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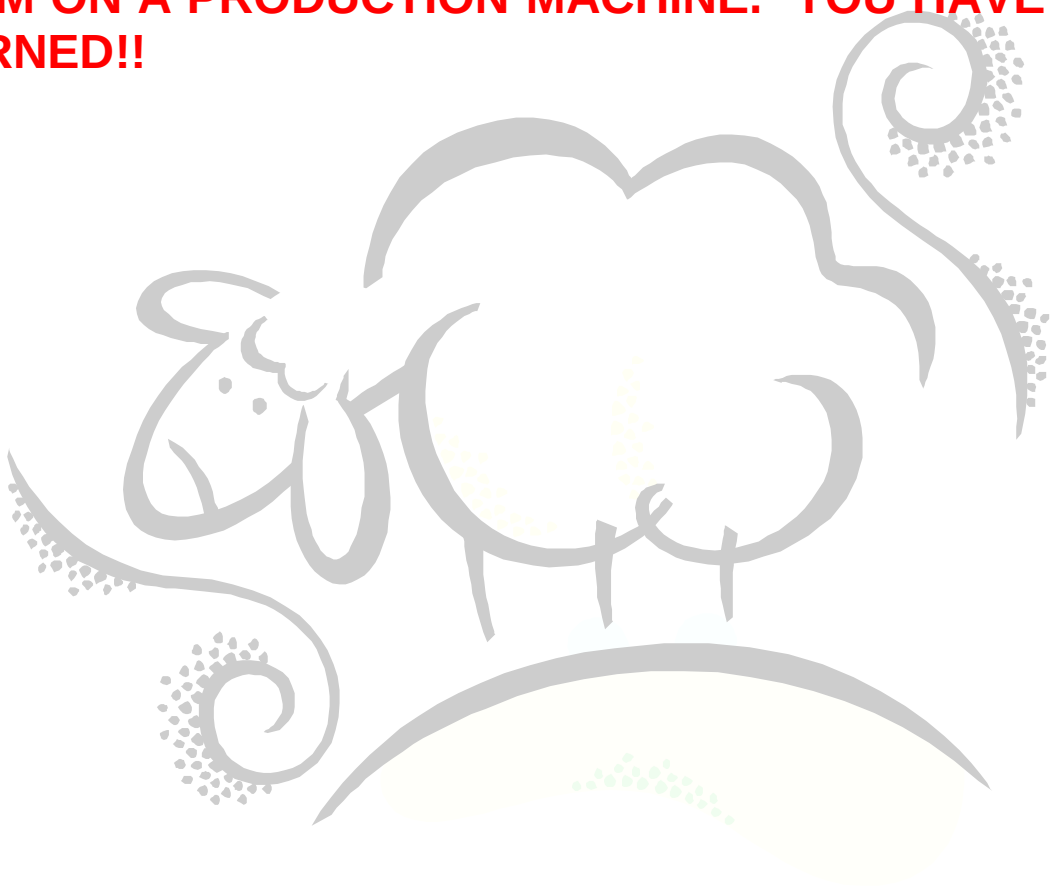
# Easy SAMBA Setup

**Table of Contents**

## Introduction

SAMBA is free software that allows your Windows computer to – among other things – read and write files to a Unix/Linux machine. There are two things to set up: your Linux machine and your Windows computer. This document describes how to setup your Linux machine to run SAMBA and how to connect your Windows machine to access it. There is much more to SAMBA than what is shown in this document, so please check online for more information. Note that SAMBA can now integrate with a Windows Server domain as well as an Active Directory domain, but these are not discussed in this manual.

**AS ALWAYS, PERFORM THE INSTRUCTIONS IN THIS MANUAL ON A TEST MACHINE BEFORE ATTEMPTING THEM ON A PRODUCTION MACHINE. YOU HAVE BEEN WARNED!!**



## Linux Setup

On your Linux machine, you must log in a root. Navigate to the `/etc/samba` directory and you will find the following files:

1. `lmhosts`
2. `smb.conf`
3. `smbusers`

Each file will be discussed next.

LMHOSTS

This file tells SAMBA what host machines (i.e., Windows PCs) are allowed to login to the SAMBA drive. For instance, it you want your own Windows PC to access the SAMBA drive, add its IP address to the `lmhosts` file, as shown below, along with a description:

```
192.168.123.456 bsmith
```

SMB.CONF

This file tells SAMBA what directories are available on the Linux machine and which users are allowed access to them. A typical, albeit minimal, `smb.conf` file looks like this:

```
[global]
 workgroup = WORKGROUP
 hosts allow = 192.168.0.  127.
 security = user
 encrypt passwords = yes
 socket options = TCP_NODELAY SO_RCVBUF=8192 SO_SNDBUF=8192
 preferred master = no
 domain master = no
 local master = no

[tmp]
 comment = Temporary File Space
 path = /data02/tmp
 valid users = bsmith administrator
 create mode = 0777
 writable = yes
 read only = no
 public = no
 guest ok = no
```

Take a look at the `[global]` section and note the line `hosts allow`. You must enter in the same IP address you did in the lmhosts file, or you can leave off the last part so that any IP address similar to it can access the machine. On a small internal network, the first three quads are probably sufficient to allow for access across a range of employee computers. The `security=user` line lets SAMBA know how to verify the user when you map a drive from Windows. The `encrypt passwords = yes` line must be added since Windows encrypts passwords.

Now take a look at the `[tmp]` section. This allows access to the `/data02/tmp` directory (as defined on the `path=` line) and allows only the users `bsmith` and `administrator` access to it. Naturally, you can add your own directories. When you create a file in `/data02/tmp`, your file is

given the mask `0777` as show on the `create mode` line. The directory is writable, not read only, not public and no guests are allowed to access it. Note that the text appearing in the brackets, `[tmp]` here, will be used in the Windows Setup portion of this document.

Make sure that `/data02/tmp` is available and in the root (`/`) directory issue the following command:

```
chmod -R 777 /data02
```

This will set the `/data02` and any subdirectories to a mask of 777. You should match the mask in the `chmod` command with the mask in your `smb.conf` file.

## SMBUSERS

This file associates an SMB user with a Linux user. You most likely won't need to modify this file. It looks like this:

```
# Unix_name = SMB_name1 SMB_name2 ...
root = administrator admin
nobody = guest pcguest smbguest
```

## Setting Up SMB Passwords

Once you have completed filling in the three files above, you must add each Linux user you want to access the SAMBA drive to the SAMBA password file. Ensure that your user has an account on the Linux box first. You use the `smbpasswd` command at the Linux command prompt like this:

```
smbpasswd -a username
```

Hit the enter key and key in the user's password. Follow the prompts. Once completed your user will be able to access the SAMBA drive.

To delete a user completely, use the `-x` switch rather than the `-a` switch.

## Start and Stop the SAMBA Services

Once the above is completed, you must re-cycle the SAMBA services. Enter the following command at the Linux command prompt to stop all SAMBA services:

```
service smb stop
```

The re-start the service by entering:

```
service smb start
```

If you make any changes to the files above, you must re-cycle the SAMBA services.

## Windows Setup

To gain access to your Samba drive, you must map the network drive in Windows Explorer. For the above settings, do the following:

1. Start Windows Explorer
2. Click on Tools…Map Network Drive
3. Choose any empty drive letter, and in the folder input box, type in `\\192.168.123.456\tmp`. Note that tmp refers to the bracketed text appearing in the smb.conf file, as described above.
4. Click on the different user name link and fill in the username and password you set up in the `smbpasswd` program above.
5. Click on OK to close the Connect As… dialog box
6. Click on Finish to close the Map Network Drive dialog box
7. You may want to uncheck `Reconnect at logon`, depending on your preference.

If everything went well, you should have access to your SAMBA drive on your Linux machine from your Windows PC.

Test out writing, reading and deleting a file from it to make sure it is fully accessible.

## Notes

If SAMBA does not automatically start when you boot your machine, do the following:

1. Log in as `root`
2. `cd /etc/rc.d/rc3.d`
3. Create a symbolic link: `ln -s ../init.d/smb S35smb`
4. Note that K35smb should already be soft linked.

When you restart your machine, SMB and NMB should start. Note that these instructions may be slightly different for your own Unix/Linux machine, so please check with your Unix/Linux System Administrator. If you *are* the System Administrator reading these instructions, you can skip the step where you contact the System Administrator…I'm just sayin'… ☺

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