SNMP Study Guide — Solutions

This document is intended to help in your preparation for the test on SNMP which will be held in the normal lecture theatre B115 on Tuesday, 20 January 2004, **10.30 am**, *not* 9.30, sorry!

1. Know what SNMP is useful for, what it can do, what it cannot, its strengths and limitations; be aware of alternatives.

2. Know the basic SNMP operations, basic data types of SNMP

3. Understand how the `get-next` and `get-bulk` request operations know which node is next.

4. Ensure you know what an *instance number* is, and how it relates to SNMP scalars and tables.

5. Understand how a network management station can determine network traffic in bits/second from the bytes obtained from the SNMP variables `IF-MIB::ifInOctets`, `IF-MIB::ifOutOctets`: traffic $= 8\frac{N_{n+1}-N_n}{t_{n+1}-t_n}$ bits/second, where N_i is measured in bytes, t_i is measured in seconds.

6. Understand how VACM works, have a basic understanding of USM. Be able to use the diagram in the slide entitled "Net-SNMP VACM" in the SNMPv3 lecture notes to determine the Net-SNMP syntax for VACM.

7. Know what a Perl reference is, and be able to modify a simple Perl program that uses `Net::SNMP`. The laboratory exercise `http://nicku.org/snm/lab/perl-snmp-tut/perl-snmp-tut.pdf` is a reasonable guide to this.

8. Review the laboratory exercises: `http://nicku.org/snm/lab/snmp-intro/snmp-intro.pdf`, `http://nicku.org/snm/lab/snmp-operations/snmp-operations.pdf`, `http://nicku.org/snm/lab/snmp-v3-tut/snmp-v3-tut-solns.pdf` also.