



# EMI-CREAM installation

Emidio Giorgio  
INFN Catania  
EMI - NA2

# Outline

- CREAM Overview
- Installation
- Configuration

# What is a CE ?

- **Computing Element** provides some of main services of a site.
- Main functionalities:
  - job management (job submission, job control)
  - job status updated for WMS
  - publish its informations (as queues, CPU availability and so on...)
  - Authentication (LCAS) and authorization (LCMAPS)
- It can run on top of several kinds of batch system:
  - Torque + MAUI
  - LSF
  - SGE
  - Condor

# CREAM Overview

- CREAM (Computing Resource Execution And Management) is a simple, lightweight service for job management operation at the Computing Element (CE) level.
- It exposes a web service interface to get users' request expressed via JDL
- It replaces Icg-CE improving and extending its features
  - direct submission to the CE
  - performance boost
  - improved security model
  - ...

# Requirements

- Two or more machine:
  - One will be used to perform **CE installation**;
  - Others will be used to perform WN installation;
- Architecture: 64 bit
- Operating System: Scientific Linux 5
- At least **one machine** with a public IP address, direct and reverse address resolution and equipped with an X509 certificate.

# What are we going to do ?



- Install CREAM
- What are we omitting ?
  - batch system installation
  - worker nodes installation
  - detailed site info configuration

# Access the t-Infrastructure

- `ssh -p 2222 root@vmXX.ct.infn.it`
- password : ???
- if you are more than 20, please work in pair
- host certificates are under `/root/hostcerts`

```
# ls -l /root/hostcerts/  
vm01.ct.infn.it  vm04.ct.infn.it  vm07.ct.infn.it  
vm10.ct.infn.it  vm13.ct.infn.it  vm16.ct.infn.it  
vm19.ct.infn.it  
vm02.ct.infn.it  vm05.ct.infn.it  vm08.ct.infn.it  
vm11.ct.infn.it  vm14.ct.infn.it  vm17.ct.infn.it  
vm20.ct.infn.it  
vm03.ct.infn.it  vm06.ct.infn.it  vm09.ct.infn.it  
vm12.ct.infn.it  vm15.ct.infn.it  vm18.ct.infn.it
```

# Installation

repository is already  
setup, just check it

already  
done on  
training  
machines

```
# cat /etc/yum.repos.d/emi-1-RC3-  
s15.repo  
# yum install lcg-CA  
# yum install emi-cream-ce.x86_64  
# cp /root/hostcerts/$HOSTNAME/  
$HOSTNAME-cert.pem /etc/grid-security/  
hostcert.pem  
# cp /root/hostcerts/$HOSTNAME/  
$HOSTNAME-key.pem /etc/grid-security/  
hostkey.pem
```



# Configuration

- CREAM is configured through **YAIM**
- Main files :
  - siteinfo.def
  - glite-creamce
  - users.conf & groups.conf
  - wn-list.conf
  - vo.d

# siteinfo.def

```
# cd /opt/glite/yaim/examples/siteinfo
# cp site-info.def mysite-info.def
# vi mysite-info.def
```

```
MYSQL_PASSWORD=goodPassword      # use a good one ;)
SITE_NAME=emi-training-test-02    # fancy name
CE_HOST=vm02.ct.infn.it           # replace with your own
FDQN CE_CPU_MODEL="Opteron 2218"
CE_CPU_VENDOR="AMD"
CE_BATCH_SYS=lsf
BATCH_LOG_DIR=/var/log/lsf
BATCH_VERSION=7.0
BDII_HOST=certtb-bdii-top.cern.ch
VOS="testers.eu-emi.eu"
QUEUES="cert prod"
CERT_GROUP_ENABLE="testers.eu-emi.eu"
PROD_GROUP_ENABLE="testers.eu-emi.eu"
```

comment all lines starting with  
VO\_<vo\_name>\_\*  
<queue-name>\_GROUP\_ENABLE=

# wn-list.conf, glite-creamce

```
# cd /opt/glite/yaim/examples
# cat wn-list.conf
wn01.acme.com
wn01.acme.com
# cd siteinfo/services
# vi glite-creamce
```

When installing a real site, replace with the actual WN names

```
CEMON_HOST=vm02.ct.infn.it
CREAM_DB_USER=creamDbUser
CREAM_DB_PASSWORD=creamDbPasswd
BLPARSER_HOST=vm02.ct.infn.it
```

# {users,groups}.conf

```
# cd /opt/glite/yaim/examples
# wget --no-check-certificate https://twiki.cern.ch/twiki/pub/EMI/TestBed/users\_testers.conf
# sed -e '1s/^\xef\xbb\xbf//'
users_testers.conf > users_testers.conf2
# cat users_testers.conf2 >> users.conf
# wget --no-check-certificate https://twiki.cern.ch/twiki/pub/EMI/TestBed/groups.conf
# cat groups.conf.1 >> groups.conf
```

# vo.d

```
# cd /opt/glite/yaim/examples/  
siteinfo/  
# mkdir vo.d; cd vo.d  
# wget --no-check-certificate  
https://twiki.cern.ch/twiki/pub/EMI/  
TestBed/testers.eu-emi.eu
```

# Configure !

```
# cd /opt/glite/yaim/examples/  
siteinfo/  
# /opt/glite/yaim/bin/yaim -c -s  
mysite-info.def -n creamCE
```

# Thank you !

- Feedback form

<http://www.surveymonkey.com/s/TL9GGLM>

- For further questions, please attend '*EMI meet the expert*', Tuesday 12 at 16:00



# Thank you!

EMI is partially funded by the European Commission under Grant Agreement RI-261611