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:

- theee open source SMB server
- continuous source of joy and grief
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Who is Samba?
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Samba Team Members

Here are contact addresses for some of the team members:

- Michael Adam
- Jeremy Allison
- Christian Ambach
- Anatoliy Atanasov
- Andrew Bartlett
- Kai Bilin
- Alexander Bokovoy
- Ira Cooper
- Steven Danneman
- Günther Deschner
- David Disseldorp
- Steve French
- Paul Green
- Chris Hertel
- Holger Hetterich
- Love Hörmquist Åstrand
- Nadezhda Ivanova
- Björn Jacke
- Marc Kaplan
- Günter Kukkuk
- 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 Tridge
- 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!
  - Completes SMB 2.0 by adding durable handles.
  - Adds support for SMB 2.1 (no leases)
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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
- ... reconsile 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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Samba 4.0 (17 / 23)
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obnox

Samba 4.0 (17 / 23)
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:**
  - new crypto (sign/encrypt)
  - secure negotiation
  - durable handles v2
  - persistent file handles
  - multi-channel
  - SMB direct
  - witness
  - cluster features
  - storage features

- **SMB direct**
- **witness**
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  - SMB direct [designed/started]
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  - cluster features ...
  - storage features ... [partly begun]
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  - leasing [in progress]
  - resilient file handles [ever?]

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Leases

- "oplocks done right"
- remove 1:1 relationship between open and oplock
- add lease/oplock key
- plan including data model
- Volker Lendecke: Currently reworking/preparing open/locking code
Witness

- Gregor Beck (with Stefan Metzmacher):
  - explored protocol with Samba rpcclient implementation
  - currently working on async RPC server (prereq)
SMB Direct

- Richard Sharp currently approaching from the Linux kernel side.
  ⇒ see his talk!
Questions?

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