

Samba download, install and configuration

- Samba is a Linux tool or utility that allows sharing for Linux resources such as files and printers to with other operating systems
- It works exactly like NFS but the difference is NFS shares within Linux or Unix like system whereas Samba shares with other OS (e.g. Windows, MAC etc.)

For example, computer “A” shares its filesystem with computer “B” using Samba then computer “B” will see that shared filesystem as if it is mounted as the local filesystem

- Samba shares its filesystem through a protocol called **SMB** (Server Message Block) which was invented by IBM
- Another protocol used to share Samba is through **CIFS** (Common Internet File System) invented by Microsoft and also NMB (NetBios Name server)
- **CIFS** became the extension of **SMB** and now Microsoft has introduced newer version of SMB v2 and v3 that are mostly used in the industry
- Most people, when they use either SMB or CIFS, are talking about the same exact thing. The two are interchangeable not only in discussion, but also in application – i.e., a client speaking CIFS can talk to a server speaking SMB and vice versa. Why? Because CIFS is a form of SMB

Step by steps installation instructions

First please make sure to take a snapshot of your VM

- Install samba packages
Become root user
`yum install samba samba-client samba-common`
- Enable samba to be allowed through firewall (Only if you have firewall running)
`firewall-cmd --permanent --zone=public --add-service=samba`
`firewall-cmd -reload`
- To stop and disable firewall or iptables
`systemctl stop firewalld`
`systemctl stop iptables`
`systemctl disable firewalld`
`systemctl disable iptables`

- Create Samba share directory and assign permissions


```
# mkdir -p /samba/morepretzels
# chmod a+rwX /samba/morepretzels
# chown -R nobody:nobody /samba
```
- Also, you need to change the SELinux security context for the samba shared directory as follows: *(Only if you have SELinux enabled)*

```
# chcon -t samba_share_t /samba/morepretzels
```
- If you want to disable SELinux, follow these instructions


```
# sestatus To check the SELinux status)
# vi /etc/selinux/config
```

 Change
 SELINUX=enforcing
 To
 SELINUX=disabled

```
# reboot
```
- Modify `/etc/samba/smb.conf` file to add new shared filesystem (*Make sure to create a copy of smb.conf file*)
 Delete everything from smb.conf file and add the following parameters

```
[global]
    workgroup = WORKGROUP
    netbios name = centos
    security = user
    map to guest = bad user
    dns proxy = no

[Anonymous]
    path = /samba/morepretzels
    browsable = yes
    writable = yes
    guest ok = yes
    guest only = yes
    read only = no
```

- Verify the setting


```
# testparm
```
- Once the packages are installed, enable and start Samba services


```
# systemctl enable smb
# systemctl enable nmb
# systemctl start smb
# systemctl start nmb
```

- Mount on Windows client
 - Go to start
 - Go to search bar
 - Type `\\192.168.1.95` (This is my server IP, you can check your Linux CentOS IP by running the command `ifconfig`)
- Mount on Linux client


```

Become root
# yum -y install cifs-utils samba-client
Create a mount point directory
# mkdir /mnt/sambashare
Mount the samba share
# mount -t cifs //192.168.1.95/Anonymous /mnt/sambashare/
# Entry without password
      
```

Secure Samba Server

- Create a group `smbgrp` & user `larry` to access the samba server with proper authentication

```

# useradd larry
# groupadd smbgrp
# usermod -a -G smbgrp larry
# smbpasswd -a larry
New SMB password: YOUR SAMBA PASS
Retype new SMB password: REPEAT YOUR SAMBA PASS
Added user larry
      
```

- Create a new share, set the permission on the share:

```

# mkdir /samba/securepretzels
# chown -R larry:smbgrp /samba/securepretzels
# chmod -R 0770 /samba/securepretzels
# chcon -t samba_share_t /samba/securepretzels
      
```

- Edit the configuration file `/etc/samba/smb.conf` (Create a backup copy first)

```

# vi /etc/samba/smb.conf
Add the following lines
[Secure]
    path = /samba/securepretzels
    valid users = @smbgrp
    guest ok = no
      
```

```
writable = yes  
browsable = yes
```

- Restart the services
`systemctl restart smb`
`systemctl restart nmb`