

Introduction

This document is addressed to site administrators responsible for middleware installation and configuration. Goal of this wiki page is to provide some hints and examples about how to install and configure a IG StoRM Storage Element based on gLite middleware.

Repository settings for x86_64

```
$ cd /etc/yum/repos.d/
$ wget http://repo-pd.italiangrid.it/mrepo/repos/glite/sl5/x86_64/dag.repo
$ wget http://repo-pd.italiangrid.it/mrepo/repos/glite/sl5/x86_64/ig.repo
$ wget http://repository.egi.eu/sw/production/cas/1/current/repo-files/egi-trustanchors.repo
$ wget http://repo-pd.italiangrid.it/mrepo/repos/glite/sl5/x86_64/glite-generic.repo
```

Only for CNAF testbed

In order not to break dependencies with the cnafl4.repo requirements, you have to set the protect=1 also into the ig.repo file only for ig_sl4_i386_externals and ig_sl4_i386_jpackage sections.

Please consider the following snippet as an example:

```
[ig_sl4_i386_externals]
name      = INFNGRID 3.1 i386 (externals)
baseurl   = http://grid-it.cnaf.infn.it/mrepo/ig_sl4-i386/RPMS.3_1_0_externals/
enabled   = 1
protect   = 1

[ig_sl4_i386_jpackage]
name      = INFNGRID 3.1 i386 (jpackage)
baseurl   = http://grid-it.cnaf.infn.it/mrepo/ig_sl4-i386/RPMS.3_1_0_jpackage/
enabled   = 1
protect   = 1
```

Pre-requisites: setting the ACL

Please pay attention that StoRM uses the ACLs on files and directories to enforce permissions. The ACL support is a compulsory feature the file system has to provide. If your StoRM installation works on standard POSIX file system (ext3), please be sure you have the option "acl" on the corresponding "fstab row".

Add in your /etc/fstab the acl declaration to the file system options:

```
$ cat /etc/fstab
/dev/VolGroup00/LogVol100 / ext3 defaults,acl 1 1
LABEL=/boot /boot ext3 defaults 1 2
tmpfs /dev/shm tmpfs defaults 0 0
devpts /dev/pts devpts gid=5,mode=620 0 0
sysfs /sys sysfs defaults 0 0
proc /proc proc defaults 0 0
/dev/VolGroup00/LogVol101 swap swap defaults 0 0
```

Remount the / as follow:

```
$ mount -v -o remount /
/dev/mapper/VolGroup00-LogVol100 on / type ext3 (rw,acl)
```

Update host and perform the installation of package(s)

```
$ yum clean all
```

Remove the newest curl version (if any) and install the correct one:

```
$ wget http://grid018.ct.infn.it/mrepo/ig_sl4-i386/RPMS.3_1_0_externals/curl-7.15.5-2.sl4.i386.rpm
$ rpm -ivh --nodeps curl-7.15.5-2.sl4.i386.rpm
Preparing...      ##### [100%]
   1:curl          ##### [100%]
```

Install the meta-packages:

```
$ yum install ig_SE_storm_backend ig_SE_storm_frontend
Loaded plugins: kernel-module
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package ig_SE_storm_backend.i386 0:3.1.0-0_ig55_sl4 set to be updated
--> Processing Dependency: glite-security-gsoap-plugin = 1.5.3-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-voms-api = 1.8.12-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-voms-api-c = 1.8.12-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-trustmanager = 1.8.16-3 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-util-java = 1.4.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-voms-clients = 1.8.12-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-voms-api-cpp = 1.8.12-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glue-schema >= 1.3.0-5 for package: ig_SE_storm_backend
--> Processing Dependency: CGSI_gSOAP_2.7-voms >= 1.3.3-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: vdt_globus_sdk >= VDT1.6.1x86_rhas_4-9 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas-plugins-voms >= 1.3.4-5.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: storm-backend-server >= 1.5.6-3.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: openssl-devel >= 0.9.7a-43.17.el4_6.1 for package: ig_SE_storm_backend
--> Processing Dependency: storm-info-dynamic >= 1.6.0-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcmaps >= 1.4.7-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: xmlrpc-c >= 1.04-1 for package: ig_SE_storm_backend
--> Processing Dependency: gpt >= VDT1.6.0x86_rhas_4-1 for package: ig_SE_storm_backend
--> Processing Dependency: log4cxx >= 0.9.7-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: xalan-c >= 1.10.0-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: log4cpp >= 1.0-1.el4.rf for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas >= 1.3.11-2.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-initscript-globus-gridftp >= 1.0.2-1 for package: ig_SE_storm_backend
--> Processing Dependency: vdt_globus_data_server >= VDT1.6.1x86_rhas_4-7 for package: ig_SE_storm_backend
--> Processing Dependency: glite-yaim-core >= 4.0.11-2 for package: ig_SE_storm_backend
--> Processing Dependency: vdt_globus_rm_server >= VDT1.6.1x86_rhas_4_LCG-1 for package: ig_SE_storm_backend
--> Processing Dependency: bdii >= 4.0.1-4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-info-generic >= 2.0.2-3 for package: ig_SE_storm_backend
--> Processing Dependency: glite-version >= 3.1.1-2 for package: ig_SE_storm_backend
--> Processing Dependency: lcg-vomscerts >= 5.9.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: mysql >= 4.1.22-2.el4.sl for package: ig_SE_storm_backend
--> Processing Dependency: glite-info-provider-service >= 1.1.7-0 for package: ig_SE_storm_backend
--> Processing Dependency: vdt_globus_rm_essentials >= VDT1.6.1x86_rhas_4-7 for package: ig_SE_storm_backend
--> Processing Dependency: edg-mkgridmap-conf >= 3.0.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: xerces-c >= 2.7.0-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcmaps-plugins-verify-proxy >= 1.4.2-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: lcg-expiregridmapdir >= 2.1.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: ig-yaim >= 4.0.12-5 for package: ig_SE_storm_backend
--> Processing Dependency: mysql-server >= 4.1.22-2.el4.sl for package: ig_SE_storm_backend
--> Processing Dependency: fetch-crl >= 2.7.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas-plugins-check-executable >= 1.2.1-3.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-info-provider-release >= 1.0.0-9 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas-interface >= 1.3.11-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas-plugins-basic >= 1.3.2-3.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcmaps-without-gsi >= 1.4.2-1.sl4 for package: ig_SE_storm_backend
--> Processing Dependency: edg-mkgridmap >= 3.0.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcmaps-plugins-basic >= 1.3.10-2.sl4 for package: ig_SE_storm_backend
```

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

```
--> Processing Dependency: ig-vomscerts-all >= 1.1-12 for package: ig_SE_storm_backend
--> Processing Dependency: ig-yaim-storm >= 4.0.9-9 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcmaps-plugins-voms >= 1.3.7-5.slc4 for package: ig_SE_
--> Processing Dependency: vdt_globus_essentials >= VDT1.6.1x86_rhas_4-9 for package: ig_SE_storm
--> Processing Dependency: edg-gpt-profile >= 1.0.0-1 for package: ig_SE_storm_backend
--> Processing Dependency: lcg-vomscerts-desy >= 0.0.9-1 for package: ig_SE_storm_backend
--> Processing Dependency: glite-security-lcas-lcmaps-gt4-interface >= 0.0.14-2.slc4 for package:
---> Package ig_SE_storm_frontend.i386 0:3.1.0-0_ig55_sl4 set to be updated
--> Processing Dependency: storm-frontend-server-gcc32dbgpthr >= 1.5.0-4.sl4 for package: ig_SE_s
--> Running transaction check
---> Package CGSI_gSOAP_2.7-voms.i386 0:1.3.3-1.slc4 set to be updated
---> Package bdii.noarch 0:4.0.1-4 set to be updated
--> Processing Dependency: openldap-servers for package: bdii
--> Processing Dependency: perl-libwww-perl for package: bdii
--> Processing Dependency: perl(LWP::Simple) for package: bdii
--> Processing Dependency: openldap-clients for package: bdii
---> Package edg-gpt-profile.noarch 0:1.0.0-1 set to be updated
---> Package edg-mkgridmap.noarch 0:3.0.0-1 set to be updated
--> Processing Dependency: perl(IO::Socket::SSL) >= 0.90 for package: edg-mkgridmap
--> Processing Dependency: perl(Net::SSLeay) >= 1.16 for package: edg-mkgridmap
--> Processing Dependency: perl(Net::LDAP) for package: edg-mkgridmap
--> Processing Dependency: perl(URI::http) for package: edg-mkgridmap
--> Processing Dependency: perl(XML::Parser) for package: edg-mkgridmap
--> Processing Dependency: perl(URI) for package: edg-mkgridmap
--> Processing Dependency: perl(URI::ldap) for package: edg-mkgridmap
--> Processing Dependency: perl(Crypt::SSLeay) for package: edg-mkgridmap
--> Processing Dependency: perl(XML::DOM) for package: edg-mkgridmap
--> Processing Dependency: perl(Net::LDAP::Util) for package: edg-mkgridmap
--> Processing Dependency: perl(Net::LDAP) for package: edg-mkgridmap
--> Processing Dependency: perl(Date::Manip) for package: edg-mkgridmap
--> Processing Dependency: perl(Term::ReadKey) for package: edg-mkgridmap
---> Package edg-mkgridmap-conf.noarch 0:3.0.0-1 set to be updated
---> Package fetch-curl.noarch 0:2.7.0-1 set to be updated
---> Package glite-info-generic.noarch 0:2.0.2-3 set to be updated
---> Package glite-info-provider-release.noarch 0:1.0.2-1 set to be updated
---> Package glite-info-provider-service.noarch 0:1.1.7-0 set to be updated
---> Package glite-initscript-globus-gridftp.noarch 0:1.0.2-1 set to be updated
---> Package glite-security-gsoap-plugin.i386 0:1.5.3-1.slc4 set to be updated
--> Processing Dependency: c-ares >= 1.3.0 for package: glite-security-gsoap-plugin
--> Processing Dependency: libcares.so.0 for package: glite-security-gsoap-plugin
---> Package glite-security-lcas.i386 0:1.3.11-2.slc4 set to be updated
--> Processing Dependency: libssl.so.4 for package: glite-security-lcas
--> Processing Dependency: libcrypto.so.4 for package: glite-security-lcas
---> Package glite-security-lcas-interface.i386 0:1.3.11-1.slc4 set to be updated
---> Package glite-security-lcas-lcmaps-gt4-interface.i386 0:0.0.14-2.slc4 set to be updated
---> Package glite-security-lcas-plugins-basic.i386 0:1.3.2-3.slc4 set to be updated
---> Package glite-security-lcas-plugins-check-executable.i386 0:1.2.1-3.slc4 set to be updated
---> Package glite-security-lcas-plugins-voms.i386 0:1.3.4-5.slc4 set to be updated
--> Processing Dependency: libgridsite_globus.so.1.1 for package: glite-security-lcas-plugins-vom
---> Package glite-security-lcmaps.i386 0:1.4.7-1.slc4 set to be updated
---> Package glite-security-lcmaps-plugins-basic.i386 0:1.3.10-2.slc4 set to be updated
--> Processing Dependency: libldap-2.2.so.7 for package: glite-security-lcmaps-plugins-basic
---> Package glite-security-lcmaps-plugins-verify-proxy.i386 0:1.4.2-1.slc4 set to be updated
---> Package glite-security-lcmaps-plugins-voms.i386 0:1.3.7-5.slc4 set to be updated
---> Package glite-security-lcmaps-without-gsi.i386 0:1.4.2-1.slc4 set to be updated
---> Package glite-security-trustmanager.noarch 0:1.8.16-3 set to be updated
--> Processing Dependency: log4j >= 1.2.14 for package: glite-security-trustmanager
--> Processing Dependency: bouncycastle >= 1.37 for package: glite-security-trustmanager
---> Package glite-security-util-java.noarch 0:1.4.0-1 set to be updated
---> Package glite-security-voms-api.i386 0:1.8.12-1.slc4 set to be updated
---> Package glite-security-voms-api-c.i386 0:1.8.12-1.slc4 set to be updated
---> Package glite-security-voms-api-cpp.i386 0:1.8.12-1.slc4 set to be updated
---> Package glite-security-voms-clients.i386 0:1.8.12-1.slc4 set to be updated
---> Package glite-version.noarch 0:3.1.2-1 set to be updated
---> Package glite-yaim-core.noarch 0:4.0.13-2 set to be updated
---> Package glue-schema.noarch 0:1.3.0-5 set to be updated
---> Package gpt.i386 0:VDT1.6.0x86_rhas_4-1 set to be updated
```

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```
---> Package ig-vomscerts-all.noarch 0:1.1-13 set to be updated
---> Package ig-yaim.noarch 0:4.0.12-8_bc set to be updated
---> Package ig-yaim-storm.noarch 0:4.0.9-11 set to be updated
---> Package lcg-expiregridmapdir.noarch 0:2.1.0-1 set to be updated
---> Package lcg-vomscerts.noarch 0:6.3.0-1 set to be updated
---> Package lcg-vomscerts-desy.noarch 0:0.0.11-1 set to be updated
---> Package log4cpp.i386 0:1.0-9.el5 set to be updated
---> Package log4cxx.i686 0:0.9.7-1.slc4 set to be updated
---> Package mysql.i386 0:5.0.77-4.el5_5.4 set to be updated
--> Processing Dependency: perl(DBI) for package: mysql
---> Package mysql-server.i386 0:5.0.77-4.el5_5.4 set to be updated
--> Processing Dependency: perl-DBD-MySQL for package: mysql-server
---> Package openssl-devel.i386 0:0.9.8e-12.el5_5.7 set to be updated
--> Processing Dependency: openssl = 0.9.8e-12.el5_5.7 for package: openssl-devel
--> Processing Dependency: zlib-devel for package: openssl-devel
--> Processing Dependency: krb5-devel for package: openssl-devel
---> Package storm-backend-server.i386 0:1.5.6-3.s14 set to be updated
---> Package storm-frontend-server-gcc32dbgpthr.i386 0:1.5.0-4.s14 set to be updated
---> Package storm-info-dynamic.i386 0:1.6.0-1.s14 set to be updated
---> Package vdt_globus_data_server.i386 0:VDT1.6.1x86_rhas_4-7 set to be updated
---> Package vdt_globus_essentials.i386 0:VDT1.6.1x86_rhas_4-9 set to be updated
---> Package vdt_globus_rm_essentials.i386 0:VDT1.6.1x86_rhas_4-7 set to be updated
---> Package vdt_globus_rm_server.i386 0:VDT1.6.1x86_rhas_4_LCG-1 set to be updated
---> Package vdt_globus_sdk.i386 0:VDT1.6.1x86_rhas_4-9 set to be updated
---> Package xalan-c.i686 0:1.10.0-1.slc4 set to be updated
---> Package xerces-c.i386 0:2.7.0-1.2.el4.rf set to be updated
---> Package xmlrpc-c.i386 0:1.04-1 set to be updated
--> Running transaction check
---> Package bouncycastle.noarch 0:1.43-1.jpp5 set to be updated
--> Processing Dependency: geronimo-javamail-1.4-api for package: bouncycastle
--> Processing Dependency: geronimo-jaf-1.0.2-api for package: bouncycastle
---> Package c-ares.i686 0:1.3.0-4.slc4 set to be updated
---> Package compat-openldap.i386 0:2.3.43-2.2.29-12.el5_5.1 set to be updated
--> Processing Dependency: openldap = 2.3.43-12.el5_5.1 for package: compat-openldap
---> Package gridsite-shared.i386 0:1.1.21-1.slc4 set to be updated
---> Package krb5-devel.i386 0:1.6.1-55.el5_6.1 set to be updated
--> Processing Dependency: krb5-libs = 1.6.1-55.el5_6.1 for package: krb5-devel
--> Processing Dependency: libselinux-devel for package: krb5-devel
--> Processing Dependency: e2fsprogs-devel for package: krb5-devel
--> Processing Dependency: keyutils-libs-devel for package: krb5-devel
---> Package log4j.noarch 0:1.2.14-15.jpp5 set to be updated
--> Processing Dependency: java >= 1.5.0 for package: log4j
--> Processing Dependency: jms_1_1_api for package: log4j
--> Processing Dependency: javamail_1_3_1_api for package: log4j
--> Processing Dependency: mx4j for package: log4j
---> Package openldap-clients.i386 0:2.3.43-12.el5_5.1 set to be updated
---> Package openldap-servers.i386 0:2.3.43-12.el5_5.1 set to be updated
--> Processing Dependency: libltdl.so.3 for package: openldap-servers
---> Package openssl.i686 0:0.9.8e-12.el5_5.7 set to be updated
---> Package openssl097a.i386 0:0.9.7a-9.el5_4.2 set to be updated
---> Package perl-Crypt-SSLeay.i386 0:0.51-11.el5 set to be updated
---> Package perl-DBD-MySQL.i386 0:3.0007-2.el5 set to be updated
---> Package perl-DBI.i386 0:1.52-2.el5 set to be updated
---> Package perl-Date-Manip.noarch 0:5.56-1.el4.rf set to be updated
---> Package perl-IO-Socket-SSL.noarch 0:1.38-1.el4.rf set to be updated
---> Package perl-LDAP.noarch 1:0.33-3.fc6 set to be updated
--> Processing Dependency: perl(Convert::ASN1) for package: perl-LDAP
--> Processing Dependency: perl(XML::SAX::Base) for package: perl-LDAP
---> Package perl-Net-SSLeay.i386 0:1.36-1.el4.rf set to be updated
---> Package perl-TermReadKey.i386 0:2.30-5.el5 set to be updated
---> Package perl-URI.noarch 0:1.35-3 set to be updated
---> Package perl-XML-DOM.noarch 0:1.44-2.el4.rf set to be updated
--> Processing Dependency: perl(XML::RegExp) for package: perl-XML-DOM
---> Package perl-XML-Parser.i386 0:2.34-6.1.2.2.1 set to be updated
---> Package perl-libwww-perl.noarch 0:5.805-1.1.1 set to be updated
--> Processing Dependency: perl-HTML-Parser >= 3.33 for package: perl-libwww-perl
--> Processing Dependency: perl(HTML::Entities) for package: perl-libwww-perl
```

Update host and perform the installation of package(s)

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```
--> Processing Dependency: perl(Compress::Zlib) for package: perl-libwww-perl
--> Package zlib-devel.i386 0:1.2.3-3 set to be updated
--> Running transaction check
--> Package classpathx-mail.noarch 0:1.1.2-1.jpp5 set to be updated
--> Processing Dependency: jaf_1_1_api for package: classpathx-mail
--> Package e2fsprogs-devel.i386 0:1.39-23.el5 set to be updated
--> Package geronimo-jaf-1.0.2-api.noarch 0:1.2-13.jpp5 set to be updated
--> Processing Dependency: geronimo-specs-poms = 1.2-13.jpp5 for package: geronimo-jaf-1.0.2-api
--> Package geronimo-javamail-1.4-api.noarch 0:1.2-13.jpp5 set to be updated
--> Package geronimo-jms-1.1-api.noarch 0:1.2-13.jpp5 set to be updated
--> Package java-1.6.0-sun-compat.i586 0:1.6.0.22-3.sl5.jpp set to be updated
--> Processing Dependency: jdk = 2000:1.6.0_22-fcs for package: java-1.6.0-sun-compat
--> Processing Dependency: /usr/bin/xsltproc for package: java-1.6.0-sun-compat
--> Processing Dependency: /usr/bin/xsltproc for package: java-1.6.0-sun-compat
--> Package keyutils-libs-devel.i386 0:1.2-1.el5 set to be updated
--> Processing Dependency: krb5-libs = 1.6.1-36.el5_5.2 for package: krb5-workstation
--> Package krb5-libs.i386 0:1.6.1-55.el5_6.1 set to be updated
--> Package libselinux-devel.i386 0:1.33.4-5.5.el5 set to be updated
--> Processing Dependency: libsepol-devel >= 1.15.2-1 for package: libselinux-devel
--> Package libtool-ltdl.i386 0:1.5.22-7.el5_4 set to be updated
--> Package mx4j.i386 1:3.0.1-6jpp.4 set to be updated
--> Processing Dependency: javamail >= 1.2-5jpp for package: mx4j
--> Processing Dependency: bcel >= 5.0 for package: mx4j
--> Processing Dependency: jakarta-commons-logging >= 1.0.1 for package: mx4j
--> Processing Dependency: axis >= 1.1 for package: mx4j
--> Processing Dependency: xml-commons for package: mx4j
--> Processing Dependency: xml-commons-resolver for package: mx4j
--> Package openldap.i386 0:2.3.43-12.el5_5.1 set to be updated
--> Package perl-Compress-Zlib.i386 0:1.42-1.fc6 set to be updated
--> Package perl-Convert-ASN1.noarch 0:0.20-1.1 set to be updated
--> Package perl-HTML-Parser.i386 0:3.55-1.fc6 set to be updated
--> Processing Dependency: perl-HTML-Tagset >= 3.03 for package: perl-HTML-Parser
--> Processing Dependency: perl(HTML::Tagset) for package: perl-HTML-Parser
--> Package perl-XML-RegExp.noarch 0:0.03-1.2.el4.rf set to be updated
--> Package perl-XML-SAX.noarch 0:0.14-8 set to be updated
--> Processing Dependency: perl(XML::NamespaceSupport) for package: perl-XML-SAX
--> Running transaction check
--> Package axis.i386 0:1.2.1-2jpp.6 set to be updated
--> Processing Dependency: jakarta-commons-discovery for package: axis
--> Processing Dependency: jakarta-commons-httpclient for package: axis
--> Processing Dependency: wsdl4j for package: axis
--> Package bcel.noarch 0:5.1-16.jpp5 set to be updated
--> Processing Dependency: regexp for package: bcel
--> Package geronimo-specs-poms.noarch 0:1.2-13.jpp5 set to be updated
--> Package glassfish-jaf.noarch 0:1.1.0-5.jpp5 set to be updated
--> Package glassfish-javamail.noarch 0:1.4.0-3.jpp5 set to be updated
--> Package jakarta-commons-logging.noarch 0:1.1-8.jpp5 set to be updated
--> Package jdk.i586 2000:1.6.0_22-fcs set to be updated
--> Package krb5-workstation.i386 0:1.6.1-55.el5_6.1 set to be updated
--> Package libsepol-devel.i386 0:1.15.2-3.el5 set to be updated
--> Package libxslt.i386 0:1.1.17-2.el5_2.2 set to be updated
--> Package perl-HTML-Tagset.noarch 0:3.10-2.1.1 set to be updated
--> Package perl-XML-NamespaceSupport.noarch 0:1.09-1.2.1 set to be updated
--> Package xml-commons.noarch 0:1.3.04-5.jpp5 set to be updated
--> Package xml-commons-resolver.i386 0:1.1-1jpp.12 set to be updated
--> Running transaction check
--> Package jakarta-commons-discovery.i386 1:0.3-4jpp.1 set to be updated
--> Package jakarta-commons-httpclient.i386 1:3.0-7jpp.1 set to be updated
--> Package regexp.noarch 0:1.5-1.jpp5 set to be updated
--> Package wsdl4j.i386 0:1.5.2-4jpp.1 set to be updated
--> Finished Dependency Resolution
Beginning Kernel Module Plugin
Finished Kernel Module Plugin
```

Dependencies Resolved

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

Package	Arch	Version
Installing:		
ig_SE_storm_backend	i386	3.1.0-0_ig55_sl4
ig_SE_storm_frontend	i386	3.1.0-0_ig55_sl4
Installing for dependencies:		
CGSI_gSOAP_2.7-voms	i386	1.3.3-1.slc4
axis	i386	1.2.1-2jpp.6
bcel	noarch	5.1-16.jpp5
bdii	noarch	4.0.1-4
bouncycastle	noarch	1.43-1.jpp5
c-ares	i686	1.3.0-4.slc4
classpathx-mail	noarch	1.1.2-1.jpp5
compat-openldap	i386	2.3.43-2.2.29-12.el5_5.1
e2fsprogs-devel	i386	1.39-23.el5
edg-gpt-profile	noarch	1.0.0-1
edg-mkgridmap	noarch	3.0.0-1
edg-mkgridmap-conf	noarch	3.0.0-1
fetch-crl	noarch	2.7.0-1
geronimo-jaf-1.0.2-api	noarch	1.2-13.jpp5
geronimo-javamail-1.4-api	noarch	1.2-13.jpp5
geronimo-jms-1.1-api	noarch	1.2-13.jpp5
geronimo-specs-poms	noarch	1.2-13.jpp5
glassfish-jaf	noarch	1.1.0-5.jpp5
glassfish-javamail	noarch	1.4.0-3.jpp5
glite-info-generic	noarch	2.0.2-3
glite-info-provider-release	noarch	1.0.2-1
glite-info-provider-service	noarch	1.1.7-0
glite-initscript-globus-gridftp	noarch	1.0.2-1
glite-security-gsoap-plugin	i386	1.5.3-1.slc4
glite-security-lcas	i386	1.3.11-2.slc4
glite-security-lcas-interface	i386	1.3.11-1.slc4
glite-security-lcas-lcmapi-gt4-interface	i386	0.0.14-2.slc4
glite-security-lcas-plugins-basic	i386	1.3.2-3.slc4
glite-security-lcas-plugins-check-executable	i386	1.2.1-3.slc4
glite-security-lcas-plugins-voms	i386	1.3.4-5.slc4
glite-security-lcmapi	i386	1.4.7-1.slc4
glite-security-lcmapi-plugins-basic	i386	1.3.10-2.slc4
glite-security-lcmapi-plugins-verify-proxy	i386	1.4.2-1.slc4
glite-security-lcmapi-plugins-voms	i386	1.3.7-5.slc4
glite-security-lcmapi-without-gsi	i386	1.4.2-1.slc4
glite-security-trustmanager	noarch	1.8.16-3
glite-security-util-java	noarch	1.4.0-1
glite-security-voms-api	i386	1.8.12-1.slc4
glite-security-voms-api-c	i386	1.8.12-1.slc4
glite-security-voms-api-cpp	i386	1.8.12-1.slc4
glite-security-voms-clients	i386	1.8.12-1.slc4
glite-version	noarch	3.1.2-1
glite-yaim-core	noarch	4.0.13-2
glue-schema	noarch	1.3.0-5
gpt	i386	VDT1.6.0x86_rhas_4-1
gridsite-shared	i386	1.1.21-1.slc4
ig-vomscerts-all	noarch	1.1-13
ig-yaim	noarch	4.0.12-8_bc
ig-yaim-storm	noarch	4.0.9-11
jakarta-commons-discovery	i386	1:0.3-4jpp.1
jakarta-commons-httpclient	i386	1:3.0-7jpp.1
jakarta-commons-logging	noarch	1.1-8.jpp5
java-1.6.0-sun-compat	i586	1.6.0.22-3.s15.jpp
jdk	i586	2000:1.6.0_22-fcs
keyutils-libs-devel	i386	1.2-1.el5
krb5-devel	i386	1.6.1-55.el5_6.1
lcg-expiregridmapdir	noarch	2.1.0-1
lcg-vomscerts	noarch	6.3.0-1
lcg-vomscerts-desy	noarch	0.0.11-1
libselinux-devel	i386	1.33.4-5.5.el5
libsepol-devel	i386	1.15.2-3.el5

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

libtool-ltdl	i386	1.5.22-7.el5_4
libxslt	i386	1.1.17-2.el5_2.2
log4cpp	i386	1.0-9.el5
log4cxx	i686	0.9.7-1.sl4
log4j	noarch	1.2.14-15.jpp5
mx4j	i386	1:3.0.1-6jpp.4
mysql	i386	5.0.77-4.el5_5.4
mysql-server	i386	5.0.77-4.el5_5.4
openldap-clients	i386	2.3.43-12.el5_5.1
openldap-servers	i386	2.3.43-12.el5_5.1
openssl-devel	i386	0.9.8e-12.el5_5.7
openssl097a	i386	0.9.7a-9.el5_4.2
perl-Compress-Zlib	i386	1.42-1.fc6
perl-Convert-ASN1	noarch	0.20-1.1
perl-Crypt-SSLeay	i386	0.51111.el5
perl-DBD-MySQL	i386	3.0007-2.el5
perl-DBI	i386	1.52-2.el5
perl-Date-Manip	noarch	5.56-1.el4.rf
perl-HTML-Parser	i386	3.55-1.fc6
perl-HTML-Tagset	noarch	3.10-2.1.1
perl-IO-Socket-SSL	noarch	1.38-1.el4.rf
perl-LDAP	noarch	1:0.33-3.fc6
perl-Net-SSLeay	i386	1.36-1.el4.rf
perl-TermReadKey	i386	2.30-5.el5
perl-URI	noarch	1.35-3
perl-XML-DOM	noarch	1.44-2.el4.rf
perl-XML-Namespacesupport	noarch	1.09-1.2.1
perl-XML-Parser	i386	2.34-6.1.2.2.1
perl-XML-RegExp	noarch	0.03-1.2.el4.rf
perl-XML-SAX	noarch	0.14-8
perl-libwww-perl	noarch	5.805-1.1.1
regexp	noarch	1.5-1.jpp5
storm-backend-server	i386	1.5.6-3.sl4
storm-frontend-server-gcc32dbgpthr	i386	1.5.0-4.sl4
storm-info-dynamic	i386	1.6.0-1.sl4
vdt_globus_data_server	i386	VDT1.6.1x86_rhas_4-7
vdt_globus_essentials	i386	VDT1.6.1x86_rhas_4-9
vdt_globus_rm_essentials	i386	VDT1.6.1x86_rhas_4-7
vdt_globus_rm_server	i386	VDT1.6.1x86_rhas_4_LCG-1
vdt_globus_sdk	i386	VDT1.6.1x86_rhas_4-9
wSDL4j	i386	1.5.2-4jpp.1
xalan-c	i686	1.10.0-1.sl4
xerces-c	i386	2.7.0-1.2.el4.rf
xml-commons	noarch	1.3.04-5.jpp5
xml-commons-resolver	i386	1.1-1jpp.12
xmllrpc-c	i386	1.04-1
zlib-devel	i386	1.2.3-3
Updating for dependencies:		
krb5-libs	i386	1.6.1-55.el5_6.1
krb5-workstation	i386	1.6.1-55.el5_6.1
openldap	i386	2.3.43-12.el5_5.1
openssl	i686	0.9.8e-12.el5_5.7

Transaction Summary

```

=====
Install      110 Package(s)
Upgrade      4 Package(s)

```

Total download size: 190 M

Is this ok [y/N]: y

Downloading Packages:

```

(1/114): edg-gpt-profile-1.0.0-1.noarch.rpm
(2/114): glite-info-provider-release-1.0.2-1.noarch.rpm
(3/114): ig_SE_storm_frontend-3.1.0-0_ig55_sl4.i386.rpm
(4/114): ig_SE_storm_backend-3.1.0-0_ig55_sl4.i386.rpm
(5/114): glite-version-3.1.2-1.noarch.rpm
(6/114): glite-initscript-globus-gridftp-1.0.2-1.noarch.rpm

```

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

(7/114): glite-info-generic-2.0.2-3.noarch.rpm
(8/114): lcg-expiregridmapdir-2.1.0-1.noarch.rpm
(9/114): storm-info-dynamic-1.6.0-1.sl4.i386.rpm
(10/114): perl-XML-RegExp-0.03-1.2.el4.rf.noarch.rpm
(11/114): lcg-vomscerts-desy-0.0.11-1.noarch.rpm
(12/114): xml-commons-1.3.04-5.jpp5.noarch.rpm
(13/114): glite-security-lcas-interface-1.3.11-1.sl4.i386.rpm
(14/114): glite-security-lcas-plugins-check-executable-1.2.1-3.sl4.i386.rpm
(15/114): glite-security-voms-api-1.8.12-1.sl4.i386.rpm
(16/114): perl-HTML-Tagset-3.10-2.1.1.noarch.rpm
(17/114): perl-XML-Namespacesupport-1.09-1.2.1.noarch.rpm
(18/114): fetch-curl-2.7.0-1.noarch.rpm
(19/114): geronimo-specs-poms-1.2-13.jpp5.noarch.rpm
(20/114): edg-mkgridmap-conf-3.0.0-1.noarch.rpm
(21/114): lcg-vomscerts-6.3.0-1.noarch.rpm
(22/114): bdii-4.0.1-4.noarch.rpm
(23/114): glite-info-provider-service-1.1.7-0.noarch.rpm
(24/114): ig-yaim-storm-4.0.9-11.noarch.rpm
(25/114): keyutils-libs-devel-1.2-1.el5.i386.rpm
(26/114): ig-vomscerts-all-1.1-13.noarch.rpm
(27/114): glue-schema-1.3.0-5.noarch.rpm
(28/114): perl-TermReadKey-2.30-5.el5.i386.rpm
(29/114): geronimo-jms-1.1-api-1.2-13.jpp5.noarch.rpm
(30/114): edg-mkgridmap-3.0.0-1.noarch.rpm
(31/114): libtool-ltdl-1.5.22-7.el5_4.i386.rpm
(32/114): geronimo-jaf-1.0.2-api-1.2-13.jpp5.noarch.rpm
(33/114): regexp-1.5-1.jpp5.noarch.rpm
(34/114): vdt_globus_rm_server-VDT1.6.1x86_rhas_4_LCG-1.i386.rpm
(35/114): perl-Convert-ASN1-0.20-1.1.noarch.rpm
(36/114): glite-security-lcas-lcmapi-gt4-interface-0.0.14-2.sl4.i386.rpm
(37/114): perl-Crypt-SSLeay-0.51-11.el5.i386.rpm
(38/114): perl-Compress-Zlib-1.42-1.fc6.i386.rpm
(39/114): perl-IO-Socket-SSL-1.38-1.el4.rf.noarch.rpm
(40/114): glite-security-lcas-plugins-basic-1.3.2-3.sl4.i386.rpm
(41/114): glite-security-lcmapi-plugins-verify-proxy-1.4.2-1.sl4.i386.rpm
(42/114): java-1.6.0-sun-compat-1.6.0.22-3.sl5.jpp.i586.rpm
(43/114): glite-security-lcas-plugins-voms-1.3.4-5.sl4.i386.rpm
(44/114): glite-security-lcas-1.3.11-2.sl4.i386.rpm
(45/114): gridsite-shared-1.1.21-1.sl4.i386.rpm
(46/114): perl-XML-SAX-0.14-8.noarch.rpm
(47/114): glassfish-jaf-1.1.0-5.jpp5.noarch.rpm
(48/114): perl-HTML-Parser-3.55-1.fc6.i386.rpm
(49/114): c-ares-1.3.0-4.sl4.i686.rpm
(50/114): zlib-devel-1.2.3-3.i386.rpm
(51/114): glite-security-lcmapi-plugins-basic-1.3.10-2.sl4.i386.rpm
(52/114): perl-URI-1.35-3.noarch.rpm
(53/114): jakarta-commons-logging-1.1-8.jpp5.noarch.rpm
(54/114): glite-yaim-core-4.0.13-2.noarch.rpm
(55/114): jakarta-commons-discovery-0.3-4jpp.1.i386.rpm
(56/114): glite-security-util-java-1.4.0-1.noarch.rpm
(57/114): libselinux-devel-1.33.4-5.5.el5.i386.rpm
(58/114): glite-security-lcmapi-plugins-voms-1.3.7-5.sl4.i386.rpm
(59/114): perl-DBD-MySQL-3.0007-2.el5.i386.rpm
(60/114): xml-commons-resolver-1.1-1jpp.12.i386.rpm
(61/114): ig-yaim-4.0.12-8_bc.noarch.rpm
(62/114): CGSI_gSOAP_2.7-voms-1.3.3-1.sl4.i386.rpm
(63/114): glite-security-lcmapi-without-gsi-1.4.2-1.sl4.i386.rpm
(64/114): geronimo-javamail-1.4-api-1.2-13.jpp5.noarch.rpm
(65/114): perl-XML-DOM-1.44-2.el4.rf.noarch.rpm
(66/114): libsepol-devel-1.15.2-3.el5.i386.rpm
(67/114): log4cpp-1.0-9.el5.i386.rpm
(68/114): perl-XML-Parser-2.34-6.1.2.2.1.i386.rpm
(69/114): perl-Date-Manip-5.56-1.el4.rf.noarch.rpm
(70/114): openldap-clients-2.3.43-12.el5_5.1.i386.rpm
(71/114): glite-security-lcmapi-1.4.7-1.sl4.i386.rpm
(72/114): xmlrpc-c-1.04-1.i386.rpm
(73/114): compat-openldap-2.3.43_2.2.29-12.el5_5.1.i386.rpm

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

```
(74/114): openldap-2.3.43-12.el5_5.1.i386.rpm
(75/114): perl-LDAP-0.33-3.fc6.noarch.rpm
(76/114): perl-Net-SSLeay-1.36-1.el4.rf.i386.rpm
(77/114): log4j-1.2.14-15.jpp5.noarch.rpm
(78/114): perl-libwww-perl-5.805-1.1.1.noarch.rpm
(79/114): wsdl4j-1.5.2-4jpp.1.i386.rpm
(80/114): vdt_globus_data_server-VDT1.6.1x86_rhas_4-7.i386.rpm
(81/114): bcel-5.1-16.jpp5.noarch.rpm
(82/114): libxslt-1.1.17-2.el5_2.2.i386.rpm
(83/114): jakarta-commons-httpclient-3.0-7jpp.1.i386.rpm
(84/114): e2fsprogs-devel-1.39-23.el5.i386.rpm
(85/114): perl-DBI-1.52-2.el5.i386.rpm
(86/114): krb5-libs-1.6.1-55.el5_6.1.i386.rpm
(87/114): storm-frontent-server-gcc32dbgpthr-1.5.0-4.s14.i386.rpm
(88/114): glite-security-voms-clients-1.8.12-1.slc4.i386.rpm
(89/114): glassfish-javamail-1.4.0-3.jpp5.noarch.rpm
(90/114): classpathx-mail-1.1.2-1.jpp5.noarch.rpm
(91/114): openssl097a-0.9.7a-9.el5_4.2.i386.rpm
(92/114): gpt-VDT1.6.0x86_rhas_4-1.i386.rpm
(93/114): krb5-workstation-1.6.1-55.el5_6.1.i386.rpm
(94/114): vdt_globus_rm_essentials-VDT1.6.1x86_rhas_4-7.i386.rpm
(95/114): glite-security-gsoap-plugin-1.5.3-1.slc4.i386.rpm
(96/114): xerces-c-2.7.0-1.2.el4.rf.i386.rpm
(97/114): openssl-0.9.8e-12.el5_5.7.i686.rpm
(98/114): glite-security-trustmanager-1.8.16-3.noarch.rpm
(99/114): krb5-devel-1.6.1-55.el5_6.1.i386.rpm
(100/114): xalan-c-1.10.0-1.slc4.i686.rpm
(101/114): openssl-devel-0.9.8e-12.el5_5.7.i386.rpm
(102/114): mx4j-3.0.1-6jpp.4.i386.rpm
(103/114): log4cxx-0.9.7-1.slc4.i686.rpm
(104/114): openldap-servers-2.3.43-12.el5_5.1.i386.rpm
(105/114): bouncycastle-1.43-1.jpp5.noarch.rpm
(106/114): axis-1.2.1-2jpp.6.i386.rpm
(107/114): glite-security-voms-api-c-1.8.12-1.slc4.i386.rpm
(108/114): glite-security-voms-api-cpp-1.8.12-1.slc4.i386.rpm
(109/114): mysql-5.0.77-4.el5_5.4.i386.rpm
(110/114): mysql-server-5.0.77-4.el5_5.4.i386.rpm
(111/114): storm-backend-server-1.5.6-3.s14.i386.rpm
(112/114): vdt_globus_essentials-VDT1.6.1x86_rhas_4-9.i386.rpm
(113/114): vdt_globus_sdk-VDT1.6.1x86_rhas_4-9.i386.rpm
(114/114): jdk-1.6.0_22-fcs.i586.rpm
```

Total

warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID 6b8d79e6
dag/gpgkey

Importing GPG key 0x6B8D79E6 "Dag Wieers (Dag Apt Repository v1.0) " from http://linuxsoft.cern.c

Is this ok [y/N]: y

Running rpm_check_debug

Running Transaction Test

Finished Transaction Test

Transaction Test Succeeded

Running Transaction

```
Updating      : krb5-libs
Updating      : openssl
Updating      : openldap
Installing    : openssl097a
Installing    : perl-DBI
Installing    : mysql
Installing    : xmlrpc-c
Installing    : perl-Net-SSLeay
Installing    : xerces-c
Installing    : xalan-c
Installing    : perl-DBD-MySQL
Installing    : mysql-server
Installing    : openldap-clients
Installing    : compat-openldap
Installing    : perl-Crypt-SSLeay
```

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

```
Installing      : perl-Compress-Zlib
Installing      : libxslt
Installing      : c-ares
Installing      : libtool-ltdl
Installing      : openldap-servers
Installing      : log4cpp
Installing      : gridsite-shared
Installing      : perl-TermReadKey
Installing      : log4cxx
Installing      : jdk
Unpacking JAR files...
  rt.jar...
  jsse.jar...
  charsets.jar...
  tools.jar...
  localedata.jar...
  plugin.jar...
  javaws.jar...
  deploy.jar...
Installing      : java-1.6.0-sun-compat
Installing      : glite-security-lcas-interface
Installing      : jakarta-commons-logging
Installing      : vdt_globus_sdk
Installing      : geronimo-specs-poms
Installing      : geronimo-jaf-1.0.2-api
Installing      : gpt
Using system tar and gzip programs to unpack packages
GNU tar located at /bin/tar
GNU zip located at /bin/gzip
GNU unzip located at /bin/gunzip
GNU make located at /usr/bin/make
Perl located at /usr/bin/perl
rpm located at /bin/rpm
rpmbuild located at /bin/rpmbuild
RPM Package License set to GNU
RPM Package Vendor set to NCSA
RPM Package FTP Site set to ftp.ncsa.uiuc.edu
RPM Package URL set to http://www.gridpackaging.org
RPM Packager set to NCSA
RPM Prefix set to /usr/grid
GNU target platform set to i686-pc-linux-gnu
Installing      : perl-URI
Installing      : glite-version
Installing      : glassfish-jaf
Installing      : glassfish-javamail
Installing      : perl-IO-Socket-SSL
Installing      : fetch-curl
Installing      : glue-schema
Installing      : ig-vomscerts-all
Installing      : edg-gpt-profile
Installing      : glite-security-voms-api
Installing      : ig-yaim-storm
Installing      : ig-yaim
Installing      : lcg-expiregridmapdir
Installing      : glite-yaim-core
Installing      : lcg-vomscerts-desy
Installing      : lcg-vomscerts
Installing      : classpathx-mail
Installing      : geronimo-javamail-1.4-api
Installing      : bouncycastle
Installing      : glite-security-util-java
Installing      : geronimo-jms-1.1-api
Installing      : xml-commons
Installing      : glite-info-provider-service
Installing      : zlib-devel
Installing      : perl-XML-NamespaceSupport
Installing      : perl-XML-SAX
```

Update host and perform the installation of package(s)

InstallationAndConfigurationOfAStoRMStorageElement < SiteAdminCorner < TWiki

```
Installing      : e2fsprogs-devel
Installing      : regexp
Installing      : bcel
Installing      : perl-XML-RegExp
Installing      : keyutils-libs-devel
Installing      : perl-Date-Manip
Installing      : storm-info-dynamic
Installing      : perl-HTML-Tagset
Installing      : libsepol-devel
Installing      : libselinux-devel
Installing      : perl-Convert-ASN1
Installing      : vdt_globus_essentials
Installing      : glite-security-voms-api-cpp
Installing      : glite-security-voms-api-c
Installing      : glite-security-lcmaps
Installing      : glite-security-lcmaps-plugins-voms
Installing      : glite-security-lcmaps-plugins-basic
Installing      : CGSI_gSOAP_2.7-voms
Installing      : glite-security-lcmaps-without-gsi
Installing      : vdt_globus_data_server
Installing      : glite-security-lcas
Installing      : glite-security-lcas-lcmaps-gt4-interface
Installing      : glite-security-lcmaps-plugins-verify-proxy
Installing      : glite-security-lcas-plugins-voms
Installing      : glite-security-voms-clients
Installing      : glite-security-lcas-plugins-basic
Installing      : vdt_globus_rm_essentials
Installing      : vdt_globus_rm_server
Installing      : glite-security-lcas-plugins-check-executable
Installing      : storm-backend-server
```

The StoRM BackEnd server is installed but NOT configured yet.
You need to use yaim to configure the server.

```
create ln for /etc/init.d/storm-backend
create ln for /etc/cron.d/storm-backend.cron
Installing      : glite-security-gsoap-plugin
Installing      : krb5-devel
Installing      : perl-HTML-Parser
Installing      : jakarta-commons-httpclient
Installing      : jakarta-commons-discovery
Installing      : wsd14j
Installing      : xml-commons-resolver
Updating        : krb5-workstation
Installing      : perl-libwww-perl
Installing      : perl-LDAP
Installing      : glite-info-generic
Installing      : openssl-devel
Installing      : glite-initscript-globus-gridftp
Installing      : glite-info-provider-release
Installing      : bdii
Installing      : perl-XML-DOM
Installing      : storm-frontend-server-gcc32dbgpthr
Installing      : perl-XML-Parser
Installing      : edg-mkgridmap
Installing      : edg-mkgridmap-conf
Installing      : ig_SE_storm_frontend
Installing      : log4j
Installing      : mx4j
Installing      : axis
Installing      : glite-security-trustmanager
Installing      : ig_SE_storm_backend
Cleanup         : krb5-libs
Cleanup         : openssl
Cleanup         : krb5-workstation
Cleanup         : openldap
```

Installed:

Update host and perform the installation of package(s)

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ig_SE_storm_backend.i386 0:3.1.0-0_ig55_sl4

ig_SE_storm_fronte

Dependency Installed:

```
CGSI_gSOAP_2.7-voms.i386 0:1.3.3-1.slc4
bcel.noarch 0:5.1-16.jpp5
bouncycastle.noarch 0:1.43-1.jpp5
classpathx-mail.noarch 0:1.1.2-1.jpp5
e2fsprogs-devel.i386 0:1.39-23.el5
edg-mkgridmap.noarch 0:3.0.0-1
fetch-curl.noarch 0:2.7.0-1
geronimo-javamail-1.4-api.noarch 0:1.2-13.jpp5
geronimo-specs-poms.noarch 0:1.2-13.jpp5
glassfish-javamail.noarch 0:1.4.0-3.jpp5
glite-info-provider-release.noarch 0:1.0.2-1
glite-initscript-globus-gridftp.noarch 0:1.0.2-1
glite-security-lcas.i386 0:1.3.11-2.slc4
glite-security-lcas-lcmapi-gt4-interface.i386 0:0.0.14-2.slc4
glite-security-lcas-plugins-check-executable.i386 0:1.2.1-3.slc4
glite-security-lcmapi.i386 0:1.4.7-1.slc4
glite-security-lcmapi-plugins-verify-proxy.i386 0:1.4.2-1.slc4
glite-security-lcmapi-without-gsi.i386 0:1.4.2-1.slc4
glite-security-util-java.noarch 0:1.4.0-1
glite-security-voms-api-c.i386 0:1.8.12-1.slc4
glite-security-voms-clients.i386 0:1.8.12-1.slc4
glite-yaim-core.noarch 0:4.0.13-2
gpt.i386 0:VDT1.6.0x86_rhas_4-1
ig-vomscerts-all.noarch 0:1.1-13
ig-yaim-storm.noarch 0:4.0.9-11
jakarta-commons-httpclient.i386 1:3.0-7jpp.1
java-1.6.0-sun-compat.i586 0:1.6.0.22-3.sl5.jpp
keyutils-libs-devel.i386 0:1.2-1.el5
lcg-expiregridmapdir.noarch 0:2.1.0-1
lcg-vomscerts-desy.noarch 0:0.0.11-1
libsepol-devel.i386 0:1.15.2-3.el5
libxslt.i386 0:1.1.17-2.el5_2.2
log4cxx.i686 0:0.9.7-1.slc4
mx4j.i386 1:3.0.1-6jpp.4
mysql-server.i386 0:5.0.77-4.el5_5.4
openldap-servers.i386 0:2.3.43-12.el5_5.1
openssl097a.i386 0:0.9.7a-9.el5_4.2
perl-Convert-ASN1.noarch 0:0.20-1.1
perl-DBD-MySQL.i386 0:3.0007-2.el5
perl-Date-Manip.noarch 0:5.56-1.el4.rf
perl-HTML-Tagset.noarch 0:3.10-2.1.1
perl-LDAP.noarch 1:0.33-3.fc6
perl-TermReadKey.i386 0:2.30-5.el5
perl-XML-DOM.noarch 0:1.44-2.el4.rf
perl-XML-Parser.i386 0:2.34-6.1.2.2.1
perl-XML-SAX.noarch 0:0.14-8
regexp.noarch 0:1.5-1.jpp5
storm-frontend-server-gcc32dbgpthr.i386 0:1.5.0-4.sl4
vdt_globus_data_server.i386 0:VDT1.6.1x86_rhas_4-7
vdt_globus_rm_essentials.i386 0:VDT1.6.1x86_rhas_4-7
vdt_globus_sdk.i386 0:VDT1.6.1x86_rhas_4-9
xalan-c.i686 0:1.10.0-1.slc4
xml-commons.noarch 0:1.3.04-5.jpp5
xmlrpc-c.i386 0:1.04-1
axis.i386 0:1.
bdii.noarch 0:
c-ares.i686 0:
compat-openld
edg-gpt-profi
edg-mkgridmap
geronimo-jaf
geronimo-jms-
glassfish-jaf
glite-info-ge
glite-info-pr
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-securit
glite-version
glue-schema.n
gridsite-shar
ig-yaim.noarc
jakarta-commo
jakarta-commo
jdk.i586 2000
krb5-devel.i3
lcg-vomscerts
libselinux-de
libtool-ltdl
log4cpp.i386
log4j.noarch
mysql.i386 0:
openldap-clie
openssl-devel
perl-Compress
perl-Crypt-SS
perl-DBI.i386
perl-HTML-Par
perl-IO-Socke
perl-Net-SSLe
perl-URI.noar
perl-XML-Name
perl-XML-RegE
perl-libwww-p
storm-backend
storm-info-dy
vdt_globus_es
vdt_globus_rm
wsdl4j.i386 0
xerces-c.i386
xml-commons-r
zlib-devel.i3
```

Dependency Updated:

krb5-libs.i386 0:1.6.1-55.el5_6.1 krb5-workstation.i386 0:1.6.1-55.el5_6.1 openldap.i386

Complete!

Install the missing package

```
$ wget ftp://mirror.switch.ch/pool/1/mirror/mysql/Downloads/MySQL-4.1/MySQL-shared-standard-4.1.22-0.sles9.i586.rpm
--2011-02-12 11:50:50-- ftp://mirror.switch.ch/pool/1/mirror/mysql/Downloads/MySQL-4.1/MySQL-sha
=> `MySQL-shared-standard-4.1.22-0.sles9.i586.rpm'
Resolving mirror.switch.ch... 130.59.10.36, 2001:620:0:8::20
Connecting to mirror.switch.ch|130.59.10.36|:21... connected.
Logging in as anonymous ... Logged in!
==> SYST ... done.      ==> PWD ... done.
==> TYPE I ... done.    ==> CWD /pool/1/mirror/mysql/Downloads/MySQL-4.1 ... done.
==> SIZE MySQL-shared-standard-4.1.22-0.sles9.i586.rpm ... 1665428
==> PASV ... done.     ==> RETR MySQL-shared-standard-4.1.22-0.sles9.i586.rpm ... done.
Length: 1665428 (1.6M)
```

```
100%[=====
2011-02-12 11:50:51 (3.50 MB/s) - `MySQL-shared-standard-4.1.22-0.sles9.i586.rpm' saved [1665428]
```

```
$ rpm -ivh MySQL-shared-standard-4.1.22-0.sles9.i586.rpm
Preparing...      ##### [100%]
 1:MySQL-shared-standard ##### [100%]
```

Install CAs

```
$ yum install -y lcg-CA
```

CERTIFICATES

```
Installing certificate
```

```
$ cd /etc/grid-security/
drwxr-xr-x  2 root root 20480 Jun 30 16:36 certificates
-rw-r--r--  1 root root  1062 Jun 30 16:42 hostcert.pem
-r-----  1 root root   887 Jun 30 16:42 hostkey.pem
drwxr-xr-x  2 root root  4096 Jun 30 16:40 vomsdir
```

PARTITIONING

```
$ mkdir /root/storage
```

CONFIGURING

```
Edit the /opt/glite/yaim/examples/siteinfo/ig-site-info.def file
```

```
# List of unix users to be created in the service nodes.
USERS_CONF=${INSTALL_ROOT}/glite/yaim/examples/ig-users.conf

# List of the local accounts which a user should be mapped to.
GROUPS_CONF=${INSTALL_ROOT}/glite/yaim/examples/ig-groups.conf

# Uncomment this variable if you are installing a mysql server
# It is the MySQL admin password.
MYSQL_PASSWORD=KualaLumpur

# Space separated list of SEs hostnames
SE_LIST="$STORM_BACKEND_HOST"

# Space separated list of VOs supported by your site
VOS="eumed infngrid"

#####
```

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```
# eumed #
#####
VO_EUMED_SW_DIR=$VO_SW_DIR/eumed
VO_EUMED_DEFAULT_SE=$SE_HOST
VO_EUMED_STORAGE_DIR=$CLASSIC_STORAGE_DIR/eumed
VO_EUMED_VOMS_SERVERS="'vomss://voms2.cnaf.infn.it:8443/voms/eumed?/eumed' 'vomss://voms-02.pd.infn.it:8443/voms/eumed?/eumed'"
VO_EUMED_VOMSES="'eumed voms2.cnaf.infn.it 15016 /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms2.cnaf.infn.it'"
VO_EUMED_VOMS_CA_DN="'/C=IT/O=INFN/CN=INFN CA' '/C=IT/O=INFN/CN=INFN CA'"
VO_EUMED_WMS_HOSTS="wms-01.eumedgrid.eu"

#####
# infngrid #
#####
VO_INFNGRID_SW_DIR=$VO_SW_DIR/infngrid
VO_INFNGRID_DEFAULT_SE=$SE_HOST
VO_INFNGRID_STORAGE_DIR=$CLASSIC_STORAGE_DIR/infngrid
VO_INFNGRID_VOMS_SERVERS="'vomss://voms.cnaf.infn.it:8443/voms/infngrid?/infngrid' 'vomss://voms-02.pd.infn.it:8443/voms/infngrid?/infngrid'"
VO_INFNGRID_VOMSES="'infngrid voms.cnaf.infn.it 15000 /C=IT/O=INFN/OU=Host/L=CNAF/CN=voms.cnaf.infn.it'"
VO_INFNGRID_VOMS_CA_DN="'/C=IT/O=INFN/CN=INFN CA' '/C=IT/O=INFN/CN=INFN CA'"
```

Add the unix users in the /opt/glite/yaim/examples/ig-users.conf file

```
70000:eumed01:48000:eumed:eumed::
70001:eumed01:48000:eumed:eumed::
70002:eumed01:48000:eumed:eumed::
70003:eumed01:48000:eumed:eumed::
70004:eumed01:48000:eumed:eumed::
70005:eumed01:48000:eumed:eumed::
70006:eumed01:48000:eumed:eumed::
70007:eumed01:48000:eumed:eumed::
70008:eumed01:48000:eumed:eumed::
70009:eumed01:48000:eumed:eumed::
70010:eumed10:48000:eumed:eumed::
70110:sgmeumed01:47001,48000:eumedsgm,eumed:eumed:sgm
70111:sgmeumed02:47001,48000:eumedsgm,eumed:eumed:sgm
70112:sgmeumed03:47001,48000:eumedsgm,eumed:eumed:sgm
[...]
2451:infngrid001:2405:infngrid:infngrid::
2452:infngrid002:2405:infngrid:infngrid::
2453:infngrid003:2405:infngrid:infngrid::
2454:infngrid004:2405:infngrid:infngrid::
2455:infngrid005:2405:infngrid:infngrid::
2456:infngrid006:2405:infngrid:infngrid::
2457:infngrid007:2405:infngrid:infngrid::
2458:infngrid008:2405:infngrid:infngrid::
2459:infngrid009:2405:infngrid:infngrid::
2460:infngrid010:2405:infngrid:infngrid::
7106:sgminfngrid001:2504,2405:sgminfngrid,infngrid:infngrid:sgm:
7206:sgminfngrid002:2504,2405:sgminfngrid,infngrid:infngrid:sgm:
7306:sgminfngrid003:2504,2405:sgminfngrid,infngrid:infngrid:sgm:
```

Add the unix groups in the /opt/glite/yaim/examples/ig-groups.conf file

```
"/eumed/ROLE=SoftwareManager"::sgm
"/eumed":::
"/infngrid/ROLE=SoftwareManager"::sgm:
"/infngrid/ROLE=pilot"::pilot:
"/infngrid":::
```

Edit the /opt/glite/yaim/examples/siteinfo/services/ig-se_storm_frontend file

```
# Database settings
#-----
STORM_DB_PWD=KualaLumpur
```

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```
Edit the /opt/glite/yaim/examples/siteinfo/services/ig-se_storm_backend
file
```

```
# StoRM backend host
STORM_BACKEND_HOST=vm03.ct.infn.it
```

```
# StoRM default storage path
STORM_DEFAULT_ROOT=/storage
```

```
# Database settings
```

```
#-----
# Host for database connection.
# OPTIONAL - Default value: localhost
#STORM_DB_HOST=localhost
# User for database connection.
# OPTIONAL - Default value: storm
#STORM_DB_USER=storm
# Password for database connection.
# COMPULSORY - No default value.
STORM_DB_PWD=KualaLumpur
```

```
# Storage Areas settings
```

```
#-----
# List of supported Storage Areas.
# Usually at least one Storage Area for each VO specified in VOS should be created. (e.g. STORM_S
# OPTIONAL - Default value: ${VOS}
STORM_STORAGEAREA_LIST=${VOS}
```

```
# **COMPULSORY** variables
```

```
STORM_INFNGRID_VONAME=infngrid
STORM_EUMED_VONAME=eumed
```

Start the configuration with ig_yaim

```
$ /opt/glite/yaim/bin/ig_yaim -c -s /opt/glite/yaim/examples/siteinfo/ig-site-info.def -n ig_SE_s
```

```
WARNING:
```

```
WARNING: *****
```

```
WARNING: Your siteinfo directory is world readable. This is generally a bad idea
```

```
WARNING: as configuration files may contain passwords and other sensitive information.
```

```
WARNING: *****
```

```
WARNING:
```

```
INFO: Using site configuration file: /opt/glite/yaim/examples/siteinfo/ig-site-info.def
```

```
INFO: Sourcing service specific configuration file: /opt/glite/yaim/examples/siteinfo/services
```

```
INFO: Sourcing service specific configuration file: /opt/glite/yaim/examples/siteinfo/services
```

```
INFO:
```

```
#####
```

```
.          /'.-. ' )
.   yA,-"-,( ,m, :/ )   .oo.   oo   o   ooo o.   .oo
.   /      .-Y a   a Y-.   8. .8'   8'8.   8   8b   d'8
.   /          ~ ~ /      8'   .8oo88.   8   8   8'   8
.   (_/      '===='      8   .8'   8.   8   8   Y   8
.   Y,-''-,Yy,-.,/      o8o  o8o   o88o  o8o  o8o   o8o
.   I_))_) I_))_)
```

```
current working directory: /root
```

```
site-info.def date: Feb 21 13:35 /opt/glite/yaim/examples/siteinfo/ig-site-info.def
```

```
yaim command: -c -s /opt/glite/yaim/examples/siteinfo/ig-site-info.def -n ig_SE_storm_ba
```

```
log file: /opt/glite/yaim/bin/./log/yaimlog
```

```
Mon Feb 21 13:42:39 CET 2011 : /opt/glite/yaim/bin/ig_yaim
```

```
Installed YAIM versions:
```

```
glite-yaim-core 4.0.13-2
```

```
ig-yaim 4.0.12-8_bc
```

```
ig-yaim-storm 4.0.9-11
```

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```
#####
INFO: The default location of the grid-env.(c)sh files will be: /opt/glite/etc/profile.d
INFO: Sourcing the utilities in /opt/glite/yaim/functions/utils
INFO: Detecting environment
INFO: Executing function: config_ntp_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_ntp
INFO: Executing function: config_add_pool_env_check
INFO: Executing function: config_sysconfig_lcg_check
INFO: Executing function: config_host_certs_check
INFO: Executing function: config_vomsdir_check
INFO: Executing function: config_users_check
INFO: Executing function: config_edgusers_check
INFO: Executing function: config_mkgridmap_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_mkgridmap
INFO: Executing function: config_vomsmmap_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_vomsmmap
INFO: Executing function: config_storm_generic_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_generic
INFO: No required variables to set.
INFO: Executing function: config_storm_dir_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_dir
INFO: Executing function: config_storm_mysql_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_mysql
INFO: Executing function: config_gip_storm_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_gip_storm
INFO: Executing function: config_lcas_lcmmaps_gt4_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_lcas_lcmmaps_gt4
INFO: Executing function: config_globus_clients_check
INFO: Executing function: config_globus_gridftp_check
INFO: Executing function: config_lcgenv_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_lcgenv
INFO: Executing function: config_storm_rfio_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_rfio
INFO: No required variables to set.
INFO: Executing function: config_storm_properties_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_properties
INFO: Executing function: config_storm_namespace_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_namespace
INFO: Executing function: config_storm_backend_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_backend
INFO: No required variables to set.
INFO: Executing function: config_storm_frontend_check
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_frontend
INFO: Executing function: config_bdi_only_check
INFO: Executing function: config_ntp_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_ntp
INFO: Executing function: config_ntp
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_ntp
INFO: Storing old ntp settings in /etc/ntp.conf.yaimold.20110221_134241
INFO: Executing function: config_ldconf
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_ldconf
INFO: Executing function: config_add_pool_env_setenv
INFO: Executing function: config_add_pool_env
INFO: Executing function: config_sysconfig_edg
INFO: Executing function: config_sysconfig_globus
INFO: Executing function: config_sysconfig_lcg
INFO: Executing function: config_crl
INFO: Executing function: config_host_certs
INFO: Executing function: config_vomsdir_setenv
INFO: Executing function: config_vomsdir
INFO: Executing function: config_users
INFO: Executing function: config_edgusers
INFO: Executing function: config_mkgridmap_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_mkgridmap
INFO: Executing function: config_mkgridmap
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_mkgridmap
```


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```
INFO: The grid-map file will also contain special users for VO EUMED since UNPRIVILEGED_MKGRID
INFO: Adding ordinary users in the gridmap file since the VO is defined in groups.conf
INFO: The grid-map file will also contain special users for VO INFNGRID since UNPRIVILEGED_MK
INFO: Adding ordinary users in the gridmap file since the VO is defined in groups.conf
INFO: Now creating the grid-mapfile - this may take a few minutes...
INFO: Executing function: config_vomsmmap_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_vomsmmap
INFO: Executing function: config_vomsmmap
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_vomsmmap
INFO: Creating grid-map directory in /etc/grid-security/gridmapdir
INFO: Creating voms grid-map file in /etc/grid-security/voms-grid-mapfile
INFO: Creating voms groupmap file in /etc/grid-security/groupmapfile
INFO: Executing function: config_storm_generic_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_generic
INFO: No environment variables to set.
INFO: Executing function: config_storm_generic
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_generic
INFO: config_storm_generic: Updating host certificate and key in /etc/grid-security/storm
INFO: config_storm_generic: Adding user 'storm' to the group 'edguser'
INFO: config_storm_generic: Adding user edguser to 'storm' group
INFO: Executing function: config_storm_dir_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_dir
INFO: No environment variables to set.
INFO: Executing function: config_storm_dir
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_dir
INFO: config_storm_dir: Setting up JAVA environment
INFO: Executing function: config_storm_mysql_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_mysql
INFO: No environment variables to set.
INFO: Executing function: config_storm_mysql
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_mysql
INFO: config_storm_mysql: Restart MySQL service
Stopping MySQL: [ OK ]
Starting MySQL: [ OK ]
WARNING: config_storm_mysql: MySQL password for 'root@localhost' is already set! Skipping
WARNING: config_storm_mysql: MySQL password for 'root@vm03.ct.infn.it' is already set! Skipping
Update done!
INFO: Executing function: config_gip_only
INFO: Executing function: config_gip_storm_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_gip_storm
INFO: Executing function: config_gip_storm
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_gip_storm
INFO: config_gip_storm: Static service information
INFO: config_gip_storm: Creating /opt/glite/etc/gip/provider/service-srm2.2 ...
INFO: config_gip_storm: Creating /opt/glite/etc/gip/glite-info-service-srm2.2.conf ...
INFO: config_gip_storm: Static storage information
INFO: config_gip_storm: Creating /opt/glite/etc/gip/ldif/static-file-StoRM.ldif ...
INFO: config_gip_storm: Successfully created /opt/glite/etc/gip/ldif/static-file-StoRM.ldif !
INFO: config_gip_storm: Dynamic storage information
INFO: config_gip_storm: Creating /opt/storm/backend/etc/storm-yaim-variables.conf ...
INFO: config_gip_storm: Creating /opt/glite/etc/gip/plugin/glite-info-dynamic-storm ...
INFO: Executing function: config_gip_service_release
INFO: Executing function: config_rfio
INFO: Executing function: config_lcas_lcmmaps_gt4_setenv
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_lcas_lcmmaps_gt4
INFO: Executing function: config_lcas_lcmmaps_gt4
INFO: Using locally defined function /opt/glite/yaim/functions/local/config_lcas_lcmmaps_gt4
INFO: Creating LCAS_DB_FILE in /opt/glite/etc/lcas/lcas.db
INFO: Creating LCMAPS_DB_FILE in /opt/glite/etc/lcmaps/lcmaps.db
INFO: Executing function: config_globus_clients_setenv
INFO: Executing function: config_globus_clients
INFO: Configure the globus service
setup-tmpdirs: creating ./config.status
config.status: creating globus-script-initializer
config.status: creating Paths.pm
creating globus-sh-tools-vars.sh
creating globus-script-initializer
```

Start the configuration with `ig_yaim`

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```
creating Globus::Core::Paths
checking globus-hostname
Done
  INFO: Executing function: config_globus_gridftp_setenv
  INFO: Executing function: config_globus_gridftp
  INFO: Starting gridftp service :
Shutting down globus-gridftp-server:          [ OK ]
Starting globus-gridftp-server                [ OK ]
  INFO: Executing function: config_lcgenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_lcgenv
  INFO: Executing function: config_nfs_sw_dir_server
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_nfs_sw_dir_server
  INFO: $HOST_SW_DIR is not this host. Skip!
  INFO: Executing function: config_storm_rfio_setenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_rfio
  INFO: No environment variables to set.
  INFO: Executing function: config_storm_rfio
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_rfio
  INFO: config_storm_rfio: Configuring RFIO for StoRM
  INFO: Executing function: config_storm_properties_setenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_properties
  INFO: No environment variables to set.
  INFO: Executing function: config_storm_properties
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_properties
  INFO: config_storm_properties: Processing /etc/sysconfig/storm-backend ...
  INFO: config_storm_properties: Configuration file
  INFO: config_storm_properties: Creating /opt/storm/backend/etc/storm.properties ...
  INFO: config_storm_properties: Successfully created /opt/storm/backend/etc/storm.properties !
  INFO: Executing function: config_storm_namespace_setenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_namespace
  INFO: No environment variables to set.
  INFO: Executing function: config_storm_namespace
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_namespace
  INFO: config_storm_namespace: Configuration file
  INFO: config_storm_namespace: Creating /opt/storm/backend/etc/namespace.xml ...
  INFO: config_storm_namespace: Successfully created /opt/storm/backend/etc/namespace.xml !
  INFO: Executing function: config_storm_backend_setenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_backend
  INFO: Executing function: config_storm_backend
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_backend
  INFO: config_storm_backend: Processing /etc/init.d/storm-backend ...
  INFO: config_storm_backend: Processing /etc/cron.d/storm-backend.cron ...
  INFO: config_storm_backend: Processing /etc/logrotate.d/storm-backend.logrotate ...
  INFO: config_storm_backend: Restart service.
32-bit OS
LCMAPS DB file '/opt/storm/backend/etc/lcmaps.db'
LCMAPS LOG file '/opt/storm/backend/var/log/lcmaps.log'
LCMAPS DEBUG level '0'
Stopping StoRM BackEnd server                  [ OK ]
32-bit OS
StoRM backend: sent command START              [ OK ]
Starting StoRM BackEnd server                  [ OK ]
  INFO: Executing function: config_storm_frontend_setenv
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_frontend
  INFO: No environment variables to set.
  INFO: Executing function: config_storm_frontend
  INFO: Using locally defined function /opt/glite/yaim/functions/local/config_storm_frontend
  INFO: config_storm_frontend: Checking connection StoRM backend database
  INFO: config_storm_frontend: Ok!
  INFO: config_storm_frontend: Configuration file
  INFO: config_storm_frontend: Creating /opt/storm/frontend/etc/storm-frontend.conf ...
  INFO: config_storm_frontend: Successfully created /opt/storm/frontend/etc/storm-frontend.conf
  INFO: config_storm_frontend: Processing /etc/init.d/storm-frontend ...
  INFO: config_storm_frontend: Processing /etc/cron.d/storm-frontend.cron ...
  INFO: config_storm_frontend: Processing /etc/logrotate.d/storm-frontend.logrotate ...
  INFO: config_storm_frontend: Restart service
storm-frontend already stopped
```

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```
Starting storm-frontend as user "storm"... ok.
  INFO: Executing function: config_bdii_only
Stopping BDII [FAILED]
Starting BDII [ OK ]
  INFO: Configuration Complete. [ OK ]
  INFO: YAIM terminated succesfully.
```

Warning

In case the configuration hangs on the `config_storm_properties`, open the `/opt/glite/yaim/functions/local/config_storm_properties` file and change the URL variable as follows:

```
#URL="http://dev.mysql.com/get/Downloads/Connector-J/mysql-connector-java-5.1.13.tar.gz/from/http
URL=http://ftp.plusline.de/mysql/Downloads/Connector-J/mysql-connector-java-5.1.13.tar.gz
```

Disable YUM update

```
$ /etc/init.d/yum stop
Disabling nightly yum update: [ OK ]
```

Ports Check

Use the `netstat` command to see what services are listening on which ports.

```
$ netstat -tnlp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 0.0.0.0:3306             0.0.0.0:*               LISTEN     25809/mysq
tcp        0      0 0.0.0.0:111             0.0.0.0:*               LISTEN     1125/port
tcp        0      0 0.0.0.0:914             0.0.0.0:*               LISTEN     1156/rpc.
tcp        0      0 0.0.0.0:2170            0.0.0.0:*               LISTEN     29468/bdi
tcp        0      0 0.0.0.0:8444            0.0.0.0:*               LISTEN     28946/sto
tcp        0      0 :::9998                 :::*                   LISTEN     28374/jav
tcp        0      0 :::8080                 :::*                   LISTEN     28374/jav
tcp        0      0 :::22                   :::*                   LISTEN     1460/sshd
tcp        0      0 :::2811                 :::*                   LISTEN     27619/glo
tcp        0      0 :::4444                 :::*                   LISTEN     28374/jav
```

TESTING

Create a VOMS proxy with your FQANs

```
$ voms-proxy-init --voms infngrid
Enter GRID pass phrase:
Your identity: /C=IT/O=INFN/OU=Personal Certificate/L=Catania/CN=Giuseppe La Rocca
Creating temporary proxy ..... Done
Contacting voms-01.pd.infn.it:15000 [/C=IT/O=INFN/OU=Host/L=Padova/CN=voms-01.pd.infn.it]
Creating proxy ..... Done
Your proxy is valid until Tue Feb 22 05:45:51 2011
```

Check authentication

```
$ uberftp vm03.ct.infn.it
220 vm03.ct.infn.it GridFTP Server 2.3 (gcc32dbg, 1144436882-63) ready.
230 User infngrid003 logged in.
uberftp> quit
221 Goodbye.
kthxbye
```

Validating GridFTP server transferring a file to the /tmp remote directory...

```
$ globus-url-copy -vb file:$PWD/my_test_file gsiftp://vm03.ct.infn.it:2811/tmp/my_test_file
```

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```
Source: file:/home/larocca/  
Dest:  gsiftp://vm03.ct.infn.it:2811/tmp/  
my_test_file  
          13 bytes          0.00 MB/sec avg          0.00 MB/sec inst
```

Check the clientSRM tool

```
$ /opt/storm/srm-clients/bin/clientSRM -h
```

```
Usage: /opt/storm/srm-clients/bin/clientSRM
```

can be (it is not case-sensitive):

Discovery functions:

```
Ping  
GetTransferProtocols      (or gtp)
```

Directory functions:

```
Mkdir  
Rmdir  
Rm  
Ls  
Mv
```

Data transfer functions:

```
PtP  
PtG  
Copy                      (or cp)  
StatusPtP                 (or sptp)  
StatusPtG                 (or sptg)  
StatusCopy                (or scp)  
PutDone                   (or pd)  
ReleaseFiles              (or rf)  
BringOnline               (or bol)  
StatusBringOnline         (or sbol)  
GetRequestTokens          (or grt)  
GetRequestSummary         (or grs)  
AbortRequest              (or ar)  
AbortFiles                (or af)  
ExtendFileLifeTime       (or efl)
```

Space management functions:

```
ReserveSpace              (or rs)  
GetSpaceMetadata          (or gsm)  
ReleaseSpace              (or rsp)  
GetSpaceTokens            (or gst)
```

Type "/opt/storm/srm-clients/bin/clientSRM get help about options

Global options:

```
-h, --help          Print this help message  
-v, --version       Print version information
```

Check the status of the STORM server

```
$ /opt/storm/srm-clients/bin/clientSRM ping -e vm03.ct.infn.it:8444
```

```
=====  
Sending Ping request to: vm03.ct.infn.it:8444  
=====
```

Request status:

```
statusCode="SRM_SUCCESS" (0)  
explanation="SRM server successfully contacted"
```

SRM Response:

```
versionInfo="v2.2"  
otherInfo (size=3)  
  [0] key="backend_type"  
  [0] value="StoRM"  
  [1] key="backend_version"
```

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```
[1] "value="
[2] key="backend_os_distribution"
[2] value="Scientific Linux SL release 5.5 (Boron)"
=====
```

Create a working directory

```
$ /opt/storm/srm-clients/bin/clientSRM mkdir -e vm03.ct.infn.it:8444 -s srm://vm03.ct.infn.it
=====
Sending Mkdir request to: vm03.ct.infn.it:8444
=====
Request status:
  statusCode="SRM_SUCCESS"(0)
  explanation="Directory created with success"
=====
SRM Response:
=====
```

Send a srmPrepareToPut request to the StoRM endpoint, to prepare the space and the environment to receive your file

```
$ /opt/storm/srm-clients/bin/clientSRM ptp -e vm03.ct.infn.it:8444 -s srm://vm03.ct.infn.it/infng
=====
Sending PtP request to: vm03.ct.infn.it:8444
=====
Polling request status:
Current status: SRM_REQUEST_QUEUED (Ctrl+c to stop polling).
=====
Request status:
  statusCode="SRM_SUCCESS"(0)
  explanation="All chunks successfully handled!"
=====
SRM Response:
  requestToken="41f63216-8acb-4084-ace1-b84671b1a871"
  arrayOfFileStatuses (size=1)
    [0] SURL="srm://vm03.ct.infn.it/infnggrid/test/testfile"
    [0] status: statusCode="SRM_SPACE_AVAILABLE"(24)
        explanation="srmPrepareToPut successfully handled!"
    [0] estimatedWaitTime=-1
    [0] TURL="gsiftp://vm03.ct.infn.it:2811//storage/infnggrid/test/testfile"
=====
```

From the PrepareToPut response, you will receive a TURL that you will use for your GridFTP transfer.

```
$ globus-url-copy -vb file:/home/larocca/hostname.jdl gsiftp://vm03.ct.infn.it:2811//stor
Source: file:/home/larocca/
Dest:  gsiftp://vm03.ct.infn.it:2811//storage/infnggrid/test/
      hostname.jdl -> testfile
           1082 bytes           0.00 MB/sec avg           0.00 MB/sec inst
```

Confirm the end of transfer operation to the SRM server with the srmPutDone option, the SURL and thre requestToken

```
$ /opt/storm/srm-clients/bin/clientSRM PutDone -e vm03.ct.infn.it:8444 \
                                             -s srm://vm03.ct.infn.it/infnggrid/test/testfile
                                             -t 41f63216-8acb-4084-ace1-b84671b1a871
=====
Sending PutDone request to: vm03.ct.infn.it:8444
=====
Request status:
  statusCode="SRM_SUCCESS"(0)
  explanation="All file requests are successfully completed"
=====
SRM Response:
  arrayOfFileStatuses (size=1)
    [0] SURL="srm://vm03.ct.infn.it/infnggrid/test/testfile"
    [0] status: statusCode="SRM_SUCCESS"(0)
```

```
explanation=""
```

```
Listing the new file on the server...
```

```
$ /opt/storm/srm-clients/bin/clientSRM ls -e vm03.ct.infn.it:8444 \
-s srm://vm03.ct.infn.it/infngrid/test/testfile

Sending Ls request to: vm03.ct.infn.it:8444

Request status:
  statusCode="SRM_SUCCESS" (0)
  explanation="All requests successfully completed"

SRM Response:
  details (size=1)
    [0] path="/infngrid/test/testfile"
    [0] size=1082
    [0] status: statusCode="SRM_SUCCESS" (0)
          explanation="Successful request completion"
```

A more detailed explanation about the srm2.2 client can be found [here](#)

LOG Files

```
/var/log/messages
/opt/storm/frontend/var/log/storm-frontend.log
/opt/storm/backend/var/log/storm-backend.log
/opt/storm/backend/var/log/heartbeat.log
/opt/storm/backend/var/log/lcmaps.log
/opt/storm/backend/var/log/storm-backend.stdout
/opt/storm/backend/var/log/storm-backend.stderr
```

Troubleshooting

<http://storm.forge.cnaf.infn.it/documentation/troubles>

Credits

This wiki page is based on Giuseppe Misurelli's presentation available at this [URL](#)

-- GiuseppeLaRocca - 2011-02-24

This topic: SiteAdminCorner > InstallationAndConfigurationOfAStoRMStorageElement

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