



StreamConnect for Milestone Systems XProtect VMS

Version 2.0.10.0

Installation and User's Guide

Copyright © 2025 Allied Telesis, Inc.

All rights reserved. No part of this publication may be reproduced without prior written permission from Allied Telesis, Inc.

Microsoft and Internet Explorer are registered trademarks of Microsoft Corporation. All other product names, company names, logos or other designations mentioned herein are trademarks or registered trademarks of their respective owners.

Allied Telesis, Inc. reserves the right to make changes in specifications and other information contained in this document without prior written notice. The information provided herein is subject to change without notice. In no event shall Allied Telesis, Inc. be liable for any incidental, special, indirect, or consequential damages whatsoever, including but not limited to lost profits, arising out of or related to this manual or the information contained herein, even if Allied Telesis, Inc. has been advised of, known, or should have known, the possibility of such damages.

Contents

Overview	3
Guidelines for StreamConnect.....	3
Network Configurations for VMS.....	4
Standard Network Configuration for VMS.....	4
VMS Network Configuration with StreamConnect	4
Installing StreamConnect.....	6
Hardware Requirement.....	6
Software Requirements	6
TCP Port Access Requirements	6
Installing StreamConnect on the XProtect Server	7
Uninstalling StreamConnect.....	10
Configuring Allied Telesis Switch and Cameras with StreamConnect.....	11
Guidelines for Configuring the Switch and Cameras	11
Adding an Allied Telesis Switch to XProtect	11
Associating Cameras to ATI Switch Ports	14
Defining Roles to User Accounts	18
Managing the Allied Telesis Switch Ports Connected to Cameras.....	19
Viewing ATI Switch and Ports Information on the ATI Tab	19
Modifying the Port Settings on the ATI Tab	21
Rebooting the ATI Switch on the ATI Tab.....	23
Accessing and Managing a Switch Port on the Live Tab.....	24
Managing the ATI Switch for Other Settings.....	26

Overview

StreamConnect for Milestone Systems XProtect VMS is a plugin to the XProtect Video Management System (VMS) in networks where the surveillance cameras are connected to Allied Telesis Power over Ethernet (PoE) switches.

StreamConnect allows you to perform tasks such as rebooting the surveillance cameras and managing port power allocations using the XProtect client without network administrator credentials.

XProtect, developed by Milestone Systems, is a system that manages surveillance cameras and beyond. Surveillance cameras are often connected to and powered by PoE switches, such as Allied Telesis PoE switches.

Guidelines for StreamConnect

Here are guidelines for network configurations for StreamConnect:

- ❑ StreamConnect supports multi-server configurations as well as single-server configurations.
- ❑ StreamConnect supports the Allied Telesis Layer 2 and Layer 3 PoE switches.
- ❑ StreamConnect supports cloud environments.
- ❑ StreamConnect is not designed to be used with switches configured in the Virtual Chassis Stacking (VCS) mode.
- ❑ StreamConnect for Milestone Systems XProtect VMS does not manage power settings on the spare Ethernet lines (Mode B, using pins 1,2,3, and 6). Mode A uses pins 4,5,7, and 8. Some PoE devices can deliver power in both Modes A and B. In order to maximize the value of StreamConnect, configure your switches to deliver power in Mode A.

Network Configurations for VMS

This section explains a standard network configuration for VMS and network configurations that Allied Telesis supports for StreamConnect.

Standard Network Configuration for VMS

Figure 1 shows a standard network configuration for a XProtect VMS installation. In this configuration, networks for surveillance cameras and client machines are separated. Cameras are physically exposed to potential intruders so that segregating the camera network provides security to the internal management networks. Separating networks also prevents video traffic caused by the cameras from consuming bandwidth on the client network.

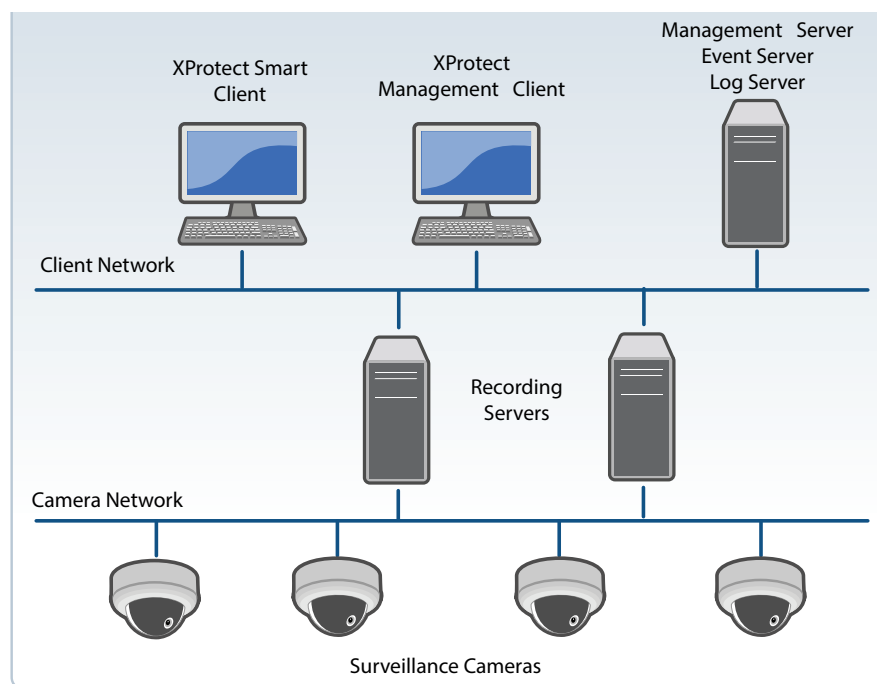


Figure 1. Standard Network Configuration for VMS

VMS Network Configuration with StreamConnect

To use StreamConnect to manage an Allied Telesis PoE switch where the camera network is connected, the switch and XProtect Clients must have direct network connectivity as shown in Figure 2 on page 5.

To preserve network security and performance, Allied Telesis recommends separating the client network and camera network using VLANs.

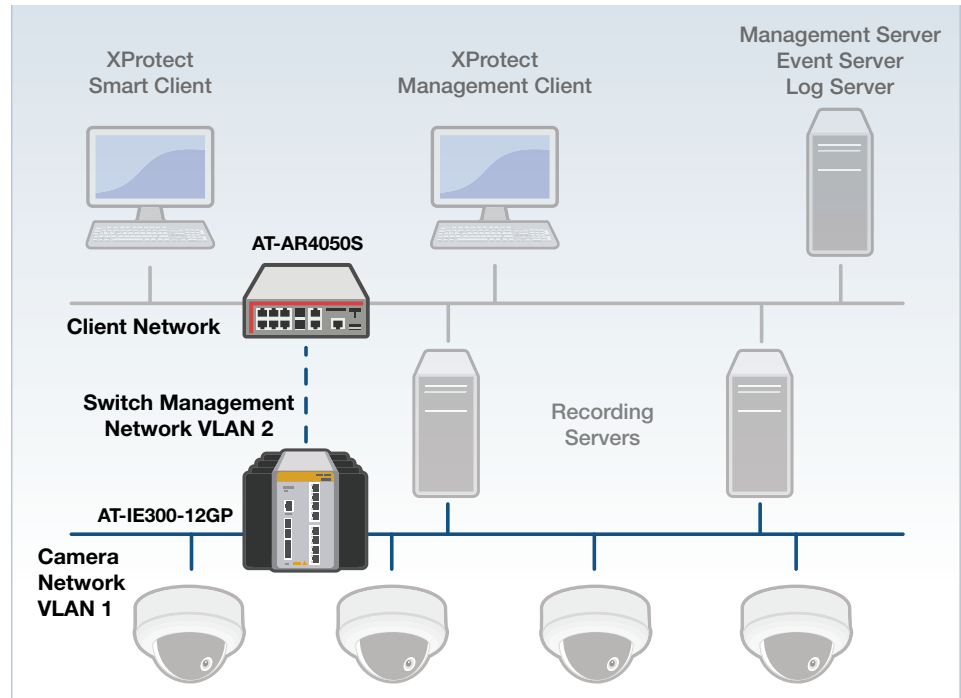


Figure 2. VMS Network Configuration with StreamConnect

In Figure 2, the AT-AR4050S UTM firewall in the client network and the AT-IE300-12GP PoE switch in the camera network are directly connected. Assume that port 1.0.1 on the AT-IE300 switch is connected to the AT-AR4050S device and the client network is configured for the address range 192.168.15.0/24.

The following configuration example is to configure port 1.0.1 as an access port for VLAN 2 and assign an IP address of 192.168.15.100/24 to VLAN 2 on the AT-IE300 switch:

```
awplus# configure terminal
awplus(config)# vlan database
awplus(config-vlan)# vlan 2
awplus(config-vlan)# exit
awplus(config)# interface port1.0.1
awplus(config-if)# switchport access vlan 2
awplus(config-if)# exit
awplus(config)# interface vlan 2
awplus(config-if)# ip address 192.168.15.100 255.255.255.0
awplus(config-if)# end
awplus#
```

To separate the client and camera networks logically, assign PoE camera ports on the AT-IE300 switch other than VLAN 2.

Installing StreamConnect

StreamConnect supports Windows based XProtect VMS servers.

Hardware Requirement

StreamConnect is compatible with any AlliedWare Plus™ PoE-capable Layer 2 and Layer 3 switches. AlliedWare Plus™ is an operating system for Allied Telesis switch and router products.

Software Requirements

Here is a list of software requirements:

- ❑ AlliedWare Plus™ version 5.5.0-1.4 or later for Allied Telesis switches
- ❑ One of the following Operating Systems:
 - Windows 10, 64-bit
 - Windows 11
- ❑ One of the following XProtect VMS server software versions:
 - Milestone XProtect 2020
 - Milestone XProtect 2021
 - Milestone XProtect 2022
 - Milestone XProtect 2023

Note

Before StreamConnect is installed, the XProtect VMS software must already be installed.

- ❑ Allied Telesis recommends using Google Chrome or Mozilla Firefox browser as the default browser for AlliedWare Plus web-based GUI.

TCP Port Access Requirements

If a firewall is between the client and camera networks, StreamConnect requires access to the following TCP ports:

- ❑ TCP port 443 (HTTPS)
- ❑ TCP port 22 (SSH) or TCP port 23 (Telnet)

Installing StreamConnect on the XProtect Server

To install StreamConnect onto the XProtect server:

1. Ensure that your system meets “Hardware Requirement” and “Software Requirements” on page 6.
2. Download the StreamConnect installer onto the XProtect server.
3. Start the Windows on the server.
4. Close the XProtect Smart Client and XProtect Management Client if they are running.
5. Close any File Explorer windows if they are open.
6. Stop the Milestone Event Server service.

Note

A couple of ways to open the Windows Services are available. Here is an example.

- a. Press the Windows key + **R** on the keyboard to open the Run dialog box.
- b. In the Run dialog box, type `services.msc` and press **OK**.

The Services window appears as shown in Figure 3.

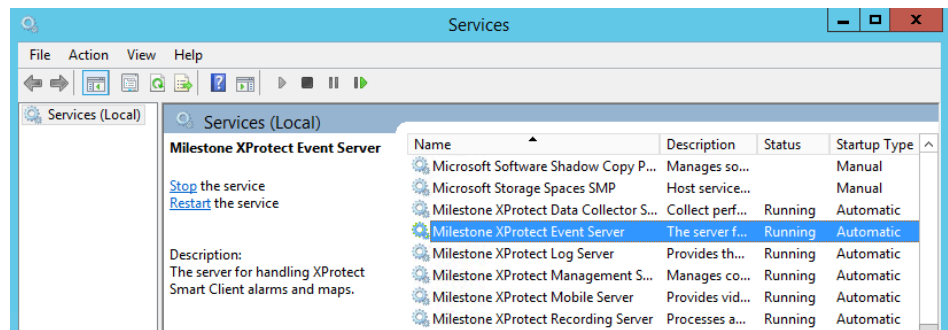


Figure 3. Windows Services Utility Window

- c. Click **Milestone XProtect Event Server**.
 - d. Click **Stop** the service.
7. Click the StreamConnect installer icon on the desktop.
 8. When Microsoft Defender SmartScreen gives you a warning, click the **More info** link, then click **Run anyway** as shown in Figure 4 on page 8.

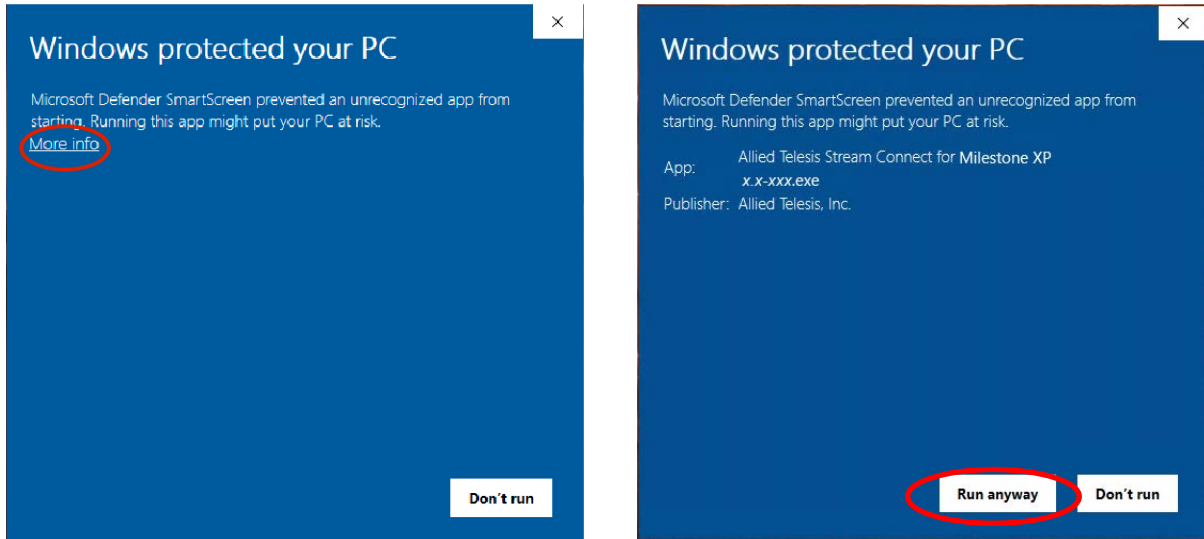


Figure 4. Defender SmartScreens

Note

You might receive multiple warnings from Microsoft Defender.

9. On the User Account Control dialog box, click **Yes** to allow the Installer to proceed. See Figure 5.

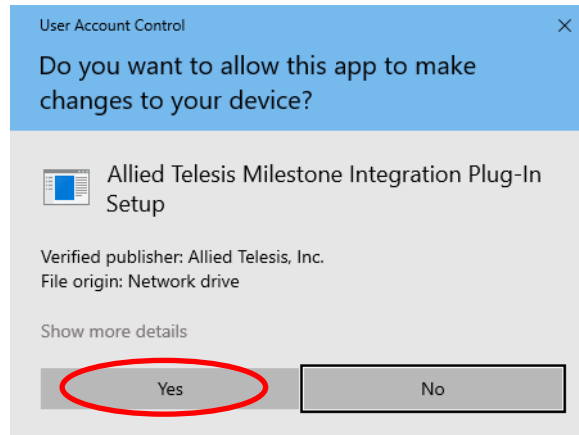


Figure 5. User Account Control Dialog Box

10. On the next Setup screen, click **Install**.

Note

The installer attempts to stop and restart Milestone background services as a part of the installation process.

Wait until the installation process is completed.

11. When the Setup screen notifies you that the installation is completed, click **Finish**.

Note

The media server service restarts when the installation is completed.

12. Go to “Configuring Allied Telesis Switch and Cameras with StreamConnect” on page 11.

Uninstalling StreamConnect

To uninstall StreamConnect from Windows:

Note

A couple of ways to open the Windows Services are available. Here is an example.

1. Click the Start button and type `control panel`.
2. Click Control Panel in the search results to open it.
3. Click **Programs > Programs and Features**.

The Programs and Features window appears as shown in Figure 6.

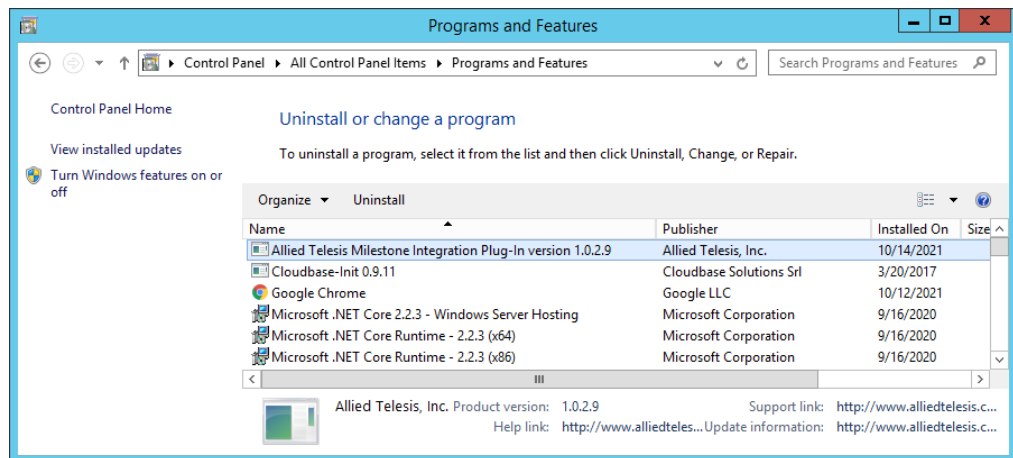


Figure 6. Programs and Features Window

4. Double-click the Allied Telesis Milestone Integration Plug-in to uninstall StreamConnect.

Note

Uninstalling StreamConnect does not remove configurations made to Milestone XProtect applications associated with StreamConnect. Allied Telesis recommends removing configurations related to StreamConnect from the Milestone XProtect Management Client prior to uninstalling StreamConnect.

Configuring Allied Telesis Switch and Cameras with StreamConnect

After installing StreamConnect into the XProtect server, or when having new surveillance cameras connected to the Allied Telesis switch in your camera network, perform the following tasks:

1. "Adding an Allied Telesis Switch to XProtect" on page 11

If the Allied Telesis switch has already been added, select your switch and skip the switch configuration steps.

2. "Associating Cameras to ATI Switch Ports" on page 14

If you need to access the Allied Telesis switch for the basic switch settings, such as the switch's management IP address and administrative user credentials or for upgrading AlliedWare Plus™ firmware to version 5.5.4 or later, visit the Allied Telesis website at:

- ❑ [Getting Started with the AlliedWare Plus Command Line Interface](#)
- ❑ [AlliedWare Plus Feature Overview and Configuration Guides](#)

Guidelines for Configuring the Switch and Cameras

Here are guidelines for configuring StreamConnect:

- ❑ When entering username and password to log into Allied Telesis switch in the ATI Information in Figure 9 on page 13 in Milestone XProtect Management Client, use the administrative account. Without administrative privilege, you can manage surveillance cameras, but not Allied Telesis switches.
- ❑ Allied Telesis recommends using Power over Ethernet (PoE) ports on the switch for surveillance cameras and non-PoE ports as uplink ports. If a PoE port is used as a uplink port, the system might mistakenly detect a camera elsewhere in the network as if it is connected to the PoE port.

Adding an Allied Telesis Switch to XProtect

After installing StreamConnect into your XProtect server, start a Milestone XProtect Management Client and add **ATI Stream Connect**.

To add an Allied Telesis switch to XProtect:

1. Ensure that the cameras and Allied Telesis switches are cabled and powered on.
2. Start the Milestone XProtect Management Client and log in.
3. In the left navigation pane, click **ATI Switches** in **Devices**.
4. In the **Switches** pane, right-click on **ATI Switches**.

The drop-down menu appears as shown in Figure 7 on page 12.

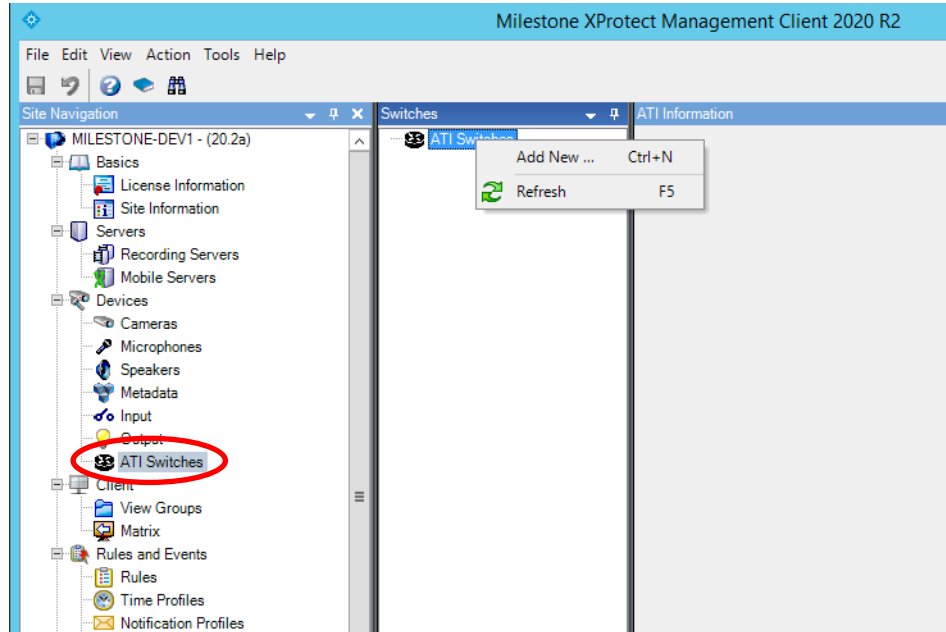


Figure 7. Milestone XProtect Management Client Window

5. Select **Add New**.

The Add ATI Switch popup window appears.

6. Enter the name of the ATI switch that you want to add. See Figure 8 as an example.

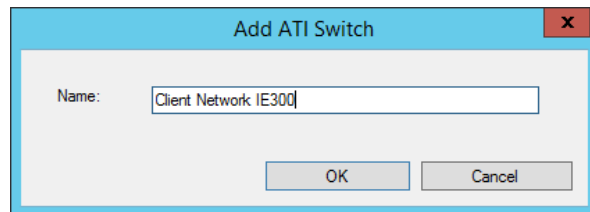


Figure 8. Add ATI Switch Popup Window

7. Click **OK**.

The switch configuration page appear. See Figure 9 on page 13.

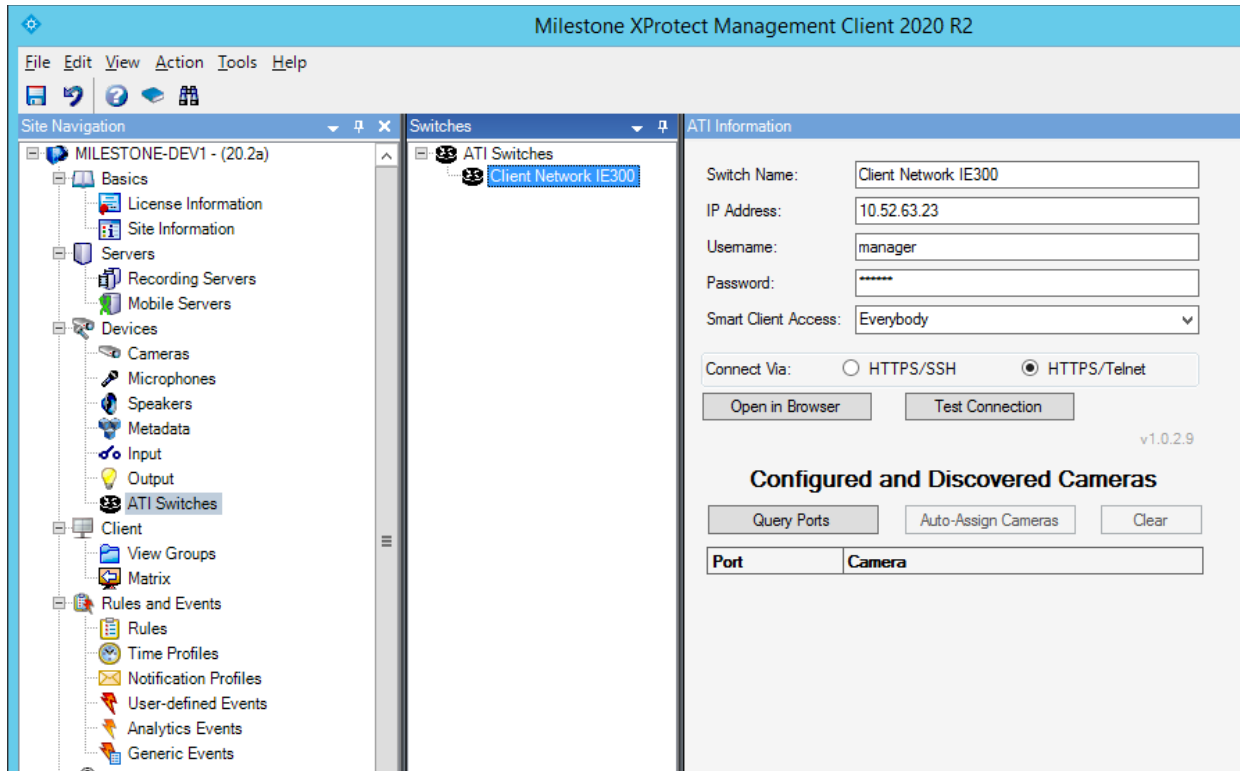


Figure 9. Switch Configuration Page

8. Enter the following information by referring Table 1. They are mandatory.

Table 1. Switch Configuration Fields

Parameter	Description
Switch Name	Displays the switch name that you entered.
IP Address	Enter the management IPv4 address of the switch. This address must be reachable from the devices that are hosting the Milestone XProtect Smart Client and Milestone XProtect Management Client.
Username	Enter the username of the account that has access to the ATI switch. The account must have configuration privileges (privilege level 15) on the switch to perform administrative actions. Account with privilege level 7 or higher and less than 15 can view the switch configuration but not make changes.
Password	Enter the password for the above username. The password is internally encrypted in the saved configuration and is not displayed on-screen.

Table 1. Switch Configuration Fields (Continued)

Parameter	Description
Smart Client Access	Select an option that gives write access to a group of users with a specified role. Access can be restricted by roles. To assign a role to users, see “Defining Roles to User Accounts” on page 18.
Connect Via	Select either HTTPS/SSH or HTTPS/Telnet. StreamConnect uses SSH or Telnet to connect to the switch for some operations. Telnet access is the default. To use SSH for improved security, SSH must be enabled on the switch. To access the ATI switch, see “Managing the ATI Switch for Other Settings” on page 26.

9. To verify the settings, click **Test Connection**.

Here are guidelines:

- ❑ Exceeding the maximum number of failed login attempts causes the account (entered username) to be temporarily locked out of the switch.
- ❑ When an error occurs, verify connectivity to the switch and if all the parameters are entered correctly.

10. When **Test Connection** succeeds, save the switch configuration.

To save the switch configuration, click the Save command button () on the tool bar or press Ctrl-S, the shortcut key for the Save command.

Associating Cameras to ATI Switch Ports

To associate cameras to the ATI switch ports, you can assign cameras automatically and/or manually:

- ❑ “Automatic Camera Assignment - Query Ports and Auto-Assign Cameras” on page 15
- ❑ “Manual Camera Assignment” on page 16

Here are guidelines:

- ❑ When Automatic Camera Assignment does not discover cameras, manually assign the camera to a switch port.
- ❑ If a camera was previously assigned to a port on other switches, the camera is not automatically assigned to the ATI switch port. Manually assign the camera to the switch port.
- ❑ You can skip the Automatic Camera Assignment and use the Manual Camera Assignment only.

Automatic Camera Assignment - Query Ports and Auto-Assign Cameras

To automatically associate the surveillance cameras to the Allied Telesis switch ports, continue from the ATI Information window to the following steps:

1. Add an ATI switch, or open a configured ATI switch in the Milestone XProtect Management Client window.

See "Adding an Allied Telesis Switch to XProtect" on page 11.

2. Click **Query Ports** in the **ATI Information** pane as shown in Figure 10.

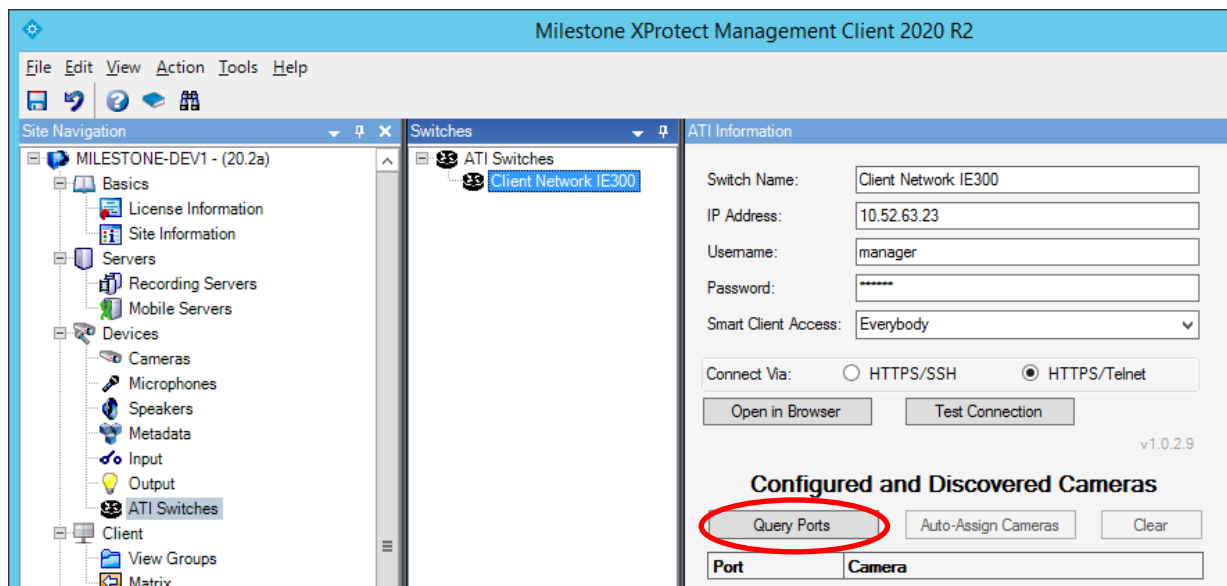


Figure 10. ATI Information Pane - Query Ports Button

StreamConnect queries the switch, discovers cameras connected to the ports, and displays a list of ports with cameras as shown in Figure 11 on page 16.

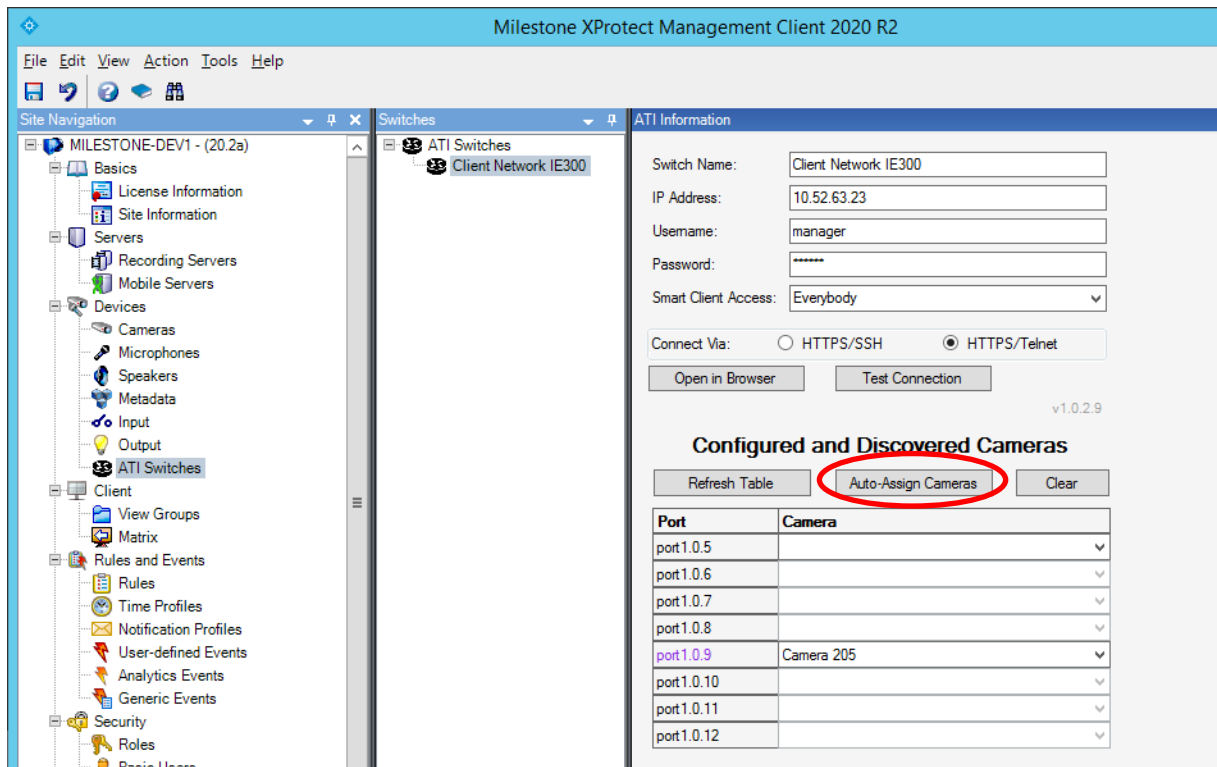


Figure 11. ATI Information Pane - List of Ports and Cameras

3. Click **Auto-Assign Cameras**.

The discovered cameras are assigned to the switch ports.

Manual Camera Assignment

To assign a camera to an ATI switch port manually:

1. Add an ATI switch, or open a configured ATI switch in the Milestone XProtect Management Client window.

See “Adding an Allied Telesis Switch to XProtect” on page 11.

2. In the left navigation pane, click **Cameras** in **Devices**.

Cameras are listed in the Devices pane as shown in Figure 12 on page 17.

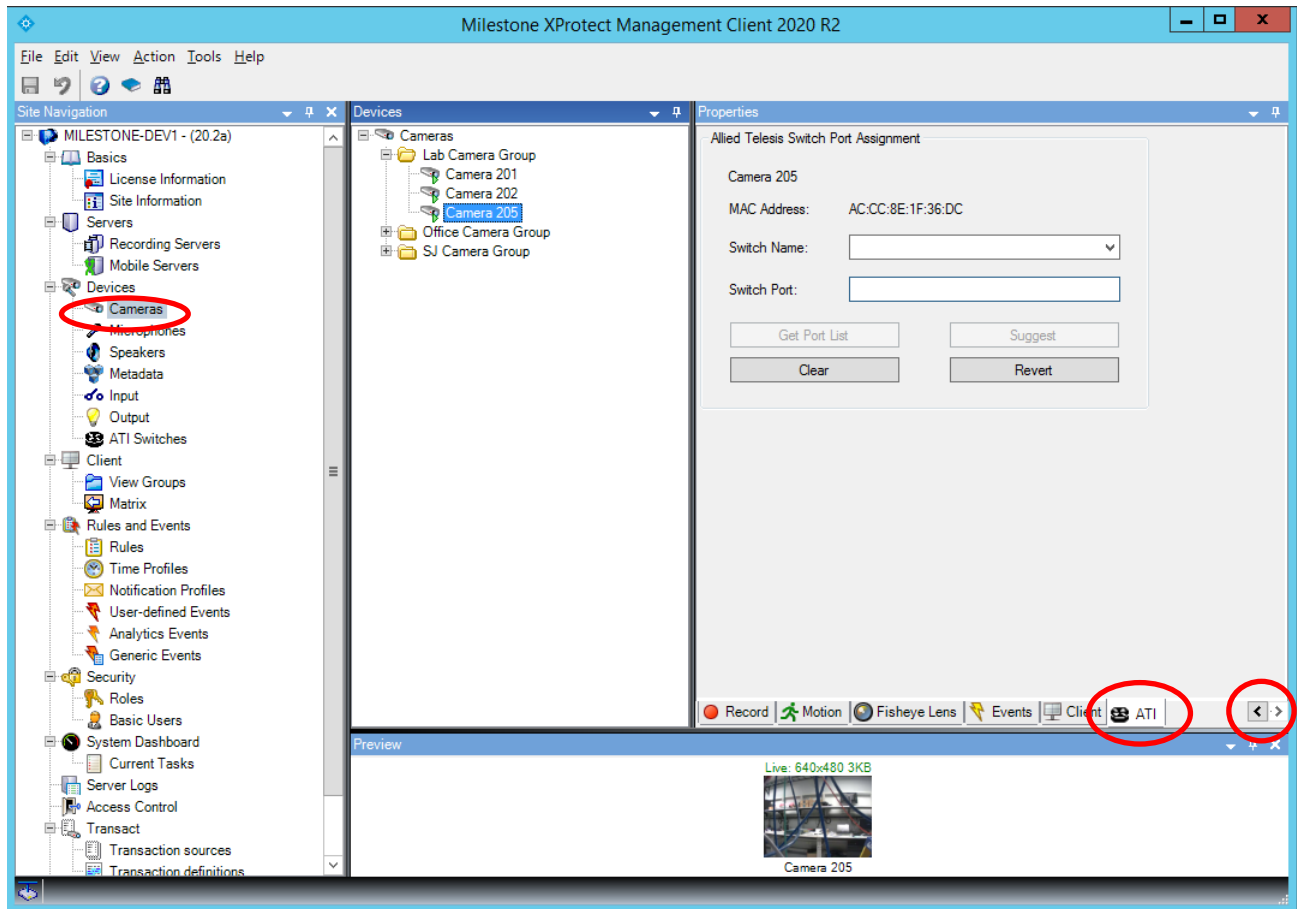


Figure 12. Devices Pane in Management Client Window

3. Click the **ATI** tab on the tab bar at the bottom of the Properties pane.

If the **ATI** tab is not shown, use the horizontal scroll bar arrows to show hidden tabs.

4. Select a switch name in **Switch Name** from the drop-down menu or type a switch name.

If the switch has not been configured, its name is not listed in the drop-down menu. Type the name of the switch where the camera is connected.

5. To select a switch port, perform one of the following procedures:
 - ❑ Click **Get Port List** to populate ports in the drop-down menu for **Switch Port** and select a port from the drop-down menu.
 - ❑ Type a switch port in **Switch Port** if **Get Port List** does not populate ports.
 - ❑ Click **Suggest** to choose a port for the camera automatically.

6. Save the switch port assignment to the camera.

To save the assignment, click the Save command button () on the tool bar or press Ctrl-S, the shortcut key for the Save command.

Defining Roles to User Accounts

To change the role of a user account:

1. Start the Milestone XProtect Management Client and log in.
2. In the left navigation pane, click **Security > Roles**.

For more information, see [Milestone's documentation](#).

Managing the Allied Telesis Switch Ports Connected to Cameras

After adding ATI switches and associating cameras to the switch ports, you can manage ATI switches and their switch ports. Available tasks from the **ATI** tab and **Live** tab are shown in Table 2.

Table 2. Available Management Tasks for ATI Switch and Ports

Task	ATI tab	Live tab
View the switch information, switch power settings, port power consumption, port power allocation. ^a	✓	✓
Enable and disable the switch port	✓	✓
Enable and disable PoE on the switch port	✓	✓
Enable and disable the port security	✓	-
Reboot the ATI switch (Reboot Switch button)	✓	-
Save the changes to the ATI switch's startup configuration file (Write Boot Config button)	✓	-
Bring up the ATI switch's Web User Interface (UI) to manage the switch (Open in Browser button)	✓	-

a. The page of the ATI tab displays more information than on the Live tab.

Viewing ATI Switch and Ports Information on the ATI Tab

To view ATI switch and switch port information:

1. Ensure that the cameras and Allied Telesis switch are cabled and powered on.
2. Start the Milestone XProtect Smart Client and log in.
3. Click **ATI** on the tab bar as shown in Figure 13.

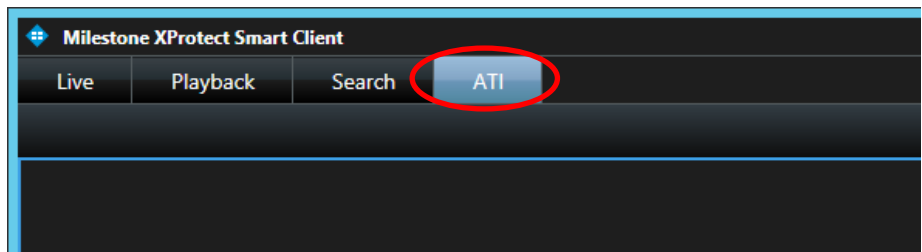


Figure 13. Milestone XProtect Smart Client

The Allied Telesis Switch Management page is displayed. See Figure 14.

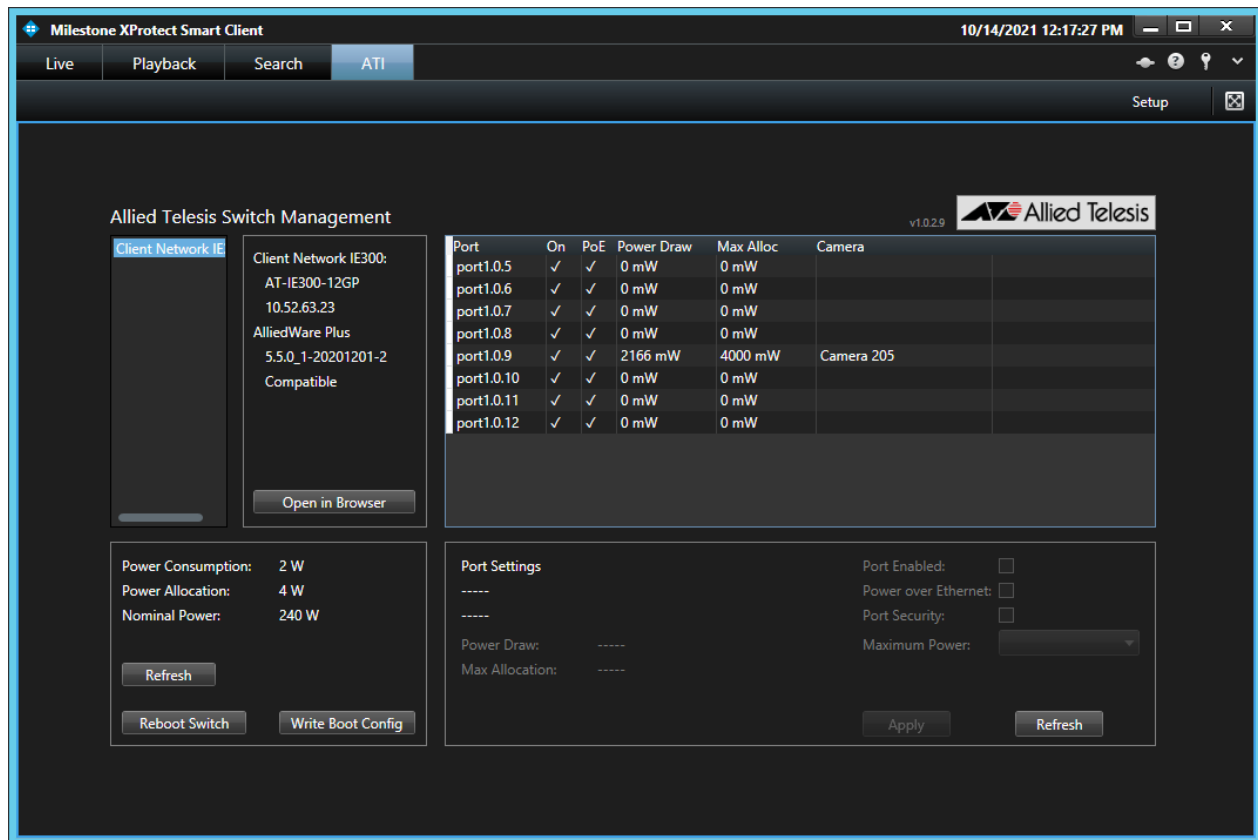


Figure 14. Allied Telesis Switch Management Page

4. Select an ATI switch that you want to manage from the top left panel.

The columns in the port table are defined in Table 3.

Table 3. Port Table

Item Name	Description
Port	Displays a port name.
On	Indicates whether the port is administratively enabled for data transmission.
PoE	Indicates whether Power over Ethernet (PoE) is enabled or disabled on the port.
Power Draw	Displays the amount of power in mW is currently being drawn by the device connected to the port.

Table 3. Port Table (Continued)

Item Name	Description
Max Alloc	Indicates the maximum amount of power that the switch can allocate to the port. This value can be based on the maximum power that is statically assigned to the port, or the power class of the device.
Camera	Indicates the camera that is associated to the port.

Modifying the Port Settings on the ATI Tab

To disable and re-enable a switch port, the PoE, the port security, or modify the maximum power setting:

1. Ensure that the cameras and Allied Telesis switch are cabled and powered on.
2. Start the Milestone XProtect Smart Client and log in.
3. Click **ATI** on the tab bar as shown in Figure 13 on page 19.

The Allied Telesis Switch Management page is displayed. See Figure 14 on page 20.

4. Select the ATI switch that you want to manage from the top left panel.
5. Click the port that you want to modify its settings.

The settings of the selected port are displayed in the Port Settings panel. See Figure 15 on page 22.

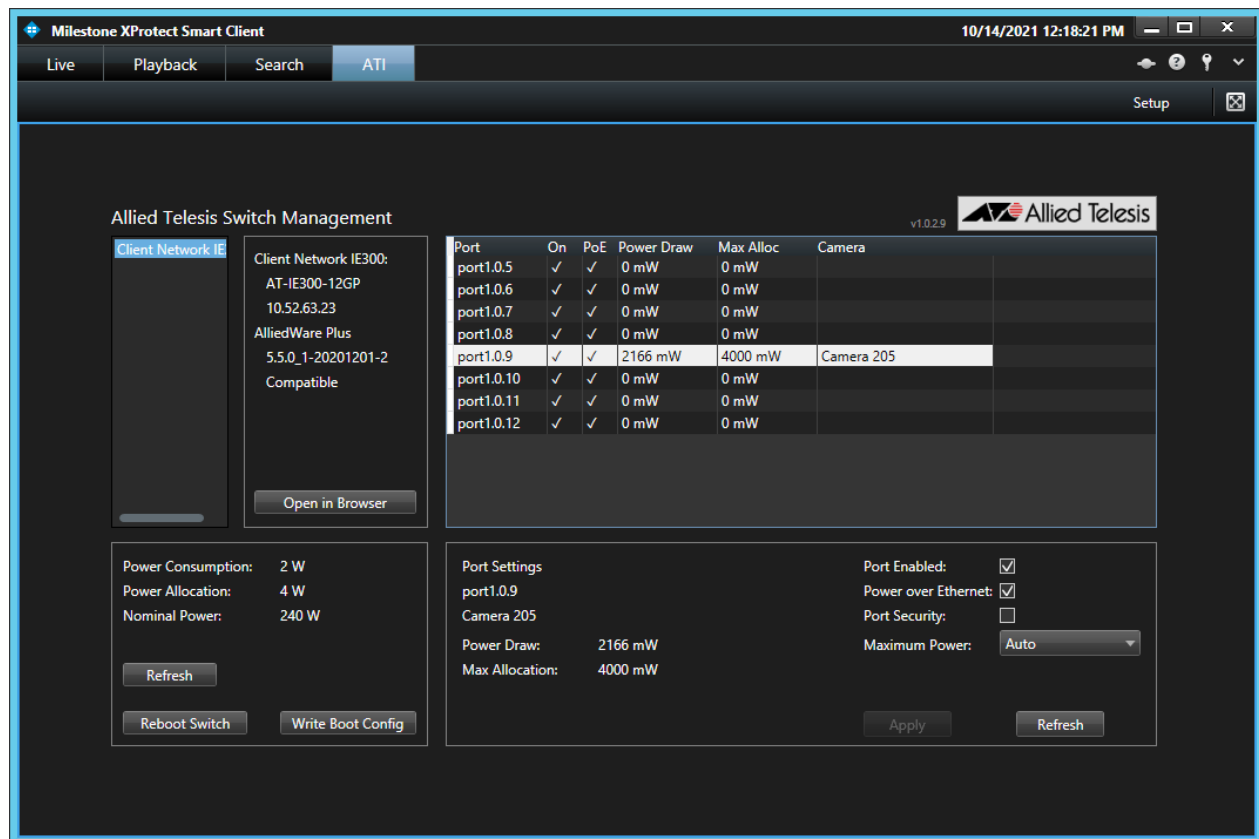


Figure 15. Port Settings

6. Modify the settings by referring to Table 4.

Table 4. Modifying Port Settings

Item Name	Description
Port Enabled	Use the checkbox to administratively enable or disable the port.
Power over Ethernet	Use the checkbox to enable or disable Power over Ethernet on the port.
Port Security	Use the checkbox to enable or disable the port security. The port with port security enabled restricts access only from a single device.
Maximum Power	Select Auto to assign the maximum power draw defined by the device's power class. Indicates the maximum amount of power that the switch can allocate to the port. This value is based on the maximum power that is statically assigned to the port or the power class of the device.

Note

The item is grayed out and not able to be modified if the current user does not have write access to the switch. The user privilege depends upon the role of the user. To change the role with Milestone XProtect Management Client, see “Defining Roles to User Accounts” on page 18.

7. Click **Apply** to save the changes to Milestone XProtect.
8. Click **Write Boot Config** in the bottom left panel to save the changes to the switch's startup configuration file.

Rebooting the ATI Switch on the ATI Tab

To reboot the ATI switch:

1. Ensure that the cameras and Allied Telesis switch are cabled and powered on.
2. Start the Milestone XProtect Smart Client and log in.
3. Click **ATI** on the tab bar as shown in Figure 13 on page 19.

The Allied Telesis Switch Management page is displayed. See Figure 14 on page 20.

4. Select the ATI switch that you want to manage from the top left panel.
5. Click **Reboot Switch** as show in Figure 16 on page 23.

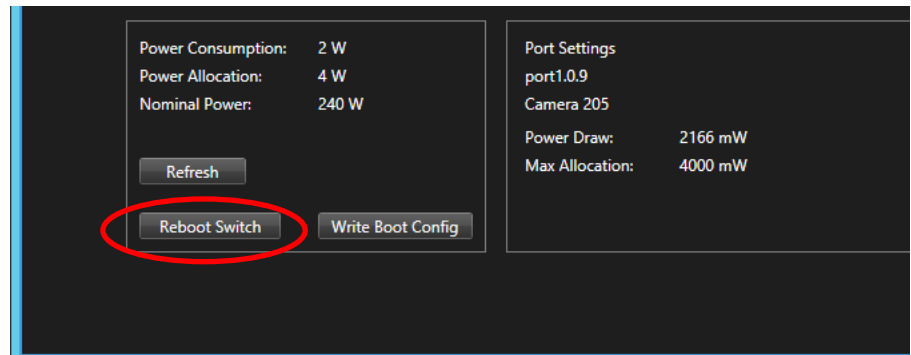


Figure 16. Reboot Switch Button

The switch reboots.

Accessing and Managing a Switch Port on the Live Tab

To assess a switch port by selecting the camera and enable/disable the port or PoE on the port:

1. Ensure that the Allied Telesis switch are cabled and powered on.
2. Start the Milestone XProtect Smart Client and log in.
3. Click **Live** on the tab bar as shown in Figure 17.

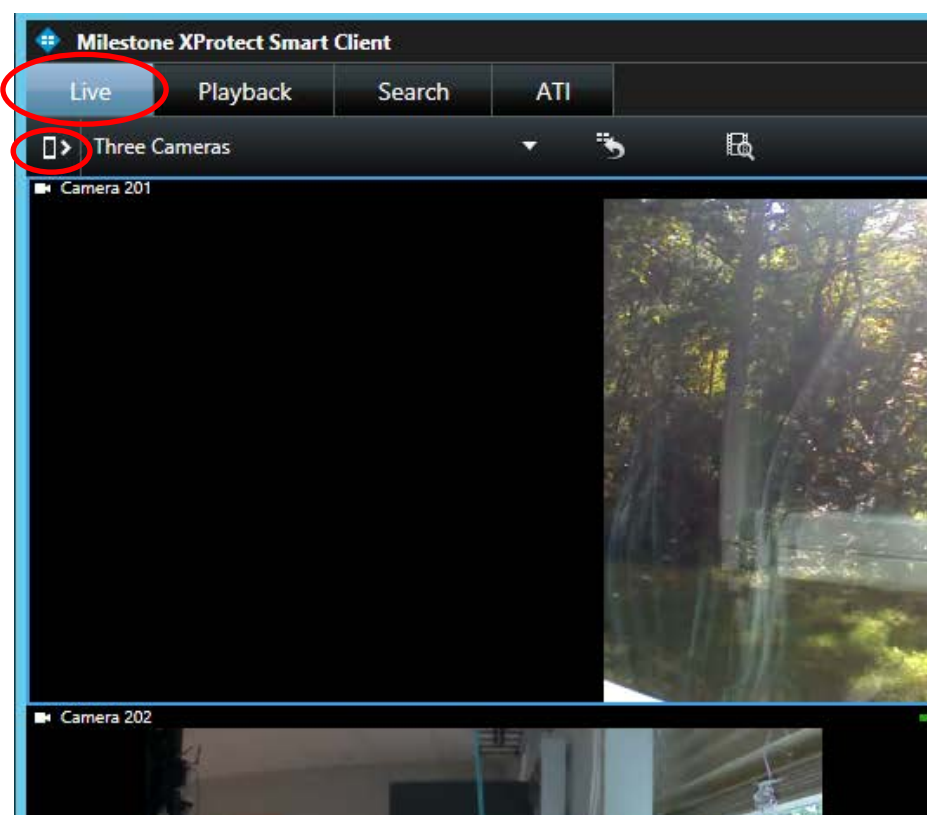


Figure 17. Live Tab

4. If the left side panel is not visible, click Show Pane () below the tab bar as shown in Figure 17 on page 24.
5. Click and highlight the view of the camera that you want to access its switch port.

The Allied Telesis Switch Management panel at the bottom left displays the information about the switch and port where the camera is connected. See Figure 18 on page 25.

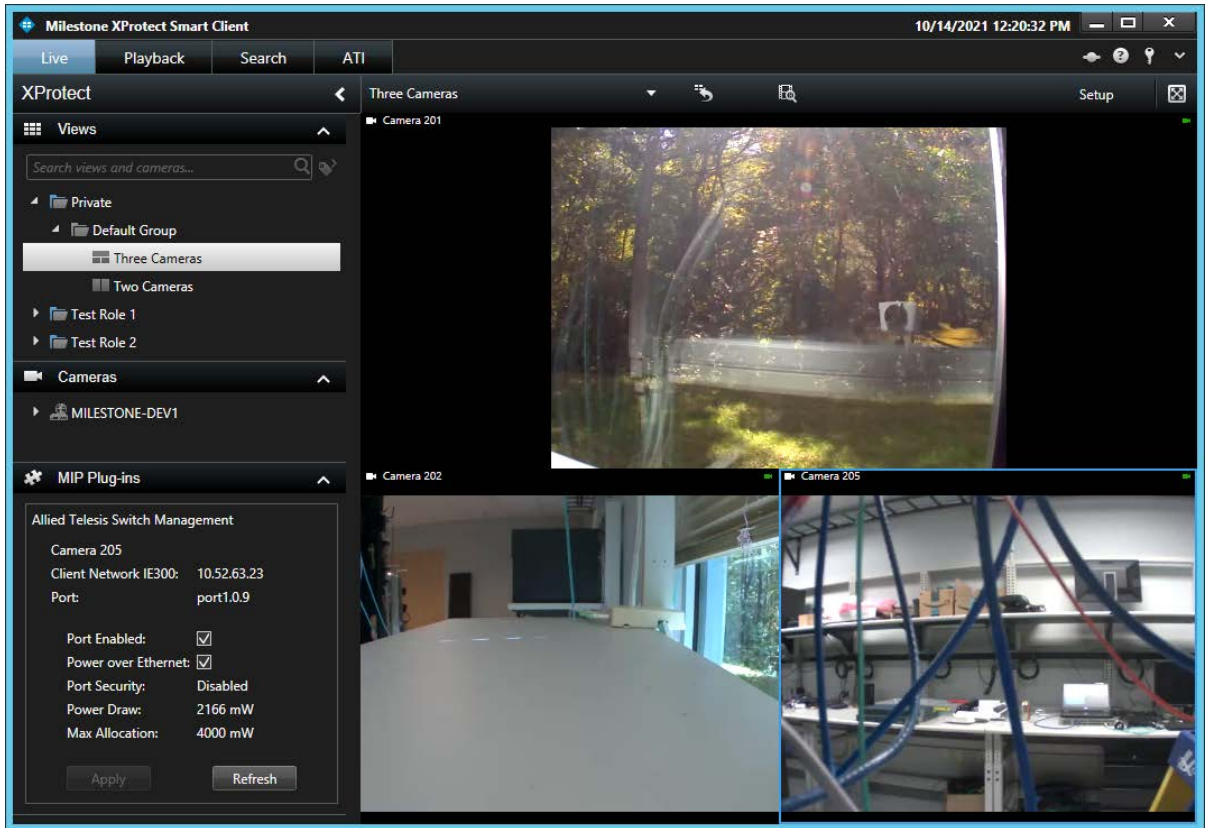


Figure 18. Camera View and Switch Management Panel

6. Use the **Port Enabled** checkbox to enable or disable the port that is associated to the selected camera.
7. Use the Power over Ethernet checkbox to enable or disable PoE on the switch port.
8. Click **Apply** to save the changes to Milestone XProtect.
9. To save the changes to the switch, go to the **ATI** tab > select the switch > click **Write Boot Config**, as shown in Figure 19 on page 26.

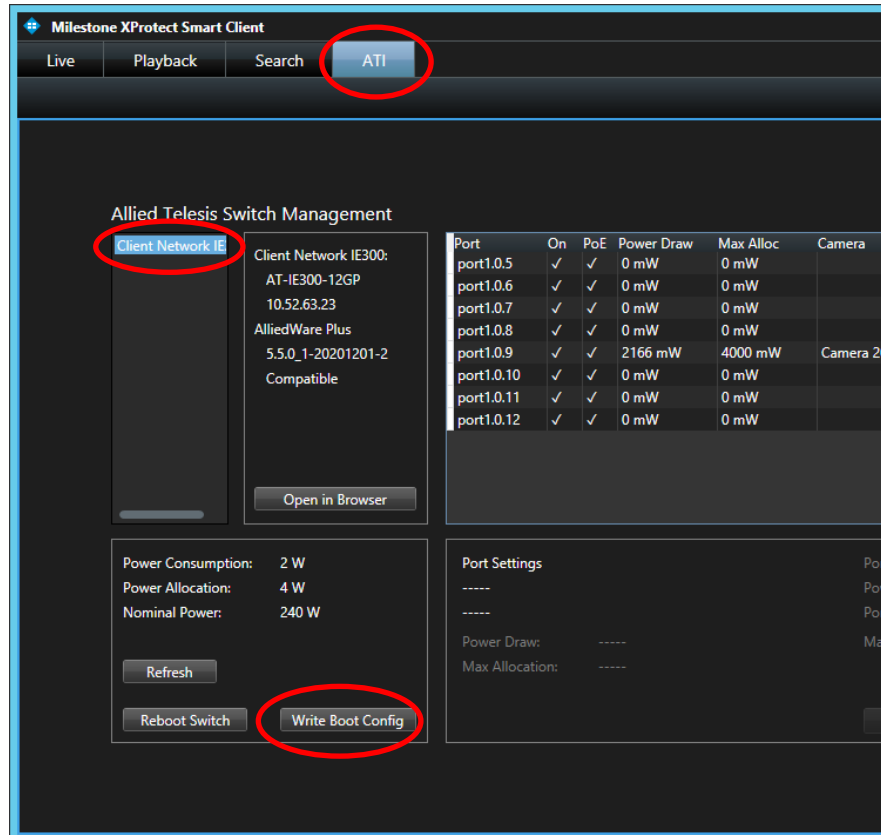


Figure 19. Write Boot Config

The changes are saved in the ATI switch's startup configuration file.

Managing the ATI Switch for Other Settings

To manage the ATI switch's other settings, use the ATI switch's Web User Interface (UI). You can bring up the Web UI from the Milestone XProtect Smart Client.

Note

ATI switch's Web UI supports Google Chrome and Mozilla Firefox. Setting either one of the web browsers as the default browser is recommended.

To start the ATI switch's Web UI:

1. Ensure that the Allied Telesis switch is cabled and powered on.
2. Start the Milestone XProtect Smart Client and log in.
3. Click **ATI** on the tab bar as shown in Figure 13 on page 19.

The Allied Telesis Switch Management page is displayed. See Figure 14 on page 20.

4. Select the ATI switch that you want to manage from the top left panel.
5. Click **Open in Browser** as shown in Figure 20.

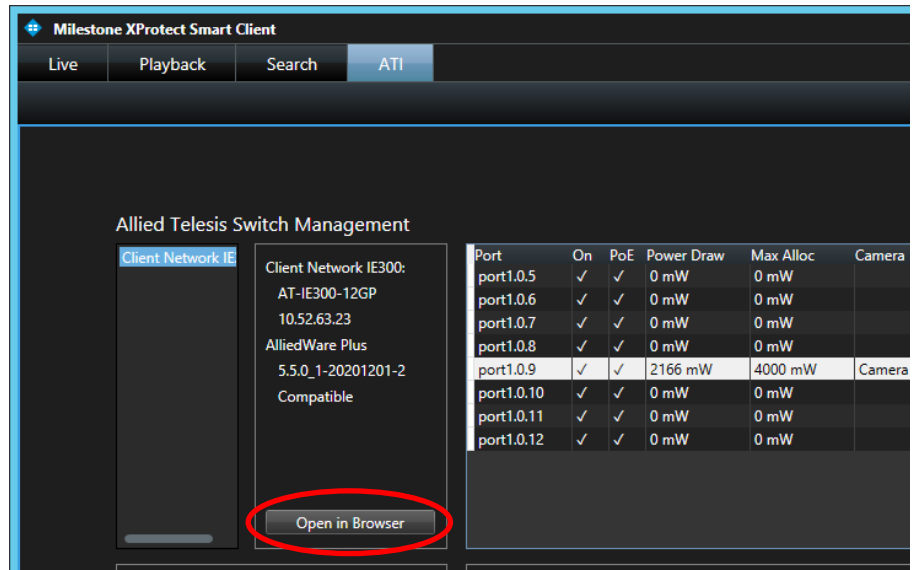


Figure 20. Open in Browser Button

The ATI switch's Web UI appears in a new browser.

6. Manage the ATI switch using the Web UI.