Allied Telesis™

Allied Telesis Milestone Integration Plug-In User Guide

Version 1.0.2.9-r1

AlliedWare Plus™
OPERATING SYSTEM

Introduction

The Allied Telesis Milestone Integration Plug-In is an add-on to the Milestone Video Management System (VMS) that provides convenient access to common port and switch management functions for Power over Ethernet (PoE)-capable AlliedWare Plus switches.

The Milestone VMS is a widely used system for managing video surveillance cameras and recordings. Surveillance cameras are often connected to PoE switches to simplify cabling and maintenance. By integrating AlliedWare Plus switch management functions into the Milestone VMS itself, users can perform tasks such as rebooting cameras and managing port power allocations without having to connect to a separate user interface.

Contents

System Requirements

Hardware Requirements

The Allied Telesis Milestone Integration Plug-In is compatible with the following AlliedWare Plus PoE-capable switches:

- AT-x230-10GP

- AT-x230-18GP

- AT-x230-28GP

- AT-x930-28GPX

- AT-x930-52GPX

- AT-FS980M/9PS

- AT-FS980M/18PS

- AT-FS980M/28PS

- AT-FS980M/52PS

- AT-GS970M/10PS

- AT-GS970M/18PS

- AT-GS970M/28PS

- AT-IE300-12GP

- AT-IE340-12GP

Software Requirements

The AlliedWare Plus switches must be running AlliedWare Plus 5.5.0-1.4 or later.

The Allied Telesis Milestone Integration Plug-In has been tested with the Milestone XProtect 2020 software suite, running on Microsoft Windows. Compatibility with older versions of the Milestone XProtect software is not guaranteed.

It is recommended that the Google Chrome or Mozilla Firefox browser be installed and set as the default browser in order to use the AlliedWare Plus web-based graphical user interface.

Restrictions and Limitations

The Allied Telesis Milestone Integration Plug-In is currently not designed to be used with switches configured in Virtual Chassis Stacking (VCStack) modes.

The Allied Telesis Milestone Integration Plug-In currently does not manage power settings on the "spare" Ethernet lines. These lines (pins 4, 5, 7, and 8) are used in the "Mode-B" and "High-Power" (60W) PoE configurations on certain AlliedWare Plus switches, such as the AT-IE300. The Plug-In should be used to configure switch ports in "Mode-A" configurations.

Network Configuration

The recommended Milestone VMS network configuration includes separate networks for cameras and client machines. This helps provide security (by segregating switch ports on the camera network, which may be physically exposed to potential intruders, from internal management networks) and helps prevent video traffic from the cameras from consuming bandwidth on the client network.
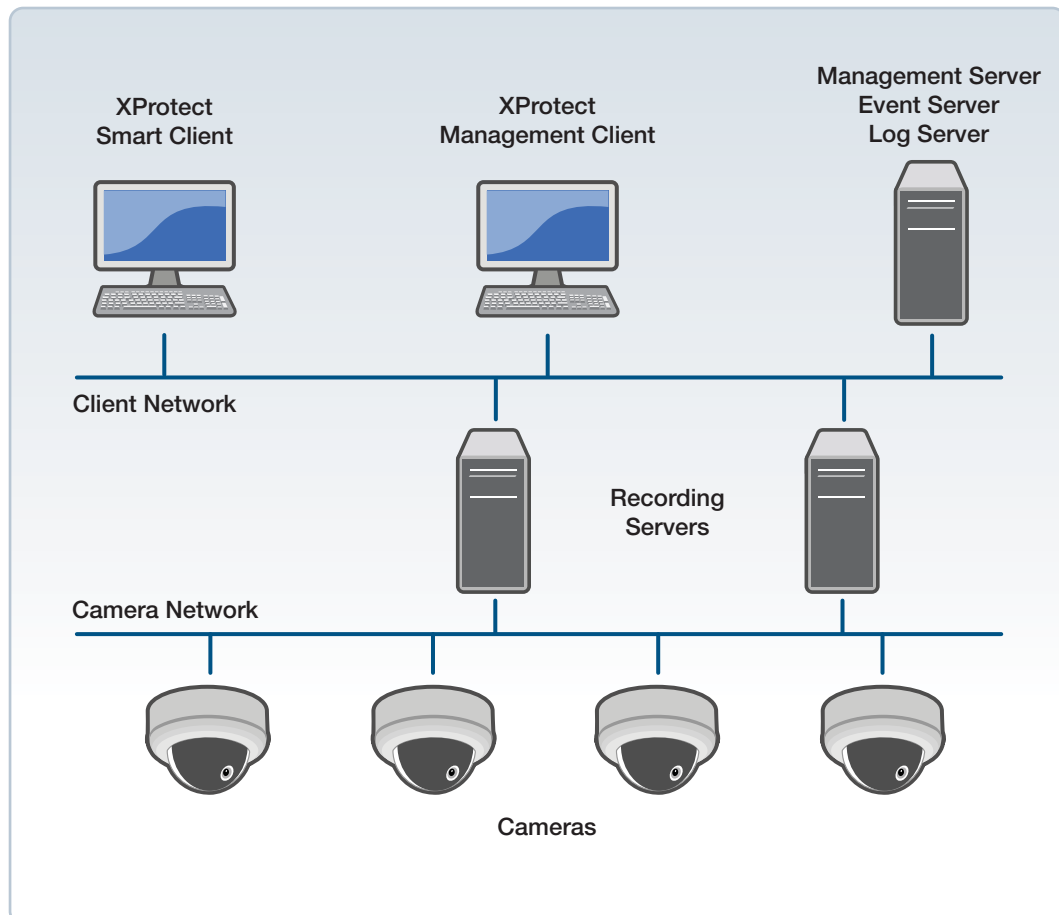
However, when using the Allied Telesis Plug-In to manage Allied Telesis PoE switches that are connected to the camera network, direct network connectivity is required between the switch and the machines that are hosting the XProtect Client software. To preserve network security and performance, it is recommended that separate VLANs be used on the switch for the management interface and the camera ports.
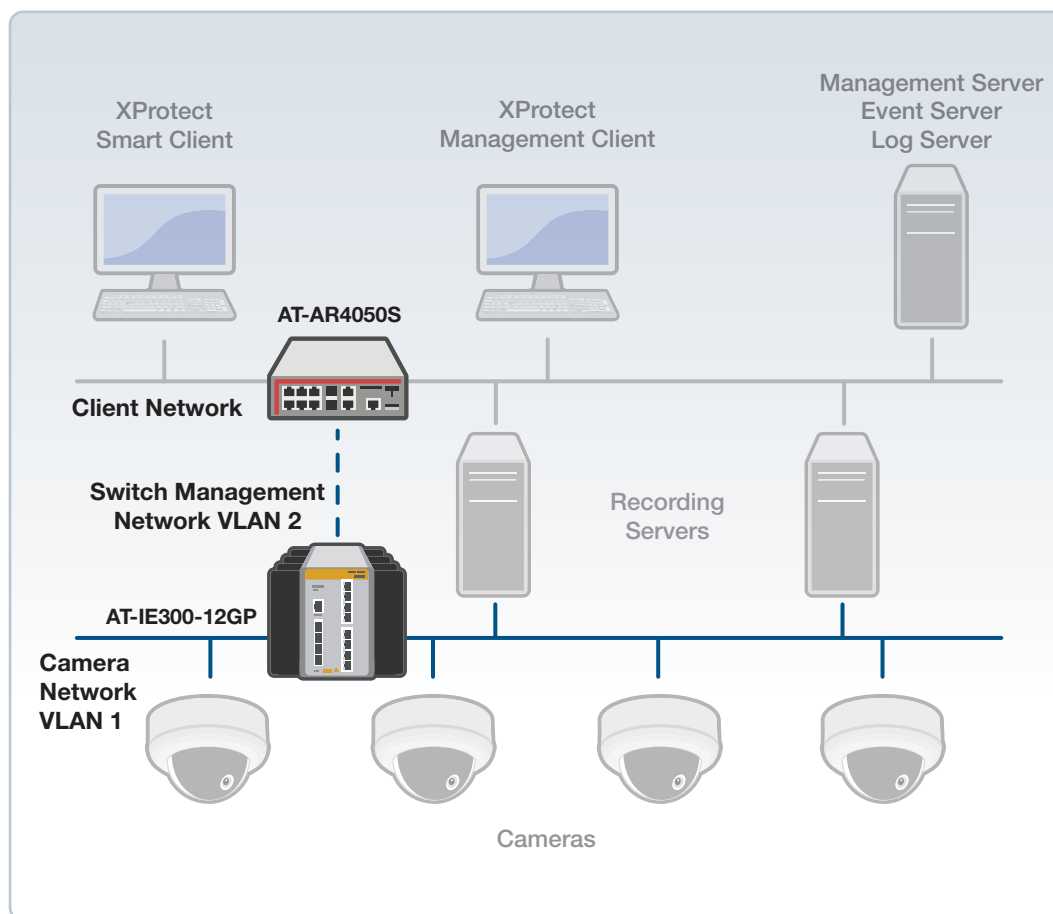
In the example above, the AR4050S UTM Firewall is used on the client network and the IE300-12GP PoE Switch is used on the camera network. If we suppose that port1.0.1 on the IE300 is connected directly to the AR4050S, and the client network is configured for the address range 192.168.15.0/24, the configuration for the IE300-12GP would be something like this:

```
configure terminal
  vlan database
    vlan 2
    exit
  interface port1.0.1
    switchport access vlan 2
    exit
  interface vlan2
    ip address 192.168.15.100/24
    exit
  exit
exit
```

By having the PoE camera ports on a different VLAN than the uplink management interface, the client network remains logically segregated from the camera network. Care should be taken to ensure that the uplink ports on the PoE switch are physically secure from intrusion.

TCP Port Access

If a firewall is configured between the client network and the camera network, the Allied Telesis Milestone Integration Plug-In requires access to these TCP protocol ports:

■ TCP Port 443 (HTTPS protocol)

■ TCP Port 22 (SSH protocol) and/or TCP Port 23 (Telnet protocol)

Software Installation

Running the Installer

Before installing the Allied Telesis Milestone Integration Plug-In, close the Milestone XProtect Smart Client and Milestone XProtect Management Client, if they are running.
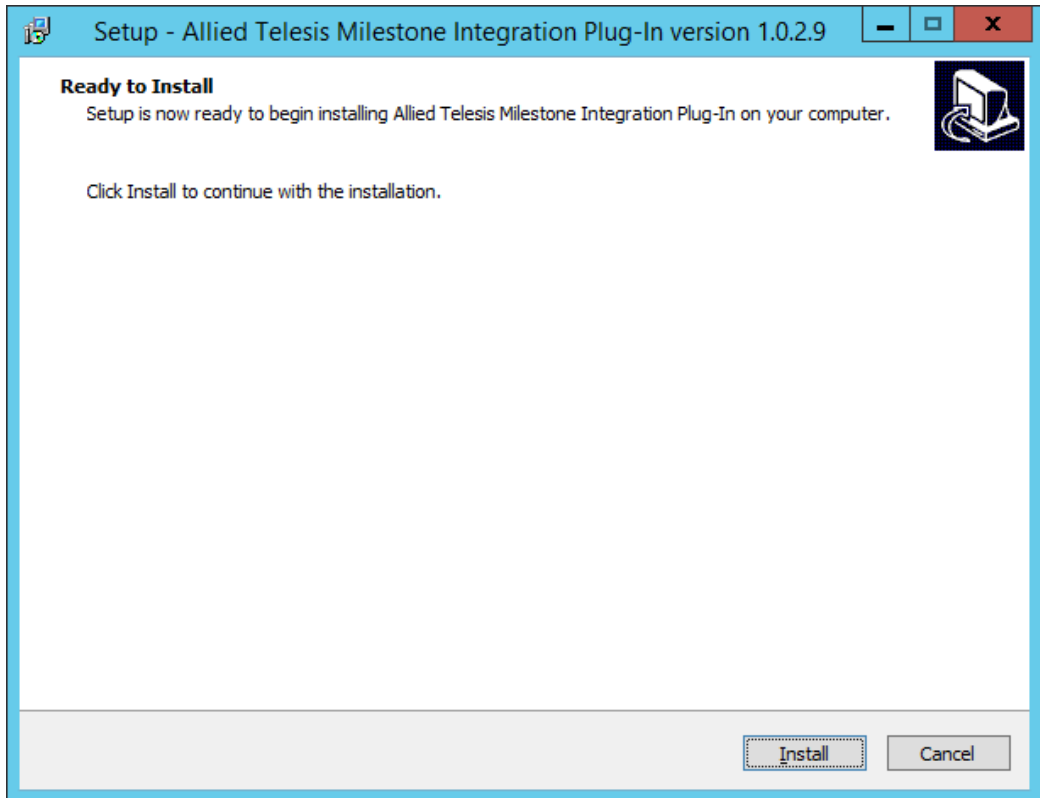
Open the application installer executable. (The version number may be different than the example below).
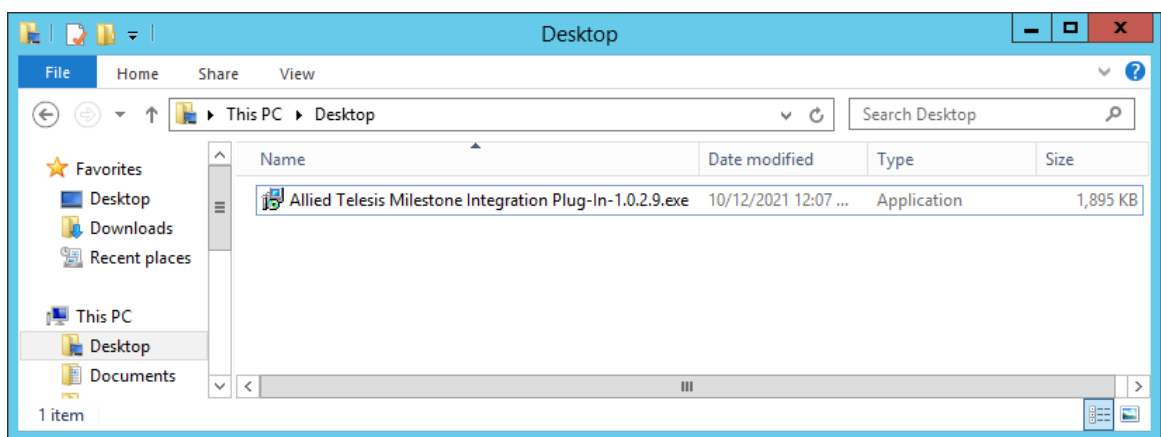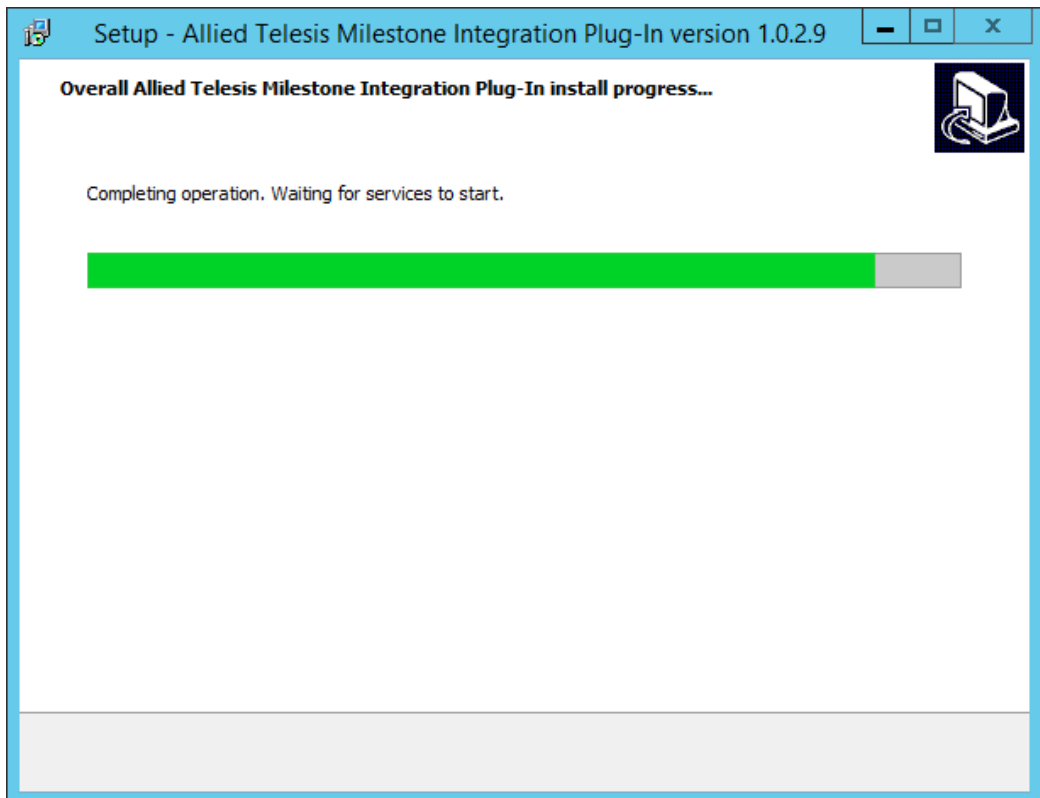

Allow the application to proceed by clicking "Yes" in the User Account Control dialog:
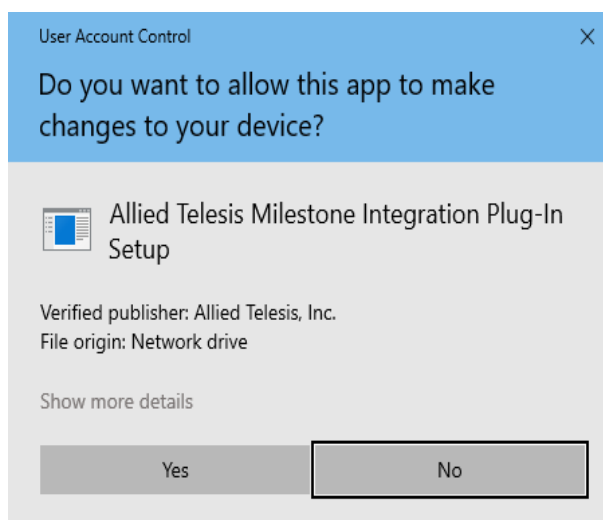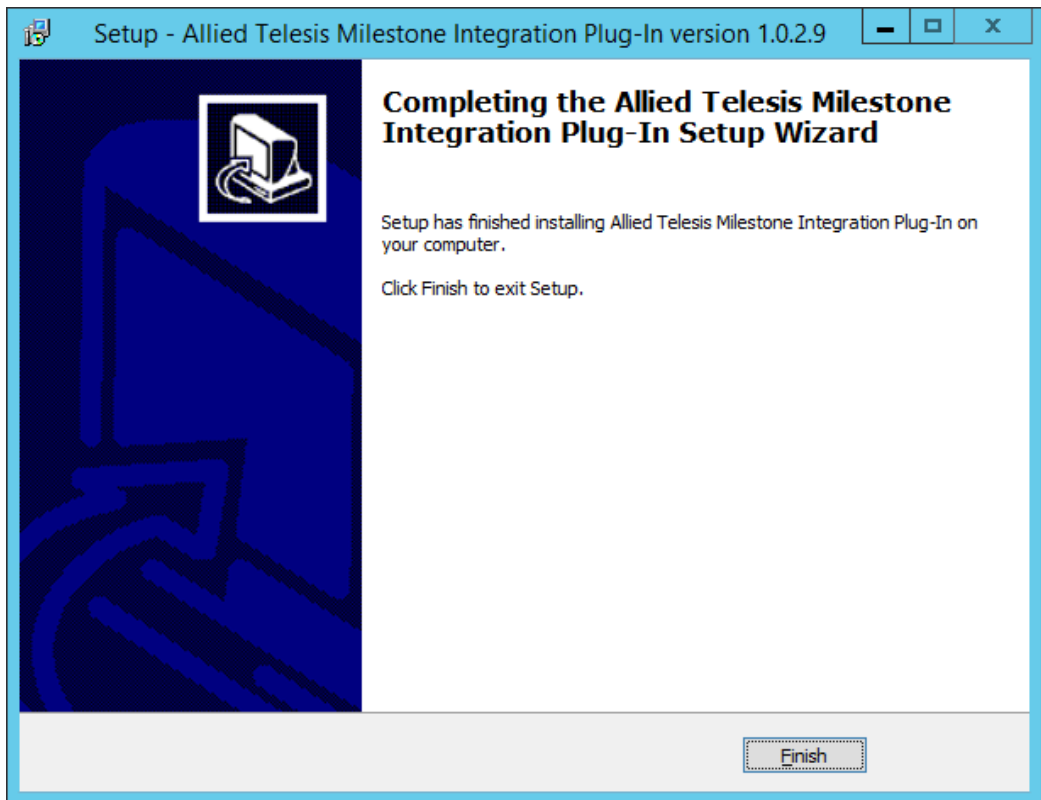

Click the "Install" button to initiate the installation.

The installer will attempt to stop and restart Milestone background services as a part of the installation process:

Click "Finish" to complete the installation.

## Troubleshooting the Installation Process

If the installation fails, make sure that the Milestone XProtect Smart Client and Milestone XProtect Management Client are not running. Also make sure that there are no file explorer windows open within the Milestone folder under the Program Files folder of your hard drive.

You may also need to manually stop the Milestone Event Server service. This can be done by right-clicking the toolbar icon and selecting "Stop Event Server service":
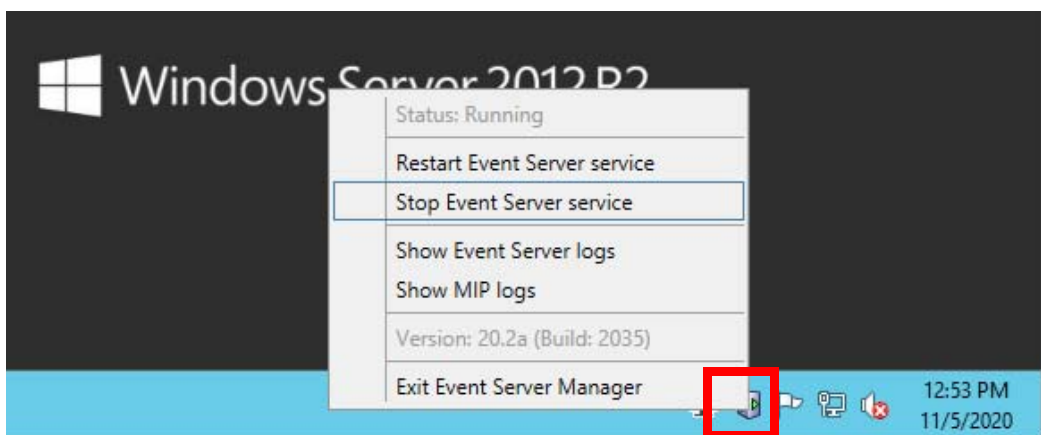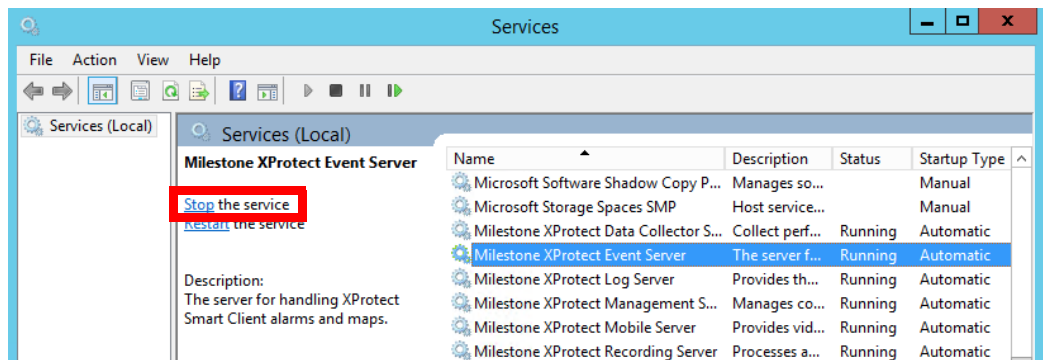
It may take some time for the service to terminate; the icon will show a red triangle when the service is fully stopped.

Alternatively, you can stop the service using Microsoft Windows' Services utility:
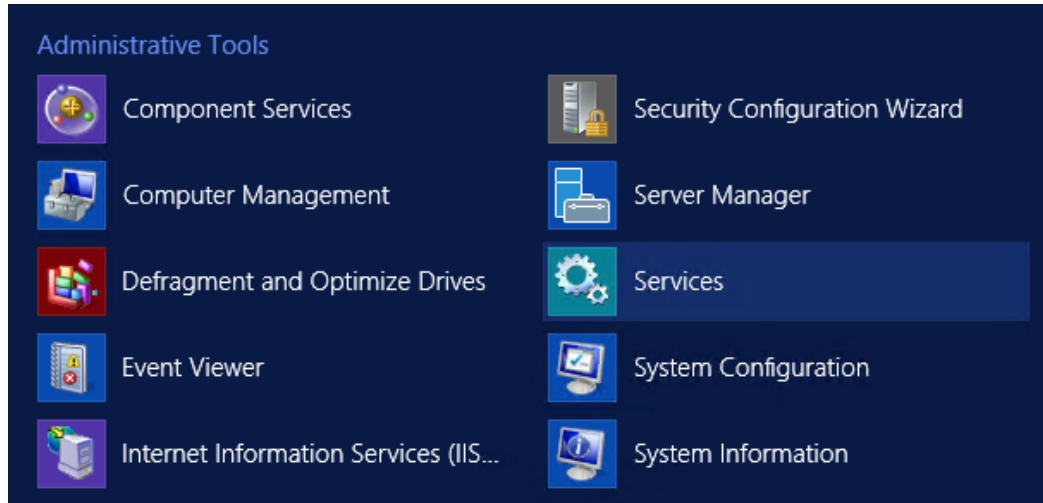
Find the Milestone XProtect Event Server service, and click "Stop the service".

Uninstallation

To uninstall the plug-in, go to the "Programs and Features" section of the Windows Control Panel, select "Allied Telesis Milestone Integration Plug-In", and click "Uninstall or change a program." Follow the prompts to complete uninstallation.
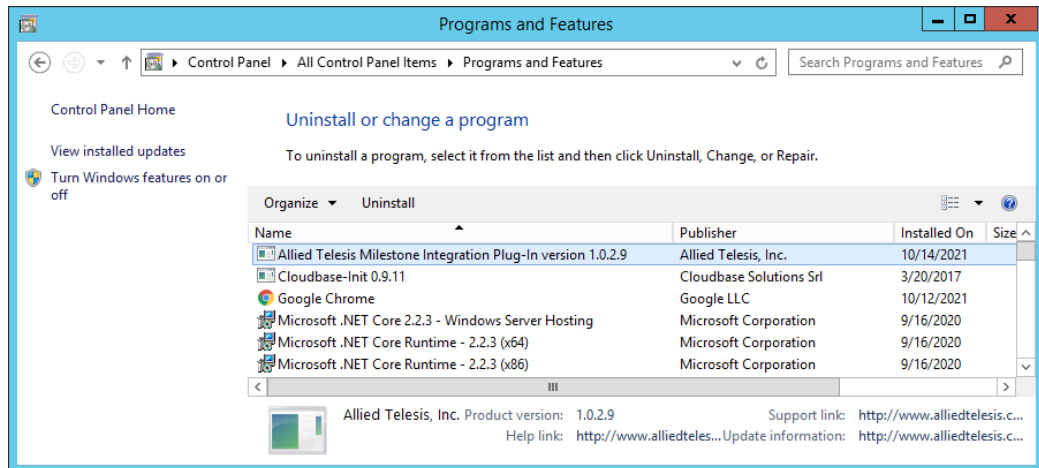
Note that any configuration in the Milestone application associated with the plug-in will **not** be removed when the plug-in is uninstalled. It is recommended that any Allied Telesis switch-related configuration be removed using the Milestone XProtect Management Client prior to uninstallation of the plug-in.

Usage

Prerequisites

To use the Allied Telesis Milestone Integration Plug-In, the cameras and Allied Telesis switch devices should be cabled and powered on. Use the AlliedWare Plus command-line or web-based user interface to configure basic settings such as the switch's management IP interface and administrative user credentials. If necessary, upgrade the AlliedWare Plus software on the switch.

For more information on setting up an AlliedWare Plus switch, see the following guides:

■ Getting Started with the AlliedWare Plus Command Line Interface

■ a list of all AlliedWare Plus Feature Overview and Configuration Guides

Configure Cameras

To install cameras, use the hardware installation wizard in the **Milestone XProtect Management Client**. Right-click on a previously configured recording server and select "Add Hardware". The system will prompt you through the process of discovering and configuring cameras into the system.
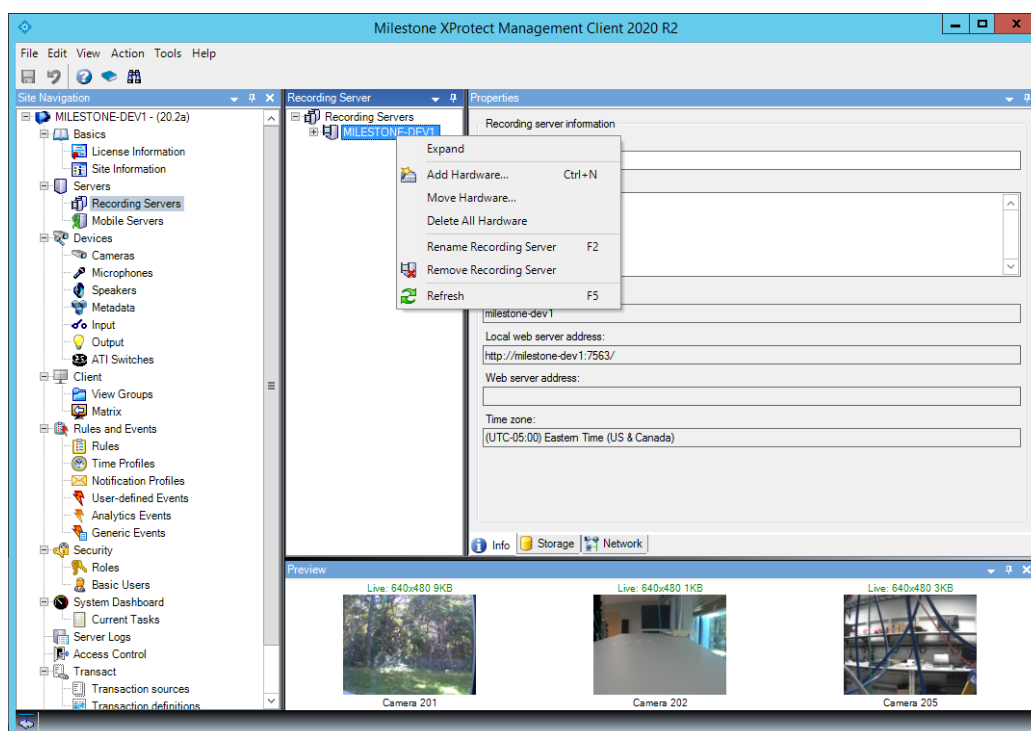
Note: full documentation for the Milestone XProtect software suite can be found at https://www.milestonesys.com/support/self-service-and-support/manuals-and-guides/.

Configure ATI Switches

To add a switch to the configuration, right-click on the "ATI Switches" item under the "Devices" group in the left navigation tree of the **Milestone XProtect Management Client**, and select "Add New".
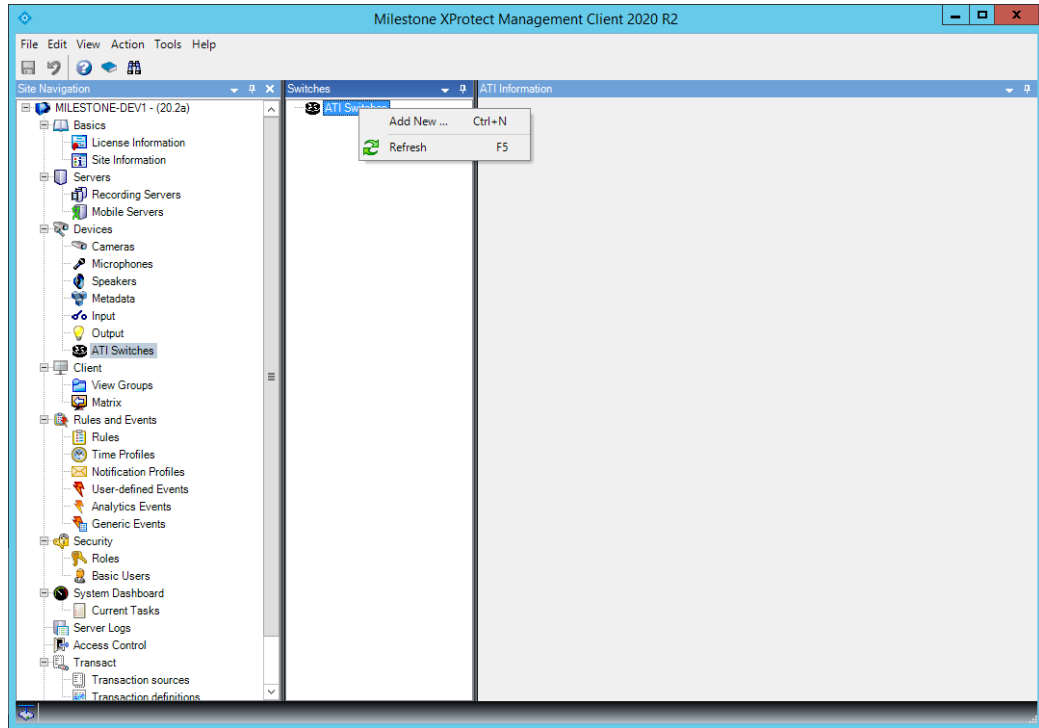
Enter a name for the switch and click "OK".
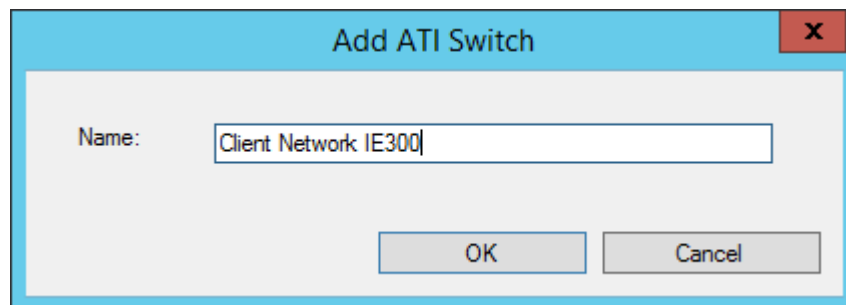
A configuration page for the switch will be shown.

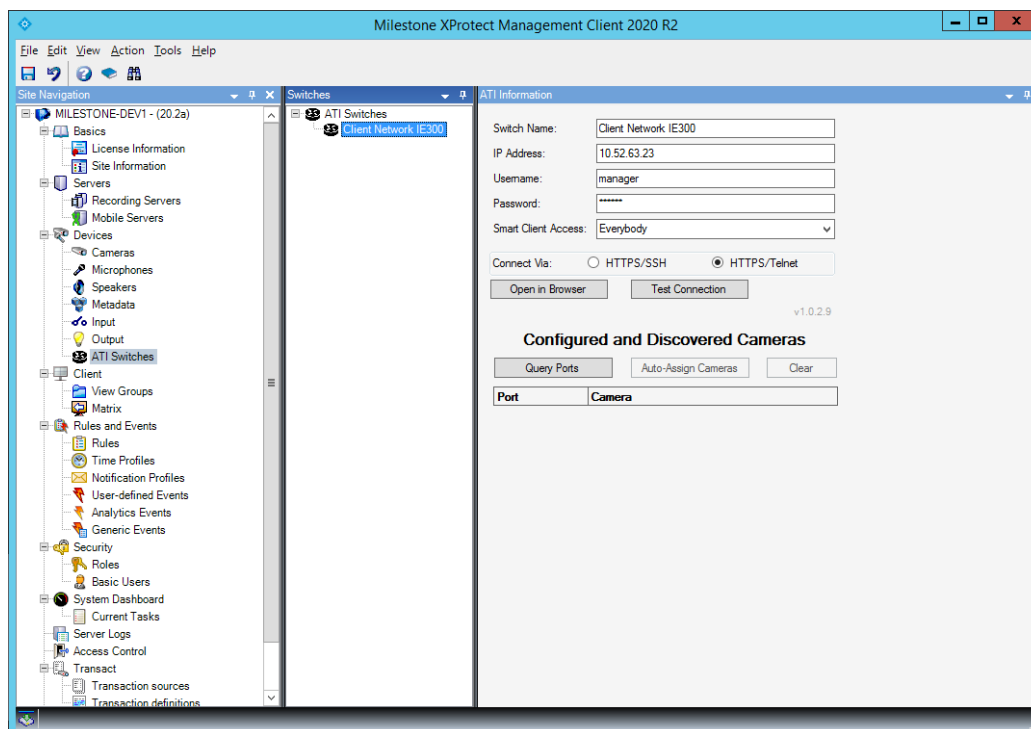Enter the following mandatory information:

- **IP Address**: Enter the management IPv4[1] address of the switch. This address must be reachable from the machines that are hosting the Milestone XProtect Smart Client and the Milestone XProtect Management Client.

- **Username**: Enter the username of an account that has access to the switch. The selected user must have configuration privileges (privilege level 15) on the switch to perform administrative actions. Users with privilege level 7 or higher can view the switch configuration but may not make changes.

- **Password**: Enter the password associated with the specified user account. The password is internally encrypted in the saved configuration and is not displayed on-screen, for security.

- **Smart Client Access**: Select which users can have write access to the switch via the **Milestone XProtect Smart Client**. Access can be restricted by roles, which are assigned using the "Roles" tool under the "Security" section in the left navigation menu. For more information about roles, see Milestone's documentation.

- **Connect Via**: Select either HTTPS/SSH or HTTPS/Telnet. Certain operations require the plug-in to connect to the switch using either SSH or Telnet internally. Telnet access is the default. To use SSH for improved security, the SSH service must be enabled on the switch, and the specified user account must be configured for SSH access. If the specified service (either SSH or Telnet) is not enabled on the switch, the plug-in will provide the option of enabling the service automatically. Note that this will cause the current switch configuration to be written to the switch's flash file system as the default boot configuration.

---

1. IPv6 is currently not supported by the plug-in.

Once these parameters have been entered, it is recommended that you press the "Test Connection" button to verify that the settings are correct. (If an incorrect password has been entered, attempting to use the plug-in could cause the specified user to be temporarily locked out of the switch due to too many incorrect password attempts.) If an error occurs with "Test Connection", verify that network connectivity to the switch exists and all the parameters have been entered correctly.

If "Test Connection" succeeds, save the configuration using the save icon at the upper left, or type Ctrl-S.

Associate Cameras to ATI Switch Ports

To provide more convenient management of switch ports, the **Milestone XProtect Management Client** may be used to associate cameras to switch ports. If the switches and cameras are powered on and connected, this association can be done easily using the Allied Telesis Milestone Integration Plug-In. Click the "Query Ports" button.
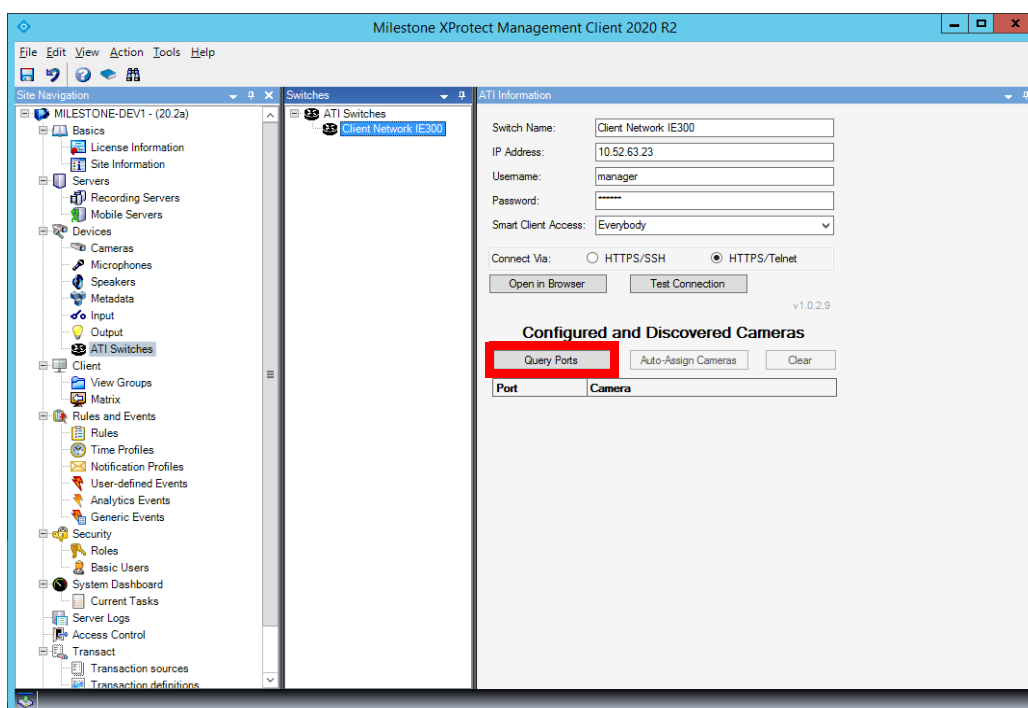
The plug-in will query the switch for its list of ports and determine if any cameras have been discovered on those ports. When the port list appears, click "Auto-Assign Cameras" to automatically associate any discovered cameras to their corresponding ports. Alternatively, use the selection menus next to each port to choose a camera to associate. Once the desired camera associations have been made, save the configuration using the save icon at the upper left, or type Ctrl-S.
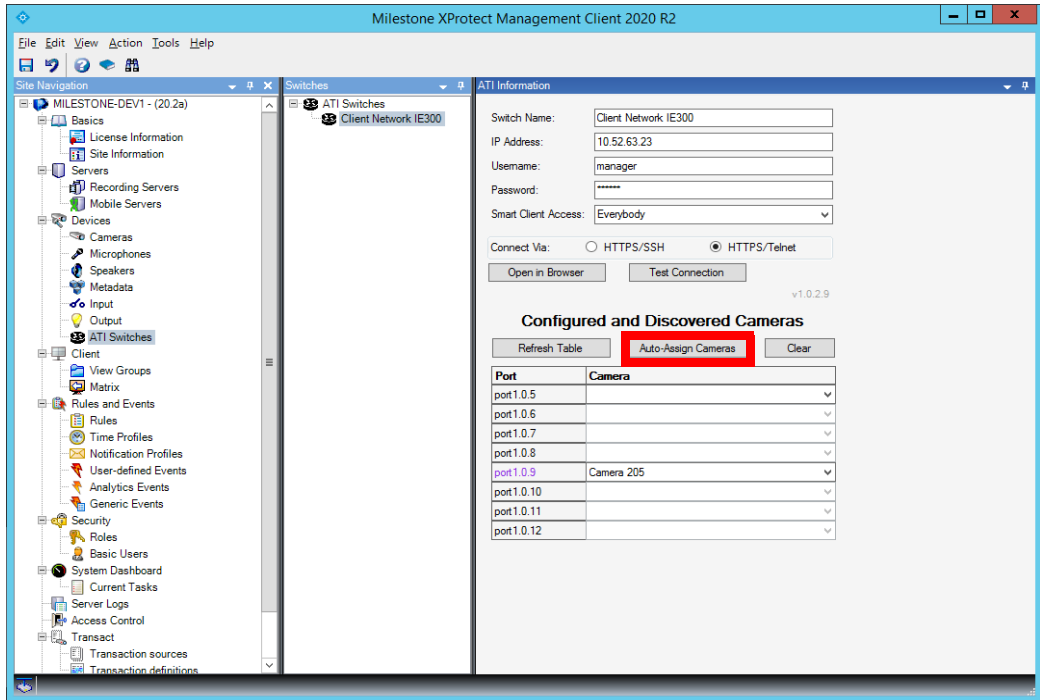
Note that cameras that were previously to assigned to ports on other switches cannot be associated to the ports using this form. Cameras that have not been discovered by the switch are also unavailable for association. If you would like to bypass the automatic camera discovery and assignment process, an alternative mechanism exists. Select the camera you would like to associate under the "Cameras" item in the "Devices" group from the left navigation tree. Click the "ATI" tab in the row of tabs at the bottom of the "Properties" panel. (If the "ATI" tab is not shown, use the right-arrow at the bottom right of the panel to scroll the list of tabs.)
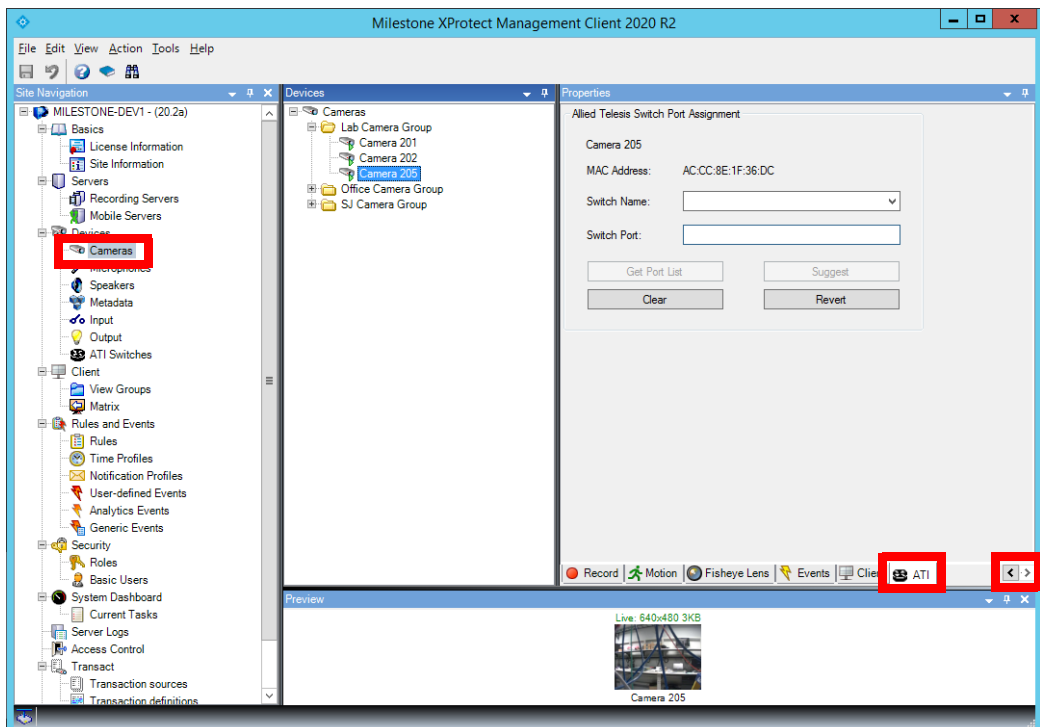
In the plug-in panel, select a switch to associate to the camera under the "Switch Name" drop-down menu. (You may also type the name of the switch into the box, in case the desired switch has not yet been configured.)

You can type the name of the port to which the camera is to be associated in the "Switch Port" field. If the switch is powered on and connected, you can click the "Get Port List" button to retrieve a list of ports from the switch. That makes the field into a drop-down menu from which you can select from a list of available ports. In addition, if the camera has been discovered on one of the ports in the list, the "Suggest" button may be used to choose that port automatically.
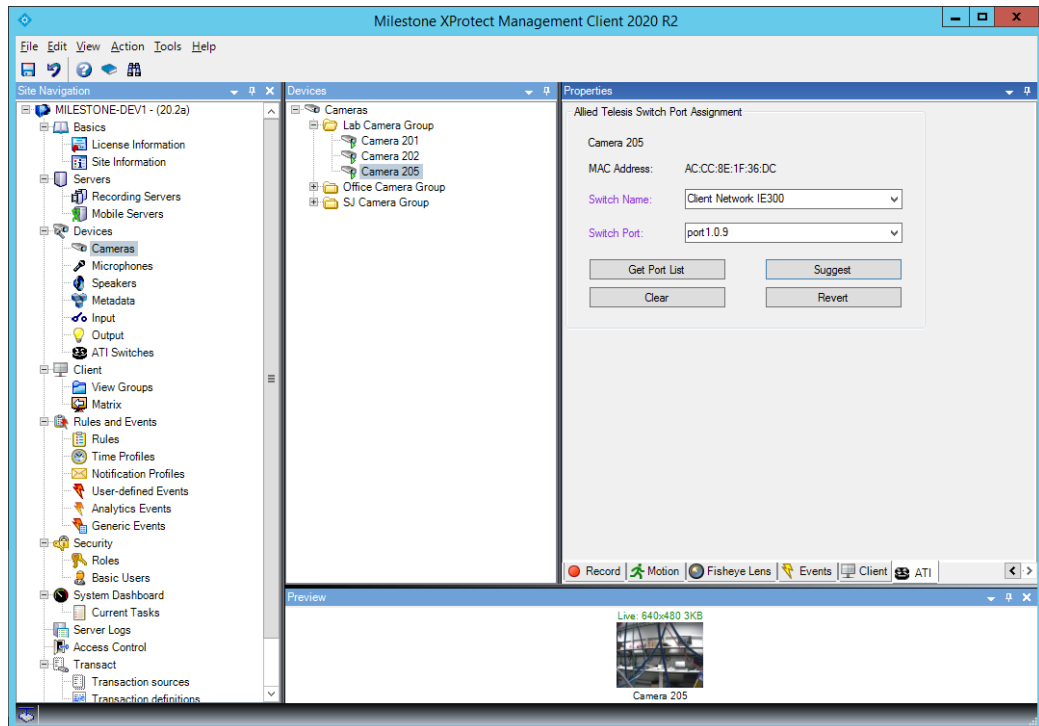
Once the desired camera association has been made, save the configuration using the save icon at the upper left, or type Ctrl-S.

Managing Switch Data and Power Settings

Once switches and cameras have been configured, the **Milestone XProtect Smart Client** can be used to manage settings easily and conveniently for the Allied Telesis switches and their ports. In the Smart Client, select the "ATI" tab from the tab bar at the top of the window. Select a switch to manage from the list at the left side of the window.
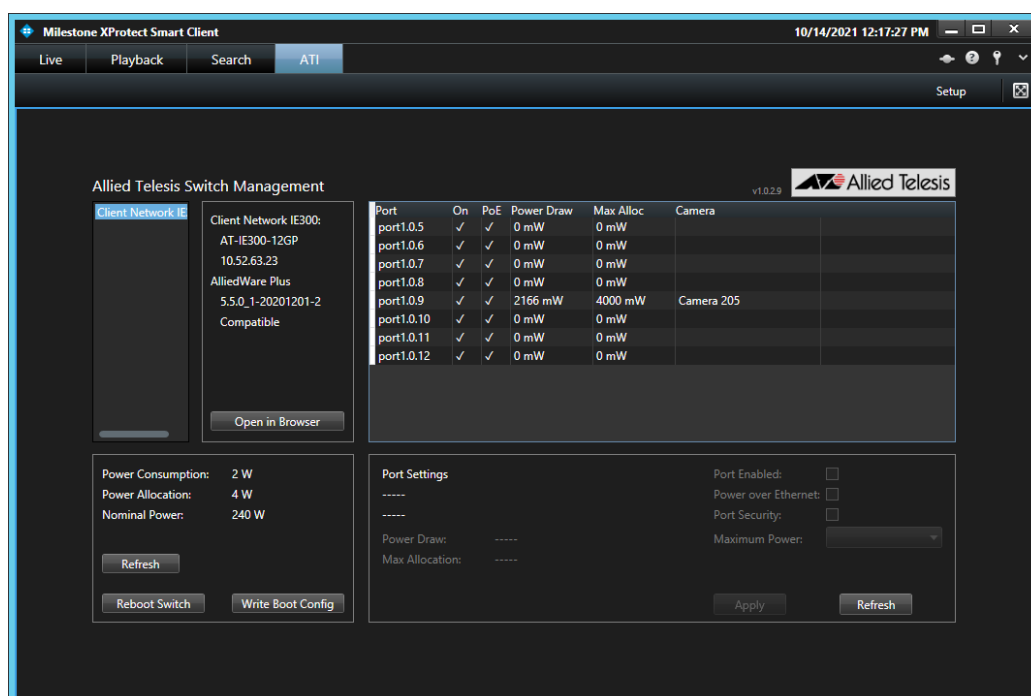
The plug-in will display information about the switch, including the hardware model and the currently running software release. It will also show a list of ports in a table at the upper right, with a summary of status information:

- The **Port** column shows the name of the port.

- The **On** column indicates whether the port is administratively enabled for data transmission.

- The **PoE** column indicates whether Power over Ethernet is being supplied on the port.

- The **Power Draw** column indicates how much power is currently being drawn by the device connected to the port.

- The **Max Alloc** column indicates the maximum amount of power the switch will allocate to the port. This may be based on a static maximum that has been assigned, or the power class of the device.

- The **Camera** column indicates which camera is associated with the port.

To modify settings for a port, select the port from the table by clicking on it. Information about the port will appear in the panel at the lower right.
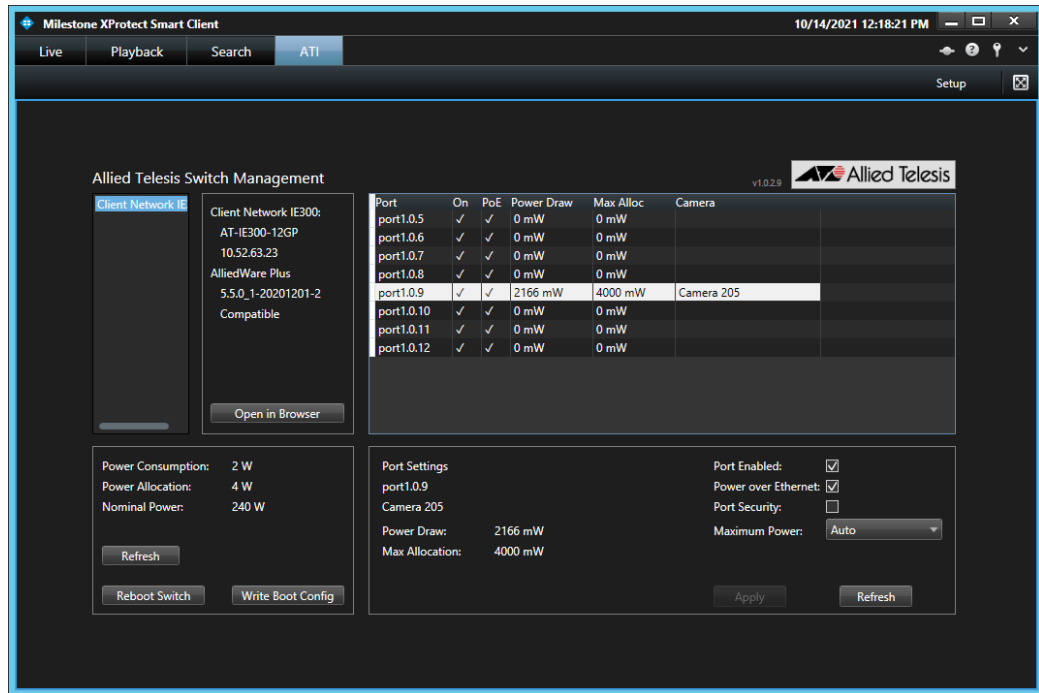
In that panel, port settings may be changed, including:

- **Port Enabled**: administratively enable or disable the port for data transmission.

- **Power over Ethernet**: enable or disable Power over Ethernet on the port.

- **Port Security**: enable port security, which restricts access to the port to a single device.

- **Maximum Power**: define the maximum amount of power that devices on the port can draw. Select "Auto" to have the maximum power draw defined by the device's power class. Note that "Auto" is recommended for Allied Telesis switches that are capable of dynamic power allocation.

Note that the controls will be disabled (greyed out) if the current user does not have write access to the switch, as assigned in the configuration in the **Milestone XProtect Management Client**.

After changing port settings, select "Apply" to apply the changes, or "Cancel" to undo them. Then, to write the changes to the switch's boot configuration (so that they will be persist after a switch reboot), click the "Write Boot Config" button in the panel at the lower left. The button will be highlighted after an "Apply" operation to remind you that this option is available.

Other Switch Operations

To reboot the switch, click the "Reboot Switch" button. This may be done to help recover a switch that is not performing properly, or to revert the switch's configuration to its last saved boot configuration.

To perform other actions on the switch, click the "Open in Browser" button. This will bring up the switch's built-in graphical user interface in your default web browser. Note that Internet Explorer is not supported by the web-based user interface; it is recommended that you select Google Chrome or Mozilla Firefox as your default browser.

Routine Camera Administration and Recovery

Users who are monitoring video using the "Live" tab of the **Milestone XProtect Smart Client** can use a convenient interface to administratively disable a port associated with a camera or disable power to the port. For example, a security officer may want to temporarily disable the port to stop video from being recorded; or, the officer may want to remove and then reapply power to the port to recover a camera that is not responding.

In the "Live" tab of the Smart Client, if the side panel at the left is not visible, click the "Show Pane" button in the upper left corner of the screen, immediately below the tab bar.
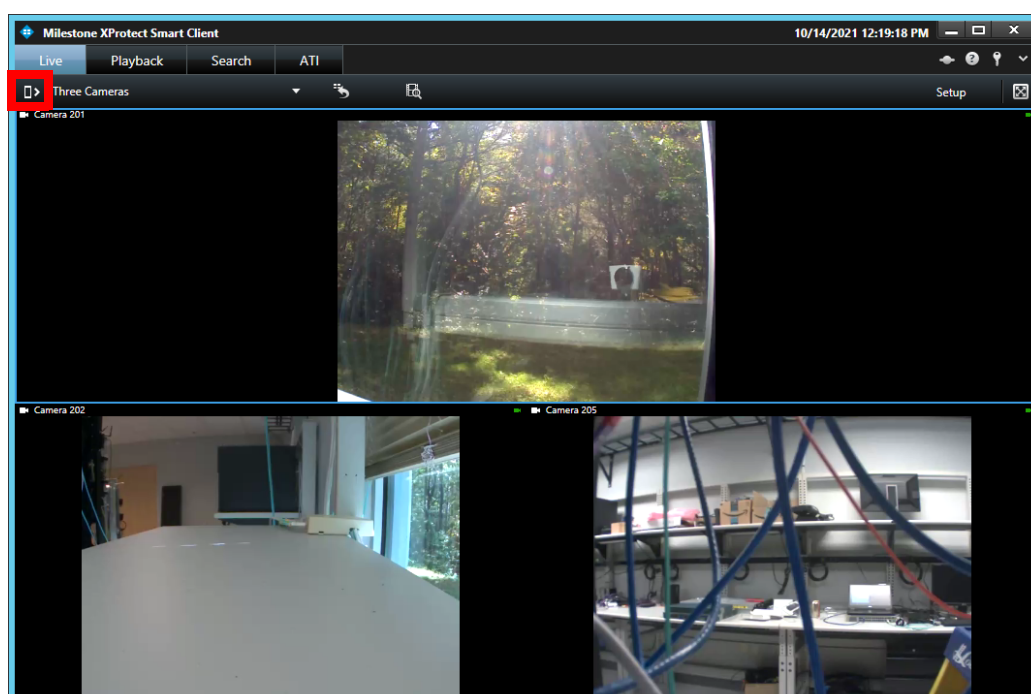
The Allied Telesis Milestone Integration Plug-In will be available under the "MIP Plug-Ins" section of the left panel. When a camera window is selected, and the camera has been associated with an Allied Telesis switch and port, information about that switch and port will be shown in the plug-in panel.
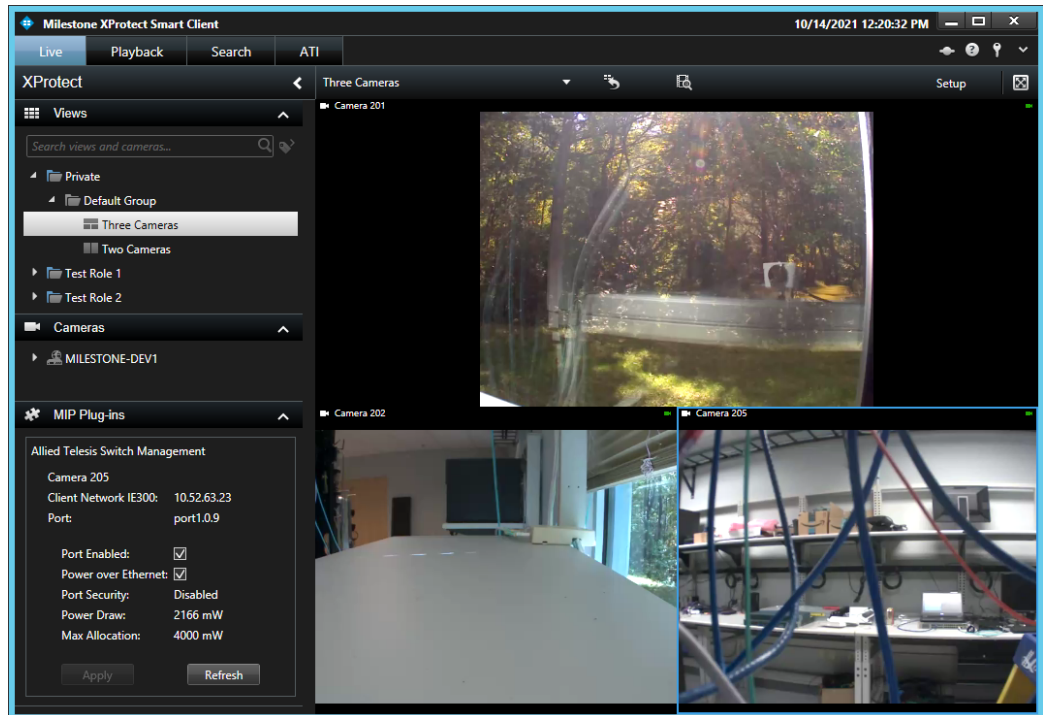
To administratively enable or disable the port, select or de-select the "Port Enabled" checkbox. To supply or remove power to the camera from the port, select or de-select the "Power over Ethernet" checkbox. Click "Apply" to apply any changes. Note that the controls will be disabled (greyed out) if the current user does not have write access to the switch, as assigned in the configuration in the **Milestone XProtect Management Client**.
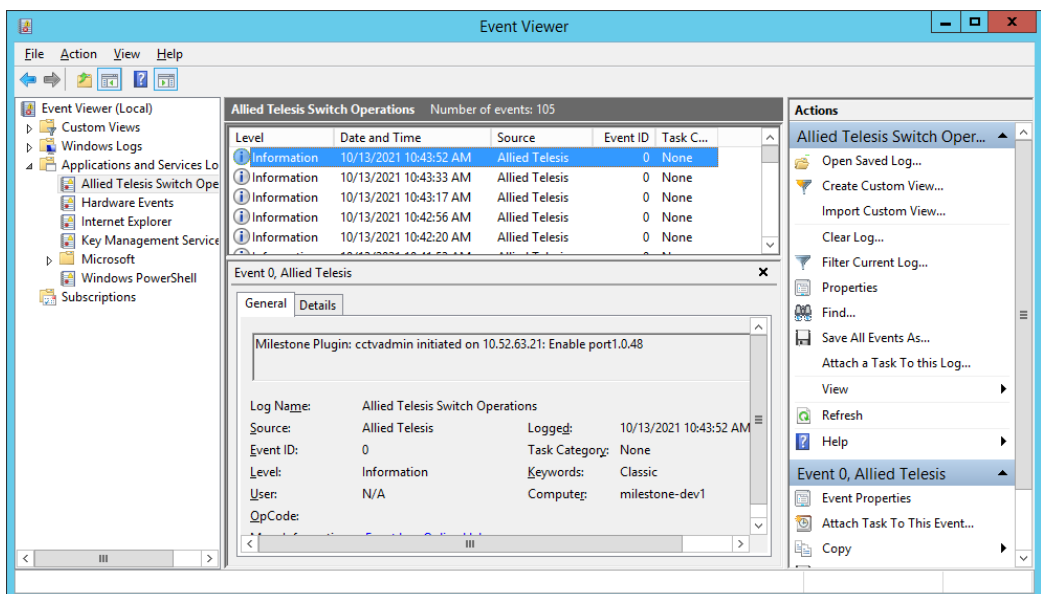
Any changes made here will not be permanent (i.e., they will not be written to the switch's boot configuration). To make the changes permanent, go to the "ATI" tab and use the "Write Boot Config" button as described in the "Managing Switch Data and Power Settings" section, above.

User Access Logging

Operations performed via the **Milestone XProtect Smart Client** that affect the switch configuration are written to the Microsoft Windows Event Logging system on the machine that hosts the recording server. (Note that the **Milestone Event Server** service must be running on that machine to enable logging.) To view the logs, open the Microsoft Windows Event Viewer application:
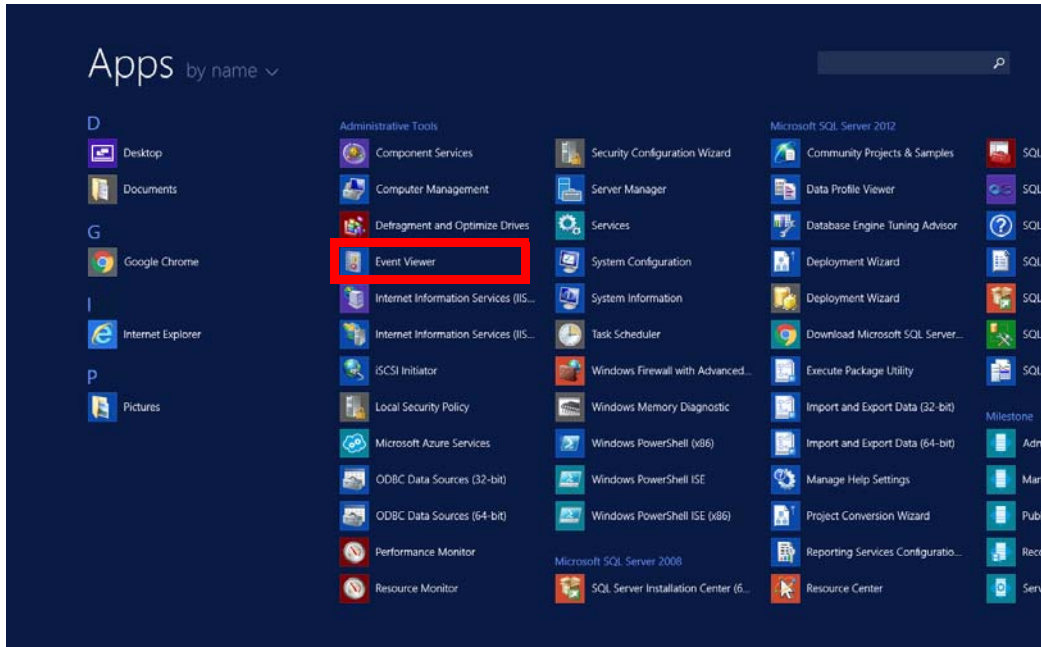
Under the "Application and Services Logs" section, select the "Allied Telesis Switch Operations" items. A log will be shown for each modification made to the switch configuration, identifying the user who made the modification and the operation performed.

Allied Telesis ™

NETWORK SMARTER