

## Samba for Windows File Sharing

**My files are your files.**

JES HALL

Many of us have multiple computers on our network, even at home, and for home Linux users, this often means co-existing with your flatmate's Windows box or the kid's Macintosh. Being able to share files between machines is probably something you'll want to do sooner or later.

Samba is a suite of tools for UNIX systems for sharing files over the network with Microsoft Windows or any other operating system that supports Microsoft Windows file sharing. The protocol is generally referred to as SMB, an acronym for Server Message Block.

### GETTING READY

Both KDE and GNOME have excellent support for accessing files over Samba, and KDE has a powerful configuration tool for Samba servers to create shares. Installing Samba is outside of the scope of this article—I assume that you're using a distribution that ships with Samba installed. If not, consult your distribution's documentation.

The Samba suite of tools has two main components: client tools for accessing shares on other machines and server tools for managing users and shares on the local machine. Distributions often split the main Samba distribution into multiple packages, and you need

both client and server tools installed to follow all of the examples here.

The KDE Control Centre has an exceptional interface for configuring the Samba server. It can be found in KControl→Internet & Network→Samba. Click Administrator Mode to make changes, and enter either your password (Ubuntu/Kubuntu) or your root password (everything else) to gain administrator access. This configuration tool is extremely powerful and flexible, with a vast array of options that can seem daunting. Don't panic though—most of them can be left how they are. Some of the options you may want (but don't have to) customise are on the Base Settings tab:

- Server identification.
- Workgroup: a workgroup is simply a way of collecting machines sharing SMB resources in one place. The default Windows XP workgroup name is, imaginatively, Workgroup, so we use that here. You can name your workgroup anything you like, and for our purposes, your systems don't need to be in the same workgroup—it's purely aesthetic.

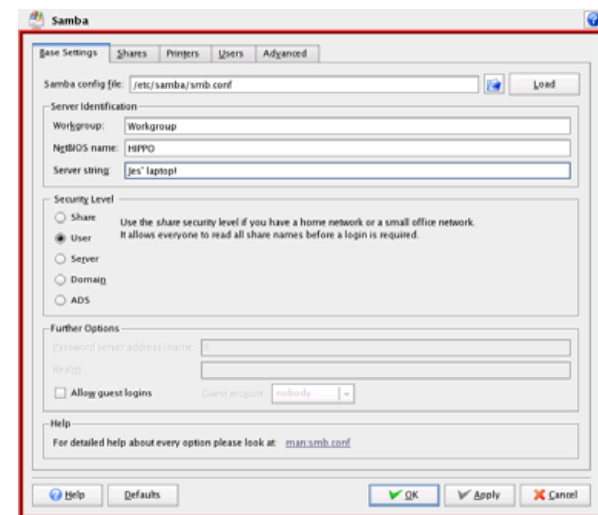


Figure 1. KDE's Samba Configuration Dialog

- NetBIOS Name: the NetBIOS name is usually the hostname of the computer, but again, it really can be any name you choose, up to 15 characters. Microsoft's standard states that the name should be uppercase.
- Server String: this is a more descriptive name. Again, you can change this to anything you

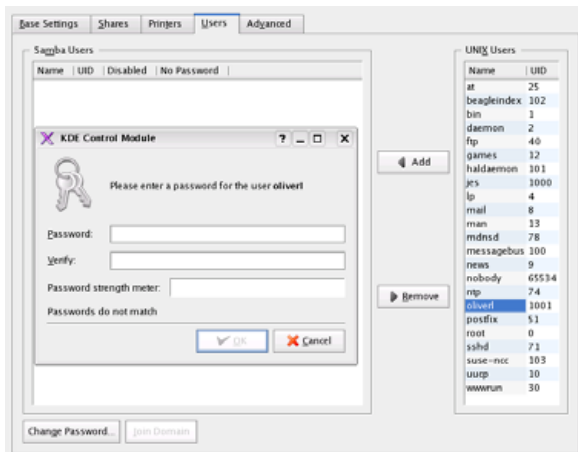


Figure 2. Adding a Samba User

like—“John’s media server” or “Kate’s desktop PC”, for example.

- Under the Shares tab, you’ll notice some shares already are defined. Most distributions enable automatic sharing of printers and home directories, to name a couple. To access your home directory from another computer though, you need to enable yourself as a Samba user. To add yourself as a Samba user, click on the Users tab. This dialog has two lists: Samba users on the left and UNIX (system) users on the right. Find your user name in the UNIX users list, highlight it, and click Add. A dialog then prompts you to set a password. Set the password, then click Apply to create your new user.

### ADDING MORE SHARES IN KDE

Sharing users’ home directories is useful, but what if you want to create a share elsewhere on the filesystem or allow more than one user to

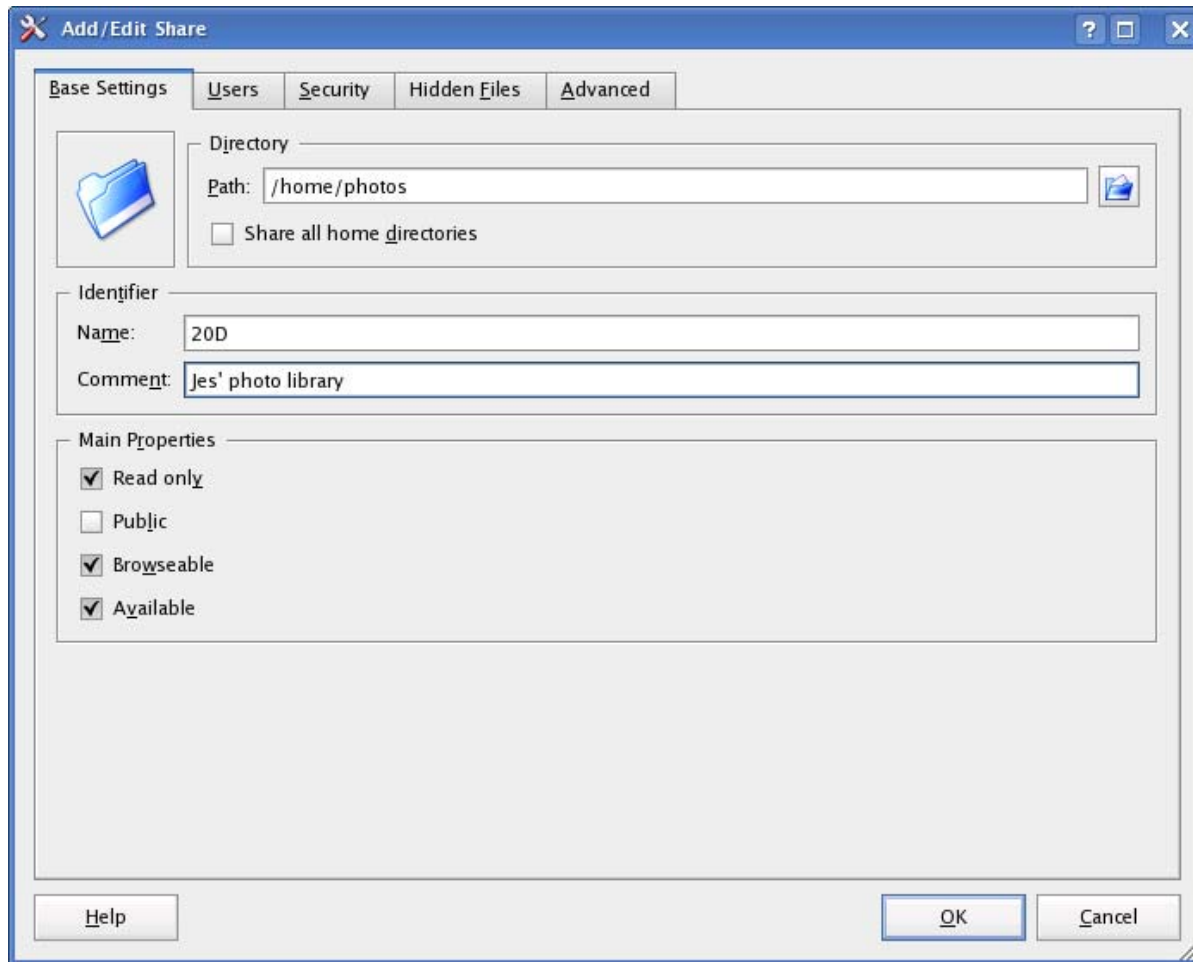


Figure 3. Creating a Samba Share

access it?

On the Shares tab, click Add new share. Pick the directory you want to share, either by typing it into the text field labeled Path or by clicking on the small folder icon to the right of the field and browsing to the folder.

Other options to configure include:

- Name: this is the name of the share you would see when you browse the shares available on that host. It is also the name you would specify when manually mapping the share.



Figure 4. SMB-Capable Hosts in Konqueror

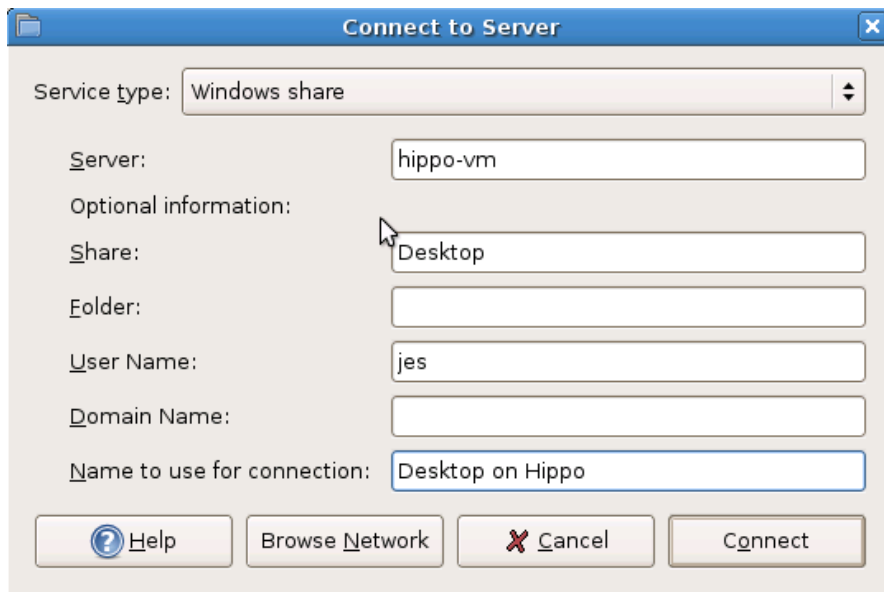


Figure 5. The GNOME Connect to Server Dialog

- Comment: the comment is a more descriptive name for the share—something like “MP3 collection” or “media files”, for example.

Here, I’m setting up a share of my digital photograph library in `/home/photos`. I leave the settings under Main properties at their defaults. I want the share to be read-only, so others can’t delete my photographs.

Under the Users tab, click Add user, and select the users you want allow access. Here you can specify what level of access to give them. On the previous tab, I could have chosen to untick read-only and given every user but myself read-only access for more fine-grained control.

Click OK to dismiss that dialog, and then click Apply to create your new share.

The KDE Samba configuration module is far too complex to explore fully here, mostly due to the sheer number of possible Samba configurations.

## BOTH KDE AND GNOME HAVE EXCELLENT SUPPORT FOR ACCESSING FILES OVER SAMBA, AND KDE HAS A POWERFUL CONFIGURATION TOOL FOR SAMBA SERVERS TO CREATE SHARES.

### ADDING MORE SHARES IN GNOME

GNOME’s Samba configuration tool is more streamlined. It can be found in System→Administration→Shared Folders, on the GNOME panel. The tool is extremely simple. To add a share, click Add, and navigate to the directory you’d like to share in the drop-down box labeled Path. Select Windows networks (smb), beside Share Through, and fill in a name and comment for the share, optionally choosing to deselect read-only. Click OK to create your new share. This creates a public share that is accessible by any configured Samba user.

The General Properties tab allows you to set a workgroup.

You also can access the same folder-sharing dialog from within the GNOME file manager by right-clicking on a directory and selecting Share folder.

GNOME does not at (the time of writing) have a tool for managing Samba users. If you do not have the KDE Control Centre installed, you can manage Samba users from the command line with the `smbpasswd` tool. For example, to add a Samba user issue the command:

```
smbpasswd -a tux
```

You will be prompted to enter a password for the new Samba user.

#### WHAT ABOUT CREATING SHARES IN WINDOWS?

See the Resources sidebar for links to information about creating shares under various versions of Microsoft Windows.

#### ACCESSING SHARES IN KDE AND GNOME

To access a share on another host from KDE, launch Konqueror and select Network Folders from the Go menu. This takes you to the remote kioslave. Kioslaves were covered in detail in my article "Konquer Your File Management with KIO" (*TUX*, June 2006).

If you're using a distribution that hides the Go menu (such as Kubuntu), you can type `remote:/` directly into the Konqueror address bar. Clicking on SMB Shares takes you to the `smb:/` kioslave, which reveals a listing of the workgroups available on your network. If you access a particular share often, you can create a shortcut to it on your KDE desktop by dragging the small folder icon to the left of the address bar to the desktop and selecting Link Here. You also can add it as a bookmark through the usual bookmarks dialog, as if it were

## RESOURCES

#### Samba: Opening Windows to a Wider World:

<http://samba.org>

#### How to Configure File Sharing in Windows XP:

<http://support.microsoft.com/kb/304040>

#### How To Share Files and Folders Over a Network for Workgroups in Windows 2000:

<http://support.microsoft.com/kb/301281/en-us>

a Web page.

## IF YOU DO NOT HAVE THE KDE CONTROL CENTRE INSTALLED, YOU CAN MANAGE SAMBA USERS FROM THE COMMAND LINE WITH THE SMBPASSWD TOOL.

Navigating around the workgroup and the hosts inside is just like navigating local folders within Konqueror. If you need to authenticate to access a share, Konqueror prompts you for a user name and password. If you use the same user

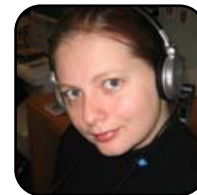
name/password pair over all of the hosts on which you access shares, you can set KDE to supply them automatically in KControl→Internet & Network→Local Network Browsing.

The procedure for navigating shares in GNOME is fairly similar. Select Places→Network Servers from the GNOME panel menu. Once again, navigating shares is just like browsing files on your local filesystem. You also can add a shortcut to often-accessed shares. To add a shortcut, select Places→Connect to Server. Select Windows share as the Service Type. Put the network address or hostname in the text field labeled Server and the name of the share beside Share. If your user name on the remote host is not the same as it is on the local host, enter your user name in the box labeled User Name. You can optionally enter a descriptive name beside Name to use for connection.

Click Connect, and a shortcut to access that host appears on the desktop and in the Places menu.

#### CONCLUSIONS

For the sake of brevity, only the very basics of file sharing have been covered here. For more information, consult the Samba documentation, found at the Samba Web site in the Resources sidebar.



Jes Hall is a KDE developer and works as a Linux Specialist at IBM New Zealand. She's passionate about helping open source bring life-changing tools to those who might otherwise have not had them.