Exercises with Cricket

1   Some Background

Refer to section 2 on page 9 of the Cricket handout I gave your earlier, and all the remaining sections right to the end. In this handout, I have provided a detailed explanation of how Cricket configuration works.

Also refer to the Cricket manual at `http://cricket.sourceforge.net/support/doc/reference.html` (or locally at `http://localhost.tyict.vtc.edu.hk/~cricket/doc/reference.html` if you set up the link as described in section 1.7 on page 7 of my Cricket handout) as you do these exercises.

All network traffic should to be monitored in units of *bits per second.* Kilobits or megabits per second are okay. One kilobit per second is 2^{10} bits per second; one megabit per second is 2^{20} bits per second.

To do this, you will need to have the agent running on your machine, configured with access to the MIB-2 tree. You should have done this already; the process is described in the handout entitled *SNMP Agent and the Set Operation*.

For each of the variables you monitor, you should provide:

- at least one set of graphs, monitoring the data over a daily, weekly, monthly and annual basis;

- meaningful labels to the graphs; for example, the graph for Internet network traffic should be labelled something like: "Internet network traffic" rather than as "3" or "ppp0". The axes of the graphs should also be labelled properly.

- meaningful names on the links to the graphs.

You should also check that the data in your graphs is meaningful by comparing it with the output from programs such as `ifconfig`. Perform the necessary calculations to indicate that the network traffic shown in your graph is consistent with the output of `ifconfig`.

2   The Exercises

1. Configure `cricket` to monitor network traffic on all network interfaces on your computer. Particularly, please refer to section 2.3.1 on page 13 of my Cricket handout.

2. Configure `cricket` to monitor network statistics on the Cisco 3548 switch in A204e. It has the IP address 172.19.66.82; the read-only community string is `693729`.

   Important: Please read section 2.5 on page 14 of the Cricket notes before starting this exercise.

3. Choose some other interesting network service(s) and configure Cricket to monitor them.