



Stories of battles fought and won

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SambaXP 2016

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Tranquil IT Systems

- ➔ IT support company
- ➔ since 2002, in Nantes, FRANCE
- ➔ 11 employees
- ➔ both small (outsourcing) and large (contracting) clients



TIS and SaMBa

→ a long love story

- 2004 first client on SaMBa3 PDC NT4
- 2011 first client on SaMBa4 AD
- leading Samba4 integrator in France (it's Google that says it :-)

→ SaMBa very popular in France

- free as in beer syndrom ?
- free as in speech syndrom ?
- Général de Gaulle syndrom ?

→ Mostly Samba3->Samba4



In a SaMBa4 migration, SaMBa is the easy part

➔ so much creativity in SaMBa3 domains

➔ strange idmap, flat tdb, underscore in names, dot in netbios name, schema ext, etc.

➔ non friendly environment

- do you really expect me to integrate that Redhat3 in the SaMBa4-AD domain ?
- no, that solaris8 NIS configuration will need some rework !

➔ But it is almost always possible to setup proper test environment



Example of SaMBA3 creativity

- woes of the GFWall of China
- automotive industry
- VPN to France 500ms latency
- PDC/BDC setup
 - problem : machine join failed all the time
 - solution : openldap multimaster !



SaMBA4-AD structures the network

- DC is the heart of the network
 - DNS server, DNS suffix, NTP, WINS (?), etc.
- addressing plan
 - nope we can't change the ERP server ip address 2.2.1.1...
 - what is that 200.200.0.0/16 internal subnet ??? and that 192.9.0.0/16 ??
 - why are you using public ipv4 on your lan ?
- why do you put dots in your NetBIOS names ?!!
- why did you choose a MSAD DNS name without a dot ?!!



Samba4 can scale

→ Education

- university faculty : 2k users / 400 computers / 4 sites / 3 DC
- training school : 3k users / 500 computers / 15 sites / 15 DC
- school district: 12k users / 1.5k computers / 110 schools / 70 DC / old KCC (yeah, full meshed)

→ Administrations

- 3k users / 3k computers / 8 sites / 3 DC
- 2k users/2k computers/24 sites/25 DC/new KCC



Samba4 can scale (2)

→ industry

- 300 users and computers / 7 sites / 7 DC / 2 countries
- 500 users and computers / 6 sites / 6 DC / 5 countries

→ military

- around 100 Samba4 DC running (even if it is a Microsoft shop)

→ and many French ministries that are still in SaMBa3, just waiting to switch to SaMBa4 !



LAN vs Internet

- ➔ The wild wide west is not the web, it's the lan !
- ➔ Years of technology piling up
 - VT100, AIX, AS400, Windows NT4, Solaris8, exotic C&C machine tools, etc.
- ➔ at the heart of the LAN : the DC
 - DNS / Directory / Authentication



Migrating a good'ol Windows NT4

- ➔ ... running on a good ol' 13 year old hardware (in 2014)
 - hope it doesn't die before migration !
- ➔ In a picturesque city in center of France
- ➔ like they says :
 - « if it ain't broke, don't fix it »
 - well, sort of...
- ➔ now they have a shiny new Samba4 AD



SaMBa in space ?

- ➔ Migration at a lab of the CNRS for space exploration
 - 120 users, 1 site
- ➔ they keep IT system running for the time of the project (5-20 years)
 - Solaris 8 configured with NIS...
 - 8" floppies in the drawer !
- ➔ researchers are like artists
- ➔ LAN still on public IPs...



Why no big names ?

- ➔ sysadmins don't talk much
- ➔ SaMBa needs no CAL
- ➔ every networks has its grey areas
 - windows print servers anyone ?
 - ➔ it is the only supported OS by the photocopier vendors !
 - shares on a Windows application server / RDS ?
 - ➔ the business app vendor only support Windows !
 - WSUS anyone ?
 - ➔ not enough bandwidth left to download the KB!



SaMBA4-AD in Africa

→ Central Bank

- 24 sites / 2k users
- 8 countries / 2 timezones
- VPN though Satlink 2mbps / 500ms latency

→ A great dedicated and skilled sysadmin team that can cope with

- failing satlink antenna
- failing diesel generator
- a military « coup d'état »...



SaMBa4-AD in Africa (2)

- ➔ Migration and domain consolidation
 - 24 Samba3-PDC-NT4 domains to 1 SaMBa4 AD domain
- ➔ Picky security (its a bank after all)
 - 802.1x authentication (both desktop and user)
 - star topology VPN (cheers to Douglas for the new KCC !)
 - strict vlan separation with acl everywhere
- ➔ So stop complaining next time ! :-)



SaMBa4-AD in Africa (3)

- ➔ feedback
- ➔ the new KCC does work
 - but things can get a little tricky
- ➔ the samba-tool domain provision is not completely site-aware
- ➔ monitor your replication !
 - \0ADEL, \0ACNF...
 - repsFrom, repsTo...
- ➔ Security Descriptor issues (4.3.0?)...



Back in cosy Europe

- ➔ Central Administration of a French ministry
 - 3k users / 8 sites
 - mostly fiber optics interconnexion, low latency, high bandwidth
 - 3 DCs
- ➔ Migration samba3/NT4 → samba4/AD
 - finished the DC migration at 9PM
 - finished the migration at 5AM
 - locked out of the building the next morning...



Story of a university in south east of France

- ➔ merging 3 domains :
 - 2 SaMBa3-NT4-PDC
 - 1 MSAD
- ➔ 10k desktops, 80k users
- ➔ ballot between SaMBa4 and MS AD
 - nothing beats a 90%+ rebate on CAL
- ➔ but we'll get them next time !



nice to have

- WSUS alternative
- real SaMBa/CUPS support from copier vendors
- better demoting
- « DNS consistancy checker »
- DNS registering still has some black magic
- repsfrom/repsto cleaning
- large group performance



Things to remember

- cleanup your LDAPs first
- inventory what things connect to your LDAPs
- SaMBa3 to SaMBa4-AD is the easy part



Questions ?