Samba for Dummies

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What is Samba

- From www.samba.org “Samba is the standard Windows interoperability suite of programs for Linux and Unix.”
- Provides file and print sharing for Windows clients from Linux servers.
- Samba is freely available under the GNU General Public License.

Getting Samba to Work

- Install Samba
- Configure Samba
- Add users (smbpasswd)
- Connect from Windows Client

Installing Samba

- Install from source or...
- Install from package
  - Debian based OS
    - `apt-get install samba cifs-utils smbclient`
  - Fedora based OS
    - `yum install samba cifs-utils smbclient`

Check for samba processes

After installation samba is generally started automatically

```
# ps ax | grep mbd
25690 ?        Ss     0:16 /usr/sbin/smbd -D
25726 ?        S      0:02 /usr/sbin/smbd -D
25742 ?        Ss     0:09 /usr/sbin/nmbd -D
```

Typical samba server processes

Configuring Samba

- smb.conf is the configuration file for samba
- Generally located at /etc/samba/smb.conf
- Detailed and richly commented file with many options explained

Three different smb.conf configs

Today demonstrate three different samba configurations. The first is a very simple two line config to a more complex, but still simple config that includes shared printers and something in between.

smb.conf configuration

- Backup the original

  `mv smb.conf smb.conf.master`

- Create minimal smb.conf using text editor

  `vi smb.conf`

smb.conf file sections

- Enclosed in brackets [ ]
- Each section in the configuration file (except for the [global] section) describes a share
- There are three special sections, [global], [homes] and [printers]
- Any other section describes a shared resource, i.e. [data] or [photos] and how it is shared.

First smb.conf file - two lines!

```
[homes]
read only = no
```

- [homes] special section provides access to the users /home/*username* directory.
- Default of read only=yes so we need to override the default

[homes] special section

A fast and simple way to give a large number of clients access to their home directories with a minimum of fuss.

For example mapping a drive to `G:` to `\\server\homes` gives access to files in `/home/username` on the samba (Linux) server

smbpasswd command

Used to create and manage samba users

`smbpasswd -a` *`username`*

`New smb password:`

username is the same name as existing linux user name. Password that will be used from Windows client.

`smbpasswd` *`username`* changes a password

Restart samba

- Be sure to restart samba after smb.conf changes.
- Check your changes with testparm.

```
smbcontrol all reload-config
/etc/init.d/samba restart (Debian)
service smbd restart (Debian)
service smb reload (Fedora)
```

testing with smbclient

ftp-like client to access SMB/CIFS resources on servers

Test if samba is sharing:

`smbclient -N -L localhost`

Simiilar to Windows `net view` command

```
Domain=[WORKGROUP] OS=[Unix] Server=[Samba 3.6.18]

    Sharename       Type      Comment
    ---------       ----      -------
    IPC$            IPC       IPC Service Samba, Ubuntu)
    print$          Disk      Printer Drivers
    homes           Disk
    Canon-MX870     Printer   Canon MX870 series

Domain=[WORKGROUP] OS=[Unix] Server=[Samba 3.6.18]

    Server               Comment
    ---------            -------
    KONA                 kona server (Samba, Ubuntu)

    Workgroup            Master
    ---------            -------
    WORKGROUP            KONA
```

Connect with smbclient

```
smbclient -U mmaki //kona/homes
Enter mmaki's password:
Domain=[WORKGROUP] OS=[Unix] Server=[Samba 3.6.18]
smb: \>

smbclient -U mmaki //kona/mmaki
Enter mmaki's password:
Domain=[WORKGROUP] OS=[Unix] Server=[Samba 3.6.18]
smb: \> ls
```

ls should give you a file listing

Create a shared share (smb.conf #2)

```
[share]
        comment = Shared Data
        path = /home/share
        guest ok = Yes
```

By default shares are read only unless the **read only = no** option is present. Anyone can access this share but not change or delete anything. **Restart samba...**

Create the directory on server

```
# mkdir /home/share
# chown you.you /home/share
```

From your Linux account you now have complete control of this directory.

No Password Anonymous login

```
smbclient //localhost/share
```

A password will be prompted but none need be entered. In fact entering a password will cause it to fail because of the “map guest to” configuration.

Accessing it from Windows

Mapping a drive from Windows such as

`\\servername\share`

connects to `/home/share`

`net use H: \\servername\share` gives access to files in `/home/share/` on the samba (Linux) server

Current smb.conf

Provides private home directory and a shared directory.

```
[homes]
   read only = no
[share]
   comment = Shared Data
   path = /home/share
   read only = No
   guest ok = Yes
```

Semi-auto smb.conf configuration

- Backup working config

  `mv smb.conf smb.conf.working`

- Create minimal smb.conf using testparm

  `testparm -s smb.conf.master > smb.conf`

```
[global]
   server string = %h server (Samba, Ubuntu)
   map to guest = Bad User
   obey pam restrictions = Yes
   pam password change = Yes
   passwd program = /usr/bin/passwd %u
   passwd chat = *Enter\snew\s*\spassword:* %n\n
     *Retype\snew\s*\spassword:* %n\n
     password\supdated\ssuccessfully* .
   unix password sync = Yes
   syslog = 0
   log file = /var/log/samba/log.%m
   max log size = 1000
   dns proxy = No
   usershare allow guests = Yes
   panic action = /usr/share/samba/panic-action %d
   idmap config * : backend = tdb
```

```
[homes]
      guest ok = no
      read only = no

[printers]
      comment = All Printers
      path = /var/spool/samba
      create mask = 0700
      printable = Yes
      print ok = Yes
      browseable = Yes

[print$]
      comment = Printer Drivers
      path = /var/lib/samba/printers
```

testparm generated smb.conf

- Provides private home share.
- Shared printers already established using CUPS (easy printer setup process)
- Other password and miscellaneous configuration settings
- Add other shares if needed (i.e. [shared]) discussed earlier.

testparm command

- Used to check an smb.conf configuration file for internal correctness
- Using it with -s option and directing the output to a file results in a minimal working server with private home directories and existing print shares
- Very convenient starting smb.config

smb.conf #3 private, share, & print

```
[global]
...
[homes]
    guest ok = no
    read only = no

[share]
comment = Shared Data
   path = /home/share
   read only = No
   guest ok = Yes
```

```
[printers]
     comment = All Printers
     path = /var/spool/samba
     create mask = 0700
     printable = Yes
     print ok = Yes
     browseable = Yes

[print$]
     comment = Printer Drivers
     path = /var/lib/samba/printers
```

Connecting to Windows from Linux

smbclient works but very clumsy ftp like client.

`mount.cifs <remotetarget> <dir> -o <options>`

```
mount.cifs //server/share /mnt/windows -o
user=winusername
```

Must be run as root.

Prompted for user Windows password.

Connecting to Windows from Linux using fstab entry

All options set in /etc/fstab file

Create an /etc/fstab/ entry to mount as regular user.

```
\\winsrvr\share \home\username\win cifs user,rw 0 0
```

Mount Windows Share on Linux

If your /etc/fstab entry is correct all you need to do is enter

```
mount win
```

You will be prompted for your Windows password.