

## IFT 259: Introduction to Internet Networking

### Lab 24 Network Management

After you complete each step, put an 'x' in the completed box

- Simple Network Management Protocol (SNMP) is used for network monitoring and management.
- It is made up of 3 parts, the SNMP manager, SNMP agent and Management Information Base (MIB).
- In Packet Tracer there is not a lot you can actually do with SNMP but it is possible to set up a router or switch as an SNMP agent and use a PC or laptop as an MIB browser.
- So although you can't set SNMP traps or informs it is still a valuable learning tool to show the sort of information that can be retrieved and even a few things that can be set on an SNMP agent.

1. Now, try to configure SNMP Protocol on Cisco router and using a PC as Management Information Base MIB. Download the Packet Tracer file from Canvas that you will use for this lab and open it on your laptop.

Completed ☒

2. Enable SNMP on Router (R1)

- Open the R1 console and configure SNMP Protocol with the following router command.
- Before configuring SNMP, you must configure the basic configuration like, setting up IP address and basic routing configuration.

R1>enable

R1#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

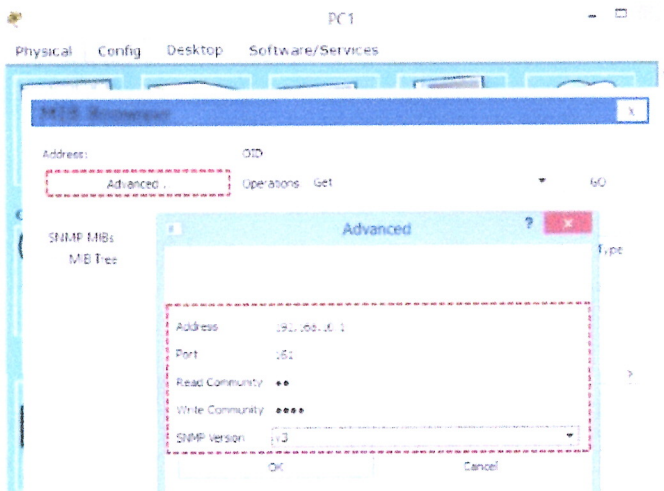
R1(config)#snmp-server community R1 ro

R1(config)#snmp-server community R1rw rw

R1(config)#

3. Testing SNMP from a PC

- OK, the SNMP has been configured on R1 router. Now try to test it from the PC1 using MIB Browser.
- Click on PC1 and click Desktop tab, then open MIB Browser.



- On the opened MIB browser page, click Advanced tab to open the Advanced page.
- Enter the information like the screenshot or below table.
- Address: 192.168.10.1. This is the R1 IP address.
- Read Community: R1. It has taken from read only (ro) community name.
- Write Community: R1rw, it is the name of read and write (rw) community.
- From the SNMP Version, select V3 and click OK.

Completed ☒

4. Now on the MIB browser page expand **MIB tree** to **system** and select each value then hit the **GO** button to display the exact information on Router1.

The screenshot shows a web-based MIB browser interface. At the top, there's a header bar with a close button. Below it, there are fields for 'Host Name' (192.168.1.1) and 'Port' (161), with tabs for 'Advanced' and 'Location: left'. A 'GO' button is on the right. The main area is divided into two panels. The left panel, titled 'SNMP MIBs', shows a tree structure with 'MIB tree' expanded to 'system'. The right panel, titled 'Result Table', displays a table with columns 'Name', 'Value', and 'Type'. The table contains four rows of system information. Below the table, there's a 'Description' field with a text area containing the description of the system string.

Name	Value	Type
sysName.1.3.6.1.2.1.1.1	Router1	OctetString
sysName.1.3.6.1.2.1.1.2	SystemName000	OctetString
sysName.1.3.6.1.2.1.1.3	SystemName001	OctetString
sysName.1.3.6.1.2.1.1.4	SystemName002	OctetString

Name: Router1  
OID: 1.3.6.1.2.1.1.1  
Index: OctetString  
Access: read-only  
Description: A textual string containing information about the interface. The string should include the

Management Information Base MIB

Completed ☒