

# GT 4.2.0 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 4.2.0

- 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

Only minor changes and bugfixes have occurred for GRAM2 since the last stable release, 4.0.x:

## 4. Bug Fixes

- [Bug 4150](#):<sup>1</sup> do not use break in Perl, use last
- [Bug 4903](#):<sup>2</sup> [patch] globusrun option to delegate a full proxy

## 5. Known Bugs

- [Bug 720](#):<sup>3</sup> allow gram client to detect the version of a gram server
- [Bug 851](#):<sup>4</sup> Add cleanup RSL attribute for cleaning up a job submission
- [Bug 865](#):<sup>5</sup> Total and available MEM not reported for gram inforproviders
- [Bug 1460](#):<sup>6</sup> Condor Jobmanager missing several features
- [Bug 1538](#):<sup>7</sup> Gatekeeper log rotation and logging job accounting info
- [Bug 1550](#):<sup>8</sup> Fixes for race condition in job manager
- [Bug 1934](#):<sup>9</sup> Gatekeeper's syslog output cannot be controlled
- [Bug 2739](#):<sup>10</sup> Gatekeeper AuthZ/Gridmap Callout result logging
- [Bug 2741](#):<sup>11</sup> catching SIGSEGV if dynamic loading of authorization modules fails
- [Bug 3373](#):<sup>12</sup> globus removes the temporary job directory before pbs writes back into it
- [Bug 3795](#):<sup>13</sup> jobmanager perl modules issues
- [Bug 4199](#):<sup>14</sup> Patch pre-WS GRAM to use individual condor logs for jobs
- [Bug 4213](#):<sup>15</sup> Patch to disable streaming
- [Bug 4235](#):<sup>16</sup> globus-job-manager doesn't exit if the job fails.
- [Bug 4360](#):<sup>17</sup> globus-job-get-output bug prevents output delivery
- [Bug 4730](#):<sup>18</sup> MPI Jobs using Globus LSF in HP XC Cluster....

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<sup>1</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4150](http://bugzilla.globus.org/globus/show_bug.cgi?id=4150)

<sup>2</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4903](http://bugzilla.globus.org/globus/show_bug.cgi?id=4903)

<sup>3</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=720](http://bugzilla.globus.org/globus/show_bug.cgi?id=720)

<sup>4</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=851](http://bugzilla.globus.org/globus/show_bug.cgi?id=851)

<sup>5</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=865](http://bugzilla.globus.org/globus/show_bug.cgi?id=865)

<sup>6</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=1460](http://bugzilla.globus.org/globus/show_bug.cgi?id=1460)

<sup>7</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=1538](http://bugzilla.globus.org/globus/show_bug.cgi?id=1538)

<sup>8</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=1550](http://bugzilla.globus.org/globus/show_bug.cgi?id=1550)

<sup>9</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=1934](http://bugzilla.globus.org/globus/show_bug.cgi?id=1934)

<sup>10</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=2739](http://bugzilla.globus.org/globus/show_bug.cgi?id=2739)

<sup>11</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=2741](http://bugzilla.globus.org/globus/show_bug.cgi?id=2741)

<sup>12</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=3373](http://bugzilla.globus.org/globus/show_bug.cgi?id=3373)

<sup>13</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=3795](http://bugzilla.globus.org/globus/show_bug.cgi?id=3795)

<sup>14</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4199](http://bugzilla.globus.org/globus/show_bug.cgi?id=4199)

<sup>15</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4213](http://bugzilla.globus.org/globus/show_bug.cgi?id=4213)

<sup>16</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4235](http://bugzilla.globus.org/globus/show_bug.cgi?id=4235)

<sup>17</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4360](http://bugzilla.globus.org/globus/show_bug.cgi?id=4360)

<sup>18</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4730](http://bugzilla.globus.org/globus/show_bug.cgi?id=4730)

- [Bug 4747](#).<sup>19</sup> Need evaluation of patch to JobManager.pm
- [Bug 4771](#).<sup>20</sup> date bug in job manager log file
- [Bug 4779](#).<sup>21</sup> gram GT2 log files: timestamps are not ISO 8601 compatible
- [Bug 5143](#).<sup>22</sup> DONE state never reported for Condor jobs when using Condor-G grid monitor
- [Bug 5200](#).<sup>23</sup> GRAM (pre-webservices) from OSG 0.6.0 (VDT 1.6.1) has bad syslog format
- [Bug 5207](#).<sup>24</sup> GRAM SoftEnv extension bug
- [Bug 5250](#).<sup>25</sup> Does not support mpi jobtype of RSL script
- [Bug 5272](#).<sup>26</sup> Invalid parsing of RSL file
- [Bug 5429](#).<sup>27</sup> stdin is lost when jobtype=multiple with jobmanager-lsf
- [Bug 5536](#).<sup>28</sup> Missing dependency in package globus\_gram\_job\_manager\_auditing
- [Bug 5537](#).<sup>29</sup> Missing dependency in package globus\_gram\_job\_manager\_auditing
- [Bug 5554](#).<sup>30</sup> GRAM2 4.0.5 setup-globus-job-manager-fork.pl silent failure
- [Bug 5556](#).<sup>31</sup> Audit directory setup instructions are insecure
- [Bug 5580](#).<sup>32</sup> ERROR regarding proxy lifetime should not be so frustrating - make it a WARNING
- [Bug 5621](#).<sup>33</sup> gram2 credential refresh problems in 4.0.5
- [Bug 5775](#).<sup>34</sup> gram status of old jobs incorrect on some lsf systems

## 6. Technology Dependencies

GRAM2 depends on the following GT components:

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

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<sup>19</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4747](http://bugzilla.globus.org/globus/show_bug.cgi?id=4747)

<sup>20</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4771](http://bugzilla.globus.org/globus/show_bug.cgi?id=4771)

<sup>21</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=4779](http://bugzilla.globus.org/globus/show_bug.cgi?id=4779)

<sup>22</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5143](http://bugzilla.globus.org/globus/show_bug.cgi?id=5143)

<sup>23</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5200](http://bugzilla.globus.org/globus/show_bug.cgi?id=5200)

<sup>24</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5207](http://bugzilla.globus.org/globus/show_bug.cgi?id=5207)

<sup>25</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5250](http://bugzilla.globus.org/globus/show_bug.cgi?id=5250)

<sup>26</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5272](http://bugzilla.globus.org/globus/show_bug.cgi?id=5272)

<sup>27</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5429](http://bugzilla.globus.org/globus/show_bug.cgi?id=5429)

<sup>28</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5536](http://bugzilla.globus.org/globus/show_bug.cgi?id=5536)

<sup>29</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5537](http://bugzilla.globus.org/globus/show_bug.cgi?id=5537)

<sup>30</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5554](http://bugzilla.globus.org/globus/show_bug.cgi?id=5554)

<sup>31</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5556](http://bugzilla.globus.org/globus/show_bug.cgi?id=5556)

<sup>32</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5580](http://bugzilla.globus.org/globus/show_bug.cgi?id=5580)

<sup>33</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5621](http://bugzilla.globus.org/globus/show_bug.cgi?id=5621)

<sup>34</sup> [http://bugzilla.globus.org/globus/show\\_bug.cgi?id=5775](http://bugzilla.globus.org/globus/show_bug.cgi?id=5775)

- 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.