

Samba 4 — Where are we now?

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Samba Team



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- ▶ Samba 4 Goals
 - ▶ Started out as rewrite of the VFS
 - ▶ Focus on Active Directory DC support
- ▶ 5th Samba 4 status update

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The fantasy page

- ▶ Our bi-weekly list of “fantasies” and achievements
- ▶ The background of this talk
- ▶ If you’re interested in how the story continues...

http://wiki.samba.org/index.php/Samba4/Andrew_and_Jelmers_Fantasy_Page

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- ▶ More than just a TP:
 - ▶ We are getting real feedback on things people want and need
 - ▶ Basic features are complete
 - ▶ Actually used in some environments
 - ▶ More developers and testers
 - ▶ Developers outside the team: OpenLDAP backend scripts in particular
- ▶ Alpha because of rough edges, not because of stability

“Franky”

- ▶ Meeting in Göttingen in May 2008
- ▶ Hybrid-server AD DC using the best parts of Samba 3 and Samba 4
 - ▶ file serving: Samba 3
 - ▶ printing: Samba 3
 - ▶ Active Directory, account management: Samba 4
- ▶ Several daemons running
- ▶ Samba 3 forwards some named pipes to Samba 4 using Unix domain sockets
 - ▶ But done right

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Franky — Details

File	139/445	SMB (3)
→ 135 1025		EPM wacn-ip.tcp (4)
88		Krb (4)
383/3268		LDAP/GA (4)
389 UDP		CLDAP (4)
<hr/>		
Samr	(4)	
Rsa	4	
netlogon	4	
spoolss	3	
Epm	4	
Dfsnapi	4	
winreg	3	
Browsing:	138 mails.dot5 RDP browsing calls 549	} 3? Fred Hilbert A??
WINS	137/42	4
DNS	TSIG	Server-side
NTP		authenticated

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“Franky” — Status

Done

- ▶ Build infrastructure can build both
- ▶ Samba 4's *smbd* renamed to *samba*
- ▶ Named pipe forwarding from Samba 3 to Samba 4 works

Todo

- ▶ Winbind integration
- ▶ Polishing

- ▶ Surprisingly little amount of changes required
- ▶ Proof-of-concept

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One source tree

- ▶ Created as part of the Franky project
- ▶ Samba 3 can build both samba 3 and samba 4 (*-enable-merged-build*)
- ▶ Samba 4's testsuite can be run more easily against Samba 3
- ▶ Not just synchronization, actually the same code
- ▶ Bug fixes and new features benefit both branches
- ▶ Finally working on the same codebase again

Shared code

- ▶ Samba4 and Samba3 sharing code, not just synchronising
- ▶ Large percentage is now shared:
 - ▶ common: *536,251*
 - ▶ Autogenerated: *468,634*
 - ▶ Samba 3: *410,452*
 - ▶ Samba 4: *401,692*
 - ▶ Heimdal: *98,398*

Shared code — Graph

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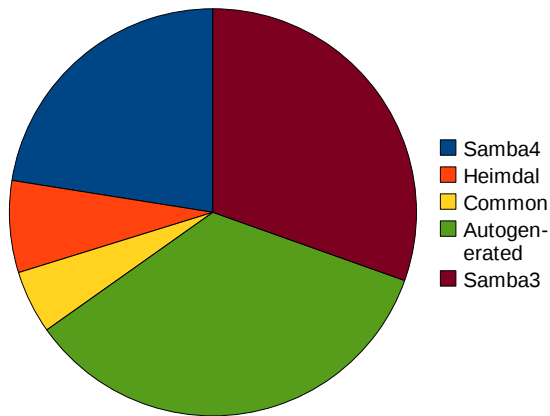
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LDB Improvements

- ▶ Extended DN support
 - ▶ Imported for Samba 3 integration
- ▶ Group Policy
 - ▶ Helped by importing the full schema
- ▶ Better attribute generation
 - ▶ parentGUID generated and maintained
 - ▶ possibleInferiors now dynamically generated

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Full schema

- ▶ AD schema from the WSPP Docs
 - ▶ Provided as a text file
- ▶ Munged into Samba4's format with script by Sreepathi Pai
- ▶ Allows the full range of attributes to be stored
- ▶ Critical for Vampire migrations and OpenChange

Python support

- ▶ Now all in “plain“ C
 - ▶ SWIG turned out to be a bad idea
- ▶ EJS now completely removed
- ▶ Used for unit tests
- ▶ Basis for three of the Google Summer of Code projects this year
 - ▶ SWAT 2
 - ▶ Samba-Gtk extension
 - ▶ GTK+ frontend to LDB

NTP Integration

- ▶ Active Directory breaks badly without clock synx
- ▶ Microsoft added a proprietary way to get secure NTP
 - ▶ Now documented in MS-SNTP
- ▶ Samba4 now provides a hook for NTPd to call to send secure time packets
 - ▶ Hopefully in the next NTPd release

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OpenLDAP multi-master backend support

- ▶ Another excellent community contribution
- ▶ Possible to setup both the first and other MMR nodes
- ▶ Fully automatic - No need to grok the OpenLDAP config file

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Client-side WMI support

- ▶ Originally somewhat supported
 - ▶ work stalled
 - ▶ incomplete implementation, not usable for anything
 - ▶ Further work by an external developer, unknown to us
 - ▶ Work on re-integrating the old work has started, also need to import the external work

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Already shipped

- ▶ Fedora 11
- ▶ Debian Experimental
- ▶ Ubuntu 9.04
- ▶ Mainly packaged because of the evolution mapi plugin

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Already in use

- ▶ Several small sites are using a DC in production
 - ▶ Russian production site
- ▶ Real bugs found by real users

Code coverage

This year:

42.8%

169931 lines covered

397460 lines total

Last year:

39.6%

158559 lines covered

400287 lines total

Two years ago:

41.5%

135817 lines covered

326916 lines total

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- ▶ Reconcile more Samba 3 and Samba 4 libraries
 - ▶ registry
 - ▶ smb.conf parsing
 - ▶ RPC servers?
 - ▶ libnet?
 - ▶ net?
- ▶ Better shared library use
 - ▶ A current Samba 4 install is around 1Gb large
- ▶ WMI
- ▶ NCACN HTTP (“Outlook Web Access“) for OpenChange
- ▶ Client-side GPO support

Plans for the next few months — Andrew

- ▶ Trusted domains
- ▶ Use the full 2008 schema (posix attributes)
- ▶ better schema testing and validation

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Try it!

- ▶ don't wait for the beta to try out Samba4
- ▶ alpha because of the rough edges, not because of the stability
 - ▶ get it working at your site, and it will keep working very well

Demo Time

Insert Demo Here

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Please let us know when you hit bugs:

- ▶ *IRC* Come talk to us in `#samba-technical` on `irc.freenode.net`.
- ▶ *Bugzilla* Submit bugs at `https://bugzilla.samba.org/`.
- ▶ *Mailinglist* Send email to `samba-technical@samba.org`.
- ▶ *SambaXP* We'll be around for most of today
- ▶ *Fantasy Page*

http://wiki.samba.org/index.php/Samba4/Andrew_and_Jelmers_Fantasy_Page