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
```