

Basics of Network Simulator 2

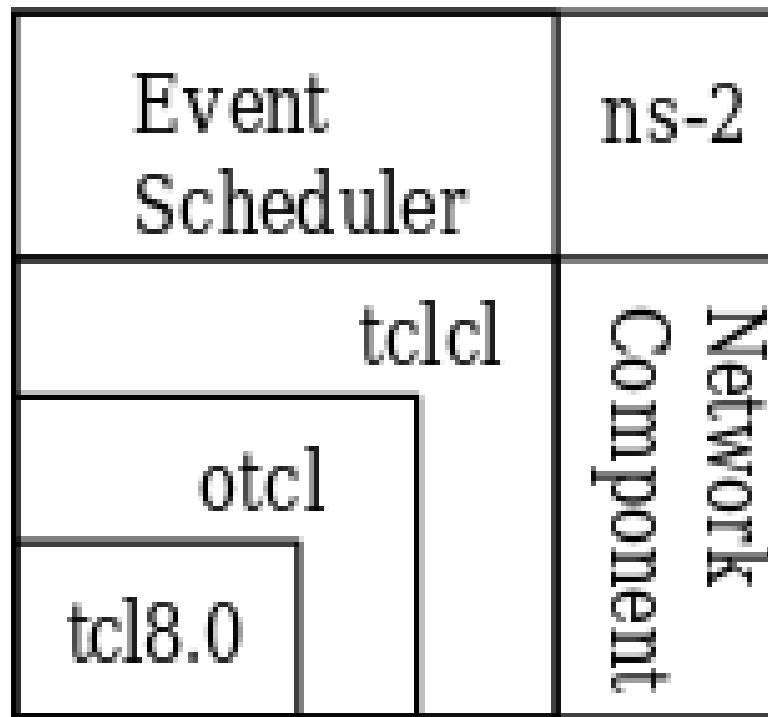
NS-2

- Discrete event simulator
- Works at packet level
- Protocols supported: TCP,UDP, FTP,HTTP
- Simulation of Wired and Wireless networks
- Unix based
- Uses TCL as scripting language

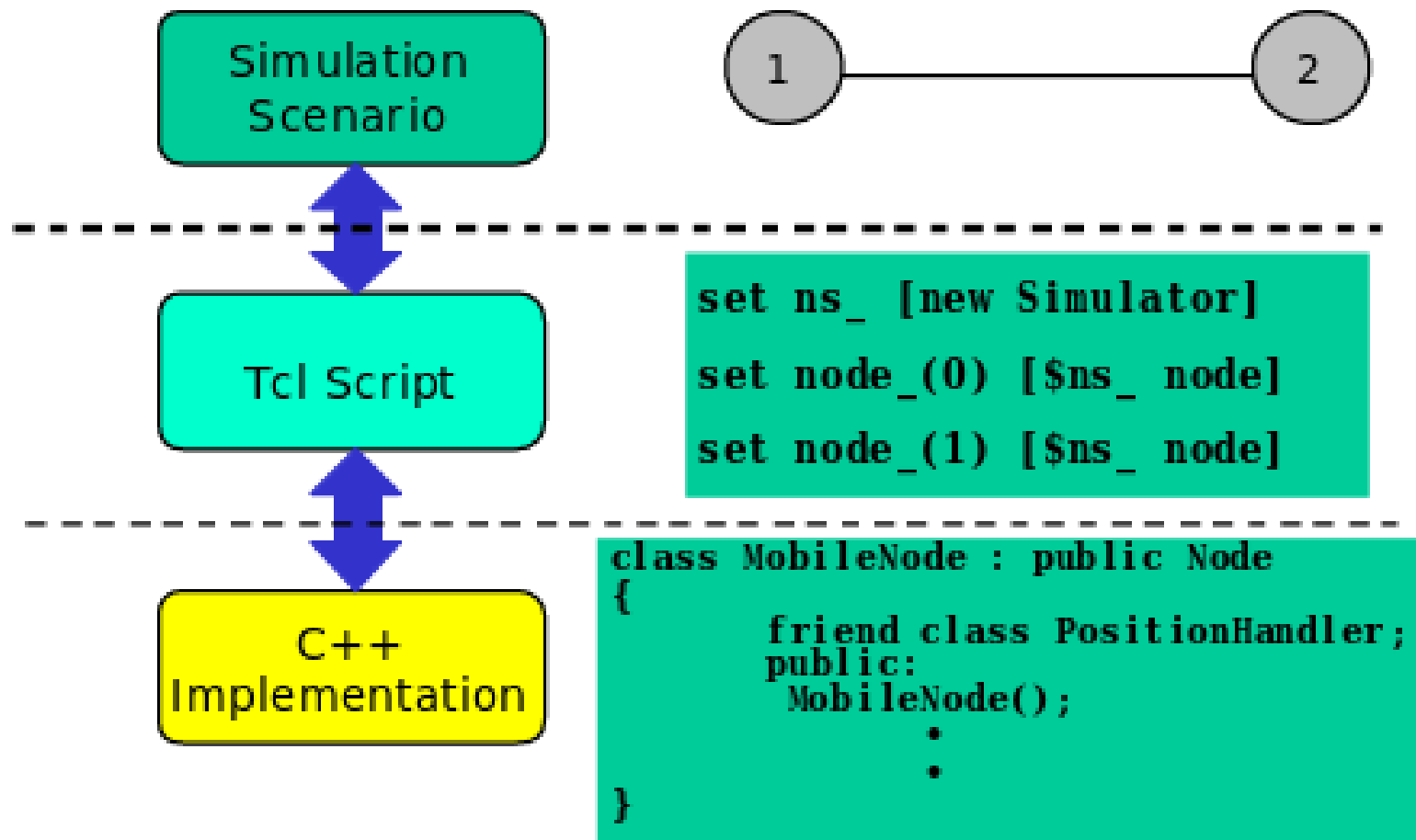
Architecture



You are here.



Implementation



Installation

- ns-2 package
 - Dependencies: g++, tcl, otcl, tclcl
- NSG.jar (TCL Script generator)
 - Creating scenarios for tcl
- NAM (Network Animator)

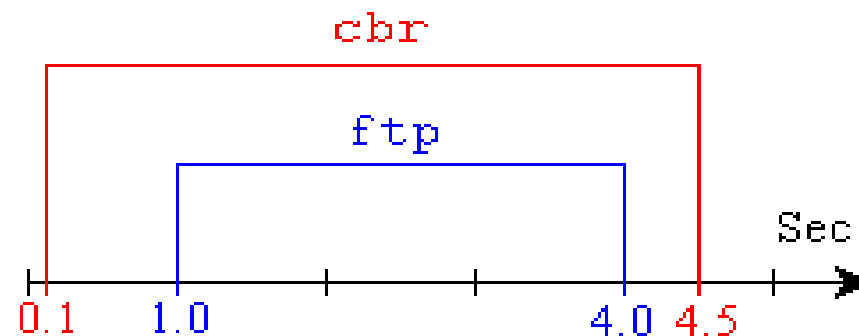
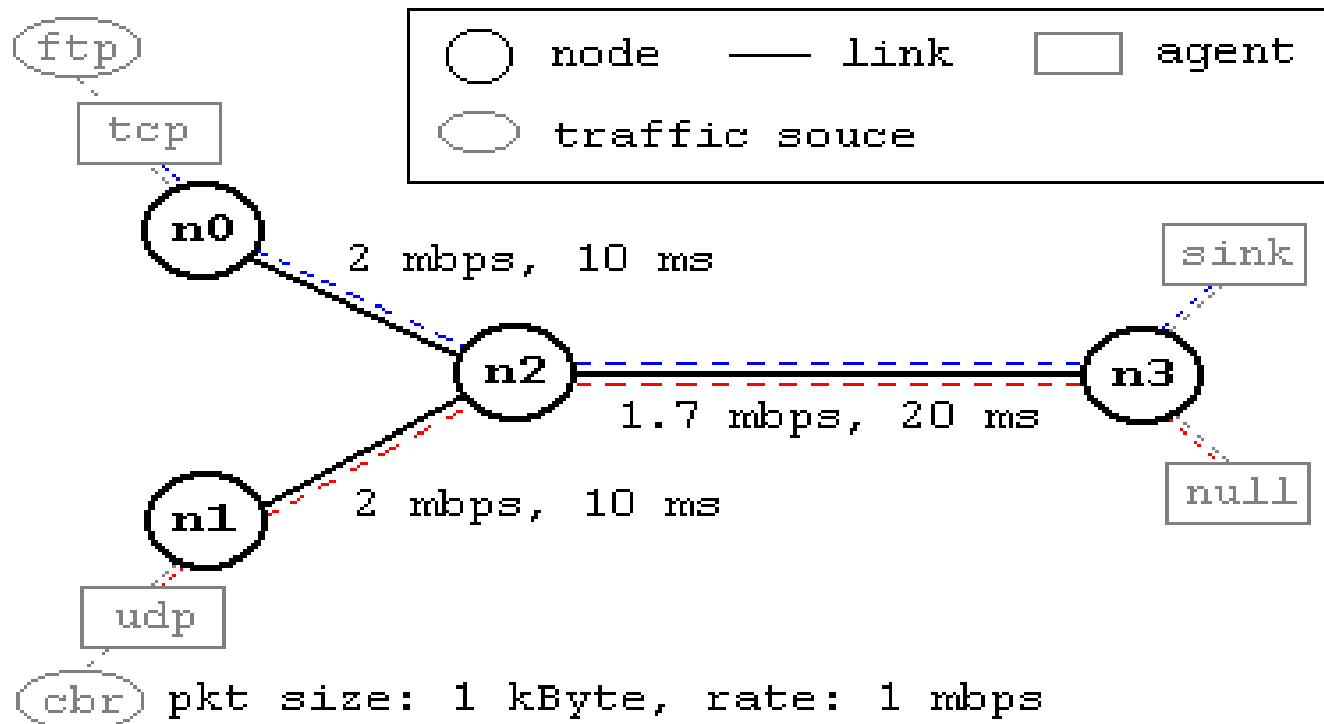
Debian Based installation

- `sudo apt-get install ns2`
- `sudo apt-get purge nam`
- `wget --user-agent="Mozilla/5.0 (Windows NT 5.2; rv:2.0.1) Gecko/20100101 Firefox/4.0.1" "http://technobytz.com/wp-content/uploads/2015/11/nam_1.14_amd64.zip"`
- `unzip nam_1.14_amd64.zip`
- `sudo dpkg -i nam_1.14_amd64.deb`
- `sudo apt-mark hold nam`

TCL basic syntax and defns

Tcl is a general purpose multi-paradigm system programming language. It is a scripting language that aims at providing the ability for applications to communicate with each other.

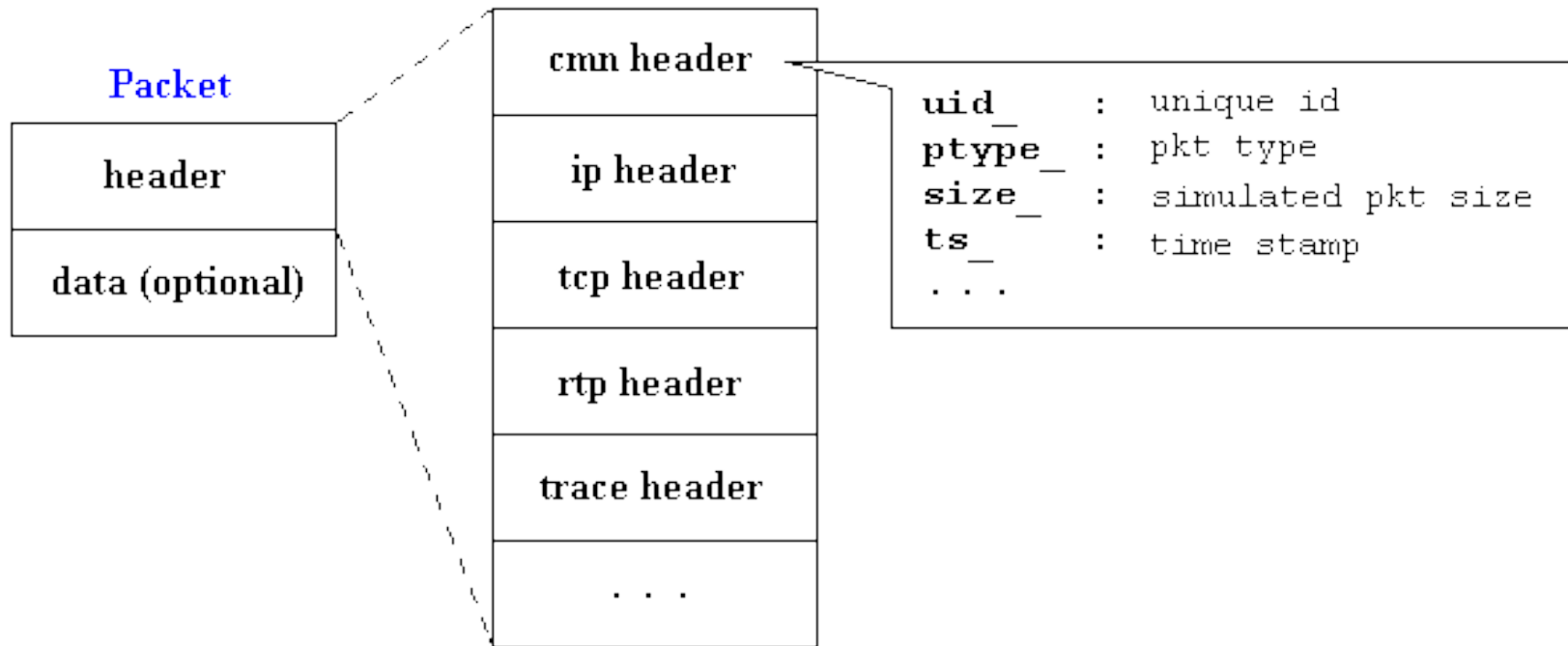
NS by example



Event Scheduler

- set ns [new Simulator]
- \$ns use-scheduler Heap
- \$ns at 300.5 "complete_sim"
- . . .
- proc complete_sim {} {
- . . .
- }

Packet Format



Thank You

- By Sundar Raman