**Usage**

Client

java ds\_client\_test /path/to/ds-system.xml [options]

/path/to/ds-system.xml is a mandatory argument, the program will not run without it. ds-system.xml will be in the same folder as ds-server.

Available options:

-v Verbose. Displays full logging, including what messages are sent and received.

-p [arg] Port. One integer argument. Must be the same as the port ds-server is listening on. Default: 50000, the same as   
ds-server’s default.

-a [arg] Algorithm. One string argument. Currently does not do anything, for the individual stage of this project you may want to implement it.

-h Usage. Less informative than this document, but briefer.

Defunct:

-path [arg] The old argument for the path to ds-system.xml. Still exists in the code, but is no longer supported, use at your own risk.

Server

ds-server -c /path/to/config.xml [options]

-c is technically an optional argument. The server is supposed to produce random jobs when this argument is left out, but the server that has been provided is bugged and instead produces no jobs.

In short: Don’t leave out the -c argument.

Available options:

-p [arg] Integer. The value passed to the server must be the same as the value passed to the client. Default 50000.

-h Usage.

**Technical Details**

Algorithm

The implementation of the all-to-largest algorithm is fairly simple. Upon receiving a job, it polls ds-server for the list of servers and sends the job to the largest active server *at the current time*. The difference between the largest server overall and the largest server at the current time is that as a server receives more jobs, it will have less resources available, making it functionally smaller. Eventually, when the largest server has enough jobs, it will be considered functionally smaller than a server with less maximum resources, but more available resources.