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

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

Help:
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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

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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
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                       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
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                        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
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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
    occures, 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

Cuurently 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.