

Available commands

Type the `--help` option to obtain information about all commands:

```
$ drm4g --help
DRM4G is an open platform, which is based on GridWay Metascheduler, to define,
submit, and manage computational jobs. For additional information,
see http://meteo.unican.es/trac/wiki/DRM4G .

Usage: drm4g [ --version ] [ --help ]
        <command> [ options ] [ <args>... ]

Options:
  -h --help      Show help.
  -v --version   Show version.
  -d --debug     Debug mode.

drm4g commands are:
  start          Start DRM4G daemon and ssh-agent
  stop           Stop DRM4G daemon and ssh-agent
  status         Check DRM4G daemon and ssh-agent
  restart       Restart DRM4G daemon
  clear          Start DRM4G daemon deleting all the jobs available on DRM4G
  conf          Configure DRM4G daemon, scheduler and logger parameters
  resource       Manage computing resources
  id            Manage reosource identities
  host          Print information about the hosts
  job           Submit, get status and history and cancel jobs

See 'drm4g <command> --help' for more information on a specific command.
```

start:

```
Start DRM4G's daemon and ssh-agent.

Usage:
  drm4g start [ options ]

Options:
  -d --debug     Debug mode..
```

stop:

```
Stop DRM4G's daemon and ssh-agent.

Usage:
  drm4g stop [ options ]

Options:
  -d --debug     Debug mode.
```

status:

```
Check DRM4G's daemon and ssh-agent.

Usage:
  drm4g status [ options ]

Options:
  -d --debug     Debug mode
```

clear:

Restart DRM4G's daemon deleting all the jobs available on DRM4G.

Usage:

```
drm4g clear [ options ]
```

Options:

```
-d --debug    Debug mode.
```

restart:

Restart DRM4G's daemon.

Usage:

```
drm4g [ options ] restart
```

Options:

```
-d --debug    Debug mode.
```

conf:

Configure DRM4G's daemon, scheduler and logger parameters.

Usage:

```
drm4g conf ( daemon | sched | logger ) [ options ]
```

Options:

```
-d --debug    Debug mode
```

resource:

Manage computing resources on DRM4G.

Usage:

```
drm4g resource [ list [ --all ] | edit | check | create | destroy ] [ options ]
```

Options:

```
-d --debug    Debug mode.
--all        Lists all of the created resources.
```

Commands:

```
list        Show resources available.
edit        Configure resources.
check       Check if configured resources are accessible.
create      Create new virtual machines
destroy     Delete all virtual machines
```

host:

Print information about the hosts available on DRM4G.

Usage:

```
drm4g [ options ] host [ list ] [ <hid> ]
```

Arguments:

```
<hid>      Host identifier.
```

Options:

```
-d --debug    Debug mode.
```

Host field information:

HID	Host identifier.
ARCH	Architecture.
JOBS(R/T)	Number of jobs: R = running, T = total.
LRMS	Local Resource Management System.
HOSTNAME	Host name.
QUEUENAME	Queue name.
WALLT	Queue wall time.
CPUT	Queue cpu time.
MAXR	Max. running jobs.
MAXQ	Max. queued jobs.

id:

Manage identities for resources. That involves managing private/public keys and grid credentials, depending on the resource configuration.

Usage:

```
drm4g id <resource_name> init [ options ] [ --lifetime=<hours> ]
drm4g id <resource_name> info [ options ]
drm4g id <resource_name> delete [ options ]
```

Options:

```
-l --lifetime=<hours> Duration of the identity's lifetime [default: 168].
-d --debug           Debug mode.
```

Commands:

```
init           Create an identity for a certain period of time, by
                default 168 hours (1 week). Use the option --lifetime
                to modify this value. It adds the configured private
                key to a ssh-agent and creates a grid proxy using
                myproxy server.
                It appends the public key to the remote user's
                ~/.ssh/authorized_keys file (creating the file, and
                directory, if necessary). It tries to load the public
                key obtained by appending *.pub to the name of the
                configured private key file. Alternative the public
                key can be given by public_key variable.
                It also configures the user's grid certificate
                under ~/.globus directory (creating directory,
                if necessary) if grid_cert variable is defined.

info           Get some information about the identity's status.

delete        Remove the identity from the ssh-agent and the
                myproxy server.
```

job:

Submit, get status and history and cancel jobs.

Usage:

```
drm4g job submit [ options ] [ --ntasks <total_tasks> ] [ --dep <job_id> ... ] <template>
drm4g job list [ options ] [ <job_id> ]
drm4g job cancel [ options ] <job_id> ...
drm4g job log [ options ] <job_id>
drm4g job history [ options ] <job_id>
```

Arguments:

<job_id>	Job identifier.
<template>	Job template.
<total_tasks>	Total number of tasks in the job array.

Options:

--ntasks <total_tasks>	Number of tasks to submit.
--dep=<job_id> ...	Define the job dependency list of the job.
-d --debug	Debug mode.

Commands:

submit	Command for submitting jobs.
list	Monitor jobs previously submitted.
cancel	Cancel jobs.
log	Keep track of a job.
history	Get information about the execution history of a job.

Job field information:

JID	Job identification.
DM	Dispatch Manager state, one of the following: pend, hold, prol, prew, wrap, epil, canl, s
EM	Execution Manager state: pend, susp, actv, fail or done.
START	The time the job entered the system.
END	The time the job reached a final state (fail or done).
EXEC	Total execution time, includes suspension time in the remote queue system.
XFER	Total file transfer time, includes stage-in and stage-out phases.
EXIT	Job exit code.
TEMPLATE	Filename of the job template used for this job.
HOST	Hostname where the job is being executed.
HID	Host identification.
PROLOG	Total prolog (file stage-in phase) time.
WRAPPER	Total wrapper (execution phase) time.
EPILOG	Total epilog (file stage-out phase) time.
MIGR	Total migration time.
REASON	The reason why the job left this host.
QUEUE	Queue name.