

ATLAS Monitoring and Distributed Computing Information System (AGIS)

- ATLAS topology and service configuration with AGIS
- Site Status Board as main entry point for sites and cloud squad
- Monitoring dashboards for data processing and data transfer
- FTS monitoring
- Automation
- Conclusions

ATLAS Grid Information System provides aggregated view of:

- site resources (storage and data processing) information collected from GOCDB/OIM + BDII merged with ATLAS specific information (spacetokens, groups areas, pandaqueue definition, etc)
- ADC services configuration
 - Cloud contacts responsible to communicate/fill properly their cloud data
 - Configuration for DDM, pilot factories, Frontier/Squid, dashboards
 - Mapping between Panda and DQ2 and GOCDB/OIM,
 - mapping between Computing Element and PandaQueues

✓ AGIS gui (under construction) provides a view of this topology

<http://adc-monitoring.cern.ch/> : for Experts,
Management, Shifters, Cloud Squads and Sites



ADC Monitoring

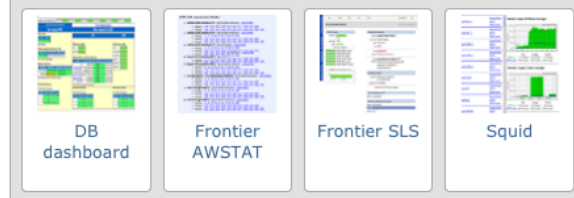
Data Management



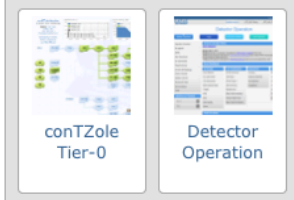
Data Processing



Databases



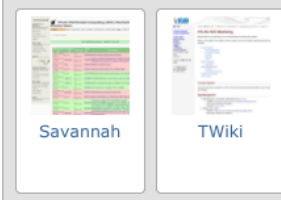
Point 1



Sites and Services



Miscellaneous



Contact: atlas-adc-monitoring(at)cern.ch Features/Bugs: Savannah

- For Cloud squads and sites:
 - ATLAS Site Status Board
- ✓ Newly deployed “Cloud View”
 - N.B. Cloud squads are the primary contact between ATLAS and sites!

Help Login

Site Status for the ATLAS sites, v0.1.0_rc33

Index Expanded Table

Show 200 entries Copy Print Save View: Cloud Search...

Site Name	Site Info			DDM DT - Status	Panda Analysis status	Panda Production status	Panda Efficiency						SRM SAM 12 [%]	CE SAM 12	Functional Tests			SW releases - critical	GGUS	
	Tier	Cloud	Downtime				Analy Activated Jobs	Analy Running Jobs	Analy Efficiency 12h [%]	Prod Activated Jobs	Prod Running Jobs	Prod Efficiency 12h [%]			Squid Functional Tests (SAM)	HC_AFT	HC_PFT		GGUS open	GGUS closed
RAL-LCG2	T1	UK	ACTIVE	online	online	online	8282	100	98	8005	8025	98	100	100	n/a	100	100	120/122	0-failure	n/a
UKI-LT2-Brunel	T2	UK	ACTIVE	online	NoQueue	online	no data	no data	no data	321	242	88	100	100	n/a	no-test	100	120/122	0-failure	n/a
UKI-LT2-IC-HEP	T2	UK	ACTIVE	online	NoQueue	online	no data	no data	no data	326	326	98	100	91	n/a	no-test	no-test	28/122	0-failure	0-failure
UKI-LT2-QMUL	T2D	UK	ACTIVE	online	online	online	12	1407	89	2843	1070	82	100	100	n/a	100	100	120/122	0-failure	n/a
UKI-LT2-RHUL	T2	UK	ACTIVE	online	online	online	2	246	90	1102	1555	99	100	100	n/a	100	no-test	120/122	0-failure	n/a
UKI-LT2-UCL-HEP	T2	UK	ACTIVE	online	test	online	4	2	100	337	228	100	100	100	n/a	100	100	120/122	0-failure	0-failure
UKI-NORTHGRID-LANCS-HEP	T2D	UK	ACTIVE	online	online	online	852	188	74	1100	821	98	100	100	n/a	100	100	120/122	0-failure	81262
UKI-NORTHGRID-LIV-HEP	T2	UK	ACTIVE	online	online	online	27	106	83	680	403	100	100	100	n/a	100	100	120/122	0-failure	0-failure
UKI-NORTHGRID-MAN-HEP	T2D	UK	ACTIVE	online	online	online	891	867	88	2052	459	89	100	79	n/a	100	100	120/122	0-failure	0-failure
UKI-NORTHGRID-SHEF-HEP	T2	UK	ACTIVE	online	online	online	305	148	90	1108	561	94	100	74	n/a	100	100	120/122	0-failure	0-failure
UKI-SCOTGRID-DURHAM	T2	UK	ACTIVE	online	NoQueue	online	no data	no data	no data	1	24	98	100	47	n/a	no-test	100	87/122	0-failure	81726
UKI-SCOTGRID-ECDF	T2D	UK	ACTIVE	online	online	online	5	3	97	561	208	98	100	98	n/a	no-test	no-test	120/122	0-failure	81403
UKI-SCOTGRID-GLASGOW	T2D	UK	UNSC-DOWN	online	online	online	278	430	87	1070	2142	87	100	100	n/a	100	100	120/122	81726	81503
UKI-SOUTHGRID-BHAM-HEP	T2	UK	ACTIVE	online	online	online	0	202	89	133	30	94	95	100	n/a	0	no-test	120/122	81711	81454
UKI-SOUTHGRID-CAM-HEP	T2	UK	ACTIVE	online	online	online	361	18	90	932	113	100	100	80	n/a	100	100	121/122	0-failure	0-failure
UKI-SOUTHGRID-OX-HEP	T2D	UK	ACTIVE	online	online	online	220	326	83	920	928	72	100	100	n/a	100	100	120/122	0-failure	0-failure
UKI-SOUTHGRID-RALB2	T2	UK	ACTIVE	online	online	online	105	418	98	8024	4305	94	100	100	n/a	100	100	120/122	0-failure	n/a

Showing 1 to 17 of 17 entries DB query took 0.0834 s

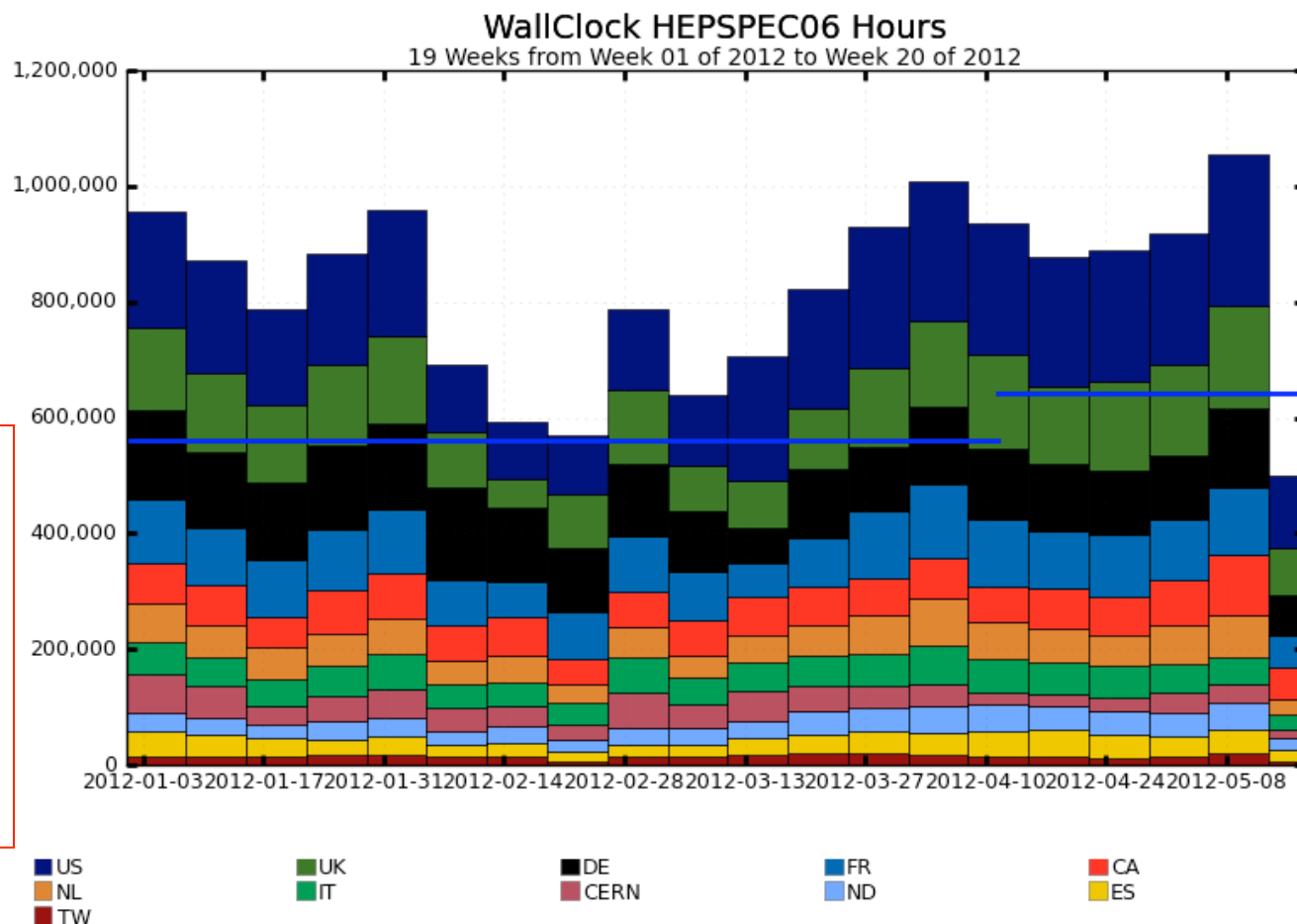
First Previous 1 Next Last

- Panda Monitor, Task Monitoring and Historical Views

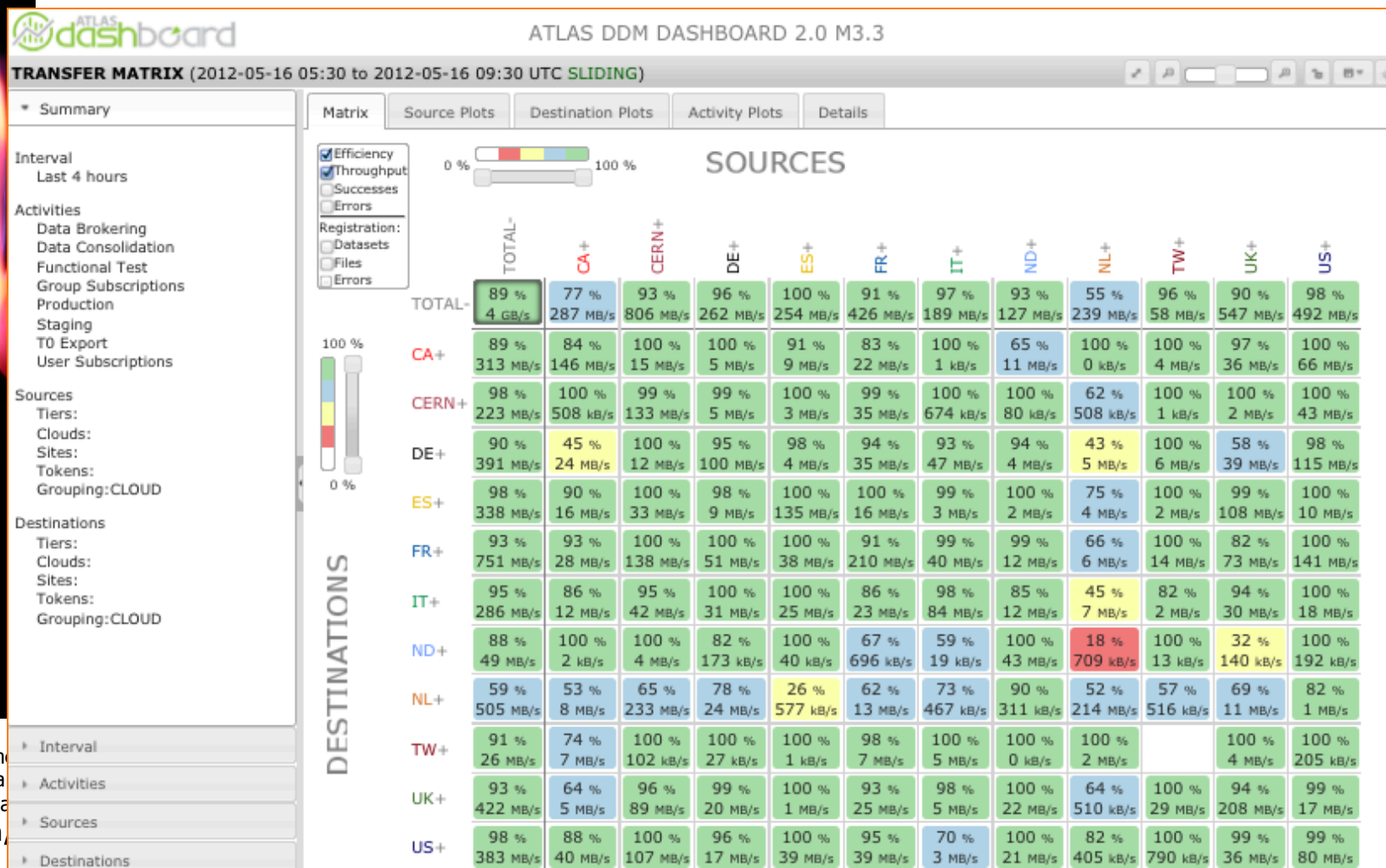
Historical Views:

Resource Utilization,
T0+T1s+T2s, with
pledges

N.B.: HS06 information
taken from Rebus, **sites**
please check that proper
information is published
(we observe a few sites
publishing strange data)



- Matrix view of Data Transfers
 - Now easy way to identify site issues
 - Easy to disentangle source or destination errors



- Common project for all the VOs!
 - It will be possible to have the global view



WLCG TRANSFERS DASHBOARD (PROTOTYPE)

TRANSFER MATRIX (2012-05-16 05:40 to 2012-05-16 09:40 UTC SLIDING)

▼ Summary

Interval
Last 4 hoursVOs
atlas

Servers

cclcgftsprod.in2p3.fr
 cclcgftstest.in2p3.fr
 cmsfts1.fnal.gov
 cmsfts2.fnal.gov
 cvitbrc04.cern.ch
 fts-pilot-service.cern.ch
 fts-t2-service.cern.ch
 fts-test.pic.es
 fts.cr.cnaf.infn.it
 fts.grid.sara.nl
 fts.pic.es
 fts.triumf.ca
 fts001.nsc.liu.se
 fts02.usatlas.bnl.gov
 fts22-t0-export.cern.ch
 imarine1.cern.ch
 lcgfts-dev.gridpp.rl.ac.uk
 lcgfts.gridpp.rl.ac.uk
 w-fts.grid.sinica.edu.tw

Sources

Countries:
 Sites:
 Host:
 Tokens:
 Grouping: COUNTRY

Destinations

► Interval

► VOs

► Servers

► Sources

► Destinations

Matrix Source Plots Destination Plots VO Plots

☒ Efficiency
☐ Throughput
☐ Successes
☐ Errors

0 % 100 %

SOURCES

100 %
0 %


DESTINATIONS

	TOTAL-	Australia+	Austria+	Canada+	China+	Czech-Republic+	France+	Germany+	Ireland+	Israel+	Italy+	Japan+	Netherlands+	Nordic+	Poland+	Portugal+	Romania+	Russian-Federation+	South-Africa+	Spain+	Sweden+	Switzerland+	Taipei+	Taiwan+	Turkey+	UK+	USA+	n/a+
TOTAL-	84 %	100 %	50 %	63 %	79 %	70 %	82 %	96 %	31 %	37 %	97 %	98 %	59 %	87 %	99 %	100 %	27 %	64 %	100 %	99 %	61 %	98 %	100 %	91 %	52 %	85 %	98 %	91 %
Australia+	83 %			53 %			95 %																100 %		100 %			
Canada+	60 %	100 %		56 %			17 %	93 %			100 %		100 %	40 %						31 %		100 %		99 %		37 %	100 %	0 %
China+	88 %						99 %	67 %		100 %	100 %	20 %					100 %	100 %			100 %		100 %		100 %			
Czech-Republic+	45 %						100 %	100 %		100 %	0 %		67 %	100 %			100 %	40 %				100 %				2 %	100 %	
France+	85 %		100 %	88 %	81 %	100 %	100 %	99 %		100 %	98 %	96 %	62 %	100 %	100 %		23 %	100 %		100 %	100 %	100 %			100 %	82 %	100 %	100 %
Germany+	90 %			95 %		100 %	100 %	98 %		93 %			100 %	100 %	100 %		16 %		100 %		100 %	100 %		100 %	7 %	96 %	0 %	
Ireland+	40 %												40 %															
Israel+	54 %						0 %						46 %					97 %		67 %					100 %	46 %		
Italy+	95 %			90 %	100 %		92 %	100 %	100 %		98 %	100 %	44 %	84 %		100 %	100 %	100 %	100 %	100 %	100 %	100 %		84 %		80 %	100 %	98 %
Japan+	79 %			100 %			84 %	100 %	100 %	100 %				0 %			100 %			100 %			100 %	100 %	100 %	100 %		
Netherlands+	60 %			47 %			65 %	77 %	30 %	49 %	73 %		74 %	88 %				49 %		25 %			52 %	50 %	68 %	64 %		
Nordic+	100 %																											100 %
Poland+	78 %	100 %		51 %	0 %	8 %	55 %	96 %	0 %	29 %	54 %	0 %	23 %	94 %		100 %	22 %	33 %		47 %	22 %	0 %		0 %	41 %	86 %	89 %	
Portugal+	97 %	100 %	20 %	100 %	100 %	100 %	100 %	92 %		100 %	83 %	100 %	54 %	100 %		100 %	100 %	71 %		100 %	100 %				77 %	100 %		
Romania+	93 %				85 %		92 %																				98 %	
Russian-Federation+	61 %			0 %				98 %		14 %			44 %	95 %				85 %							100 %	96 %		
South-Africa+	100 %										100 %																	
Spain+	95 %			88 %			99 %	100 %		99 %		67 %	100 %	8 %	100 %		0 %			100 %			100 %		94 %	100 %	100 %	
Taiwan+	92 %	100 %		68 %			88 %	100 %		100 %	100 %	100 %								100 %					100 %	100 %		
Turkey+	41 %									100 %			40 %															
UK+	92 %			60 %		88 %	90 %	99 %		98 %		62 %	92 %							100 %		100 %		100 %	94 %	99 %	88 %	
USA+	91 %					0 %	0 %			0 %			100 %							98 %			100 %		90 %	100 %	87 %	
n/a+	99 %		100 %			96 %	99 %			77 %	100 %		0 %						100 %		100 %	100 %			98 %	100 %	92 %	

ATLAS efforts are to automate repetitive operations as much as possible. Automatic exclusion and inclusion of resources:

- Analysis and Production functional tests of sites (with Hammer Cloud):
 - Sites failing are automatically excluded from analysis or production
- Downtimes
 - Outage Downtimes (both Scheduled or Unscheduled) information are used to exclude sites from activities: Data Transfer, Data Processing and Data Analysis
- Space information
 - Sites are excluded from DT when available space in specific spacetokens is close to zero
 - Still some sites (especially Storm sites) do not publish correct info in the BDII.
- Storage Functional Test via SAM
 - Under development: exclude endpoints failing SRM SAM tests with spacetoken granularity

Usability and Reliability Views in the SSB:
overview of the status of sites

- 
- ✓ ATLAS primary communication channel with sites are the Cloud Squads
 - Feedback to ADC Coordination from Sites are welcome!
 - Main monitoring entry point for Cloud Squads and Sites is the ATLAS Site Status Board
 - TEG Operations preliminary outcomes: Site View
 - Sites should verify the publication of their resources
 - Both in terms of space (in the BDII) and processing resources (HS06 in Rebus)
 - ! Automation of Operations: ongoing efforts
 - Other experiments could benefit of the ideas!