

Table of Contents

Testing report (SL5): IGIRTC-120.....	1
Summary.....	1
Deployment tests.....	1
Clean Installation.....	1
CREAM PBS.....	1
CREAM LSF.....	1
Upgrade Installation.....	1
CREAM PBS.....	1
CREAM LSF.....	1
Unit Tests.....	1
System tests.....	1
Functionality tests.....	2
CREAM PBS.....	2
CREAM LSF.....	3
Regression tests.....	4
Verification attached bugs for CREAM Torque.....	4
Bug #95328 In cluster mode, YAIM does not set GlueCEInfoHostName for CREAMs FIXED.....	4
Bug #98707 Wrong warning message form ArgusPEPClient configuration NOT TESTED.....	4
Bug #94418 The SIGTERM signal should be issued to all the processes belonging to the job FIXED.....	4
Bug #97106 CREAM JW - fatal_error: command not found FIXED.....	6
Verification attached bugs for CREAM LSF.....	6
Bug #97441: CREAM: Unwanted auto-updating of the field "creationTime" on the creamdb database FIXED.....	6
Bug #96310 Wrong lowercase conversion for Glue-1 VO Tags FIXED.....	7
Bug #98707 Wrong warning message form ArgusPEPClient configuration NOT TESTED.....	7
Bug #95973 Missing Glue capability in GLUE2EntityOtherInfo FIXED.....	8
Verification of old bugs and bugs 96306 and 96512 attached to the patch LSF.....	8
Bug #96306 (patch attached) manual verification LSF:.....	11
Bug #59871 (old) manual verification:.....	12
Verification of old bugs and bugs 96306 and 96512 attached to the patch PBS.....	12
Standard conformance tests.....	16
Glue 1 Compliance.....	16
Glue 2 Compliance.....	16
Integration testing.....	16

Testing report (SL5): IGIRTC-120

Summary

- Product: **CREAM v. 1.14.2**
- Release Task: Task #34089
- ETICS Subsystem Configuration Name: emi-cream-ce_R_1_14_3_8, emi-lrms-utils_R_2_0_2_3
- VCS Tag: emi-yaim-cream_R_4_3_1_4, emi-cream-common_R_1_14_1_1, emi-cream_R_1_14_2_1, emi-cemonitor-api-java_R_1_14_0_4, emi-cemonitor_R_1_14_0_4, emi-cream-interface_R_1_14_1_1, emi-cream-es_R_1_14_2_1, emi-cream-utils_R_1_2_2_1, emi-cream-api-java_R_1_14_2_1
- EMI Major Release: **EMI 2 (Matterhorn)**
- Platform: **SL5**
- Author: Sara Bertocco
- Outcome: "Certified"

Deployment tests

Clean Installation

CREAM PBS

- Installation log file
- Configuration log file

CREAM LSF

- Installation log file
- Configuration log file

Upgrade Installation

CREAM PBS

- Update log file
- Configuration log file

CREAM LSF

- Update log file
- Configuration log file

Unit Tests

Available here

System tests

Functionality tests

CREAM PBS

```

$ pybot -e job_man -e cpu_alloc -e glue -e ban -e bdii -e lb -e old_blah -e status /opt/cream_tes
INFO: The files of this testsuite will be stored under: /tmp/tmpi7FLa2.cream_testing/
INFO: Non-mandatory variable "sec_cert" has not been set.
INFO: Non-mandatory variable "sec_key" has not been set.
INFO: Non-mandatory variable "argus_host" has not been set.
INFO: Non-mandatory variable "sec_proxy_pass" has not been set.
INFO: Non-mandatory variable "argus_root_pass" has not been set.
=====
Cream Test Suite :: This is the main testing module,needed for testing the ...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
Check Executables :: Check whether the needed executables for the ... | PASS |
-----
Simple Submit :: Execute /bin/uname -a.Submit the jdl and wait for... | PASS |
-----
ISB Base URI :: Execute a bash shell script.The script is stored i... | PASS |
-----
ISB Client to CE :: Execute a bash shell script.The script is stor... | PASS |
-----
ISB gsift to CE :: Execute a bash shell script.The script is stor... | PASS |
-----
OSB localhost :: Execute /bin/uname -a.Store std out and error str... | PASS |
-----
OSB gsift BaseDestURI :: Execute /bin/uname -a.Store std out and ... | PASS |
-----
OSB gsift DestURI :: Execute /bin/uname -a.Store std out and erro... | PASS |
-----
Environment :: Execute a bash shell script.The script is stored lo... | PASS |
-----
Epilogue :: Execute two bash shell scripts,one for the job and the... | PASS |
-----
Prologue :: Execute two bash shell scripts,one for the job and the... | PASS |
-----
Explicit Delegation :: Test job submission with explicit delegatio... | PASS |
-----
Job Cancel :: Test job cancellation.Two cases are tested:          | PASS |
-----
Job List :: Test the job listing cli utility.Store the list of the... | PASS |
-----
Job Suspend - Resume :: Submit a job and suspend it.Wait until it'... | PASS |
-----
Manually Cancel Job :: Submit a job and then manually cancel it on... | PASS |
-----
Verify CE service info :: This test case verifies the output of th... | PASS |
-----
Enable - Disable Submission :: This test case tests the proper fun... | PASS |
-----
Job Purge :: This test case verifies the proper functionality of t... | PASS |
-----
Limiter :: NOTE: This test case is about 25 minutes long!          | PASS |
-----
Sandbox Staging :: This test case tests the two different Sandbox ... | PASS |
-----
Automatic Proxy Purging :: This test case checks the automatic pro... | PASS |
-----
OutputData :: This test case tests the OutputData jdl attribute. T... | FAIL |
'[]' should not be empty
-----
Automatic Job Purge :: This test case is testing the functionality... | PASS |
-----
Proxy Renewal :: Submit a job lasting 20 minutes using a proxy val... | PASS |

```

```

-----
Cream Test Suite :: This is the main testing module,needed for tes... | FAIL |
26 critical tests, 25 passed, 1 failed
26 tests total, 25 passed, 1 failed
=====
Output: /home/bertocco/output.xml
Log:    /home/bertocco/log.html
Report: /home/bertocco/report.html

```

- log file

The OutputData test failed for a configuration problem (LCG_GFAL_INFOSYS was not set in the worker node). Fixing the problem:

```

$ pybot -i outputdata /opt/cream_test/testsuite/cream_test_suite.html
INFO: The files of this testsuite will be stored under: /tmp/tmp1OrH9L.cream_testing/
INFO: Non-mandatory variable "sec_cert" has not been set.
INFO: Non-mandatory variable "sec_key" has not been set.
INFO: Non-mandatory variable "argus_host" has not been set.
INFO: Non-mandatory variable "sec_proxy_pass" has not been set.
INFO: Non-mandatory variable "argus_root_pass" has not been set.
=====
Cream Test Suite :: This is the main testing module,needed for testing the ...
=====
OutputData :: This test case tests the OutputData jdl attribute. T... | PASS |
-----
Cream Test Suite :: This is the main testing module,needed for tes... | PASS |
1 critical test, 1 passed, 0 failed
1 test total, 1 passed, 0 failed
=====
Output: /home/bertocco/output.xml
Log:    /home/bertocco/log.html
Report: /home/bertocco/report.html

```

- log file

CREAM LSF

```

$ pybot -e job_man -e cpu_alloc -e glue -e ban -e bdii -e lb -e old_blah -e status /opt/cream_test
INFO: The files of this testsuite will be stored under: /tmp/tmpskj86N.cream_testing/
INFO: Non-mandatory variable "sec_cert" has not been set.
INFO: Non-mandatory variable "sec_key" has not been set.
INFO: Non-mandatory variable "argus_host" has not been set.
INFO: Non-mandatory variable "sec_proxy_pass" has not been set.
=====
Cream Test Suite :: This is the main testing module,needed for testing the ...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
Check Executables :: Check whether the needed executables for the ... | PASS |
-----
Simple Submit :: Execute /bin/uname -a.Submit the jdl and wait for... | PASS |
-----
ISB Base URI :: Execute a bash shell script.The script is stored i... | PASS |
-----
ISB Client to CE :: Execute a bash shell script.The script is stor... | PASS |
-----
ISB gsiftp to CE :: Execute a bash shell script.The script is stor... | PASS |
-----
OSB localhost :: Execute /bin/uname -a.Store std out and error str... | PASS |
-----
OSB gsiftp BaseDestURI :: Execute /bin/uname -a.Store std out and ... | PASS |
-----
OSB gsiftp DestURI :: Execute /bin/uname -a.Store std out and erro... | PASS |

```

CREAM PBS

```

-----
Environment :: Execute a bash shell script.The script is stored lo... | PASS |
-----
Epilogue :: Execute two bash shell scripts,one for the job and the... | PASS |
-----
Prologue :: Execute two bash shell scripts,one for the job and the... | PASS |
-----
Explicit Delegation :: Test job submission with explicit delegatio... | PASS |
-----
Job Cancel :: Test job cancellation.Two cases are tested:          | PASS |
-----
Job List :: Test the job listing cli utility.Store the list of the... | PASS |
-----
Job Suspend - Resume :: Submit a job and suspend it.Wait until it'... | PASS |
-----
Manually Cancel Job :: Submit a job and then manually cancel it on... | PASS |
-----
Verify CE service info :: This test case verifies the output of th... | PASS |
-----
Enable - Disable Submission :: This test case tests the proper fun... | PASS |
-----
Job Purge :: This test case verifies the proper functionality of t... | PASS |
-----
Limiter :: NOTE: This test case is about 25 minutes long!          | PASS |
-----
Sandbox Staging :: This test case tests the two different Sandbox ... | PASS |
-----
Automatic Proxy Purging :: This test case checks the automatic pro... | PASS |
-----
OutputData :: This test case tests the OutputData jdl attribute. T... | PASS |
-----
Automatic Job Purge :: This test case is testing the functionality... | PASS |
-----
Proxy Renewal :: Submit a job lasting 20 minutes using a proxy val... | PASS |
-----
Cream Test Suite :: This is the main testing module,needed for tes... | PASS |
26 critical tests, 26 passed, 0 failed
26 tests total, 26 passed, 0 failed
=====
Output: /home/bertocco/output.xml
Log:    /home/bertocco/log.html
Report: /home/bertocco/report.html

```

- log file

Regression tests

Verification attached bugs for CREAM Torque

Bug #95328 In cluster mode, YAIM does not set GlueCEInfoHostName for CREAMs **FIXED**

```

$ ldapsearch -h cream-06.pd.infn.it -x -p 2170 -b "o=grid" objectclass=GlueCE | grep InfoHostName
GlueCEInfoHostName: cream-06.pd.infn.it
GlueCEInfoHostName: cream-06.pd.infn.it
GlueCEInfoHostName: cream-06.pd.infn.it

```

Bug #98707 Wrong warning message form ArgusPEPClient configuration **NOT TESTED**

Bug #94418 The SIGTERM signal should be issued to all the processes belonging to the job **FIXED**

```

### On CE:
# ls -l /tmp/test_bug94418.sh
-rw-r--r-- 1 dteam043 dteam 378 Dec  5 16:14 /tmp/test_bug94418.sh

```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```

# cat /tmp/test_bug94418.sh
#!/bin/bash

OUTF="/tmp/sdpgu.out"

MYPID=$$

sleep 3600 & PID1=$!

sleep 3600 & PID2=$!
echo "MYPID=${MYPID}, PID1=${PID1}, PID2=${PID2}" > $OUTF
echo "MYPID=${MYPID}, PID1=${PID1}, PID2=${PID2}"
# supposedly this should kill the child processes on SIGTERM.
trap "kill $PID1 $PID2" SIGTERM

wait

### On UI:
$ cat test_bug94418.jdl
[
  Type = "job";
  JobType = "normal";
  VirtualOrganisation = "dteam";
  executable="test_bug94418.sh";
  InputSandbox = {"test_bug94418.sh"};
  InputSandboxBaseURI = "gsiftp://cert-41.pd.infn.it/tmp"
]

$ glite-ce-job-submit -d -r cream-06.pd.infn.it:8443/cream-pbs-cert -a test_bug94418.jdl
2012-12-06 12:48:09,303 DEBUG - Using certificate proxy file [/tmp/x509up_u33337]
2012-12-06 12:48:09,325 DEBUG - VO from certificate=[dteam]
2012-12-06 12:48:09,325 WARN - No configuration file suitable for loading. Using built-in configu
2012-12-06 12:48:09,325 DEBUG - Logfile is [/tmp/glite_cream_cli_logs/glite-ce-job-submit_CREAM_b
2012-12-06 12:48:09,326 WARN - VirtualOrganisation specified in the JDL but overridden with [dteam
2012-12-06 12:48:09,326 DEBUG - Processing file [test_bug94418.sh]...
2012-12-06 12:48:09,326 DEBUG - Inserting mangled InputSandbox in JDL: [{"test_bug94418.sh"}]...
2012-12-06 12:48:09,330 INFO - certUtil::generateUniqueID() - Generated DelegationID: [1342e66bf8
2012-12-06 12:48:12,291 DEBUG - Registering to [https://cream-06.pd.infn.it:8443/ce-cream/service
2012-12-06 12:48:13,050 DEBUG - Will invoke JobStart for JobID [CREAM289344871]
https://cream-06.pd.infn.it:8443/CREAM289344871

$ glite-ce-job-status https://cream-06.pd.infn.it:8443/CREAM289344871

***** JobID=[https://cream-06.pd.infn.it:8443/CREAM289344871]
      Status      = [REALLY-RUNNING]

### On WN:
# cat /tmp/sdpgu.out
MYPID=27223, PID1=27225, PID2=27226

# ps -ef |grep 27223
dteam042 27223 27220 0 12:48 ?        00:00:00 /bin/bash ./test_bug94418.sh
dteam042 27225 27223 0 12:48 ?        00:00:00 sleep 3600
dteam042 27226 27223 0 12:48 ?        00:00:00 sleep 3600
root     27229  6392 0 12:49 pts/0    00:00:00 grep 27223
# ps -ef |grep 27225
dteam042 27225 27223 0 12:48 ?        00:00:00 sleep 3600
root     27231  6392 0 12:49 pts/0    00:00:00 grep 27225
# ps -ef |grep 27226
dteam042 27226 27223 0 12:48 ?        00:00:00 sleep 3600
root     27233  6392 0 12:49 pts/0    00:00:00 grep 27226

### On UI:
$ glite-ce-job-cancel https://cream-06.pd.infn.it:8443/CREAM289344871

Are you sure you want to cancel specified job(s) [y/n]: y

```

Bug #94418 The SIGTERM signal should be issued to all the processes belonging to the job FIXED

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
$ glite-ce-job-status https://cream-06.pd.infn.it:8443/CREAM289344871
```

```
***** JobID=[https://cream-06.pd.infn.it:8443/CREAM289344871]
  Status      = [CANCELLED]
  ExitCode    = []
  Description  = [Cancelled by user]
```

```
### On WN:
```

```
# ps -ef |grep 27223
root      27261  6392  0 12:51 pts/0    00:00:00 grep 27223
# ps -ef |grep 27225
root      27263  6392  0 12:51 pts/0    00:00:00 grep 27225
# ps -ef |grep 27226
root      27265  6392  0 12:51 pts/0    00:00:00 grep 27226
```

Bug #97106 CREAM JW - fatal_error: command not found FIXED

```
### On WN:
```

```
# mv /usr/bin/glite-lb-logevent /usr/bin/glite-lb-logevent.save
```

```
### On UI:
```

```
$ glite-ce-job-status https://cream-06.pd.infn.it:8443/CREAM821651109
```

```
***** JobID=[https://cream-06.pd.infn.it:8443/CREAM821651109]
  Status      = [DONE-FAILED]
  ExitCode    = [W]
  FailureReason = [Cannot find lb_logevent command; reason=1]
```

Verification attached bugs for CREAM LSF

Bug #97441: CREAM: Unwanted auto-updating of the field "creationTime" on the creamdb database FIXED

```
# mysql -u cremino -p creamdb
```

```
Enter password:
```

```
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

```
Your MySQL connection id is 2771
```

```
Server version: 5.0.95 Source distribution
```

```
Copyright (c) 2000, 2011, Oracle and/or its affiliates. All rights reserved.
```

```
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
```

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
mysql> select startUpTime, creationTime from db_info;
```

```
+-----+-----+
| startUpTime      | creationTime      |
+-----+-----+
| 2012-12-05 12:05:11 | 2012-12-05 11:59:11 |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> exit
```

```
Bye
```

```
# /opt/glite/yaim/bin/yaim -c -s /usr/local/nfs1/jral_test/cream-48/site-info_lsf.def -n creamCE
```

```
.....
```

```
# mysql -u cremino -p creamdb
```

```
....
```

```
mysql> select startUpTime, creationTime from db_info;
```

```
+-----+-----+
```

Bug #97106 CREAM JW - fatal_error: command not found FIXED

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
| startUpTime          | creationTime          |
+-----+-----+
| 2012-12-05 12:16:51 | 2012-12-05 11:59:11 |
+-----+-----+
1 row in set (0.00 sec)
```

Bug #96310 Wrong lowercase conversion for Glue-1 VO Tags **FIXED**

```
# cat /opt/glite/var/info/cream-48.pd.infn.it/dteam/dteam.list
```

```
RMON3.1
```

```
RMon3.1
```

```
# cat /opt/edg/var/info/dteam/dteam.list
```

```
RMON3.1
```

```
RMon3.1
```

```
# grep GlueHostApplicationSoftwareRunTimeEnvironment: /var/lib/bdii/gip/ldif/static-file-Cluster.
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: LCG
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_2_0
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: EMI
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPIch
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPICH
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i RMON
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i RMon
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep GlueHostApplicationSoftwareR
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: EMI
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_2_0
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: LCG
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPIch
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i RMON
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i RMon
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep GlueHostApplicationSoftware
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_0_0
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: GLITE-3_1_0
```

```
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: MPICH
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPI_HOME_NOTSHARED
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: PADOVA
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: R-GMA
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: RMON3.1
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: SF00MeanPerCPU_790
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: SI00MeanPerCPU_870
```

Bug #98707 Wrong warning message form ArgusPEPClient configuration **NOT TESTED**

Bug #97441: CREAM: Unwanted auto-updating of the field "creationTime" on the creamdb database **FIXED**

Bug #95973 Missing Glue capability in GLUE2EntityOtherInfo FIXED

```
# grep CE_CAPABILITY /opt/nfs_install/jral_test/cream-48/services/glite-creamce
CE_CAPABILITY="CPUScalingReferenceSI00=10 SNMPSupport=yes"
#CE_CAPABILITY="CPUScalingReferenceSI00=10"
```

```
# ldapsearch -h cream-48.pd.infn.it -x -p 2170 -b "o=glue" | grep GLUE2EntityOtherInfo |grep CPUS
GLUE2EntityOtherInfo: CPUScalingReferenceSI00=10
# ldapsearch -h cream-48.pd.infn.it -x -p 2170 -b "o=glue" | grep GLUE2EntityOtherInfo |grep SNMP
GLUE2EntityOtherInfo: SNMPSupport=yes
```

Verification of old bugs and bugs 96306 and 96512 attached to the patch LSF

```
$ pybot bug_*.html
```

```
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====
```

```
batch_system = lsf
ce_admin_user = root
ce_admin_pass = cmsgrid
ce_host = cream-48.pd.infn.it
ce_endpoint = cream-48.pd.infn.it:8443
cream_queue = cream-lsf-cert
vo = dteam
proxy_pass = sarabINFN
log_level = TRACE
tmp_dir = /tmp
delete_files = False
tomcat_service = tomcat5
catalina_home = /var/lib/tomcat5
middleware_version = emi2
ce_cream_xml = /etc/glite-ce-cream/cream-config.xml
cream_config_xml = /etc/glite-ce-cream/cream-config.xml
blah_config = /etc/blah.config
site_info = /root/siteinfo/site-info_lsf.def
services_glite_creamce = /root/siteinfo/services/glite-creamce
blah_bupdater_loop_interval = bupdater_loop_interval
blah_check_children_interval = blah_check_children_interval
blah_bupdater_use_bhist_for_killed = bupdater_use_bhist_for_killed
cream_sandbox_path = CREAM_SANDBOX_PATH
cream_concurrency_level_yaim_name = CREAM_CONCURRENCY_LEVEL
middleware_version = emi2
cream_concurrency_level = commandworkerpoolsize
ce = cream-48.pd.infn.it:8443/cream-lsf-cert
```

Command "/usr/bin/voms-proxy-info" output follows:

```
subject   : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco/CN=proxy
issuer    : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco
identity  : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco
type      : proxy
strength  : 1024 bits
path      : /tmp/x509up_u33337
timeleft  : 11:57:26
```

Command's output printed.

```
dn = /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco/CN=proxy
The files of this testsuite will be stored under: /tmp/tmpiEYKea.cream_testing/
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
```

```
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----
```

```
bug_59871 | FAIL |
_error: 'ldapsearch -h cream-48.pd.infn.it -x -p 2170 -b mds-vo-name=resource,o=grid | grep -i GL
```

```
-----  
Teardown | PASS |
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |  
3 critical tests, 2 passed, 1 failed  
3 tests total, 2 passed, 1 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_69857 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
bug_81561 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
2 critical tests, 2 passed, 0 failed  
2 tests total, 2 passed, 0 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83238 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83338 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83592 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
Check Executables :: Check whether the needed executables for the ... | PASS |
-----
bug_83593 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
3 critical tests, 3 passed, 0 failed
3 tests total, 3 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
bug_83749 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
1 critical test, 1 passed, 0 failed
1 test total, 1 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_84374 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_86191 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_87361 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_87492 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_89489 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_95356 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
Check Executables :: Check whether the needed executables for the ... | PASS |
-----
bug_95552 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
3 critical tests, 3 passed, 0 failed
3 tests total, 3 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_96306 | FAIL |
CHECK FAILED != CHECK SUCCESSFUL
-----
Teardown | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |
3 critical tests, 2 passed, 1 failed
3 tests total, 2 passed, 1 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_96512 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |
41 critical tests, 39 passed, 2 failed
41 tests total, 39 passed, 2 failed
=====
Output: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/output.xml
Log: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/log.html
Report: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/report.html
```

- log file

Bug #96306 (patch attached) manual verification LSF:

```
# cat /opt/glite/var/info/cream-48.pd.infn.it/dteam/dteam.list
TESTTAGG

# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i TESTTAGG
GlueHostApplicationSoftwareRunTimeEnvironment: TESTTAGG
```

The information is not updated

Bug #59871 (old) manual verification:

```
# /var/lib/bdii/gip/plugin/glite-info-dynamic-software-wrapper |grep -i tag
GlueHostApplicationSoftwareRunTimeEnvironment: tag1
GlueHostApplicationSoftwareRunTimeEnvironment: tag2
GlueHostApplicationSoftwareRunTimeEnvironment: tag3
```

Verification of old bugs and bugs 96306 and 96512 attached to the patch PBS

```
$ pybot bug_*.html
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
batch_system = pbs
ce_admin_user = root
ce_admin_pass = cmsgrid
ce_host = cream-06.pd.infn.it
ce_endpoint = cream-06.pd.infn.it:8443
cream_queue = cream-pbs-cert
vo = dteam
proxy_pass = sarabINFN
log_level = TRACE
tmp_dir = /tmp
delete_files = False
tomcat_service = tomcat5
catalina_home = /var/lib/tomcat5
middleware_version = emi2
ce_cream_xml = /etc/glite-ce-cream/cream-config.xml
cream_config_xml = /etc/glite-ce-cream/cream-config.xml
blah_config = /etc/blah.config
site_info = /root/siteinfo/site-info_1.def
services_glite_creamce = /root/siteinfo/services/glite-creamce
blah_bupdater_loop_interval = bupdater_loop_interval
blah_check_children_interval = blah_check_children_interval
blah_bupdater_use_bhist_for_killed = bupdater_use_bhist_for_killed
cream_sandbox_path = CREAM_SANDBOX_PATH
cream_concurrency_level_yaim_name = CREAM_CONCURRENCY_LEVEL
middleware_version = emi2
cream_concurrency_level = commandworkerpoolsize
ce = cream-06.pd.infn.it:8443/cream-pbs-cert
Command "/usr/bin/voms-proxy-info" output follows:
subject   : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco/CN=proxy
issuer    : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco
identity  : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco
type      : proxy
strength  : 1024 bits
path      : /tmp/x509up_u33337
timeleft  : 11:48:51

Command's output printed.
dn = /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sara Bertocco/CN=proxy
The files of this testsuite will be stored under: /tmp/tmplStRTT.cream_testing/
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_59871                                                    | PASS |
-----
Teardown                                                    | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
3 critical tests, 3 passed, 0 failed
3 tests total, 3 passed, 0 failed
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_69857 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
bug_81561 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
2 critical tests, 2 passed, 0 failed  
2 tests total, 2 passed, 0 failed  
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83238 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83338 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83592 | PASS |  
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed  
=====  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |  
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |  
-----  
bug_83593 | PASS |  
-----
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
3 critical tests, 3 passed, 0 failed
3 tests total, 3 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
bug_83749 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
1 critical test, 1 passed, 0 failed
1 test total, 1 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_84374 | FAIL |
CHECK FAILED != CHECK SUCCESSFUL
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |
2 critical tests, 1 passed, 1 failed
2 tests total, 1 passed, 1 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_86191 | FAIL |
None != CHECK SUCCESSFUL
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |
2 critical tests, 1 passed, 1 failed
2 tests total, 1 passed, 1 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_87361 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_87492 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_89489 | PASS |
-----
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
```

EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
-----  
bug_95356 | PASS |
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |  
2 critical tests, 2 passed, 0 failed  
2 tests total, 2 passed, 0 failed
```

```
=====
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====
```

```
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
```

```
-----  
Check Executables :: Check whether the needed executables for the ... | PASS |
```

```
-----  
bug_95552 | PASS |
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
```

```
-----  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed
```

```
=====
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====
```

```
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
```

```
-----  
bug_96306 | PASS |
```

```
-----  
Teardown | PASS |
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
```

```
-----  
3 critical tests, 3 passed, 0 failed  
3 tests total, 3 passed, 0 failed
```

```
=====
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83592 & Bug...  
=====
```

```
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
```

```
-----  
bug_96512 | PASS |
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | PASS |
```

```
-----  
2 critical tests, 2 passed, 0 failed  
2 tests total, 2 passed, 0 failed
```

```
=====
```

```
-----  
Bug 59871 & Bug 69857 & Bug 81561 & Bug 83238 & Bug 83338 & Bug 83... | FAIL |
```

```
-----  
41 critical tests, 39 passed, 2 failed  
41 tests total, 39 passed, 2 failed
```

```
=====
```

```
-----  
Output: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/output.xml
```

```
-----  
Log: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/log.html
```

```
-----  
Report: /home/bertocco/cream_blah_testsuites-master/cream_regression_testsuite/tests/report.html
```

- log file

Separated verification of failed bugs:

```
-----  
Bug 84374 :: Regression test of Bug #84374 yaim-cream-ce: GlueForeignKey: G...  
=====
```

```
-----  
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
```

```
-----  
bug_84374 | PASS |
```

```
-----  
Bug 84374 :: Regression test of Bug #84374 yaim-cream-ce: GlueFore... | PASS |
```

```
-----  
2 critical tests, 2 passed, 0 failed  
2 tests total, 2 passed, 0 failed
```

```
=====
```


EMI2CREAMTask34089SL5 < IGIRelease < TWiki

```
Bug 86191 :: Regression test of Bug #86191 No info published by the lcg-inf...
=====
Set Log Level :: Set the log level used for the test suite. This c... | PASS |
-----
bug_86191 | PASS |
-----
Bug 86191 :: Regression test of Bug #86191 No info published by th... | PASS |
2 critical tests, 2 passed, 0 failed
2 tests total, 2 passed, 0 failed
=====
```

- bug_84374 log file
- bug_86191 log file

Standard conformance tests

Glue 1 Compliance

- glue-validator -t glue1 -h cream-06.pd.infn.it -p 2170 -b o=grid
log

Glue 2 Compliance

- glue-validator -t glue2 -h cream-06.pd.infn.it -p 2170 -b o=glue
log

Integration testing

Tests described:

- <https://twiki.cern.ch/twiki/bin/view/EMI/EmiJra1TaskForceIntegrationTesting>
 - ◆ test 2: "CEMon to use Argus for authorization "
 - ◇ NA
 - ◆ test 3: "CREAM jobs executed under different backends is properly treated by APEL client "
 - ◇ PASSED - proven by functionality tests of different CREAM + LSF, TORQUE, SGE modules
 - ◆ test 16: "Do authorization filtering based on VOMS attributes and ARGUS authorization" *
 - NA

-- SaraBertocco - 2012-11-23

This topic: IGIRelease > EMI2CREAMTask34089SL5

Topic revision: r17 - 2012-12-11 - SaraBertocco



Copyright © 2008-2022 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.

Ideas, requests, problems regarding TWiki? Send feedback