

VxSNMP Agent

v 1.1 Quick Start Guide



VideoXpert™

Contents

- Getting Started with VxSNMP Agent 1
- Preparing Your System for VxSNMP Agent 2
- Installing VxSNMP Agent 3
- Using MIB Parameters in the VxSNMP Agent 6
- (Optional) Importing the VideoXpert-MIB File Into Your SNMP Manager 7
- Establishing an SNMP Monitoring Strategy 8
 - Monitoring Software Services Using VxSNMP Agent 8
 - Monitoring Hardware Conditions Using VxSNMP Agent 8
- Reconfiguring VxSNMP Agent 9

Getting Started with VxSNMP Agent

VxSNMP Agent enables the SNMP manager application to monitor your VideoXpert system via SNMP. The following functionality is supported:

- Monitoring system camera information and health status, for example: whether the camera is Online or Offline, the camera number, and whether the camera is recording or not.
- Providing VideoXpert software services status, for example: whether the software is running or stopped.
- Monitoring the health and performance of local hardware components, using existing Windows support leveraged by the camera.
- Providing notification of events associated with VideoXpert software services using Traps.
- Providing secure communication using SNMPv3.

Preparing Your System for VxSNMP Agent

Ensure that your system meets the following prerequisites before installing VxSNMP Agent:

- VideoXpert Professional or VideoXpert Enterprise is properly installed.
- Windows has been updated. This ensures that the required supporting files are present.

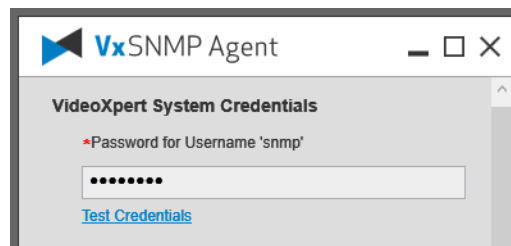
Installing VxSNMP Agent

Use the VideoXpert VxSNMP Agent installer to install VxSNMP Agent on hardware that is running VideoXpert components. Install VxSNMP Agent after the other VideoXpert components have been installed.

During the installation process the agent configuration window will appear, giving you the opportunity to configure the agent. If you need to change the configuration after installation you can run the configuration application from the Windows **Start** menu. See *Configuring VxSNMP Agent*.

Repeat this process for each VideoXpert component you want to monitor.

1. Download and run *VideoXpert VxSNMP Agent-[version number as ###.###].exe*.
2. In the *Pelco VideoXpert VxSNMP Agent Installation Bundle* wizard, click **Install**.
3. In the *VxSNMP Agent* configuration window, *VideoXpert System Credentials* area, enter a value in the *Password for Username 'snmp'* field, and then click **Test Credentials**.

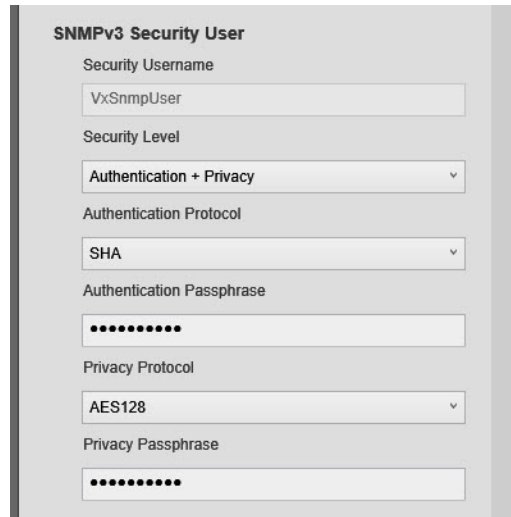


NOTE: The value must match the password for user 'snmp' in the VideoXpert user database.

NOTE: The *VideoXpert System Credentials* area is only displayed by a computer on which VideoXpert is installed. If you do not see this section in the *VxSNMP Agent* configuration window, the agent is installed on the incorrect computer.

NOTE: These credentials will be used by VxSNMP Agent to retrieve status information about the VideoXpert System including devices and data sources. The password will be stored encrypted.

- In the *SNMPv3 Security User* area, configure the default VxSNMP Agent user 'VxSnmpUser'.



SNMPv3 Security User

Security Username
VxSnmpUser

Security Level
Authentication + Privacy

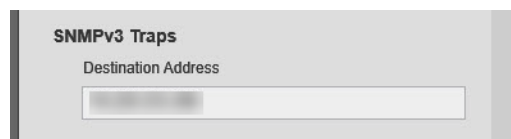
Authentication Protocol
SHA

Authentication Passphrase
.....

Privacy Protocol
AES128

Privacy Passphrase
.....

- Select a *Security Level* from the drop-down menu. Options are **None**, **Authentication**, and **Authentication + Privacy** (the highest level of security).
 - Select an *Authentication Protocol* from the drop-down menu. Options are **None**, **MD5**, and **SHA** (recommended).
 - Enter a value in the *Authentication Passphrase* field.
The authentication passphrase must be at least eight (8) characters in length; a longer passphrase is more secure. The authentication protocol/passphrase can be configured even if the currently selected security level does not require it. However, if the selected security level is set to 'Authentication', then an authentication protocol must be selected.
 - Select a *Privacy Protocol* from the drop-down menu. Options are **None**, **DES**, and **AES128** (recommended).
 - If you selected **Authentication + Privacy** for the security level, enter a value in the *Privacy Passphrase* field.
The privacy passphrase must be at least eight (8) characters in length; a longer passphrase is more secure. The protocol/passphrase can be configured even if the currently selected security level does not require it. However, if the selected security level is set to 'Authentication + Privacy', then both authentication and privacy protocols must be selected.
- In the *SNMPv3 Traps* area, enter a value in the *Destination Address* field.



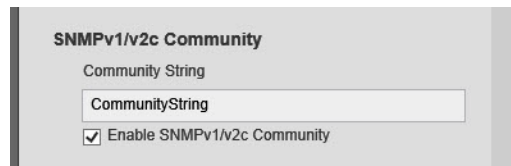
SNMPv3 Traps

Destination Address
.....

VxSNMP Agent sends traps when any of the VideoXpert services go offline or online. Traps may be sent based on events or change-of-state detection related to system devices and essential services.

Traps sent by VxSNMP Agent are defined in DISMAN-EVENT-MIB. This is a standard MIB that should be included with your SNMP manager. The VideoXpert VxSNMP Agent MIB file is named VideoXpert-MIB. It is copied to the target system as part of the installation process. It can be found at *c:\Program Files\Pelco\VideoXpert\VxSNMP Agent\MIB*. If you cannot find it, contact Pelco technical support for help.

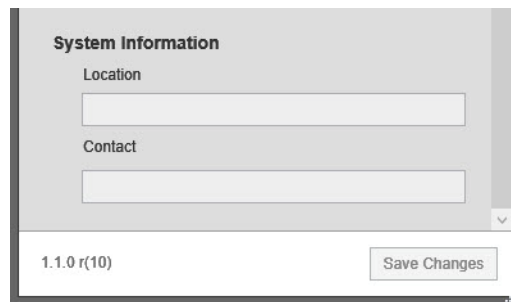
- (Optional) In the *SNMPv1/v2c Community* area, click to select the checkbox for *Enable SNMPv1/v2c Community*, and then enter a value in the *Community String* field.



The screenshot shows a configuration window titled "SNMPv1/v2c Community". It contains a "Community String" label above a text input field with the value "CommunityString". Below the input field is a checked checkbox labeled "Enable SNMPv1/v2c Community".

NOTE: The community string acts as a password, but is not very secure because SNMPv1/v2c community strings are passed in clear text. Enabling SNMPv1/v2c is not recommended due to the limited security provided.

- (Optional) In the *System Information* area, enter the physical location of the managed node in the *Location* field and the contact person for the managed node in the *Contact* field.



The screenshot shows a configuration window titled "System Information". It contains two text input fields: "Location" and "Contact". At the bottom left, it displays "1.1.0 r(10)". At the bottom right, there is a "Save Changes" button.

These values can be found under SNMP MIB-2 System (sysLocation: OID value 1.3.6.1.2.1.1.6 and sysContact: OID value 1.3.6.1.2.1.1.4).

- Click **Save Changes**.
- In the *VxSNMP Agent* configuration window, click **Continue**.
- In the installation wizard, click **Close**.

VxSNMP files are saved to *c:\Program Files\Pelco\VideoXpert\VxSNMP Agent*.

Using MIB Parameters in the VxSNMP Agent

VxSNMP uses the following MIB parameters:

- product name
- model number
- serial numbers
- status of VideoXpert software components
- status of VideoXpert services
- status of VideoXpert datasources (video and audio streams)
- number of cameras
- camera names
- camera input numbers
- camera status
- CPU usage
- memory usage
- network usage
- system name
- host name
- IP address
- OS software version
- hard drive status
- hard drive temperature
- hard drive serial numbers

(Optional) Importing the VideoXpert-MIB File Into Your SNMP Manager

Refer to the documentation for your SNMP manager for information about the MIB import process.

The VxSNMP process installed the file *VideoXpert-MIB* to *c:\Program Files\Pelco\VideoXpert\VxSNMP Agent\MIB*.

Establishing an SNMP Monitoring Strategy

The VideoXpert SNMP installer enables SNMP services for Windows, and exposes the default Windows MIBs. Most SNMP managers will simplify your monitoring strategy, showing the available hardware, software, and services that you can monitor so you do not need to know the individual MIBs or OIDs.

Default traps available to Windows are defined by Microsoft KnowledgeBase Article 172879.

You might want to perform periodic GETs against the individual services and hardware statuses you want to monitor to obtain a more complete view of system status. Hardware and Software statuses are mostly defined by *hostmib.mib*; service statuses are defined by *msft.mib*.

Monitoring Software Services Using VxSNMP Agent

At a minimum, poll the following services:

Service	Description
VideoXpert Core	Core service; runs on COR and CMG models.
VideoXpert Exports	Provides the ability to export video; runs on COR and CMG models
VideoXpert Media Gateway	Media Gateway service; runs on MG and CMG models.
Ops Center Communications	Ops Center Workstation service. Runs on OPS models.
MongoD	Database daemon; manages requests, access and management for system database
MongoS	Database shared routing service; applies to clusters of six (6) or more servers.
MongoLogRotator	Log rotation service; failure of this service could cause logs to take excess space on the system.
VideoXpert Storage	Storage service; runs on VXS models
VideoXpert Storage Database	Storage database service; runs on VXS models

Monitoring Hardware Conditions Using VxSNMP Agent

The services available will vary depending on the SNMP management application and the hardware used.

At a minimum, Pelco recommends that you poll the following services, if available:

- Processor load
- Storage/memory statistics
- Hard disk status
- Power failures
- System uptime

Reconfiguring VxSNMP Agent

The VxSNMP Agent configuration application was launched during the installation process to provide the initial SNMP configuration needed by the Agent. You can run the configuration application post-installation any time a setting change is required. To do so:

1. Locate the VxSNMP Agent icon on your system, and double-click to launch it.
2. Update the settings as instructed in the section titled *Installing VxSNMP Agent*.



Pelco, Inc.

625 W. Alluvial, Fresno, California 93711 USA

(800) 289-9100 Tel (800) 289-9150 Fax

+1 (559) 292-1981 International Tel

+1 (559) 348-1120 International Fax

www.pelco.com

Pelco, the Pelco logo, and other trademarks associated with Pelco products referred to in this publication are trademarks of Pelco, Inc. or its affiliates. ONVIF and the ONVIF logo are trademarks of ONVIF Inc. All other product names and services are the property of their respective companies. Product specifications and availability are subject to change without notice.

© Copyright 2018, Pelco, Inc.
All rights reserved.