

Building Stroika

Common

Stroika is a C++ class library. For the most part, it's built make. However, internally, some of these make rules use perl etc scripts.

Quick Start

For the very impatient

```
wget --tries=10 --no-check-certificate --output-document=STROIKA_DOWNLOAD.tar.gz https://github.com/SophistSolutions/Stroika/archive/master.tar.gz

tar xf STROIKA_DOWNLOAD.tar.gz

cd Stroika-master

make all run-tests
```

For the more patient (hints about what to try next)

- `wget --tries=10 --no-check-certificate --output-document=STROIKA_DOWNLOAD.tar.gz https://github.com/SophistSolutions/Stroika/archive/v2.0a18.tar.gz`
or
`wget --tries=10 --no-check-certificate --output-document=STROIKA_DOWNLOAD.tar.gz https://github.com/SophistSolutions/Stroika/archive/master.tar.gz`
- `tar xf STROIKA_DOWNLOAD.tar.gz`
- `cd Stroika-2.0a18` (or whatever extracted)
- `make help`
Not needed, but gives some idea of make options
- `make check-tools`
Not needed, but tells you if you are missing anything critical
- `make default-configuration`
Not needed, but it's a springboard for setting up the configuration you want.
 - Review/edit `ConfigurationFiles/DefaultConfiguration.xml`
 - Or try something like
 - `make default-configuration DEFAULT_CONFIGURATION_ARGS="--enable-assertions --enable-trace2file --compiler-driver 'g++-4.8'"`
 - or*
 - `make default-configuration DEFAULT_CONFIGURATION_ARGS="--help"`
- `make all`
Builds everything (takes perhaps 15 minutes? – depends a lot on OS/computer speed).
- `make run-tests`
Runs regression tests (optionally on remote machines, or with VALGRIND)

Required Tools

Required for ALL platforms

- git
 - not needed to build, but
- make
- patch
- perl
- wget

For Windows

- Visual Studio.net 2013 (or later)
- Cygwin
 - Including
 - dos2unix
 - unix2dos

For UNIX

- Compiler
 - gcc 4.7 or later OR
 - Stroika is currently tested with gcc 4.7- gcc 4.8
 - llvm (clang++) 3.4 or later

Optional Components

- curl
 - If present, Stroika can be configured to include it and take advantage of it
- openssl
 - You can use the statically linked copy in ThirdPartyProducts, or the os-intalled .so files.

Build Process

On any platform, building Stroika, and all its demo applications and regression tests is as simple as cd'ing to the top-level directory, and typing make

Special Targets

- make
 - Make with no arguments runs 'make help'

- `make help`
Prints the names and details of the special targets
- `make all`
builds the stroika library, tests, demos, etc.
- `make run-tests`
Builds Stroika, and all the regression tests, and runs the regression tests
- `make project-files`
Builds project files which can be used for things like visual studio (not needed)
- `make check-tools`
Checks if the tools needed to build Stroika are installed and in your path. This is done automatically, and generally not needed explicitly.

Configuration

Building Stroika requires building special configuration files. But using the above mechanism automatically builds them for you. To customize your Stroika configuration, you can manually run

- Configurations can be generated via
 - `make default-configuration`
 - This generates `ConfigurationFiles/DefaultConfiguration.xml`
- Configurations can be applied via
 - `make apply-configurations`
 - This generates makefiles (as appropriate for your platform/`Configuration.xml` file), and C++ `#include` files

Using Visual Studio.net

Visual Studio.net project and solution files are available for the Stroika demos, top-level project files, and regression tests. Once you have built your configuration files (see above), you can use the project files to build, test, extend and develop Stroika.

Using QtCreator (on unix)

Run `Library/Projects/QtCreator/CreateQtCreatorSymbolicLinks.sh` to create project files at the top level of your Stroika directory. Then you can open that `.creator` file in qtCreator, and build and debug Stroika-based applications.