

Globus Online Plugin Stress Test Analysis

1 Introduction

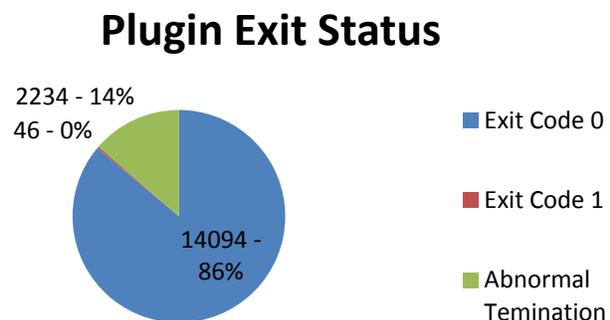
This document analyzes the results of the stress tests done running experiment jobs through glideinWMS using Globus Online transfer plugin to transfer output files. For the stress tests we submitted 5000 experiment jobs. The condor submit files for the jobs were modified to transfer the output files to the Globus Online end point. The analysis considers results from 2636 jobs while other jobs were deleted from the queue. Because of the limit on maximum number of jobs that the experiment could start, we had only 500 glideins running at any given time. This translates to max 500 jobs running at any given time.

2 Analysis based on exit code of the plugin

Plugin exit code line encountered in logs: 16374
Duplicate terminations in same log file: 15
Total plugin log files analyzed: 16359

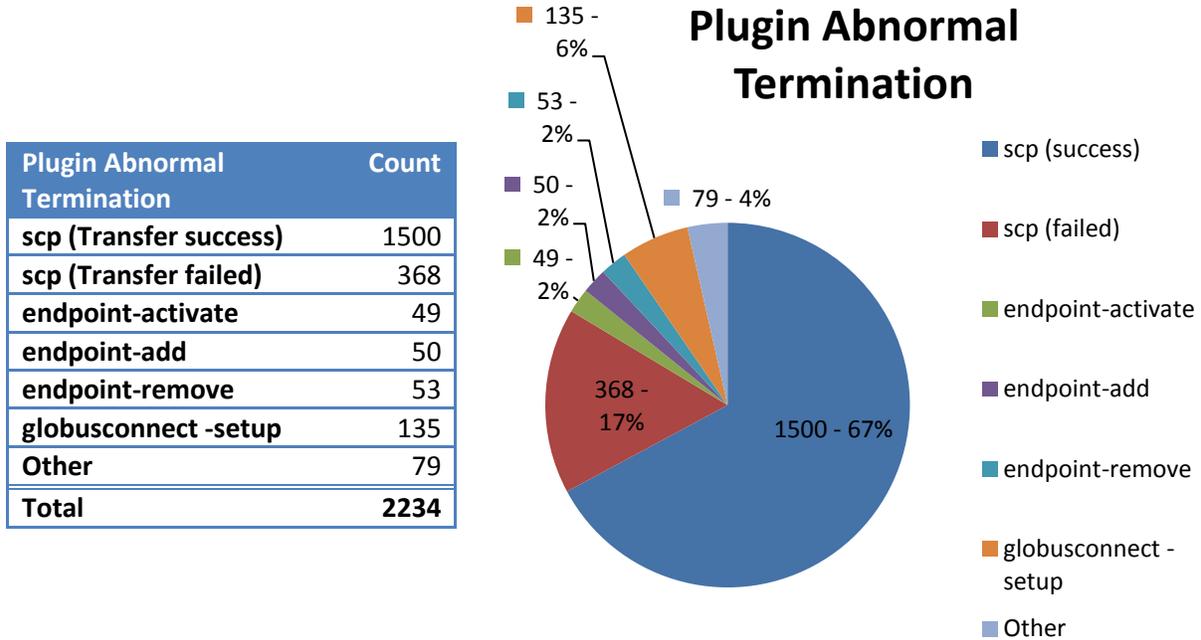
It is not clear why the plugin ran multiple times for the same transfer. Since the number (15) is so small, we decided to ignore them for this analysis. Following table and the diagram describes the distribution based on the exit status of the plugin. Exit Code 0 represents plugin exiting after a successful transfer, while the exit code 1 represents plugin exiting with failure in transferring the output file. In some cases the plugin terminated abnormally, possibly it was killed after running longer than expected.

Plugin Exit Status	Count
Exit Code 0	14094
Exit Code 1	46
Abnormal Termination	2234
Total	16374



3 Analysis of the abnormal termination of the plugin

When the plugin was terminated abnormally, in most cases the files were transferred successfully. Log files were analyzed based on the last command that the plugin tried to run. It's possible that the last command run never reported back to the plugin about its exit. The table and the graph below shows the distribution of last command encountered in the plugin logs.



4 Analysis of Transfers

From the previous two analyses, the transfer is considered successful when any of the following conditions are fulfilled -

- The plugin exits with exit code 0
- Plugin terminated abnormally but the last command executed was scp. The scp command completed successfully and the file was available at the destination.

All other transfers out of total 13659 that did not satisfy above criteria were considered as failures. Table and graph below shows the distribution of the successful v/s failed transfers.

