

Table of Contents

gLite-CLUSTER 2.0.0-2 test report (EMI-3) - IGIRTC-139	1
Summary.....	1
Deployment tests.....	1
Clean Installation - PASSED.....	1
Update - PASSED.....	1
System tests.....	1
Basic functionality tests - PASSED.....	1
gridftp (when ARGUS is not used) - PASSED.....	1
VO tag dir test - PASSED.....	1
Resource BDII test PASSED.....	2
Standard compliance and conformance tests - PASSED.....	6

gLite-CLUSTER 2.0.0-2 test report (EMI-3) - IGIRTC-139

Summary

- Product: **Cluster 2.0.0-2**
- Release Task: Task #34054
- ETICS Subsystem Configuration Name:
- VCS Tag: e
- EMI Major Release: EMI 3 (MonteBianco)
- Platform: SL5/x86_64, SL6/x86_64
- Author:
- Testing report: * test_report.txt
- Certification report: cert_report.txt
- Date: 10 Feb. 2013
- Outcome: Certified

Deployment tests

Clean Installation - PASSED

- SL5/x86_64 - emi_cluster_install_sl5.txt
- SL6/x86_64 - emi_cluster_install_sl6.txt

Update - PASSED

- SL5/x86_64 - emi_cluster_update_sl5.rtf
- SL6/x86_64 - emi_cluster_update_sl6.txt

System tests

Basic functionality tests - PASSED

gridftp (when ARGUS is not used) - PASSED

- Successfully tried a gridftp towards the gLite cluster node.

```
-bash-4.1$ uberftp emi-demo15.cnaf.infn.it
220 emi-demo15.cnaf.infn.it GridFTP Server 6.16 (gcc64, 1352462503-83) [Globus Toolkit 5.2.2] rea
230 User dteam030 logged in.
```

VO tag dir test - PASSED

- Verified that under /opt/glite/var/info there is a directory for each subcluster, and verified that within each of these directories, there is a directory per VO which contains a file called .list.

For SL5:

```
[caifti@emitestbed33 ~]$ ls -lR /opt/glite/var/info
/opt/glite/var/info:
total 8
drwxr-xr-x 4 root root 4096 May  2  2012 sub1id
drwxr-xr-x 4 root root 4096 May  2  2012 sub2id
```

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```
/opt/glite/var/info/sublid:
total 8
drwxrwxr-x 2 dteamsgm001 dteamsgm 4096 May 2 2012 dteam
drwxrwxr-x 2 sgmtst01 sgmtesters 4096 May 2 2012 testers.eu-emi.eu

/opt/glite/var/info/sublid/dteam:
total 0
-rw-rw-r-- 1 dteamsgm001 dteamsgm 0 May 2 2012 dteam.list

/opt/glite/var/info/sublid/testers.eu-emi.eu:
total 0
-rw-rw-r-- 1 sgmtst01 sgmtesters 0 May 2 2012 testers.eu-emi.eu.list

/opt/glite/var/info/sub2id:
total 8
drwxrwxr-x 2 dteamsgm001 dteamsgm 4096 May 2 2012 dteam
drwxrwxr-x 2 sgmtst01 sgmtesters 4096 May 2 2012 testers.eu-emi.eu

/opt/glite/var/info/sub2id/dteam:
total 0
-rw-rw-r-- 1 dteamsgm001 dteamsgm 0 May 2 2012 dteam.list

/opt/glite/var/info/sub2id/testers.eu-emi.eu:
total 0
-rw-rw-r-- 1 sgmtst01 sgmtesters 0 May 2 2012 testers.eu-emi.eu.list
```

For SL5:

```
[caifti@emi-demo15 ~]$ ls -lR /opt/glite/var/info
/opt/glite/var/info:
total 8
drwxr-xr-x 4 root root 4096 May 3 2012 sublid
drwxr-xr-x 4 root root 4096 May 3 2012 sub2id

/opt/glite/var/info/sublid:
total 8
drwxrwxr-x 2 dteamsgm001 dteamsgm 4096 May 3 2012 dteam
drwxrwxr-x 2 sgmtst01 sgmtesters 4096 May 3 2012 testers.eu-emi.eu

/opt/glite/var/info/sublid/dteam:
total 0
-rw-rw-r-- 1 dteamsgm001 dteamsgm 0 May 3 2012 dteam.list

/opt/glite/var/info/sublid/testers.eu-emi.eu:
total 0
-rw-rw-r-- 1 sgmtst01 sgmtesters 0 May 3 2012 testers.eu-emi.eu.list

/opt/glite/var/info/sub2id:
total 8
drwxrwxr-x 2 dteamsgm001 dteamsgm 4096 May 3 2012 dteam
drwxrwxr-x 2 sgmtst01 sgmtesters 4096 May 3 2012 testers.eu-emi.eu

/opt/glite/var/info/sub2id/dteam:
total 0
-rw-rw-r-- 1 dteamsgm001 dteamsgm 0 May 3 2012 dteam.list

/opt/glite/var/info/sub2id/testers.eu-emi.eu:
total 0
-rw-rw-r-- 1 sgmtst01 sgmtesters 0 May 3 2012 testers.eu-emi.eu.list
```

Resource BDII test PASSED

- Verified that the resource BDII publishes glue 1 GlueCluster objectclasses (one for each cluster).

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```
-bash-4.1$ ldapsearch -h emi-demo15.cnaf.infn.it -x -p 2170 -b "o=grid" objectclass=GlueCluster
# extended LDIF
#
# LDAPv3
# base <o=grid> with scope subtree
# filter: objectclass=GlueCluster
# requesting: ALL
#
# cl2id, resource, grid
dn: GlueClusterUniqueID=cl2id,Mds-Vo-name=resource,o=grid
objectClass: GlueClusterTop
objectClass: GlueCluster
objectClass: GlueInformationService
objectClass: GlueKey
objectClass: GlueSchemaVersion
GlueClusterUniqueID: cl2id
GlueClusterService: emitestbed31.cnaf.infn.it:8443/cream-lsf-testers
GlueClusterService: emitestbed32.cnaf.infn.it:8443/cream-lsf-testers
GlueSchemaVersionMinor: 3
GlueForeignKey: GlueSiteUniqueID=INFN-CNAF-CREAMTEST
GlueForeignKey: GlueCEUniqueID=emitestbed31.cnaf.infn.it:8443/cream-lsf-tester
s
GlueForeignKey: GlueCEUniqueID=emitestbed32.cnaf.infn.it:8443/cream-lsf-tester
s
GlueSchemaVersionMajor: 1
GlueClusterName: cl2name
GlueInformationServiceURL: ldap://emi-demo15.cnaf.infn.it:2170/mds-vo-name=res
ource,o=grid

# cl1id, resource, grid
dn: GlueClusterUniqueID=cl1id,Mds-Vo-name=resource,o=grid
objectClass: GlueClusterTop
objectClass: GlueCluster
objectClass: GlueInformationService
objectClass: GlueKey
objectClass: GlueSchemaVersion
GlueClusterUniqueID: cl1id
GlueClusterService: emitestbed31.cnaf.infn.it:8443/cream-lsf-demo
GlueClusterService: emitestbed32.cnaf.infn.it:8443/cream-lsf-demo
GlueSchemaVersionMinor: 3
GlueForeignKey: GlueSiteUniqueID=INFN-CNAF-CREAMTEST
GlueForeignKey: GlueCEUniqueID=emitestbed31.cnaf.infn.it:8443/cream-lsf-demo
GlueForeignKey: GlueCEUniqueID=emitestbed32.cnaf.infn.it:8443/cream-lsf-demo
GlueSchemaVersionMajor: 1
GlueClusterName: cl1name
GlueInformationServiceURL: ldap://emi-demo15.cnaf.infn.it:2170/mds-vo-name=res
ource,o=grid

# search result
search: 2
result: 0 Success

# numResponses: 3
# numEntries: 2
```

- Verified that the resource BDII publishes glue 1 GlueSubCluster objectclasses (one per SubCluster).

```
# ldapsearch -h emi-demo15.cnaf.infn.it -x -p 2170 -b "o=grid" objectclass=GlueSubCluster
# extended LDIF
#
# LDAPv3
# base <o=grid> with scope subtree
# filter: objectclass=GlueSubCluster
# requesting: ALL
#
```

Resource BDII test PASSED

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```
# sub2id, cl2id, resource, grid
dn: GlueSubClusterUniqueID=sub2id,GlueClusterUniqueID=cl2id,Mds-Vo-name=resource,o=grid
GlueSubClusterName: sub2name
GlueHostOperatingSystemName: osname2
GlueHostOperatingSystemRelease: 2.0
GlueChunkKey: GlueClusterUniqueID=cl2id
GlueHostProcessorModel: m2
GlueHostArchitecturePlatformType: amd64
GlueHostBenchmarkSI00: 20
GlueHostMainMemoryVirtualSize: 200
GlueSubClusterPhysicalCPUs: 20
GlueHostBenchmarkSF00: 2
GlueHostNetworkAdapterInboundIP: FALSE
GlueSubClusterLogicalCPUs: 200
GlueSubClusterWNTmpDir: /tmp
GlueSchemaVersionMajor: 1
GlueSubClusterTmpDir: /tmp
GlueHostNetworkAdapterOutboundIP: TRUE
GlueHostOperatingSystemVersion: 20.0
GlueSchemaVersionMinor: 3
GlueHostProcessorClockSpeed: 200
GlueInformationServiceURL: ldap://emi-demo15.cnaf.infn.it:2170/mds-vo-name=resource,o=grid
objectClass: GlueClusterTop
objectClass: GlueSubCluster
objectClass: GlueHostApplicationSoftware
objectClass: GlueHostArchitecture
objectClass: GlueHostBenchmark
objectClass: GlueHostMainMemory
objectClass: GlueHostNetworkAdapter
objectClass: GlueHostOperatingSystem
objectClass: GlueHostProcessor
objectClass: GlueInformationService
objectClass: GlueKey
objectClass: GlueSchemaVersion
GlueHostMainMemoryRAMSize: 20
GlueHostApplicationSoftwareRunTimeEnvironment: rt1
GlueHostApplicationSoftwareRunTimeEnvironment: rt2
GlueHostProcessorOtherDescription: Cores=2
GlueSubClusterUniqueID: sub2id
GlueHostArchitectureSMPSize: 2
GlueHostProcessorVendor: v2

# sub1id, cl1id, resource, grid
dn: GlueSubClusterUniqueID=sub1id,GlueClusterUniqueID=cl1id,Mds-Vo-name=resource,o=grid
GlueSubClusterName: sub1name
GlueHostOperatingSystemName: osname1
GlueHostOperatingSystemRelease: 1.0
GlueChunkKey: GlueClusterUniqueID=cl1id
GlueHostProcessorModel: m1
GlueHostArchitecturePlatformType: i386
GlueHostBenchmarkSI00: 10
GlueHostMainMemoryVirtualSize: 100
GlueSubClusterPhysicalCPUs: 10
GlueHostBenchmarkSF00: 1
GlueHostNetworkAdapterInboundIP: FALSE
GlueSubClusterLogicalCPUs: 100
GlueSubClusterWNTmpDir: /tmp
GlueSchemaVersionMajor: 1
GlueSubClusterTmpDir: /tmp
GlueHostNetworkAdapterOutboundIP: FALSE
GlueHostOperatingSystemVersion: 10.0
GlueSchemaVersionMinor: 3
GlueHostProcessorClockSpeed: 100
```

Resource BDII test PASSED

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```
GlueInformationServiceURL: ldap://emi-demo15.cnaf.infn.it:2170/mds-vo-name=resource,o=grid
objectClass: GlueClusterTop
objectClass: GlueSubCluster
objectClass: GlueHostApplicationSoftware
objectClass: GlueHostArchitecture
objectClass: GlueHostBenchmark
objectClass: GlueHostMainMemory
objectClass: GlueHostNetworkAdapter
objectClass: GlueHostOperatingSystem
objectClass: GlueHostProcessor
objectClass: GlueInformationService
objectClass: GlueKey
objectClass: GlueSchemaVersion
GlueHostMainMemoryRAMSize: 10
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_1_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_1_1
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_2_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_3_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_3_1
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_4_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_5_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_6_0
GlueHostApplicationSoftwareRunTimeEnvironment: LCG-2_7_0
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_0_0
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_1_0
GlueHostApplicationSoftwareRunTimeEnvironment: R-GMA
GlueHostApplicationSoftwareRunTimeEnvironment: PADOVA
GlueHostApplicationSoftwareRunTimeEnvironment: SI00MeanPerCPU_870
GlueHostApplicationSoftwareRunTimeEnvironment: SF00MeanPerCPU_790
GlueHostApplicationSoftwareRunTimeEnvironment: MPICH
GlueHostApplicationSoftwareRunTimeEnvironment: MPI_HOME_NOTSHARED
GlueHostProcessorOtherDescription: Cores=1,Benchmark=100-HEP-SPEC06
GlueSubClusterUniqueID: sublid
GlueHostArchitectureSMPSize: 1
GlueHostProcessorVendor: v1

# search result
search: 2
result: 0 Success

# numResponses: 3
# numEntries: 2
```

- Verified that the resource BDII publishes one glue 2 GLUE2ComputingService objectclass.

```
$ ldapsearch -h emi-demo15.cnaf.infn.it -x -p 2170 -b "o=glue" objectclass=GLUE2ComputingService
# extended LDIF
#
# LDAPv3
# base <o=glue> with scope subtree
# filter: objectclass=GLUE2ComputingService
# requesting: ALL
#
# TestCluster, resource, glue
dn: GLUE2ServiceID=TestCluster,GLUE2GroupID=resource,o=glue
GLUE2ServiceType: org.glite.ce.CREAM
GLUE2ServiceID: TestCluster
objectClass: GLUE2Entity
objectClass: GLUE2Service
objectClass: GLUE2ComputingService
GLUE2EntityCreationTime: 2012-05-03T15:27:22Z
GLUE2ServiceQualityLevel: production
GLUE2EntityOtherInfo: InfoProviderName=glite-ce-glue2-computingservice-static
```

Resource BDII test PASSED

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```
GLUE2EntityOtherInfo: InfoProviderVersion=1.0
GLUE2EntityOtherInfo: InfoProviderHost=emi-demo15.cnaf.infn.it
GLUE2ServiceComplexity: endpointType=2, share=4, resource=2
GLUE2ServiceCapability: executionmanagement.jobexecution
GLUE2EntityName: Computing Service TestCluster
GLUE2ServiceAdminDomainForeignKey: EMI1-RC-INFN
```

```
# search result
search: 2
result: 0 Success
```

```
# numResponses: 2
# numEntries: 1
```

Standard compliance and conformance tests - PASSED

• Glue1 compliance

```
[caifti@emi-demo15 ~]$ glue-validator -h emi-demo15.cnaf.infn.it -p 2170 -b "o=grid" -t glue1
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
```

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```
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
```

Ran 60 tests in 0.008s

OK

• Glue2 compliance

```
[caifti@emi-demo15 ~]$ glue-validator -h emi-demo15.cnaf.infn.it -p 2170 -b "o=glue" -t glue2
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
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Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
```


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Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
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Validating data types. ... ok
Verifying that attributes are not empty. ... ok
Verifying the existence of mandatory attributes. ... ok
Verifying the object class ... ok
Verifying single-valued attributes only have one value. ... ok
Validating data types. ... ok
Verifying that attributes are not empty. ... ok

