FTS 2.0 deployment and testing status

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Information Society
and Media

Enabling Grids for E-sciencE

- **CERN and all T1 sites using FTS 1.5**
    - (from gLite release 3.0)
    - > 8 PB exported from T0 since start of SC4

- **FTS infrastructure runs well**
    - CERN and T1 sites ~understand the software
    - Most problems ironed out last year
    - Remainder of the problems understood with experiments and we have a plan to address them

- **Still problems with 'overall transfer service'**
  - FTS + SRM
  - Transfer se…
    following-up…
    - https://tw…s
    - GGUS / V…
- **Monitoring a…
  system is ou…**
  - But can be…
  - Still need to…

FTS Report

Disclaimer
This page contains a report generated from information stored in the FTS Database and is intended for reporting purposes only. Since the format will probably change in the future, it's therefore recommended not to use parsing robots on it.

Statistics concerning all the transfers performed during last week
Between **2007-05-28 00:00:00 +02:00** and **2007-06-04 00:00:00 +02:00**

CERN-.* [Filter] Show VO details

Channel Name	VO Name	Total	% Failures	# Succ.	# Fail.	1st Failure Reason	% 1st Failure Reason	2nd Failure Reason	% 2nd Failure Reason	Avg. Size (GiB)	Avg. Duration (sec)	Avg. Tx Rate (MB/sec)	Eff. Tx Bytes (GiB)	Tx Bytes (GiB)
CERN-CERN	[All]	6	100	0	6	Source SRM	100			0	0	0	0	0
CERN-STAR	[All]	4689	84	765	3924	Dest SRM	78	Transfer	16	2.42	2077.57	1.61	1852.85	2065.91
CERN-RAL	[All]	40583	72	11168	29415	Dest SRM	98	Source SRM	1	2.31	715.82	3.31	25753.47	26058.41
CERN-PIC	[All]	30060	71	8786	21274	Dest SRM	31	Other	30	2.48	1015.91	2.53	21789.53	24302.82
CERN-INFN	[All]	33842	59	13895	19947	Dest SRM	49	Source SRM	29	2.48	467.61	9.71	34421.89	37431.96
CERN-NDGF	[All]	19894	56	8736	11158	Transfer	77	Source SRM	21	2.16	814.24	2.45	18846.14	19085.9
CERN-ASCC	[All]	26073	46	14144	11929	Dest SRM	74	Transfer	17	1.82	1325.73	1.15	25677.05	26220.39
CERN-GRIDKA	[All]	32327	43	18495	13832	Transfer	56	Source SRM	34	2.02	519.06	8.54	37340.07	39407.74
	atlas	21471	61	8373	13098	Transfer	56	Source SRM	36	1.61	705.93	2.98	13448.77	15216.63
	cms	10557	7	9867	690	Transfer	72	Dest SRM	14	2.42	368.94	13.48	23901.2	24191.1
	lhcb	299	15	255	44	Dest SRM	93	Transfer	7	0	119.76	0	0	0
CERN-IN2P3	[All]	20221	42	11717	8504	Dest SRM	57	Transfer	34	1.13	281.58	6.4	13260.48	13260.48
CERN-TRIUMF	[All]	11255	36	7249	4006	Source SRM	72	Dest SRM	16	1.97	545.7	4.72	14260.3	14374.7
CERN-BNL	[All]	35668	33	24031	11637	Source SRM	72	Dest SRM	15	2.16	624.15	7.44	51882.76	54080.47
	atlas	35668	33	24031	11637	Source SRM	72	Dest SRM	15	2.16	624.15	7.44	51882.76	54080.47
CERN-SARA	[All]	24444	18	20151	4293	Source SRM	63	Transfer	25	2.35	517.34	5.87	47430.29	47926.11
CERN-FNAL	[All]	14538	1	14410	128	Transfer	92	Other	8	0	327.87	0	0	0
CERN-DESY	[All]	1	0	1	0					1.42	107	13.55	1.42	1.42

Click on the Channel Name to show the VO details

Enabling Grids for E-sciencE

- Based on feedback from Amsterdam workshop
- Improved monitoring capabilities
  - This is critical for the reliability of the 'overall transfer service'
- Certificate delegation
  - Security issue: No more MyProxy passphrase in the job
- Beta SRM 2.2 support
- Better database model
  - Improved performance and scalability
- Better administration tools
  - Make it easier to run the service
- Placeholders for the future functionality
  - To minimise the service impact of future upgrades

- FTS 2.0 currently deployed on pilot service@CERN
  - In testing on pilot since December (dteam stress tests)
  - Opened to experiments week of 12 March [LCG MB]

- Minimal changes required for compatibility (using existing client from October '06 gLite release)
- File state checking:
  - 'Pending' -> 'Pending' || 'Ready'
  - 'Done' -> 'Done' || 'Finished'
  - 'Failed' -> 'Failed' || 'FinishedDirty'
  - (new states brought in *now* to support future [requested] extensions)

- Using the new delegation feature requires a couple more changes and a client upgrade, but new server will run fine in legacy mode

- RAL running test FTS 2.0 in parallel

eGee

Enabling Grids for E-sciencE

- Current validation status:
- **Atlas: OK**
- **LHCb: OK**
- **CMS: OK, changes being incorporated into Phedex**
- **Alice: Not yet**
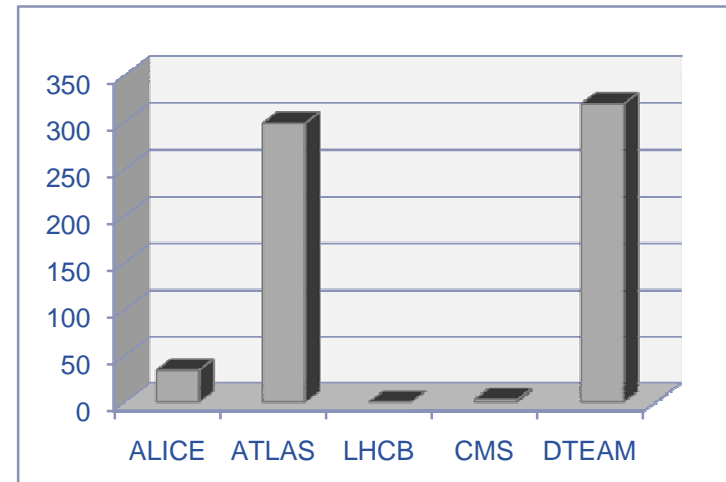
- Upgrade intervention on CERN-PROD planned since 24 April 2007 [WLCG SCM] but never scheduled

- Our target date for upgrade on CERN-PROD is now 18 June 2007

Enabling Grids for E-sciencE

- **Gained much experience during pilot validations**
  - > 600 TB transferred
  - A new patch for FTS 2.0 is in preparation fixing some operational annoyances (nothing new)

- **This is the patch we will give T1 sites**
  - Assume 3 weeks or so for building, certification and release

- **Expect at least one more patch fixing other annoyances as they come up + incremental improvements to the monitoring tools**

- **We also need to understand the appropriate time to add in the 'clouds' (site groups) for CMS**

- **Tested against 4 SRM test instances**
  - Tracked here:
    https://twiki.cern.ch/twiki/bin/view/EGEE/FTSSRMValidationStatus

- **Testing now proceeding on PPS test-bed against all test SRM 2.2 endpoints**

Enabling Grids for E-sciencE

- Major new release
  - Delegation
  - Beta SRM 2.2 support
  - Performance and useability
  - Better monitoring of transfers

- Scheduled upgrade – week of 18 June 2007
- Tier-1 sites ~3 weeks afterwards

- SRM 2.2 / FTS integration ongoing on PPS

Plans

Enabling Grids for E-sciencE

1. **Evolve SRM 2.2 FTS code as we understand the SRM 2.2 implementations [all 2007]**
    –   Several round-trips expected…

2. **Improve service monitoring [all 2007]**
    –   FTS can give very detailed measurements about the current service level and problems it is observing with sites
    –   Integration with experiment and operations dashboards

3. **Site grouping in channel definition [Q2 2007]**
    –   To make it easier for sites to implement the computing models of CMS and Alice

4. **SRM / gridFTP split, better handling on catch-all channels [Q3 / Q4 2007]**

- Site blacklisting
- Service stability improvement

5. **Better service administration tools**

- [iterative, based on feedback, focus Q3]

6. **Notification of job states [Q4]**

- Instead of polling

7. **Pre-staging support using SRM 2.2**

- Requested by experiments? [Q4 2007, 2008]

- **Support for a non–Oracle version**
- **Support for more complex data movement orchestration**
  - Assumed to be done in the experiment layer