GT 4.2.0 Release Notes: CoG jGlobus

Table of Contents

1. Component Overview ....................................................................................................................... 1
2. Feature Summary ............................................................................................................................. 1
3. Summary of Changes in CoG jGlobus .................................................................................................. 2
4. Bug Fixes ....................................................................................................................................... 2
5. Known Problems .............................................................................................................................. 2
6. Technology Dependencies .................................................................................................................. 3
7. Supported Platforms ......................................................................................................................... 3
8. Backward Compatibility Summary ...................................................................................................... 3
9. Associated Standards ........................................................................................................................ 4
10. For More Information ..................................................................................................................... 4

1. Component Overview

Java CoG Kit (JGlobus API, also referred to as GSI Java) provides a client-side API to the GT2-based services such as GRAM, GASS, and MDS. It also provides a client-side API for GridFTP, MyProxy and has extensive GSI support. Please see the Java CoG Kit\(^1\) for more information.

2. Feature Summary

Features new in release GT 4.2.0:

- Added support for partial 3rd party transfers to the UrlCopy library.
- Added support for SelfHost authorization method.

Other Supported Features

- Support for Globus legacy, pre-draft, and RFC 3820 proxy formats
- GT2 GRAM client library
- GT2 MDS client library
- GridFTP client library
- GT2 GASS library
- MyProxy client library

Deprecated Features

- None.

\(^1\) http://www.globus.org/cog/java/
3. Summary of Changes in CoG jGlobus

The following changes have occurred for CoG jGlobus since the last stable release, 4.0.x:

- Added support for signing policy.
- Changed CRL validation to raise an exception when expired CRLs are detected.
- Changed default proxy credential generated to be RFC 3820 compliant. Support for legacy, draft compliant and RFC 3820 remains as it was.
- Support for partial 3rd party transfers to the UrlCopy library.
- Added support for SelfHost authorization method.
- Improved handling of SSLv2 client hello messages.
- Optimized obtaining a default credential using the GSSAPI.
- Optimized CA certificate and CRL file refresh functions.
- Added error codes to all error messages generated by the GSI library.
- Updated 3rd party libraries:
  - BouncyCastle 1.31
  - Apache Log4j 1.2.13
  - Apache Commons Logging 1.1

4. Bug Fixes

The following bugs were fixed for Java CoG Kit:

- Bug 4414: Clarify lifetime parameter in myproxy documentation
- Bug 4323: Public utility method to read X.509 certificate string
- Bug 4733: [patch] try all myproxy server addresses
- Bug 4806: set MyProxy lifetime to 12 hours by default
- Bug 4842: Incorrect default ports used in ServiceURL

5. Known Problems

The following problems and limitations are known to exist for the JavaCoG Kit at the time of the 4.2.0 release:

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2 http://bugzilla.globus.org/globus/show_bug.cgi?id=4414
3 http://bugzilla.globus.org/globus/show_bug.cgi?id=4323
4 http://bugzilla.globus.org/globus/show_bug.cgi?id=4733
5 http://bugzilla.globus.org/globus/show_bug.cgi?id=4806
6 http://bugzilla.globus.org/globus/show_bug.cgi?id=4842
5.1. Limitations

• None.

5.2. Known Bugs

• Bug 1056: FTP client in extended block mode after receiving EODC does not wait for EOD on the same channel

• Bug 2277: GridFTPClient bug Parallel, Passive, EBlockImageDCReader does not receive EOF

• Bug 2345: Allow for a way to set cert and key location using environment variables

• Bug 2413: A rare decrypt error

• Bug 3299: Extended Key Usage certificate extension not supported

• Bug 4304: Class does not represent an RSA key

6. Technology Dependencies

The Java CoG Kit depends on the following 3rd party software:

• PureTLS

• BouncyCastle

• Cryptix

• Log4j

• Commons Logging

7. Supported Platforms

Java CoG Kit should work on any platform that supports J2SE 1.3.1 or higher.

Tested Platforms for Java CoG Kit:

• Linux (Debian 3.1)

• Windows XP

• Solaris

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7 http://bugzilla.globus.org/globus/show_bug.cgi?id=1056
8 http://bugzilla.globus.org/globus/show_bug.cgi?id=2277
9 http://bugzilla.globus.org/globus/show_bug.cgi?id=2345
10 http://bugzilla.globus.org/globus/show_bug.cgi?id=2413
11 http://bugzilla.globus.org/globus/show_bug.cgi?id=3299
12 http://bugzilla.globus.org/globus/show_bug.cgi?id=4304
13 http://www.rtfm.com/puretls/
14 http://www.bouncycastle.org/
15 http://www.cryptix.org/
16 http://jakarta.apache.org/log4j/
17 http://jakarta.apache.org/commons/logging/
Tested JVMs for Java CoG Kit:

- **Sun JVM**\(^\text{18}\) 1.4.2, 1.5.0, and 1.6.0 RC
- **IBM JVM**\(^\text{19}\) 1.3.1, and 1.4.2

JVM notes:

- **GCJ**\(^\text{20}\) is not supported.

### 8. Backward Compatibility Summary

Protocol changes since GT version 4.0.x:

- None.

API changes since GT version 4.0.x:

- The default port number of the HTTPS URL protocol handler was changed to 443 (from 8443) to comply with the standard.

Schema changes since GT version 4.0.x:

- None.

### 9. Associated Standards

Associated standards for Java CoG Kit:

- **RFC 959**\(^\text{21}\) FTP
- **RFC 2251**\(^\text{22}\) LDAP
- **RFC 2222**\(^\text{23}\) SASL
- **RFC 2853**\(^\text{24}\) GSSAPI: Java Bindings
- **RFC 3820**\(^\text{25}\) Proxy Certificates
- **RFC 2818**\(^\text{26}\) TLS

### 10. For More Information

Please see [CoG JGlobus](http://www-unix.mcs.anl.gov/~gawor/jglobus-nightly/HEAD/javadoc/) for more information or see the [API documentation](http://www-unix.mcs.anl.gov/~gawor/jglobus-nightly/HEAD/javadoc/).