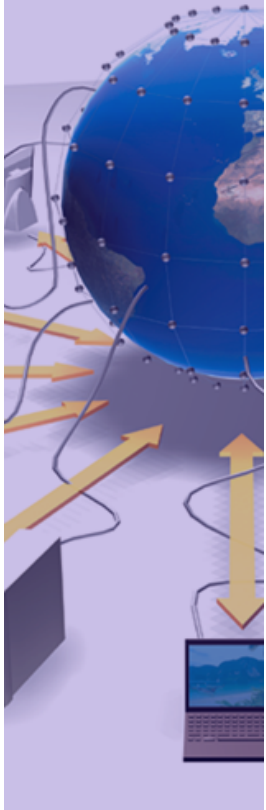


GS



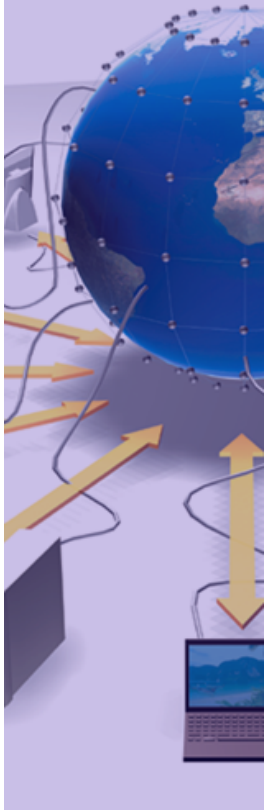
# Monitoring of the core Grid Services

Alessandro Di Girolamo  
*CERN IT/GS*



# Outline

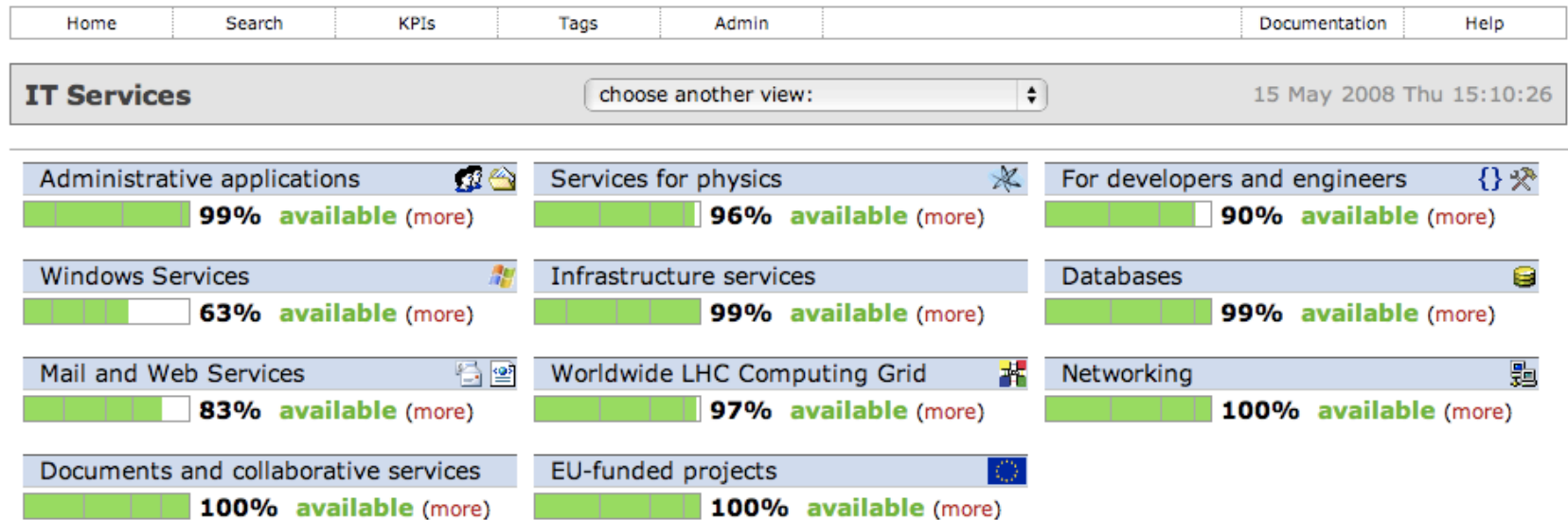
- The Service Level Status framework
- Monitor the LHC Experiments core services:
  - Retrieve services information
  - Calculate their availability
  - Organize the dependency structure
- Conclusions



# Service Level Status (SLS)



- [sls.cern.ch](http://sls.cern.ch) Aim to provide a web-based tool that dynamically shows availability, basic information and/or statistics about IT services, as well as dependencies between them.

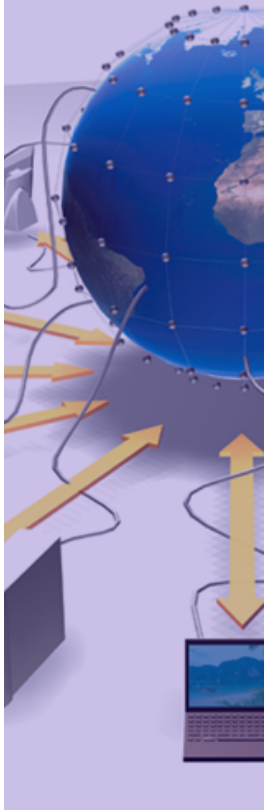


SLS by CERN IT/FIO

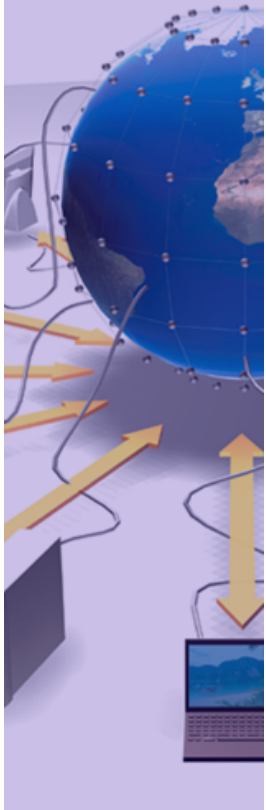
SLS.Support@cern.ch

# Provide services information

- Status information
  - Fabric monitoring sensors (e.g. Lemon) read out with cronjobs:
    - Many metrics created
    - Different sensors depending on the service running on the machine
    - Possibility to restart the services under conditions
    - Availability calculated
  - Direct report from the services
- SLS fishes reports (xml files) each 10 minutes



- ATLAS
  - ATLAS Distributed Computing Central Services  
[http://sls.cern.ch/sls/service.php?id=ADC\\_CS](http://sls.cern.ch/sls/service.php?id=ADC_CS)
  - Services for ATLAS  
<http://sls.cern.ch/sls/service.php?id=ServicesForATLAS>
- CMS
  - Services for CMS  
<http://sls.cern.ch/sls/service.php?id=ServicesForCMS>
- LHCb
  - LHCb DIRAC Central Services  
<http://sls.cern.ch/sls/service.php?id=DIRAC-VOBOX>
  - Services for LHCb  
<http://sls.cern.ch/sls/service.php?id=ServicesForLHCb>



# Organize the Services


- one example for the ATLAS Experiment:  
[http://sls.cern.ch/sls/service.php?id=ADC\\_CS](http://sls.cern.ch/sls/service.php?id=ADC_CS)

Home	Search	KPIs	Tags	Admin	Documentation	Help
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**ATLAS Distributed Computing Central Services** 11 Sep 2008 Thu 12:53:12

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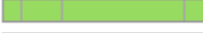

### ADC Central Services

availability:   
(more)

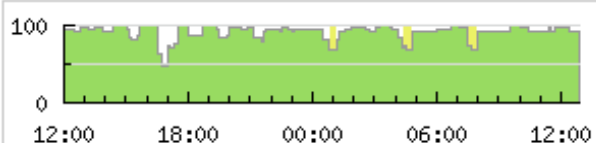
percentage: 93%

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


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email: **atlas-project-adc-operations@cern.ch**

web site: [https://twiki.cern.c...](https://twiki.cern.ch)

alarms page: <https://prod-grid-lo...>

---

service **Birger Koblitz** 

managers: Alessandro Di Girolamo 


---

### Availability update

last update: 12:49:19, 11 Sep 2008  
(4 minutes ago)

expires after: 31 minutes

---

 [rss feed with status changes](#)

---

### Part of (subservice of):

none / not declared

## ATLAS DDM voboxes

11 Sep 2008 Thu 12:53:31

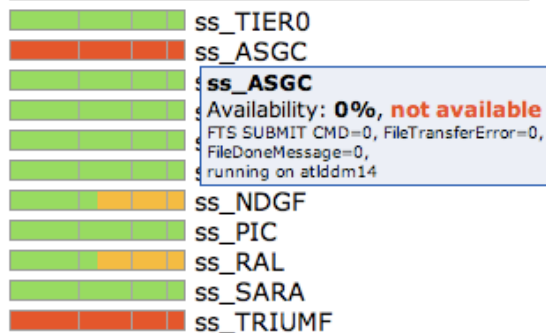
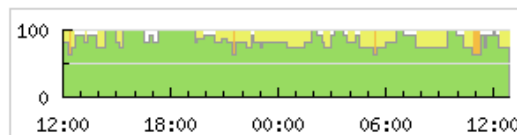
## ATLAS\_DDM\_VOBOXES

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

percentage: 73%

status: **affected**

this service consists of:




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

## Additional information

full name: **ATLAS DDM voboxes**

short name: ATLAS\_DDM\_VOBOXES

group: IT-GS


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

## Availability update

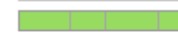
last update: 12:50:05, 11 Sep 2008

(3 minutes ago)

expires after: 31 minutes

 [rss feed with status changes](#)

## Part of (subservice of):

 ADC Central Services

## Admin

[admin tools](#)

- SiteServices:
  - quattorized machines in the CERN Computing Center
  - monitored via Lemon
- ss\_XXX could have different weight for the ATLAS\_DDM\_VOBOXES availability calculation


[Home](#)[Search](#)[KPIs](#)[Tags](#)[Admin](#)[Documentation](#)[Help](#)**ss\_TIER0**


11 Sep 2008 Thu 12:55:53


## Service information

full name: **ss\_TIER0**

group: PH-DI

service **Alessandro Di Girolamo** 

managers: **Birger Koblitz** 

**Mikayil Garayev** 

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


percentage: 100%

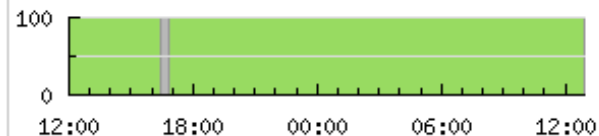
availability info: FTS SUBMIT CMD=184,  
FileTransferError=1037,  
FileDoneMessage=1384,  
running on atlddm17

status: **available**


last update: 12:50:04, 11 Sep 2008  
(6 minutes ago)

expires after: 31 minutes

 [rss feed with status changes](#)

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

## Part of (subservice of):

 ATLAS\_DDM\_VOBOXES

## Subservices

none / not declared

## Clusters, subclusters and nodes

none / not declared

## Depends on

none / not declared

## Depended on by

none / not declared

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

service notes:

ss\_TIER0 running on atlddm17  
<http://lemonweb.cern...>

num of FTS SUBMIT CMD in 30 min period: 184

num of FileTransferError in 30 min period: 1037

num of FileDoneMessage in 30 min period: 1384

Seconds since DQ2 log updated: 0



[Home](#)[Search](#)[KPIs](#)[Tags](#)[Admin](#)[Documentation](#)[Help](#)**ss\_TIER0**

11 Sep 2008 Thu 12:52:58

Service

name: **ss\_TIER0**[back to service details](#)

Menu

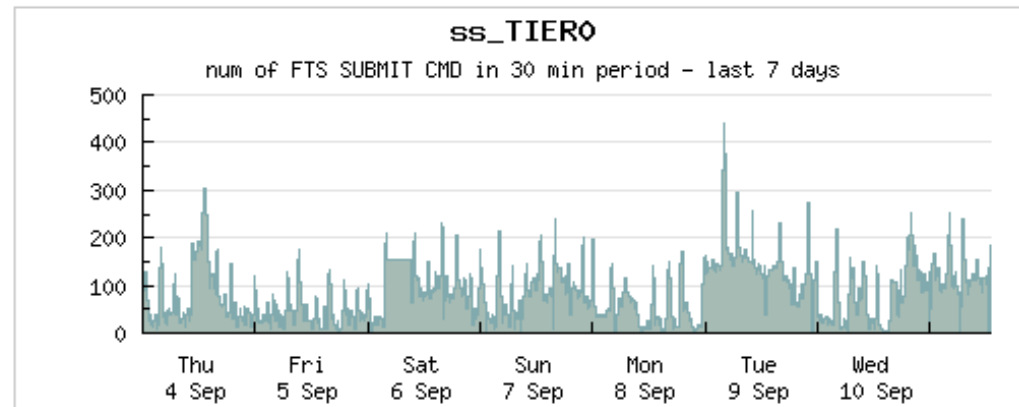
see details of:

[Service availability](#)[num of FTS SUBMIT CMD in 30 min period](#)[num of FileTransferError in 30 min period](#)[num of FileDoneMessage in 30 min period](#)[Seconds since DQ2 log updated](#)

for the period of:

[last 24 hours](#)[last week](#)[last month](#)

More on num of FTS SUBMIT CMD in 30 min period in the last week



# Organize the Services

- one example for the CMS Experiment:  
[http://sls.cern.ch/sls/service.php?id=CMS\\_PHEDEXSERVICE](http://sls.cern.ch/sls/service.php?id=CMS_PHEDEXSERVICE)

## CMS PhEDEx Service

12 Sep 2008 Fri 19:11:06

### Service information

full name: **CMS PhEDEx Service**  
 short name: Phedex  
 group: IT-GS-EIS


---

email: **[cms-phedex-developers@cern.ch](mailto:cms-phedex-developers@cern.ch)**  
 web site: <http://cmsdoc.cern.ch/cms/aprom/phedex/>  
 alarms page: <https://twiki.cern.ch/twiki/bin/view/CMS/CernOperations...>










---

manager: **Andrea Sciaba** 


### Part of (subservice of):

 Services for CMS


### Subservices

 Phedex T0 CERN  
 Phedex T1 CERN  
 Phedex T1 ASGC  
 Phedex T1 CNAF  
 Phedex T1 FNAL  
 Phedex T1 CCIN2P3  
 Phedex T1 FZK  
 Phedex T1 PIC  
 Phedex T1 RAL

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

availability:   
 percentage: 60%  
 status: **degraded**

last update: 19:01:14, 12 Sep 2008  
 (10 minutes ago)  
 expires after: 30 minutes

 [rss feed with status changes](#)

how is availability measured or estimated:

PhEDEx service: 100 if all services are UP. 0 if any infrastructure, workflow and support agent is DOWN. -20\*(1-avail) for each Tier-1 PhEDEx service. Tier-1 PhEDEx service: 100 if all services are UP. 0 if FileDownload, FileExport or FileStager DOWN. -50 if FileRemove DOWN. -50 if BlockDownloadVerify DOWN.

### Clusters, subclusters and nodes

host **vocms01**  
 host **vocms20**

### Depends on

none / not declared

### Depended on by

none / not declared


# Organize the Services

- one example for the LHCb Experiment:  
<http://sls.cern.ch/sls/service.php?id=LHCb-StorageSpace>

Home	Search	KPIs	Tags	Admin	Documentation	Help
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## LHCb Storage Space

availability:  (more)

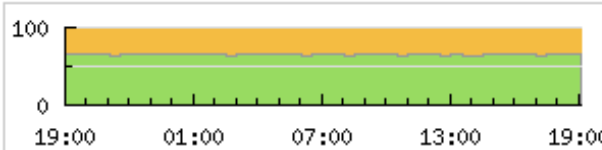
percentage: 66%

status: **degraded**

this service consists of:

-  CERN Space
-  CNAF Space
-  PICVOBOX
-  RALVOBOX
-  GRIDKA Space
-  IN2P3 Space
-  PIC Space
-  RAL Space
-  SARA Space

availability in the last 24 hours (more):



### Additional information


full name: **LHCb Storage Space**

group: IT-GS

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email: **roberto.santinelli@cern.ch**

---

manager: **Roberto Santinelli** 


---

### Availability update

last update: 18:41:20, 12 Sep 2008  
(27 minutes ago)

expires after: 773 minutes

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 [rss feed with status changes](#)

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how is availability measured or estimated:

---

**N.B. IMPORTANT**  
 The current availabilities and thresholds in this Storage Space tree are for testing purposes.

---

### Part of (subservice of):

-  Worldwide LCG
-  Services for LHCb

12 Sep 2008 Fri 19:08:09

- History of the available storage space:
  - Speed of writing
  - raw storage resource manager status

## CERN LHCb\_RAW Storage space

16 Sep 2008 Tue 15:07:32

## Service

name: **CERN-RAW**[back to service details](#)

## Menu

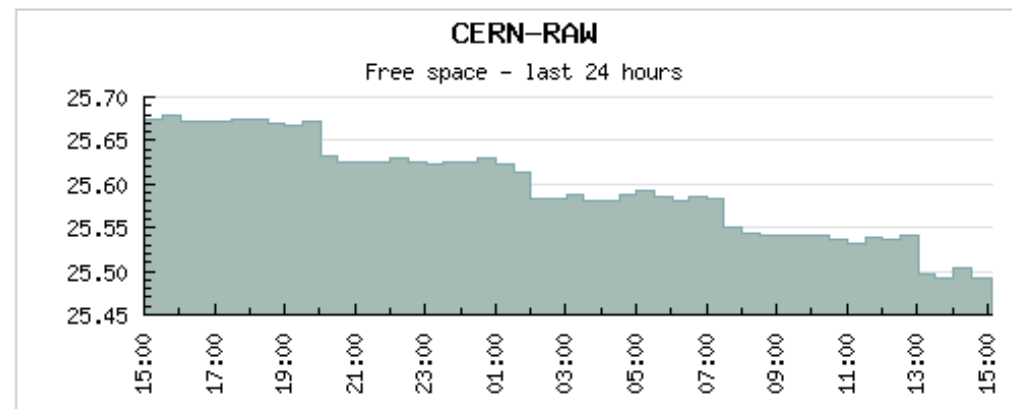
see details of:

[Service availability](#)[Free space](#)[Total space](#)

for the period of:

[last 24 hours](#)[last week](#)[last month](#)

## More on Free space in the last 24 hours



# Conclusions

- ✓ Service Level Status: powerful, flexible and user friendly framework to aggregate Grid and VO specific service information.
- ✓ SLS already used by experiments shifters
- ✓ SLS integrated with GridMap

