

# Throughput tests: status report

David Bouvet , Laurent Caillat, Lionel Schwarz (CCIN2P3), Sabine Elles (LAPP)  
et all.

- **LCG-France Tests T1-T2T3**

- 2006Q2 : LCG-France T2-T3 Actions plan

- Wiki page and Logbook :

[http://lcg2.in2p3.fr/wiki/index.php/T2T3:2006Q2:Tests\\_T1-T2T3](http://lcg2.in2p3.fr/wiki/index.php/T2T3:2006Q2:Tests_T1-T2T3)

[http://lcg2.in2p3.fr/wiki/index.php/T2T3:2006Q2:Tests\\_T1-T2T3:Logbook](http://lcg2.in2p3.fr/wiki/index.php/T2T3:2006Q2:Tests_T1-T2T3:Logbook)

- **Tiers-2 test and leading-up**

- SE SRM set-up in Tier-2 & Tier-3 sites
- Network testing performed by Laurent Caillat (check connectivity bandwidth)
- FTS configuration and channel definition by David Bouvet and Lionel Schwarz
- FTS channel management (streams/files) by authorized site admin.
- Bidirectional Transfer Test (gridftp-srm-FTS) performed by David Bouvet, Sabine Elles...
  - ♦ could be initiated by Tier-2 sites as well
  - ♦ need to be planified (on-going T0-T1 and T1-T1 exercises)



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- **SE SRM set-up in Tiers-2 and Tiers-3**
  - LCG 2\_7\_0 : LPC, GRIF, LAPP, Subatech
  - gLite 3.0 : ICEPP (Tokyo)
- **Network testing done by Laurent Caillat in May**
  - French Tier-2s connectivity through RENATER @1 Gb/s
  - Bandwidth connectivity checked to all french sites above 500 Mb/s when using > 4 streams
  - Very few problems seen : GRIF-Dapnia (solved by now), Subatech (IOS limitation-version upgrade under study)
  - Special attention to ICEPP (Tokyo) : asymmetry problem under study.  
Summary of H. Matsumoto tests made available :  
[http://ueda.web.cern.ch/ueda/computing/network/lyon\\_tokyo-2006/](http://ueda.web.cern.ch/ueda/computing/network/lyon_tokyo-2006/)

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- **FTS Configuration in Lyon :**

- Running gLite 3.0

- Channels definition and management autorisation (files and streams)

```
grid-proxy-init
```

```
glite-transfer-channel-list \
```

```
-s https://cclcgftsli01.in2p3.fr:8443/glite-data-  
transfer-fts/services/ChannelManagement
```

```
glite-transfer-channel-list LAPP-IN2P3CC
```

- FTS Transfert agent : srm-copy/globus-url-copy modes

DPM does not support srm-cp so channels from T1 to T2(DPM) have been configured in globus-url-copy mode.

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- Bidirectional transfer tests between Lyon and T2-T3 sites done in June
  - evaluate incidence of SRM implementation and FTS and evaluate rates in both directions with
    - ◆ globus-url-copy/srm-cp
    - ◆ FTS
  - streams and concurrent files tuning
  - provide tools for testing and monitoring :
    - ◆ Sabine's script initiates // transfers (globus-url-copy/srm-cp/lcg-cp) within several threads  
[http://lappweb.in2p3.fr/informatique/GRID/transfert\\_concurrent.tar.gz](http://lappweb.in2p3.fr/informatique/GRID/transfert_concurrent.tar.gz)
    - ◆ GridPP script  
[http://www.gridpp.ac.uk/wiki/Transfer\\_Test\\_Python\\_Script\\_HOWTO](http://www.gridpp.ac.uk/wiki/Transfer_Test_Python_Script_HOWTO)
    - ◆ Status of monitoring tools ?

# Transfer tests between Lyon and T2-T3

- Lot of work has been done
- first results from our logbook and minutes – **Please fill in !**
- from individual T2 to T1 (10 files – nb streams ? )
  - from GRIF-LAL to Lyon : average value of 230 Mbit/s
  - from LPC to Lyon : 265 Mbit/s up to 600 Mbit/s from time to time
  - from LAPP to Lyon : 500 Mbit/s obtained with 20 files
  - from Tokyo to Lyon : **please recall the results !**
- from T1 to individual T2 (10 files – 10 streams)
  - from Lyon to GRIF-LAL: average value of 150 Mbit/s - up to 230 Mbit/s
  - from Lyon to LPC : 260 Mbit/s - up to 300 Mbit/s
  - from Lyon to LAPP : : average value of 150 Mbit/s – up to 300 Mbit/s
  - from Lyon to Tokyo : average value around 150 Mbit/s

# Transfer tests between Lyon and T2-T3

- What should be the target rates ?
  - in my opinion 30 MB/s - 250 Mb/s in reasonable (ATLAS requirements : 20 MB/s)
- What are the limitation factors ?
  - Impact of T0 – T1 exercise / dCache configuration
  - Performances of Tier-2 SE (File system R/W perf.)
    - ◆ GRIF-DAPNIA 800 to 1000 Mb/s
    - ◆ LAPP 500 Mb/s
  - FTS performances
  - Aggregate bandwidth out of Lyon ...

# Transfer tests between Lyon and T2-T3

- What next ?
  - Priority to T0-T1 exercise
  - Priority to Experiments
  - Glite migration
  - Integration of all SEs
  - Simultaneous Read/Write to Tier-2
  - Sustain transfers
  - Simultaneous Transfer to several T2s