Manager and edit the file path and enter //192.168.252.133/Shared
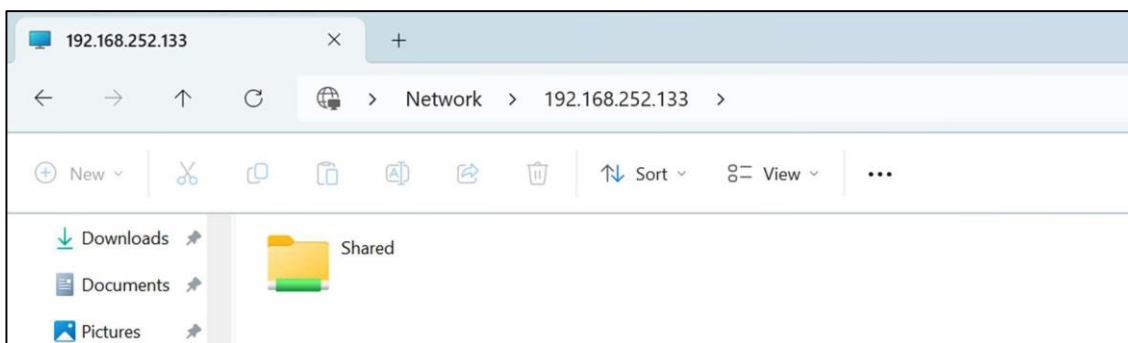
The Samba file server setup on Ubuntu was successful, and Windows clients can now access and modify shared files as intended.
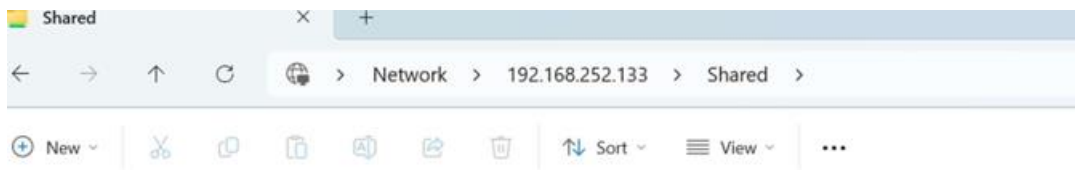

```
root@ubuntu:~# cd /srv/samba/shared/
root@ubuntu:/srv/samba/shared# ls
mydir
root@ubuntu:/srv/samba/shared#
```

✓ A Samba file server is successfully configured on the Ubuntu system.
✓ Windows clients can access and modify files on the shared directory.
✓ A comprehensive case study documenting the process is created.

Thank you

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