

Latency monitoring in the WLCG transfers Dashboard

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On behalf of the WLCG transfer Dashboard team

- Context
- General UI improvement
- Latency monitoring
- Latency history
- Ranking plots



- Part of the WLCG Transfers Dashboard:
 - Cross VO and cross technology monitoring tool
- Initially design to detect slow transfers:
 - Ability to spot slow transfers by checking the FTS jobs that were lasting for more than N hours.
- Many use cases now available:
 - Detect slow / blocked transfers
 - Channel throughput monitoring
 - ...

- 3 new tabs have been implemented in the WLCG Transfers Dashboard



- **Latency:** Snapshot of the current active transfers
- **Latency history:** Historical data from latency
- **Ranking plots:** Ranking plot over a defined time range

- Channel filter is now available:
 - Autocomplete field

▼ Channel

Add a channel

- CERN-ASGC
- CERN-BNL
- CERN-CERN
- CERN-DESY

Server filter will be converted into autocomplete tab

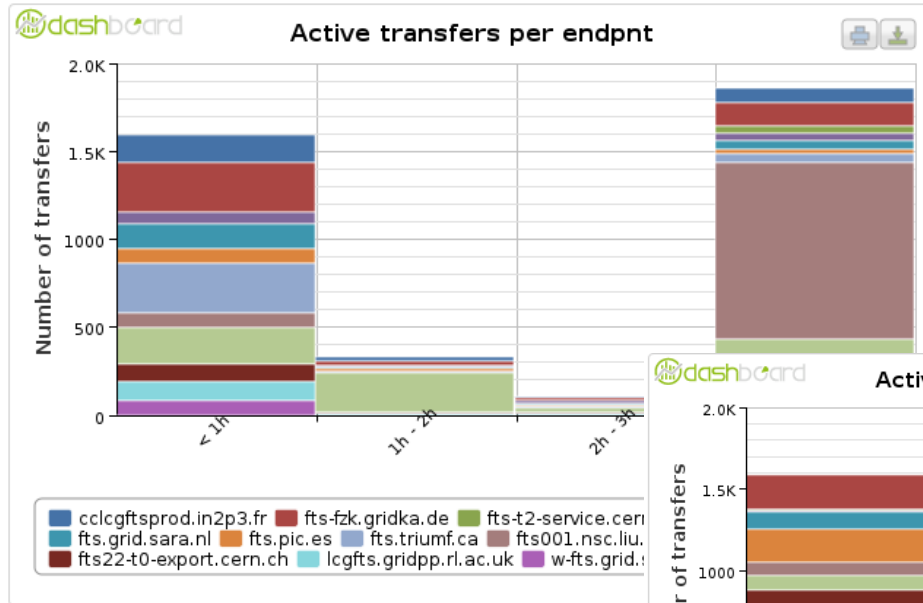
- Available for the whole application:
 - Including matrix and existing plot tabs

- Display the number of active transfers
 - Including SRM phases
 - Procedure which run every 10 minutes (not real time)
- Custom toolbar (tab specific):



- Multiple breakdown available
- Multiple way to present the data
- Bins can be customized

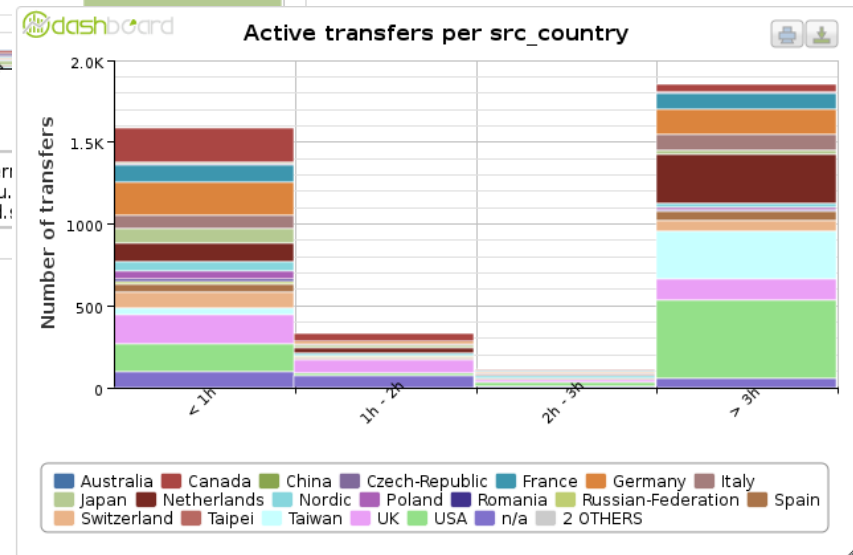
- Multiple breakdown available:




BREAKDOWN

- VO
- Server
- Channel
- Source country
- Source host
- Destination country
- Destination host

Generate




- Multiple ways to visualize data:
 - Type: modify data
 - Style: modify appearance

TYPE 

Standard

Cumulative

Sum

STYLE 

Basic

Outline

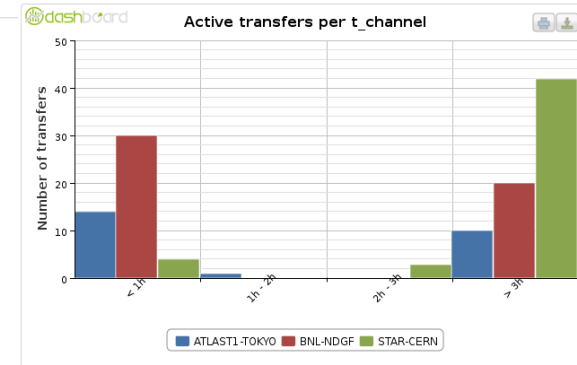
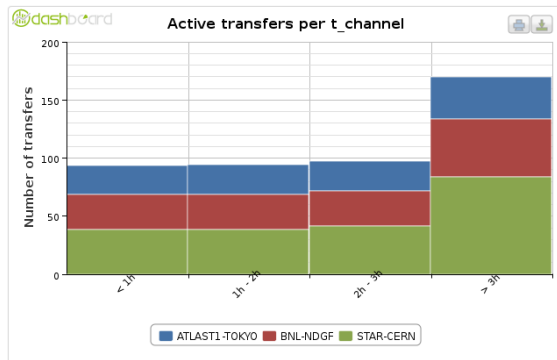
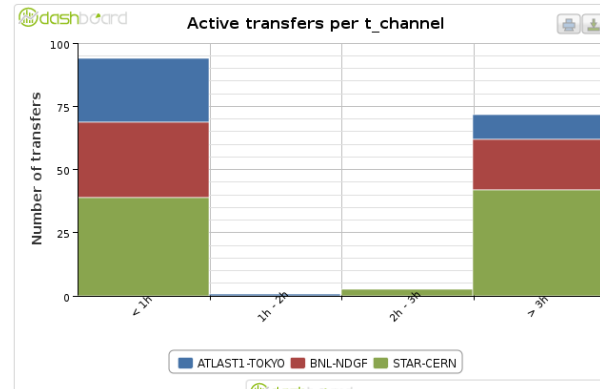
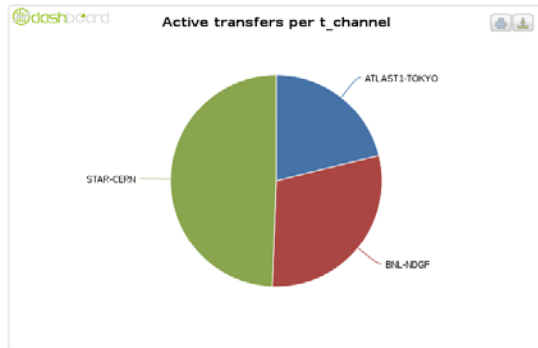
Column

Area

Distinct

Stacked

Percent



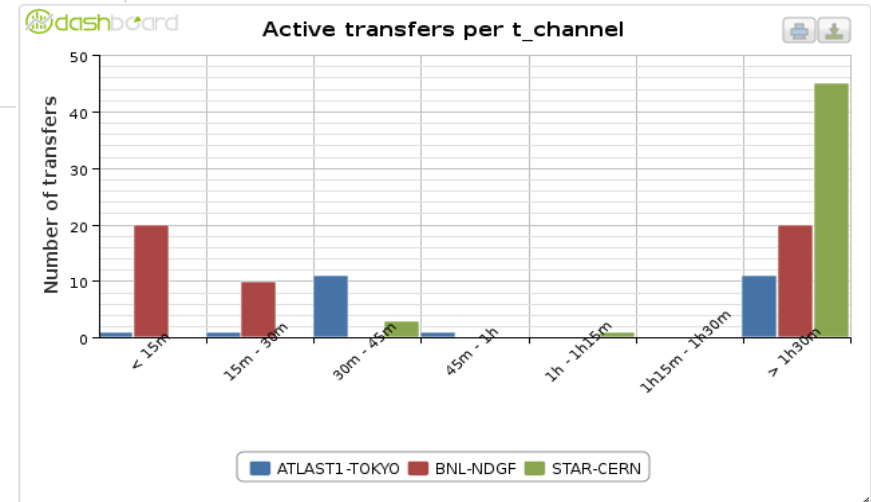
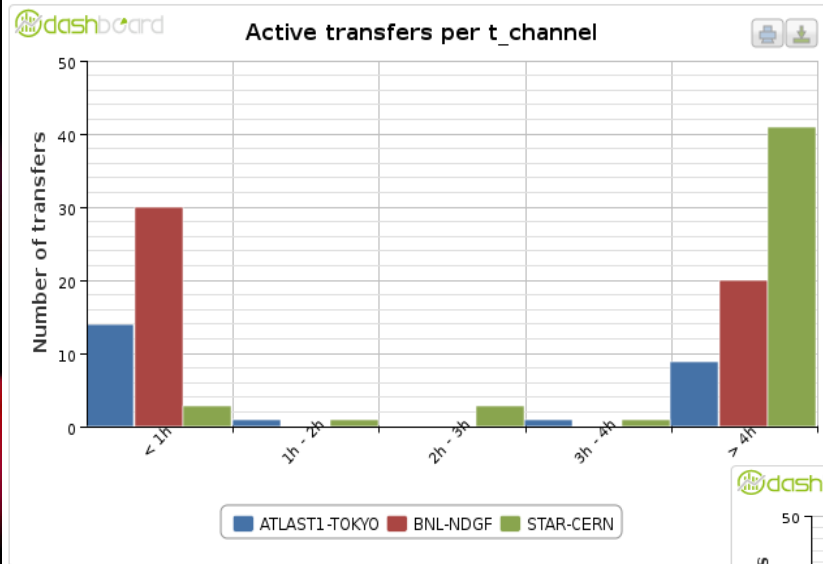
- Bins can be customized:

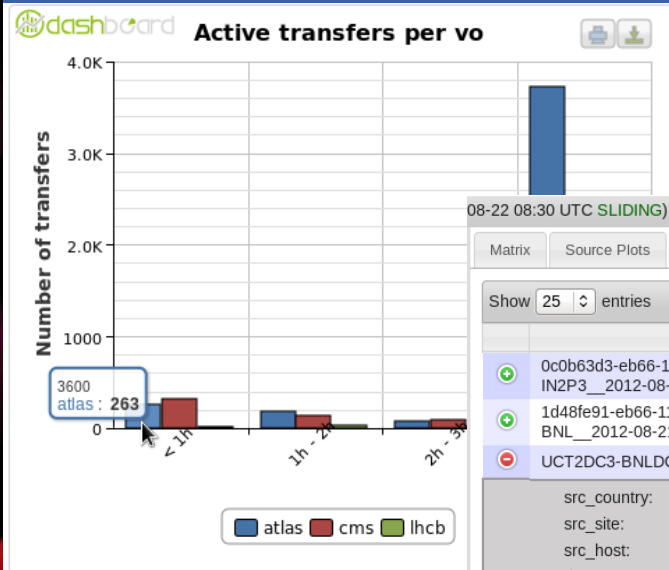
SIZE ▾

- 5 min
- 10 min
- 15 min
- 20 min
- 30 min
- Hourly

COUNT ▾

- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10





Detailed view

08-22 08:30 UTC SLIDING

Matrix Source Plots Destination Plots VO Plots Latency Latency history Latency ranking Details

Fields: Basic Extended

- Source country
- Source site
- Source host
- Source token
- Source URL
- Destination country
- Destination site
- Destination host
- Destination token
- Destination URL
- Transfer ID
- VO
- Server
- Channel
- Started time
- Elapsed time

Show 25 entries Search:

	transfer_id	vo	t_channel	
+	0c0b63d3-eb66-11e1-b32d-96c0dcdf560ATLASUST2D-IN2P3_2012-08-21-0801_QXyelk	atlas	ATLASUST2D-IN2P3	
+	1d48fe91-eb66-11e1-bcec-db9a49b19ff6CERN-BNL_2012-08-21-0801_jS1XT1	atlas	CERN-BNL	
-	UCT2DC3-BNLDCACHE_2012-08-21-0733_wPOG6b	atlas	UCT2DC3-BNLDCACHE	
src_country: USA src_site: MWT2 src_host: uct2-dc1.uchicago.edu dst_country: n/a dst_host: dcsrm.usatlas.bnl.gov transfer_id: UCT2DC3-BNLDCACHE_2012-08-21-0733_wPOG6b				
+	16dfc255-eb66-11e1-bf8f-f6089b20e912CERN-CERN_2012-08-21-0801_0acV56	atlas	CERN-CERN	1768.427247
+	2213cd3a-eb66-11e1-9f25-f194c613d2faCERN-IFIC_2012-08-21-0806_zfvi7q	atlas	CERN-IFIC	1475.427247
+	2b99d67f-eb62-11e1-b7ce-a19be824bb55PIC-IFAE_2012-08-21-0731_eAhmab	atlas	PIC-IFAE	3583.427247
+	2b99d67f-eb62-11e1-b7ce-a19be824bb55PIC-IFAE_2012-08-21-0731_Qy90xO	atlas	PIC-IFAE	3583.427247
+	4ad35006-eb57-11e1-a4c3-bb3893dd9a65TRIUMF-AUATLAS_2012-08-21-0731_mDFigc	atlas	TRIUMF-AUATLAS	3558.427247
+	a32b4619-eb62-11e1-a663-ad7fa4cacba0ATLBIGT2-FZK_2012-08-21-0744_GEJ1Df	atlas	ATLBIGT2-FZK	2807.427247
+	a133114c-ec2c-11e1-a4c3-bb3893dd9a65CNAF-TRIUMF_2012-08-22-0740_EZUawR	atlas	CNAF-TRIUMF	3030.427247
+	febce5b2-ebf6-11e1-a663-ad7fa4cacba0ATLBIGT2-FZK_2012-08-22-0733_bKryxD	atlas	ATLBIGT2-FZK	3436.427247
+	129e9697-ec2a-11e1-a298-fb2c50dce9f0ATLAST1-BEIJING_2012-08-22-0737_M1bhkO	atlas	ATLAST1-BEIJING	3228.427247

Showing 1 to 25 of 262 entries

First Previous 1 2 3 4 5 Next Last

All data loaded:

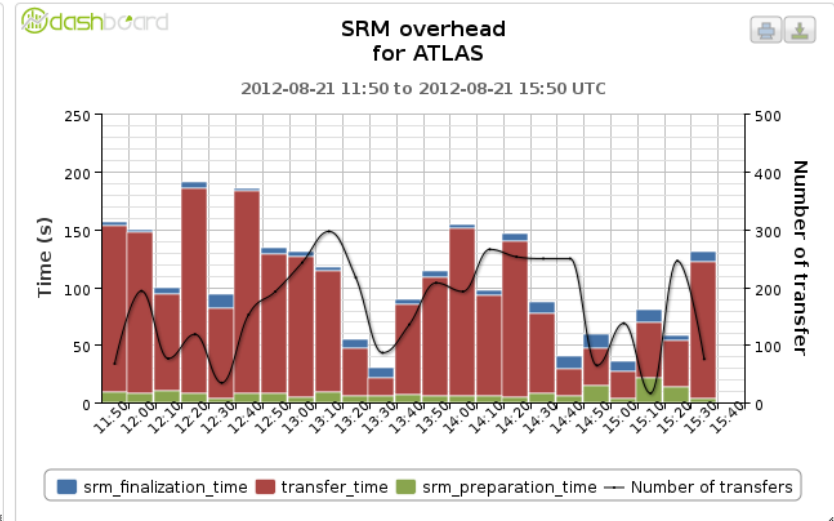
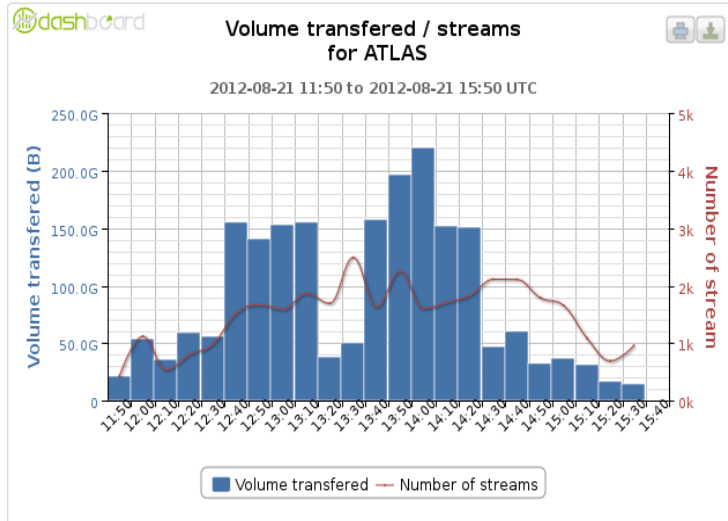
Customizable fields

Extended view

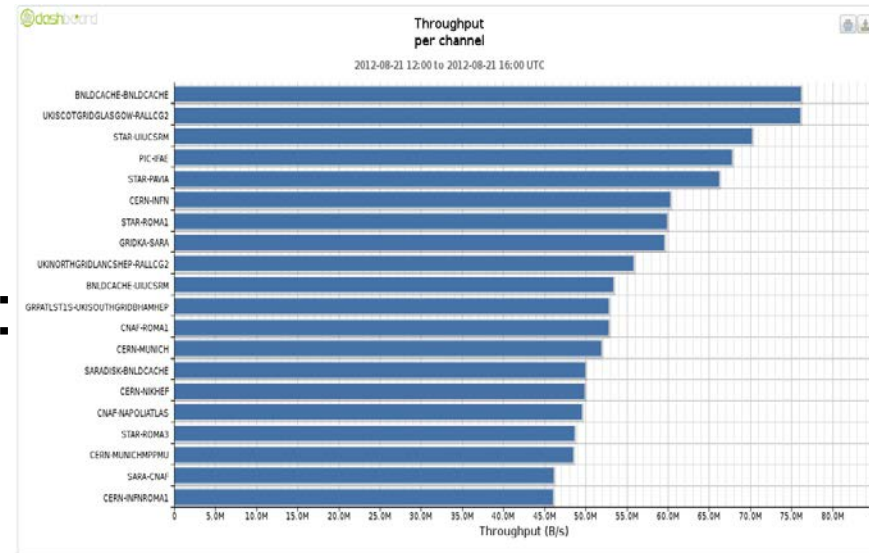
Sortable rows

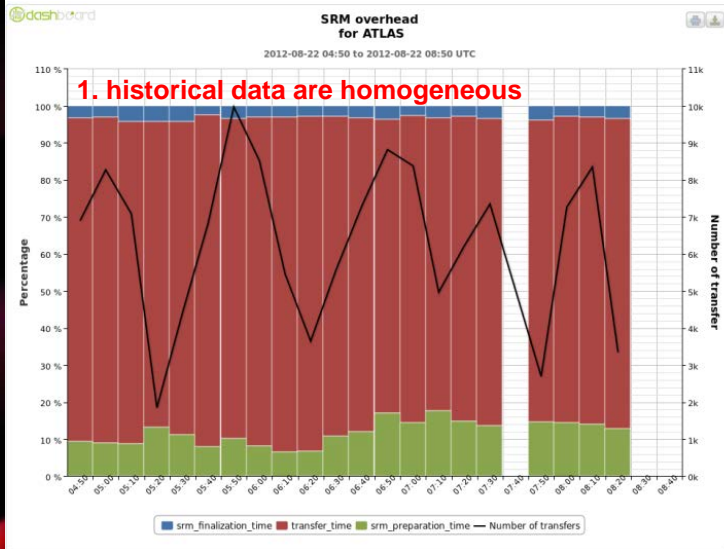
Search box

- Aggregation of transfers info in time bins
 - Two graph families already available:
 - SRM overhead
 - Volume transferred / Streams
 - Others can be easily added.

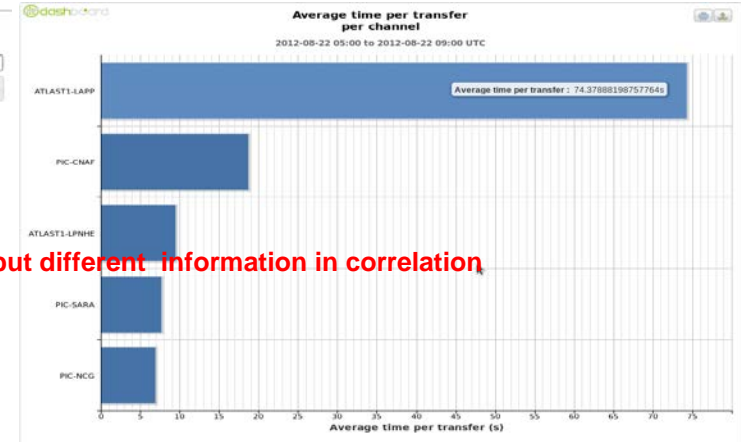
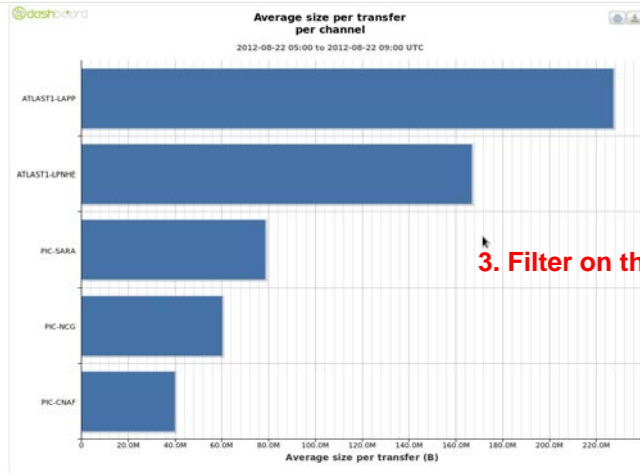
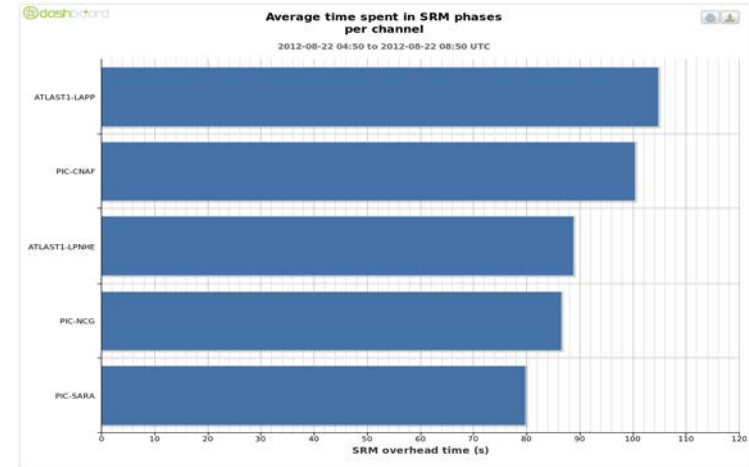


- Multiple metrics available:
 - SRM overhead (percentage, time)
 - Number of bytes transferred
 - Number of transfers
 - ...
- Multiple breakdown:
 - FTS server
 - Channel
 - Source country, site, host,
 - ...





2. Find the 5 channels with the biggest SRM overhead time



• And many other use cases ...

- More infos (roadmap, technical details):
 - <https://twiki.cern.ch/twiki/bin/view/LCG/WLCGTransfersDashboardLatency>
- Testbed server accessible:
 - <http://dashb-wlcg-transfers-dev-latencyv.cern.ch>
 - Accessible from outside
- All feedback are very welcome
 - dashboard-support@cern.ch





Thanks for your attention