



13/10/2010

LCG-France Tier-1 & AF

Réunion mensuelle de coordination

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dapnia
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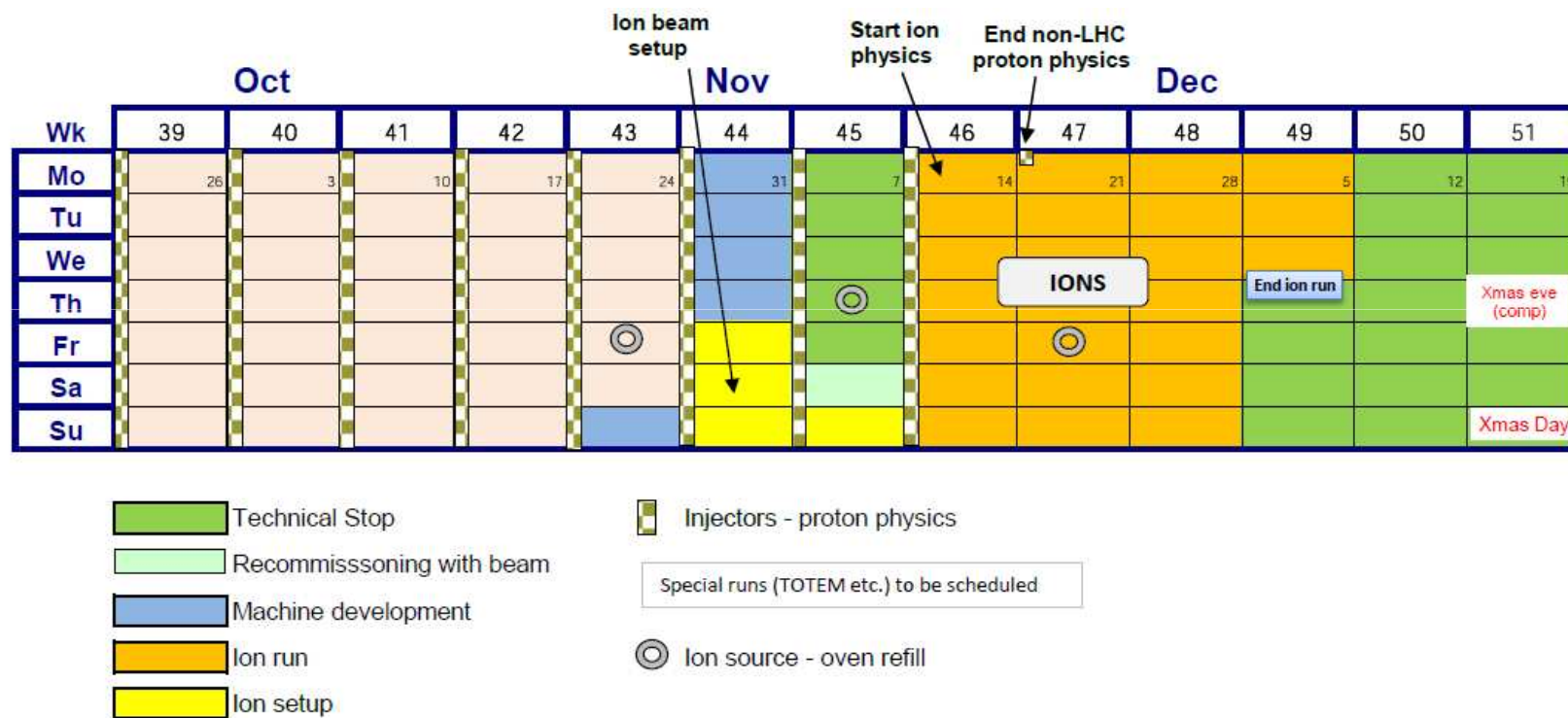
CNRS
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SCIENTIFIQUE



- Nouvelles de LCG
 - Planning LHC
 - Prochain arrêt du CC
 - CR du derniers GDB
 - Technical Evolution Groups
- Disponibilité du site
- Dossiers en cours
- Événements

Nouvelles de LCG

Planning du LHC



Planning du LHC



ML

2012 LHC Schedule

DRAFT!!!

14/9/2011

V0.4

	Jan				Feb				Mar				
Wk	52	1	2	3	4	5	6	7	8	9	10	11	12
Mo	25	2	9	16	23	30	6	13	20	27	5	12	19
Tu													
We						1-Feb							
Th		Technical stop								1-Mar			
Fr											Machine checkout		
Sa													
Su	1												

- Technical Stop
- Recommissioning with beam
- Machine development
- Ion run
- Ion setup

Special runs (TOTEM etc.) to be scheduled

Close ring

Re-commissioning with beam



Arrêts du CC



- <http://cc.in2p3.fr/Arrets-de-production>

- **6 décembre 2011**

- 1 jour avant l'arrêt du LHC

- **7 février 2012**

- Update/Upgrade de dCache possible

CR du dernier GDB

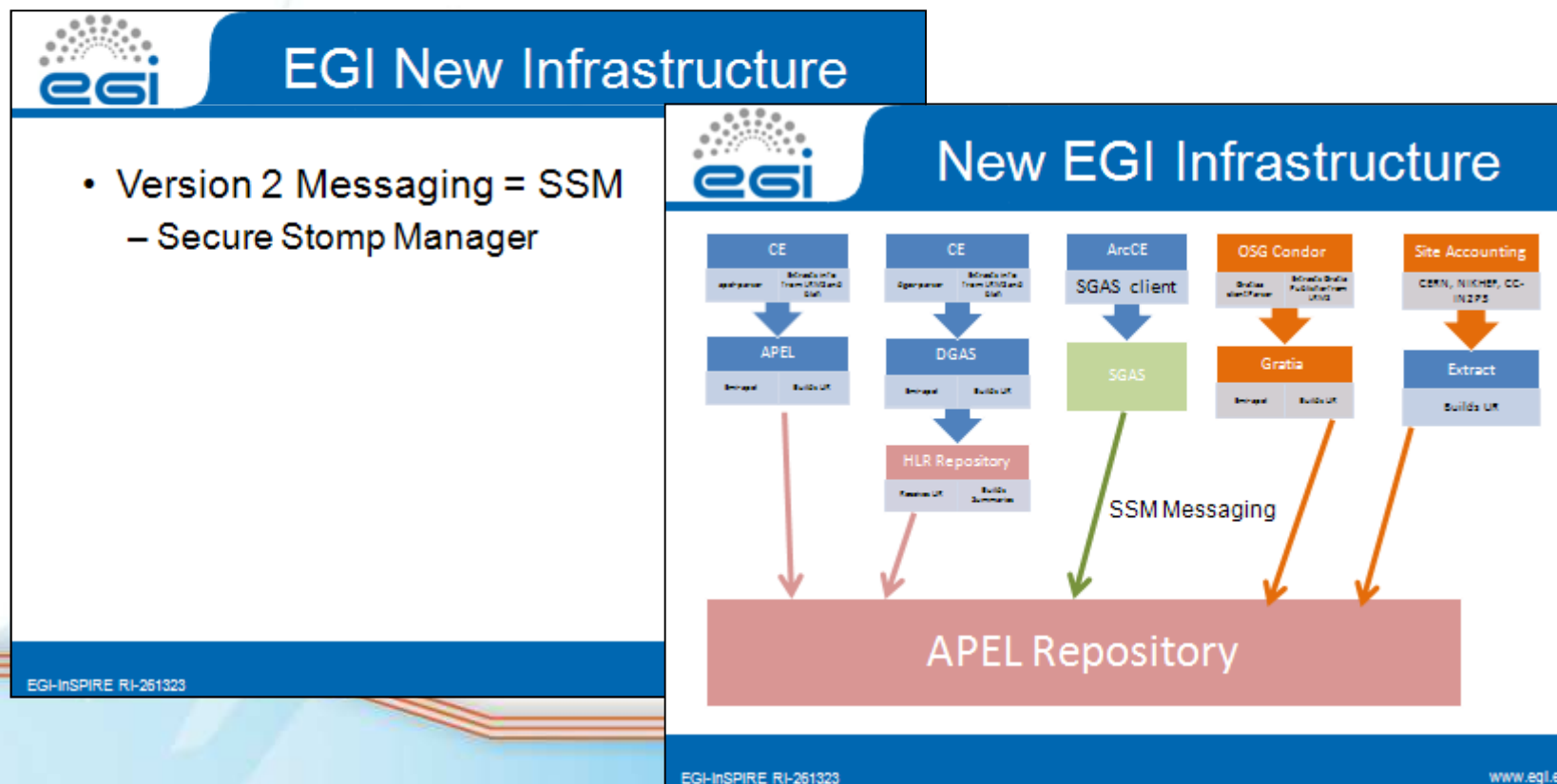


Accounting



■ EGI New Infrastructure

- <http://indico.cern.ch/materialDisplay.py?sessionId=4&materialId=1&confId=106650>





Accounting



■ EGI New Infrastructure

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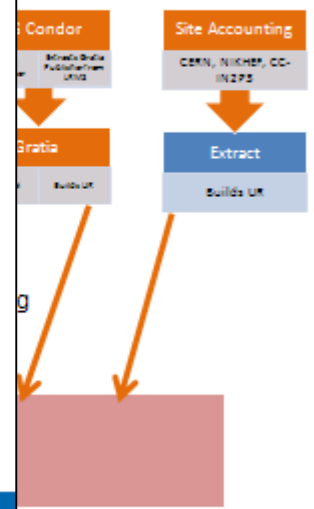
Storage

- Version 2 Me
 - Secure Stor
- StAR – Storage Accounting Record
 - From EMI Data Group to OGF
 - Not yet compatible with the WLCG Installed Capacity use case.
- EMI Storage Services will gather data to populate StAR (dCache, dpm, StoRM)
- What then?
 - Wotk with them to publish UR into the infrastructure
- Evangelise to other storage products (Castor, EOS, BestMan)
- EMI aiming for 2013 release but should be widespread testing before then.

EGI-InSPIRE RI-261323

www.egi.eu

Infrastructure



```
graph TD; Condor[Condor] --> Gratia[Gratia]; SiteAccounting[Site Accounting] --> Extract[Extract]; Gratia --> Central[ ]; Extract --> Central; Central --> RedBox[ ]
```

9



Middleware/Glite



- Maria Alandes Pradillo (CERN)
 - <http://indico.cern.ch/materialDisplay.py?contribId=4&sessionId=1&materialId=slides&confId=106650>



End of support for standard updates



- No more standard updates in gLite 3.1/3.2 since 31.10.2011
 - The following services will only have security updates support until April 2012:
 - gLite 3.2: glite-APEL, glite-ARGUS, glite-BDII_site, glite-BDII_top, glite-CLUSTER, glite-CREAM, glite-GLEXEC_wn, glite-LB, glite-LSF_utils, glite-MPI_utils, glite-SCAS, glite-SE_dcache_info, glite-SE_dcache_nameserver_chimera, glite-SE_dcache_pool, glite-SE_dcache_srm, glite-SGE_utils, glite-TORQUE_client, glite-TORQUE_server, glite-TORQUE_utils, glite-UI, glite-VOBOX, glite-VOMS_mysql, glite-VOMS_oracle, glite-WN.
 - glite 3.1: glite-CLUSTER, glite-LSF_utils, glite-SGE_utils, glite-TORQUE_utils, glite-WMS and lcg-CE.
 - User support is still provided for all services.

Middleware Update - M. Alandes Pradillo

Middleware/EMI



- Doina Cristina Aiftimiei (INFN)
 - <http://indico.cern.ch/materialDisplay.py?contribId=3&sessionId=1&materialId=slides&confId=106650>

EMI 1 Updates – General Links

- EMI 1 planned products updates
 - http://bit.ly/all_active_tasks
- Near/next Update
 - <http://bit.ly/EMI1UpdatesReady>
- EMI 1 products releases under preparation
 - <http://bit.ly/EMI1UpdatesOpen>

17/11/2011 WLCG ODS, 9th November 2011

Next Updates

- Emergency Release:
 - APEL publisher [v. 3.2.8](#)
 - Security Vulnerability – [RT #504](#)
- Major Release:
 - CREAM (S)GE module [v. 1.0.0](#)
 - together with Revision Release of BLAH, v. [1.16.3](#)
 - Both certified
 - Under testing in few volunteer sites (details in next slide)

17/11/2011 WLCG ODS, 9th November 2011

Status of CREAM SGE Support

- SGE support in CREAM finalised
- Internal certification finished on 07/11
- Currently being validated by a number of WLCG sites to avoid unnecessary delays after official release
 - LIP, Imperial College (confirmed)
 - NGI-Fr and QMUL (available, but TBC)
- As soon as external tests are finished, will be available from the EMI production repository

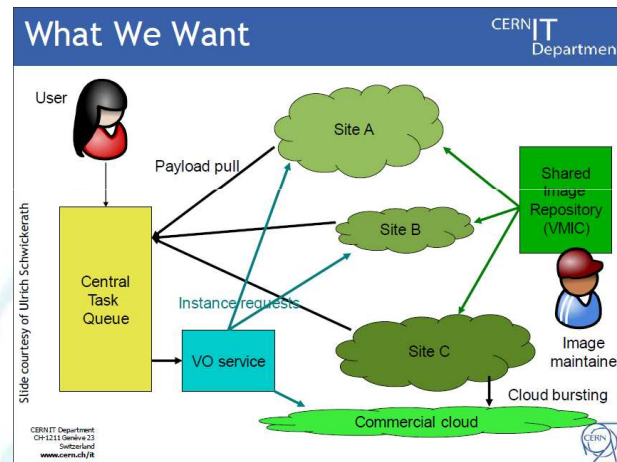
17/11/2011 WLCG ODS, 9th November 2011

?



■ Virtualisation (Tony Cass)

- <http://indico.cern.ch/materialDisplay.py?contribId=2&sessionId=2&materialId=slides&confId=106650>



■ CPU benchmarking (Helge Meinhard)

- <http://indico.cern.ch/getFile.py/access?contribId=1&sessionId=2&resId=2&materialId=slides&confId=106650>

Conclusion:

HS06 no longer very accurate, but probably “good enough”

- *Better carry on with it as defined rather than introducing a new benchmark now or (even worse) re-define existing one*

Technical Evolution Groups



GDB du 09/11/2011



- <http://indico.cern.ch/conferenceDisplay.py?confId=106650>



Today

- Technical Evolution Groups
- Accounting
- Middleware
 - Staged Rollout
- HEPiX
 - Benchmarking
 - Virtualisation

WLCG
Worldwide LHC Computing Grid

LCG

Science & Technology
Facilities Council

GDB



WARNING WARNING WARNING...



Disk pledges

- **Floods in Thailand are seriously affecting disk availability and price**
 - Costs already risen by 25-30%
 - http://www.channelregister.co.uk2011/11/03/disk_drive_prices_may_double/
 - Problem is likely to be long-lasting: 6-9 months?
- **Affecting ongoing procurements at CERN and several (all?) Tier 1s, and presumably at Tier 2s**
 - Can affect both disk server and CPU server procurements...
- **Risk/likelihood:**
 - 2012 disk installation may be very(?) late, and potentially reduced wrt pledges
 - Situation still evolving ... but not clear how it will get better very soon
- **Experiments need to be prepared for this situation...**





LCG CE / CREAM SGE



LCG-CE/CREAM

- Sites no longer required to run an LCG-CE.
- Proposed removing from Availability calculation in October
 - Provided ACE worked OK (it did)
 - But reliable CREAM for SGE not yet rolled out
- MB discussed yesterday and decided to wait longer for the anticipated release of CREAM for SGE.
 - News this afternoon

WLCG
Worldwide LHC Computing Grid



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GDB



TEG Workload Management



The WM TEG

- Suggested scope (from the TEG WG document v3):
 - Pilots and frameworks
 - CE's – what is needed from them?
 - WMS? Required
 - Clouds
 - Virtualization
 - Security model (MUPJs etc.)
 - Whole node scheduling
 - How to ask for / use GPUs etc.
 - How to make use of parallelism
 - Information services
 - What is still the requirement for non-private IP for the WN's?
- Deliverables:
 - An assessment of the current situation, covering middleware, operation, support
 - A strategy document defining the needs, and a plan to satisfy these needs for the next 2 to 5 years



TEG Workload Management



Organization

- Mailing list, wlcg-teg-workload-mgmt@cern.ch
 - 33 people currently subscribed; representation from experiments, EMI, EGI and about 10 sites; still missing reps from some T1s, though (e.g. IN2P3, NL, RAL)
 - Contact Torre/Davide if interested to join (you can also self-subscribe to the list)
- Indico page, <https://indico.cern.ch/categoryDisplay.py?categId=3768>
- Wiki page, <https://twiki.cern.ch/twiki/bin/view/LCG/WorkloadManagementTechnicalEvolution>
- Cross-participation to our meetings from other TEGs is encouraged
 - We will also try to be present at other TEG meetings



TEG Data Management



The E stands for Evolution

- We should not start by collecting bug reports or feature requests for existing systems
- We should rather step back and look at main concepts behind recent strategy changes/additions on the experiment side?
 - Eg Data placement and Federation
- Which concepts allow to implement Storage Federation?
 - What are the implicit assumptions: eg namespace congruence, read-only files
 - Upcoming Federation workshop in Lyon will help TEG to collect input
- How and where can new technology come in and which of our “special needs” is preventing this today?
 - Clustered file systems at smaller sites
 - but we need SRM for disk?
 - Cloud storage
 - but we need a global namespace?



The Es

- We should not start by existing systems
- We should rather step strategy changes/addi
 - Eg Data placement a
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 - but we need SRM f
 - Cloud storage
 - but we need a glob

DM Model and Evolution

- A few key questions to guide input collection
 - Is the archive<->disk split an agreed strategy?
 - In other words: can we drop HSM?
 - If yes, several simplifications can be done and benefits can be evaluated. Eg Why SRM for disk-only pools?
 - Do we see "naked" clustered file systems or cloud storage coming in during the reviewed time scale?
 - Can we take our abstract DM model and fill its conceptual boxes with technology options for a give class of sites?
 - Are the experiment data services prepared for this?
 - What role do we see for Federation vs Data Push?
 - Eg Federation is complementing Push at small sites (T>1) but Push is still required to maintain control
 - Eg Federation/Push is far better and will be the strategic target



TEG Operations



How we divided the work

- **WG1: Monitoring and Metrics**
 - Editors: Simone Campana and Pepe Flix
 - Contributors: Costin Grigoras, Andrea Sciaba, Alessandro Di Girolamo; (sites) Ian Collier, Xavier Espinal, Vera Hansper, Alexandre Lossent
 - WG1 Sub-Wiki: <https://twiki.cern.ch/twiki/bin/view/LCG/WLCGTegOperationsWG1>
- **WG2: Support tools + Underlying Services+ WLCG Operations**
 - Editors: Andrea Sciaba, Maria Dimou (support tools), Lionel Cons (underlying services) and Stefan Roiser (WLCG Operations)
 - Contributors: Simone Campana, Andrea Sciaba, Alessandro Di Girolamo, Joel Closier, Pepe Flix, John Gordon, Alison Packer; (sites) Alexandre Lossent, Xavier Espinal
 - WG2 Sub-Wiki: <https://twiki.cern.ch/twiki/bin/view/LCG/WLCGTegOperationsWG2>
- **WG3: Application Software Management**
 - Editor: Stefan Roiser
 - Contributions: Marco Cattaneo, Steve Traylen; (sites) Ian Collier, Alexandre Lossent, Alessandra Forti
- **WG4: Operational Requirements on Middleware**
 - Editors: Maarten Litmaath, Tiziana Ferrari
 - Contributors: Maria Dimou, Laurence Field; (sites) Alexandre Lossent, Jeff Templon, Vera Hansper, Anthony Tiradani, Paolo Veronesi
- **WG5: Middleware Configuration, Deployment and Distribution**
 - Editors: Oliver Keeble, Rob Quick
 - Contributors: Cristina Aifitimi, Simone Campana, ; (sites) Ian Collier, Alexandre Lossent, Pablo Fernandez, Felix Lee
- Horizontal Representation from OSG (R.Quick), EGI (T. Ferrari), and EMI (C. Aifitimi, L. Field)





TEG Operations



How we divided the work

Where we are headed

- “Provocative Question”: how can we reduce the manpower needed for “operations” to zero?
- Starting point: ask three related questions
 - What works well?
 - What are the three main problems?
 - Where could we save the most manpower?
- These questions were asked to each TEG member for each sub-area.





TEG Operations



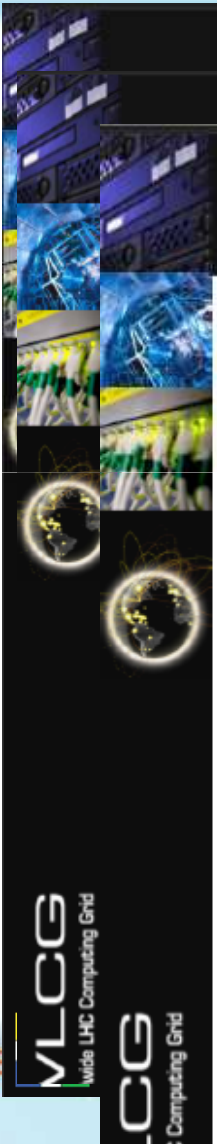
How we divided the work

What we have achieved

Issues (from MB)

- The membership of the group – e.g. missing stakeholders? Site representation is thin, only 5 of 10 listed on the wiki have responded.
- Other issues? It is a huge amount of work, we are thankful for the help of the subgroup editors, we will do our best to deliver within the stated time frame.

Input still welcome, but hurry ... Nov 28th is less than three weeks away!!!!





Participation du CC



- RAPPEL: description des TEGs sur le wiki LCG France
 - <http://lcg.in2p3.fr/wiki/index.php/TEG>
- TEG Storage
 - Yvan Calas
 - Loïc Tortay
 - Fabio Hernandez
- TEG Data Management
 - Jean-Yves ?
 - Qq'un HSM (HPSS) ?
- TEG Workload Management
 - Qq'un du groupe système pour les aspects cloud/whole nodes ?
- TEG Operations
 - Qq'un des opérations du CC ?
- TEG Databases
 - Un DBA du CC ?

Résultats du site

OPS/Octobre 2011



- http://gvdev.cern.ch/GRIDVIEW/downloads/Reports/201110/wlwg/Tier1_Summary_Oct2011.pdf

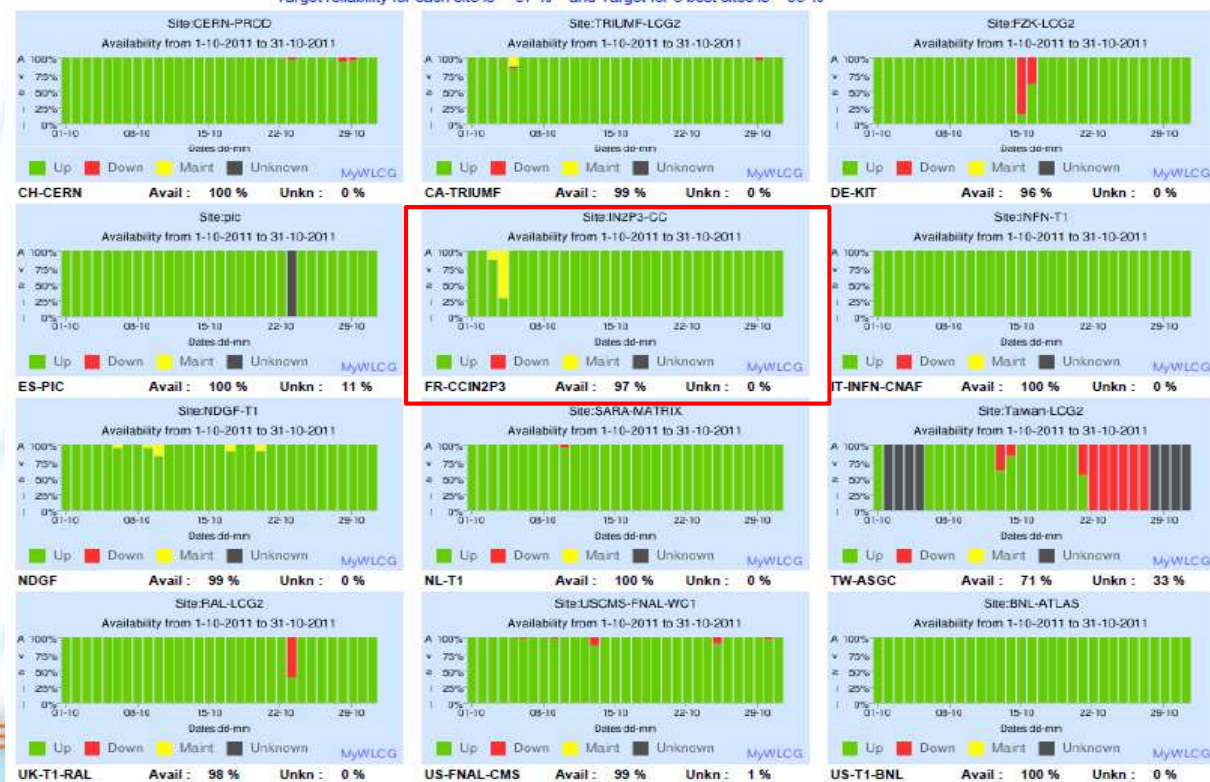


Availability of WLCG Tier-1 Sites + CERN for ops (WLCG_CREAM_LCGCE_CRITICAL)

Data from Nagios and ACE

October 2011

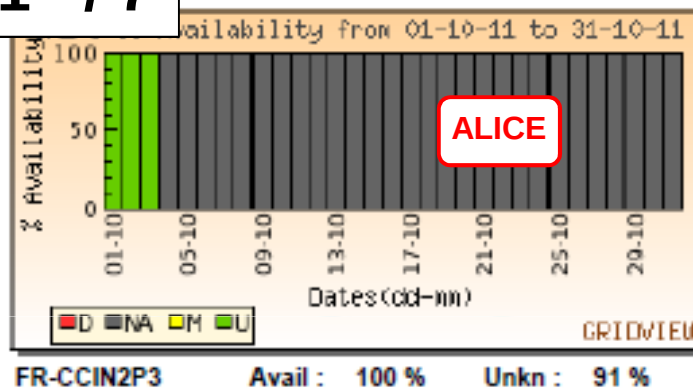
Availability is calculated as uptime / (total_time - time_status_was_UNKNOWN)
Target reliability for each site is 97 % and Target for 8 best sites is 98 %



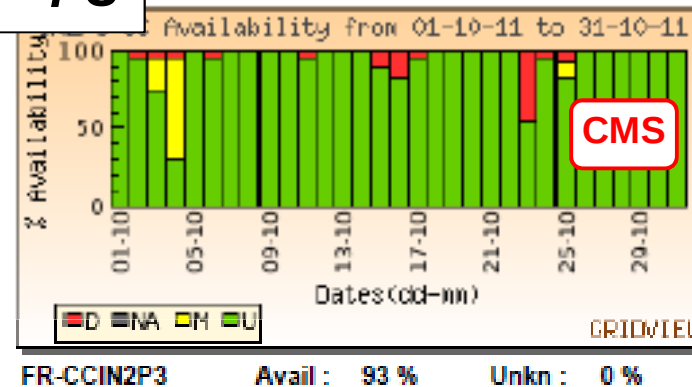
Disponibilités des VOs pour septembre 2011



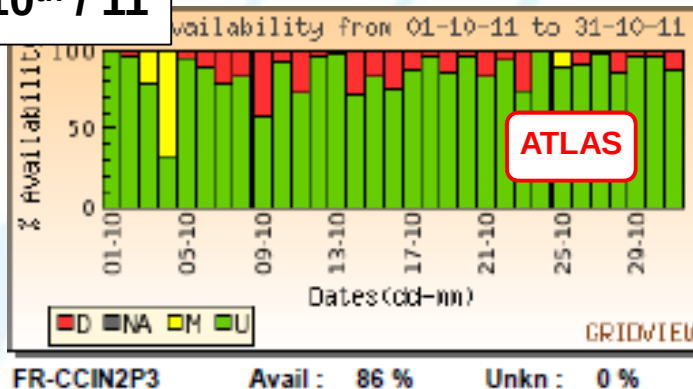
1st / 7



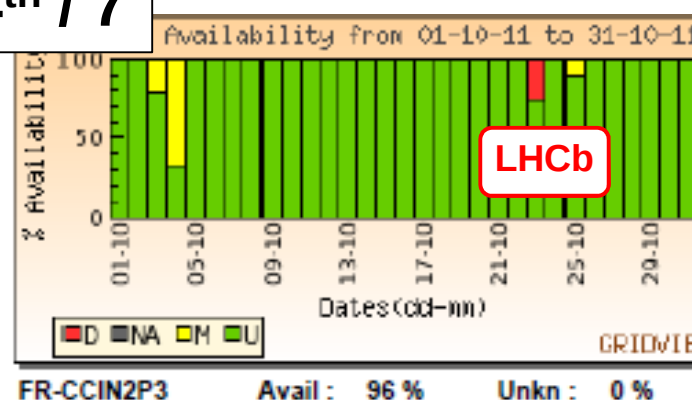
7th / 8



10th / 11



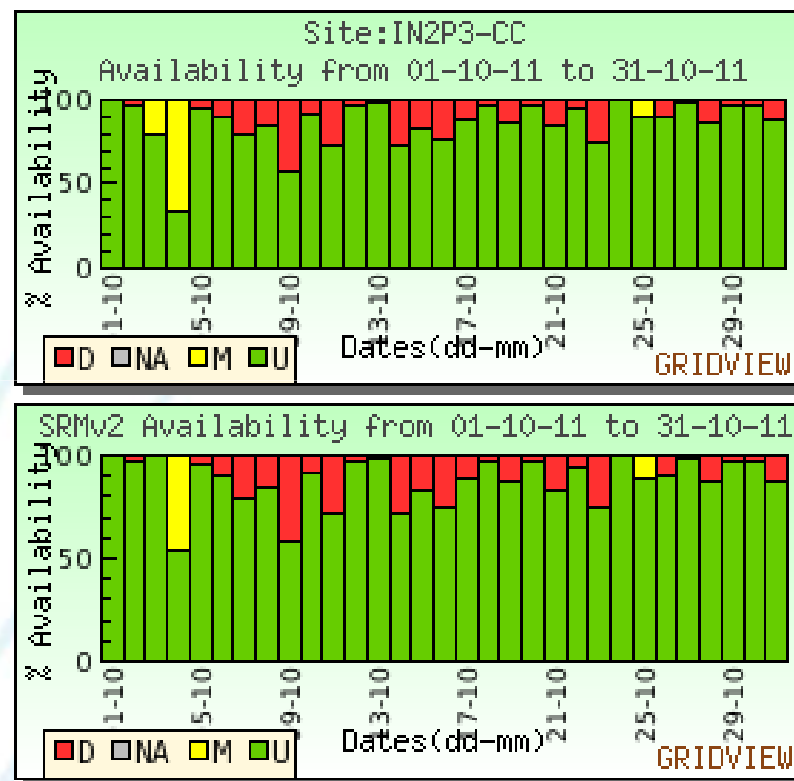
4th / 7



OK!!



Détails de la disponibilité d'Atlas



**“Get timeout”
probablement à cause
des tranferts lents. Pb
de réseau en cours
d’investigations.**

Dossiers en cours



Chantiers en cours



- Arrêt de BQS le 6/12
- CEs
 - Decommissionning des CEs BQS
 - Plus de LCG CEs pour les VOs LHC
 - Plus de CREAM BQS pour le T2
 - Arrêt du dernier CREAM BQS du T1 le vendredi 25/11/2011
 - Les pledges CPUs seront assurés sur GE à cette date.
 - 2 CREAM GE par site pour les 4 VOs LHC
 - Récente mise à jour avec le dernier “patch” officialisé
 - Pb du statut des jobs résolu ? (à vérifier)
 - Proposition de donner l'accès au support à l'historique des jobs des CREAM
 - Fonctionnalité du CREAM
 - Christelle a fourni un exemple à Ghita et Emmanouil
 - Feedback ????

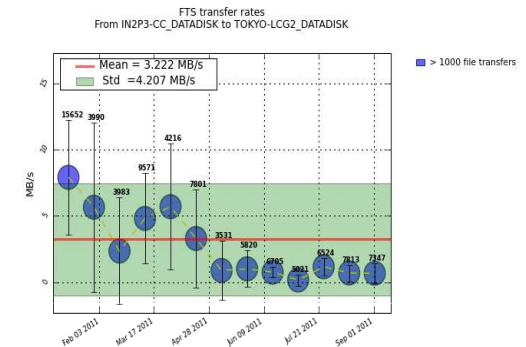


Chantiers en cours



■ Problèmes réseaux

- Avec les sites étrangers qui ne sont pas sur LHCOPN
- Impact sur ATLAS et CMS
 - https://ggus.eu/ws/ticket_info.php?ticket=75983
 - https://ggus.eu/ws/ticket_info.php?ticket=75919
 - https://ggus.eu/ws/ticket_info.php?ticket=75397
 - https://ggus.eu/ws/ticket_info.php?ticket=74268
 - https://ggus.eu/ws/ticket_info.php?ticket=71864
- Procédure WLCG nous désigne comme responsable du suivi de l'incident
 - Telecom suit l'affaire
 - Plusieurs problèmes détectés avec RENATER





Chantiers en cours



- “Whole node” job
 - CMS et maintenant ATLAS
 - Mise en place de workers dédiés en production
 - 5 workers 8 coeurs normaux
 - 5 workers 8 coeurs virtuels
 - 1 CREAM de test
 - cccreamceli01.in2p3.fr
 - A finaliser
 - Wiki à mettre en place ?



■ Partial Downtime Management

- Ex: downtime sur dCache, impact sur les jobs.
- https://twiki.cern.ch/twiki/bin/view/LCG/WLCGTier1ServiceCoordinationMinutes111103#Partial_Downtime_Management

■ Prochaine T1/AF

- Avenir de la LAF
- Point sur les Pledges 2011



Evénements



- En cours/A venir
 - SC11, Seattle, 14-17 November
 - Workshop "Creating Federated Data Stores For the LHC", CCIN2P3, 21-22 novembre
 - LCG France, CCIN2P3, 30/11 et 01/12
 - EGI Information Services Workshop 1 December
 - LHCONe Meeting, Amsterdam, 1-2 December
 - ISGC, Taipei, 26 February - 2 March 2012
 - EGI User Forum, Munich, 19-23 March
 - WLCG Workshop, NYC, 19-20th May 2012
 - CHEP2012, NYC, 21-25th May 2012