



LCG-France Tier-1 & AF

Réunion de Coordination

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cea

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CENTRE NATIONAL
DE LA RECHERCHE
SCIENTIFIQUE

► Table des Matières



- Disponibilité, fiabilité, efficacité du site
- GDB de Septembre 2007
- Chantiers en cours
- Thèmes du jour

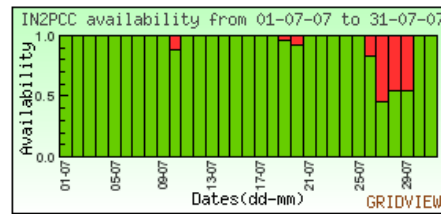
Disponibilité du site (1/5)



- Juillet 2007

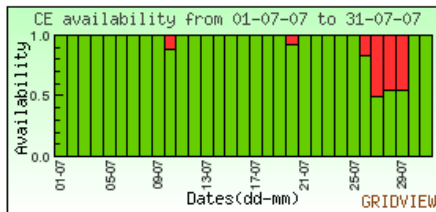
Overall Service Availability for site IN2PCC : Daily Report

Score: 94%

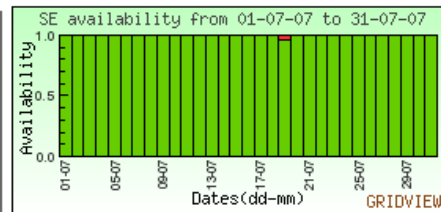


Individual Service Availability for site IN2PCC : Daily Report

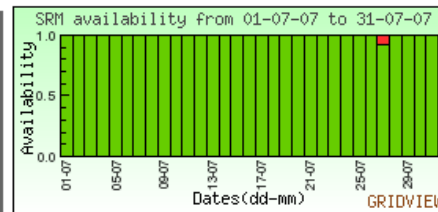
CE



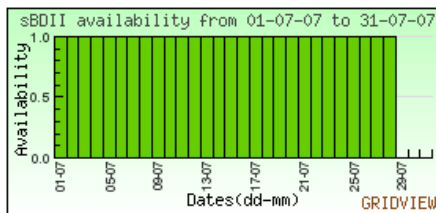
SE



SRM



sBDII



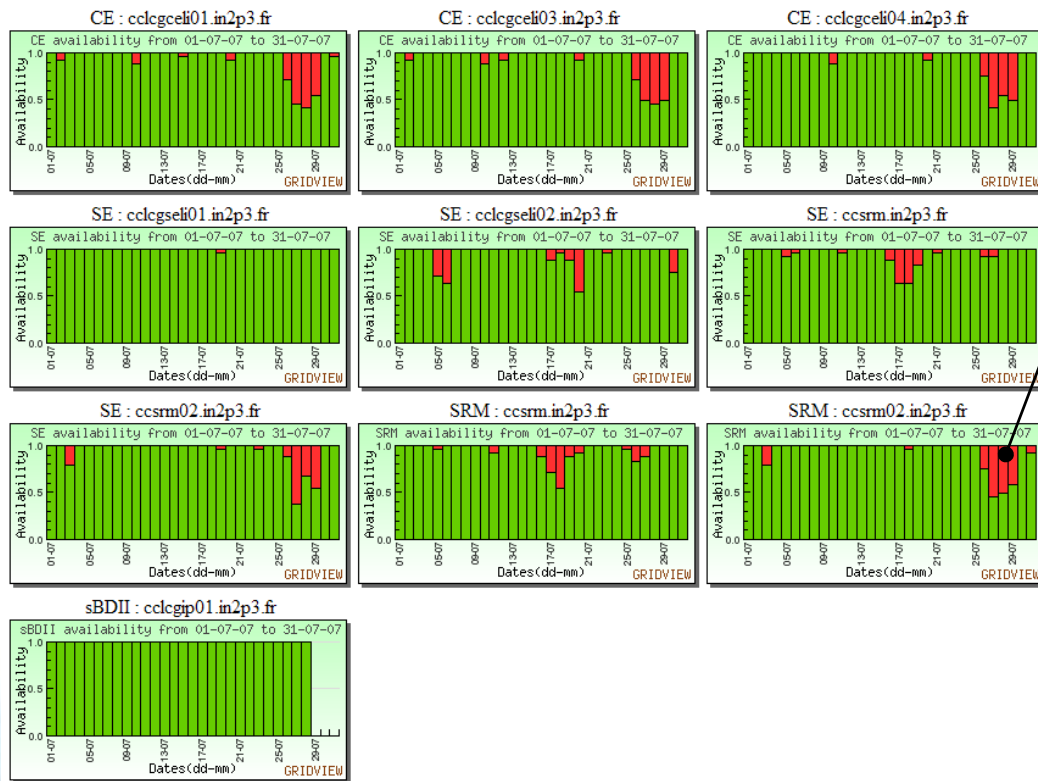
Disponibilité du site (2/5)



• Juillet 2007 (suite)

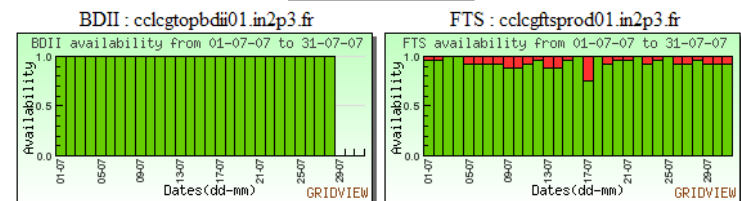
Service Instance Availability for site IN2PCC : Daily Report

Site Services



Est-ce un problème avec ccsrm02 qui affecte les tests sur tous les CEs?

Central Services



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

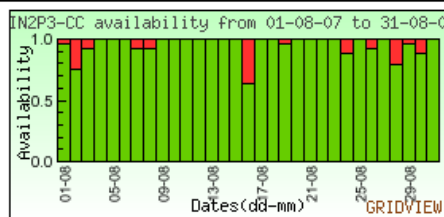
Disponibilité du site (3/5)



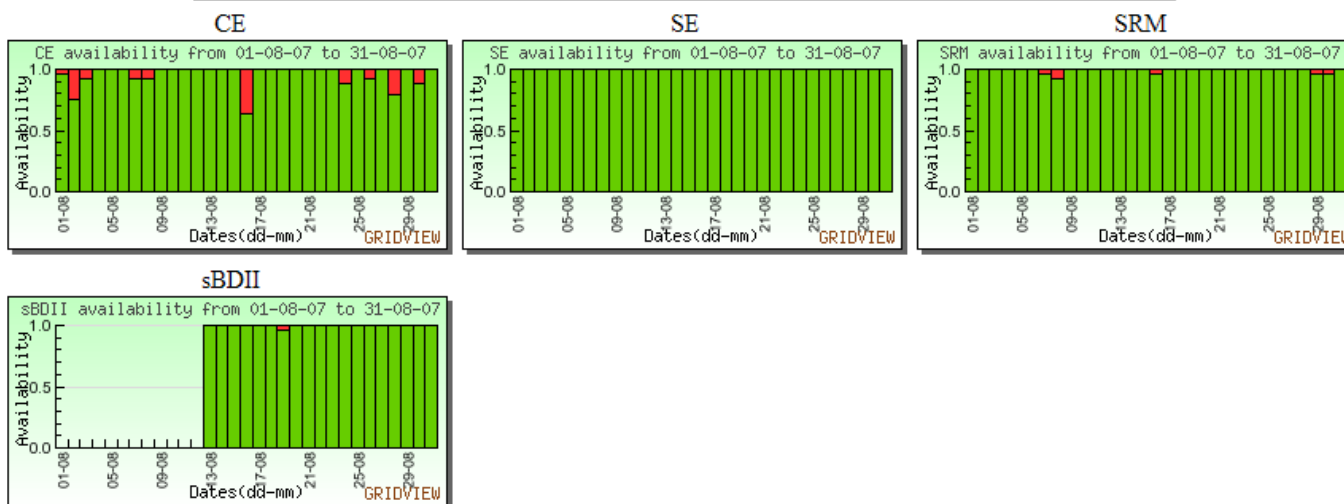
- Août 2007

Overall Service Availability for site IN2P3-CC : Daily Report

Score: 95%



Individual Service Availability for site IN2P3-CC : Daily Report



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

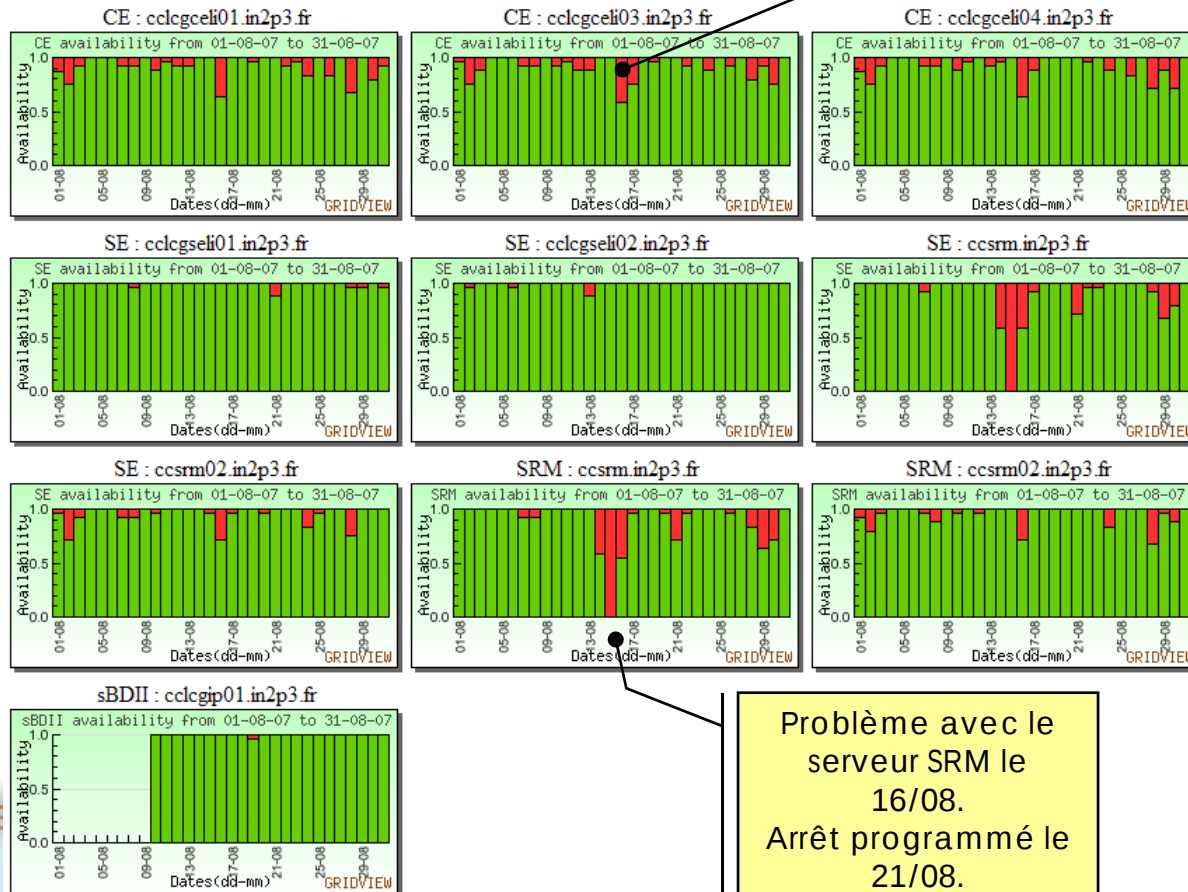
Disponibilité du site (4/5)



• Août 2007 (suite)

Service Instance Availability for site IN2P3-CC : Daily Report

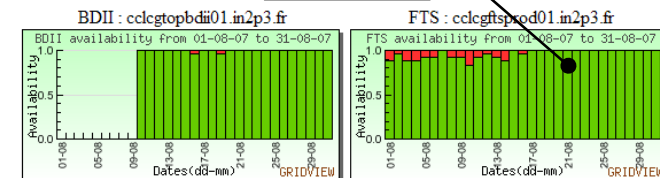
Site Services



Tous les CEs ont été impactés simultanément.
Notre configuration est-elle adaptée pour assurer la redondance?

Nettoyage régulier des bases de données FTS semble porter ses fruits

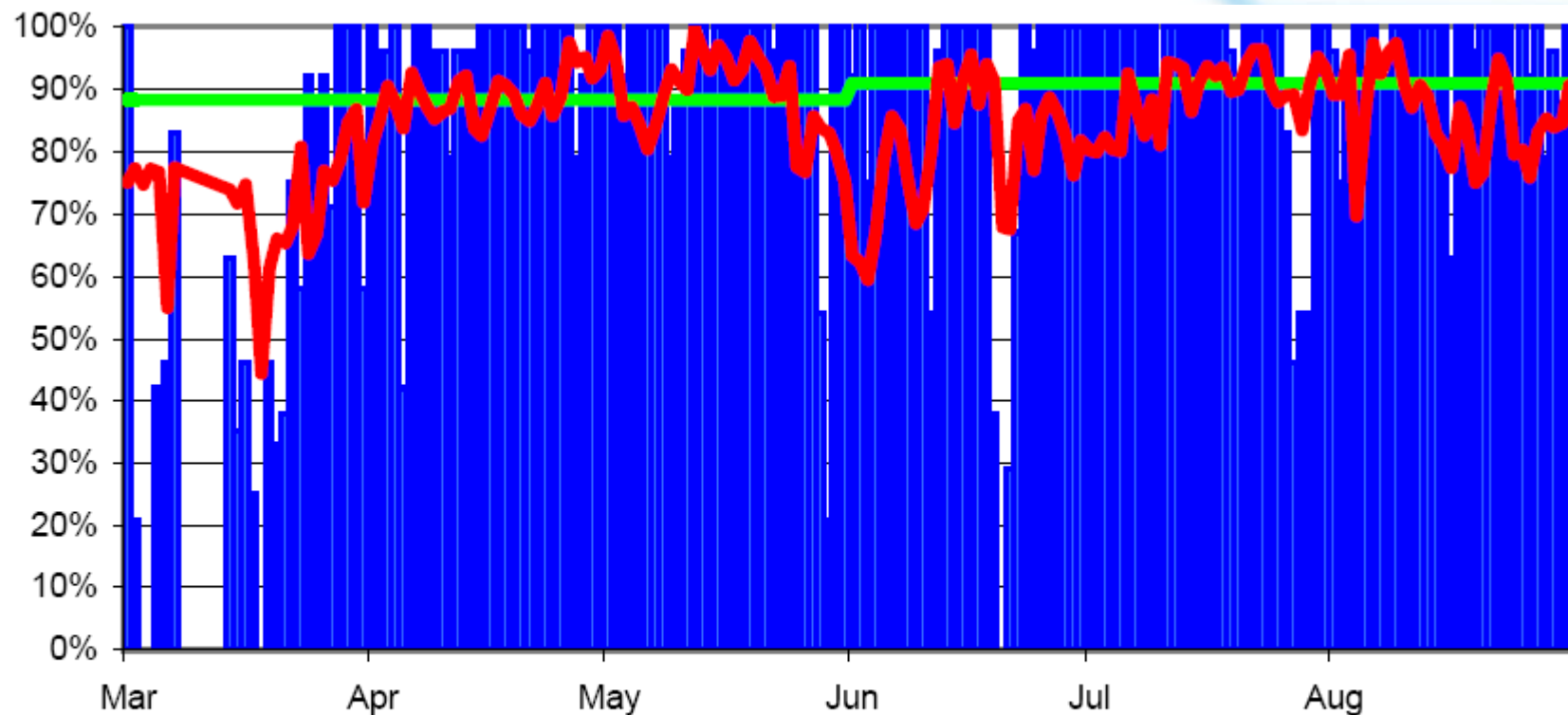
Central Services



Problème avec le serveur SRM le 16/08.
Arrêt programmé le 21/08.

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

Disponibilité du site (5/5)



IN2P3-CC

av.reliability last 3 mths 92%

Source: http://lcg.web.cern.ch/LCG/MB/availability/site_reliability.pdf

Le tier-1 au CC-IN2P3 vu par les VOs



- Tests spécifiques à chaque VO
 - Objectif: disposer d'un indicateur permettant de mesurer la disponibilité du site tel que perçue par les expériences LHC
 - Utilisent le framework SAM
- Résultats très disparates pour notre site
 - Exemple pour Août 2007
 - Alice: 40%
 - Atlas: 12%
 - CMS: 98%
 - LHCb: 94%
 - Source: http://lcg-sam.cern.ch:8080/reports/site_avail.xsql
 - Investigation en cours

- Agenda
 - <http://indico.cern.ch/conferenceOtherViews.py?view=cdsagenda&confId=17747>
- Sujets
 - Etat d'avancement de l'infrastructure réseau (LHCOPN) et du middleware

- FTS v2

**FTS 2.0: what**
Enabling Grids for E-science

- **Based on feedback from Amsterdam workshop**
- **Improved monitoring capabilities**
 - This is critical for the reliability of the 'overall transfer service'
- **Certificate delegation**
 - Security issue: No more MyProxy passphrase in the job
- **SRM 2.2 support**
- **Better database model**
 - Improved performance and scalability
- **Better administration tools**
 - Make it easier to run the service
- **Placeholders for the future functionality**
 - To minimise the service impact of future upgrades

EGEE-II INFOS-RI-031688

- Déploiement chez nous avant le début de CSA07 (24 sep).

- Nouveau node de monitoring: FTM

Informations pour un déploiement maximisant la disponibilité du service :

<https://twiki.cern.ch/twiki/bin/view/LCG/FtsServiceReview20>

- Middleware pour SL4



Enabling Grids for E-science

Summary

- **32bit SL4**
 - UI, WN in production
 - BDII 2 weeks to certification
 - Lcg-CE 3 weeks to certification
 - WMS ~ 2 months
 - CREAM ~ ?
 - VOBOX 1-2 months depending of priority (prototype)
 - DPM, LFC 3-4 weeks (internally tested)
 - FTS-2 October pilot, January T1s
- **64bit SL4**
 - Gfal + lcg-util internally tested ~ 2 months
 - DPM data movers ~ 3 weeks
 - DPM LFC ~ 1 - 2 months (first tests)
 - Others ~ ???

INFSO-RI-508833

SL4 Status and Plans 05/02/ 2007

10

• WMS & CE



Enabling Grids for E-science

CE: status

- The gLiteCE and CREAM passed the acceptance tests
 - gLite CE (GSI-enabled Condor-C) on SL3 (tests @CERN)
 - Implements the identity change with glxexec (called by BLAH)
 - Up to 8000 jobs in a day submitted with 40 users with no failures
 - <https://edms.cern.ch/document/863275/1>
 - CREAM on SL3 - Tests going on on SL4 now (tests @CNAF)
 - Uses the same BLAH of the gLite CE
 - > 90000 in 8 days with 50 users and 111 failures (LSF errors)
 - <https://edms.cern.ch/document/863276/1>
- LCG-CE has been ported to SL4 / VDT 1.6.0
 - GT4 pre-WS GRAM (tests @CERN)
 - Uses the globus call-out implemented in GT4 and the new LCAS/LCMAPS that was developed for the gLiteCE
 - Does not scale to the level of the acceptance tests
 - *ok for single user, but 21% success rate with 9000 jobs/day submitted by 15 users and high load on the machine*
 - <https://twiki.cern.ch/twiki/bin/view/LCG/LCGCETest>

Le JobManager BQS pour Globus v2, est-il compatible avec GT4 pre-WS?

- WMS & CE (suite)

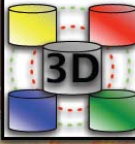


Enabling Grids for E-science

CE: next steps

- **Assuming that the project cannot support more than one CE in the long term, the TCG decided that:**
 - The first priority is to deploy the LCG-CE on SL4 as it is
 - On the PPS in early September, on the PS by end of September
 - Full develop CREAM and make it available on the production infrastructure
 - Certification by December, in production in February-March 2008
 - <https://twiki.cern.ch/twiki/bin/view/EGEE/CECheckList>
 - Sites supporting applications that use native globus interface for job submission will continue to deploy the LCG-CE
 - The development of a new node type that combines the LCG-CE and CREAM is in discussion and will be addressed after the release of CREAM in production
 - Ask VOs to switch to other supported interfaces
 - No effort will be spent on the gLite CE
 - We will continue to accept requirements on BLAH and glxexec from Condor that will be included in the RedHat and Fedora distributions
 - TCG: <https://twiki.cern.ch/twiki/bin/viewfile/EGEE/TCGHome?rev=1;filename=CE-proposal.doc>

- LCG 3D (réplication de bases de données)



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Tier 1 DB Scalability Tests

CERN IT Department

- Since spring year the experiments have started to evaluate/confirm also the (so far) estimated size of the server resources at Tier 1
 - number of DB nodes CPUs
 - memory, network and storage configuration
- Need realistic work-load which now becomes available as experiment s/w frameworks approach complete coverage of their detectors
- ATLAS conducted two larger tests with ATHENA jobs against IN2P3 (shared solaris server) and CNAF (Linux)
 - Total throughput of above 2500 jobs/h achieved with some 50 concurrent test jobs per Tier 1
- LHCb s/w framework integration done and scalability tests starting as well
 - Lower throughput requirements assumed than for ATLAS



LCG 3D Status Update - GDB - 5

50 jobs en
simultané, est-ce
suffisant?

• Déploiement de SRM v2.2



IN2P3 status



- Running dCache 1.8.0-14
- Separate pools for LHCb_RAW (5 TB) and LHCb_RDST (1 TB)
 - Not yet verified
- Configured for ATLAS (13 TB)
- Space tokens no longer coupled to name space subsets
- srmLs seen returning partial result
 - PNFS error in dCache logfile under investigation
- srmMv problem?

- SRM v2.2 (suite)



Rollout plan



- See <https://twiki.cern.ch/twiki/bin/view/LCG/GSSD>
- 2007/10/15 - 2007/11/30
 - Upgrade of FNAL or BNL and FZK production systems to dCache 1.8.0-N
 - If no showstoppers found in dteam or experiment testing
- 2007/11/30
 - Start upgrade of key T1 sites to new dCache and CASTOR versions
- 2007/10/15 – 2008/01/31
 - Upgrade of T2 sites using DPM or StoRM
- 2008/01/05 – 2008/01/31
 - Upgrade of all remaining T1 and T2 sites
- 2008/02/28
 - SRM v2.2 functional on all sites

Est-ce compatible
avec nos plans?

- Agenda
 - <http://indico.cern.ch/conferenceTimeTable.py?confId=3578>
- Encore beaucoup d'information à digérer

- Finaliser la validation de SL4 pour toutes expériences
 - Déployer les CE permettant de cibler les WNs en SL4 aussi pour le tier-1
 - Implémenter la répartition de ressources pour le tier-1 et tier-2 en accord avec nos engagements
- Finaliser la configuration de tous les services grid avec le niveau de redondance nécessaire
- Accounting
 - Utilisation des benchmarks communs à tous les sites
 - Séparation tier-1, tier-2 et AF
- Outils et procédures d'exploitation
 - Monitoring
 - Interface d'exploitation des services grid
- CREAM-compatible BQS-backed computing element

- Plate-forme de monitoring de services grid
- Activités récentes et à venir des expériences
- Prochaine réunion
 - 11 octobre 2007

► Questions/Commentaires

