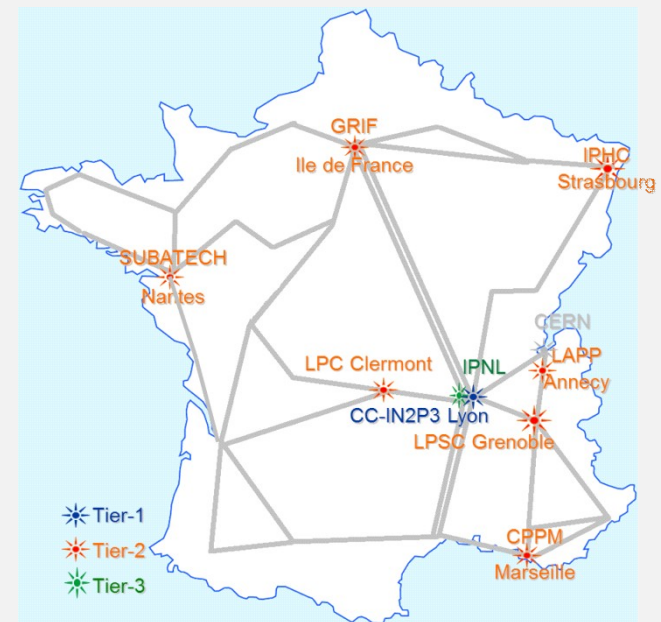


Experiences & Expectations from France

2nd DPM workshop, LAL, Orsay
3-4 Dec. 2012



DPM usage in France

- LCG Tier-2 / Tier-3 s & NGI France Grilles using DPM
- DPM disk storage have to be shared with non-LCG users
- Current DPM infrastructure
 - At least 6,5 PB deployed via Quattor (and 0,5 PB via Yaim) on 8 sites
 - largest site GRIF (3800TB – on 6 locations), IPHC (850TB)
 - other sites have between 300 and 600TB of storage
- Communication via LCG-France T2-T3 technical group
- Quattor (and DPM) documentation via Trac at LAL:
<https://trac.lal.in2p3.fr/Quattor/wiki/>



Support of LHC VOs

- Various sites have various needs depending of the VO they support
 - Mainly DPM (for SRM) and Xrootd.
 - Until recently Xrootd usage was for Alice only
 - Started using dpm-xrootd plugin
 - Alice pushed for native Xrootd (with some reasons)
 - What about the newer dpm-xrootd versions ?
 - Xrootd came back for storage federations (Atlas and CMS)
- Non LHC-VO: most use DPM. Usually not a need for a lot of volume but high performances sometimes required.



Deployment & Administration

- French sites have used DPM for quite some time and have a good knowledge of it
- Suggestions for improvements
 - Good enough xrootd-plugin for Alice
 - Better drain (faster, able to select destination volume, etc.)
 - Wise volume management:
 - Fast disks (SSD, etc.)
 - Auto-replicas under load
 - Federation aware



Migration to EMI releases

- Started since LCG-France meeting in Nantes
 - Is now done for all french sites with DPM 1.8.3 in production
- Status & Feed-back on latest DPM releases
 - Seems to work fine and being stable.
- Xrootd support
 - Most french sites using both DPM and Xrootd are eagerly waiting for a good dpm-xrootd plugin
- Towards storage federation
 - CMS: Xrootd as a fall-back
 - ATLAS: preliminary tests HTTP-Webdav



Post-EMI strategy

- Strong interest in DPM collaboration
- Main reasons
 - Sustainability of current Tier-2 / Tier-3 disk storage infrastructure
 - Needs for both hardware & middleware maintenance
 - Maintenance **and Evolution** of disk management solution
- In favor of a Community-based organization where we would take place



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DPM collaboration

- 3 LCG sites already agreed in principle to participate
 - GRIF, IPHC, LAPP
 - GRIF as a federation gathers a large technical team
 - Others may join
- Eq ~ 0,5 FTE (target contribution for France)
- LCG-France already promote and support French participation to DPM collaboration (funding agencies awarded)
 - Comprehensive support for both hardware & middleware maintenance



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Possible contributions

- User support
- Quattor templates
- Packaging
- Monitoring probes
- Release qualification
- Code development on specific points is also looked at:
 - add replicate command to the shell
<https://its.cern.ch/jira/browse/LCGDM-701>
 - add pool handling commands to the shell
<https://its.cern.ch/jira/browse/LCGDM-698>
 - web tool for dpm/dmlite administration <https://its.cern.ch/jira/browse/LCGDM-689>
 - log file analyser.... somehow related to task
<https://its.cern.ch/jira/browse/LCGDM-758>



