

RAL CVMFS Stratum-0

EGI Conference 2021

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What is CVMFS

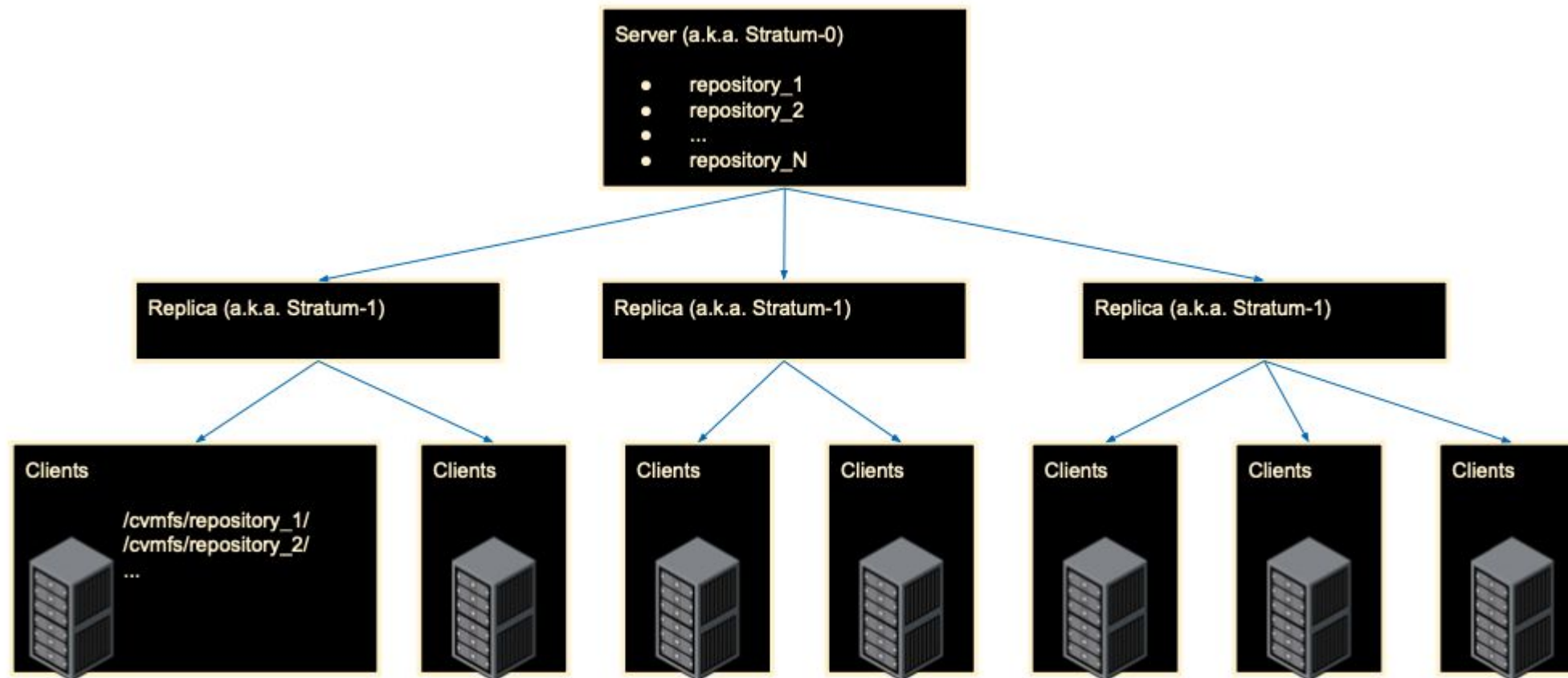
From the official documentation:

"The CernVM-File System (CernVM-FS) provides a scalable, reliable, performant and low-maintenance software distribution service [...] CernVM-FS is implemented as a POSIX read-only file system in user space (a FUSE module). Files and directories are hosted on standard web servers and mounted in the universal namespace /cvmfs."

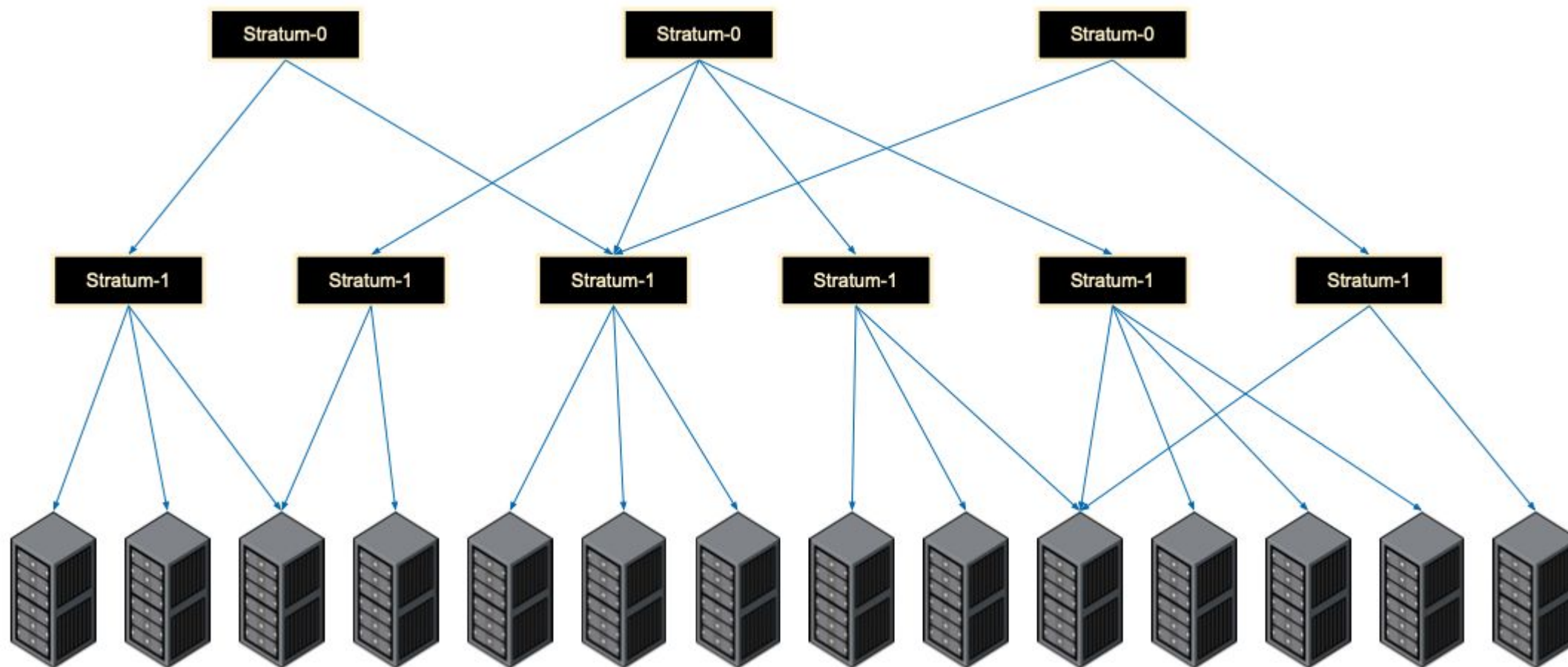
<https://cvmfs.readthedocs.io/en/latest/>

In a nutshell: CVMFS is a read-only world-wide distributed filesystem.

Distributed filesystem



Distributed filesystem



Distributed filesystem

ATLAS



Stratum-0: CERN

Stratum-1:

- RAL
- BNL
- FNAL
- KEK

BELLE II



Stratum-0: KEK

Stratum-1:

- RAL
- BNL
- FNAL
- IHEP
- DESY

Stratum-0 (server) for EGI

RAL hosts the server for the EGI communities:

auger.egi.eu
biomed.egi.eu
config-egi.eig.eu
dirac.egi.eu
eosc.egi.eu
gridpp.egi.eu

hyperk.egi.eu
km3net.egi.eu
ligo.egi.eu
lucid.egi.eu
mice.egi.eu
na62.egi.eu

pheno.egi.eu
snoplus.egi.eu
solidexperiment.egi.eu
supernemo.egi.eu
t2k.egi.eu
...

Multiple replicas (stratum-1s):

- RAL
- FNAL
- BNL
- KEK
- TRIUM
- NIKHEF
- ASCG

Stratum-0 at RAL for EGI

The documentation (<https://www.gridpp.ac.uk/wiki/CVMFS>) contains:

- Link to the instructions to request the creation of a new Repository.
- Instructions for new Content Managers for existing Repositories.
- Instructions on how to distribute new content.

Read them (including the Privacy Notice and the Acceptable Use Policy documents) before start using the service.

Access to Stratum-0 at RAL for EGI

Currently, the implemented mechanism for Content Managers to access the service is `gsissh`.

⇒ Content Manager need a valid X509 grid proxy.

To access interactively the server: `gsissh -p 1975 cvmfs-upload01.gridpp.rl.ac.uk`

To copy files into the server: `gsiscp -P 1975 <source> cvmfs-upload01.gridpp.rl.ac.uk:<destination>`

Once you `gsissh` into the server, there is a single directory in your home. Just copy new content into that directory, and it will be distributed world-wide:

```
[gridppsgm@cvmfs-uploader02 ~]$ ls
cvmfs_repo

[gridppsgm@cvmfs-uploader02 ~]$ ls cvmfs_repo/
euclid lsst Mu3e sl6 testfolder testing
```



```
[root@lcg2400 ~]$ ls /cvmfs/gridpp.egi.eu/
euclid lsst Mu3e sl6 testfolder testing
```


Future plans

Most relevant work on RAL CVMFS infrastructure (for EGI) in the next months:

1. Getting the service onboard on EOSC.
2. Integration with EGI Check-In for authentication/authorization.
X509 proxies not mandatory.
3. Easy mechanism for Docker images distribution.



Website: www.egi.eu/projects/egi-ace

 [EGI Foundation](https://www.linkedin.com/company/egi-foundation)  [@EGI_eInfra](https://twitter.com/EGI_eInfra)

