WLCG Information System Status

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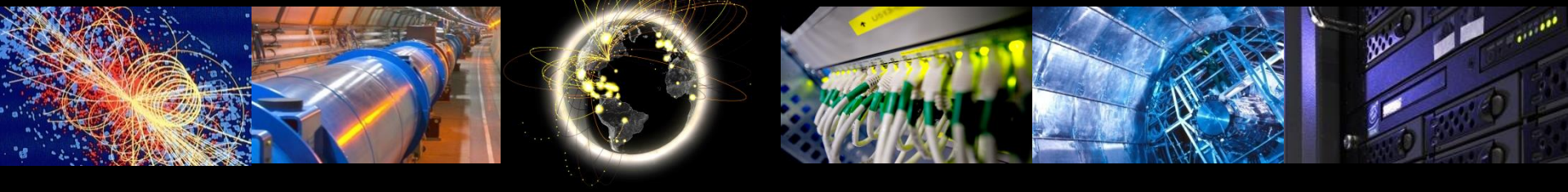


WLCG Worldwide LHC Computing Grid

Contents

- BDII development and support
- BDII and GLUE deployment
- GLUE 2 site validation
- GLUE 2 storage validation
- Summary

BDII development and support

BDII development

- Releases since the last GDB presentation (April 2014)
  - 3 releases in total
    - Last to be done officially in EMI in the next days
      - Mostly glue-validator fixes and minor fixes affecting
        - » glite-info-provider-service
        - » glue-schema
        - » bdii

http://gridinfo.web.cern.ch/sys-admins/bdii-releases

Ginfo development

- New BETA version of ginfo available for comments
  - /afs/cern.ch/user/i/icalvet/public/ginfo-1.9.0-1.el6.noarch.rpm
  - /afs/cern.ch/user/i/icalvet/public/ginfo_tutorial.txt
- This version provides similar functionality as lcg-info/lcg-infosites
- Please, give it a try and send your feedback to project-grid-info-support!

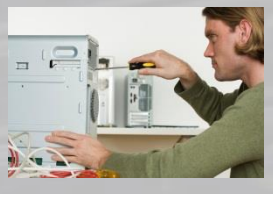
New GLUE 2.1

- Extension of GLUE 2 under discussion in the OGF GLUE WG
- The extension will contain new objects and attributes to better describe
  - Cloud resources
  - GPU resources
- Backwards compatible with GLUE 2.0
- New version of glue-schema package will have to be released and installed in the BDIIs
  - GLUE 2.1 expected to be approved by the end of the year
  - Deployment will be managed by EGI FedCloud for their cloud sites
    - WLCG has shown no interest on GLUE 2.1 for the time being, but eventually all BDIIs will be able to understand the new version of the schema and be able to discover Cloud and GPU resources

BDII user support

- Incident happened on 11.08 overloading CERN Top BDII with ldapsearch commands coming from a CMS user
  - https://ggus.eu/?mode=ticket_info&ticket_id=107621
- LDAP configuration now better tuned to deal with high loads
  - This will be the configuration by default in top BDIIs to be released in the next days (see previous slide)
- No other incidents reported in the last months

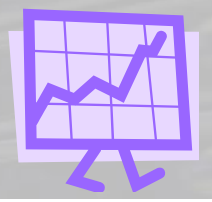
BDII maintenance effort



Site	Service Monitoring (Nagios/SAM)	BDII Upgrades	Incidents in the past year	OS/HW interventions	Adding/Removing service LDAP URLs from site BDII
CERN	Automated	None	User overloading the service	Running on VMs	Trivial (10 changes in 2014)
TRIUMF	Automated	Migration to EMI 3	None	Few minutes for kernel/OS upgrade	Trivial
NIKHEF	Automated	None	None	No major overhead	Trivial
PIC	Automated	Migration to EMI3 (easy)	None	Running on VMs	Trivial
RAL	Automated	None	None	No major overhead	Trivial
IN2P3	Automated	Migration to EMI 3	Users overloading the service	Running on VMs	Trivial
CNAF	Automates	None	None	No major overhead	Trivial
CIEMAT	Automated	None (grouped with other updates if needed)	None	Like any other services but very simple	Trivial
Manchester	Automated	None	Restarts needed to get rid of cached results	No major overhead	Trivial

BDII and GLUE deployment

BDII deployment status



- https://wlcg-mon/dashboard/request.py/siteview#currentView=BDII+deployment
  - All GOCDB + OSG sites
  - Stable number of site and top BDII endpoints

	5.2.10	5.2.12	5.2.17	5.2.20	5.2.21	5.2.22	Number of Endpoints
bdii_site	2	3	1	0	2	315	323
bdii_top	0	1	1	1	1	79	83

Cleaning SW tags

- 195000 SW tags published one year ago
  - Most of them belonging to ATLAS and CMS
  - After carrying out cleaning campaigns, number has been reduced to 6600 SW tags
    - These are still used by other VOs

	SW tags removed	Comments
ALICE	-	-
ATLAS	YES	All of them removed
CMS	YES	5 SW tags per site are still published
LHCb	YES	Except VO-lhcb-pilot

GLUE deployment status

- https://wlcg-mon.cern.ch/dashboard/request.py/siteview#currentView=Glue+Deployment
  - All GOCDB + OSG BDIIs

	GLUE1 DNs	GLUE1 Data Size	GLUE2 DNs	GLUE2 Data Size	GLUE1 Sites	GLUE2 Sites	GLUE1 Endpoints	GLUE2 Endpoints	GLUE1 Endpoint Types	GLUE2 Endpoint Types	GLUE2 Services	GLUE2 Service Types
lcg-bdii	57104	53MB	105073	99MB	369	325	3538	5018	30	56	1891	35

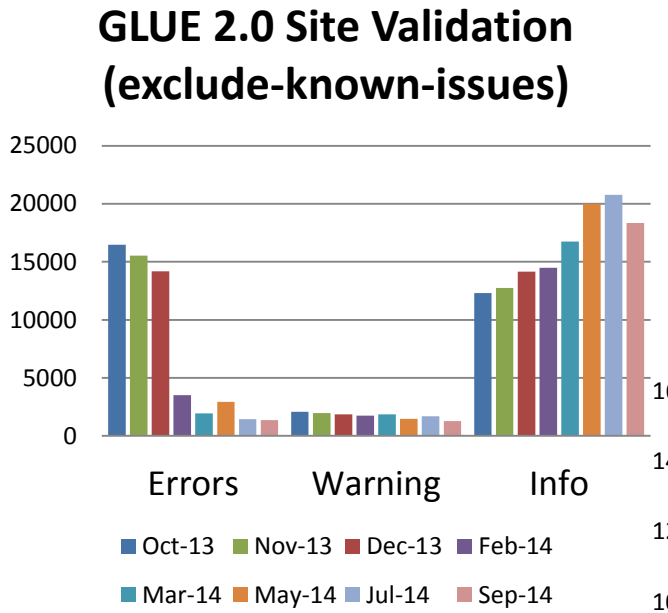
One year ago, only SW Tags were summing up 120 MB!

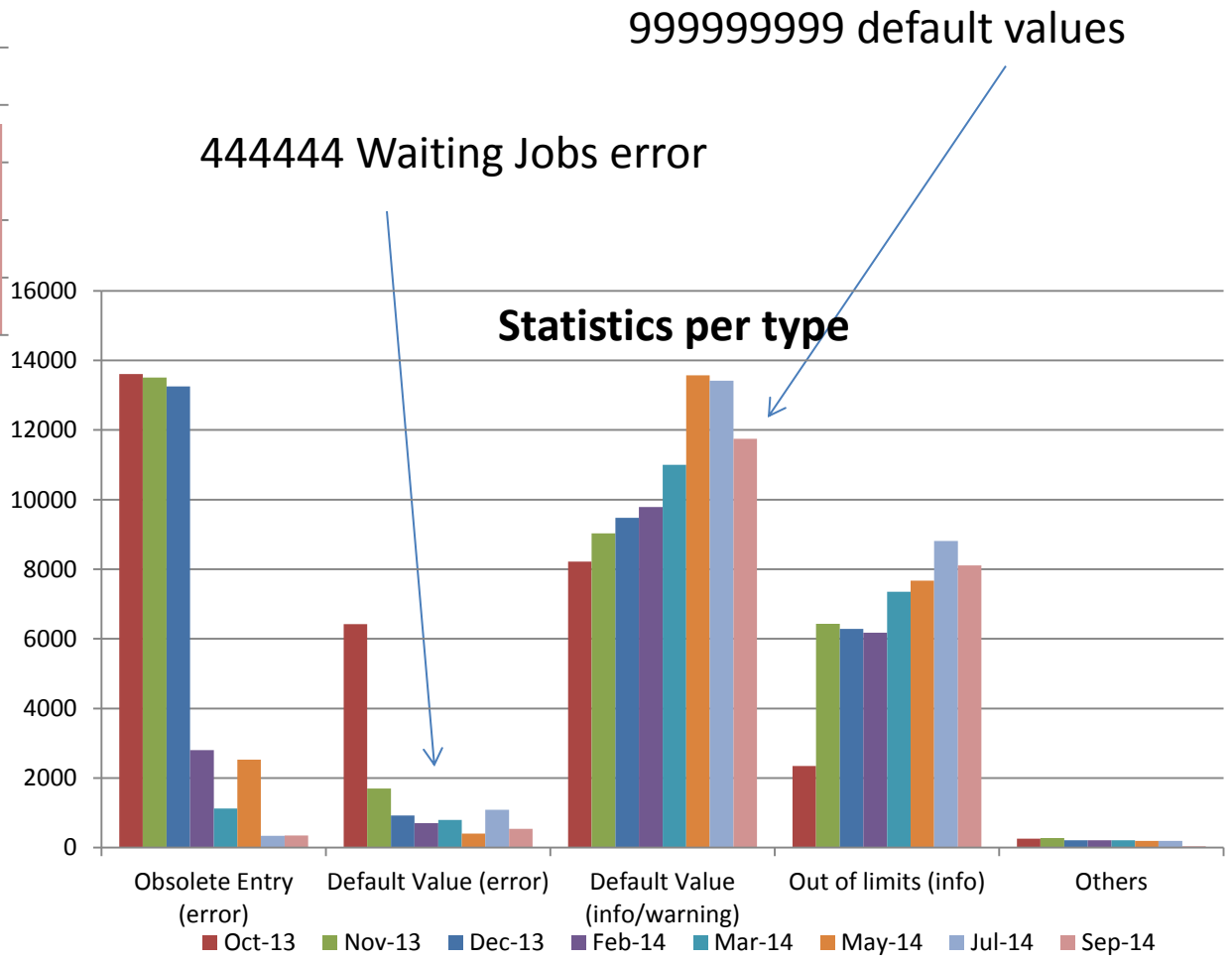
GLUE 2 site validation

GLUE 2 validation

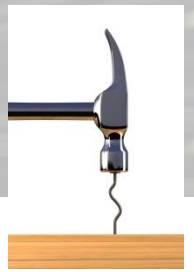
- GLUE 2 validation for WLCG
  - https://wlcg-mon.cern.ch/dashboard/request.py/siteview#currentView=Glue+Validator+WLCG
- EGI GLUE 2 validation
  - Uses glue-validator Nagios Probe and opens tickets to sites raising ERROR messages
  - https://midmon.egi.eu/nagios/cgi-bin/status.cgi?servicegroup=SERVICE_Site-BDII&style=detail
  - 301 tickets opened since mid March 2014, out of which 287 tickets have been solved
- New tests released in the last version which raise ERROR messages will have an impact on the sites

GLUE 2 validation statistics for WLCG





GLUE 2 fixes and site misconfigurations

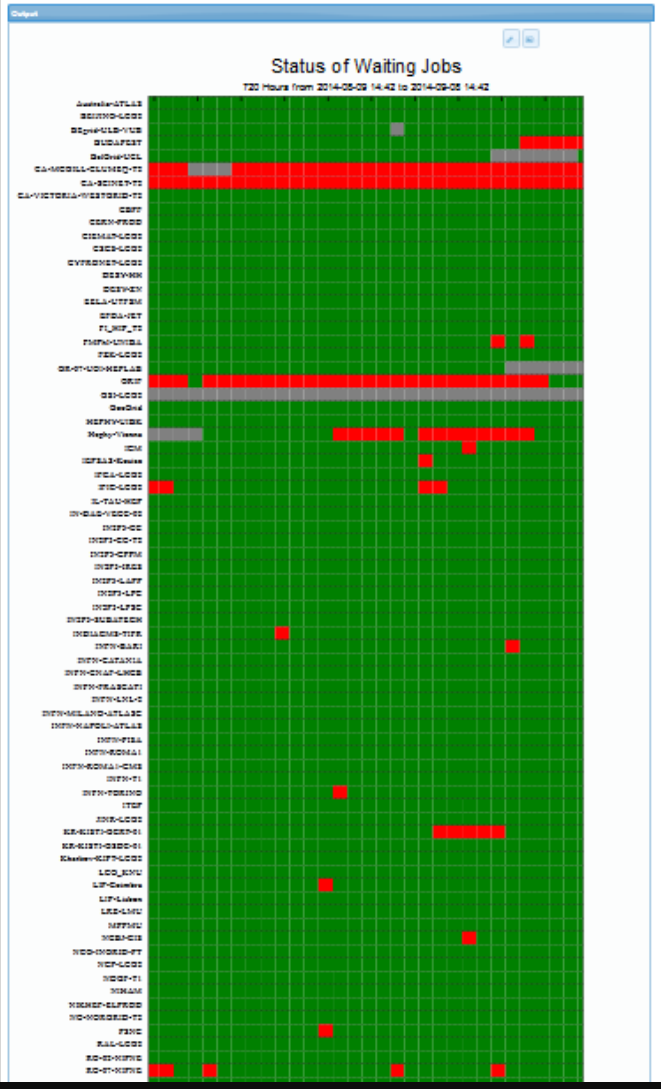


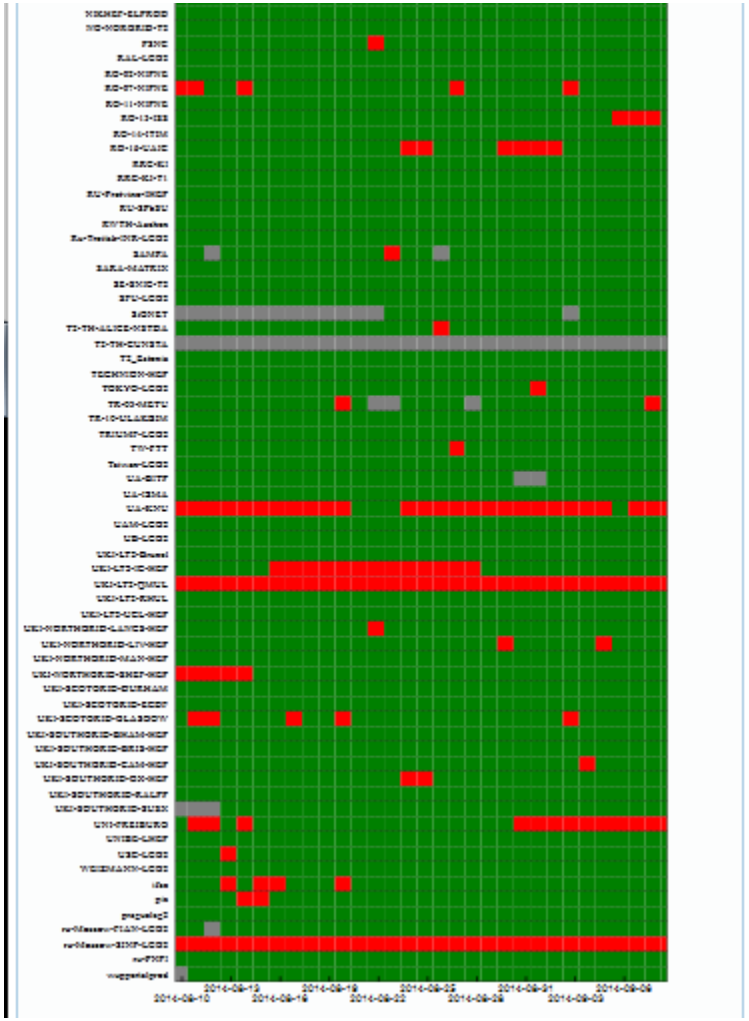
- Important GLUE 2 fixes have been released in July in EMI 3

  http://www.eu-emi.eu/releases/emi-3-monte-bianco/updates/-/asset_publisher/5Na8/content/update-18-07-07-2014-v-3-9-0-1

  - These fixes are related to batch system information providers
    - Some default values were still being published due to bugs in these information providers (GGUS 101157)
    - An improvement in the quality of these attributes has been observed
      - INFO and WARNING messages due to 999999 being published should disappear as now default values are different from undefined limits (GGUS 97721)
- 444444 errors related to site misconfigurations are still happening
  - Sites are strongly encouraged to check: https://wiki.egi.eu/wiki/Tools/Manuals/TS59

444444 Waiting Jobs in the last month



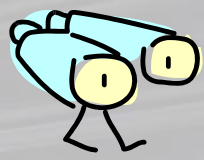


GLUE 2 validation open issues

- Automating GLUE 2 validation has been a great success
- However there are some sites who seem to be raising ERROR messages for long periods of time
  - Why aren't this fixed?
  - Need to follow up GGUS tickets a bit closely to understand how sites are fixing the reported problems

GLUE 2 storage validation

ATLAS SRM vs BDII



- Like LHCb, this is now monitored in the dashboard
  - http://wlcg-mon.cern.ch/dashboard/request.py/siteview#currentView=BDII+vs+SRM+ATLAS+Storage
  - It compares once per day BDII values with SRM values taken from http://bourricot.cern.ch/SLS/data/
  - Most space tokens are aligned in both SRM and BDII
    - Main inconsistencies due to known issues
    - This means Storage information published by the BDII is as reliable as the SRM information

Information Provider Fixes

- Storage Info Providers meeting held in May 2014
  - https://indico.cern.ch/event/316488/
  - Action items to follow up on storage inconsistencies published at sites
- CASTOR/EOS
  - GLUE 2 information published since August
- DPM
  - Issues detected and fixed
    - Both affecting storage capacity and GLUE 2 errors
    - Release containing these fixes expected in October
- StoRM
  - GLUE 2 errors fixed
  - Storage issues for Tape not fixed
    - In principle it only affects INFN-T1
- dCache
  - No major issues detected

GLUE Storage Monitoring

- http://wlcg-mon.cern.ch/dashboard/request.py/siteview#currentView=Storage+Deployment

Site Name	GLUE 1 Nearline Storage	GLUE 2 Nearline Storage	GLUE 1 Online Storage	GLUE 2 Online Storage	GLUE 1 storage instances	GLUE 2 storage instances	GLUE 1 storage sites	GLUE 2 storage sites	GLUE 2 Storage Endpoints
DPM	4.0	NA	49.32	47.26	203	202	177	182	907
StoRM	9.79	11.57	31.81	29.17	63	62	51	51	123
castor	111.7	94.67	22.56	NA	20	5	3	1	9
dCache	77.18	107.39	145.69	101.03	79	59	56	39	1124
eos	0.0	NA	0.0	0.0	1	5	1	1	9

(*) Capacities are in PB

Summary

- BDII service stable
  - Few releases with minor fixes and effort mainly going to glue-validator
- BDII information quality automatically validated and monitored
  - Still a few open issues to be followed up
  - Effectiveness of the validation to be better understood