
GT 4.2.1 Release Notes: GRAM2

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<titleabbrev>Release Notes</titleabbrev>

1. Component Overview

The Grid Resource Allocation and Management (GRAM) service provides a single interface for requesting and using remote system resources for the execution of "jobs". The most common use of GRAM is remote application execution and control. It is designed to provide a uniform, flexible interface to job scheduling systems.

2. Feature Summary

Features new in release 4.2.1

- None

Other Supported Features

- Remote job execution and management
- Uniform and flexible interface to batch scheduling systems
- File staging before and after job execution
- Data streaming of stdout/err during jobs execution
- Recording of audit records to a directory, with a tool for uploading audit records to a database.
- An alternate job polling mechanism which uses the Scheduler Event Generator from GRAM4 in place of polling the scheduler directly.

Deprecated Features

- None

3. Summary of Changes in GRAM2

A number of patches from VDT have been applied in this release. Details about these patches is [here](#)¹

4. Bug Fixes

- [Bug 1538](#):² Gatekeeper log rotation and logging job accounting info
- [Bug 1550](#):³ Fixes for race condition in job manager
- [Bug 1551](#):⁴ Race condition in job manager
- [Bug 4213](#):⁵ Patch to disable streaming
- [Bug 4771](#):⁶ date bug in job manager log file
- [Bug 6196](#):⁷ GRAM2 Test Failures
- [Bug 6240](#):⁸ gatekeeper crash
- [Bug 6241](#):⁹ GRAM fails to load large state fails
- [Bug 6302](#):¹⁰ New gatekeeper feature to control service fork
- [Bug 6303](#):¹¹ Remove obsolete GRAM reporter in GT 4.2
- [Bug 6307](#):¹² update path for fast polling file for condor
- [Bug 6358](#):¹³ Changes in current Gram2 audit logging
- [Bug 6391](#):¹⁴ Fix leaks, null pointer dereferences, and uninitialized memory reads in GRAM2

5. Known Problems

The following problems and limitations are known to exist for GRAM2 at the time of the 4.2.1 release:

5.1. Limitations

- [list limitations]

¹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6192

² http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=1538

³ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=1550

⁴ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=1551

⁵ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4213

⁶ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4771

⁷ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6196

⁸ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6240

⁹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6241

¹⁰ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6302

¹¹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6303

¹² http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6307

¹³ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6358

¹⁴ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6391

5.2. Known Bugs

- [Bug 1934](#):¹⁵ Gatekeeper's syslog output cannot be controlled
- [Bug 2739](#):¹⁶ Gatekeeper AuthZ/Gridmap Callout result logging
- [Bug 2741](#):¹⁷ catching SIGSEGV if dynamic loading of authorization modules fails
- [Bug 3373](#):¹⁸ globus removes the temporary job directory before pbs writes back into it
- [Bug 4235](#):¹⁹ globus-job-manager doesn't exit if the job fails.
- [Bug 4360](#):²⁰ globus-job-get-output bug prevents output delivery, PBS jobmanager affected. See also globus-job-clean, globus-job-cancel
- [Bug 4730](#):²¹ MPI Jobs using Globus LSF in HP XC Cluster....
- [Bug 4747](#):²² Need evaluation of patch to JobManager.pm
- [Bug 5143](#):²³ DONE state never reported for Condor jobs when using Condor-G grid monitor
- [Bug 5200](#):²⁴ GRAM (pre-webservices) from OSG 0.6.0 (VDT 1.6.1) has bad syslog format
- [Bug 5207](#):²⁵ GRAM SoftEnv extension bug
- [Bug 5272](#):²⁶ Invalid parsing of RSL file
- [Bug 5429](#):²⁷ stdin is lost when jobtype=multiple with jobmanager-lsf
- [Bug 5536](#):²⁸ Missing dependency in package globus_gram_job_manager_auditing
- [Bug 5537](#):²⁹ Missing dependency in package globus_gram_job_manager_auditing
- [Bug 5554](#):³⁰ GRAM2 4.0.5 setup-globus-job-manager-fork.pl silent failure
- [Bug 5556](#):³¹ Audit directory setup instructions are insecure
- [Bug 5621](#):³² gram2 credential refresh problems in 4.0.5
- [Bug 5775](#):³³ gram status of old jobs incorrect on some lsf systems

¹⁵ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=1934

¹⁶ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=2739

¹⁷ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=2741

¹⁸ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=3373

¹⁹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4235

²⁰ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4360

²¹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4730

²² http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=4747

²³ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5143

²⁴ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5200

²⁵ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5207

²⁶ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5272

²⁷ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5429

²⁸ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5536

²⁹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5537

³⁰ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5554

³¹ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5556

³² http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5621

³³ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=5775

- [Bug 6184](#).³⁴ pbs.pm jobmanager fails jobs on qstat failure
- [Bug 6337](#).³⁵ Cannot configure globus to use different certificate path than default

6. Technology Dependencies

GRAM2 depends on the following GT components:

- C Common Libraries
- Non-WS Authentication and Authorization
- XIO
- GridFTP

GRAM2 depends on the following 3rd party software. The dependency exists only for the batch schedulers configured, thus making job submissions possible to the batch scheduling service:

- PBS
- Condor
- LSF
- other batch schedulers... (where the GRAM scheduler interface has been implemented)

7. Tested Platforms

Tested Platforms for GRAM2

- Linux

8. Backward Compatibility Summary

There have been no protocol changes since GT version 4.0.x

There have been no API changes since GT version 4.0.x

There have been no exception/error changes since GT version 4.0.x

There have been no schema changes since GT version 4.0.x

9. For More Information

See [GRAM2](#) for more information about this component.

³⁴ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6184

³⁵ http://bugzilla.globus.org/bugzilla/show_bug.cgi?id=6337