Introduction and installation of Ns2
Background

- Network simulator, version 2 (Ns2) is an object oriented network simulator
- Ns2 is created by UC Berkeley
OTcl: Tcl interpreter with OO extension

NS simulator library
- Event scheduler objects
- Network component objects
- Network setup helping Modules (plumbing module)

Analysis

Simulation results

NAM
Network animator

OTcl Script
Simulation program
Installation of NS2

- Install cygwin (OS: Windows)
  - [http://www.cygwin.com](http://www.cygwin.com)
  - click “Install or Update now (using setup.exe)”

- Install NS2
  - [http://www.isi.edu/nsnam/dist/](http://www.isi.edu/nsnam/dist/)
  - ns-allinone-2.30.tar.gz (in home dir of Cygwin)
  - tar xvfz ns-allinone-2.30.tar.gz
  - Edit .bashrc in home dir

```bash
export NS_HOME="pwd"/ns-allinone-2.30
export PATH=$NS_HOME/tcl8.4.5/unix:$NS_HOME/tk8.4.5/unix:$NS_HOME/bin:$PATH
export LD_LIBRARY_PATH=$NS_HOME/tcl8.4.5/unix:$NS_HOME/tk8.4.5/unix:$NS_HOME/otcl-1.8:$NS_HOME/lib:$LD_LIBRARY_PATH
export TCL_LIBRARY=$NS_HOME/tcl8.4.5/library
```
export LD_LIBRARY_PATH=<paths>

(2) You MUST put `/home/hcchu/ns-allinone-2.30/tcl8.4.13/library` into your ICL_LIBRARY environmental variable. Otherwise ns/nam will complain during startup.

(3) [OPTIONAL] To save disk space, you can now delete directories `tcl8.4.13` and `tk8.4.13`. They are now installed under `/home/hcchu/ns-allinone-2.30/include/`.

After these steps, you can now run the ns validation suite with `cd ns-2.30; ./validate`

For trouble shooting, please first read ns problems page: http://www.isi.edu/nsnam/ns/ns-problems.html. Also search the ns mailing list archive for related posts.

`hcchu@hollings-566f72 ~`/ns-allinone-2.30`
$ startxwin.bat
startxwin.bat - Starting on Windows NT/2000/XP/2003

`hcchu@hollings-566f72 ~`/ns-allinone-2.30`
Testing

```
hcchu@hollings-556f72 ~/ns-allinone-2.30
$ ns exp3.tcl
```

```
File   Views Analysis
0.000000 Step: 2.0ms
```

Diagram:

```
0 --2-- 3
 \
|   |
\|   |
1
```

```
```