



## LCG Service Report – October 23 2006 (Week 43)

**This text will no longer appear as from next week's report.**

This report lists significant problems or issues that are outstanding, or have been recently resolved, seen by the main LHC VOs at the WLCG Tier0 and Tier1 sites supporting that VO. It also shows Tier0-Tier1 file transfer statistics for the previous week.

It is compiled weekly through the LCG Experiment Coordination Meeting for presentation at the joint WLCG-OSG-EGEE operations meeting. It is complementary to the site and VO reports and does not duplicate information recorded in these. The site reports should cover operational issues, such as interventions carried out during the reference period, as well as those scheduled for the future, preferably with a list of issues addressed by the corresponding intervention. The VO reports should cover achievements and short-term plans, as well as operational issues seen over the reference period.

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### General Status (from CERN "C5" Report)

The total outgoing SC4 traffic has ranged from at least 450 to at least 650 MB/s as daily average. The real numbers are estimated to lie between a factor 1.5 and 2 higher, when the GridView plots are compared with rates shown by Lemon and the monitoring of the experiments themselves.

We did not yet manage to find the root cause of the problem with the monitoring data, but the R-GMA developers have made available a new version of their Python client, which still suffers from assertions thrown by the httplib.py library, but does better management of the connections to the MON box.

CMS are running their CSA'06 Challenge without big problems, it seems, though there have been instabilities with CASTOR, the FTS and the OPN (see below).

When CASTOR got upgraded last week, a new port range parameter did not get set in all the necessary places, severely limiting the throughput.

A temporary manual fix for that was put in place on Saturday evening, but it got partly wiped out by a Quattor reconfiguration on Tuesday, after which a mistake in a new temporary fix made things even worse for a few hours.

On Wed. evening the FTS once again suffered from a problem with the DB back-end: all the active agents locked up inside an Oracle library for some 2 hours until they were restarted after CMS had reported problems with FTS transfers. The cause and possible fix/work-around are being investigated.

On Wed. morning and in the afternoon there were reports that the FTS was unreachable from FNAL, ASGC and CNAF, and that many transfers were failing with similar errors. This was finally discovered to be due to an ACL update for all the Tier-1 interfaces earlier that morning that caused the ACLs of a random set of sites not to be considered.

The problem is being investigated with the vendor of the equipment.

The Atlas and CMS contributions to the outgoing traffic are about equal.



Alice have been running at > 100 MB/s (probably > 150 MB/s) for 4 days in a row, followed by lower activity. LHCb traffic has never needed to be more than a few tens of MB/s.

## File Transfer Report

The general trend in improved transfers (lower per file failure rates) continues, although there are still significant variations by VO at certain sites. Operational issues (see above) are still a major cause of service instability.

Problem channels:

- CERN-INFN – 85% failure rate for ATLAS (Dest SRM);
- CERN-RAL – 85% failure rate for ATLAS (Source SRM).

The screenshot shows a Mozilla Firefox browser window displaying a file transfer report. The browser's address bar shows the URL: http://pcitgm02:8081/channel/transfer/week/index.html. The report table is the main content, listing various channels and their performance metrics. Below the table, there is a note: "Click on the Channel Name to show the VO details".

Channel Name	VO Name	Total	% Failures	# Succ.	# Fail.	1st Failure Reason	% 1st Failure Reason	2nd Failure Reason	% 2nd Failure Reason	Avg. Size (GB)	Avg. Duration (sec)	Avg. Tx Rate (MB/sec)	Eff. Tx Bytes (GB)	Tx Bytes (GB)
CERN-INFN	[All]	69593	71	20008	49585	Dest SRM	61	Other	30	1.41	404.73	4.66	28218.15	32120.31
	alice	5901	33	3941	1960	Dest SRM	48	Other	35	1.84	399.7	6.97	7245.61	8225.66
	atlas	48451	85	7458	40993	Dest SRM	64	Other	28	0.73	427.1	1.94	5408.24	5899.12
	cms	11598	48	6046	5552	Dest SRM	46	Other	44	2.54	464.73	8.28	15364.4	17791.99
	dteam	7	29	5	2	Other	50	Dest SRM	50	0	48.8	0.01	0	0
	lhcb	3611	30	2537	1074	Source SRM	43	Dest SRM	36	0.08	206.89	0.49	199.9	203.53
	ops	25	16	21	4	Dest SRM	75	Source SRM	25	0	113.48	0	0	0
CERN-STAR	[All]	3640	67	1190	2450	Dest SRM	54	Other	45	0	104.18	0.02	1.68	1.73
CERN-CERN	[All]	73	56	32	41	Dest SRM	59	Other	24	0.23	902.03	0.34	7.25	7.64
CERN-IN2P3	[All]	147981	52	71591	76390	Other	89	Source SRM	6	0.99	303.1	5.23	70540.82	70540.82
	alice	11375	28	8192	3183	Other	95	Dest SRM	3	1.82	314.22	9.44	14908.69	14908.69
	atlas	40354	57	17479	22875	Other	81	Source SRM	16	0.6	342.91	2.1	10489.03	10489.03
	cms	8604	50	4344	4260	Dest SRM	50	Other	49	2.53	591.33	7.7	10998.07	10998.07
	dteam	80239	55	35935	44304	Other	100	Source SRM	0	0.93	245.45	6.25	33576.17	33576.17
	lhcb	7385	24	5626	1759	Source SRM	54	Dest SRM	30	0.1	309.44	0.45	568.85	568.85
	ops	24	38	15	9	Other	100		0	100.67	0	0	0	
CERN-PIC	[All]	67096	38	41380	25716	Dest SRM	61	Other	26	0.99	727.18	1.3	40826.4	41605.88
	atlas	32598	68	10434	22164	Dest SRM	63	Other	28	0.8	638.02	1.23	8363.77	8857.69
	cms	4666	4	4460	206	Other	63	Transfer	29	2.55	1238.34	2.17	11377.52	11377.52
	dteam	23090	10	20785	2305	Dest SRM	81	Other	16	0.98	804.42	1.3	20292.97	20576.23
	lhcb	6719	15	5679	1040	Source SRM	97	Other	3	0.14	209.46	0.77	792.14	794.43
	ops	23	4	22	1	Source SRM	100		0	53.68	0.01	0.01	0.01	
CERN-RAL	[All]	88760	34	58462	30298	Other	60	Source SRM	39	1.04	395.13	3.26	60953.75	61158.63
	alice	2953	65	1023	1930	Other	97	Source SRM	3	1.86	1533.72	1.73	1898.14	1908.28
	atlas	30752	85	4673	26079	Other	58	Source SRM	42	0.5	363.65	1.7	2327.53	2343.22
	cms	5184	3	5015	169	Source SRM	31	Dest SRM	25	2.75	541.14	6.78	13790.4	13937.53
	dteam	44916	3	43779	1137	Other	81	Source SRM	15	0.97	369.81	3.29	42443.36	42473.46
	lhcb	4936	20	3955	981	Source SRM	76	Other	13	0.12	234.33	0.71	494.31	496.12
	ops	19	11	17	2	Other	100		0	59.53	0.01	0.01	0.01	
CERN-ASCC	[All]	48995	29	35000	13995	Dest SRM	61	Other	24	0.98	1041.96	1.05	34391.24	37891.93
CERN-GRIDKA	[All]	71621	25	53962	17659	Other	78	Source SRM	13	1.12	420.08	4.57	60495.17	60643.71
CERN-BNL	[All]	64654	21	51005	13649	Source SRM	71	Other	26	0.82	312.33	4.37	41798.7	42128.6
CERN-FNAL	[All]	29946	18	24550	5396	Transfer	94	Other	6	0	274.58	0	0	0
CERN-TRIUMF	[All]	28158	10	25413	2745	Source SRM	49	Other	29	0.91	285.03	3.63	23091.47	23177.91
CERN-SARA	[All]	41667	4	40021	1646	Other	68	Source SRM	19	0.95	115.85	11.09	37935.58	37981.94



## ALICE T0-T1 Transfers

The following table shows the target T0-T1 data export rates for ALICE in MB/s. Although the peak rates obtained, typically over periods of several hours, compare well to the target numbers for both pp and HI running, stability over a period of several days to one week has not yet been attained across all sites simultaneously. The primary goals for the immediate future are therefore assumed to be:

- Obtaining stable transfers to all participating sites at rates at least equal to that required for pp running;
- Adding the remaining sites (requires an SRM end-point for ALICE to be established at NDGF and US-ALICE and published in the Information System);
- Ramping up the data rates on a schedule that is agreed with the sites to that required for HI running.

The need for further headroom, for example to cope with an accelerator operating efficiency well above 50%, remains to be discussed.

Tier1 site	SC4 Target	SC4 Peak	Megatable (pp)	2007 Request (HI?)
CCIN2P3	60	60	28	50
CNAF	60	40	35	50
FZK	60	30	60	80
RAL	30	15	9	5
SARA	30	60	14	30
NDGF	N/A	-	21	50
US-ALICE	60	-	46	40
<b>TOTAL</b>	<b>300</b>		<b>188</b>	<b>305</b>

Table 1 - ALICE pp & HI data rates vs SC4 targets & results

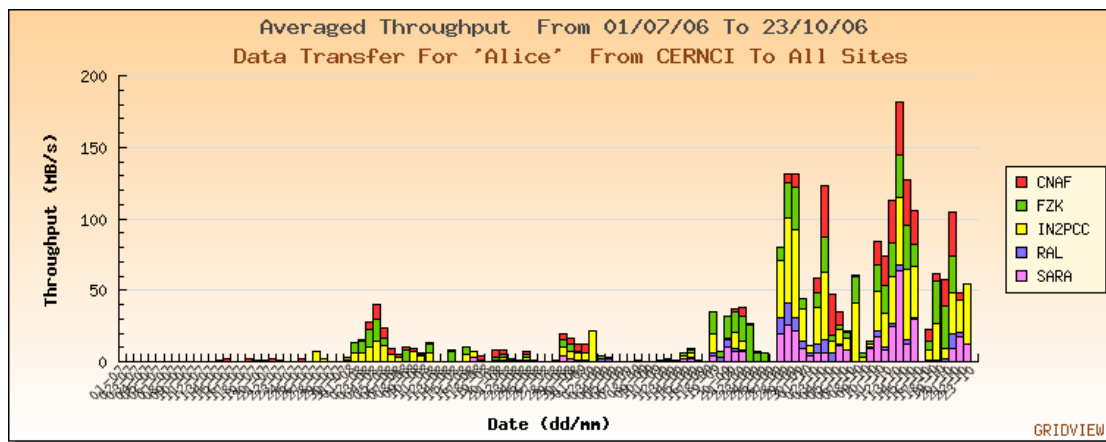


Figure 1 - GridView Rates from July 1st



## ATLAS Transfers

ATLAS T0-T1 transfers have not achieved the SC4 target of full nominal rates based on the TDR figures (which have since been revised up, due to a doubling in the ESD size). The reasons for these results are not yet understood but will be tackled in the coming weeks.

Tier1	SC4 target (40% to tape)	pp nominal rates for all experiment
ASGC	60.0	100
CNAF	59.0	200
PIC	48.6	100
IN2P3	90.2	200
GridKA	74.6	200
RAL	59.0	150
BNL	196.8	200
TRIUMF	47.6	50
SARA	87.6	150
NDGF	48.6	50

Table 2 - ATLAS SC4 targets (40% to tape, remainder to disk)

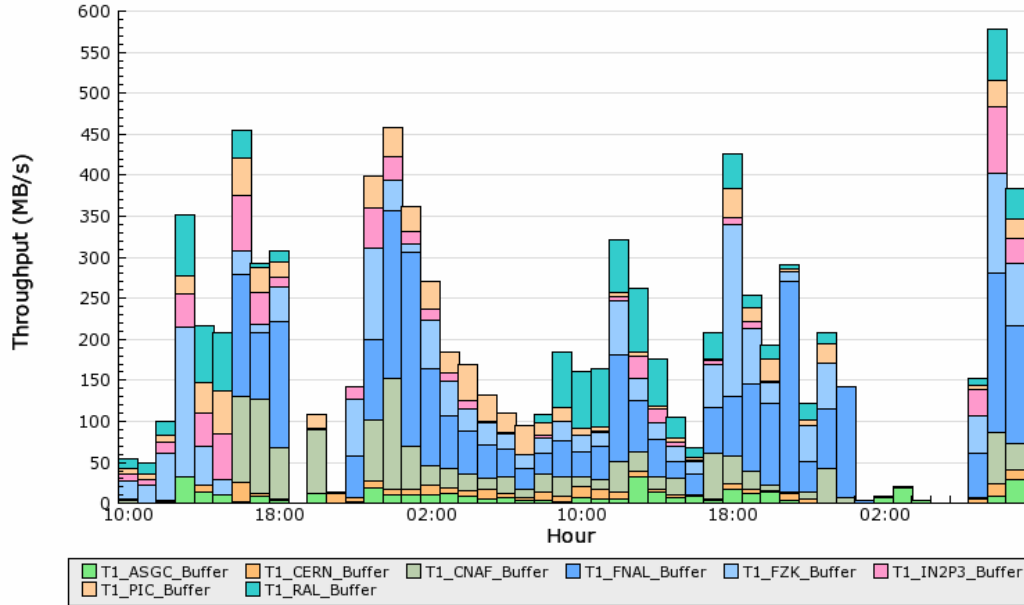
## CMS Transfers

The above mentioned service problems had a clear impact on the profile of CMS transfers. Whilst the individual incidents are being followed up with a view to making the overall service more robust, the ability of the service to recover from the backlogs generated by such problems is encouraging. The peaks show that backlogs can be recovered in a few hours, although it should be noted that the target T0-T1 export rate for CSA'06 is 25% of the nominal rate.



### PhEDEx Prod Data Transfers By Destination

48 Hours from 2006-10-18 10:00 to 2006-10-20 09:00 GMT  
 Nodes matching regular expression 'T1\_.\*\_(?!IMSS)'



### Site Action List

CERN	ALICE	
	ATLAS	
	CMS	
	LHCb	
BNL	ATLAS	
ASGC	ATLAS	
	CMS	
CNAF	ALICE	
	ATLAS	
	CMS	
	LHCb	
LYON	ALICE	
	ATLAS	
	CMS	
	LHCb	
FZK	ALICE	
	ATLAS	
	CMS	
	LHCb	



PIC	ATLAS	
	CMS	
	LHCb	
RAL	ALICE	
	ATLAS	
	CMS	
	LHCb	
SARA	ALICE	
	ATLAS	
	LHCb	
TRIUMF	ATLAS	
NDGF	ALICE	<b>Site not available for SC4 Service.</b>
	ATLAS	<b>Ditto</b>
	CMS	<b>Ditto</b>
US ALICE	ALICE	<b>Site not available for SC4 Service.</b>