

Stratmas Server User Manual

Daniel Ahlin Per Alexius

January 31, 2007



Paralleldatorcentrum

This document describes how to use the Stratmas server. It is divided in four different sections. The first section describes the main interface towards the server and the files that the server uses. The other three sections provides usage instructions for the server for the Linux, Mac OS X and Windows platforms respectively.

1 The Stratmas Server

The following sections describes the files that the Stratmas server depends on and the command line interface for using the server.

1.1 Files

The files and folders described in this section should all be located in the same directory as the Stratmas server executable, i.e. in **StratmasServer/**

stratmas.cfg

Permanent configuration settings can be specified in a file, *stratmas.cfg*, which is processed at startup. As will be described below, all configuration options have a long form, for instance, `--port` is the long form for `-p`. Without the dashes this long form can be used in the configuration file with the same effect as were they specified on the command line. Note, however, that in case of conflict, the command line option will supersede or augment those of the configuration file.

Location of stratmas.cfg Unless explicitly specified by command line option (see 1.2), the server will try to use any file called *stratmas.cfg* that resides in the same folder as the server binary. Please note that currently the non-existence of the default configuration file *is not considered an error*.

A sample stratmas.cfg For safety reasons it is desirable to be able to control from where it is possible to connect to the server. By default the server will allow connections only from IP addresses that are explicitly specified (this can be disabled by command line options, see section 1.2). The *stratmas.cfg* file is a good place to specify who may connect. A *stratmas.cfg* allowing access from two hosts may look like this:

```
# This is a comment
# Friendly computer one
client = 192.168.0.1
# Friendly computer two
client = 192.168.0.2
```

1.2 Options

The main interface to the Stratmas server is the command line. When starting the server from the command line several options may be given to control the server's behavior. These are described below.

Invocation options

Invocation options are options that changes the purpose of running the server or the way it reads its configuration. Since, for instance, it makes no sense to specify that the server should run in `--version` mode every time it is invoked, it is not valid to specify any of these options in the *stratmas.cfg* file. In addition to the invocation options specified below there are some platform specific that are described in sections 2, 3 and 4.

- `-? or --help` This option displays information about the available options (summarizing the information in this document). Example:
`./StartServer.command -?`
displays a summary of the options on the current platform.
- `-v or --version` This option displays information about the version of the Stratmas server. Example:
`./StartServer.command -v`
displays the version.
- `--configfile <filename>` This option forces the server to use *filename* instead of *stratmas.cfg* as the file from which to read the configuration Example:
`./StartServer.command --configfile my-special-settings`
will tell the server to use *my-special-settings* to get the configuration from which connections are allowed.

Configuration Options

Configuration options are options that changes the way the server is running, as such they are all also valid entries in the configuration file.

- `-c <IP address> or --client <IP address>` This option explicitly tells the server to allow connections from the specified IP address. Example:
`./StartServer.command -c 192.168.0.1 -c 192.168.0.2`
will explicitly allow connections from the IP addresses *192.168.0.1* and *192.168.0.2*.
- `-h <address> or --host <address>` This option tells the server to listen for connections on the specified address only. Example:
`./StartServer.command -h localhost`
will make the server reject all connections that does not come from *localhost*, i.e. the machine the server is running on. This may be useful if it is not desirable to open the server for connections from other hosts.
- `-a or --anyclient` This option will make the server ignore IP validation, i.e. connections will be allowed from any IP address. The `-a` option overrides any `-c` option. Example:
`./StartServer.command -a`
will force the server to ignore IP validation.

- p <port> or --port <port>** This option tells the server which port to listen for connections on. The default port is 28444. Example:
`./StartServer.command -p 29000`
will tell the server to listen for connections on port 29000.
- d <host> or --dispatcher <host>** This option tells the server to register with a dispatcher at the specified host. Port number for the connection may be specified optionally. Default is 4181. Example:
`./StartServer.command -d localhost`
will tell the server to register with a dispatcher running on the same machine as the server.
- dispatcher-port <port>** This option tells the server that if it is to register with a dispatcher, the specified port is the one to use. As stated above, default is 4181. Example:
`./StartServer.command -d localhost --dispatcher-port 30000`
will tell the server to register with a dispatcher running on the same machine as the server listening on port 30000.

2 Using Stratmas Server on Linux

To start the server, perform the steps listed below. All references to directories are given relative to the Stratmas distribution root directory.

1. Open a shell.
2. Go to the directory `StratmasServer/`
3. Type `./StartServer.command` followed by the appropriate option parameters, see sections 1.2 and 2.1.

The output from the server will now be written to the shell. To stop the server, simply press `Ctrl-c`.

2.1 Invocation options for Linux

- daemonize** This option tells the server to function as a daemon in the traditional Unix sense, example:
`./StartServer.command --daemonize`
will (assuming no configuration errors) spawn a server using the settings in *stratmas.cfg* and immediately return. The server will detach from the controlling terminal (see `daemon(3)`) and communicate any subsequent errors via `syslog(3)`.

3 Using Stratmas Server on Mac OS X

There are two different main ways of using the server. These are described in the following sections.

3.1 Using the Server From Finder

To start the server, perform the steps listed below. All references to directories are given relative to the Stratmas distribution root directory.

1. Go to the directory `StratmasServer/`
2. Double click on the `StartServer.command` icon.

A Terminal window will now open and the output from the server will be written to this window. To stop the server, simply close the Terminal window.

It should be noticed that this method uses a script to start the server in order to be able to set the appropriate environment variables. If other than the default command line arguments should be given to the server, the start script must be modified. This is done by simply opening the file `StartServer.command` in a text editor and changing the line that looks like:

```
./stratmas_${CURRENT_PLATFORM} $*
```

to for example:

```
./stratmas_${CURRENT_PLATFORM} -p 29000
```

and then save the file. Double clicking on the `StartServer.command` icon will now start the server with the desired arguments.

3.2 Using the Server From Terminal

To start the server, perform the steps listed below. All references to directories are given relative to the Stratmas distribution root directory.

1. Open the Terminal application.
2. Go to the directory `StratmasServer/`
3. Type `./StartServer.command` followed by the appropriate option parameters, see sections 1.2 and 2.1.

The output from the server will now be written to the Terminal window. To stop the server, simply press `Ctrl-c`.

3.3 Invocation options for Mac OS X

The invocation options are the same as for Linux, see 2.1.

4 Using Stratmas Server on Windows

To start the server, perform the steps listed below. All references to directories are given relative to the Stratmas distribution root directory.

1. Go to the directory `StratmasServer/`
2. Double click on the `StartServer.bat` icon.

A command window will now open and the output from the server will be written to this window. To stop the server, simply close the command window.

It should be noticed that this method uses a script to start the server in order to be able to set the appropriate environment variables. If other than the default command line arguments should be given to the server, the start script must be modified. This is done by simply opening the file `StartServer.bat` in a text editor and adding the desired arguments to the end of the line that looks like

```
stratmas_win
```

for example:

```
stratmas_win -p 29000
```

and then save the file. Double clicking on the `StartServer.bat` icon will now start the server with the desired arguments.

4.1 Invocation options for Windows

Some basic provisions are made to allow the server to run as a service in Windows, to control this there are four invocation options specific to Microsoft Windows

--installService This option tells the server to connect to the service control manager and register the StratmasServer service. This will only work if the user has sufficient privileges to install new services. Example:

```
stratmas_win --installService
```

Please note that for security reasons, by default *the service is not configured to start automatically*. To make this happen, please use the service manager client supplied with Windows.

--uninstallService This option tells the server to connect to the service control manager and remove any StratmasServer service. Again, this will only work if the user has sufficient privileges. Example:

```
stratmas_win --uninstallService
```

Please note that it is recommended to stop the service first (see below).

--startService This option tells the server to connect to the service control manager and request that any StratmasServer service be started. This will only work if the user has sufficient privileges and the service has been installed. Example:

```
stratmas_win --startService
```

--stopService This option tells the server to connect to the service control manager and request that any StratmasServer service be stopped. This will only work if the user has sufficient privileges and the service is running. Example:

```
stratmas_win --stopService
```

--service This option is used internally by the server to indicate that it should be started in a mode suitable to run as a Windows service. *Please note that this option is not recommended to be used directly by users.*