



French DPMs sites

Status Report & Feedbacks

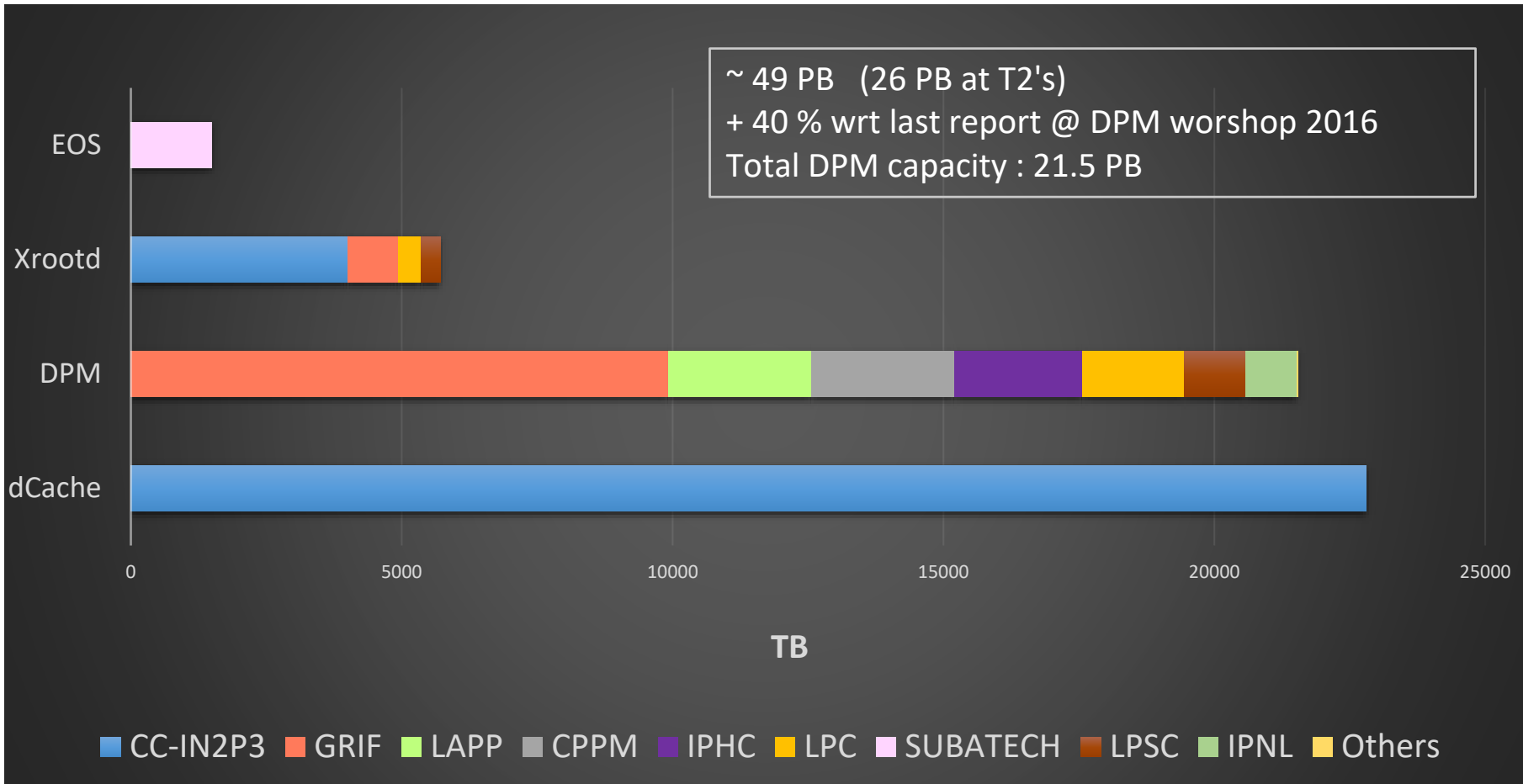


Introduction

- Quick feedbacks : French DPMs
 - Slot de 10 mn au Workshop DPM 2019, Bern (Suisse)
<https://indico.cern.ch/event/776832>
 - Philippe, et FC y participent
- Version préliminaire en partie discutée lors de ces journées (mercredi)
 - Certaines diapositives pourraient faire partie de la présentation pour le workshop DPM 2019
 - Propositions, idées à compléter / discuter
 - Etat d'avancement de la migration vers DOME
 - Personnellement, j'aurais souhaité que la collaboration DPM se pose des questions à long terme en lien avec l'évolution du stockage DPM mais rien de tel dans l'agenda du Workshop
 - Vos avis ?
- Message d'Andrea sur LCGFR-TECH 22/05/2019
 - Organisation support FR concernant le « legacy stack » de DPM
 - « *Planifiez votre migration a DOME! Et, pour ceux qui sont déjà passé à DOME, planifiez le passage a la redirection gridftp et l'abandon de SRM. »*



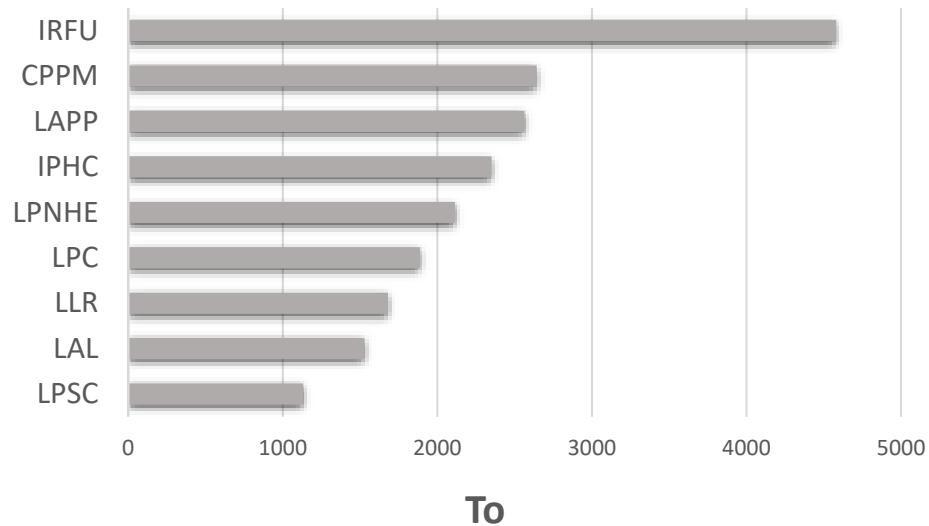
Grid Storage in France





FR DPM Community

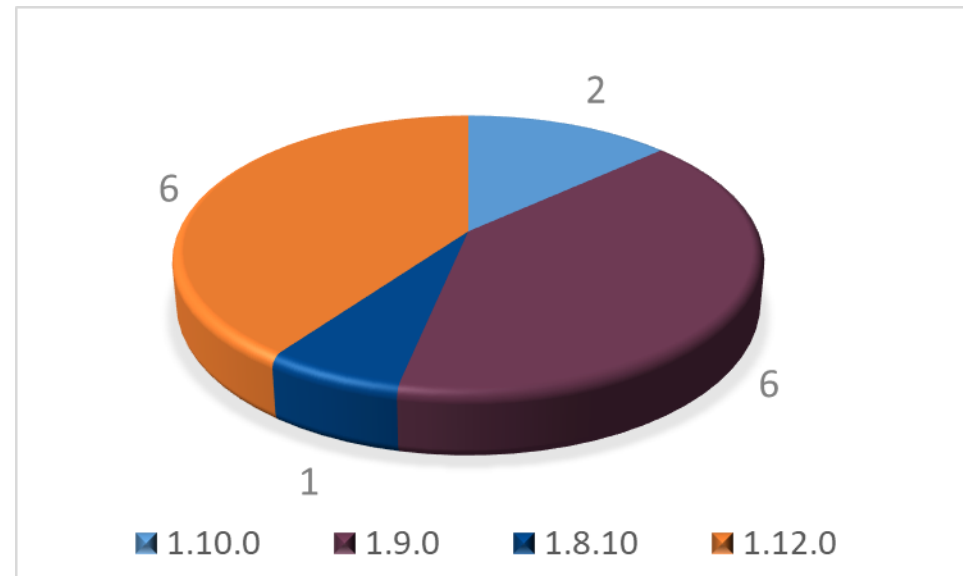
- Quite a large community
 - 15 DPM instances
 - ~ 21.5 PB
 - Several instances above 2 PB
- 3 testbeds
 - 2@GRIF
 - Epel testing
 - Quattor/Puppet conf validation
 - CMS MW validation
 - 1@LAPP ATLAS MW validation turned off and converted into a « New » testbed ATLAS FR-ALPES (LAPP Annecy-LPSC Grenoble)





FR DPM Sites

- DPM is now configured hybrid Puppet/Quattor (using dpm puppet modules within Quattor)
 - GRIF_LAL/LPNHE/IPNO/LLR, IPHC, IPNL, LAPP, LPSC
- Some sites have migrated puppet profiting of the ready-to-use puppet modules
 - GRIF_IRFU, CPPM, LPC
- On the road to DOME...





Migration to DOME

Thanks to the [DPM upgrade task force](#) and Petr Vokac

- GRIF_LAL / LLR/IRFU participating

Upgrade to DOME (+add-ons) in two or three steps

0. upgrade DPM packages to the latest version (1.12.1)
1. enable DOME [1] + xrootd checksums
 - SRR validation : should be configured just to be checked
 - ATLAS : no changes in AGIS config. SRM preferred for everything except lan_read
 - Issue(s) with diverging spacetoken vs. quotatoken
2. enable gridftp redirection, enable non-gridftp TPC, non SRM
 - with changes in AGIS for ATLAS sites
 - LCGDM-2748 : DPM not aware in case of dead disknode [2]

No clear evidence whether there are some options or not...

- On one hand : TPC is part of the DOMA activity,
- On the other hand : End of the Legacy stack support(including SRM)
01/06/2019

The way to proceed : more or less a site choice

[1] https://twiki.cern.ch/twiki/bin/view/DPM/DpmSetup1100#2_Upgrade_to_DPM_1_10_0_Dome_Fla

[2] <https://its.cern.ch/jira/browse/LCGDM-2748>



Migration to DOME *In work*

Current situation

Site	DPM	DOME enabled	XrootD	XrootD chksum	SRR validation	GridFTP redirection	SRM support	TPC XRootD	Upgrade Status
LAL (GRIF)	1.12.1	✓	4.9.0	No	OK	-	Yes	-	production
LLR (GRIF)	1.12.1	✓	4.9.1-1	Yes	OK	-	Yes	-	production
IRFU (GRIF)	1.12.1	✓	4.9.0	No	OK	-	Yes	-	production
LPNHE (GRIF)	1.10.0	No	4.8.4-1	No	-	-	Yes	-	production
IN2P3-CPPM	1.9.2	✓	4.8.0-1	No	-	-	Yes	-	production
IN2P3-IRES	1.10.0	No		No	-	-	yes	-	production
IN2P3-LAPP	1.9.2	No	4.8.2	No	-	-	yes	-	production
IN2P3-LPC	1.9.2	No	4.8.1	No	-	-	yes	-	production
IN2P3-LPSC	1.9.0	No		No	-	-	yes	-	production
FR-ALPES	1.12.1	✓	4.9.0	Not yet	-	-	yes	-	ATLAS testbed
AUVERGRID	1.12.1	✓			-	-	yes	-	production



Migration to DOME *In work*

Plans

Site	DPM	DOME enabled	XrootD	XrootD chksum	SRR validation	GridFTP redirection	SRM support	TPC XRootD	Upgrade Status
LAL (GRIF)	1.12.1	✓	4.9.0	No	OK	YES	NO	-	production
LLR (GRIF)	1.12.1	✓	4.9.1-1	Yes	OK	-	YES	-	production
IRFU (GRIF)	1.12.1	✓	4.9.0	No	OK	-	YES	-	production
LPNHE (GRIF)	1.10.0	No	4.8.4-1	No	-	-	YES	-	production
IN2P3-CPPM	1.9.2	✓	4.8.0-1	No	-	-	YES	-	production
IN2P3-IRES	1.10.0	No		No	-	-	YES	-	production
IN2P3-LAPP	1.12.1	YES	4.9.0	YES	OK	YES	NO	YES	< end of 2019
IN2P3-LPC	1.9.2	No	4.8.1	No	-	-	yes	-	production
IN2P3-LPSC	1.9.0	No		No	-	-	yes	-	production
FR-ALPES	1.12.1	✓	4.9.0	Not yet	OK	YES	NO	YES	ATLAS testbed ASAP
AUVERGRID	1.12.1	✓			-	-	yes	-	production



Sites Feedback

- Remaining requests : load balance and load mgt
 - Scalability
 - Redistributing files
 - VO's/users «quotas» on connections/bandwidth.
- Not so many issues
 - « Graceful restart » not so graceful !
- Improvements appreciated on
 - Documentation
 - Reactivity and Help ont the dpm_forum list
 - DB check tools
- Few concerns related to SRM deprecation
 - More a communication/coordination problem between VOs and sites
 - No clear vision about smalls VOs still using SRM... or not
- Redirection gridftp : risk of headnode overload with old clients (lcg-cp)
 - A way to check : « occurrences of PASV in the gridftp logfile /var/log/dpm-gsiftp/gridftp.log and /var/log/dpm-gsiftp/dpm-gsiftp.log. (Newer clients such as gfal2 use STOR instead, meaning a delayed passive ftp »



Future of DPM storage

- Strategy / ideas/ concerns for the future of DPM in the context of WLCG DOMA ?
- DOMA-FR project :
 - **Starting point** : Set-up of a DPM federation (FR-ALPES) and integration within the ATLAS environment (Rucio, AGIS, HC)
 - Studies : Data access perf., Reliability, Usability...
 - Including DPM Volatile pools : Use cases, benefit ?
 - **Medium term interest** : CEPH back-end of DPM or Xrootd gateway
 - Cf. ECHO (RAL)
 - **Long-term concern** : DPM component within a DataLake
 - is this possible ?
 - Is it too early to identify potential limitations ?
- Discussion or common actions within the DPM Collaboration ?