NAME

tgftp − The GridFTP test script

SYNOPSIS

tgftp [--source|-s *gsiftpSourceUrl***] [--target|-t** *gsiftpTargetUrl***] [--timeout** *gsiftpTimeout***] [--log-filename** *gsiftpTransferLogFilename***] [--log-comment** *gsiftpTransferLogComment***] [--pre-command** *gsiftpTransferPreCommand***] [--post-command** *gsiftpTransferPostCommand***] [--** *gsiftpParameters***]**

tgftp --source|-s *gsiftpSourceUrl* **--target|-t** *gsiftpTargetUrl* **--connection-test|-c**

tgftp --source|-s *gsiftpSourceUrl* **--target|-t** *gsiftpTargetUrl* **--auto-tune|-a**

tgftp --batchfile|-f *gsiftpBatchfile*

DESCRIPTION

tgftp is a wrapper script for **globus-url-copy (guc)** to ease testing and documentation of GridFTP performance for specific connections. The generated **guc** command, its output and the reached performance are logged to a file named like the following:

yyyymmdd_H:Mh_$$_testgftp.sh.log

$$ is resolved to the PID of the tgftp process. Additionally the output of the **guc** command and the performance (transfer rate) is printed out to screen.

NOTES

Because this tool includes the time needed for establishing the connection (total time needed for the transfer), the transfer rates may vary from the rates that the **guc** command prints out - especially for short transfers. Additionally this tool can only calculate the transfer rate if a **-len|-partial-length** *length* **guc** param is present.

MODES

tgftp has several modes of operation:

SINGLE TEST
Test a single connection.

CONNECTION TEST
Just make a connection test.

AUTO-TUNING
This will try various **guc** parameter configurations and determine the best performing combination for a specific connection.

BATCH Test multiple connections one after another.

OPTIONS

The options are as follows:

General Options:

[--source|-s *gsiftpSourceUrl***]**
Determine the source URL for the transfer to test. If the *gsiftpParameters* contain a "-f" and provide a file with guc source and destination URLs, this option can be omitted.

[--target|-t *gsiftpTargetUrl***]**
Determine the target URL for the transfer to test. If the *gsiftpParameters* contain a "-f" and provide a file with guc source and destination URLs, this option can be omitted.

[--force-log-overwrite]
By default tgftp refuses to overwrite existing tgftp logfiles. This option forces overwriting of existing tgtfp logfiles.

[--help] Prints out a help message.

[--help-batchfile]
Prints out the help about batchfiles.

[--version|-V]
Prints out version information.

SINGLE TEST Mode:

[--timeout *gsiftpTimeout***]**
Determine the time in seconds, **tgftp** waits before it kills the guc command. By default no timeout is set. This is also true if set to "0".

[--log-filename *gsiftpTransferLogFilename***]**
Determine the filename (including extension) of the logfile. The filename has to be enclosed by double quotes. If not specified the default naming is used.

[--log-comment *gsiftpTransferLogComment***]**
Add a comment to the log. The comment has to be enclosed by double quotes. This can also be a command like "cat PRE_COMMAND_OUTPUT.txt", which enables to include output of the pre-command in the logfile (for example network params of the target system or traceroute output, etc.). If not specified no comment is added. Text only comments, meaning no command should be called, have to be preceded by "#"!

[--pre-command *gsiftpTransferPreCommand***]**
Determine the filename of the command that should be executed before the test (command must be executable and path must be included). Must be enclosed by double quotes. A pre-command may consist of multiple commands included in one script. If not specified no additional command will be excuted before the test.

[--post-command *gsiftpTransferPostCommand***]**
Determine the filename of the command that should be executed after the test (command must be executable and path must be included). Must be enclosed by double quotes.A post-command may consist of multiple commands included in one script. If not specified no additional command will be excuted after the test.

[-- *gsiftpParameters***]**
Determine the guc parameters that should be used for the test. Notice the space between **--** and the actual parameters. To calculate the transfer rate at least **-len|-partial-length** *length* must be specified. If this is not needed, the **-len|-partial-length** *length* parameter can be omitted completely.

CONNECTION TEST Mode:

--connection-test|-c
Just do a connection test. This test does only transfer 1 Byte and logs the full connection process. This implies **-dbg** and **-vb** for the resulting **guc** command. Additionally the timeout is set to 30 seconds. If this parameter is used, all other parameters except **--source** and **--target** are ignored.

AUTO-TUNING Mode:

--auto-tune|-a
Determine the best performing **guc** parameter configuration for the current source and target URLs.

BATCH Mode:

--batchfile|-f *gsiftpBatchfile*
Determine the batchfile containing the parameter values for the tests to be batch processed. If this parameter is used, all other parameters are ignored.

EXAMPLES

The following command:

```
tgftp -s file:///dev/zero -t gsiftp://localhost:2811/dev/null
```

results in the following **guc** command:

```
globus-url-copy file:///dev/zero gsiftp://localhost:2811/dev/null
```

The following command will determine the congestion protocol that is used locally before starting the test and include the output of the pre-command in the comment of the logfile:

```
tgftp -s file:///dev/zero -t gsiftp://gridftp-host.domain:2811/dev/null \
    --log-comment 'cat PRE_COMMAND_OUTPUT.txt' \
    --pre-command 'sysctl -n net.ipv4.tcp_congestion_control > PRE_COMMAND_OUTPUT.txt' \
    -- -len 1M
```

The following command will initiate multiple tests (one after another) with the parameter values included in "tgftp_tests.csv":

```
tgftp -f tgftp_tests.csv
```

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SEE ALSO

tgftp_log(1)