10-Mar-09		WLCG High Level Milestones												
			Done (green)			Late < 1 month (orange)			Late > 1 month (red)					
ID	**Date**	**Milestone**	**ASGC**	**CC IN2P3**	**CERN**	**DE-KIT**	**INFN CNAF**	**NDGF**	**PIC**	**RAL**	**SARA NIKHEF**	**TRIUMF**	**BNL**	**FNAL**
		VOBoxes Support												
WLCG-07-04	Apr 2007	**VOBoxes SLA Defined** Sites propose and agree with the VO the level of support (upgrade, backup, restore, etc) of VOBoxes	Aug 2008	Aug 2008					Aug 2008		Jan 2009			
WLCG-07-05	May 2007	**VOBoxes SLA Implemented** VOBoxes service implemented at the site according to the SLA	Aug 2008	Aug 2008				Jan 2009	Aug 2008		Jan 2009			
WLCG-07-05b	Jul 2007	**VOBoxes Support Accepted by the Experiments** VOBoxes support level agreed by the experiments	**ALICE** n/a					red	n/a		red	n/a	n/a	n/a
			ATLAS						n/a	n/a				n/a
			CMS red	red	red			n/a	red		n/a	n/a	n/a	
			LHCb n/a					n/a				n/a	n/a	n/a
		WLCG High Level Milestones - 2008												
		Pilot Jobs Frameworks												
WLCG-08-14	May 2008	**Pilot Jobs Frameworks studied and accepted by the Review working group** Working group proposal complete and accepted by the Experiments.	ALICE		ATLAS			CMS			LHCb Nov 2007			
WLCG-08-09	Jun 2008	**Weighted Average Reliability of the Tier-2 Federation above 95% for 80% of Sites** Weighted according to the sites CPU resources	See separated table of Tier-2 Federations if E6080% of the Sites above 95% reliability											
WLCG-08-11	Apr 2009	**VO-Specific Tier-1 Sites Reliability** Considering each Tier-0 and Tier-1 site (and by VO?)	**Apr 2009**											
			May 2009											
			Jun 2009											
		WLCG High Level Milestones - 2009												
		SLC5 Milestones												
WLCG-09-21	TBD	**SLC5 gcc 4.3 (WN 4.1 binaries)Tested by the Experiments** Experiments should test whether the MW on SL5	ALICE		ATLAS			CMS			LHCb			
WLCG-09-22	TBD	**SLC5 Deployed by the Sites (64 bits nodes)** Assuming the tests by the Experiments were successful. Otherwise a real gcc 4.3 porting of the WN software is needed.												
		Tier-1 Sites Procurement - 2009												
WLCG-09-01	TBD	**MoU 2009 Pledges Installed** To fulfill the agreement that all sites procure they MoU pledged by April of every year												
		SCAS/gLexec Milestones												
WLCG-09-17	Jan 2009	**SCAS Solutions Available for Deployment** Certification successful and SCAS packaged for deployment												
WLCG-09-18	09-17 + 1 Month	**SCAS Verified by the Experiments** Experiment verify that the SCAS implementation is working (available at CNAF and NL-T1)	ALICE n/a		ATLAS			CMS n/a ?			LHCb			
WLCG-09-19	09-18 + 1 Month	**SCAS + gLExec Deployed and Configured at the Tier-1 Sites** SCAS and gLExec ready for the Experiments.												
WLCG-09-20	09-18 + 3 Month	**SCAS + gLExec Deployed and Configured at the Tier-2 Sites** SCAS and gLExec ready for the Experiments.												
		Accounting Milestones												
WLCG-09-02	TBD	**Wall-Clock Time Included in the Tier-2 Accounting Reports** The APEL Report should include CPU and wall-clock accounting	APEL											
WLCG-09-03	TBD	**Tier-2 Sites Sites Report Installed Capacity in the Info System** Both CPU and Disk Capacity is reported in the agreed GLUE 1.3 format.	% of T2 Sites Reporting											
WLCG-09-04	TBD	**User Level Accounting** (verify with the Experiments)												
		CCRC 2009 - Tier-1 Validation												
WLCG-09-21	TBD	**Tier-1 Validation by the Experiments**	**ALICE**											
			ATLAS											
			CMS											
			LHCb											

ID	Date	Milestone	ASGC	CC IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		SRM Milestones												
WLCG-09-05	Dec 2008	**SRM Short-Term Solutions Available for Deployment**		CASTOR			dCache		DPM		StoRM		BestMan	
WLCG-09-06	TBD	**SRM Short-Term Solutions Deployed at Tier-1 Sites** Installation at the Tier-1 Sites												
		FTS Milestones												
WLCG-09-07	TBD	**FTS Deployed on SL4 at the Tier-1 Sites** FTS is ready to be installed on SL4 at the Tier-1 Sites												
		Metrics and Monitoring Milestones												
WLCG-09-08	Nov 2008	**Experiments Dataflows clear for the Tier-1 Sites** Experiments should present the data flows they expect to reach at the Sites (a la LHCb)	ALICE			ATLAS			CMS			LHCb Nov 2007		
WLCG-09-09	TDB	**Tier-1 Sites Define Their MSS Metrics** Tier-1 Sites specify which metrics are going to be collected to demonstrate the dataflow supported												
WLCG-09-10	TDB	**Tier-1 Sites Show Their MSS Metrics** Tier-1 Sites specify where their MSS metrics are available												
WLCG-09-11	TDB	**Automatic Alarms (SAM, etc) at the Tier-1 Sites** Tier-1 Sites should be able to automatically send, receive and handle alarms and problem notifications												
WLCG-09-12	TDB	**Monitoring of the Storage Systems** The Storage systems used provide monitoring information to Sites and Experiments		CASTOR			dCache		DPM		StoRM		BestMan	
WLCG-09-13	TDB	**Performance Metrics?** User Response, Services Dowtimes Operations KPI												
		CPU Benchmarks/Units Milestones												
WLCG-09-14	Dec 2008	**CPU New Unit Working Group Completed** Agreement on Benchmarking Methods Conversion Proposal and Test Machines	CPU New Benchmarking Unit Working Group											
WLCG-09-15	Feb 2009	**Sites Pledges in the CPU New Unit** Pledged from the Sites should be converted to the new unit	LCG Office											
WLCG-09-16	Apr 2009	**New Experiments Requirement in New CPU Unit** Experiments should convert their requirements to the new unit (or by LCG Office)	ALICE			ATLAS			CMS			LHCb		

Completed / Cancelled High Level Milestones

ID	Date	Milestone	ASGC	CC IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		24x7 Support												
WLCG-07-01	Feb 2007	**24x7 Support Definition** Definition of the levels of support and rules to follow, depending on the issue/alarm												
WLCG-07-02	Apr 2007	**24x7 Support Tested** Support and operation scenarios tested via realistic alarms and situations				Apr 2008	June 2008							
WLCG-07-03	Jun 2007	**24x7 Support in Operations** The sites provides 24x7 support to users as standard operations				July 2008	June 2008		Apr 2008		July 2008			
		3D DB Milestones												
WLCG-07-09	Mar 2007	**3D Oracle Service in Production** Oracle Service in production, and certified by the Experiments												squid frontier
WLCG-07-10	May 2007	**3D Conditions DB in Production** Conditions DB in operations for ATLAS, CMS, and LHCb. Tested by the Experiments.												squid frontier
		Site Reliability - June 2007												
WLCG-07-12	Jun 2007	**Site Reliability above 91%** Considering each Tier-0 and Tier-1 site (Note: orange means > 90% of target)	Apr 88% May 88% Jun 91% Jul 91% Aug 91% Sept 91%											
WLCG-07-13	Jun 2007	**Average of Best 8 Sites above 93%** Eight sites should reach a reliability above 93%	Averages of the 8 Best sites Apr-Sept 2007 Apr 92 - May 94 - Jun 87 - Jul 93 - Aug 94 - Sept 93											
		Procurement												
WLCG-07-16	1 Jul 2007	**MoU 2007 Pledges Installed** To fulfill the agreement that all sites procure the 2007 MoU pledged by July 2007												

ID	Date	Milestone	ASGC	CC IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		FTS 2.0												
WLCG-07-18	Jun 2007	**FTS 2.0 Tested and Accepted by the Experiments** In production at CERN and accepted tested by each Experiment	ALICE			ATLAS			CMS				LHCb	
WLCG-07-19	Jun 2007	**Multi-VO Tests Executed and Tested by the Experiments** Scheduled at CERN for last week of June	(will be part of CCRC in February and May 2008)											
WLCG-07-20	Sept 2007	**FTS 2.0 Deployed in Production** Installed and in production at each Tier-1 Site												
		BDII												
WLCG-07-21	Jun 2007	**BDII Guidelines Available** On how to install BDII on a separated node	EGEE - SA1 (not requested)											
WLCG-07-22	Jun 2007	**Top-Level BDII Installed at the Site** For each Tier-1 site												
		glexec												
WLCG-07-24	Jul 2007	**Decision on Usage of glexec and Guidelines to Follow**	GDB											
		Accounting												
WLCG-07-08	Mar 2007	**Accounting Data published in the APEL Repository** The site is publishing the accounting data in APEL. Monthly reports extracted from the APEL Repository												
		MSS Main Storage Systems												
WLCG-07-25	Jun 2007	**CASTOR 2.1.3 in Production at CERN** MSS system supporting SRM 2.2 deployed in production at the site			CERN Tier-0									
WLCG-07-26	Nov 2007	**SRM: CASTOR 2.1.6 Tested and Accepted by the Experiments at all Sites** From the SRM Roll-Out Plan (SRM-16 to -19)	ALICE n/a			ATLAS Nov 2007			CMS Nov 2007				LHCb Nov 2007	
WLCG-07-27	Nov 2007	**SRM: dCache 1.8 Tested and Accepted by the Experiments** From the SRM Roll-Out Plan (SRM-16 to -19)	ALICE n/a			ATLAS Nov 2007			CMS Nov 2007				LHCb Nov 2007	
WLCG-07-30b	May 2008	**SRM Missing MoU Features Implemented** With full features agreed in the HEP MoU (srmCopy, etc).	CASTOR			DCache			DPM					
		CAF CERN Analysis Facility												
WLCG-07-40	Oct 2007	**Experiment provide the Test Setup for the CAF** Specification of the requirements and setup needed by each Experiment	ALICE			ATLAS May 2008			CMS June 2008				LHCb May 2008	
		MSS Main Storage Systems												
WLCG-07-28	Sept 2007	**Demonstrated Tier-0 Performance (Storage, DM)** Demonstration that the highest throughput (ATLAS 2008) can be reached.			CERN Tier-0									
WLCG-07-28b	Sept 2007	**Demonstrated Tier-0 Export to Tier-1 Sites** Demonstration that the highest throughput (ATLAS 2008) can be reached.			CERN Tier-0									
WLCG-07-29	Feb 2008	**SRM: CASTOR 2.1.6/dCache in Production at T1** From the SRM Roll-Out Plan (SRM-20 to -21a)												
WLCG-07-30	Dec 2007	**SRM Implementations with HEP MoU Features** With features agreed in HEP MoU (srmCopy, etc).	CASTOR			DCache			DPM					
		WN and UI												
WLCG-07-31	Jun 2007	**WN Installed in Production at the Tier-1 Sites** WN on SL4 installed on each Tier-1 site, with the configuration needed to use SL4 or SL3 nodes						n/a				n/a		
WLCG-07-32	Jun 2007	**UI Certification and Installation on the PPS Systems**	EGEE - SA1-PPS done: Jul 2007											
WLCG-07-33	Aug 2007	**UI Tested and Accepted by the Experiments**	ALICE			ATLAS			CMS				LHCb	
		xrootd												
WLCG-	Jul	**xrootd Interfaces Tested and Accepted by ALICE**	ALICE											
		SAM Vo-Specific Tests												
WLCG-	Sept	**VO-Specific SAM Tests in Place**	POSTPONED TO 2008 AND REPLACED BY A NEW MILESTONE (WLCG-08-08)											
		Site Reliability - Dec 2007												

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
WLCG-07-14	Dec 2007	**Site Reliability above 93%** Considering each Tier-0 and Tier-1 site (Note: orange means > 90% of target)	Aug 91%												
			Sept 91%												
			Oct 91%												
			Nov 91%												
			Dec 93%												
			Jan 93%												
			Feb 93%												
WLCG-	Dec	**Average of Best 8 Sites above 95%**		Averages of the 8 Best sites Sept 2007 - Jan 2008											

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		Tier-1 Sites Reliability - June 2008													
WLCG-08-06	Jun 2008	**Tier-1 Sites Reliability above 95%** Considering each Tier-0 and Tier-1 site	Jan 93%					70	92		92	57		91	
			Feb 93%					20	84			84		67	85
			Mar 93%					86		88				80	
			Apr 93%					76	84			90			92
			May 93%					88							
			June 95%					86							93
WLCG-08-07	Jun 2008	**Average of Best 8 Sites above 97%** Average of eight sites should reach a reliability above 97%		**Averages of the 8 Best sites Jan-Jun 2008** **Jan 96 - Feb 96 - Mar 96 - Apr 96 - May 98 - Jun 96**											
		Tier-1 Procurement													
WLCG-07-17	1 Apr 2008	**MoU 2008 Pledges Installed** To fulfill the agreement that all sites procure they MoU pledged by April of every year		Sept 2008	CPU OK May Disk Sep 08	July 2008	Apr 2008	CPU Jul 08 Disk Sept 08	CPU OK May Disk Sep 08	CPU OK May Disk Jul 08	Apr 2008	Nov 2008	Apr 2008	CPU OK Disk Nov 08	CPU OK May Disk Jul 08
WLCG-08-04	Sep 2008	**Sites Report on the Status of the MoU 2009 Procurement** Reporting whether is on track with the MoU pledges by April. Or which is the date when the pledges will be fulfilled.		Tender Sept Jan Install May	Tender Sept Dec Install Apr	Tender Sept Oct Install Apr	Tender Sept Install May	Tender Sept Install Apr	Tender Oct Install Apr	Tender Sep Disk Oct	Tender CPU Sep Disk Oct	Tender Sept Install TBD	Tender CPU Disk Oct	Tender CPU Sep Disk Oct	Tender Sep Install Apr
		OSG RSV Tests													
WLCG-08-01	May 2008	**RSV Tier-2 CE Tests Equivalent to SAM** Successful WLCG verification of OSG test equivalence of RSV tests to WLCG CE tests		OSG-RSV											
WLCG-08-01b	Jun 2008	**RSV Tier-2 SE Tests Equivalent to SAM** Successful WLCG verification of OSG test equivalence of RSV tests to WLCG SE tests		OSG-RSV											
WLCG-08-02	Jun 2008	**OSG Tier-2 Reliability Reported** OSG RSV information published in SAM and GOCDB databases. Reliability reports include OSG Tier-2 sites.		OSG-RSV											
		SAM VO-Specific Tests													
WLCG-08-08	Jun 2008	**VO-Specific SAM Tests in Place** With results included every month in the Site Availability Reports.		ALICE			ATLAS			CMS			LHCb		
		MSS/Tape Metrics													
WLCG-08-03	April 2008	**Tape Efficiency Metrics Published** Metrics are collected and published weekly					June 2008								
		Tier-1 Sites Reliability - Dec 2008													
WLCG-08-11	Dec 2008	**Tier-1 Sites Reliability above 97%** Considering each Tier-0 and Tier-1 site	Jul 95%		94			79	88		91				
			Aug 95%						43						
			Sept 95%				90	82			94				
			Oct 95%				84	90	92		83				
			Nov 95%		94		94	86		93	89	93			
			Dec 97%		88		80	91					95	95	
WLCG-08-12	Dec 2008	**Average of ALL Tier-1 Sites above 98%** Average Reliability above 98%		**95% on all Sites - 97% on the Best 8 Sites**											