

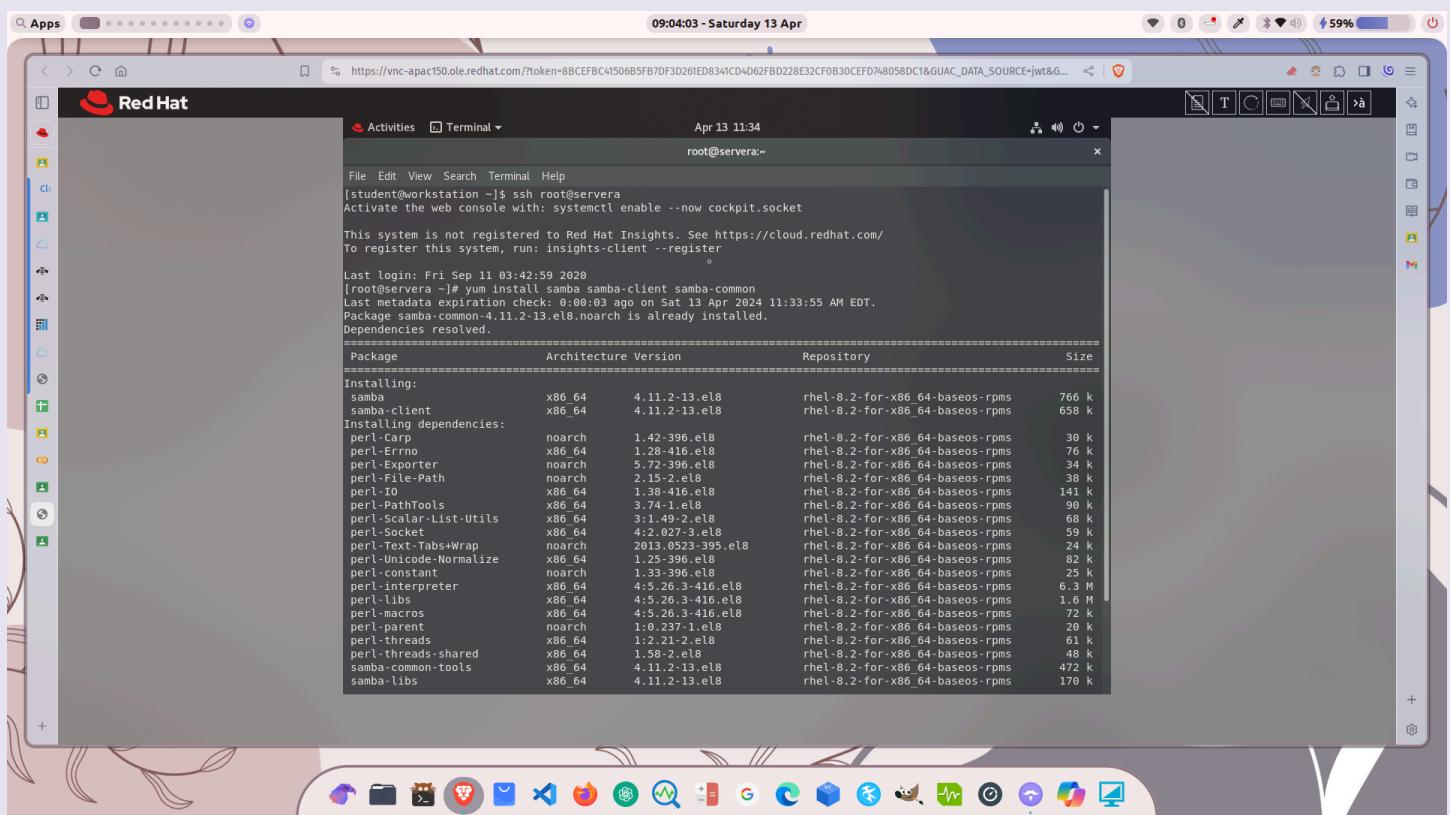
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Question 1 : Configure Samba server and define /samba directory as sambashare

- a) Share should show up with name sambashare on client side.
- b) Share should be browsable.
- c) Share should be writable
- d) Mount the share on directory /samba_mount with smb1 user.

Steps and Screenshots :

1. Login to servera with root user through ssh and install required samba packages including server, client and common libraries for samba



The screenshot shows a Red Hat Linux desktop environment. A terminal window is open, displaying the following command-line session:

```
student@workstation ~ $ ssh root@servera
Activate the web console with: systemctl enable --now cockpit.socket
This system is not registered to Red Hat Insights. See https://cloud.redhat.com/
To register this system, run: insights-client --register
Last login: Fri Sep 11 03:42:59 2020
[root@servera ~]# yum install samba samba-client samba-common
Last metadata expiration check: 0:00:03 ago on Sat 13 Apr 2024 11:33:55 AM EDT.
Package samba-common-4.11.2-13.el8.noarch is already installed.
Dependencies resolved.
=====
 Package          Architecture Version      Repository   Size
=====
Installing:
 samba           x86_64       4.11.2-13.el8    rhel-8.2-for-x86_64-baseos-rpms 766 K
 samba-client    x86_64       4.11.2-13.el8    rhel-8.2-for-x86_64-baseos-rpms 658 K
Installing dependencies:
 perl-Carp        noarch     1.42-396.el8    rhel-8.2-for-x86_64-baseos-rpms 30 k
 perl-Erno        x86_64     1.28-416.el8    rhel-8.2-for-x86_64-baseos-rpms 76 k
 perl-Exporter    noarch     5.72-396.el8    rhel-8.2-for-x86_64-baseos-rpms 34 k
 perl-File-Path   noarch     2.15-2.el8     rhel-8.2-for-x86_64-baseos-rpms 38 k
 perl-IO          x86_64     1.38-416.el8    rhel-8.2-for-x86_64-baseos-rpms 141 k
 perl-PathTools   x86_64     3.74-1.el8     rhel-8.2-for-x86_64-baseos-rpms 90 k
 perl-Scalar-List-Utils x86_64     3:1.49-2.el8   rhel-8.2-for-x86_64-baseos-rpms 68 k
 perl-Socket      x86_64     4:2.027-3.el8   rhel-8.2-for-x86_64-baseos-rpms 59 k
 perl-Text-Tabs+Wrap noarch     2013.0523-395.el8 rhel-8.2-for-x86_64-baseos-rpms 24 k
 perl-Unicode-Normalize x86_64     1.25-396.el8   rhel-8.2-for-x86_64-baseos-rpms 82 k
 perl-constant    noarch     1.33-396.el8   rhel-8.2-for-x86_64-baseos-rpms 25 k
 perl-interpreter x86_64     4:5.26.3-416.el8 rhel-8.2-for-x86_64-baseos-rpms 6.3 M
 perl-libs         x86_64     4:5.26.3-416.el8 rhel-8.2-for-x86_64-baseos-rpms 1.6 M
 perl-macros      x86_64     4:5.26.3-416.el8 rhel-8.2-for-x86_64-baseos-rpms 72 k
 perl-parent      noarch     1:0.237-1.el8   rhel-8.2-for-x86_64-baseos-rpms 20 k
perl-threads      x86_64     1:2.21-2.el8   rhel-8.2-for-x86_64-baseos-rpms 61 k
perl-threads-shared x86_64     1.58-2.el8    rhel-8.2-for-x86_64-baseos-rpms 48 k
samba-common-tools x86_64     4.11.2-13.el8   rhel-8.2-for-x86_64-baseos-rpms 472 k
samba-libs        x86_64     4.11.2-13.el8   rhel-8.2-for-x86_64-baseos-rpms 170 k
```

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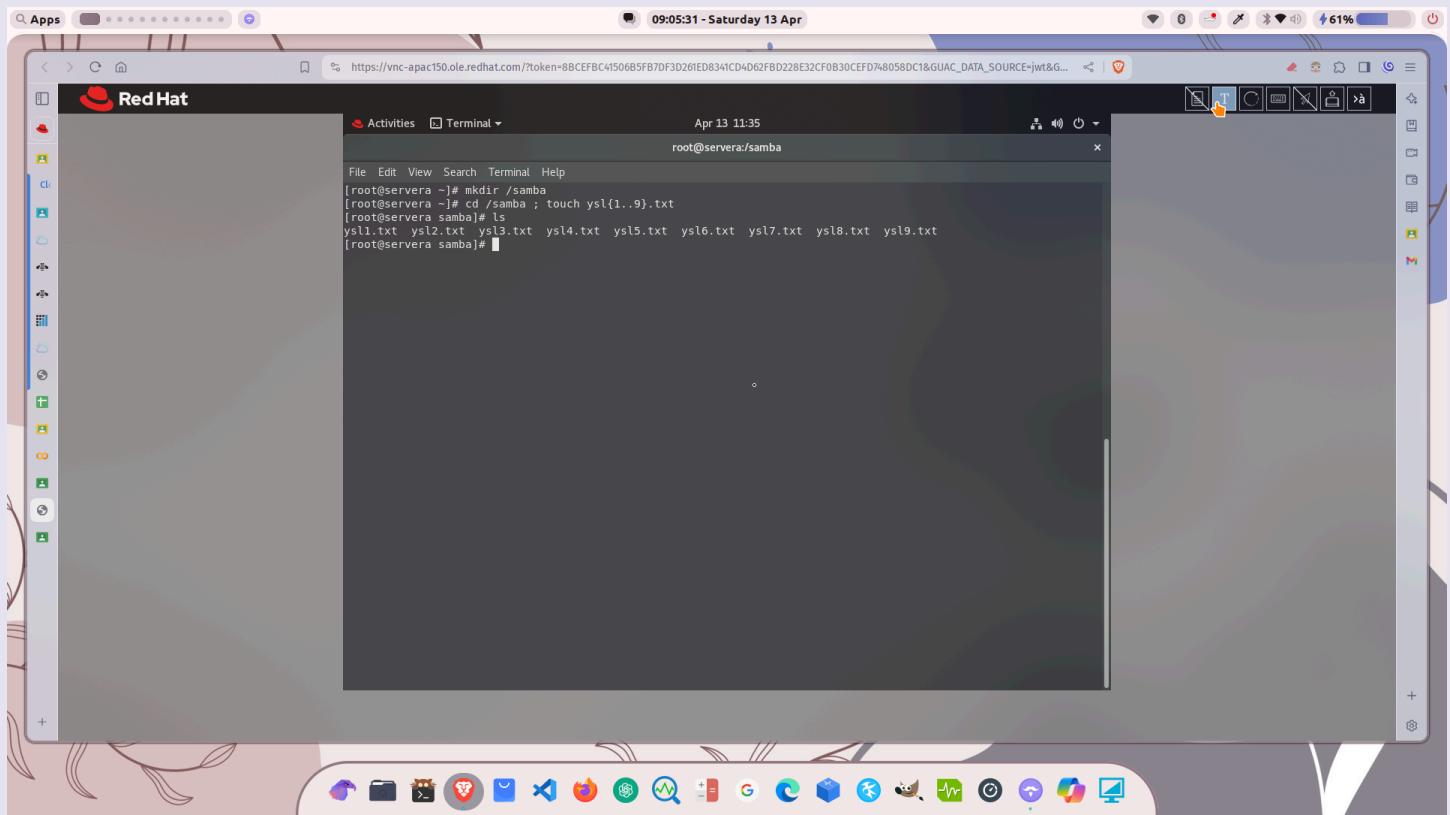
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Command : yum install samba samba-client samba-common

2. Create directories and files to check access



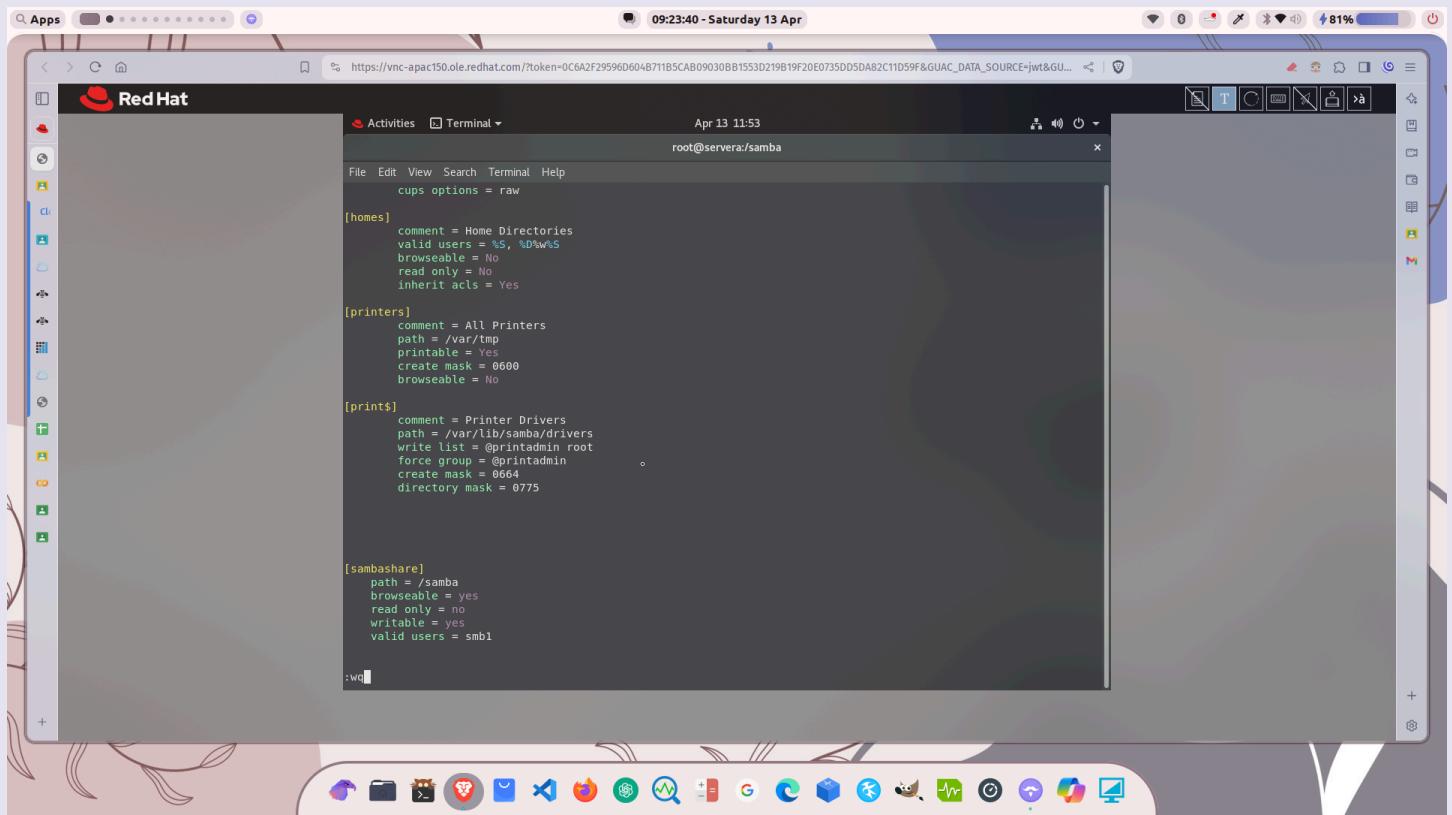
Commands :

- **mkdir /samba**
- **cd samba ; touch ysl{1..9}.txt (to create 9 files ysl1.txt to ysl9.txt in samba directory)**
- **ls**

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3. Open samba configuration file using vim editor and add the following lines

```
[sambashare]
path = /samba
browseable = yes
writable = yes
guest ok = no
valid users = smb1
```



Command : **vim /etc/samba/smb.conf**

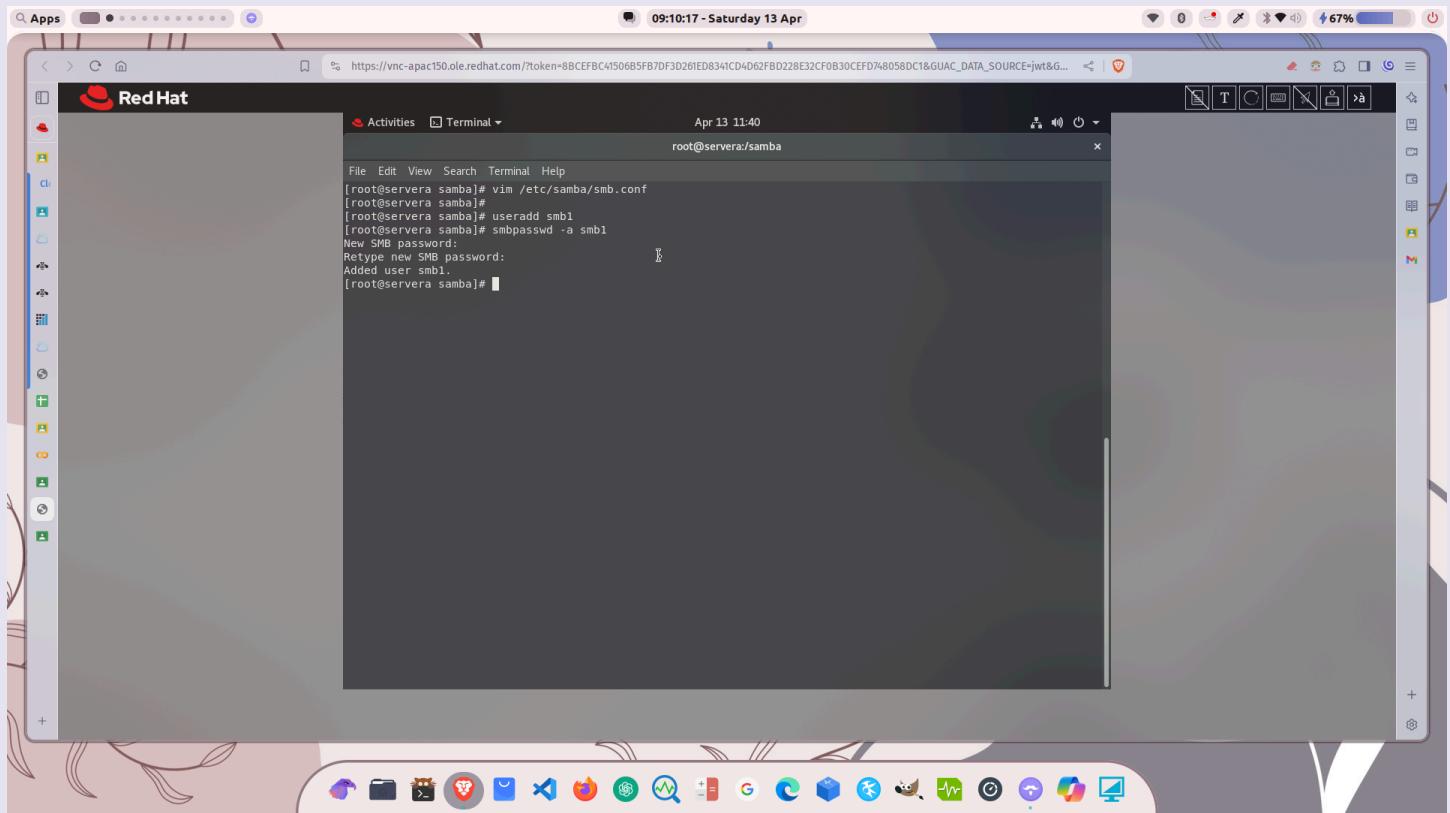
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4. Add smb1 user and assign its password via -a option of smbpasswd



Commands :

- **useradd smb1**
- **smbpasswd -a smb1**

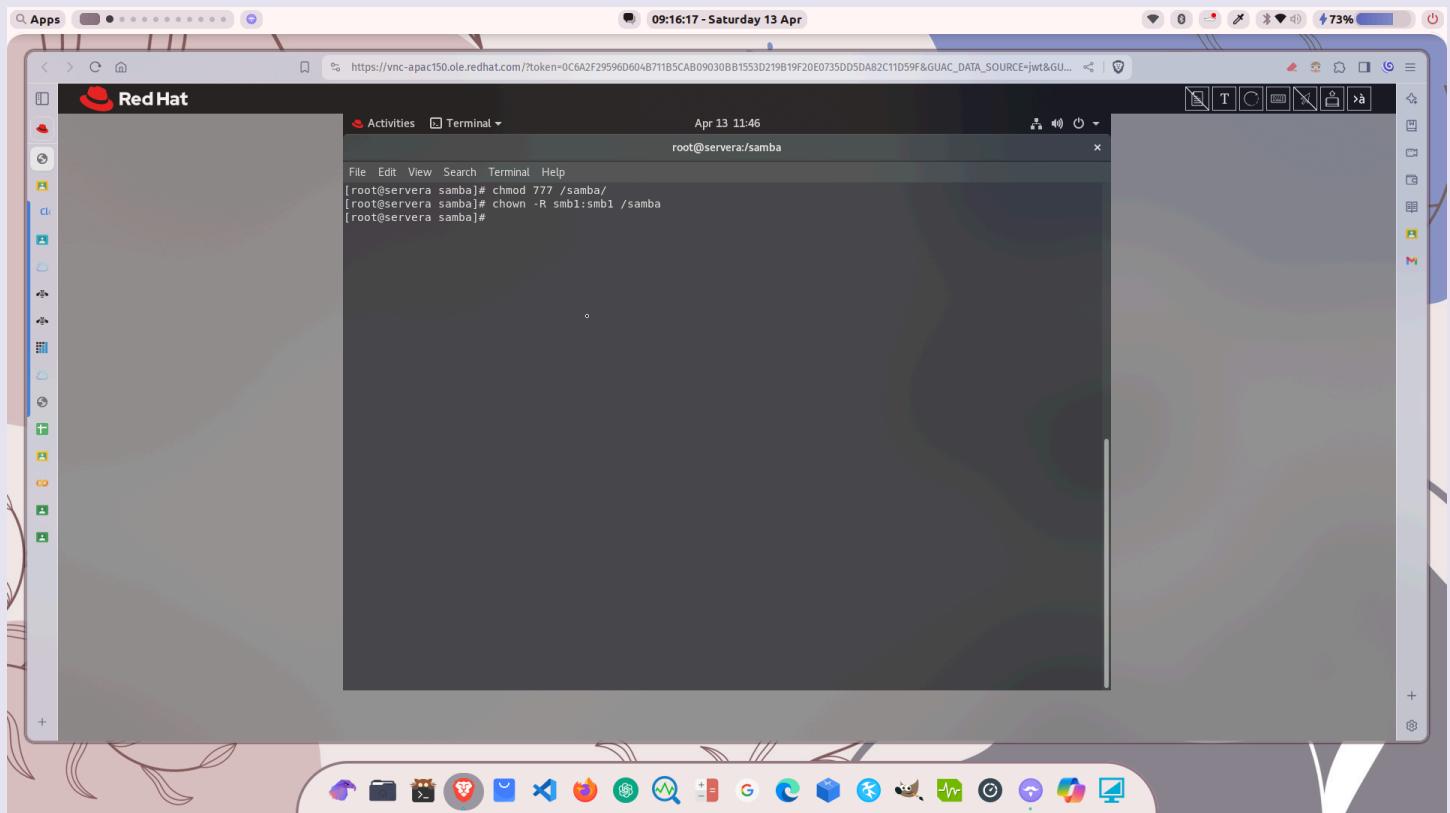
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5. Assign all permissions to smb1 user and also change the ownership of the samba directory to smb1



Commands :

- **chmod -R 777 /samba**
- **chown -R smb1:smb1 /samba**

(here, -R stands for recursive permissions on subdirs and subfiles also)

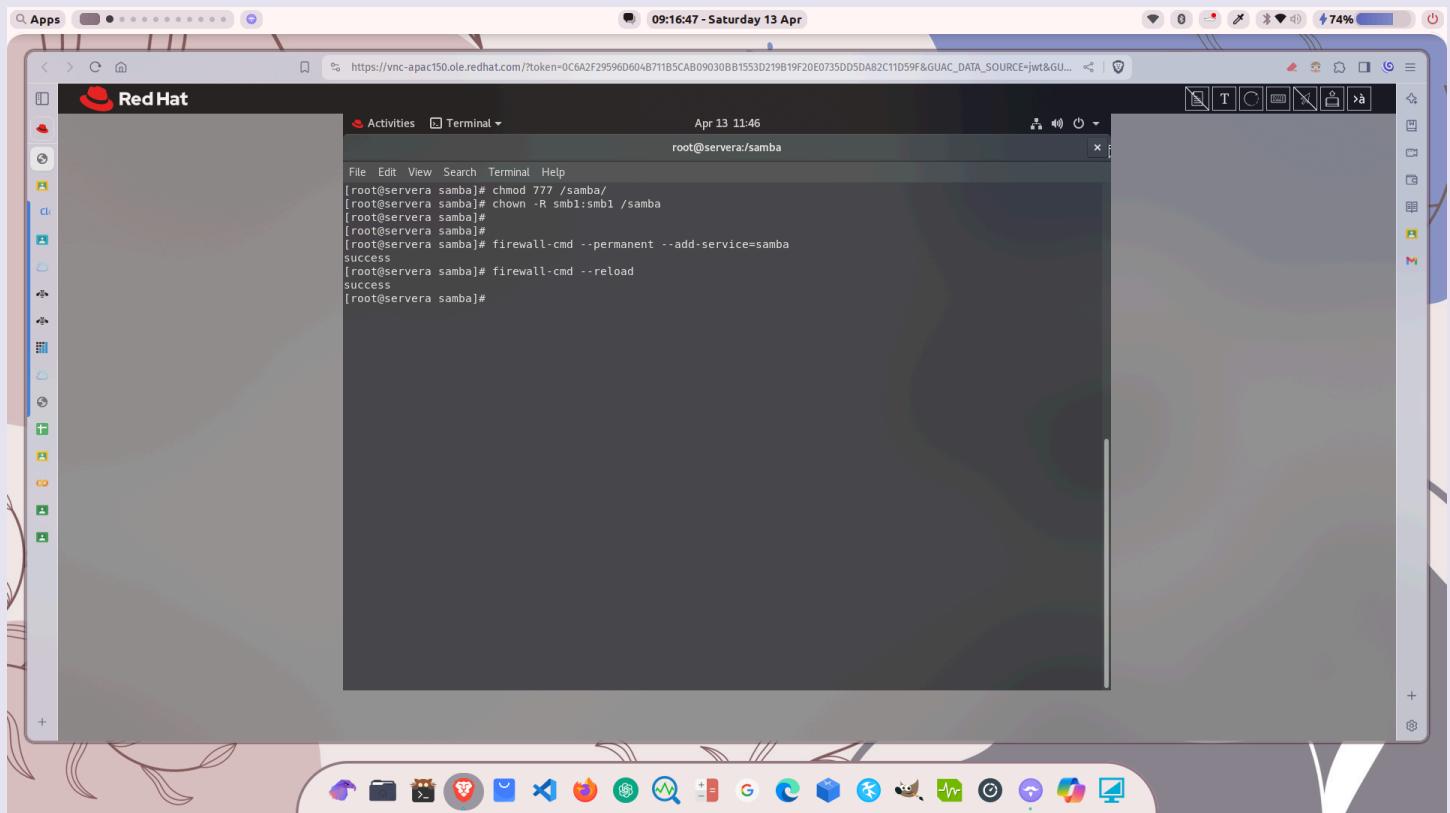
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6. Disable firewall protection on samba by adding it permanently to it and reload the firewall daemon



Commands :

- **firewall-cmd --permanent --add-service=samba**
- **firewall-cmd --reload**

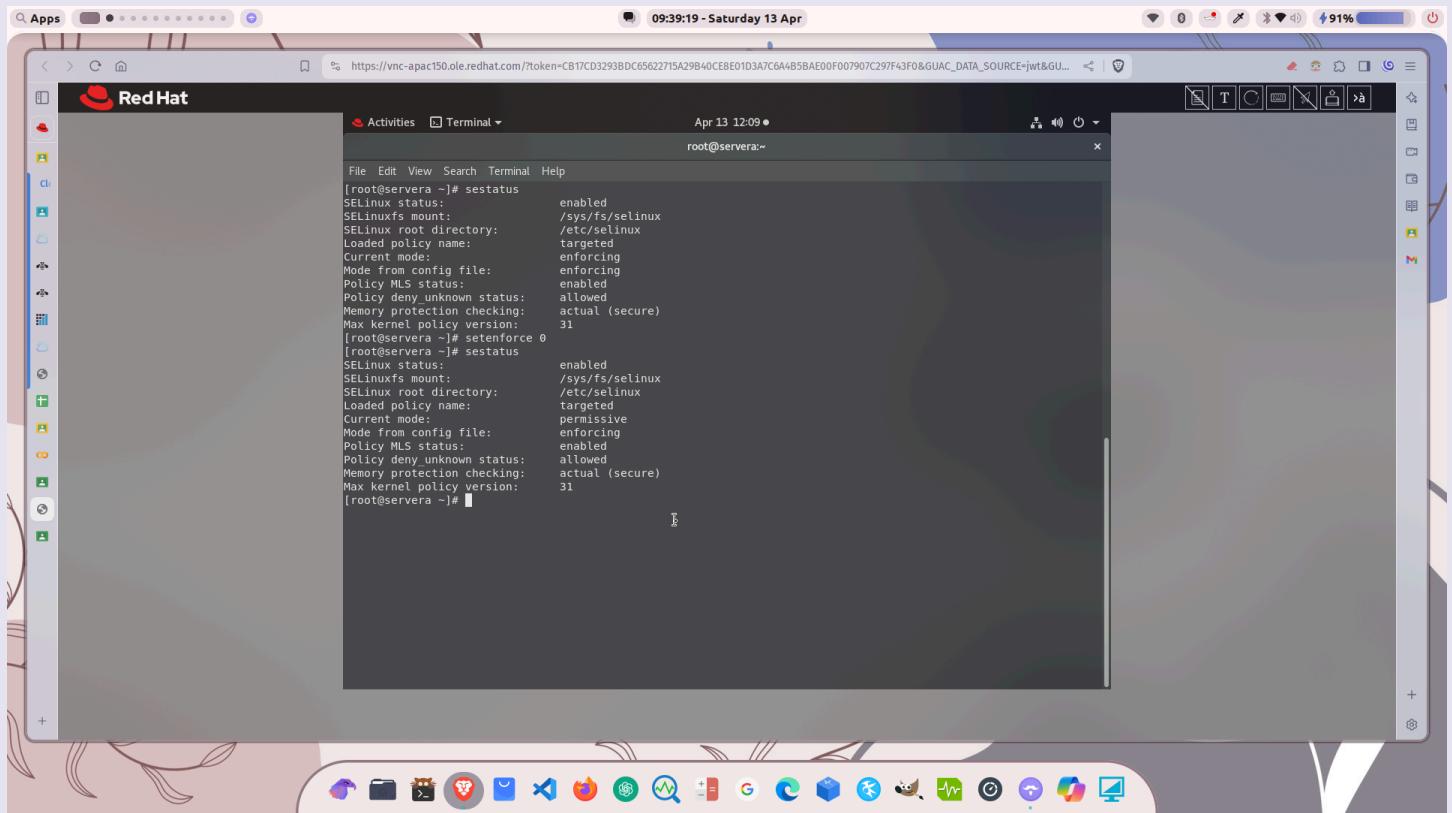
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7. Disable SELinux security temporarily if required by setenforce

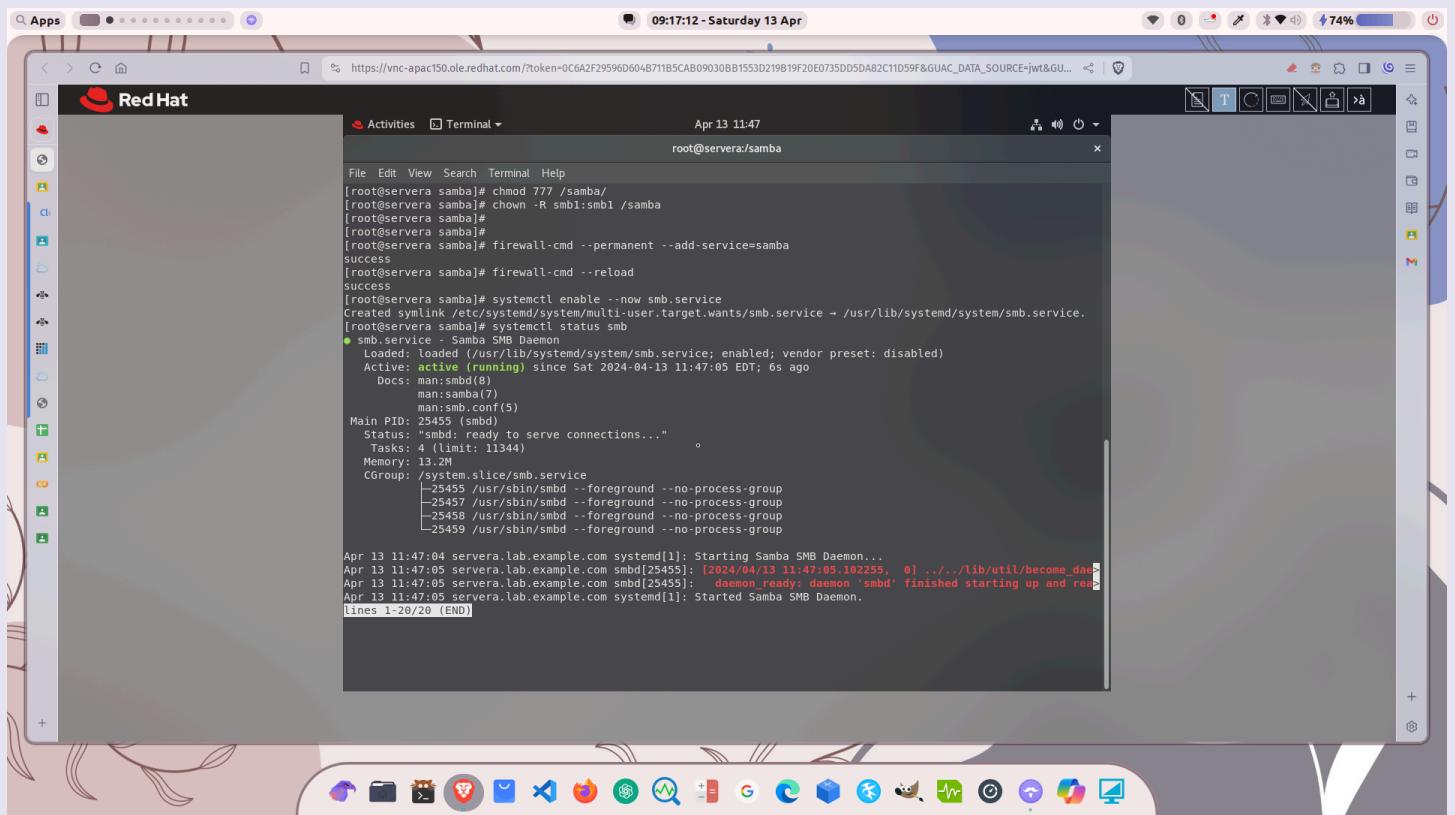


Commands :

- **sestatus** (to check SELinux status)
- **setenforce 0** (to disable enforcing the security temporarily)

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8. Enable and start the samba service



The screenshot shows a Red Hat Linux desktop environment. A terminal window titled 'root@servera:samba' is open, displaying the following command history:

```
root@servera samba]# chmod 777 /samba/
[root@servera samba]# chown -R smbl:smb1 /samba
[root@servera samba]#
[root@servera samba]# firewall-cmd --permanent --add-service=samba
success
[root@servera samba]# firewall-cmd --reload
success
[root@servera samba]# systemctl enable --now smb.service
Created symlink /etc/systemd/system/multi-user.target.wants/smb.service → /usr/lib/systemd/system/smb.service.
[root@servera samba]# systemctl status smb
● smb.service - Samba SMB Daemon
  Loaded: loaded (/usr/lib/systemd/system/smb.service; enabled; vendor preset: disabled)
  Active: active (running) since Sat 2024-04-13 11:47:05 EDT; 6s ago
    Docs: man:smb(8)
           man:smb.conf(5)
  Main PID: 25455 (smbd)
  Status: "smbd: ready to serve connections..."
     Tasks: 4 (limit: 11344)
    Memory: 13.2M
   CGroup: /system.slice/smb.service
           └─25455 /usr/sbin/smbd --foreground --no-process-group
               ├─25457 /usr/sbin/smbd --foreground --no-process-group
               ├─25458 /usr/sbin/smbd --foreground --no-process-group
               └─25459 /usr/sbin/smbd --foreground --no-process-group

Apr 13 11:47:04 servera.lab.example.com systemd[1]: Starting Samba SMB Daemon...
Apr 13 11:47:05 servera.lab.example.com smbd[25455]: [2024/04/13 11:47:05.102255,  0] ../../lib/util/become_daemon[main]: daemon_ready: daemon 'smbd' finished starting up and ready to handle connections
Apr 13 11:47:05 servera.lab.example.com systemd[1]: Started Samba SMB Daemon.
lines 1-20/20 (END)
```

Command : **systemctl enable –now smb.service**

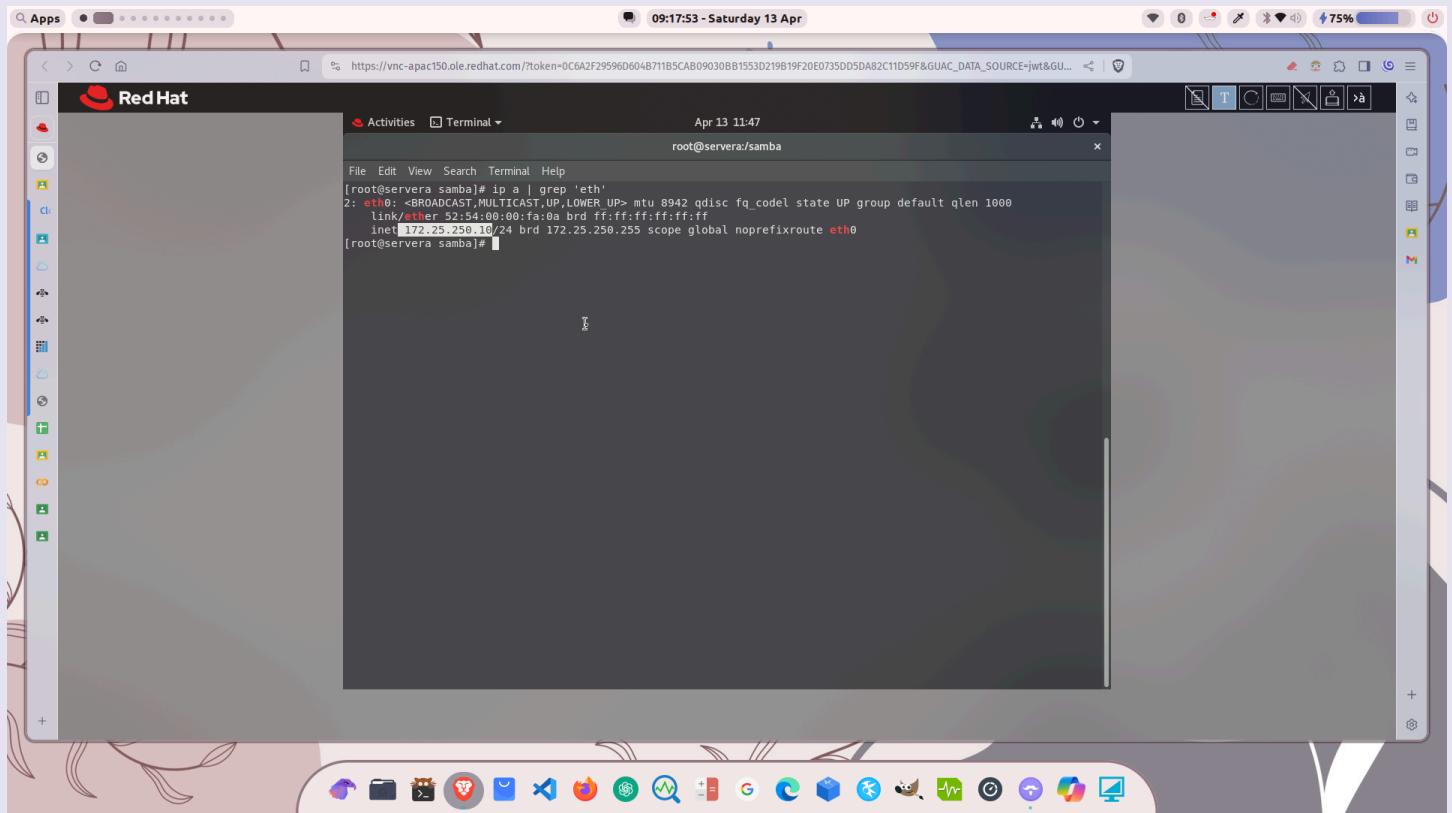
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9. Grep the IP address of the default ethernet interface of servera



Command : **ip a | grep 'eth0'**

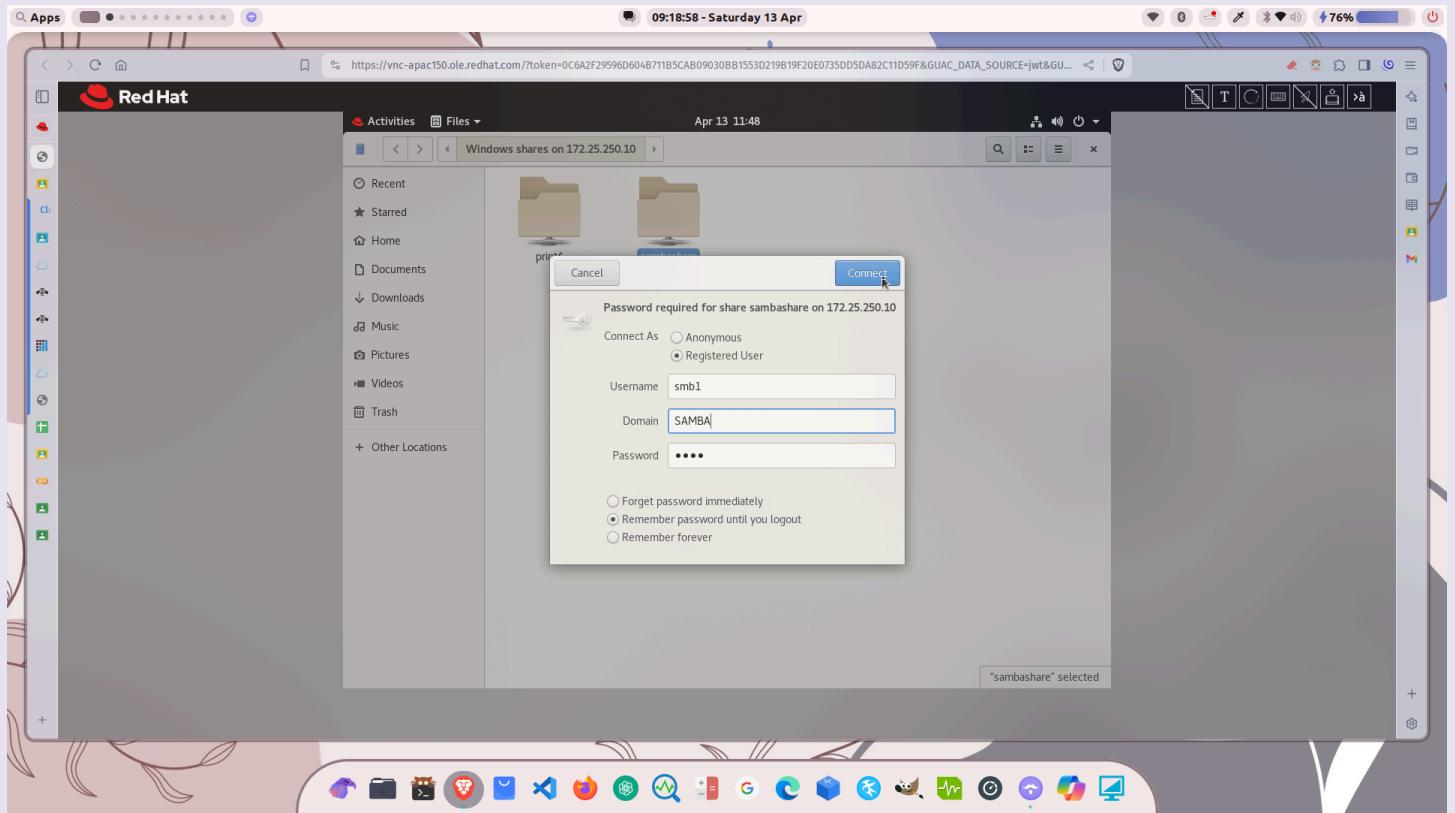
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10. Use the IP to access sambashare from workstation, in Files (Nautilus file manger), open other locations and enter address, **smb://IP** and enter username and password assigned



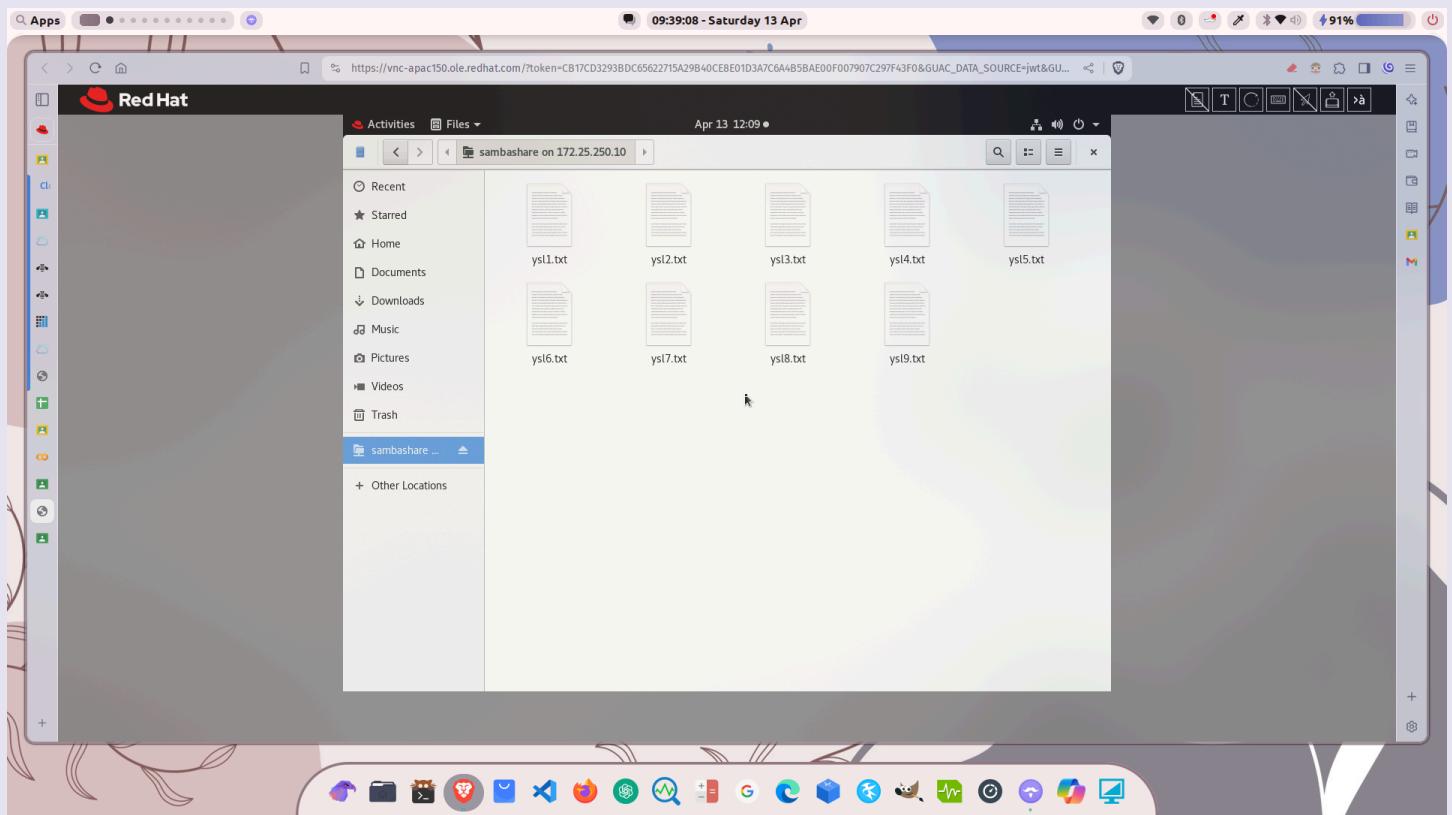
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11. The access should now be enables and contents will be visible



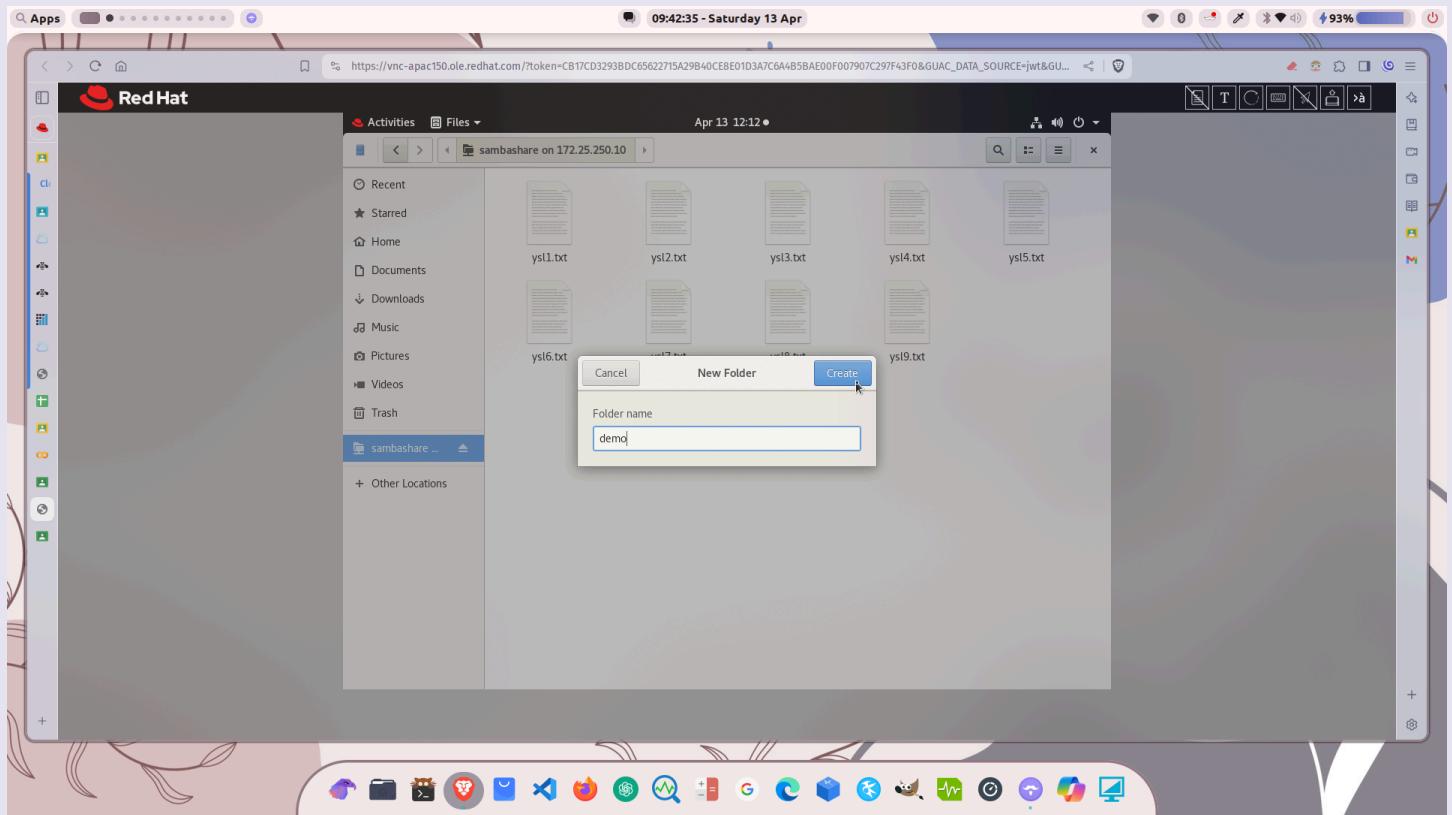
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12. Try creating a folder to check write access

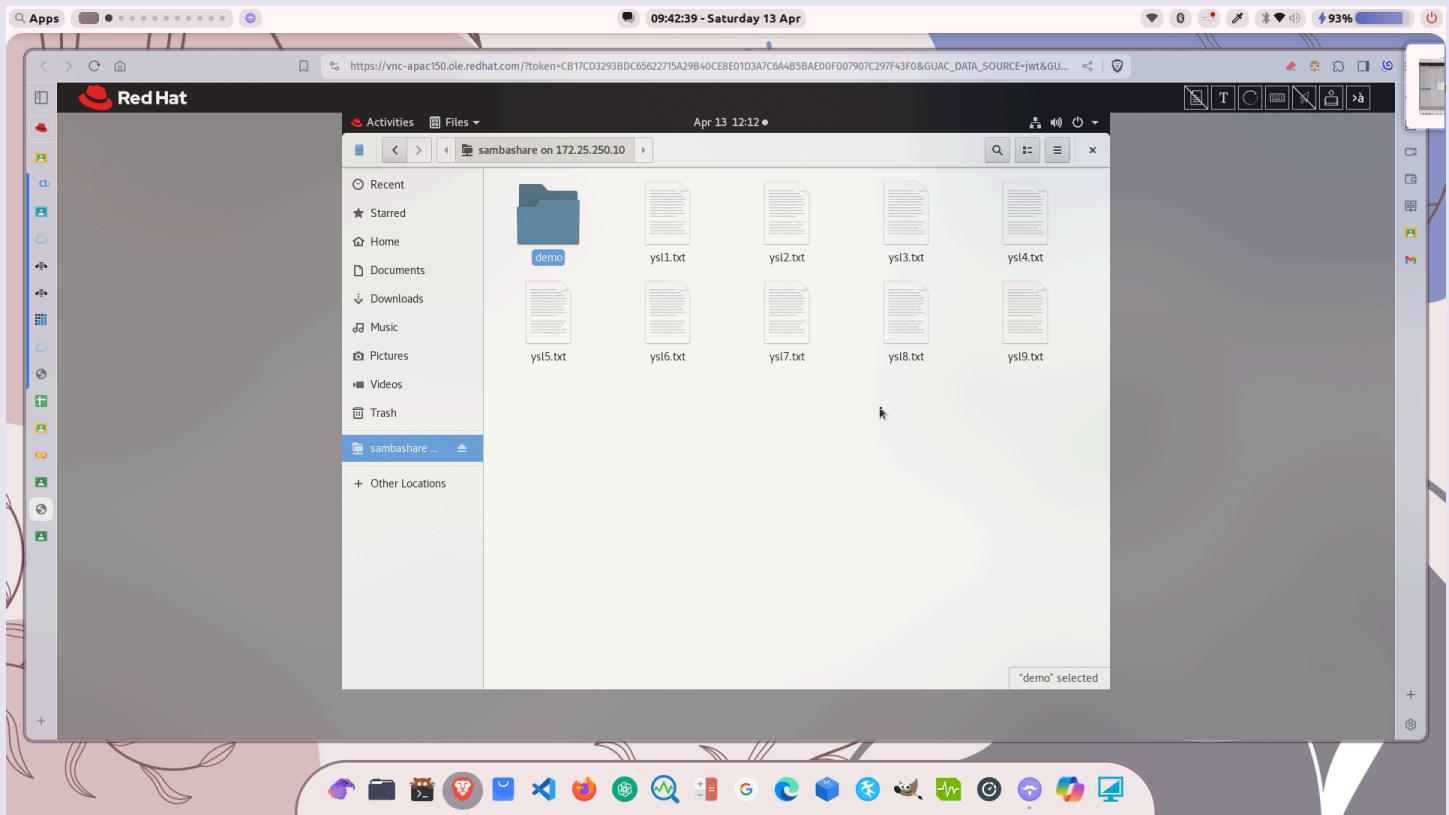


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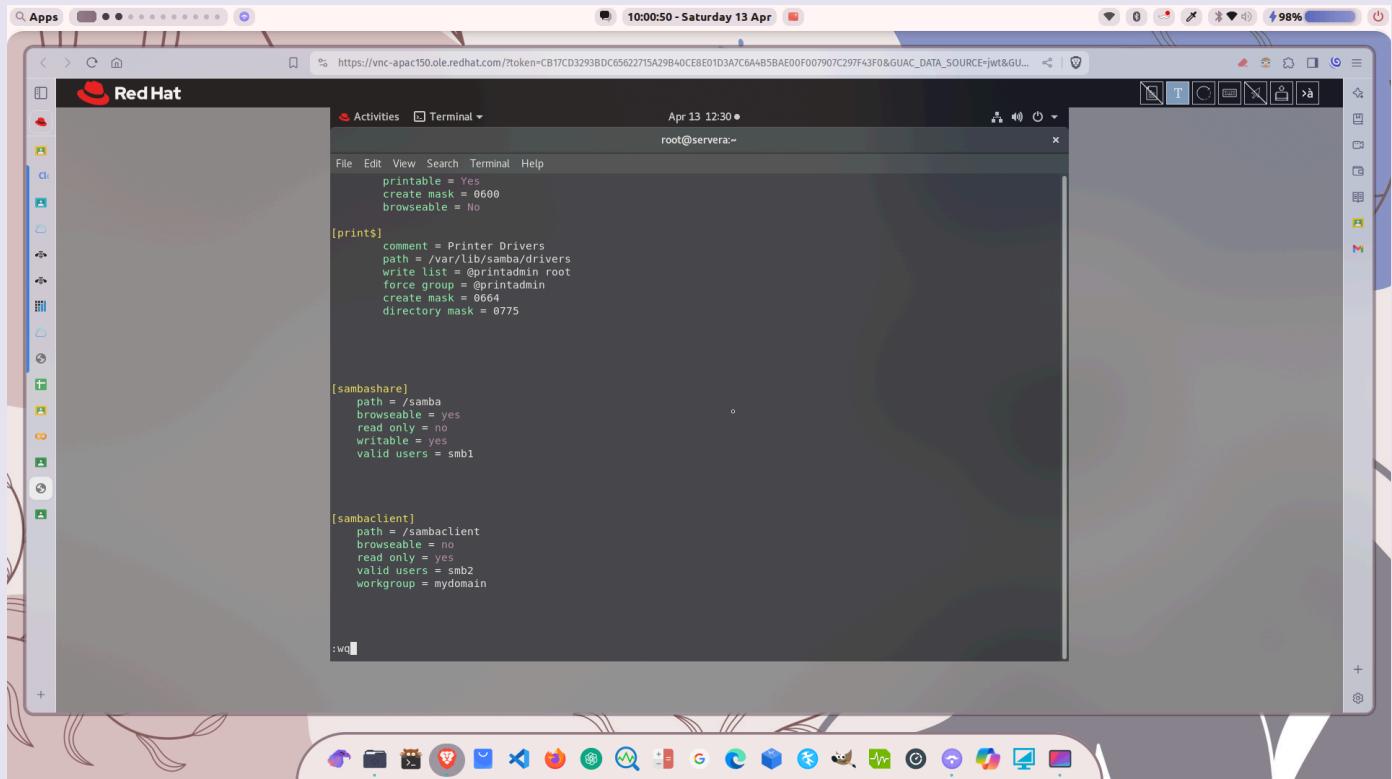
Question 2: Configure samba share /sambaclient

- a) Share should be accessible only to host.
- b) Share should be read only.
- c) Set the WORKGROUP to mydomain.
- d) Mount this persistently on /smbclient with smb2 user.

1. Open samba configuration file and add the following lines :

[sambaclient]

```
path = /sambaclient
browseable = no
read only = yes
valid users = @smbgroup
workgroup = mydomain
```



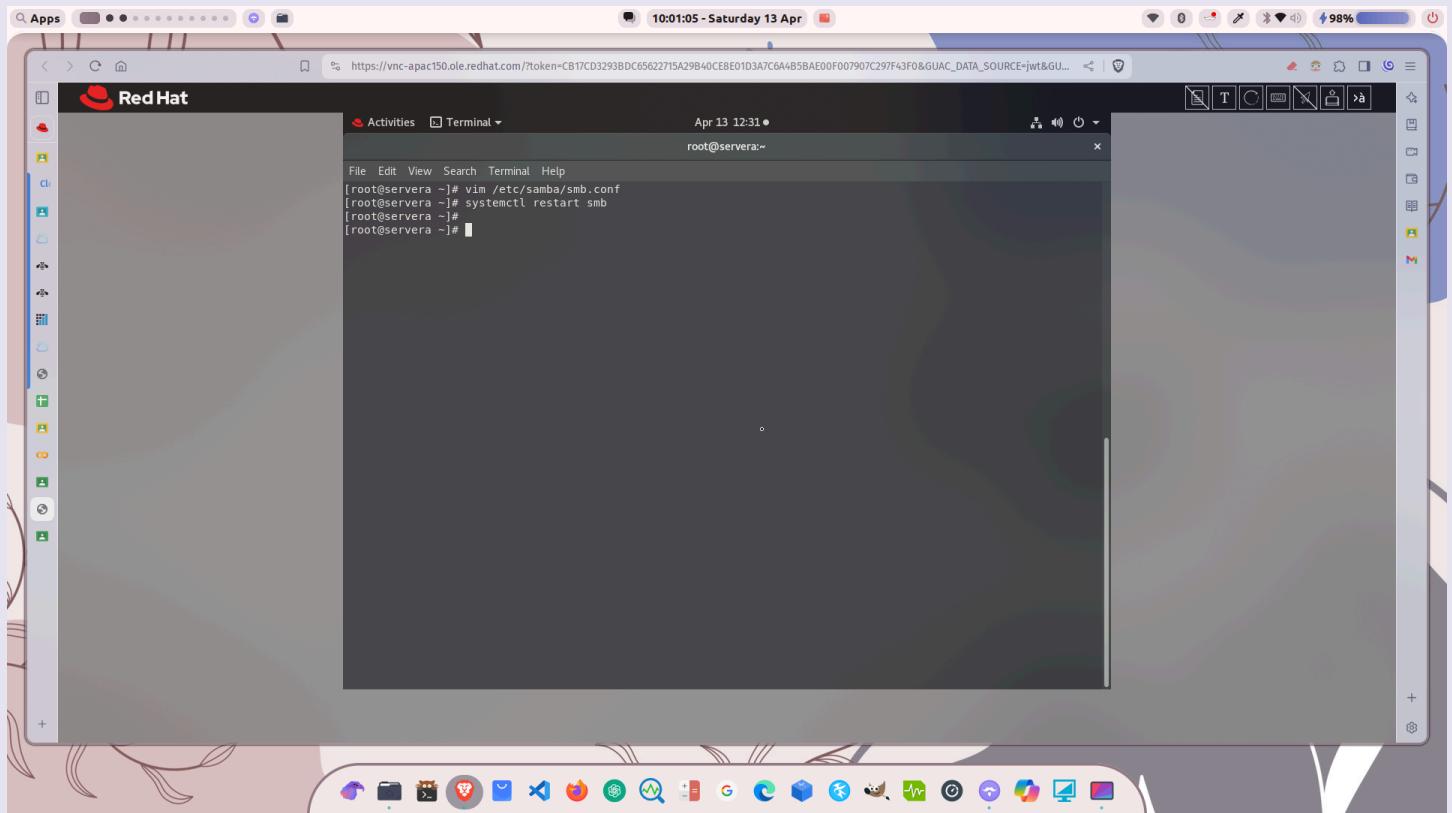
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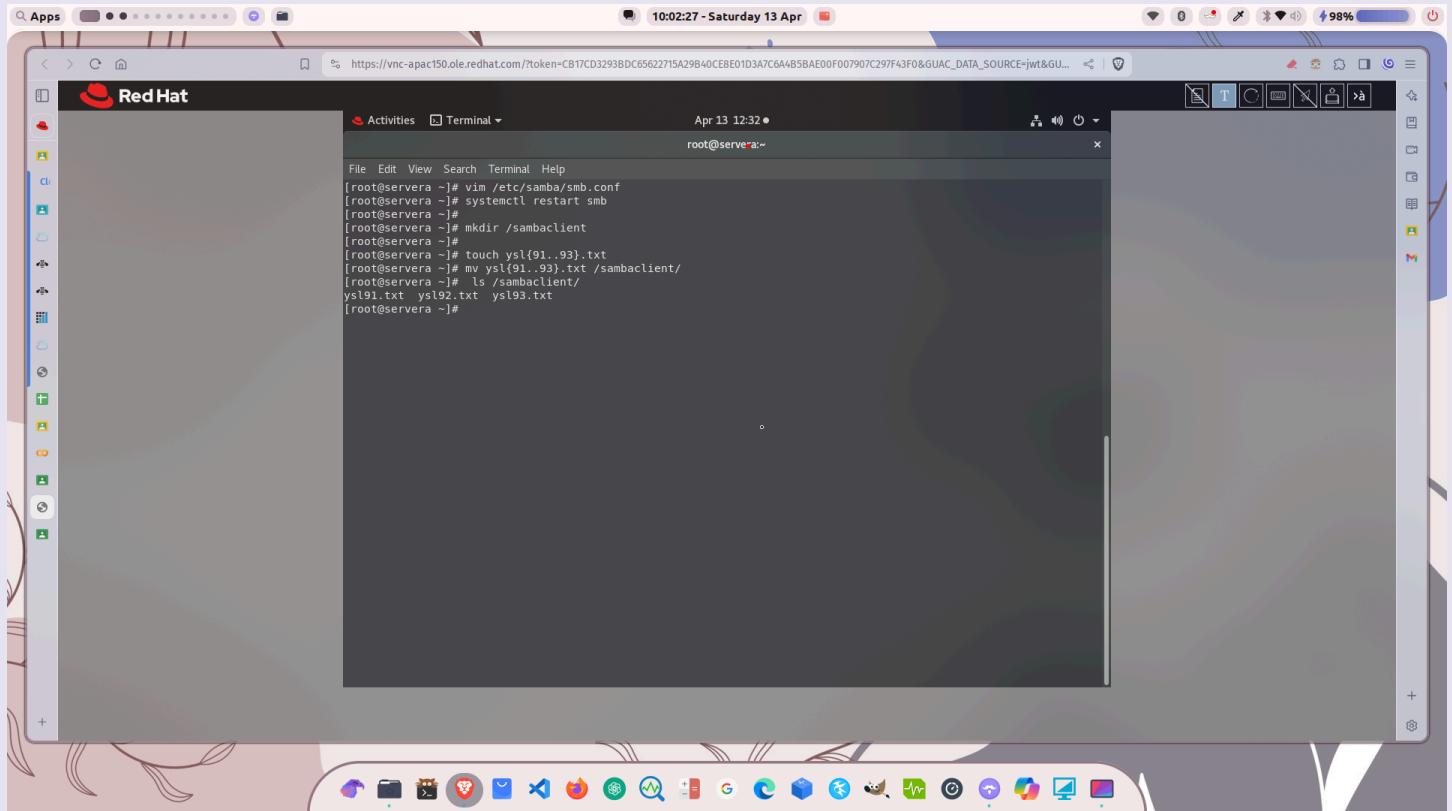
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2. Restart the samba service using **systemctl restart smb**



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3. Create the required directory and files for sambaclient



Commands :

- **mkdir /sambaclient**
- **touch ysl{91..93}.txt**

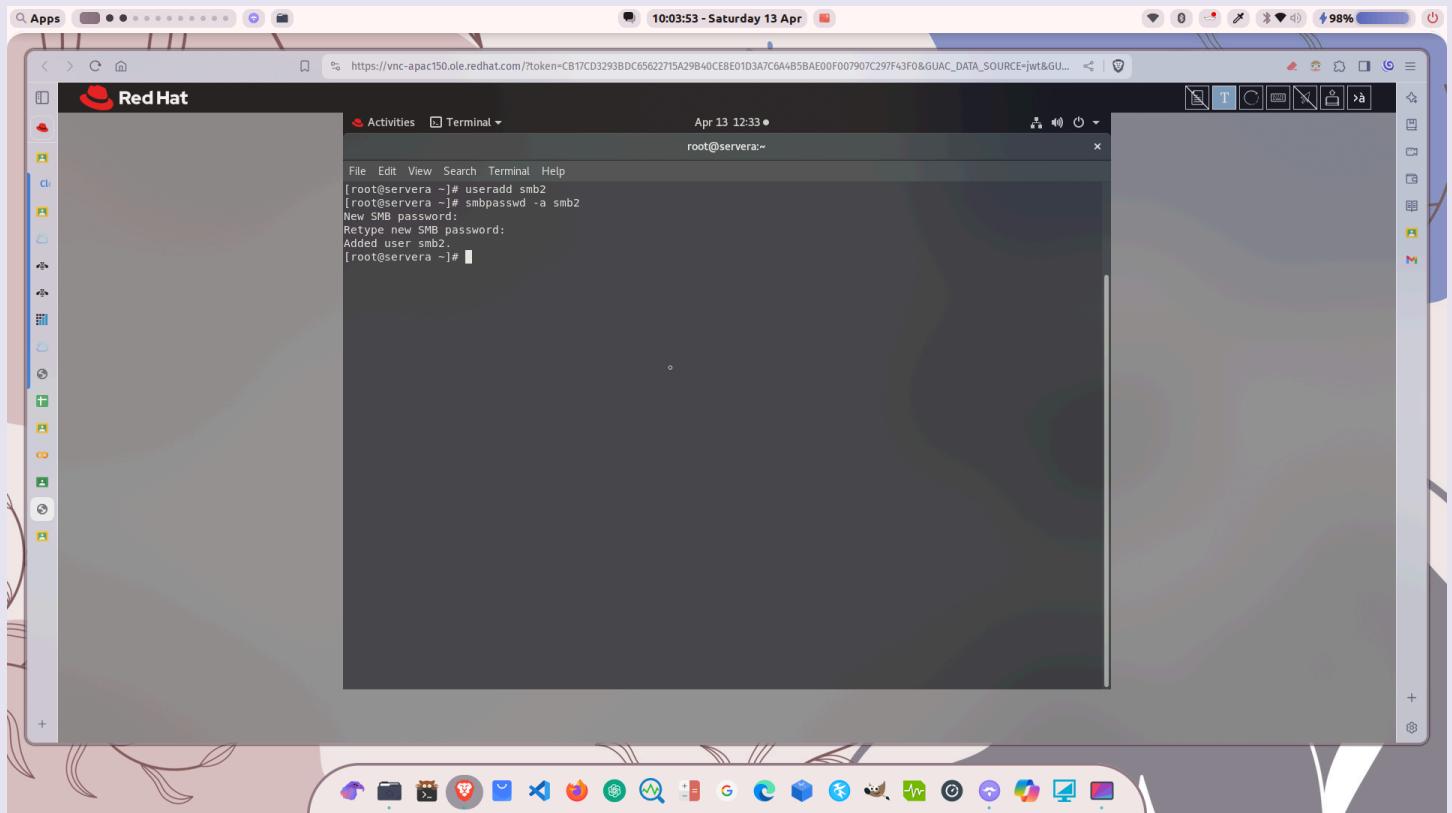
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4. Add smb2 user and assign its samba password same as earlier



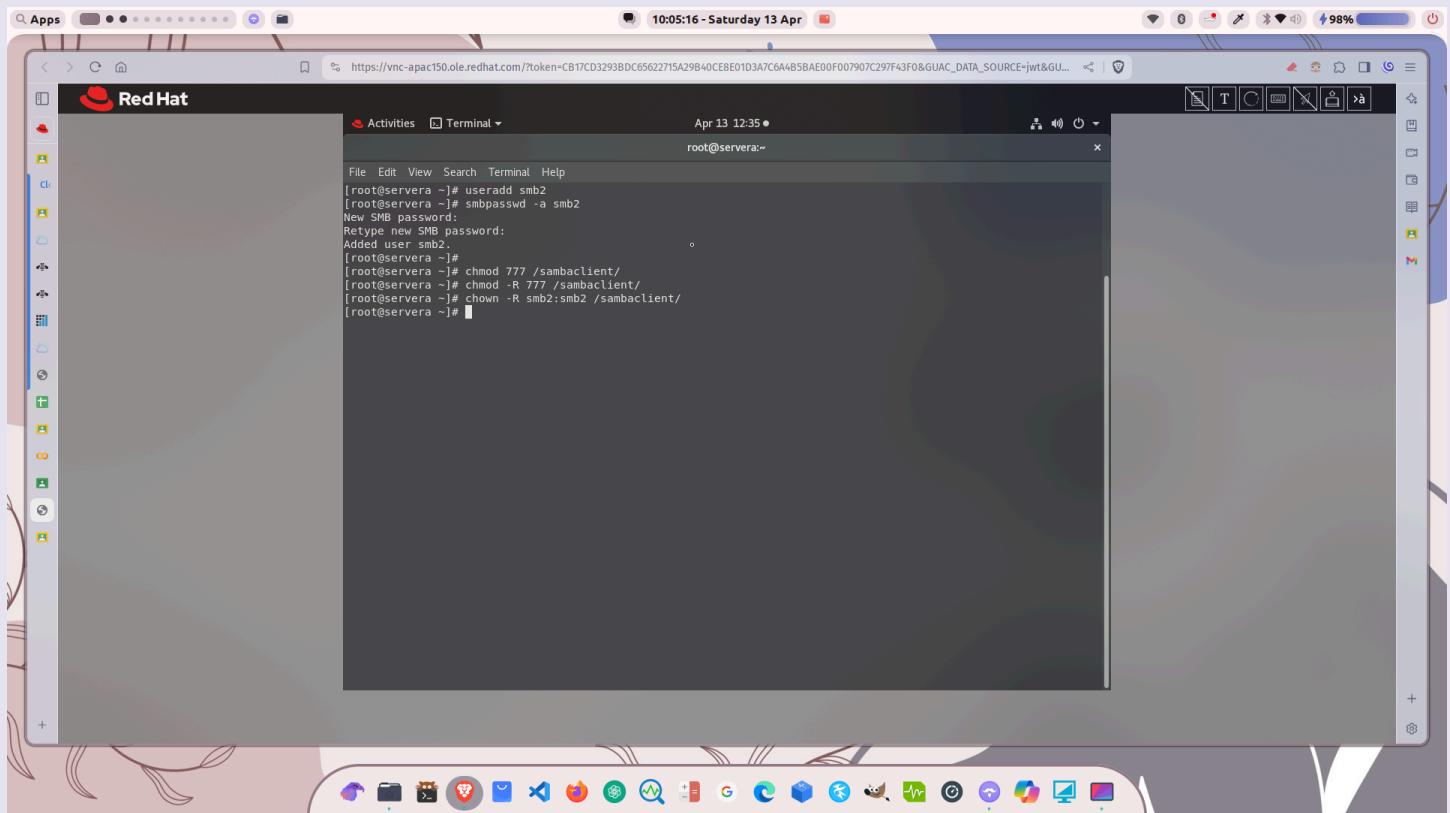
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5. Change permissions and ownership of sambaclient folder to smb2 user same as earlier done



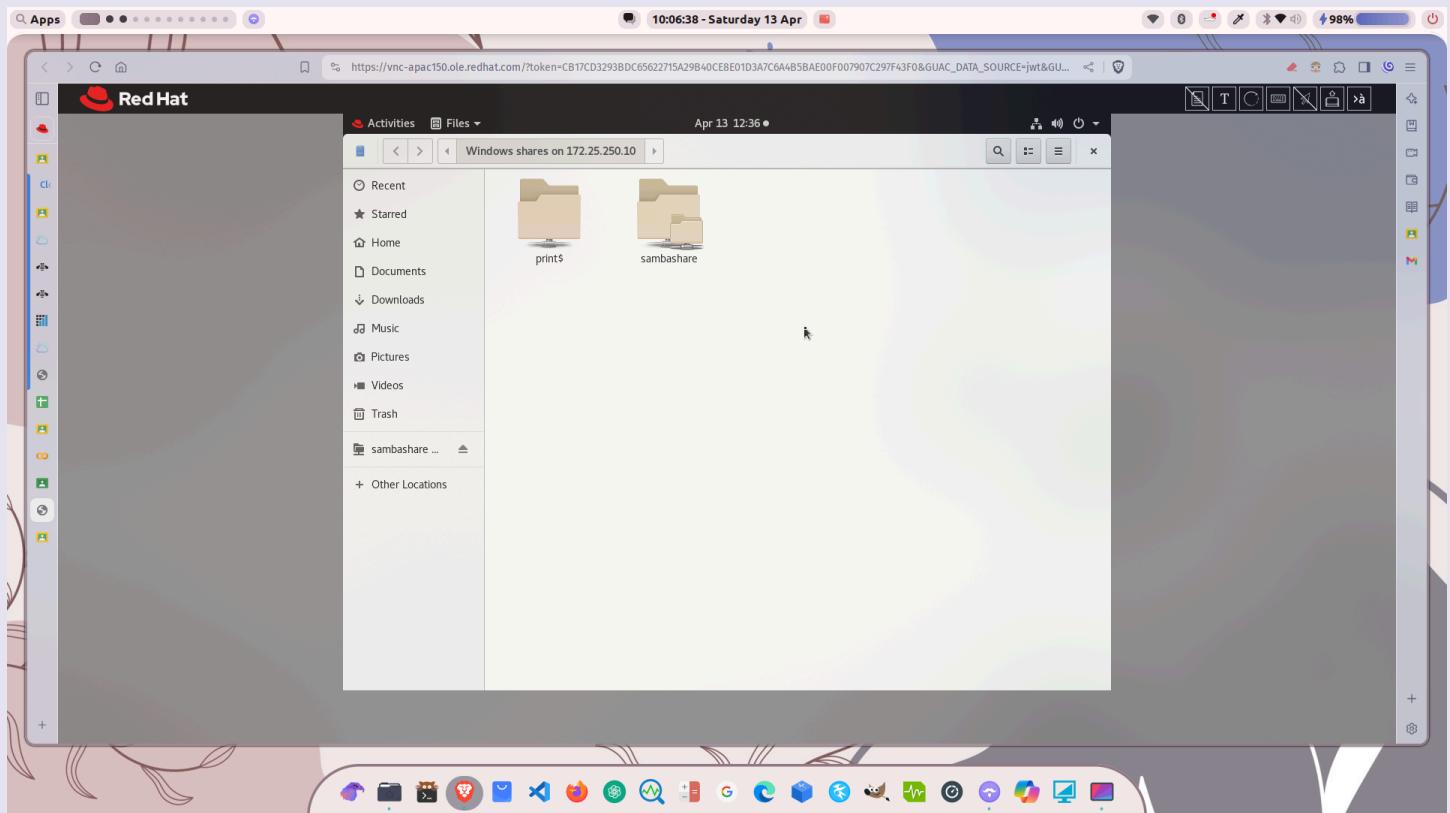
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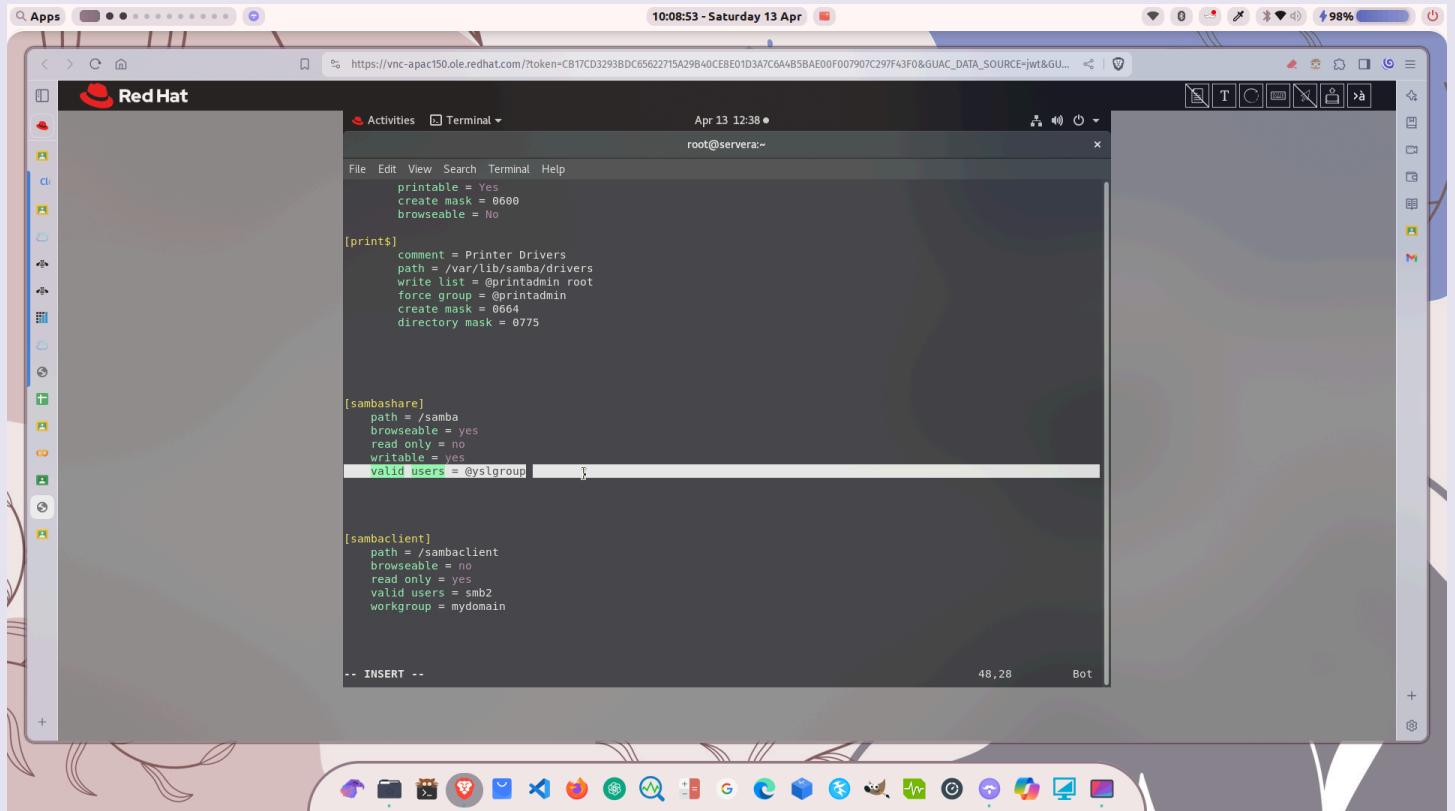
6. But, now, in workstation the sambaclient is not visible as it is not shared outside host (here, server)



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Question 3: Share the folder to a group of users.

1. For the folder created earlier sambashare, change the line in config file for valid users and assign groupname there, here yslgroup using '@' symbol



The screenshot shows a Red Hat Linux desktop environment with a terminal window open. The terminal window title is 'Activities Terminal'. The command being run is 'vi /etc/samba/smb.conf'. The configuration file contains the following relevant sections:

```
printable = Yes
create mask = 0660
browseable = No

[print$]
comment = Printer Drivers
path = /var/lib/samba/drivers
write list = @printadmin root
force group = @printadmin
create mask = 0664
directory mask = 0775

[sambashare]
path = /samba
browseable = yes
read only = no
writable = yes
valid users = @yslgroup

[sambaclient]
path = /sambaclient
browseable = no
read only = yes
valid users = smb2
workgroup = mydomain

-- INSERT --
```

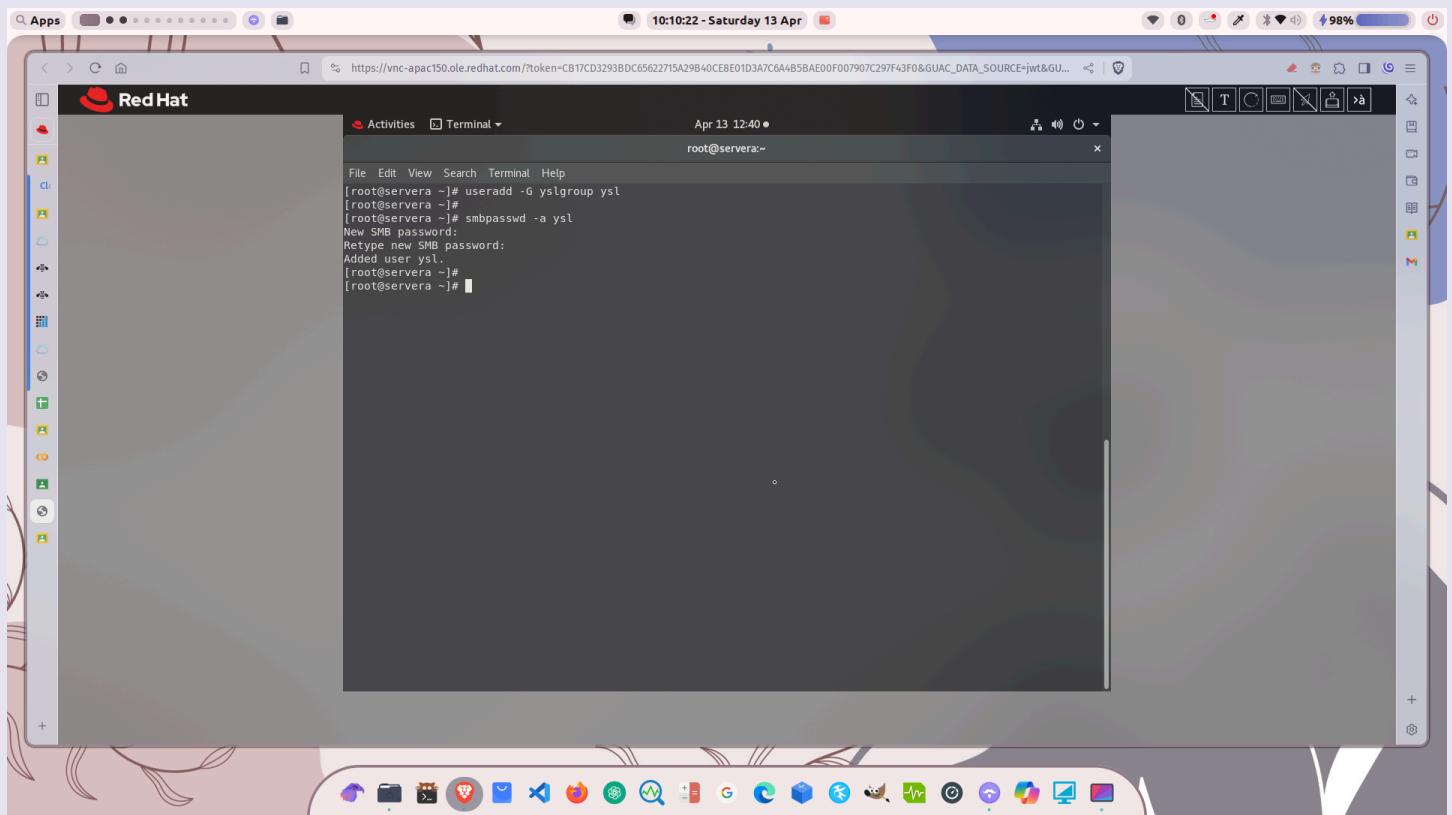
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2. Create group using groupadd and add the user (here ysl) to it



Commands :

- **groupadd yslgroup**
- **useradd -G yslgroup ysl** (to add usl to secondary group yslgroup)
- **smbpasswd -a ysl**

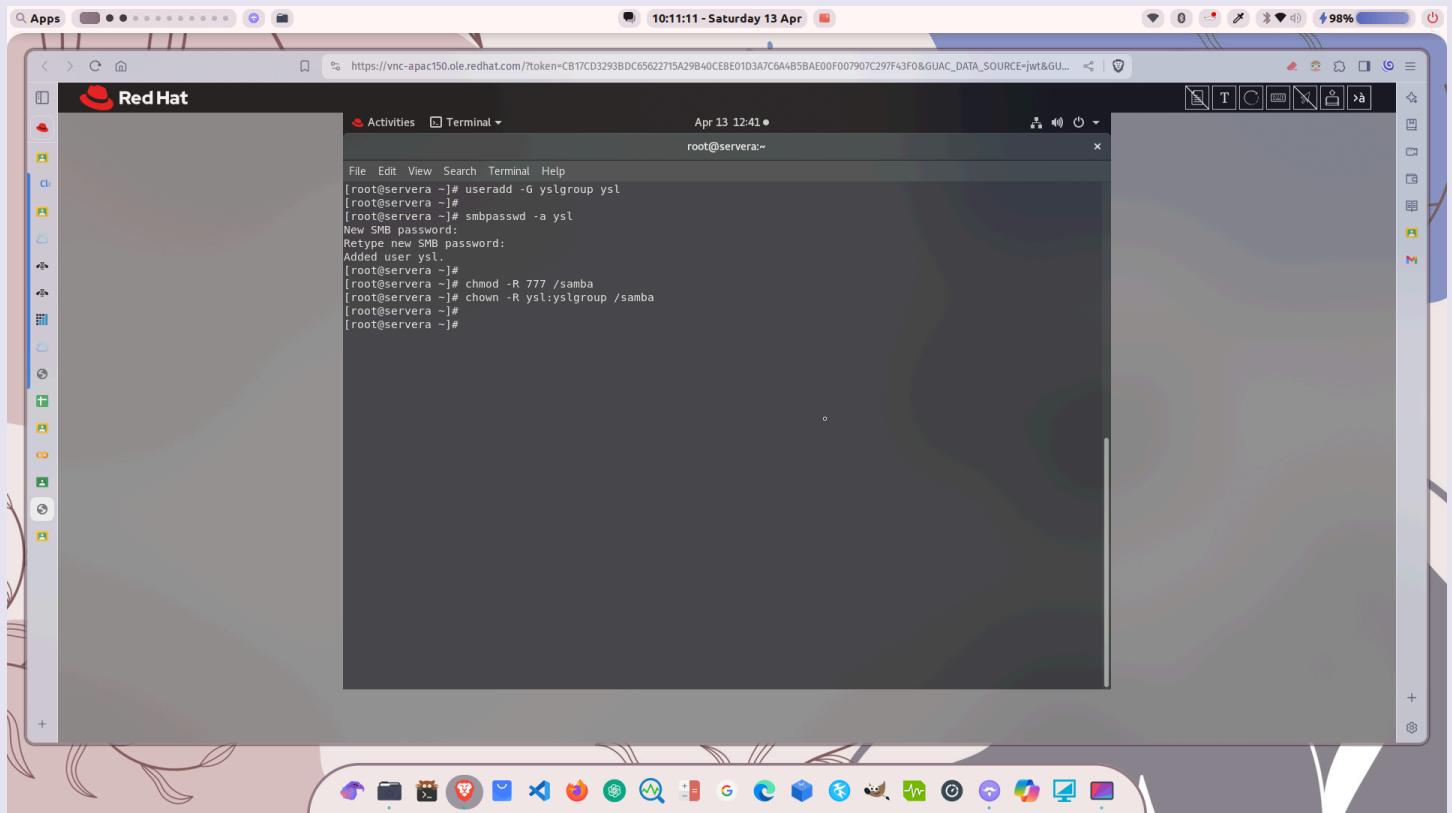
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3. Change ownership and assign required permissions to the folder



Commands :

- **chmod -R 777 /samba**
- **chown -R ysl:yslgroup /samba**

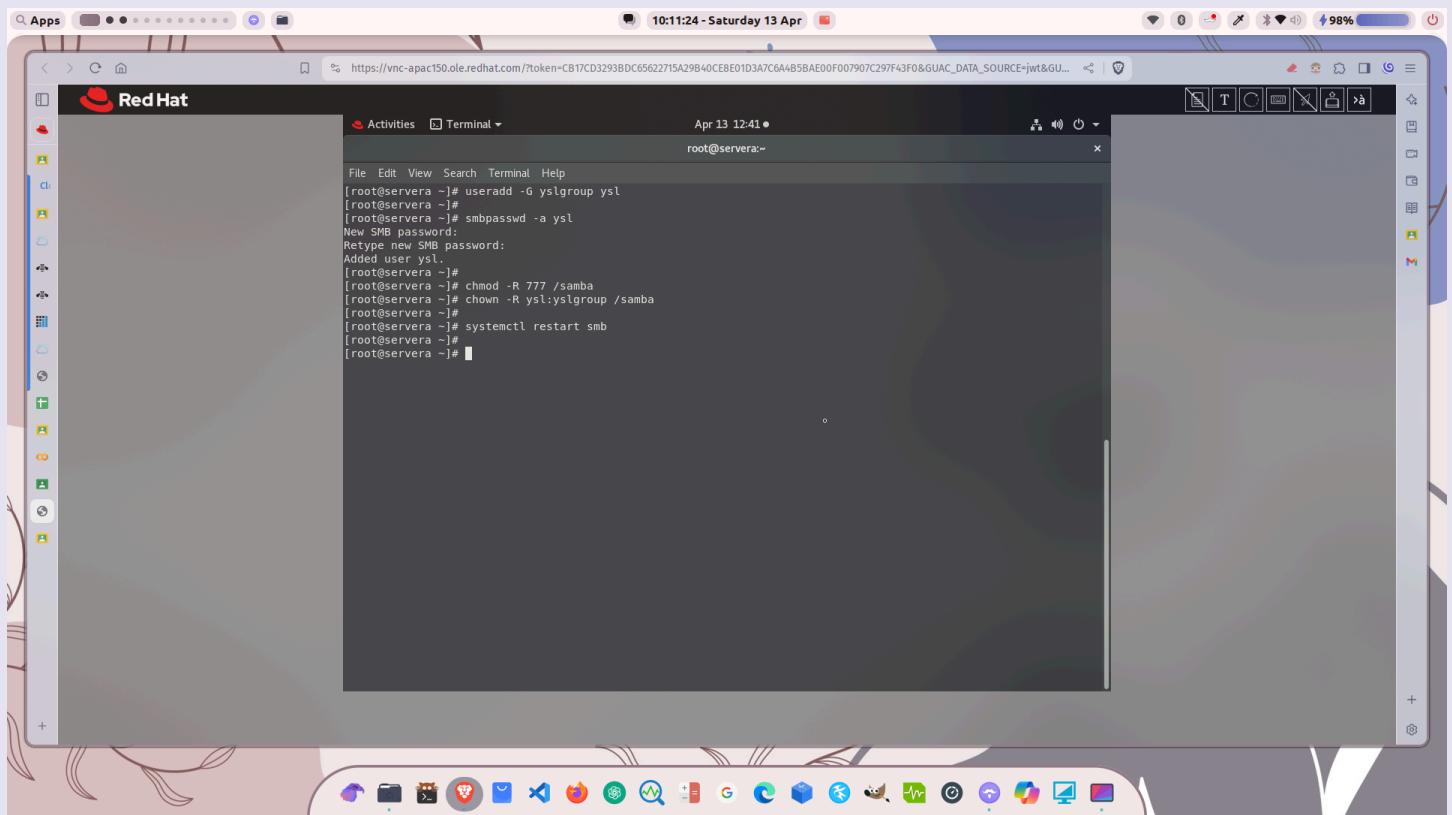
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4. Restart the samba service using **systemctl restart smb**



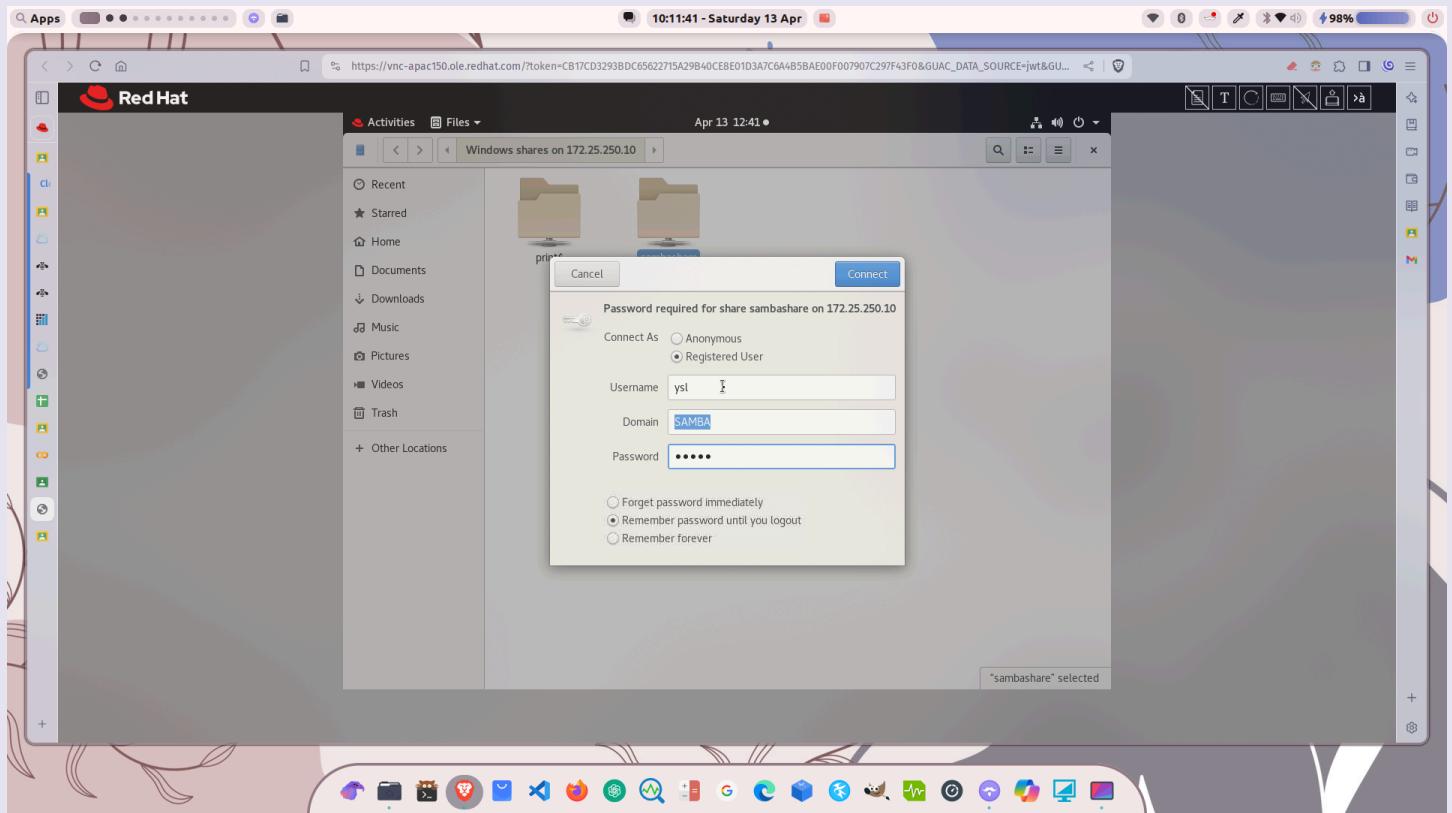
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5. Now, try to access sambashare using ysl user of yslgroup



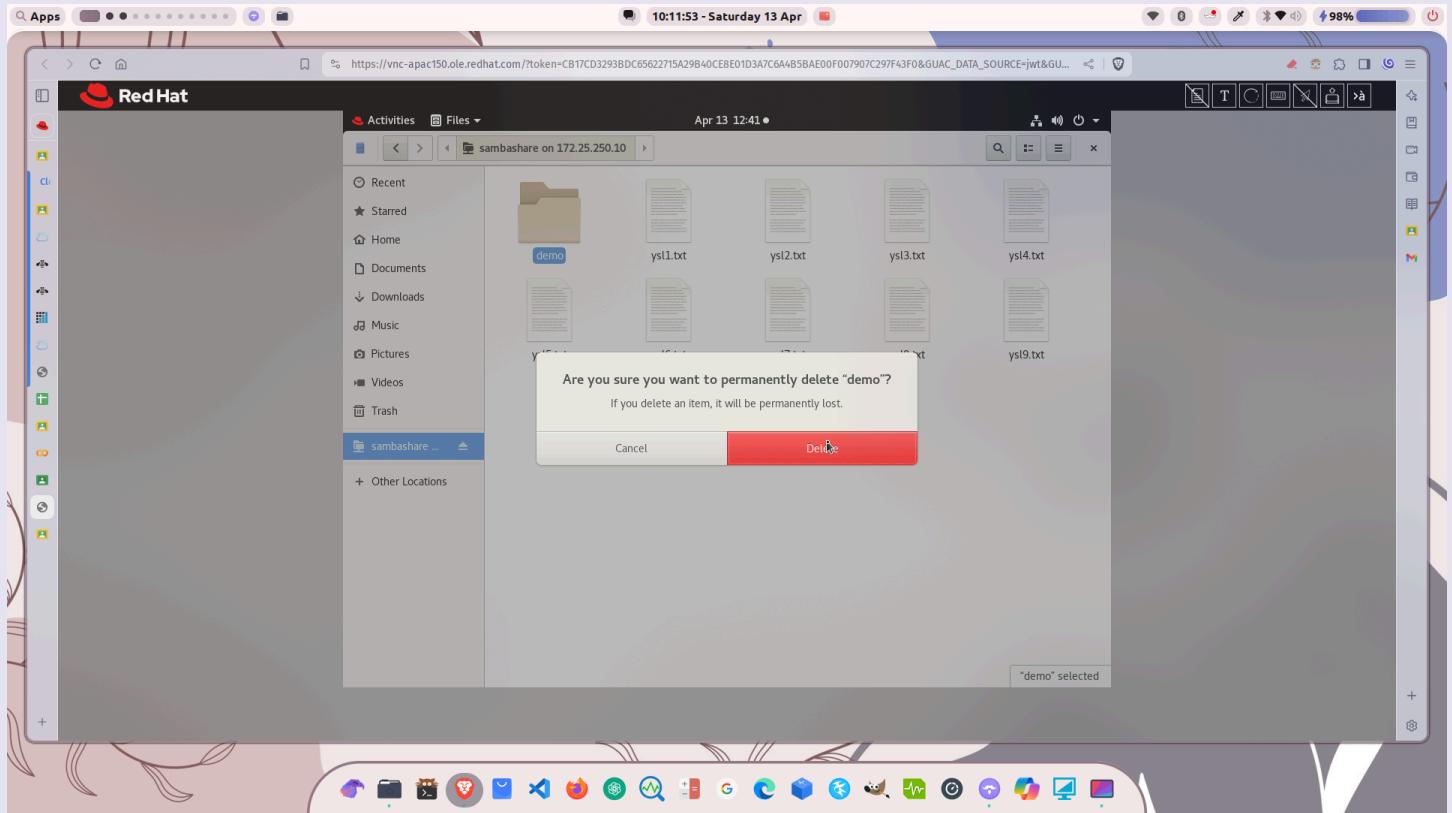
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6. It will work and also write access is there, here, deleting folder is demonstrated



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