Exercises with Cricket

1 Some Background

Refer to section 2 on page 9 of the Cricket handout I gave you 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 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.