

# Streams

Version 3.02

## Installation and Registration



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# I Installation and Execution

The *Streams* 3.02 application is deployed as a ZIP file downloadable from the following website.

<https://www.canterbury.ac.nz/engineering/schools/cnre/software/streams/>

Different ZIP files are provided for Macintosh, Windows and Linux systems.

The only system requirement for running *Streams* on either a Macintosh, Linux, or Windows computers is the Java Development Kit (JDK) version 1.8.0, or later, installed. This can be downloaded from the Oracle website below:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

## I.1 Installation on Windows

The ZIP file required for installation on a Windows computer is named

*Streams302\_Win.zip*

To begin, create the following directory

*C:\StreamsLibrary\Streams3.02*

The contents of the zip file should be extracted into this directory. The zip file contains the following:

- *Streams3.02.exe*– the executable launch file
- *Streams3.02.jar* – the java archive file containing the *Streams* program.
- a directory containing the three software manuals in PDF format.

The file *Streams3.02.exe* and the directory of manuals can be moved to any desired location in the file system.

## I.2 Installation on Mac OS X

The ZIP file required for installation on a Macintosh computer running OS X is named

*Streams302\_Mac.zip*

To begin, create the following directory

*/StreamsLibrary/Streams3.02*

in the root directory of the boot disk. The contents of the zip file should be extracted into this directory. The zip file contains the following:

- *Streams3.02.app*– the executable launch file
- *Streams3.02.jar* – the java archive file containing the *Streams* program.
- a directory containing the three software manuals in PDF format.

The file *Streams3.02.app* and the directory of manuals can be moved to any desired location in the file system.

If your Mac is running Mojave© (MacOS 10.14) you may find that the fonts displayed in various field views are not smooth. It appears that smoothing the fonts is not the default for Mojave. To rectify this problem execute the following command in the Terminal app before running *Streams*:

```
defaults write -g CGFontRenderingFontSmoothingDisabled -bool NO
```

## I.3 Installation on Linux

The ZIP file required for installation on a Linux computer is named

*Streams302\_Lnx.zip*

To begin, create the following directory

*/usr/StreamsLibrary/Streams3.02*

in the root directory of the boot disk. The contents of the zip file should be extracted into this directory. The zip file contains the following:

This zip file contains the following:

- *Streams3.02.sh* – a shell script that will launch the *Streams* application.
- *Streams3.02.jar* – the jar file containing the application code.
- a directory containing the three software manuals in PDF format.

The file *Streams3.02.sh* and the directory of manuals can be moved to any desired location in the file system.

*Notes:*

1. *Streams* has been tested on a Linux machine running Mandriva 2007 with the Gnome 2.16.0 desktop. Its performance on other Linux systems is untested.
2. The user will note some slight differences between the user interface under Linux/Gnome and that under Windows and Mac OS X.

## 1.4 Execution

Launching *Streams* on a Windows or Mac OS X computer is a two step process. The first step is initiated by running the program file *Stream3.02.exe* under Windows and *Streams3.02.app* under Mac OS X.

This action executes the *Streams3.02* Launcher which displays a window whose primary purpose is to allow the user to specify the amount of memory that should be allocated to the *Streams* application. Three memory values can be set (all specified in megabytes). The stack size ideally should be set to 32 Mb, although smaller values may be suitable if memory is tight. The initial and maximum heap sizes may be set to a common value. This value will depend on the operating system, the Java Runtime Environment installed, and the amount of RAM in the computer. Ideally this value should be as large as possible. As a rough guide, for a 32bit Windows system with 1Gb of RAM choose 800Mb. For a 32bit Windows computer with 2Gb of RAM current JREs won't allow more than approximately 1200 Mb to be specified. For Mac OS X 10.6 and above running 64bit Java the heap value can be much larger. The user is encouraged to experiment with this value for their particular environment. If the value they set is too large *Streams* simply won't launch.

This launch window also allows the user to specify the location of the *Streams3.02.jar* file. Provided this is in the directory specified in the installation instructions no action by the user is required.

Once all settings have been made the second step in the launch process is to click the Launch button. This executes the *Streams3.02* application itself.

Note that the memory settings and Jar file location are remembered when the launcher is next executed and the user is unlikely to need to adjust these settings again unless their system changes in some way, or they wish to make movies.

Under Linux the memory allocated to *Streams* can be changed by editing the shell file, *Streams3.02.sh*, using a simple text editor. The stack memory is specified by the command line flag `-Xss32m`, while the heap specifications are set by the flags `-Xmx800m` and `-Xms800m`. In each case the numbers are the memory allocations specified in megabytes. The user can change these and resave the shell file. Finally *Streams* is launched by double clicking on the shell file *Streams3.02.sh*. In the resulting dialog box the user should select the Run option.

## 2 Registration

*Streams* must be registered before it can be run for the first time. A registration key can be requested from the developer, Dr Roger Nokes.

When *Streams* is run for the first time a registration dialog box is displayed that prompts the user to electronically agree to the conditions of software use and to enter a 20 character registration key. This key is checked by the software, and if valid, the application is launched. Subsequent launches of the software do not require the registration key to be reentered.

Part of the registration key is the registration expiry date. If the application is run after this date the user will be prompted to reregister the software. The expiry date can be viewed in the application parameters dialog box under the application menu of the

main window. The date on which the software was registered is also displayed in this dialog box.