

SNMP exercises

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Please run all exercises on your assigned router:

Row 1: 196.200.218.249

Row 2: 196.200.218.250

Row 3: 196.200.218.251

Row 4: 196.200.218.252

Row 5: 196.200.218.253

1. Make sure that snmp commands work
 - `snmpstatus -v1 -c afnog 196.200.218.254`
 - What do you see?
 - Does v2c, v3 also work? Why, why not?
 - Does it also work to your local machine? Why, why not?
2. Do an SNMP GET request
 - `snmpget -v2c -c afnog 196.200.218.254 sysUpTime.0`
 - Why do you need the .0?
 - easier: `snmpwalk -v2c -c afnog 196.200.218.254 sysUpTime`
3. Browse a MIB file
 - MIBs are installed under: `/usr/share/snmp/mibs`
 - Look at `/usr/share/snmp/mibs/RFC1213-MIB.txt`
 - Try to read the hierarchy and find the OID for `sysUpTime` *Hint: mib-2 is .1.3.6.1.2.1*
 - Verify: `snmpwalk -v2c -c afnog 196.200.218.254 <yourOID>`
 - If you want to get the results without name resolution do `snmpwalk -v2c -On -c afnog 196.200.218.1 <yourOID>` or if you want the full name hierarchy use `-Of`
4. Find some information
 - What is the location of the router in your workgroup (196.200.218.249/250/251/252/253 for row 1/2/3/4/5)? *Hint: Check in the system tree*
 - What is the MAC address of FastEthernet0/1 on this router? *Hint: Get the whole interface table and try to read it - it's a table by ifIndex - find the ifIndex for FastEthernet0/1 and find the MAC address for this interface*
 - What's the IP address for this interface? Get `ipAdEntIfIndex` from the ip tree
5. Add a custom MIB
 - Run the following command:
`snmpwalk -Of -v2c -c afnog 196.200.218.254 .1.3.6.1.4.1.9.9.13.1.3`
 - What do you notice?

- To insert Cisco-specific MIB information, you need to download a MIB file and put it in your path. scp them from the NOC server

As root:

```
cd /usr/share/snmp/mibs
```

```
wget http://noc/files/CISCO-SMI.my
```

```
wget http://noc/files/CISCO-ENVMON-MIB.my
```

- **Add variables so it can find the mibs**

```
export MIBDIRS=/usr/share/snmp/mibs
```

```
export MIBS=ALL
```

- Try the snmpwalk command again - what is different now?

- *Note: You can find MIBs on the vendor website or FTP server usually, e.g. Cisco MIBs are in <ftp://ftp.cisco.com/pub/mibs/v2/> - to see what information you can get via SNMP in addition to the standard you can read through the MIB files or vendor doc*