

OpenAFS Status 2014

The March of Progress

- D Brashear
- The OpenAFS Project
- 26 March 2014

History

- OpenAFS 1.6.0 was released on 1 September 2011.
- “rx ping” issue at CERN, DESY, others.
- Data corruption issues as well.
- 1.6.1 on 3 April 2012

OpenAFS 1.6.1

- rx ping avalanche
 - leak of AFS connections (with one Rx connection each) during server probes
 - issues with which Rx connection would exist
 - tracked per server so exactly one exists
- corruption due to CopyOnWrite speedup
 - reverted

OpenAFS 1.6.2

- Buffer overflow fixes
 - Presaged what would follow
- Improvements when a server went off into I/O wait forever
- Linux updates

And then ...

Security vulnerability

- MIT 6.858 paper “Kerberos with 2 Heads Napping”
 - Recovery via brute force of a DES service ticket if used for encryption (like Kerberos session keys)
 - ... and AFS only supported DES
- Impetus for MIT rxgk work
- More details later today

OpenAFS 1.6.5

- 2 mitigations to rxkad since rxgk has not been completed yet.
 - rxkad-k5
 - backward compatible to clients
 - rxkad-kdf
 - more secure but harder to deploy

What are you running?

- Folks here running previous-to-1.6.5
 - and before 1.6.5, you are vulnerable
- Oldest observed:
 - hephy.at with OpenAFS 1.4.11 and afs3.6 2.58

OpenAFS 1.6.5.1

- AIX client fix
 - Rx listener was broken
- Linux
 - kernels through 3.12rc4

OpenAFS 1.6.6

- Additional intelligence for disk cache error handling
- Fix for Mavericks symlink issue
- Broken with RedHat Enterprise Linux 6.5 and 5.10

Mavericks issues

- While 1.6.6 includes Mavericks support:
 - kpi did not change, 10.8 client also will load
 - but the kext isn't signed
 - neither packaging nor binaries are signed
 - and the current packaging can't be signed
 - Oh, and the ._ quarantine stupidity ..

OpenAFS 1.6.7

- Security release
 - No details are available yet.
 - To be finalized today followed.

OpenAFS 1.6.8

- Issues with Linux sentry revalidation introduced earlier.
 - Pending workaround in gerrit
- Xcode 5.1 caused many new MacOS issues.
 - Patches in gerrit.
- Fix for possible panic at shutdown

Other work

- RxGK patches starting to show up in gerrit
- bos patches are prerequisite to the work and need more review

Other work

- Restricted Query (avoid leaking metadata) patch in Gerrit
 - Issue is things like volume names and pts identities “leak” the existence of usernames
 - Privacy concerns

Other work

- volscan work
 - alternate mode of use for volinfo tool
 - can be used to generate statistics about data by server, partition, volume, volumetype, or other metrics

Next Release Series

- 1.8? 1.9? 1.10? What's what??
 - Need for a place to merge rxgk without interfering with other releases
 - Pending pile of Windows changes
 - but the current Windows client is stable
 - Skew between Windows stable and Unix stable
 - Possibility to unlink src/WINNT from the rest of the tree

Talk back to us

- Mailing lists:
 - Openafs-info <http://lists.openafs.org/mailman/listinfo/openafs-info>
 - Openafs-devel <http://lists.openafs.org/mailman/listinfo/openafs-devel>
 - Foundation-discuss <http://lists.openafs.org/mailman/listinfo/foundation-discuss>
- IRC chat room: #openafs on freenode
- Jabber developer MUC:
openafs@conference.openafs.org