

APEL Parsers Test Plan

EMI Component Description and Version

The new APEL Parsers read accounting log files from a directory and ingest the data into the APEL client database.

This test plan is suitable for APEL Parsers v2.1.0.

Installation and configuration

Follow the instructions in the APEL Parsers System Administrator Guide.

Unit Tests

Unit tests are available with the APEL source code.

Deployment Tests

APEL parsers should be installed with access to:

- Logs from the CREAM BLAH module
- Logs from the batch system – SGE, PBS, LSF or SLURM

Configuration Tests

- Check that the log file is created when the parser runs
- Check that logging to the console option works
- Check that incorrect database details are handled correctly
- Check that incorrect log directories are handled correctly
- Check that omitted site_name and lrms_server configurations are handled correctly
- Check that each section can be disabled using the appropriate configuration

System Tests

Basic Functionality Tests

PBS

- A valid log file produces the correct number of records – the number of lines with a status 'E'
 - Invalid lines are correctly logged
- A log file with multi-core information is parsed correctly when enabled
- An invalid file is logged as incorrect

SGE

- A valid log file produces the correct number of records
 - Invalid lines are correctly logged

LSF

- A valid log file is parsed correctly

- Invalid lines are correctly logged
- A log file with multi-core information is parsed correctly
- The scale_host_factor option works correctly

SLURM

- A valid log file produces the correct number of records
 - Invalid lines are correctly logged

BLAH

- All lines are parsed correctly from a log file – all lines should be parsed

General

- A log file that has been appended to is reparsed
- A log file that has not been appended to is not reparsed
- A gzipped log file is parsed
- A file which has been parsed and is then gzipped is not reparsed
- An invalid file is logged as incorrect
- Check that the parser handles the database being down
- Turn the database off during parsing
 - Check that files are not marked as parsed if they have not been
- Lock the table into which records are being inserted
 - Check that files are not marked as parsed if they have not been
- Check that subdirectories are appropriately searched for log files
- Check that filenames not matching the name prefix are ignored

Regression Tests

- #101022: Check that an empty log file to parse is handled correctly

Performance and Scalability Tests

No performance tests have been defined.

Standard Compliance and Conformance Tests

Not applicable for the parsers.

Inter-component Tests

The only component with which the parsers interact is the APEL client database.