

<b>Tier-1 Planning for 2008</b>		<b>ALICE</b>	<b>ATLAS</b>	<b>CMS</b>	<b>LHCb</b>	<b>SUM 2008</b>
<b>CPU - MSI2K</b>	Planned capacity	6.7	22.7	12.5	4.4	46.3
	Required	12.3	24.0	15.2	4.4	55.9
	Balance	<b>-46%</b>	<b>-5%</b>	<b>-18%</b>	<b>-0%</b>	<b>-17%</b>
<b>Disk - PBytes</b>	Offered	2.8	12.5	5.7	2.2	23.2
	Planned capacity	7.4	14.4	7.0	2.4	31.2
	Balance	<b>-62%</b>	<b>-13%</b>	<b>-18%</b>	<b>-10%</b>	<b>-25%</b>
<b>Tape - PBytes</b>	Planned capacity	3.2	9.1	8.1	1.9	22.3
	Required	6.9	9.0	16.7	2.1	34.7
	Balance	<b>-54%</b>	<b>1%</b>	<b>-51%</b>	<b>-9%</b>	<b>-36%</b>

Includes current planning for all Tier-1 centres

<b>Tier-2 Planning for 2008</b>		<b>ALICE</b>	<b>ATLAS</b>	<b>CMS</b>	<b>LHCb</b>	<b>SUM 2008</b>
<b>CPU - MSI2K</b>	Planned capacity	5.0	19.5	17.4	4.4	46.3
	Required	14.4	19.9	19.3	7.7	61.3
	Balance	<b>-65%</b>	<b>-2%</b>	<b>-10%</b>	<b>-42%</b>	<b>-24%</b>
<b>Disk - PBytes</b>	Offered	1.4	5.9	4.5	0.8	12.6
	Required	5.1	8.7	4.9	0.023	18.723
	Balance	<b>-72%</b>	<b>-33%</b>	<b>-8%</b>	<b>n/a</b>	<b>-33%</b>
<b># Tier-2 federations - included(expected)</b>		12 (13)	20 (29)	18 (19)	11 (12)	28 (38)

## DRAFT LCG Tier 0 and 1 Resources DRAFT

CERN Tier0	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kS12K)			2400	4800	12500	15900	26200	Required	3300	4060	4600	570	12530
								Offered	3300	4030	4600	570	12500
								% of Req.	100%	99%	100%	100%	100%
Disk (Tbytes)			230	450	1260	1330	1770	Required	240	350	400	270	1260
								Offered	240	350	400	270	1260
								% of Req.	100%	100%	100%	100%	100%
Tape (Tbytes)			1500	3400	13600	23600	33900	Required	2480	5680	4900	500	13560
								Offered	2500	5700	4900	500	13600
								% of Req.	101%	100%	100%	100%	100%
Nominal WAN (Mbits/sec)	30000	60000	80000	100000	120000	140000	160000						

CERN Analysis Facility	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kS12K)			2600	5100	10000	14600	15000	Required	5000	2650	4800	330	12780
								Offered					10000
								% of Req.					78%
Disk (Tbytes)			850	1700	4200	5200	5300	Required	1450	1850	1500	450	5250
								Offered					4200
								% of Req.					80%
Tape (Tbytes)				1500	3400	5700	5900	Required	1160	520	1900	860	4440
								Offered					3400
								% of Req.					77%

Canada Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kS12K)		180	600	316	1060	1904		Offered		1060			1060
								% of Total		4%			4%
								Offered		618			618
Disk (Tbytes)		34	113	222	618	924		% of Total		4%			4%
								Offered		404			404
								% of Total		4%			4%
Tape (Tbytes)		120	120	121	404	742		Offered		404			404
								% of Total		4%			4%
								Nominal WAN (Mbits/sec)				10000	10000

GridKa	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kS12K)	330	530	1027	2007	7145	11545	17388	Offered	2900	2400	1200	645	7145
								% of Total	24%	10%	8%	15%	13%
								Offered	1000	1440	650	164	3254
Disk (Tbytes)	59	83	284	908	3254	5152	8075	% of Total	14%	10%	9%	7%	10%
								Offered	1500	900	900	172	3472
								% of Total	22%	10%	5%	8%	10%
Tape (Tbytes)	100	150	393	1053	3472	7514	11763	Offered	1500	900	900	172	3472
								% of Total	22%	10%	5%	8%	10%
								Nominal WAN (Mbits/sec)	2000	10000	10000	10000	20000

IN2P3 Lyon	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	247	402	1171	2666	6769	10464	17325	Offered	1058	3021	1490	1200	6769
								% of Total	9%	13%	10%	27%	12%
Disk (Tbytes)	42	86	516	1591	3790	5376	8435	Offered	589	1763	780	658	3790
								% of Total	8%	12%	11%	27%	12%
Tape (Tbytes)	136	177	535	1453	3464	6384	9902	Offered	576	1153	1180	555	3464
								% of Total	8%	13%	7%	26%	10%
Nominal WAN (Mbits/sec)	2500	5000	10000	10000	10000	10000	10000						

INFN CNAF	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		1300	1800	2400	5500	8000	11500	Offered	1210	1760	1925	605	5500
								% of Total	10%	7%	13%	14%	10%
Disk (Tbytes)		200	850	1200	2500	4000	5800	Offered	550	800	875	275	2500
								% of Total	7%	6%	13%	11%	8%
Tape (Tbytes)		460	850	1000	2100	4100	6000	Offered	462	672	735	231	2100
								% of Total	7%	7%	4%	11%	6%
Nominal WAN (Mbits/sec)		2000	5000	10000	20000	30000	40000						

NL Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	180	300	306	1677	4382	7544	12305	Offered	317	3048		1017	4382
								% of Total	3%	13%		23%	11%
Disk (Tbytes)	9	150	168	1059	2510	3753	6149	Offered	173	1778		559	2510
								% of Total	2%	12%		23%	10%
Tape (Tbytes)	10	70	143	719	1813	3548	5736	Offered	173	1163		477	1813
								% of Total	3%	13%		23%	10%
Nominal WAN (Mbits/sec)	10000	10000	10000	10000	10000	10000	10000						

NDGF Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		410	567	1945	3962	5570	7730	Offered	1148	1464	900		3512
								% of Total	9%	6%	6%		7%
Disk (Tbytes)		88	173	594	1388	2110	3230	Offered	466	622	200		1288
								% of Total	6%	4%	3%		4%
Tape (Tbytes)		130	240	435	1072	1502	2261	Offered	450	622			1072
								% of Total	7%	7%			3%
Nominal WAN (Mbits/sec)		1000	2000	5000	10000	20000	20000						

ASGC Taipei	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	166	500	950	1770	3400	3600		Offered		1870	1530		3400
								% of Total		8%	10%		9%
Disk (Tbytes)	24	120	400	900	1500	2373		Offered		825	675		1500
								% of Total		6%	10%		7%
Tape (Tbytes)	20	140	500	800	1300	2000		Offered		715	585		1300
								% of Total		8%	4%		5%
Nominal WAN (Mbits/sec)	2400	2400	4800	10000	10000	10000							

UK Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		651	980	1492	2712	4206	5857	Offered	48	1571	449	644	2712
								% of Total	0%	7%	3%	15%	5%
Disk (Tbytes)		174	450	841	1484	2087	3020	Offered	26	888	227	343	1484
								% of Total	0%	6%	3%	14%	5%
Tape (Tbytes)		250	664	1080	2074	3934	5710	Offered	26	1032	670	346	2074
								% of Total	0%	11%	4%	16%	6%
Nominal WAN (Mbits/sec)	2500	2500	2500	10000	10000	10000	10000						

US-ATLAS Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	200	500	1125	2558	5300	9520	16266	Offered		5300			5300
								% of Total		22%			22%
Disk (Tbytes)	84	225	525	1108	3093	4619	8374	Offered		3093			3093
								% of Total		21%			21%
Tape (Tbytes)	57	168	300	603	2023	3707	6175	Offered		2023			2023
								% of Total		22%			22%
Nominal WAN (Mbits/sec)	622	2488	2488	9952	19904	29856	39808						

US-CMS Tier1	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	82	167	728	1792	4256			Offered			4256		4256
								% of Total			28%		28%
Disk (Tbytes)	46	65	100	700	1986			Offered			1986		1986
								% of Total			28%		28%
Tape (Tbytes)			250	300	3224			Offered			3224		3224
								% of Total			19%		19%
Nominal WAN (Mbits/sec)													

Spain PIC	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)			250	749	2246	3369	5054	Offered		1200	760	286	2246
								% of Total		5%	5%	7%	5%
Disk (Tbytes)			136	409	1226	1839	2759	Offered		720	350	156	1226
								% of Total		5%	5%	7%	5%
Tape (Tbytes)			158	474	1422	2132	3198	Offered		450	835	137	1422
								% of Total		5%	5%	7%	5%
Nominal WAN (Mbits/sec)			1000	2500	10000	10000	10000						

Summary Tier1s	2004	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	1205	4940	9504	19372	46732	65722	93425	Offered	6681	22694	12510	4397	46282
								Required	12300	24000	15200	4400	55900
								Balance	-46%	-5%	-18%	0%	-17%
Disk (Tbytes)	264	1225	3715	9532	23349	32233	45842	Offered	2804	12547	5743	2155	23249
								Required	7400	14400	7000	2400	31200
								Balance	-62%	-13%	-18%	-10%	-25%
Tape (Tbytes)	323	1665	4153	8038	22368	35563	50745	Offered	3187	9134	8129	1918	22368
								Required	6900	9000	16700	2100	34700
								Balance	-54%	1%	-51%	-9%	-36%

During the 4 months after the end of heavy-ion runs ALICE requires the totality of its CERN resources in the T0. The rest of the time its CERN resources are shared between T0 (for pp reconstruction) and CAF.

The left part of the tables for each T1 shows the planned ramp-up of capacities. A yellow background indicates extrapolations, not yet covered by approved budgets.

The percentages in the right part of the T1 tables give for each T1 the percentage of the requirements of each experiment provided by this T1 and the percentage of the sum of requirements of the experiments served by this T1 and provided by this T1.

Requirements for all experiments are for 2008 and compared with 2008 pledges.

The left part of the summary table is just the sum of all the pledged capacities where summing up is meaningful.

Years 2009 and 2010 are obviously too small, as several centres have not provided the corresponding input.

The right side provides the split onto the experiments for the reference year.

Requirements 2008	ALICE	ATLAS	CMS	LHCb	SUM
CPU (kSI2K)	12300	24000	15200	4400	55900
Disk (Tbytes)	7400	14400	7000	2400	31200
Tape (Tbytes)	6900	9000	16700	2100	34700
Number of T1s	6	10	7	6	n/a

CERN Tier0	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	2400	4800	12500	15900	26200	
Disk (Tbytes)	230	450	1300	1300	1800	
Tape (Tbytes)	1500	3400	13600	23600	33900	
Nominal WAN (Mbits/sec)	80000	100000	120000	140000	160000	

CERN Analysis Facility	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	2600	5100	10000	14600	15000	
Disk (Tbytes)	850	1700	4200	5200	5300	
Tape (Tbytes)		1500	3400	5700	5900	

TRIUMF, Canada	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	600	316	1060	1900		
Disk (Tbytes)	110	220	620	920		
Tape (Tbytes)	120	120	400	740		
Nominal WAN (Mbits/sec)			10000	10000	10000	

GridKA, Germany	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1030	2010	7140	11500	17400	
Disk (Tbytes)	280	910	3300	5200	8100	
Tape (Tbytes)	393	1050	3470	7510	11800	
Nominal WAN (Mbits/sec)	10000	10000	20000	20000	20000	

CC-IN2P3, France	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1170	2670	6770	10500	17300	
Disk (Tbytes)	520	1600	3800	5400	8400	
Tape (Tbytes)	535	1450	3460	6380	9900	
Nominal WAN (Mbits/sec)	10000	10000	10000	10000	10000	

CNAF, Italy	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1800	2400	5500	8000	11500	
Disk (Tbytes)	850	1200	2500	4000	5800	
Tape (Tbytes)	850	1000	2100	4100	6000	
Nominal WAN (Mbits/sec)	5000	10000	20000	30000	40000	

NIKHEF/SARA, NL	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	306	1680	4380	7540	12300	
Disk (Tbytes)	170	1100	2500	3800	6100	
Tape (Tbytes)	143	719	1810	3550	5740	
Nominal WAN (Mbits/sec)	10000	10000	10000	10000	10000	

Nordic Data Grid Facility	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	567	1940	3960	5570	7730	Includes pledges of CPU and Disk for TOTEM.
Disk (Tbytes)	170	590	1400	2100	3200	
Tape (Tbytes)	240	435	1070	1500	2260	
Nominal WAN (Mbits/sec)	2000	5000	10000	20000	20000	

ASGC, Taipei	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	950	1770	3400	3600		
Disk (Tbytes)	400	900	1500	2400		
Tape (Tbytes)	500	800	1300	2000		
Nominal WAN (Mbits/sec)	4800	10000	10000	10000		

RAL, UK	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	980	1490	2710	4210	5860	
Disk (Tbytes)	450	840	1500	2100	3000	
Tape (Tbytes)	664	1080	2070	3930	5710	
Nominal WAN (Mbits/sec)	2500	10000	10000	10000	10000	

BNL, US	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1120	2560	5300	9520	16300	
Disk (Tbytes)	520	1100	3100	4600	8400	
Tape (Tbytes)	300	603	2020	3710	6180	
Nominal WAN (Mbits/sec)	2490	9950	19900	29900	39800	

FNAL, US	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	728	1790	4260			
Disk (Tbytes)	100	700	2000			
Tape (Tbytes)	250	300	3220			
Nominal WAN (Mbits/sec)						

PIC, Spain	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	250	749	2250	3370	5050	
Disk (Tbytes)	140	410	1200	1800	2800	
Tape (Tbytes)	158	474	1420	2130	3200	
Nominal WAN (Mbits/sec)	1000	2500	10000	10000	10000	

China, IHEP, Beijing	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	100	500	1400	1400	2000	
Disk (Tbytes)	20	50	400	400	600	
Nominal WAN (Mbits/sec)						
Tape (Tbytes)	100	400	1000	1000	1000	

Czech Rep., FZU AS, Prague	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	300	400	1900	2900		
Disk (Tbytes)	70	200	900	1400		
Nominal WAN (Mbits/sec)						

France, CC-IN2P3, AF	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	44	1380	3600	5620	9860	
Disk (Tbytes)	7	210	460	730	1100	
Nominal WAN (Mbits/sec)						
Tape (Tbytes)		170	450	660	1000	

France, French Tier-2 Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	340	1470	1620	1620	1620	
Disk (Tbytes)	61	330	340	340	340	
Nominal WAN (Mbits/sec)						



Germany, DESY, Hamburg	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	300	900	900	1200		
Disk (Tbytes)	110	340	340	570		
Nominal WAN (Mbits/sec)	10000	10000	10000	10000	10000	

Germany, CMS Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	300	900	900	1400		Only DESY part of Federation!
Disk (Tbytes)	67	200	200	400		
Nominal WAN (Mbits/sec)	10000	10000	10000	10000	10000	

Germany, GSI, Darmstadt	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	100	260	660	860	1100	
Disk (Tbytes)	30	80	200	260	340	
Nominal WAN (Mbits/sec)	100	100	1000	1000	1000	

Germany, ATLAS Federation, Munich	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	60	60	330	530	880	Only MPI and RZG part of Federation!
Disk (Tbytes)	20	27	150	260	430	
Nominal WAN (Mbits/sec)	660	660	1000	1000	1000	

India, VECC/SINP, Kolkata	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	150	300	450	600	600	
Disk (Tbytes)	20	40	60	80	80	
Nominal WAN (Mbits/sec)	20	80	100	160	160	

India, TIFR, Mumbai	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	150	300	450	600	800	
Disk (Tbytes)	100	200	300	450	600	
Nominal WAN (Mbits/sec)	34	160	620			

Italy, INFN Tier-2 Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1500	2500	5000	8000	11000	
Disk (Tbytes)	300	600	1500	2500	3500	
Nominal WAN (Mbits/sec)						

Japan, ICEPP, Tokyo	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	200	1000	1000	1000	1000	
Disk (Tbytes)	40	200	200	200	200	
Nominal WAN (Mbits/sec)	1000	2000	2000	2000	2000	

Pakistan, Pakistan Tier-2 Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	160	410	800	820	870	
Disk (Tbytes)	50	80	200	200	200	
Nominal WAN (Mbits/sec)	5	10	42	42	42	

Poland, Polish Tier-2 Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	600	650	750			
Disk (Tbytes)	32	32	36			
Nominal WAN (Mbits/sec)	1000	1000	2000	2000	2000	

Russian Federation, RDIG	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	2230	4060	5890	7870	10900	
Disk (Tbytes)	780	1500	2400	4100	6200	
Nominal WAN (Mbits/sec)	1000	2500	2500	5000	10000	
Tape (Tbytes)	400	780	1500	2200	3500	

Spain, ATLAS Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)			810			
Disk (Tbytes)			310			
Nominal WAN (Mbits/sec)						

Spain, CMS Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)			1000			
Disk (Tbytes)			280			
Nominal WAN (Mbits/sec)						

Spain, LHCb Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)			300			
Disk (Tbytes)			1			
Nominal WAN (Mbits/sec)						

Switzerland, CSCS, Manno	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	240	730	2400			
Disk (Tbytes)	90	260	870			
Nominal WAN (Mbits/sec)	1000	1000	10000	10000	10000	

Taipei, Taiwan Analysis Facility Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	200	300	400			
Disk (Tbytes)	15	30	75			
Nominal WAN (Mbits/sec)	2	10	10			

UK, Sum of all Federations	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	3800	3800	4800	5400	6000	
Disk (Tbytes)	530	540	600	660	720	
Nominal WAN (Mbits/sec)						

USA, Boston/Harvard ATLAS T2	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	350	730	1100	1600		
Disk (Tbytes)	170	370	480	630		
Nominal WAN (Mbits/sec)						

USA, Southwest ATLAS T2	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	900	1500	1700	2100		
Disk (Tbytes)	200	380	540	700		
Nominal WAN (Mbits/sec)						

USA, Midwest ATLAS T2	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	510	900	1100	1300		
Disk (Tbytes)	130	260	460	790		
Nominal WAN (Mbits/sec)						

USA, CMS Tier-2 Federation	Pledged	Planned to be pledged				Comment
	2006	2007	2008	2009	2010	
CPU (kSI2K)	1500	3300	7000			
Disk (Tbytes)	250	550	1400			
Nominal WAN (Mbits/sec)	250	550	1400			

## DRAFT LCG Tier 2 Resources DRAFT

China, IHEP, Beijing	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	40	100	500	1400	1400	2000	Offered		700	700		1400
							% of Total		4%	4%		4%
Disk (Tbytes)	6	20	50	400	400	600	Offered		200	200		400
							% of Total		2%	4%		3%
Nominal WAN (Mbits/sec)												
Tape (Tbytes)		100	400	1000	1000	1000	Offered		500	500		1000

Czech Rep., FZU AS, Prague	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	150	300	400	1900	2900		Offered	380	1520			1900
							% of Total	3%	8%			6%
Disk (Tbytes)	40	70	200	900	1400		Offered	180	720			900
							% of Total	4%	8%			6%
Nominal WAN (Mbits/sec)		1000	1000	1000								

France, CC-IN2P3, Lyon	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	8	44	1377	3598	5617	9862	Offered	265	2595	738		3598
							% of Total	2%	13%	4%		7%
Disk (Tbytes)	1	7	207	455	728	1077	Offered	46	217	192		455
							% of Total	1%	2%	4%		2%
Nominal WAN (Mbits/sec)												
Tape (Tbytes)	0	0	166	453	659	1009	Offered	0	453	0		453

France, French Tier-2 Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	45	340	1470	1620	1620	1620	Offered	458	654	280	228	1620
							% of Total	3%	3%	1%	3%	3%
Disk (Tbytes)	14	61	329	341	341	341	Offered	73	145	74	49	341
							% of Total	1%	2%	2%	213%	2%
Nominal WAN (Mbits/sec)												

Germany, DESY, Hamburg	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		300	900	900	1200		Offered		900			900
							% of Total		5%			5%
Disk (Tbytes)		112	340	340	570		Offered		340			340
							% of Total		4%			4%
Nominal WAN (Mbits/sec)		10000	10000	10000	10000	10000						

Germany, CMS Federation <sup>1</sup>	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		300	900	900	1400		Offered			900		900
							% of Total			5%		5%
Disk (Tbytes)		67	200	200	400		Offered			200		200
							% of Total			4%		4%
Nominal WAN (Mbits/sec)		10000	10000	10000	10000	10000						

Germany, GSI, Darmstadt	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		100	260	660	860	1100	Offered	660				660
							% of Total	5%				5%
Disk (Tbytes)		30	80	200	260	340	Offered	200				200
							% of Total	4%				4%
Nominal WAN (Mbits/sec)		100	100	1000	1000	1000						

Germany, ATLAS Federation, Munich <sup>2</sup>	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		60	60	332	529	884	Offered		332			332
							% of Total		2%			2%
Disk (Tbytes)		20	27	146	265	430	Offered		146			146
							% of Total		2%			2%
Nominal WAN (Mbits/sec)		660	660	1000	1000	1000						

India, VECC/SINP, Kolkata	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	75	150	300	450	600	600	Offered	450				450
							% of Total	3%				3%
Disk (Tbytes)	10	20	40	60	80	80	Offered	60				60
							% of Total	1%				1%
Nominal WAN (Mbits/sec)	4	20	80	100	155	155						

India, TIFR, Mumbai	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	40	150	300	450	600	800	Offered			450		450
							% of Total			2%		2%
Disk (Tbytes)	20	100	200	300	450	600	Offered			300		300
							% of Total			6%		6%
Nominal WAN (Mbits/sec)	26	34	155	622								

Italy, INFN Tier-2 Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		1500	2500	5000	8000	11000	Offered	1100	1600	1750	550	5000
							% of Total	8%	8%	9%	7%	8%
Disk (Tbytes)		300	600	1500	2500	3500	Offered	370	540	589	1	1500
							% of Total	7%	6%	12%	4%	8%
Nominal WAN (Mbits/sec)												

Japan, ICEPP, Tokyo	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		200	1000	1000	1000	1000	Offered			1000		1000
							% of Total			5%		5%
Disk (Tbytes)		40	200	200	200	200	Offered			200		200
							% of Total			2%		2%
Nominal WAN (Mbits/sec)		1000	2000	2000	2000	2000						

Pakistan, Pakistan Tier-2 Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	48	164	410	795	820	870	Offered			795		795
							% of Total			4%		4%
Disk (Tbytes)	10	50	80	200	200	200	Offered			200		200
							% of Total			4%		4%
Nominal WAN (Mbits/sec)	1	5	10	42	42	42						

Poland, Polish Tier-2 Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	342	597	650	753			Offered	250	142	250	111	753
							% of Total	2%	1%	1%	1%	1%
Disk (Tbytes)	17	32	32	36			Offered	8	14	8	6	36
							% of Total	0%	0%	0%	26%	0%
Nominal WAN (Mbits/sec)		1000	1000	2000	2000	2000						

Russian Federation, RDIG	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	400	2233	4060	5894	7873	10873	Offered	1319	1450	1625	1500	5894
							% of Total	9%	7%	8%	20%	10%
Disk (Tbytes)	20	779	1471	2356	4064	6244	Offered	456	830	630	440	2356
							% of Total	9%	9%	13%	1913%	13%
Nominal WAN (Mbits/sec)	622	1000	2500	2500	5000	10000						
Tape (Tbytes)	50	397	783	1455	2246	3476	Offered	345	230	500	380	1455

Spain, ATLAS Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)				812			Offered		812			812
							% of Total		4%			4%
Disk (Tbytes)				311			Offered		311			311
							% of Total		4%			4%
Nominal WAN (Mbits/sec)												

Spain, CMS Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)				1036			Offered			1036		1036
							% of Total			5%		5%
Disk (Tbytes)				276			Offered			276		276
							% of Total			6%		6%
Nominal WAN (Mbits/sec)												

Spain, LHCb Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)				300			Offered				300	300
							% of Total				4%	4%
Disk (Tbytes)				0.9			Offered				1	1
							% of Total				4%	4%
Nominal WAN (Mbits/sec)												

Switzerland, CSCS, Manno	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	45	245	730	2443			Offered		663	829	951	2443
							% of Total		3%	4%	12%	5%
Disk (Tbytes)	9	90	260	867			Offered		316	308	243	867
							% of Total		4%	6%	1057%	6%
Nominal WAN (Mbits/sec)	1000	1000	1000	10000	10000	10000						

Taipei, Taiwan Analysis Facility Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	120	200	300	400			Offered		200	200		400
							% of Total		1%	1%		1%
Disk (Tbytes)	5	15	30	75			Offered		40	35		75
							% of Total		0%	1%		1%
Nominal WAN (Mbits/sec)	2.40	2.40	10.00	10.00								



UK, Sum of all Federations	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	2980	3798	3835	4825	5408	6009	Offered	154	3024	851	796	4825
							% of Total	1%	15%	4%	10%	8%
Disk (Tbytes)	469	532	537	602	661	721	Offered	18	378	106	100	602
							% of Total	0%	4%	2%	435%	3%
Nominal WAN (Mbits/sec)												

USA, Boston/Harvard ATLAS T2	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	210	350	730	1090	1600		Offered		1090			1090
							% of Total		5%			5%
Disk (Tbytes)	40	170	370	480	630		Offered		480			480
							% of Total		5%			5%
Nominal WAN (Mbits/sec)												

USA, Southwest ATLAS T2	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	500	900	1500	1700	2100		Offered		1700			1700
							% of Total		9%			9%
Disk (Tbytes)	60	200	380	540	700		Offered		540			540
							% of Total		6%			6%
Nominal WAN (Mbits/sec)												

USA, Midwest ATLAS T2	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	360	510	900	1100	1300		Offered		1100			1100
							% of Total		6%			6%
Disk (Tbytes)	50	130	260	465	790		Offered		465			465
							% of Total		5%			5%
Nominal WAN (Mbits/sec)												

USA, CMS Tier-2 Federation	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)		1500	3300	7000			Offered			7000		7000
							% of Total			36%		36%
Disk (Tbytes)		250	550	1400			Offered			1400		1400
							% of Total			29%		29%
Nominal WAN (Mbits/sec)		5000	5000	10000								

Summary Tier2s	2005	2006	2007	2008	2009	2010	Split 2008	ALICE	ATLAS	CMS	LHCb	SUM 2008
CPU (kSI2K)	3078	4627	8412	15634	13645	18491	Offered	5036	19482	17404	4436	46358
							Required	14400	19940	19300	7650	61290
							Balance	-65%	-2%	-10%	-42%	-24%
Disk (Tbytes)	493	730	1533	3053	1930	2339	Offered	1411	5882	4518	840	12651
							Required	5106	8748	4900	23	18777
							Balance	-72%	-33%	-8%	3552%	-33%
Tape (Tbytes)	0	0	166	453	659	1009	Offered	345	1183	1000	380	2908

Requirements 2008	ALICE	ATLAS	CMS	LHCb	SUM
CPU (kSI2K)	14400	19940	19300	7650	61290
Disk (Tbytes)	5106	8748	4900	23	18777
Number of T2s <sup>3</sup>	12 (13)	20 (29)	18 (19)	11 (12)	28 (38)

Note 1: The German CMS federation shows at the moment only the DESY part.

Note 2: The German ATLAS Federation, Munich, shows at the moment only the MPI and RZG part.

Note 3: The number of T2s is given as n (m). The first number is the count of T2s or T2 Federations already registered in the table, the second the overall count of T2s planning to support the experiment.