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# Technical Document

## Configuring PRTG Network Monitor for SNMPv3 communications with NuDesign SNMPv3 Agent Service

**NuDesign Technologies, Inc.**

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## Document History

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## Introduction

This document explains how to set up SNMPv3 credentials in a PRTG Network Monitor environment for communications with NuDesign SNMPv3 Agent Service.

## Configuration

When initially run, PRTG Network Monitor runs its Discovery Wizard which finds management objects within your network. PRTG Network Monitor comes configured to discover objects which can communicate using **SNMPv1** with a community string of **'public'**.

From any node in the Device view at which you wish to establish SNMPv3 credentials, right click on the node and select **'Edit'**. From the next menu select **'Settings'**. From the subsequent page, scroll down until you see the

### 'CREDENTIALS FOR SNMP DEVICES'

section. Uncheck the entry and you should see something like the following ...

### CREDENTIALS FOR SNMP DEVICES

SNMP Version	<input type="radio"/> v1 <input type="radio"/> v2c <input checked="" type="radio"/> v3
Authentication Type	<input type="radio"/> MD5 <input checked="" type="radio"/> SHA
User	shaaes
Password	.....
Encryption Type	<input type="radio"/> DES <input checked="" type="radio"/> AES
Data Encryption Key	.....
Context Name	
SNMP Port	161
SNMP Timeout (Sec.)	5

**Note:** the entries, above and below, are based on the default configuration of the NuDesign SNMPv3 Agent Service. If you have changed its configuration, you will have to substitute with the same credentials you changed to.

For "SNMP Version", select "v3".

For "Authentication Type", select "SHA"

For USM "User" specify "shaaes" and for authentication 'password' is "shaaesauth".

For "Encryption Type", select "AES", for "Data Encryption Key" enter "shaaespriv".

Leave the other fields at defaults, including "Context Name", leaving it empty.

As noted earlier, the example configuration above is based on the default configuration for a NuDesign SNMPv3 agent service. NuDesign agents ship with the following pre-configured\* USM users:

Name	Authentication		Privacy	
	Protocol	Password	Protocol	Password
public	none		none	
md5	MD5	md5auth	none	
md5nopriv	MD5	md5noprivauth	none	
sha	SHA	shaauth	none	
shanopriv	SHA	shanoprivauth	none	
md5des	MD5	md5desauth	DES	md5despriv
shades	SHA	shadesauth	DES	shadespriv
md5aes	MD5	md5aesauth	AES	md5aespriv
shaaes	SHA	shaaesauth	AES	shaaespriv

\* These users are supplied for evaluation purposes only. They are **NOT** suggested for a production environment.

User "shaaes", as used in the above example, is mapped to "grpAll" in the **VacmSecurityToGroupTable**. This gives any **SNMPv3** messages using these parameters "read-write" access.

Read/Write SNMPv3 Credentials:

```
SNMPv3 Username: shaaes
SNMPv3 Context:
SNMPv3 Authentication
  Method: SHA
  Password | Key: shaaesauth
SNMPv3 Privacy/Encryption
  Method: AES128
  Password | Key: shaaespriv
```

Normally, 'Context' is a zero length string, i.e. leave SNMPv3 Context field empty.

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## About NuDesign Technologies

NuDesign provides software tools, libraries and applications for development of management agents and client applications used in remote configuration, monitoring and control of network devices, services, and applications. Our solutions operate over IPv4 / IPv6 networks in carrier, campus and enterprise settings. We also provide professional services supporting customers requiring specific management application and agent solutions.

Our software is based on industry standard management protocols such as NETCONF, SNMP, CLI, Web and RESTCONF protocols. Our customers are Original Equipment Manufacturers, System Integrators, Operators, Service Providers and End Users worldwide.

Our development products and software technologies provide the basis for the following solutions:

- the management Agents for embedded targets, implementing standard and custom YANG / MIB data models with secure, well integrated NETCONF / SNMPv3 / CLI and / or Web & RESTCONF access.
- the secure SNMPv3 and CLI management solutions for multiple desktop and embedded targets.
- the secure monitoring of Windows and Linux Servers using extensible SNMPv3 Agent Service for Windows or Linux with standard and / or custom extension subagents, configured with the provided SNMPv3 Configuration Editor. NuDesign SNMPv3 Service for Windows is a direct, drop-in replacement of Microsoft Windows SNMP Service (please visit [www.snmp4windows.com](http://www.snmp4windows.com)).
- the SNMP Browser, MIB Builder and Traffic Monitor products that are feature rich, extensible, and easy to use in development, test and production environments.
- specialized SNMPv3 Management Agents and Managers for avionics AFDX<sup>®</sup> / ARINC664 networks and SNMPv1 products for NTCIP Transportation industry.

The highly automated management Agent / Subagent / Manager development tools, code generation wizards, multiple target development libraries, samples, evaluations with associated tutorials and our technical support enable quick learning, fast prototyping, experimentation, development and reliable production deployment.

The code generation tools facilitate organization of design process, providing for generation of project files for target OS / RTOS and a very complete and immediately compilable agent or manager source code.

For more information please visit [www.ndt-inc.com](http://www.ndt-inc.com), it contains NETCONF, SNMPv3 and MIB development tools and management product descriptions, tutorials and full feature product evaluations packages or call 416 737 0328 to discuss your specific needs.