

managed-job-globusrun - submit a job to a (Master) Managed Job Factory Service

#### NOTE

managed-job-globusrun is the GT3 equivalent of the GT2 globusrun tool more or less a few options. Some options have changed (-s, -o, -w).

#### SYNOPSIS

Given the following grammar:

```
<factory> = -factory <contact> [-type <type>]
<contact> = [<protocol>://]<host>[:[<port>]][/<service>]
<RSL>      = -file <RSL filename> | <RSL string>
```

Job service submission:

```
-----
managed-job-globusrun [options] [<factory>] <RSL>
```

with

```
[options] = [-s] [-w] [-o] [-q] [-n]
           [-b] [-duration <duration>] [-terminate-at <time>]
           [-auth <auth>] [-xmlsec <sec>] [-nogrim] [-personal]
```

RSL parsing only:

```
-----
managed-job-globusrun -p <RSL>
```

Job listing:

```
-----
managed-job-globusrun -list [<factory>]
managed-job-globusrun (-status | -kill) <job service URL>
```

Help:

```
-----
managed-job-globusrun (-help | -usage | -version)
```

#### DESCRIPTION

This command is used to submit jobs to globus resources. The job startup is done using the GT3 GRAM services. Also, the GASS service can be used to provide access to remote files and for redirecting standard output streams.

In addition to starting jobs, it is possible to list previously started jobs, query status of previously started jobs, parse RSL request strings or files.

The existence of a valid proxy is required for essentially all

supported operations but RSL parsing (-p).

## OPTIONS

### Help:

-help display help.  
-usage display usage.  
-v, -version display version.

### Job Factory Contact:

-factory <contact> specify the URL of the Job Factory Service to contact when submitting or listing jobs. A factory contact string can be specified in the following ways:

host  
host:  
host:port  
host:port/service  
host/service  
host:/service

It is also possible to specify the protocol by prepending protocol:// to each of the previous possibilities, bringing the total number of supported syntaxes to 12.

For those factory contacts which omit the protocol, port or service field, properties in the file ogsa.properties are used as defaults, but if the property file cannot be found or read, the following default values are used, as the following table explains:

URL part	\$property	default value
port	\$service.port	8080
protocol	\$binding.protocol	http
service	none	/ogsa/services/base/gram/ MasterForkManagedJobFactoryService

Omitting altogether the -factory option is equivalent to specifying the local host as the contact string.

-type <factory type> specify the job factory service as a shortname instead of specifying a full service path with -factory or using the default service path. This is equivalent to specifying the service with the -factory option as:  
/ogsa/services/base/gram/  
Master<factory type>ManagedJobFactoryService  
Examples: -factory myHost -type Fork  
-factory myHost -type PBS  
Default: Fork

### Job Specification:

<RSL string> read RSL from the string <RSL string>.  
-file <RSL filename> read RSL from the local file <RSL filename>.  
The RSL must be a single job request.  
-p only parse the RSL, and then print either a

success message or a parser failure. No job will be submitted to any factory service. The RSL must be a single job request.

#### Internal GASS Server:

- s, -server start GASS server with read access to local files, providing read-only service to the local filesystem.
- w, -write-allow start GASS server with read/write access to local files. Similar to -server, except the GASS server URL will allow writing to the local filesystem as well as reading to it. Implies -server.
- o, -output start GASS server and display the job's standard output and error streams on the standard output and error of the command's process. No other read/write access will be provided by this option alone. Implies -quiet.

The substitution variable GLOBUSRUN\_GASS\_URL can be used in RSL to access files local to the submission machine via GASS.

#### Batch Operations:

- b, -batch do not wait for started job to complete (and do not destroy started job service on exit). The handle of the job service will be printed on the standard output. Incompatible with internal GASS options (-server, -write-allow, and -output). The job must use an external GASS server if it needs to access local files. incompatible with multi-request jobs. Implies -quiet.
- l, -list list previously started and not destroyed job services. The output of this command consists of the job service URLs, and the job RSL string. Requires the -factory <URL> argument.
- status <URL> printout the status of the specified job. For a list of valid states, see the GRAM documentation; the current valid states are Pending, Active, Done, Suspended, and Failed. The <URL> argument should be one printed out when executing in batch mode or when using the -list option.
- k, -kill <URL> kill the specified job. The <URL> argument should be one printed out when executing in batch mode or when using the -list option.

#### Job Service Termination Time:

- duration <duration> specify duration of job service. The job service will destroy itself automatically after the specified duration starting from service creation.  
Format: HH:mm

Default job service duration is 24 hours.  
 Incompatible with `-date-time`.  
 Useful with `-batch`.

`-terminate-at <date>` specify termination date/time of service.  
 Same as `-duration` but with an absolute date/time value.  
 Format: MM/dd/yyyy HH:mm  
 The date expression may need to be quoted, as in: `-terminate-at '08/15/2005 11:30'`  
 Incompatible with `-duration`.  
 Useful with `-batch`.

Security:

`-auth <auth>` set authorization type. `<auth>` can be:  
     'host' for host authorization,  
     'self' for self authorization (default).  
 Otherwise identity authorization is performed.

`-xmlsec <sec>` set xml security type to use. `<sec>` can be:  
     'sig' for XML Signature (default),  
     'enc' for XML Encryption.

`-nogrim` disable grim checks (enabled by default).  
`-personal` shortcut for `-nogrim` and `-auth self`.

Miscellaneous:

`-q, -quiet` set quiet mode on (do not print diagnostic messages when job status changes, in non-batch mode). Useful when job output is redirected to the local process and parsed.

`-n, -no-interrupt` disable interrupt handling. By default, interrupt signals (typically generated by Ctrl + C) cause the program to terminate the currently submitted job. This flag disables that behavior.

`-timeout <integer>` set timeout for HTTP socket, in milliseconds. Applies to job submission only. Default is 1200000.

GT2 globusrun options not functional (yet):

`-dryrun` NOT IMPLEMENTED ON SERVER SIDE YET.  
 augment the RSL in order to mark this job as a dry run, if the RSL does not already say so. This causes the job manager to stop short of starting the job, but still detect other RSL errors (such as bad directory, bad executable, etc). An error message will be displayed if the dry run fails.  
 Otherwise, a message will be displayed indicating that the dryrun was successful.

`-authenticate-only` NOT IMPLEMENTED ON SERVER SIDE YET.  
`-interactive` DUROC not supported yet.  
`-stop-manager` doesn't apply in GT3 (yet).

JOB SERVICE DESTRUCTION

Execution errors and user interrupt events are handled by automatically destroying the requested job service(s), unless the `-batch` option is on the command-line. The `-batch` option prevents the tool from listening to job status changes and from waiting for the job to finish. If `-batch` is selected, the command will return as soon as the remote job has been submitted.

The behavior of the tool with respect to job service destruction will vary in response to several kinds of events:

The command exits normally after the job(s) finish(es), and destroys the job service(s) it requested. In batch mode, the requested job is never destroyed.

The command is terminated in response to a user interrupt, such as typing `^C`, or a system-wide event, such as user logoff or system shutdown. If the `-no-interrupt` option is on the command-line, and the command-line has been successfully parsed when the interrupt occurs, the tool does not destroy any job service(s) it requested. Otherwise the tool destroys the requested job service(s).

In case of any error of execution, the command will exit and destroy the job(s) it successfully requested.

If the virtual machine aborts, that is, stops running without shutting down cleanly, for instance because it received a `SIGKILL` signal on Unix, then no guarantee can be made about whether or not the job service(s) will be destroyed.

Note: the shutdown behavior explained above cannot be guaranteed if the JVM option `-Xrs` is entered.

The recommended way to disable service destruction is to specify the `-batch` option on the command-line.

## EXAMPLES AND TESTING

Assuming the directory `$GLOBUS_LOCATION/bin` is in the path:

```
% ant startContainer
% managed-job-globusrun -factory $HOSTNAME -f etc/test.xml
```

Currently only in CVS, the sub-directory `<ogsa-cvs>/program_execution/mjs/test/globusrun` contains example RSL documents and a text file describing functional tests for the command-line tool. They can be used as examples to understand most of the features of the tool.