



Requirements, intra-project communication and software repositories

Sebastien Ponce, Giuseppe Lo Presti, German Cancio
CERN / IT



Outline



❖ Requirement gathering

- From experiments, external institutes and users

❖ Communication tools

- Among developers
- With outside customers

❖ Software Repositories

- Source code
- Binary repository
- Documentation



Experiment requirements



❖ Meetings

- Mid 2005 : CASTOR 2 requirements gathering meetings with all LHC experiments
- Before migration of each experiment, presentation of CASTOR 2 status and features

❖ Support

- Remedy flow tickets can become requests for enhancement
- Mailing lists : castor-support and castor2-support

❖ Data Challenges

- Tight collaboration for running the challenges
- Contacts and lots of feedback from the key people



External Institutes requirements



❖ Meetings

- Regular phone conferences every second week
- Regular face to face meetings (twice a year)

❖ Mailing list

- castor-external-operations

❖ Web pages

- Support feature of the savannah portal



Requirements handling



❖ Translation into tasks

- Analysis of the requirement and of the implications
- Update of the work item list

❖ Prioritization

- In conjunction with the operation team
- At the castor deployment meetings

❖ Integration into the planning

- Identification of the developers that can handle it
- Modification of the work plan



Communication among developers



❖ Mailing lists

- castor-dev has extremely high traffic
- castor-deployment for deployment related problems
- castor-external-operations when it may concern external institutes

❖ Tools

- All CVS commits are sent to the mailing list
- Bug tracking is done through savannah

❖ Meetings

- Weekly section meetings

❖ But most important : face to face discussions

- Only few people all in the same building



Communication with 'customers'



❖ Operation team

- Deployment meeting every week
- Very frequent discussions
- “The key office” : Sebastien and Olof share an office

❖ DB section

- Invited to the deployment meeting
- CASTOR devs are actively involved in the testing of new ORACLE releases and in relations with ORACLE representatives

❖ External institutes

- Biweekly phone conference + biyearly face to face meeting
- Dedicated twiki page for tricks and practices



Source repository



❖ CVS

- Using the central CVS service
- With anonymous read only access
- Contains CASTOR and genCastor complete sources

❖ Some improvements

- Mails sent for each commit
- Automatic update of the checked out copy in AFS
- Automatic update of man pages on the web

❖ A source RPM is provided in savannah for each release

❖ Doxygen documentation is available on the web

- Or by issuing `make doxygen` after a fresh check out



Binaries



❖ RPMs are available

- In savannah <https://savannah.cern.ch/files/?group=castor>
 - Main repository for all users, including external Institutes
- In SLC3 / SLC4
- In swrep
 - CERN internal use
- Binaries on AFS for the client part
 - `/afs/cern.ch/sw/lcg/external/castor/<version>/<platform>`

❖ Kernel patches are available on the castor web page

❖ Tools

- Umbrello can be found in any linux distribution
- gencastor is provided internally to the dev team as a debian package



Documentation



❖ Guides

- Available on the web
- New ones have sources in CVS (latex format)
- Most of them have to be updated for CASTOR 2

❖ Procedures and recipes

- On the web as wiki pages
- A page is dedicated to external institutes
- FAQs were created very recently

❖ Design, architecture, dev related

- CVS can be browsed from the web
- Full doxygen documentation on the web
- All UML diagrams are provided