



LCG-France Tier-1 & AF

Réunion de Coordination

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Lyon, 15 mai 2008

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

Security Service Challenge



Security Service Challenge 3

Enabling Grids for E-science

- 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

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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

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

Security Service Challenge (suite)



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

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

- **Additional comments**

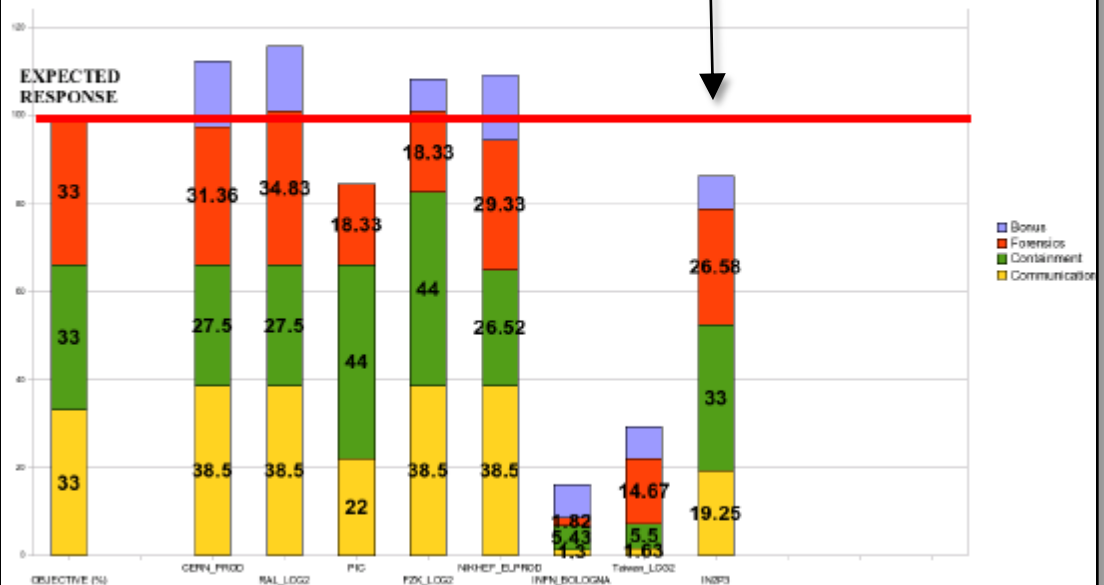
- Malicious user was successfully banned and all processes terminated
- Incomplete communication and forensics report

CC-IN2P3



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Scores



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

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WN working group



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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

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



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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, CERN

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Source: Steve Traylen, [GDB, 14/05/2008](http://indico.cern.ch/conferenceDisplay.py?confId=20225)

Multi-user pilot jobs



LCAS/SCAS

GDB

- 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



Summary

GDB

- 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](#)

SAM tests spécifiques VO - CMS



Critical tests

GS

The CMS SAM tests

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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

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Test name	Run by
Computing Element	
CE-sft-job	CMS
CE-sft-caver	OPS
SRMv2	
SRMv2-lcg-cp	CMS

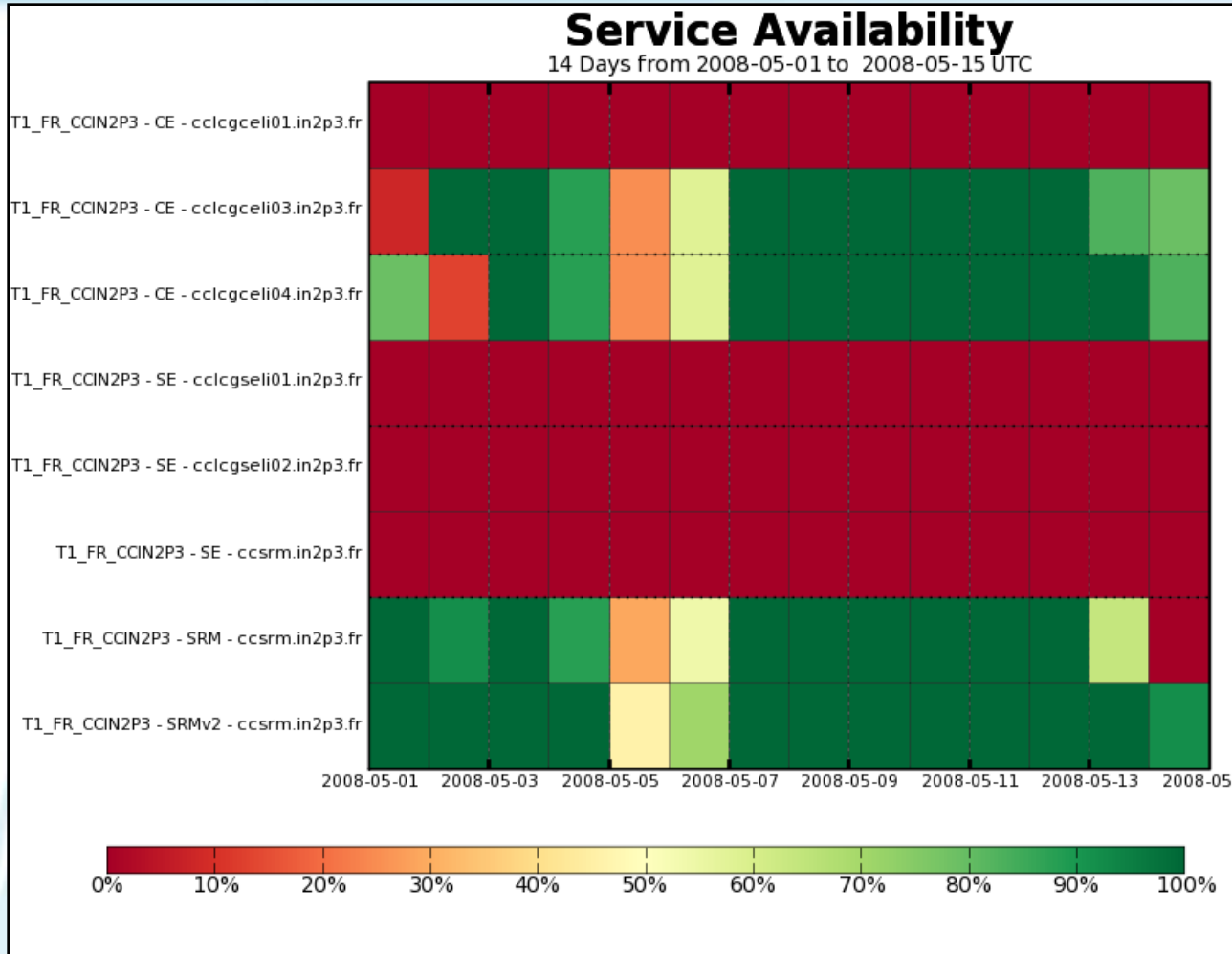
WLCG critical tests

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

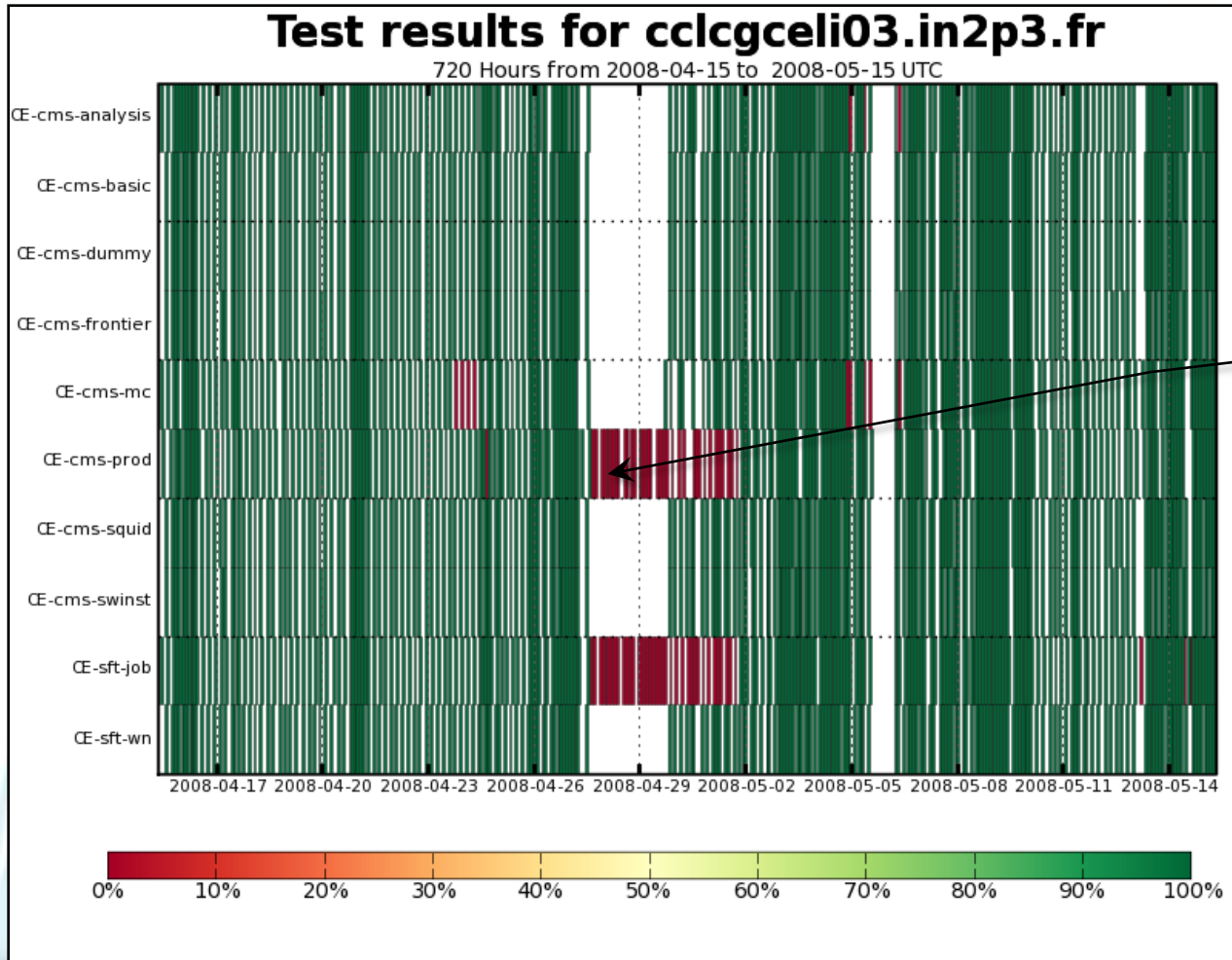
Source: Andrea Sciaba, [GDB, 14/05/2008](#)

SAM tests spécifiques VO - CMS



Source: [CMS Dashboard](#)

SAM tests spécifiques VO - CMS



Cliquez ici
pour obtenir
le résultat du
test

Source: [CMS Dashboard](#)

SAM tests spécifiques VO - ATLAS



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

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14 May 2008

Alessandro Di Girolamo

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

▶ SAM tests spécifiques VO - ATLAS



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](#)

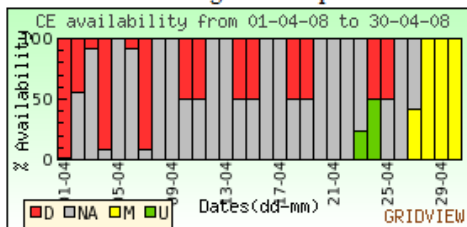
SAM tests spécifiques VO - ATLAS



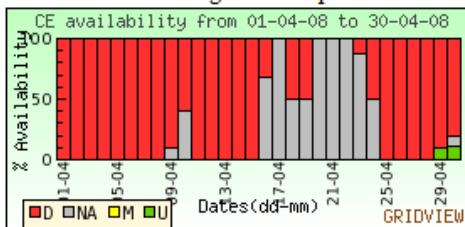
Service Instance Availability for site:IN2P3-CC VO:Atlas (Daily Report)

Site Services

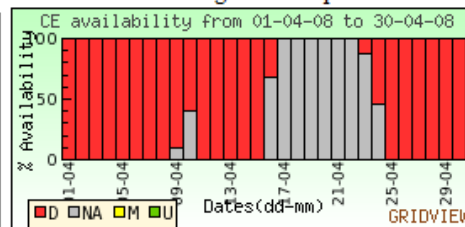
CE : cclcgceli01.in2p3.fr



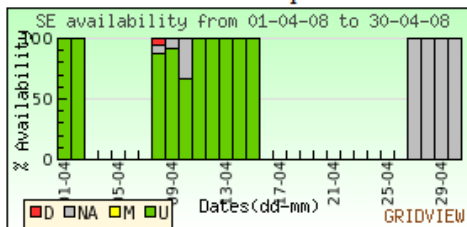
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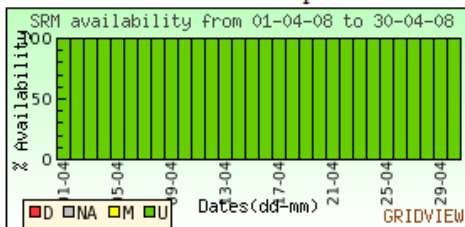
CE : cclcgceli04.in2p3.fr



SE : ccsrm.in2p3.fr

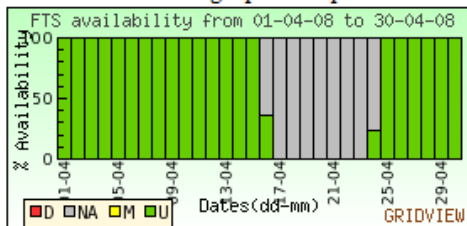


SRM : ccsrm.in2p3.fr

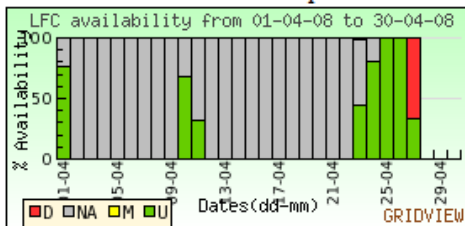


Central Services

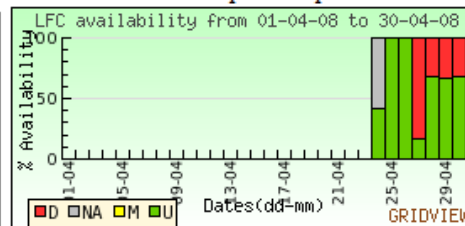
FTS : cclcgftsprod.in2p3.fr



LFC : lfc-atlas.in2p3.fr



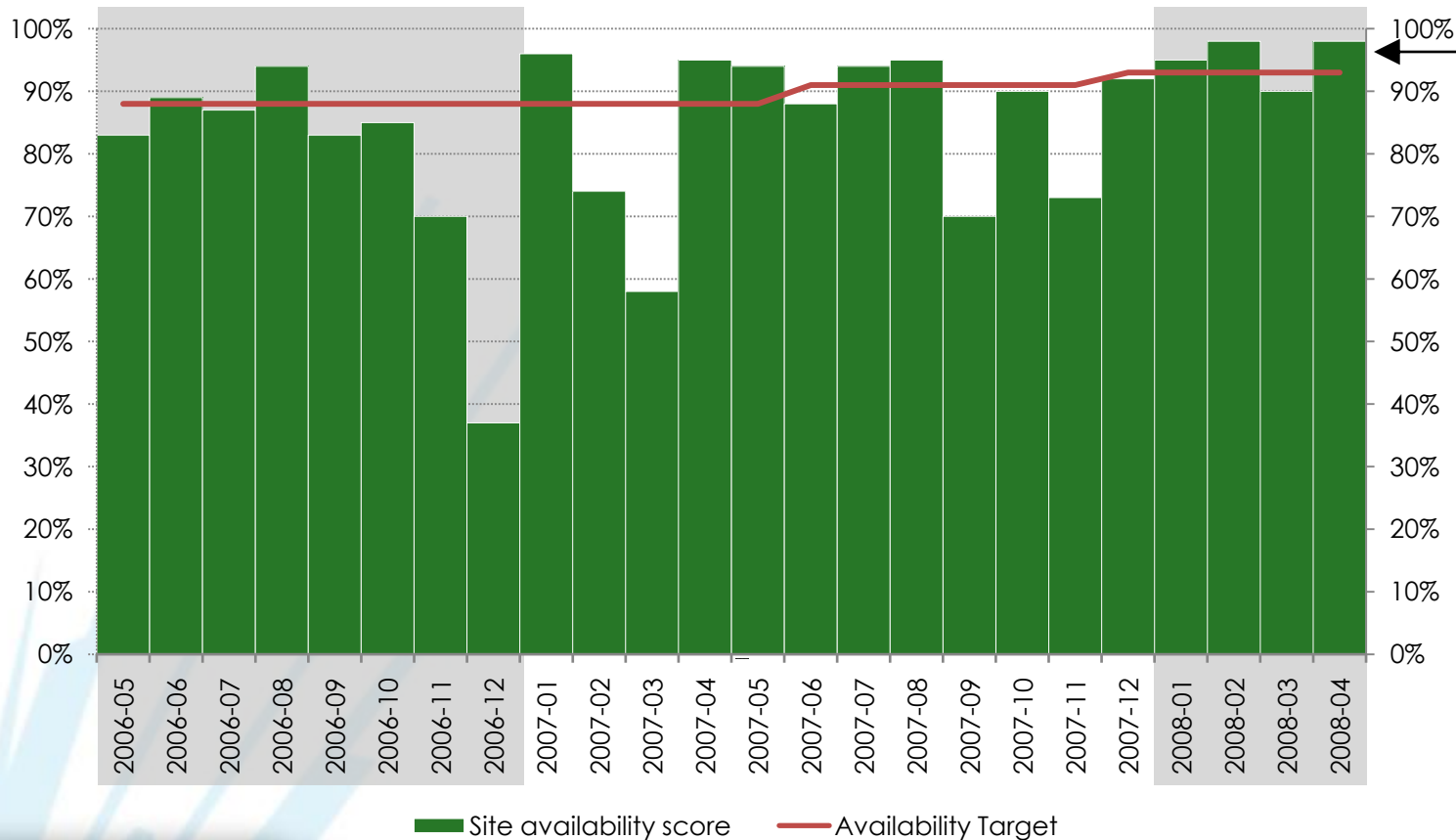
LFC : lfc-prod.in2p3.fr



Disponibilité du tier-1



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

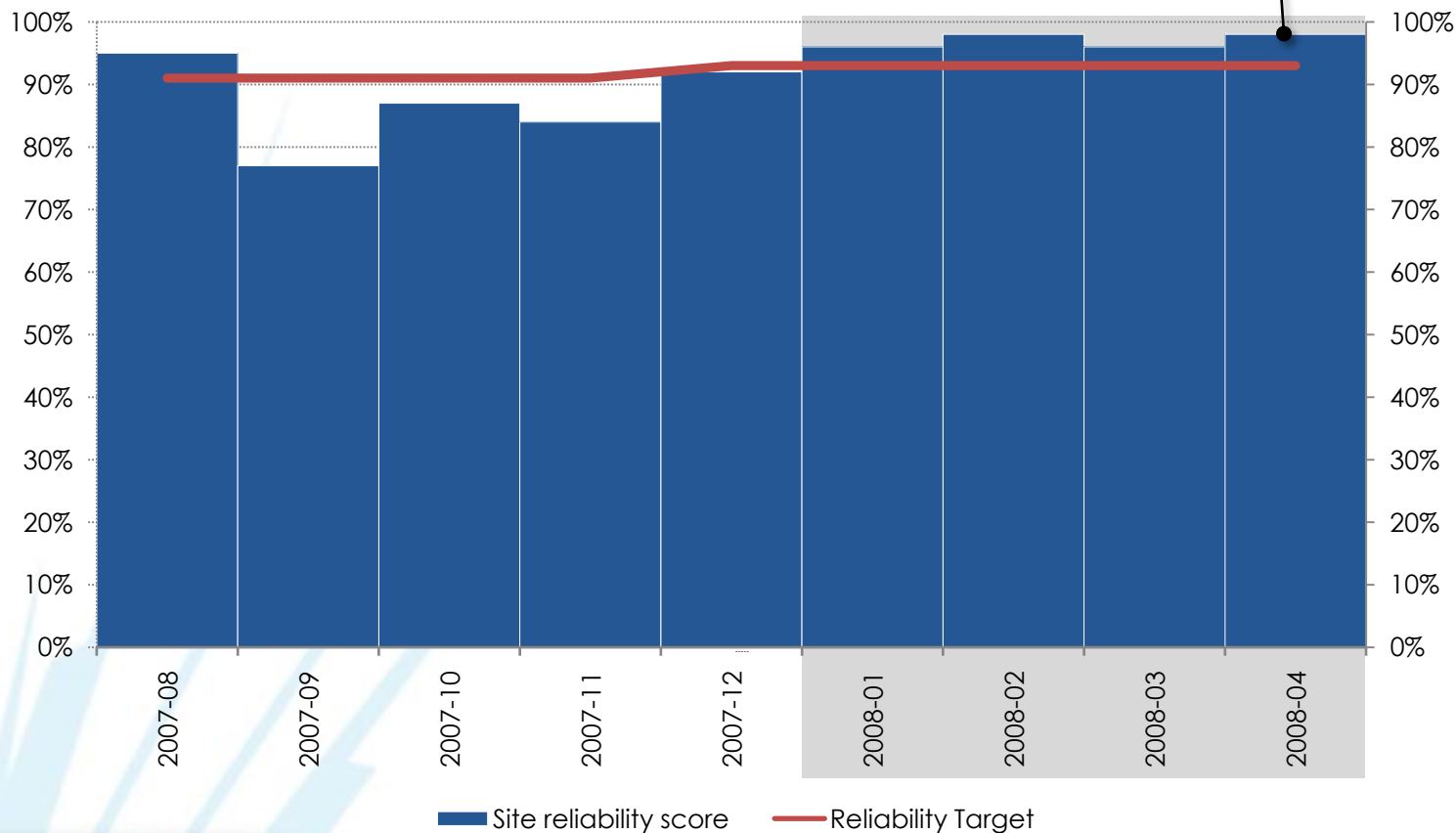


Source: [WLCG T0 & T1 Site Reliability Reports](#)

Fiabilité du tier-1



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



Fiabilité en
avril 2008:
98%



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

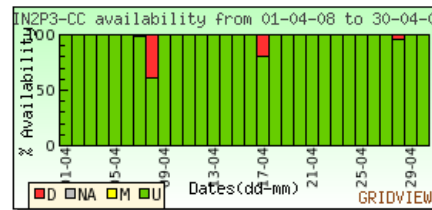
Disponibilité des sites: tier-1 (1/4)



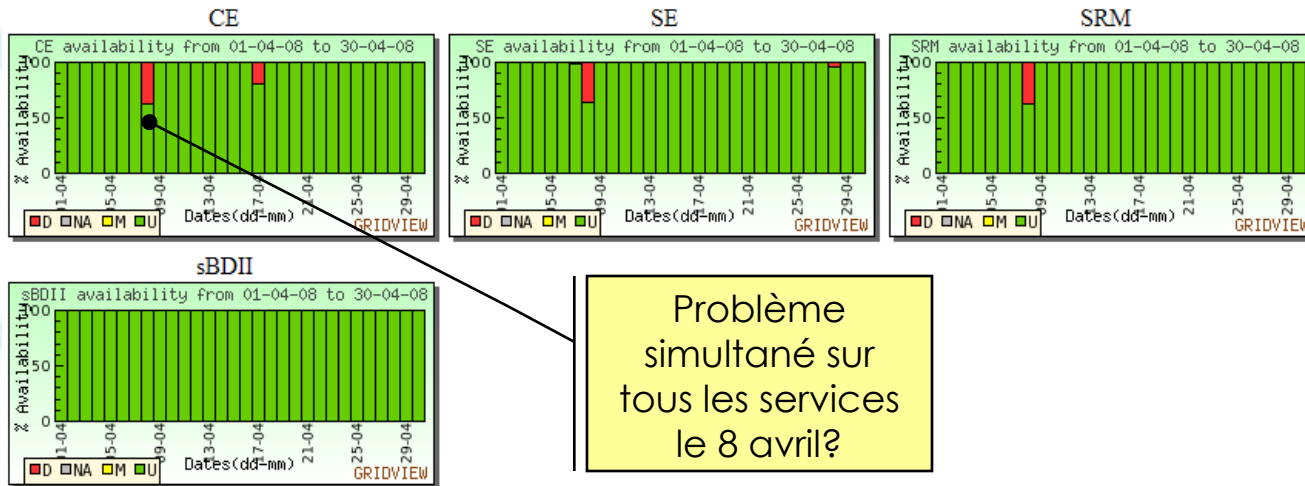
- Avril 2008

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?

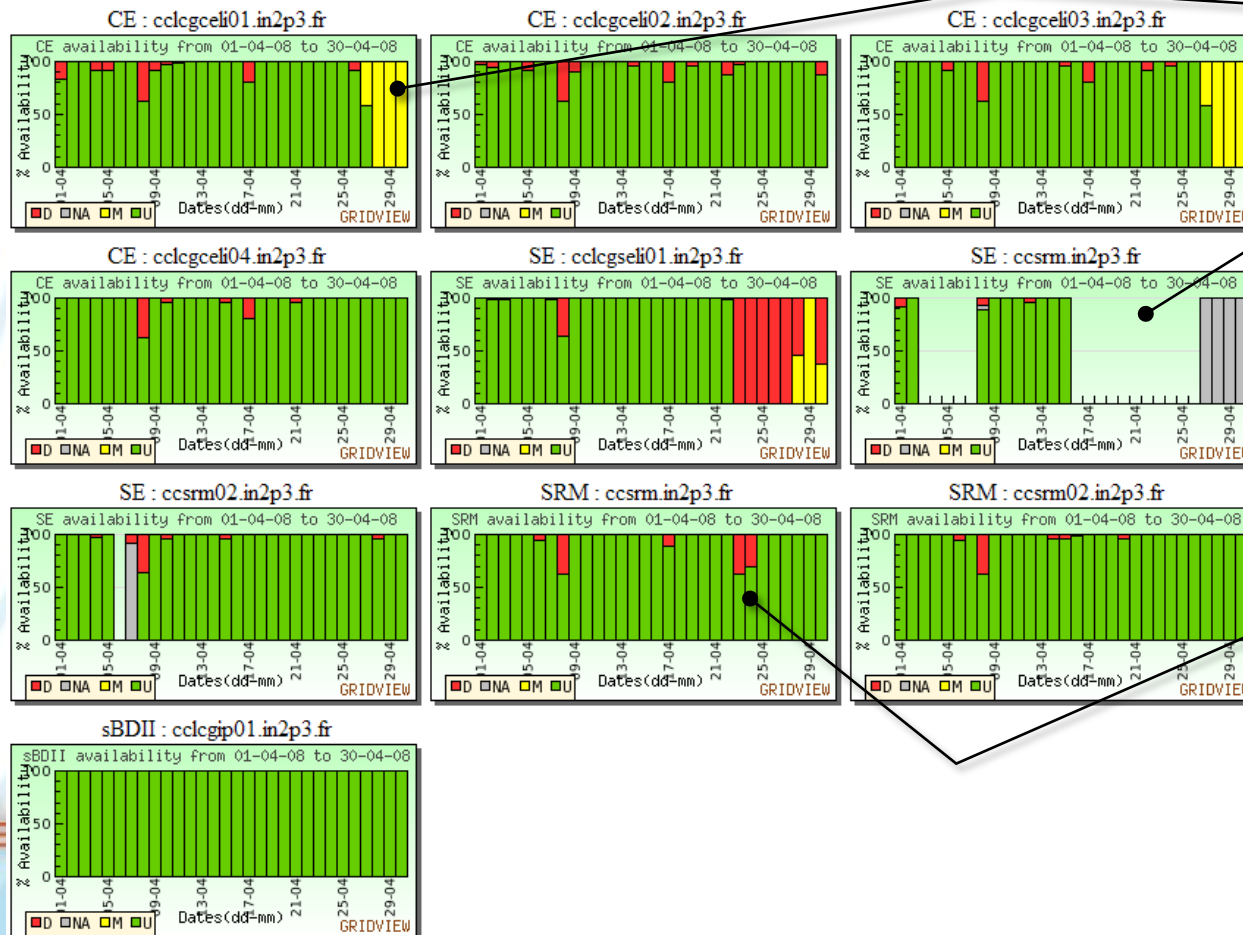
Disponibilité des sites: tier-1 (2/4)



• Avril 2008 (suite)

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

Site Services



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?

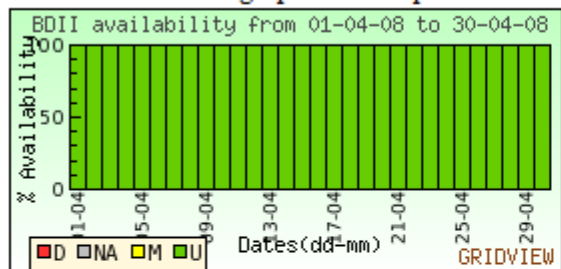
Disponibilité des sites: tier-1 (3/4)



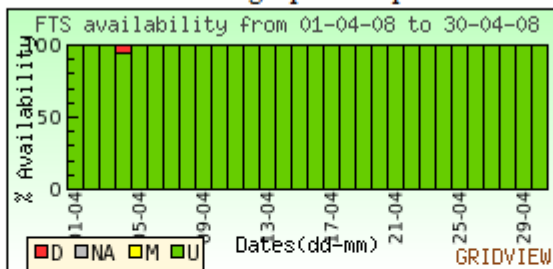
- Avril 2008 (suite)

Central Services

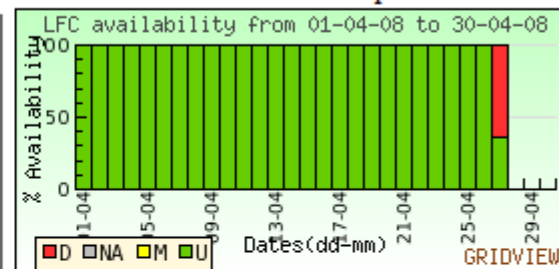
BDII : cclcgtopbdi01.in2p3.fr



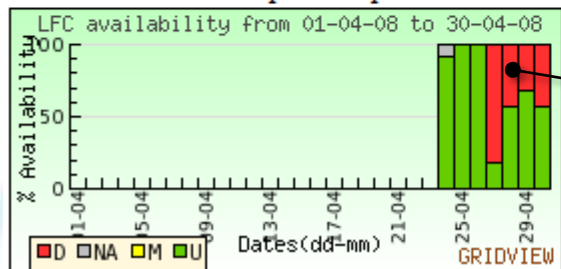
FTS : cclcgftsprod.in2p3.fr



LFC : lfc-atlas.in2p3.fr



LFC : lfc-prod.in2p3.fr



Instabilités
très
remarquées
dans le
service LCF
pour Atlas.

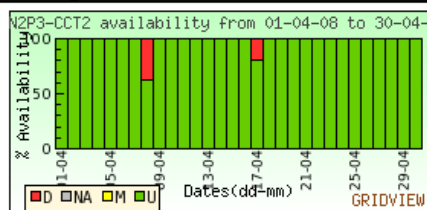
Disponibilité des sites: tier-2 (4/4)



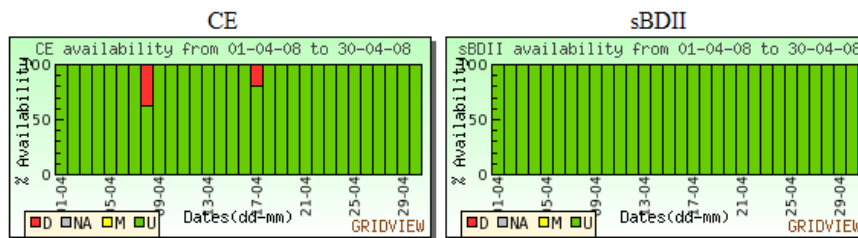
• Avril 2008

Score: 98%

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

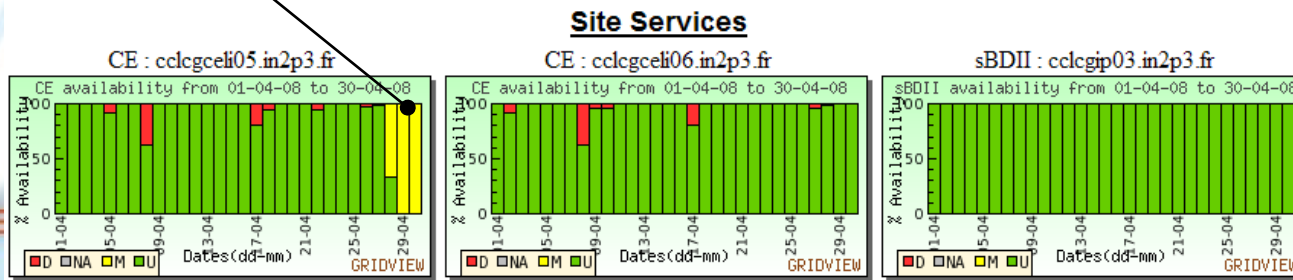


Individual Service Availability for site:IN2P3-CCT2 VO:OPS (Daily Report)



Mi à jour de ce CE?

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



Source: <http://gridview.cern.ch>

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 %

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 priorisation 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 glxexec) 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?categId=102>

► Questions/Commentaires

