



Status Report

**AFS & Kerberos
Best Practice Workshop
2006**

What a difference a year makes

- 26 releases
- New stable and development branches
- A reorganization of the Elders
- Celebrated our Fifth Anniversary
- Hundreds of modifications and improvements
- New Platforms

Release Summary (1.4.0)

November 1, 2005

- First Stable Microsoft Windows release for 32-bit systems
- RX library optimizations
- Audit Logs
- Improved Mobile Client support
- Callback Break Later
- Large File Support
 - Client defaults on and Server defaults off
- vos copy, vos convertROtoRW, -vattachpar
- linux changed to use system inodes instead of treating afs "vcaches" as a private inode pool
- aklog
- **File Server is not stable – Upgrade if you are running anything post 1.2.x and pre-1.4.1**

Release Summary (1.4.1)

April 24, 2006

- MacOS X 10.4 (Tiger) – Thanks Chaskiel Grundman
- File Server stability and improvements
 - Resource leaks, deadlocks, and reference errors removed
 - More mobile client improvements but there is still a delay if a callback was broken while the client was in transit
 - Fairer algorithms used for recycling callback registration
- asetkey
- Large File Support – Server defaults to on
- New man pages (Thanks Russ)
- Windows client improvements
 - Byte Range Locks in the CIFS Server
 - Improvements in CIFS Server Virtual Circuit management
 - ICMP response no longer hamper RX performance

Release Summary (1.4.2 Beta 1)

June 13, 2006

- Windows
 - Removes race condition and deadlock introduced in 1.4.1
 - Dynamic adjustment of thread priorities based on age of CIFS Request
 - Improved CIFS Server performance due to finer grained locking
 - Improved resource recycling
 - Works with Microsoft Vista Beta 2
- File Server
 - Final mobility improvement – no longer delays if callbacks were invalidated during transit
 - write locks are controlled by ‘w’ and not ‘k’
- ability to bind rx to a single ip address on a multihomed host (-rxbind)
- posix file lock tracking fixes for linux
- pag garbage collection enabled by default on linux
 - to lessen vmalloc pool memory pressure

Release Summary (1.5.2)

June 13, 2006

- Windows
 - CIFS Byte Range Locking Backed by File Server Locks
 - Support for AMD 64-bit Windows XP, 2003, R2
- ??????

Supported Platforms

- AIX 4.2, 4.3, 5.1, 5.2, 5.3
- HP-UX 11i (pa-risc), 11.22 (pa-risc), 11.23 (ia64)
- Solaris 7 (sparc,x86), 8 (sparc,x86), 9 (sparc,x86), 10 (sparc,x86,amd64)
- MacOS X 10.3 and 10.4 (ppc, intel)
- Microsoft Windows 2000, XP (x86, amd64), 2003 (x86, amd64), 2003 R2 (x86, amd64), Vista Beta 2 (x86, amd64)
- Linux 2.4 kernel: x86, x86-uml, amd64, ia64, pa-risc, ppc, ppc64, s390, s390x, sparc, sparc64
- Linux 2.6 kernel: x86, x86-uml, amd64, ia64, ppc, ppc64, s390x, sparc64
- OpenBSD (x86) 3.3, 3.4, 3.5, 3.6, 3.7, 3.8
- NetBSD (x86; server only) 1.5, 1.6, 2.0, 2.1, 3.0
- FreeBSD (x86; server only) 4.7, 5.3, 6.0-beta
- SGI Irix 6.5

Elders Reorganization

- Thanks to the original Elders who retired

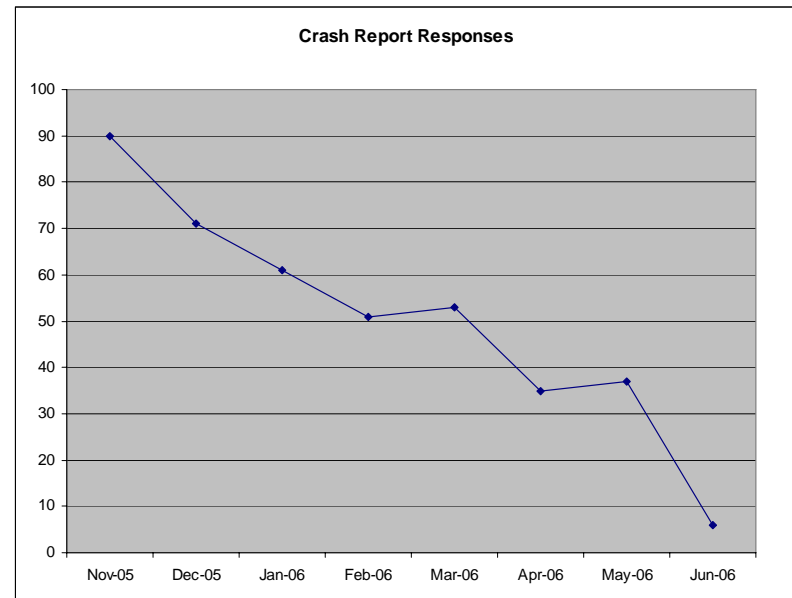
- Travis Broughton
 - Intel
- Craig Everhart
- Peter Honeyman
 - University of Michigan
- Ted McCabe
 - MIT
- Philip Moore
- Bob Oesterlin
 - IBM Rochester
- Garry Zacheiss
 - MIT

- Current Elders

- Russ Allbery
 - Stanford University
- Jeffrey Altman
 - Secure Endpoints Inc.
- Harald Barth
 - Kungliga Tekniska högskolan [Royal Institute of Technology] Stockholm
- Derrick Brashear
 - Sine Nomine Associates
- Todd DeSantis
 - IBM Pittsburgh Labs
- Jim Rees
 - University of Michigan
- Jeffrey Schiller
 - MIT
- Laura Stentz
 - IBM Pittsburgh Labs
- Warren Yenson
 - Google

Windows Crash Reports

- Starting in November 2005 Microsoft began providing access to Windows Crash Reports for AFS (IBM and OpenAFS)
- Users are referred to a web page providing upgrade information for non-current releases
- The number of reports has steadily decreased




Windows Specific Known Issues

- No support for UNICODE
 - adverse impact on roaming profiles and redirected folders
- No integration with Microsoft Dfs
- No support for files greater than 2GB
- No disconnected mode functionality
- No support for DOS and Extended Attributes

Plans for 1.5/1.6

- Protection Server
 - AFS ID aliases
- Capabilities RPC for all services
- Lock upgrades and downgrades
- Fast fileserver restart/online salvage
- Split cache by volume type
- Online salvager and demand attach
- Multiple realms
- Hash based inode numbers
 - to work around linux libc issues
- Large File Support for Windows
- Better configuration tools for MacOS X

Things to come (post 1.6)

- Windows
 - Installable File System
 - Eric Williams, U. Michigan (CITI)
 - New Credential Manager
 - KFW 3.x Network Identity Manager 
 - Removal of Submounts
- RX
 - rxgk
 - rxtcp
 - ipv6
- File Server
 - Mandatory Locks
 - Unicode path names
- Other
 - proactive monitoring
 - a good admin suite

Mobility Demo

Got Questions About Windows?

- OpenAFS for Windows Status Reports available at
 - <http://www.secure-endpoints.com/>
- Mailing List
 - openafs-win32-devel@openafs.org



Contact Information

Derrick Brashear

shadow *at* dementia *dot* org

Jeffrey Eric Altman

jaltman *at* secure-endpoints *dot* com