



Update on Sites Milestones Quarterly Reports

GDB

11 January 2006

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Planning, Monitoring and Reviewing in LCG Phase 2

Milestones Plans

WLCG High Level Milestones

- [WLCG High Level Phase2](#) (updated 15 Dec 05)

Areas Milestones

- [Applications Area Plan](#)
- [Deployment Area Plan](#) (updated 19 Dec 05)
- [Fabrics Area Plan \(Tier-0\)](#) (updated 14 Dec 05)

Tier-1 Sites Milestone Plans

Experiments Task Forces

Additional Information

- [Contact people for the Tier-1 sites milestones plans](#)
- [Presentations](#) about planning in LCG Phase 2

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CC-IN2P3							
Plans and Schedule							
ID	Date	Expected install capacity/performance Milestones: Description and Verification					Status Progress
		CPU (kSI2K)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)	
2P3-1	31.12.05	Dedicated network link to CERN of 10 Gbps in service					
2006							
	01.01.06		150			na	
2P3-10	01.01.06	Start procurement of additional tape drives and tape servers					
2P3-10	01.01.06	Start evaluation for automated cartridge library upgrade					
2P3-10	01.01.06	Compute nodes and disk servers purchase starts					
SC4-1	31.01.06	SC4: All required software for baseline services deployed					SRM
2P3-10	28.02.06	Complete procurement of additional tape drives and tape servers					
2P3-20	01.04.06	Disk extension to 50 TB For xrootd, HPSS and dCache					
	01.04.06	1171	516	200	535	75	
SC4-2	30.04.06	SC4: Set-up complete and basic service demonstrated					SRM
2P3-20	28.06.06	810	327		258		

PIC						
Plans and Schedule						
ID	Date	Expected install capacity/performance Milestones: Description and Verification			Status Progress	Notes Reference Dependence
		Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)		
		Castor disk-cache expansion operational				
		new tape drives operational				
		41.5	30	85	48	
2006						
		100			na	
		start deployment of additional CPU				
		All required software for baseline services deployed			SRM 2.1, LFC, FTS	
		additional CPU operational				
		41.5	30	85	48	
		start deployment of additional 1Gbps WAN infrastructure				
		new 2Gbps WAN infrastructure operational				

INFN							
Plans and Schedule							
ID	Date	Expected install capacity/performance Milestones: Description and Verification					Status Progress
		CPU (kSI2K)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)	
		Dedicated network link to CERN of 10 Gbps in service					
2006							
	01.01.06		150			na	
2P3-10	01.01.06	Start procurement of additional tape drives and tape servers					
2P3-10	01.01.06	Start evaluation for automated cartridge library upgrade					
2P3-10	01.01.06	Compute nodes and disk servers purchase starts					
SC4-1	31.01.06	SC4: All required software for baseline services deployed					SRM
2P3-10	28.02.06	Complete procurement of additional tape drives and tape servers					
2P3-20	01.04.06	Disk extension to 50 TB For xrootd, HPSS and dCache					
	01.04.06	1171	516	200	535	75	
SC4-2	30.04.06	SC4: Set-up complete and basic service demonstrated					SRM
2P3-20	28.06.06	810	327		258		

US-ATLAS							
Plans and Schedule							
ID	Date	Expected install capacity/performance Milestones: Description and Verification					Status Progress
		CPU (kSI2K)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)	
UA-7	15.12.05	Begin installation of expanded LAN infrastructure					
UA-8	15.12.05	50					
UA-9	15.01.06	Expanded LAN infrastructure operational					
UA-10	15.01.06	New Tape subsystem operational					
UA-11	31.12.05	500	150	200	300	200	

TRIUMF							
Plans and Schedule							
Date	Expected install capacity/performance Milestones: Description and Verification					Status Progress	No Refer Dependence
	CPU (kSI2K)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)		
4.10.05	10G Foundry R4 switch ordered						
31.10.05	LFC + VOBOX installation/configuration + ATLAS initial SC3 tests						
30.11.05	Last mile DWDM optics for TRIUMF/BCNET						
30.11.05	ATLAS / SC3 phase 2						
31.12.05	ATLAS / SC3 phase 2 (?)						
31.12.05	2 Persons hired to support development and operations(sys admin + grid)						
2006							
01.01.06		50			na		

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Milestones Plans of the LCG Tier-1 Sites

Modified on: 19 Dec 2005 - 23:38

This page links to the milestones plans of the LCG Tier-1 sites.

Tier-1 sites can update their plans whenever is needed. In order to do this just:

- download a milestones plan;
- review and modify the milestones, add comments, project status and progress;
- [submit](#) back the modified plan.

- [SUMMARY Sites Procurement Milestones - Update 14 Dec 2005](#)**
- [Pages from WLCG MoU \(Annexe 6.3\)](#)

ALL UPDATED ON THE 14 DEC 2005

Site	Milestones Plan - Excel files (14 Dec 2005)
ASGC	ASGC Plan
CC-IN2P3	CC-IN2P3 Plan
CERN	CERN Plan
FZK	FZK Plan
INFN	INFN Plan
PIC	PIC Plan
RAL	RAL Plan
SARA-NIKHEF	SARA-NIKHEF Plan
TDIIME	TDIIME Plan

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PROCUREMENT PLANS SUMMARY (14 Dec 05)							
Expected install capacity/performance Milestones: Description and Verification							Notes Comments References Hyperlinks Dependent Milestones
ID	Date	CPU (kSI2K)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)	
ASGC							
		138	23	40	24		network capacity at: 2Gbps
	30.11.05	298	23	40	24		
2006							
	01.01.06			100		na	
	15.02.06	298	39	70	24		network capacity at: 2Gbps
	01.04.06	950	400	100	500	75	
	01.07.06	950	400	100	500	100	
	30.12.06	950	400	100	500		
2007							
	01.04.07	1770	900	100	800	100	
CC-IN2P3							
IN2P3-11	31.12.05	410	87		177		
2006							
	01.01.06			150		na	
	01.04.06	1170	520	200	535	75	
IN2P3-21	31.06.06	810	337		356		
	01.07.06	1170	520	200	535	200	
IN2P3-25	31.12.06	1215	523		535		

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Contact people for the Tier-1 sites milestones plans

- R.Tafirout (Canada, TRIUMF)
- F.Hernandez (France, CC-IN2P3)
- H.Marten (Germany, FZK)
- M.Mazzucato (Italy, CNAF)
- K.Bos (Nederlands, Sara-Nikhef)
- B.Vinter (NDGF)
- G.Merino (Spain, PIC)
- T.Cass (Switzerland, CERN)
- S.Lin (Taipei, ASGC)
- A.Sansum (UK, RAL)
- B.Gibbard (US, BNL)
- I.Fisk (US, FNAL)

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Work in progress: Improving Tier-1 plans



- The plans should include
 - Clear **capacity and performance availability at key dates**
Service challenges and future LCG services
 - CPU, Disks, Tapes, Network
 - Clear **planning of installations and changes in the services provided**
 - SRM 2.1, LFC, FTS, CE, RB, BDII, RGMA, etc
 - Several **steps needed to set-up equipment and service**
 - selection, procure, start install, end install, make operational
 - Include **important infrastructure milestones** that can be show stoppers, not only software and computers
 - air conditioning, electrical works, 24x7 operations support, on call system, etc
 - Plans should cover at least **until end of 2006**

Microsoft Excel - RAL_Plan-20051214.xls

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Reply with Changes... End Review...

A2 Plans and Schedule

	B	C	D	E	F	G	H	I	
1	RAL								
25	15.01.06	Delivery of Site Edge Router 10Gbit Upgrade							
26	15.01.06	4*6TB disk resource allocated to dteam in preparation for SC3 throughput test							
27	15.01.06	On-Call System in Place							
28	15.01.06	Airconditioning Capacity Upgrade Installed							
29	15.01.06	dCache Upgraded to version 1.6.6 (SRM 1)						Follow two parallel tracks. dCache will continue to provide production SRM until at least March 2007 but at some point (possibly end 2006) will become read only.	
30	15.01.06	FTS Upgraded to latest release in order to support srmcp						Depends on timely FTS release	
31	15.01.06	dCache ready for 150MB/s disk to disk.							
32	15.01.06	Tier-1 10Gbit uplink switch delivered							
33	15.01.06	493	120	150	229	75			
34	31.01.06	100% of Tier-2 GRIDPP sites tested at 300-500Mb/s for 1TB bi-directional from tier							
35	31.01.06	Migration complete from old to new Robot						Functionality only	
36	31.01.06	Test CASTOR2 System Running						Depends on effort from CERN	
37	31.01.06	SC4: All required software for baseline services deployed (for 28.02.06)						SRM 2.1, LFC, FTS, CE, RB, BDII, RGMA	
38	15.02.06	dCache Upgraded to support SRM 2.1. (dCache continues to back end into RAL ADS tape system)						Depends on receiving dCache SRM 2.1 on 15th January and deploying 2-3 weeks later	
39	15.02.06	3D Service Moves to Production Hardware							
40	15.02.06	Tier-1 Connected to Site Edge Router at 10Gb/s							
41	15.02.06	1st Disk and CPU delivery							
42	28.02.06	New Tape drives Installed						Not funded by Tier-1 but available for test	
43	28.02.06	UKLIGHT Provisioned at 4*1Gbit						May be earlier but scheduled January date now impacted by throughput test	
44	28.02.06	Order Tape Drives and Media for new Robot							
	15.03.06	Nagios monitoring System deployed (replaces SURE)						Better automation and escalation	

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Ready

Reporting



Each project (site, area projects, experiment) provides a **quarterly report**

- The QR will be lighter and more structured than in the past. Each project leader to comment milestones of the quarter, provided by the PO :
 - past milestone with comments
 - outlook for coming milestones
 - comments on each milestone and action of the quarter
 - description of achievements and issues
- Report to MB, if needed, by the PO
 - Monthly reports to the MB with summary of main achievements and decisions, by the PO

QUARTERLY STATUS REPORT							
Project Name				Date			
<i>To be filled</i>				<i>To be filled</i>			
Report Period				Author Name			
2005 Q4				<i>To be filled</i>			
Milestones for the Quarter					Status	Comments	
IN2P3-1	15.7.05	VOBoxes installed for the 4 LHC experiments					
IN2P3-2	15.9.05	FTS 1.3 Installed					
IN2P3-3	1.10.05	Start testing for preparing the purchase of compute nodes and disk servers					
IN2P3-4	1.10.05	dCache production starts dCache disk 4 TB					
IN2P3-5	17.10.05	dCache expansion dCache disk 19TB					
IN2P3-6	17.10.05	LFC installed, tested and published in the IS					
IN2P3-7	17.10.05	SRM SE published in IS					
IN2P3-8	31.10.05	FTS installed, tested. T1- T2s channels created					
IN2P3-9	31.10.05	xrootd disk space xroot disk 10 TB					
IN2P3-10	30.11.05	dCache expansion dCache disk 30TB					
IN2P3-11	31.12.05	410	87		177		
IN2P3-12	31.12.05	dCache expansion dCache disk 60TB					
IN2P3-13	31.12.05	xrootd disk space xroot disk 20 TB					
IN2P3-14	31.12.05	Results from testing for preparing the purchase of compute nodes and disk servers					
IN2P3-15	31.12.05	Dedicated network link to CERN of 10 Gbps in service					
2006							
	01.01.06			150	na		
Summary of Progress							
<i>Status of the project, major key achievements, other work completed during the period.</i>							
Outstanding Issues since Last Report							

Summary of Progress

Status of the project, major key achievements, other work completed during the period.

Outstanding Issues since Last Report

Problems encountered and open issues.

Milestones Changes and Actions

Comments on the coming milestones, changes to the plan or additional milestones.

References and Hyperlinks

Additional pertinent information (web links) and other documents that contain useful details on the status of project.

Milestones for Next Quarter			Status	Comments
IN2P3-16	01.01.06	Start procurement of additional tape drives and tape servers		
IN2P3-17	01.01.06	Start evaluation for automated cartridge library upgrade		
IN2P3-18	31.01.06	Compute nodes and disk servers purchase starts		
SC4-1	31.01.06	SC4: All required software for baseline services deployed (for		SRM 2.1, LFC, FTS, CE, RB, BDII, RGMA
IN2P3-19	28.02.06	Complete procurement of additional tape drives and tape servers		
IN2P3-20	01.04.06	Disk extension to 50 TB For xrootd, HPSS and dCache		

Comments and Additional Information

Any other information or comment.

Improvements to the template or other aspects of the planning of the project.

Planning Check List



- The plans are quite different in content and level of detail
- I will send to the contact people
 - a “check list” of all different milestones that appear in some of the plans
- Sites send me back
 - answer with the date in which it will be implemented
 - Or if the milestones do not apply to them
- All T1 sites maintain updated plans and provide quarterly reports
- T2 sites can report on a voluntary basis
 - This will also help to understand how much (and which) T2 sites are active and at which level they want to get involved.

TIER-1 SITES CHECKLIST

CPU procurement (decisions, orders, start install, end install, operational)

Disk procurement (decisions, orders, start install, end install, operational)

Tape procurement (robots, tape drives, tape servers, tape cartridges, decisions, orders, start install, end install, operational)

Network equipment (hardware, routers, hw for connection to T0, hw for connections to T2s, plan, testing, operational)

Connection to T0 (deliver plan, begin testing, different tests, operational)

Connections to T2s (deliver plan, begin testing, different tests, operational)

Human resources (hiring, operational)

24/7 On-Call System in Place (definition of procedures, hiring, operational)

Infrastructure work, electricity, airconditioning, safety, etc (begin work, operational)

VOBoxes installed (for each experiment, versions, installation, begin testing and operational)

LFC upgraded (versions, installation, testing, operational)

FTS installed (version, when installed, operational)

SRM system Castor2 or dCache (installation, testing, operational, future expansions)

Next Steps



- **Some sites send more information when their internal planning/budget is clear**
 - **Use the check list to see what is missing**
 - **31 Jan 06: Send me updated plans**
- **Preparation of the Quarterly reports**
 - **15 Jan 06: send me back the QR**
 - **Review of the QR and summary for the MB and POB**
- **More details on the services for SC4**
 - **Exact list of what will be released and when**
 - **Sites should plan the necessary infrastructure**
 - **Will be discussed with experiments, sites and development projects in the next two weeks**
 - **Target to have these details agreed by Mumbai workshop**



All information is available on the web

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Planning, Monitoring and Reviewing in LCG Phase 2

- [Contact people for the Tier-1 sites milestones plans](#)
- [Presentations](#) about planning in LCG Phase 2

Milestones Plans

WLCG High Level Plan

- [WLCG High Level Phase2](#) (updated 15 Dec 05)

Areas Plans

- [Applications Area Plan](#) (updated Nov 05)
- [Deployment Area Plan](#) (updated 15 Dec 05)

[Tier-1 Sites Milestone Plans](#)

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Proposal

- Latest version ([doc](#), [pdf](#)), Changes from the previous version ([pdf](#))

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EGEE
ELFms
ETICS
EgeePtf
FIOgroup
HROnDemand
Know

Applications Area		
LCG Phase 2 Plans and Schedule		
ID	Date	Milestones: Description and Verification
SPI		
SPI-1	31.12.05	Provide the tools for generating CMT and SCRAM configurations from a common generic configuration description based on XML description files. Be able to update the web and distribution's kits from the same description.
SPI-2	28.02.06	Provide a web based "user discussion forum" service interfaced with Savannah. This new service should allow projects and experiments to easily setup and manage discussion subjects.
ROOT		
ROOT-1	30.09.05	Make available prototypes addressing different topics for the SEAL+ROOT merge (Math libraries, Dictionary libraries, etc.) such that detailed planning for the experiments migration can be established. These prototypes should be available by the ROOT
ROOT-2	30.09.05	Demonstration of the new the Parallel ROOT facility (PROOF) in a cluster of 32 CPU's provided by CERN/IT. This new version of the system should include asynchronous queries, GUI session controller, interactive batch mode.
ROOT-3	30.09.06	Demonstrate the performance and robustness of the PROOF system on typical analysis clusters of up to several 100 CPU's under a typical multi-user load doing typical LHC final data analysis on ESD and AOD data sets.
ROOT-4	31.12.05	Finalization of the fitting and minimization application programming interfaces and integration of the new C++ implementation of Minuit in the ROOT release.
ROOT-5	31.03.06	The Python interface to ROOT (PyROOT) adapted to directly use the new C++ reflection library (Reflex). This would avoid the intermediate software layers and additional dependencies of the maintainability.
ROOT-6	30.04.06	The ROOT C++ in Applications will be Backward compatible

CERN						
Plans and Schedule						
Expected install capacity/performance Milestones: Description and Verification						
ID	Date	CPU (kSIZK)	Disk (TB)	WAN=>Disk (MB/sec)	Tape (TB)	WAN=>Tape (MB/sec)
DATA RECORDING						
DR-1	31.12.05	Definition of T0 building blocks The building blocks of the Tier-0 Centre are defined, their performance and their interactions are established (disk server, tape server, tape drives and the Castor software), decision on the				
DR-2	31.12.05	750 MB/s data recording demonstration at CERN Data generator disk tape sustaining 750 MB/s for one week using the CASTOR 2 mass storage system. Internal milestone for DRC2. Use the building blocks to setup a system to run at 750 MB/s to tape for at least a week, where 750 MB/s means the average over one week with a maximum of 4 periods of a maximum of 12 h (each) where the speed drops below 700 MB/s (minimum 600 MB/s).				
DR-3	31.12.05	T0 buffer performance of 500 MB/s Expand this system to the T0 buffer setup. The disk pool would be filled by about 100 streams and in parallel the data would be read by three different client systems (emulation of the T1 export, tape				
DR-5	28.02.06	1.0 GB/s data recording demonstration at CERN Data generator disk tape sustaining 1.0 GB/s for one week using the CASTOR 2 mass storage system and the new tape equipment. This is the internal milestone for				
DR-6	30.04.05	T0 buffer performance of 1 GB/s Expand this to the T0 buffer setup at 1 GB/s.				
DR-8	30.09.06	1.6 GB/s data recording demonstration at CERN Data generator disk tape sustaining 1.6 GB/s for one week using the CASTOR 2 mass storage system and the new tape equipment. This is the internal milestone for				

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A.Aimar

Deployment Area				
LCG Phase 2 Plans and Schedule				
ID	Date	Milestones: Description and Verification	Status Progress	Notes Comments References Hyperlinks Dependent Milestones
GRID DEPLOYMENT AREA				
GD-1	31.10.05	Operations monitoring metrics for EGEE grid agreed EGEE metrics - scheduled to be agreed during the Pisa conference		
GD-2	15.11.05	SC4 detailed plan agreed (following November GDB)		
GD-5	30.11.05	System and application tests for SC4 integrated in the Site Functional Test (SFT) framework		

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A1 Worldwide LHC Computing Grid - High Level Planning for Phase 2

Worldwide LHC Computing Grid - High Level Planning for Phase 2

15/12/12

ID	Date	Milestones Description and Verification	Status Progress	Notes Comments References Hyperlinks Dependent Milestones	Coordinators
SC3-1	01.09.05	Service Challenge 3: start of stable service phase	Done.	Including at least 9 Tier-1 and 10 Tier-2 sites.	J.Shiers
SC3-2	31.12.05	Service Challenge 3: successful completion of stable service phase		5 Tier-1s and 5 Tier-2s must have achieved the following targets: (a) appropriate baseline services operational	J.Shiers
SC3-3	28.02.06	Performance and throughput tests complete		CERN-disk > network > Tier-1-disk and tape. Goal is to maintain for one week an average aggregate throughput of 1 GB/s from disk at CERN to disk at the Tier-1s; each Tier-1 capable of accepting 150 MB/sec to disk and 50 MB/sec to tape. All Tier-1 sites must participate. At least 5 Tier-1s must satisfy individual site throughput goals.	J.Shiers
OPII-1	31.12.05	Tier-0/1 high-performance network operational at CERN and 3 Tier-1s.		FNAL, SARA and IN2P3	D.Foster
DRC-2	31.12.05	750 MB/s data recording demonstration at CERN: Data generator → disk → tape sustaining 750 MB/s for one week using the CASTOR 2 mass storage system.			B.Panzer
2006					
SC4-1	28.02.06	All required software for baseline services deployed and operational at all Tier-1s and at least 20 Tier-2 sites		List of what needs to be installed on each site is available.	J.Shiers
OPII-2	31.03.06	Tier-0/1 high-performance network operational at CERN and 6 Tier-1s, at least 3 via GEANT.		FNAL, SARA, IN2P3, TRIUMF, BNL and CNAF. Only CNAF on GEANT.	D.Foster
SC4-3	28.02.06	Use cases and service level support defined for SC4 SC workshop at CHEP		Defines in detail: - the SC4 success criteria for each Tier-1(SC4-5) - the LCG Services operations (IS-1).	J.Shiers
CAS-1	15.03.06	Castor2 Readiness Review			A.Cass
SC3-4	31.03.06	All services on all Tier-1 sites monitored			J.Shiers
SC3-5	31.03.06	Proposal on availability levels specified in Annex 3 of			J.Shiers