

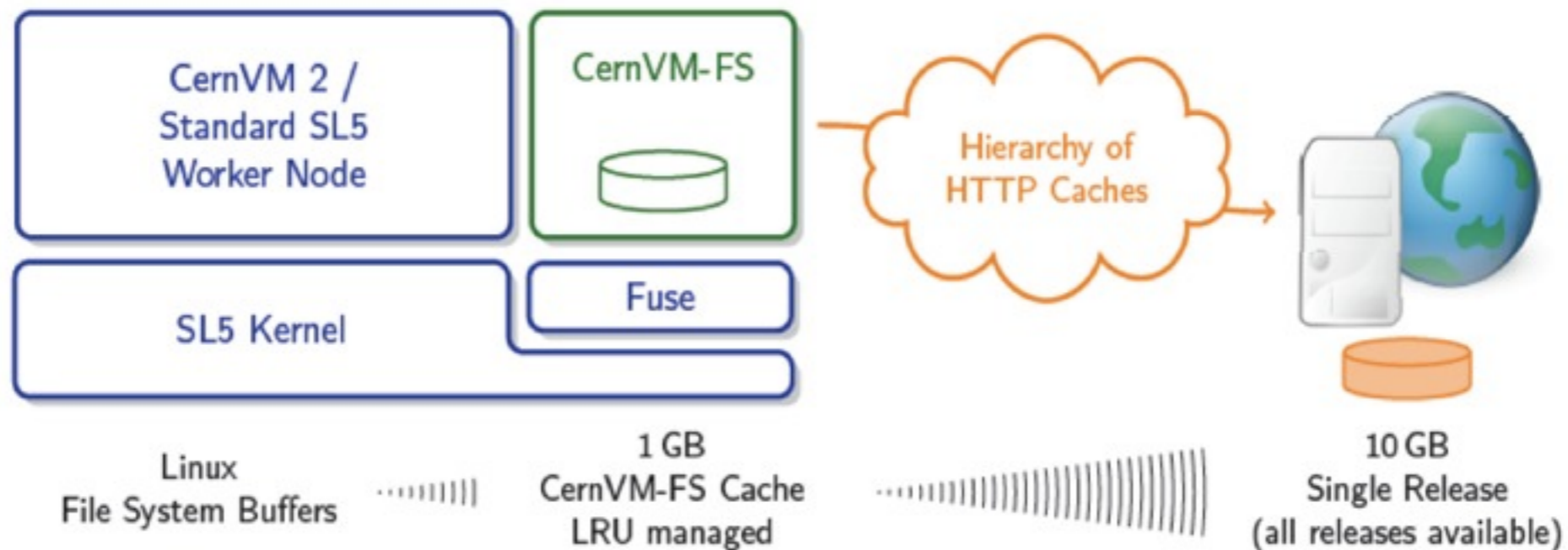


cvmfs: ready for the big time?

Graeme Stewart
2010-12-02

cvmfs

- Quick reminder of what it is:
 - Read only file system, developed by CERN VM team
 - Cached strongly - local cache, backed up by hierarchical series of squids



Why it's good

- Liked by sites because:
 - It scales beautifully (c.f., nfs, afs, lustre, gpfs)
 - It's easy to setup and maintain
- Liked by us because:
 - No reason to run installer jobs anymore
 - Things in cvmfs uniformly and ~instantly available at all sites
- Liked by everyone because of
 - De-duplication for identical files in different places in the filesystem tree

HOWTO

- <https://twiki.cern.ch/twiki/bin/viewauth/Atlas/Tier3CVMFS2SLC5>
- Some juggling of soft links required, with `VO_ATLAS_SW_DIR` still on nfs:

```
drwxr-xr-x  3 atlassgm atlas 4096 Jan 25  2010 atlas-gcc
-rw-r--r--  1 atlassgm atlas  178 Feb  1  2010 AtlasSiteConfig.sh
drwxr-xr-x  4 atlassgm atlas 4096 Jul 15 12:56 cctools
lrwxrwxrwx  1 root      root   20 Oct 20 10:11 database -> /opt/atlas/database/
drwxr-xr-x  6 atlassgm atlas 4096 Apr 23  2010 ddm
drwxr-xr-x  5 atlassgm atlas 4096 Nov 29 03:07 local
drwxr-xr-x  3 atlassgm atlas 4096 Jan 21  2010 prod
lrwxrwxrwx  1 root      root   39 Oct 20 10:40 software -> /opt/atlas/software/i686-slc5-gcc43-opt
drwxr-xr-x 27 atlassgm atlas 4096 Oct 19 19:19 software.old
-rw-r--r--  1 atlassgm atlas 5672 Nov 28 02:32 tags
```

Go, go, go, ...

- Used at RAL, Wuppertal, QMUL (plus T3s)
 - So far, so good
- Interest from significant number of other sites

Improvements and Open Questions

- Conditions data into cvmfs, plus ddm, cctools, dbreleases
 - Uniform path, no need to build PFC on each site
- What do we really need to localise on sites?
 - Anything...? How...?
- Do we need to make the setup easier for sites? How?
- Can athena setup be truly relocatable (limited to /opt/atlas for now)?
- Do we have to validate sites when s/w area is 'guaranteed'?
- What to do if the site cannot/will not use cvmfs on WNs?
- Install into cvmfs master from RPMs?
- Robustness of CERN setup critical