

# DDM Service Monitoring using SLS

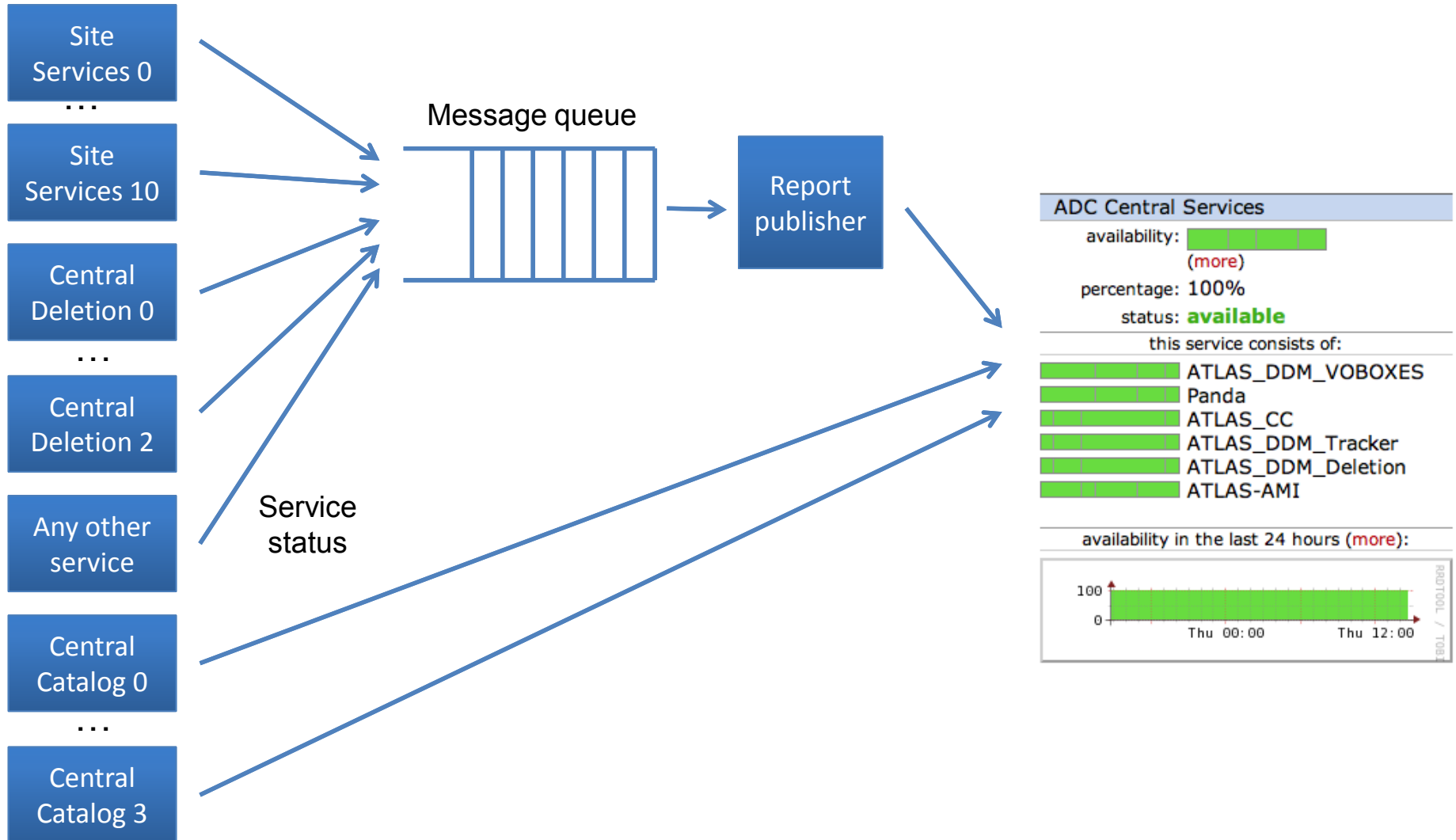
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Alessandro Di Girolamo

**CERN IT-ES-VOS**

- Introduction
- Overview
- Monitoring client
- Report publisher
- Ongoing work: Improving the metrics
- Conclusions

- Service instance activity monitoring
  - Monitor critical and relevant metrics
  - Follow-up the health of service instances
  - Monitored by P1 and ADCos shifters
- Useful for service validation
  - SLS DDM testbed category
- Share development with Service Availability Monitor NAGIOS infrastructure



1. SLS monitor client common [https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor\\_client\\_common/](https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor_client_common/)
  - Installs message queue client
  - Library to generate XML report
  - Library to read out configuration file
2. Service dependent client [https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor\\_client\\_ss/](https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor_client_ss/)
  - Retrieves relevant information about services status
    - Lemon metrics: Count messages e.g. service restarts in log.
    - Parse service reports: Information about important service activity
    - Decides service availability
  - **The critical part is to determine the measurements to monitor in your service, how to retrieve them and combining them!**
  - Generates and puts the availability report in the message queue using the common libraries

**Lightweight and easy to install**

[https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor\\_server/](https://svn.cern.ch/repos/it-es-vos/trunk/SLS/monitor_server/)

- Message consumer and publisher set up on [adc-sls.cern.ch](http://adc-sls.cern.ch)
  - VM shared with SSB publishers
- Periodically collects SLS reports from the message queue
- Publishes reports to SLS via http
- Not limited to DDM – can pick up and publish the reports for any other service monitoring
  - We hope to extend this mechanism to the various ADC services

# Example: Site Services


## Service information


full name: **ss-fzk(atlas-SS08)**

group: IT-ES

site: CERN

email: **atlas-adc-expert@cern.ch**

service Alessandro Di Girolamo 

managers: Fernando Harald Barreiro Megino 

## Service availability [\(more\)](#)

availability: 


percentage: 100%

availability info: 0 DQ2 restart in 30min period  
0 CRITICAL in 30min period  
Running on node atlas-SS08

status: **available**

last update: 14:32:02, 24 Mar 2011  
(38 minutes ago)

expires after: 60 minutes

 [rss feed with status changes](#)

how is availability measured or estimated:

Availability 50%: num of CRITICAL in the last 30min exceeds 3

Availability 30%: DQ2 report is older than 33 min

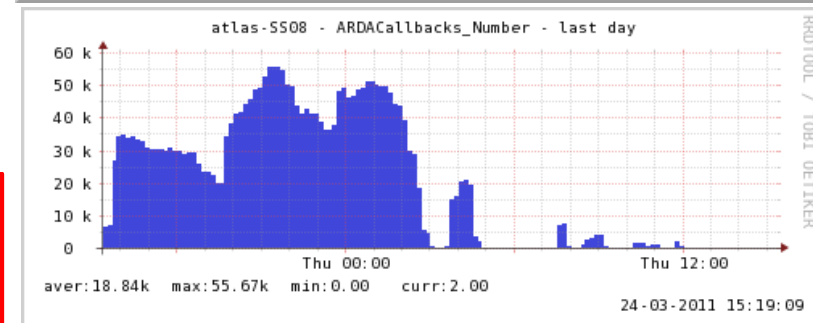
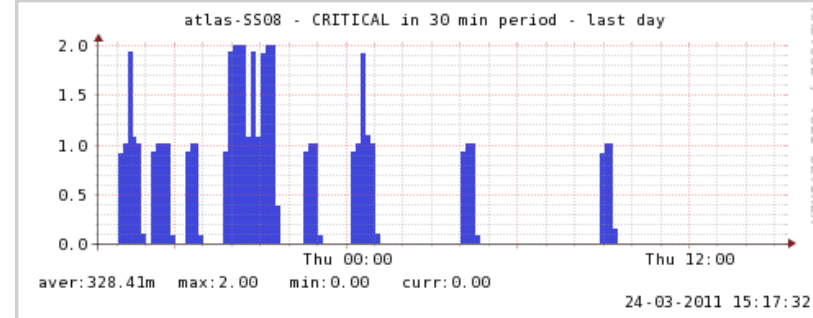
Availability 0%: num of DQ2\_restart in the last 30min exceeds 3

## Additional service information [\(more\)](#)

service notes:

<https://twiki.cern.c...>,  
<http://lemonweb.cern...>

ARDACallbacks_Number:	2
Files_Number:	2,224
Files_State_COPIED_Number:	2
Files_State_COPYING_Number:	637
Files_State_COPY_FAILED_Number:	94
Files_State_NEW_Number:	53
Files_State_QUEUED_Number:	1,438
Files_State_REGISTER_FAILED_Number:	0
Files_State_STAGED_Number:	0
Files_State_STAGE_FAILED_Number:	0
Files_State_STAGING_Number:	0
Files_State_DONE_LastHour:	1,372
DQ2_restarts in 30 min period:	0
ERROR in 30 min period:	0
CRITICAL in 30 min period:	0
VALIDATE in 30 min period:	552



— Obtained by parsing periodic dq2 report

— Obtained using Lemon

## Service information


full name: **Central Catalogue monitoring service at voatlas03**

group: IT-ES

site: CERN

email: **atlas-dq2-dmod@cern.ch, atlas-adc-expert@cern.ch**

web site: <http://voatlas03.cern.ch:8000/usage/index.html>

manager: **Alessandro Di Girolamo** 

**Client developed by  
Alexei Buzykayev**

## Service availability [\(more\)](#)


availability: 

percentage: 100%

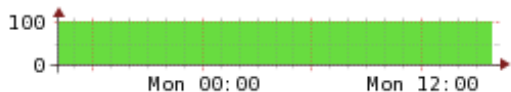
status: **available**

last update: 15:42:03, 28 Mar 2011  
(18 minutes ago)

expires after: 60 minutes

 [rss feed with status changes](#)

availability in the last 24 hours [\(more\)](#):



## Additional service information [\(more\)](#)

Total hits: 29,449

Total size: 181,760

lemon info for IOError rate:	0
lemon info for Traceback rate:	0
repository counter:	11,797
location counter:	3,545
subscription counter:	2,584
content counter:	1,813

Obtained using  
Lemon

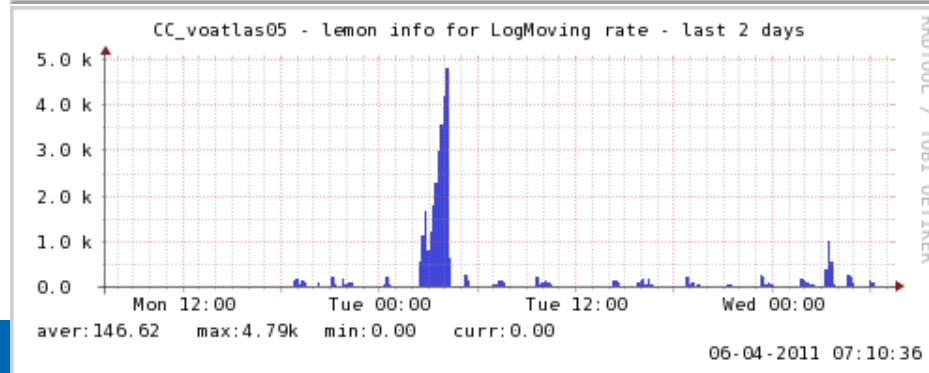
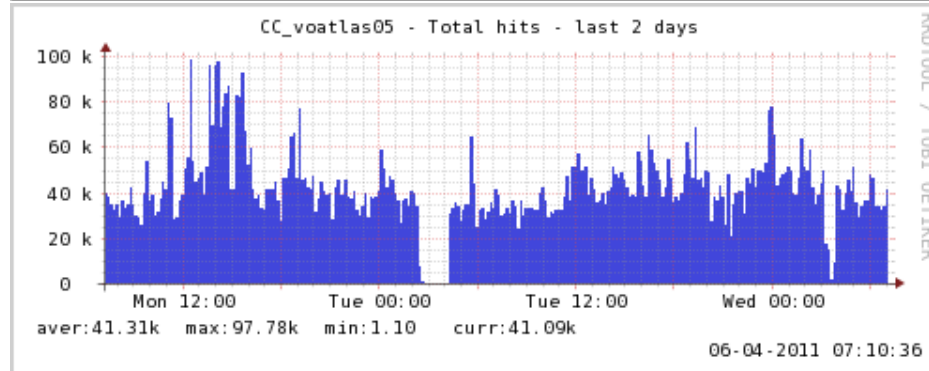
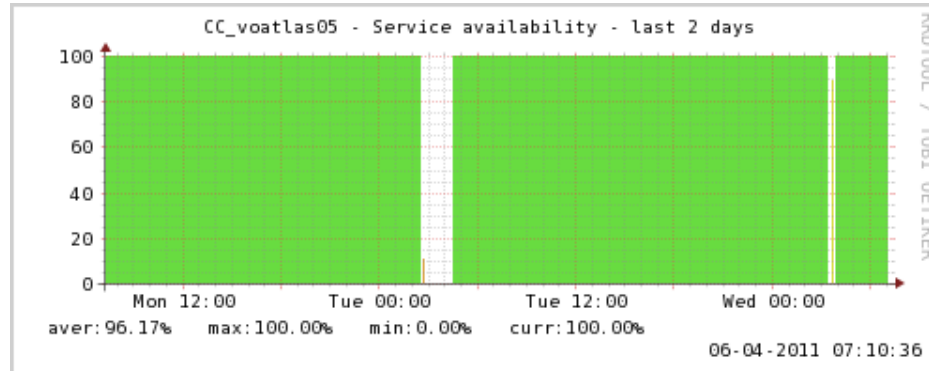
Obtained from  
webalyzer

## Summary from Webalazer

**New feature since this week:** Verify the mdate of the CC log file to check it is moving (needed to detect incidents like <https://svnweb.cern.ch/trac/dq2/wiki/Incident%2029March2011>)



# Example Central Catalogues (2)



RRDTool / TOBI OETIKER

RRDTool / TOBI OETIKER

RRDTool / TOBI OETIKER

In collaboration with **Danila Oleynik** and **Artem Petrosyan**


## Service information


full name: **atlas-deletionTESTBED**

group: IT-ES

site: CERN

email: **atlas-dq2-dev@cern.ch**

service Alessandro Di Girolamo 

managers: Fernando Harald Barreiro Megino 

## Service availability [\(more\)](#)

availability: 


percentage: 100%

availability info: 0 DQ2 restart in 30min period  
0 CRITICAL in 30min period  
Running on node atlas-deletionTESTBED

status: **available**

last update: 16:12:02, 28 Mar 2011  
(14 minutes ago)

expires after: 60 minutes

 [rss feed with status changes](#)

how is availability measured or estimated:

Availability 50%: num of CRITICAL in the last 30min exceeds 3  
Availability 0%: num of DQ2\_restart in the last 30min exceeds 3

## Additional service information [\(more\)](#)

service notes:

<http://lemonweb.cern...>

Restarts in 30 min period: 0  
ERROR messages in 30 min period: 0  
CRITICAL messages in 30 min period: 0



Obtained using Lemon

Generate report file per service instance

- Sites and SRM endpoints served
- Number of deleted files
- Numer of deleted files per site (?)

- Easy to implement a new client!
- Not running apache on the machine of the instance is not an obstacle – send the report to our SLS publisher
- SLS is being actively monitored by P1 and ADCos shifters
  - Automatic email alerts are possible to have experts/service managers on the problems as soon as the problem arise
- We encourage people to contact us for advice in implementing SLS monitoring for other ATLAS Computing critical services

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