Overview

- Components of the SMB protocol
- Components of Samba
- Developments in Samba 2.0
- Demo of SWAT - the Samba Web Administration Tool
- Feedback and questions

I hope that the majority of the time can be spent in feedback and questions.

Components of the SMB protocol

There are 3 main types of packets used in the SMB protocol when run over TCP/IP. They are:

- **UDP/137** - name resolution and registration traffic
- **UDP/138** - browsing and announcement traffic
- **TCP/139** - file and printer sharing traffic

The protocols themselves are extremely complex and are not particularly well designed. It is widely used because it is the native networking protocol of all Microsoft operating systems.

SMB Terminology

- **CIFS** - another name for SMB
- **NBT** - netbios over TCP/IP
- **WINS** - a non-broadcast version of the UDP/137 NBT protocol
- **LOCAL BROWSE MASTER** - the machine on each subnet that collects host announcements and collates them.
- **DOMAIN MASTER BROWSER** - the machine per workgroup that collates host lists from the local master browsers.
- **WORKGROUP** - a collection of machines which share a common host list collation point.

- **DOMAIN** - a workgroup that includes a central authentication server
- **DOMAIN CONTROLLER** - the machine in the domain that holds the authentication database
- **DOMAIN LOGON** - a process where client machines authenticate via a remote server and download account and user profile information.
- **LOGON SERVER** - a machine that accepts domain logon requests

Components of Samba

- **smbd** - This listens on TCP/139 and forks for each client connection. Does all file and printer sharing.
- **nmbd** - Does all UDP/137 and UDP/138 traffic for name serving, registration and browsing.
- **smbclient** - a simple client useful for testing Samba and some batch operations.
- **nmblookup** - a command line utility for doing NBT name lookups.
- **testparm** - tests the syntax of smb.conf files.

There are also many other small utilities.

Developments in Samba 2.0

Samba 2.0 will go into "alpha" release shortly. The date for the final release will depend on feedback from the alpha releases.

Major changes include:

- web based administration tool
- NT domain controller support
- advanced NT SMB support (change notify etc)
- autoconf based configuration

There have also been a lot of minor improvements, including many efficiency improvements. Benchmarks show we are well ahead of WinNT on equivalent hardware for large numbers of clients.

Demo of SWAT

Many users have asked for a GUI administration tool for Samba. As often happens in the free software world there are now several competing Samba GUIs!

The one that will come with Samba is SWAT. You can see a demo of the current development version at
http://samba.anu.edu.au/cgi-bin/swat/

SWAT produces a standard smb.conf as output, so administrators can choose GUI or non-GUI configuration.

Feedback and questions

I hope this will be the main part of this talk!

Meanwhile, here is some reference information:

- **Samba Web site** - http://samba.anu.edu.au/samba/
- **reference book** - *Samba: Integrating UNIX and Windows* by John Blair, published by SSC (ISBN 1-57831-006-7)
- **commercial support** - see the web site