



# GLUE 2.0 deployment: ensuring quality in the EGI/WLCG information system

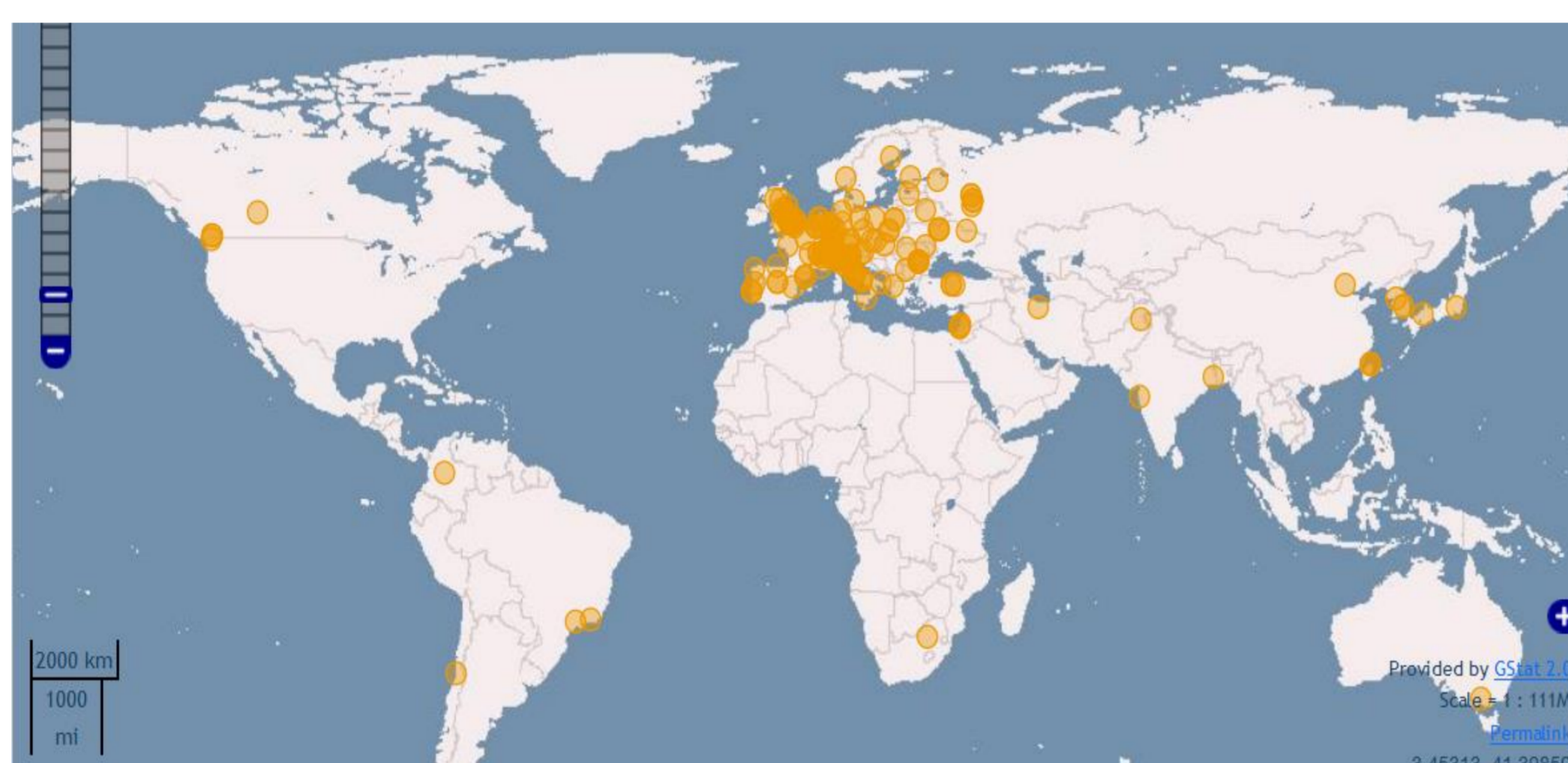


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The GLUE information model defines a common data structure to be used for grid resources monitoring and discovery. Version 2.0 of GLUE is now fully supported in the production EGI/WLCG information system. However, to make the schema usable and allow clients to rely on the information it is important that the meaning of the published information is clearly defined, and that information providers and site configurations are validated to ensure as far as possible that what they publish is correct.

## GLUE 2.0

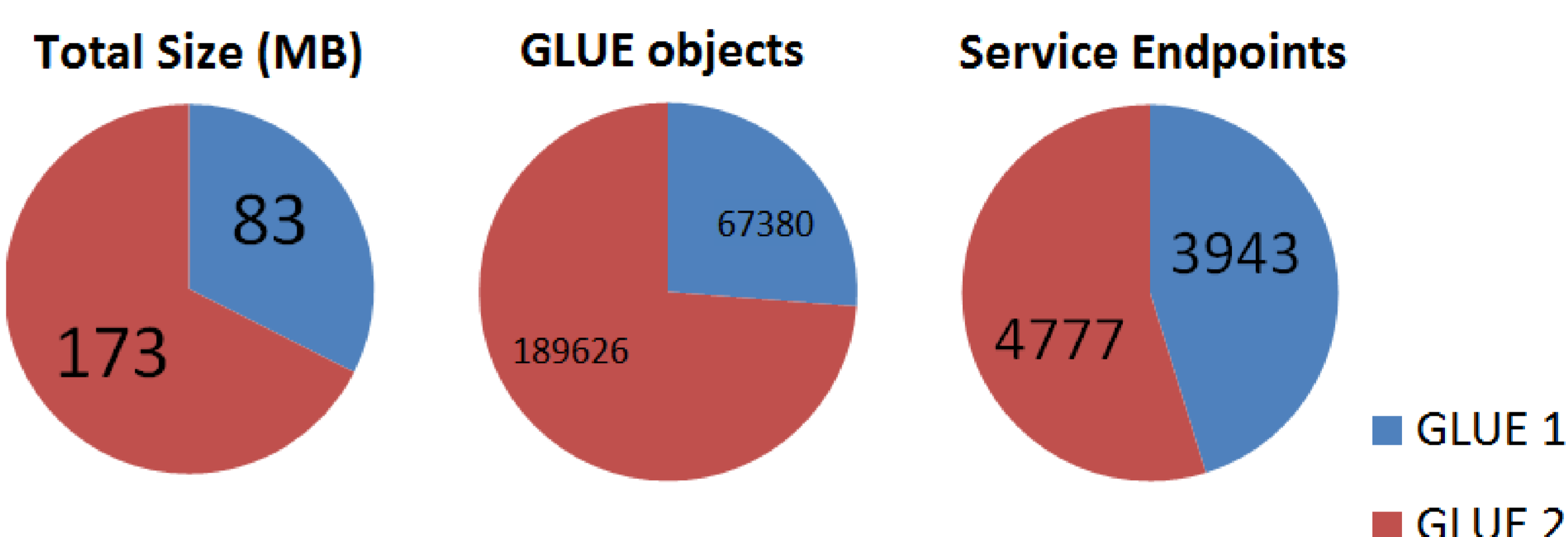
The original GLUE information model dates from 2002, when it was set up as an interoperability project between US and European grids. In 2007, building on five years of real-world experience, a new model was designed from scratch, with no requirement for backward compatibility. GLUE 2.0 is an OGF standard adopted by EGI, UNICORE and Globus.



More than 300 EGI sites are deploying GLUE 2.0, out of which 123 are also WLCG sites

## EGI Profile for GLUE 2.0

This document specifies how the GLUE 2.0 information model should be used in EGI. It gives detailed guidance on what should be published, how the information should be interpreted, what kinds of uses are likely and how the information may be validated to ensure accuracy.



## glue-validator

The glue-validator is a command line tool for system administrators and middleware developers who want to validate whether the information published by the site/service they are managing/developing is compliant with the GLUE model and the EGI profile. It is currently used in the EGI middleware certification process.

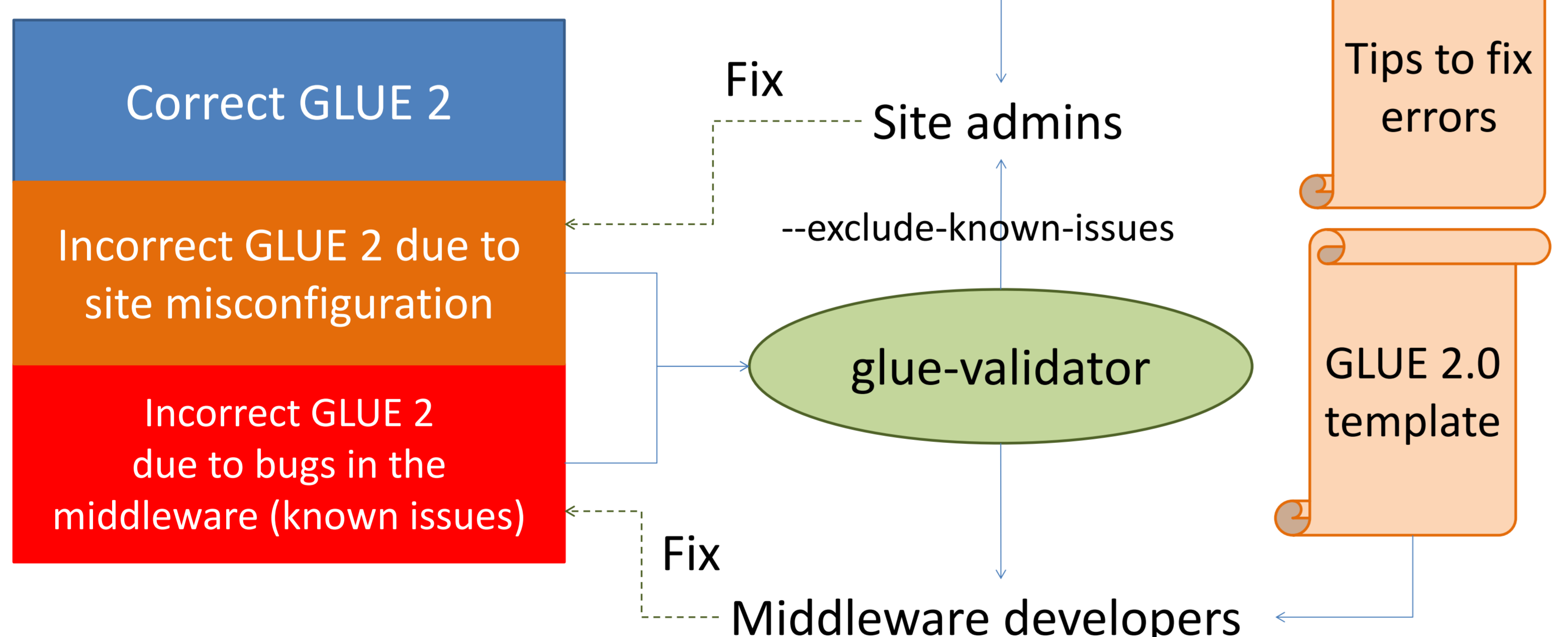
```
glue-validator -H hostname -p port -b ldap-binding
```

### Validator output

- Error:** Values that are definitely invalid and raise a critical error in Nagios.
- Warning:** Values that are likely, but not certain, to be wrong.
- Info:** Values that may be valid but that are unknown or seem wrong to the validation tool.

- Available in EMI, UMD and EPEL repositories
- 133 tests for 136 GLUE 2 attributes
- Detailed error message twiki with tips for site admins: 24 errors, 45 warnings and 97 info
- Online tutorial: <https://gridinfo.web.cern.ch/glue>

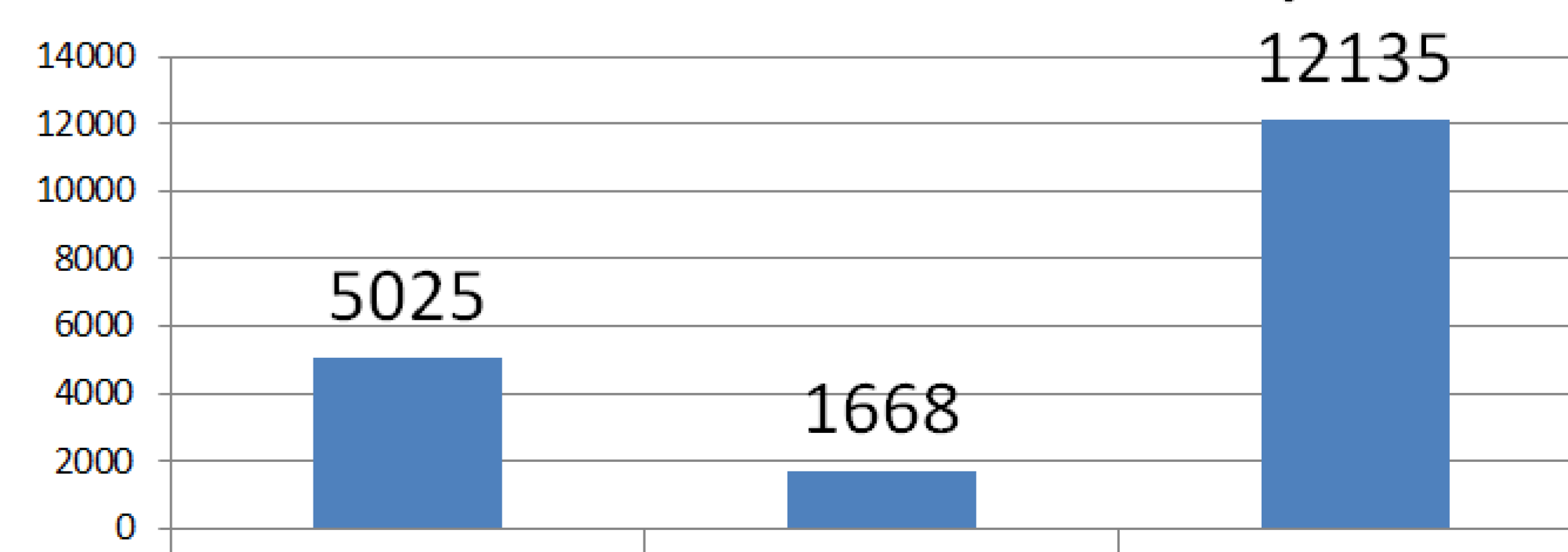
GLUE 2.0 site information



## Nagios Monitoring

Automation is needed to check the GLUE 2.0 publication of EGI/WLCG sites in a sustainable way. The glue-validator is integrated within the EGI Nagios monitoring infrastructure. Sites will get tickets to fix critical errors as soon as this is deployed in production. This is scheduled for November 2013 and is currently undergoing the final validation steps.

GLUE 2.0 site validation statistics Sep-13



Errors Warning Info

Statistics for WLCG sites publishing GLUE 2.0. Note that site statistics do not include known issues and are mostly related to batch system misconfigurations and values out of predefined limits as stated by the EGI profile.

cleopatra.zih.tu-dresden.de	org.bdii.GLUE2-Validate	OK	10-03-2013 14:46:04	37d 2h 50m 31s	1/2
cluster117.knu.ac.kr	org.bdii.GLUE2-Validate	OK	10-03-2013 15:04:47	29d 2h 40m 7s	1/2
cluster51.knu.ac.kr	org.bdii.GLUE2-Validate	OK	10-03-2013 14:47:41	29d 2h 48m 21s	1/2
cox01.grid.metu.edu.tr	org.bdii.GLUE2-Validate	OK	10-03-2013 14:36:08	37d 3h 8m 15s	1/2
cream-ce01.ariagni.hellasgrid.gr	org.bdii.GLUE2-Validate	OK	10-03-2013 14:29:03	12d 3h 6m 37s	1/2