

Ian Bird

WLCG Referees' meeting

CERN, 3rd December 2013

WLCG

C-RRB (29th Oct)

- C-RSG recommendations to RRB – see RSG report attached to RRB agenda
 - Rebus to be updated to reflect this

- The resource requirements for 2014-17 were shown to the RRB
 - General agreement that working assumption of flat budgets is a reasonable approach

CRSG comments/ recommendations

- ❑ Run 2 requests have become more definite since Spring – assumed flat budgets;
- ❑ ALICE and LHCb scrutinised requests have not always been met at T1. RRB requested to help find a way to resolve this;
- ❑ CSG strongly supports on going efforts to improve software efficiency, notes that *resulting gains are already assumed* in the requests for Run 2;
- ❑ Effectiveness of disk use only partly reflected in occupancy. Welcome efforts (popularity, etc.) but would like a metric to take account of access frequency;
- ❑ Networks have been exploited to reduce disk use and move processing between tiers. Concern that poorly networked sites will be underused and cost implications of providing network capacity.

ALICE

		2014 request	2015 request
CPU/kHS06	T0	135	175
	T1	110	120
	T2	190	200
Disk/PB	T0	8.3	11.5
	T1	10.1	17.8
	T2	12.8	22.1
Tape/PB	T0	12.0	16.2
	T1	6.0	10.2

- ▶ CPU and storage for Run 2 increased by 25% (beam energy and pileup)
- ▶ PbPb and pPb events include TPC data; raises reco and sim times

ATLAS

		2014 ATLAS	2014 CRSG	2015 ATLAS	2015 CRSG
CPU/kHS06	T0	111(111)	111	205(240)	205
	T1	365(385)	355	462(478)	450
	T2	425(412)	390	530(522)	520
Disk/PB	T0	12(12)	11	14(15)	14
	T1	35(35)	35	39(47)	37
	T2	52(56)	49	55(65)	52
Tape/PB	T0	29(29)	27	33(38)	33
	T1	53(55)	53	65(74)	65

- ▶ 2015 requests reduced compared to Spring
 - ▶ disk: reduced pre-placement and more aggressive deletion of unused data
 - ▶ CPU: *assumes* improved reconstruction performance

March 2013 requests in parentheses

CMS

		2014	2014	2015	2015
		CMS	CRSG	CMS	CRSG
CPU/kHS06	T0	121(121)	121	268	268
	T1	175(165)	175	300	300
	T2	390(390)	390	500	500
Disk/PB	T0	7(7)	7	15	15
	T1	26(26)	26	27	26
	T2	27(27)	27	31	29
Tape/PB	T0	26(26)	26	35	35
	T1	55(56)	55	74	74

- ▶ 2014 requests stable since the Spring.
- ▶ CMS *includes* use of HLT in requests

March 2013 requests in parentheses

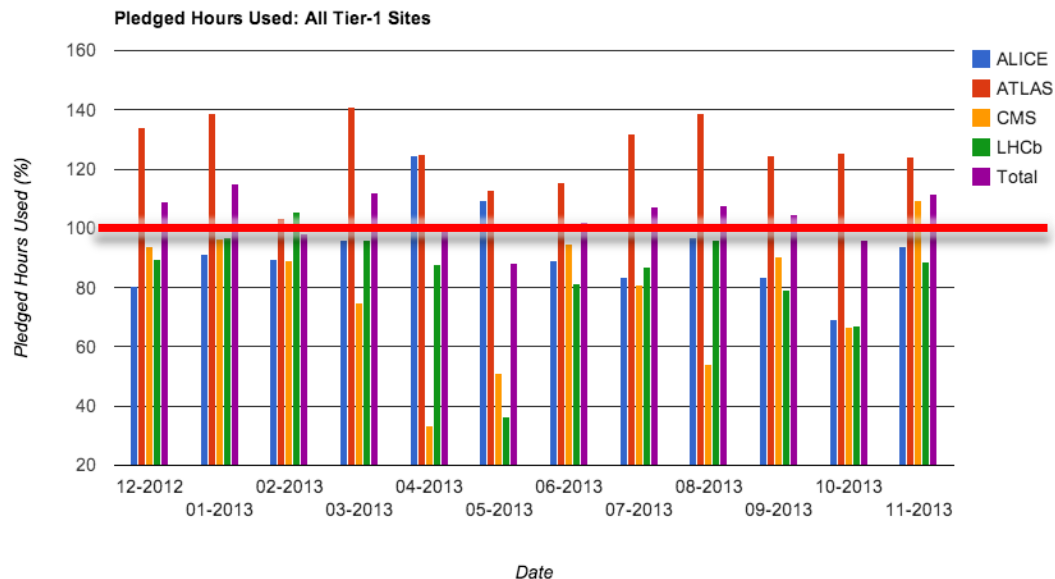
		2014	2015
		request	request
CPU/kHS06	T0	40	44
	T1	110	123
	T2	47	52
	HLT + Yandex	30+10	10+10
Disk/PB	T0	6.4	6.7
	T1	11.5	12.5
	T2	2.5	2.5
Tape/PB	T0	7.3	10.4
	T1	12.1	21.3

- Introduction of T2 disk (change to computing model)
- Changes to 2015 request compared to the Spring, to limit growth

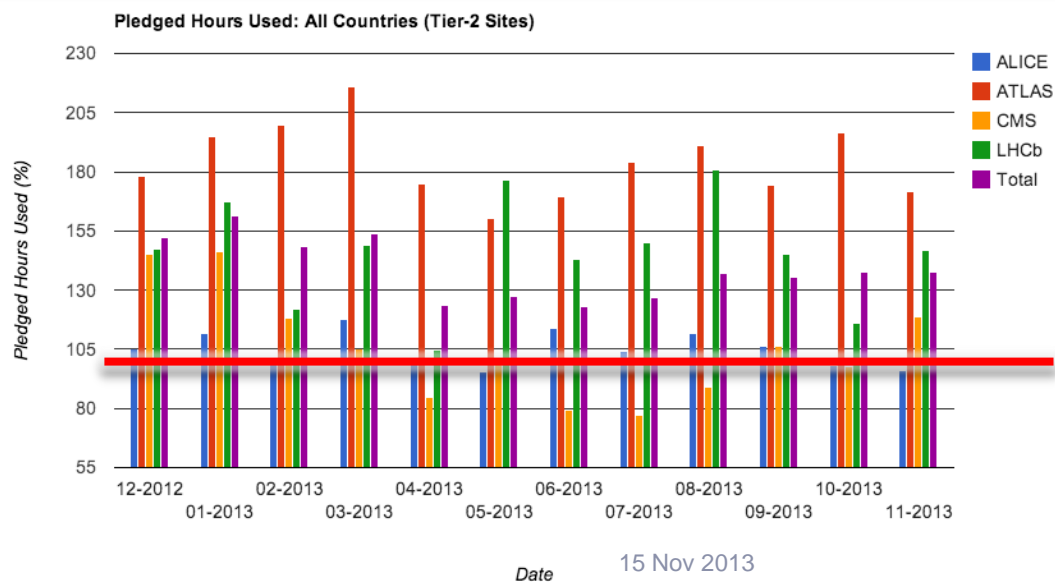
Updated scrutiny schedule

- Spring of year n
 - Final scrutiny of requests for year $n+1$ and look beyond
 - Review use of resources in previous calendar year, $n-1$
- Autumn of year n
 - Look forward to requests for year $n+2$ and beyond
 - If necessary, consider year $n+1$ requests
 - For individual experiments if they want significant changes
 - Or for all experiments if, say, LHC running parameters change significantly
- CRSG asks experiments to submit documentation on 1 February and 1 August

Resource occupancy



Tier 1



Tier 2

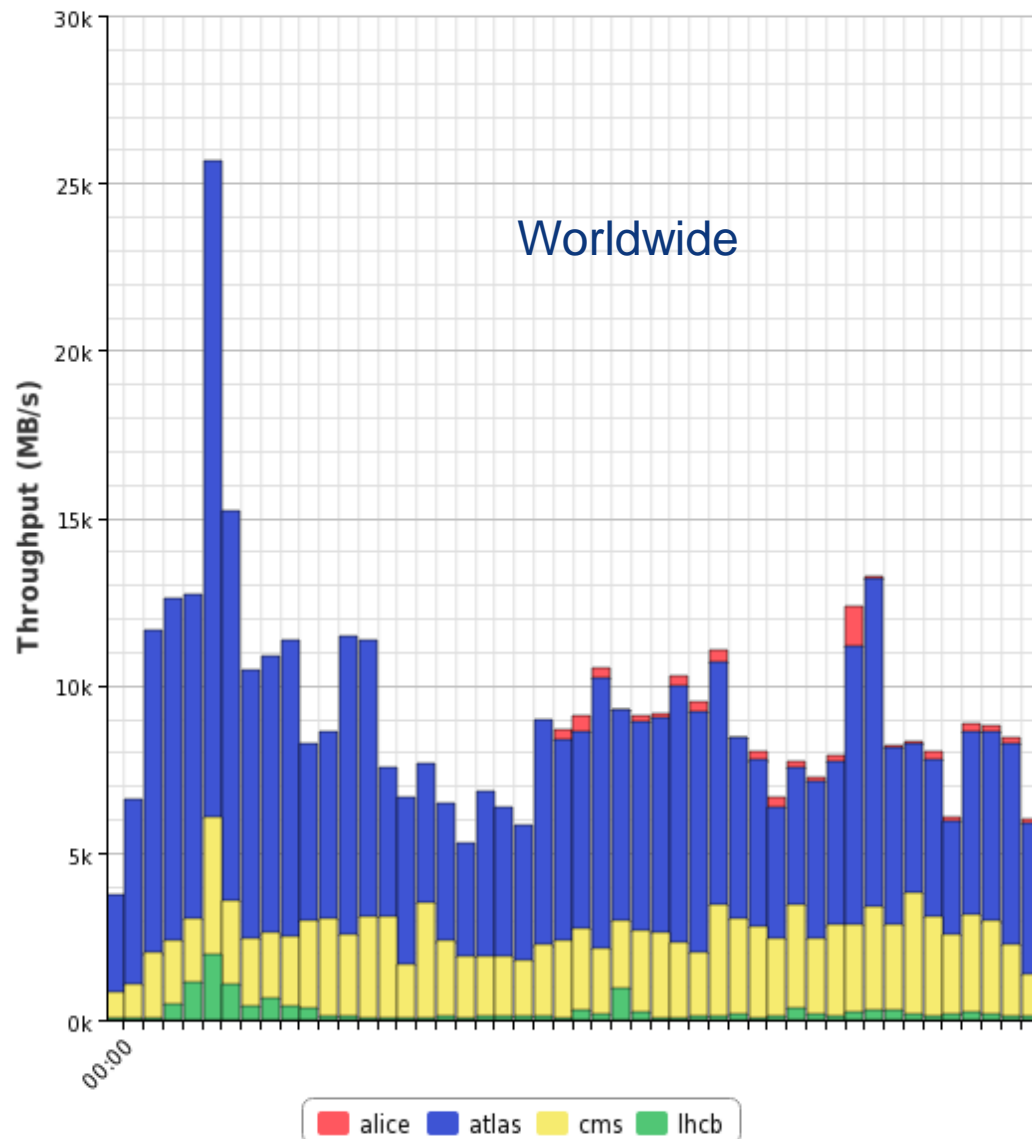
15 Nov 2013

Transfers: Jan – Nov 2013



Transfer Throughput

2013-01-01 00:00 to 2013-12-01 00:00 UTC



Preparations for Run 2

- WLCG workshop agreed that
 - Operations coordination team will manage the scheduling of experiment challenges during 2014
 - Anticipated to being Spring 2014
 - No reason for dedicated challenge with all 4 experiments
 - System is still operating and will not be stopped