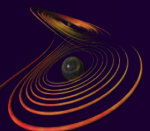


OpenAFS

Windows Client experiences



L.Schimmer

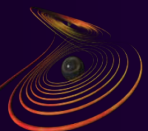
Institut für ComputerGraphik & WissensVisualisierung



Rome, 28.09.2010

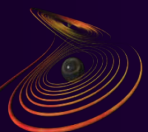
Lineup

- Overview
- Technical overview
- Our setup
- Pitfalls
- Lookout
- Demo



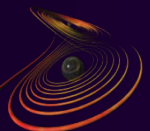
Overview

- OpenAFS works on windows !
- Current version 1.5.64 dated 23.09.2009
- Client is well tested
- Server is untested and maybe not functional
- Windows server 2003 and above AD server works as kerberos 5 auth server



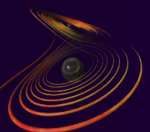
Technical Overview

- Windows Active Directory server does kerberos 5 auth as default and OpenAFS 1.4 and above in conjunction with the network ID manager can authenticate against those AD and obtain tokens automatic
- Win 2008 RC2 server and above need to reenale single DES encryption again (disabled by default)



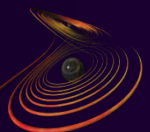
Technical Overview

- Current client setup usual OpenAFS cache and usual OpenAFS behaviour with usual communication between cache and OpenAFS servers
- Special setup for accessing the filesystem:
- Binds via a smb-redirect server as a UNC path (samba like network drive)
- Direct windows drive in developement



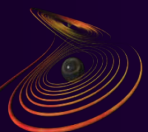
Technical Overview

- Setup across smb redirect provides some pitfalls like bugs in windows smb redirector or security issues
- Smb setup on client with loopback device needs to be working fine for OpenAFS to work fine
- Filespace is available via network path \\AFS\cell.name.tld



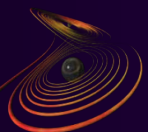
Our setup

- Cell cgv.tugraz.at
- Windows 2003 Server AD as krb5 KDC and windows profile manager
- 3 debian lenny OpenAFS 1.4.11 db/fileserver
- 2 iSCSI storage boxes with 3*2TB partitions (on SATA drives) for each fileserver (one RW and two RO)
- ~15 debian clients and ~30 win XP clients



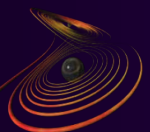
Pitfalls

- Loopback device fails
- Too big cachesize (32bit system limit ~1GB)
- SMB bugs/limitations by MS
- Server setup with AFS keyfile (documentation not fine enough)
- Profiles in AFS space too big
- Folder redirection has disabled filetypes



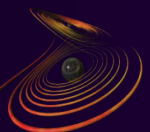
Pitfalls

- Loss of network – e.g. Explorer hangs if you switch from WLAN to cable
- Not all applications work well (disk full e.g. on total commander, Right Hemisphere Deep Exploration will die if load models out of OpenAFS space)
- Setup of client options with .msi only on installation



Results

- So whats all this for?
- OpenAFS is well tested and great as external data storage – little to no problems
- Speed is well enough: 6 to 10 MB/sec on 100Mbit LAN
- No problems with unicode or big files
- Big datastorage everywhere your network is ☺

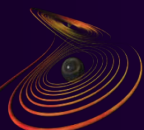


Results

- Profiles in OpenAFS space are working
- Not as flawless as pure datastorage only
- Profiles has lots of small files – use data redirection or big cache
- Be careful with programs like MS Virtual earth cache files in user profile without limiting size of cache!
- On error on logoff it will not end itself – token lifetime and power useage

Results

- Multiuser edits of same file could be problematic
- Locking of files are done but not of fileparts
- Wise not to try to edit same office file with more than one client
- Usual not done/tested at our cell



Future

- Win 2008 RC2 Server – need to adopt krb5 setting
- Windows Vista client works – UAC problematic for some parts
- Windows 7 – works, same problems like Vista
- Alternate Datastreams missing!
- 64bit versions working like 32bit but could address more cache!

