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Notes about Installation and Configuration of User Interface (emi-ui profile, EMI-2 SL6)

- These notes are provided by site admins on a best effort base as a contribution to the IGI communities and **MUST not be considered as a substitute of the Official IGI documentation** .
- This document is addressed to site administrators responsible for middleware installation and configuration.
- The goal of this page is to provide some hints and examples on how to install and configure an IGI **User Interface (UI)** service based on EMI-2 middleware.

References

1. EMI-UI v. 2.0.0
2. About IGI - Italian Grid infrastructure
3. About IGI Release
4. IGI Official Installation and Configuration guide
5. Troubleshooting Guide for Operational Errors on EGI Sites
6. Grid Administration FAQs page

Recommendations

If the UI is used only by site administrators, hardware requirements are very basic:

- The service needs at least:
 - ◆ 1 cores
 - ◆ 2 GB RAM
 - ◆ 10 GB disk space.

A full virtualized machine based on KVM has been used in the following notes.

Service installation

O.S. and Repos

- Starts from a fresh installation of Scientific Linux release 6.3 x86_64 (or CentOS6)

```
# cat /etc/redhat-release
Scientific Linux release 6.3 (Carbon)
```

* Install the additional repositories: EPEL, Certification Authority, EMI-2

```
# yum install yum-priorities yum-protectbase epel-release
# rpm -ivh http://emisoft.web.cern.ch/emisoft/dist/EMI/2/sl6/x86_64/base/emi-release-2.0.0-1.sl6.
# cd /etc/yum.repos.d/
# wget http://repo-pd.italiangrid.it/mrepo/repos/egi-trustanchors.repo
```

- Be sure that SELINUX is disabled (or permissive). Details on how to disable SELINUX are here :

```
# getenforce
Disabled
```

yum install

- If S.O. repos are prioritized, install first `c-ares` from EMI repo with the following command (where `sl6x` is the name of S.O. repo):

```
yum install --disablerepo=sl6x c-ares
```

- Now you can proceed with the installation of `emi-ui` metapackage:

```
# yum clean all
# yum install -y ca-policy-egi-core emi-ui
# yum install openldap-clients glite-lb-client-progs perl-dpm perl-lfc dpm-devel lfc-devel
```

Service configuration

site-info.def

Copy the examples and customize them. There just two variables to customize in the `site-info.def`: `VOS` and `SITE_NAME`. The other variables **MUST** be left unchanged to use IGI Core services.

```
# cp -vr /opt/glite/yaim/examples/siteinfo/ /root/
# mv /root/siteinfo/ /root/igi-siteinfo/
# cat /root/igi-siteinfo/site-info.def
SITE_NAME=IGI-BOLOGNA
VOS="infngrid dteam comput-er.it gridit igi.italiangrid.it ops"
#####
#DEFAULT IGI (Italian Grid Infrastructure) CORE SERVICES#
# Please do not change them
#####
# Hostname of the top level BDII
BDII_HOST=egee-bdii.cnaf.infn.it
# Hostname of the PX
PX_HOST=myproxy.cnaf.infn.it
# Hostname of the WMS
WMS_HOST=wms-multi.grid.cnaf.infn.it
# FTS endpoint
FTS_SERVER_URL="https://fts.cr.cnaf.infn.it:8443/path/glite-data-transfer-fts"
```

vo.d directory

Create the `vo.d` directory and a file for each supported VO like in the following examples.

```
# mkdir -p /root/igi-siteinfo/vo.d
# cat /root/igi-siteinfo/vo.d/comput-er.it
VOMSES="'comput-er.it voms2.cnaf.infn.it 15007 /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms2.cnaf.infn.it
VOMS_CA_DN="'/C=IT/O=INFN/CN=INFN CA' '/C=IT/O=INFN/CN=INFN CA'"
# cat /root/igi-siteinfo/vo.d/dteam
VOMSES="'dteam lcg-voms.cern.ch 15004 /DC=ch/DC=cern/OU=computers/CN=lcg-voms.cern.ch dteam 24' '
VOMS_CA_DN="'/DC=ch/DC=cern/CN=CERN Trusted Certification Authority' '/DC=ch/DC=cern/CN=CERN Trus
# cat /root/igi-siteinfo/vo.d/gridit
VOMSES="'gridit voms.cnaf.infn.it 15008 /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms.cnaf.infn.it gridit'
VOMS_CA_DN="'/C=IT/O=INFN/CN=INFN CA' '/C=IT/O=INFN/CN=INFN CA'"
# cat /root/siteinfo/vo.d/infngrid
```

```
yum install
```

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```
VOMSES="'infngrid voms.cnaf.infn.it 15000 /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms.cnaf.infn.it infngrid
VOMS_CA_DN=''/C=IT/O=INFN/CN=INFN CA' '/C=IT/O=INFN/CN=INFN CA'"
```

Information about others VOs are available at the [CENTRAL OPERATIONS PORTAL](#) .

yaim check

```
# /opt/glite/yaim/bin/yaim -v -s /root/igi-siteinfo/site-info.def -n UI
INFO: Using site configuration file: /root/siteinfo/site-info.def
[...]
INFO: YAIM terminated succesfully.
```

YAIM config

Please use the debug flag ("-d 6") to configure the services in order to have detailed information. For your convenience you can save all the configuration information in a log file you can look at any time, separated from the yaimlog default one.

```
# /opt/glite/yaim/bin/yaim -c -d 6 -s /root/igi-siteinfo/site-info.def -n UI
DEBUG: Checking siteinfo dir is not world readable
[...]
INFO: Configuration Complete. [ OK ]
INFO: YAIM terminated succesfully.
```

Service checks

To check the functionalities of the UI we can use some commands (see the [*!gLite UI User Guide*](#) for more information).

Creation and setup of an user account

```
# adduser veronesi
# passwd veronesi
Changing password for user veronesi.
New UNIX password:
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
```

Please have a look at Cap. 4 "GRID SECURITY AND GETTING STARTED" of the guide. At the end of the configuration, you should have the following situation:

```
$ ll .globus/
total 16
-rw-r--r-- 1 veronesi veronesi 1798 Jan 11 08:49 usercert.pem
-r----- 1 veronesi veronesi 1918 Jan 11 08:49 userkey.pem
```

Create, check and destroy your first proxy

```
voms-proxy-init --voms infngrid
Enter GRID pass phrase:
Your identity: /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
Creating temporary proxy ..... Done
Contacting voms.cnaf.infn.it:15000 [/C=IT/O=INFN/OU=Host/L=CNAF/CN=voms.cnaf.infn.it] "infngrid"
Creating proxy ..... Done
Your proxy is valid until Wed Jan 11 20:54:21 2012

$ voms-proxy-info --all
subject    : /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi/CN=proxy
issuer     : /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
```

```
identity : /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
type     : proxy
strength : 1024 bits
path     : /tmp/x509up_u500
timeleft : 11:59:28
=== VO infngrid extension information ===
VO       : infngrid
subject  : /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
issuer   : /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms.cnaf.infn.it
attribute : /infngrid/Role=NULL/Capability=NULL
timeleft : 11:59:28
uri      : voms.cnaf.infn.it:15000
```

```
$ voms-proxy-destroy
```

Using myproxy server

```
$ myproxy-init -v -k test_veronesi
MyProxy v5.5 5 Sep 2011 PAM SASL KRB5 LDAP VOMS OCSP
Socket bound to port 20000.
Attempting to connect to 131.154.101.27:7512
Successfully connected to myproxy.cnaf.infn.it:7512
```

```
User Cert File: /home/veronesi/.globus/usercert.pem
User Key File: /home/veronesi/.globus/userkey.pem
```

```
Trusted CA Cert Dir: /etc/grid-security/certificates
```

```
Output File: /tmp/myproxy-proxy.500.20869
Your identity: /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
Enter GRID pass phrase for this identity:
Creating proxy .....+++
.....+++
Done
Proxy Verify OK
Your proxy is valid until: Wed Jan 18 09:01:03 2012
using trusted certificates directory /etc/grid-security/certificates
server name: /C=IT/O=INFN/OU=Host/L=CNAF/CN=myproxy.cnaf.infn.it
checking that server name is acceptable...
server name matches "myproxy@myproxy.cnaf.infn.it"
authenticated server name is acceptable
Enter MyProxy pass phrase:
Verifying - Enter MyProxy pass phrase:
A proxy valid for 168 hours (7.0 days) for user veronesi now exists on myproxy.cnaf.infn.it.
```

```
$ myproxy-info -v -k test_veronesi
MyProxy v5.5 5 Sep 2011 PAM SASL KRB5 LDAP VOMS OCSP
Socket bound to port 20000.
Attempting to connect to 131.154.101.27:7512
Successfully connected to myproxy.cnaf.infn.it:7512
using trusted certificates directory /etc/grid-security/certificates
server name: /C=IT/O=INFN/OU=Host/L=CNAF/CN=myproxy.cnaf.infn.it
checking that server name is acceptable...
server name matches "myproxy@myproxy.cnaf.infn.it"
authenticated server name is acceptable
username: veronesi
owner: /C=IT/O=INFN/OU=Personal Certificate/L=CNAF/CN=Paolo Veronesi
name: test_veronesi
timeleft: 167:59:13 (7.0 days)
```

Job submission

```
$ cat hello.jdl
Executable = "/bin/env";
StdOutput = "test.out";
```

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```
StdError      = "test.err";
RetryCount    = 0;
ShallowRetryCount = 0;
OutputSandbox = {"test.out", "test.err"};
```

```
$ glite-wms-job-list-match -a hello.jdl
```

```
Connecting to the service https://egee-rb-09.cnaf.infn.it:7443/glite_wms_wmproxy_server
```

```
=====
```

COMPUTING ELEMENT IDs LIST

The following CE(s) matching your job requirements have been found:

```
*CEId*
- argoce01.na.infn.it:2119/jobmanager-lcgpbs-cert
- atlasce-cream.na.infn.it:8443/cream-pbs-cert
- atlasce01.na.infn.it:2119/jobmanager-lcgpbs-cert
- atlascel.lnf.infn.it:2119/jobmanager-lcgpbs-cert
- boalice3.bo.infn.it:2119/jobmanager-lcgpbs-cert
- boccream.bo.infn.it:8443/cream-pbs-cert
- ce-02.roma3.infn.it:8443/cream-pbs-cert
- ce-cr-02.ts.infn.it:8443/cream-lsf-cert
- ce-cream.mi.infn.it:8443/cream-pbs-cert
- ce-enmr.chemie.uni-frankfurt.de:2119/jobmanager-lcgpbs-cert
- ce-enmr.chemie.uni-frankfurt.de:2119/jobmanager-lcgpbs-long
- ce-enmr.chemie.uni-frankfurt.de:2119/jobmanager-lcgpbs-medium
- ce-enmr.chemie.uni-frankfurt.de:2119/jobmanager-lcgpbs-short
- ce-enmr.chemie.uni-frankfurt.de:2119/jobmanager-lcgpbs-verylong
- ce.cyb-pcr.it:2119/jobmanager-lcgsge-pocert
- ce.scope.unina.it:8443/cream-pbs-egeecert
- ce01-lcg.cr.cnaf.infn.it:8443/cream-lsf-gpu
- ce01-lcg.cr.cnaf.infn.it:8443/cream-lsf-infngid
- cel-enmr.science.uu.nl:8443/cream-pbs-cert
- cel-enmr.science.uu.nl:8443/cream-pbs-long
- cel-enmr.science.uu.nl:8443/cream-pbs-medium
- cel-enmr.science.uu.nl:8443/cream-pbs-short
- cel-enmr.science.uu.nl:8443/cream-pbs-verylong
- cebo-t3-01.cr.cnaf.infn.it:8443/cream-lsf-T3_BO
- cecream.ca.infn.it:8443/cream-lsf-cert
- cert-15.pd.infn.it:8443/cream-lsf-cert
- cert-37.pd.infn.it:8443/cream-lsf-cert
- cex.grid.unipg.it:2119/jobmanager-lcgpbs-cert
- cmsce01.na.infn.it:2119/jobmanager-lcgpbs-cert
- cmsrm-ce01.roma1.infn.it:2119/jobmanager-lcglslf-cmsgcert
- cmsrm-ce02.roma1.infn.it:2119/jobmanager-lcglslf-cmsgcert
- cmsrm-cream01.roma1.infn.it:8443/cream-lsf-cmsgcert
- cream-ce-2.ba.infn.it:8443/cream-pbs-cert
- cream-ce.ct.infn.it:8443/cream-lsf-cert
- cream-ce.research-infrastructures.eu:8443/cream-pbs-cert
- cream.sns.it:8443/cream-pbs-cert
- creamce01.ge.infn.it:8443/cream-lsf-cert
- devce.cnaf.infn.it:8443/cream-pbs-cert
- egice.polito.it:8443/cream-pbs-cert
- grid-ce.lns.infn.it:2119/jobmanager-lcgpbs-cert
- grid-ce.pv.infn.it:8443/cream-pbs-cert
- grid0.fe.infn.it:8443/cream-pbs-cert
- grid001.ts.infn.it:2119/jobmanager-lcglslf-cert
- grid010.ct.infn.it:2119/jobmanager-lcgpbs-cert
- gridce.sns.it:2119/jobmanager-lcgpbs-cert
- gridce0.pi.infn.it:8443/cream-lsf-cert
- gridce1.pi.infn.it:2119/jobmanager-lcglslf-cert
- gridce2.pi.infn.it:2119/jobmanager-lcglslf-cert
- gridce3.pi.infn.it:8443/cream-lsf-certmpi
- gridsrv2-4.dir.garr.it:8443/cream-pbs-grid
- gridvm03.roma2.infn.it:8443/cream-pbs-cert
- grisuce.scope.unina.it:8443/cream-pbs-egeecert
```

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- iceage-ce-01.ct.infn.it:8443/cream-pbs-cert
- inaf-ce-01.ct.pi2s2.it:8443/cream-lsf-cert
- linucs-ce-01.cs.infn.it:8443/cream-pbs-atlasgcert
- ng-ce.grid.unipg.it:2119/jobmanager-lcgpbs-cert
- pbs-enmr.cerm.unifi.it:8443/cream-pbs-cert
- prod-ce-01.pd.infn.it:8443/cream-lsf-cert
- prod-ce-02.pd.infn.it:2119/jobmanager-lcglssf-cert
- se.cyb-pcr.it:8443/cream-sge-poncert
- sirius-ce.ct.infn.it:8443/cream-pbs-cert
- spacina-ce.scope.unina.it:2119/jobmanager-lcgpbs-cert
- t2-ce-01.lnl.infn.it:8443/cream-lsf-cert1
- t2-ce-01.mi.infn.it:2119/jobmanager-lcgpbs-cert
- t2-ce-01.to.infn.it:8443/cream-pbs-cert
- t2-ce-01.to.infn.it:8443/cream-pbs-short
- t2-ce-02.lnl.infn.it:8443/cream-lsf-cert1
- t2-ce-03.lnl.infn.it:2119/jobmanager-lcglssf-cert1
- t2-ce-04.lnl.infn.it:8443/cream-lsf-cert1
- t2-ce-05.lnl.infn.it:8443/cream-lsf-cert1
- t2-ce-06.lnl.infn.it:8443/cream-lsf-cert1
- unict-dmi-ce-01.ct.pi2s2.it:2119/jobmanager-lcglssf-cert
- unipa-ce-01.pa.pi2s2.it:2119/jobmanager-lcglssf-cert
- virgo-ce.roma1.infn.it:2119/jobmanager-lcgpbs-cert
- t2-ce-02.mi.infn.it:2119/jobmanager-lcgcondor-cert
- ce-01.grid.sissa.it:8443/cream-pbs-blade
- ce07-lcg.cr.cnaf.infn.it:8443/cream-lsf-gpu
- ce07-lcg.cr.cnaf.infn.it:8443/cream-lsf-infngrid
- ce05-lcg.cr.cnaf.infn.it:8443/cream-lsf-gpu
- ce05-lcg.cr.cnaf.infn.it:8443/cream-lsf-infngrid
- ce06-lcg.cr.cnaf.infn.it:8443/cream-lsf-gpu
- ce06-lcg.cr.cnaf.infn.it:8443/cream-lsf-infngrid
- ce04-lcg.cr.cnaf.infn.it:8443/cream-lsf-gpu
- ce04-lcg.cr.cnaf.infn.it:8443/cream-lsf-infngrid
- grid-ce-01.ba.infn.it:2119/jobmanager-lcgpbs-cert
- cremino.cnaf.infn.it:8443/cream-pbs-cert
- atlas-ce-01.roma1.infn.it:2119/jobmanager-lcglssf-atlasgcert
- atlas-ce-02.roma1.infn.it:2119/jobmanager-lcglssf-atlasgcert
- atlas-creamce-01.roma1.infn.it:8443/cream-lsf-atlasgcert
- ce-1.le.infn.it:8443/cream-lsf-cert
- cream-ce-01.ct.trigrid.it:8443/cream-lsf-cert
- grid012.ct.infn.it:8443/cream-lsf-cert
- infn-ce-01.ct.pi2s2.it:8443/cream-lsf-cert
- infn-ce-01.ct.trigrid.it:2119/jobmanager-lcglssf-cert
- infnlns-ce-01.ct.pi2s2.it:8443/cream-lsf-cert
- unict-diit-ce-01.ct.pi2s2.it:2119/jobmanager-lcglssf-cert
- atlasce02.scope.unina.it:8443/cream-pbs-egeecert
- atlasce2.lnf.infn.it:8443/cream-pbs-cert
- cream-ce.pg.infn.it:8443/cream-pbs-cert
- cream-ce.pr.infn.it:8443/cream-pbs-cert
- cream-ce.pr.infn.it:8443/cream-pbs-parallel
- gridce.ilc.cnr.it:8443/cream-pbs-cert
- pamelace01.na.infn.it:8443/cream-pbs-cert
- unime-ce-01.me.pi2s2.it:2119/jobmanager-lcglssf-cert

=====

```
$ glite-wms-job-submit -a hello.jdl
```

```
Connecting to the service https://egee-rb-09.cnaf.infn.it:7443/glite_wms_wmproxy_server
```

```
===== glite-wms-job-submit Success =====
```

```
The job has been successfully submitted to the WMPProxy  
Your job identifier is:
```

```
https://lb004.cnaf.infn.it:9000/ac8cwtv9oLfC5fW4nulrLg
```

Job submission

```
=====
$ glite-wms-job-status https://lb004.cnaf.infn.it:9000/ac8cwtv9oLfc5fW4nulrLg
```

```
===== glite-wms-job-status Success =====
BOOKKEEPING INFORMATION:

Status info for the Job : https://lb004.cnaf.infn.it:9000/ac8cwtv9oLfc5fW4nulrLg
Current Status:      Done (Success)
Logged Reason(s):
  - job completed
  - Job Terminated Successfully
Exit code:           0
Status Reason:      Job Terminated Successfully
Destination:        cream-ce-2.ba.infn.it:8443/cream-pbs-cert
Submitted:          Wed Jan 11 09:04:26 2012 CET
=====
```

```
$ glite-wms-job-output https://lb004.cnaf.infn.it:9000/ac8cwtv9oLfc5fW4nulrLg

Connecting to the service https://egee-rb-09.cnaf.infn.it:7443/glite_wms_wmproxy_server
```

```
=====
                                JOB GET OUTPUT OUTCOME

Output sandbox files for the job:
https://lb004.cnaf.infn.it:9000/ac8cwtv9oLfc5fW4nulrLg
have been successfully retrieved and stored in the directory:
/tmp/jobOutput/veronesi_ac8cwtv9oLfc5fW4nulrLg
=====
```

```
$ ll /tmp/jobOutput/veronesi_ac8cwtv9oLfc5fW4nulrLg/*
-rw-rw-r-- 1 veronesi veronesi    0 Jan 11 09:05 /tmp/jobOutput/veronesi_ac8cwtv9oLfc5fW4nulrLg/t
-rw-rw-r-- 1 veronesi veronesi 6591 Jan 11 09:05 /tmp/jobOutput/veronesi_ac8cwtv9oLfc5fW4nulrLg/t
```

Data management

```
$ lcg-infosites --vo infngrid se|tail -1
    9268099100      1280456314  SRM   virgo-se01.roma1.infn.it

$ lcg-cr -v -d virgo-se01.roma1.infn.it file:/home/veronesi/hello.jdl
Using grid catalog type: lfc
Using grid catalog : lfcserver.cnaf.infn.it
Checksum type: None
SE type: SRMv2
Destination SURL : srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home/infngrid/generated/2012-
Source SRM Request Token: 0f98605f-48d3-44ba-9fde-2353319d1659
Source URL: file:/home/veronesi/hello.jdl
File size: 282
VO name: infngrid
Destination specified: virgo-se01.roma1.infn.it
Destination URL for copy: gsiftp://virgo-se01.roma1.infn.it/virgo-se01.roma1.infn.it:/data3/infngr
# streams: 1
GSIFTP: default set up URL mode
GSIFTP: dest: set up FTP mode. DCAU disabled. Streams = 1, Tcp BS = 0
      0 bytes      0.00 KB/sec avg      0.00 KB/sec inst
    282 bytes      0.34 KB/sec avg      0.34 KB/sec inst
```



```
Transfer took 1020 ms
Using grid catalog type: lfc
Using grid catalog : lfcserver.cnaf.infn.it
Site URL to be registered: srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home/infngri
File size: 282
Using LFN: lfn:/grid/infngri/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b
Using GUID: guid:cbeb1790-c829-4423-baef-9e0320409068
Registering LFN: /grid/infngri/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b (c
Registering SURL: srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home/infngri/generated/2012-0
guid:cbeb1790-c829-4423-baef-9e0320409068

$ lcg-lr -v lfn:/grid/infngri/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b
Using grid catalog type: lfc
Using grid catalog : lfcserver.cnaf.infn.it
srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home/infngri/generated/2012-01-11/file8daf2f20-

$ lcg-del -a -v lfn:/grid/infngri/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b
VO name: infngri
SE type: SRMv2
[lfn:/grid/infngri/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b] srm://virgo-s
[guid:cbeb1790-c829-4423-baef-9e0320409068] srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home
[guid:cbeb1790-c829-4423-baef-9e0320409068] lfn:/grid/infngri/generated/2012-01-11/file-b8a3d3f7
```

Revisions

Date	Comment
2012-09-26	installation notes completed - EMI-UI v. 2.0.0

-- PaoloVeronesi - 2012-09-26

This topic: SiteAdminCorner > NotesAboutInstallationAndConfigurationOfEMI-UI-EMI-2SL6

Topic revision: r1 - 2012-09-26 - PaoloVeronesi



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