

Receiving SNMP Traps Using Visual MIBrowser Pro

Product Brief

NuDesign Technologies, Inc.

This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

Table of Contents

1. DOCUMENT HISTORY	3
2. INTRODUCTION	4
3. TRAP RECEPTION	4
3.1. SNMPv1/v2 Traps.....	4
3.2. SNMPv3 Traps.....	8
3.3. SNMPv1 & SNMPv3 Traps Together	11
4. ABOUT NUDESIGN TECHNOLOGIES.....	13
Contact Information.....	13

This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

1. Document History

Date	Rev.	Remarks	Author
2008-8-26	A01	Created	Shehzad Haq
2008-9-29	A02	Revisions	Shehzad Haq
2009-1-15	A03	Revisions	Shehzad Haq
2009-2-9	A04	Revisions	Shehzad Haq
2017-10-18	A06	Minor edits	NDT

This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

2. Introduction

This document shows how to receive SNMP traps using NuDesign products (Visual MIBrowser Pro and NuDesign Master Agent Service).

3. Trap Reception

For the purposes of this exercise, NuDesign Visual MIBrowser Pro is used to receive SNMP v1/v2 and SNMPv3 traps. NuDesign Master Agent Service is used for sending traps.

3.1. SNMPv1/v2 Traps

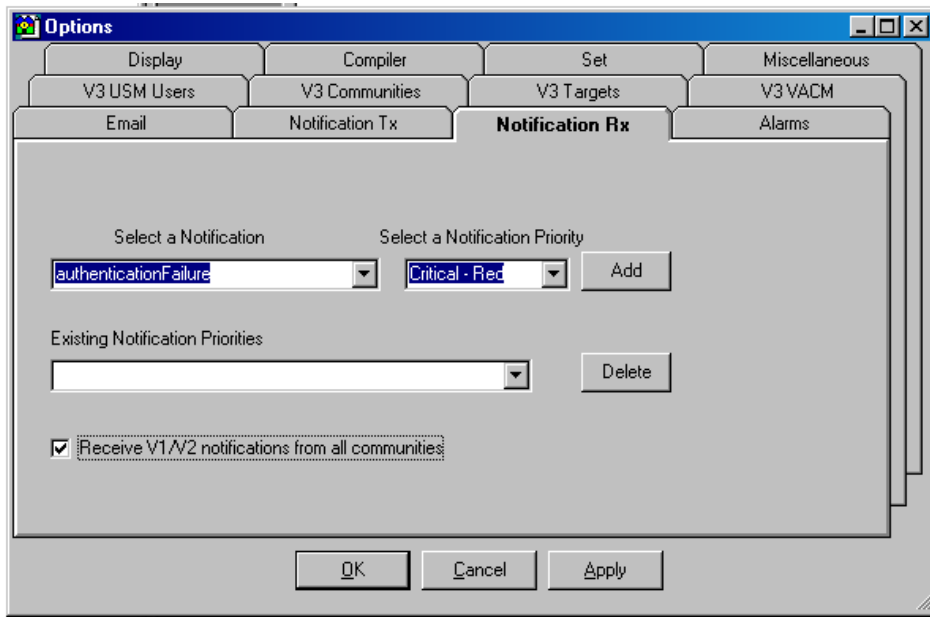
1. Open NuDesign Visual MIBrowser Pro and click on the “Trap Rx” button.



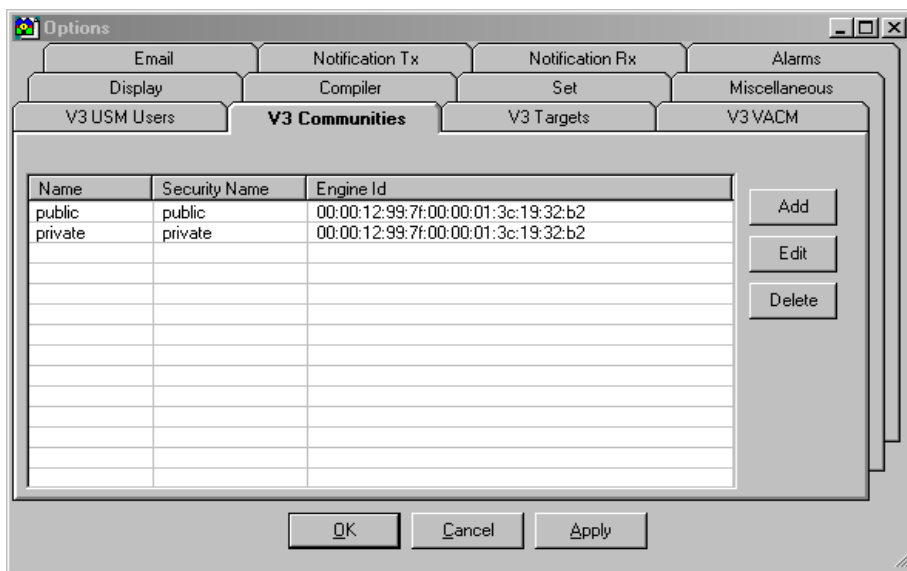
2. Notification Receiver window will open up. It is showing that the traps will be received on port 162.



3. To receive v1/v2 traps, we need to ensure that the community strings specified in the traps are configured in MIBrowser. This can be done in two different ways. The first is to configure MIBrowser to receive trap for all community strings. This is done in the "Notification Rx" tab of the "Tools/Options" dialogue by checking off the "Receive V1/V2 notifications from all communities" check box at the bottom of the tab.



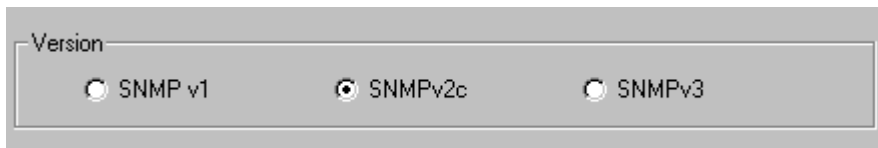
The second way is to configure individual community strings in the "V3 Communities" tab of the "Tools/Options" dialogue.



- Now that Visual MIBrowser Pro ready to receive, let's configure NuDesign Master Agent Service to send to traps. From the Control Panel click on the NuDesign SNMPv3HTTP Agent icon to start the agent configuration applet.

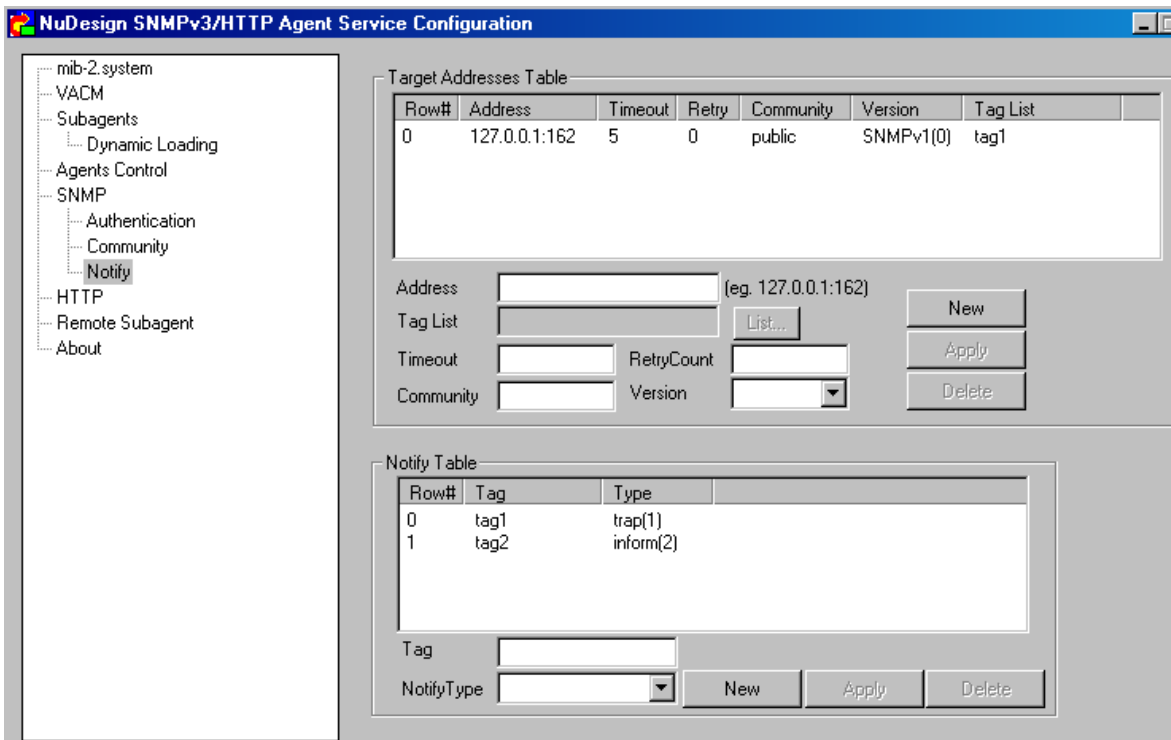


Choose SNMPv2c in the SNMP version.

A dialog box titled "Version" with three radio button options: "SNMP v1", "SNMPv2c", and "SNMPv3". The "SNMPv2c" option is selected.

Version
<input type="radio"/> SNMP v1
<input checked="" type="radio"/> SNMPv2c
<input type="radio"/> SNMPv3

- Now look at the Target Address table where it is specified which address the trap is supposed to go to and what the community string is. We are using the loop back address for this exercise since the source and target are both on the same machine.

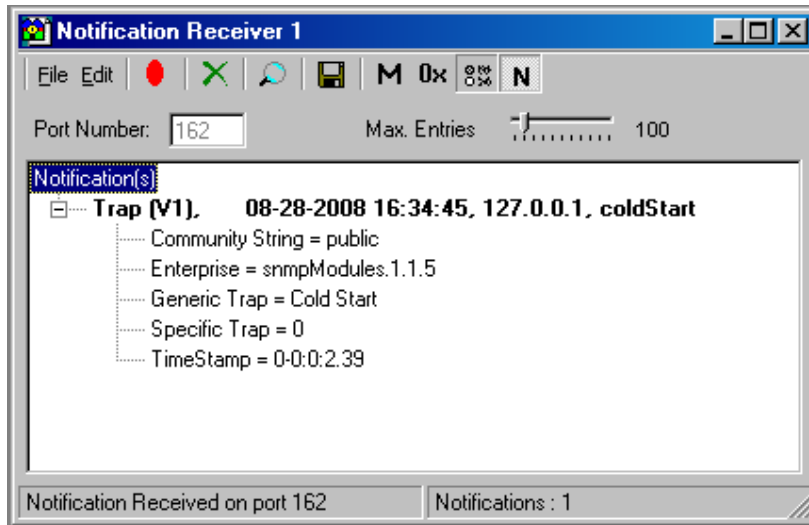
The main configuration window for the NuDesign SNMPv3/HTTP Agent Service. It has a tree view on the left with "Notify" selected. The main area contains a "Target Addresses Table" and a "Notify Table".

Row#	Address	Timeout	Retry	Community	Version	Tag List
0	127.0.0.1:162	5	0	public	SNMPv1(0)	tag1

Row#	Tag	Type
0	tag1	trap(1)
1	tag2	inform(2)

This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

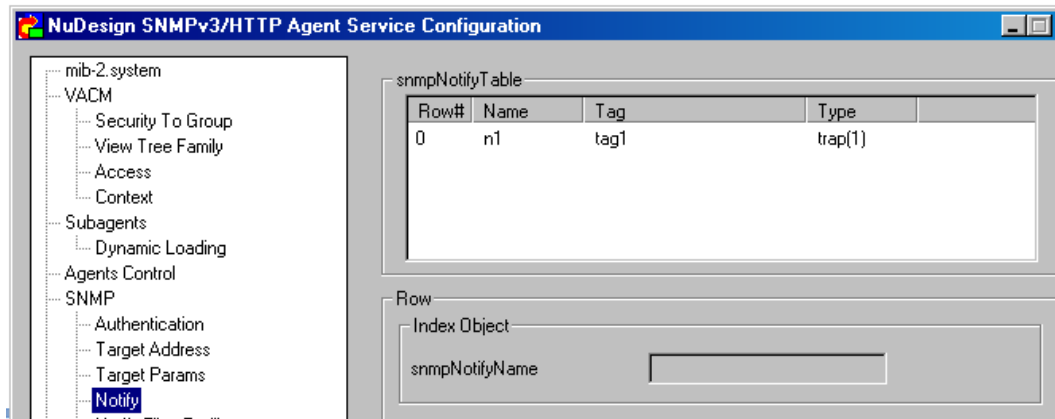
6. Now close this applet and it will ask to restart the agent. When the agent is restarted it will send out a cold start trap which we should see in the MIBrowser Pro Notification Receiver.



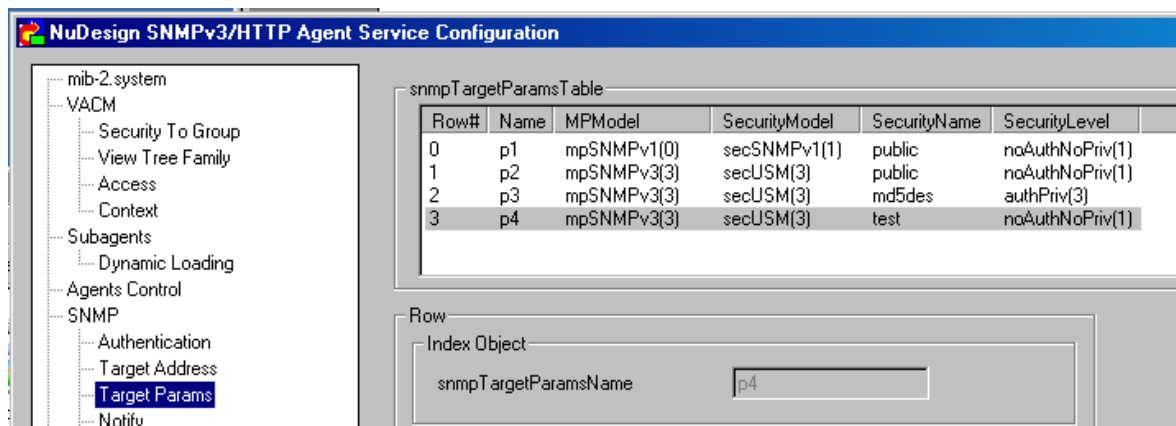
3.2. SNMPv3 Traps

To send out SNMPv3 Traps a number of tables in the agent need to be configured.

1. From the agent configuration applet, choose the SNMPv3 for the SNMP version.
2. Go to the Notify table and create a row that tells the agent that you want to send a trap. This row has a tag and specifies whether a trap or an inform will be sent out. Make sure that the Notify Filter Table and Notify Filter Profile Tables are empty. We will not be dealing with filtering in this tutorial.

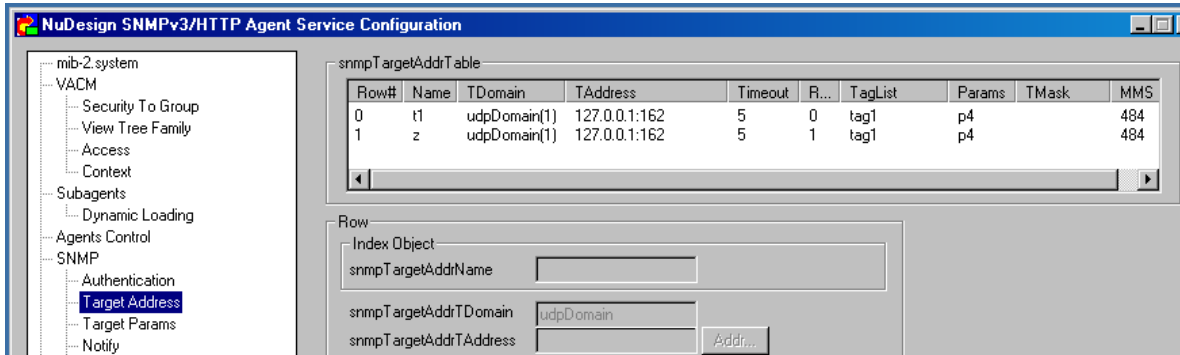


3. We will configure the Target Params Table next. In this table you should create a new row 'p4'. Its MPMModel is SNMPv3 and the security model being used is secUSM. We call it 'test' and its security level chosen is NoAuthNoPriv.



This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

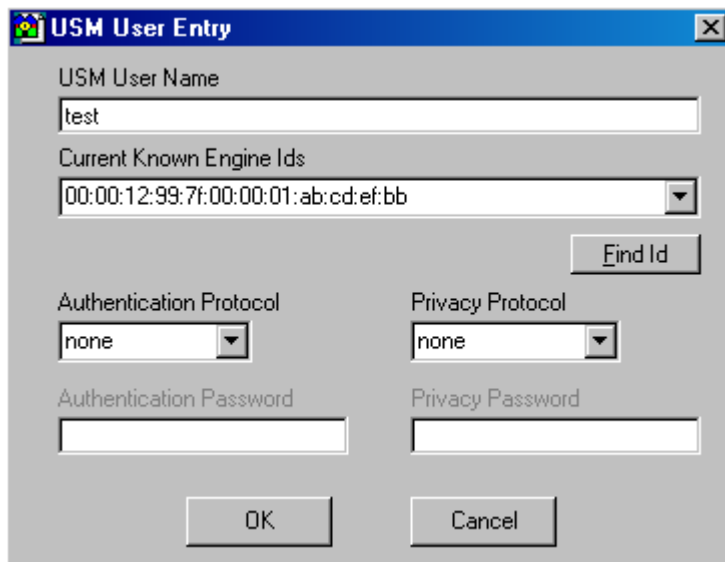
- The Target Address Table will tie the rows in the above two tables together. In this table you will specify the address to which the trap/inform is sent to (specified in the Notify table as 'tag1') and what security is to be used (specified in the Target Params table as 'p4').



- Now close this applet and a v3 trap will be sent by the agent service when it restarts.

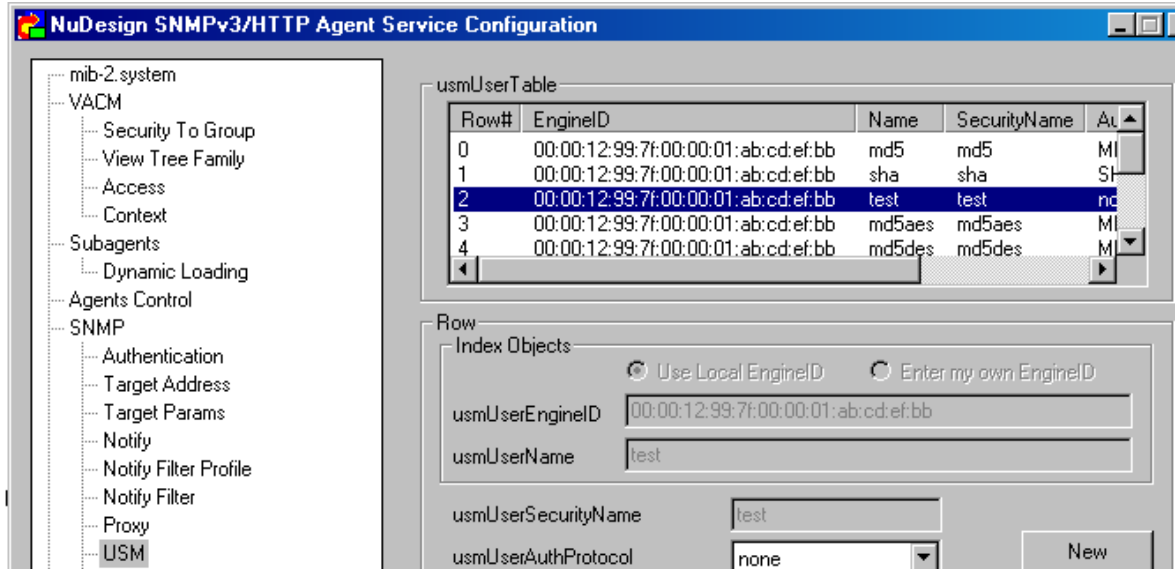
We notice that the trap was not received by the Notification Receiver.

- At this point we need to review what we have done to make sure all the parameters were configured properly. We will notice that in the Target Params table the security name is 'test' and its securityLevel is noAuthnoPriv. We need to make sure that the MIBrowser Pro has a corresponding security name in the USM table with the correct authentication and privacy and corresponding engine id.

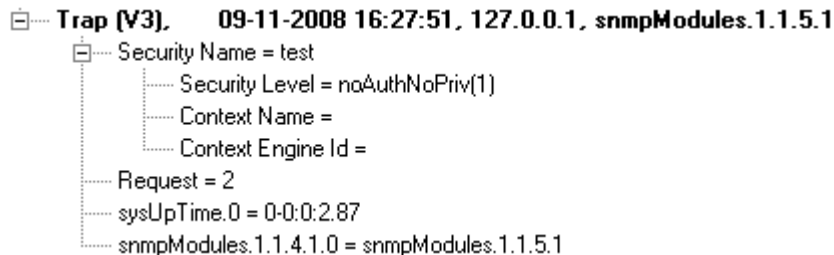


This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.

7. Also the USM table in agent should have a corresponding entry for 'test'.



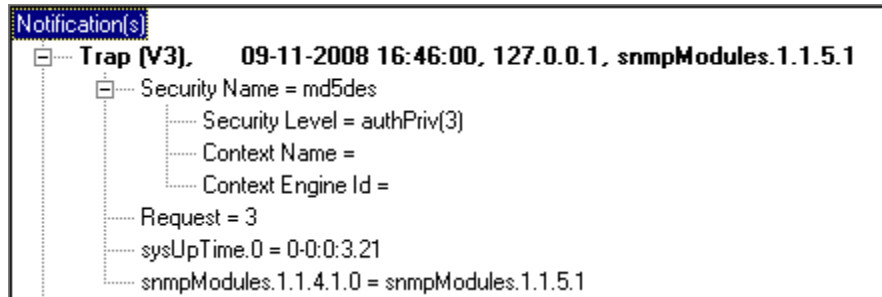
8. Now when we close this application and a trap is sent, it is received in Notification receiver.



9. The next step is to try to send an AuthPriv trap and see if we receive it. We review the USM and Target Params tables in the agent and find 'md5des' already defined and it is AuthPriv. Next we go to the TargetAddress table and specify 'p3' which is the row in the TargetParams table with the securityName of 'md5des'.

We also have to make sure that MIBrowser Pro USM table also has an entry for 'md5des'.

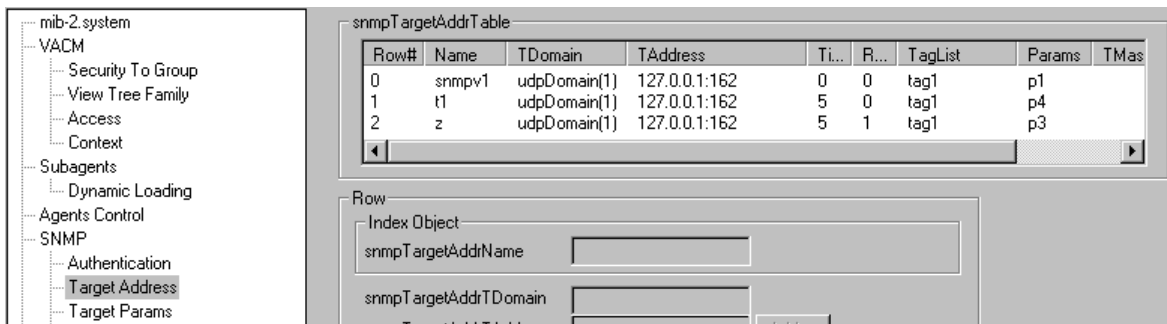
Once, this is done we are ready to send the trap again by closing the application.



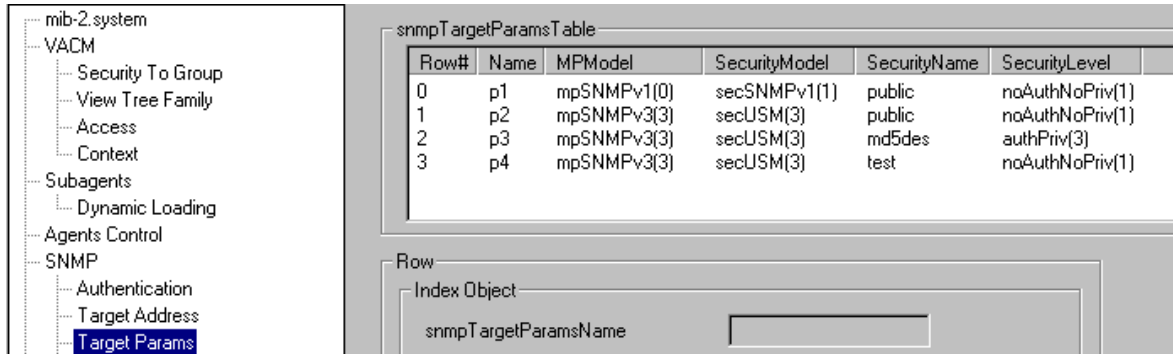
To recap, we were able to send v1/v2, v3 noAuthnoPriv, v3 AuthPriv traps, individually, from the Agent Service and receive them in NuDesign Visual MIBBrowser Pro.

3.3. SNMPv1 & SNMPv3 Traps Together

An agent can send any version of a trap (SNMPv1, v2 and / or v3) to as many locations as specified in the TargetAddress Table.



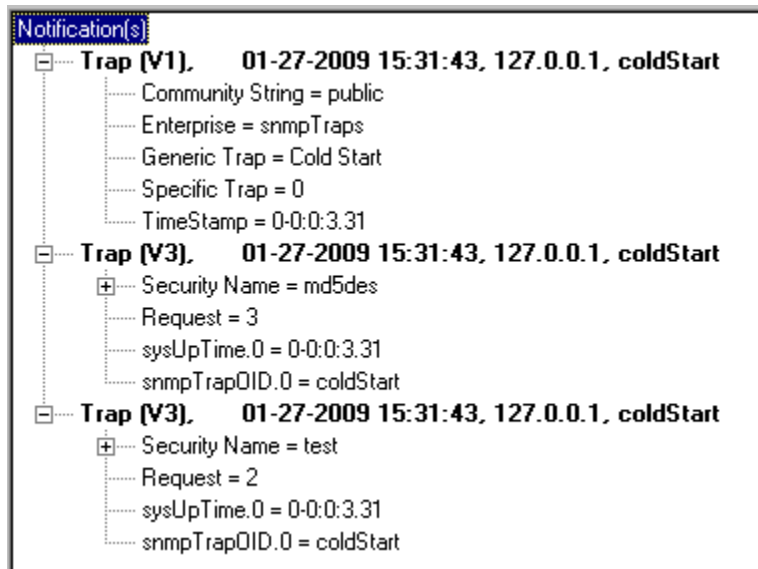
We can see from Target Address Table that three destinations (all loopback addresses) have been configured. Therefore, we should see three different traps being received by MIBrowser Pro.



Correlating “Params” from Target Address Table to Target Params Table, it can be observed that,

‘p1’s security model is SNMPv1, ‘p3’ is SNMPv3 with security level of ‘authPriv’ and ‘p4’ is also SNMPv3 and it is ‘noAuthnoPriv’.

When this applet is closed, the traps will be sent out. We can observe in Visual MIBBrowser Pro the traps received by it.



4. About NuDesign Technologies

NuDesign Technologies, Inc, based in Toronto, Canada, specializes in the development of management agents and client applications used in remote configuration, monitoring and control of Windows and Linux Servers & Workstations, embedded devices, networking services and applications. For all of our software products, supporting standard management protocols such as NETCONF, SNMP, CLI and web protocols such as RESTCONF, please visit our main site at www.ndt-inc.com.

The benefits of deploying NuDesign's management software technologies are reliable, low risk, quick-to-market and well supported solutions. The highly automated code generation tools with associated applications and tutorials enable fast prototyping and development. They also facilitate organization and design process for multiple target environments.

Contact Information



NuDesign Technologies, Inc.

tel: 416 737 0328 / fax: 416 445 9101

toll free: 1 866 886 SNMP (7667)

contact@ndt-inc.com

www.ndt-inc.com / www.snmp4windows.com

This document is provided for informational purposes only, 'as is' and without warranty of any kind. This document may be copied, however without any modification, and all pages, full text and notices must be included.