

Source: LSST

# Deployment of LSST software at CC-IN2P3

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*LSST-France, Paris, December 7th, 2015*





# LSST software deployment at CC-IN2P3

- In the cloud, available worldwide  
*stable versions only, distributed via CernVM FS*  
*both Linux and MacOS X, usable from your laptop and from compute nodes*  
*not yet installed on CC-IN2P3's compute nodes*  
*details: <https://github.com/airnandez/lsst-cvmfs>*  
*other official binary distributions channels: <http://sqr-002.lsst.io>*
- Local to CC-IN2P3, under `/sps/lsst/Library`  
*latest stable version v11.0: `/sps/lsst/Library/stack_v11_0`*  
*development version: `/sps/lsst/Library/lsstsw`*  
*installed and maintained by D. Boutigny*

# LSST software deployment at CC-IN2P3 (cont.)

- Usage

*development version:*

```
export LSSTSW=/sps/lsst/Library/lsstsw
export EUPS_PATH=$LSSTSW/stack
source $LSSTSW/bin/setup.sh
setup pipe_tasks
```

*stable version v11.0:*

```
source /sps/lsst/Library/stack_v11_0/loadLSST.bash
setup pipe_tasks
```

*source: mail from D. Boutigny to [lsst-fr-calcul-l@in2p3.fr](mailto:lsst-fr-calcul-l@in2p3.fr) dated on 2015-11-28*

# LSST software deployment at CC-IN2P3 (cont.)

- Note, LSST software requires a standard C++ compiler and runtime  
*for using GCC v4.6.4 at CC-IN2P3 do:*

```
source /usr/local/shared/bin/gcc464_env.sh
```

# Qserv development and integration cluster

- 50 database server nodes (DELL R620 and R630)
  - aggregate 400 cores, 500 TB of raw disk, 800 GB RAM*
  - deployed in a private subnet*
  - partially managed by Puppet (OS + ACLs + local accounts)*
  - AFS read-write, read-only access to GPFS*
  - Docker container now used for deployment of Qserv software across the cluster*
- 1 login node
  - virtual machine partially managed by Puppet (OS + ACLs + local accounts)*
  - access point to cluster*
  - network firewall configured to allow login from SLAC network*
  - compilation and deployment of Qserv software (gcc-4.9.3 required)*
  - AFS, GPFS both read-write*
- 1 monitoring node
  - Ganglia: system level monitoring*
  - ElasticSearch + Kibana: application level monitoring (work in progress)*

# Qserv development and integration cluster (cont.)

- NCSA intends to deploy a cluster for Qserv development
- LSST database team intends to evaluate [Greenplum](#) as a candidate platform for LSST catalog

*I don't know what this means for Qserv in the short term and for the Qserv instance at CC-IN2P3*

- Does LSST-France need / intend to use Qserv for the CFHT data processing exercise?

*is it at all possible?*



# QUESTIONS & COMMENTS

