

## Exercise 6 - Run a Management Application

The sixth exercise of this course consists of the following parts:

- Part A: Monitor usage of your SNMP agent, using tcpdump.
- Part B: Periodically poll SNMP Interface statistics of all SNMP agents (including your own), using tools like MRTG/Cacti/Nagios or Zenoss.
- Part C: write a report, in which you analyse how the various tools retrieve MIB objects

### Part A: Monitor usage of your SNMP agent

You should use tcpdump to capture all SNMP traffic to and from your agent. You will use this trace file for Part C of this exercise. For the precise timeline (start and end of tcpdump), see below.

### Part B: Periodically poll all SNMP agents

Use a management tool like MRTG/Cacti/Nagios or Zenoss to periodically poll the "ifInOctets" and "ifOutOctets" objects (plus other objects you consider to be interesting) of all the SNMP agents installed as part of this course (so also your own). Use the tool's default setting as far as possible.

Note that the information needed to access each agent has previously been provided by everyone on the blackboard system.

### Part C: Analyse the trace file, and write a report

In part C you should analyse the tcpdump trace file (collected under Part A). The idea is that you discover the precise way the various tools retrieve the MIB objects. What are the precise PDUs that are exchanged, which precise OIDs are retrieved, what is the interval between subsequent polling events? Is this interval always the same, or is there a slight "jitter" (of several seconds). Do you find any particular behaviour?

### Report

The result of (part C of) this exercise should be a report, which you enter into the blackboard system. In addition, you should send an email to the student assistant, indicating where the original (compressed) tcpdump trace file can be downloaded from.