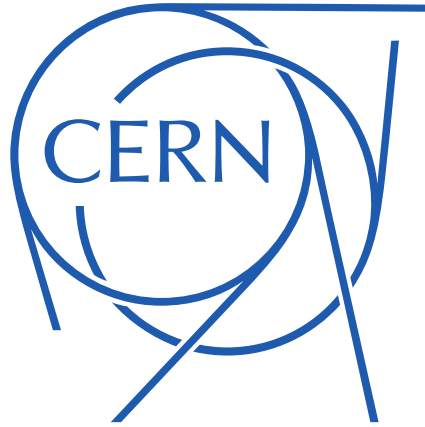




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# Status of WLCG Tier-0

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Grid Deployment Board  
12 June 2013



# Outline

- Agile Infrastructure (AI)
- Facilities
- SL6 migration
- Services

# Agile Infrastructure (1)

- (Almost) moved from development project to production services
  - VM provisioning (Openstack) in IT-OIS
  - Configuration management (Puppet etc.) in IT-PES
  - Monitoring infrastructure in IT-CF
- Lot of work to improve scalability and stability

# Agile Infrastructure (2)

- VM provisioning: 'Ibex' based on Openstack Folsom
  - Providing 'cattle' style of machines
- Upgrade to Openstack Grizzly on-going
  - EC2 interface to general user end June
  - Service level:  
<https://cern.ch/information-technology/book/cern-cloud-infrastructure-user-guide/service-levels>
  - Large deployment at Wigner imminent
- Strong involvement with Openstack development and governance

# Agile Infrastructure (3)

- Investigating CEPH and Owncloud

# Facilities (1)

- Wigner (Budapest)
  - Procedure for VAT exemption finally sorted out
  - Official inauguration tomorrow (13-Jun-2013)
  - 2 x 100 Gbits/s links operational, but less stable than hoped for; LAN ready
  - Equipment installed and running: 80 x 4 dual-CPU compute nodes, 80 SAS boxes (24 x 3 TB) with one head node each; awaiting Grizzly deployment

# Facilities (2)

- Barn of building 513
  - Officially inaugurated on 07-May-2013
  - Aim is to house (almost) all “critical” equipment
  - Servers and storage installed, services moving over
- Building 513
  - Spring: fire in an ancillary basement room
    - Significant smoke damage (being cleaned)
    - Physics equipment without UPS for some weeks



# SL6 Migration

- Procedure for lxplus.cern.ch alias change planned, discussed and agreed previously
- Alias was changed on 06-May-2013, following agreed procedure
- Batch capacity provided as virtual worker nodes on additional hypervisors – 15% level
- Technical issues addressed, either solved or being followed up
  - Sssd crashes preventing logins
  - Virtual worker nodes not perfectly stable

# Services (1)

- WMS: Successfully upgraded entirely to EMI-3 running under SLC5 (production) and SLC6 (test)
- EMI cluster on EMI-3 level
- Numerous services in the process of upgrading to EMI-3
- FTS: Pilot service for FTS3 established
  - Preparing for roll-out in production
- VOMS: Preparing to test 3.0.1
  - Does it provide required functionality to phase out VOMRS?

# Services (2)

Service	Current Level	Comments
AFSUI	3.2	latest
APEL	SSM 0.10	Pilot user of new transmission format. Testing the just released SSM 2
ARGUS	EMI-2, EMI-3 (site and WLCG)	EMI-2 being phased out
BDII	EMI-2	Work ongoing for EMI-3 'puppetisation'
CE	EMI-2	Work ongoing for EMI-3 'puppetisation'
EMI Cluster	EMI-3	
FTS	FTS2 3.7.12	Setting up production FTS3
gLexec	Latest	Deployed and tested ok very early
LFC	1.8.6-1, EMI-2	'Puppetisation' done
MyProxy	EPEL	latest

# Services (3)

Service	Current Level	Comments
VOMRS	3.1	To be retired
VOMS	2.6.0, EMI-2	Preparing 3.0.1 testing
WMS	EMI-3	
WN	EMI-2	EMI-3 tested, issues reported
Castor	2.1.13-9	
SRM	2.11	
EOS	0.2.29	
Xrootd	3.2.7	
BeStMan2	2.2.2	

# Services (4)

- Batch services
  - Lots of work on all Ixbatch/Ixplus due to security vulnerabilities
  - Simplifying LSF setup – dedicated resources being removed
  - SLURM investigation continues
- Version control, issue tracking
  - Git service established, rather popular (231 projects)
  - Jira well received by community (117 projects)
- CERN Certification Authority
  - Instance supporting SHA-2 being tested

# Services (5)

- Databases: Oracle contract
  - Oracle/MySQL licence and support offer approved by Finance Committee; new contract from May 1<sup>st</sup>
    - Oracle “campus licence” for 2013-2018 with and defined cost for 2018-2023
    - All WLCG sites can use a bundle of Oracle packages (at no charge to them)
    - Significant cost to CERN...
      - Need to be better prepared for negotiations in 2018: create an inventory of database applications and estimate cost of migration to an alternative RDBMS (but no push to migrate before 2018)
- Databases: "Lost write" issue affecting various database services since last October traced to a bug in the NetApp servers
  - Contact Ruben Gaspar or Eric Grancher if needed

# Comments? Questions?



