

UW Computer Science and Engineering

Introduction to Samba

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What is Samba

Samba is a UNIX tool that enables you to access UNIX files from a PC running Windows XP/Vista. It runs on almost every CSE Lab-managed UNIX host.

Samba also allows ftp-like access to PC file servers from UNIX hosts.

Accessing Files on CSE Lab UNIX Servers from a Windows PC

Microsoft Distributed file system (Dfs) provides “one stop shopping” for most Windows and UNIX shares you need to access. On most systems all of these files are found under the **O:** drive, as described in [Microsoft Dfs](#).

Accessing your UNIX Home Directory from a PC

To access your UNIX home directory from a PC running Windows XP/Vista you must first know which home directory you want to access. Some people have only one, e.g. on the instructional Linux systems, normally called `‘/homes/iws/username’`. Research users may have several: a “main” research home directory called `‘/homes/gws/username’` on one of the lab managed hosts (e.g. barb), and perhaps a different one when logging into project machines such as the graphics (grail) hosts.

Let’s assume your user name is “jouser” and you want to access your “gws” home directory.

You can use a Windows “UNC”¹ name and access it as `‘\\cseexec\cs\unix\homes\gws\jouser’`.

Or, you can “map” it to a drive letter. To do this choose the ‘**map network drive**’ button on the menu bar of one of the PC file manager or explorer tools, or use the `net` command in an MSDOS window. In the example above, jouser would map her home directory using the UNC path given above, e.g. using the `net` command:²

```
net use H: \\cseexec\cs\unix\homes\gws\jouser
```

Or, you can use the default mapping of `‘\\cseexec\cs’` to `‘O:’` (or map `‘\\cseexec\cs’` to `‘O:’`) and access your home directory as `‘O:\unix\homes\gws\jouser’`.

Important notes:

- In order to access a UNIX file from Windows you need to have an account on a UNIX server that can access that file. So, for example, if you want to access `‘O:\cse\www’` the remote host, in this case `www`, needs to see an entry for you in its `passwd` file.³

¹ One definition of “UNC (Universal Naming Convention) name” (from the Microsoft TechNet Glossary of Registry Terms) is: “A convention for naming files and other resources beginning with two backslashes (\), indicating that the resource exists on a network computer. UNC names conform to the `\\servername\sharename` syntax, where *servername* is the server’s name and *sharename* is the name of the shared resource. The UNC name of a directory or file can also include the directory path after the share name, by using the following syntax: `\\servername\sharename\directory\filename.`”

² See the `net` command on-line help for available options and more information.

³ This does not necessarily give you login privileges to the remote UNIX host, as you could have a “nologin” entry that only allows remote access of files.

Actually `www` is not a good example, since all faculty, staff, and grads have `passwd` entries on the web server. However, you should be aware of this if someday you are asked to look at something on, say, one of the Grail laboratory's research servers on which you do not have an account.

- Samba on CSE UNIX hosts is configured to grant access based on your Windows username and password, not your UNIX credentials. The research UNIX hosts grant access based on your authentication in the `CSERESEARCH` domain; the instructional UNIX hosts (`fiji`, `tahiti`, etc.) grant access based on your authentication in the `CSEPCLAB` domain. Thus, in most cases you will not be prompted for a password when you access a Samba share.⁴

Accessing PC Shared Directories from UNIX using `smbclient`

WARNING: `smbclient` Is a Crude Kludge

`Smbclient` is an *extremely* crude tool. Here is how `smbclient` is broken and will frustrate you:

- You *cannot* specify anything other than an explicit share, e.g. you cannot specify `\\filesrv2\students1\jouser` on the command line. The file share you can specify is `\\filesrv2\students1`.
- `Smbclient` is not Dfs-aware. This means you can specify `\\cseexec\cs` as a share, but when you attempt to drill down past the so-called Dfs “junction points” you will not get anywhere. In the following example this is illustrated. You cannot get to `//cseexec/cs/cse/www` using `smbclient`.

```
% smbclient //cseexec/cs
Password:
Domain=[CSERESEARCH] OS=[Windows Server 2003 3790] Server=[Windows Server 2003 5.2]
smb: \> ls
.                D           0   Thu Oct 16 16:17:54 2003
..               D           0   Thu Oct 16 16:17:54 2003
bu               DH          0   Sat Oct 18 10:06:08 2003
cse              D           0   Thu Oct 28 10:25:56 2004
nt               D           0   Wed Feb 25 15:28:09 2004
sources         D           0   Wed Sep 15 12:54:29 2004
unix            D           0   Thu Oct 16 17:04:57 2003

                               34522 blocks of size 1048576. 29260 blocks available
smb: \> cd cse
smb: \cse\> ls
.                D           0   Thu Oct 28 10:25:56 2004
```

⁴ You will be prompted if you specify a different username in the ‘Connect as:’ box (or the ‘/USER:’ parameter in the `net` command), or if the UNIX host's Samba configuration has not yet been changed. If the latter please send mail to `support@cs`.

```

..                D            0   Thu Oct 28 10:25:56 2004
courses           D            0   Thu Oct 16 16:16:55 2003
distiller         D            0   Thu Oct 16 16:16:56 2003
ftp               D            0   Thu Apr 22 14:22:18 2004
groups            D            0   Thu Oct 16 16:16:56 2003
lab               D            0   Thu Oct 16 16:16:56 2003
labrec            D            0   Thu Oct 16 16:16:56 2003
mailing-lists     D            0   Thu Oct 16 16:16:57 2003
office            D            0   Thu Oct 16 16:16:57 2003
student-affairs   D            0   Thu Oct 16 16:16:57 2003
ugrad-org         D            0   Sat Oct  2 12:25:46 2004
www               D            0   Thu Oct 28 10:25:56 2004
www2              D            0   Thu Oct 16 16:16:58 2003

```

34522 blocks of size 1048576. 29260 blocks available

```
smb: \cse\> cd www
```

```
smb: \cse\www\> ls
```

```
NT_STATUS_PATH_NOT_COVERED listing \cse\www\*
```

34522 blocks of size 1048576. 29260 blocks available

```
smb: \cse\www\> q
```

Using smbclient

Smbclient⁵, can be used for ftp-like or tar-like access to PC shares. For example, to access the `\\ifilesrv2\students1` share in the **CSEPCLAB** domain, enter

```
smbclient '\\ifilesrv2\students1' -W csepclab
```

To see what services are offered by `ifilesrv1`, enter

```
smbclient -L ifilesrv1 -W csepclab
```

For more information, see the **smbclient** man page.

Using csepclab-smbclient to rename or reduce your CSEPCLAB Windows profile

There's a special script, `/cse/lab/bin/csepclab-smbclient`, that will connect automatically to your instructional (CSEPCLAB) Windows home directory share from your instructional Linux account on one of the "attu" servers. There are no parameters to this script; you do not have to know the exact server and share that contains your Windows home directory.

Important: you should not be logged into your Windows account when you do this.

When you run the script you will be prompted for your CSEPCLAB password (NOT your UNIX password!). Once you enter that password, you will need to use the **smbclient** 'cd'

⁵ Path names may differ; if not in the regular path, try `/usr/local/samba/bin/smbclient`

command to get into your Windows home directory and profile. Once there, other commands allow you to delete or rename files; refer to the **smbclient** man page for details.

To completely get rid of your current (possibly corrupted) profile, rename the **profile** folder.

Here is an example of moving a possibly buggy profile out of the way by renaming it:

```

attu2% /cse/lab/bin/csepclab-smbclient
Password:
Domain=[CSEPCLAB] OS=[Windows Server 2003 3790] Server=[Windows Server 2003 5.2]
smb: \> cd jouser
smb: \jouser\> ls
.                D            0  Mon Apr 26 15:23:54 2004
..               D            0  Mon Apr 26 15:23:54 2004
profile          D            0  Tue Apr 27 16:37:57 2004
WINDOWS         D            0  Mon Apr 26 15:23:54 2004

                64000 blocks of size 8192. 63875 blocks available
smb: \jouser\> rename profile profile.old
smb: \jouser\> cd profile.old
smb: \jouser\profile.old\> ls
.                D            0  Tue Apr 27 16:37:57 2004
..               D            0  Tue Apr 27 16:37:57 2004
Application Data DHR           0  Mon Apr 26 15:24:08 2004
Cookies          DS            0  Tue Dec 23 14:08:26 2003
Desktop          D            0  Tue Dec 23 05:59:47 2003
Favorites        DR            0  Tue Apr 27 14:45:33 2004
My Documents     DR            0  Mon Apr 26 15:24:11 2004
NetHood          DH            0  Tue Dec 23 05:59:47 2003
NTUSER.DAT      H           786432 Tue Apr 27 16:37:57 2004
ntuser.dat.LOG  H            1024  Tue Apr 27 16:37:57 2004
ntuser.ini       H             352  Tue Apr 27 16:37:57 2004
ntuser.pol      HSR           1698  Tue Apr 27 14:45:33 2004
PrintHood       DH            0  Tue Dec 23 05:59:47 2003
Recent          DHR           0  Mon Apr 26 15:24:11 2004
SendTo          DHR           0  Mon Apr 26 15:24:08 2004
Start Menu      DR            0  Tue Dec 23 05:59:47 2003
Sti_Trace.log   0  Tue Dec 23 06:03:29 2003
Templates       DH            0  Tue Dec 23 05:59:47 2003

                64000 blocks of size 8192. 63875 blocks available
smb: \jouser\profile.old\> q
attu2%

```

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