



# LCG-France Tier-1 & AF

## Réunion de Coordination

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Lyon, 15 mai 2008

dapnia  
ceci  
saclay

CNRS

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DE LA RECHERCHE  
SCIENTIFIQUE



# Table des Matières



- Réunions CCRC, GDB et MB de avril et mai 2008
- Disponibilité, fiabilité, efficacité du site
- Chantiers en cours
- Thème du jour

- Agendas:
  - GDB: <http://indico.cern.ch/categoryDisplay.py?categoryId=31181>
  - MB: <http://indico.cern.ch/categoryDisplay.py?categoryId=666>
  - CCRC: <http://indico.cern.ch/categoryDisplay.py?categoryId=1613>
- Principaux sujets traités
  - CCRC
  - SAM Tests
  - Security service challenge
  - WN working group

# Security Service Challenge



## Security Service Challenge 3

- **SSC3** is a very real simulation of a security incident
- Same procedure followed for all challenged sites:
  1. Submit a carefully crafted binary to the site
  2. Contact the site security team (GOCDB)  
*"You are asked to follow the normal incident procedure, but you MUST NOT take any collective action against the VO of the offending user. Consider any activity from the following user as malicious."*
  3. Carefully monitor and assess the response of the site
- Feedback from previous challenges: sites want to know how they performed
  - Difficult to implement a detailed evaluation in a best effort environment

INFSO-RI-508833

Source: Romain Wartel, [GDB, 14/05/2008](#)



## Security Service Challenge 3

Evaluation was based on three main areas:

- **Communication**
  - Acknowledge/Heads-up report sent to the CSIRT list
  - Alert sent to the affected VO Manager
  - Verify the responsible CA has been notified
  - Close-out report sent to the CSIRT list
- **Containment**
  - Found the malicious job and killed it
  - Suspended the user at the site
- **Forensics**
  - Discovery of initiating site (UI) and established contact with that site's CERT
  - Found evidence of malicious network traffic
  - Some analysis of the submitted binaries was performed
- **Plus some bonuses points for very fast response time, etc.**
- **Caveat 1:** "The scores are based on the quality and delay of the response of the sites. The scale of the various items used in the scoring and the procedure to determine what constitutes a satisfactory response are based on various parameters, including LCG/EGEE security policies, procedures, and experience from past incidents. The best scores are not necessarily requirements but are generally perceived as good, appropriate practices in a best effort environment."
- **Caveat 2: Debriefing in progress: sites may object on specific points**

INFSO-RI-508833

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# Security Service Challenge (suite)



Enabling Grids for E-sciencE

IN2P3 CC

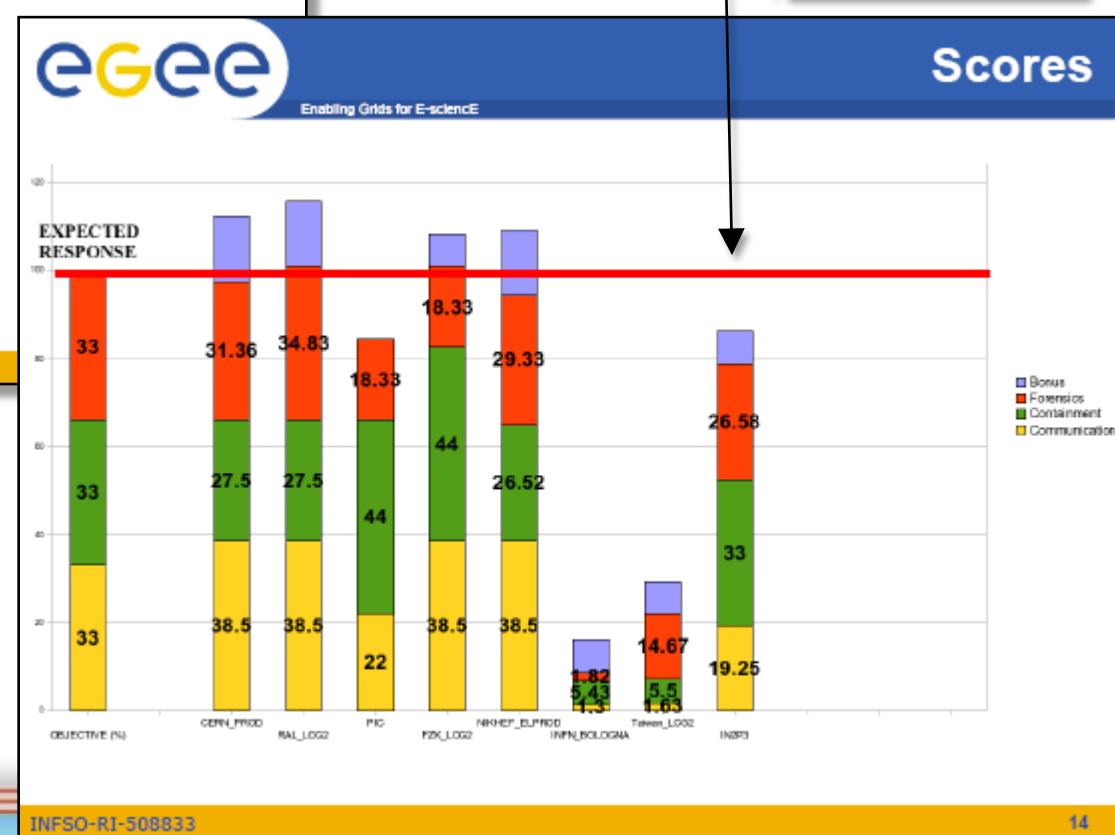
- **Total score: 22.2 / 27 FAIL**

- Communication: 7 / 12 FAIL
- Containment: 6 / 6 PASS
- Forensics: 7.25 / 9 FAIL
- Bonus: + 5

- **Additional comments**

- Malicious user was successfully banned and all processes terminated
- Incomplete communication and forensics report

CC-IN2P3



Source: Romain Wartel, [GDB](#), 14/05/2008



Enabling Grids for E-sciencE

## Recap of Motivation

- **Currently deployed EGEE Grid assumes :**
  - WNs behind a CE node are identical.
  - Clearly not the case at all but a tiny number of tiny sites.
  - Current advice has been to advertise smallest nodes available.
- **This results in:**
  - Large WNs being wasted by small memory jobs.
  - Large memory nodes cannot even be advertised.
  - Walltime and CPU.
    - § Hard for users to work out how long they will get.
    - § Hard for batch managers to allocate jobs efficiently.

Steve Traylen , [steve.traylen@cern.ch](mailto:steve.traylen@cern.ch)

Pierre, Pierre-Emmanuel et Sylvain devraient trouver cette présentation intéressante.



Enabling Grids for E-sciencE

## Overview

- **Previous Slides:**
  - January 2008 GDB
    - § <http://indico.cern.ch/conferenceDisplay.py?confId=20225>
- **Motivation:**
  - Efficient use of Worker Nodes.
- **Information System Deployment**
  - The ClusterPublisher
- **Publishing Software Tags:**
  - Review of software tags w.r.t. experiments.
  - Resolution of WN to GlueSubCluster.
  - Resolution of GlueSubCluster to the ClusterPublisher.
- **Deployment Steps:**
  - Ordered deployment steps to make it all possible.

Steve Traylen , [steve.traylen@cern.ch](mailto:steve.traylen@cern.ch) , CERN

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Source: Steve Traylen, [GDB, 14/05/2008](#)

# Multi-user pilot jobs



## LCAS/SCAS

- LCAS developers proposed a method of using LCAS across a cluster.
  - a partitioned set of uids, unique to a WN
- TCG advised against this.
  - worried that once this was released SCAS would not gain acceptance
  - much preferred the single decision point of SCAS
  - and the complicated configuration required on WN
- General agreement on using SCAS.
- Coding complete, developer testing,
- Not yet in certification, estimate end of June

## GDB



## Summary

- With SCAS not reaching certification until July even the LHCb framework is unlikely to be in production for months.
- Framework testing without SCAS is encouraged to test the interworking of framework and batch systems.



Source: John Gordon, [GDB, 14/05/2008](#)

## Critical tests

### The CMS SAM tests

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IT  
Department

- Goal
  - Test the basic functionality of some Grid services
  - Verify the correctness of the CMS software installation and site configuration
  - Reproduce the operations performed by a typical Monte Carlo or analysis job
  - Avoid “false alarms”
  - Add tests as more things that can fail are discovered

GS



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Test name	Run by
Computing Element	
CE-sft-job	CMS
CE-cms-prod	CMS
CE-cms-basic	CMS
CE-cms-swinst	CMS
CE-cms-squid	CMS
CE-cms-frontier	CMS
CE-cms-mc	CMS
CE-cms-analysis	CMS
SRMv2	
SRMv2-lcg-cp	CMS

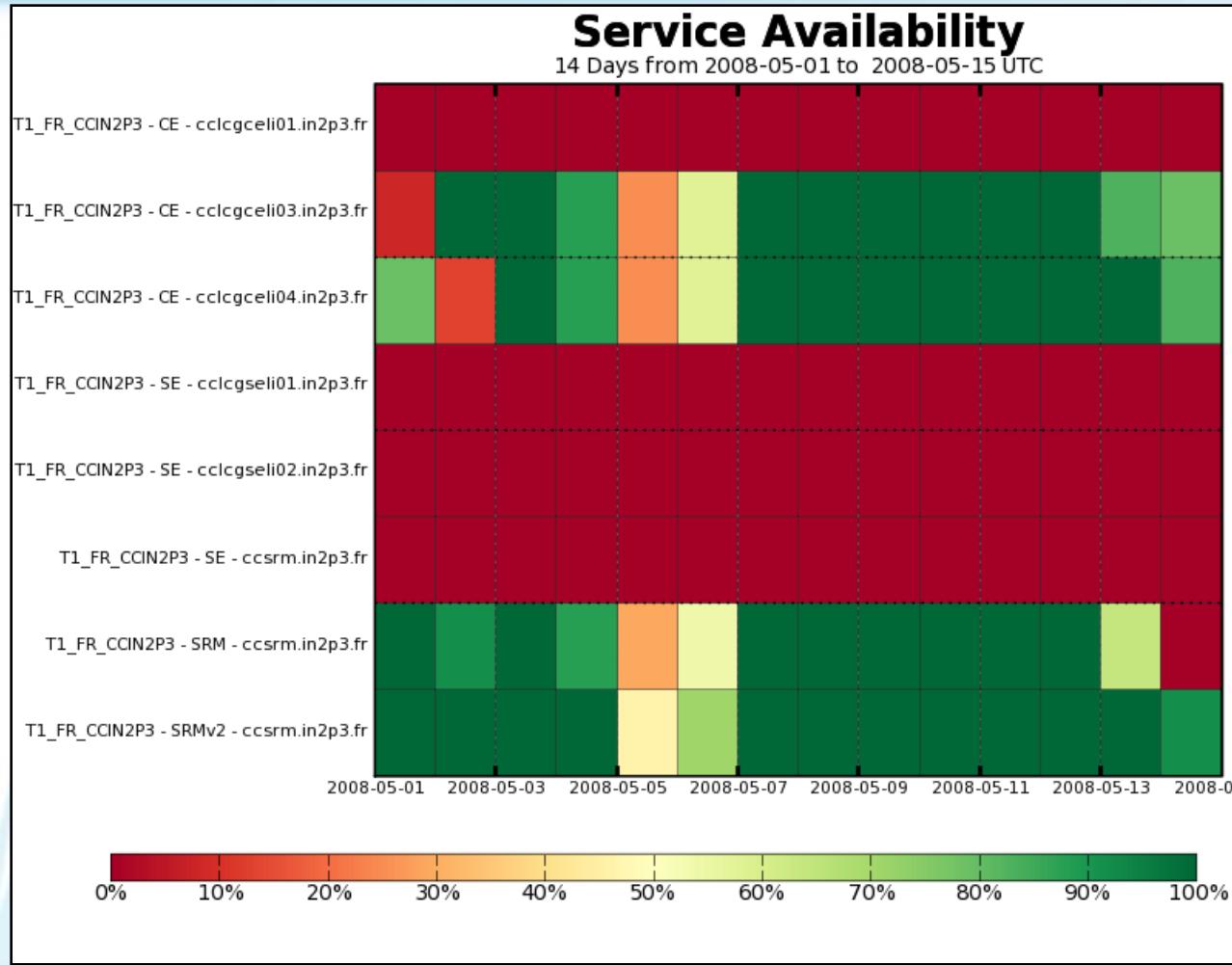
### WLCG critical tests

Test name	Run by
Computing Element	
CE-sft-job	CMS
CE-cms-prod	CMS
CE-cms-basic	CMS
CE-cms-swinst	CMS
CE-cms-squid	CMS
CE-cms-frontier	CMS
CE-cms-mc	CMS
CE-cms-analysis	CMS
SRMv2	
SRMv2-get-pfn-from-tfc	CMS
SRMv2-lcg-cp	CMS

### CMS critical tests

Source: Andrea Sciaba, [GDB](http://GDB), 14/05/2008

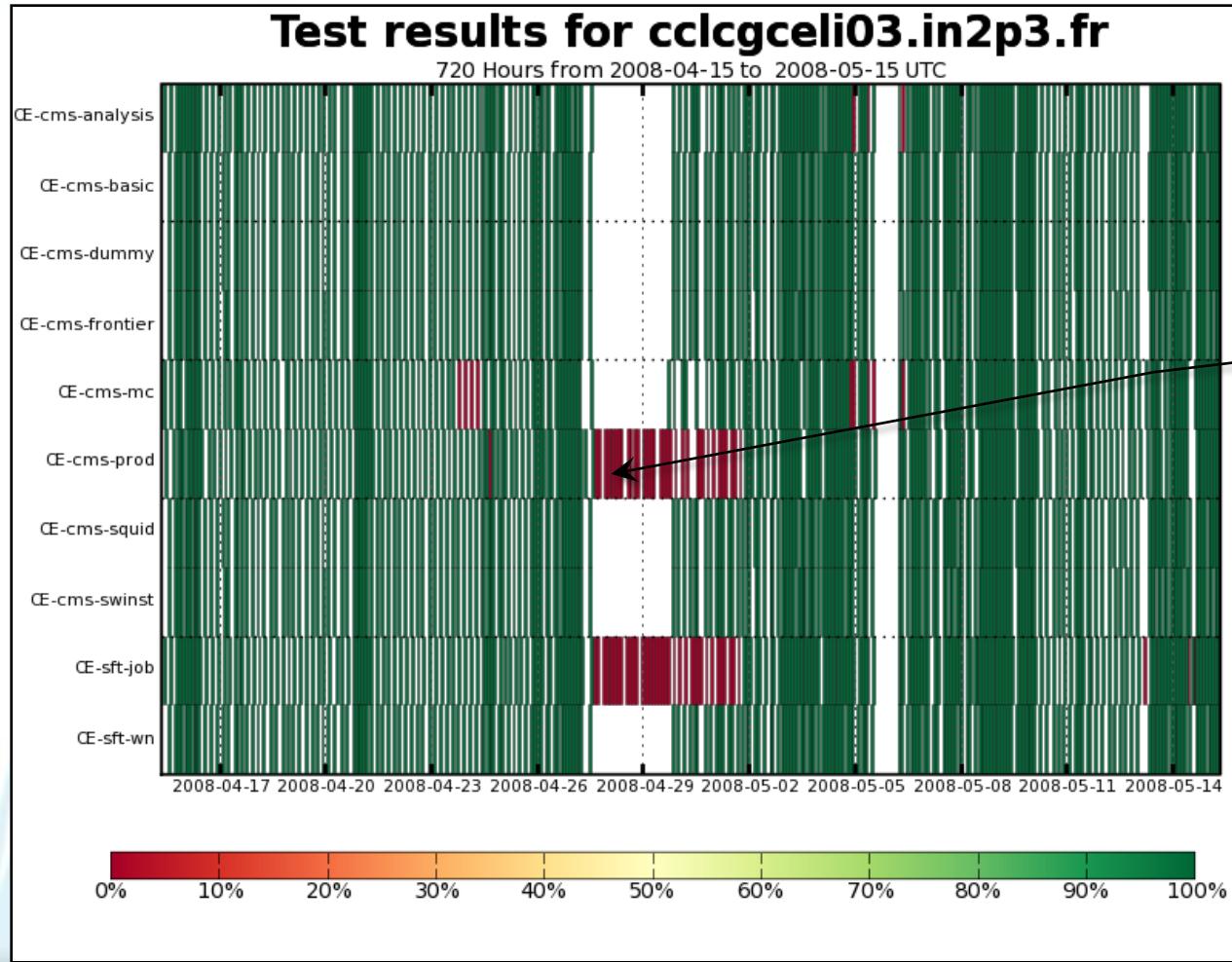
# SAM tests spécifiques VO - CMS



Source: [CMS Dashboard](#)



# SAM tests spécifiques VO - CMS



Cliquez ici  
pour obtenir  
le résultat du  
test

Source: [CMS Dashboard](#)

GS

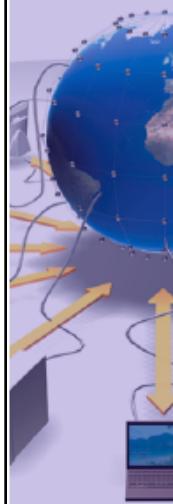
## Critical Tests: Current Status



Now running ATLAS specific tests together with standard OPS tests. All tests are using ATLAS credentials.

- Sites and endpoints definition:
  - intersection between GOCDB and TiersOfATLAS (ATLAS specific sites configuration file with Cloud Model)
- Different services and endpoints need to be tested using different VOMS credentials
  - ATLAS endpoints and paths must be explicitly tested
  - The LFC of the Cloud (residing in the T1) is used.
- FCR: No banning if sites are failing Critical Tests

Only Clouds using LFC are tested with ATLAS specific tests



CERN IT Department  
[www.cern.ch/it](http://www.cern.ch/it)

14 May 2008

Alessandro Di Girolamo

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Source: Alessandro di Girolamo, [GDB](http://GDB), 14/05/2008

## Critical Tests: Current Status - Storage Element

- SE & SRM (centrally from SAM UI):
  - SE-ATLAS-lcg-cr : copy and register (with the cloud LFC) a file from the SAM UI to the endpoint
    - For the Tier1s both Disk and Tape areas are tested
  - SE-ATLAS-lcg-cp: copy back the file from the SE to the UI. Verification of the integrity of the file copied.
  - SE-ATLAS-lcg-del: delete the files from the storage and from the LFC

## Critical Tests: Current Status LFC & FTS

- LFC:
  - lfc ls: list entries in /grid/atlas
  - lfc wf: create an entry in the LFC
- FTS:
  - List FTS channels: glite-transfer-channel-list

Source: Alessandro di Girolamo, [GDB, 14/05/2008](#)

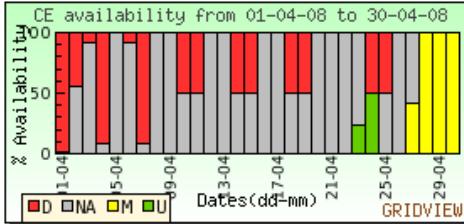
# SAM tests spécifiques VO - ATLAS



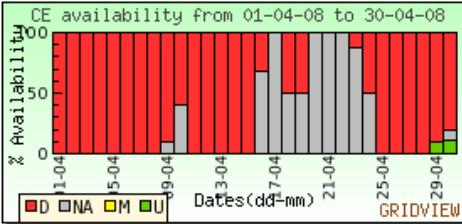
## Service Instance Availability for site:IN2P3-CC VO:Atlas (Daily Report)

### Site Services

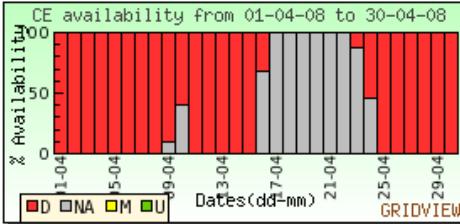
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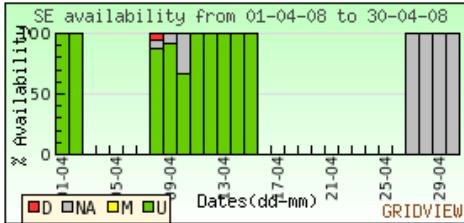
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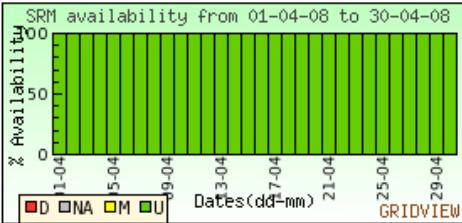
CE : cclcgceli04.in2p3.fr



SE : ccsrm.in2p3.fr

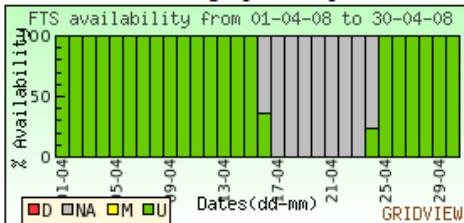


SRM : ccsrm.in2p3.fr

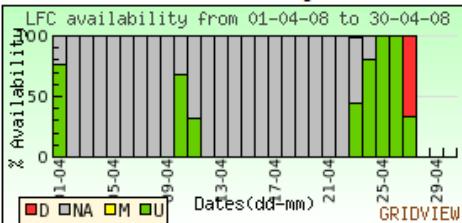


### Central Services

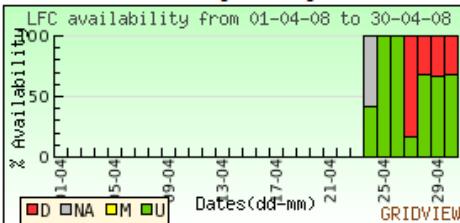
FTS : cclcgftsprod.in2p3.fr



LFC : lfc-atlas.in2p3.fr



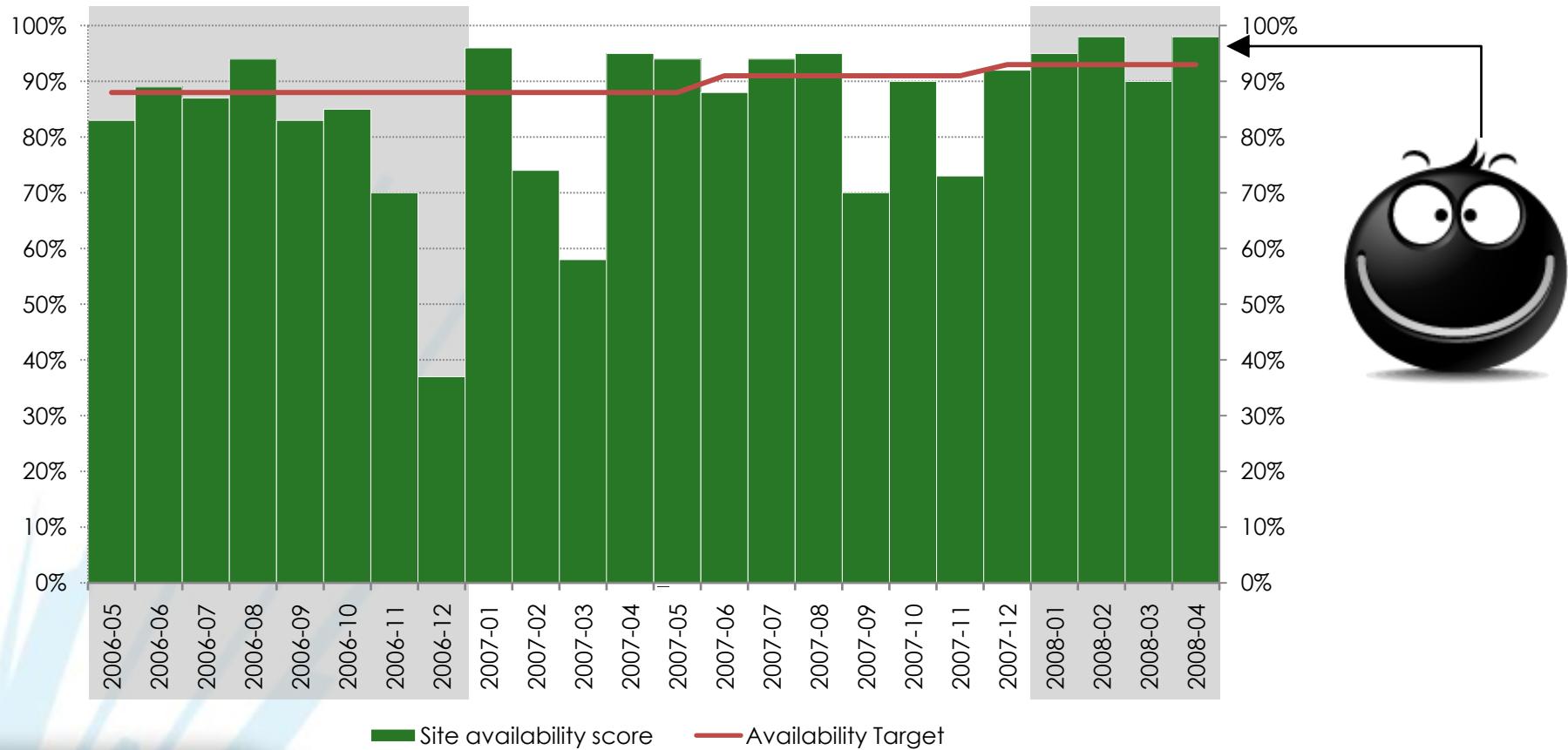
LFC : lfc-prod.in2p3.fr



# Disponibilité du tier-1



## CC-IN2P3 Tier-1: monthly availability score (VO OPS)

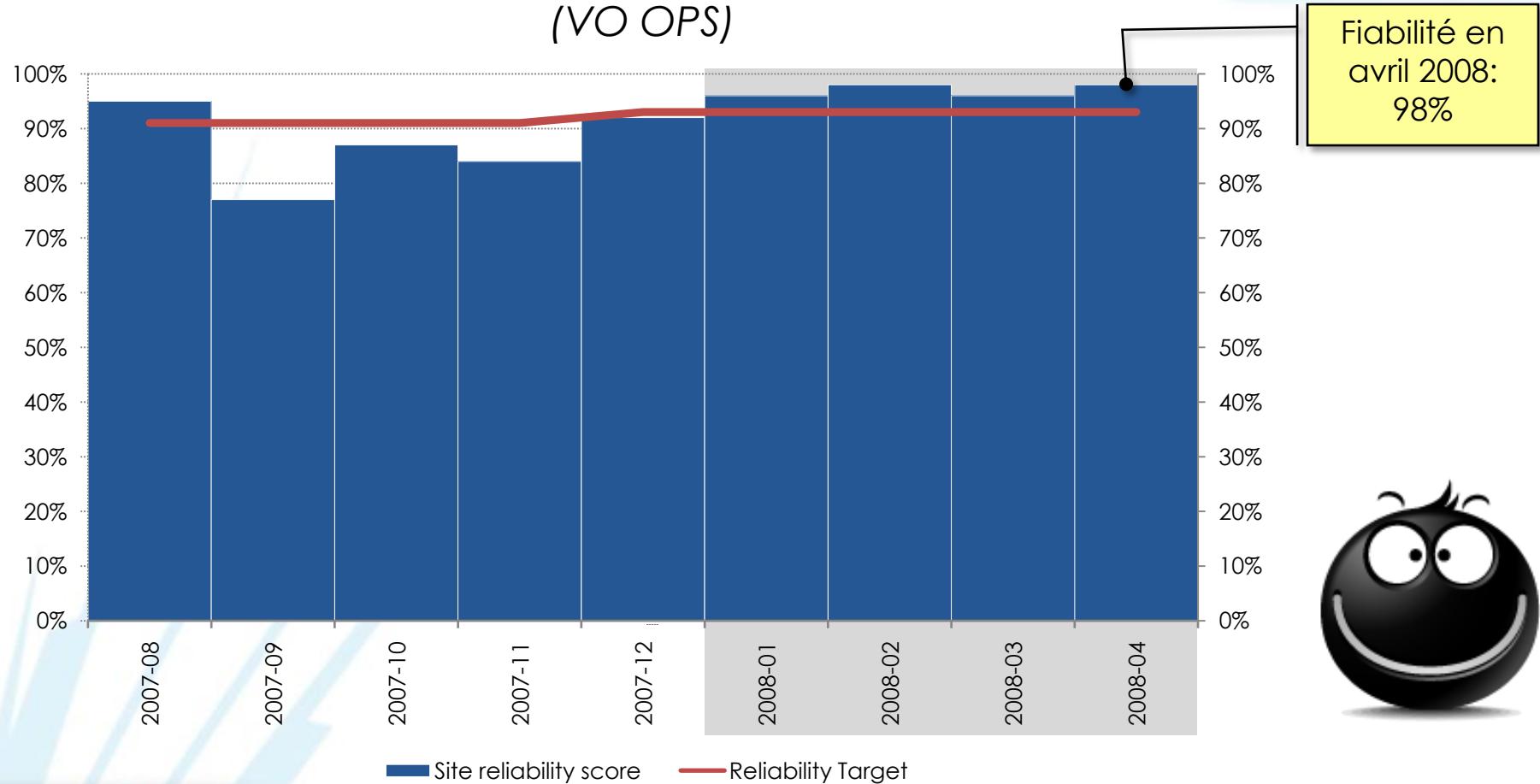


Source: [WLCG T0 & T1 Site Reliability Reports](#)

# Fiabilité du tier-1



CC-IN2P3 Tier-1: monthly reliability score  
(VO OPS)



Source: [WLCG T0 & T1 Site Reliability Reports](#)

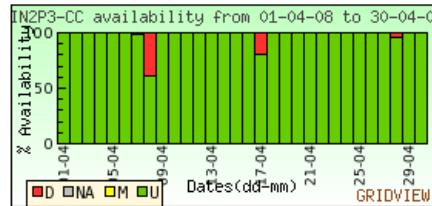
# Disponibilité des sites: tier-1 (1/4)



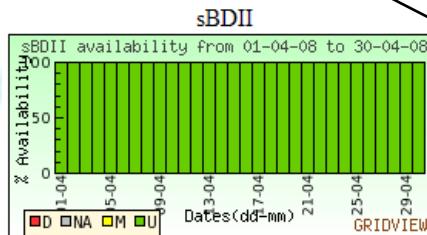
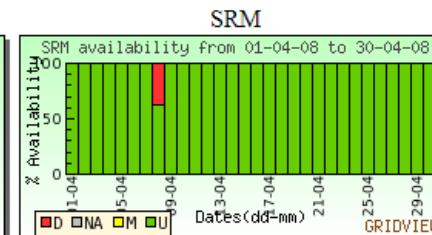
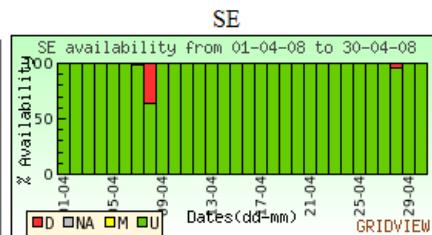
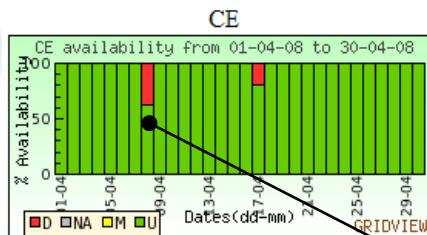
- Avril 2008

Score: 98%

## Overall Service Availability for Site:IN2P3-CC VO:OPS (Daily Report)



## Individual Service Availability for site:IN2P3-CC VO:OPS (Daily Report)



Problème  
simultané sur  
tous les services  
le 8 avril?

# Disponibilité des sites: tier-1 (2/4)



## • Avril 2008 (suite)

### Service Instance Availability for site:IN2P3-CC VO:OPS (Daily Report)



Mise à jour  
des CEs?

Problème avec  
des tests SE sur  
ccsrm?

Stabilité  
améliorée de  
SRM.  
Des raisons  
particulières  
pour ces  
échecs les 23  
et 24 avri?

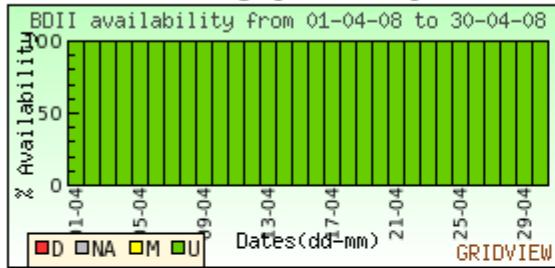
# Disponibilité des sites: tier-1 (3/4)



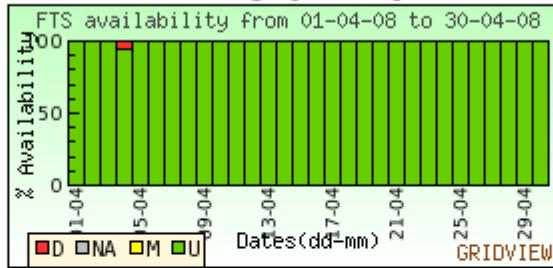
- Avril 2008 (suite)

## Central Services

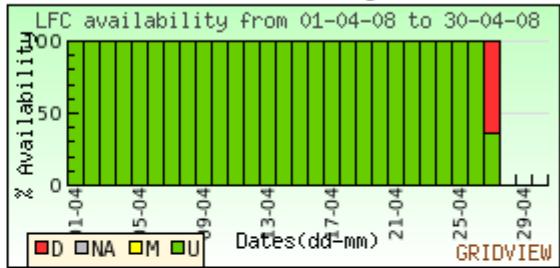
BDII : [cclcgtopbdii01.in2p3.fr](http://cclcgtopbdii01.in2p3.fr)



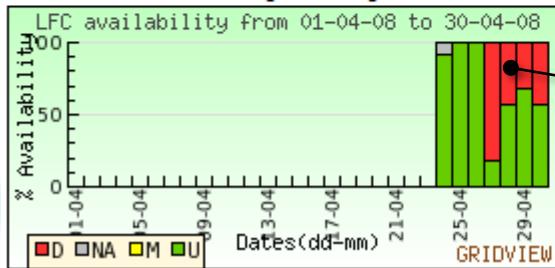
FTS : [cclcgftsprod.in2p3.fr](http://cclcgftsprod.in2p3.fr)



LFC : [lfc-atlas.in2p3.fr](http://lfc-atlas.in2p3.fr)



LFC : [lfc-prod.in2p3.fr](http://lfc-prod.in2p3.fr)



Instabilités  
très  
remarquées  
dans le  
service LCF  
pour Atlas.

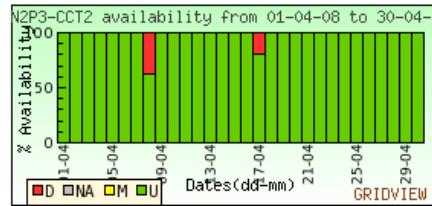
# Disponibilité des sites: tier-2 (4/4)



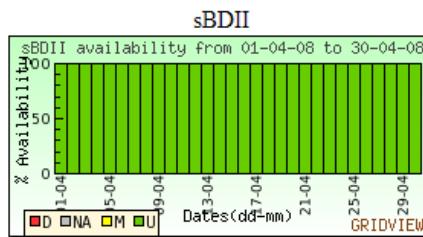
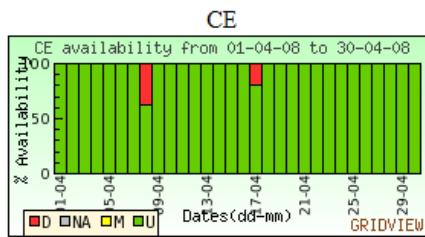
- Avril 2008

Score: 98%

## Overall Service Availability for Site:IN2P3-CCT2 VO:OPS (Daily Report)



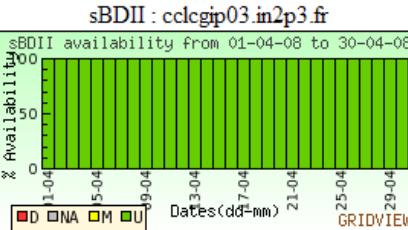
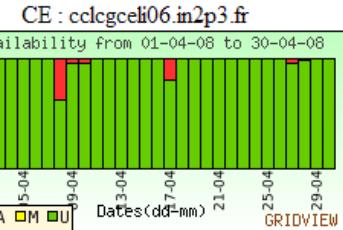
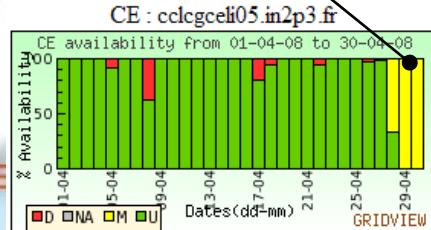
## Individual Service Availability for site:IN2P3-CCT2 VO:OPS (Daily Report)



Mi à jour de ce CE?

## Service Instance Availability for site:IN2P3-CCT2 VO:OPS (Daily Report)

### Site Services



# Disponibilité des sites EGEE-FR



- Avril 2008

AUVERGRID

92 %	93 %
------	------

CGG-LCG2

81 %	81 %
------	------

GRIF

98 %	98 %
------	------

IBCP-GBIO

0 %	0 %
-----	-----

IN2P3-CC

98 %	98 %
------	------

IN2P3-CC-T2

98 %	98 %
------	------

IN2P3-CPPM

89 %	90 %
------	------

IN2P3-IPNL

91 %	93 %
------	------

IN2P3-IRES

88 %	89 %
------	------

IN2P3-LAPP

97 %	97 %
------	------

IN2P3-LPC

95 %	95 %
------	------

IN2P3-LPSC

91 %	91 %
------	------

IN2P3-SUBATECH

92 %	92 %
------	------

IPSL-IPGP-LCG2

87 %	87 %
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Region	Avail-ability	Reli-ability
France	86 %	86 %
SouthEasternEurope	74 %	77 %
SouthWesternEurope	71 %	76 %
NorthernEurope	70 %	85 %
GermanySwitzerland	70 %	75 %
Russia	69 %	74 %
AsiaPacific	66 %	73 %
CERN	64 %	74 %
CentralEurope	60 %	87 %
Italy	60 %	76 %
UKI	47 %	88 %
OpenScienceGrid	13 %	27 %



# Revue des chantiers en cours



- Intégration
  - Tests de prioritisation des jobs basée sur le rôle VOMS
  - Tests de worker nodes SL4 64bits avec middleware gLite 32bits
  - Développement de l'interface BQS pour CREAM-CE
  - Consolidation des services grid: LFC, FTS, CE, SRM, système d'information
- Exploitation
  - Intégration des VO boxes à l'exploitation standard
  - **Procédures d'exploitation services grid**
  - Plate-forme de monitoring basée sur NAGIOS (et intégration avec SAM)
  - Séparation de la consommation CPU tier-1 et tier-2 dans la comptabilité interne
  - Système d'alarme basé sur e-mail pour des experts sélectionnés des expériences
  - Rédaction des SLAs pour les VO boxes (en cours)
- Terminés
  - ✓ Tests d'impact du changement d'utilisateur UNIX (par gexec) pour un job BQS
  - ✓ Tests de LCG-CE sous SL4
  - ✓ Déploiement de LFC-RO pour LHCb
  - ✓ Arrêt de FTS v1.5



# Aujourd'hui



- Etat des lieux des services
- Déroulement de la phase 2 de CCRC'08 tel que vu par les expériences
- Prochaine réunion
  - Jeudi 19 juin 14h Amphi
- Agendas de toutes les réunions
  - <http://indico.in2p3.fr/categoryDisplay.py?categoryId=102>



# Questions/Commentaires

