

1 Installation tips for SPIN and XSPIN

For Homework 2 in CS 4271 course, we shall be using SPIN model checker. Following is a brief description for installing SPIN and the GUI XSPIN in Linux system:

1. Goto <http://spinroot.com/spin/Src/index.html> and obtain the latest source distribution of SPIN **spin524.tar.gz**.
2. Untar and unzip the source in a convenient directory, **tar -xvzf spin524.tar.gz**. From now on we shall be calling this directory **SPIN_HOME**. Thus if you have downloaded the source in directory say **/home/sudiptac/sudiptac/4271**, **SPIN_HOME = /home/sudiptac/sudiptac/4271**. You can set this variable in bash shell using command **"export SPIN_HOME=/home/sudiptac/sudiptac/4271"**.
3. Go to the directory **\$SPIN_HOME/Spin/Src5.2.4** for compiling the spin source code. You need a working version of gcc compiler running in your system to produce the spin binary. Type **"make"** in this directory. If the compilation is successful, it has already produced an executable named **"spin"** in the current directory. Type the command **"./spin -V"** for double checking. It should print the current version of spin (*e.g.* Spin Version 5.2.4).
4. Set the path of **"spin"** binary in your shell. If you are using the bash shell, you can do it by typing the following command **"export PATH=\$PATH:\$SPIN_HOME/Spin/Src5.2.4"**. Note that you need to provide the appropriate path for **\$SPIN_HOME** unless you have already set this variable in your shell.
5. Download the file **"xspin523.tcl"** from the same URL (<http://spinroot.com/spin/Src/index.html>) and save it in the directory **\$SPIN_HOME/Spin/Src5.2.4** *i.e.* in the same directory of **"spin"** executable. Rename it to a convenient name say **"xspin"**. xspin is a tcl script. Thus for running it, you need to have tcl version 8.4 installed in your machine. First type the **"wish"** command in your shell. If the command executes successfully, it means that you have some version of Tcl/Tk installed in your computer.
6. Replace the line labeled **"exec wish c:/cygwin/bin/xspin"** in **"xspin"** script with the correct path of **"xspin"** *i.e.* write **"exec wish \$SPIN_HOME/Spin/Src5.2.4/xspin"**.
7. Launch the **"xspin"** application with some test file in the **\$SPIN_HOME/Spin/Test** directory. As a particular example type **"./xspin ../Test/leader"** from directory **\$SPIN_HOME/Spin/Src5.2.4** and do the following:
 - In the XSPIN GUI menu, goto **RUN⇒Run Simulation**. Several windows should appear simultaneously.
 - Press the **Run** button in simulation window. If the simulation starts, you have installed SPIN and XSPIN successfully in your computer.

If you are unable to launch xspin, it is highly due to the incompatibility or unavailability of Tcl/Tk in your computer. If you are using ubuntu, you can very easily install the latest version of Tcl/Tk by typing the command **"apt-get install tk"**. Otherwise, obtain the source **"tcl8.4.19-src.tar.gz"** from <http://www.tcl.tk/software/tcltk/download.html> and follow the respective installation guide.

If you face difficulties in any of the above process, feel free to go through the installation guide at SPIN website <http://spinroot.com/spin/Man/README.html#S1> or contact me (sudiptac@comp.nus.edu.sg).

2 Tutorials

Both short and long versions available at <http://spinroot.com/spin/Man/index.html>.