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SDC 2013

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Samba Team / SerNet

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Part I - Drama

On December 11, 2012 ...

... around 6pm CET ...

... something
unexpected
happened! ...

... something most people
would not have expected
to happen anytime soon ...

... or at all ...

Samba 4.0.0 was released! 😊

Obviously one day too early! ☹️

12/12/12 - that would have been a date



Now why is this so remarkable?

Part II - Chatty

What is (was) Samba?

for SDC audience:

- ▶ a (hopefully *the*) open source SMB file server
- ▶ used in some of the products known here

for Samba's community:

- ▶ the open source SMB server ("samba3")
- ▶ the upcoming open source AD domain controller ("samba4")
- ▶ ⇒ two different projects

for the Samba developers:

- ▶ *thee*e open source SMB server^H^H^H^H^H^H^H^H^Hsoftware
- ▶ continuous source of joy and grief

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Who is Samba?

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www.samba.org/samba/team/

Samba Team Members

Here are contact addresses for some of the team members:

- Michael Adam
- Jeremy Allison
- Christian Ambach
- Anatoliy Atanasov
- Andrew Bartlett
- Kai Blin
- Alexander Bokovoy
- Ira Cooper
- Steven Danneman
- Günther Deschner
- David Disseldorp
- Steve French
- Paul Green
- Chris Hertel
- Holger Hetterich
- Love Hörnquist Åstrand
- Nadezhda Ivanova
- Björn Jacke
- Marc Kaplan
- Günter Kukuk
- Jeff Layton
- Volker Lendecke
- Herb Lewis
- Derrell Lipman
- Kamen Mazdrashki
- Jim McDonough
- Stefan Metzmacher
- Lars Müller
- Matthieu Patou
- James Peach
- Tim Potter
- Tim Prouty
- Rusty Russell
- Andreas Schneider
- Karolin Seeger
- Richard Sharpe
- Dan Shearer
- Simo Sorce
- Rafal Szczesniak
- John Terpstra
- Andrew Tridgell
- Jelmer Vernooij
- Matthias Dieter Wallnöfer
- Michael Warfield
- Bo Yang

So what is Samba development like?

Focus

- ▶ *Not* one single concentrated development effort.
- ▶ Various companies (e.g. redhat, SuSE, IBM, SerNet, ...)
- ▶ Different interests by employers and customers.
- ▶ Changing interests...

Quality

- ▶ Established: autobuild selftest mechanism.
- ▶ New: voluntary review system (since October 2012)

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Now what about Samba 4.0 after all?

- ▶ The first (!?) open source Active Directory domain controller.
⇒ See Andrew Bartlett's presentation!
- ▶ The direct continuation of the Samba 3.6 SMB file server.
- ▶ ⇒ A big success in reuniting two de-facto separated projects!
- ▶ It is also a big and important file server release!
 - ▶ Complete SMB 2.0 by adding the file modules
 - ▶ Add support for SMB 2.1 (no ready)
 - ▶ Add support for SMB 3.0 (not support)

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▶ See [Samba 4.0](#) by adding the file server

▶ Add support for SMB 2.1 (SMB 3.0)

▶ Add support for SMB 3.0 (SMB 3.11)

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Digression on History

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- ▶ 2003-06-07: Samba 3.0.0 beta1
- ▶ 2003-08-13: First public commit of Samba 4 code (Tridge)
 - ▶ focus: NTVFS - rewrite of SMB server
 - ▶ focus: make SMB clusterable?
- ▶ 2003-10-24: Samba 3.0.0 released
- ▶ ... code repositories diverge ...
- ▶ 2006: S4 focus changed: Implementation of AD/DC
- ▶ 2007-2008: S3 is made cluster aware with CTDB
- ▶ 2008-05-08: Franky-idea is born
- ▶ 2008-07-01: Samba 3.2.0 released (GPLv3+, PIDL from S4)
- ▶ 2008-09-14: Merged branch/build for Samba3 and Samba4
- ▶ ... reconcile commonly used components into top level ...
- ▶ 2010-03-01: Samba 3.5.0 is released (exp SMB2)
- ▶ 2011-08-09: Samba 3.6.0 is released (off SMB2)
- ▶ 2012-06-05: 4.0.0 beta1
- ▶ 2012-09-13: 4.0.0 rc1
- ▶ 2012-12-11: **4.0.0**

What will 4.1 bring?

- ▶ current 4.1.0rc3
- ▶ final currently planned for 2013-09-27
- ▶ mostly stabilization (AD, file server)
- ▶ SMB2,3 support in smbclient, including SMB3 encryption
- ▶ server side copy
- ▶ removed SWAT
- ▶ ...

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Part III - Technical

SMB Tasks

- ▶ SMB 2.0:
 - ▶ durable file handles
- ▶ SMB 2.1:
 - ▶ multi-credit / large mtu
 - ▶ dynamic reauthentication
 - ▶ leasing
 - ▶ resilient file handles
- ▶ SMB 3.0:
 - ▶ server crypto (sign/encrypt)
 - ▶ secure negotiation
 - ▶ durable handles v2
 - ▶ resilient file handles
 - ▶ multi-stage
 - ▶ SMB direct
 - ▶ snapshots
 - ▶ cluster awareness
 - ▶ large file support

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 - ▶ new crypto (sign/encrypt)
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 - ▶ persistent file handles
 - ▶ multi-channel
 - ▶ SMB direct
 - ▶ witness
 - ▶ cluster features ...
 - ▶ storage features ...

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 - ▶ multi-channel [designed]
 - ▶ SMB direct [designed/started]
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 - ▶ storage features ... [partly begun]

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 - ▶ dynamic reauthentication [4.0]
 - ▶ leasing [in progress]
 - ▶ resilient file handles [ever?]
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 - ▶ persistent file handles [planning]
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Leases

- ▶ "oplocks done right"
- ▶ remove 1:1 relationship between open and oplock
- ▶ add lease/oplock key
- ▶ <https://wiki.samba.org/index.php/Samba3/SMB2#Leases>
- ▶ plan including data model
- ▶ Volker Lendecke: Currently reworking/preparing open/locking code

- ▶ https://wiki.samba.org/index.php/Samba3/SMB2#Witness_Notification_Protocol
- ▶ Gregor Beck (with Stefan Metzmacher):
 - ▶ explored protocol with Samba rpcclient implementation
 - ▶ currently working on async RPC server (prereq)

- ▶ https://wiki.samba.org/index.php/Samba3/SMB2#SMB_Direct
- ▶ Richard Sharp currently approaching from the Linux kernel side.
⇒ see his talk!

Questions?

obnox@samba.org / ma@sernet.de

