G L I T E   C O M P U T I N G   E L E M E N T

1. RELEASE DESCRIPTION

This release contains the gLite Computing Element module v. 2.2.7. The following sections provide additional information about the release content, the module dependencies, the know bugs and issues and a list of bugs closed since the previous release. For information about installing and using the gLite Computing Element, please refer to the gLite Installation and User Guides.

2. CHANGES IN THIS RELEASE

2.1. CHANGES IN FUNCTIONALITY

- Migration of CE.monitor web application to axis1.2.1 and gsoap 2.7.6b
- Blahp now uses limited proxies
- Proxy path is settable via classad by using the attribute X509UserProxy
- Job hold/resume commands implemented for pbs and lsf
- BLParserPBS and BLParserLSF accepts new configuration option via command line
- Added configuration of SGM accounts for software tags management
- Use new VO configuration model (all VO parameters are centralized in a separate file for all services)

2.2. CHANGES IN CONFIGURATION

The following new parameters have been added to the glite-ce.cfg.xml file:

Parameter name	Default value	Description
rgma.servicetool.activate	true	Turn on/off R-GMA Service Publishing for the CE services. [Example: true] [Type: 'boolean']
dgas.client.enabled	true	This variable allows configuring the dgas client in the CE. It can be true or false. [Example: true][Type: boolean]
create.sgm.account	true	If this parameter is set to true, the sgm accounts are created using values from the VO configuration file. [Example: true][Type: boolean]

The following parameters have been changed in the glite-ce.cfg.xml file:

Parameter name	Old value	New value	Description
cemon.cetype			This parameter now takes also the value 'condor' to configure the CE with Condor as a batch system

All parameters used to set VO-specific values have been removed from the service configuration files and moved to a dedicated VO configuration file called vo-list.cfg.xml. A template is available in /opt/glite/etc/config/templates. This file is common to all gLite services running on this node or

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referenced in the same site-config file (unless locally overridden). For more information please refer to the gLite 1.5 installation guide.

The R-GMA Service Publisher (aka R-GMA servicetool) parameters are now automatically handled by the configuration script and do not need to be explicitly set anymore in the configuration file. The parameters can be set in the configuration file to override the default values.

3. RELEASE CONTENTS

3.1. GLITE SUB-DEPLOYMENT MODULES

The gLite Computing Element module requires the following sub-modules:

- gLite Security Utilities
- gLite R-GMA Servicetool
- gLite R-GMA GIn
- gLite DGAS Client

The sub-modules are automatically installed with the CE module. For more information about these sub-modules please refer to the specific release notes and installation instructions.

If the CE node should be used with the Torque PBS batch system, the gLite Torque Client module can also be installed. Otherwise, a suitable LRMS client must be installed.

3.2. GLITE RPMS

The gLite Computing Element v. 2.2.7 is composed of the following gLite components:

Component name	Description	Version	File
glite-ce-blahp	CE Blahp	1.5.4	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-ce-blahp-1.5.4-1.i386.rpm
glite-ce-ce-plugin	Monitor plugin for CE management	1.5.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-ce-plugin-1.5.0-1.noarch.rpm
glite-ce-common-java	Common classes for CE-Monitor and CREAM	1.5.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-common-java-1.5.0-0.noarch.rpm
glite-ce-config	gLite CE configuration scripts	2.2.7	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-config-2.2.7-1.noarch.rpm
glite-ce-monitor	CE monitor	1.5.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-monitor-1.5.1-1.noarch.rpm
glite-ce-monitor-api-java	Monitor API for Java	1.5.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-monitor-api-java-1.5.1-1.noarch.rpm
glite-ce-wsdl	CE wsdl	1.5.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-ce-wsdl-1.5.1-1.noarch.rpm
glite-config	gLite configuration scripts	1.6.22	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-config-1.6.22-1.noarch.rpm
glite-dgas-client-config	gLite dgas client node configuration files	1.1.3	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-dgas-client-config-1.1.3-1.noarch.rpm
glite-lb-client	L&B client API and tools	2.1.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-lb-client-2.1.1-1.i386.rpm
glite-lb-client-interface	L&B client library header files	2.1.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-lb-client-interface-2.1.0-1.i386.rpm

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glite-lb-common	L&B common subroutines library	3.0.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-lb-common-3.0.1-1.i386.rpm
glite-lb-logger	L&B local logger	1.2.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-lb-logger-1.2.1-1.i386.rpm
glite-rgma-gin-config	gLite R-GMA gin installation	5.1.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-rgma-gin-config-5.1.0-1.noarch.rpm
glite-rgma-servicetool-config	gLite R-GMA servicetool installation	5.2.2	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-rgma-servicetool-config-5.2.2-1.noarch.rpm
glite-security-authz-framework-java	Authorization Framework Java API	1.0.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-security-authz-framework-java-1.0.0-2.noarch.rpm
glite-security-gatekeeper	The (EDG/gLite) gatekeeper derived from globus_gatekeeper-2.1 (GT 2.2.4)	2.3.0	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-gatekeeper-2.3.0-4.i386.rpm
glite-security-gsoap-plugin	gSOAP plugin and gss libraries	1.2.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-gsoap-plugin-1.2.1-0.i386.rpm
glite-security-lcas	Local Centre Authorization Service (LCAS)	1.2.4	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcas-1.2.4-1.i386.rpm
glite-security-lcas-interface	Public interface to LCAS	1.2.4	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcas-interface-1.2.4-1.i386.rpm
glite-security-lcas-plugins-basic	Basic plugins for Local Centre Authorization Service (LCAS)	1.2.4	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcas-plugins-basic-1.2.4-1.i386.rpm
glite-security-lcas-plugins-voms	VOMS plugins for Local Centre Authorization Service (LCAS)	1.2.4	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcas-plugins-voms-1.2.4-1.i386.rpm
glite-security-lcmaps	Local Credential MAPping Service (LCMAPS)	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-1.2.9-1.i386.rpm
glite-security-lcmaps-interface	Public interface to LCMAPS	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-interface-1.2.9-1.i386.rpm
glite-security-lcmaps-interface-without-gsi	Public interface to LCMAPS	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-interface-without-gsi-1.2.9-1.i386.rpm
glite-security-lcmaps-plugins-basic	The basic plugins for LCMAPS	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-plugins-basic-1.2.9-1.i386.rpm
glite-security-lcmaps-plugins-voms	The VOMS plugins for LCMAPS	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-plugins-voms-1.2.9-1.i386.rpm
glite-security-lcmaps-without-gsi	Local Credential MAPping Service (LCMAPS)	1.2.9	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-lcmaps-without-gsi-1.2.9-1.i386.rpm
glite-security-utils-config	gLite Security Utilities configuration files	1.2.1	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/noarch/RPMS/glite-security-utils-config-1.2.1-1.noarch.rpm
glite-security-voms-api-c		1.6.10	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-security-voms-api-c-1.6.10-0.i386.rpm
glite-wms-utils-exception		1.0.3	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-wms-utils-exception-1.0.3-1.i386.rpm
glite-wms-utils-jobid		1.0.2	http://glite.web.cern.ch/glite/packages/R1.5/R20051130/bin/rhel30/i386/RPMS/glite-wms-utils-jobid-1.0.2-1.i386.rpm

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4. DEPENDENCIES

The gLite Computing Element module v. 2.2.7 has the following dependencies:

Component name	Description	Version	RPM file name
condor	Condor 6.7.10	6.7.10	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/condor-6.7.10-1.i386.rpm
gpt	The Grid Packaging Toolkit (GPT)	VDT1.2.2rh9	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/gpt-VDT1.2.2rh9-1.i386.rpm
gridsite	GridSite	1.1.15	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/gridsite-1.1.15-1.i386.rpm
gt4-workspace-service-tech_preview	Tech preview for GT4 Workspace Service	1.0.0	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/gt4-workspace-service-tech_preview-1.0.0-1_EGEE.i386.rpm
gt4-ws-core	Tech preview for GT4 Workspace Service	3.9.4	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/gt4-ws-core-3.9.4-2_EGEE.noarch.rpm
j2re	Java JRE	1.4.2	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/j2re-1_4_2_08-linux-i586.rpm
lcg-info-dynamic-condor	Condor dynamic information provider.	1.1.0	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-dynamic-condor-1.1.0-1.noarch.rpm
lcg-info-dynamic-lsf	LSF dynamic information provider.	1.0.5	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-dynamic-lsf-1.0.5-1.noarch.rpm
lcg-info-dynamic-pbs	PBS dynamic information provider.	1.0.6	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-dynamic-pbs-1.0.6-1.noarch.rpm
lcg-info-dynamic-software	Installed software dynamic information provider.	1.0.2	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-dynamic-software-1.0.2-1_sl3.noarch.rpm
lcg-info-generic	Generic information provider.	1.0.20	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-generic-1.0.20-1_sl3.noarch.rpm
lcg-info-templates	Templates for the Generic Information Provider	1.0.13	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/lcg-info-templates-1.0.13-1.noarch.rpm
tomcat5	Tomcat application server	5.0.28	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/tomcat5-5.0.28-11_EGEE.noarch.rpm
vdt_globus_essentials	Virtual Data Toolkit	VDT1.2.2rh9	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/vdt_globus_essentials-VDT1.2.2rh9-1.i386.rpm
vdt_globus_rm_essentials	Virtual Data Toolkit	VDT1.2.2rh9	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/vdt_globus_rm_essentials-VDT1.2.2rh9-1.i386.rpm
vdt_globus_rm_server	Virtual Data Toolkit	VDT1.2.2rh9	http://glite.web.cern.ch/glite/packages/externals/bin/rhel30/RPMS/vdt_globus_rm_server-VDT1.2.2rh9-1.i386.rpm

5. KNOWN BUGS AND ISSUES

This release has the following bugs and issues. Bug numbers refer to the gLite Bug Tracking system database hosted on the CERN Savannah system at https://savannah.cern.ch/bugs/?group=jra1mdw .

- Jobs get a full proxy.
  The BLAHP component now uses restricted proxies, however it doesn't dispatch the limited proxy file to the worker node. A limited copy of the proxy submitted in the job classad is correctly created, but neither the original proxy file name or the limited one are passed in the file submitted to the local batch system.
  Additionally, this functionality needs to be separately introduced also in the Condor components to fix this issue also when using Condor pools, which do not make use of BLAHP.
- During the execution of the CE configuration script, a number of Globus configuration scripts are executed. One of these scripts outputs the following error (BUG #5992):

[…]

running /opt/globus/setup/globus/setup-globus-gram-reporter-fork..[Changing to
/opt/globus/setup/globus]
Setting up fork gram reporter in MDS

Error fork GRAM reporter entry jobmanager-fork. Aborting!
ERROR: Command failed

[…]

This error doesn't affect the correct functionality of the CE and can be ignored.

- This release include a tech preview of the GT4 Workspace Service that can be used as an alternative to the pool accounts method for creating and configuring the user execution space. This preview can be activated by using the alternative configuration script glite-ce-wss-config-py. This script requires Apache Ant v. 1.6.1 or greater to be installed and properly configured on the server. Please refer to the Apache Ant user manual for the details

- No removal procedure is provided with this release apart from the removal of the RPMS. Any account, group or other resource created during the module configuration must be manually cleaned up.

Known open bugs and requests:

Bug number	Description	
#7718	VO specific access contorl to queues doesn't work	
#8845	CE parameters "cemon.wms.host" and "cemon.wms.port" not clearly described in the Installation Guide (see also #8841)	
#9125	blahpd operation intricately tied to pbs logging level	
#9518	something in workload management is fragile against unexpected results	
#10388	CE: impossible to remove VOs from a CE via the XML configuration file	
#10487	LSF CE failed to submit job to CERN lxbatch	
#10658	error on glite CE 1.3 configuration scripts	
#10692	Popen() and pclose() are thread-unsafe	
#10693	Memory leaks and possible heap corruption in blahpd	
#12225	Enhancement requested for CREAM-BLAH integration	
#13507	For CEMon port 8080 is now hardcoded in script tomcat.py, config file claims it is configurable	
#14007	Limited proxy not dispatched to worker node by Blahp	
#14079	org.glite.ce.monitor-client-api-c should always build PIC code	
#14365	ACL for the PBS queues not correctly advertised in the out.ldif on the CE node	

Fixed in this or previous releases, but not yet tested:

Bug number	Description	

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#6439	Limit of 2048 chars per line in scripts submitted to pbs	
#6665	Only 1 GlueCESEBind objectclass provided by CEMon	
#6760	predifinedSubscriptionList.xml --> predefinedSubscriptionList.xml	
#6763	VOMS server certificate not installed by CE installer	
#7050	The ce deployment module stop method does not check if servicetool stops correctly	
#7356	glite-ce-config.py --status fails when the configuration is in the central xml file	
#7597	./glite-ce-info for condor fails to publish condor queues	
#7808	Jobs submitted to WMS get aborted	
#7846	Globus job state file dir in /tmp	
#7930	globus lib missing when running blah job submit	
#8615	gram_job_state directory shouldn't be in /tmp	
#8864	CE: explicit configuration of WMS names on the CE needed even working in PUSH mode	
#9111	lcas configuration doesn't use XML values	
#9116	condor/blah tool config does not respect XML config params	
#9342	CE LCMAPS: Can't alter the VOMSDIR for in the lcmaps.db file through XML conf file	
#9343	CE LCMAPS: Can't place the groupmapfile in another directory then the grid-mapfile	
#9374	cannot remove pool account creation from config script	
#9377	copying certs to logger dir fails if they are not called 'hostcert'	
#9401	pool account creation	
#9700	SOAP read/write timeout issue	
#10525	BPRClient does not cycle through ports	
#10527	Temporary file not removed by lsf_status.sh (blahpd) under some circumstances	
#10536	a misconfigured CE brings down the system in pull mode	
#10575	CE Monitor cannot retrieve authorization chain for a WMS cert subject	
#10798	Existing ACLs on the CE queues are not considered in the matchmaking	
#10872	Software TAG publish	
#12522	CE: DGAS client configuration should not be mandatory	
#12746	Existing ACLs on LSF queues are not considered in the matchmaking	
#13952	GIP configuration problem with Condor backend	

6. BUGS CLOSED SINCE LAST RELEASE

This release fixes the following bugs and issues. Bug numbers refer to the gLite Bug Tracking system database hosted on the CERN Savannah system at https://savannah.cern.ch/bugs/?group=jra1mdw

Bug number	Description	
#9684	predefinedSubscriptionList.xml in a new location : CEmon doesn't work	
#10816	glite-ce-config.py wrongly sets GlueHostApplicationSoftwareRunTimeEnvironment to GLITE_1.2	
#11881	cemon.wms.host.subject in the CE configuration is ignored.	

#13317	BLParserLSF doesn't start when starting the CE with glite-ce-config.py --start	
#13599	When installing the glite CE 1.4.1 I get an unmet dependency	
#13713	When the torque server is on a separate box the out.ldif file in the CE turns out not to contain the ACL information.	
#13732	The grid-mapfile and groumapfile on the CE are wrongly generated by the CE configuration script	
#14226	The queues and the queues' information in the CE should be created homogeneously	