13-Oc	ct-09		W	LCG	High	Level	Miles	stone	s						
				D	one (gree	en)		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
		Pilot Jobs Frameworks													
WLCG- 08-14	2008	Pilot Jobs Frameworks studied and accepte the Review working group Working group proposal complete and accepte Experiments.	-		ALICE		ATLAS				CMS		LHCb Nov 2007		7
WLCG- 08-09	Jun	Tier-2 and VOs Sites SAM Reports Weighted Average Reliability of the Tier-2 Federation above 95% for 80% of Sites	d Average Reliability of the Tier-2		July 200 95% 40/6			ugust 20 95% 36/6			tember 95% 27/	Oct-09			
WLCG-	Apr	Weighted according to the sites CPU resource VO-Specific Tier-1 Sites Availability	es	ASGC	90% 48/6 IN2P3	CERN	DE-KIT	INFN CNAF	NDGF	PIC	00% 43/0 RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
08-11	2009	Considering each Tier-0 and Tier-1 site (OPS and by VO?)							_	2009					
			OPS	97	99	99	99	100	98	99	90	95	99	n/a	99
			ALICE	n/a <b>82</b>	100 99	100 99	100 88	100 97	100 86	n/a <b>100</b>	92 86	94 79	n/a <b>99</b>	n/a n/a	n/a n/a
			CMS	96	99	99	98	100	n/a	90	92	n/a	n/a	n/a	98
			LHCb	n/a	100	98	100	100	n/a	99	93	83	n/a	n/a	n/a
									Augus	st 2009					
			OPS	100	99	100	99	97	86	97	77	86	99	91	100
			ALICE	n/a	100	100	100	100	100	n/a	77	84	n/a	n/a	n/a
			ATLAS	18	98	99	95	96	98 n/o	96	75 77	80	98 n/o	n/a	n/a
			CMS LHCb	<b>95</b> n/a	92 100	99 100	96 100	100 99	n/a n/a	98 100	77 78	n/a <b>7</b> 1	n/a n/a	n/a n/a	<b>98</b> n/a
			LITOD	11/a	100	100	100		Septem				11/a	11/a	11/a
			OPS	83	87	99	98	99	96	98	92	84	98	100	100
			ALICE	n/a	77	99	99	100	100	n/a	88	88	n/a	n/a	n/a
			ATLAS	48	76	98	76	99	96	96	65	79	98	n/a	n/a
			CMS	94	79	97	99	99	n/a	97	87	n/a	n/a	n/a	99
			LHCb	n/a	77	97	99	100	n/a	96	93	89	n/a	n/a	n/a
					1	1	1	1	Octob	er 2009		ŧ	1	i	1
			OPS	,						,			,	,	,
			ALICE	n/a						n/a			n/a	n/a	n/a
			CMS						n/a			n/a	n/a	n/a	n/a
			LHCb	n/a					n/a			11/a	n/a	n/a	n/a
		WLC	G Higi	h Lev	el Mile	eston	es - 2	009							-
	;	SL5 Milestones													
WLCG-	Mar	SL5 gcc 4.3 (WN 4.1 binaries)Tested by the													
09-21	2009	Experiments			ALICE			ATLAS			CMS			LHCb	
		Experiments should test whether the MW on S	SL5											ı	ı
WLCG- 09-22	Jul 2009	SL5 Deployed by the Sites (64 bits nodes) Assuming the tests by the Experiments were													
03-22	2003	successful. Otherwise a real gcc 4.3 porting of software is needed.	f the WN												
		Tier-1 Sites Procurement - 2009													
WLCG- 09-01		MoU 2009 Pledges Installed To fulfill the agreement that all sites procure the pledged by April of every year	ney MoU												
		SCAS/glExec Milestones													
WLCG-		SCAS Solutions Available for Deployment													
09-17		Certification successful and SCAS packaged for deployment	or						one in N	larch 20	09				
WLCG- 09-18		SCAS Verified by the Experiments Experiment verify that the SCAS implementation working (available at CNAF and NL-T1)	on is		ALICE n/a			ATLAS			CMS n/a ?			LHCb	
WLCG-		SCAS + glExec Deployed and Configured at	t the Tier-												
09-19		1 Sites													
WLCG- 09-20	09-18	SCAS and glExec ready for the Experiments.  SCAS + glExec Deployed and Configured at  2 Sites	t the Tier-			<u></u>		1	]	<u> </u>		1	]	!	]
<b></b>		SCAS and glExec ready for the Experiments.													
		Accounting Milestones													
WLCG-		Wall-Clock Time Included in the Tier-2 Acco	ounting												
09-02	2009	Reports The APEL Report should include CPU and wal	II-clock						AF	PEL					

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE- KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL		
WLCG-	Jul	Tier-2 Sites Report Installed Capacity in the	e Info					VII/AI									
09-03	2009	System  Both CPU and Disk Capacity is reported in the GLUF 1.3 format	e agreed	% of T2 Sites Reporting													
WLCG- 09-04a	Jul 2009	Sites publishing the User Level Accounting information	g														
WLCG- 09-04b	Jul 2009	User Level Accounting verified and approved by the Experiments			ALICE	<u>:</u>		ATLAS	<u> </u>		CMS		LHCb				
		STEP 2009 - Tier-1 Validation															
WLCG-	Jun	Tier-1 Validation by the Experiments	ALICE	n/a						n/a			n/a	n/a	n/a		
09-23	2009		ATLAS CMS						n/a n/a	n/a		n/a	n/a	n/a	n/a		
			LHCb	n/a					n/a			1,75	n/a	n/a	n/a		
		CREAM CE Rollout					•										
WLCG- 09-25	Apr 2009	Release of CREAM CE for deployment															
WLCG- 09-26	May 2009	All European T1 + TRIUMF and CERN at lea 5 T2s supporting 1 CE	ast 1 CE.	n/a					n/a				n/a	n/a	n/a		
WLCG- 09-27	Jul 2009	2 T2s for each experiment provide 1 CREAM-CE each.			ALICE			ATLAS			CMS		LH		 >b		
WLCG- 09-28	Sep 2009	50 sites in addition to the ones above															
		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			7			
WLCG- 09-09	Remo ved	Tier-1 Sites Define Their MSS Metrics Tier-1 Sites specify which metrics are going to collected to demonstrate the dataflow support															
WLCG- 09-10	June 2009	Tier-1 Sites Publish Their MSS Metrics in SLS Tier-1 Sites make their current MSS metrics available via SLS															
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	CPU New Unit Working Group Completed Agreement on Benchmarking Methods Conve Proposal and Test Machines	ersion	CPU New Benchmarking Unit Working Group													
WLCG- 09-15	Feb 2009	Sites Pledges in HEPSPEC-06 Pledged from the Sites should be converted to unit	the new	LCG Office													
WLCG- 09-16	Apr 2009	New Experiments Requirement in HEPSPE Experiments should convert their requirement new unit (or by LCG Office)			ALICE		ATLAS			CMS				LHCb			
WLCG- 09-24	May 2009	Sites Benchmark their Capacity in the HEP Resources from the Sites should be converted new unit															
		Complete	ed / Ca	ncelle	ed Hig	h Lev	el Mil	lestor	es								
WLCG- 07-04	Apr	VOBoxes Support VOBoxes SLA Defined Sites propose and agree with the VO the level		Aug 2008	Aug 2008					Aug 2008		Jan 2009					
WLCG- 07-05	May 2007	support (upgrade, backup, restore, etc) of VOI VOBoxes SLA Implemented VOBoxes service implemented at the site acc		Aug	Aug				Jan	Aug		Jan					
WLCG-	Jul	the SLA  VOBoxes Support Accepted by the	ALICE	2008	2008				2009	2008		2009	n/c	n/a	n/a		
WLCG-	Jul	- Coboxes Support Accepted by the	ALICE	n/a						n/a			n/a	n/a	n/a		

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE- KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
บ7-บ5ธ	2007	Experiments	ATLAS						n/a	n/a					n/a
		VOBoxes support level agreed by the experiments	смѕ						n/a			n/a	n/a	n/a	
			LHCb	n/a					n/a				n/a	n/a	n/a
		24x7 Support													
WLCG-	Feb	24x7 Support Definition													
07-01	2007	Definition of the levels of support and rules to	follow,												
WLCG-	Apr	depending on the issue/alarm  24x7 Support Tested													
07-02		Support and operation scenarios tested via re	alistic				Apr 2008	June 2008							
WI 00		alarms and situations					2000	2000							
WLCG- 07-03	Jun 2007	<b>24x7 Support in Operations</b> The sites provides 24x7 support to users as s	tandard				July	June		Apr		July			
		operations					2008	2008		2008		2008			
	;	3D DB Milestones													
WLCG-	Mar	3D Oracle Service in Production													squid
07-09	2007	Oracle Service in production, and certified by Experiments	tne												frontier
WLCG-	May	3D Conditions DB in Production													
07-10	2007	Conditions DB in operations for ATLAS, CMS	and												squid frontier
		LHCb. Tested by the Experiments.  Site Reliability - June 2007													
WLCG-	Jun	Site Reliability - June 2007 Site Reliability above 91%	Apr 88%												
07-12	2007	Considering each Tier-0 and Tier-1 site	May 88%												
		(Natara and an anatara 2000) at tarrant)	Jun 91%												
		(Note: orange means > 90% of target)	Jul 91%												
			Aug 91% Sept 91%												
WLCG-	Jun	Average of Best 8 Sites above 93%	Сорготи				Averac	es of t	he 8 Be	st sites	Apr-Se	pt 2007			
07-13		Eight sites should reach a reliability above 93	%			Apr 92			Jun 87				ept 93		
		Procurement													
WLCG- 07-16		MoU 2007 Pledges Installed  To fulfill the agreement that all sites procure to	he 2007												
0. 10	2001	MoU pledged by July 2007	10 2001												
		FTS 2.0				,									
WLCG-	Jun	FTS 2.0 Tested and Accepted by the Exper									01.10				
07-18	2007	In production at CERN and accepted tested be Experiment	y eacn		ALICE			ATLAS			CMS			LHCb	
WLCG-	Jun	Multi-VO Tests Executed and Tested by the	)												
07-19	2007	Experiments				(	will be p	art of C	CRC in	Februa	ry and M	lay 2008	)		
WLCG-	Sept	Scheduled at CERN for last week of June FTS 2.0 Deployed in Production													
07-20		Installed and in production at each Tier-1 Site													
WI 00		BDII													
WLCG- 07-21	Jun 2007	BDII Guidelines Available On how to install BDII on a separated node			GEE - S.										
		·		(no	t reques	iea)									
WLCG- 07-22	Jun 2007	Top-Level BDII Installed at the Site For each Tier-1 site													
		glexec													
WLCG-		Decision on Usage of glexec and Guideline	es to		CDD										
07-24	2007	Follow			GDB										
		Accounting													
WLCG- 07-08	Mar 2007	Accounting Data published in the APEL Re The site is publishing the accounting data in A													
01-00	2007	Monthly reports extracted from the APEL Repo													
		MSS Main Storage Systems													
WLCG-	Jun	CASTOR 2.1.3 in Production at CERN				0									
07-25	2007	MSS system supporting SRM 2.2 deployed in production at the site		CI	ERN Tie	r-0									
WLCG-	Nov	SRM: CASTOR 2.1.6 Tested and Accepted	by the												
07-26	2007	Experiments at all Sites	-		ALICE n/a			ATLAS Nov 200			CMS Nov 200	7		LHCb Nov 200	
		From the SRM Roll-Out Plan (SRM-16 to -19)			11/d		ľ	40V 20U	,		10V 200			NOV 200	<u> </u>
WLCG-	Nov	SRM: dCache 1.8 Tested and Accepted by	the		ALICE			ATLAS			CMS			LHCb	
07-27	2007	Experiments From the SRM Roll-Out Plan (SRM-16 to -19)			n/a		1	Nov 200		1	Nov 200	7	1	Nov 200	7
	1	, , , ,													
WLCG-	May	SRM Missing MoU Features Implemented													
WLCG- 07-30b	May 2008	With full features agreed in the HEP MoU (srn etc).	пСору,		CASTOR	₹		DCache	e		DPM				

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE- KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		CAF CERN Analysis Facility													
WLCG- 07-40		Specification of the requirements and setup no	Experiment provide the Test Setup for the CAF Specification of the requirements and setup needed by each Experiment					ATLAS May 200		J	CMS une 200	)8	N	LHCb May 200	8
		each Experiment  MSS Main Storage Systems													
WLCG-		Demonstrated Tier-0 Performance (Storage	, DM)												
07-28		Demonstration that the highest throughput (AT 2008) can be reached.		CE	ERN Tie	r-0									
WLCG- 07-28b		Demonstrated Tier-0 Export to Tier-1 Sites Demonstration that the highest throughput (AT	0 Export to Tier-1 Sites		ERN Tie	r-0									
WLCG-	Feb	2008) can be reached.  SRM: CASTOR 2.1.6/dCache in Production													
07-29		From the SRM Roll-Out Plan (SRM-20 to -21a	<u>,                                      </u>												
WLCG- 07-30	Dec 2007	SRM Implementations with HEP MoU Feat With features agreed in HEP MoU (srmCopy,		(	CASTO	٦		DCache			DPM				
07-30		, ,,,,	eic).												
		WN and UI													
WLCG-		WN Installed in Production at the Tier-1 Sit													
07-31	2007	WN on SL4 installed on each Tier-1 site, with 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	1		E - SA1 ne: Jul 2										
WLCG-	Aug	UI Tested and Accepted by the Experiment	s												
07-33	2007				ALICE			ATLAS			CMS			LHCb	
	2	xrootd													
WLCG- 07-41	Jul 2007	xrootd Interfaces Tested and Accepted by	ALICE		ALICE										
		SAM Vo-Specific Tests													
WLCG-		VO-Specific SAM Tests in Place		P	OSTPO	NED TO	2008 4	ND RFI	PLACED	BYAN	JEW/ MII	ESTON	JE (WI (	CG-08-0	18)
07-39	2007	With results included every month in the Site			00110	IVED TO	20007	W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LACEL	, 51 , 11	4E VV 1VIII	LLOTO	4L (VVL	00 0	0)
		Site Reliability - Dec 2007													
WLCG-	Dec	Site Reliability above 93%	Aug 91%												
07-14	2007	Considering each Tier-0 and Tier-1 site	Sept 91% Oct 91%												
		(Note: orange means > 90% of target)	Nov 91%												
		(Note: Grange means > 30 % of target)	Dec 93%												
			Jan 93%												
			Feb 93%												
WLCG-	Dec	Average of Best 8 Sites above 95%				Av	erages	of the 8	Best s	ites Sep	ot 2007	- Jan 20	80		
		Tier-1 Sites Reliability - June 2008													
WLCG-	Jun	Tier-1 Sites Reliability above 95%	Jan 93%					70	92		92	57		91	
08-06	2008	Considering each Tier-0 and Tier-1 site	Feb 93%					20	84			84		67	85
			Mar 93%					86		88				80	
			Apr 93%					76	84			90			92
			May 93% June 95%					88							00
WLCG-	Jun	Average of Best 8 Sites above 97%	Julie 95 /6				_	86							93
08-07	2008	Average of eight sites should reach a reliability	y above			Jan 9		ges of t b 96 -					un 96		
		Tier-1 Procurement													
WLCG- 07-17		MoU 2008 Pledges Installed To fulfill the agreement that all sites procure to pledged by April of every year	hey MoU	Sept 2008	CPU OK May Disk	July 2008	Apr 2008	CPU Jul 08 Disk	CPU OK May Disk	CPU OK May Disk	Apr 2008	Nov 2008	Apr 2008	OK Disk	CPU OK May Disk
WLCG-	Sep	Sites Report on the Status of the MoU 2009	)		Sep 08 Tender	Tender	Tender	Sept 08 Tender	Sep 08 Tender	Jul 08 Tender	Tender	Tender	Tender	Nov 08 Tender	Jul 08 Tender
08-04	2008	Procurement Reporting whether is on track with the MoU plo	odace by		Sept	Sept	Sept	Sept	Sept	Oct	CPU	Sept	CPU	CPU	Sep
		April. Or which is the date when the pledges v fulfilled.			Jan Install May	Dec Install Apr	Oct Install Apr	Install May	Install Apr	Install Apr	Sep Disk Oct	Install TBD	Disk Oct	Sep Disk Oct	Install Apr
	(	OSG RSV Tests													
WLCG- 08-01	-	RSV Tier-2 CE Tests Equivalent to SAM Successful WLCG verification of OSG test eq	uivalence	C	SG-RS	V									
WLCG-	Jun	of RSV tests to WLCG CE tests  RSV Tier-2 SE Tests Equivalent to SAM  Suggestive WLCG verification of OSC test on	uivoles -		) S.C. D.C	V									
08-01b WLCG-	2008 Jun	Successful WLCG verification of OSG test eq of RSV tests to WLCG SE tests OSG Tier-2 Reliability Reported	urvarence		SG-RS	V									
08-02		OSG RSV information published in SAM and databases. Reliability reports include OSG Tie		C	SG-RS	V									
	;	SAM VO-Specific Tests													
WLCG-	Jun	VO-Specific SAM Tests in Place													
08-08	2008	With results included every month in the Site Availability Reports.			ALICE			ATLAS			CMS			LHCb	

ID	Date	Milestone		ASGC	CC IN2P3	CERN	DE- KIT	INFN CNAF	NDGF	PIC	RAL	SARA NIKHEF	TRIUMF	BNL	FNAL
		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-	Dec	, , , , , , , , , , , , , , , , , , , ,	Jul 95%		94			79	88			91			
08-11	08-11 2008 Considering each Tier-0 and Tier-1 site	Aug 95%						43							
			Sept 95%				90	82				94			
		ľ	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%	93% on all Sites - 97% on the best o Sites												
		SRM Milestones													
WLCG- 09-05	Dec 2008	SRM Short-Term Solutions Available for Deployment			CASTOR dCache						DPM		StoRM		tMan
WLCG- 09-06	Jun 2009	SRM Short-Term Solutions Deployed at Tier-1 Sites Installation at the Tier-1 Sites													
		FTS Milestones													
WLCG- 09-07	Mar 2009	FTS Deployed on SL4 at the Tier-1 Sites FTS is ready to be installed on SL4 at the Tier-	-1 Sites												