

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

Name of the component	QCG-Computing		
Release	qcg.qcg-comp.sl5.x86_64-3.0.4	RT Ticket	#5840
Software Provider			
Release Contact			
Validator	Name: Franciszek Klajn	E-Mail franciszek.klajn@pwr.wroc.pl	
V. Hours Worked	8		
Component status	Accepted	Date	01.08.2013
Verification start date	31.07.2013	Verification end date	01.08.2013

Summary:

The component is ready for production. Installation process was successful, test jobs was run without problems. Support team responded to the test ticket.

The tests was done only for Torque batch system.

**GGUS Tickets:
#96315**

Summary of Quality Criteria verification:

	Generic Quality Criteria Total (Critical/Non critical)			
	Passed	Not passed	Not Applicable	Total
TP	4			4
VLD	15	3		18
	Specific Quality Criteria			
TP	8	5		13
VLD	18			18

Quality Criteria verification cheatsheet:

Criteria	Accepted (Y/N/NA)	Tested (TP/VLD)	Comments
DOCUMENTATION QC			
GENERIC_DOC_1 (Functional Description)	Optional Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/wiki/FunctionalDescription
GENERIC_DOC_2 (Release Notes)	Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/export/HEAD/tags/current/RELEASE_NOTES#1
GENERIC_DOC_3 (User Documentation)	Optional N	VLD	QCG computing is used mainly via QCG-Broker and QCG-Icon
GENERIC_DOC_4 (Online help (man pages))	Optional Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/wiki/CommandsReference
GENERIC_DOC_5 (API Documentation)	Optional Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/wiki/JavaSDK
GENERIC_DOC_6 (Administrator Documentation)	Optional Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/wiki/InstallationGuide
GENERIC_DOC_7 (Service Reference Card)	Optional N	VLD	
GENERIC_DOC_8 (Software License)	Y	VLD	http://www.qoscosgrid.org/trac/qcg/wiki/license
GENERIC_DOC_9 (Release changes testing)	Optional N	VLD	
SOFTWARE DISTRIBUTION QC			
GENERIC_DIST_1 (Source Code Availability)	Y	VLD	http://www.qoscosgrid.org/trac/qcg-computing/wiki/InstallingFromSources
GENERIC_DIST_3 (Binary Distribution)	Y	VLD	
SOFTWARE FEATURES QC			
GENERIC_SOFT_1 (Backwards Compatibility)	Y	TP	First version for UMD
GENERIC_SOFT_2 (New features testing)	Y	TP	First version for UMD
SERVICE CRITERIA QC			
GENERIC_SERVICE_1 (Service control and status)	Y	VLD	
GENERIC_SERVICE_2 (Log Files)	Y	VLD	
GENERIC_SERVICE_3 (Service Reliability)	Optional Y	TP	
GENERIC_SERVICE_4 (Service Robustness)	Optional Y	TP	
GENERIC_SERVICE_6 (Default Password Configuration)	Y	VLD	
GENERIC_SERVICE_7 (Default Configuration)	Y	VLD	
SECURITY QC			
GENERIC_SEC_1 (World Writable Files)	Y	VLD	
GENERIC_SEC_3	Y	VLD	

(Passwords in world readable files)			
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MISCELLANEOUS QC

GENERIC_MISC_1 (Bug Tracking System)	Y	VLD	https://ggus.eu/ws/ticket_info.php?ticket=96315
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AUTHENTICATION QC

AUTHN_CRED_1 (X.509 Certificate support)	Y	VLD	
AUTHN_CRED_2 (SHA2 Certificate support)	Optional Y	VLD	
AUTHN_CRED_3 (RFC Proxy support)	Optional Y	VLD	
AUTHN_PROTO_1 (TLSSSLv3 Support)	Y	TP	Supported according to developers
AUTHN_DELEG_1 (Delegation Interface)	Optional N	TP	

AUTHORISATION QC

AUTHZ_PCYDEF_3 (Ban UserGroup of users)	Optional Y	TP	Supported by external tools - by LCMAPS.
AUTHZ_PCYDEF_4 (Allowed users definition)	Y	TP	Supported by external tools - by gridmapfilegenerator (if user mapping is defined in LDAP) or by LCMAPS if pool accounts are used.
AUTHZ_PEP_2 (User Mapping)	Y	TP	Supported by external tools - by gridmapfilegenerator (if user mapping is defined in LDAP) or by LCMAPS if pool accounts are used.

JOB EXECUTION QC

JOBEXEC_IFACE_1 (Job Execution Interface)	Y	TP	BES Compliant interface with extensions: http://ogf.org/documents/GFD.179.pdf
JOBEXEC_JOB_1 (Simple Job)	Y	VLD	
JOBEXEC_JOB_2 (Simple Job with inputoutput files)	Y	VLD	
JOBEXEC_JOB_3 (Cancel Job)	Y	VLD	
JOBEXEC_EXECMNGR_1 (Not Invasive Deployment)	Y	VLD	There is an application directory which has to be shared across the nodes (description: http://www.qoscosgrid.org/trac/qcg-computing/wiki/ApplicationScripts)
JOBEXEC_EXECMNGR_2 (Job Management)	Y	VLD	Only Torque was tested (despite QCG-Computing supprts also the others batch systems).
JOBEXEC_EXECMNGR_3 (Information Retrieval)	Y	VLD	
JOBEXEC_AVAIL_1 (Service Redundancy)	Y	TP	http://www.qoscosgrid.org/trac/qcg-computing/wiki/MultipleInstances
JOBEXEC_AVAIL_2 (Self Disabling Mechanism)	Optional N	TP	
JOBEXEC_AVAIL_4 (Timely Job Status Updates)	Optional Y	TP	http://www.qoscosgrid.org/trac/qcg-computing/wiki/benchmarks

PARALLEL JOB QC

PARALLEL_JOB_1 (Simple parallel job submission)	Y	VLD	
PARALLEL_JOB_2 (Single machine parallel job submission)	Optional Y	VLD	
PARALLEL_JOB_3 (Fine grained mapping parallel job submission)	Optional Y	VLD	

PARALLEL_MPI_1 (Precompiled MPI job Execution)	Y	VLD	
PARALLEL_MPI_2 (MPI job Execution from source.)	Y	VLD	
PARALLEL_OMP_1 (Precompiled OpenMP job Execution)	Y	VLD	
PARALLEL_OMP_2 (OpenMP job Execution from source)	Y	VLD	
INTERACTIVE JOB MANAGEMENT QC			
INTERACTIVE_JOB_1 (Interactive login)	Optional N	TP	
INTERACTIVE_JOB_2 (Interactive Job Perusal)	Optional N	TP	
INTERACTIVE_JOB_3 (Interactive Job Monitoring)	Optional N	TP	
INTERACTIVE_JOB_4 (Interactive Job Steering)	Optional N	TP	
CLIENT TOOLS QC			
CLIENT_TOOLS_1 (Command line options coherency)	Y	VLD	
CLIENT_TOOLS_2 (Error Messages)	Y	VLD	

Validator comments:

Tests was only done for Torque (QCG-Computing supports also another batch systems).

```
[root@qcg ~]# vi /etc/sysconfig/iptables
[root@qcg ~]# /etc/init.d/iptables restart
Flushing firewall rules: [ OK ]
Setting chains to policy ACCEPT: filter [ OK ]
Unloading iptables modules: [ OK ]
Applying iptables firewall rules: [ OK ]
Loading additional iptables modules: ip_conntrack_netbios_n[ OK ]
[root@qcg ~]# yum install postgresql postgresql-server
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package postgresql.x86_64 0:8.1.23-6.el5_8 set to be updated
--> Processing Dependency: libpq.so.4()(64bit) for package: postgresql
---> Package postgresql-server.x86_64 0:8.1.23-6.el5_8 set to be updated
--> Running transaction check
---> Package postgresql-libs.x86_64 0:8.1.23-6.el5_8 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin
```

Dependencies Resolved

```

=====
=====
===
Package                               Arch
Version                               Repository
Size
=====
=====
===
Installing:
  postgresql                           x86_64
8.1.23-6.el5_8                         slc5-os                               2.9
M
  postgresql-server                    x86_64
8.1.23-6.el5_8                         slc5-os                               3.9
M
Installing for dependencies:
  postgresql-libs                      x86_64
8.1.23-6.el5_8                         slc5-os                               197
k

Transaction Summary
=====
=====
===
Install      3 Package(s)
Upgrade      0 Package(s)

Total download size: 7.0 M
Is this ok [y/N]: y
Downloading Packages:
(1/3): postgresql-libs-8.1.23-6.el5_8.x86_64.rpm
| 197 kB      00:00
(2/3): postgresql-8.1.23-6.el5_8.x86_64.rpm
| 2.9 MB     00:00
(3/3): postgresql-server-8.1.23-6.el5_8.x86_64.rpm
| 3.9 MB     00:01
-----
-----
---
Total
2.3 MB/s | 7.0 MB      00:03
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : postgresql-libs
1/3
  Installing      : postgresql
2/3
  Installing      : postgresql-server
3/3

Installed:
  postgresql.x86_64 0:8.1.23-6.el5_8
  postgresql-server.x86_64 0:8.1.23-6.el5_8

Dependency Installed:
  postgresql-libs.x86_64 0:8.1.23-6.el5_8

Complete!
[root@qcq ~]# yum install unixODBC postgresql-odbc
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process

```

Resolving Dependencies

```

--> Running transaction check
---> Package postgresql-odbc.x86_64 0:08.01.0200-3.1 set to be updated
--> Processing Dependency: libodbcinst.so.1()(64bit) for package: postgresql-odbc
---> Package unixODBC.i386 0:2.2.11-10.e15 set to be updated
--> Processing Dependency: libodbcinst.so.1 for package: unixODBC
--> Processing Dependency: libodbc.so.1 for package: unixODBC
---> Package unixODBC.x86_64 0:2.2.11-10.e15 set to be updated
--> Running transaction check
---> Package unixODBC-libs.i386 0:2.2.11-10.e15 set to be updated
---> Package unixODBC-libs.x86_64 0:2.2.11-10.e15 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin

```

Dependencies Resolved

```

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

```

Package Version Size	Arch Repository
=====	
=====	
===	
Installing:	
postgresql-odbc 08.01.0200-3.1 201 k	x86_64 slc5-os
unixODBC 2.2.11-10.e15 290 k	i386 slc5-os
unixODBC 2.2.11-10.e15 291 k	x86_64 slc5-os
Installing for dependencies:	
unixODBC-libs 2.2.11-10.e15 551 k	i386 slc5-os
unixODBC-libs 2.2.11-10.e15 554 k	x86_64 slc5-os

Transaction Summary

```

=====
=====
===
Install      5 Package(s)
Upgrade     0 Package(s)

```

Total download size: 1.8 M

Is this ok [y/N]: y

Downloading Packages:

```

(1/5): postgresql-odbc-08.01.0200-3.1.x86_64.rpm
| 201 kB    00:00
(2/5): unixODBC-2.2.11-10.e15.i386.rpm
| 290 kB    00:00
(3/5): unixODBC-2.2.11-10.e15.x86_64.rpm
| 291 kB    00:00
(4/5): unixODBC-libs-2.2.11-10.e15.i386.rpm
| 551 kB    00:00
(5/5): unixODBC-libs-2.2.11-10.e15.x86_64.rpm
| 554 kB    00:00

```

```

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-----
---
```

```

Total
1.3 MB/s | 1.8 MB    00:01
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : unixODBC-libs
1/5
  Installing      : unixODBC-libs
2/5
  Installing      : unixODBC
3/5
  Installing      : unixODBC
4/5
  Installing      : postgresql-odbc
5/5

Installed:
  postgresql-odbc.x86_64 0:08.01.0200-3.1                unixODBC.i386
0:2.2.11-10.e15                unixODBC.x86_64 0:2.2.11-10.e15

Dependency Installed:
  unixODBC-libs.i386 0:2.2.11-10.e15
unixODBC-libs.x86_64 0:2.2.11-10.e15

Complete!
[root@qcq ~]# cat > /etc/yum.repos.d/egi-trustanchors.repo << EOF
> [EGI-trustanchors]
> name=EGI-trustanchors
> baseurl=http://repository.egi.eu/sw/production/cas/1/current/
> gpgkey=http://repository.egi.eu/sw/production/cas/1/GPG-KEY-EUGridPMA-RPM-3
> gpgcheck=1
> enabled=1
> EOF
[root@qcq ~]# yum install ca-policy-egi-core
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
EGI-trustanchors
| 951 B    00:00
EGI-trustanchors/primary
| 31 kB   00:00
EGI-trustanchors
213/213
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package ca-policy-egi-core.noarch 0:1.54-1 set to be updated
--> Processing Dependency: ca_TERENA-eScience-SSL-CA = 1.54 for package: ca-
policy-egi-core
--> Processing Dependency: ca_CNRS2 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DigiCertGridCA-1-Classic = 1.54 for package: ca-
policy-egi-core
--> Processing Dependency: ca_KEK = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UniandesCA = 1.54 for package: ca-policy-egi-
core
--> Processing Dependency: ca_UGRID = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UKeScienceCA-2B = 1.54 for package: ca-policy-
egi-core
--> Processing Dependency: ca_UTN-USERFirst-Hardware = 1.54 for package: ca-
policy-egi-core
--> Processing Dependency: ca_HellasGrid-CA-2006 = 1.54 for package: ca-
policy-egi-core
--> Processing Dependency: ca_NECTEC = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_QuoVadis-Root-CA1 = 1.54 for package: ca-policy-
egi-core

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--> Processing Dependency: ca_pkIRISGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CERN-GridCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_MYIFAM = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UNLPGGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SRCE = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_HIAST = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_LACGridCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_BalticGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_RomanianGRID = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_AustrianGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UTNAAAClient = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CERN-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DZeScience = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_PSC-Myproxy-CA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_REUNA-ca = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_BrGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SiGNET-CA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_TRGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DFN-GridGermany-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_AddTrust-External-CA-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CALG = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_IGCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NCSA-tfca = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_PolishGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SDG = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_IRAN-GRID = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_KISTI-2007 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SlovakGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SWITCHslcs2011 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NCSA-slcs = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DigiCertGridTrustCA-Classic = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_MREN-CA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_HKU = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SEE-GRID = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_BEGrid2008 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_GermanGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CNRS2-Grid-FR = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DOEGrids = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DFN-SLCS = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_RDIG = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_ULAGrid-CA-2008 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_IUCC = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_HellasGrid-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_INFN-CA-2006 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DigiCertGridRootCA-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_IHEP-2013 = 1.54 for package: ca-policy-egi-core


```
--> Processing Dependency: ca_CERN-Root-2 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NICS-MyProxy = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UKeScienceCA-2A = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_ESnet = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SWITCHgrid-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NERSC-SLCS = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_AIST = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_ArmeSfo = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_AEGIS = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_cilogon-silver = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_JUnet-CA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_EG-GRID = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_PK-Grid-2007 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CERN-TCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_GridCanada = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_ASGCCA-2007 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CyGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_BG-ACAD-CA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_MARGI = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NCSA-mics = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_LIPCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NCHC = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CESNET-CA-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_IHEP = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_MaGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NorduGrid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NIIF = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_PRAGMA-UCSD = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_FNAL-SLCS = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NAREGI = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CNIC = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_DigiCertAssuredIDRootCA-Root = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_AAACertificateServices = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_APAC = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_MD-Grid = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_NIKHEF = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UKeScienceRoot-2007 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CNRS2-Projets = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_SWITCH-QuoVadis-Grid-ICA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_UNAMgrid-ca = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_CESNET-CA-3 = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_TERENAeSciencePersonalCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_BYGCA = 1.54 for package: ca-policy-egi-core
--> Processing Dependency: ca_ANSPGrid = 1.54 for package: ca-policy-egi-core
--> Running transaction check
----> Package ca_AAACertificateServices.noarch 0:1.54-1 set to be updated
----> Package ca_AEGIS.noarch 0:1.54-1 set to be updated
----> Package ca_AIST.noarch 0:1.54-1 set to be updated
```

----> Package ca_ANSPGrid.noarch 0:1.54-1 set to be updated
----> Package ca_APAC.noarch 0:1.54-1 set to be updated
----> Package ca_ASGCCA-2007.noarch 0:1.54-1 set to be updated
----> Package ca_AddTrust-External-CA-Root.noarch 0:1.54-1 set to be updated
----> Package ca_ArmeSFo.noarch 0:1.54-1 set to be updated
----> Package ca_AustrianGrid.noarch 0:1.54-1 set to be updated
----> Package ca_BEGrid2008.noarch 0:1.54-1 set to be updated
----> Package ca_BG-ACAD-CA.noarch 0:1.54-1 set to be updated
----> Package ca_BYGCA.noarch 0:1.54-1 set to be updated
----> Package ca_BalticGrid.noarch 0:1.54-1 set to be updated
----> Package ca_BrGrid.noarch 0:1.54-1 set to be updated
----> Package ca_CALG.noarch 0:1.54-1 set to be updated
----> Package ca_CERN-GridCA.noarch 0:1.54-1 set to be updated
----> Package ca_CERN-Root.noarch 0:1.54-1 set to be updated
----> Package ca_CERN-Root-2.noarch 0:1.54-1 set to be updated
----> Package ca_CERN-TCA.noarch 0:1.54-1 set to be updated
----> Package ca_CESNET-CA-3.noarch 0:1.54-1 set to be updated
----> Package ca_CESNET-CA-Root.noarch 0:1.54-1 set to be updated
----> Package ca_CNIC.noarch 0:1.54-1 set to be updated
----> Package ca_CNRS2.noarch 0:1.54-1 set to be updated
----> Package ca_CNRS2-Grid-FR.noarch 0:1.54-1 set to be updated
----> Package ca_CNRS2-Projets.noarch 0:1.54-1 set to be updated
----> Package ca_CyGrid.noarch 0:1.54-1 set to be updated
----> Package ca_DFN-GridGermany-Root.noarch 0:1.54-1 set to be updated
----> Package ca_DFN-SLCS.noarch 0:1.54-1 set to be updated
----> Package ca_DOEGrids.noarch 0:1.54-1 set to be updated
----> Package ca_DZeScience.noarch 0:1.54-1 set to be updated
----> Package ca_DigiCertAssuredIDRootCA-Root.noarch 0:1.54-1 set to be updated
----> Package ca_DigiCertGridCA-1-Classic.noarch 0:1.54-1 set to be updated
----> Package ca_DigiCertGridRootCA-Root.noarch 0:1.54-1 set to be updated
----> Package ca_DigiCertGridTrustCA-Classic.noarch 0:1.54-1 set to be updated
----> Package ca_EG-GRID.noarch 0:1.54-1 set to be updated
----> Package ca_ESnet.noarch 0:1.54-1 set to be updated
----> Package ca_FNAL-SLCS.noarch 0:1.54-1 set to be updated
----> Package ca_GermanGrid.noarch 0:1.54-1 set to be updated
----> Package ca_GridCanada.noarch 0:1.54-1 set to be updated
----> Package ca_HIAST.noarch 0:1.54-1 set to be updated
----> Package ca_HKU.noarch 0:1.54-1 set to be updated
----> Package ca_HellasGrid-CA-2006.noarch 0:1.54-1 set to be updated
----> Package ca_HellasGrid-Root.noarch 0:1.54-1 set to be updated
----> Package ca_IGCA.noarch 0:1.54-1 set to be updated
----> Package ca_IHEP.noarch 0:1.54-1 set to be updated
----> Package ca_IHEP-2013.noarch 0:1.54-1 set to be updated
----> Package ca_INFN-CA-2006.noarch 0:1.54-1 set to be updated
----> Package ca_IRAN-GRID.noarch 0:1.54-1 set to be updated
----> Package ca_IUCC.noarch 0:1.54-1 set to be updated
----> Package ca_JUnet-CA.noarch 0:1.54-1 set to be updated
----> Package ca_KEK.noarch 0:1.54-1 set to be updated
----> Package ca_KISTI-2007.noarch 0:1.54-1 set to be updated
----> Package ca_LACGridCA.noarch 0:1.54-1 set to be updated
----> Package ca_LIPCA.noarch 0:1.54-1 set to be updated
----> Package ca_MARGI.noarch 0:1.54-1 set to be updated
----> Package ca_MD-Grid.noarch 0:1.54-1 set to be updated
----> Package ca_MREN-CA.noarch 0:1.54-1 set to be updated
----> Package ca_MYIFAM.noarch 0:1.54-1 set to be updated
----> Package ca_MaGrid.noarch 0:1.54-1 set to be updated
----> Package ca_NAREGI.noarch 0:1.54-1 set to be updated
----> Package ca_NCHC.noarch 0:1.54-1 set to be updated
----> Package ca_NCSA-mics.noarch 0:1.54-1 set to be updated
----> Package ca_NCSA-slcs.noarch 0:1.54-1 set to be updated
----> Package ca_NCSA-tfca.noarch 0:1.54-1 set to be updated
----> Package ca_NECTEC.noarch 0:1.54-1 set to be updated
----> Package ca_NERSC-SLCS.noarch 0:1.54-1 set to be updated
----> Package ca_NICS-MyProxy.noarch 0:1.54-1 set to be updated
----> Package ca_NIIF.noarch 0:1.54-1 set to be updated
----> Package ca_NIKHEF.noarch 0:1.54-1 set to be updated
----> Package ca_NorduGrid.noarch 0:1.54-1 set to be updated
----> Package ca_PK-Grid-2007.noarch 0:1.54-1 set to be updated

```

----> Package ca_PRAGMA-UCSD.noarch 0:1.54-1 set to be updated
----> Package ca_PSC-Myproxy-CA.noarch 0:1.54-1 set to be updated
----> Package ca_PolishGrid.noarch 0:1.54-1 set to be updated
----> Package ca_QuoVadis-Root-CA1.noarch 0:1.54-1 set to be updated
----> Package ca_RDIG.noarch 0:1.54-1 set to be updated
----> Package ca_REUNA-ca.noarch 0:1.54-1 set to be updated
----> Package ca_RomanianGRID.noarch 0:1.54-1 set to be updated
----> Package ca_SDG.noarch 0:1.54-1 set to be updated
----> Package ca_SEE-GRID.noarch 0:1.54-1 set to be updated
----> Package ca_SRCE.noarch 0:1.54-1 set to be updated
----> Package ca_SWITCH-QuoVadis-Grid-ICA.noarch 0:1.54-1 set to be updated
----> Package ca_SWITCHgrid-Root.noarch 0:1.54-1 set to be updated
----> Package ca_SWITCHslcs2011.noarch 0:1.54-1 set to be updated
----> Package ca_SiGNET-CA.noarch 0:1.54-1 set to be updated
----> Package ca_SlovakGrid.noarch 0:1.54-1 set to be updated
----> Package ca_TERENA-eScience-SSL-CA.noarch 0:1.54-1 set to be updated
----> Package ca_TERENAeSciencePersonalCA.noarch 0:1.54-1 set to be updated
----> Package ca_TRGrid.noarch 0:1.54-1 set to be updated
----> Package ca_UGRID.noarch 0:1.54-1 set to be updated
----> Package ca_UKeScienceCA-2A.noarch 0:1.54-1 set to be updated
----> Package ca_UKeScienceCA-2B.noarch 0:1.54-1 set to be updated
----> Package ca_UKeScienceRoot-2007.noarch 0:1.54-1 set to be updated
----> Package ca_ULAGrid-CA-2008.noarch 0:1.54-1 set to be updated
----> Package ca_UNAMgrid-ca.noarch 0:1.54-1 set to be updated
----> Package ca_UNLPGrid.noarch 0:1.54-1 set to be updated
----> Package ca_UTN-USERFirst-Hardware.noarch 0:1.54-1 set to be updated
----> Package ca_UTNAAClient.noarch 0:1.54-1 set to be updated
----> Package ca_UniandesCA.noarch 0:1.54-1 set to be updated
----> Package ca_cilogon-silver.noarch 0:1.54-1 set to be updated
----> Package ca_pkIRISGrid.noarch 0:1.54-1 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin

```

Dependencies Resolved

```

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

```

Package Version	Repository	Arch	Size
=====			
===			
Installing:			
ca-policy-egi-core 1.54-1	EGI-trustanchors	noarch	5.4 k
Installing for dependencies:			
ca_AAACertificateServices 1.54-1	EGI-trustanchors	noarch	5.7 k
ca_AEGIS 1.54-1	EGI-trustanchors	noarch	5.3 k
ca_AIST 1.54-1	EGI-trustanchors	noarch	5.6 k
ca_ANSPGrid 1.54-1	EGI-trustanchors	noarch	5.5 k
ca_APAC 1.54-1	EGI-trustanchors	noarch	5.9 k
ca_ASGCCA-2007 1.54-1	EGI-trustanchors	noarch	5.3 k
ca_AddTrust-External-CA-Root 1.54-1	EGI-trustanchors	noarch	5.8 k
ca_ArmeSFo 1.54-1	EGI-trustanchors	noarch	5.0 k
ca_AustrianGrid 1.54-1	EGI-trustanchors	noarch	5.3 k
ca_BEGrid2008 1.54-1	EGI-trustanchors	noarch	5.1 k

ca_BG-ACAD-CA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_BYGCA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_BalticGrid		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_BrGrid		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_CALG		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_CERN-GridCA		noarch	
1.54-1	EGI-trustanchors		6.0 k
ca_CERN-Root		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_CERN-Root-2		noarch	
1.54-1	EGI-trustanchors		5.9 k
ca_CERN-TCA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_CESNET-CA-3		noarch	
1.54-1	EGI-trustanchors		4.8 k
ca_CESNET-CA-Root		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_CNIC		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_CNRS2		noarch	
1.54-1	EGI-trustanchors		5.0 k
ca_CNRS2-Grid-FR		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_CNRS2-Projets		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_CyGrid		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_DFN-GridGermany-Root		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_DFN-SLCS		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_DOEGrids		noarch	
1.54-1	EGI-trustanchors		6.3 k
ca_DZeScience		noarch	
1.54-1	EGI-trustanchors		7.1 k
ca_DigiCertAssuredIDRootCA-Root		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_DigiCertGridCA-1-Classic		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_DigiCertGridRootCA-Root		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_DigiCertGridTrustCA-Classic		noarch	
1.54-1	EGI-trustanchors		6.0 k
ca_EG-GRID		noarch	
1.54-1	EGI-trustanchors		6.8 k
ca_ESnet		noarch	
1.54-1	EGI-trustanchors		6.1 k
ca_FNAL-SLCS		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_GermanGrid		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_GridCanada		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_HIAST		noarch	
1.54-1	EGI-trustanchors		6.7 k
ca_HKU		noarch	
1.54-1	EGI-trustanchors		5.0 k
ca_HellasGrid-CA-2006		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_HellasGrid-Root		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_IGCA		noarch	
1.54-1	EGI-trustanchors		5.1 k

ca_IHEP		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_IHEP-2013		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_INFN-CA-2006		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_IRAN-GRID		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_IUCC		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_JUnet-CA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_KEK		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_KISTI-2007		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_LACGridCA		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_LIPCA		noarch	
1.54-1	EGI-trustanchors		5.0 k
ca_MARGI		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_MD-Grid		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_MREN-CA		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_MYIFAM		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_MaGrid		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_NAREGI		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_NCHC		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_NCSA-mics		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_NCSA-slcs		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_NCSA-tfca		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_NECTEC		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_NERSC-SLCS		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_NICS-MyProxy		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_NIIF		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_NIKHEF		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_NorduGrid		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_PK-Grid-2007		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_PRAGMA-UCSD		noarch	
1.54-1	EGI-trustanchors		5.6 k
ca_PSC-Myproxy-CA		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_PolishGrid		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_QuoVadis-Root-CA1		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_RDIG		noarch	
1.54-1	EGI-trustanchors		5.6 k
ca_REUNA-ca		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_RomanianGRID		noarch	
1.54-1	EGI-trustanchors		5.3 k

ca_SDG		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_SEE-GRID		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_SRCE		noarch	
1.54-1	EGI-trustanchors		4.9 k
ca_SWITCH-QuoVadis-Grid-ICA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_SWITCHgrid-Root		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_SWITCHslcs2011		noarch	
1.54-1	EGI-trustanchors		4.9 k
ca_SiGNET-CA		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_SlovakGrid		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_TERENA-eScience-SSL-CA		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_TERENAEsciencePersonalCA		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_TRGrid		noarch	
1.54-1	EGI-trustanchors		5.2 k
ca_UGRID		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_UKeScienceCA-2A		noarch	
1.54-1	EGI-trustanchors		4.9 k
ca_UKeScienceCA-2B		noarch	
1.54-1	EGI-trustanchors		4.9 k
ca_UKeScienceRoot-2007		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_ULAGrid-CA-2008		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_UNAMgrid-ca		noarch	
1.54-1	EGI-trustanchors		5.5 k
ca_UNLPGrid		noarch	
1.54-1	EGI-trustanchors		5.3 k
ca_UTN-USERFirst-Hardware		noarch	
1.54-1	EGI-trustanchors		5.7 k
ca_UTNAAAClient		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_UniandesCA		noarch	
1.54-1	EGI-trustanchors		5.4 k
ca_cilogon-silver		noarch	
1.54-1	EGI-trustanchors		5.1 k
ca_pkIRISGrid		noarch	
1.54-1	EGI-trustanchors		5.5 k

Transaction Summary

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

```
Install      102 Package(s)
Upgrade       0 Package(s)
```

Total download size: 550 k

Is this ok [y/N]: y

Downloading Packages:

```
(1/102): ca_CESNET-CA-3-1.54-1.noarch.rpm
| 4.8 kB    00:00
(2/102): ca_SWITCHslcs2011-1.54-1.noarch.rpm
| 4.9 kB    00:00
(3/102): ca_UKeScienceCA-2A-1.54-1.noarch.rpm
| 4.9 kB    00:00
(4/102): ca_UKeScienceCA-2B-1.54-1.noarch.rpm
| 4.9 kB    00:00
(5/102): ca_SRCE-1.54-1.noarch.rpm
| 4.9 kB    00:00
```

(6/102): ca_HKU-1.54-1.noarch.rpm
| 5.0 kB 00:00
(7/102): ca_LIPCA-1.54-1.noarch.rpm
| 5.0 kB 00:00
(8/102): ca_CNRS2-1.54-1.noarch.rpm
| 5.0 kB 00:00
(9/102): ca_ArmeSfo-1.54-1.noarch.rpm
| 5.0 kB 00:00
(10/102): ca_HellasGrid-CA-2006-1.54-1.noarch.rpm
| 5.1 kB 00:00
(11/102): ca_MREN-CA-1.54-1.noarch.rpm
| 5.1 kB 00:00
(12/102): ca_NorduGrid-1.54-1.noarch.rpm
| 5.1 kB 00:00
(13/102): ca_MARGI-1.54-1.noarch.rpm
| 5.1 kB 00:00
(14/102): ca_IGCA-1.54-1.noarch.rpm
| 5.1 kB 00:00
(15/102): ca_DFN-SLCS-1.54-1.noarch.rpm
| 5.1 kB 00:00
(16/102): ca_UGRID-1.54-1.noarch.rpm
| 5.1 kB 00:00
(17/102): ca_cilogon-silver-1.54-1.noarch.rpm
| 5.1 kB 00:00
(18/102): ca_CyGrid-1.54-1.noarch.rpm
| 5.1 kB 00:00
(19/102): ca_NCHC-1.54-1.noarch.rpm
| 5.1 kB 00:00
(20/102): ca_BEGrid2008-1.54-1.noarch.rpm
| 5.1 kB 00:00
(21/102): ca_UTNAAAClient-1.54-1.noarch.rpm
| 5.1 kB 00:00
(22/102): ca_INFN-CA-2006-1.54-1.noarch.rpm
| 5.2 kB 00:00
(23/102): ca_BG-ACAD-CA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(24/102): ca_SWITCH-QuoVadis-Grid-ICA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(25/102): ca_TRGrid-1.54-1.noarch.rpm
| 5.2 kB 00:00
(26/102): ca_CERN-TCA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(27/102): ca_IRAN-GRID-1.54-1.noarch.rpm
| 5.2 kB 00:00
(28/102): ca_CERN-Root-1.54-1.noarch.rpm
| 5.2 kB 00:00
(29/102): ca_JUnet-CA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(30/102): ca_NIIF-1.54-1.noarch.rpm
| 5.2 kB 00:00
(31/102): ca_KISTI-2007-1.54-1.noarch.rpm
| 5.2 kB 00:00
(32/102): ca_IHEP-2013-1.54-1.noarch.rpm
| 5.2 kB 00:00
(33/102): ca_CESNET-CA-Root-1.54-1.noarch.rpm
| 5.2 kB 00:00
(34/102): ca_PolishGrid-1.54-1.noarch.rpm
| 5.2 kB 00:00
(35/102): ca_NCSA-tfca-1.54-1.noarch.rpm
| 5.2 kB 00:00
(36/102): ca_TERENAeSciencePersonalCA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(37/102): ca_BYGCA-1.54-1.noarch.rpm
| 5.2 kB 00:00
(38/102): ca_MaGrid-1.54-1.noarch.rpm
| 5.2 kB 00:00
(39/102): ca_NCSA-mics-1.54-1.noarch.rpm
| 5.3 kB 00:00

(40/102): ca_NCSA-slcs-1.54-1.noarch.rpm
| 5.3 kB 00:00
(41/102): ca_GridCanada-1.54-1.noarch.rpm
| 5.3 kB 00:00
(42/102): ca_IHEP-1.54-1.noarch.rpm
| 5.3 kB 00:00
(43/102): ca_CALG-1.54-1.noarch.rpm
| 5.3 kB 00:00
(44/102): ca_SlovakGrid-1.54-1.noarch.rpm
| 5.3 kB 00:00
(45/102): ca_CNRS2-Projets-1.54-1.noarch.rpm
| 5.3 kB 00:00
(46/102): ca_NICS-MyProxy-1.54-1.noarch.rpm
| 5.3 kB 00:00
(47/102): ca_ASGCCA-2007-1.54-1.noarch.rpm
| 5.3 kB 00:00
(48/102): ca_AustrianGrid-1.54-1.noarch.rpm
| 5.3 kB 00:00
(49/102): ca_BalticGrid-1.54-1.noarch.rpm
| 5.3 kB 00:00
(50/102): ca_GermanGrid-1.54-1.noarch.rpm
| 5.3 kB 00:00
(51/102): ca_SDG-1.54-1.noarch.rpm
| 5.3 kB 00:00
(52/102): ca_FNAL-SLCS-1.54-1.noarch.rpm
| 5.3 kB 00:00
(53/102): ca_RomanianGRID-1.54-1.noarch.rpm
| 5.3 kB 00:00
(54/102): ca_CNIC-1.54-1.noarch.rpm
| 5.3 kB 00:00
(55/102): ca_MYIFAM-1.54-1.noarch.rpm
| 5.3 kB 00:00
(56/102): ca_REUNA-ca-1.54-1.noarch.rpm
| 5.3 kB 00:00
(57/102): ca_SWITCHgrid-Root-1.54-1.noarch.rpm
| 5.3 kB 00:00
(58/102): ca_AEGIS-1.54-1.noarch.rpm
| 5.3 kB 00:00
(59/102): ca_PSC-Myproxy-CA-1.54-1.noarch.rpm
| 5.3 kB 00:00
(60/102): ca_CNRS2-Grid-FR-1.54-1.noarch.rpm
| 5.3 kB 00:00
(61/102): ca_UNLPGrid-1.54-1.noarch.rpm
| 5.3 kB 00:00
(62/102): ca_UniandesCA-1.54-1.noarch.rpm
| 5.4 kB 00:00
(63/102): ca_LACGridCA-1.54-1.noarch.rpm
| 5.4 kB 00:00
(64/102): ca_HellasGrid-Root-1.54-1.noarch.rpm
| 5.4 kB 00:00
(65/102): ca_NIKHEF-1.54-1.noarch.rpm
| 5.4 kB 00:00
(66/102): ca_SiGNET-CA-1.54-1.noarch.rpm
| 5.4 kB 00:00
(67/102): ca_DigiCertGridRootCA-Root-1.54-1.noarch.rpm
| 5.4 kB 00:00
(68/102): ca_IUCC-1.54-1.noarch.rpm
| 5.4 kB 00:00
(69/102): ca_ULAGrid-CA-2008-1.54-1.noarch.rpm
| 5.4 kB 00:00
(70/102): ca_SEE-GRID-1.54-1.noarch.rpm
| 5.4 kB 00:00
(71/102): ca-policy-egi-core-1.54-1.noarch.rpm
| 5.4 kB 00:00
(72/102): ca_DigiCertAssuredIDRootCA-Root-1.54-1.noarch.rpm
| 5.4 kB 00:00
(73/102): ca_DFN-GridGermany-Root-1.54-1.noarch.rpm
| 5.4 kB 00:00


```

(74/102): ca_KEK-1.54-1.noarch.rpm
| 5.5 kB      00:00
(75/102): ca_BrGrid-1.54-1.noarch.rpm
| 5.5 kB      00:00
(76/102): ca_UKeScienceRoot-2007-1.54-1.noarch.rpm
| 5.5 kB      00:00
(77/102): ca_pkIRISGrid-1.54-1.noarch.rpm
| 5.5 kB      00:00
(78/102): ca_NECTEC-1.54-1.noarch.rpm
| 5.5 kB      00:00
(79/102): ca_NAREGI-1.54-1.noarch.rpm
| 5.5 kB      00:00
(80/102): ca_MD-Grid-1.54-1.noarch.rpm
| 5.5 kB      00:00
(81/102): ca_ANSPGrid-1.54-1.noarch.rpm
| 5.5 kB      00:00
(82/102): ca_UNAMgrid-ca-1.54-1.noarch.rpm
| 5.5 kB      00:00
(83/102): ca_RDIG-1.54-1.noarch.rpm
| 5.6 kB      00:00
(84/102): ca_PRAGMA-UCSD-1.54-1.noarch.rpm
| 5.6 kB      00:00
(85/102): ca_AIST-1.54-1.noarch.rpm
| 5.6 kB      00:00
(86/102): ca_QuoVadis-Root-CA1-1.54-1.noarch.rpm
| 5.7 kB      00:00
(87/102): ca_DigiCertGridCA-1-Classic-1.54-1.noarch.rpm
| 5.7 kB      00:00
(88/102): ca_UTN-USERFirst-Hardware-1.54-1.noarch.rpm
| 5.7 kB      00:00
(89/102): ca_NERSC-SLCS-1.54-1.noarch.rpm
| 5.7 kB      00:00
(90/102): ca_AAACertificateServices-1.54-1.noarch.rpm
| 5.7 kB      00:00
(91/102): ca_PK-Grid-2007-1.54-1.noarch.rpm
| 5.7 kB      00:00
(92/102): ca_TERENA-eScience-SSL-CA-1.54-1.noarch.rpm
| 5.7 kB      00:00
(93/102): ca_AddTrust-External-CA-Root-1.54-1.noarch.rpm
| 5.8 kB      00:00
(94/102): ca_CERN-Root-2-1.54-1.noarch.rpm
| 5.9 kB      00:00
(95/102): ca_APAC-1.54-1.noarch.rpm
| 5.9 kB      00:00
(96/102): ca_CERN-GridCA-1.54-1.noarch.rpm
| 6.0 kB      00:00
(97/102): ca_DigiCertGridTrustCA-Classic-1.54-1.noarch.rpm
| 6.0 kB      00:00
(98/102): ca_ESnet-1.54-1.noarch.rpm
| 6.1 kB      00:00
(99/102): ca_DOEGrids-1.54-1.noarch.rpm
| 6.3 kB      00:00
(100/102): ca_HIAST-1.54-1.noarch.rpm
| 6.7 kB      00:00
(101/102): ca_EG-GRID-1.54-1.noarch.rpm
| 6.8 kB      00:00
(102/102): ca_DZeScience-1.54-1.noarch.rpm
| 7.1 kB      00:00
-----
-----
---
Total
25 kB/s | 550 kB      00:22
warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID 3cdbbc71
EGI-trustanchors/gpgkey
| 889 B      00:00

```

```
Importing GPG key 0x3CDBBC71 "EUGridPMA Distribution Signing Key 3
<info@euagridpma.org>" from http://repository.egi.eu/sw/production/cas/1/GPG-
KEY-EUGridPMA-RPM-3
Is this ok [y/N]: y
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : ca_UKeScienceRoot-2007
1/102
  Installing      : ca_QuoVadis-Root-CA1
2/102
  Installing      : ca_SWITCHgrid-Root
3/102
  Installing      : ca_DigiCertAssuredIDRootCA-Root
4/102
  Installing      : ca_CESNET-CA-Root
5/102
  Installing      : ca_ESnet
6/102
  Installing      : ca_CNRS2
7/102
  Installing      : ca_CNRS2-Projets
8/102
  Installing      : ca_HellasGrid-Root
9/102
  Installing      : ca_AddTrust-External-CA-Root
10/102
  Installing      : ca_UTN-USERFirst-Hardware
11/102
  Installing      : ca_AAACertificateServices
12/102
  Installing      : ca_UTNAAAClient
13/102
  Installing      : ca_CERN-Root
14/102
  Installing      : ca_DigiCertGridRootCA-Root
15/102
  Installing      : ca_DigiCertGridCA-1-Classic
16/102
  Installing      : ca_CERN-TCA
17/102
  Installing      : ca_TERENAeSciencePersonalCA
18/102
  Installing      : ca_TERENA-eScience-SSL-CA
19/102
  Installing      : ca_HellasGrid-CA-2006
20/102
  Installing      : ca_CNRS2-Grid-FR
21/102
  Installing      : ca_DOEGrids
22/102
  Installing      : ca_CESNET-CA-3
23/102
  Installing      : ca_DigiCertGridTrustCA-Classic
24/102
  Installing      : ca_SWITCHslcs2011
25/102
  Installing      : ca_SWITCH-QuoVadis-Grid-ICA
26/102
  Installing      : ca_UKeScienceCA-2A
27/102
  Installing      : ca_UKeScienceCA-2B
28/102
  Installing      : ca_UNAMgrid-ca
29/102
```

Installing : ca_SRCE
30/102
Installing : ca_UniandesCA
31/102
Installing : ca_BG-ACAD-CA
32/102
Installing : ca_RDIG
33/102
Installing : ca_cilogon-silver
34/102
Installing : ca_ArmeSfo
35/102
Installing : ca_EG-GRID
36/102
Installing : ca_BYGCA
37/102
Installing : ca_LACGridCA
38/102
Installing : ca_SDG
39/102
Installing : ca_PRAGMA-UCSD
40/102
Installing : ca_NIKHEF
41/102
Installing : ca_CERN-GridCA
42/102
Installing : ca_HKU
43/102
Installing : ca_AustrianGrid
44/102
Installing : ca_IGCA
45/102
Installing : ca_GridCanada
46/102
Installing : ca_CERN-Root-2
47/102
Installing : ca_MaGrid
48/102
Installing : ca_IRAN-GRID
49/102
Installing : ca_ANSPGrid
50/102
Installing : ca_NICS-MyProxy
51/102
Installing : ca_NAREGI
52/102
Installing : ca_RomanianGRID
53/102
Installing : ca_BEGrid2008
54/102
Installing : ca_CyGrid
55/102
Installing : ca_ASGCCA-2007
56/102
Installing : ca_MARGI
57/102
Installing : ca_NERSC-SLCS
58/102
Installing : ca_NCSA-tfca
59/102
Installing : ca_IHEP-2013
60/102
Installing : ca_SlovakGrid
61/102
Installing : ca_DZeScience
62/102
Installing : ca_REUNA-ca
63/102

Installing : ca_NCSA-slcs
64/102
Installing : ca_NECTEC
65/102
Installing : ca_NCHC
66/102
Installing : ca_PK-Grid-2007
67/102
Installing : ca_DFN-GridGermany-Root
68/102
Installing : ca_IHEP
69/102
Installing : ca_MD-Grid
70/102
Installing : ca_LIPCA
71/102
Installing : ca_BrGrid
72/102
Installing : ca_GermanGrid
73/102
Installing : ca_PolishGrid
74/102
Installing : ca_JUnet-CA
75/102
Installing : ca_BalticGrid
76/102
Installing : ca_pkIRISGrid
77/102
Installing : ca_IUCC
78/102
Installing : ca_SiGNET-CA
79/102
Installing : ca_HIAST
80/102
Installing : ca_INFN-CA-2006
81/102
Installing : ca_NIIF
82/102
Installing : ca_APAC
83/102
Installing : ca_CALG
84/102
Installing : ca_PSC-Myproxy-CA
85/102
Installing : ca_ULAGrid-CA-2008
86/102
Installing : ca_AIST
87/102
Installing : ca_AEGIS
88/102
Installing : ca_NorduGrid
89/102
Installing : ca_CNIC
90/102
Installing : ca_UGRID
91/102
Installing : ca_MREN-CA
92/102
Installing : ca_MYIFAM
93/102
Installing : ca_NCSA-mics
94/102
Installing : ca_FNAL-SLCS
95/102
Installing : ca_KISTI-2007
96/102
Installing : ca_KEK
97/102

Installing : ca_TRGrid
98/102
Installing : ca_DFN-SLCS
99/102
Installing : ca_UNLPGrid
100/102
Installing : ca_SEE-GRID
101/102
Installing : ca-policy-egi-core
102/102

Installed:

ca-policy-egi-core.noarch 0:1.54-1

Dependency Installed:

ca_AAACertificateServices.noarch 0:1.54-1 ca_AEGIS.noarch
0:1.54-1 ca_AIST.noarch 0:1.54-1
ca_ANSPGrid.noarch 0:1.54-1 ca_APAC.noarch
0:1.54-1 ca_ASGCCA-2007.noarch 0:1.54-1
ca_AddTrust-External-CA-Root.noarch 0:1.54-1 ca_ArmeSFo.noarch
0:1.54-1 ca_AustrianGrid.noarch 0:1.54-1
ca_BEGrid2008.noarch 0:1.54-1 ca_BG-ACAD-CA.noarch
0:1.54-1 ca_BYGCA.noarch 0:1.54-1
ca_BalticGrid.noarch 0:1.54-1 ca_BrGrid.noarch
0:1.54-1 ca_CALG.noarch 0:1.54-1
ca_CERN-GridCA.noarch 0:1.54-1 ca_CERN-Root.noarch
0:1.54-1 ca_CERN-Root-2.noarch 0:1.54-1
ca_CERN-TCA.noarch 0:1.54-1 ca_CESNET-CA-3.noarch
0:1.54-1 ca_CESNET-CA-Root.noarch 0:1.54-1
ca_CNIC.noarch 0:1.54-1 ca_CNRS2.noarch
0:1.54-1 ca_CNRS2-Grid-FR.noarch 0:1.54-1
ca_CNRS2-Projets.noarch 0:1.54-1 ca_CyGrid.noarch
0:1.54-1 ca_DFN-GridGermany-Root.noarch 0:1.54-1
ca_DFN-SLCS.noarch 0:1.54-1 ca_DOEGrids.noarch
0:1.54-1 ca_DZeScience.noarch 0:1.54-1
ca_DigiCertAssuredIDRootCA-Root.noarch 0:1.54-1 ca_DigiCertGridCA-1-
Classic.noarch 0:1.54-1 ca_DigiCertGridRootCA-Root.noarch 0:1.54-1
ca_DigiCertGridTrustCA-Classic.noarch 0:1.54-1 ca_EG-GRID.noarch
0:1.54-1 ca_ESnet.noarch 0:1.54-1
ca_FNAL-SLCS.noarch 0:1.54-1 ca_GermanGrid.noarch
0:1.54-1 ca_GridCanada.noarch 0:1.54-1
ca_HIAST.noarch 0:1.54-1 ca_HKU.noarch 0:1.54-
1 ca_HellasGrid-CA-2006.noarch 0:1.54-1
ca_HellasGrid-Root.noarch 0:1.54-1 ca_IGCA.noarch
0:1.54-1 ca_IHEP.noarch 0:1.54-1
ca_IHEP-2013.noarch 0:1.54-1 ca_INFN-CA-
2006.noarch 0:1.54-1 ca_IRAN-GRID.noarch 0:1.54-1
ca_IUCC.noarch 0:1.54-1 ca_JUnet-CA.noarch
0:1.54-1 ca_KEK.noarch 0:1.54-1
ca_KISTI-2007.noarch 0:1.54-1 ca_LACGridCA.noarch
0:1.54-1 ca_LIPCA.noarch 0:1.54-1
ca_MARGI.noarch 0:1.54-1 ca_MD-Grid.noarch
0:1.54-1 ca_MREN-CA.noarch 0:1.54-1
ca_MYIFAM.noarch 0:1.54-1 ca_MaGrid.noarch
0:1.54-1 ca_NAREGI.noarch 0:1.54-1
ca_NCHC.noarch 0:1.54-1 ca_NCSA-mics.noarch
0:1.54-1 ca_NCSA-slcs.noarch 0:1.54-1
ca_NCSA-tfca.noarch 0:1.54-1 ca_NECTEC.noarch
0:1.54-1 ca_NERSC-SLCS.noarch 0:1.54-1
ca_NICS-MyProxy.noarch 0:1.54-1 ca_NIIF.noarch
0:1.54-1 ca_NIKHEF.noarch 0:1.54-1
ca_NorduGrid.noarch 0:1.54-1 ca_PK-Grid-
2007.noarch 0:1.54-1 ca_PRAGMA-UCSD.noarch 0:1.54-1
ca_PSC-Myproxy-CA.noarch 0:1.54-1 ca_PolishGrid.noarch
0:1.54-1 ca_QuoVadis-Root-CA1.noarch 0:1.54-1
ca_RDIG.noarch 0:1.54-1 ca_REUNA-ca.noarch
0:1.54-1 ca_RomanianGRID.noarch 0:1.54-1

```

ca_SDG.noarch 0:1.54-1
0:1.54-1
ca_SWITCH-QuoVadis-Grid-ICA.noarch 0:1.54-1
Root.noarch 0:1.54-1
ca_SiGNET-CA.noarch 0:1.54-1
0:1.54-1
ca_TERENA-eScience-SSL-CA.noarch 0:1.54-1
ca_TERENAeSciencePersonalCA.noarch 0:1.54-1
0:1.54-1
ca_UKeScienceCA-2A.noarch 0:1.54-1
2B.noarch 0:1.54-1
ca_ULAGrid-CA-2008.noarch 0:1.54-1
0:1.54-1
ca_UTN-USERFirst-Hardware.noarch 0:1.54-1
ca_UTNAAAClient.noarch 0:1.54-1
0:1.54-1
ca_ciligon-silver.noarch 0:1.54-1
0:1.54-1

ca_SRCE.noarch 0:1.54-1
ca_SWITCHgrid-
ca_SWITCHslcs2011.noarch 0:1.54-1
ca_SlovakGrid.noarch
ca_TERENAeScience-SSL-CA.noarch 0:1.54-1
ca_TRGrid.noarch
ca_UGRID.noarch 0:1.54-1
ca_UKeScienceCA-
ca_UKeScienceRoot-2007.noarch 0:1.54-1
ca_UNAMgrid-ca.noarch
ca_UNLPGrid.noarch 0:1.54-1
ca_UniandesCA.noarch
ca_pkIRISGrid.noarch

```

Complete!

```

[root@qcg ~]# yum install fetch-crl
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package fetch-crl.noarch 0:2.8.5-1.el5 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin

```

Dependencies Resolved

```

=====
=====
===
Package                Arch
Version                Repository
Size
=====
=====
===
Installing:
  fetch-crl                noarch
2.8.5-1.el5              epel
24 k

```

Transaction Summary

```

=====
=====
===
Install      1 Package(s)
Upgrade     0 Package(s)

```

```

Total download size: 24 k
Is this ok [y/N]: y
Downloading Packages:
fetch-crl-2.8.5-1.el5.noarch.rpm
| 24 kB    00:00
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : fetch-crl
1/1

```

Installed:

fetch-crl.noarch 0:2.8.5-1.el5

Complete!

```
[root@qcq ~]# /usr/sbin/fetch-crl -v
fetch-crl[6942]: 20130801T100216+0200 Starting CRL retrieval process at
20130801T100216+0200
fetch-crl[6942]: 20130801T100217+0200 Using OpenSSL version OpenSSL 0.9.8e-
fips-rhel5 01 Jul 2008 at /usr/bin/openssl
fetch-crl[6942]: 20130801T100217+0200 processing '/etc/grid-
security/certificates/AAACertificateServices.crl_url'
fetch-crl[6942]: 20130801T100218+0200 updating CRL 'AAA Certificate Services
(75680d2e) '
fetch-crl[6942]: 20130801T100218+0200 File /etc/grid-
security/certificates/75680d2e.r0 valid: yes
fetch-crl[6942]: 20130801T100218+0200 processing '/etc/grid-
security/certificates/AEGIS.crl_url'
fetch-crl[6942]: 20130801T100218+0200 updating CRL 'AEGIS-CA (393f7863) '
fetch-crl[6942]: 20130801T100218+0200 File /etc/grid-
security/certificates/393f7863.r0 valid: yes
fetch-crl[6942]: 20130801T100219+0200 processing '/etc/grid-
security/certificates/AIST.crl_url'
fetch-crl[6942]: 20130801T100220+0200 updating CRL 'Certificate Authority
(a317c467) '
fetch-crl[6942]: 20130801T100220+0200 File /etc/grid-
security/certificates/a317c467.r0 valid: yes
fetch-crl[6942]: 20130801T100220+0200 processing '/etc/grid-
security/certificates/ANSPGrid.crl_url'
fetch-crl[6942]: 20130801T100221+0200 updating CRL 'ANSPGrid CA (126f0acf) '
fetch-crl[6942]: 20130801T100221+0200 File /etc/grid-
security/certificates/126f0acf.r0 valid: yes
fetch-crl[6942]: 20130801T100221+0200 processing '/etc/grid-
security/certificates/APAC.crl_url'
fetch-crl[6942]: 20130801T100224+0200 updating CRL
'APACGrid/emailAddress=camanager@vpac.org (1e12d831) '
fetch-crl[6942]: 20130801T100224+0200 File /etc/grid-
security/certificates/1e12d831.r0 valid: yes
fetch-crl[6942]: 20130801T100224+0200 processing '/etc/grid-
security/certificates/ASGCCA-2007.crl_url'
fetch-crl[6942]: 20130801T100226+0200 updating CRL 'Academia Sinica Grid
Computing Certification Authority Mercury (9cd75e87) '
fetch-crl[6942]: 20130801T100227+0200 File /etc/grid-
security/certificates/9cd75e87.r0 valid: yes
fetch-crl[6942]: 20130801T100227+0200 processing '/etc/grid-
security/certificates/AddTrust-External-CA-Root.crl_url'
fetch-crl[6942]: 20130801T100227+0200 updating CRL 'AddTrust External CA Root
(3c58f906) '
fetch-crl[6942]: 20130801T100227+0200 File /etc/grid-
security/certificates/3c58f906.r0 valid: yes
fetch-crl[6942]: 20130801T100227+0200 processing '/etc/grid-
security/certificates/ArmeSFo.crl_url'
fetch-crl[6942]: 20130801T100228+0200 updating CRL 'ArmeSFo CA (d0c2a341) '
fetch-crl[6942]: 20130801T100228+0200 File /etc/grid-
security/certificates/d0c2a341.r0 valid: yes
fetch-crl[6942]: 20130801T100228+0200 processing '/etc/grid-
security/certificates/AustrianGrid.crl_url'
fetch-crl[6942]: 20130801T100229+0200 updating CRL 'Certificate Issuer
(6e3b436b) '
fetch-crl[6942]: 20130801T100229+0200 File /etc/grid-
security/certificates/6e3b436b.r0 valid: yes
fetch-crl[6942]: 20130801T100229+0200 processing '/etc/grid-
security/certificates/BEGrid2008.crl_url'
fetch-crl[6942]: 20130801T100229+0200 updating CRL 'BEgrid CA (e8d818e6) '
fetch-crl[6942]: 20130801T100229+0200 File /etc/grid-
security/certificates/e8d818e6.r0 valid: yes
fetch-crl[6942]: 20130801T100229+0200 processing '/etc/grid-
security/certificates/BG-ACAD-CA.crl_url'
fetch-crl[6942]: 20130801T100230+0200 updating CRL 'BG.ACAD CA (2418a3f3) '
```

fetch-crl[6942]: 20130801T100230+0200 File /etc/grid-security/certificates/2418a3f3.r0 valid: yes
fetch-crl[6942]: 20130801T100230+0200 processing '/etc/grid-security/certificates/BYGCA.crl_url'
fetch-crl[6942]: 20130801T100230+0200 updating CRL 'Belarusian Grid Certification Authority (709bed08)'
fetch-crl[6942]: 20130801T100231+0200 File /etc/grid-security/certificates/709bed08.r0 valid: yes
fetch-crl[6942]: 20130801T100231+0200 processing '/etc/grid-security/certificates/BalticGrid.crl_url'
fetch-crl[6942]: 20130801T100231+0200 updating CRL 'Baltic Grid Certification Authority (2a237f16)'
fetch-crl[6942]: 20130801T100231+0200 File /etc/grid-security/certificates/2a237f16.r0 valid: yes
fetch-crl[6942]: 20130801T100231+0200 processing '/etc/grid-security/certificates/BrGrid.crl_url'
fetch-crl[6942]: 20130801T100232+0200 updating CRL 'UFF Brazilian Grid Certification Authority (0a2bac92)'
fetch-crl[6942]: 20130801T100232+0200 File /etc/grid-security/certificates/0a2bac92.r0 valid: yes
fetch-crl[6942]: 20130801T100233+0200 processing '/etc/grid-security/certificates/CALG.crl_url'
fetch-crl[6942]: 20130801T100233+0200 updating CRL 'Certification Authority for Latvian Grid (742edd45)'
fetch-crl[6942]: 20130801T100233+0200 File /etc/grid-security/certificates/742edd45.r0 valid: yes
fetch-crl[6942]: 20130801T100233+0200 processing '/etc/grid-security/certificates/CERN-GridCA.crl_url'
fetch-crl[6942]: 20130801T100233+0200 updating CRL 'CERN Grid Certification Authority (4339b4bc)'
fetch-crl[6942]: 20130801T100234+0200 File /etc/grid-security/certificates/4339b4bc.r0 valid: yes
fetch-crl[6942]: 20130801T100234+0200 processing '/etc/grid-security/certificates/CERN-Root-2.crl_url'
fetch-crl[6942]: 20130801T100234+0200 updating CRL 'CERN Root Certification Authority 2 (b4278411)'
fetch-crl[6942]: 20130801T100234+0200 File /etc/grid-security/certificates/b4278411.r0 valid: yes
fetch-crl[6942]: 20130801T100234+0200 processing '/etc/grid-security/certificates/CERN-Root.crl_url'
fetch-crl[6942]: 20130801T100235+0200 updating CRL 'CERN Root CA (d254cc30)'
fetch-crl[6942]: 20130801T100235+0200 File /etc/grid-security/certificates/d254cc30.r0 valid: yes
fetch-crl[6942]: 20130801T100235+0200 processing '/etc/grid-security/certificates/CERN-TCA.crl_url'
fetch-crl[6942]: 20130801T100235+0200 updating CRL 'CERN Trusted Certification Authority (1d879c6c)'
fetch-crl[6942]: 20130801T100236+0200 File /etc/grid-security/certificates/1d879c6c.r0 valid: yes
fetch-crl[6942]: 20130801T100236+0200 processing '/etc/grid-security/certificates/CESNET-CA-3.crl_url'
fetch-crl[6942]: 20130801T100236+0200 updating CRL 'CESNET CA 3 (712ae4cc)'
fetch-crl[6942]: 20130801T100236+0200 File /etc/grid-security/certificates/712ae4cc.r0 valid: yes
fetch-crl[6942]: 20130801T100236+0200 processing '/etc/grid-security/certificates/CESNET-CA-Root.crl_url'
fetch-crl[6942]: 20130801T100237+0200 updating CRL 'CESNET CA Root (edca0fc0)'
fetch-crl[6942]: 20130801T100237+0200 File /etc/grid-security/certificates/edca0fc0.r0 valid: yes
fetch-crl[6942]: 20130801T100237+0200 processing '/etc/grid-security/certificates/CNIC.crl_url'
fetch-crl[6942]: 20130801T100238+0200 updating CRL 'Root Certificate Authority at CNIC (b2771d44)'
fetch-crl[6942]: 20130801T100238+0200 File /etc/grid-security/certificates/b2771d44.r0 valid: yes
fetch-crl[6942]: 20130801T100238+0200 processing '/etc/grid-security/certificates/CNRS2-Grid-FR.crl_url'
fetch-crl[6942]: 20130801T100238+0200 updating CRL 'GRID2-FR (d11f973e)'

fetch-crl[6942]: 20130801T100238+0200 File /etc/grid-security/certificates/d11f973e.r0 valid: yes
fetch-crl[6942]: 20130801T100239+0200 processing '/etc/grid-security/certificates/CNRS2-Projets.crl_url'
fetch-crl[6942]: 20130801T100239+0200 updating CRL 'CNRS2-Projets (09ff08b7)'
fetch-crl[6942]: 20130801T100239+0200 File /etc/grid-security/certificates/09ff08b7.r0 valid: yes
fetch-crl[6942]: 20130801T100239+0200 processing '/etc/grid-security/certificates/CNRS2.crl_url'
fetch-crl[6942]: 20130801T100239+0200 updating CRL 'CNRS2 (163af95c)'
fetch-crl[6942]: 20130801T100240+0200 File /etc/grid-security/certificates/163af95c.r0 valid: yes
fetch-crl[6942]: 20130801T100240+0200 processing '/etc/grid-security/certificates/CyGrid.crl_url'
fetch-crl[6942]: 20130801T100240+0200 updating CRL 'CyGridCA (afe55e66)'
fetch-crl[6942]: 20130801T100240+0200 File /etc/grid-security/certificates/afe55e66.r0 valid: yes
fetch-crl[6942]: 20130801T100240+0200 processing '/etc/grid-security/certificates/DFN-GridGermany-Root.crl_url'
fetch-crl[6942]: 20130801T100241+0200 updating CRL 'DFN-Verein PCA Grid - G01 (1149214e)'
fetch-crl[6942]: 20130801T100241+0200 File /etc/grid-security/certificates/1149214e.r0 valid: yes
fetch-crl[6942]: 20130801T100241+0200 processing '/etc/grid-security/certificates/DFN-SLCS.crl_url'
fetch-crl[6942]: 20130801T100242+0200 updating CRL 'DFN SLCS-CA (a02131f7)'
fetch-crl[6942]: 20130801T100242+0200 File /etc/grid-security/certificates/a02131f7.r0 valid: yes
fetch-crl[6942]: 20130801T100242+0200 processing '/etc/grid-security/certificates/DOEGrids.crl_url'
fetch-crl[6942]: 20130801T100252+0200 RetrieveFileByURL: download no data from http://crl.doe grids.org/1c3f2ca8/1c3f2ca8.r0
fetch-crl[6942]: 20130801T100252+0200 could not download a valid file from 'http://crl.doe grids.org/1c3f2ca8/1c3f2ca8.r0'
fetch-crl[6942]: 20130801T100252+0200 updating CRL 'DOEGrids CA 1 (1c3f2ca8)'
fetch-crl[6942]: 20130801T100253+0200 File /etc/grid-security/certificates/1c3f2ca8.r0 valid: yes
fetch-crl[6942]: 20130801T100253+0200 processing '/etc/grid-security/certificates/DZeScience.crl_url'
fetch-crl[6942]: 20130801T100253+0200 updating CRL 'DZ e-Science CA (0a49430a)'
fetch-crl[6942]: 20130801T100253+0200 File /etc/grid-security/certificates/0a49430a.r0 valid: yes
fetch-crl[6942]: 20130801T100253+0200 processing '/etc/grid-security/certificates/DigiCertAssuredIDRootCA-Root.crl_url'
fetch-crl[6942]: 20130801T100254+0200 updating CRL 'DigiCert Assured ID Root CA (69105f4f)'
fetch-crl[6942]: 20130801T100254+0200 File /etc/grid-security/certificates/69105f4f.r0 valid: yes
fetch-crl[6942]: 20130801T100254+0200 processing '/etc/grid-security/certificates/DigiCertGridCA-1-Classic.crl_url'
fetch-crl[6942]: 20130801T100254+0200 updating CRL 'DigiCert Grid CA-1 (c7a717ce)'
fetch-crl[6942]: 20130801T100254+0200 File /etc/grid-security/certificates/c7a717ce.r0 valid: yes
fetch-crl[6942]: 20130801T100255+0200 processing '/etc/grid-security/certificates/DigiCertGridRootCA-Root.crl_url'
fetch-crl[6942]: 20130801T100255+0200 updating CRL 'DigiCert Grid Root CA (2694e4f2)'
fetch-crl[6942]: 20130801T100255+0200 File /etc/grid-security/certificates/2694e4f2.r0 valid: yes
fetch-crl[6942]: 20130801T100255+0200 processing '/etc/grid-security/certificates/DigiCertGridTrustCA-Classic.crl_url'
fetch-crl[6942]: 20130801T100255+0200 updating CRL 'DigiCert Grid Trust CA (38f7145f)'
fetch-crl[6942]: 20130801T100256+0200 File /etc/grid-security/certificates/38f7145f.r0 valid: yes

fetch-crl[6942]: 20130801T100256+0200 processing '/etc/grid-security/certificates/EG-GRID.crl_url'
fetch-crl[6942]: 20130801T100256+0200 updating CRL 'EG-GRID Certification Authority (4a96blea)'
fetch-crl[6942]: 20130801T100257+0200 File /etc/grid-security/certificates/4a96blea.r0 valid: yes
fetch-crl[6942]: 20130801T100257+0200 processing '/etc/grid-security/certificates/ESnet.crl_url'
fetch-crl[6942]: 20130801T100307+0200 RetrieveFileByURL: download no data from http://crl.es.net/dlb603c3/dlb603c3.crl
fetch-crl[6942]: 20130801T100307+0200 could not download a valid file from 'http://crl.es.net/dlb603c3/dlb603c3.crl'
fetch-crl[6942]: 20130801T100307+0200 updating CRL 'ESnet Root CA 1 (dlb603c3)'
fetch-crl[6942]: 20130801T100307+0200 File /etc/grid-security/certificates/dlb603c3.r0 valid: yes
fetch-crl[6942]: 20130801T100307+0200 processing '/etc/grid-security/certificates/FNAL-SLCS.crl_url'
fetch-crl[6942]: 20130801T100308+0200 updating CRL 'Kerberized CA HSM (99f9f5a3)'
fetch-crl[6942]: 20130801T100308+0200 File /etc/grid-security/certificates/99f9f5a3.r0 valid: yes
fetch-crl[6942]: 20130801T100308+0200 processing '/etc/grid-security/certificates/GermanGrid.crl_url'
fetch-crl[6942]: 20130801T100309+0200 updating CRL 'GridKa-CA (dd4b34ea)'
fetch-crl[6942]: 20130801T100309+0200 File /etc/grid-security/certificates/dd4b34ea.r0 valid: yes
fetch-crl[6942]: 20130801T100309+0200 processing '/etc/grid-security/certificates/GridCanada.crl_url'
fetch-crl[6942]: 20130801T100310+0200 updating CRL 'Grid Canada Certificate Authority (bffb7d0)'
fetch-crl[6942]: 20130801T100310+0200 File /etc/grid-security/certificates/bffb7d0.r0 valid: yes
fetch-crl[6942]: 20130801T100310+0200 processing '/etc/grid-security/certificates/HIAST.crl_url'
fetch-crl[6942]: 20130801T100310+0200 updating CRL 'HIAST GRID CA (74c6eaeb)'
fetch-crl[6942]: 20130801T100311+0200 File /etc/grid-security/certificates/74c6eaeb.r0 valid: yes
fetch-crl[6942]: 20130801T100311+0200 processing '/etc/grid-security/certificates/HKU.crl_url'
fetch-crl[6942]: 20130801T100312+0200 updating CRL 'HKU Grid CA (4798da47)'
fetch-crl[6942]: 20130801T100312+0200 File /etc/grid-security/certificates/4798da47.r0 valid: yes
fetch-crl[6942]: 20130801T100312+0200 processing '/etc/grid-security/certificates/HellasGrid-CA-2006.crl_url'
fetch-crl[6942]: 20130801T100313+0200 updating CRL 'HellasGrid CA 2006 (82b36fca)'
fetch-crl[6942]: 20130801T100313+0200 File /etc/grid-security/certificates/82b36fca.r0 valid: yes
fetch-crl[6942]: 20130801T100313+0200 processing '/etc/grid-security/certificates/HellasGrid-Root.crl_url'
fetch-crl[6942]: 20130801T100313+0200 updating CRL 'HellasGrid Root CA 2006 (28a58577)'
fetch-crl[6942]: 20130801T100313+0200 File /etc/grid-security/certificates/28a58577.r0 valid: yes
fetch-crl[6942]: 20130801T100314+0200 processing '/etc/grid-security/certificates/IGCA.crl_url'
fetch-crl[6942]: 20130801T100316+0200 updating CRL 'Indian Grid Certification Authority (da75f6a8)'
fetch-crl[6942]: 20130801T100316+0200 File /etc/grid-security/certificates/da75f6a8.r0 valid: yes
fetch-crl[6942]: 20130801T100316+0200 processing '/etc/grid-security/certificates/IHEP-2013.crl_url'
fetch-crl[6942]: 20130801T100317+0200 updating CRL 'Institute of High Energy Physics Certification Authority (39d30eba)'
fetch-crl[6942]: 20130801T100317+0200 File /etc/grid-security/certificates/39d30eba.r0 valid: yes

fetch-crl[6942]: 20130801T100317+0200 processing '/etc/grid-security/certificates/IHEP.crl_url'
fetch-crl[6942]: 20130801T100319+0200 updating CRL 'gridca-cn/emailAddress=gridca@ihep.ac.cn (ba2f39ca)'
fetch-crl[6942]: 20130801T100319+0200 File /etc/grid-security/certificates/ba2f39ca.r0 valid: yes
fetch-crl[6942]: 20130801T100319+0200 processing '/etc/grid-security/certificates/INFN-CA-2006.crl_url'
fetch-crl[6942]: 20130801T100320+0200 updating CRL 'INFN CA (2f3fadf6)'
fetch-crl[6942]: 20130801T100320+0200 File /etc/grid-security/certificates/2f3fadf6.r0 valid: yes
fetch-crl[6942]: 20130801T100320+0200 processing '/etc/grid-security/certificates/IRAN-GRID.crl_url'
fetch-crl[6942]: 20130801T100321+0200 updating CRL 'IRAN-GRID CA (ce33db76)'
fetch-crl[6942]: 20130801T100321+0200 File /etc/grid-security/certificates/ce33db76.r0 valid: yes
fetch-crl[6942]: 20130801T100321+0200 processing '/etc/grid-security/certificates/IUCC.crl_url'
fetch-crl[6942]: 20130801T100322+0200 updating CRL 'IUCC/emailAddress=ca@mail.iucc.ac.il (6fee79b0)'
fetch-crl[6942]: 20130801T100322+0200 File /etc/grid-security/certificates/6fee79b0.r0 valid: yes
fetch-crl[6942]: 20130801T100322+0200 processing '/etc/grid-security/certificates/JUnet-CA.crl_url'
fetch-crl[6942]: 20130801T100323+0200 updating CRL 'JUNet CA (b3222f9e)'
fetch-crl[6942]: 20130801T100323+0200 File /etc/grid-security/certificates/b3222f9e.r0 valid: yes
fetch-crl[6942]: 20130801T100323+0200 processing '/etc/grid-security/certificates/KEK.crl_url'
fetch-crl[6942]: 20130801T100324+0200 updating CRL 'KEK GRID Certificate Authority (617ff41b)'
fetch-crl[6942]: 20130801T100325+0200 File /etc/grid-security/certificates/617ff41b.r0 valid: yes
fetch-crl[6942]: 20130801T100325+0200 processing '/etc/grid-security/certificates/KISTI-2007.crl_url'
fetch-crl[6942]: 20130801T100326+0200 updating CRL 'KISTI Grid Certificate Authority (722e5071)'
fetch-crl[6942]: 20130801T100326+0200 File /etc/grid-security/certificates/722e5071.r0 valid: yes
fetch-crl[6942]: 20130801T100326+0200 processing '/etc/grid-security/certificates/LACGridCA.crl_url'
fetch-crl[6942]: 20130801T100328+0200 updating CRL 'UFF Latin American and Caribbean Catch-all Grid CA (a9082267)'
fetch-crl[6942]: 20130801T100328+0200 File /etc/grid-security/certificates/a9082267.r0 valid: yes
fetch-crl[6942]: 20130801T100328+0200 processing '/etc/grid-security/certificates/LIPCA.crl_url'
fetch-crl[6942]: 20130801T100329+0200 updating CRL 'LIP Certification Authority (11b4a5a2)'
fetch-crl[6942]: 20130801T100329+0200 File /etc/grid-security/certificates/11b4a5a2.r0 valid: yes
fetch-crl[6942]: 20130801T100329+0200 processing '/etc/grid-security/certificates/MARGI.crl_url'
fetch-crl[6942]: 20130801T100329+0200 updating CRL 'MARGI-CA (7d0d064a)'
fetch-crl[6942]: 20130801T100330+0200 File /etc/grid-security/certificates/7d0d064a.r0 valid: yes
fetch-crl[6942]: 20130801T100330+0200 processing '/etc/grid-security/certificates/MD-Grid.crl_url'
fetch-crl[6942]: 20130801T100330+0200 updating CRL 'MD-Grid CA (9ff26ea4)'
fetch-crl[6942]: 20130801T100330+0200 File /etc/grid-security/certificates/9ff26ea4.r0 valid: yes
fetch-crl[6942]: 20130801T100330+0200 processing '/etc/grid-security/certificates/MREN-CA.crl_url'
fetch-crl[6942]: 20130801T100331+0200 updating CRL 'MREN-CA (3232b9bc)'
fetch-crl[6942]: 20130801T100331+0200 File /etc/grid-security/certificates/3232b9bc.r0 valid: yes
fetch-crl[6942]: 20130801T100331+0200 processing '/etc/grid-security/certificates/MYIFAM.crl_url'

fetch-crl[6942]: 20130801T100332+0200 updating CRL 'Malaysian Identity Federation and Access Management (d33760ec)'
fetch-crl[6942]: 20130801T100332+0200 File /etc/grid-security/certificates/d33760ec.r0 valid: yes
fetch-crl[6942]: 20130801T100332+0200 processing '/etc/grid-security/certificates/MaGrid.crl_url'
fetch-crl[6942]: 20130801T100333+0200 updating CRL 'MaGrid CA (7b54708e)'
fetch-crl[6942]: 20130801T100333+0200 File /etc/grid-security/certificates/7b54708e.r0 valid: yes
fetch-crl[6942]: 20130801T100333+0200 processing '/etc/grid-security/certificates/NAREGI.crl_url'
fetch-crl[6942]: 20130801T100334+0200 updating CRL 'NAREGI CA (a87d9192)'
fetch-crl[6942]: 20130801T100334+0200 File /etc/grid-security/certificates/a87d9192.r0 valid: yes
fetch-crl[6942]: 20130801T100334+0200 processing '/etc/grid-security/certificates/NCHC.crl_url'
fetch-crl[6942]: 20130801T100335+0200 updating CRL 'NCHC CA (71a89a47)'
fetch-crl[6942]: 20130801T100335+0200 File /etc/grid-security/certificates/71a89a47.r0 valid: yes
fetch-crl[6942]: 20130801T100335+0200 processing '/etc/grid-security/certificates/NCSA-mics.crl_url'
fetch-crl[6942]: 20130801T100337+0200 updating CRL 'CACL (9b95bbf2)'
fetch-crl[6942]: 20130801T100337+0200 File /etc/grid-security/certificates/9b95bbf2.r0 valid: yes
fetch-crl[6942]: 20130801T100337+0200 processing '/etc/grid-security/certificates/NCSA-slcs.crl_url'
fetch-crl[6942]: 20130801T100337+0200 updating CRL 'MyProxy (f2e89fe3)'
fetch-crl[6942]: 20130801T100337+0200 File /etc/grid-security/certificates/f2e89fe3.r0 valid: yes
fetch-crl[6942]: 20130801T100338+0200 processing '/etc/grid-security/certificates/NCSA-tfca.crl_url'
fetch-crl[6942]: 20130801T100338+0200 updating CRL 'Two Factor CA (679cff61)'
fetch-crl[6942]: 20130801T100338+0200 File /etc/grid-security/certificates/679cff61.r0 valid: yes
fetch-crl[6942]: 20130801T100339+0200 processing '/etc/grid-security/certificates/NECTEC.crl_url'
fetch-crl[6942]: 20130801T100340+0200 updating CRL 'NECTEC GOC CA (8a047de1)'
fetch-crl[6942]: 20130801T100340+0200 File /etc/grid-security/certificates/8a047de1.r0 valid: yes
fetch-crl[6942]: 20130801T100340+0200 processing '/etc/grid-security/certificates/NERSC-SLCS.crl_url'
fetch-crl[6942]: 20130801T100341+0200 updating CRL 'NERSC Online CA (b93d6240)'
fetch-crl[6942]: 20130801T100341+0200 File /etc/grid-security/certificates/b93d6240.r0 valid: yes
fetch-crl[6942]: 20130801T100341+0200 processing '/etc/grid-security/certificates/NICS-MyProxy.crl_url'
fetch-crl[6942]: 20130801T100342+0200 updating CRL 'MyProxy (dc75341f)'
fetch-crl[6942]: 20130801T100342+0200 File /etc/grid-security/certificates/dc75341f.r0 valid: yes
fetch-crl[6942]: 20130801T100342+0200 processing '/etc/grid-security/certificates/NIIF.crl_url'
fetch-crl[6942]: 20130801T100343+0200 updating CRL 'NIIF Root CA (cc800af0)'
fetch-crl[6942]: 20130801T100343+0200 File /etc/grid-security/certificates/cc800af0.r0 valid: yes
fetch-crl[6942]: 20130801T100343+0200 processing '/etc/grid-security/certificates/NIKHEF.crl_url'
fetch-crl[6942]: 20130801T100343+0200 updating CRL 'NIKHEF medium-security certification auth (16da7552)'
fetch-crl[6942]: 20130801T100343+0200 File /etc/grid-security/certificates/16da7552.r0 valid: yes
fetch-crl[6942]: 20130801T100343+0200 processing '/etc/grid-security/certificates/NorduGrid.crl_url'
fetch-crl[6942]: 20130801T100344+0200 updating CRL 'NorduGrid Certification Authority (1f0e8352)'
fetch-crl[6942]: 20130801T100344+0200 File /etc/grid-security/certificates/1f0e8352.r0 valid: yes

fetch-crl[6942]: 20130801T100344+0200 processing '/etc/grid-security/certificates/PK-Grid-2007.crl_url'
fetch-crl[6942]: 20130801T100345+0200 updating CRL 'PK-GRID-CA (f5ead794)'
fetch-crl[6942]: 20130801T100345+0200 File /etc/grid-security/certificates/f5ead794.r0 valid: yes
fetch-crl[6942]: 20130801T100345+0200 processing '/etc/grid-security/certificates/PRAGMA-UCSD.crl_url'
fetch-crl[6942]: 20130801T100346+0200 updating CRL 'PRAGMA-UCSD CA (7721d4d3)'
fetch-crl[6942]: 20130801T100346+0200 File /etc/grid-security/certificates/7721d4d3.r0 valid: yes
fetch-crl[6942]: 20130801T100346+0200 processing '/etc/grid-security/certificates/PSC-Myproxy-CA.crl_url'
fetch-crl[6942]: 20130801T100347+0200 updating CRL 'PSC MyProxy CA (4b2783ac)'
fetch-crl[6942]: 20130801T100347+0200 File /etc/grid-security/certificates/4b2783ac.r0 valid: yes
fetch-crl[6942]: 20130801T100347+0200 processing '/etc/grid-security/certificates/PolishGrid.crl_url'
fetch-crl[6942]: 20130801T100347+0200 updating CRL 'Polish Grid CA (8a661490)'
fetch-crl[6942]: 20130801T100348+0200 File /etc/grid-security/certificates/8a661490.r0 valid: yes
fetch-crl[6942]: 20130801T100348+0200 processing '/etc/grid-security/certificates/QuoVadis-Root-CA1.crl_url'
fetch-crl[6942]: 20130801T100348+0200 updating CRL 'QuoVadis Root Certification Authority (5cf9d536)'
fetch-crl[6942]: 20130801T100348+0200 File /etc/grid-security/certificates/5cf9d536.r0 valid: yes
fetch-crl[6942]: 20130801T100348+0200 processing '/etc/grid-security/certificates/RDIG.crl_url'
fetch-crl[6942]: 20130801T100349+0200 updating CRL 'Russian Data-Intensive Grid CA (55994d72)'
fetch-crl[6942]: 20130801T100349+0200 File /etc/grid-security/certificates/55994d72.r0 valid: yes
fetch-crl[6942]: 20130801T100349+0200 processing '/etc/grid-security/certificates/REUNA-ca.crl_url'
fetch-crl[6942]: 20130801T100350+0200 updating CRL 'REUNA Certification Authority (295adc19)'
fetch-crl[6942]: 20130801T100351+0200 File /etc/grid-security/certificates/295adc19.r0 valid: yes
fetch-crl[6942]: 20130801T100351+0200 processing '/etc/grid-security/certificates/RomanianGRID.crl_url'
fetch-crl[6942]: 20130801T100351+0200 updating CRL 'RomanianGRID CA (1f3834d0)'
fetch-crl[6942]: 20130801T100351+0200 File /etc/grid-security/certificates/1f3834d0.r0 valid: yes
fetch-crl[6942]: 20130801T100351+0200 processing '/etc/grid-security/certificates/SDG.crl_url'
fetch-crl[6942]: 20130801T100352+0200 updating CRL 'Scientific Data Grid CA (c48c63f3)'
fetch-crl[6942]: 20130801T100352+0200 File /etc/grid-security/certificates/c48c63f3.r0 valid: yes
fetch-crl[6942]: 20130801T100352+0200 processing '/etc/grid-security/certificates/SEE-GRID.crl_url'
fetch-crl[6942]: 20130801T100353+0200 updating CRL 'SEE-GRID CA (468d15b3)'
fetch-crl[6942]: 20130801T100353+0200 File /etc/grid-security/certificates/468d15b3.r0 valid: yes
fetch-crl[6942]: 20130801T100353+0200 processing '/etc/grid-security/certificates/SRCE.crl_url'
fetch-crl[6942]: 20130801T100353+0200 updating CRL 'SRCE CA (ff94d436)'
fetch-crl[6942]: 20130801T100353+0200 File /etc/grid-security/certificates/ff94d436.r0 valid: yes
fetch-crl[6942]: 20130801T100353+0200 processing '/etc/grid-security/certificates/SWITCH-QuoVadis-Grid-ICA.crl_url'
fetch-crl[6942]: 20130801T100354+0200 updating CRL 'QuoVadis Grid ICA (e72045ce)'
fetch-crl[6942]: 20130801T100354+0200 File /etc/grid-security/certificates/e72045ce.r0 valid: yes
fetch-crl[6942]: 20130801T100354+0200 processing '/etc/grid-security/certificates/SWITCHgrid-Root.crl_url'

fetch-crl[6942]: 20130801T100355+0200 updating CRL 'SWITCHgrid Root CA (d0b701c0)'
fetch-crl[6942]: 20130801T100355+0200 File /etc/grid-security/certificates/d0b701c0.r0 valid: yes
fetch-crl[6942]: 20130801T100355+0200 processing '/etc/grid-security/certificates/SWITCHslcs2011.crl_url'
fetch-crl[6942]: 20130801T100355+0200 updating CRL 'SWITCHslcs CA (5e15f3bd)'
fetch-crl[6942]: 20130801T100356+0200 File /etc/grid-security/certificates/5e15f3bd.r0 valid: yes
fetch-crl[6942]: 20130801T100356+0200 processing '/etc/grid-security/certificates/SiGNET-CA.crl_url'
fetch-crl[6942]: 20130801T100356+0200 updating CRL 'SiGNET CA (3d5be7bc)'
fetch-crl[6942]: 20130801T100356+0200 File /etc/grid-security/certificates/3d5be7bc.r0 valid: yes
fetch-crl[6942]: 20130801T100356+0200 processing '/etc/grid-security/certificates/SlovakGrid.crl_url'
fetch-crl[6942]: 20130801T100357+0200 updating CRL 'SlovakGrid CA (e13e0fcf)'
fetch-crl[6942]: 20130801T100357+0200 File /etc/grid-security/certificates/e13e0fcf.r0 valid: yes
fetch-crl[6942]: 20130801T100357+0200 processing '/etc/grid-security/certificates/TERENA-eScience-SSL-CA.crl_url'
fetch-crl[6942]: 20130801T100357+0200 updating CRL 'TERENA eScience SSL CA (20ce830e)'
fetch-crl[6942]: 20130801T100358+0200 File /etc/grid-security/certificates/20ce830e.r0 valid: yes
fetch-crl[6942]: 20130801T100358+0200 processing '/etc/grid-security/certificates/TERENAeSciencePersonalCA.crl_url'
fetch-crl[6942]: 20130801T100358+0200 updating CRL 'TERENA eScience Personal CA (169d7f9c)'
fetch-crl[6942]: 20130801T100358+0200 File /etc/grid-security/certificates/169d7f9c.r0 valid: yes
fetch-crl[6942]: 20130801T100358+0200 processing '/etc/grid-security/certificates/TRGrid.crl_url'
fetch-crl[6942]: 20130801T100359+0200 updating CRL 'TR-Grid CA (1691b9ba)'
fetch-crl[6942]: 20130801T100359+0200 File /etc/grid-security/certificates/1691b9ba.r0 valid: yes
fetch-crl[6942]: 20130801T100359+0200 processing '/etc/grid-security/certificates/UGRID.crl_url'
fetch-crl[6942]: 20130801T100400+0200 updating CRL 'UGRID CA (0a12b607)'
fetch-crl[6942]: 20130801T100400+0200 File /etc/grid-security/certificates/0a12b607.r0 valid: yes
fetch-crl[6942]: 20130801T100400+0200 processing '/etc/grid-security/certificates/UKeScienceCA-2A.crl_url'
fetch-crl[6942]: 20130801T100400+0200 updating CRL 'UK e-Science CA 2A (1b6f5ede)'
fetch-crl[6942]: 20130801T100400+0200 File /etc/grid-security/certificates/1b6f5ede.r0 valid: yes
fetch-crl[6942]: 20130801T100401+0200 processing '/etc/grid-security/certificates/UKeScienceCA-2B.crl_url'
fetch-crl[6942]: 20130801T100401+0200 updating CRL 'UK e-Science CA 2B (ffc3d59b)'
fetch-crl[6942]: 20130801T100401+0200 File /etc/grid-security/certificates/ffc3d59b.r0 valid: yes
fetch-crl[6942]: 20130801T100401+0200 processing '/etc/grid-security/certificates/UKeScienceRoot-2007.crl_url'
fetch-crl[6942]: 20130801T100402+0200 updating CRL 'UK e-Science Root (98ef0ee5)'
fetch-crl[6942]: 20130801T100402+0200 File /etc/grid-security/certificates/98ef0ee5.r0 valid: yes
fetch-crl[6942]: 20130801T100402+0200 processing '/etc/grid-security/certificates/ULAGrid-CA-2008.crl_url'
fetch-crl[6942]: 20130801T100404+0200 updating CRL 'ULAGrid Certification Authority (3f0f4285)'
fetch-crl[6942]: 20130801T100404+0200 File /etc/grid-security/certificates/3f0f4285.r0 valid: yes
fetch-crl[6942]: 20130801T100404+0200 processing '/etc/grid-security/certificates/UNAMgrid-ca.crl_url'
fetch-crl[6942]: 20130801T100405+0200 updating CRL 'CA (24c3ccde)'

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fetch-crl[6942]: 20130801T100405+0200 File /etc/grid-
security/certificates/24c3ccde.r0 valid: yes
fetch-crl[6942]: 20130801T100405+0200 processing '/etc/grid-
security/certificates/UNLPGrid.crl_url'
fetch-crl[6942]: 20130801T100407+0200 updating CRL 'PKIGrid (b7bcb7b2)'
fetch-crl[6942]: 20130801T100407+0200 File /etc/grid-
security/certificates/b7bcb7b2.r0 valid: yes
fetch-crl[6942]: 20130801T100407+0200 processing '/etc/grid-
security/certificates/UTN-USERFirst-Hardware.crl_url'
fetch-crl[6942]: 20130801T100408+0200 updating CRL 'UTN-USERFirst-Hardware
(ff783690)'
fetch-crl[6942]: 20130801T100408+0200 File /etc/grid-
security/certificates/ff783690.r0 valid: yes
fetch-crl[6942]: 20130801T100408+0200 processing '/etc/grid-
security/certificates/UTNAAAClient.crl_url'
fetch-crl[6942]: 20130801T100408+0200 updating CRL 'UTN-USERFirst-Client
Authentication and Email (9ec3a561)'
fetch-crl[6942]: 20130801T100409+0200 File /etc/grid-
security/certificates/9ec3a561.r0 valid: yes
fetch-crl[6942]: 20130801T100409+0200 processing '/etc/grid-
security/certificates/UniandesCA.crl_url'
fetch-crl[6942]: 20130801T100409+0200 updating CRL 'Uniandes CA (fc1898ec)'
fetch-crl[6942]: 20130801T100409+0200 File /etc/grid-
security/certificates/fc1898ec.r0 valid: yes
fetch-crl[6942]: 20130801T100410+0200 processing '/etc/grid-
security/certificates/cilogon-silver.crl_url'
fetch-crl[6942]: 20130801T100410+0200 updating CRL 'CILogon Silver CA 1
(10718cba)'
fetch-crl[6942]: 20130801T100410+0200 File /etc/grid-
security/certificates/10718cba.r0 valid: yes
fetch-crl[6942]: 20130801T100410+0200 processing '/etc/grid-
security/certificates/pkIRISGrid.crl_url'
fetch-crl[6942]: 20130801T100411+0200 updating CRL 'IRISGridCA (9dd23746)'
fetch-crl[6942]: 20130801T100411+0200 File /etc/grid-
security/certificates/9dd23746.r0 valid: yes
fetch-crl[6942]: 20130801T100411+0200 Completed CRL retrieval process at
20130801T100411+0200
fetch-crl[6942]: 20130801T100411+0200 There were 0 errors and 2 warnings
[root@qcg ~]# /etc/init.d/fetch-crl-cron start
Enabling periodic fetch-crl: [ OK ]
[root@qcg ~]# chkconfig fetch-crl-cron on
[root@qcg ~]# touch /etc/grid-security/hostcert.pem
[root@qcg ~]# touch /etc/grid-security/hostkey.pem
[root@qcg ~]# chmod 600 /etc/grid-security/hostkey.pem
[root@qcg ~]# vi /etc/grid-security/hostcert.pem
[root@qcg ~]# vi /etc/grid-security/hostkey.pem
[root@qcg ~]# ls -l /etc/grid-security/hostkey.pem
-rw----- 1 root root 3371 Aug 1 10:08 /etc/grid-security/hostkey.pem
[root@qcg ~]# cd /etc/yum.repos.d/
[root@qcg yum.repos.d]# curl -O http://admin-repo.egi.eu/sw/unverified/umd-
3.qcg.qcg-comp.sl5.x86_64/3/0/4/repofiles/QCG.qcg-comp.sl5.x86_64.repo
% Total % Received % Xferd Average Speed Time Time Time
Current
100 343 100 343 0 0 1953 0 ---:--:-- ---:--:-- ---:--:-- 0
[root@qcg yum.repos.d]# cd
[root@qcg ~]# yum install qcg-comp qcg-comp-client qcg-comp-logrotate
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
QCG.qcg-comp.sl5.x86_64
| 1.9 kB 00:00
QCG.qcg-comp.sl5.x86_64/primary_db
| 9.1 kB 00:00
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check

```

```
---> Package qcg-comp.x86_64 0:3.0.4-31 set to be updated
--> Processing Dependency: qcg-core >= 3.0.3 for package: qcg-comp
--> Processing Dependency: libglobus_gssapi_gsi.so.4(globus_gssapi_gsi) (64bit)
for package: qcg-comp
--> Processing Dependency: qcg-comp-schemas for package: qcg-comp
--> Processing Dependency: libqcg-core.so.3() (64bit) for package: qcg-comp
--> Processing Dependency: libglobus_openssl.so.0() (64bit) for package: qcg-
comp
--> Processing Dependency: libvomsapi.so.1() (64bit) for package: qcg-comp
--> Processing Dependency: libglobus_gssapi_gsi.so.4() (64bit) for package:
qcg-comp
---> Package qcg-comp-client.x86_64 0:3.0.4-31 set to be updated
--> Processing Dependency: globus-proxy-utils for package: qcg-comp-client
---> Package qcg-comp-logrotate.x86_64 0:3.0.4-31 set to be updated
--> Running transaction check
---> Package globus-gssapi-gsi.x86_64 0:10.7-1.e15 set to be updated
--> Processing Dependency: globus-gsi-sysconfig >= 5 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-gsi-proxy-core >= 6 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-gsi-openssl-error >= 2 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-gsi-credential >= 5 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-gsi-cert-utils >= 8 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-gsi-callback >= 4 for package: globus-
gssapi-gsi
--> Processing Dependency: globus-common >= 14 for package: globus-gssapi-gsi
--> Processing Dependency: libglobus_common.so.0(GLOBUS_COMMON_14) (64bit) for
package: globus-gssapi-gsi
--> Processing Dependency: libglobus_openssl_error.so.0() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_gsi_sysconfig.so.1() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_gsi_proxy_core.so.0() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_gsi_credential.so.1() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_gsi_cert_utils.so.0() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_gsi_callback.so.0() (64bit) for package:
globus-gssapi-gsi
--> Processing Dependency: libglobus_common.so.0() (64bit) for package: globus-
gssapi-gsi
---> Package globus-openssl-module.x86_64 0:3.2-1.e15 set to be updated
--> Processing Dependency: globus-gsi-proxy-ssl >= 4 for package: globus-
openssl-module
--> Processing Dependency: libglobus_proxy_ssl.so.1() (64bit) for package:
globus-openssl-module
---> Package globus-proxy-utils.x86_64 0:5.0-6.e15 set to be updated
--> Processing Dependency: globus-gss-assist >= 8 for package: globus-proxy-
utils
--> Processing Dependency: libglobus_gss_assist.so.3() (64bit) for package:
globus-proxy-utils
---> Package qcg-comp-schemas.x86_64 0:3.0.4-31 set to be updated
---> Package qcg-core.x86_64 0:3.0.3-5 set to be updated
--> Processing Dependency: qcg-libxml2 >= 2.6.27 for package: qcg-core
---> Package voms.x86_64 0:2.0.10-1.e15 set to be updated
--> Running transaction check
---> Package globus-common.x86_64 0:14.9-1.e15 set to be updated
--> Processing Dependency: libltdl.so.3() (64bit) for package: globus-common
---> Package globus-gsi-callback.x86_64 0:4.4-1.e15 set to be updated
---> Package globus-gsi-cert-utils.x86_64 0:8.3-1.e15 set to be updated
---> Package globus-gsi-credential.x86_64 0:5.3-1.e15 set to be updated
---> Package globus-gsi-openssl-error.x86_64 0:2.1-2.e15 set to be updated
---> Package globus-gsi-proxy-core.x86_64 0:6.2-1.e15 set to be updated
---> Package globus-gsi-proxy-ssl.x86_64 0:4.1-2.e15 set to be updated
```


globus-openssl-module		x86_64	3.2-
1.e15	epel		
14 k			
globus-proxy-utils		x86_64	5.0-
6.e15	epel		
46 k			
libtool-ltdl		x86_64	
1.5.22-7.e15_4	slc5-os		
38 k			
qcg-comp-schemas		x86_64	
3.0.4-31	QCG.qcg-comp.s15.x86_64		
20 k			
qcg-core		x86_64	
3.0.3-5	QCG.qcg-comp.s15.x86_64		
557 k			
qcg-libxml2		x86_64	
2.6.27-2	QCG.qcg-comp.s15.x86_64		
1.4 M			
voms		x86_64	
2.0.10-1.e15	epel		
174 k			

Transaction Summary

=====

Install 21 Package(s)
 Upgrade 0 Package(s)

Total download size: 6.6 M

Is this ok [y/N]: y

Is this ok [y/N]: y

Downloading Packages:

(1/21): qcg-comp-logrotate-3.0.4-31.x86_64.rpm
 | 2.6 kB 00:00
 (2/21): globus-openssl-module-3.2-1.e15.x86_64.rpm
 | 14 kB 00:00
 (3/21): globus-gsi-openssl-error-2.1-2.e15.x86_64.rpm
 | 16 kB 00:00
 (4/21): globus-callout-2.2-1.e15.x86_64.rpm
 | 17 kB 00:00
 (5/21): globus-gsi-proxy-ssl-4.1-2.e15.x86_64.rpm
 | 18 kB 00:00
 (6/21): globus-gsi-cert-utils-8.3-1.e15.x86_64.rpm
 | 20 kB 00:00
 (7/21): qcg-comp-schemas-3.0.4-31.x86_64.rpm
 | 20 kB 00:00
 (8/21): globus-gsi-sysconfig-5.3-1.e15.x86_64.rpm
 | 31 kB 00:00
 (9/21): globus-gss-assist-8.7-1.e15.x86_64.rpm
 | 36 kB 00:00
 (10/21): globus-gsi-credential-5.3-1.e15.x86_64.rpm
 | 36 kB 00:00
 (11/21): globus-gsi-proxy-core-6.2-1.e15.x86_64.rpm
 | 37 kB 00:00
 (12/21): libtool-ltdl-1.5.22-7.e15_4.x86_64.rpm
 | 38 kB 00:00
 (13/21): globus-gsi-callback-4.4-1.e15.x86_64.rpm
 | 43 kB 00:00
 (14/21): globus-proxy-utils-5.0-6.e15.x86_64.rpm
 | 46 kB 00:00
 (15/21): globus-gssapi-gsi-10.7-1.e15.x86_64.rpm
 | 62 kB 00:00
 (16/21): globus-common-14.9-1.e15.x86_64.rpm
 | 132 kB 00:00
 (17/21): voms-2.0.10-1.e15.x86_64.rpm
 | 174 kB 00:00

```
(18/21): qcg-comp-client-3.0.4-31.x86_64.rpm
| 428 kB      00:00
(19/21): qcg-core-3.0.3-5.x86_64.rpm
| 557 kB      00:01
(20/21): qcg-libxml2-2.6.27-2.x86_64.rpm
| 1.4 MB      00:01
(21/21): qcg-comp-3.0.4-31.x86_64.rpm
| 3.6 MB      00:03
```



```
Total
675 kB/s | 6.6 MB      00:10
warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID ba42f9ba
QCG.qcg-comp.s15.x86_64/gpgkey
| 1.7 kB      00:00
Importing GPG key 0xBA42F9BA "Bartosz Bosak (QCG) <bbosak@man.poznan.pl>" from
http://www.qoscosgrid.org/qcg-packages/s15/RPM-GPG-KEY-QCG
Is this ok [y/N]: y
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : qcg-libxml2
1/21
  Installing      : voms
2/21
  Installing      : libtool-ltdl
3/21
  Installing      : globus-common
4/21
  Installing      : globus-gsi-openssl-error
5/21
  Installing      : globus-gsi-sysconfig
6/21
  Installing      : globus-gsi-proxy-ssl
7/21
  Installing      : globus-openssl-module
8/21
  Installing      : globus-gsi-cert-utils
9/21
  Installing      : globus-gsi-callback
10/21
  Installing      : globus-gsi-credential
11/21
  Installing      : globus-gsi-proxy-core
12/21
  Installing      : globus-gssapi-gsi
13/21
  Installing      : qcg-core
14/21
  Installing      : qcg-comp-schemas
15/21
  Installing      : qcg-comp
16/21
Run "/sbin/service qcg-compd start" to start qcg-compd service.
```

IMPORTANT: You must first configure the QCG Computing database prior to starting the service. You can either use the /usr/share/qcg-comp/tools/qcg-comp-install.sh script or create it manually using the QCG Computing documentation available at <http://www.qoscosgrid.org/trac/qcg-computing/wiki/InstallingUsingRPMS> as the reference.

```
  Installing      : globus-callout
17/21
  Installing      : globus-gss-assist
18/21
```

```
Installing      : globus-proxy-utils
19/21
Installing      : qcg-comp-client
20/21
Installing      : qcg-comp-logrotate
21/21
```

Installed:

```
qcg-comp.x86_64 0:3.0.4-31          qcg-comp-client.x86_64
0:3.0.4-31          qcg-comp-logrotate.x86_64 0:3.0.4-31
```

Dependency Installed:

```
globus-callout.x86_64 0:2.2-1.el5          globus-common.x86_64
0:14.9-1.el5          globus-gsi-callback.x86_64 0:4.4-1.el5
globus-gsi-cert-utils.x86_64 0:8.3-1.el5          globus-gsi-
credential.x86_64 0:5.3-1.el5          globus-gsi-openssl-error.x86_64 0:2.1-
2.el5
globus-gsi-proxy-core.x86_64 0:6.2-1.el5          globus-gsi-proxy-
ssl.x86_64 0:4.1-2.el5          globus-gsi-sysconfig.x86_64 0:5.3-1.el5
globus-gss-assist.x86_64 0:8.7-1.el5          globus-gssapi-gsi.x86_64
0:10.7-1.el5          globus-openssl-module.x86_64 0:3.2-1.el5
globus-proxy-utils.x86_64 0:5.0-6.el5          libtool-ltdl.x86_64
0:1.5.22-7.el5_4          qcg-comp-schemas.x86_64 0:3.0.4-31
qcg-core.x86_64 0:3.0.3-5          qcg-libxml2.x86_64
0:2.6.27-2          voms.x86_64 0:2.0.10-1.el5
```

Complete!

```
[root@qcg ~]# useradd -r -d /var/log/qcg/ qcg-broker
[root@qcg ~]# yum install globus-gridftp-server-progs.x86_64
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package globus-gridftp-server-progs.x86_64 0:6.19-1.el5 set to be updated
--> Processing Dependency: globus-gridftp-server = 6.19-1.el5 for package:
globus-gridftp-server-progs
--> Processing Dependency: globus-xio-gsi-driver >= 2 for package: globus-
gridftp-server-progs
--> Processing Dependency: libglobus_xio.so.0()(64bit) for package: globus-
gridftp-server-progs
--> Processing Dependency: libglobus_usage.so.0()(64bit) for package: globus-
gridftp-server-progs
--> Processing Dependency: libglobus_gridftp_server.so.6()(64bit) for package:
globus-gridftp-server-progs
--> Processing Dependency: libglobus_gfork.so.0()(64bit) for package: globus-
gridftp-server-progs
--> Running transaction check
---> Package globus-gfork.x86_64 0:3.2-1.el5 set to be updated
---> Package globus-gridftp-server.x86_64 0:6.19-1.el5 set to be updated
--> Processing Dependency: globus-gridftp-server-control >= 2 for package:
globus-gridftp-server
--> Processing Dependency: globus-ftp-control >= 4 for package: globus-
gridftp-server
--> Processing Dependency: globus-authz >= 2 for package: globus-gridftp-
server
--> Processing Dependency: libglobus_io.so.3()(64bit) for package: globus-
gridftp-server
--> Processing Dependency: libglobus_gridftp_server_control.so.0()(64bit) for
package: globus-gridftp-server
--> Processing Dependency: libglobus_ftp_control.so.1()(64bit) for package:
globus-gridftp-server
--> Processing Dependency: libglobus_authz.so.0()(64bit) for package: globus-
gridftp-server
---> Package globus-usage.x86_64 0:3.1-2.el5 set to be updated
---> Package globus-xio.x86_64 0:3.3-1.el5 set to be updated
```

```

---> Package globus-xio-gsi-driver.x86_64 0:2.3-1.e15 set to be updated
--> Processing Dependency: globus-gssapi-error >= 4 for package: globus-xio-gsi-driver
--> Processing Dependency: libglobus_gssapi_error.so.2()(64bit) for package: globus-xio-gsi-driver
--> Running transaction check
---> Package globus-authz.x86_64 0:2.2-1.e15 set to be updated
--> Processing Dependency: globus-authz-callout-error >= 2 for package: globus-authz
--> Processing Dependency: libglobus_gsi_authz_callout_error.so.0()(64bit) for package: globus-authz
---> Package globus-ftp-control.x86_64 0:4.5-2.e15 set to be updated
---> Package globus-gridftp-server-control.x86_64 0:2.8-1.e15 set to be updated
--> Processing Dependency: globus-xio-pipe-driver >= 2 for package: globus-gridftp-server-control
---> Package globus-gssapi-error.x86_64 0:4.1-2.e15 set to be updated
---> Package globus-io.x86_64 0:9.4-1.e15 set to be updated
--> Running transaction check
---> Package globus-authz-callout-error.x86_64 0:2.2-1.e15 set to be updated
---> Package globus-xio-pipe-driver.x86_64 0:2.2-1.e15 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin

```

Dependencies Resolved

```

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

```

Package Version	Repository	Arch	Size
Installing:			
globus-gridftp-server-progs 6.19-1.e15	epel	x86_64	48 k
Installing for dependencies:			
globus-authz 2.2-1.e15	epel	x86_64	14 k
globus-authz-callout-error 2.2-1.e15	epel	x86_64	11 k
globus-ftp-control 4.5-2.e15	epel	x86_64	74 k
globus-gfork 3.2-1.e15	epel	x86_64	20 k
globus-gridftp-server 6.19-1.e15	epel	x86_64	179 k
globus-gridftp-server-control 2.8-1.e15	epel	x86_64	79 k
globus-gssapi-error 4.1-2.e15	epel	x86_64	14 k
globus-io 9.4-1.e15	epel	x86_64	45 k
globus-usage 3.1-2.e15	epel	x86_64	17 k
globus-xio 3.3-1.e15	epel	x86_64	178 k
globus-xio-gsi-driver 2.3-1.e15	epel	x86_64	37 k
globus-xio-pipe-driver 2.2-1.e15	epel	x86_64	17 k

Transaction Summary

```

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

```

Install 13 Package(s)
Upgrade 0 Package(s)

Total download size: 734 k

Is this ok [y/N]: y

Downloading Packages:

(1/13): globus-authz-callout-error-2.2-1.el5.x86_64.rpm
| 11 kB 00:00
(2/13): globus-gssapi-error-4.1-2.el5.x86_64.rpm
| 14 kB 00:00
(3/13): globus-authz-2.2-1.el5.x86_64.rpm
| 14 kB 00:00
(4/13): globus-usage-3.1-2.el5.x86_64.rpm
| 17 kB 00:00
(5/13): globus-xio-pipe-driver-2.2-1.el5.x86_64.rpm
| 17 kB 00:00
(6/13): globus-gfork-3.2-1.el5.x86_64.rpm
| 20 kB 00:00
(7/13): globus-xio-gsi-driver-2.3-1.el5.x86_64.rpm
| 37 kB 00:00
(8/13): globus-io-9.4-1.el5.x86_64.rpm
| 45 kB 00:00
(9/13): globus-gridftp-server-progs-6.19-1.el5.x86_64.rpm
| 48 kB 00:00
(10/13): globus-ftp-control-4.5-2.el5.x86_64.rpm
| 74 kB 00:00
(11/13): globus-gridftp-server-control-2.8-1.el5.x86_64.rpm
| 79 kB 00:00
(12/13): globus-xio-3.3-1.el5.x86_64.rpm
| 178 kB 00:00
(13/13): globus-gridftp-server-6.19-1.el5.x86_64.rpm
| 179 kB 00:00

Total

492 kB/s | 734 kB 00:01

Running rpm_check_debug

Running Transaction Test

Finished Transaction Test

Transaction Test Succeeded

Running Transaction

Installing : globus-xio
1/13
Installing : globus-gssapi-error
2/13
Installing : globus-xio-gsi-driver
3/13
Installing : globus-io
4/13
Installing : globus-gfork
5/13
Installing : globus-usage
6/13
Installing : globus-ftp-control
7/13
Installing : globus-xio-pipe-driver
8/13
Installing : globus-gridftp-server-control
9/13
Installing : globus-authz-callout-error
10/13
Installing : globus-authz
11/13
Installing : globus-gridftp-server
12/13
Installing : globus-gridftp-server-progs
13/13

Installed:

globus-gridftp-server-progs.x86_64 0:6.19-1.e15

Dependency Installed:

```
globus-authz.x86_64 0:2.2-1.e15          globus-authz-callout-
error.x86_64 0:2.2-1.e15          globus-ftp-control.x86_64 0:4.5-2.e15
globus-gfork.x86_64 0:3.2-1.e15          globus-gridftp-server.x86_64
0:6.19-1.e15          globus-gridftp-server-control.x86_64 0:2.8-1.e15
globus-gssapi-error.x86_64 0:4.1-2.e15    globus-io.x86_64 0:9.4-1.e15
globus-usage.x86_64 0:3.1-2.e15
globus-xio.x86_64 0:3.3-1.e15          globus-xio-gsi-driver.x86_64
0:2.3-1.e15          globus-xio-pipe-driver.x86_64 0:2.2-1.e15
```

Complete!

```
[root@qcg ~]# vi /etc/xinetd.d/gsiftp
```

```
[root@qcg ~]# yum install xinetd.x86_64
```

Loaded plugins: changelog, kernel-module, protectbase, security, tsflags, versionlock

260 packages excluded due to repository protections

Reading version lock configuration

Setting up Install Process

Package 2:xinetd-2.3.14-17.e15.x86_64 already installed and latest version

Nothing to do

```
[root@qcg ~]# /etc/init.d/xinetd reload
```

Reloading configuration: [OK]

```
[root@qcg ~]# /sbin/chkconfig --list xinetd
```

```
xinetd          0:off  1:off  2:off  3:on   4:on   5:on   6:off
```

```
[root@qcg ~]# telnet qcg.wcss.pl 2811
```

Trying 156.17.5.144...

Connected to qcg.wcss.pl (156.17.5.144).

Escape character is '^'.

220 qcg.wcss.pl GridFTP Server 6.19 (gcc64, 1359994843-83) [Globus Toolkit

5.2.3] ready.

quit

211 Goodbye.

Connection closed by foreign host.

```
[root@qcg ~]# /usr/share/qcg-comp/tools/qcg-comp-install.sh
```

Welcome to qcg-comp installation script!

This script will guide you through process of configuring proper environment for running the QCG Computing service. You have to answer few questions regarding parameters of your database. If you are not sure just press Enter and use the default values.

Use local PostgreSQL server? (y/n) [y]: y

Database [qcg-comp]:

User [qcg-comp]:

Password [3jn1KXmxjDmIqgm5h20RGia2Ggqjx7Li]: *****

Create database? (y/n) [y]: y

Create user? (y/n) [y]: y

Checking for system user qcg-comp...OK

Checking whether PostgreSQL server is installed...OK

Checking whether PostgreSQL server is running...

PostgreSQL server is not running. Start now? (y/n) [y]: y

Starting PostgreSQL server...OK

Performing installation

* Creating user qcg-comp...OK

* Creating database qcg-comp...OK

* Creating database schema...OK

* Checking for ODBC data source qcg-comp...

* Installing ODBC data source...OK

Remember to add appropriate entry to /var/lib/pgsql/data/pg_hba.conf (as the first rule!) to allow user qcg-comp to

access database qcg-comp. For instance:

```
host    qcg-comp          qcg-comp          127.0.0.1/32     md5
```

and reload Postgres server.

```
[root@qcg ~]# vi /var/lib/pgsql/data/pg_hba.conf
[root@qcg ~]# /etc/init.d/postgresql reload
[root@qcg ~]# echo '"/C=PL/O=GRID/O=WCSS/CN=Franciszek Klajn" franek' >>
/etc/grid-security/grid-mapfile
[root@qcg ~]# yum install pbs-drmaa
Loaded plugins: changelog, kernel-module, protectbase, security, tsflags,
versionlock
260 packages excluded due to repository protections
Reading version lock configuration
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package pbs-drmaa.x86_64 0:1.0.15-1 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin
```

Dependencies Resolved

```
=====
=====
===
Package                               Arch          Size          Version
Repository                             Size
=====
=====
===
Installing:
 pbs-drmaa                               x86_64        379 k        1.0.15-1
QCG.qcg-comp.s15.x86_64
```

Transaction Summary

```
=====
=====
===
Install      1 Package(s)
Upgrade      0 Package(s)
```

```
Total download size: 379 k
Is this ok [y/N]: y
Downloading Packages:
pbs-drmaa-1.0.15-1.x86_64.rpm
| 379 kB    00:00
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : pbs-drmaa
1/1
```

```
Installed:
 pbs-drmaa.x86_64 0:1.0.15-1
```

Complete!

```
[root@qcg ~]# vi /opt/qcg/dependencies/etc/pbs_drmaa.conf
[root@qcg ~]# vi /etc/qcg/qcg-comp/qcg-compd.xml
```

```
GENERIC_SERVICE_1
[root@qcg ~]# /etc/init.d/qcg-compd start
Starting qcg-compd:
```

[OK]


```

[root@qcg ~]# /etc/init.d/qcg-compd start
Starting qcg-compd: [ OK ]
[root@qcg ~]# /etc/init.d/qcg-compd status
qcg-compd (pid 12536) is running...
[root@qcg ~]# /etc/init.d/qcg-compd restart
Shutting down qcg-compd: [ OK ]
Starting qcg-compd: [ OK ]
[root@qcg ~]# /etc/init.d/qcg-compd status
qcg-compd (pid 12700) is running...
[root@qcg ~]# /etc/init.d/qcg-compd stop
Shutting down qcg-compd: [ OK ]
[root@qcg ~]# /etc/init.d/qcg-compd status
qcg-compd is stopped

```

GENERIC_SERVICE_2

```

[root@qcg ~]# tail /var/log/qcg/qcg-comp/qcg-compd.log
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....qcg-comp] Setting up:
ecm_gsoap (gSOAP external communication module)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....qcg-comp] Setting up:
atc_transport_http (Plain HTTP transport)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....qcg-comp] Setting up:
ntf_client (QCG Notification gSOAP client module (service use only))
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....qcg-comp] Setting up:
application_mapper (JSDL Application -> HPCPA Executable mapper)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....qcg-comp] Setting up: DRMS:
http://schemas.qoscosgrid.org/comp/2011/04/drms/Torque/Torque (3)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....monitoring] Querying DRMS for
hosts, queues, jobs statuses (extended=0)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....monitoring] Active jobs count
= 1
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....monitoring] Jobs selected for
extended query: []
I #51a9 [ 0.38] * pbs_disconnect(1)
INF Aug 02 07:36:13 20905 0x2b745e2cfd50 [.....monitoring] Exited session
process after 1 seconds

```

GENERIC_SEC_1

```

[root@qcg ~]# find / -path /proc -prune -o -perm -0002 -type f -ls
[root@qcg ~]#

```

GENERIC_SEC_3

```

[root@qcg ~]# ls -l /etc/qcg/qcg-comp/qcg-compd.xml
-rw----- 1 qcg-comp root 3083 sie 1 14:51 /etc/qcg/qcg-comp/qcg-compd.xml

```

JOBEXEC_JOB_1

```

[franek@qcg test]$ cat JOBEXEC_JOB_1.xml
<?xml version="1.0" encoding="UTF-8"?>

```

```

<jSDL:JobDefinition
  xmlns:jSDL="http://schemas.ggf.org/jSDL/2005/11/jSDL"
  xmlns:jSDL-hPCPA="http://schemas.ggf.org/jSDL/2006/07/jSDL-hPCPA"
  xmlns:jSDL-qCG-comp-
  factory="http://schemas.qoscosgrid.org/comp/2011/04/jSDL/factory">
  <jSDL:JobDescription>
    <jSDL:JobIdentification>
      <jSDL:JobName>Sleep</jSDL:JobName>
      <jSDL:Description>sleep comment</jSDL:Description>
    </jSDL:JobIdentification>
    <jSDL:Application>
      <jSDL-hPCPA:HPCProfileApplication>
        <jSDL-hPCPA:Executable>/bin/sleep</jSDL-hPCPA:Executable>
        <jSDL-hPCPA:Argument>60</jSDL-hPCPA:Argument>
      </jSDL-hPCPA:HPCProfileApplication>
    </jSDL:Application>
  </jSDL:JobDescription>
</jSDL:JobDefinition>

```

```

[franek@qcg test]$ qcg-comp -c -J JOBEXEC_JOB_1.xml

```

```
Activity Id: 2a451c9a-5928-4d83-bb1f-33cc539bdf9
[franek@qcg test]$ qcg-comp -s -a 2a451c9a-5928-4d83-bb1f-33cc539bdf9
status = Queued
[franek@qcg test]$ qcg-comp -s -a 2a451c9a-5928-4d83-bb1f-33cc539bdf9
status = Executing
[franek@qcg test]$ qcg-comp -s -a 2a451c9a-5928-4d83-bb1f-33cc539bdf9
status = Finished (exit status = 0)
```

JOBEXEC_JOB_2

```
[franek@qcg test]$ cat JOBEXEC_JOB_2.xml
<?xml version="1.0" encoding="UTF-8"?>
```

```
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
  factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>JOBEXEC_JOB_2</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl:ApplicationName>bash</jsdl:ApplicationName>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Argument>JOBEXEC_JOB_2.sh</jsdl-hpcpa:Argument>
      <jsdsl-hpcpa:Output>JOBEXEC_JOB_2.out</jsdl-hpcpa:Output>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdsl:DataStaging>
      <jsdsl:FileName>JOBEXEC_JOB_2.sh</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Source>
        <jsdsl:URI>JOBEXEC_JOB_2.sh</jsdl:URI>
      </jsdl:Source>
    </jsdl:DataStaging>
    <jsdsl:DataStaging>
      <jsdsl:FileName>JOBEXEC_JOB_2.out</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Target>
        <jsdsl:URI>JOBEXEC_JOB_2.out</jsdl:URI>
      </jsdl:Target>
    </jsdl:DataStaging>
    <jsdsl:Resources>
      <jsdsl:TotalCPUCount>
        <jsdsl:Exact>1</jsdl:Exact>
      </jsdl:TotalCPUCount>
    </jsdl:Resources>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
```

```
[franek@qcg test]$ cat JOBEXEC_JOB_2.sh
#!/bin/bash
```

/bin/uname -a

```
[franek@qcg test]$ qcg-comp -i -J JOBEXEC_JOB_2.xml
Staging file: JOBEXEC_JOB_2.sh
```

All files staged in.

```
[franek@qcg test]$ qcg-comp -c -J JOBEXEC_JOB_2.xml
```

Activity Id: 85e4fef1-9eae-47c8-979c-90dfbfc066b2

```
[franek@qcg test]$ qcg-comp -s -a 85e4fef1-9eae-47c8-979c-90dfbfc066b2
status = Queued
```

```
[franek@qcg test]$ qcg-comp -s -a 85e4fef1-9eae-47c8-979c-90dfbfc066b2
status = Queued
```

```
[franek@qcg test]$ qcg-comp -s -a 85e4fef1-9eae-47c8-979c-90dfbfc066b2
```

```
[franek@qcg test]$ qcg-comp -o -J JOBEXEC_JOB_2.xml
```

File JOBEXEC_JOB_2.out staged out.

All files staged out.

```
[franek@qcg test]$ cat JOBEXEC_JOB_2.out
```

```
Linux wn02 2.6.32-358.11.1.el6.x86_64 #1 SMP Wed Jun 12 03:34:52 UTC 2013
x86_64 x86_64 x86_64 GNU/Linux
```

```
JOBEXEC_JOB_3
```

```
[franek@qcg test]$ cat JOBEXEC_JOB_3.xml
<?xml version="1.0" encoding="UTF-8"?>
```

```
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>Sleep</jsdl:JobName>
      <jsdsl:Description>sleep comment</jsdl:Description>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Executable>/bin/sleep</jsdl-hpcpa:Executable>
        <jsdsl-hpcpa:Argument>600</jsdl-hpcpa:Argument>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
```

```
[franek@qcg test]$ qcg-comp -c -J JOBEXEC_JOB_3.xml
Activity Id: 58c8b054-7cc2-496b-9e6a-ff55ef6393b5
[franek@qcg test]$ qcg-comp -s -a 58c8b054-7cc2-496b-9e6a-ff55ef6393b5
status = Executing
[franek@qcg test]$ qcg-comp -t -a 58c8b054-7cc2-496b-9e6a-ff55ef6393b5
Activity is being terminated.
[franek@qcg test]$ qcg-comp -s -a 58c8b054-7cc2-496b-9e6a-ff55ef6393b5
status = Cancelled
```

```
JOBEXEC_EXECMNGR_3
```

```
[franek@qcg test]$ qcg-comp -G | xmllint --format -
<?xml version="1.0"?>
<bes-factory:FactoryResourceAttributesDocument xmlns:bes-
factory="http://schemas.ggf.org/bes/2006/08/bes-factory">
  <bes-factory:IsAcceptingNewActivities>true</bes-
factory:IsAcceptingNewActivities>
  <bes-factory:CommonName>ce.wcss.wroc.pl</bes-factory:CommonName>
  <bes-factory:LongDescription>WCSS-PPS cluster</bes-factory:LongDescription>
  <bes-factory:TotalNumberOfActivities>1</bes-factory:TotalNumberOfActivities>
  <bes-factory:TotalNumberOfContainedResources>2</bes-
factory:TotalNumberOfContainedResources>
  <bes-factory:ContainedResource xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:type="bes-factory:BasicResourceAttributesDocumentType">
    <bes-factory:ResourceName>wn01.local</bes-factory:ResourceName>
    <bes-factory:CPUArchitecture>
      <jsdsl:CPUArchitectureName
xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl">x86_64</jsdl:CPUArchitec
tureName>
      </bes-factory:CPUArchitecture>
    <bes-factory:CPUCount>2</bes-factory:CPUCount>
    <bes-factory:PhysicalMemory>513470464</bes-factory:PhysicalMemory>
    <bes-factory:VirtualMemory>1040179200</bes-factory:VirtualMemory>
    <qcm:Utilization
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">0</qcm:Utili
zation>
    <qcm:Attributes
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">lcgpro</qcm:
Attributes>
    <qcm:State
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">up</qcm:Stat
e>
```

```

    <qcm:UsedCPUTime>
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">0</qcm:UsedC
PUCount>
    </bes-factory:ContainedResource>
    <bes-factory:ContainedResource xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:type="bes-factory:BasicResourceAttributesDocumentType">
    <bes-factory:ResourceName>wn02.local</bes-factory:ResourceName>
    <bes-factory:CPUArchitecture>
    <jsdl:CPUArchitectureName
xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl">x86_64</jsdl:CPUArchitec
tureName>
    </bes-factory:CPUArchitecture>
    <bes-factory:CPUCount>2</bes-factory:CPUCount>
    <bes-factory:PhysicalMemory>513470464</bes-factory:PhysicalMemory>
    <bes-factory:VirtualMemory>1040179200</bes-factory:VirtualMemory>
    <qcm:Utilization
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">0</qcm:Utili
zation>
    <qcm:Attributes
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">lcgpro</qcm:
Attributes>
    <qcm:State
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">up</qcm:Stat
e>
    <qcm:UsedCPUTime>
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">0</qcm:UsedC
PUCount>
    </bes-factory:ContainedResource>
    <bes-
factory:NamingProfile>http://schemas.ggf.org/bes/2006/08/bes/naming/BasicWSAdd
ressing</bes-factory:NamingProfile>
    <bes-
factory:BESEExtension>http://schemas.qoscosgrid.org/comp/2012/07/jsdl/TotalCPUC
ount</bes-factory:BESEExtension>
    <bes-
factory:BESEExtension>http://schemas.ggf.org/hpcp/2007/01/bp/BasicFilter</bes-
factory:BESEExtension>
    <bes-factory:BESEExtension>http://schemas.qoscosgrid.org/comp/2011/04</bes-
factory:BESEExtension>
    <bes-
factory:LocalResourceManagerType>http://schemas.qoscosgrid.org/comp/2011/04/dr
ms/Torque/Torque</bes-factory:LocalResourceManagerType>
    <qcf:AuthorizedUsers
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory">
    <qcf:Subject>/C=PL/O=GRID/O=WCSS/CN=Franciszek Klajn</qcf:Subject>
    </qcf:AuthorizedUsers>
    <qcf:Applications
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory">
    <qcf:Application name="bash"/>
    </qcf:Applications>
    <qcf:Modules
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory"/>
    <qcm:ClusterMonitoring
xmlns:qcm="http://schemas.qoscosgrid.org/comp/2011/04/monitoring">
    <qcm:Queues>
    <qcm:Queue enabled="true" name="dteam" runningJobs="0" started="true"
waitingJobs="0" walltime="PT72H0M0S" qcm:enabled="true" qcm:name="dteam"
qcm:runningJobs="0" qcm:started="true" qcm:waitingJobs="0"
qcm:walltime="PT72H0M0S"/>
    <qcm:Queue enabled="true" name="normal" runningJobs="0" started="true"
waitingJobs="0" walltime="PT0H0M0S" qcm:enabled="true" qcm:name="normal"
qcm:runningJobs="0" qcm:started="true" qcm:waitingJobs="0"
qcm:walltime="PT0H0M0S"/>
    <qcm:Queue enabled="true" name="ops" runningJobs="0" started="true"
waitingJobs="0" walltime="PT72H0M0S" qcm:enabled="true" qcm:name="ops"
qcm:runningJobs="0" qcm:started="true" qcm:waitingJobs="0"
qcm:walltime="PT72H0M0S"/>
    </qcm:Queues>

```

```

    <qcm:Jobs>
      <qcm:Job cores="1" cpuTime="0:00:00" desc="/tmp/cream_945343161"
id="60351.ce.wcss.wroc.pl" memUsage="0" name="cream_945343161" owner="ops002"
queue="ops" startTime="2013-08-02T05:58:13Z" submissionTime="2013-08-
02T05:58:12Z" qcm:cores="1" qcm:cpuTime="0:00:00"
qcm:desc="/tmp/cream_945343161" qcm:name="cream_945343161"
qcm:id="60351.ce.wcss.wroc.pl" qcm:memUsage="0" qcm:owner="ops002"
qcm:queue="ops" qcm:startTime="2013-08-02T07:58:13" qcm:submissionTime="2013-
08-02T07:58:12">
        <qcm:Host name="wn02.local" slots="1" qcm:name="wn02.local"
qcm:slots="1"/>
      </qcm:Job>
    </qcm:Jobs>
    <qcm:Reservations/>
  </qcm:ClusterMonitoring>
  <qcf:Timestamp
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory">2013-08-
02T06:01:12Z</qcf:Timestamp>
    <qcf:VersionString
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory">3.0.4</qcf:Vers
ionString>
    <qcf:NotificationProviderURL
xmlns:qcf="http://schemas.qoscosgrid.org/comp/2011/04/factory">http://qcg-
ntf.wcss.pl:19001/</qcf:NotificationProviderURL>
  </bes-factory:FactoryResourceAttributesDocument>

```

PARALLEL_JOB_1

```

[franek@qcg test]$ cat PARALLEL_JOB_1.xml
<jSDL:JobDefinition
  xmlns:jSDL="http://schemas.ggf.org/jSDL/2005/11/jSDL"
  xmlns:jSDL-hpcpa="http://schemas.ggf.org/jSDL/2006/07/jSDL-hpcpa"
  xmlns:jSDL-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jSDL/factory">
  <jSDL:JobDescription>
    <jSDL:JobIdentification>
      <jSDL:JobName>PARALLEL_JOB_1</jSDL:JobName>
    </jSDL:JobIdentification>
    <jSDL:Application>
      <jSDL-hpcpa:HPCProfileApplication>
        <jSDL-hpcpa:Executable>/bin/sleep</jSDL-hpcpa:Executable>
        <jSDL-hpcpa:Argument>60</jSDL-hpcpa:Argument>
      </jSDL-hpcpa:HPCProfileApplication>
    </jSDL:Application>
    <jSDL:Resources>
      <jSDL:TotalCPUCount>
        <jSDL:Exact>2</jSDL:Exact>
      </jSDL:TotalCPUCount>
    </jSDL:Resources>
  </jSDL:JobDescription>
</jSDL:JobDefinition>

```

```

[franek@qcg test]$ qcg-comp -c -J PARALLEL_JOB_1.xml
Activity Id: 4ebda753-e2a5-4ff5-95e1-709ca137ddf1
[franek@ce ~]$ qstat -f
Job Id: 60352.ce.wcss.wroc.pl
Job_Name = PARALLEL_JOB_1
Job_Owner = franek@qcg.wcss.pl
resources_used.cput = 00:00:00
resources_used.mem = 3048kb
resources_used.vmem = 26664kb
resources_used.walltime = 00:00:36
job_state = R
queue = normal
server = ce.wcss.wroc.pl
Checkpoint = u
ctime = Fri Aug 2 08:05:11 2013
Error_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_1.e60352
exec_host = wn02.local/1+wn02.local/0

```

```
Keep_Files = n
mtime = Fri Aug  2 08:05:13 2013
Output_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_1.o60352
Priority = 0
qtime = Fri Aug  2 08:05:11 2013
Resource_List.nodect = 2
Resource_List.nodes = 2
session_id = 8430
Variable_List = PBS_O_QUEUE=normal,PBS_O_HOST=qcg.wcss.pl,
                PBS_O_WORKDIR=/home/franek
etime = Fri Aug  2 08:05:11 2013
submit_args = -l nodes=2
start_time = Fri Aug  2 08:05:13 2013
start_count = 1
```

PARALLEL_JOB_2

```
[franek@qcg test]$ cat PARALLEL_JOB_2.xml
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
  factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>PARALLEL_JOB_2</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Executable>/bin/sleep</jsdl-hpcpa:Executable>
        <jsdsl-hpcpa:Argument>60</jsdl-hpcpa:Argument>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdsl:Resources>
      <jsdsl:IndividualCPUCount>
        <jsdsl:Exact>2</jsdl:Exact>
      </jsdl:IndividualCPUCount>
    </jsdl:Resources>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
```

```
[franek@qcg test]$ qcg-comp -c -J PARALLEL_JOB_2.xml
Activity Id: 0eeb031b-5eff-4809-8892-809936993e29
[franek@qcg test]$ qcg-comp -s -a 0eeb031b-5eff-4809-8892-809936993e29
status = Executing
[root@ce ~]# qstat -f 60376.ce
Job Id: 60376.ce.wcss.wroc.pl
Job_Name = PARALLEL_JOB_2
Job_Owner = franek@qcg.wcss.pl
job_state = R
queue = normal
server = ce.wcss.wroc.pl
Checkpoint = u
ctime = Fri Aug  2 09:51:02 2013
Error_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_2.e60376
exec_host = wn02.local/1+wn02.local/0
Keep_Files = n
mtime = Fri Aug  2 09:51:04 2013
Output_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_2.o60376
Priority = 0
qtime = Fri Aug  2 09:51:02 2013
Resource_List.neednodes = 1:ppn=2
Resource_List.nodect = 1
Resource_List.nodes = 1:ppn=2
session_id = 15862
substater = 42
Variable_List = PBS_O_QUEUE=normal,PBS_O_HOST=qcg.wcss.pl,
                PBS_O_WORKDIR=/home/franek
euser = franek
egroup = users
```

```
hashname = 60376.ce.wcss.wroc.pl
queue_rank = 1518
queue_type = E
etime = Fri Aug 2 09:51:02 2013
submit_args = -l nodes=1:ppn=2
start_time = Fri Aug 2 09:51:04 2013
start_count = 1
```

PARALLEL_JOB_3

```
[franek@qcg test]$ cat PARALLEL_JOB_3_1.xml
```

```
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>PARALLEL_JOB_3_1</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Executable>/bin/sleep</jsdl-hpcpa:Executable>
        <jsdsl-hpcpa:Argument>60</jsdl-hpcpa:Argument>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdsl:Resources>
      <jsdsl:IndividualCPUCount>
        <jsdsl:Exact>1</jsdl:Exact>
      </jsdl:IndividualCPUCount>
      <jsdsl:TotalResourceCount>
        <jsdsl:Exact>2</jsdl:Exact>
      </jsdl:TotalResourceCount>
    </jsdl:Resources>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
```

```
[franek@qcg test]$ qcg-comp -c -J PARALLEL_JOB_3_1.xml
```

```
Activity Id: 300d3d16-2d1d-43cc-a23c-e21c61b60eee
```

```
[franek@qcg test]$ qcg-comp -s -a 300d3d16-2d1d-43cc-a23c-e21c61b60eee
status = Executing
```

```
[root@ce ~]# qstat -f 60379.ce
```

```
Job Id: 60379.ce.wcss.wroc.pl
  Job_Name = PARALLEL_JOB_3_
  Job_Owner = franek@qcg.wcss.pl
  job_state = R
  queue = normal
  server = ce.wcss.wroc.pl
  Checkpoint = u
  ctime = Fri Aug 2 10:14:24 2013
  Error_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.e60379
  exec_host = wn02.local/1+wn01.local/0
  Keep_Files = n
  mtime = Fri Aug 2 10:14:25 2013
  Output_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.o60379
  Priority = 0
  qtime = Fri Aug 2 10:14:24 2013
  Resource_List.nodect = 2
  Resource_List.nodes = 2:ppn=1
  session_id = 16903
  substate = 42
  Variable_List = PBS_O_QUEUE=normal,PBS_O_HOST=qcg.wcss.pl,
  PBS_O_WORKDIR=/home/franek
  euser = franek
  egroup = users
  hashname = 60379.ce.wcss.wroc.pl
  queue_rank = 1521
  queue_type = E
  etime = Fri Aug 2 10:14:24 2013
```

```

submit_args = -l nodes=2:ppn=1
start_time = Fri Aug 2 10:14:25 2013
start_count = 1
[franek@qcg test]$ cat PARALLEL_JOB_3_2.xml
<jSDL:JobDefinition
  xmlns:jSDL="http://schemas.ggf.org/jSDL/2005/11/jSDL"
  xmlns:jSDL-hpcpa="http://schemas.ggf.org/jSDL/2006/07/jSDL-hpcpa"
  xmlns:jSDL-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jSDL/factory">
  <jSDL:JobDescription>
    <jSDL:JobIdentification>
      <jSDL:JobName>PARALLEL_JOB_3_2</jSDL:JobName>
    </jSDL:JobIdentification>
    <jSDL:Application>
      <jSDL-hpcpa:HPCProfileApplication>
        <jSDL-hpcpa:Executable>/bin/sleep</jSDL-hpcpa:Executable>
        <jSDL-hpcpa:Argument>60</jSDL-hpcpa:Argument>
      </jSDL-hpcpa:HPCProfileApplication>
    </jSDL:Application>
    <jSDL:Resources>
      <jSDL:IndividualCPUCount>
        <jSDL:Exact>2</jSDL:Exact>
      </jSDL:IndividualCPUCount>
    </jSDL:Resources>
  </jSDL:JobDescription>
</jSDL:JobDefinition>
[franek@qcg test]$ qcg-comp -c -J PARALLEL_JOB_3_2.xml
Activity Id: 9c9ab492-018e-4063-bd96-401dc141598f
[franek@qcg test]$ qcg-comp -s -a 9c9ab492-018e-4063-bd96-401dc141598f
status = Queued
[root@ce ~]# qstat -f 60381.ce
Job Id: 60381.ce.wcss.wroc.pl
Job Name = PARALLEL_JOB_3_
Job Owner = franek@qcg.wcss.pl
job_state = R
queue = normal
server = ce.wcss.wroc.pl
Checkpoint = u
ctime = Fri Aug 2 10:17:45 2013
Error_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.e60381
exec_host = wn02.local/1+wn02.local/0
Keep_Files = n
mtime = Fri Aug 2 10:17:46 2013
Output_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.o60381
Priority = 0
qtime = Fri Aug 2 10:17:45 2013
Resource_List.nodect = 1
Resource_List.nodes = 1:ppn=2
session_id = 17094
substate = 42
Variable_List = PBS_O_QUEUE=normal,PBS_O_HOST=qcg.wcss.pl,
  PBS_O_WORKDIR=/home/franek
euser = franek
egroup = users
hashname = 60381.ce.wcss.wroc.pl
queue_rank = 1523
queue_type = E
etime = Fri Aug 2 10:17:45 2013
submit_args = -l nodes=1:ppn=2
start_time = Fri Aug 2 10:17:46 2013
start_count = 1

[franek@qcg test]$ cat PARALLEL_JOB_3_3.xml
<jSDL:JobDefinition
  xmlns:jSDL="http://schemas.ggf.org/jSDL/2005/11/jSDL"
  xmlns:jSDL-hpcpa="http://schemas.ggf.org/jSDL/2006/07/jSDL-hpcpa"

```



```

    xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdl:JobDescription>
    <jsdl:JobIdentification>
      <jsdl:JobName>PARALLEL_JOB_3_1</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdl:Application>
      <jsdl-hpcpa:HPCProfileApplication>
        <jsdl-hpcpa:Executable>/bin/sleep</jsdl-hpcpa:Executable>
        <jsdl-hpcpa:Argument>60</jsdl-hpcpa:Argument>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdl:Resources>
      <jsdl:IndividualCPUCount>
        <jsdl:Exact>2</jsdl:Exact>
      </jsdl:IndividualCPUCount>
      <jsdl:TotalResourceCount>
        <jsdl:Exact>2</jsdl:Exact>
      </jsdl:TotalResourceCount>
    </jsdl:Resources>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
[franek@qcg test]$ qcg-comp -c -J PARALLEL_JOB_3_3.xml
Activity Id: 2f4d21fa-8f68-4edd-a9cd-122d2debe7b8
[franek@qcg test]$ qcg-comp -s -a 2f4d21fa-8f68-4edd-a9cd-122d2debe7b8
status = Queued
[root@ce ~]# qstat -f 60382.ce
Job Id: 60382.ce.wcss.wroc.pl
Job_Name = PARALLEL_JOB_3_
Job_Owner = franek@qcg.wcss.pl
job_state = R
queue = normal
server = ce.wcss.wroc.pl
Checkpoint = u
ctime = Fri Aug 2 10:21:11 2013
Error_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.e60382
exec_host = wn02.local/1+wn02.local/0+wn01.local/1+wn01.local/0
Keep_Files = n
mtime = Fri Aug 2 10:21:12 2013
Output_Path = qcg.wcss.pl:/home/franek/PARALLEL_JOB_3_.o60382
Priority = 0
qtime = Fri Aug 2 10:21:11 2013
Resource_List.nodect = 2
Resource_List.nodes = 2:ppn=2
session_id = 17249
substate = 42
Variable_List = PBS_O_QUEUE=normal,PBS_O_HOST=qcg.wcss.pl,
                PBS_O_WORKDIR=/home/franek
euser = franek
egroup = users
hashname = 60382.ce.wcss.wroc.pl
queue_rank = 1524
queue_type = E
etime = Fri Aug 2 10:21:11 2013
submit_args = -l nodes=2:ppn=2
start_time = Fri Aug 2 10:21:12 2013
start_count = 1

PARALLEL_MPI_1
[franek@qcg mpi]$ cat PARALLEL_MPI_1.xml
<jsdl:JobDefinition
xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdl:JobDescription>
    <jsdl:JobIdentification>

```

```

    <jsdsl:JobName>PARALLEL_MPI_1</jsdl:JobName>
</jsdl:JobIdentification>
<jsdsl:Application>
  <jsdsl:ApplicationName>bash</jsdl:ApplicationName>
  <jsdsl-hpcpa:HPCProfileApplication>
    <jsdsl-hpcpa:Argument>PARALLEL_MPI_1.sh</jsdl-hpcpa:Argument>
    <jsdsl-hpcpa:Output>PARALLEL_MPI_1.out</jsdl-hpcpa:Output>
  </jsdl-hpcpa:HPCProfileApplication>
</jsdl:Application>
<jsdsl:DataStaging>
  <jsdsl:FileName>PARALLEL_MPI_1.sh</jsdl:FileName>
  <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
  <jsdsl:Source>
    <jsdsl:URI>PARALLEL_MPI_1.sh</jsdl:URI>
  </jsdl:Source>
</jsdl:DataStaging>
<jsdsl:DataStaging>
  <jsdsl:FileName>PARALLEL_MPI_1</jsdl:FileName>
  <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
  <jsdsl:Source>
    <jsdsl:URI>PARALLEL_MPI_1</jsdl:URI>
  </jsdl:Source>
</jsdl:DataStaging>
<jsdsl:DataStaging>
  <jsdsl:FileName>PARALLEL_MPI_1.out</jsdl:FileName>
  <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
  <jsdsl:Target>
    <jsdsl:URI>PARALLEL_MPI_1.out</jsdl:URI>
  </jsdl:Target>
</jsdl:DataStaging>
<jsdsl:Resources>
  <jsdsl:IndividualCPUCount>
    <jsdsl:Exact>2</jsdl:Exact>
  </jsdl:IndividualCPUCount>
  <jsdsl:TotalResourceCount>
    <jsdsl:Exact>2</jsdl:Exact>
  </jsdl:TotalResourceCount>
</jsdl:Resources>
</jsdl:JobDescription>
</jsdl:JobDefinition>
[franek@qcg mpi]$ vi PARALLEL_MPI_1.sh
[franek@qcg mpi]$ vi PARALLEL_MPI_1.sh
[franek@qcg mpi]$ cat PARALLEL_MPI_1.xml
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>PARALLEL_MPI_1</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl:ApplicationName>bash</jsdl:ApplicationName>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Argument>PARALLEL_MPI_1.sh</jsdl-hpcpa:Argument>
        <jsdsl-hpcpa:Output>PARALLEL_MPI_1.out</jsdl-hpcpa:Output>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdsl:DataStaging>
      <jsdsl:FileName>PARALLEL_MPI_1.sh</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Source>
        <jsdsl:URI>PARALLEL_MPI_1.sh</jsdl:URI>
      </jsdl:Source>
    </jsdl:DataStaging>
    <jsdsl:DataStaging>
      <jsdsl:FileName>PARALLEL_MPI_1</jsdl:FileName>

```

```

    <jSDL:CreationFlag>overwrite</jSDL:CreationFlag>
    <jSDL:Source>
      <jSDL:URI>PARALLEL_MPI_1</jSDL:URI>
    </jSDL:Source>
  </jSDL:DataStaging>
<jSDL:DataStaging>
  <jSDL:FileName>PARALLEL_MPI_1.out</jSDL:FileName>
  <jSDL:CreationFlag>overwrite</jSDL:CreationFlag>
  <jSDL:Target>
    <jSDL:URI>PARALLEL_MPI_1.out</jSDL:URI>
  </jSDL:Target>
</jSDL:DataStaging>
<jSDL:Resources>
  <jSDL:IndividualCPUCount>
    <jSDL:Exact>2</jSDL:Exact>
  </jSDL:IndividualCPUCount>
  <jSDL:TotalResourceCount>
    <jSDL:Exact>2</jSDL:Exact>
  </jSDL:TotalResourceCount>
</jSDL:Resources>
</jSDL:JobDescription>
</jSDL:JobDefinition>

```

```

[franeq@qcg mpi]$ cat PARALLEL_MPI_1.sh
#!/bin/bash

```

```

chmod 700 PARALLEL_MPI_1
mpirun -np 4 ./PARALLEL_MPI_1
[franeq@qcg mpi]$ qcg-comp -i -J PARALLEL_MPI_1.xml
Staging file: PARALLEL_MPI_1.sh
Staging file: PARALLEL_MPI_1
All files staged in.
[franeq@qcg mpi]$ qcg-comp -c -J PARALLEL_MPI_1.xml
Activity Id: 08d82df5-847d-48ae-a2d2-ca43041b4119
[franeq@qcg mpi]$ qcg-comp -s -a 08d82df5-847d-48ae-a2d2-ca43041b4119
status = Queued
[franeq@qcg mpi]$ qcg-comp -s -a 08d82df5-847d-48ae-a2d2-ca43041b4119
status = Finished (exit status = 0)
[franeq@qcg mpi]$ qcg-comp -o -J PARALLEL_MPI_1.xml
File PARALLEL_MPI_1.out staged out.
All files staged out.
[franeq@qcg mpi]$ cat PARALLEL_MPI_1.out
Hello world from process 2 of 4
Hello world from process 1 of 4
Hello world from process 3 of 4
Hello world from process 0 of 4

```

```

PARALLEL_MPI_2
[franeq@qcg mpi]$ cat PARALLEL_MPI_2.xml
<jSDL:JobDefinition
  xmlns:jSDL="http://schemas.ggf.org/jSDL/2005/11/jSDL"
  xmlns:jSDL-hpcpa="http://schemas.ggf.org/jSDL/2006/07/jSDL-hpcpa"
  xmlns:jSDL-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jSDL/factory">
  <jSDL:JobDescription>
    <jSDL:JobIdentification>
      <jSDL:JobName>PARALLEL_MPI_2</jSDL:JobName>
    </jSDL:JobIdentification>
    <jSDL:Application>
      <jSDL:ApplicationName>bash</jSDL:ApplicationName>
      <jSDL-hpcpa:HPCProfileApplication>
        <jSDL-hpcpa:Argument>PARALLEL_MPI_2.sh</jSDL-hpcpa:Argument>
        <jSDL-hpcpa:Output>PARALLEL_MPI_2.out</jSDL-hpcpa:Output>
      </jSDL-hpcpa:HPCProfileApplication>
    </jSDL:Application>
  </jSDL:JobDescription>
  <jSDL:DataStaging>
    <jSDL:FileName>PARALLEL_MPI_2.sh</jSDL:FileName>
    <jSDL:CreationFlag>overwrite</jSDL:CreationFlag>
    <jSDL:Source>

```

```

        <jSDL:URI>PARALLEL_MPI_2.sh</jSDL:URI>
    </jSDL:Source>
</jSDL:DataStaging>
<jSDL:DataStaging>
    <jSDL:FileName>PARALLEL_MPI_2.c</jSDL:FileName>
    <jSDL:CreationFlag>overwrite</jSDL:CreationFlag>
    <jSDL:Source>
        <jSDL:URI>PARALLEL_MPI_2.c</jSDL:URI>
    </jSDL:Source>
</jSDL:DataStaging>
<jSDL:DataStaging>
    <jSDL:FileName>PARALLEL_MPI_2.out</jSDL:FileName>
    <jSDL:CreationFlag>overwrite</jSDL:CreationFlag>
    <jSDL:Target>
        <jSDL:URI>PARALLEL_MPI_2.out</jSDL:URI>
    </jSDL:Target>
</jSDL:DataStaging>
<jSDL:Resources>
    <jSDL:IndividualCPUCount>
        <jSDL:Exact>2</jSDL:Exact>
    </jSDL:IndividualCPUCount>
    <jSDL:TotalResourceCount>
        <jSDL:Exact>2</jSDL:Exact>
    </jSDL:TotalResourceCount>
</jSDL:Resources>
</jSDL:JobDescription>
</jSDL:JobDefinition>
[franek@qcg mpi]$ cat PARALLEL_MPI_2.sh
#!/bin/bash

mpicc PARALLEL_MPI_2.c -o PARALLEL_MPI_2
mpirun -np 4 ./PARALLEL_MPI_2
[franek@qcg mpi]$ cat PARALLEL_MPI_2.c
/* C Example */
#include <stdio.h>
#include <mpi.h>

int main (argc, argv)
    int argc;
    char *argv[];
{
    int rank, size;

    MPI_Init (&argc, &argv);          /* starts MPI */
    MPI_Comm_rank (MPI_COMM_WORLD, &rank);      /* get current process id */
    MPI_Comm_size (MPI_COMM_WORLD, &size);      /* get number of processes */
    printf( "Hello world from process %d of %d\n", rank, size );
    MPI_Finalize();
    return 0;
}

[franek@qcg mpi]$ qcg-comp -i -J PARALLEL_MPI_2.xml
Staging file: PARALLEL_MPI_2.sh
Staging file: PARALLEL_MPI_2.c
All files staged in.
[franek@qcg mpi]$ qcg-comp -c -J PARALLEL_MPI_2.xml
Activity Id: 2b11b63c-d7b9-4657-81fe-01a0ca96e14e
[franek@qcg mpi]$ qcg-comp -s -a 2b11b63c-d7b9-4657-81fe-01a0ca96e14e
status = Queued
[franek@qcg mpi]$ qcg-comp -s -a 2b11b63c-d7b9-4657-81fe-01a0ca96e14e
status = Finished (exit status = 0)
[franek@qcg mpi]$ qcg-comp -o -J PARALLEL_MPI_2.xml
File PARALLEL_MPI_2.out staged out.
All files staged out.
[franek@qcg mpi]$ cat PARALLEL_MPI_2.out
Hello world from process 2 of 4
Hello world from process 1 of 4

```

```
Hello world from process 0 of 4
Hello world from process 3 of 4
```

```
PARALLEL_OMP_1
```

```
[franek@qcg omp]$ cat PARALLEL_OMP_1.xml
```

```
<jsdsl:JobDefinition
  xmlns:jsdl="http://schemas.ggf.org/jsdl/2005/11/jsdl"
  xmlns:jsdl-hpcpa="http://schemas.ggf.org/jsdl/2006/07/jsdl-hpcpa"
  xmlns:jsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jsdl/factory">
  <jsdsl:JobDescription>
    <jsdsl:JobIdentification>
      <jsdsl:JobName>PARALLEL_OMP_1</jsdl:JobName>
    </jsdl:JobIdentification>
    <jsdsl:Application>
      <jsdsl:ApplicationName>bash</jsdl:ApplicationName>
      <jsdsl-hpcpa:HPCProfileApplication>
        <jsdsl-hpcpa:Argument>PARALLEL_OMP_1.sh</jsdl-hpcpa:Argument>
        <jsdsl-hpcpa:Output>PARALLEL_OMP_1.out</jsdl-hpcpa:Output>
      </jsdl-hpcpa:HPCProfileApplication>
    </jsdl:Application>
    <jsdsl:DataStaging>
      <jsdsl:FileName>PARALLEL_OMP_1.sh</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Source>
        <jsdsl:URI>PARALLEL_OMP_1.sh</jsdl:URI>
      </jsdl:Source>
    </jsdl:DataStaging>
    <jsdsl:DataStaging>
      <jsdsl:FileName>PARALLEL_OMP_1</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Source>
        <jsdsl:URI>PARALLEL_OMP_1</jsdl:URI>
      </jsdl:Source>
    </jsdl:DataStaging>
    <jsdsl:DataStaging>
      <jsdsl:FileName>PARALLEL_OMP_1.out</jsdl:FileName>
      <jsdsl:CreationFlag>overwrite</jsdl:CreationFlag>
      <jsdsl:Target>
        <jsdsl:URI>PARALLEL_OMP_1.out</jsdl:URI>
      </jsdl:Target>
    </jsdl:DataStaging>
    <jsdsl:Resources>
      <jsdsl:IndividualCPUCount>
        <jsdsl:Exact>2</jsdl:Exact>
      </jsdl:IndividualCPUCount>
    </jsdl:Resources>
  </jsdl:JobDescription>
</jsdl:JobDefinition>
```

```
[franek@qcg omp]$ cat PARALLEL_OMP_1.sh
```

```
#!/bin/bash
```

```
export OMP_NUM_THREADS=2
```

```
chmod 700 ./PARALLEL_OMP_1
```

```
./PARALLEL_OMP_1
```

```
[franek@qcg omp]$ qcg-comp -i -J PARALLEL_OMP_1.xml
```

```
Staging file: PARALLEL_OMP_1.sh
```

```
Staging file: PARALLEL_OMP_1
```

```
All files staged in.
```

```
[franek@qcg omp]$ qcg-comp -c -J PARALLEL_OMP_1.xml
```

```
Activity Id: 33eb93b7-0405-448b-be3f-a4b305600a4c
```

```
[franek@qcg omp]$ qcg-comp -s -a 33eb93b7-0405-448b-be3f-a4b305600a4c
```

```
status = Finished (exit status = 0)
```

```
[franek@qcg omp]$ qcg-comp -o -J PARALLEL_OMP_1.xml
```

```
File PARALLEL_OMP_1.out staged out.
```

```
All files staged out.
```

```
[franek@qcg omp]$ cat PARALLEL_OMP_1.out
```

```
Hello World!
```

Hello World!

PARALLEL_OMP_2

```
[franek@qcg omp]$ cat PARALLEL_OMP_2.xml
```

```
<jdsdl:JobDefinition
  xmlns:jdsdl="http://schemas.ggf.org/jdsdl/2005/11/jdsdl"
  xmlns:jdsdl-hpcpa="http://schemas.ggf.org/jdsdl/2006/07/jdsdl-hpcpa"
  xmlns:jdsdl-qcg-comp-
factory="http://schemas.qoscosgrid.org/comp/2011/04/jdsdl/factory">
  <jdsdl:JobDescription>
    <jdsdl:JobIdentification>
      <jdsdl:JobName>PARALLEL_OMP_2</jdsdl:JobName>
    </jdsdl:JobIdentification>
    <jdsdl:Application>
      <jdsdl:ApplicationName>bash</jdsdl:ApplicationName>
      <jdsdl-hpcpa:HPCProfileApplication>
        <jdsdl-hpcpa:Argument>PARALLEL_OMP_2.sh</jdsdl-hpcpa:Argument>
        <jdsdl-hpcpa:Output>PARALLEL_OMP_2.out</jdsdl-hpcpa:Output>
      </jdsdl-hpcpa:HPCProfileApplication>
    </jdsdl:Application>
    <jdsdl:DataStaging>
      <jdsdl:FileName>PARALLEL_OMP_2.sh</jdsdl:FileName>
      <jdsdl:CreationFlag>overwrite</jdsdl:CreationFlag>
      <jdsdl:Source>
        <jdsdl:URI>PARALLEL_OMP_2.sh</jdsdl:URI>
      </jdsdl:Source>
    </jdsdl:DataStaging>
    <jdsdl:DataStaging>
      <jdsdl:FileName>PARALLEL_OMP_2.c</jdsdl:FileName>
      <jdsdl:CreationFlag>overwrite</jdsdl:CreationFlag>
      <jdsdl:Source>
        <jdsdl:URI>PARALLEL_OMP_2.c</jdsdl:URI>
      </jdsdl:Source>
    </jdsdl:DataStaging>
    <jdsdl:DataStaging>
      <jdsdl:FileName>PARALLEL_OMP_2.out</jdsdl:FileName>
      <jdsdl:CreationFlag>overwrite</jdsdl:CreationFlag>
      <jdsdl:Target>
        <jdsdl:URI>PARALLEL_OMP_2.out</jdsdl:URI>
      </jdsdl:Target>
    </jdsdl:DataStaging>
    <jdsdl:Resources>
      <jdsdl:IndividualCPUCount>
        <jdsdl:Exact>2</jdsdl:Exact>
      </jdsdl:IndividualCPUCount>
    </jdsdl:Resources>
  </jdsdl:JobDescription>
</jdsdl:JobDefinition>
```

```
[franek@qcg omp]$ cat PARALLEL_OMP_2.sh
```

```
#!/bin/bash
```

```
gcc -fopenmp PARALLEL_OMP_2.c -o ./PARALLEL_OMP_2
```

```
export OMP_NUM_THREADS=2
```

```
./PARALLEL_OMP_2
```

```
[franek@qcg omp]$ cat PARALLEL_OMP_2.c
```

```
#include <stdio.h>
```

```
int main(void)
```

```
{
    #pragma omp parallel
    printf("Hello World!\n");
    return 0;
}
```

```
[franek@qcg omp]$ qcg-comp -i -J PARALLEL_OMP_2.xml
```

```
Staging file: PARALLEL_OMP_2.sh
```

```
Staging file: PARALLEL_OMP_2.c
```

```
All files staged in.
[franek@qcg omp]$ qcg-comp -c -J PARALLEL_OMP_2.xml
Activity Id: 29984019-e52f-47ba-abc0-eda8fe6abf85
[franek@qcg omp]$ qcg-comp -s -a 29984019-e52f-47ba-abc0-eda8fe6abf85
status = Queued
[franek@qcg omp]$ qcg-comp -s -a 29984019-e52f-47ba-abc0-eda8fe6abf85
status = Finished (exit status = 0)
[franek@qcg omp]$ qcg-comp -o -J PARALLEL_OMP_2.xml
File PARALLEL_OMP_2.out staged out.
All files staged out.
[franek@qcg omp]$ cat PARALLEL_OMP_2.out
Hello World!
Hello World!
```

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):

Comments for DMSU (TSA2.5):

Comments for TP: