OpenAFS Status Report

June 14, 2022

Objectives

- Updates on work done for the OpenAFS stable release branches

- Report on work merged to the main development branch

- Status of planned future work

OpenAFS Release Team Meetings

- Every Thursday at 12:00 noon Eastern via Jabber

- Agenda:
  - Changes for OpenAFS Stable
  - Changes for OpenAFS 1.9.x/master

- Logs:

  https://conference.openafs.org/release-team@conference.openafs.org/

Gerrit

- All code changes are reviewed on https://gerrit.openafs.org

- For information on how to submit code changes, see:

  https://wiki.openafs.org/devel/GitDevelopers/

- Changes for master should be based on the current master branch and pushed as gerrit changes

- Changes for stable must be submitted stacks based on 1.8.x
  - changes must already exist on the master branch
  - limited refactoring patches may be accepted to allow for cleaner backports
  - please coordinate with the Release Team before submitting to stable branch

Buildbot

- buildbot.openafs.org is hosted by MIT
  - Performs test builds of each gerrit submission
- Upgraded to Buildbot 3.5.0 in 2022
  - Configuration is Ansible managed now.
  - New builder names to distinguish gerrit triggered from nightlies
- New contributed builders in 2022
  - openSUSE 15
  - FreeBSD 12
  - Debian 11
  - Fedora 35

OpenAFS Releases

Recent OpenAFS Releases

- 1.8.8 July, 2021
- 1.8.8.1 December, 2021
- 1.8.8.2/1.8.9 In progress

OpenAFS 1.8.8

Highlights

- Avoid Rx calls getting stuck on the incoming call queue
- Avoid a possible salvageserver deadlock
- Avoid client connections hanging forever when the server is restarted
- Improved documentation, diagnostics and error messages
- Fixes for recent c compilers
- Avoid potential salvager crashes
- Avoid erratic vlserver behaviour due to overflowing the maximum VLDB size of 2 GB
- Fixed a slow kernel memory leak triggered by retrieving tokens

(continued)

OpenAFS 1.8.8 (continued)

- Fix 'pts mem -expandgroups' failure when supergroups are enabled
- Take read-only volumes offline during read-only to read-write conversion
- Avoid inconsistent volume states due to interrupted rename operations
- Support deleting non-DES keys with asetkey
- Improved ubik performance and robustness
- Avoid flooding servers with NAT pings
- Avoid panics during client startup or shutdown
- Avoid buffer overflows by one character in the "bos" client program

(continued)

OpenAFS 1.8.8 (continued)

- Linux
    - Support Linux kernel 5.13
    - Fix crash when running on Crowdstrike Falcon
    - Fix crash when reading from /proc/fs/openafs/CellServDB before afsd has started
    - Fix more getcwd() failures
- macOS
    - Support macOS 11.0 "Big Sur"
- FreeBSD
    - Support releases 11.2, 12.1, 12.2

(and more, see NEWS)

1.8.8.1

- Support Linux kernels 5.14, 5.15 and 5.16
- Support building on FreeBSD 12
- Support building on Solaris with Solaris Studio 12.6

- Support Linux version 5.17
- Avoid unnecessary cell DNS lookups
- Cleanup and refactoring changes for clean backports
- Changes for FreeBSD 12.3 support
- Changes for improved C compiler support (gcc 11, clang 13)
- Update c-tap-harness (unit tests) to support verbose output

OpenAFS master branch

Platforms

- Linux 5.18 support

- MacOS 12.0 "Monterey" support

- FBSD 12 support

- Build support for AIX 7.2

Fixes/Changes

- Compare `RX_ACK_TYPE_ACK` as a bit-field

- New `RXAFS_StoreACL` (CVE-2018-7168)

- Improve performance with large number of PAGs

- Fix FID output format in cmdebug

Features

- Log a warning if the bosserver is not started in restricted mode

- Support `fs -literal` option (non-Windows)

- Support unified error number lookup in `translate_et` (non-Windows)

- Trim trailing path slashes in `fs lsmount` and `fs flushmount`

- Convert from unsafe to safe string functions
  - kernel module
  - bos client

- Compiler support

OpenAFS master branch

OpenAFS
Status Report

Clean up

- Remove afsinstall (obsolete install scripts)
- Remove kdump (obsolete kernel module debugging)
- Remove obsolete autoconf macros (build system)
- Remove IRIX pre-65 code
- Set oldest supported Linux kernel version to 2.6.18
- Fix issues detected by clang static analyzer

Changes in Review

- RxGK security class
    - Add client/server support
- Linux 5.18 support
    - replace readpages with readahead
- Pthreaded Bosserver
- Pthreaded fs command
- Bosserver large string support
- Compiler support (gcc 12)
- and many more...

Questions?

Thank you.