

GLITE MIDDLEWARE

1. RELEASE DESCRIPTION

This release contains the gLite Middleware version 1.1 (1.1.0). The following sections provide additional information about the release content, the module dependencies and known issues. The gLite Middleware is a suite of several gLite Services and clients. Please refer to the individual gLite Services and Clients release notes for additional information. For information about installing and using the gLite Middleware, please refer to the gLite Installation and User Guides.

2. CHANGES IN THIS RELEASE

This release is the General Availability (GA) gLite v. 1.1.

In this release all components have been updated with bug fixes found since the previous release. In particular the following major changes are included:

- New File Transfer Service for Oracle module
- New Metadata Catalog for MySQL module
- Improved Fireman Catalogs for MySQL and Oracle with secure endpoints
- Improved I/O Server with support for secure catalogs
- Improved VOMS Server and Administration Tools module with full multi-VO support
- New file inclusion mechanism for the configuration files that allows having multiple files for easy maintenance and still use them as a single configuration file for an easy deployment
- Fully supported APT cache with meta-packages for each high-level gLite module (instructions can be found on the gLite web site)
- Many fixes for bugs and problems discovered after the release of gLite 1.0 (see below for a more detailed list)

3. RELEASE CONTENTS

The gLite Middleware v. 1.1 (1.1.0) is composed of the following gLite modules:

| Module name | Version | File |
|--------------------------------------|---------|---|
| gLite Computing Element | 1.2.3 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-ce_installer.sh apt-get install glite-ce-config |
| gLite Workload Management System | 1.0.7 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-wms_installer.sh apt-get install glite-wms-config |
| gLite Logging and Bookkeeping Server | 1.2.3 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-lb_installer.sh apt-get install glite-lb-config |
| gLite I/O Server | 1.2.5 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-io-server_installer.sh apt-get install glite-io-server-config |
| gLite I/O Client | 1.3.1 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-io-client_installer.sh |

| | | |
|---|-------|--|
| | | apt-get install glite-io-client-config |
| gLite File Transfer Service (Oracle) | 1.0.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-file-transfer-service-oracle_installer.sh apt-get install glite-file-transfer-service-oracle-config |
| gLite Data Management Single Catalog (MySQL) | 1.1.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-data-single-catalog_installer.sh apt-get install glite-data-single-catalog-config |
| gLite Data Management Single Catalog (Oracle) | 1.1.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-data-single-catalog-oracle_installer.sh apt-get install glite-data-single-catalog-oracle-config |
| gLite Standard Worker Node | 1.1.2 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-wn_installer.sh apt-get install glite-wn-config |
| gLite R-GMA Server | 4.3.4 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-rgma-server_installer.sh apt-get install glite-rgma-server-config |
| gLite R-GMA Client | 4.3.1 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-rgma-client_installer.sh apt-get install glite-rgma-client-config |
| gLite R-GMA Service Publisher | 4.2.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-rgma-servicetool_installer.sh apt-get install glite-rgma-servicetool-config |
| gLite VOMS Server and Admin Tools | 1.1.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-voms-server_installer.sh apt-get install glite-voms-server-config |
| gLite User Interface | 1.0.1 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-ui_installer.sh apt-get install glite-ui-config |
| gLite Service Discovery APIs | 1.0.0 | http://glite.web.cern.ch/glite/packages/R1.1/R20050430/installers/glite-service-discovery_installer.sh apt-get install glite-service-discovery-config |

4. PREREQUISITE AND DEPENDENCIES

The gLite modules have a number of pre-requisites. All information can be found on the individual modules release notes and the gLite Installation Guide.

For a list of the external dependencies, please refer to the individual gLite Service and Clients release notes.

5. KNOWN ISSUES

The known issues with each module in this release are detailed in the individual release notes. The most important issues are:

- The MySQL version of the Fireman Catalog doesn't allow creating files or directories in the root (/) when using secure endpoints. In order to use the catalog in secure mode, first one or more top-level directories have to be created using a non-secure endpoint. Directories created in this way are writable by all users in the default group 'egee-group'

- The Oracle version of the Fireman Catalog is very sensitive to the database settings. In some cases, it has been found that some CLI tools (glite-catalog-ls, glite-catalog-mkdir, etc) do not work when using non-secure endpoints. This problem is not fully reproducible and it's still under investigation
- When using the catalogs with secure endpoints, all files and directories are owned by the default group 'egee-group' even if a valid VOMS proxy is used.
- The use of Condor-based batch systems in the CE is not fully supported. A number of issues exist and are being investigated
- Many error messages and logs can be improved in all services. Work on rationalizing the errors and log formats is being carried on
- The R-GMA Server shows some performance problems when dealing with large datasets. A solution using data chunking is being implemented and will be include in the next release.
- This version of gLite allows the installation of multiple R-GMA Registries. However, only a single R-GMA Schema server can be used per infrastructure. Work on multi-schema architecture and schema replication is being carried on
- The UI and the WN modules can be installed as root or normal users. The normal user installation is RPM based to allow exploiting the RPM package management feature (dependency checking, updates, etc). However, the drawback is that installation is possible only on OSs supporting the RPM format. Other methods may be provided in the future.

6. ISSUES CLOSED SINCE LAST RELEASE

For a complete list of the closed bugs and issues, please refer to the individual gLite Services and Clients release notes. The following is a list of the main issues closed in this release:

- **Issue:** The VOMS Admin Tools use a VO creation method, which has known bugs. A better method is being developed and will be released next. For the moment, only creation of one VO per server is reliable and reasonably automated. Other scenarios may require manual interventions by a system administrator
Solution: The configuration script has been rewritten to use the correct method. The creation of multiple VOs is fully supported
- **Issue:** This release fixes various issues with renewal of grid and VOMS proxies. However, an issue still exists with the proxy renewal daemon "losing" one thread is still being addressed. This may cause occasional delays and hangs
Solution: A new version of the proxy renewal daemon fixing this problem has been released as a quick fix soon after gLite 1.0 and it's included in gLite 1.1
- **Issue:** An issue with the communication of match results from the WMS to the Network Server have been identified another potential cause of delays and hangs that are observed in the match-making loop
Solution: A new version of the WMS Manager component fixing this problem has been released as a quick fix soon after gLite 1.0 and it's included in gLite 1.1
- **Issue:** There is a known issue with Java 1.4.2 running with the Scientific Linux 3 SMP kernel on dual processor machines, where the Java Virtual Machine can crash without warning. The current solution is to use a non-SMP kernel. This should be fixed in Java 1.4.2_08, but there is no release date for this yet. The problem does not seem to occur in RH7.3 or RHEL4.
Solution: Java v. 1.4.2_08 has been released and fixes this issue. This is the minimum version currently supported for gLite R-GMA. Please note that Java v. 1.5.0 is know not to be compatible yet with R-GMA

- **Issue:** The Local Transfer Service is presented as a preview. A more reliable and powerful version for both MySQL and Oracle RDBMS is being implemented and will be released next
Solution: A fully supported version of the File Transfer Service for Oracle is included in this release

7. LICENSING

All gLite code is open source and developed as part of the EU-funded EGEE project. For more information on the licence and copyright statements, please refer to the EGEE web site. The licence can be found at <http://public.eu-egee.org/license/license2.html> .