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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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```
VOMSSES="'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-dit-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/infngrid/generated
File size: 282
Using LFN: lfn:/grid/infngrid/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b
Using GUID: guid:cbeb1790-c829-4423-baef-9e0320409068
Registering LFN: /grid/infngrid/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b (c
Registering SURL: srm://virgo-se01.roma1.infn.it/dpm/roma1.infn.it/home/infngrid/generated/2012-0
guid:cbeb1790-c829-4423-baef-9e0320409068

$ lcg-lr -v lfn:/grid/infngrid/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/infngrid/generated/2012-01-11/file8daf2f20-

$ lcg-del -a -v lfn:/grid/infngrid/generated/2012-01-11/file-b8a3d3f7-828c-4877-b9ee-1dd0020ca11b
VO name: infngrid
SE type: SRMv2
[lfn:/grid/infngrid/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/infngrid/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

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

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



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