

## NETWORKING WINDOWS AND LINUX

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Linux is able to access directories, files, and printers that are shared from MS Windows machines, and can act as a server for Windows clients, thanks to a software package called SaMBa. The latest version of SaMBa also allows Linux computers to participate in Windows NT domain-based networks.

SaMBa is an implementation of the SMB protocol, also called the NetBIOS or LanManager protocol. This is a networking protocol used by Windows. It ships with most of the major Linux distributions, and is available for many different operating systems.

Getting SaMBa running was quite easy for me with the help of the [SMB HOW-TO](#), and should be equally easy for most folks, so I won't go into too much detail. The steps are these:

1. **Get your Ethernet configured.** (A whole separate FAQ!)
2. **Set up TCP/IP on each of your machines.** By default MS uses their NetBEUI protocol, which Linux doesn't understand (yet). You need to install the TCP/IP protocol for Windows (comes on the Windows CD). This is done under Network Properties in the control panel. (See Windows help for details, but I found it self explanatory.) Each machine must have an IP address assigned. All the IP's must be on the same subnet (have the same subnet mask). You should use IP's that have been reserved for private networks. See the [Networking HOW-TO](#) for details on this.

3. **Make all the machines members of the same workgroup.** For the Windows machines you set the workgroup name under Network Properties in control panel. For the Linux machine, you must edit /etc/smb.conf. Make a backup of the example before editing, and change nothing but the workgroup name. The example will serve nicely for starters, and you can add shares later. Read the [SMB How-to](#) for details here.
4. Finally, you must **load the SMB daemons.** This is covered in detail in the [SMB How-to](#). Note that some Linux distributions may automatically start these daemons at startup if SaMBa is installed, so you may want to test it before doing this step. Basically, you edit /etc/inetd.conf (make a backup!) and paste in these lines:

```
5. # SAMBA NetBIOS services (for PC file and print sharing)
6. netbios-ssn stream tcp nowait root /usr/sbin/smbd smbd
7. netbios-ns dgram udp wait root /usr/sbin/nmbd nmbd
```

Then restart the inetd daemon or (easier) just reboot. (Note: newer distributions may use `xinetd` rather than `inetd`.) You should then be able to browse Network Neighborhood on your Windows boxes and see the Linux box there. You still need a username and password to access the Linux machine across the network. By default, Windows will send the same name you used to login to Windows, so you may need to create a new account on one machine so the user names match.

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## Update

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Newer versions of Samba come with a handy web-based configuration tool called SWAT. With many distributions this tool is installed but not enabled by default. To enable it, edit the file `/etc/inetd.conf`. (Again, you may have xinetd instead.) Find the line containing SWAT (near the end of the file) and remove the comment symbol (#) from the front of the line. Save and exit, then restart your inetd (`/etc/rc.d/init.d/inet restart`). Once that's done, point your web browser to <http://localhost:9000> and have fun poking around!

## Resources

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SaMBa documentation under `/usr/doc/smbfs*`

man pages `smb`, `smb.conf`, `smbclient`, and `smbmount`

Source : <http://www.control-escape.com/linux/lx-samba.html>