

Installation Instructions for OmNet ++ on Mac OS X

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Requirements

1. Mac OS X 10.3.5 Panther. Others may work too.
2. Apple X Server (Custom install, with X11 headers / dev kit)
3. Fink, with tcltk, tcltk-dev, libxslt, bison, doxygen, gnuplot (and others?)

I do not recommend compiling against the TCL/TK Aqua Batteries Included distribution, as OmNet++ doesn't work well with it (you can't move/use the windows). To make a proper Aqua app would require use of XCode or similar to assemble the package after the OmNet++ simulation has been built.

Method

1. Download and unpack into /usr/local/omnet
2. Edit configure.user
 - Add "-Wno-long-double -I/usr/include/malloc" to CFLAGS
 - build_shared_libs=no
 - TK_CFLAGS="-I/sw/include -fwritable-strings"
 - TK_LIBS="-L/sw/lib -ltcl8.4 -ltk8.4"
3. export PATH=/usr/local/omnet/bin:\$PATH
4. export LD_LIBRARY_PATH=/usr/local/omnet/lib/
5. Run ./configure CC=gcc2 CXX=g++2. If it fails to detect Tk, check config.log and start searching from the first location of "tk". It may be that it's actually found the Tk distribution, but failed for some other reason (perhaps X11/Xlib.h or some such is missing).
6. make
7. cd into /usr/local/bin/ and run ln -s ../omnet/bin

Notes

- -shared is a GCC 2 option. The default compiler on Mac OS X is GCC 3. The preferred method is to use libtool instead. We can more easily get OmNet working if we use GCC 2.95 instead, which is also included in Mac OS X.
 - You'll find the installation package in "Applications:Installers:XCode Tools:Packages:gcc2.95.2.pkg"
 - You can also install the X11 SDK from there as well.
 - Don't use gcc_select to change the default toolchain version, rather, just specify the CC and CXX variables when you run ./configure. This way, you won't have to change the system-wide default when you want to make a simulation.
- Current status is as thus: Can compile, but get a lot of messages like the following.
 - /sw/lib/libtcl8.4.dylib(tclStubLib.o) definition of _tclStubsPtr
 - /sw/lib/libtk8.4.dylib(tclStubLib.o) definition of _tclStubsPtr
 - Not sure how to get rid of these messages.

- Plove needs to use a different command when launching gnuplot. Currently, we get this.



- It should use mkfifo instead perhaps. Strangely enough, gnuplot does come up and display the expected graphic after this.
- Drop-down boxes show under the window (I've seen this behaviour on Linux too. Actually, it only seems to work correctly on older Linux boxen.
- You need to launch your simulations from an xterm, not Terminal.app. This is because only xterm (which is started when you start X11), has the appropriate DISPLAY setting and security tokens.
- I need to find out how you can make X11 pass through clicks when that click would make a new X11 window active, otherwise you need to click twice on a button when a different window (X11 or not) is currently active.

Testing

The amount of testing I have done has been minimal. Essentially just compiling and making sure the fifol simulation works as expected. I'm pleased to say that it does work wonderfully.