



WLCG Draft Service Plan

Change Log

December 18 – Main LHCb goals added; ATLAS milestones completed / corrected from slides from Dario. ALICE milestones and goals taken from Harry's wiki. (Data export rates have to be checked – they are not the pp rates from Megatable and look to me like Heavy Ion rates!)

December 15 – Currently unscheduled objectives (e.g. full ESD to BNL) added.

December 14 – Updated with information gleaned from slides presented at ATLAS Software & Computing week. Guestimates of full service availability added. LHCb plans expected during week of December 18.

Month	Objective	VOs Involved	Sites Involved	Goals/Milestones
January	Continue multi-VO T0-T1 transfer tests	ALICE, ATLAS, CMS	IN2P3, FZK, SARA	Understand in detail possible bottlenecks and couplings between VOs, maintenance and house-keeping operations etc. Stability of load generators and VO services etc. Focus on main (multi-VO, high data rate) dCache sites.
January	75% 2007 challenge	ALICE	ALICE Tier1s	During first quarter build up to a data challenge of 75% of the last quarter (data taking) capacity using new site capacity as and when available. Require up to 2325 KSi2K cpu, 720 TB disk and 1500 TB tape over the 7 Tier-1. Export rate from CERN of 230 MB/s will be 38



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				MB/s to CNAF, 38 MB/s to IN2P3, 60 MB/s to FZK, 4 MB/s to RAL , 23 MB/s to NIKHEF, 38 MB/s to NDGF and 30 MB/s to USA.
January	Preparation for ATLAS Calibration Data Challenge	ATLAS	ASGC, BNL, CNAF, GridKa, IN2P3, RAL. (TRIUMF, SARA if ready for 3D).	Required DB services in full production for sub-system testing prior to official start of challenge (internal ATLAS Milestone).
January	Replicated R/O LFC for LHCb in full production.	LHCb	CNAF	read-only instance (with streaming from CERN) at one T1 centre (CNAF)
January	COOL/3D DB	LHCb	3D Phase 1 sites	instance of read-only COOL DB (at least phase 1 sites) for January'07 tests
January 22 – 26	WLCG Collaboration workshop	All	All	Understand and agree major goals for 2007, requirements on sites etc.
February	Perform multi-VO T0-T1 transfer tests to CASTOR sites	ALICE, ATLAS, CMS	CNAF, RAL, PIC, ASGC	Understand in detail possible bottlenecks and couplings between VOs, maintenance and house-keeping operations etc. Focus on CASTOR sites.
February	ATLAS Calibration Data Challenge (Phase 1?)	ATLAS	All (except FNAL)	Readiness for ATLAS Calibration Data Challenge ATLAS All



				except FNAL Production-level 3D DB services (ATLAS LCG 3D Milestone).
February	SRM v2.2 preparation	All	All	SRM v2.2 support in experiment s/w
March	Multi-VO T0-T1 transfer tests	All	All	Understand in detail possible bottlenecks and couplings between VOs, maintenance and house-keeping operations etc. Extend to all sites.
March	Detector calibration / alignment challenge	LHCb	All Tier1 sites	instance of read-only COOL DB
March	CMS MTCC3	CMS		
March	Data Distribution Tier0→Tier1→Tier2	ATLAS	All	Nominal rate for at least one week.
March	3D Databases	ATLAS	All	Available at all Tier1s
April	ATLAS FDR, CMS CSA07	ATLAS, CMS	All	Services required for ATLAS FDR+CMS CSA07 in production ready for sub-system testing.
April	Analysis challenge	LHCb	All Tier1s	Analysis of production data
April			All	gLite 3.x / SL(C)4 production services.
April	ATLAS Calibration Data Challenge	ATLAS	FZK, ASGC, RAL, CNAF, IN2P3, BNL, TRIUMF, NDGF, PIC, SARA	Phase II



April 6 - 9	Easter	All	All	
May	Multi-VO transfers to sites using SRM v2.2?	ALICE, ATLAS, CMS	Split by SRM implementation?	Stability – aim to reproduce results of previous SRM v1.1 tests.
May	Tier0 tests phase II	ATLAS	CERN	See ATLAS milestone for details
June	ATLAS FDR – first “run”	ATLAS	All except FNAL	
June	ATLAS reprocessing tests	ATLAS	All	Reprocessing tests completed at all Tier1s, including pre-staging raw data from tape
June	CMS CSA07	CMS	All except BNL, TRIUMF	
July	SRM v2.2 services	All	All	Full SRM v2.2 production services at all sites
July	3D services	All	All	Full 3D production services at all sites
July	ATLAS FDR – second “run”	ATLAS	All except FNAL	
July	ATLAS CDC	ATLAS	All	End of CDC: calib/align loop at required rate (1 day latency)
July	CMS CSA07	CMS	All except BNL, TRIUMF	
August	ATLAS FDR – third “run”	ATLAS	All except FNAL	
September	ATLAS FDR – final “run”	ATLAS	All except FNAL	
October	LHC operations testing			
October	ATLAS FDR	ATLAS	All	Complete operation stable for >1 week



November	Full LHC machine checkout			
November	Data taking	ALICE		For data taking require 3100 KSi2K cpu, 960 TB disk and 2000 TB tape over the 7 Tier-1. Export rate from CERN of 305 MB/s will be 50 MB/s to CNAF, 50 MB/s to IN2P3, 80 MB/s to FZK, 5 MB/s to RAL , 30 MB/s to NIKHEF, 50 MB/s to NDGF and 40 MB/s to USA.
December	Beam commissioning & Engineering run			

Month	Objective	VOs Involved	Sites Involved	Goals/Milestones
TBD	Full data rate to BNL	ATLAS	BNL	355MB/s sustained to BNL corresponding to full ESD.



Appendix – Service Metrics

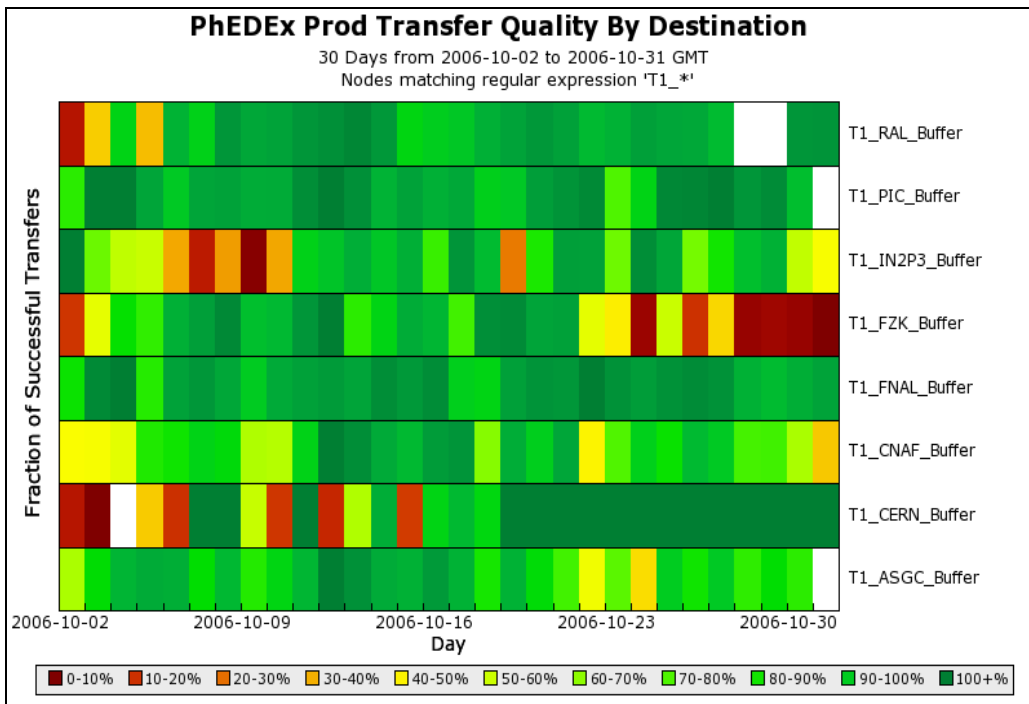
DDM Functional Test 2006. Summary Table

Tier-1	Tier-2s	Sept 06	Oct 06	Nov 06
ASGC	IPAS, Uni Melbourne	Failed within the cloud	Failed for Melbourn	T1-T1 not testd
BNL	GLT2, NET2,MWT2,SET2, WT2	done	done	2+GB & DPM
CNAF	LNF,Milano,Napoli,Roma1	65% failure rate	done	
FZK	CSCS, CYF, DESY-ZN, DESY-HH, FZU, WUP	Failed from T2 to FZK	dCache problem	T1-T1 not testd
LYON	BEIJING, CPPM, LAPP, LPC, LPHNE, SACLAY, TOKYO	done	done, FTS conn	
NG		not tested	not tested	not tested
PIC	IFAE, IFIC, UAM	Failed within the cloud	done	
RAL	CAM, EDINBOURGH, GLASGOW, LANCS, MANC, QMUL	Failed within the cloud	Failed for Edinbgr.	done
SARA	IHEP, ITEP, SINP	Failed	IHEP not tested	IHEP in progress
TRIUMF	ALBERTA, TORONTO, UniMontreal, SFU, UVIC	Failed within the cloud	Failed	T1-T1 not testd

ATLAS SW week

Dec 11, 2006. A.Klimentov

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Item	Goal	Threshold	Result
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# Tier1	7	5	7
# Tier2	20	15	24
Weeks of sustained rate	4	2	4
Tier0 efficiency	80 %	30 %	100 %
Running jobs per day (2h) Tier1+Tier2	50k	30k	50k
Grid job efficiency	90 %	75 %	95 %
Data serving (storage to CPU)	1 MB/s/slot	300 MB/s (T1) 100 MB/s (T2)	OK
Data transfer Tier0-all Tier1 (tape)	150 MB/s	75 MB/s	550 MB/s
Data transfer Tier1 - Tier2	20 MB/s	5 MB/s	OK

Table 1 - CMS CSA06 Success Metrics