SNMP Agent Plug-In Help

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<td>23</td>
</tr>
<tr>
<td>Sub-identifiers must be within the range of 1 to 4294967295</td>
<td>24</td>
</tr>
<tr>
<td>The community '&lt;community name&gt;' has already been added</td>
<td>24</td>
</tr>
<tr>
<td>The host IP '&lt;IP Address&gt;' has already been added</td>
<td>24</td>
</tr>
<tr>
<td>The network interface '&lt;NIC description&gt;': Port: '&lt;port&gt;' has already been added</td>
<td>24</td>
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<tr>
<td>The tag does not exist</td>
<td>24</td>
</tr>
<tr>
<td>The trap recipient has already been added. Please select a different IP, port, community, version, or network adapter</td>
<td>25</td>
</tr>
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<td>The rate must be within the range of 10 milliseconds and 49 days</td>
<td>25</td>
</tr>
<tr>
<td>Unable to bind socket on binding address '&lt;IP address&gt;', port '&lt;port&gt;', and protocol '&lt;protocol&gt;'</td>
<td>25</td>
</tr>
<tr>
<td>Unable to create communications thread on socket for binding address '&lt;IP address&gt;', port '&lt;port&gt;', and protocol '&lt;protocol&gt;'</td>
<td>25</td>
</tr>
<tr>
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<td>noSuchName</td>
<td>28</td>
</tr>
<tr>
<td>notWritable</td>
<td>28</td>
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SNMP Agent Plug-In Help

Help version 1.009

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What is the SNMP Agent Plug-In and how is it used?

Agent Setup
How do I configure a new SNMP Agent?

Data Type Descriptions
What data types are supported by the SNMP Agent Plug-In? How are the server data types converted to SNMP data types?

Error Descriptions
What error messages does the SNMP Agent Plug-In produce?

Overview
The SNMP Agent Plug-In acts as an internal client to the server. It supports SNMP versions 1 and 2C over the UDP protocol. For more information on the supported SNMP version command PDUs, refer to the table below.

<table>
<thead>
<tr>
<th>SNMP Version</th>
<th>Supported Command PDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Get</td>
</tr>
<tr>
<td></td>
<td>Set</td>
</tr>
<tr>
<td></td>
<td>Get-Next</td>
</tr>
<tr>
<td></td>
<td>Trap</td>
</tr>
<tr>
<td>2C</td>
<td>Get</td>
</tr>
<tr>
<td></td>
<td>Set</td>
</tr>
<tr>
<td></td>
<td>Get-Next</td>
</tr>
<tr>
<td></td>
<td>Get-Bulk</td>
</tr>
<tr>
<td></td>
<td>Notification</td>
</tr>
</tbody>
</table>

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Agent Setup

For more information on a specific aspect of agent setup, select a link from the list below.

- General
- Network Interfaces
- Communication
- Agent Actions

See Also: System Objects, Creating a New Item Mapping Group, and Creating a New Trap Group
General

Descriptions of the parameters are as follows:

- **Description**: This parameter specifies the textual description of the agent entity. It is optional, and left blank by default.
- **ObjectID**: This parameter displays the agent node's fully-qualified object identifier.
- **Contact**: This parameter specifies the identification and contact information of the user maintaining the agent. It is optional, and left blank by default.
- **Name**: This parameter specifies the administratively-assigned name for the agent node. It is optional, and left blank by default.
- **Location**: This parameter specifies the physical location of the node running the agent. It is optional, and left blank by default.
- **MIB Sub-Identifier**: This parameter specifies the MIB sub-identifier. The valid range is 1 to 4294967295. The default setting is 1.

**Note**: Different sub-identifiers should be chosen between multiple instances of the SNMP Agent Plug-In that exist on the same network. This will prevent the collision of data that have the same OID but different meanings.

- **Enable**: When selected, all objects underneath the SNMP Agent will be enabled and visible to SNMP managers. The default setting is checked.

Network Interfaces

The SNMP Agent Plug-In allows users to select several network adapters, and several ports for each adapter.
Descriptions of the parameters are as follows:

- **Network Adapter**: This parameter specifies the network adapter. On project start up, the Network Adapter list box will be filtered to include the network adapters that are available on the system. The Default network adapter will always be available. The default setting is Default.

  **Note**: When Default is selected, the agent will bind to the first network adapter in the list.

- **Port**: This parameter specifies the port number. The default setting is 161.

- **Add**: When clicked, this button will add the selected network interface to the Network Adapter list box.

- **Remove**: When clicked, this button will remove the network interface selected in the Network Adapter list box.

### Communication
SNMP Agent Plug-In Help

Description of the parameters are as follows:

- **SNMP Version**: This parameter specifies the SNMP version. Options include V1, V2c, and V1, V2c. The default setting is V1, V2c.
- **Protocol**: This parameter specifies the protocol. The default setting is UDP.

**Community Access**
The Community list box lists the communities to which the agent belongs. The agent will neither respond to requests containing community strings that are not listed, nor respond to SNMP Set requests containing community strings with Read Only access rights. Descriptions of the parameters are as follows:

- **Community Name**: This parameter specifies the community name. It is left blank by default.
- **Community Rights**: This parameter specifies the community access rights. Options include Read Only and Read/Write. The default setting is Read Only.
- **Add**: When clicked, this button will add the specified community name and rights to the Community list box.
- **Remove**: When clicked, this button will remove the specified community name and rights from the Community list box.

**IP/Host Access**
The IP Address list box lists the IP addresses from which SNMP messages will be accepted. The agent will not respond to requests from hosts whose IP addresses are not listed. If a request is received from an accepted IP address, the agent may still ignore the request if the community string is not accepted. Descriptions of the parameters are as follows:

- **Accept packets from all hosts**: If this option is checked, the agent will accept packets from all hosts.
- **IP Address**: This parameter specifies the IP address. The default setting is 0.0.0.0.
- **Add**: When clicked, this button will add the specified IP address to the IP Address list box.
- **Remove**: When clicked, this button will remove the specified IP address from the IP Address list box.
- **Accept packets from all hosts:** When checked, SNMP packets will be accepted from all hosts. When unchecked, SNMP packets will only be accepted from hosts that are entered and displayed in the list box. The default setting is unchecked.
- **Host IP Address:** This parameter specifies the IP address from which SNMP packets will be accepted.
- **Add:** When clicked, this button will add the specified IP to the IP Address list box.
- **Remove:** When clicked, this button will remove the specified IP from the IP Address list box.

### Agent Actions

Once an SNMP Agent has been configured, users may access its context menu for further actions.

![Agent Actions Context Menu]

Descriptions of the options are as follows:

- **Export MIB File:** When selected, this option will invoke the MIB File Export dialog.
- **Toggle On/Off:** When selected, this option will change the agent and all of its objects to the value opposite its current state.
- **Delete:** When selected, this option will delete the agent and all of its objects.
- **Properties:** When selected, this option will invoke the Agent Properties dialog.

### MIB File Export

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Descriptions of the parameters are as follows:

- **Item Mapping Groups**: This field’s group and description will be specified by the MIB Export file. SNMP object definitions will be added to the exported MIB file for each item mapping in the selected groups.
- **Trap Groups**: This field’s group and description will be specified by the MIB Export file. SNMP trap definitions will be added to the exported MIB file for each trap in the selected groups.
- **Module Name**: This parameter specifies the module name of the exported MIB file. The default setting is SNMPAGENT-MIB.
- **SNMP Version**: This parameter specifies the version of the exported MIB file. Options include V1 and V2c. The default setting is V2c.

**Note**: To ensure successful communication, the MIB file used by a network manager should be the same version as the SNMP responses it expects to receive.

**See Also**: Creating a New Item Mapping Group and Creating a New Trap Group.

**System Objects**

After an SNMP Agent has been configured, several system objects will become available.
Description of the parameters are as follows:

- **Name**: This parameter specifies the name of the system object.
- **Description**: This parameter provides a description of the system object.
- **SNMP Data Type**: This parameter specifies the SNMP data type. Options include Integer32, Unsigned32, Gauge32, Counter32, Counter64, TimeTicks, Octet String, Opaque, IpAddress, and Object Identifier.
- **Access**: This parameter specifies the object's access. All system objects have Read Only access.
- **MIB Sub-Identifier**: This parameter specifies the MIB sub-identifier of the system object.
- **OID**: This parameter specifies the Object Identifier.
- **Enable**: When selected, this checkbox makes system objects (which are those displayed in the Detail View when the SNMP Agent is selected) visible to SNMP managers for polling. The default setting is checked.
System Objects Description

The SNMP Agent Plug-In supports the following system objects. Each object can be accessed at both the local address (where the agent's top-level sub-identifier is represented by '<agent>'), and at an address defined in RFC 1213.

<table>
<thead>
<tr>
<th>System Object</th>
<th>Local OID</th>
<th>RFC1213 OID</th>
</tr>
</thead>
<tbody>
<tr>
<td>sysDescr</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.1.0</td>
<td>1.3.6.1.2.1.1.1.0</td>
</tr>
<tr>
<td>sysObjectID</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.2.0</td>
<td>1.3.6.1.2.1.1.2.0</td>
</tr>
<tr>
<td>sysUpTime</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.3.0</td>
<td>1.3.6.1.2.1.1.3.0</td>
</tr>
<tr>
<td>sysContact</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.4.0</td>
<td>1.3.6.1.2.1.1.4.0</td>
</tr>
<tr>
<td>sysName</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.5.0</td>
<td>1.3.6.1.2.1.1.5.0</td>
</tr>
<tr>
<td>sysLocation</td>
<td>1.3.6.1.4.1.30144.12.&lt;agent&gt;.1.6.0</td>
<td>1.3.6.1.2.1.1.6.0</td>
</tr>
</tbody>
</table>

Descriptions of the system objects are as follows:

- **sysDescr**: A textual description of the agent entity.
- **sysObjectID**: The agent node's fully-qualified object identifier.
- **sysUpTime**: The time (in hundredths of a second) since the network management portion of the system was last re-initialized.
- **sysContact**: The identification and contact information of the user maintaining the agent.
- **sysName**: An administratively-assigned name for the agent node.
- **sysLocation**: The physical location of the node running the agent.

Creating a New Item Mapping Group

For information on adding a new item mapping group, follow the instructions below.

1. To start, right-click on **Item Mappings** and then select **New Group**.

2. Next, specify the following parameters:
   - **Name**: This parameter specifies the name of the new item mapping group. This field will be used as an identifier in exported MIB files, and is therefore limited to alphanumeric characters.
   - **Description**: This parameter may be used to provide a description of the group. This field will be used in exported MIB files, and is therefore limited to the ANSI character set. It is optional, and left blank by default.
   - **MIB Sub-identifier**: This parameter specifies the MIB sub-identifier. The valid range is 1 to 4294967295. The default setting is 1.
   - **Enable**: When selected, all item mappings in the group will be enabled and visible to the SNMP manager. The default setting is checked.

3. Once all the parameters have been specified, click **OK**.

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Creating New Item Mapping

For information on adding new item mapping, follow the instructions below.

1. To start, right-click on the new group and then select **New Item Mapping**.

![Item Mapping Properties](image)

2. Next, specify the following parameters:

- **Item**: This field specifies the item. For more information on how to populate this field by using the Tag Browser, refer to **Tag Browser**.

  Note: The SNMP object's identifier in an exported MIB file is derived from the underlying server item's fully-qualified path (excluding all non-alphanumeric characters).

- **Update Rate**: This parameter specifies the rate at which the item mapping's cached value for the server item will be updated. The valid range is 10 milliseconds to 49 days. The default setting is 10 minutes.

- **Description**: This parameter may be used to provide a description of the item mapping. If the item has been selected through the Tag Browser, the field will populate automatically with the server description. This field will be used as a description in exported MIB files, and is therefore limited to the ANSI character set.

- **SNMP Data Type**: This parameter specifies the SNMP data type. Options include Integer32, Unsigned32, Gauge32, Counter32, Counter64, TimeTicks, Octet String, Opaque, IpAddress, and Object Identifier. The default setting is based on the server item's data type.

  Note: This parameter is restricted to the SNMP data types to which the server item's data may convert. If the agent cannot convert data to the SNMP data type, it will return a null value. For more information on data type conversion, refer to **Data Types Description**.

- **Access**: This parameter specifies the item's access. Options include Read Only and Read/Write. The default setting is based on the server item's access.

- **MIB Sub-identifier**: This parameter specifies the MIB sub-identifier. The valid range is 1 to 4294967295. The default setting is 1.

- **OID**: This parameter specifies the Object Identifier.
Enable: When selected, an item mapping will receive periodic updates from the server item that it references, and will also be visible to SNMP managers. When unchecked, the reference to the server item will be removed (possibly causing the active tag count to decrease) and the item mapping will not be visible to SNMP managers. The default setting is checked.

3. Once all the parameters have been specified, click OK.

Tag Browser
This dialog is used to select one or more server items. To do so, expand the list of devices and server plug-ins, and then select the tags as desired. Once all tags have been selected, click Apply.

Note: To add multiple item mappings at once, right-click on the group and then select Add Multiple Item Mappings. Then, press the Ctrl key while selecting all desired tag names. Once finished, click Apply.

Creating a New Trap Group
For information on creating a new trap group, follow the instructions below.

1. To start, right-click on Traps and then select New Group.
2. Next, specify the following parameters:

- **Name**: This parameter specifies the name of the new trap group. This field will be used as an identifier in exported MIB files, and is therefore limited to alphanumeric characters.

- **Description**: This parameter may be used to provide a description of the trap. This field will be used in exported MIB files, and is therefore limited to the ANSI character set. It is optional, and left blank by default.

- **MIB Sub-Identifier**: This parameter specifies the MIB sub-identifier. The valid range is 1 to 4294967295. The default setting is 1.

- **Enable**: When selected, all traps in the group will be enabled by default. The default setting is checked.
3. Once all parameters have been specified, click **Next**.

4. Next, specify the following parameters:
   - **Trap Destination IP**: This parameter specifies the trap destination's IP address.
   - **Port**: This parameter specifies the trap destination's port number. The default setting is 162.
   - **Community**: This parameter specifies the community of trap messages sent to the specified trap destination. The default setting is public.
   - **SNMP Version**: This parameter specifies the version of trap messages sent to the specified trap destination. Options include V1 and V2c. The default setting is V1.
   - **Network Adapter**: This parameter specifies the network adapter on which traps will be sent. On project start up, the list box will be filtered to only include entries with network adapters available on the system. The Default network adapter will always be available. The default setting is Default.
   - **Add**: When clicked, this button will add the specified trap destination, message, and local information to the list box.
   - **Remove**: When clicked, this button will remove the specified trap destination, message, and local information from the list box.

5. Once all the parameters have been specified, click **Finish**.
Creating a New Trap

For information on creating a new trap, follow the instructions below.

1. To start, right-click on the trap group and then select New Trap.

2. Next, specify the following parameters:

- **Name:** This parameter specifies the name of the trap. This field will be used as an identifier in exported MIB files, and is therefore limited to alphanumeric characters. The default setting is Trap1.

- **Description:** This parameter may be used to provide a description of the trap. This field will be used as a description in exported MIB files, and is therefore limited to the ANSI character set. It is optional, and left blank by default.

- **V1 Enterprise OID:** This parameter specifies the V1 Enterprise OID.

- **MIB Sub-identifier / Specific Trap Type:** This parameter specifies the MIB sub-identifier or the specific trap type. The valid range is 1 to 4294967295. It defaults to the lowest available sub-identifier.

- **V2c OID:** This parameter specifies the V2c OID.

- **Enable:** When selected, the trap will receive periodic updates from the server item that it is monitoring. Trap messages will also be sent to all of the trap group's trap recipients if the trap's trigger condition is met. The default setting is checked.
3. Once all parameters have been specified, click Next.

4. Next, specify the following parameters:

   - **Item**: This parameter specifies the item. For more information on how to populate this field by using the Tag Browser, refer to Tag Browser.
   - **Data Type**: This parameter specifies the item’s data type.
   - **Update Rate (ms)**: This parameter specifies the rate at which the trap’s cached value for the source server item will be updated. The valid range is 10 milliseconds to 49 days. The default setting is 1000 milliseconds.
   - **Deadband Type**: This parameter specifies the deadband type. Options include None, Absolute, and Percent. The default setting is None.
   - **Deadband**: This parameter specifies the value of deadband. It is only enabled when either Absolute or Percent is the chosen deadband type. The default value is 0.
   - **Range**: This parameter specifies the range of the deadband. It is only enabled when Percent is the chosen deadband type. The default value is 0.
5. Once all parameters have been identified, click **Next**.

6. Next, specify the following parameters:

   - **Threshold Type:** This field specifies the threshold type. Options include Value and Item. The default setting is Value.

     **Note:** When Item is the selected threshold, additional settings will be made available. For more information, refer to Item Threshold Deadband.

   - **Threshold:** This parameter specifies the threshold. The default setting is 0.

   - **Comparison:** This parameter specifies the comparison for the trigger. The default setting is Source > Threshold.

7. Once all parameters have been specified, click **Finish**.

**Item Threshold Deadband**

When Item is selected as the threshold, the Triggers dialog will change as shown below.
Description of the additional parameters are as follows:

- **Threshold:** This parameter specifies the threshold. The default setting is 0. To browse for an item, click Browse. For more information on how to populate this field by using the Tag Browser, refer to Tag Browser.
- **Update Rate:** This parameter specifies the rate at which the trap’s cached value for the trigger server item will be updated. The valid range is 10 milliseconds to 49 days. The default setting is 1000 milliseconds.
- **Deadband Type:** This parameter specifies the deadband. Options include None, Absolute, and Percent. The default setting is None.
- **Deadband:** This parameter specifies the value of deadband. It is only enabled when either Absolute or Percent is the chosen deadband type. The default value is 0.
- **Range:** This parameter specifies the range of the deadband. It is only enabled when Percent is the chosen deadband type. The default value is 0.

### Data Types Description

**Supported SNMP Data Types**

Server items can be represented by item mappings with SNMP data types. The default converted data type is shown in **bold**.

**Note:** If the SNMP Agent Plug-In cannot convert data to the SNMP data type, it will return a null value.

<table>
<thead>
<tr>
<th>Server Data Type</th>
<th>SNMP Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bool</strong></td>
<td>Integer32, Unsigned32, <strong>Gauge32</strong>, Counter32, Counter64, TimeTicks, Octet String, Opaque</td>
</tr>
<tr>
<td><strong>Char</strong></td>
<td><strong>Integer32</strong>, Unsigned32, Gauge32, Counter32, Counter64, TimeTicks, Octet String, Opaque</td>
</tr>
<tr>
<td><strong>Byte</strong></td>
<td><strong>Integer32</strong>, Unsigned32, Gauge32, Counter32, Counter64, TimeTicks, Octet String, Opaque</td>
</tr>
</tbody>
</table>
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Server Data Types Description

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bool</td>
<td>Single bit</td>
</tr>
<tr>
<td>Char</td>
<td>Signed 8 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 6 is the high bit</td>
</tr>
<tr>
<td></td>
<td>bit 7 is the sign bit</td>
</tr>
<tr>
<td>Byte</td>
<td>Unsigned 8 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 7 is the high bit</td>
</tr>
<tr>
<td>Short</td>
<td>Signed 16 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 14 is the high bit</td>
</tr>
<tr>
<td></td>
<td>bit 15 is the sign bit</td>
</tr>
<tr>
<td>Word</td>
<td>Signed 16 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 15 is the high bit</td>
</tr>
<tr>
<td>Long</td>
<td>Signed 32 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 30 is the high bit</td>
</tr>
<tr>
<td></td>
<td>bit 31 is the sign bit</td>
</tr>
<tr>
<td>DWord</td>
<td>Unsigned 32 bit value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 31 is the high bit</td>
</tr>
<tr>
<td>Float</td>
<td>32 bit floating point value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 31 is the high bit</td>
</tr>
<tr>
<td>Double</td>
<td>64 bit floating point value</td>
</tr>
<tr>
<td></td>
<td>bit 0 is the low bit</td>
</tr>
<tr>
<td></td>
<td>bit 63 is the high bit</td>
</tr>
<tr>
<td>String</td>
<td>Null terminated ASCII string</td>
</tr>
</tbody>
</table>

Note: The SNMP Agent Plug-In does not support arrays.
Support includes HiLo LoHi byte order selection.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Value Range</th>
<th>Behavior beyond range</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCD</td>
<td>Two byte packed BCD</td>
<td>0-9999</td>
<td>Undefined</td>
</tr>
<tr>
<td>LBCD</td>
<td>Four byte packed BCD</td>
<td>0-9999999999</td>
<td>Undefined</td>
</tr>
<tr>
<td>Date</td>
<td>64 bit floating point value</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Error Descriptions**

The following error/warning messages may be generated. Click on the link for a description of the message.

- **Invalid IP address**
  - Sub-identifier '<selected sub-identifier>' already in use. The lowest available sub-identifier is '<lowest available sub-identifier>'
  - Sub-identifiers must be within the range of 1 to 4294967295

- **The community '<community name>' has already been added**
  - The host IP '<IP Address>' has already been added
  - The network interface '<NIC description>'; Port '<port>' has already been added

- **The tag does not exist**
  - The trap recipient has already been added. Please select a different IP, port, community, version, or network adapter

- **The rate must be within the range of 10 milliseconds and 49 days**

- **Unable to bind socket on binding address '<IP address>', port '<port>' and protocol '<protocol>'**

- **Unable to create communications thread on socket for binding address '<IP address>', port '<port>' and protocol '<protocol>'**

**SNMP Error-Status Messages**

- badValue
- commitFailed
- genError
- noError
- noSuchName
- notWritable
- tooBig
- wrongType

See Also: [SNMP Error-Status Table](#)

**Invalid IP Address**

**Error Type:**

Error

**Source:**

Configuration

**Possible Cause:**

The IP Address specified is invalid.

**Solution:**

Enter a valid IPv4 address in quad-dotted notation.

**Note:**

An example of an IPv4 address in quad-dotted notation is 127.0.0.1.

**Sub-identifier '<selected sub-identifier>' already in use. The lowest available sub-identifier is '<lowest available sub-identifier>'**

**Error Type:**

Error

**Source:**

Configuration

**Possible Cause:**

The specified sub-identifier is already in use by an object at the same level of the tree hierarchy.

**Solution:**

1. Select the lowest available sub-identifier.
2. Select any other sub-identifier that is not currently in use by an object at the same level of the tree hierarchy.
**Sub-identifiers must be within the range of 1 to 4294967295**

**Error Type:**
Error

**Source:**
Configuration

**Possible Cause:**
The specified sub-identifier is outside the accepted range of 1 to 4294967295.

**Solution:**
Select a sub-identifier within the accepted range.

---

**The community '<community name>' has already been added**

**Error Type:**
Error

**Source:**
Configuration

**Possible Cause:**
A community with the specified name already exists in the list of accepted communities.

**Solution:**
Make the community name unique, and then add it to the list of accepted communities.

---

**The host IP '<IP Address>' has already been added**

**Error Type:**
Error

**Source:**
Configuration

**Possible Cause:**
The specified host IP Address has already been added to the list of accepted host IP Addresses.

**Solution:**
Make the host IP Address unique, and then add it to the list of accepted host IP addresses.

---

**The network interface '<NIC description>'; Port: '<port>' has already been added**

**Error Type:**
Error

**Source:**
Configuration

**Possible Cause:**
The specified network interface has already been added to the list of network interfaces.

**Solution:**
Make the network adapter or port unique, and then add it to the list of network interfaces.

---

**The tag does not exist**

**Error Type:**
Error

**Source:**
Configuration
Possible Cause:
The specified server item does not match the fully-qualified path of an existing server item.

Solution:
Enter the fully-qualified path of an existing server item.

Note:
An example of a fully-qualified path is "Channel1.Device1.Item1".

The trap recipient has already been added. Please select a different IP, port, community, version, or network adapter

Error Type:
Error

Source:
Configuration

Possible Cause:
The specified trap recipient contains the same IP, port, community, version, and network adapter as an entry in the trap recipients list.

Solution:
Make the trap recipient unique by selecting a different IP, port, community, version, or network adapter.

The rate must be within the range of 10 milliseconds and 49 days

Error Type:
Error

Source:
Configuration

Possible Cause:
The selected update rate is outside the accepted range of 10 milliseconds to 49 days.

Solution:
Specify an update rate within the accepted range.

Unable to bind socket on binding address '<IP address>', port '<port>', and protocol '<protocol>'

Error Type:
Warning

Source:
Runtime

Possible Cause:
Another SNMP application may already be bound to the specified port on the selected binding address.

Solution:
1. Terminate the other SNMP applications (such as the Windows SNMP Agent). Then, stop/start the Runtime Process.
2. Select a different binding address or port.

Unable to create communications thread on socket for binding address '<IP address>', port '<port>', and protocol '<protocol>'

Error Type:
Warning

Source:
Runtime

Possible Cause:
The system may not have enough remaining memory to create new threads.

Solution:
Ensure that adequate system memory is available, and then restart the Runtime process.

Unable to create socket on binding address '<IP address>', port '<port>', and protocol '<protocol>'

Error Type:
Warning

Source:
Runtime

Possible Cause:
Another SNMP application may already be bound to the specified port on the selected binding address.

Solution:
1. Terminate other SNMP applications (such as the Windows SNMP Agent).
2. Select a different binding address or port.
SNMP Error-Status Messages
The following error-status messages may be generated. The error-index included in the message specifies the
object identifier (OID) to which the error is related. An error-index of zero means that the error occurred before
processing any of the OIDs in the variable-bindings. Click on the link for a description of the message.

SNMP Error-Status Messages
badValue
commitFailed
genError
noError
noSuchName
notWritable
tooBig
wrongType

See Also: SNMP Error-Status Table

SNMP Error-Status Table
The SNMPv2c error-status is mapped to an SNMPv1 error-status using the following table:

<table>
<thead>
<tr>
<th>SNMPv2c Error-Status</th>
<th>SNMPv1 Error-Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>noError</td>
<td>noError</td>
</tr>
<tr>
<td>tooBig</td>
<td>tooBig</td>
</tr>
<tr>
<td>noSuchName</td>
<td>noSuchName</td>
</tr>
<tr>
<td>badValue</td>
<td>badValue</td>
</tr>
<tr>
<td>readOnly</td>
<td>readOnly</td>
</tr>
<tr>
<td>genErr</td>
<td>genErr</td>
</tr>
<tr>
<td>wrongValue</td>
<td>badValue</td>
</tr>
<tr>
<td>wrongEncoding</td>
<td>badValue</td>
</tr>
<tr>
<td>wrongType</td>
<td>badValue</td>
</tr>
<tr>
<td>wrongLength</td>
<td>badValue</td>
</tr>
<tr>
<td>inconsistentValue</td>
<td>badValue</td>
</tr>
<tr>
<td>noAccess</td>
<td>noSuchName</td>
</tr>
<tr>
<td>notWritable</td>
<td>noSuchName</td>
</tr>
<tr>
<td>noCreation</td>
<td>noSuchName</td>
</tr>
<tr>
<td>inconsistentName</td>
<td>noSuchName</td>
</tr>
<tr>
<td>resourceUnavailable</td>
<td>genErr</td>
</tr>
<tr>
<td>commitFailed</td>
<td>genErr</td>
</tr>
<tr>
<td>undoFailed</td>
<td>genErr</td>
</tr>
<tr>
<td>authorizationError</td>
<td>genErr</td>
</tr>
</tbody>
</table>

badValue

Error Type: SNMP Response

Possible Cause:
When responding to SNMPv1 requests, this error-status will be used in place of wrongType.

Solution:
For more information, refer to wrongType.

commitFailed

Error Type: SNMP Response

Possible Cause:
The attempt to set the OID failed to write to the OPC item.
**Solution:**
Check the Event Log for details concerning the failure. This error-status is usually returned if the tag does not have Read/Write access, if the device is not responding, or if the device rejected the write.

**Notes:**
1. When a commitFailed error-status is returned, a set-request containing multiple OIDs to be written will not undo previously set values. As a result, set-requests containing multiple OIDs are not guaranteed to be atomic.
2. This error-status only applies to SNMPv2c. SNMPv1 will use genErr.

**See Also:**
- genErr

---

**genError**

**Error Type:**
SNMP Response

**Possible Cause:**
An error occurred that cannot be described by an SNMP error-status. When responding to SNMPv1 requests, this response will be used in place of commitFailed.

**Solution:**
For more information, refer to commitFailed.

---

**noError**

**Error Type:**
SNMP Response

**Possible Cause:**
The data returned in the SNMP get-response is valid, and represents the most recently cached value in the SNMP Agent.

**Solution:**
N/A.

**Note:**
This error-status is used in both SNMPv2c and SNMPv1.

---

**noSuchName**

**Error Type:**
SNMP Response

**Possible Cause:**
The requested OID is not available.

1. For SNMPv1, this error-status will be returned for get-requests that include OIDs that do not exist in the SNMP Agent. For set-requests, noSuchName will be returned in the response when the OID is unavailable or cannot be modified.
2. For SNMPv2c, the noSuchObject exception value will be used in place of noSuchName. When the OID cannot be modified, notWritable will be used in place of noSuchName.

**Solution:**
Verify that the requested OID is included in the SNMP Agent project.

**See Also:**
- SNMP Error-Status Table
- notWritable

---

**notWritable**

**Error Type:**
SNMP Response
Possible Cause:
The OID cannot be modified in response to a set-request. This error-status will be returned when a specific item mapping is designated as Read Only, or if the community string used in the set-request does not have Read/Write access.

Solution:
Ensure that the item mapping permissions and the community string’s Read/Write access are set correctly.

Note:
This error-status only applies to SNMPv2c. SNMPv1 will use noSuchName.

See Also:
Creating a New Item Mapping
Communication
noSuchName

tooBig

Error Type:
SNMP Response

Possible Cause:
1. The request contains an unusual number of OIDs.
2. The get-bulk request contains a large number of max-repetitions.

Solution:
1. Decrease the number of OIDs included in the request.
2. Decrease the number of max-repetitions for get-bulk requests.

Note:
This error-status applies to responses for all SNMP requests for SNMPv1 and SNMPv2c (such as get, get-next, get-bulk, and set).

wrongType

Error Type:
SNMP Response

Possible Cause:
The SNMP type for a particular OID does not match the SNMP type configured for the item mapping.

Solution:
Verify that the SNMP data type used in the set-request matches the type configured in the item mapping.

Note:
This error-status only applies to SNMPv2c. SNMPv1 will use badValue.

See Also:
Creating a New Item Mapping
badValue
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Sub-identifiers must be within the range of 1 to 4294967295
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System Objects
System Objects Description

The community '<community name>' has already been added
The host IP '<IP Address>' has already been added
The network interface '<NIC description>'
The rate must be within the range of 10 milliseconds and 49 days
The tag does not exist
The trap recipient has already been added. Please select a different IP, port, community, version, or network adapter
tooBig

Unable to bind socket on binding address '<IP address>', port '<port>', and protocol '<protocol>'
Unable to create communications thread on socket for binding address '<IP address>', port '<port>', and protocol '<protocol>'
Unable to create socket on binding address '<IP address>', port '<port>', and protocol '<protocol>'

wrongType