

From Tiny Acorns Your first submission to OpenAFS

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Movie

9 years in 4 minutes

OpenAFS



ALFRED
LEE

Contributions

Documentation

Contributions

Tools

Contributions

Website and Wiki

Contributions

Code review

Contributions

Bug fixes

Contributions

New features

Contributions

Scratch your own itch

Contributions

Scratch your own itch

Do the work that interests & benefits you

Other people's itches

Better CellservDB parsing
(remove hard limits)

Other people's itches

SRV record support for the
cache manager

Other people's itches

Configuration files for servers

Other people's itches

Fix the fileserver defaults

Other people's itches

Add Bonjour support to the
cache manager

Other people's itches

Complete libkopenafs

Working with OpenAFS

Discuss early, discuss often

Working with OpenAFS

Discuss
Design
(Standardise)
Code

Working with OpenAFS

When in Rome, do as the
Romans

Working with OpenAFS

One change per patch

One patch per change

Getting our code

CVS

Getting our code

git



Getting your code

- Clone our upstream repository

```
git clone \  
  http://git.openafs.org/git/openafs.git \  
  openafs
```

- Checkout the branch you wish to work on

```
git checkout -b my-changes \  
  remotes/origin/master
```

- Edit the code

Finding your way around

- OpenAFS tree can be daunting
- The same files are built in multiple places, in multiple ways
- Kernel: Includes afs/ rx/ and many more
- Servers: Built in both LWP and pthreaded modes
- Make sure you build the entire tree (from the root) before submitting

Things to look forwards to ...

- Some headers are autogenerated ...
 - rxgen
 - com_err (place to edit is *header.p.h*)

- Platform independence

- Build with warnings enabled

```
./configure --enable-warnings
```

- OpenAFS code is ANSI C (*well, nearly ...*)

Submitting your change

- Git makes this relatively simple
- Use `git rebase`, `git commit --amend` or `git cherry-pick` to remove local revision history
- Then ...

```
git push ssh://gerrit.openafs.org/openafs \
HEAD:/refs/for/master
```

(some configuration required)

Gerrit

- Gerrit is a git submission and code review system developed by Google for the Android Open Source Project
- Streamlines the submit / review / commit workflow

Demo (network permitting)

Open | gerrit.openafs Code Review

https://gerrit.openafs.inf.ed.ac.uk/Gerrit#all,open,n,z

Index of /~...penafs-logs Package Index - Android Blogs (26) http://par...AAAAAA== Enlightening Times AFS Papers CDSA/CSSM

All [Open](#) [Merged](#) [Abandoned](#) [Sign In](#)

Change # Search

All open changes

ID	Subject	Owner	Project	LastUpdate
22	Convert curpag to be a pioctl caller to get the kernel's idea of current PAG.	Derrick Brashear	openafs	Jun 2, 2009 5:35 PM
21	Add option to disable syscall probing	Simon Wilkinson	openafs	Jun 2, 2009 10:42 AM
20	Fix overflow in CellServDB parsing code	Simon Wilkinson	openafs	Jun 1, 2009 8:36 PM
3	host reference and ihandle boost	matt@linuxbox.com	openafs	Jun 1, 2009 6:04 PM
19	Prototype the afsmonitor directory	Simon Wilkinson	openafs	May 31, 2009 8:38 PM
17	Tidy up ptserver directory	Simon Wilkinson	openafs	May 31, 2009 5:41 PM
18	Roughly prototype the kauth directory	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
16	Tidy up util	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
15	Prototype the xstat directory	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
14	Prototyping for the volser directory	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
13	Additional prototyping for libacl	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
12	Additional prototyping for vol	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
11	Prototype the vlserver directory	Simon Wilkinson	openafs	May 31, 2009 5:37 PM
10	Updates to chapter 1 of the admin guide	Simon Wilkinson	openafs	May 31, 2009 4:17 PM
9	Fix bad string dereference	Simon Wilkinson	openafs	May 31, 2009 4:01 PM
8	Fix return type warnings	Simon Wilkinson	openafs	May 31, 2009 9:58 AM
2	I would like to submit this patch that adds a -rxmaxmtu NNNN parameter to afsd.	Simon Wilkinson	openafs	May 29, 2009 12:21 PM
1	Make Linux byte range locking pass the NFS connectathon lock tests	Simon Wilkinson	openafs	May 28, 2009 11:09 AM

Press '?' to view keyboard shortcuts
Powered by [Gerrit Code Review](#) (v2.0.13.1)

Configuring Gerrit (and git)

- Log in to gerrit with an OpenID
- Generate a ssh key pair, and upload the public portion
- Edit `~/.ssh/config` and add:

```
Host gerrit.openafs.org  
  Identity ~/.ssh/id_gerrit  
  Port 24918  
  User you
```

Telling git who you are

- Gerrit knows your email address (your IdP told it). You can give it additional addresses, too.
- All commits you push must come from an email address gerrit knows.

```
git config --global user.name "Simon Wilkinson"
```

```
git config --global user.email "sxw@inf.ed.ac.uk"
```

Recycling

- Your code may not be perfect first time
- Gerrit gives each change a number, which can be used to modify existing submissions
- `git commit --amend`, or `git rebase` to combine your modifications with the original change
- Upload your change to the server for review

```
git push ssh://gerrit.openafs.org/openafs \  
HEAD:refs/changes/<changen>
```


Bug tracking

- If your change fixes a bug, then open an RT ticket for it
- Preferably do this first...
- Bugs are created by sending email to openafs-bugs@openafs.org
- RT is available to everyone at <http://rt.central.org/rt>
- Patches can also be submitted directly to RT

Standardisation

- Changes to RPCs, pioctls, network visible datastructures and the like require standardisation
- **Don't** just pick a random number!
- Correct location to do this is on afs3-standardization@grand.central.org
- Start with an informal discussion, but we'll probably need a formal document at some point. People will be happy to help with this!

Talking

- Mailinglist: openafs-devel@openafs.org
- Jabber: [openafs@conference.openafs.org](jabber:openafs@conference.openafs.org)
- IRC: #openafs on Freenode

Mentoring

- I've got a little more time this summer than I expected
- I'd like to get more people involved
- If you're a new developer, I'm prepared to help out in the same way as we help GSoC students.
- Drop me an email!