

Lab 3: SNMP in Windows

NET311 – Computer Networks Management

Instructor: Dr. Mostafa Dahshan

Objectives

1. Install and configure SNMP service in Windows Server.
2. Use a MIB browser software to interact with Windows SNMP agent.

References

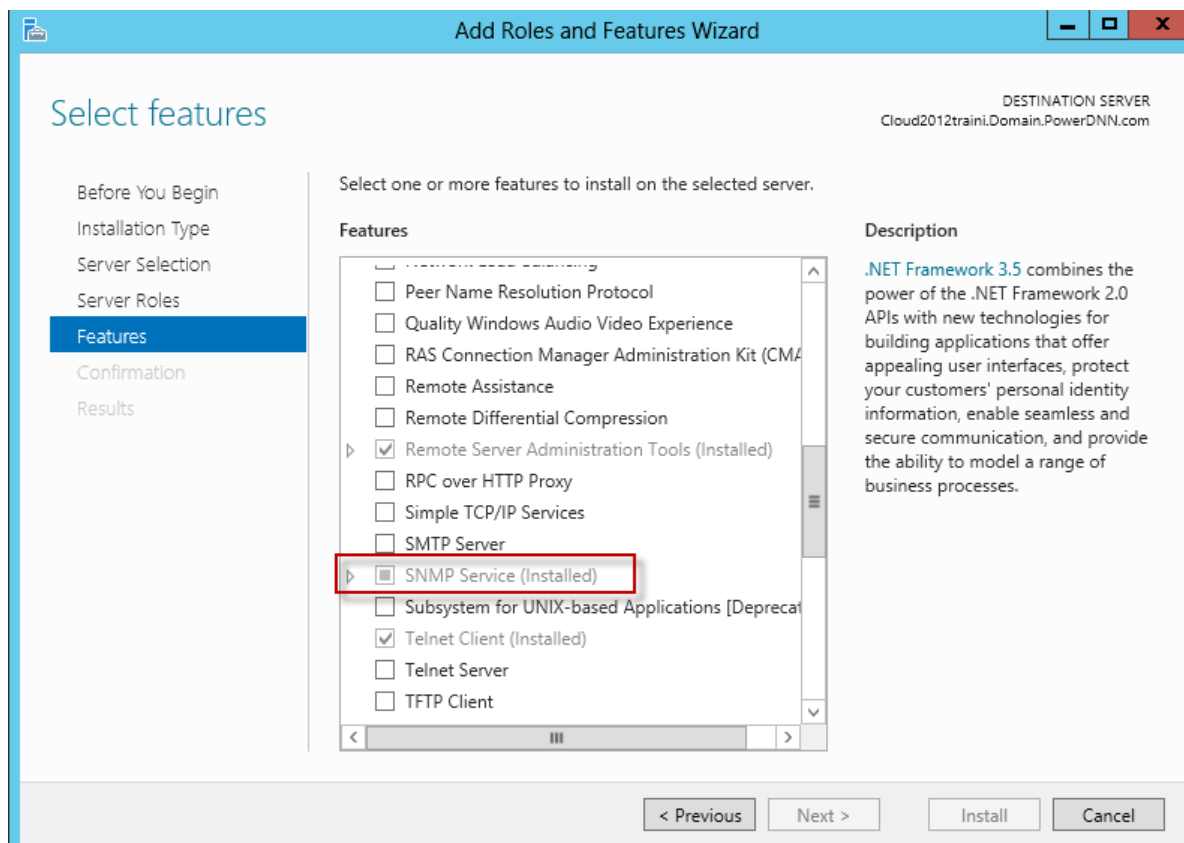
1. [How to Install SNMP and Configure the Community String](#), Managed.com.
2. [SnmpB download](#), SourceForge.net.

Instructions

1. Read the lab instructions.
2. Provide question answers and screenshots in the supplied answer sheet.
3. After finishing the lab, upload your saved answer sheet to LMS.

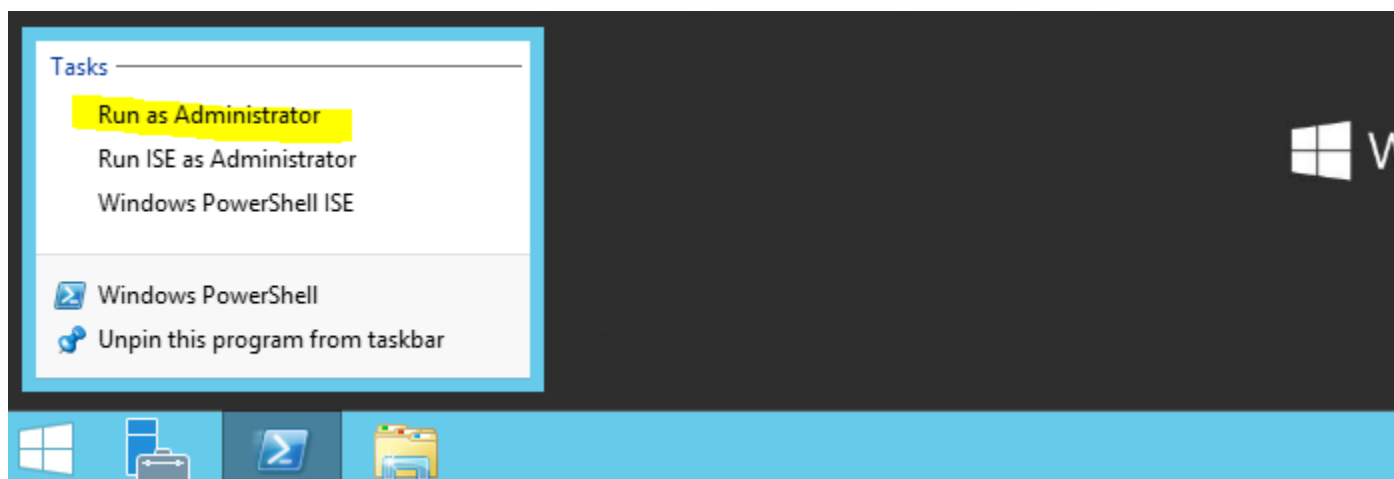
Part 1: Install and Configure SNMP Service in Windows Server

1. Log in to Windows Server.
2. Click on **Windows Key > Administrative Tools > Server Manager**.
3. Click **Manage > Add Roles and Features**.
4. Click **Next > Next > Next > Next**. Follow steps to install SNMP Service.



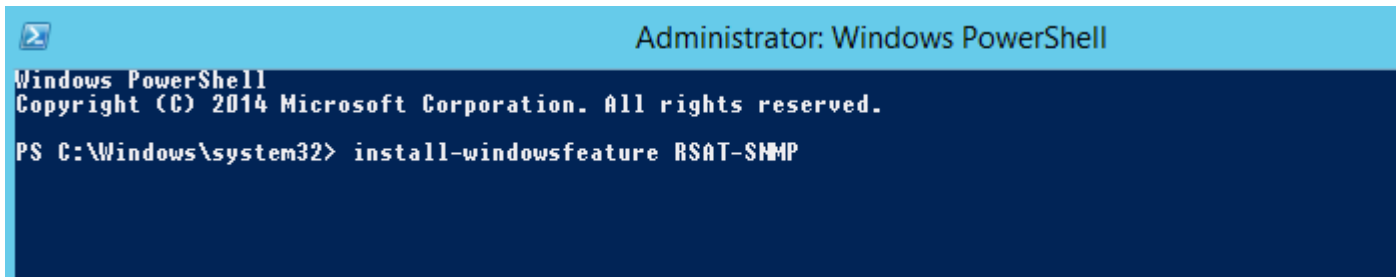
Lab sheet 1.1: provide a screenshot of the Add Roles and Features screen.

5. Run **PowerShell** as **Administrator**.



6. Run the following command:

```
install-windowsfeature RSAT-SNMP
```

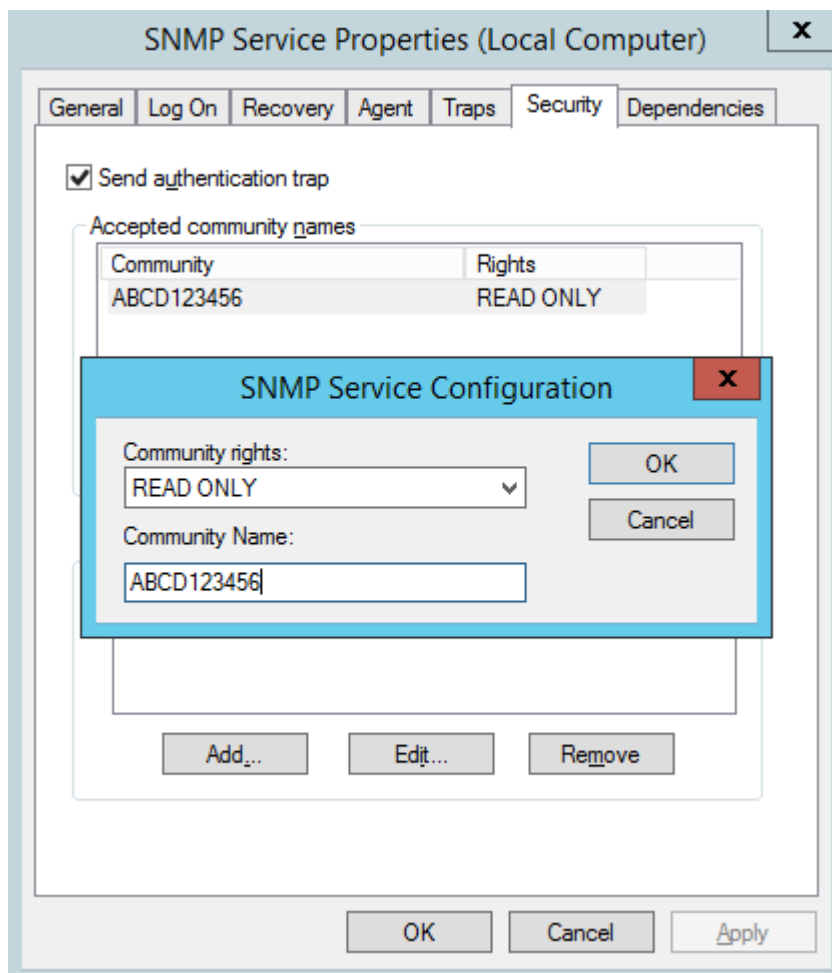


7. Click on **Windows Key > Administrative Tools > Services**.

8. Right click on **SNMP Service** and click on **Properties**.

9. Click on the **Security** tab.

10. Type your Community Name. Make sure it is **READ ONLY**.



Lab sheet 1.2: type the value of the Community Name.

Lab sheet 1.3: provide a screenshot of your Security configuration screen.

11. Click on the Agent tab and enter your **Contact** and **Location** information.

The screenshot shows the 'SNMP Service Properties (Local Computer)' dialog box with the 'Agent' tab selected. The 'Contact' field is filled with 'NET311' and the 'Location' field is filled with 'Lab 4'. In the 'Service' section, the checkboxes for 'Physical', 'Applications', 'Datalink and subnetwork', 'Internet', and 'End-to-end' are all checked. The 'OK', 'Cancel', and 'Apply' buttons are at the bottom.

SNMP Service Properties (Local Computer)

General Log On Recovery **Agent** Traps Security Dependencies

Internet management systems may request the contact person, system location, and network services for this computer from the SNMP service.

Contact: NET311

Location: Lab 4

Service

☐ Physical ☒ Applications ☐ Datalink and subnetwork

☒ Internet ☒ End-to-end

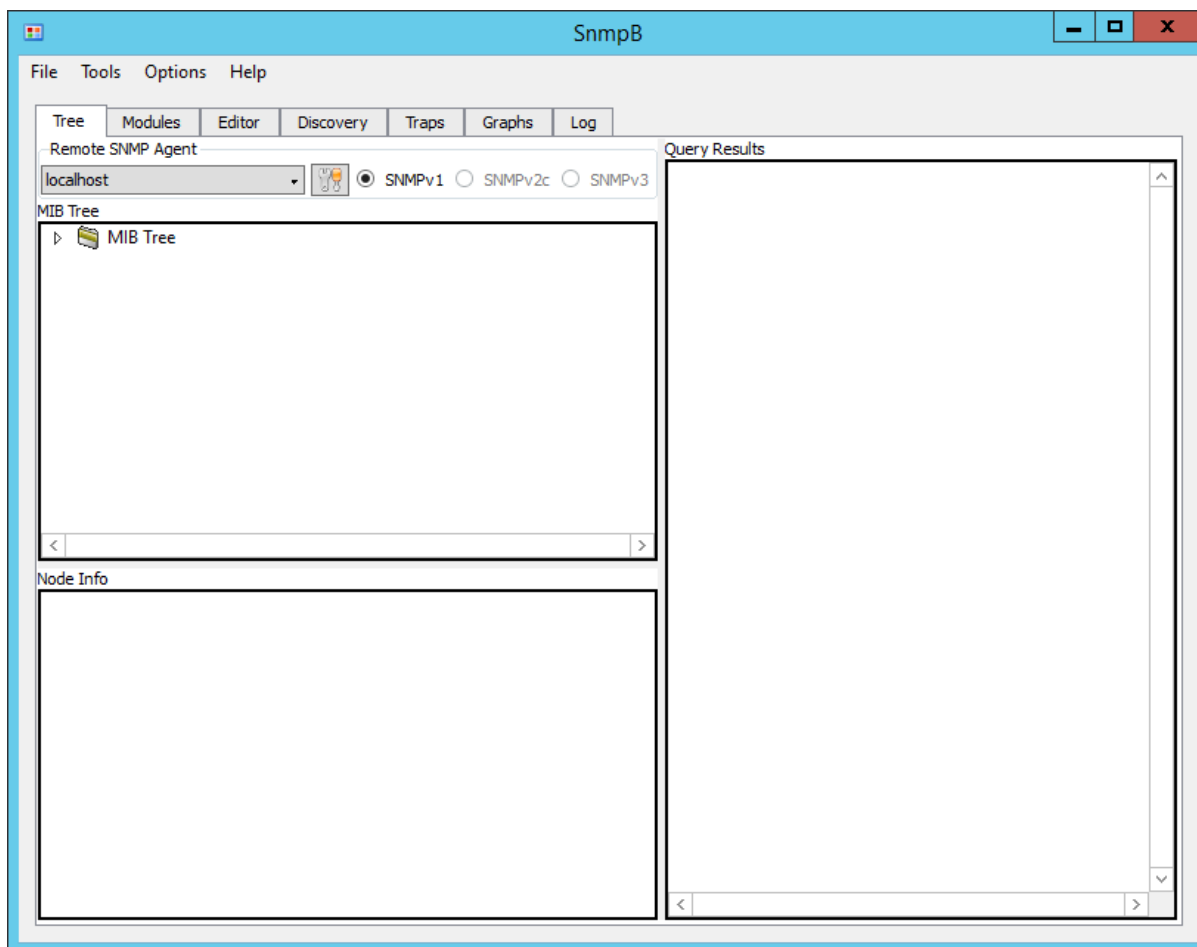
OK Cancel Apply

Lab sheet 1.4: type the contact information you entered.

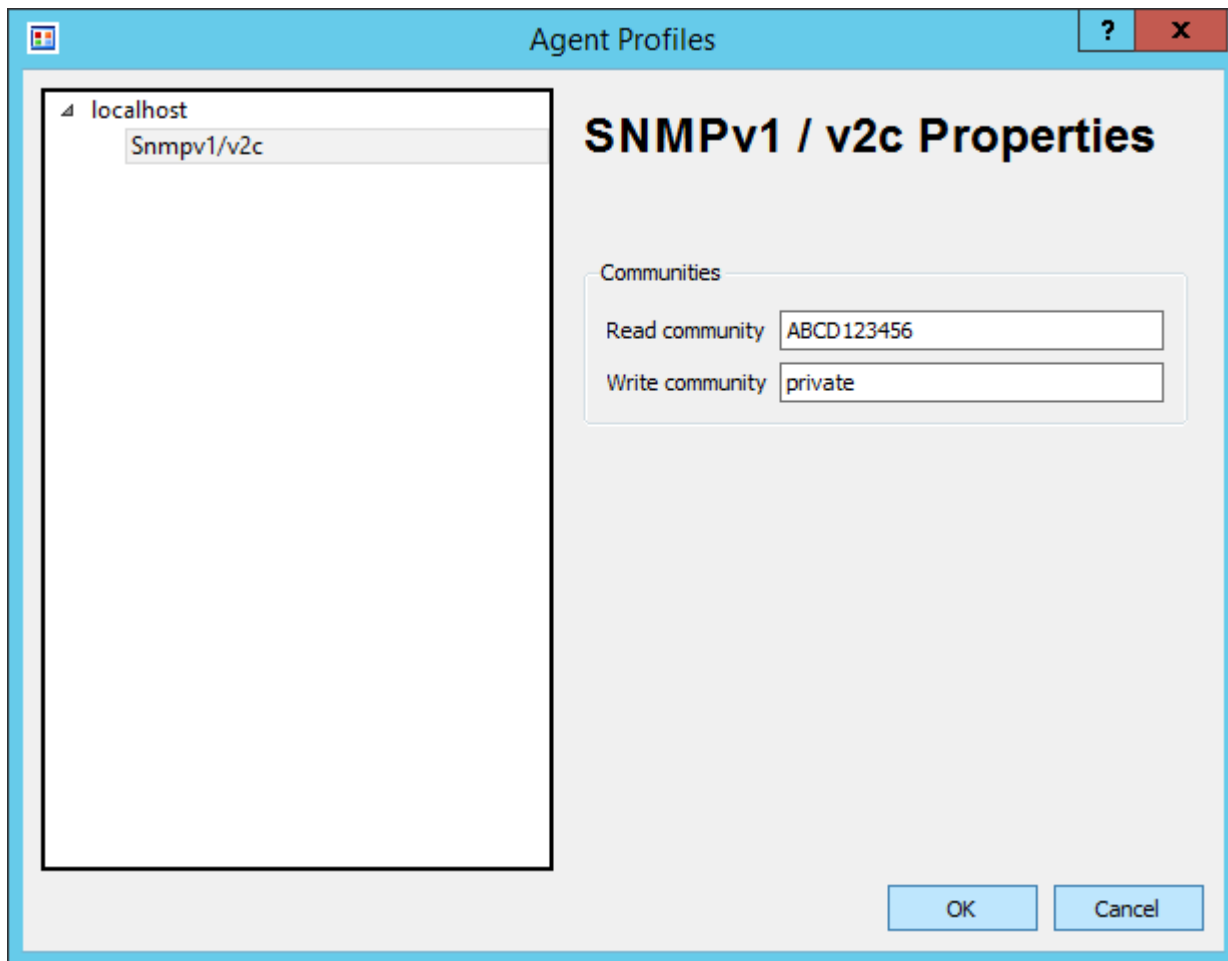
Lab sheet 1.5: provide a screenshot of your Agent configuration screen.

Part 2: Use a MIB browser to interact with Windows SNMP agent

1. Install the SnmpB software from the **Downloads** folder.
2. Run the SnmpB software.



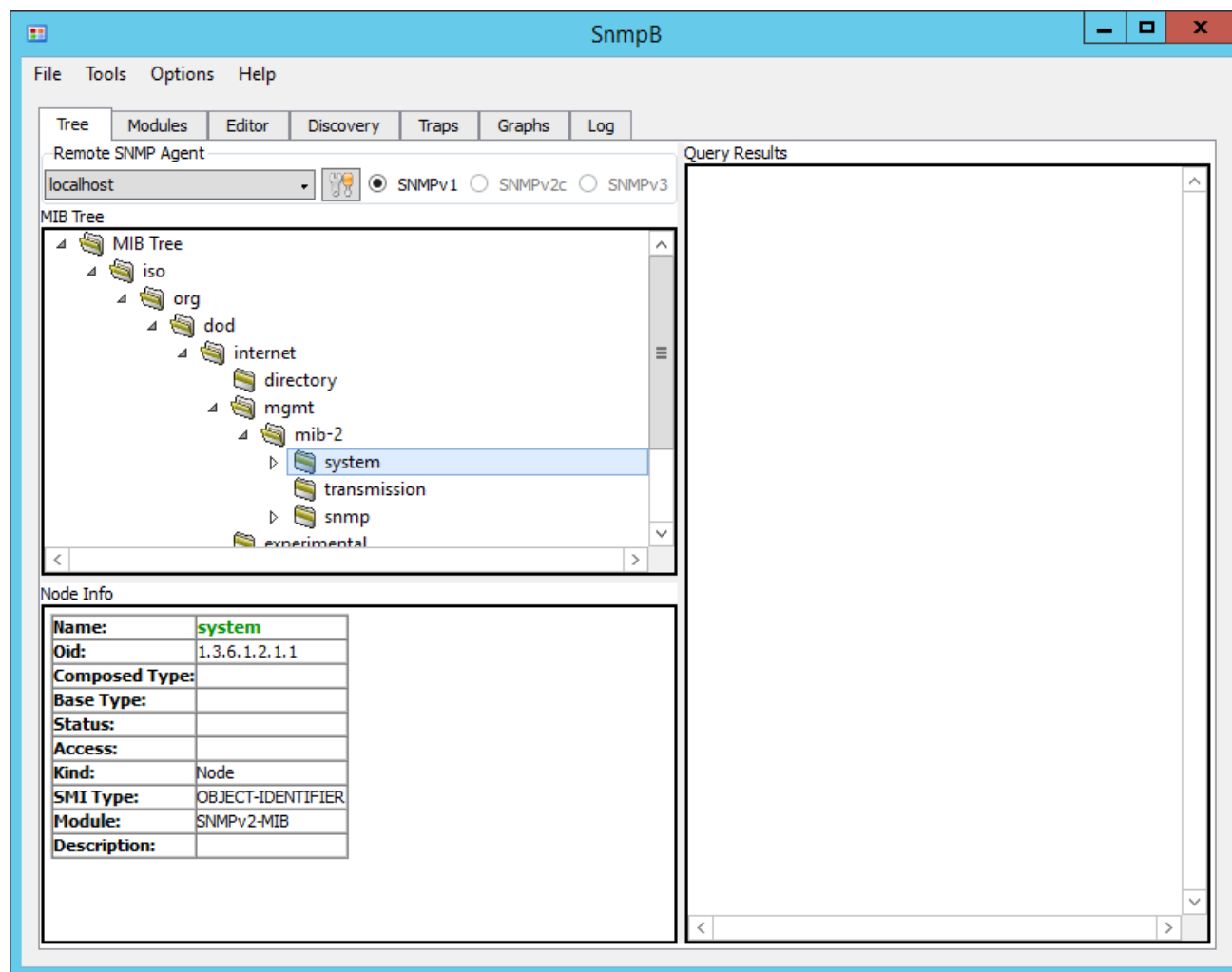
3. Click Options > Manage Agent Profiles.
4. Expand the **localhost** profile.
5. Under Snmpv1/v2c, enter the Read Community value configured in Part 1.



6. Click OK.

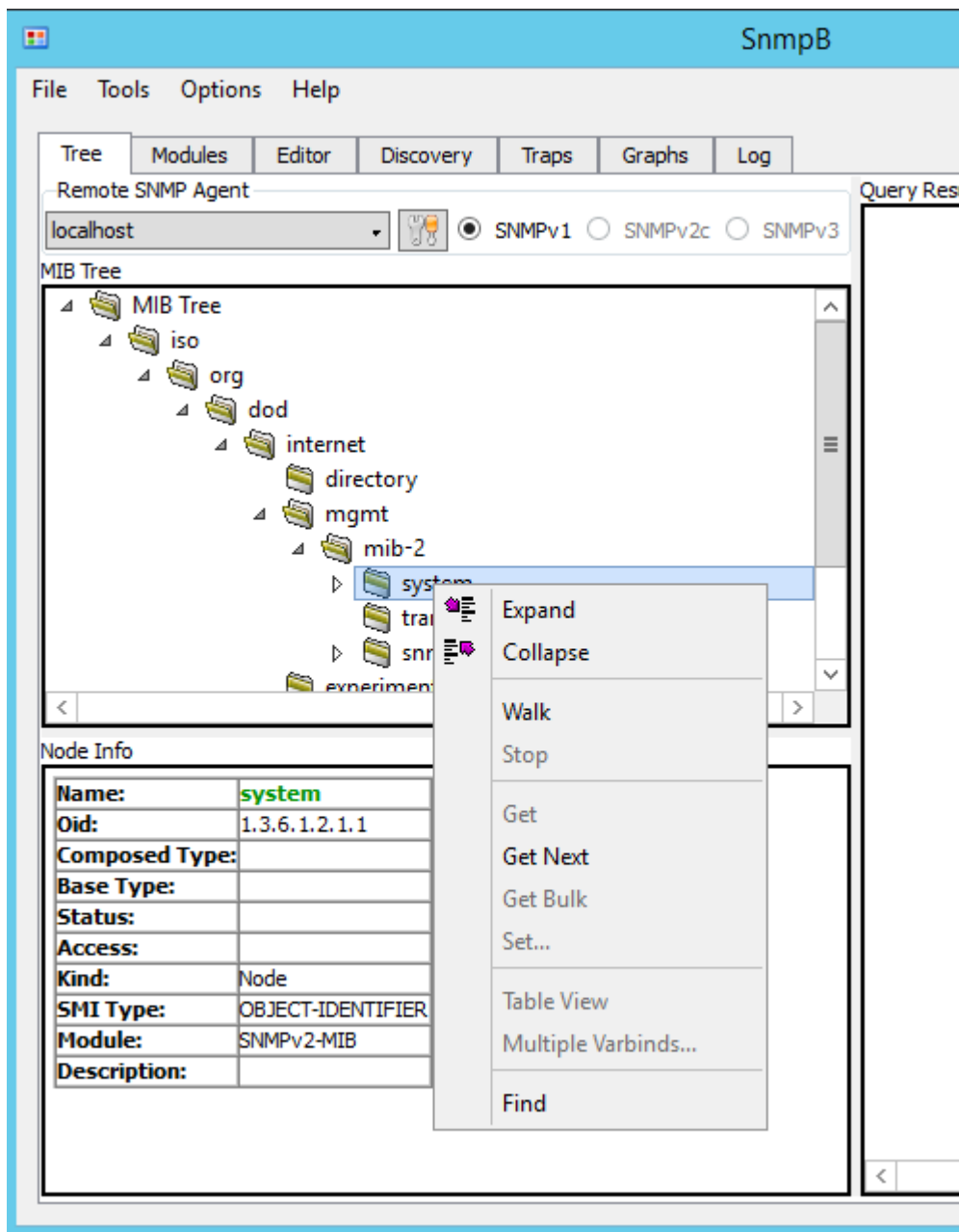
Lab sheet 2.1: provide a screenshot of the running SnmpB screen.

7. Expand the MIB Tree > iso > org > dod > internet > mgmt > mib-2 > system



Lab sheet 2.2: type the value of the OID you selected.

8. Right-click on **system**, then click on **Walk**.



The screenshot shows the SnmpB application window. The 'Remote SNMP Agent' is set to 'localhost' and 'SNMPv1' is selected. The 'MIB Tree' panel shows a hierarchical structure with 'system' selected under 'mib-2'. The 'Node Info' panel displays details for the 'system' node. The 'Query Results' panel shows the output of an SNMP query.

MIB Tree

- MIB Tree
 - iso
 - org
 - dod
 - internet
 - directory
 - mgmt
 - mib-2
 - system (selected)
 - transmission
 - snmp
 - experimental

Node Info

Name:	system
Oid:	1.3.6.1.2.1.1
Composed Type:	
Base Type:	
Status:	
Access:	
Kind:	Node
SMI Type:	OBJECT-IDENTIFIER
Module:	SNMPv2-MIB
Description:	

Query Results

```

-----SNMP query started-----
1: sysDescr.0 Hardware: Intel64 Family 6 Model 58 Stepping
2: sysObjectID.0 enterprises.311.1.1.3.1.2
3: sysUpTime.0 1:37:42.51
4: sysContact.0 NET311
5: sysName.0 WIN-8R2RSS0ARM3
6: sysLocation.0 Lab 4
7: sysServices.0 76
-----SNMP query finished-----
Total # of Requests = 8
Total # of Objects = 8
  
```

Lab sheet 2.3: provide the Query Result contents (copy/paste).

Extra Tasks

Load more modules in SnmpB that can help finding more OIDs. For example, use IF-MIB to find the ifDescr.

Use alternative SNMP browser tool, such as snmputilg.