



Tier2 Installed Capacity Reports

WLCG Management Board

John Gordon

10th November 2010

- In October we showed the Tier1 Results
- They have all either: corrected their publishing, or explained any discrepancies
- Now the turn of Tier2s
- Remember, only you know what you **should** be publishing.
- Gstat compares installed capacity with pledges
 - <http://gstat-wlcg.cern.ch/apps/capacities/comparision/>

Pledge Comparison

Country	Federation	Phys	Log	HS06/		Disk/			
		CPU	CPU	HS06	Pledge	Pledge	Disk GB	Pledge	Pledge
Australia	University of Melbourne	54	216	2538	2500	1.02	283874	250000	1.14
Austria	Austrian Tier-2 Federation	189	927	2707	8850	0.31	449703	594000	0.76
Belgium	Belgian Tier-2 Federation	745	1361	0	9000	0.00	0	670000	0.00
Brazil	SPRACE, Sao Paulo	152	368	0	3200	0.00	0	120000	0.00
Canada	Canada-East Federation	168	672	8400	5760	1.46	496601	595000	0.83
Canada	Canada-West Federation	210	840	9729	5760	1.69	614441	595000	1.03
China	IHEP, Beijing	226	904	8885	8000	1.11	620395	600000	1.03
Czech Republic	FZU AS, Prague	702	2808	22372	5900	3.79	349459	201000	1.74
Estonia	NICPB, Tallinn	63	404	0	3200	0.00	0	120000	0.00
Finland	NDGF/HIP Tier2	32	64	0	2680	0.00	0	210000	0.00
France	CC-IN2P3 AF	451	2537	21818	15654	1.39	250691	1001000	0.25
France	CC-IN2P3 IPHC	256	1216	10944	8000	1.37	490242	420000	1.17
France	CPPM, Marseille	180	645	5160	3350	1.54	183038	152000	1.20
France	GRIF, Paris	1381	5555	44876	25808	1.74	2045187	1570000	1.30
France	LAPP, Annecy	220	752	7391	4400	1.68	266231	272000	0.98
France	LPC, Clermont-Ferrand	228	816	6232	7080	0.88	248950	610000	0.41
France	SUBATECH, Nantes	104	408	3487	2400	1.45	8	200000	0.00
Germany	ATLAS Federation DESY	914	4944	40577	4800	8.45	2403289	740000	3.25
Germany	ATLAS Federation FR/W	436	1744	55808	6872	8.12	834719	738000	1.13
Germany	ATLAS Federation, HH/Goe	266	1064	0	2280	0.00	516495	250000	2.07
Germany	ATLAS Federation, Munich	709	2072	0	6880	0.00	258047	740000	0.35
	CMS Federation DESY RWTH								
Germany	Aachen	1420	6968	57579	13000	4.43	2967583	650000	4.57
Germany	LHCb Federation DESY	178	712	6636	3200	2.07	768452	2000	384.23
Hungary	HGCC Federation	147	462	3840	2500	1.54	150044	140000	1.07
India	TIFR, Mumbai	30	240	20400	3200	6.38	365338	600000	0.61
India	VECC/SINP, Kolkata	94	220	0	1800	0.00	0	150000	0.00
Israel	IL-HEP Tier-2 Federation	192	1040	54560	3200	17.05	275655	375000	0.74



Country	Federation	Phys	Log	HS06	Pledge	HS06/		Disk GB	Disk/	
		CPU	CPU			Pledge	Pledge		Pledge	Pledge
	Italy	INFN ALICE Federation	1899	7629	69037	8000	8.63	2740554	500000	5.48
	Italy	INFN ATLAS Federation	1899	7629	69037	12000	5.75	2740554	1000000	2.74
	Italy	INFN CMS Federation	1899	7629	69037	24000	2.88	2740554	1300000	2.11
	Italy	INFN LHCb Federation	1899	7629	69037	4750	14.53	2740554		#####
	Japan	ICEPP, Tokyo	288	1152	16532	12000	1.38	1199997	1000000	1.20
	Norway	UNINETT SIGMA Tier-2	14	14	0	1280	0.00	59329	90000	0.66
	Pakistan	Pakistan Tier-2 Federation	60	240	2400	3480	0.69	69822	200000	0.35
	Poland	Polish Tier-2 Federation	1948	11200	52571	10540	4.99	637823	599000	1.06
	Portugal	LIP Tier-2 Federation	497	1964	15835	6400	2.47	952202	400000	2.38
	Republic of Korea	CHEP of KNU, Daegu	140	336	0	2840	0.00	0	205000	0.00
	Republic of Korea	KISTI, Daejeon	134	536	0	600	0.00	215195	50000	4.30
	Romania	Romanian Tier-2 Federation	135	502	4132	12092	0.34	197178	816000	0.24
	Russian Federation	Russian Data-Intensive GRID	2212	2784	302	30000	0.01	1807418	2800000	0.65
	Slovenia	SiGNET	335	1162	11388	5200	2.19	10585	350000	0.03
	Spain	ATLAS Federation	562	2409	21170	10308	2.05	6962025	1107000	6.29
	Spain	CMS Federation	718	2516	23727	9040	2.62	329068	670000	0.49
	Spain	LHCb Federation	232	626	2883	3420	0.84	1548	1000	1.55
	Sweden	SNIC Tier-2	1008	1008	0	7870	0.00	1121271	920000	1.22
	Switzerland	CHIPP	192	1152	11520	10560	1.09	654177	910000	0.72
	Taipei	Taiwan Analysis Facility	102	404	0	3200	0.00	560185	350000	1.60
	Turkey	Turkish Tier-2 Federation	356	776	3229	9800	0.33	613630	900000	0.68
	UK	London Tier 2	2417	7145	46222	10551	4.38	1801214	781000	2.31
	UK	NorthGrid	1517	3294	36986	8309	4.45	1545780	845000	1.83
	UK	ScotGrid	1066	4128	40113	9025	4.44	539761	606000	0.89
	UK	SouthGrid	895	3040	25327	9258	2.74	1112149	669000	1.66
	USA	Caltech CMS T2	276	992	7760	7760	1.00	509000	570000	0.89
	USA	Florida CMS T2	1276	3000	7760	7760	1.00	425000	570000	0.75
	USA	Great Lakes ATLAS T2	0	0	22880	11040	2.07	1927000	1141000	1.69
	USA	MIT CMS T2	3012	3012	7760	7760	1.00	570000	570000	1.00
	USA	Midwest ATLAS T2	684	2100	16248	11040	1.47	1374000	1141000	1.20
	USA	Nebraska CMS T2	412	1264	7760	7760	1.00	570000	570000	1.00
	USA	Northeast ATLAS T2	382	1528	19035	11040	1.72	1100000	1141000	0.96
	USA	Purdue CMS T2	2848	12992	7760	7760	1.00	570000	570000	1.00
	USA	SLAC ATLAS T2	1378	4684	9570	11040	0.87	1663000	1141000	1.46
	USA	Southwest ATLAS T2	850	1906	23220	11040	2.10	1260000	1141000	1.10
	USA	U. Wisconsin CMS T2	330	920	7760	7760	1.00	550000	570000	0.96
	USA	UC San Diego CMS T2	916	1236	7760	7760	1.00	502000	570000	0.88





Federations Not Publishing HS06

Country	Federation	Phys CPU	Log CPU	HS06	Pledge	Disk GB	Pledge
Belgium	Belgian Tier-2 Federation	745	1361	0	9000	0	670000
Brazil	SPRACE, Sao Paulo	152	368	0	3200	0	120000
Estonia	NICPB, Tallinn	63	404	0	3200	0	120000
Finland	NDGF/HIP Tier2	32	64	0	2680	0	210000
Germany	ATLAS Federation, HH/Goe	266	1064	0	2280	516495	250000
Germany	ATLAS Federation, Munich	709	2072	0	6880	258047	740000
India	VECC/SINP, Kolkata	94	220	0	1800	0	150000
Republic of Korea	CHEP of KNU, Daegu	140	336	0	2840	0	205000
Republic of Korea	KISTI, Daejeon	134	536	0	600	215195	50000
Russian Federation	Russian Data-Intensive GRID	2212	2784	0	30000	0.01	1807418
Sweden	SNIC Tier-2	1008	1008	0	7870	1121271	920000
Taipei	Taiwan Analysis Facility Federation	102	404	0	3200	560185	350000

Not Meeting CPU Pledge

Country	Federation	Phys	Log	HS06	Pledge	HS06/		Disk GB	Pledge	Disk/
		CPU	CPU			Pledge	Pledge			Pledge
Austria	Austrian Tier-2 Federation	189	927	2707	8850	0.31	449703	594000	0.76	
Turkey	Turkish Tier-2 Federation	356	776	3229	9800	0.33	613630	900000	0.68	
Romania	Romanian Tier-2 Federation	135	502	4132	12092	0.34	197178	816000	0.24	
Pakistan	Pakistan Tier-2 Federation	60	240	2400	3480	0.69	69822	200000	0.35	
Spain	LHCb Federation	232	626	2883	3420	0.84	1548	1000	1.55	
USA	SLAC ATLAS T2	1378	4684	9570	11040	0.87	1663000	1141000	1.46	
France	LPC, Clermont-Ferrand	228	816	6232	7080	0.88	248950	610000	0.41	

Not Meeting Disk Pledge

Country	Federation	Phys CPU	Log CPU	HS06	Pledge	HS06/ Pledge	Disk GB	Pledge	Disk/ Pledge
France	SUBATECH, Nantes	104	408	3487	2400	1.45	8	200000	0.00
Slovenia	SiGNET	335	1162	11388	5200	2.19	10585	350000	0.03
Romania	Romanian Tier-2 Federation	135	502	4132	12092	0.34	197178	816000	0.24
France	CC-IN2P3 AF	451	2537	21818	15654	1.39	250691	1001000	0.25
Germany	ATLAS Federation, Munich	709	2072	0	6880	0.00	258047	740000	0.35
Pakistan	Pakistan Tier-2 Federation	60	240	2400	3480	0.69	69822	200000	0.35
France	LPC, Clermont-Ferrand	228	816	6232	7080	0.88	248950	610000	0.41
Spain	CMS Federation	718	2516	23727	9040	2.62	329068	670000	0.49
India	TIFR, Mumbai	30	240	20400	3200	6.38	365338	600000	0.61
Russian Federation	Russian Data-Intensive GRID	2212	2784	0	30000	0.01	1807418	2800000	0.65
Norway	UNINETT SIGMA Tier-2	14	14	0	1280	0.00	59329	90000	0.66
Turkey	Turkish Tier-2 Federation	356	776	3229	9800	0.33	613630	900000	0.68
Switzerland	CHIPP	192	1152	11520	10560	1.09	654177	910000	0.72
Israel	IL-HEP Tier-2 Federation	192	1040	54560	3200	17.05	275655	375000	0.74
USA	Florida CMS T2	1276	3000	7760	7760	1.00	425000	570000	0.75
Austria	Austrian Tier-2 Federation	189	927	2707	8850	0.31	449703	594000	0.76
Canada	Canada-East Federation	168	672	8400	5760	1.46	496601	595000	0.83
USA	UC San Diego CMS T2	916	1236	7760	7760	1.00	502000	570000	0.88
UK	ScotGrid	1066	4128	40113	9025	4.44	539761	606000	0.89
USA	Caltech CMS T2	276	992	7760	7760	1.00	509000	570000	0.89
USA	Northeast ATLAS T2	382	1528	19035	11040	1.72	1100000	1141000	0.96
USA	U. Wisconsin CMS T2	330	920	7760	7760	1.00	550000	570000	0.96
France	LAPP, Annecy	220	752	7391	4400	1.68	266231	272000	0.98

Installed Capacity just for LHC?

- Use Fair Share to apportion installed cpu resources between VOs
- Unfortunately, lots of missing data

Capacities: Pledges ... x

http://gstat-wlcg.cern.ch/apps/capacities/comparison/

Search with Google

Capacities > Pledges Comparison

vo: ATLAS Year: 2010 Month: 11

All Tiers Tier 0 Tier 1 Tier 2

Search:

Tier	Country	Federation	Physical CPU	Logical CPU	HEPSPC06	CPU Pledge	Total Online Storage (GB)	Disk Pledge	Total Heartline Storage (GB)	Tape Pledge
Tier 0	Switzerland	CH-CERN	764	2,999	33,542	67,000	5,537,279	3,900,000	15,788,080	8,900,000
Tier 1	Canada	CA-TRIUMF	0	0	0	10,800	1,100,000	1,095,000	750,000	710,000
Tier 1	France	FR-CCIN2P3	0	0	0	21,600	2,737,480	2,464,000	83,752	1,598,000
Tier 1	Germany	DE-KIT	0	0	0	21,600	6,390,284	2,190,000	360,000	1,420,000
Tier 1	Italy	IT-INFN-CNAF	0	0	0	16,000	2,229,546	1,800,000	0	1,400,000
Tier 1	Netherlands	NL-T1	378	1,368	14,710	33,496	4,403,788	3,001,000	0	2,122,000
Tier 1	Nordic	NDGF	0	0	0	7,490	4,400,824	900,000		
Tier 1	Spain	ES-PIC	249	995	10,140	9,145	11,076,040	1,043,000		
Tier 1	Taiwan	TW-ASGC	486	1,944	20,028	14,000	1,538,004	1,750,000		
Tier 1	UK	UK-T1-RAL	728	2,912	27,518	27,000	3,122,197	2,738,000		

Fit to Width 100% Ctrl+O

Show Images

Zoom: 100% 20% 100% 200% 300%

HS06

Country	Federation	Phys CPU	Log CPU	HS06	Pledge	HS06/ Pledge	Disk GB	Pledge	Disk/ Pledge
Belgium	Belgian Tier-2 Federation	745	1361	0	9000	0.00	0	670000	0.00
Brazil	SPRACE, Sao Paulo	152	368	0	3200	0.00	0	120000	0.00
Estonia	NICPB, Tallinn	63	404	0	3200	0.00	0	120000	0.00
Finland	NDGF/HIP Tier2	32	64	0	2680	0.00	0	210000	0.00
Germany	ATLAS Federation, HH/Goe	266	1064	0	2280	0.00	516495	250000	2.07
Germany	ATLAS Federation, Munich	709	2072	0	6880	0.00	258047	740000	0.35
India	VECC/SINP, Kolkata	94	220	0	1800	0.00	0	150000	0.00
Norway	UNINETT SIGMA Tier-2	14	14	0	1280	0.00	59329	90000	0.66
Republic of Korea	CHEP of KNU, Daegu	140	336	0	2840	0.00	0	205000	0.00
Republic of Korea	KISTI, Daejeon	134	536	0	600	0.00	215195	50000	4.30
Sweden	SNIC Tier-2	1008	1008	0	7870	0.00	1121271	920000	1.22
Taipei	Taiwan Analysis Facility	102	404	0	3200	0.00	560185	350000	1.60
Russian Federation	Russian Data-Intensive GRID	2212	2784	0	30000	0.01	1807418	2800000	0.65
Pakistan	Pakistan Tier-2 Federation	60	240	2400	3480	0.69	69822	200000	0.35
Australia	University of Melbourne	54	216	2538	2500	1.02	283874	250000	1.14
Austria	Austrian Tier-2 Federation	189	927	2707	8850	0.31	449703	594000	0.76

Top HS06

Country	Federation	Phys CPU	Log CPU	HS06	Pledge	HS06/ Pledge	Disk GB	Pledge	Disk/ Pledge
Italy	INFN ALICE Federation	1899	7629	69037	8000	8.63	2740554	500000	5.48
Italy	INFN ATLAS Federation	1899	7629	69037	12000	5.75	2740554	1000000	2.74
Italy	INFN CMS Federation	1899	7629	69037	24000	2.88	2740554	1300000	2.11
Italy	INFN LHCb Federation	1899	7629	69037	4750	14.53	2740554		#####
Germany	CMS Federation DESY RWTH	1420	6968	57579	13000	4.43	2967583	650000	4.57
Germany	ATLAS Federation FR/W	436	1744	55808	6872	8.12	834719	738000	1.13
Israel	IL-HEP Tier-2 Federation	192	1040	54560	3200	17.05	275655	375000	0.74
Poland	Polish Tier-2 Federation	1948	11200	52571	10540	4.99	637823	599000	1.06
UK	London Tier 2	2417	7145	46222	10551	4.38	1801214	781000	2.31
France	GRIF, Paris	1381	5555	44876	25808	1.74	2045187	1570000	1.30
Germany	ATLAS Federation DESY	914	4944	40577	4800	8.45	2403289	740000	3.25
UK	ScotGrid	1066	4128	40113	9025	4.44	539761	606000	0.89
UK	NorthGrid	1517	3294	36986	8309	4.45	1545780	845000	1.83
UK	SouthGrid	895	3040	25327	9258	2.74	1112149	669000	1.66
Spain	CMS Federation	718	2516	23727	9040	2.62	329068	670000	0.49

Strange Data

Country	Federation	Phys CPU	Log CPU	Log/ Phys	HS06
India	TIFR, Mumbai	30	240	8.00	20400
Estonia	NICPB, Tallinn	63	404	6.41	0
Switzerland	CHIPP	192	1152	6.00	11520
Poland	Polish Tier-2 Federation	1948	11200	5.75	52571
France	CC-IN2P3 AF	451	2537	5.63	21818
Israel	IL-HEP Tier-2 Federation	192	1040	5.42	54560
Germany	ATLAS Federation DESY	914	4944	5.41	40577
	CMS Federation DESY				
Germany	RWTH Aachen	1420	6968	4.91	57579
Austria	Austrian Tier-2 Federation	189	927	4.90	2707
France	CC-IN2P3 IPHC	256	1216	4.75	10944
USA	Purdue CMS T2	2848	12992	4.56	7760
Spain	ATLAS Federation	562	2409	4.29	21170



HS06/Core

Country	Federation	Phys CPU	Log CPU	Log/ Phys	HS06	HS06/ Core	Pledge
India	TIFR, Mumbai	30	240	8.00	20400	85.00	3200
Israel	IL-HEP Tier-2 Federation	192	1040	5.42	54560	52.46	3200
Germany	ATLAS Federation FR/W	436	1744	4.00	55808	32.00	6872
Japan	ICEPP, Tokyo	288	1152	4.00	16532	14.35	12000
Canada	Canada-East Federation	168	672	4.00	8400	12.50	5760
USA	Northeast ATLAS T2	382	1528	4.00	19035	12.46	11040
USA	Southwest ATLAS T2	850	1906	2.24	23220	12.18	11040
Australia	University of Melbourne	54	216	4.00	2538	11.75	2500
Canada	Canada-West Federation	210	840	4.00	9729	11.58	5760
UK	NorthGrid	1517	3294	2.17	36986	11.23	8309
Pakistan	Pakistan Tier-2 Federation	60	240	4.00	2400	10.00	3480
Switzerland	CHIPP	192	1152	6.00	11520	10.00	10560
China	IHEP, Beijing	226	904	4.00	8885	9.83	8000
France	LAPP, Annecy	220	752	3.42	7391	9.83	4400
Slovenia	SiGNET	335	1162	3.47	11388	9.80	5200
UK	ScotGrid	1066	4128	3.87	40113	9.72	9025



Conclusions

- Most sites publishing total installed capacity
- Most meeting cpu pledges
 - If we believe the data
- More missing disk pledge
 - Known issue with native xrootd
- Need to factor in LHC Share

Message to the Tier2s

- Check gstat for your site.
 - <http://gstat-wlcg.cern.ch/apps/capacities/comparision/>
- Do the figures look realistic?
 - Cores/cpu, HS06/core?
- Remember they show total resources installed, not just for LHC (yet).
- If you don't understand why your published results are wrong:
 - Ask your NGI
 - Ask your Tier1
 - Raise a general GGUS ticket.

Questions for MB

- What do you want to see in the monthly report?
 - LHC Share of installed capacity
 - Drill down into federation to see sites.
- Who should chase the sites not publishing or obviously publishing incorrectly?
 - Ian Bird will write to all federations not publishing or meeting a pledge.