

# Central Services

Alessandra Forti  
ADCoS tutorial  
23 July 2009



# DDM

- What is the Atlas Distributed Data Management?
  - DDM consists (in a very simplified) way of a bookkeeping system (dataset-based) and a set of local site services to handle data transfers, building upon Grid technologies. The software stack is called DQ2.



# Central Services

- What are Central Services for shifters?
  - CSs are mostly centrally (CERN) managed components of DDM. There are 2 main services to monitor:
    - Site Services: responsible for DDM transfers to the outside world
    - Central Catalogues: DDM file catalogues and metadata catalogues
  
- There are many more central services as for example DB services presented later.

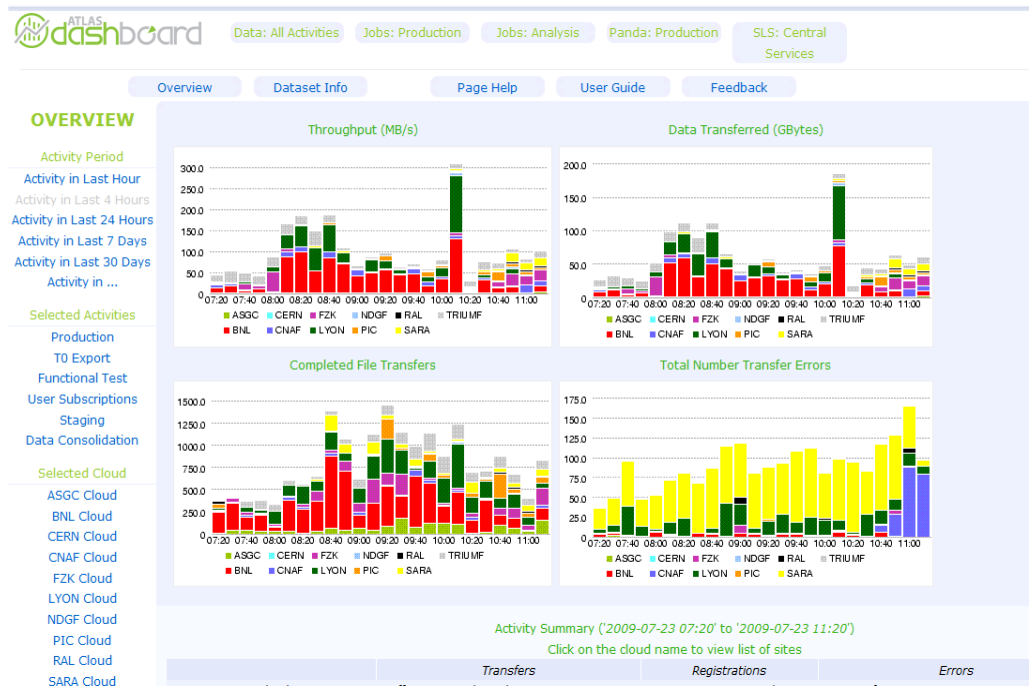


# Why check them?

- They are, from the name, a point of failure
  - if there is a massive transfer failure to a cloud it can be a site service problem, if there is a general failure it can be a database problem.
  - In short they should be checked to pinpoint where is the problem
    - In the shift summary you can tick the box of the good shifter! ;-)



# Where to start from?



- The dashboard is a good place to access most of the monitoring

– buttons at the top are common to all the views

– 5<sup>th</sup> button is Central Services

- SLS (Service Level Status) is just another monitoring tool.




# Central Services SLS

Service Level Status overview



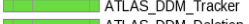


Home Search KPIs Tags Admin Documentation Help

ATLAS Distributed Computing Central Services 23 Jul 2009 Thu 06:50:21

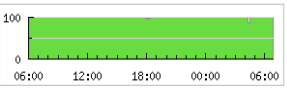
**ADC Central Services**

availability:  (more)  
percentage: 100%  
status: **available**

this service consists of:

-  ATLAS\_DDM\_VOBOXES
-  ATLAS\_CC
-  ATLAS\_DDM\_Tracker
-  ATLAS\_DDM\_Deletion
-  ATLAS-AMI



availability in the last 24 hours (more):



**Additional information**


full name: ATLAS Distributed Computing Central Services  
short name: ADC Central Services  
group: IT-GS

email: [atlas-project-adc-operations@cern.ch](mailto:atlas-project-adc-operations@cern.ch)  
web site: <https://twiki.cern.ch>  
alarms page: <https://prod-grid-lo...>


service managers: **Birger Koblitz**   
Alessandro Di Girolamo 

**Availability update**

last update: 06:43:41, 23 Jul 2009  
(7 minutes ago)  
expires after: 77 minutes

 [rss feed with status changes](#)

**Part of (subservice of):**

-  Services for ATLAS

**Admin**  
[admin tools](#)

- On the left there are bars with the services names. We are interested in the first two:

- ATLAS\_DDM\_VOBOXES
- ATLAS\_CC



# Site Services

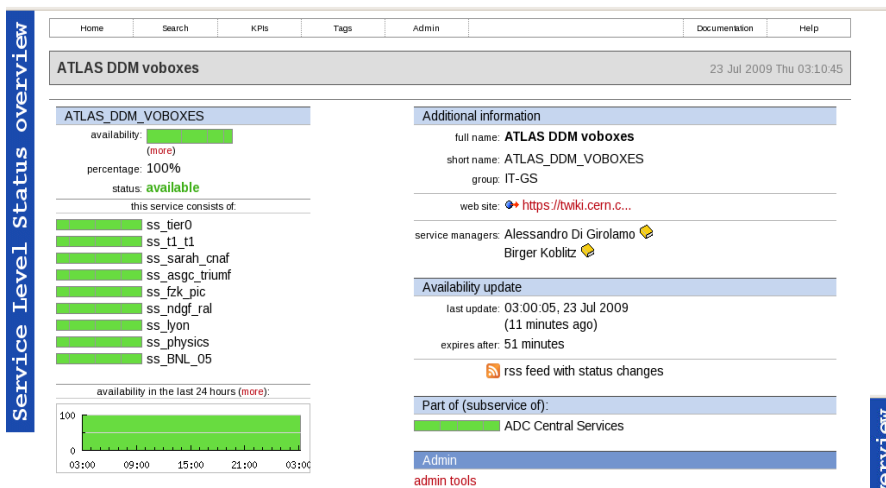
- DQ2 site services is the software used to manage ATLAS data movement. It is maintained on VOBOXES.
  - pulling and fulfilling DQ2 dataset subscriptions:
    - feeding requests into FPS/FTS;
  - integrated DQ2 monitoring;
  - DQ2 file registration/validation;
  - And other DDM tasks like space token management



# Site Services

[https://sls.cern.ch/sls/service.php?id=ATLAS\\_DDM\\_VOBOXES](https://sls.cern.ch/sls/service.php?id=ATLAS_DDM_VOBOXES)

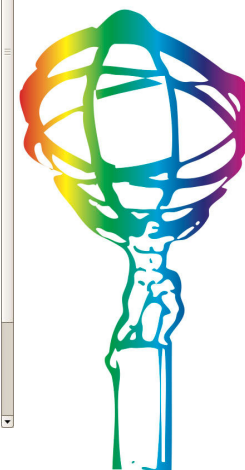
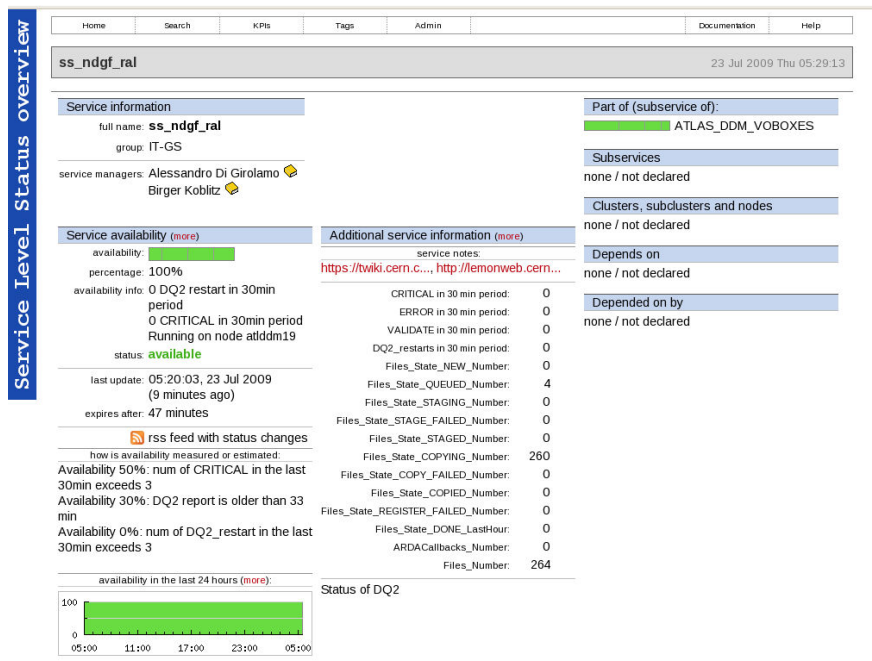
Selecting a particular Site Services cloud clicking on the bar the page will display several information concerning the service and its monitoring.



SLS by CERN IT/FIO

SLS.Support@cern.ch

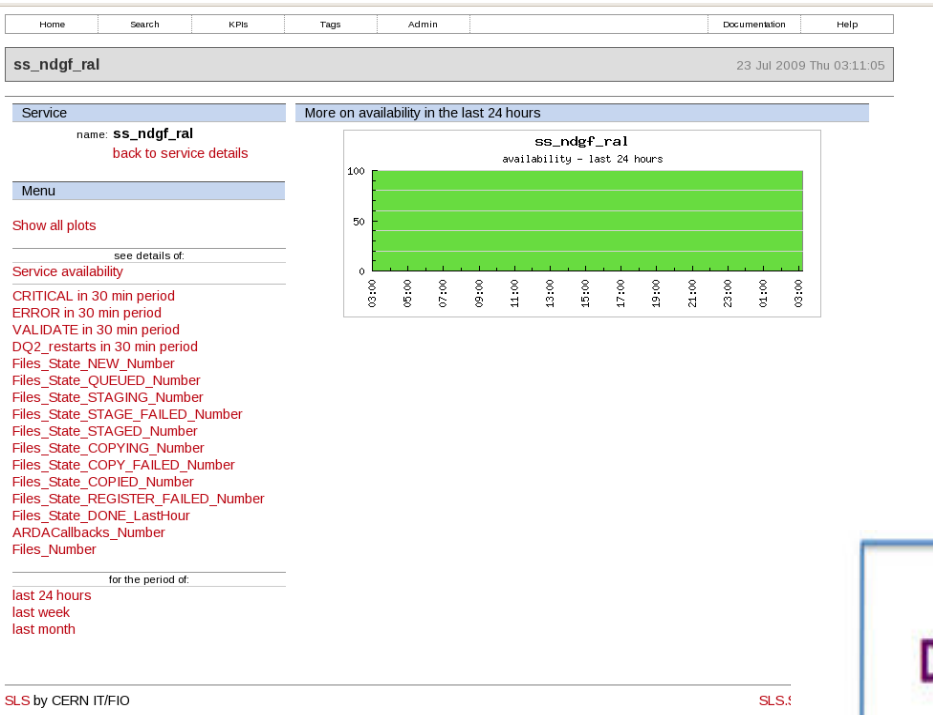
If you click on "Additional service information (more)" link, you will be shown plots of relevant quantities being monitored.





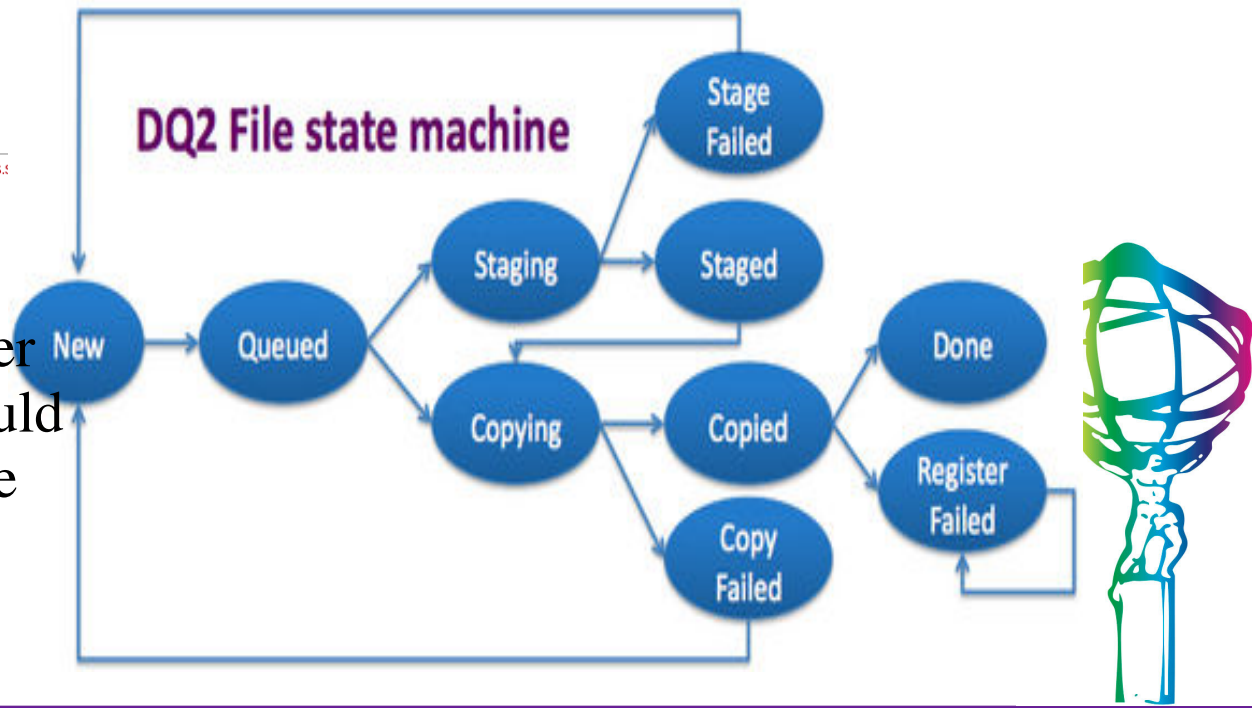
# Site Services

Service Level Status overview



Information is from different sources partly from dq2 log files and partly from the Services themselves

The different graphs correspond to a different stage in the file transfer in DQ2. The graph on the right should help you understand where there are failures.



# Computing Catalogues

**Service Level Status overview**

Home Search KPIs Tags Admin Documentation Help

Central Catalogue monitoring service at atlddm24 23 Jul 2009 Thu 09:09:23

---

**Service information**

full name: **Central Catalogue monitoring service at atlddm24**  
 group: IT-GS

email: [atlas-dq2-dmod@cern.ch](mailto:atlas-dq2-dmod@cern.ch), [atlas-adc-expert@cern.ch](mailto:atlas-adc-expert@cern.ch)  
 web site: <http://atlddm24.cern.ch:8000/usage/index.html>

service managers: **Alessandro Di Girolamo**   
 Birger Koblitz

---

**Service availability (more)**

availability:   
 percentage: 100%  
 status: **available**

last update: 08:52:02, 23 Jul 2009  
 (17 minutes ago)

expires after: 60 minutes

[rss feed with status changes](#)

availability in the last 24 hours (more):

---

**Additional service information (more)**

Total hits:	13689
Total size:	48458
lemon info for IOError rate:	0
lemon info for Traceback rate:	0
repository counter:	10374
subscription counter:	1155
content counter:	1125
location counter:	863
tracer counter:	172

---

**Part of (subservice of):**  
 ATLAS\_CC

**Subservices**  
 none / not declared

**Clusters, subclusters and nodes**  
 none / not declared

**Depends on**  
 none / not declared

**Depended on by**  
 none / not declared

---

**Admin**  
[admin tools](#)

- Go down the same route but click ATLAS\_CC and you get to a catalogue monitoring page
  - Most important number in this page for me is the number of hits (number of users that access the DB)



# What to do

- What to do in case there is a failure in SS or CC?

[CMS Logbooks](#) | [CERN Grid Operations Logbooks](#) | [Demo Logbooks](#) | [CCRC'08 Logbooks](#) | [ATLAS Operations Logbooks](#)  
[T0 Operations Logbooks](#) | [ATLAS Computer Operations Logbook](#) | [ATLAS T0 SW Validation Logbook](#) | [ATLAS Computing Management](#)  
[ATLAS Reprocessing Logbook](#)

ATLAS Computer Operations Logbook Not logged in

[List](#) | [Find](#) | [Login](#) | [Help](#)

Message ID: **3679** Entry time: **Sun, May 24, 2009, 14:35 +0200**

Author:	Simone Campana
Email:	<a href="mailto:Simone.Campana@cern.ch">Simone.Campana@cern.ch</a>
Severity:	Top Priority
Cloud:	US
Level:	Central Operations
Affect Users:	No
Subject:	SS in BNL look sick.

From SLS, BNL site services do not look good.

There is a backlog of 184587 callbacks to the dashboard, beside 3 CRITICAL errors and 3 subsequent restarts just in the last one hour.

[https://sls.cern.ch/sls/service.php?id=bnl\\_dns05](https://sls.cern.ch/sls/service.php?id=bnl_dns05)

Sending email to Hiro.

Simone

ELOG V2.7.5-2130

- Write an entry in the ADCoS eLog
  - see example
- Contact the adc-expert:
  - atlas-adc-expert@cern.ch



# Docs

- There are various pages in the twiki describing CSs but they are sparse and require some dedication to follow the links and read them.
- ADCoS twiki sections need to be refreshed...
  - Don't trust them yet. :-)
- They will be fixed soon.



# Conclusions

- Central services are supposed to have a really high availability: some services above 98%
  - Something wrong in central services can have quite a visible impact.
  - eLog what you have observed and contact the ADC and DB experts for further checks and intervention.
- ADCoS twiki needs some improvement on the specific.

