

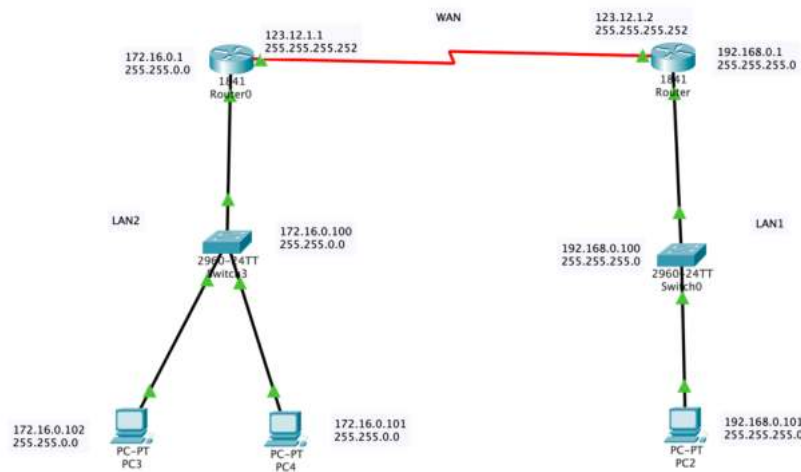
Network management and analysis (IT324T)

Lab 3: SNMP

(An individual task)

Using Cisco Packet tracer, perform the following:

- Open IT324T-Lab3.pkt file



Open Router0 -> CLI tab press **enter** then type

```
Router_IT324T_A > enable
Router_IT324T_A #config t
Router_IT324T_A(config) #
```

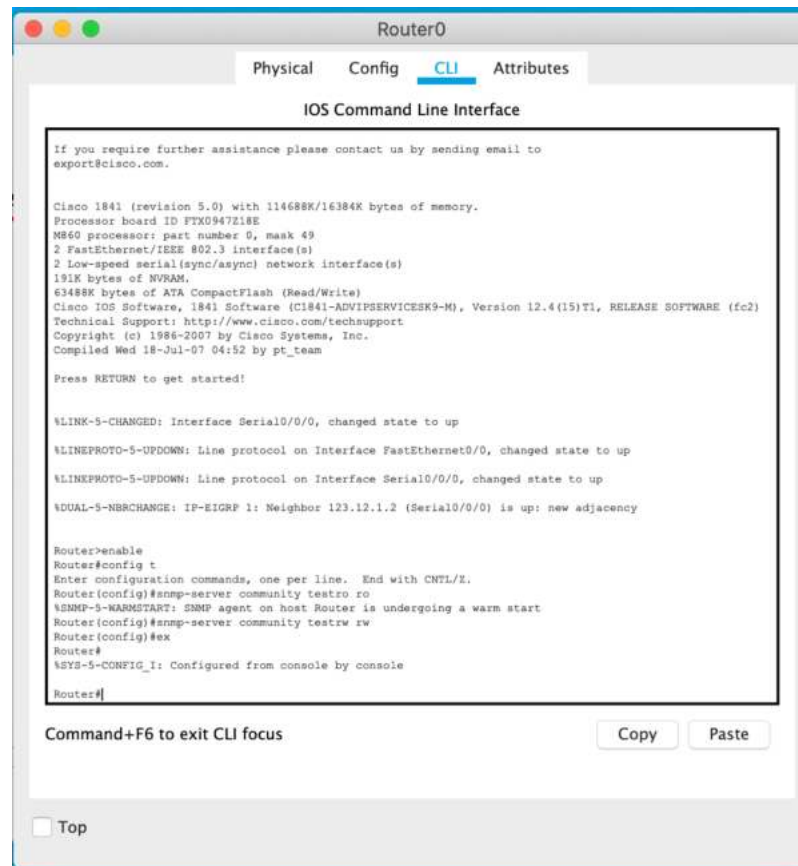


Next configure SNMP, there are not a lot of options here, so the configuration is pretty simple. Below is the configuration for Router_IT324T_A but the other router and switches use exactly the same syntax - nothing changes.

```
Router_IT324T_A(config)#snmp-server community testro ro
Router_IT324T_A(config)#snmp-server community testrw rw

Router_IT324T_A(config)#ex

exit
```



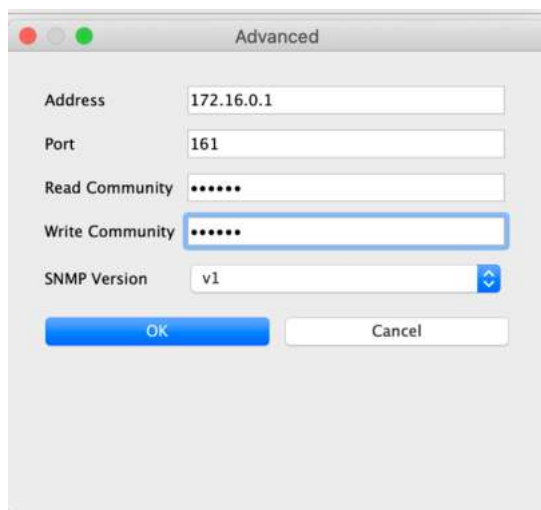
Those two lines effectively start the SNMP service and apply 'passwords' (community name). The `ro` and `rw` at the end of each line refer to Read Only (ro) and Read Write (rw) respectively. That's it, nothing else can be done on the routers or switches.

MIB

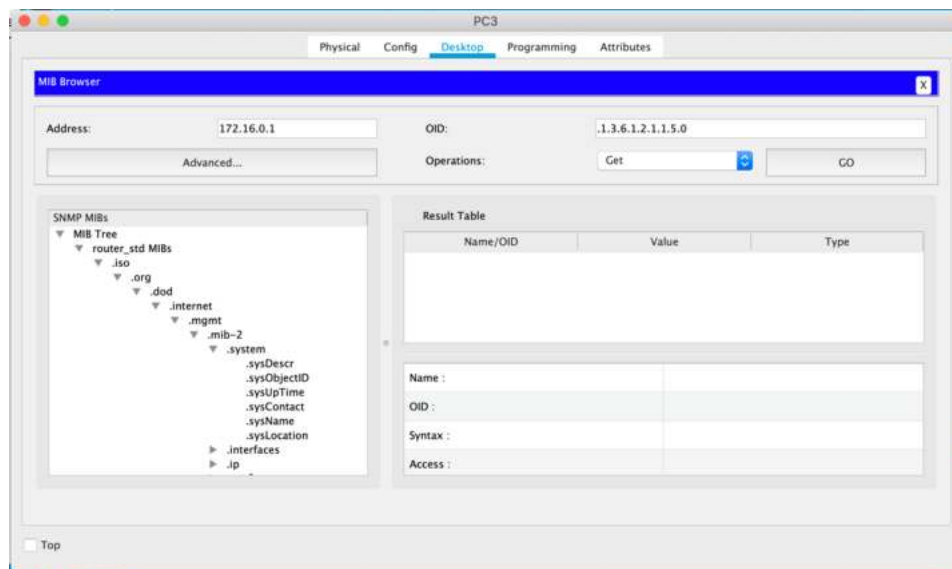
Now the configuration is done, It is time to see what can be done on the MIB browser. On a PC click the Desktop tab and select the MIB Browser:



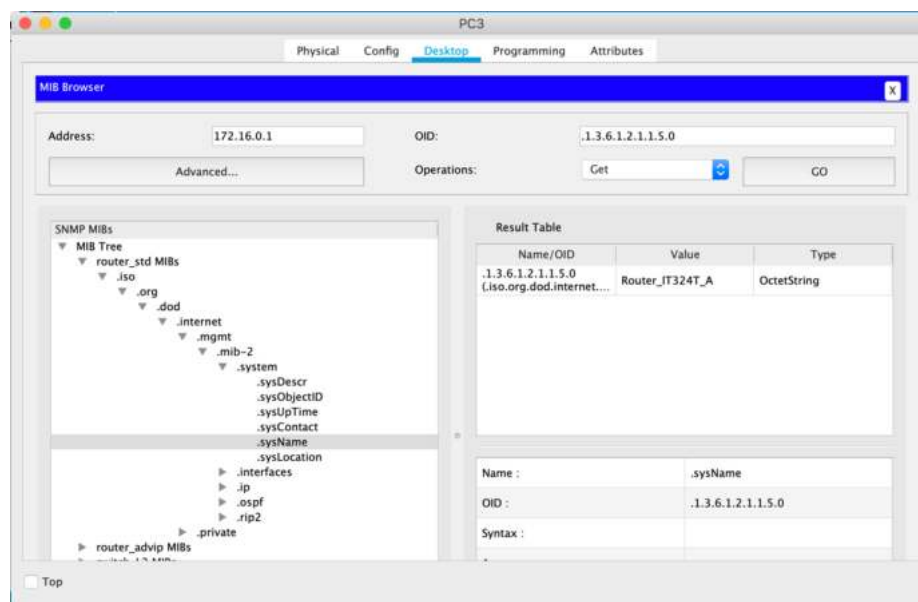
First, select a target (or an SNMP agent) so click the **Advanced...** button and enter the IP address of the device you want to connect to; in this case choose Router_IT324T_A:



Leave the port number as 161 and enter the two 'passwords' we used on all the routers and switches; in this case the two we had `testro` and `testrw` then select the SNMP version, we'll use v1. We should now be ready to connect to the device, so in the left-hand pane expand out the MIB Tree as shown below:



Once there we can start to view a few of the options available. For example, click on `.sysName` and in the Operations: drop down box select `Get` and hit the `Go` button and you should see the display below:

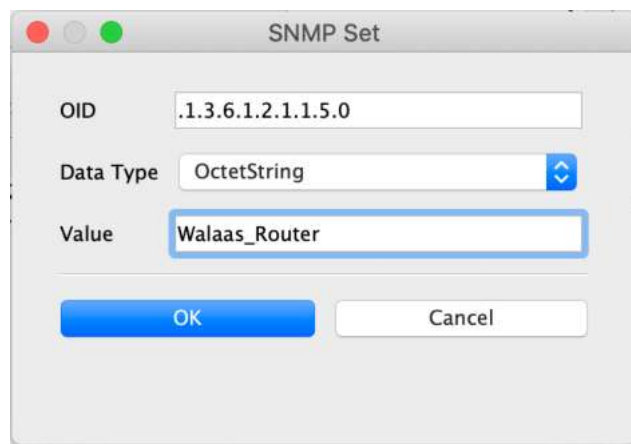


Play around with the various fields you have and keep clicking the `Get` button; feel free to knock yourself out in the other areas (like `.interfaces` for example) and you will get a bit of an idea how much information is available on the device. Also try connecting to the switches and the other router as well, remember that you will have to go back into the `Advanced...` area and select the new target to do this.

Setting Values

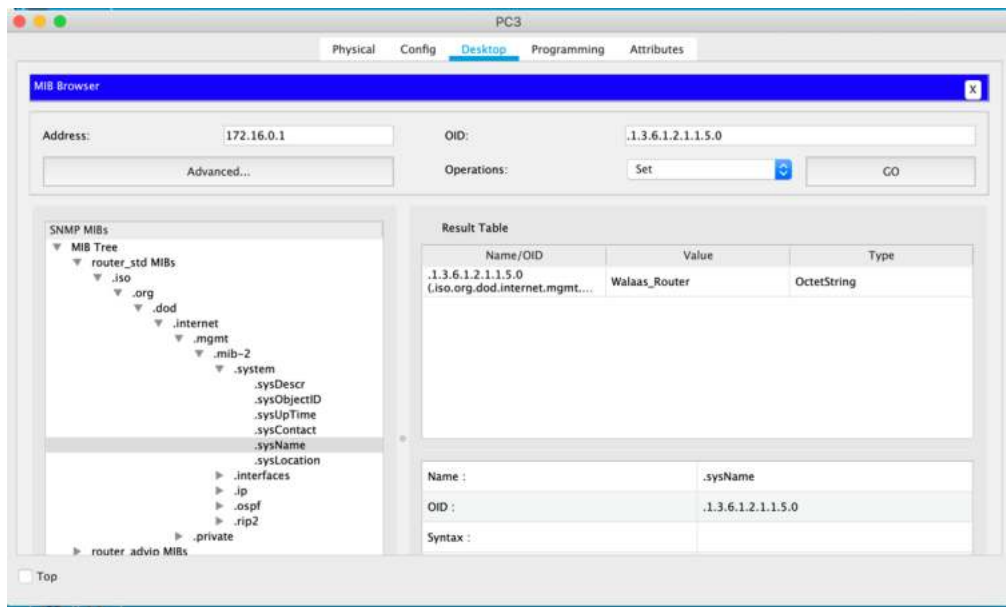
As well as viewing information we can also `Set` some fields; not all fields are writable, so it won't work with everything. Using the `.sysName` field we had a look at earlier we'll go and change the value for that.

To do this change the `Operations:` drop down box and pick `Set` and a dialog box will pop up like the one below. Leave the `OID` line as is but change the `Data Type` to `OctetString`. This `Data Type` should be the same type of data as displayed in the `Result Table` when you performed the `Get` function earlier. Then enter a value in the `Value` field as shown below:



The image shows a dialog box titled "SNMP Set". It contains three input fields: "OID" with the value ".1.3.6.1.2.1.1.5.0", "Data Type" with a dropdown menu showing "OctetString", and "Value" with the text "Walaas_Router". At the bottom, there are two buttons: "OK" and "Cancel".

Hit the `OK` button and the value will be sent to the device. You can check this by switching back to the `Get` function and seeing the new value.



Also, in this case it will change the router name so you should also see that in the running configuration for the router:

```
Walaas_Router#sh run
Building configuration...
```

Good luck,
Dr. Walaal Alayed