



Goal for LCG2 Storage Element

- The main new feature of the LCG2 release is to provide disk managed space with a common interface “SRM”
- They were 3 options:
 - CASTOR (CERN)
 - HRM/DRM (Berkeley)
 - dCache (DESY/FNAL)



CASTOR

- This solution was tried first because of local expertise
- Functionality ok
- Solution dropped by CERN IT management for lack of manpower to do the support worldwide



HRM/DRM (Berkeley)

- This system has been used in production for more than a year to transfer data between Berkeley and Brookhaven for the STAR experiment
- The licensing and support was unclear
- However VDT will probably distribute this software
- IN2P3 (Lyon) is investigating if they could use this solution to provide an SRM interface to their HPSS system



dCache (DESY/FNAL)

- Joint project between DESY and FNAL
- DESY developed the core part of dCache while FNAL developed the Grid interfaces (GridFTP and SRM) and monitoring tools
- dCache is used in production at DESY and FNAL, but also at some Tier centers for CMS
- IN2P3 is also investigating if dCache could be used as a frontend to their HPSS system



LCG-2 SE (February release)

- Mass Storage access – to tape
 - SRM interfaces exist for Castor, Enstore/dCache, HPSS
 - SRM SEs available at CERN, FNAL, INFN, PIC
- Classic SEs deployed everywhere else
- GFAL included in LCG-2 – it has been tested against CASTOR SRM and rfiio as well as against Enstore/dCache SRM



LCG-2 SE (end of March release)

- A lot of effort has been spent by dCache developers to improve dCache functionality and by Michael Ernst to improve dCache packaging to satisfy LCG requirements.
- CERN IT/GD is currently testing this new version



Test suites

- Test suites have been written and run against CASTOR and dCache for:
 - SRM
 - GFAL library
- The new version (better performance) of the GFAL File System is being extensively tested against CASTOR and the tests against dCache have started
- Latest version of the Replica Manager support both the classical SES and the SRM SEs



Conclusion

- We are still confident to be able to release an SRM SE at the end of March