Samba 4 — Where are we now?

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Introduction

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

Agenda

Changes in the last year

New and exciting features

Distributions

Users

Code coverage

Plans for the next few months

Beta releases

Demo Time
Samba 4 Alpha releases

▶ 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
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
Franky — Details

| 139/445 | SMB (3) |
| 135/1025 | Epm ucacn_ip+tcp (4) |
| 88 | krb (4) |
| 389/3268 | LDAP/Ga (4) |
| 389 | LDAP (4) |

- smb1
- lsad
- LM/NT password
- spoolss
- epm
- dcsynapi
- winreg
- browsing:
  - Samba logs
  - RDP
  - browsing calls
- WINS 137/42
- DNS TSIG
- Server-side
- NTP authenticated
“Franky“ — Status

Done

- Build infrastructure can build both
- Samba 4’s \texttt{smbd} renamed to \texttt{samba}
- Named pipe forwarding from Samba 3 to Samba 4 works

Todo

- Winbind integration
- Polishing
- Surprisingly little amount of changes required
- Proof-of-concept
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
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Feedback

Shared code — Graph

- Samba4
- Heimdal
- Common
- Autogenerated
- Samba3
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
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
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
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
Already shipped

- Fedora 11
- Debian Experimental
- Ubuntu 9.04
- Mainly packaged because of the evolution mapi plugin
Already in use

- Several small sites are using a DC in production
  - Russian production site
- Real bugs found by real users
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
Plans for the next few months — Jelmer

- 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
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
Feedback

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**