

Description: Guide to setting up SNMP devices without browsing support.

OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7

General Requirement: GENESIS32, SNMP device (MIB files), SNMP Service, Getif utility.

Introduction

SNMP stands for Simple Network Management Protocol and is a simple protocol that allows devices to expose useful information to other devices. This information can be the CPU fan speed of a computer or the routing table of a router or temperature from a sensor. Almost every network device answers to SNMP requests. SNMP gives Network Managers access to information from nearly every device connected to the Network.

If the device does not fully support SNMP browsing (because of a different implementation) it is still possible to add the OIDs manually to SNMP Configurator. This application note describes how to setup SNMP devices that are not browsable by using the standard Unified Data Browser. It also shows how to change the SNMP version manually, depending on the SNMP device version.

SNMP Service and PC Setup

Before you begin setting up SNMP devices in the ICONICS SNMP Configurator, you need to configure the SNMP device that does not fully support browsing in Unified Data Browser. It is recommended to follow these steps:

1. Install the SNMP Service to enable data gathering. For more details on how to setup SNMP Service, look for the application note entitled *SNMP Connector – Setting up Windows to Support SNMP Connectivity*.
2. Set up the community on your device:
 - **public** - read (e.g. for all in the subnet),
 - **private** - read/write (for the specific IP).
3. Launch the SNMP Configurator by going to Start → Programs → ICONICS Tools → SNMP Configurator.
4. The default configuration will be opened. You can use this default or create a new configuration.

NOTE: If you need more details about SNMP Configuration, see the SNMP documentation which is available on the GENESIS32 Product CD.

5. Parse the MIB files that have been provided by your device vendor. Select “MIB Items” in the tree and click on the “Parse Files” or “Parse Folder” button.
6. Check the SNMP version which is supported by the device and change it to the right one in SNMP Configurator, as you can see in the picture below, or change the following

setting in your IcoSetup.ini file located in *C:\Documents and Settings\All Users\Application Data\ICONICS* (for Windows 2000, Windows XP, and Windows Server2003) or *C:\ProgramData\ICONICS*(for Windows Vista, Windows Server 2008 and Windows 7):

```
[SNMP\Configuration]
SNMPVersion=2
```

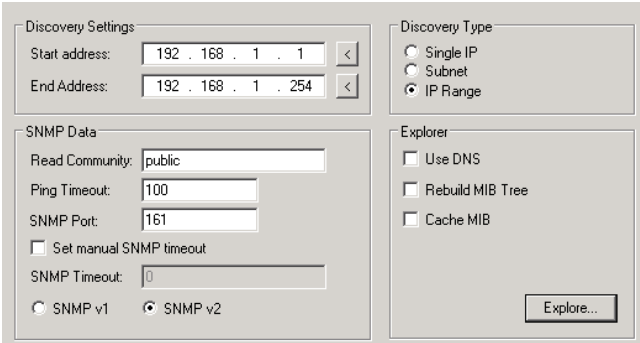


Figure 1 - SNMP version in SNMP Configurator

Using the Getif to Get OIDs Manually

If you are still not able to explore the device after setting the SNMP version, you need to add the OIDs to your SNMP Configurator manually.

Many utilities exist, but “Getif” is preferred for this purpose. You can download it from this site:
<http://www.wtcs.org/snmp4tpc/getif.htm>

Here are the steps on how to use the Getif utility to get and manually add the OID SNMP Configurator:

1. Run the Getif utility from Start → Programs.
2. Click on the Parameters tab, specify the Host name or IP address, and click on the Start button.

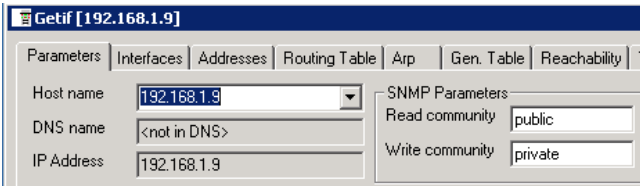


Figure 2 - Host Name Tab in the Getif Utility

3. When you have the SysInfo variables from your device, navigate to the MBrowser tab.
4. Browse for iso→ org → dod → internet → mgmt (1.3.6.1) which is the root OID available on every SNMP device and try to resolve the data by clicking on Start. You should get results similar to the ones shown in Figure 3.

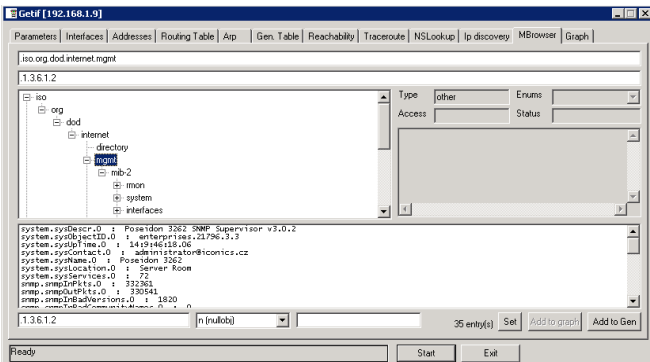


Figure 3 - Getting OIDs in MBrowser tab in Getif Utility

5. Select the OID from the list (like sysDescr, which matches to 1.3.6.1.2.1.1.1) and copy this string to the clipboard by using CTRL+C. Don't copy the "." character from the beginning of the OID string.
6. Switch back to the SNMP Configurator and create a new device by right-clicking on SNMP → New → Device.
7. Specify the Name, Type and Host. Customize the Polling Rate (in sec.) depending on how often you want to poll the data.
8. Create a folder structure if you need it and then select New → Data Item and name it (e.g. sysDescr).
9. Paste the OID to the Full OID field (e.g. 1.3.6.1.2.1.1.1).
10. Select the Data Type (e.g. String), Data Access (e.g. read) and click Apply.
11. You should now see the full MIB information like Name, Type, Status, Access and Description.

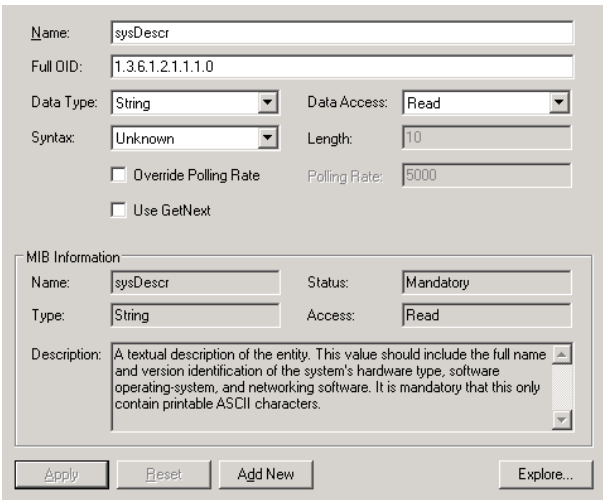


Figure 4 - Data Item in SNMP Configurator

Test in GraphWorX32

Once you have successfully configured your device with the right IP and OID, you can confirm that the SNMP information is readable in GraphWorX32.

1. Launch the GraphWorX32 by going to Start → Programs → ICONICS GENESIS32 → GraphWorX32 → GraphWorX32.
2. Add a new process point by clicking on the  icon.
3. Browse for the SNMP tag by clicking on the Data Source button.
4. Click the SNMP tab in Unified Data Browser and browse for a Data Item that you just created in SNMP Configurator, then click OK. This GenBroker plug-in syntax will be used in the process point:

```
snmp:<device>\<folder>\<deviceitem>
```

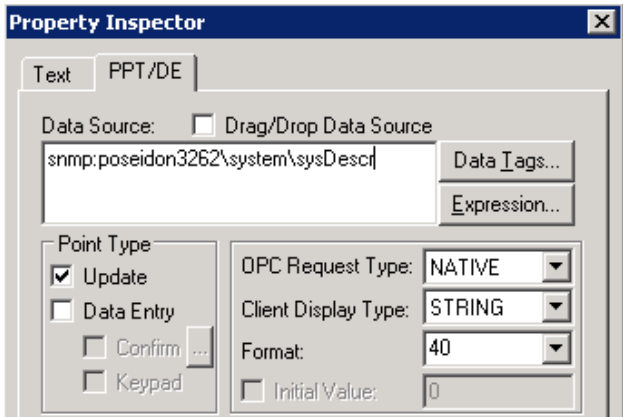


Figure 5 - SNMP Tag in GraphWorX32

5. Click OK and go to runtime. You should now see the SNMP data on your display from the device.