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## SAEAUT SNMP OPC Server



SAEAUT SNMP OPC Server – methods how to  
configure address space effectively.

### *Possibilities and methods how to configure address space of SAEAUT SNMP OPC Server from version 2.09 effectively*

#### Introduction

Manual configuration of the address space of SNMP OPC Server can be, for many **SNMP variables** and many **SNMP devices**, really time consuming. The **SAEAUT SNMP OPC Server** provides various methods how to create configurations easy, effective and really fast. At the time of creation of a configuration, you can use single or even combination of the following methods:

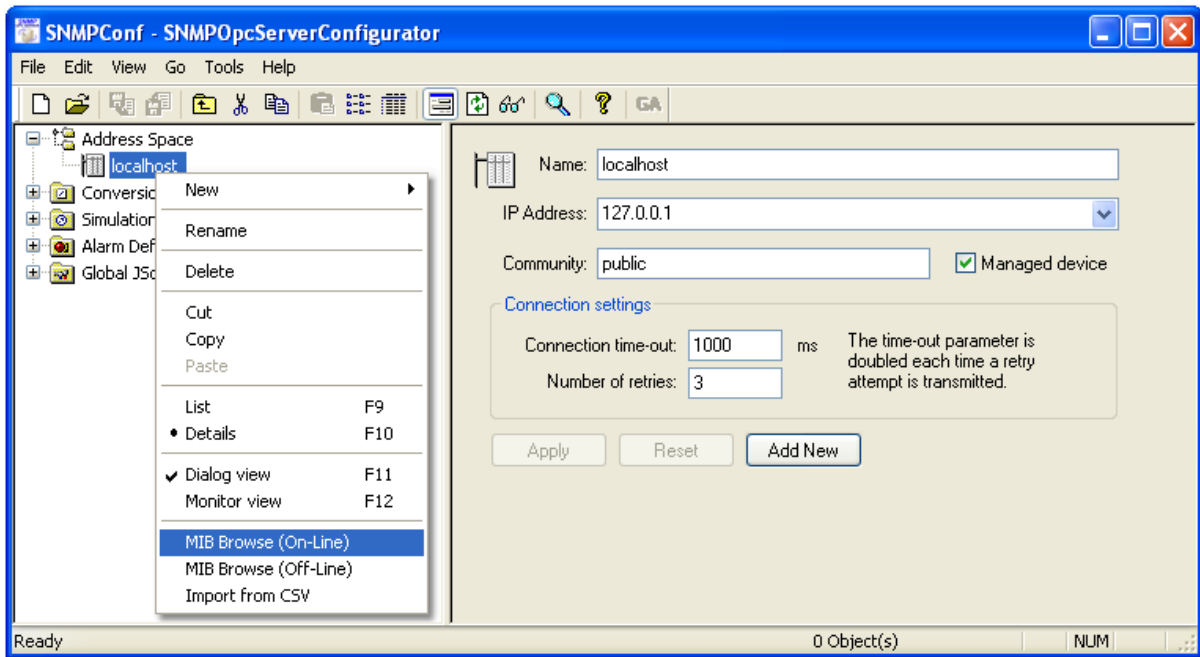
- On-line browsing.
- Import from MIB files (Off-line browsing).
- Import from CSV files.
- Import from XML files.
- Manual configuration.

#### On-line browsing

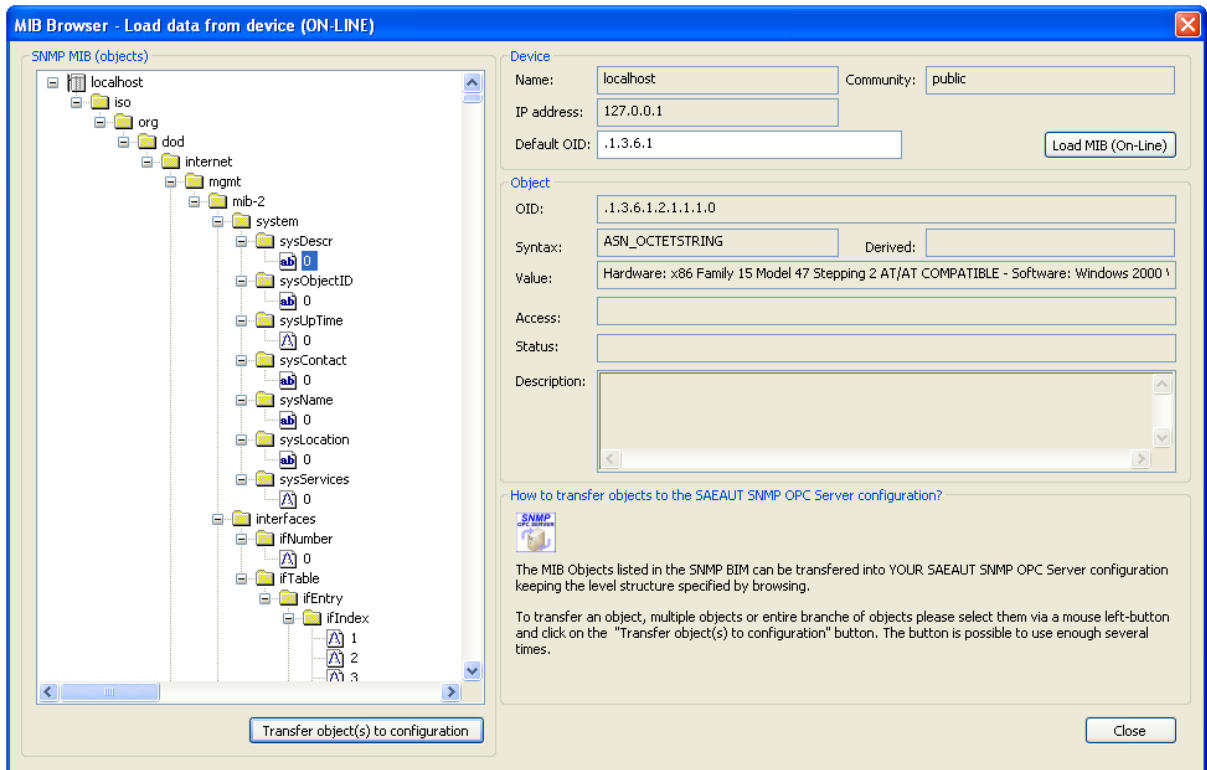
If we have a possibility to connect **SNMP devices** which we would like to monitor or control then we can use a method called **On-line browsing** for searching of all available **SNMP variables** directly from connected devices. Using this simple method, we can transfer on one-click not only one SNMP variable but even entire tree multi-level hierarchical structure to address space of **SAEAUT SNMP OPC Server**. Advantage of this method is that all obtained SNMP variables are really defined in device and in time of monitoring and controlling of device will be definitely available. Small disadvantage of this method is a limited volume of the information transferred about SNMP variables from the device. It means, we cannot obtain for instance description of a SNMP variable this way. Of course, all important parameters for functionality are available.

To enable the **On-Line browsing** in the SAEAUT SNMP OPC Server Configurator, please do the following:

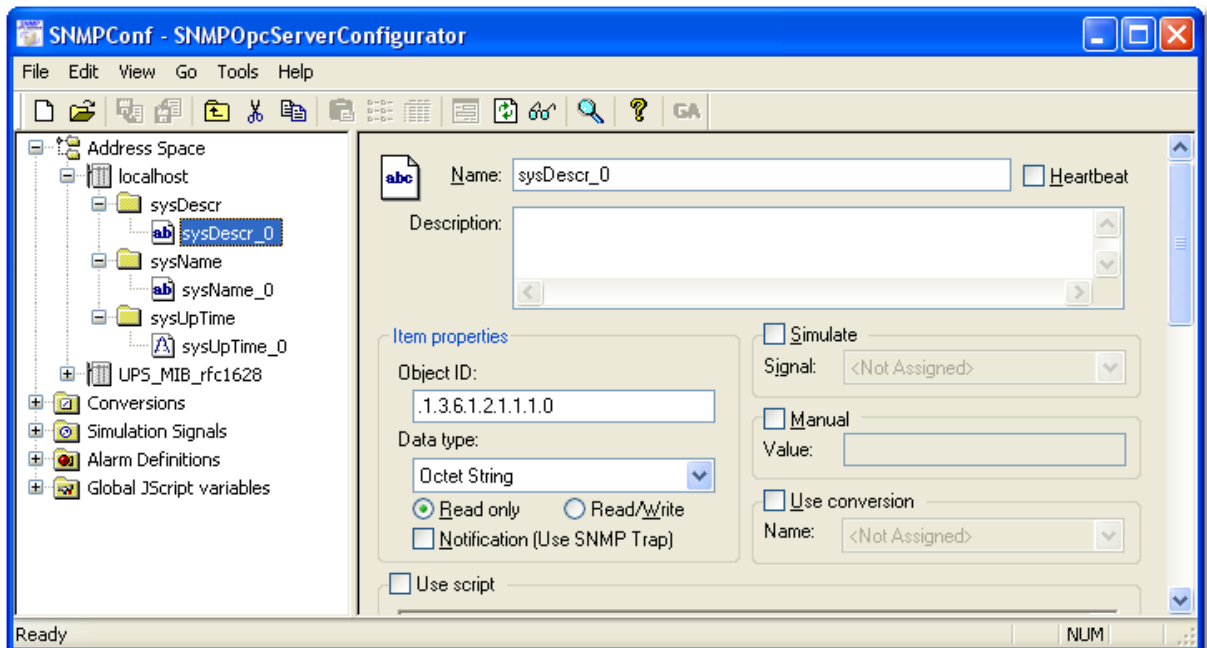
1. Create a new device or select an existing device.
2. Right-click on the **device** and choose **MIB Browse (On-line)** (see Figure 1).
3. Click on the **Load MIB (On-line)** button (see Figure 2).
4. Select the SNMP variables of folder in the tree.
5. Click on the **Transfer object(s) to configuration** button (see Figure 2).
6. Click on the **Close** button.
7. The SNMP variables mapped to OPC items (see Figure 3).



**Figure 1:** The MIB Browse (On-line): The start from the device menu.



**Figure 2:** The MIB Browse (On-line): The tree structure of available SNMP variables from connected device.



**Figure 3:** The MIB Browse (On-line): The SNMP variables transferred to OPC items.

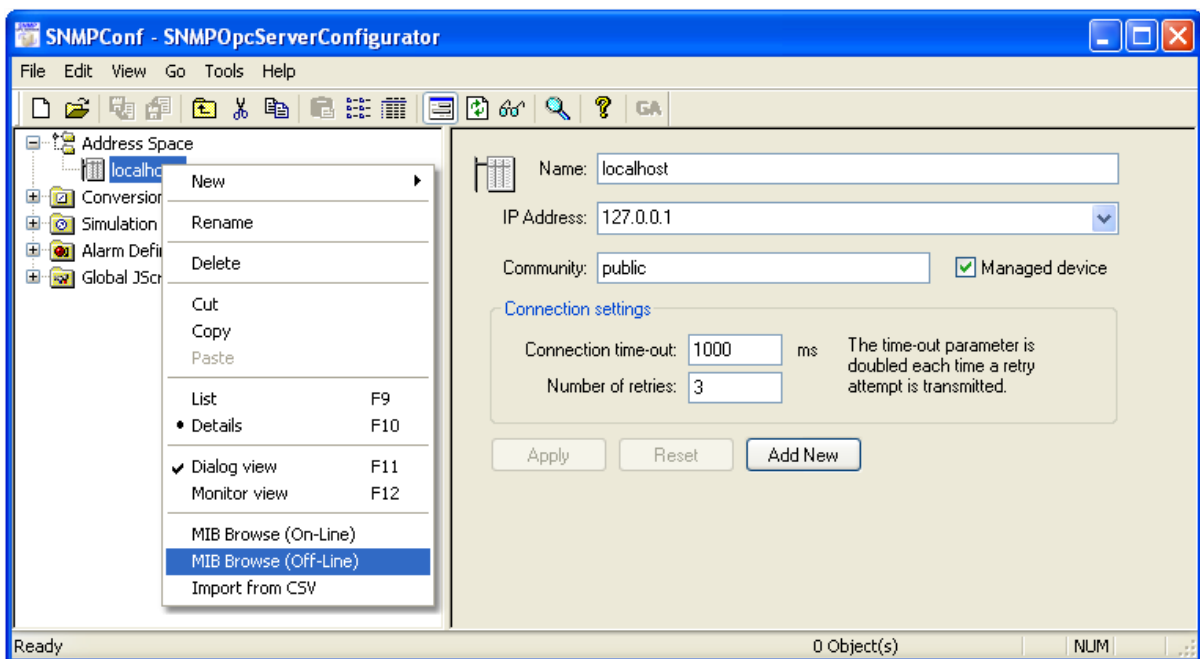
## Import from MIB file or CSV file

We need very often to prepare a configuration although we have no available SNMP device yet. In this case, we can use one of the following methods: **Import from MIB file** or **Import from CSV file**.

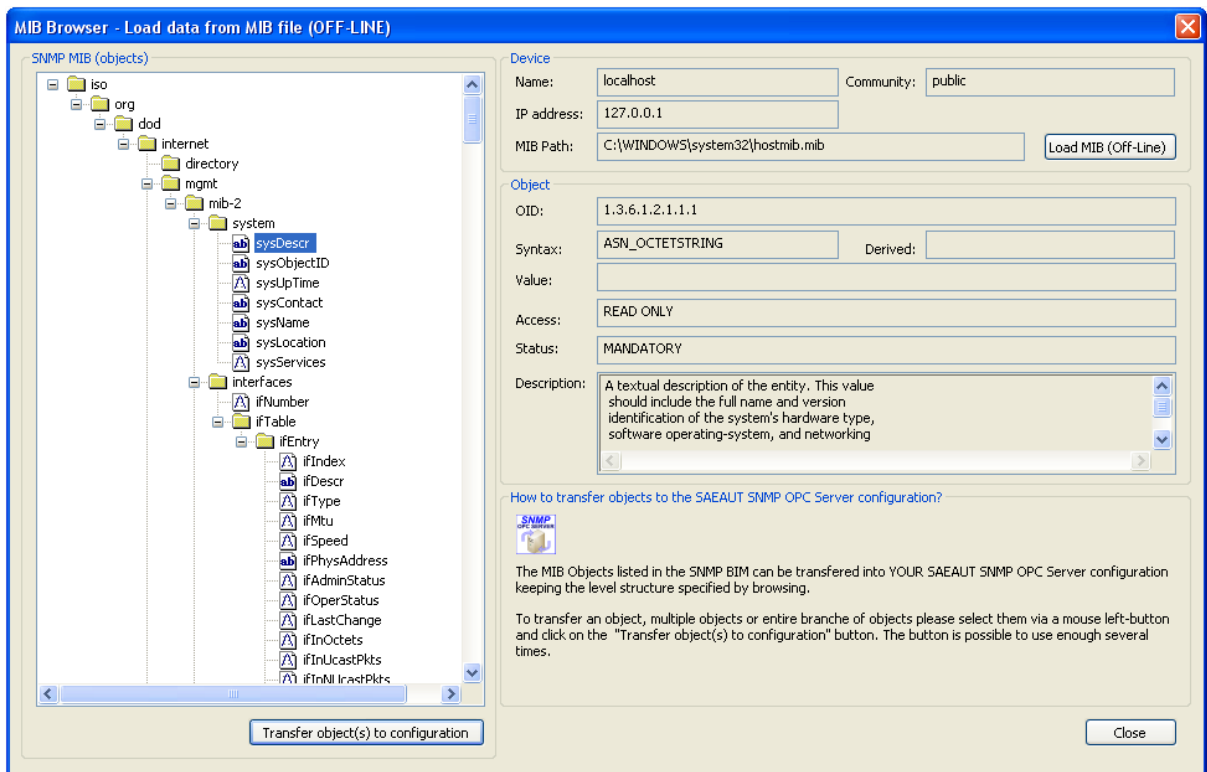
A MIB file is a text file which enables to organize SNMP variables in well-known tree structure. The MIB file provides complex information about available SNMP variables (i.e. description of SNMP variable). The MIB file can even include references to other MIB files and then the content of these MIB files can be also included. The number of defined SNMP variables in one MIB file can be large and different for each device type. Therefore, the SAEAUT SNMP OPC Server configurator brings possibility of **Off-line browsing** for searching of SNMP variables directly from MIB files. Using this simple method, we can transfer not only one SNMP variable but even entire tree multi-level hierarchical structure to address space of SAEAUT SNMP OPC Server on one-click. A small disadvantage of this method is that not all SNMP variables defined in the MIB file have to be available in a specific SNMP device type.

To enable the **Off-Line browsing (Import MIB file)** in the SAEAUT SNMP OPC Server Configurator, please do the following:

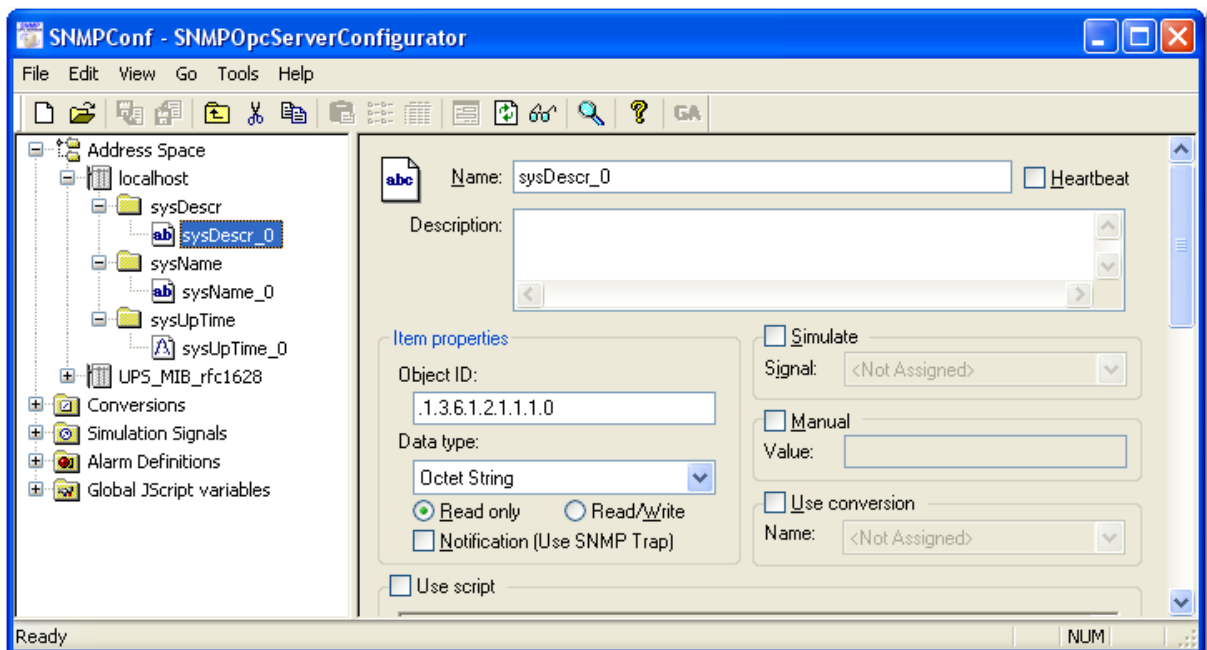
1. Create a new device or select an existing device.
2. Right-click on the device and choose **MIB Browse (Off-line)** (see Figure 4).
3. Click on the **Load MIB (Off-line)** button (see Figure 5).
4. Select the SNMP variables of folder in the tree.
5. Click on the **Transfer object(s) to configuration** button (see Figure 5).
6. Click on the **Close** button.
7. The SNMP variables mapped to OPC items (see Figure 6).



**Figure 4:** The MIB Browse (Off-line): The start from the device menu.



**Figure 5:** The MIB Browse (Off-line): The tree structure of available SNMP variables from MIB file.



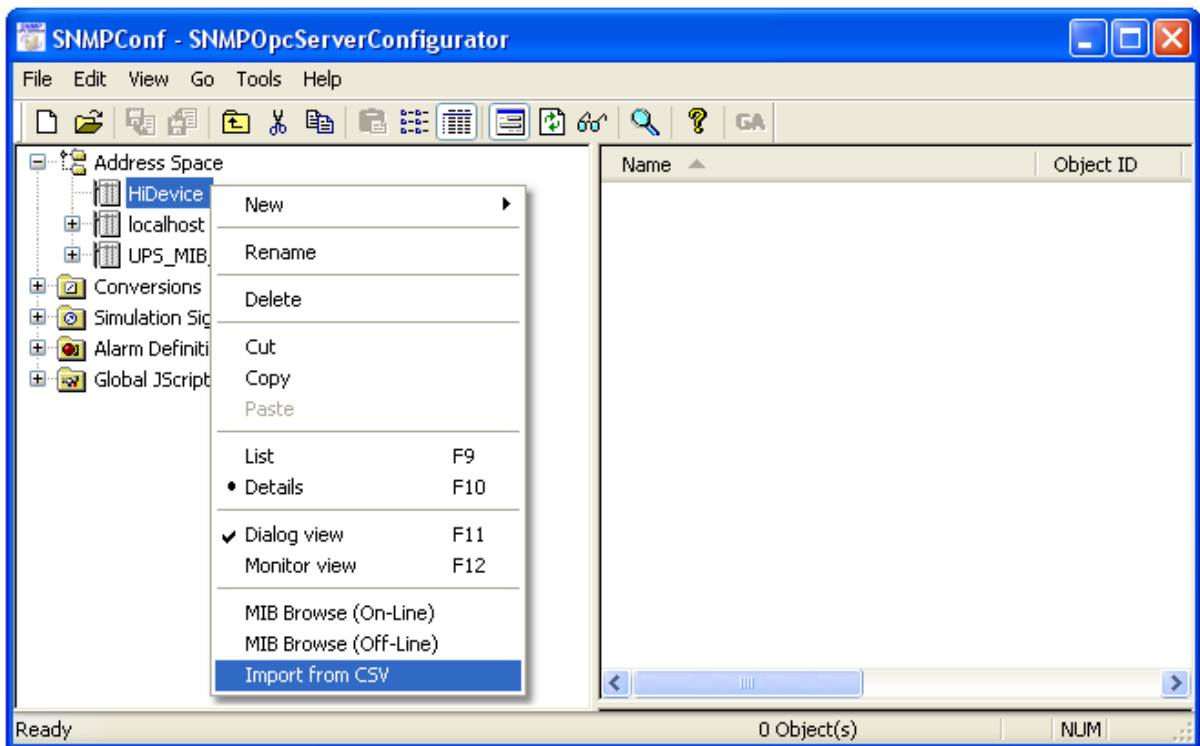
**Figure 6:** The MIB Browse (Off-line): The SNMP variables transferred to OPC items.

The CSV file is also textual file which structure is very similar to tables. The SNMP variable in the MIB file is presented as one row and its individual parameters (e.g. name or OID) are columns separated by comma or semi-colon. Each SNMP variable starts at the new line (CR+LF) of CSV file. The CSV files are created e.g. by providers of devices or by integrators.

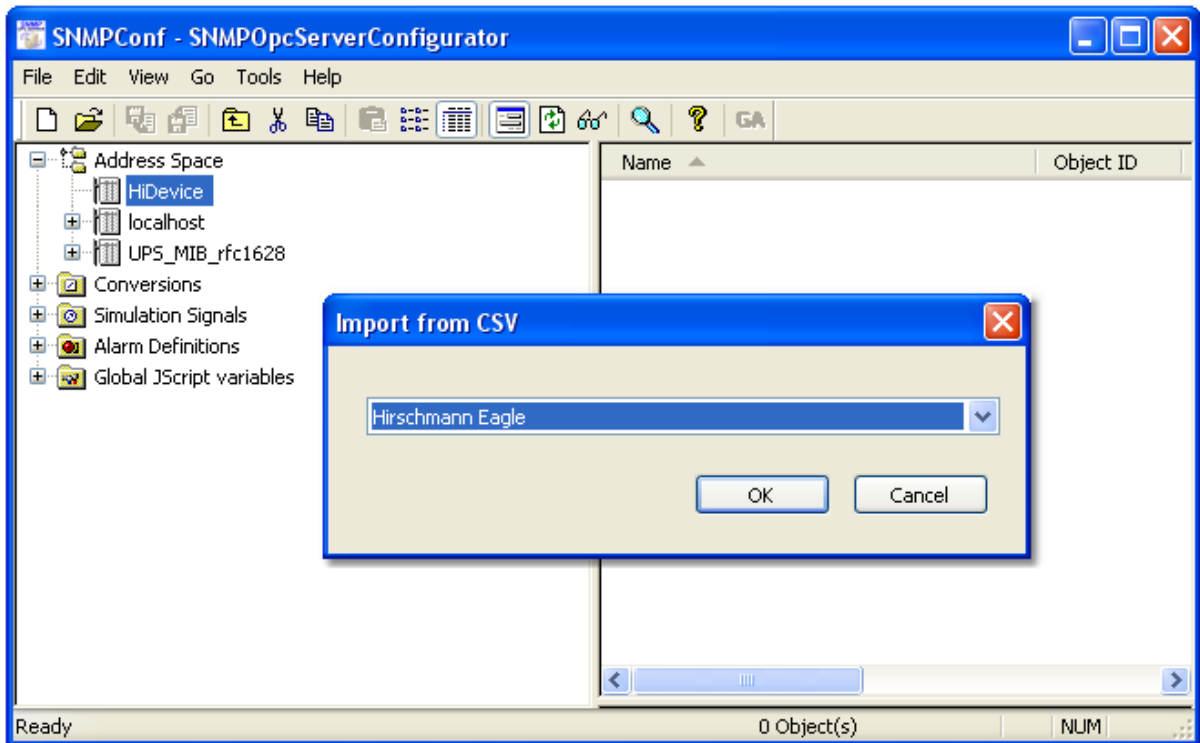
Import of SNMP variables from CSV files to SAEAUT SNMP OPC Server is fast and easy (on one-click). As a small disadvantage of this method can be perceived that SNMP variables are not organized in a tree hierarchical structure. But, this feature is not important for functionality because it defines only logic “virtual” organization of the items.

To enable the **Import from CSV file** in the SAEAUT SNMP OPC Server Configurator, please do the following:

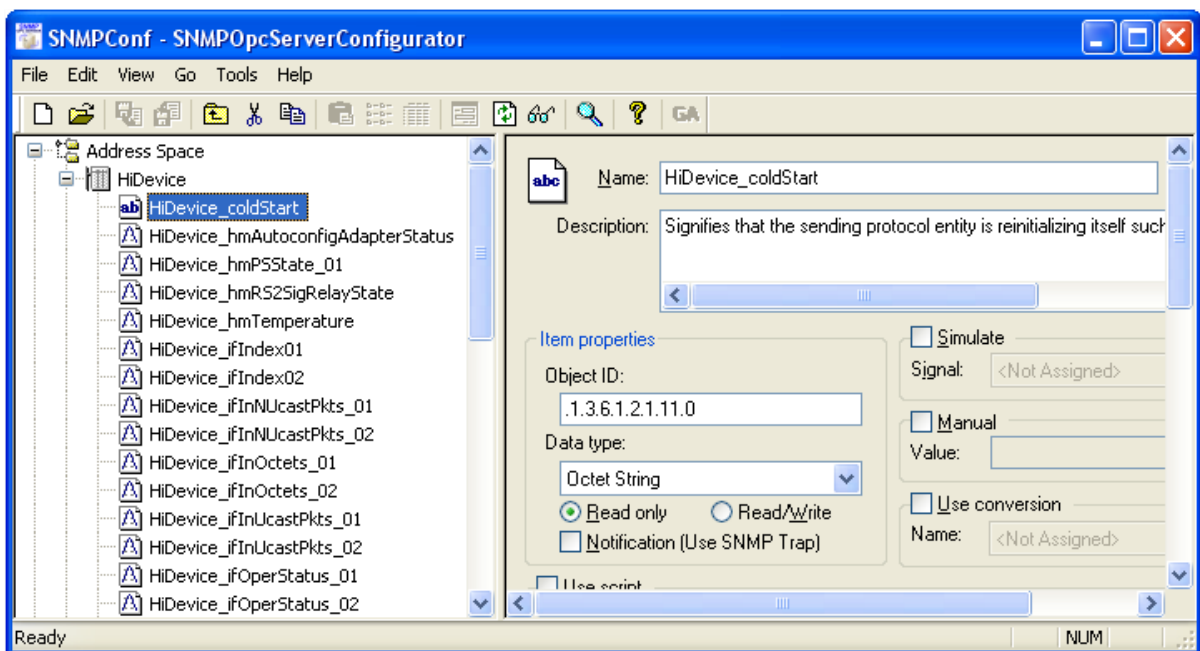
1. Create a new device or select an existing device.
2. Right-click on the **device** and choose **Import from CSV** (see Figure 7).
3. Select the CSV file definition in the combo-box (see Figure 8).
4. Click on the **OK** button (see Figure 8).
5. The SNMP variables mapped to OPC items (see Figure 9).



**Figure 7:** Import from CSV: The start from the device menu.



**Figure 8:** Import from CSV: The dialog displays the list of available devices for which are defined CSV files.



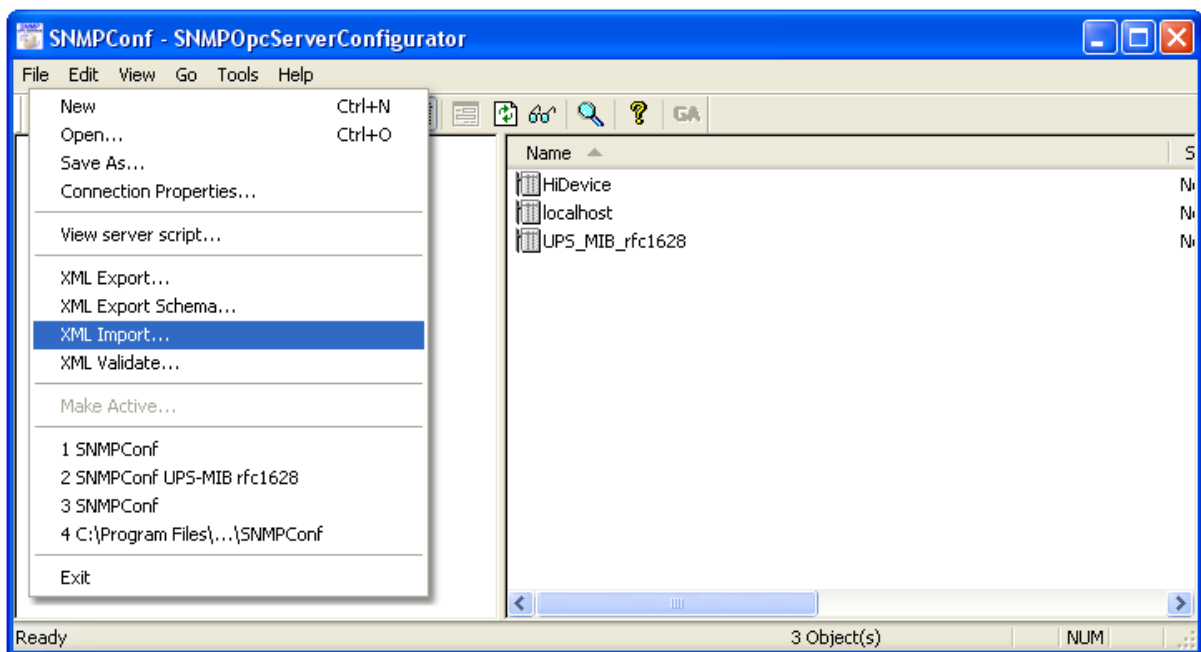
**Figure 9:** Import from CSV: The SNMP variables transferred to OPC items.

## Import from XML file

The SAEAUT SNMP OPC Server provides also another possibility how to configurate address space. The configuration of the SAEAUT SNMP OPC Server is stored in the Microsoft Access MDB file. There is possibility in the configurator tool to export entire configuration to a **XML file**. This XML file can be modified in an arbitrary xml or text editor and imported to a configuration of SAEAUT SNMP OPC Server.

To enable the **Import from XML file** in the SAEAUT SNMP OPC Server Configurator, please do the following:

1. Click on the **File** ⇒ **XML Import...** (see Figure 10).
2. Select a XML file.
3. Click on **OK** button.



**Figure 10:** Import from XML: The start from application menu.

## Manual configuration of OPC item

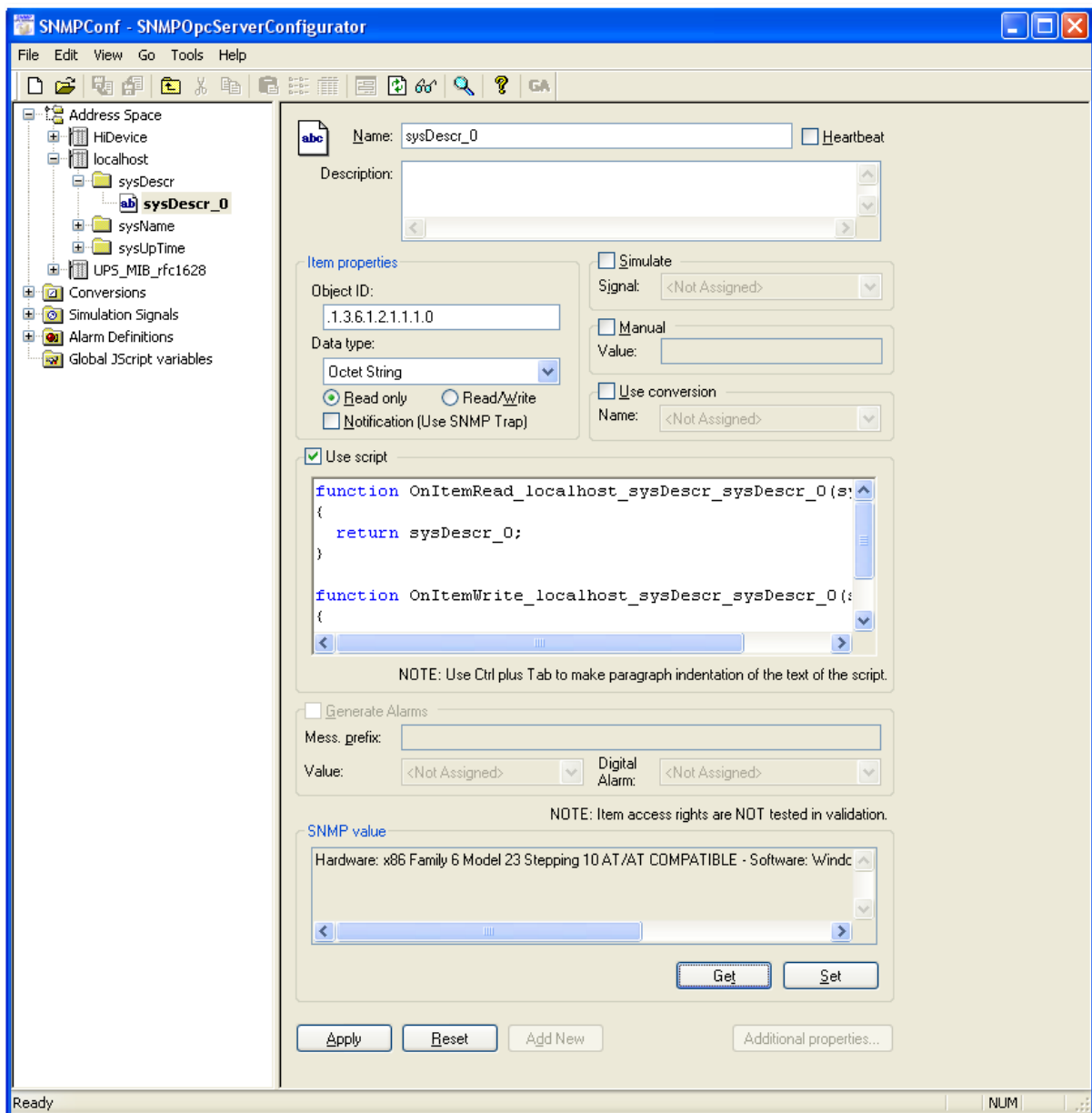
The SAEAUT SNMP OPC Server provides also a manual creation of configuration. You can set manually all parameters of OPC item. Between the most important parameters belong following:

- Name.
- Description.
- Object OID (associated to SNMP variable).
- Data Type.
- Access Rights.
- SNMP Trap notification.
- Etc.



To enable the manual configuration of OPC item in the SAEAUT SNMP OPC Server Configurator, please do the following:

1. Create a new or select existing OPC item (see Figure 11).
2. Set the required parameters.
3. Click on the **Apply** button.



**Figure 11:** Manual configuration: The dialog for manual configuration of an OPC item.

## Summary

In the SAEAUT SNMP OPC Server from version 2.09, it is possible to use following features:

- **Import CSV and XML files** in all distributed versions **Basic**, **Enhanced** and **Professional**.
- The **On-line browsing** functionality is available only in versions **Enhanced** and **Professional**.
- The **Import from MIB files** called **Off- line browsing** is available only in version **Professional**.

Version	On-line Browsing	Import MIB files (Off-line)	Import CSV files	Import XML files	Manual configuration
Basic	No	No	Yes	Yes	Yes
Enhanced	Yes	No	Yes	Yes	Yes
Professional	Yes	Yes	Yes	Yes	Yes

**Table Nr.1:** The possibilities of creating configuration in the SAEAUT SNMP OPC Server.

## Downloads

In this section are listed links to important documents which relates with the SAEAUT SNMP OPC Server.

### **SAEAUT SNMP OPC Server documentation (User's Guide)**

[http://www.saeautom.sk/download/help/saeaut\\_snmp\\_opc\\_server\\_en.pdf](http://www.saeautom.sk/download/help/saeaut_snmp_opc_server_en.pdf)

### **Using of the SAEAUT SNMP OPC Server for receiving Trap messages from SNMP Agents**

[http://www.saeautom.sk/download/SAEAUT\\_SNMP\\_OPC\\_Server\\_receives\\_TRAP\\_messages.pdf](http://www.saeautom.sk/download/SAEAUT_SNMP_OPC_Server_receives_TRAP_messages.pdf)

### **Installation & Activation of the SNMP Service and SNMP Trap Service**

[http://www.saeautom.sk/download/install\\_snmp\\_service.pdf](http://www.saeautom.sk/download/install_snmp_service.pdf)

### **SAEAUT SNMP OPC Server support Windows Scripting - JScript**

[http://www.saeautom.sk/download/SAEAUT\\_SNMP\\_OPC\\_Server\\_JScript.pdf](http://www.saeautom.sk/download/SAEAUT_SNMP_OPC_Server_JScript.pdf)

### **SAEAUT SNMP Agent documentation (User's Guide)**

[http://www.saeautom.sk/download/help/saeaut\\_snmp\\_agent\\_en.pdf](http://www.saeautom.sk/download/help/saeaut_snmp_agent_en.pdf)

### **Elegant solution for the management of computer network**

[http://www.saeautom.sk/download/snmpopcserver\\_en.pdf](http://www.saeautom.sk/download/snmpopcserver_en.pdf)

### **Monitoring of network infrastructure**

[http://www.saeautom.sk/download/monitoring\\_en.pdf](http://www.saeautom.sk/download/monitoring_en.pdf)

### **Configuring OPC and DCOM for OPC server and OPC client applications from SAE – Automation, Ltd.**

[http://www.saeautom.sk/download/dcom\\_config.pdf](http://www.saeautom.sk/download/dcom_config.pdf)

### **Configuring DCOM for using OPC UA COM Wrapper with OPC servers from SAE – Automation, Ltd.**

<http://www.saeautom.sk/download/opcuaforsaeproducts.pdf>

### **Internet browser based OPC client**

[http://www.saeautom.sk/download/opc\\_explorer.pdf](http://www.saeautom.sk/download/opc_explorer.pdf)

### **SAEAUT SMS Service, sending and receiving SMS from/to various applications**

[http://www.saeautom.sk/download/smsservice\\_en.pdf](http://www.saeautom.sk/download/smsservice_en.pdf)

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