SNMP exercises, part 1
                              APRICOT 2008

1. Getting packages

      # apt-get install snmp
      # apt-get install snmpd
      # apt-get install mbrowse

2. GET and WALK

      To control that your SNMP installation works:

      - The backbone router:

      # snmpstatus -c san0g -v1 169.223.X.Y

      - The classroom switch:

      # snmpstatus -c san0g -v1 169.223.2.3

      - Try to snmpwalk different parts of these equipments' MIBs:

      # snmpwalk -c san0g -v1 169.223.X.Y 1.3.6.1.4.1.9.9.13.1.3 | more
      # ...

      Do you notice anything important about the OID on the output ?

3. Configuration of snmpd

      - Edit the following file:

      # vi /etc/snmp/snmpd.conf

          Comment the line (ADD '#' in front):

      com2sec paranoid default   public

          And UNcomment the line (REMOVE the '#' in front):

      #com2sec readonly default   public

          Edit the file /etc/default/snmpd, and find the line:

SNMPDOPTS='-Lsd -Lf /dev/null -u snmp -I -smux -p /var/run/snmpd.pid 127.0.0.1'

          Remove 127.0.0.1 at the end, so you have:

SNMPDOPTS='-Lsd -Lf /dev/null -u snmp -I -smux -p /var/run/snmpd.pid'

      - Restart snmpd

      # /etc/init.d/snmpd stop
      # /etc/init.d/snmpd start

4. Check that snmpd is working:

      # snmpstatus -c public -v1 localhost

      - What do you observe ?

5. Check now that you can run snmpstatus against your neighbor's server:

- Find out what your neighbor's IP is, ask them to run:

ifconfig eth0

(your IP is 169.223.2.X where X is between 10-24)

- Check snmp against their machine:

snmpstatus -c public -v1 169.223.2.X

6. Adding MIBs

Remember when you ran:

snmpwalk -c san0g -v1 169.223.5.3 1.3.6.1.4.1.9.9.13.1.3 | more

If you noticed, the SNMP client (snmpwalk) couldn't interpret
all the OIDs coming back from the Agent:

```
SNMPv2-SMI::enterprises.9.9.13.1.3.1.3.1 = Gauge32: 27
SNMPv2-SMI::enterprises.9.9.13.1.3.1.3.2 = Gauge32: 41
SNMPv2-SMI::enterprises.9.9.13.1.3.1.3.3 = Gauge32: 26
```

What is '9.9.13.1.3.1.3' ?

To be able to interpret this information, we need to download extra
mibs...

- Download the following files to your machine:

```
# cd /usr/share/snmp/mibs
# wget ftp://ftp.cisco.com/pub/mibs/v2/CISCO-SMI.my
# wget ftp://ftp.cisco.com/pub/mibs/v2/CISCO-ENVMON-MIB.my
```

- Create the file /usr/share/snmp/snmp.conf, and put into it:

mibdirs /usr/share/snmp/mibs

mibs ALL

Save the file, quit.

Now, try again:

snmpwalk -c san0g -v1 169.223.5.3 1.3.6.1.4.1.9.9.13.1.3 | more