

Table of Contents

CREAM & WN (IGI/EMI) using last Torque (2.5.7-7) and Maui 3.3-4 installation with MPI.....	1
On CE Host (also BATCH Master PBS/Torque).....	1
INSTALLATION:	1
Repository settings:.....	1
Packages installation (CA, epel, emi, cream, torque,...):.....	1
Munge configuration.....	1
Starting PBS.....	1
File LOG.....	1
CONFIGURATION:	1
SSH Customization:.....	1
File LOG:.....	2
On WN Hosts:.....	2
INSTALLATION:	2
Repository settings:.....	2
Packages installation (CA, epel, emi, cream, torque,...):.....	2
Munge configuration:.....	2
File LOG:.....	2
CONFIGURATION:	2
SSH Customization:.....	2
File LOG:.....	2
TESTING:	2
JOB Submission:	3
First Test (simple job):.....	3
Second Test (simple job MPI with 2 core):.....	3
Third Test: (MPI 4 core required).....	5
Third Test (bis): (MPI 4 core required).....	5

CREAM & WN (IGI/EMI) using last Torque (2.5.7-7) and Maui 3.3-4 installation with MPI

On CE Host (also BATCH Master PBS/Torque)

INSTALLATION:

Repository settings:

```
cd /etc/yum.repos.d/  
mv dag.repo dag.repo.orig  
wget http://repo-pd.italiangrid.it/mrepo/repos/egi-trustanchors.repo  
wget http://repo-pd.italiangrid.it/mrepo/repos/igi/sl5/x86_64/igi-cert-emi.repo  
cd /root/  
wget http://download.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm  
wget http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/x86_64/updates/emi-release-1.0.1-1.sl5.noarch.rpm
```

Packages installation (CA, epel, emi, cream, torque,...):

```
yum install ca-policy-egi-core  
yum localinstall *.rpm  
yum install xml-commons-apis  
yum install emi-cream-ce  
yum install emi-torque-server emi-torque-utils  
yum install glite-mpi
```

Munge configuration

```
/usr/sbin/create-munge-key  
service munge start  
chkconfig munge on
```

Starting PBS

```
/etc/init.d/pbs_server start
```

File LOG

Installation File on CE - cert-09.pd.infn.it Work Log

CONFIGURATION:

```
/opt/glite/yaim/bin/yaim -c -d 6 -s /usr/local/nfs/cert-3_2/rtc_mpi/rtc-site-info.def -n MPI_CE
```

SSH Customization:

Modify the file /etc/ssh/sshd_config as the example attached here
Modify the file /etc/ssh/shosts.equiv as the example attached here

```
service sshd restart
```

File LOG:

Yaim Configuration File on CE cert-09.pd.infn.it

On WN Hosts:

INSTALLATION:

Repository settings:

```
cd /etc/yum.repos.d/
mv dag.repo dag.repo.orig
wget http://repo-pd.italiangrid.it/mrepo/repos/egi-trustanchors.repo
wget http://repo-pd.italiangrid.it/mrepo/repos/igi/sl5/x86_64/igi-cert-emi.repo
cd /root/
wget http://download.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm
wget http://emisoft.web.cern.ch/emisoft/dist/EMI/1/sl5/x86_64/updates/emi-release-1.0.1-1.sl5.noarch.rpm
```

Packages installation (CA, epel, emi, cream, torque,...):

```
yum install ca-policy-egi-core
yum localinstall *.rpm
yum install igi-wn_torque_noafs
yum install glite-mpi
yum install openmpi openmpi-devel mpich2
```

Munge configuration:

```
scp cert-09:/etc/munge/munge.key /etc/munge/
chown munge.munge /etc/munge/munge.key
service munge start
```

File LOG:

Installation File on WN - cert-wn64-08.pn.pd.infn.it Work Log

CONFIGURATION:

```
/opt/glite/yaim/bin/yaim -c -d 6 -s /usr/local/nfs/cert-3_2/rtc_mpi/rtc-site-info.def -n MPI_WN -
```

SSH Customization:

Modify the file /etc/ssh/sshd_config as the example attached here

Modify the file /etc/ssh/shosts.equiv as the example attached here

```
service sshd restart
```

File LOG:

Yaim Configuration File on WN cert-wn64-08.pn.pd.infn.it

TESTING:

JOB Submission:

First Test (simple job):

From an EMI UI creating proxy and submission:

```
-bash-3.2$ glite-ce-job-submit -r cert-09.pd.infn.it:8443/cream-pbs-cert -a testCream.jdl
https://cert-09.pd.infn.it:8443/CREAM043342708
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM043342708
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM043342708]
Status      = [RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM043342708
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM043342708]
Status      = [REALLY-RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM043342708
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM043342708]
Status      = [DONE-OK]
ExitCode     = [0]
```

First Test : **PASSED**

Second Test (simple job MPI with 2 core):

```
-bash-3.2$ glite-ce-job-submit -r cert-09.pd.infn.it:8443/cream-pbs-cert -a mpi-start-wrapper_Cre
https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Status      = [IDLE]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Status      = [RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Status      = [REALLY-RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Status      = [REALLY-RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM986827158
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Status      = [DONE-OK]
ExitCode     = [1]
```

JOB Submission:

TestingIgiCreamTorqueMpi < IGIRelease < TWiki

```

-bash-3.2$ glite-ce-job-status -L 2
https://cert-09.pd.infn.it:8443/CREAM986827158
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM986827158]
Current Status = [DONE-OK]
Working Dir     = [[reserved]]
ExitCode       = [1]
Grid JobID     = [N/A]
LRMS Abs JobID = [[reserved]]
LRMS JobID     = [[reserved]]
Deleg Proxy ID = [613f3558926a0ba8642c51cfcaeb019b88a5b791]
DelegProxyInfo = [Valid From      : 2/14/12 2:04 PM (GMT)
                  Valid To      : 2/14/12 11:14 PM (GMT)
                  Holder Subject : /C=IT/O=INFN/OU=Personal
Certificate/L=Padova/CN=Sergio Traldi
                  Holder CA      : /C=IT/O=INFN/CN=INFN CA
                  VO              : dteam
                  AC Issuer      :
CN=voms2.hellasgrid.gr,OU=hellasgrid.gr,O=HellasGrid,C=GR
                  Attribute      : /dteam/Role=NULL/Capability=NULL
/dteam/NGI_IT/Role=NULL/Capability=NULL
]
Worker Node    = [cert-wn64-08.pn.pd.infn.it]
Local User     = [dteam009]
CREAM ISB URI  =
[gsiftp://cert-09.pd.infn.it/var/cream_sandbox/dteam/_C_IT_O_INFNOU_Personal_Certificate_L_Padov
CREAM OSB URI  =
[gsiftp://cert-09.pd.infn.it/var/cream_sandbox/dteam/_C_IT_O_INFNOU_Personal_Certificate_L_Padov
JDL           = [[ Arguments = "name_mpi OPENMPI"; QueueName =
"cert"; JobType = "Normal"; Executable = "mpi-start-wrapper.sh";
VirtualOrganisation = "dteam"; InputSandbox = {
"/home/traldi/JOB_MPI/mpi-start-wrapper.sh", "/home/traldi/JOB_MPI/mpi-hooks.sh", "/home/traldi/JOB
}; CPUNumber = 2; StdOutput = "std.out"; Type = "Job";
OutputSandboxBaseDestUri = "gsiftp://prod-se-01.pd.infn.it/tmp"; StdError =
"std.err"; BatchSystem = "pbs"; OutputSandbox = { "std.err", "std.out" } ]]
Type          = [Normal]

Job status changes:
-----
Status       = [REGISTERED] - [Tue 14 Feb 2012 15:09:29]
(1329228569)
Status       = [PENDING] - [Tue 14 Feb 2012 15:09:31] (1329228571)
Status       = [IDLE] - [Tue 14 Feb 2012 15:09:31] (1329228571)
Status       = [RUNNING] - [Tue 14 Feb 2012 15:09:36] (1329228576)
Status       = [REALLY-RUNNING] - [Tue 14 Feb 2012 15:09:40]
(1329228580)
Status       = [DONE-OK] - [Tue 14 Feb 2012 15:09:43] (1329228583)

Issued Commands:
-----

*** Command Name           = [JOB_REGISTER]
   Command Category       = [JOB_MANAGEMENT]
   Command Status         = [SUCCESSFULL]
   Creation Time          = [Tue 14 Feb 2012 15:09:29]
(1329228569)
   Start Scheduling Time  = [Tue 14 Feb 2012 15:09:29]
(1329228569)
   Start Processing Time  = [Tue 14 Feb 2012 15:09:29]
(1329228569)
   Execution Completed Time = [Tue 14 Feb 2012 15:09:29]
(1329228569)

*** Command Name           = [JOB_START]
   Command Category       = [JOB_MANAGEMENT]
   Command Status         = [SUCCESSFULL]

```

Second Test (simple job MPI with 2 core):

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```
Creation Time = [Tue 14 Feb 2012 15:09:31]
(1329228571)
Start Scheduling Time = [Tue 14 Feb 2012 15:09:31]
(1329228571)
Start Processing Time = [Tue 14 Feb 2012 15:09:31]
(1329228571)
Execution Completed Time = [Tue 14 Feb 2012 15:09:38]
(1329228578)
```

Second Test : **PASSED**

Third Test: (MPI 4 core required)

Test Submission with 4 core required:

```
-bash-3.2$ glite-ce-job-submit -r cert-09.pd.infn.it:8443/cream-pbs-cert -a mpi-start-wrapper_Cre
https://cert-09.pd.infn.it:8443/CREAM888211702
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM888211702
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM888211702]
Status = [ABORTED]
ExitCode = []
FailureReason = [BLAH error: submission command failed (exit code = 1) (stdout:) (stderr:)]
```

Third Test : **NOT PASSED**

Third Test (bis): (MPI 4 core required)

Execute again the third test submitting a jobs using 4 cores:

Modified one YAIM variable in services/glite-mpi_ce file :

```
MPI_SUBMIT_FILTER=${MPI_SUBMIT_FILTER:-"yes"}
```

and reconfigure the CE

```
-bash-3.2$ glite-ce-job-submit -r cert-09.pd.infn.it:8443/cream-pbs-cert -a mpi-start-wrapper_Cre
https://cert-09.pd.infn.it:8443/CREAM115768488
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM115768488
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM115768488]
Status = [IDLE]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM115768488
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM115768488]
Status = [RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM115768488
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM115768488]
Status = [REALLY-RUNNING]
```

```
-bash-3.2$ glite-ce-job-status https://cert-09.pd.infn.it:8443/CREAM115768488
```

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM115768488]
Status = [DONE-OK]
```

Third Test: (MPI 4 core required)

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ExitCode = [0]

-bash-3.2\$ glite-ce-job-status -L 2 https://cert-09.pd.infn.it:8443/CREAM115768488

```
***** JobID=[https://cert-09.pd.infn.it:8443/CREAM115768488]
Current Status = [DONE-OK]
Working Dir = [[reserved]]
ExitCode = [0]
Grid JobID = [N/A]
LRMS Abs JobID = [[reserved]]
LRMS JobID = [[reserved]]
Deleg Proxy ID = [e1444f9cc9df997f65b2b6d247d1dc582814c451]
DelegProxyInfo = [Valid From : 2/15/12 2:12 PM (GMT)
                  Valid To : 2/15/12 9:26 PM (GMT)
                  Holder Subject : /C=IT/O=INFN/OU=Personal Certificate/L=Padova/CN=Sergio
                  Holder CA : /C=IT/O=INFN/CN=INFN CA

                  VO : dteam
                  AC Issuer : CN=voms2.hellasgrid.gr,OU=hellasgrid.gr,O=HellasGrid,
                  Attribute : /dteam/Role=NULL/Capability=NULL /dteam/NGI_IT/Role=
                  ]
Worker Node = [cert-wn64-08.pn.pd.infn.it]
Local User = [dteam009]
CREAM ISB URI = [gsiftp://cert-09.pd.infn.it/var/cream_sandbox/dteam/_C_IT_O_INFNOU_Per
CREAM OSB URI = [gsiftp://cert-09.pd.infn.it/var/cream_sandbox/dteam/_C_IT_O_INFNOU_Per
JDL = [[ Arguments = "name_mpi OPENMPI"; QueueName = "cert"; JobType = "Normal
Type = [Normal]
```

Job status changes:

```
-----
Status = [REGISTERED] - [Wed 15 Feb 2012 15:18:00] (1329315480)
Status = [PENDING] - [Wed 15 Feb 2012 15:18:04] (1329315484)
Status = [IDLE] - [Wed 15 Feb 2012 15:18:04] (1329315484)
Status = [RUNNING] - [Wed 15 Feb 2012 15:18:11] (1329315491)
Status = [REALLY-RUNNING] - [Wed 15 Feb 2012 15:18:14] (1329315494)
Status = [DONE-OK] - [Wed 15 Feb 2012 15:23:24] (1329315804)
```

Issued Commands:

```
-----
*** Command Name = [JOB_REGISTER]
Command Category = [JOB_MANAGEMENT]
Command Status = [SUCCESSFULL]
Creation Time = [Wed 15 Feb 2012 15:17:59] (1329315479)
Start Scheduling Time = [Wed 15 Feb 2012 15:17:59] (1329315479)
Start Processing Time = [Wed 15 Feb 2012 15:17:59] (1329315479)
Execution Completed Time = [Wed 15 Feb 2012 15:18:01] (1329315481)
```

```
*** Command Name = [JOB_START]
Command Category = [JOB_MANAGEMENT]
Command Status = [SUCCESSFULL]
Creation Time = [Wed 15 Feb 2012 15:18:04] (1329315484)
Start Scheduling Time = [Wed 15 Feb 2012 15:18:04] (1329315484)
Start Processing Time = [Wed 15 Feb 2012 15:18:04] (1329315484)
Execution Completed Time = [Wed 15 Feb 2012 15:18:11] (1329315491)
```

Inside CE:

[root@cert-09 ~]# qstat -n

cert-09.pd.infn.it:

Job ID	Username	Queue	Jobname	SessID	NDS	TSK	Req'd Memory	Req'd Time	Elap S	Time
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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5.cert-09.pd.inf dteam009 cert cream_115768488 29356 2 4 -- -- R 00:02
cert-wn64-08+cert-wn64-08+cert-wn64-07+cert-wn64-07

Third Test (bis) : **PASSED**

This topic: IGIRelease > TestingIgiCreamTorqueMpi

Topic revision: r4 - 2012-02-17 - CristinaAiftimiei



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