

**Quality Criteria Verification
Executive Summary
For QCV, Stage Rollout, DMSU and EGI internal**

Name of the component			
Release	emi.glite-mpi.sl6.x86_64-1.4.0	RT Ticket:	#4498
Software Provider			
Release Contact	Name: Cristina Aiftimiei	E-Mail: cristina.aiftimiei@pd.infn.it	
Validator	Name: Esteban Freire García	E-Mail: esfreire@cesga.es	
V. Hours Worked	10 hours		
Component st	VERIFIED	Date	
Verification start date	03/01/13	Verification end date	08/01/13

Summary:

EMI-MPI was updated and installed from scratch using UMD-2 repository without any important issue in a creamCE and Worker Nodes with Torque + Maui.

GGUS Tickets:

Summary of Quality Criteria verification:

	Generic Quality Criteria Total (Critical/Non critical)			
	Passed	Not passed	Not Applicable	Total
TP				
VLD	11			11
	Specific Quality Criteria			
TP				
VLD	4			4

Quality Criteria verification cheatsheet:

Criteria	Accepted	Tested	Comments
Generic QC			
GENERIC_DOC_1 (Functional Description)	Y	VLD	http://grid.ifca.es/wiki/Middleware/MpiStart/MpiUtils#Functional_Description
GENERIC_DOC_2 (Release Notes)	Y	VLD	https://devel.ifca.es/mpi-start/versions?show=all
GENERIC_DOC_3 (User Documentation)	Y	VLD	http://grid.ifca.es/wiki/Middleware/MpiStart/UserDocumentation
GENERIC_DOC_4 (Online help (man pages))	Y	VLD	http://grid.ifca.es/wiki/Middleware/MpiStart
GENERIC_DOC_6 (Administrator Documentation)	Y	VLD	http://grid.ifca.es/wiki/Middleware/MpiStart
GENERIC_DOC_8 (Software License)	Y	VLD	GPL
GENERIC_DOC_9 (Release changes tests)	Y	VLD	https://devel.ifca.es/mpi-start/versions?show=all
GENERIC_DIST_1 (Source Code Availability)	Y	VLD	https://devel.ifca.es/mpi-start/browser
GENERIC_DIST_2 (Source Distribution)	Y	VLD	https://devel.ifca.es/mpi-start/browser
GENERIC_DIST_3 (Binary Distribution)	Y	VLD	http://admin-repo.egi.eu/sw/unverified/umd-2.emi.glite-mpi.sl6.x86_64/1/4/0/emi-mpi-1.0.2-1.el6.noarch.rpm
GENERIC_MISC_2 (Bug Tracking System)	Y	VLD	https://ggus.eu/pages/home.php
Compute Capabilities QC			
PARALLEL_MPI_1 (Precompiled MPI job)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_MPI_2 (MPI job Execution)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_OMP_1 (Precompiled OpenMP)	Y	VLD	Job submitted without issues for openmpi
PARALLEL_OMP_2 (OpenMP job Execution)	Y	VLD	Job submitted without issues for openmpi

Validator comments:

== Verification of EMI.glite-mpi.sl6 in a EMI_creamCE_Torque SL6 ==

=== Ticket assigned ===

* [<https://rt.egi.eu/rt/Ticket/Display.html?id=4498>]

=== ggus tickets opened ===

* None.

=== Important Documentation ===

* <https://wiki.egi.eu/wiki/MAN03>

=== Repositories ===

(!) Verifier must install a new repo for each product, this information is available at RT ticket field:

* MPI repo under verification

{{{

```
[root@test15 yum.repos.d]# cat EMI.glite-mpi.sl6.x86_64.repo
```

```
# EGI Software Repository - REPO META (releaseId,repositoryId,repofileId) - (4498,752,679)
```

```
[EMI.glite-mpi.sl6.x86_64]
```

```
name=EMI.glite-mpi.sl6.x86_64
```

```
baseurl=http://admin-repo.egi.eu/sw/unverified/umd-2.emi.glite-mpi.sl6.x86_64/1/4/0/
```

```
enabled=1
```

```
protect=1
```

```
priority=1
```

```
gpgcheck=1
gpgkey=http://emisoft.web.cern.ch/emisoft/dist/EMI/2/RPM-GPG-KEY-emi
}}
```

=== Installing (OK) ===

* yum update

```
{{
```

```
=====
=====
=====
=====
Package                    Arch           Version
Repository                 Size
=====
=====
Installing:
kernel                     x86_64         2.6.32-279.19.1.el6
sl-security                25 M
Updating:
bind-libs                  x86_64         32:9.8.2-
0.10.rc1.el6_3.6          sl-security    870 k
bind-utils                  x86_64         32:9.8.2-
0.10.rc1.el6_3.6          sl-security    181 k
emi-version                 x86_64         2.5.0-1.sl6
UMD-2-updates              2.2 k
epel-release               noarch         6-8
epel                       14 k
glite-yaim-mpi             noarch         1.1.12-1.el6
EMI.glite-mpi.sl6.x86_64  15 k
globus-gridftp-server      x86_64         6.14-1.1.el6
UMD-2-updates              153 k
globus-gridftp-server-progs x86_64         6.14-1.1.el6
UMD-2-updates              44 k
gridsite-libs              x86_64         1.7.24-1.el6
UMD-2-updates              87 k
kernel-firmware            noarch         2.6.32-279.19.1.el6
sl-security                8.7 M
libtiff                    x86_64         3.9.4-9.el6_3
sl-security                341 k
mpi-start                   noarch         1.4.0-1.el6
EMI.glite-mpi.sl6.x86_64  40 k
mysql                      x86_64         5.1.66-2.el6_3
sl-security                884 k
mysql-libs                  x86_64         5.1.66-2.el6_3
sl-security                1.2 M
=====
```

mysql-server	x86_64	5.1.66-2.el6_3
sl-security	8.6 M	
selinux-policy	noarch	3.7.19-155.el6_3.13
sl-security	1.3 M	
selinux-policy-targeted	noarch	3.7.19-
155.el6_3.13	sl-security	2.6 M
umd-release	noarch	2.0.0-2.el6
UMD-2-updates	9.3 k	
Removing:		
kernel	x86_64	2.6.32-279.5.1.el6
@sl-security/6.2	114 M	

Transaction Summary

```
=====
=====
=====
=====
```

Install 1 Package(s)

}}}

==== Configure the siteinfo.def file for the CreamCE =====

* This is the site-info used to configure the CreamCE + Torque + MPI

(!)

* Taking the information about how to configure MPI in the CreamCE from the following links:

* <https://wiki.egi.eu/wiki/MAN03>

* There is a point in the previous link pointing to this one, that it is where is explained how to configure YAIM to configure torque + MPI:

<http://grid.ifca.es/wiki/Middleware/MpiStart/MpiUtils>

{{{

}}}

```
[root@test06 etc]# cat site-info.def
```

```
# YAIM example site configuration file - adapt it to your site!
```

```
#####
# CE configuration variables #
#####
```

```
CE_HOST=test06.egi.cesga.es
WMS_HOST=test22.egi.cesga.es
BDII_HOST=topbdii02.ncg.ingrid.pt
SITE_BDII_HOST=sbdii02.ncg.ingrid.pt
##SITE_BDII_HOST=test04.egi.cesga.es
##LFC_HOST=lxb7607.cern.ch
```

```
PX_HOST=myproxy.egi.cesga.es
MON_HOST=test07.egi.cesga.es
```

```
YAIM_LOGGING_LEVEL=INFO
```

```
#####
# CREAM CE node cluster mode #
#####
##CREAMCE_CLUSTER_MODE=yes
```

```
# Hostname where the cluster is configured
CLUSTER_HOST="test06.egi.cesga.es"
COMPUTING_SERVICE_ID="test06.egi.cesga.es_ComputingElement"
```

```
# Space separated list of your cluster names
CLUSTERS="clustersa2"
```

```
# Cluster UniqueID
CLUSTER_CLUSTERSA2_CLUSTER_UniqueID=my-sa2
CLUSTER_TEST06_EGI_CESGA_ES_CLUSTER_UniqueID=my-sa2
```

```
##QUEUE_xxx_CLUSTER_UniqueID
```

```
# Cluster human readable name
CLUSTER_CLUSTERSA2_CLUSTER_Name="This is the SA2 cluster for UMD
verification"
CLUSTER_TEST06_EGI_CESGA_ES_CLUSTER_Name="This is the SA2 cluster for
UMD verification"
```

```
# Site name where the cluster belongs to
# It should be consistent with your variable SITE_NAME
# NOTE: This may be changed to SITE_UniqueID when the GlueSite
# is configured with the new infosys variables
CLUSTER_CLUSTERSA2_SITE_UniqueID=cesga-egi
CLUSTER_TEST06_EGI_CESGA_ES_SITE_UniqueID=cesga-egi
```

```
# space separated list of CE hostnames configured in the cluster
CLUSTER_CLUSTERSA2_CE_HOSTS="test06.egi.cesga.es"
CLUSTER_TEST06_EGI_CESGA_ES_CE_HOSTS="test06.egi.cesga.es"
CLUSTER_YAIM_CE_TYPE="cream"
CLUSTER_CLUSTERSA2_INFO_PORT=2170
CLUSTER_CLUSTERSA2_INFO_TYPE=resource
```

```
# Define the following variables for the CEs configured in your cluster
# NOTE: you don't need to uncomment these variables if you are configuring
# only one CE in the same host as your cluster.
# You can use the variables defined in services/lcg-ce instead
```

```

# CE type: 'jobmanager' for lcg CE and 'cream' for cream CE
CE_HOST_test06_egi_cesga_es_CE_TYPE="cream"

# Space separated list of the queue names configured in the CE
# This variable has been renamed in the new infosys configuration.
# The old variable name was: QUEUES
#CE_HOST_test06_egi_cesga_es_QUEUES="GRID_ops GRID_dteam GRID_opsibeu
GRID_iberibeu"

# The name of the job manager used by the gatekeeper
# This variable has been renamed in the new infosys configuration.
# The old variable name was: JOB_MANAGER
# Please, define: lcgpbs, lcgifs, lcgsgc or lcgcondor
CE_HOST_test06_egi_cesga_es_CE_InfoJobManager="pbs"

CE_HOST_test06_egi_cesga_es_QUEUES="GRID_ops GRID_dteam GRID_opsibeu
GRID_iberibeu"
QUEUE_GRID_OPS_CLUSTER_UniqueID=my-sa2
QUEUE_GRID_DTEAM_CLUSTER_UniqueID=my-sa2
QUEUE_GRID_OPSIBEU_CLUSTER_UniqueID=my-sa2
QUEUE_GRID_IBERIBEU_CLUSTER_UniqueID=my-sa2

# The Subcluster variables should contain the name of the subcluster variable in upper
case
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_UniqueID=cesga-egi-
configuration
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ApplicationSoftwareRunTimeEnv
ironment="LCG-2|LCG-2_1_0|LCG-2_1_1|LCG-2_2_0" # CE_RUNTIMEENV
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ArchitectureSMPSize=2
# CE_SMPSIZE
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ArchitecturePlatformType=x86_6
4 # CE_OS_ARCH
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_BenchmarkSF00=1714
# CE_SF00
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_BenchmarkSI00=2395
# CE_SI00
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_MainMemoryRAMSize=513
# CE_MINPHYSMEM
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_MainMemoryVirtualSize=524
# CE_MINVIRTMEM
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_NetworkAdapterInboundIP=FAL
SE # CE_INBOUNDIP
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_NetworkAdapterOutboundIP=TR
UE # CE_OUTBOUNDIP
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_OperatingSystemName="Scientifi
c Linux" # CE_OS
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_OperatingSystemRelease=5.5
# CE_OS_RELEASE

```

```
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_OperatingSystemVersion="ScientificSL"
# CE_OS_VERSION
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ProcessorClockSpeed=2200
# CE_CPU_SPEED
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ProcessorModel=Opteron
# CE_CPU_MODEL
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ProcessorVendor=amd
# CE_CPU_VENDOR
SUBCLUSTER_TEST06_EGI_CESGA_ES_HOST_ProcessorOtherDescription="Cores=24,Benchmark=9.58-HEP-SPEC06"
# Processor description
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_Name="my subcluster SA2 verification"
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_PhysicalCPUs=2
# CE_PHYSCPU
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_LogicalCPUs=4
# CE_LOGCPU
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_TmpDir=/tmp
SUBCLUSTER_TEST06_EGI_CESGA_ES_SUBCLUSTER_WNTmpDir=/tmp
```

```
#####
# Site configuration variables #
#####
```

```
SITE_EMAIL=egee-admin@cesga.es
```

```
SITE_NAME=CESGA-EGEE
SITE_LOC="Santiago de Compostela, Spain"
SITE_LAT=42.87558 #42.8757 # -90 to 90 degrees
SITE_LONG=-8.553147 #-8.5536 # -180 to 180 degrees
```

```
#####
# Batch server configuration variables #
#####
```

```
# Jobmanager specific settings
JOB_MANAGER=lcpbs
BATCH_SERVER=test06.egi.cesga.es
CE_BATCH_SYS=torque
BATCH_LOG_DIR=/var/lib/torque
BATCH_VERSION=torque-2.5.7-9
```

```
#####
# APEL configuration variables #
#####
```

```
# Database password for the APEL DB.
APEL_MYSQL_HOST=test07.egi.cesga.es
```

```
APEL_DB_PASSWORD=""

#####

# ARGUS authorisation framework control #

#####

# Set USE_ARGUS to yes to enable the configuration of ARGUS

##USE_ARGUS=yes
USE_ARGUS=no

# In case ARGUS is to be used the following should be set
# The ARGUS service PEPD endpoints as a space separated list:

##ARGUS_PEPD_ENDPOINTS="https://test10.egi.cesga.es:8154/authz"
##CREAM_PEPD_RESOURCEID="http://www.egee.cesga.es/test10"

# These variables tell YAIM where to find additional configuration files.
WN_LIST=/opt/glite/yaim/etc/wn-list.conf
USERS_CONF=/opt/glite/yaim/etc/users.conf
GROUPS_CONF=/opt/glite/yaim/etc/groups.conf
FUNCTIONS_DIR=/opt/glite/yaim/functions

#
# SE_dpm-specific settings - Ignore if you are not running a DPM
#
# Set these if you are installing a DPM yourself
# and/or if you need a default DPM for the lcg-stdout-mon
#
# DPMDATA is now deprecated. Use an entry like $DPM_HOST:/filesystem in
# the DPM_FILESYSTEMS variable.
# From now on we use DPM_DB_USER and DPM_DB_PASSWORD to make clear
# its different role from that of the dpmmgr unix user who owns the
# directories and runs the daemons.

# The name of the DPM head node
DPM_HOST=test08.egi.cesga.es

DPMPOOL=egi-pool
DPM_FILESYSTEMS="$DPM_HOST:/storage"

# The base user
```



```
DPM_DB_USER=dpmmgr
DPM_DB_HOST=$DPM_HOST
DPM_DB_PASSWORD=
```

```
# Specifies the default amount of space reserved for a file
#DPMFSIZE=200M
```

```
DPM_INFO_USER=dpm_info
DPM_INFO_PASS=
```

```
# Variable for the port range - Optional, default value is shown
# RFIO_PORT_RANGE="20000 25000"
```

```
# This largely replaces CE_CLOSE_SE but it is a list of hostnames
SE_MOUNT_INFO_LIST="none"
SE_LIST="$DPM_HOST"
SE_ARCH="multidisk" # "disk, tape, multidisk, other"
```

```
#####
```

```
# SubCluster configuration #
```

```
#####
```

```
# Architecture and environment specific settings
```

```
CE_CPU_MODEL=Opteron
```

```
CE_CPU_VENDOR=amd
```

```
CE_CPU_SPEED=2200
```

```
CE_OS="ScientificSL" # Forma correcta
```

```
CE_OS_RELEASE=5.5
```

```
CE_OS_VERSION="Boron"
```

```
#New variables
```

```
CE_PHYSCPU=2
```

```
CE_LOGCPU=2
```

```
CE_OS_ARCH=x86_64
```

```
CE_CAPABILITY="CPUScalingReferenceSI00=2395"
```

```
CE_OTHERDESCR="Cores=24,Benchmark=9.58-HEP-SPEC06"
```

```
SE_MOUNT_INFO_LIST="none"
```

```
CE_SI00=2395
```

```
CE_MINPHYSMEM=524
```

```
CE_MINVIRTMEM=512
```

```
CE_SMPSIZE=2
```

```
CE_SF00=1714
```

```
CE_OUTBOUNDIP=TRUE
```

```
CE_INBOUNDIP=FALSE
```

```
CE_RUNTIMEENV="
```

```
  LCG-2  
  LCG-2_1_0  
  LCG-2_1_1  
  LCG-2_2_0  
  LCG-2_3_0  
  LCG-2_3_1  
  LCG-2_4_0  
  LCG-2_5_0  
  LCG-2_6_0  
  LCG-2_7_0  
  GLITE-3_0_0  
  GLITE-3_0_2  
  GLITE-3_1_0  
  R-GMA
```

```
"
```

```
###CREAM CE Variables
```

```
CEMON_HOST=test06.egi.cesga.es  
CREAM_DB_USER=umdttest  
CREAM_DB_PASSWORD=""  
MYSQL_PASSWORD=""  
BLPARSER_HOST=test06.egi.cesga.es
```

```
# MPI CONFIGURATION
```

```
#####
```

```
MPI_OPENMPI_ENABLE="yes"  
MPI_OPENMPI_VERSION="1.4-4"  
##If you do NOT provide a shared home, set $MPI_SHARED_HOME to "no" (default).  
MPI_SHARED_HOME="no"  
## If you do NOT have SSH Hostbased Authentication between your WNs, set the  
below variable to "no" (default). Else, set it to "yes".  
MPI_SSH_HOST_BASED_AUTH="yes"  
### If you use Torque as batch system, you may want to let the yaim plugin configure a  
submit filter for you. Uncomment the following line to do so  
MPI_SUBMIT_FILTER="yes"  
# KNOWN ISSUE IN SL6!!!  
TORQUE_VAR_DIR=/var/lib/torque
```

```
# VOS="atlas alice lhcb cms dteam biomed"
```

```
# Space separated list of supported VOs by your site
```

```
VOS="ops dteam ops.vo.ibergrid.eu iber.vo.ibergrid.eu"  
QUEUES="GRID_ops GRID_dteam GRID_opsibeu GRID_iberibeu"  
VO_SW_DIR=/opt/exp_soft
```

```
#New in Yaim 3.0.1
```

```
GRID_OPS_GROUP_ENABLE="ops /VO=ops/GROUP=/ops/ROLE=lcgadmin"  
GRID_DTEAM_GROUP_ENABLE="dteam  
/VO=dteam/GROUP=/dteam/ROLE=lcgadmin"
```

```
GRID_OPSIBEU_GROUP_ENABLE="ops.vo.ibergrid.eu
/VO=ops.vo.ibergrid.eu/GROUP=/ops.vo.ibergrid.eu/ROLE=VO-Admin
/VO=ops.vo.ibergrid.eu/GROUP=/ops.vo.ibergrid.eu/ROLE=Production"
GRID_IBERIBEU_GROUP_ENABLE="iber.vo.ibergrid.eu
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=VO-Admin
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=Production"
```

```
#:::~::~:
```

```
#dteam
```

```
#:::~::~:
```

```
VO_DTEAM_SW_DIR=$VO_SW_DIR/dteam
```

```
VO_DTEAM_DEFAULT_SE=$DPM_HOST
```

```
VO_DTEAM_STORAGE_DIR=$CLASSIC_STORAGE_DIR/dteam
```

```
VO_DTEAM_QUEUES="GRID_small"
```

```
#New conf (https://wiki.egi.eu/wiki/Dteam\_vo)
```

```
VO_DTEAM_VOMS_SERVERS='vomss://voms.hellasgrid.gr:8443/voms/dteam?/dteam/'
```

```
VO_DTEAM_VOMSES=""dteam lcg-voms.cern.ch 15004
```

```
/DC=ch/DC=cern/OU=computers/CN=lcg-voms.cern.ch dteam 24' dteam voms.cern.ch
```

```
15004 /DC=ch/DC=cern/OU=computers/CN=voms.cern.ch dteam 24' dteam
```

```
voms.hellasgrid.gr 15004
```

```
/C=GR/O=HellasGrid/OU=hellasgrid.gr/CN=voms.hellasgrid.gr dteam 24' dteam
```

```
voms2.hellasgrid.gr 15004
```

```
/C=GR/O=HellasGrid/OU=hellasgrid.gr/CN=voms2.hellasgrid.gr dteam 24'"
```

```
VO_DTEAM_VOMS_CA_DN=""/DC=ch/DC=cern/CN=CERN Trusted Certification Authority' /DC=ch/DC=cern/CN=CERN Trusted Certification Authority'
```

```
'/C=GR/O=HellasGrid/OU=Certification Authorities/CN=HellasGrid CA 2006'
```

```
'/C=GR/O=HellasGrid/OU=Certification Authorities/CN=HellasGrid CA 2006'"
```

```
#:::~::~:
```

```
#ops
```

```
#:::~::~:
```

```
VO_OPS_SW_DIR=$VO_SW_DIR/ops
```

```
VO_OPS_DEFAULT_SE=$DPM_HOST
```

```
VO_OPS_STORAGE_DIR=$CLASSIC_STORAGE_DIR/ops
```

```
VO_OPS_QUEUES="GRID_ops"
```

```
VO_OPS_VOMS_SERVERS=""vomss://voms.cern.ch:8443/voms/ops?/ops/"
```

```
VO_OPS_VOMSES=""ops voms.cern.ch 15009
```

```
/DC=ch/DC=cern/OU=computers/CN=voms.cern.ch ops' 'ops lcg-voms.cern.ch
```

```
15009 /DC=ch/DC=cern/OU=computers/CN=lcg-voms.cern.ch ops'"
```

```
VO_OPS_VOMS_CA_DN=""/DC=ch/DC=cern/CN=CERN Trusted Certification Authority' /DC=ch/DC=cern/CN=CERN Trusted Certification Authority'"
```

```
## IBERGRID VOS ##
```

```
# ops.vo.ibergrid.eu
```

```
VO_OPS_VO_IBERGRID_EU_SW_DIR=$VO_SW_DIR/opsibeu
```

```
VO_OPS_VO_IBERGRID_EU_DEFAULT_SE=$DPM_HOST
```

```
VO_OPS_VO_IBERGRID_EU_STORAGE_DIR=$CLASSIC_STORAGE_DIR/opsib
eu
VO_OPS_VO_IBERGRID_EU_QUEUES="GRID_opsibeu"
VO_OPS_VO_IBERGRID_EU_VOMS_SERVERS=""vomss://voms02.ncg.ingrid.pt:84
43/voms/ops.vo.ibergrid.eu?/ops.vo.ibergrid.eu"
VO_OPS_VO_IBERGRID_EU_VOMSES=""ops.vo.ibergrid.eu voms02.ncg.ingrid.pt
40001 /C=PT/O=LIPCA/O=LIP/OU=Lisboa/CN=voms02.ncg.ingrid.pt
ops.vo.ibergrid.eu"
VO_OPS_VO_IBERGRID_EU_VOMS_CA_DN=""/C=PT/O=LIPCA/CN=LIP
Certification Authority"
```

```
# iber.vo.ibergrid.eu
VO_IBER_VO_IBERGRID_EU_SW_DIR=$VO_SW_DIR/iberibeu
VO_IBER_VO_IBERGRID_EU_DEFAULT_SE=$DPM_HOST
VO_IBER_VO_IBERGRID_EU_STORAGE_DIR=$CLASSIC_STORAGE_DIR/iberi
beu
VO_IBER_VO_IBERGRID_EU_QUEUES="GRID_iberibeu"
VO_IBER_VO_IBERGRID_EU_VOMS_SERVERS=""vomss://voms02.ncg.ingrid.pt:8
443/voms/iber.vo.ibergrid.eu?/iber.vo.ibergrid.eu"
VO_IBER_VO_IBERGRID_EU_VOMSES=""iber.vo.ibergrid.eu voms02.ncg.ingrid.pt
40003 /C=PT/O=LIPCA/O=LIP/OU=Lisboa/CN=voms02.ncg.ingrid.pt
iber.vo.ibergrid.eu"
VO_IBER_VO_IBERGRID_EU_VOMS_CA_DN=""/C=PT/O=LIPCA/CN=LIP
Certification Authority"
```

```
{}}
```

```
===== Configuring with YAIM the CreamCE =====
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{}}
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```
/opt/glite/yaim/bin/yaim -c -s /opt/glite/yaim/etc/site-info.def -n MPI_CE -n creamCE
-n TORQUE_server -n TORQUE_utils
[ ..... ]
```

```
Stopping tomcat6: [ OK ]
INFO: Copying hostcert to /etc/grid-security/tomcat-cert.pem for tomcat:root.....
INFO: Copying hostkey to /etc/grid-security/tomcat-key.pem for tomcat:root...
INFO: Configuring /etc/tomcat6/server.xml...
INFO: Copying trustmanager log4j properties to tomcat configuration directory..
INFO: Linking log4j and bouncycastle jars to tomcat server lib directory..
INFO: Linking trustmanager jars to tomcat server lib directory...
INFO: Linking jakarta-commons-logging to tomcat server lib directory...
INFO: Defining JAVA_HOME in the Tomcat configuration file
INFO: Starting Tomcat
```

```
Starting tomcat6: [ OK ]
INFO: Executing function: config_vomsmmap_setenv
INFO: Executing function: config_vomsmmap
INFO: Creating grid-map directory in /etc/grid-security/gridmapdir
INFO: Creating voms grid-map file in /etc/grid-security/voms-grid-mapfile
```

INFO: Creating voms groupmap file in /etc/grid-security/groupmapfile
INFO: Copying the /etc/grid-security/voms-grid-mapfile in the standard location
/etc/grid-security/grid-mapfile
INFO: Executing function: config_cream_remove_subcluster_ce_setenv
INFO: Executing function: config_cream_remove_subcluster_ce
INFO: Executing function: config_lcas_lcmaps_gt4_setenv
INFO: Executing function: config_lcas_lcmaps_gt4
INFO: Creating LCAS_DB_FILE in /etc/lcas/lcas.db
INFO: Creating LCMAPS_DB_FILE in /etc/lcmaps/lcmaps.db
INFO: Executing function: config_globus_gridftp_setenv
INFO: Executing function: config_globus_gridftp
INFO: Starting gridftp service :
Stopping globus-gridftp-server: [OK]
Starting globus-gridftp-server: [OK]
INFO: Executing function: config_cream_glexec_setenv
INFO: Executing function: config_cream_glexec
INFO: Executing function: config_cream_blah_setenv
INFO: Executing function: config_cream_blah
INFO: Executing function: config_cream_ce_setenv
INFO: Executing function: config_cream_ce
INFO: File /etc/glite-ce-cream/cream-config.xml backed-up in /etc/glite-ce-cream/cream-config.xml.bak_20130104_133219
Stopping tomcat6: [FAILED]
Starting tomcat6: [FAILED]
INFO: Executing function: config_cream_emies_setenv
INFO: Executing function: config_cream_emies
Stopping tomcat6: [FAILED]
Starting tomcat6: [FAILED]
INFO: Executing function: config_cream_logrotation_setenv
INFO: Executing function: config_cream_logrotation
INFO: Executing function: config_bdii_5.2
Stopping BDII update process: [OK]
Stopping BDII slapd: [OK]
Starting BDII slapd: [OK]
Starting BDII update process: [OK]
INFO: Executing function: config_cream_gip_info_dynamic_setenv
INFO: Executing function: config_cream_gip_info_dynamic
INFO: Executing function: config_cream_gip_setenv
INFO: Executing function: config_cream_gip
WARNING: Queue GRID_ops was enabled for one or more FQANs which specify an entire VO
WARNING: Queue GRID_dteam was enabled for one or more FQANs which specify an entire VO
WARNING: Queue GRID_opsibeu was enabled for one or more FQANs which specify an entire VO
WARNING: Queue GRID_opsibeu was enabled for one or more FQANs which specify an entire VO
WARNING: Queue GRID_iberibeu was enabled for one or more FQANs which specify an entire VO

WARNING: Queue GRID_iberibeu was enabled for one or more FQANs which specify an entire VO

INFO: Executing function: config_cream_gip_glue2_setenv

INFO: Executing function: config_cream_gip_glue2

SE_LIST=test08.egi.cesga.es

INFO: File /etc/glite-ce-glue2/glite-ce-glue2.conf backed-up in /etc/glite-ce-glue2/glite-ce-glue2.conf.bak_20130104_133234

INFO: Executing function: config_cream_gip_scheduler_plugin_setenv

INFO: Executing function: config_cream_gip_scheduler_plugin

INFO: Executing function: config_cream_gip_software_plugin_setenv

INFO: Executing function: config_cream_gip_software_plugin

INFO: Executing function: config_cream_vo_tag_dir

INFO: Executing function: config_info_service_cream_ce_setenv

INFO: Executing function: config_info_service_cream_ce

INFO: Executing function: config_info_service_cemon_setenv

INFO: Executing function: config_info_service_cemon

INFO: Executing function: config_cream_info_service_rtepublish_setenv

INFO: Executing function: config_cream_info_service_rtepublish

INFO: Executing function: config_cream_cemon_setenv

INFO: Executing function: config_cream_cemon

Stopping tomcat6: [OK]

Starting tomcat6: [OK]

INFO: Executing function: config_cream_gliteservices_setenv

INFO: Executing function: config_cream_gliteservices

INFO: Executing function: config_cream_locallogger_setenv

INFO: Executing function: config_cream_locallogger

INFO: Executing function: config_glite_locallogger_setenv

INFO: Executing function: config_glite_locallogger

INFO: The workaround for bug 22389 already exists

Stopping glite-lb-logd ... not running

Stopping glite-lb-interlogd ... not running

Starting glite-lb-logd ... This is LocalLogger, part of Workload Management System in EU DataGrid & EGEE.

done

Warning: stale /var/cream_lb/glite-lb-interlogd.pid for glite-lb-interlogd

Warning: stale /tmp/interlogger.sock for glite-lb-interlogd

Starting glite-lb-interlogd ... done

INFO: Executing function: config_cream_glite_initd

INFO: Executing function: config_torque_server_setenv

INFO: Currently this function doesn't set any environment variables.

INFO: Executing function: config_torque_server

INFO: Re-starting the torque server

Shutting down TORQUE Server: [OK]

/var/lib/torque/server_priv/serverdb

Starting TORQUE Server: [OK]

Max open servers: 9

set server scheduling = True

set server acl_host_enable = False

set server managers = root@test06.egi.cesga.es

set server operators = root@test06.egi.cesga.es

```
set server default_queue = dteam
set server log_events = 511
set server mail_from = adm
set server mail_domain = never
set server query_other_jobs = True
set server scheduler_iteration = 600
set server default_node = lcgpro
set server node_pack = False
set server kill_delay = 10
set server authorized_users = *@test06.egi.cesga.es
Max open servers: 9
set queue GRID_ops queue_type = Execution
set queue GRID_ops resources_max.cput = 48:00:00
set queue GRID_ops resources_max.walltime = 72:00:00
set queue GRID_ops enabled = True
set queue GRID_ops started = True
set queue GRID_ops acl_group_enable = True
Max open servers: 9
set queue GRID_dteam queue_type = Execution
set queue GRID_dteam resources_max.cput = 48:00:00
set queue GRID_dteam resources_max.walltime = 72:00:00
set queue GRID_dteam enabled = True
set queue GRID_dteam started = True
set queue GRID_dteam acl_group_enable = True
Max open servers: 9
set queue GRID_opsibeu queue_type = Execution
set queue GRID_opsibeu resources_max.cput = 48:00:00
set queue GRID_opsibeu resources_max.walltime = 72:00:00
set queue GRID_opsibeu enabled = True
set queue GRID_opsibeu started = True
set queue GRID_opsibeu acl_group_enable = True
Max open servers: 9
set queue GRID_iberibeu queue_type = Execution
set queue GRID_iberibeu resources_max.cput = 48:00:00
set queue GRID_iberibeu resources_max.walltime = 72:00:00
set queue GRID_iberibeu enabled = True
set queue GRID_iberibeu started = True
set queue GRID_iberibeu acl_group_enable = True
Shutting down TORQUE Server: [ OK ]
/var/lib/torque/server_priv/serverdb
Starting TORQUE Server: [ OK ]
INFO: Executing function: config_mai_cfg_setenv
INFO: Executing function: config_mai_cfg
INFO: configuring maui ...
MPI_CE creamCE TORQUE_server TORQUE_utils
Shutting down MAUI Scheduler: [ OK ]
Starting MAUI Scheduler: [ OK ]
INFO: Executing function: config_apel_pbs_setenv
INFO: Executing function: config_apel_pbs
INFO: Executing function: config_gip_sched_plugin_pbs_setenv
```

```
INFO: Executing function: config_gip_sched_plugin_pbs
INFO: Executing function: config_torque_submitter_ssh
Starting MUNGE: munged
Reloading sshd: [ OK ]
INFO: Configuration Complete. [ OK ]
```

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}}}
```

```
== Verification of EMI.glite-mpi.sl6 in a EMI_WN_Torque SL6 ==
```

```
=== Ticket assigned ===
```

```
* [https://rt.egi.eu/rt/Ticket/Display.html?id=4498]
```

```
=== ggus tickets opened ===
```

```
=== Important Documentation ===
```

```
* https://wiki.egi.eu/wiki/MAN03
```

```
=== Repositories ===
```

(!) Verifier must install a new repo for each product, this information is available at RT ticket field:

```
* MPI repo under verification
```

```
{}}
```

```
[root@test15 yum.repos.d]# cat EMI.glite-mpi.sl6.x86_64.repo
```

```
# EGI Software Repository - REPO META (releaseId,repositoryId,repofileId) -
(4498,752,679)
```

```
[EMI.glite-mpi.sl6.x86_64]
```

```
name=EMI.glite-mpi.sl6.x86_64
```

```
baseurl=http://admin-repo.egi.eu/sw/unverified/umd-2.emi.glite-mpi.sl6.x86_64/1/4/0/
```

```
enabled=1
```

```
protect=1
```

```
priority=1
```

```
gpgcheck=1
```

```
gpgkey=http://emisoft.web.cern.ch/emisoft/dist/EMI/2/RPM-GPG-KEY-emi
```

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}}}
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```
=== Installing ===
```

```
* yum install emi-wn
```

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{}}
```

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```


Package Repository	Arch Size	Version
Installing:		
emi-wn	x86_64	2.0.0-1.sl6
UMD-2-updates	2.7 k	
Installing for dependencies:		
CGSI-gSOAP	x86_64	1.3.5-2.el6
UMD-2-base	38 k	
SAGA.lsu-cpp.engine	x86_64	1.6.0-1.sl6
UMD-2-updates	19 M	
a1_grid_env	x86_64	3.0.2-1.sl6
UMD-2-updates	3.5 k	
alsa-lib	x86_64	1.0.22-3.el6
sl	369 k	
at	x86_64	3.1.10-43.el6_2.1
sl	59 k	
atk	x86_64	1.28.0-2.el6
sl	190 k	
autoconf	noarch	2.63-5.1.el6
sl	780 k	
automake	noarch	1.11.1-1.2.el6
sl	549 k	
avahi-libs	x86_64	0.6.25-11.el6
sl	53 k	
bc	x86_64	1.06.95-1.el6
sl	109 k	
boost	x86_64	1.41.0-11.el6_1.2
sl	16 k	
boost-date-time	x86_64	1.41.0-11.el6_1.2
sl	37 k	
boost-filesystem	x86_64	1.41.0-11.el6_1.2
sl	43 k	
boost-graph	x86_64	1.41.0-11.el6_1.2
sl	79 k	
boost-iostreams	x86_64	1.41.0-11.el6_1.2
sl	36 k	
boost-program-options	x86_64	1.41.0-
11.el6_1.2	sl	104 k
boost-python	x86_64	1.41.0-11.el6_1.2
sl	122 k	
boost-regex	x86_64	1.41.0-11.el6_1.2
sl	474 k	
boost-serialization	x86_64	1.41.0-11.el6_1.2
sl	165 k	
boost-signals	x86_64	1.41.0-11.el6_1.2
sl	41 k	

boost-system	x86_64	1.41.0-11.el6_1.2
sl	23 k	
boost-test	x86_64	1.41.0-11.el6_1.2
sl	388 k	
boost-thread	x86_64	1.41.0-11.el6_1.2
sl	40 k	
boost-wave	x86_64	1.41.0-11.el6_1.2
sl	199 k	
c-ares	x86_64	1.7.0-5.el6
UMD-2-updates	52 k	
cairo	x86_64	1.8.8-3.1.el6
sl	308 k	
cdparanoia-libs	x86_64	10.2-5.1.el6
sl	47 k	
classads	x86_64	1.0.8-1.el6
epel	233 k	
cleanup-grid-accounts	noarch	2.0.0-1
UMD-2-base	7.0 k	
cups	x86_64	1:1.4.2-48.el6
sl	2.3 M	
cups-libs	x86_64	1:1.4.2-48.el6
sl	315 k	
cvs	x86_64	1.11.23-11.el6_2.1
sl	711 k	
dbus	x86_64	1:1.2.24-7.el6_3
sl-security	206 k	
dcache-srmclient	x86_64	2.2.4-2.el6
UMD-2-updates	15 M	
dcap	x86_64	2.47.7-1.el6
UMD-2-updates	14 k	
dcap-devel	x86_64	2.47.7-1.el6
UMD-2-updates	7.6 k	
dcap-libs	x86_64	2.47.7-1.el6
UMD-2-updates	81 k	
dcap-tunnel-gsi	x86_64	2.47.7-1.el6
UMD-2-updates	14 k	
dcap-tunnel-krb	x86_64	2.47.7-1.el6
UMD-2-updates	14 k	
dcap-tunnel-ssl	x86_64	2.47.7-1.el6
UMD-2-updates	8.0 k	
dcap-tunnel-telnet	x86_64	2.47.7-1.el6
UMD-2-updates	8.5 k	
dpm	x86_64	1.8.5-1.el6
UMD-2-updates	151 k	
dpm-libs	x86_64	1.8.5-1.el6
UMD-2-updates	133 k	
dpm-python	x86_64	1.8.5-1.el6
UMD-2-updates	204 k	
ed	x86_64	1.1-3.3.el6
sl	71 k	

editline	x86_64	2.9-1.sl6
UMD-2-updates	202 k	
emi-version	x86_64	2.5.0-1.sl6
UMD-2-updates	2.2 k	
emi.amga.amga-cli	x86_64	2.3.0-1.sl6
UMD-2-updates	281 k	
emi.saga-adapter.context-cpp	x86_64	1.0.2-3.sl6
UMD-2-updates	347 k	
emi.saga-adapter.isn-common	noarch	1.0.1-3.sl6
UMD-2-updates	18 k	
emi.saga-adapter.isn-cpp	x86_64	1.0.3-1.sl6
UMD-2-updates	779 k	
emi.saga-adapter.sd-cpp	x86_64	1.0.4-1.sl6
UMD-2-updates	4.2 M	
fetch-curl	noarch	3.0.8-1.el6
epel	45 k	
flac	x86_64	1.2.1-6.1.el6
sl	242 k	
fontconfig	x86_64	2.8.0-3.el6
sl	185 k	
foomatic	x86_64	4.0.4-1.el6_1.1
sl	250 k	
foomatic-db	noarch	4.0-7.20091126.el6
sl	979 k	
foomatic-db-filesystem	noarch	4.0-
7.20091126.el6	sl	3.4 k
foomatic-db-ppds	noarch	4.0-
7.20091126.el6	sl	19 M
freetype	x86_64	2.3.11-6.el6_2.9
sl	358 k	
gettext	x86_64	0.17-16.el6
sl	1.8 M	
gfal	x86_64	1.13.19-0.el6
UMD-2-updates	94 k	
gfal-python	x86_64	1.13.19-0.el6
UMD-2-updates	37 k	
ghostscript	x86_64	8.70-14.el6_3.1
sl-security	4.4 M	
ghostscript-fonts	noarch	5.50-23.1.el6
sl	749 k	
giflib	x86_64	4.1.6-3.1.el6
sl	36 k	
glite-jobid-api-c	x86_64	2.1.2-5.el6
UMD-2-updates	8.5 k	
glite-jobid-api-cpp-devel	x86_64	1.2.0-7.el6
UMD-2-updates	4.7 k	
glite-lb-client	x86_64	5.1.6-1.el6
UMD-2-updates	159 k	
glite-lb-common	x86_64	8.1.5-1.el6
UMD-2-updates	92 k	

glite-lbjs-common-gss	x86_64	3.1.6-1.el6
UMD-2-updates	17 k	
glite-lbjs-common-trio	x86_64	2.2.3-2.el6
UMD-2-updates	24 k	
glite-service-discovery-api-c	x86_64	2.2.3-1.sl6
UMD-2-updates	38 k	
glite-wms-brokerinfo-access	x86_64	3.4.0-4.sl6
UMD-2-updates	18 k	
glite-wms-brokerinfo-access-lib	x86_64	3.4.0-4.sl6
UMD-2-updates	54 k	
glite-wn-info	noarch	1.0.3-2.sl6
UMD-2-updates	5.6 k	
glite-yaim-clients	noarch	5.0.1-2.sl6
UMD-2-updates	24 k	
glite-yaim-core	noarch	5.1.0-1.sl6
EMI.glite-mpi.sl6.x86_64	102 k	
globus-callout	x86_64	2.2-1.el6
UMD-2-updates	17 k	
globus-common	x86_64	14.7-1.el6
UMD-2-updates	115 k	
globus-ftp-client	x86_64	7.4-1.el6
UMD-2-updates	94 k	
globus-ftp-control	x86_64	4.4-1.el6
UMD-2-updates	67 k	
globus-gass-copy	x86_64	8.6-1.el6
UMD-2-updates	34 k	
globus-gass-copy-progs	x86_64	8.6-1.el6
UMD-2-updates	40 k	
globus-gass-transfer	x86_64	7.2-1.el6
UMD-2-updates	39 k	
globus-gsi-callback	x86_64	4.3-1.el6
UMD-2-updates	37 k	
globus-gsi-cert-utils	x86_64	8.3-1.el6
UMD-2-updates	19 k	
globus-gsi-credential	x86_64	5.3-1.el6
UMD-2-updates	32 k	
globus-gsi-openssl-error	x86_64	2.1-2.el6
UMD-2-updates	16 k	
globus-gsi-proxy-core	x86_64	6.2-1.el6
UMD-2-updates	32 k	
globus-gsi-proxy-ssl	x86_64	4.1-2.el6
UMD-2-updates	16 k	
globus-gsi-sysconfig	x86_64	5.3-1.el6
UMD-2-updates	27 k	
globus-gss-assist	x86_64	8.6-1.el6
UMD-2-updates	32 k	
globus-gssapi-error	x86_64	4.1-2.el6
UMD-2-updates	13 k	
globus-gssapi-gsi	x86_64	10.7-1.el6
UMD-2-updates	55 k	

globus-io	x86_64	9.3-1.el6
UMD-2-updates	39 k	
globus-openssl-module	x86_64	3.2-1.el6
UMD-2-updates	13 k	
globus-proxy-utils	x86_64	5.0-2.el6
UMD-2-updates	42 k	
globus-xio	x86_64	3.3-1.el6
UMD-2-updates	159 k	
globus-xio-gsi-driver	x86_64	2.3-1.el6
UMD-2-updates	34 k	
globus-xio-popen-driver	x86_64	2.3-1.el6
UMD-2-updates	20 k	
gnutls	x86_64	2.8.5-4.el6_2.2
sl	341 k	
gridftp-ifce	x86_64	2.2.0-0.el6
UMD-2-updates	14 k	
gridsite-libs	x86_64	1.7.24-1.el6
UMD-2-updates	87 k	
gsoap	x86_64	2.7.16-3.el6
epel	198 k	
gstreamer	x86_64	0.10.29-1.el6
sl	763 k	
gstreamer-plugins-base	x86_64	0.10.29-1.el6
sl	942 k	
gstreamer-tools	x86_64	0.10.29-1.el6
sl	22 k	
gtk2	x86_64	2.18.9-10.el6
sl	3.3 M	
hicolor-icon-theme	noarch	0.11-1.1.el6
sl	39 k	
is-interface	x86_64	1.13.9-0.el6
UMD-2-updates	45 k	
iso-codes	noarch	3.16-2.el6
sl	2.4 M	
jasper-libs	x86_64	1.900.1-15.el6_1.1
sl	135 k	
java-1.6.0-openjdk	x86_64	1:1.6.0.0-
1.50.1.11.5.el6_3	sl-security	25 M
jclassads	noarch	2.4.0-2.sl6
UMD-2-updates	95 k	
jline	noarch	0.9.94-0.8.el6
sl	85 k	
jpackage-utils	noarch	1.7.5-3.12.el6
sl	58 k	
keyutils-libs-devel	x86_64	1.4-4.el6
sl	28 k	
krb5-devel	x86_64	1.9-33.el6_3.2
sl-security	1.2 M	
lcg-ManageVOTag	noarch	4.0.0-1
UMD-2-updates	4.9 k	

lcg-info		noarch	1.12.2-1.el6
UMD-2-updates	13 k		
lcg-infosites		noarch	3.1.0-3.el6
UMD-2-updates	10 k		
lcg-tags		noarch	0.4.0-2
UMD-2-updates	8.9 k		
lcg-util		x86_64	1.13.9-0.el6
UMD-2-updates	72 k		
lcg-util-libs		x86_64	1.13.9-0.el6
UMD-2-updates	53 k		
lcg-util-python		x86_64	1.13.9-0.el6
UMD-2-updates	34 k		
lcgdm-devel		x86_64	1.8.5-1.el6
UMD-2-updates	44 k		
lcgdm-libs		x86_64	1.8.5-1.el6
UMD-2-updates	91 k		
lcms-libs		x86_64	1.19-1.el6
sl	99 k		
lfc		x86_64	1.8.5-1.el6
UMD-2-updates	98 k		
lfc-libs		x86_64	1.8.5-1.el6
UMD-2-updates	38 k		
lfc-python		x86_64	1.8.5-1.el6
UMD-2-updates	243 k		
libICE		x86_64	1.0.6-1.el6
sl	52 k		
libSM		x86_64	1.1.0-7.1.el6
sl	25 k		
libX11		x86_64	1.3-2.el6
sl	581 k		
libX11-common		noarch	1.3-2.el6
sl	187 k		
libXau		x86_64	1.0.5-1.el6
sl	21 k		
libXcomposite		x86_64	0.4.1-2.el6
sl	16 k		
libXcursor		x86_64	1.1.10-2.el6
sl	31 k		
libXdamage		x86_64	1.1.2-1.el6
sl	15 k		
libXext		x86_64	1.1-3.el6
sl	32 k		
libXfixes		x86_64	4.0.4-1.el6
sl	19 k		
libXfont		x86_64	1.4.1-2.el6_1
sl	127 k		
libXft		x86_64	2.1.13-4.1.el6
sl	48 k		
libXi		x86_64	1.3-3.el6
sl	31 k		

libXinerama		x86_64	1.1-1.el6
sl	14 k		
libXrandr		x86_64	1.3.0-4.el6
sl	29 k		
libXrender		x86_64	0.9.5-1.el6
sl	26 k		
libXt		x86_64	1.0.7-1.el6
sl	173 k		
libXtst		x86_64	1.0.99.2-3.el6
sl	21 k		
libXv		x86_64	1.0.5-1.el6
sl	20 k		
libXxf86vm		x86_64	1.1.0-1.el6
sl	18 k		
libasyncns		x86_64	0.8-1.1.el6
sl	23 k		
libcom_err-devel		x86_64	1.41.12-12.el6
sl	30 k		
libfontenc		x86_64	1.0.5-2.el6
sl	24 k		
libgomp		x86_64	4.4.6-4.el6
sl	116 k		
libgudev1		x86_64	147-2.41.el6
sl	58 k		
libicu		x86_64	4.2.1-9.1.el6_2
sl	4.9 M		
libjpeg		x86_64	6b-46.el6
sl	133 k		
libmng		x86_64	1.0.10-4.1.el6
sl	164 k		
libogg		x86_64	2:1.1.4-2.1.el6
sl	20 k		
liboil		x86_64	0.3.16-4.1.el6
sl	120 k		
libpng		x86_64	2:1.2.49-1.el6_2
sl	181 k		
libselinux-devel		x86_64	2.0.94-5.3.el6
sl	135 k		
libsepol-devel		x86_64	2.0.41-4.el6
sl	63 k		
libsndfile		x86_64	1.0.20-5.el6
sl	232 k		
libtasn1		x86_64	2.3-3.el6_2.1
sl	237 k		
libthai		x86_64	0.1.12-3.el6
sl	182 k		
libtheora		x86_64	1:1.1.0-2.el6
sl	128 k		
libtiff		x86_64	3.9.4-9.el6_3
sl-security	341 k		

libtool-ltdl		x86_64	2.2.6-15.5.el6
sl	43 k		
libudev		x86_64	147-2.41.el6
sl	74 k		
libvisual		x86_64	0.4.0-9.1.el6
sl	134 k		
libvorbis		x86_64	1:1.2.3-4.el6_2.1
sl	167 k		
libxcb		x86_64	1.5-1.el6
sl	99 k		
mailcap		noarch	2.1.31-2.el6
sl	26 k		
make		x86_64	1:3.81-20.el6
sl	388 k		
mesa-dri-drivers		x86_64	7.11-5.el6
sl	11 M		
mesa-libGL		x86_64	7.11-5.el6
sl	144 k		
mesa-libGLU		x86_64	7.11-5.el6
sl	200 k		
openjpeg-libs		x86_64	1.3-9.el6_3
sl-security	58 k		
openssl-devel		x86_64	1.0.0-20.el6_2.5
sl	1.1 M		
pango		x86_64	1.28.1-3.el6_0.5
sl	350 k		
patch		x86_64	2.6-6.el6
sl	90 k		
pax		x86_64	3.4-10.1.el6
sl	68 k		
perl		x86_64	4:5.10.1-127.el6
sl	10 M		
perl-Authen-SASL		noarch	2.13-2.el6
sl	50 k		
perl-CGI		x86_64	3.51-127.el6
sl	206 k		
perl-Compress-Raw-Zlib		x86_64	1:2.020-
127.el6	sl		67 k
perl-Compress-Zlib		x86_64	2.020-127.el6
sl	42 k		
perl-Convert-ASN1		noarch	0.22-1.el6
sl	42 k		
perl-DBI		x86_64	1.609-4.el6
sl	704 k		
perl-Digest-HMAC		noarch	1.01-22.el6
sl	21 k		
perl-Digest-SHA1		x86_64	2.12-2.el6
sl	48 k		
perl-ExtUtils-MakeMaker		x86_64	6.55-127.el6
sl	290 k		

perl-ExtUtils-ParseXS		x86_64	1:2.2003.0-
127.el6	sl		42 k
perl-GSSAPI		x86_64	0.26-5.el6
sl	63 k		
perl-HTML-Parser		x86_64	3.64-2.el6
sl	108 k		
perl-HTML-Tagset		noarch	3.20-4.el6
sl	15 k		
perl-IO-Compress-Base		x86_64	2.020-127.el6
sl	66 k		
perl-IO-Compress-Zlib		x86_64	2.020-127.el6
sl	133 k		
perl-IO-Socket-SSL		noarch	1.31-2.el6
sl	68 k		
perl-LDAP		noarch	1:0.40-1.el6
sl	353 k		
perl-Module-Pluggable		x86_64	1:3.90-127.el6
sl	37 k		
perl-Net-LibIDN		x86_64	0.12-3.el6
sl	34 k		
perl-Net-SSLeay		x86_64	1.35-9.el6
sl	172 k		
perl-Pod-Escapes		x86_64	1:1.04-127.el6
sl	30 k		
perl-Pod-Simple		x86_64	1:3.13-127.el6
sl	209 k		
perl-Test-Harness		x86_64	3.17-127.el6
sl	229 k		
perl-Test-Simple		x86_64	0.92-127.el6
sl	110 k		
perl-Text-Iconv		x86_64	1.7-6.el6
sl	21 k		
perl-URI		noarch	1.40-2.el6
sl	116 k		
perl-XML-Filter-BufferText		noarch	1.01-8.el6
sl	8.5 k		
perl-XML-LibXML		x86_64	1:1.70-5.el6
sl	363 k		
perl-XML-Namespacesupport		noarch	1.10-3.el6
sl	16 k		
perl-XML-SAX		noarch	0.96-7.el6
sl	77 k		
perl-XML-SAX-Writer		noarch	0.50-8.el6
sl	23 k		
perl-devel		x86_64	4:5.10.1-127.el6
sl	420 k		
perl-libs		x86_64	4:5.10.1-127.el6
sl	575 k		
perl-libwww-perl		noarch	5.833-2.el6
sl	386 k		

perl-version		x86_64	3:0.77-127.el6
sl	48 k		
phonon-backend-gstreamer		x86_64	1:4.6.2-
24.el6	sl		125 k
pixman		x86_64	0.18.4-1.el6_0.1
sl	146 k		
pkgconfig		x86_64	1:0.23-9.1.el6
sl	69 k		
poppler		x86_64	0.12.4-3.el6_0.1
sl	556 k		
poppler-data		noarch	0.4.0-1.el6
sl	2.2 M		
poppler-utils		x86_64	0.12.4-3.el6_0.1
sl	72 k		
portreserve		x86_64	0.0.4-9.el6
sl	22 k		
pulseaudio-libs		x86_64	0.9.21-13.el6
sl	461 k		
qt		x86_64	1:4.6.2-24.el6
sl	4.0 M		
qt-sqlite		x86_64	1:4.6.2-24.el6
sl	50 k		
qt-x11		x86_64	1:4.6.2-24.el6
sl	12 M		
qt3		x86_64	3.3.8b-30.el6
sl	3.5 M		
redhat-lsb		x86_64	4.0-3.el6
sl	23 k		
redhat-lsb-graphics		x86_64	4.0-3.el6
sl	11 k		
redhat-lsb-printing		x86_64	4.0-3.el6
sl	9.6 k		
rhino		noarch	1.7-0.7.r2.2.el6
sl	777 k		
srm-ifce		x86_64	1.13.0-0.el6
UMD-2-updates		143 k	
time		x86_64	1.7-37.1.el6
sl	25 k		
tmpwatch		x86_64	2.9.16-4.el6
sl	30 k		
tzdata-java		noarch	2012i-2.el6
sl-security	154 k		
uberftp		x86_64	2.6-4.el6
epel	82 k		
urw-fonts		noarch	2.4-10.el6
sl	3.0 M		
voms		x86_64	2.0.8-1.el6
UMD-2-base	136 k		
voms-clients		x86_64	2.0.8-1.el6
UMD-2-base	105 k		

voms-devel		x86_64	2.0.8-1.el6
UMD-2-base		26 k	
xerces-c		x86_64	3.0.1-20.el6
sl	865 k		
xml-common		noarch	0.6.3-32.el6
sl	8.4 k		
xorg-x11-font-utils		x86_64	1:7.2-11.el6
sl	74 k		
zlib-devel		x86_64	1.2.3-27.el6
sl	43 k		

Transaction Summary

```

=====
=====
=====
=====

```

Install 251 Package(s)

Total download size: 180 M

Installed size: 567 M

Is this ok [y/N]:

}}}

-->

* yum install emi-wn emi-torque-client

{{{

```

=====
=====
=====
=====

```

Package	Arch	Version
Repository	Size	

```

=====
Installing:
emi-torque-client          x86_64          1.0.0-2.sl6
UMD-2-updates             1.8 k
Installing for dependencies:
glite-yaim-torque-client  noarch          5.1.0-1.sl6
UMD-2-updates             5.4 k
lcg-pbs-utils             x86_64          2.0.0-1.sl6
UMD-2-updates             4.3 k
munge                     x86_64          0.5.10-1.el6
epel                      111 k

```

```

mungelibs                x86_64                0.5.10-1.el6
epel                      32 k
tcl                       x86_64                1:8.5.7-6.el6
sl                        1.9 M
torque                    x86_64                2.5.7-9.el6
epel                      56 k
torque-client            x86_64                2.5.7-9.el6
epel                      309 k
torque-libs              x86_64                2.5.7-9.el6
epel                      87 k
torque-mom               x86_64                2.5.7-9.el6
epel                      168 k

```

Transaction Summary

```

=====
=====
=====
=====
}}}

```

=====
Installation the MPI specific software on the WNs
=====

* yum install mpi-start

```

{{{
=====
=====
=====
=====
Package              Arch          Version
Repository           Size
=====

```

```

Installing:
mpi-start                noarch          1.4.0-1.el6
EMI.glite-mpi.sl6.x86_64 40 k

```

Transaction Summary

```

=====
=====
=====
=====
}}}

```

* yum install glite-mpi

```

{{{
```

Package Repository	Arch Size	Version
-----------------------	--------------	---------

```
Installing:
emi-mpi                                noarch          1.0.2-1.el6
EMI.glite-mpi.sl6.x86_64              1.9 k
Installing for dependencies:
glite-yaim-mpi                         noarch          1.1.12-1.el6
EMI.glite-mpi.sl6.x86_64              15 k
```

Transaction Summary

```
}}}
```

```
* yum install openmpi openmpi-devel
```

```
{{{
```

Package Repository	Arch Size	Version
-----------------------	--------------	---------

```
Installing:
openmpi                                x86_64          1.5.4-1.el6
sl                                     2.1 M
openmpi-devel                          x86_64          1.5.4-1.el6
sl                                     2.4 M
Installing for dependencies:
cloog-ppl                              x86_64          0.15.7-1.2.el6
sl                                     92 k
cpp                                     x86_64          4.4.6-4.el6
sl                                     3.7 M
environment-modules                   x86_64          3.2.7b-6.el6
sl                                     95 k
```

gcc	x86_64	4.4.6-4.el6
sl	10 M	
gcc-gfortran	x86_64	4.4.6-4.el6
sl	4.7 M	
glibc-devel	x86_64	2.12-1.80.el6_3.5
sl-security	970 k	
glibc-headers	x86_64	2.12-1.80.el6_3.5
sl-security	600 k	
infinipath-psm	x86_64	2.9-
926.1005_open.2.el6	sl	156 k
kernel-headers	x86_64	2.6.32-
279.19.1.el6	sl-security	1.9 M
libesmtp	x86_64	1.0.4-15.el6
sl	56 k	
libgfortran	x86_64	4.4.6-4.el6
sl	263 k	
libibverbs	x86_64	1.1.6-4.el6
sl	44 k	
librdmacm	x86_64	1.0.15-2.el6
sl	28 k	
mpfr	x86_64	2.4.1-6.el6
sl	156 k	
numactl	x86_64	2.0.7-3.el6
sl	58 k	
ppl	x86_64	0.10.2-11.el6
sl	1.3 M	

Transaction Summary

```

=====
=====
=====
=====
=====

```

```

Install      18 Package(s)
}}}
```

(!) The devel packages of the MPI packages do not include the compiler as dependency!
You should install it also if you want to support the compilation of MPI applications
(e.g. gcc, gcc-gfortran, gcc-g++)

```

* yum install gcc-gfortran gcc.x86_64 gcc-c++.x86_64 compat-gcc-34.x86_64 compat-
gcc-34-c++.x86_64 compat-gcc-34-g77.x86_64
{{{
```

```

=====
=====
=====
=====
=====

```

Package	Arch	Version
Repository	Size	

```

=====
=====

```

```

=====
Installing:
compat-gcc-34          x86_64          3.4.6-
19.el6                sl              3.7 M
compat-gcc-34-c++     x86_64          3.4.6-
19.el6                sl              10 M
compat-gcc-34-g77     x86_64          3.4.6-
19.el6                sl              2.1 M
gcc-c++               x86_64          4.4.6-4.el6
sl                    4.7 M
Installing for dependencies:
compat-libf2c-34      x86_64          3.4.6-
19.el6                sl              50 k
libstdc++-devel       x86_64          4.4.6-4.el6
sl                    1.5 M

```

Transaction Summary

```

}}}

```

==== Configure the siteinfo.def file for the WNs =====

* This is the site-info used to configure the Wns + Torque + MPI

(!)

* Taking the information about how to configure MPI in the WNs from the following links:

* <https://wiki.egi.eu/wiki/MAN03>

* There is a point in the previous link pointing to this one, that it is where is explained how to configure YAIM to configure torque + MPI:

<http://grid.ifca.es/wiki/Middleware/MpiStart/MpiUtils>

```

{{{

```

```

[root@test14 etc]# cat site-info.def

```

```

# YAIM example site configuration file - adapt it to your site!

```

```

#####

```

```

# CE configuration variables #

```

```

#####

```

```

CE_HOST=test06.egi.cesga.es

```

```

WMS_HOST=test22.egi.cesga.es

```

```

##BDII_HOST=topbdii02.ncg.ingrid.pt

```

SITE_BDII_HOST=sbdii02.ncg.ingrid.pt
BDII_HOST=topbdii02.ncg.ingrid.pt
LFC_HOST=
PX_HOST=myproxy.egi.cesga.es
MON_HOST=test07.egi.cesga.es

YAIM_LOGGING_LEVEL=INFO

CREAM CE node cluster mode #

CREAMCE_CLUSTER_MODE=no

Site configuration variables #
#####

SITE_EMAIL=egee-admin@cesga.es

SITE_NAME=CESGA-EGEE
SITE_LOC="Santiago de Compostela, Spain"
SITE_LAT=42.875558 #42.8757 # -90 to 90 degrees
SITE_LONG=-8.553147 #-8.5536 # -180 to 180 degrees

Batch server configuration variables #
#####

Jobmanager specific settings
JOB_MANAGER=lcgpbs
BATCH_SERVER=test06.egi.cesga.es
CE_BATCH_SYS=torque
BATCH_LOG_DIR=/var/lib/torque
TORQUE_VAR_DIR=/var/lib/torque
BATCH_VERSION=torque-2.5.7-9

APEL configuration variables #
#####

Database password for the APEL DB.
APEL_MYSQL_HOST=test07.egi.cesga.es
APEL_DB_PASSWORD=""


```
#####
```

```
# ARGUS authorisation framework control #
```

```
#####
```

```
# Set USE_ARGUS to yes to enable the configuration of ARGUS
```

```
###USE_ARGUS=yes
```

```
USE_ARGUS=no
```

```
# In case ARGUS is to be used the following should be set
```

```
# The ARGUS service PEPD endpoints as a space separated list:
```

```
###ARGUS_PEPD_ENDPOINTS="https://test10.egi.cesga.es:8154/authz"
```

```
###CREAM_PEPD_RESOURCEID="http://www.egee.cesga.es/test10"
```

```
# These variables tell YAIM where to find additional configuration files.
```

```
WN_LIST=/opt/glite/yaim/etc/wn-list.conf
```

```
USERS_CONF=/opt/glite/yaim/etc/users.conf
```

```
GROUPS_CONF=/opt/glite/yaim/etc/groups.conf
```

```
FUNCTIONS_DIR=/opt/glite/yaim/functions
```

```
#
```

```
# SE_dpm-specific settings - Ignore if you are not running a DPM
```

```
#
```

```
# Set these if you are installing a DPM yourself
```

```
# and/or if you need a default DPM for the lcg-stdout-mon
```

```
#
```

```
# DPMDATA is now deprecated. Use an entry like $DPM_HOST:/filesystem in
```

```
# the DPM_FILESYSTEMS variable.
```

```
# From now on we use DPM_DB_USER and DPM_DB_PASSWORD to make clear
```

```
# its different role from that of the dpmmgr unix user who owns the
```

```
# directories and runs the daemons.
```

```
# The name of the DPM head node
```

```
DPM_HOST=test08.egi.cesga.es
```

```
DPMPOOL=egi-pool
```

```
DPM_FILESYSTEMS="$DPM_HOST:/storage"
```

```
# The base user
```

```
DPM_DB_USER=dpmmgr
```

```
DPM_DB_HOST=$DPM_HOST
```

DPM_DB_PASSWORD=

Specifies the default amount of space reserved for a file
#DPMFSIZE=200M

DPM_INFO_USER=dpm_info
DPM_INFO_PASS=

Variable for the port range - Optional, default value is shown
RFIO_PORT_RANGE="20000 25000"

This largely replaces CE_CLOSE_SE but it is a list of hostnames
SE_MOUNT_INFO_LIST="none"
SE_LIST="\$DPM_HOST"
SE_ARCH="multidisk" # "disk, tape, multidisk, other"

#####

SubCluster configuration

#####

Architecture and environment specific settings

CE_CPU_MODEL=Opteron

CE_CPU_VENDOR=amd

CE_CPU_SPEED=2200

CE_OS="ScientificSL" # Forma correcta

CE_OS_RELEASE=5.5

CE_OS_VERSION="Boron"

#New variables

CE_PHYSCPU=2

CE_LOGCPU=2

CE_OS_ARCH=x86_64

CE_CAPABILITY="CPUScalingReferenceSI00=2395"

CE_OTHERDESCR="Cores=24,Benchmark=9.58-HEP-SPEC06"

SE_MOUNT_INFO_LIST="none"

CE_SI00=2395

CE_MINPHYSMEM=524

CE_MINVIRTMEM=512

CE_SMPSIZE=2

CE_SF00=1714

CE_OUTBOUNDIP=TRUE

CE_INBOUNDIP=FALSE

CE_RUNTIMEENV="

LCG-2

```
LCG-2_1_0
LCG-2_1_1
LCG-2_2_0
LCG-2_3_0
LCG-2_3_1
LCG-2_4_0
LCG-2_5_0
LCG-2_6_0
LCG-2_7_0
GLITE-3_0_0
GLITE-3_0_2
GLITE-3_1_0
R-GMA
```

```
"
```

```
###CREAM CE Variables
```

```
CEMON_HOST=test06.egi.cesga.es
CREAM_DB_USER=umdttest
CREAM_DB_PASSWORD=""
MYSQL_PASSWORD=""
BLPARSER_HOST=test06.egi.cesga.es
```

```
# MPI CONFIGURATION
```

```
#####
```

```
MPI_OPENMPI_ENABLE="yes"
## If you do NOT have SSH Hostbased Authentication between your WNs, set the
below variable to "no" (default). Else, set it to "yes".
MPI_SSH_HOST_BASED_AUTH="yes"
```

```
# VOS="atlas alice lhcb cms dteam biomed"
# Space separated list of supported VOs by your site
VOS="ops dteam ops.vo.ibergrid.eu iber.vo.ibergrid.eu"
QUEUES="GRID_ops GRID_dteam GRID_opsibeu GRID_iberibeu"
VO_SW_DIR=/opt/exp_soft
```

```
#New in Yaim 3.0.1
```

```
GRID_OPS_GROUP_ENABLE="ops /VO=ops/GROUP=/ops/ROLE=lcgadmin"
GRID_DTEAM_GROUP_ENABLE="dteam
/VO=dteam/GROUP=/dteam/ROLE=lcgadmin"
GRID_OPSIBEU_GROUP_ENABLE="ops.vo.ibergrid.eu
/VO=ops.vo.ibergrid.eu/GROUP=/ops.vo.ibergrid.eu/ROLE=VO-Admin
/VO=ops.vo.ibergrid.eu/GROUP=/ops.vo.ibergrid.eu/ROLE=Production"
GRID_IBERIBEU_GROUP_ENABLE="iber.vo.ibergrid.eu
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=VO-Admin
/VO=iber.vo.ibergrid.eu/GROUP=/iber.vo.ibergrid.eu/ROLE=Production"
```

```
#:::~::~:
```

```
#dteam
```

```
#:.....:
VO_DTEAM_SW_DIR=$VO_SW_DIR/dteam
VO_DTEAM_DEFAULT_SE=$DPM_HOST
VO_DTEAM_STORAGE_DIR=$CLASSIC_STORAGE_DIR/dteam
VO_DTEAM_QUEUES="GRID_small"
#New conf (https://wiki.egi.eu/wiki/Dteam_vo)
VO_DTEAM_VOMS_SERVERS='vomss://voms.hellasgrid.gr:8443/voms/dteam?/dteam/'
VO_DTEAM_VOMSES=""dteam lcg-voms.cern.ch 15004
/DC=ch/DC=cern/OU=computers/CN=lcg-voms.cern.ch dteam 24' 'dteam voms.cern.ch
15004 /DC=ch/DC=cern/OU=computers/CN=voms.cern.ch dteam 24' 'dteam
voms.hellasgrid.gr 15004
/C=GR/O=HellasGrid/OU=hellasgrid.gr/CN=voms.hellasgrid.gr dteam 24' 'dteam
voms2.hellasgrid.gr 15004
/C=GR/O=HellasGrid/OU=hellasgrid.gr/CN=voms2.hellasgrid.gr dteam 24'"
VO_DTEAM_VOMS_CA_DN=""/DC=ch/DC=cern/CN=CERN Trusted Certification
Authority' '/DC=ch/DC=cern/CN=CERN Trusted Certification Authority'
'/C=GR/O=HellasGrid/OU=Certification Authorities/CN=HellasGrid CA 2006'
'/C=GR/O=HellasGrid/OU=Certification Authorities/CN=HellasGrid CA 2006'"
```

```
#:.....:
#ops
#:.....:
VO_OPS_SW_DIR=$VO_SW_DIR/ops
VO_OPS_DEFAULT_SE=$DPM_HOST
VO_OPS_STORAGE_DIR=$CLASSIC_STORAGE_DIR/ops
VO_OPS_QUEUES="GRID_ops"
VO_OPS_VOMS_SERVERS=""vomss://voms.cern.ch:8443/voms/ops?/ops/"
VO_OPS_VOMSES=""ops voms.cern.ch 15009
/DC=ch/DC=cern/OU=computers/CN=voms.cern.ch ops' 'ops lcg-voms.cern.ch
15009 /DC=ch/DC=cern/OU=computers/CN=lcg-voms.cern.ch ops'"
VO_OPS_VOMS_CA_DN=""/DC=ch/DC=cern/CN=CERN Trusted Certification
Authority' '/DC=ch/DC=cern/CN=CERN Trusted Certification Authority'"
```

IBERGRID VOS

```
# ops.vo.ibergrid.eu
VO_OPS_VO_IBERGRID_EU_SW_DIR=$VO_SW_DIR/opsibeu
VO_OPS_VO_IBERGRID_EU_DEFAULT_SE=$DPM_HOST
VO_OPS_VO_IBERGRID_EU_STORAGE_DIR=$CLASSIC_STORAGE_DIR/opsibeu
eu
VO_OPS_VO_IBERGRID_EU_QUEUES="GRID_opsibeu"
VO_OPS_VO_IBERGRID_EU_VOMS_SERVERS=""vomss://voms02.ncg.ingrid.pt:84
43/voms/ops.vo.ibergrid.eu?/ops.vo.ibergrid.eu"
VO_OPS_VO_IBERGRID_EU_VOMSES=""ops.vo.ibergrid.eu voms02.ncg.ingrid.pt
40001 /C=PT/O=LIPCA/O=LIP/OU=Lisboa/CN=voms02.ncg.ingrid.pt
ops.vo.ibergrid.eu"
VO_OPS_VO_IBERGRID_EU_VOMS_CA_DN=""/C=PT/O=LIPCA/CN=LIP
Certification Authority'"
```

```
# iber.vo.ibergrid.eu
VO_IBER_VO_IBERGRID_EU_SW_DIR=$VO_SW_DIR/iberibeu
VO_IBER_VO_IBERGRID_EU_DEFAULT_SE=$DPM_HOST
VO_IBER_VO_IBERGRID_EU_STORAGE_DIR=$CLASSIC_STORAGE_DIR/iberibeu
VO_IBER_VO_IBERGRID_EU_QUEUES="GRID_iberibeu"
VO_IBER_VO_IBERGRID_EU_VOMS_SERVERS=""vomss://voms02.ncg.ingrid.pt:8443/voms/iber.vo.ibergrid.eu?/iber.vo.ibergrid.eu"
VO_IBER_VO_IBERGRID_EU_VOMSES=""iber.vo.ibergrid.eu voms02.ncg.ingrid.pt40003 /C=PT/O=LIPCA/O=LIP/OU=Lisboa/CN=voms02.ncg.ingrid.ptiber.vo.ibergrid.eu"
VO_IBER_VO_IBERGRID_EU_VOMS_CA_DN=""/C=PT/O=LIPCA/CN=LIP Certification Authority"
```

```
##### GLEXEC
GLEXEC_WN_OPMODE=setuid
GLEXEC_WN_SCAS_ENABLED=no
GLEXEC_WN_ARGUS_ENABLED=no
GLEXEC_EXTRA_WHITELIST=.dteam
```

```
}}}
```

==== Configuring with YAIM the WNs =====

```
{ { {
[root@test14 etc]# /opt/glite/yaim/bin/yaim -c -s /opt/glite/yaim/etc/site-info.def -n
MPI_WN -n WN -n TORQUE_client
```

```
WARNING:
WARNING:
```

```
*****
*****
```

```
WARNING: Your siteinfo directory is world readable. This is generally a bad idea
WARNING: as configuration files may contain passwords and other sensitive
information.
```

```
WARNING:
```

```
*****
*****
```

```
WARNING:
```

```
INFO: Configuring HOST: test14.egi.cesga.es
INFO: Using site configuration file: /opt/glite/yaim/etc/site-info.def
INFO:
```

```
#####
```

```
. /.-. ')
. yA,-"-,( ,m,:/ ) .oo. oo o ooo o. .oo
. / .-Y a a Y-. 8. .8' 8'8. 8 8b d'8
. / ~~/ 8' .8oo88. 8 8 8' 8
. (_/ '====' 8 .8' 8. 8 8 Y 8
```

```
. Y,-",Yy,-,./      o8o o8o  o88o o8o o8o  o8o
.  I_))_ I_))_
```

```
current working directory: /opt/glite/yaim/etc
site-info.def date: Jan 4 13:18 /opt/glite/yaim/etc/site-info.def
yaim command: -c -s /opt/glite/yaim/etc/site-info.def -n MPI_WN -n WN -n
```

TORQUE_client

```
log file: /opt/glite/yaim/bin/./log/yaimlog
Fri Jan 4 13:39:04 CET 2013 : /opt/glite/yaim/bin/yaim
```

```
Installed YAIM versions:
glite-yaim-clients 5.0.1-2
glite-yaim-core 5.1.0-1
glite-yaim-mpi 1.1.11-1
glite-yaim-torque-client 5.1.0-1
```

```
#####
INFO: The default location of the grid-env.(c)sh files will be: /usr/libexec
INFO: Sourcing the utilities in /opt/glite/yaim/functions/utils
INFO: Detecting environment
INFO: Executing function: config_mpi_wn_check
INFO: Executing function: config_sysconfig_lcg_check
INFO: Executing function: config_globus_clients_check
INFO: Executing function: config_lcgenenv_check
INFO: Executing function: config_users_check
INFO: Executing function: config_sw_dir_check
INFO: Executing function: config_fts_client_check
INFO: Executing function: config_amga_client_check
INFO: Executing function: config_wn_check
INFO: Executing function: config_vomsdir_check
INFO: Executing function: config_vomses_check
INFO: Executing function: config_glite_saga_check
INFO: Executing function: config_add_pool_env_check
INFO: Executing function: config_wn_info_check
INFO: Executing function: config_torque_client_check
INFO: Executing function: config_mpi_wn_setenv
INFO: Found OPENMPI at /usr/lib64/openmpi
INFO: Installed version of OPENMPI is 1.5.4
INFO: Setting I2G_MPI_START env variable to /usr/bin/mpi-start
INFO: Executing function: config_mpi_wn
INFO: Executing function: config_ldconf
INFO: config_ldconf: function not needed anymore, left empty waiting to be removed
INFO: Executing function: config_sysconfig_edg
INFO: Executing function: config_sysconfig_globus
INFO: Executing function: config_sysconfig_lcg
INFO: Executing function: config_crl
INFO: Now updating the CRLs - this may take a few minutes...
WARNING: /usr/libexec/fetch-crl.sh didn't finish successfully
```

WARNING: CRLs may not be updated, please have a look !

Enabling periodic fetch-crl: [OK]

INFO: Executing function: config_rfio

INFO: Executing function: config_globus_clients_setenv

INFO: Executing function: config_globus_clients

INFO: Configure the globus service - not needed in EMI

INFO: Executing function: config_lcgenv

INFO: Executing function: config_users

INFO: Executing function: config_sw_dir_setenv

INFO: Executing function: config_sw_dir

INFO: Executing function: config_fts_client

INFO: Executing function: config_amga_client_setenv

INFO: Executing function: config_amga_client

INFO: Executing function: config_wn_setenv

INFO: Executing function: config_wn

INFO: Executing function: config_vomsdir_setenv

INFO: Executing function: config_vomsdir

INFO: Executing function: config_vomses

INFO: Executing function: config_glite_saga_setenv

INFO: Executing function: config_glite_saga

INFO: Executing function: config_add_pool_env_setenv

INFO: Executing function: config_add_pool_env

INFO: Executing function: config_wn_info

WARNING: No subcluster has been defined for the WN in the WN_LIST file
/opt/glite/yaim/etc/wn-list.conf

WARNING: YAIM will use the default subcluster id: CE_HOST ->
test06.egi.cesga.es

INFO: Executing function: config_torque_client

munge: Error: Unable to access "/var/run/munge/munge.socket.2": No such file or
directory

/usr/bin/pbsnodes: Invalid credential

WARNING: Could not establish connection with the BATCH_SERVER, please
verify!

WARNING: /var/lib/torque/mom_priv/config already exists, YAIM will not touch it

WARNING: Batch server defined in BATCH_SERVER variable is different

WARNING: from the batch server defined under /var/lib/torque/mom_priv/config

WARNING: Remove /var/lib/torque/mom_priv/config and reconfigure again to use
the new value!

Starting MUNGE: munged [OK]

INFO: starting pbs_mom...

Shutting down TORQUE Mom: pbs_mom already stopped [OK]

Starting TORQUE Mom: [OK]

INFO: Configuration Complete. [OK]

INFO: YAIM terminated successfully.

}}}

* Known issues:

{{{

SL6/x86_64 first configuration with yaim presents the following WARNING:

```
WARNING: /var/lib/torque/mom_priv/config already exists, YAIM will not touch it
WARNING: Batch server defined in BATCH_SERVER variable is different
WARNING: from the batch server defined under /var/lib/torque/mom_priv/config
WARNING: Remove /var/lib/torque/mom_priv/config and reconfigure again to use the
new value!
```

this is due to the presence of the file /var/lib/torque/mom_priv/config, provided by the SL6 torque-mom package, torque-mom-2.5.7-9.el6.x86_64. Remove the file as recommended and reconfigure.

```
}}}
```

* Error on the Cream CE:

```
{}{}
/var/log/messages
[ .... ]
Jan 7 11:15:39 test14 pbs_mom: LOG_ALERT::mom_server_valid_message_source,
bad connect from 193.144.35.44:1023 - unauthorized server
}}}
```

* Solution: Put this content on the file /var/lib/torque/mom_priv/config and restart pbs_mom daemon

```
{}{}
[root@test15 etc]# cat /var/lib/torque/mom_priv/config
$pbsserver test06.egi.cesga.es
$restricted test06.egi.cesga.es
$llogevent 255
$ideal_load 2.5
$max_load 2.4
```

```
[root@test14 mom_priv]# /etc/init.d/pbs_mom restart
Shutting down TORQUE Mom: [ OK ]
Starting TORQUE Mom: [ OK ]
}}}
```

=== TESTING ===

==== GENERIC_SEC_1 ====

```
{}{}
[root@test06 ~]# rpm -qalv | egrep "^[^-d]([^-r][^-w][^-xs]){2}[-^-r]w"
drwxrwxrwt 2 root root 0 Dec 3 2011 /var/lib/torque/checkpoint
drwxrwxrwt 2 root root 0 Dec 3 2011 /var/lib/torque/spool
drwxrwxrwt 2 root root 0 Dec 3 2011 /var/lib/torque/undelivered
drwxrwxrwt 2 root root 0 Oct 13 2011 /var/spool/maui/spool
drwxrwxrwt 2 root root 0 Jul 20 2011 /tmp
drwxrwxrwt 2 root root 0 Jul 20 2011 /var/tmp
}}}
```

==== Checking ldap (OK) ====


```
{{{
```

```
[root@se2 ~]# ldapsearch -x -H ldap://test06.egi.cesga.es:2170 -b o=grid
```

```
[ .... ]
```

```
# search result
```

```
search: 2
```

```
result: 0 Success
```

```
# numResponses: 30
```

```
# numEntries: 29
```

```
}}}
```

```
{{{
```

```
[root@ce2 etc]# ldapsearch -x -H ldap://test06.egi.cesga.es:2170 -b o=grid | grep
```

```
GlueCEStateFreeCPUs
```

```
GlueCEStateFreeCPUs: 4
```

```
GlueCEStateFreeCPUs: 4
```

```
GlueCEStateFreeCPUs: 4
```

```
GlueCEStateFreeCPUs: 4
```

```
}}}
```

```
{{{
```

```
[root@se2 ~]# ldapsearch -x -h test06.egi.cesga.es -p 2170 -b mds-vo-
```

```
name=resource,o=grid | grep -i MPI
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPI-START
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPI-START-1.4.0
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: MPI_NO_SHARED_HOME
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: OPENMPI
```

```
GlueHostApplicationSoftwareRunTimeEnvironment: OPENMPI-1.4-4
```

```
}}}
```

```
* Checking if MPI has been configured correctly
```

```
{{{
```

```
[root@test06 ~]# cat /var/lib/torque/torque.cfg
```

```
SUBMITFILTER /var/lib/torque/submit_filter
```

```
}}}
```

```
==== Checking if ssh works in bidirectional sense =====
```

```
* From WN to CE (OK)
```

```
{{{
```

```
[root@test14 ~]# su - dteam004
```

```
[dteam004@test14 ~]$ ssh test06.egi.cesga.es
```

```
[dteam004@test06 ~]$
```

```
}}}
```

```
==== Trying some internal commands =====
```

```
{{{
```

```
[root@test06 etc]# qstat -B
```

```
Server      Max Tot Que Run Hld Wat Trn Ext Status
```

```
-----
```

```
test06.egi.cesga  0  0  0  0  0  0  0  0  0 Active
```

```
[root@test06 etc]# qstat -Q
```

```
Queue      Max Tot Ena Str Que Run Hld Wat Trn Ext T
```

```
-----
```

GRID_ops	0	0	yes	yes	0	0	0	0	0	0	E
GRID_dteam	0	0	yes	yes	0	0	0	0	0	0	E
GRID_opsibeu	0	0	yes	yes	0	0	0	0	0	0	E
GRID_iberibeu	0	0	yes	yes	0	0	0	0	0	0	E

```
}}}
```

```
==== Submitting a job from the CESGA UI =====
```

```
{{{
```

```
[esfreire@test13 ~]$ glite-ce-delegate-proxy -e test06.egi.cesga.es esfreire  
2013-01-08 13:05:00,880 NOTICE - Proxy with delegation id [esfreire] succesfully  
delegated to endpoint [https://test06.egi.cesga.es:8443//ce-cream/services/gridsite-  
delegation]
```

```
[esfreire@test13 ~]$ glite-ce-proxy-renew -e test06.egi.cesga.es esfreire  
2013-01-08 13:05:11,371 NOTICE - Proxy with delegation id [esfreire] succesfully  
renewed to endpoint [https://test06.egi.cesga.es:8443//ce-cream/services/gridsite-  
delegation]
```

```
}}}
```

```
{{{
```

```
{}  
[esfreire@test13 ~]$ glite-ce-job-submit -D esfreire -r test06.egi.cesga.es:8443/cream-  
pbs-GRID_ops testCream1.jdl  
https://test06.egi.cesga.es:8443/CREAM937698068
```

```
[esfreire@test13 ~]$ glite-ce-job-status  
https://test06.egi.cesga.es:8443/CREAM937698068
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM937698068]  
        Status    = [DONE-OK]  
        ExitCode   = [0]
```

```
}}
```

```
==== Submitting MPI jobs ====
```

```
{}  
[esfreire@test13 verification]$ cat job1.jdl  
CPUNumber    = 4;  
Executable   = "/usr/bin/mpi-start";  
Arguments    = "-v -pre hooks.sh cpi";  
InputSandbox = {"cpi.c", "hooks.sh"};  
StdOutput    = "std.out";  
StdError     = "std.err";  
OutputSandbox = {"std.out", "std.err"};  
##OutputSandboxBaseDestUri = "gsiftp://localhost";  
OutputSandboxBaseDestUri = "gsiftp://se2.egi.cesga.es/tmp";  
Requirements =  
    Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)  
&&  
    Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);  
}}
```

```
{}  
[esfreire@test13 verification]$ cat cat hooks.sh  
#!/bin/sh
```

```
pre_run_hook () {  
  
    # Compile the program.  
    echo "Compiling ${I2G_MPI_APPLICATION}"  
  
    sleep 20  
  
    # Actually compile the program.  
    cmd="mpicc ${MPI_MPICC_OPTS} -o ${I2G_MPI_APPLICATION} $  
{I2G_MPI_APPLICATION}.c"  
    $cmd  
    if [ ! $? -eq 0 ]; then
```

```
    echo "Error compiling program. Exiting..."
    return 1
fi

# Everything's OK.
echo "Successfully compiled ${I2G_MPI_APPLICATION}"

return 0
}
```

```
}}
* Applying 4 CPUS fails
{{{
[esfreire@test13 verification]$ glite-ce-job-submit -D esfreire -r
test06.egi.cesga.es:8443/cream-pbs-GRID_ops job1.jdl
https://test06.egi.cesga.es:8443/CREAM639122338
```

```
[esfreire@test13 verification]$ glite-ce-job-status
https://test06.egi.cesga.es:8443/CREAM639122338
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM639122338]
        Status    = [DONE-OK]
        ExitCode   = [0]
```

```
[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002341, Error is 0.0000000003104410
wall clock time = 0.002240
=[FINISHED]=====
=====
```

```
[root@se2 tmp]# cat std.err
mpi-start [INFO ]:
*****
mpi-start [INFO ]: UID    = opssgm003
mpi-start [INFO ]: HOST    = test15.egi.cesga.es
mpi-start [INFO ]: DATE    = Tue Jan 8 13:42:47 CET 2013
mpi-start [INFO ]: VERSION = 1.4.0
mpi-start [INFO ]:
*****
mpi-start [INFO ]: search for scheduler
mpi-start [INFO ]: activate support for pbs
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
```

```
mpi-start [INFO ]: activate support for openmpi
mpi-start [INFO ]: call backend MPI implementation
mpi-start [INFO ]: start program with mpirun
Process 1 on test15.egi.cesga.es: n=0
Process 0 on test15.egi.cesga.es: n=0
Using 16384 intervals
Process 3 on test14.egi.cesga.es: n=0
Process 2 on test14.egi.cesga.es: n=0
```

```
}}}
```

```
{{{
```

```
[esfreire@test13 verification]$ cat job2.jdl
CPUNumber    = 2;
Executable   = "/usr/bin/mpi-start";
Arguments    = "-t openmpi -v -pre hooks.sh cpi";
InputSandbox = {"cpi.c", "hooks.sh"};
StdOutput    = "std.out";
StdError     = "std.err";
OutputSandbox = {"std.out", "std.err"};
OutputSandboxBaseDestUri = "gsiftp://se2.egi.cesga.es/tmp";
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
&&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
```

```
[esfreire@test13 verification]$ glite-ce-job-submit -D esfreire -r
test06.egi.cesga.es:8443/cream-pbs-GRID_ops job2.jdl
https://test06.egi.cesga.es:8443/CREAM985507144
```

```
[esfreire@test13 verification]$ glite-ce-job-status
https://test06.egi.cesga.es:8443/CREAM985507144
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM985507144]
        Status    = [REALLY-RUNNING]
```

```
[esfreire@test13 verification]$ glite-ce-job-status
https://test06.egi.cesga.es:8443/CREAM985507144
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM985507144]
        Status    = [DONE-OK]
```

```
ExitCode = [0]
}}}
```

```
{
{
{
[root@se2 tmp]# cat std.err
mpi-start [INFO ]:
*****
mpi-start [INFO ]: UID = opssgm003
mpi-start [INFO ]: HOST = test15.egi.cesga.es
mpi-start [INFO ]: DATE = Tue Jan 8 15:03:22 CET 2013
mpi-start [INFO ]: VERSION = 1.4.0
mpi-start [INFO ]:
*****
mpi-start [INFO ]: search for scheduler
mpi-start [INFO ]: activate support for pbs
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
mpi-start [INFO ]: activate support for openmpi
mpi-start [INFO ]: call backend MPI implementation
mpi-start [INFO ]: start program with mpirun
Process 1 on test15.egi.cesga.es: n=0
Process 3 on test14.egi.cesga.es: n=0
Process 0 on test15.egi.cesga.es: n=0
Using 16384 intervals
Process 2 on test14.egi.cesga.es: n=0
[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002341, Error is 0.0000000003104410
wall clock time = 0.001674
=[FINISHED]=====
=====
}}}
```

```
{
{
{
[esfreire@test13 verification]$ cat job3.jdl
NodeNumber = 2;
SMPGranularity = 2;
WholeNodes = True;
Executable = "/usr/bin/mpi-start";
Arguments = "-v -pre hooks.sh cpi";
InputSandbox = {"cpi.c", "hooks.sh"};
StdOutput = "std.out";
StdError = "std.err";
OutputSandbox = {"std.out", "std.err"};
}
```

```
OutputSandboxBaseDestUri = "gsiftp://se2.egi.cesga.es/tmp";
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
  &&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
```

```
[esfreire@test13 verification]$ glite-ce-job-submit -D esfreire -r
test06.egi.cesga.es:8443/cream-pbs-GRID_ops job3.jdl
https://test06.egi.cesga.es:8443/CREAM456555652
```

```
[esfreire@test13 verification]$ glite-ce-job-status
https://test06.egi.cesga.es:8443/CREAM456555652
```

```
***** JobID=[https://test06.egi.cesga.es:8443/CREAM456555652]
      Status    = [DONE-OK]
      ExitCode   = [0]
  }}}}
```

```
{}{}
[root@se2 tmp]# cat std.err
mpi-start [INFO ]:
*****
mpi-start [INFO ]: UID    = opssgm003
mpi-start [INFO ]: HOST    = test15.egi.cesga.es
mpi-start [INFO ]: DATE    = Tue Jan 8 15:07:13 CET 2013
mpi-start [INFO ]: VERSION = 1.4.0
mpi-start [INFO ]:
*****
mpi-start [INFO ]: search for scheduler
mpi-start [INFO ]: activate support for pbs
mpi-start [INFO ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
mpi-start [INFO ]: activate support for openmpi
mpi-start [INFO ]: call backend MPI implementation
mpi-start [INFO ]: start program with mpirun
Process 0 on test15.egi.cesga.es: n=0
Using 16384 intervals
Process 1 on test15.egi.cesga.es: n=0
```

```
[root@se2 tmp]# cat std.out
Compiling cpi
Successfully compiled cpi
=[START]=====
=====
pi is approximately 3.1415926539002363, Error is 0.0000000003104432
wall clock time = 0.000986
=[FINISHED]=====
=====
}}}
```

```

{{{
[esfreire@test13 verification]$ cat job-oldsyntax.jdl
CPUNumber    = 4;
Executable   = "starter.sh";
Arguments    = "cpi OPENMPI";
InputSandbox = {"starter.sh", "cpi.c", "hooks.sh"};
StdOutput    = "std.out";
StdError     = "std.err";
OutputSandbox = {"std.out", "std.err"};
OutputSandboxBaseDestUri = "gsiftp://se2.egee.cesga.es/tmp";
Environment  = {"I2G_MPI_PRE_RUN_HOOK=hooks.sh"};
Requirements =
  Member("MPI-START", other.GlueHostApplicationSoftwareRunTimeEnvironment)
  &&
  Member("OPENMPI", other.GlueHostApplicationSoftwareRunTimeEnvironment);
}}}}

```

* With 4 CPUs:

```

{{{
esfreire@test13 verification]$ glite-ce-job-submit -r test06.egi.cesga.es:8443/cream-
pbs-GRID_ops -D esfreire job-oldsyntax.jdl
https://test06.egi.cesga.es:8443/CREAM955281781

```

```

***** JobID=[https://test06.egi.cesga.es:8443/CREAM955281781]
      Status    = [DONE-OK]
      ExitCode   = [0]
}}}}

```

```

{{{
[root@se2 tmp]# cat std.err
mpi-start [INFO  ]:
*****
mpi-start [INFO  ]: UID    = opssgm003
mpi-start [INFO  ]: HOST   = test15.egi.cesga.es
mpi-start [INFO  ]: DATE   = Tue Jan 8 15:09:23 CET 2013
mpi-start [INFO  ]: VERSION = 1.4.0
mpi-start [INFO  ]:
*****
mpi-start [INFO  ]: search for scheduler
mpi-start [INFO  ]: activate support for pbs
mpi-start [INFO  ]: Unable to detect number of cores per cpu, assuming 1
mpi-start [INFO  ]: Detected 0 CPU socket(s) and 1 core(s) per CPU
mpi-start [INFO  ]: activate support for openmpi
mpi-start [INFO  ]: call backend MPI implementation
mpi-start [INFO  ]: start program with mpirun
Process 1 on test15.egi.cesga.es: n=0

```


Process 3 on test14.egi.cesga.es: n=0

Process 0 on test15.egi.cesga.es: n=0

Using 16384 intervals

Process 2 on test14.egi.cesga.es: n=0

[root@se2 tmp]# cat std.out

Compiling cpi

Successfully compiled cpi

=[START]=====

=====

pi is approximately 3.1415926539002341, Error is 0.0000000003104410

wall clock time = 0.001654

=[FINISHED]=====

=====

}}}

Not applicable Quality Criteria

Specific Functional Tests to be repeated in SR:

Test number	Description	Motivation

Specific Non-functional tests (Scalability, etc...) to be repeated in SR:

Test number	Description	Motivation

Comments for UMD QC definition (TSA2.2):

- Review criteria xxxx
- Add criteria xxxx

Comments for SR (TSA1.3):

EMI-MPI was updated and installed from scratch using UMD-2 repository without any important issue in a creamCE and Worker Nodes with Torque + Maui.

Comments for DMSU (TSA2.5):

Comments for TP: