Fiber SenSys

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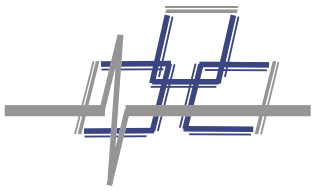
Fiber SenSys Security Center Integrator

How to integrate Fiber SenSys Fiber Defender® Alarm Processing Units with Genetec Security Center™

Application Note



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Introduction

This application note provides an overview on how to add support for Fiber SenSys Inc. (FSI) Alarm Processing Units (APUs) to a Genetec Security Center system (Security Center).

The Fiber SenSys Security Center Integrator (Integrator) is a separate software application that runs on a Microsoft Windows server or PC. Integrator is responsible for communicating with Fiber SenSys APUs and forwarding alarms and other messages to Security Center.

This document will explain how to set up the Integrator to send alarms to Security Center. It will also describe in general terms how to set up Security Center to handle the alarms. Finally, it will describe how to verify that communication is occurring between the APUs and Security Center.

Each installed site has its own requirements for Security Center configuration and you will need to design the configuration based on your site's requirements. This guide is not a substitute for experience with and understanding of the details of configuring Security Center.

This document was written based on Security Center Version 5.4 SR2 and Fiber SenSys Security Center Integrator version 2.4.2.

Before You Get Started

This guide assumes that Security Center, the Security Center Config Tool, and the Security Center Security Desk have been installed. It also assumes that you are familiar with Security Center and are able to configure it to obtain the behavior you desire. See the Security Center manuals for more information about properly setting up and operating your Security Center system.

To make use of Integrator, your Security Center license must include support for **Fiber Defender** from **Fiber SenSys**. If you have not already done so, you will need to order part number GSC-1SDK-FIBERSENSYS-Defender from Genetec and install your updated license. The instructions below will describe how to confirm that this license is installed.

This guide also assumes that the Fiber SenSys APUs have been installed and are ready to integrate. For more information about setting up Fiber SenSys APUs, refer to each APU's documentation.

You will need to set each APU's IP address and configure the APU for incoming connections. Refer to the *APU Networking Application Note* (AN-SM-009) for instructions. Keep track of the IP addresses you are setting, because you will need to know them later when configuring Integrator.

Configuring the software

This section will describe how to prepare Security Center and the Integrator software for integration.

Confirming the Security Center license

To begin, start the Security Center Server Admin software and enter the password that you specified during the main server installation.

Figure 1. The Security Center Server Admin icon.

Figure 2. The Server Admin login screen.

In the Server Admin window, select the **Directory** tab and click the **License Information...** button.

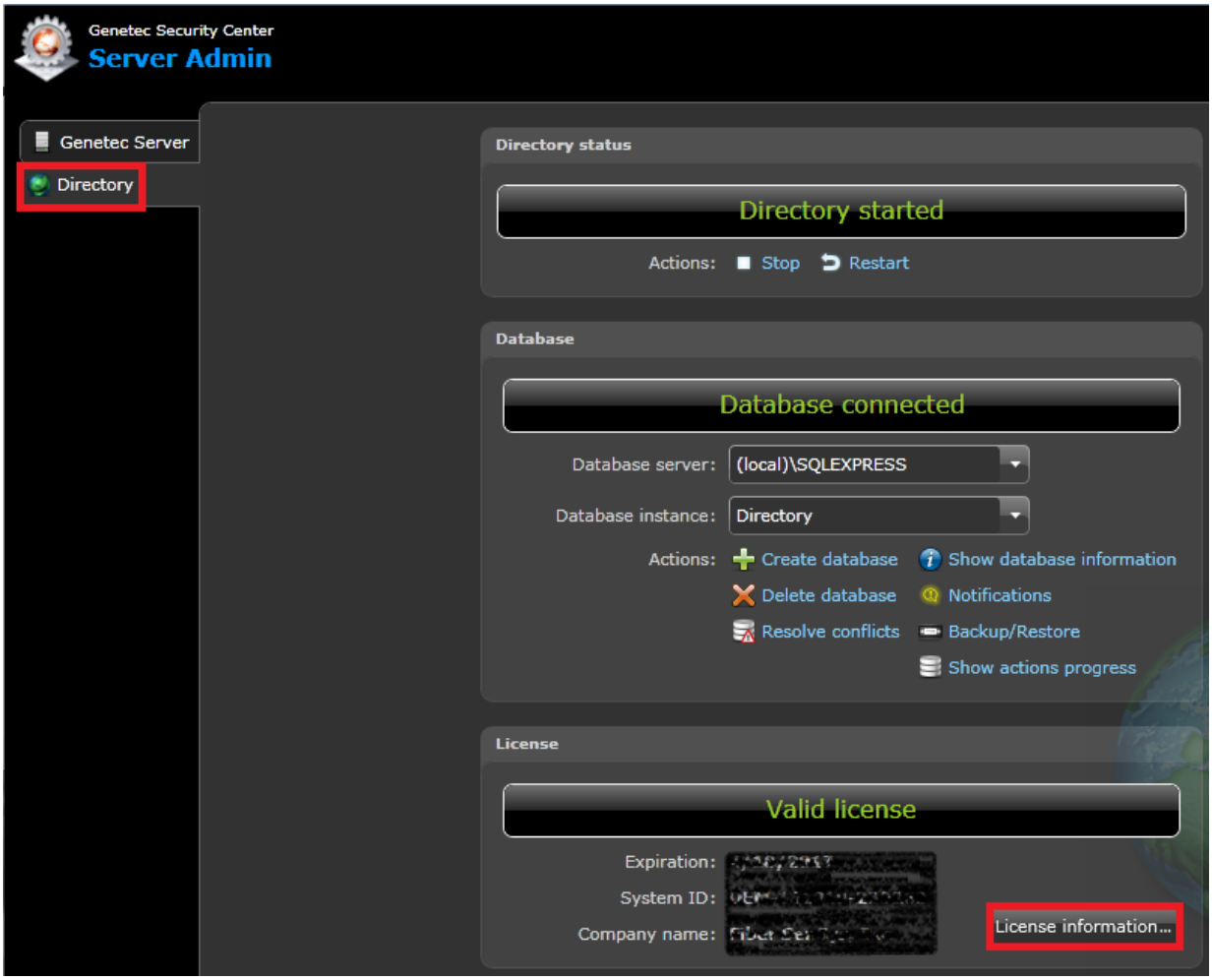

Figure 3. The license information button.

This will raise a License Information window. In that window, select the **Certificates** tab and check for a certificate named **Fiber Defender**. Close the **License** window.

If that certificate is not present, then you will need to contact your Genetec representative and place an order for part number GSC-1SDK-FIBERSENSYS-Defender. This will result in generation of a new license for your Security Center system. Work with your representative to ensure that the license is installed. Revisit these steps to ensure that the **Fiber Defender** certificate is included.

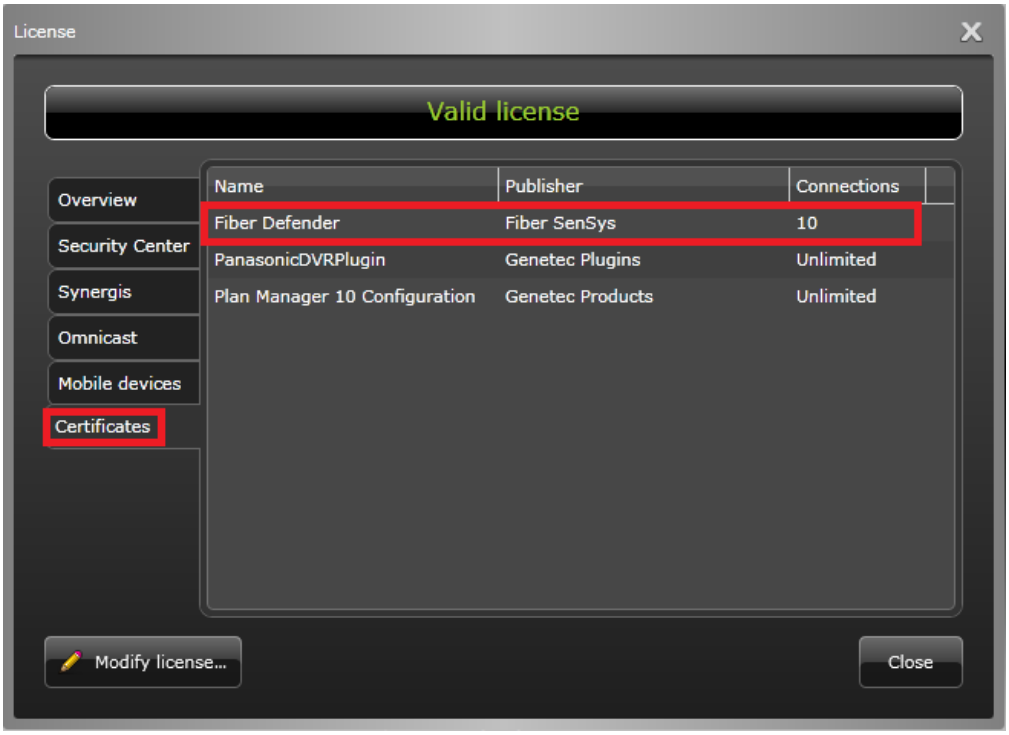

Figure 4. This server has the license for the Integrator.

Identifying the Security Center server connection

In the Server Admin window, select the **Genetec Server** tab and locate the **Private address** and **Private port** items. Write down the address and port; you will need these later to configure the Integrator.

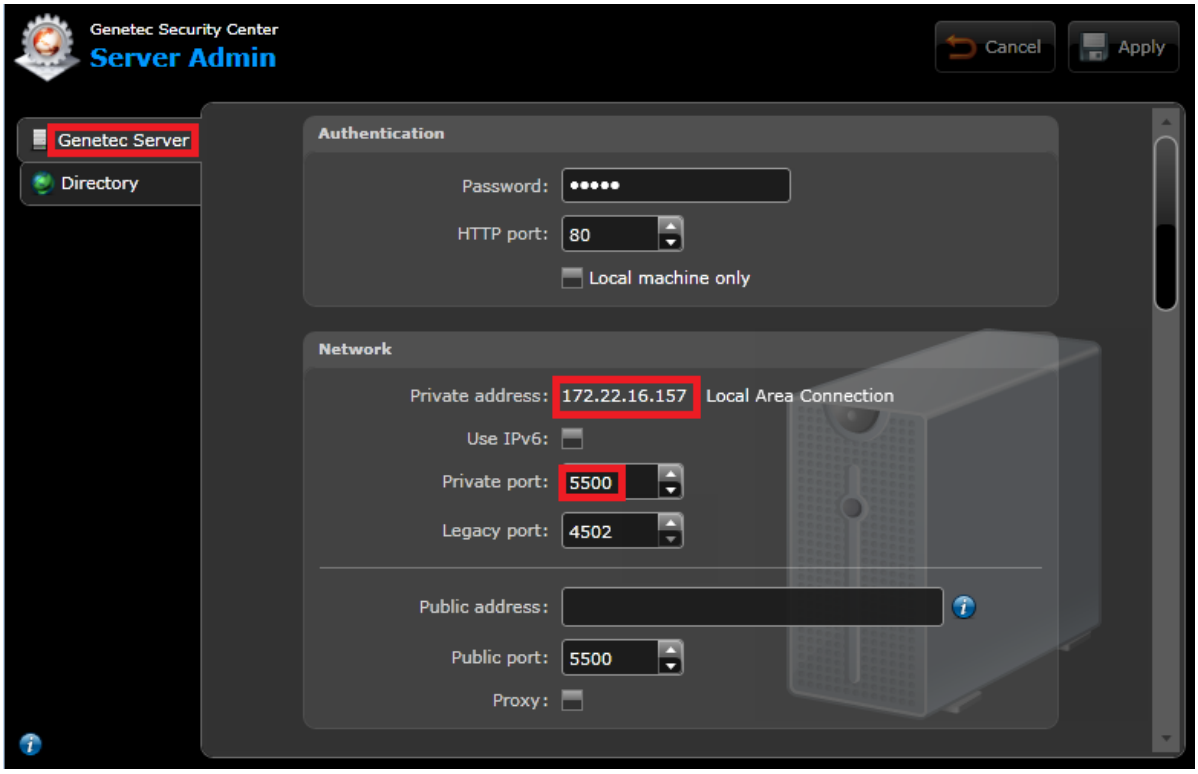

Figure 5. Server Admin network settings.

You can now exit the Security Center Server Admin window.

Adding a Security Center user for the integration software

In order for the Integrator software to report alarms to Security Center, it must log into the server. Although you can use one of your administrative users for this, it is preferable to create a user specific for the Integrator.

To begin, start the Security Center Config Tool software. Log in using the Admin account.

Figure 6. The Security Center Config Tool icon.

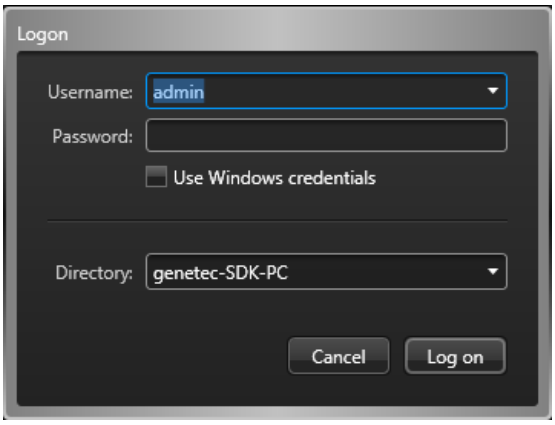

Figure 7. The Config Tool login screen.

In the Config Tool window, select the **Tasks** section and then the **User management** task. This will open a **User Management** tab.

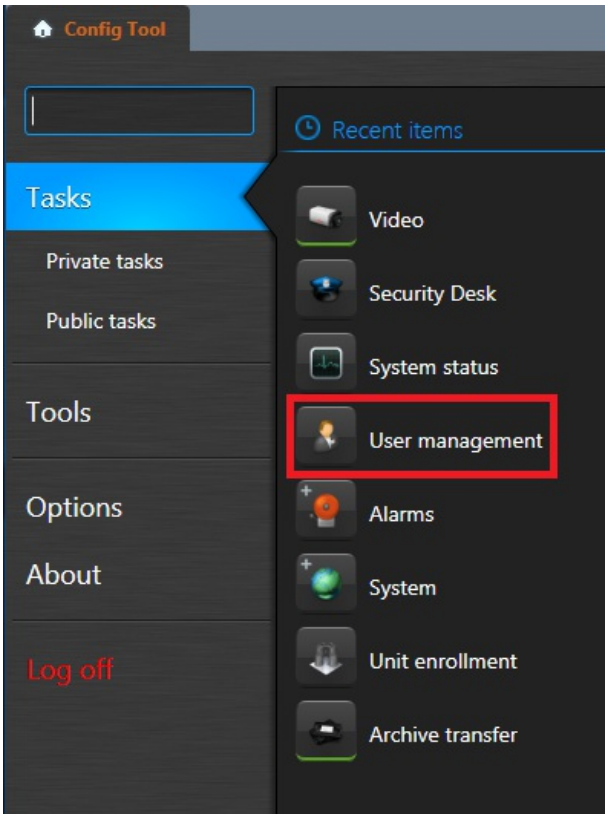

Figure 8. Starting the User Management Task

In the **User Management** tab, click on **Add an entity** and then **User**. This will open a **Creating a user** window.

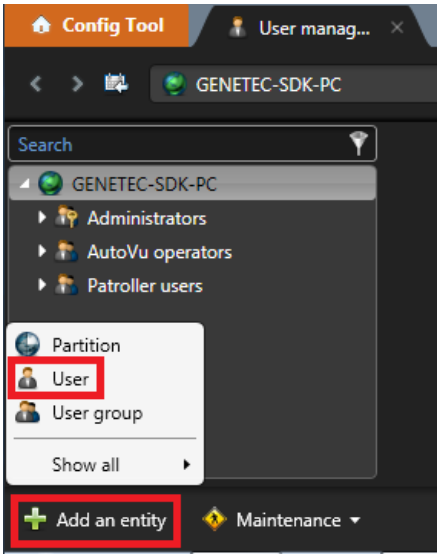

Figure 9. The User Management Task

When creating the user, choose descriptive names and a secure password. Write down the **Username** and **Password** because you will need them later. Do not select a **Privilege template** -- we will select privileges later. when you are done, click **Next**, then **Create**, then **Close**.

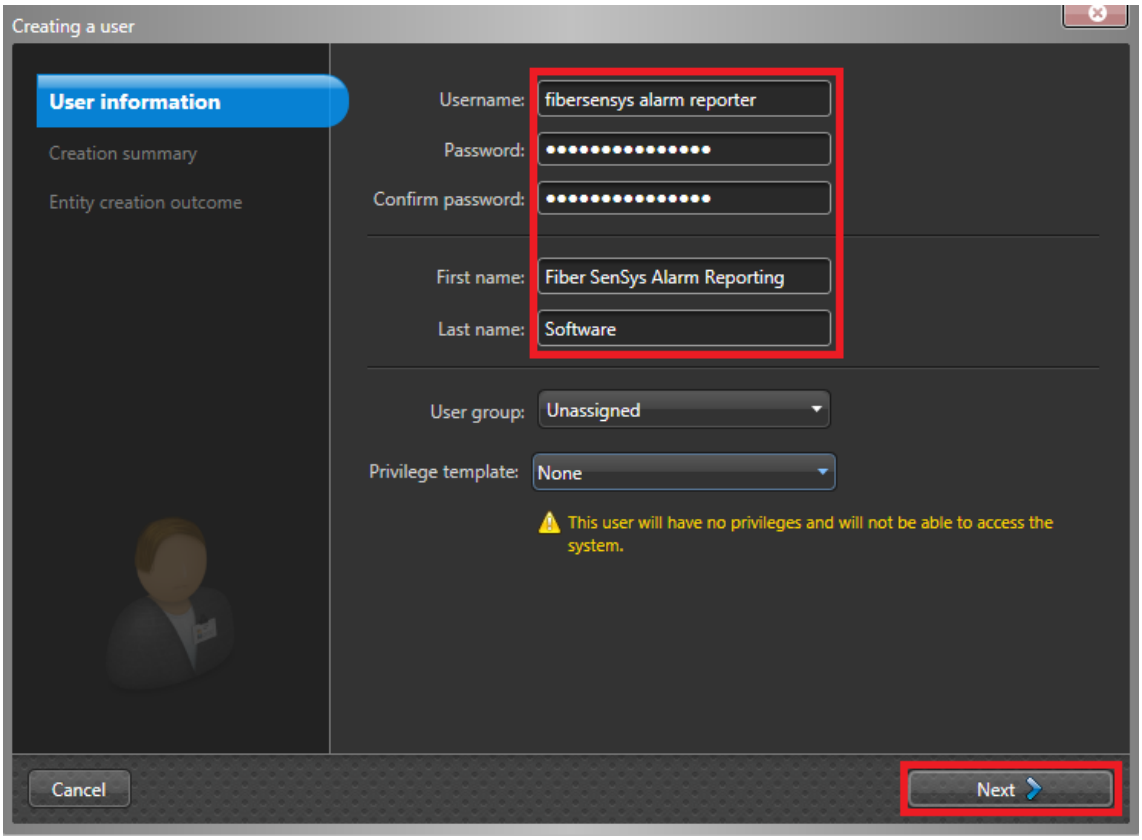

Figure 10. Creating a user

After the user has been created, click on the **Privileges** section and select **Allow** for the following items:

- **Log on using the SDK** under **Application privileges**
- **Alarm management** under **Administrative privileges**
- **Alarms** under **Action privileges**

Then click on **Apply**.

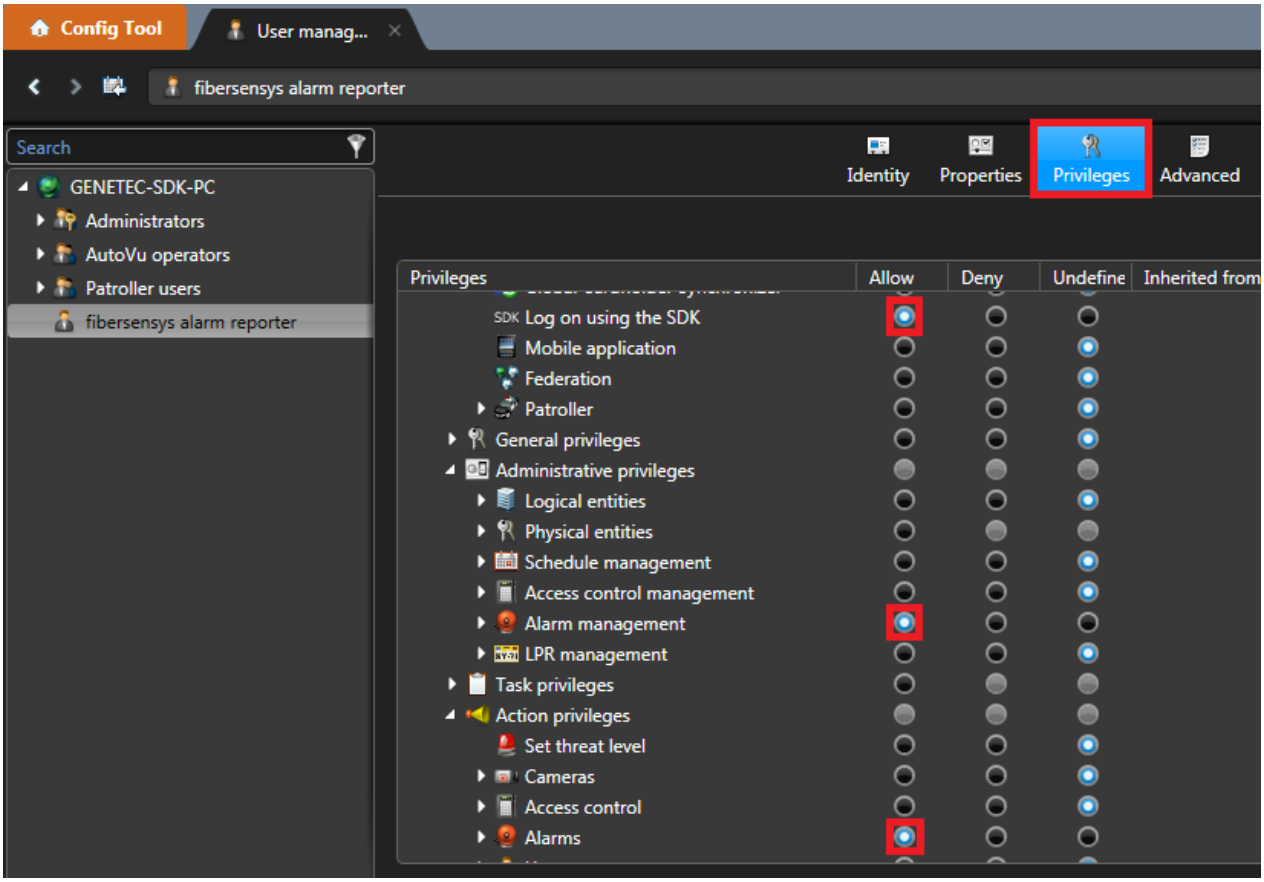

Figure 11. Setting user privileges

You can now exit the Security Center Config Tool.

Configuring Fiber SenSys Security Center Integrator

Install the Fiber SenSys Security Center Integrator software using the provided installer executable. If you do not already have the installer executable, you can download it from the Fiber SenSys website.

NOTE: Integrator must be running at all times for alarms to be reported to Security Center. This is why the installer's default setting is to install the application to be run on computer startup. Do not switch off this setting unless you are sure that you do not want the service running continuously.

Open the Integrator software. It can be opened by clicking its icon on the desktop or the start menu.

Figure 12. The Fiber SenSys Security Center Integrator icon.

On the **File** menu, select the **Configuration...** item. This will raise the **Configuration** dialog window.

Using the information you wrote down while configuring Security Center, enter the **IP address** (as the Server Name), the **Port number**, and **User name** and **Password** that will allow Integrator to log into Security Center.

Then click **OK** to complete the configuration.

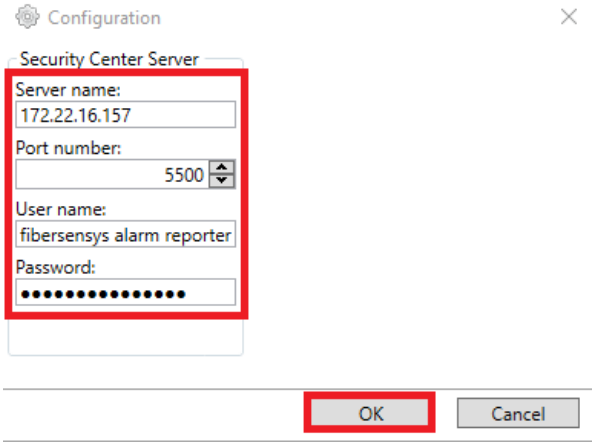

Figure 13. Configuration dialog window

The connection state with Security Center is displayed at the bottom of the main window. If Integrator fails to connect, an error message will appear.

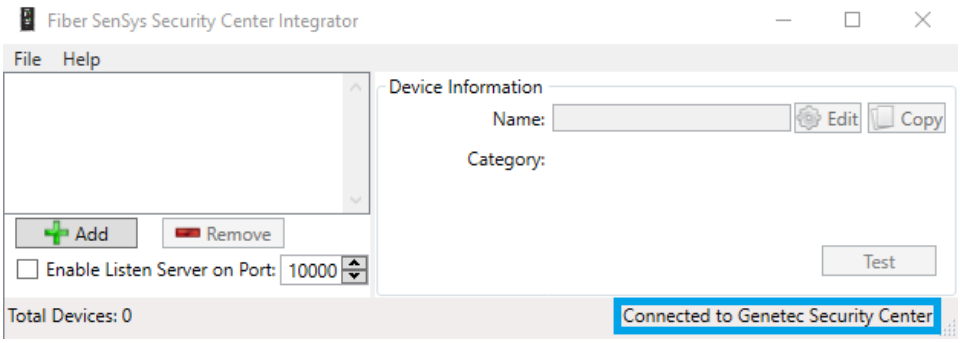

Figure 14. Integrator successfully connected to Security Center

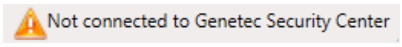

Figure 15. Message when there is a failure to connect

The most common reasons for a failure to connect are:

- Incorrect IP address, Port number, User name, or Password.
- Security Center is not running or there is a problem with the network connection.
- Security Center does not have a license for use with Fiber Defender.

Adding APUs to Fiber SenSys Security Center Integrator

Now that the software has been set up, Integrator needs to be told about each APU that should be monitored.

Click the **Add** button to add a new APU to Integrator. This will raise the **Add Device** dialog window.

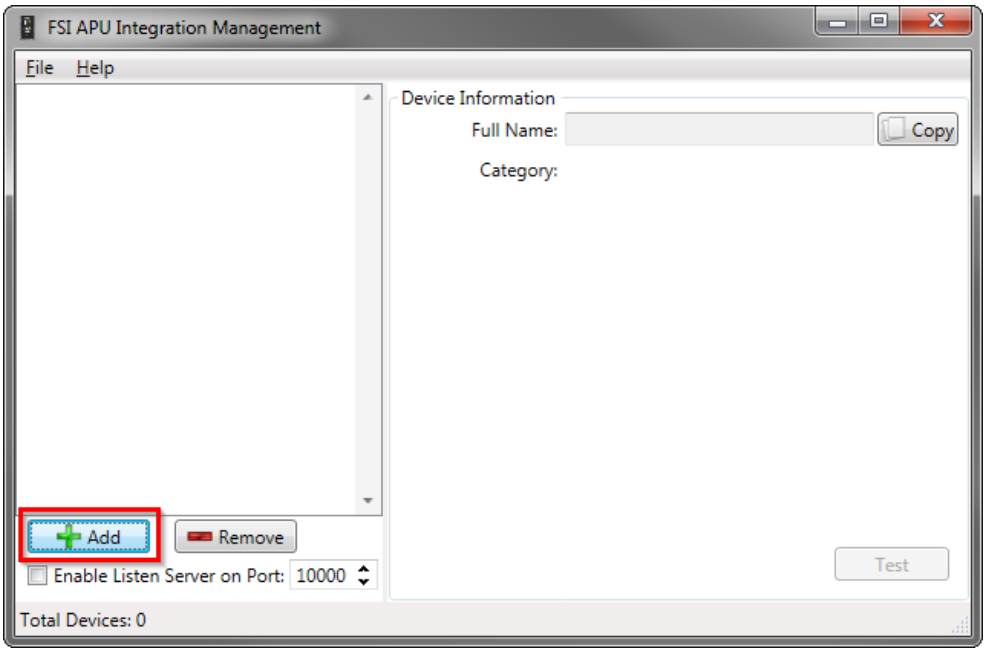

Figure 16. The main Integrator window.

In the **Add Device** dialog window, type the APU's IP address in the **Host** box; then click the **Add** button.

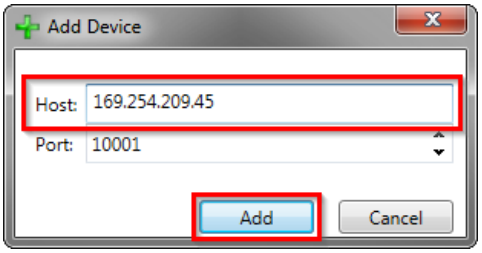

Figure 17. The Add Device dialog window.

The main Integrator window shows the connection state of the APU. There are three possible states:

Disconnected
: There is not a network connection to the APU. Check that the APU is powered, is connected to the network, and the IP address entered into Integrator is correct. Integrator may show a message providing more details about the connection problem.

Waiting for Handshake
: Integrator has established a TCP/IP connection to the APU and is waiting for the APU to report its device name and other information. The handshake process may take up to two minutes to complete. Alarms will not be reported while waiting for the handshake to complete.

Connected
: The APU is communicating with Integrator. Alarms and other events will be forwarded to Security Center.

The following images show the handshake and connected states.

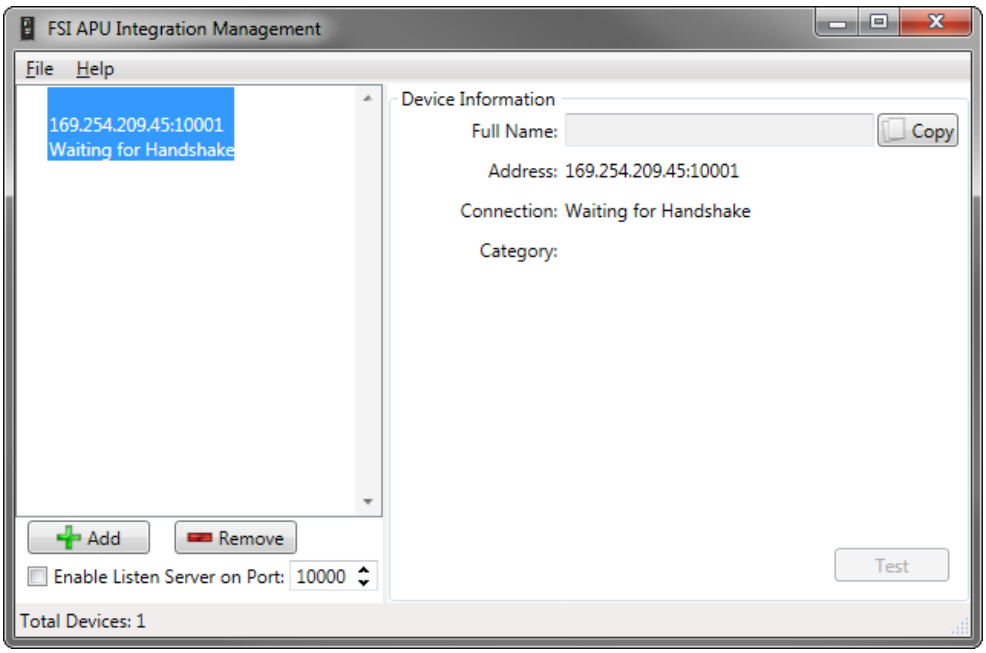

Figure 18. Waiting for the handshake to complete.

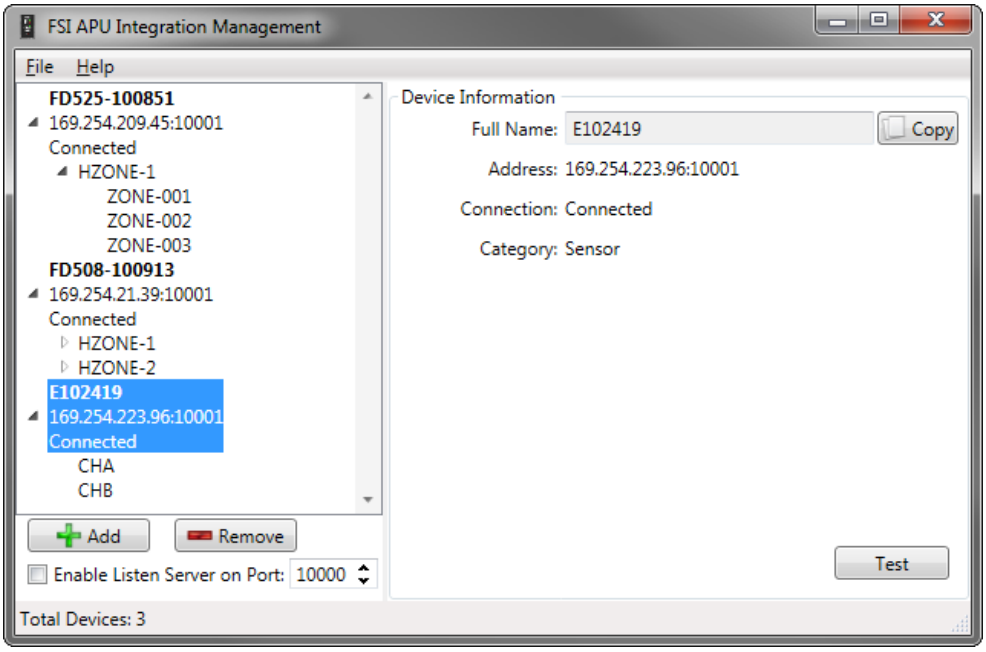

Figure 19. The APUs are connected to Integrator. Note the zones underneath the APUs in the tree view.

Verify that each APU is connected to Integrator before proceeding to the next step.

NOTE: It is possible to change the name of the APUs and zones that Integrator reports to Security Center. See Appendix B for details.

Configuring Fiber SenSys Alarms in Security Center

The Integrator software automatically creates new Alarm entities in Security Center for each condition it reports. However, the Alarms must be configured to report to the appropriate users of Security Desk.

Understanding Fiber SenSys Alarm Types

There are four types of alarms that the Integrator software sends to Security Center.

Alarm name	Source	Meaning
Intrusion	Zone	An intrusion has been detected on the zone. If the intrusion continues, multiple alarms may be reported.
Cable fault	Zone	Loss or significant degradation of returning optical power was detected for the zone. This alarm cannot be acknowledged until the condition has been resolved.
Tamper	APU	The APU reported a tamper condition. This alarm cannot be acknowledged until the condition has been resolved.
Communications failure	APU	The Integrator software has lost communication with the APU. Intrusions, cable faults, and tampers will not be reportd until communications are restored. This alarm cannot be acknowledged until the condition has been resolved.

Table 1. Description of alarms sent to Security Center.

Adding alarm recipients

To begin, start the Security Center Config Tool software. Log in using the Admin account.

In the Config Tool window, select the **Tasks** section and then the **Alarms** task. This will open an **Alarms** tab.

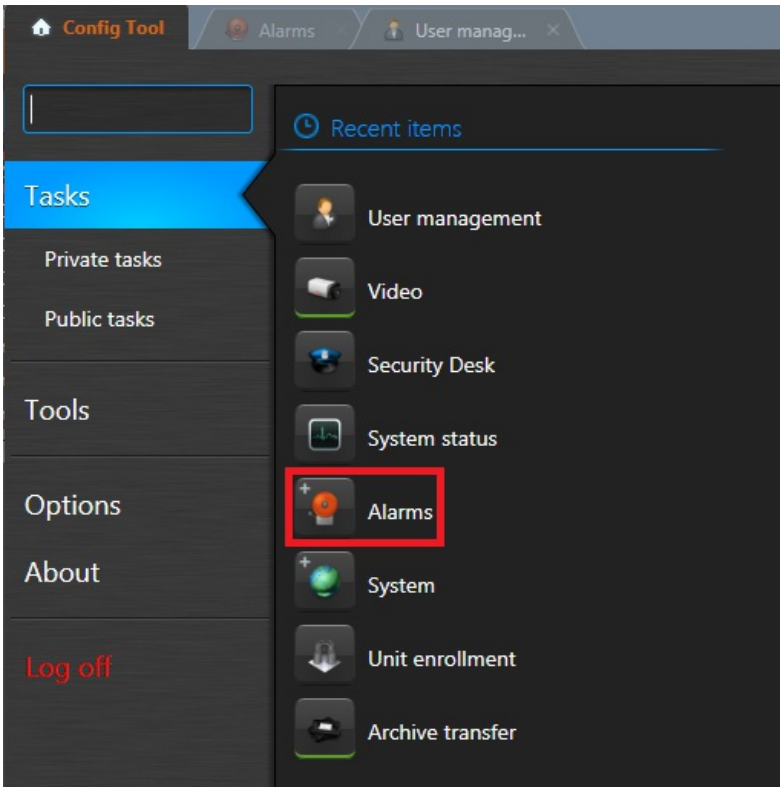

Figure 20. Starting the Alarms Task

On the left side of the Alarms tab is a list of currently defined alarms. Select one of the alarms in the list, then click on the **Properties** icon, then click on the **+** sign underneath **Recipients**. This will open a window of potential recipients.

NOTE: If the list of alarms is very long, you can find the alarms for an APU or zone more easily by searching for the APU or zone's name. The figure below shows only the alarms for a particular APU.

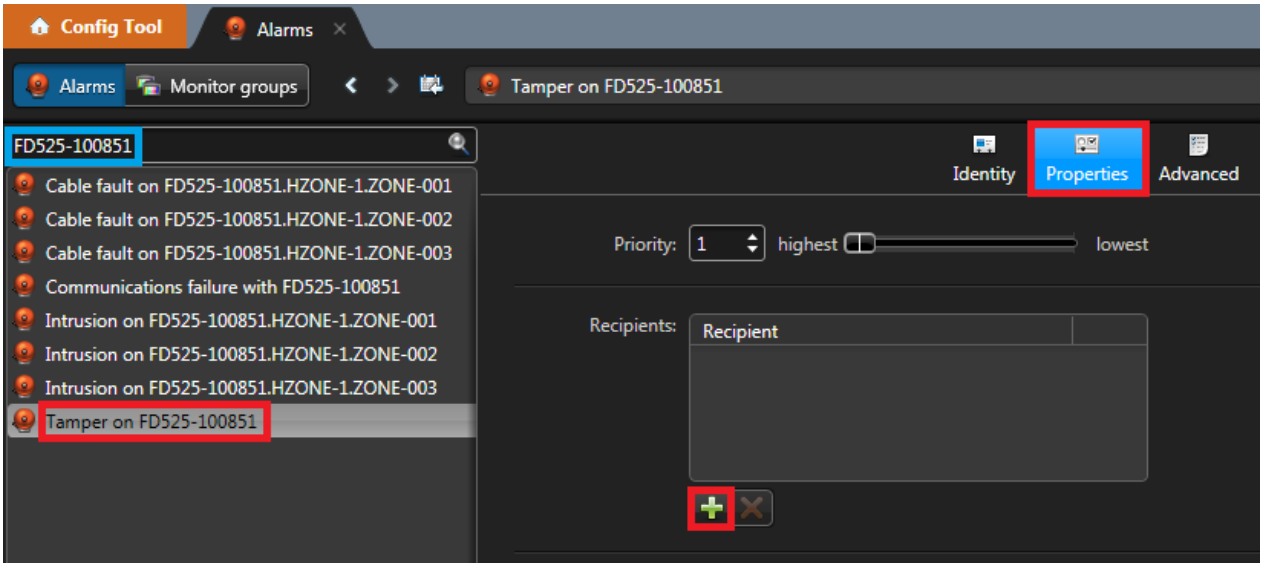

Figure 21. Adding a recipient for an alarm

In the window of recipients, select the recipient (or group) that will be using Security Desk to monitor for alarms. Then press **Add** to add the recipient. This will close the window. Finally, make sure to click **Apply** in the Alarms tab to confirm the addition of the recipient.

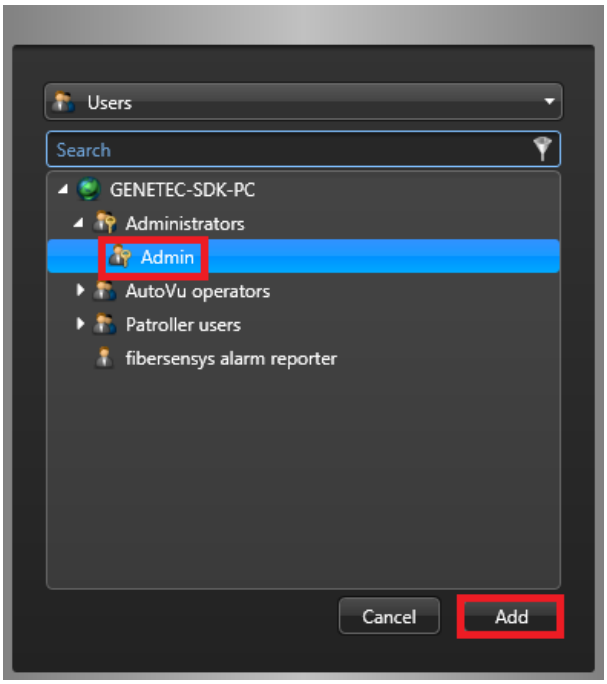

Figure 22. Selecting a recipient

Copying alarm recipients in Security Center

Security Center provides an easy way to copy the recipients to multiple alarms. To being, click on the **Copy configuration tool** icon. This will bring up the **Copy configuration tool** window. In the window, select **Alarm** and click **Next**.

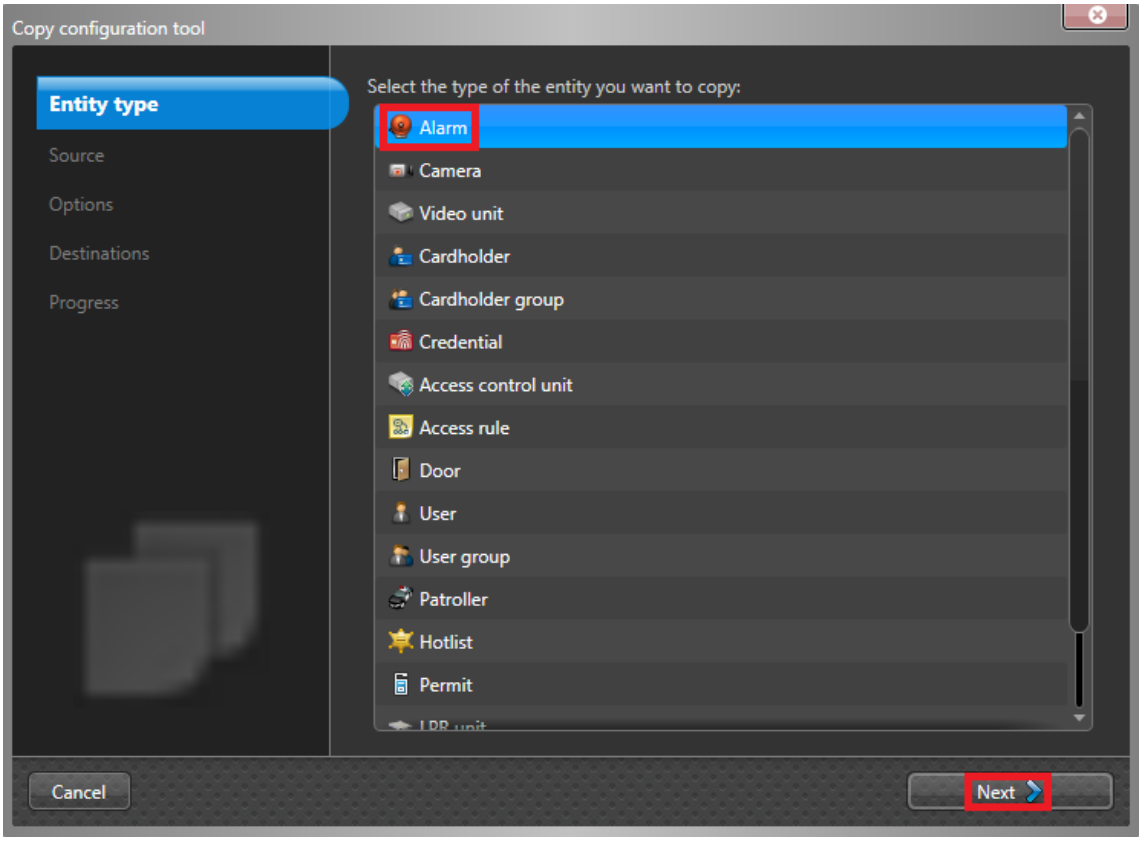

Figure 23. Copying the alarm configuration

Then select the alarm to copy from and click **Next**.

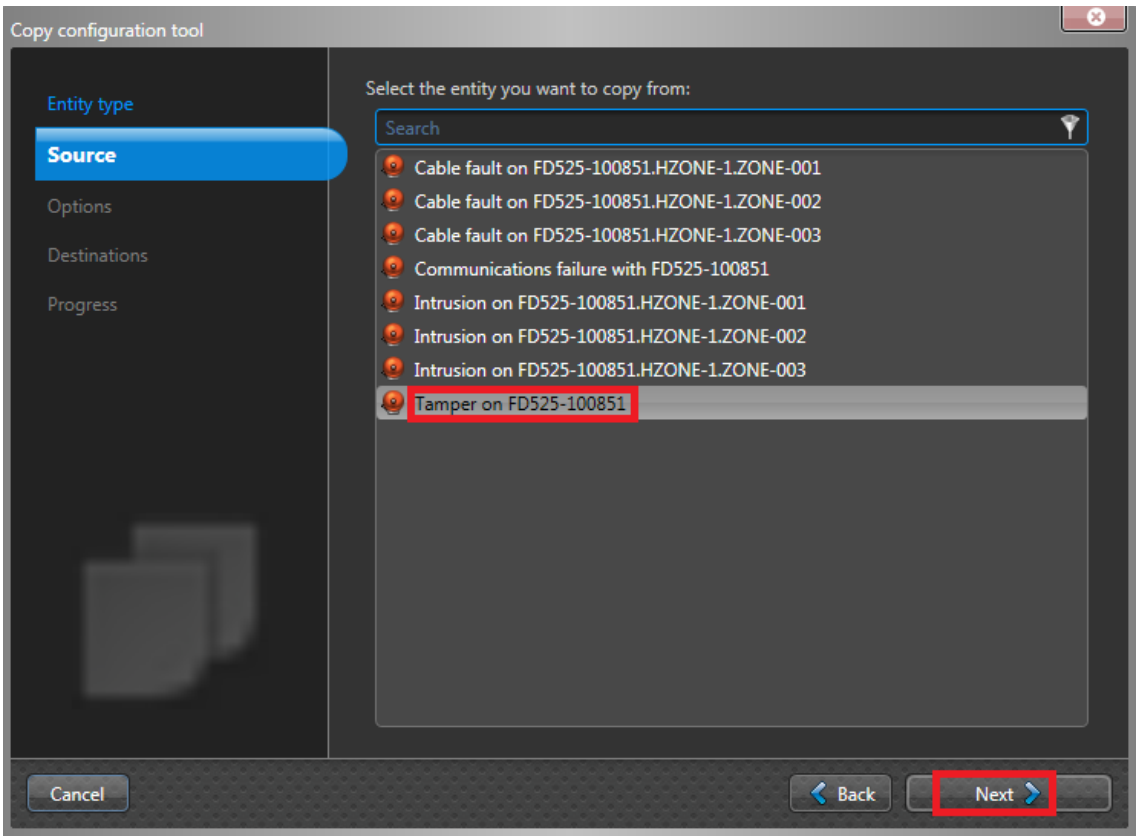

Figure 24. The alarm we will copy from

Then select the **Recipients** item and click **Next**.

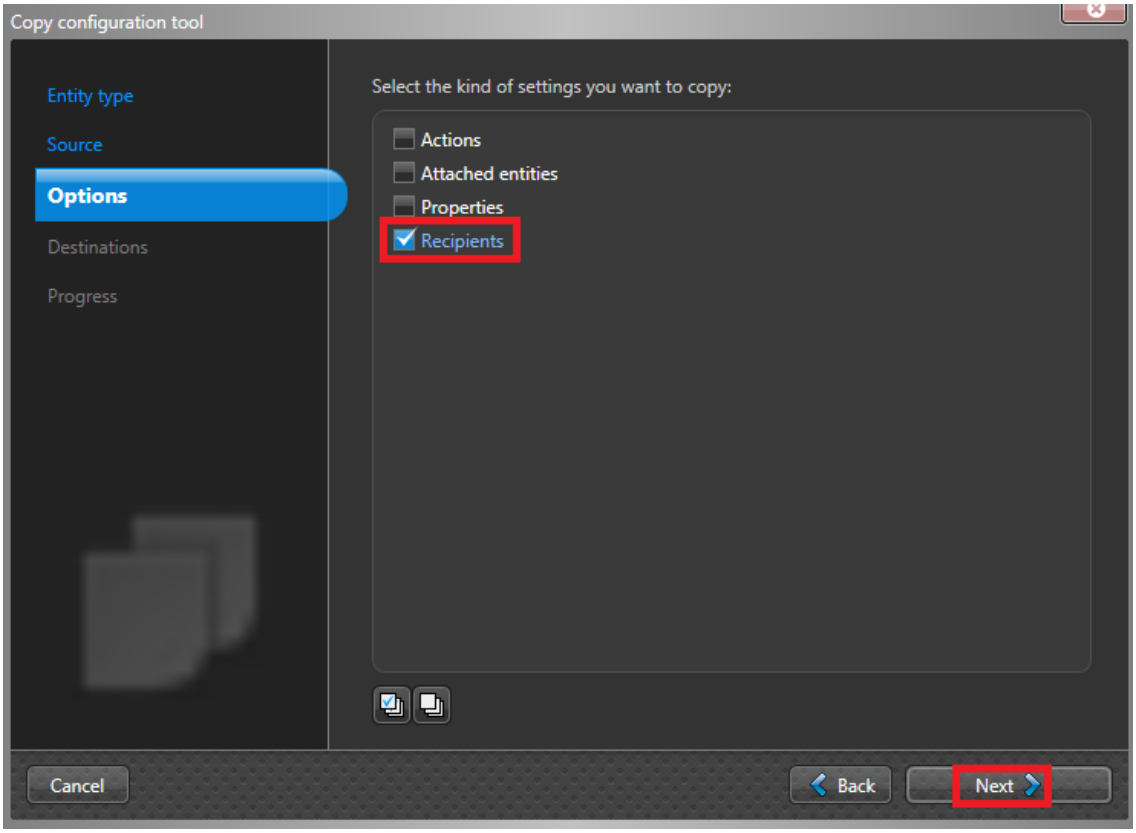

Figure 25. We want to copy the recipients

Then select the alarms to copy to. (If you want to copy to all of the alarms, click on the multiple checkbox icon.) Then click **Start**. Then click **Close**. The copy configuration window will close.

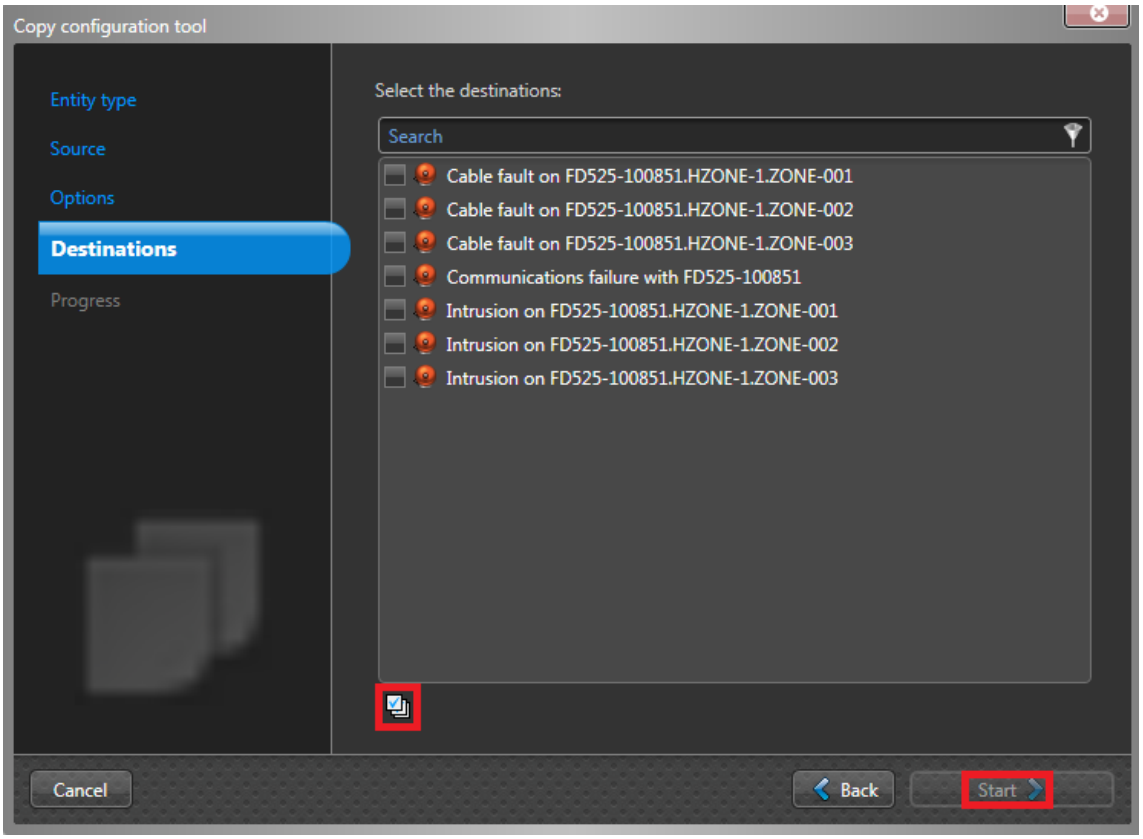

Figure 26. Copying to all of the alarms

Additional alarm handling

The rest of the integration process consists of modifying your Security Center configuration to make use of the alarms. Each site will have

its own requirements and you will need to design an Security Center configuration that matches those requirements. Understanding how to configure Security Center to meet your particular site's requirements is beyond the scope of this document.

Testing the integration

At this point some or all of your site's Security Center configuration must be set up. This section describes how to test the integration between Integrator and Security Center after this has been completed. Each APU and zone can be individually tested.

To begin, open both the Fiber SenSys Security Center Integrator software and the Security Center Security Desk software. Log into Security Desk using the login for the recipient of the alarms.

Figure 27. Security Desk Icon

In Integrator, select the APU or zone to be tested, then click the **Test** button.

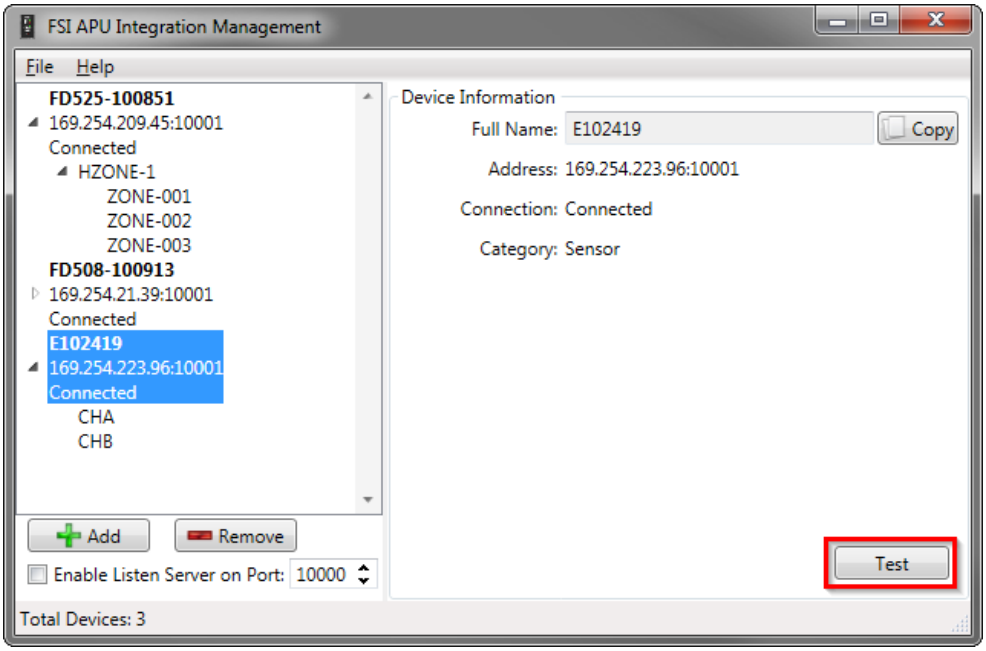

Figure 28. Integrator Test button.

Alarms should appear in the Security Desk. For APUs, the **Tamper** and **Communications Failure** alarms will be sent. For zones, the **Intrusion** and **Cable Fault** alarms will be sent.

Verify that the test alarms appear in Security Desk. (The actual appearance will depend on your Security Desk configuration.) Select each alarm and acknowledge it.

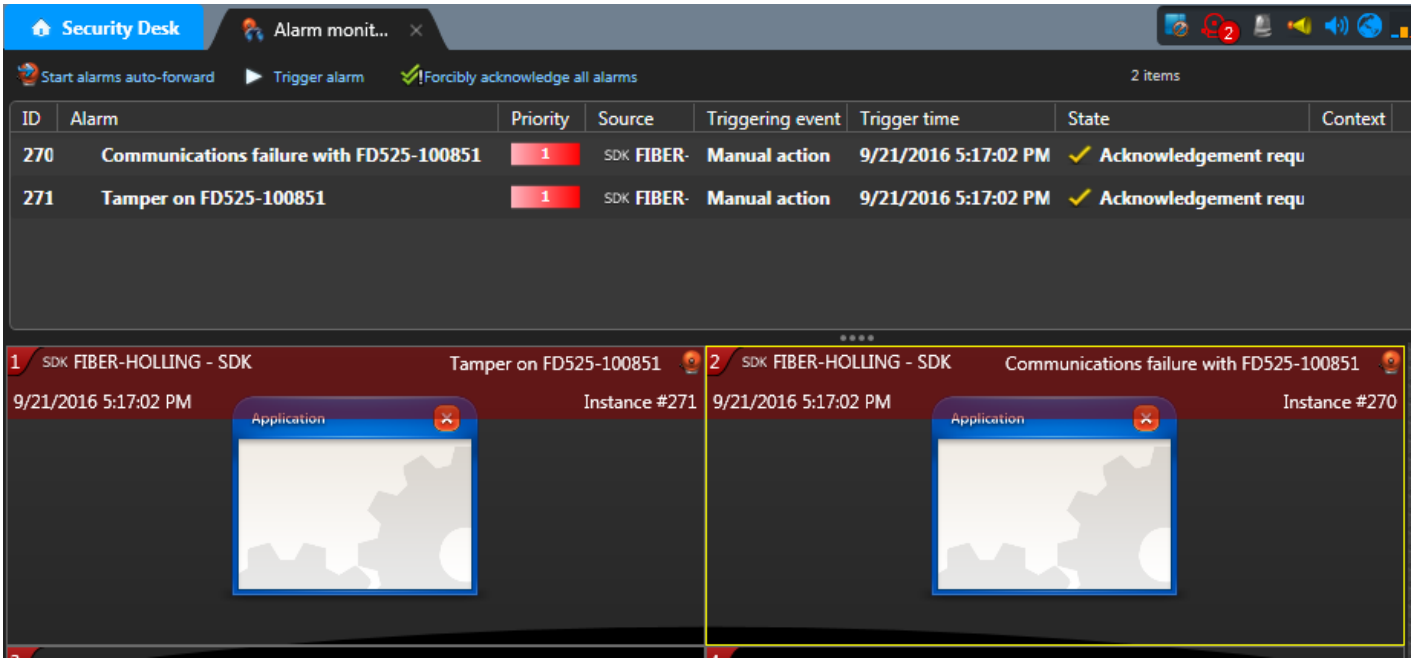

Figure 29. Test alarms appearing in a Security Desk layout.

Removing APUs

This section explains how to remove the configuration for an APU.

Open the Fiber SenSys Security Center Integrator software. Select the APU to remove and click the **Remove** button.

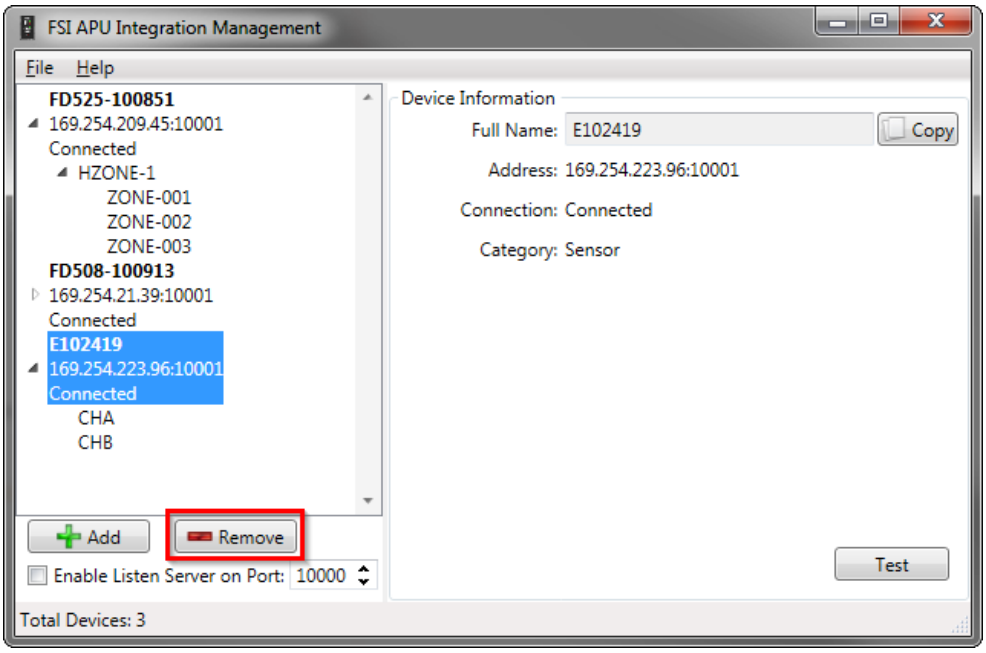

Figure 30. Click Remove to remove the selected device from Security Center Integrator.

Integrator will no longer be reporting alarms for the APU to Security Center. However, Integrator does not remove the alarm entities from Security Center. In fact, alarms are often triggered during decommissioning, and it would not be appropriate for Integrator to remove active alarms.

Therefore, after removing the APU from Integrator, you will need to use Security Center Config Tool to select and remove the alarms for the APU.

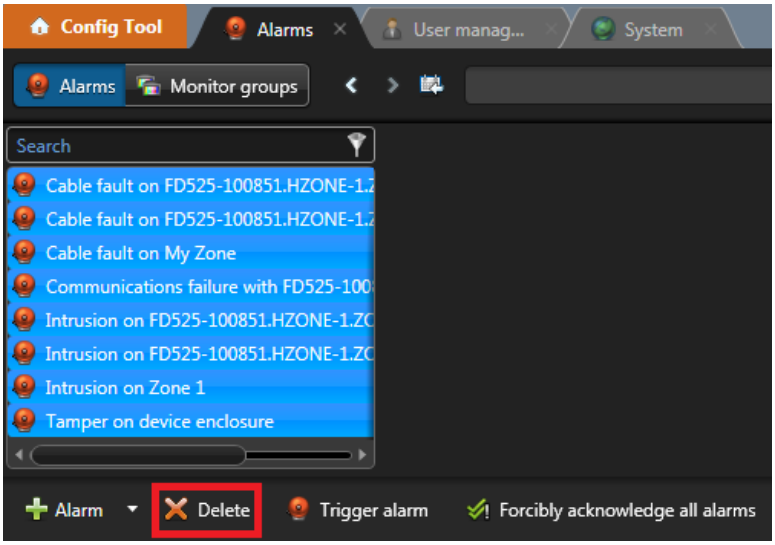

Figure 31. Removing alarms in Config Tool

Appendix A: Using the Listen Server

Integrator can be configured to accept incoming connections initiated from APUs.

To enable the listen server first enter the port to listen on in the **Port** box. The default port is 10000. Next select **Enable Listen Server**. The port cannot be changed while the server is running.

NOTE: Make sure the listen server port number is not in use by any other application.

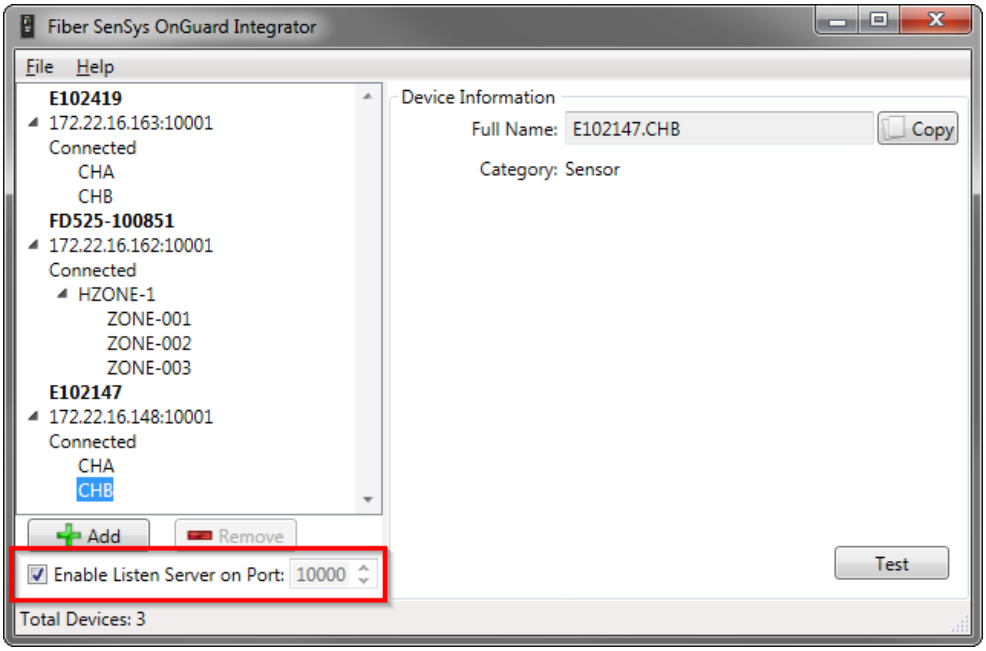

Figure 32. The listen server allows APUs to actively connect to Integrator.

Each APU must be configured to connect to the PC running Integrator. Refer to AN-SM-009, the APU Networking Application Note, on how to configure the APU's Active Connect options.

When an APU connects, it will automatically be added to the device list.

Appendix B: Changing the reported names of APUs and zones

The names reported by Fiber SenSys Security Center Integrator for an APU or zone can be configured. This allows the names reported in Security Center to be the appropriate names for your site.

NOTE: If you have modified the alarm names using the Security Center Config Tool, changing the reported name in Integrator may override your name changes. Either change the alarm names in Security Center or the APU / zone names in Integrator, but don't change both.

Begin by using the Fiber SenSys Security Center Integrator software. Select the APU or zone whose name you want to change and press the **Edit** button.

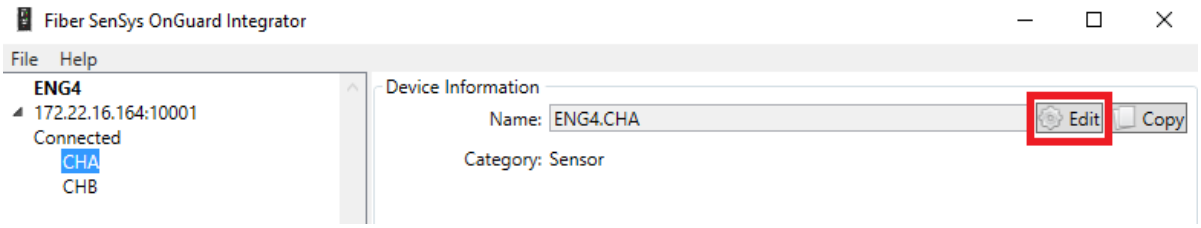

Figure 33. The edit button can be used to change the name reported to Security Center.

This will pop up a dialog window. Edit the name to the value of your choice and press **OK**. If you decide that you do not want to change the name, press **Cancel**.

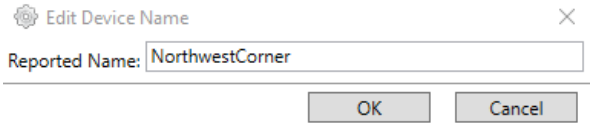

Figure 34. The dialog window for editing a reported name.

Verify that the name has been modified.

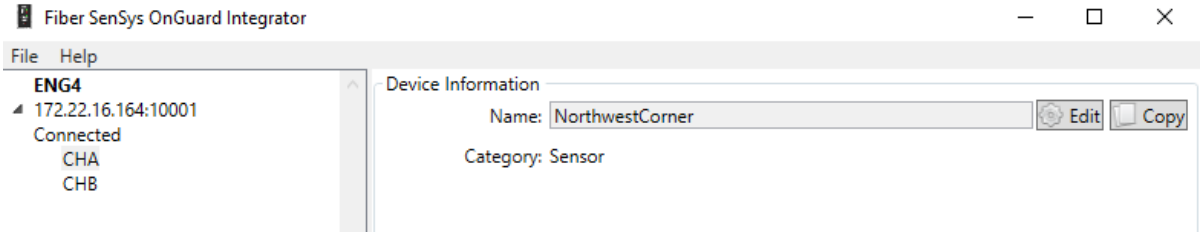

Figure 35. This zone's reporting name has been changed.

Appendix C: Example configuration: Adding a Camera Preset

Although each installed site has its own requirements for Security Center integration with Fiber SenSys APUs, a common use case is to trigger a camera preset when an intrusion occurs.

This appendix describes the process of adding a single camera preset trigger. It does not describe how to configure your security system in general.

To begin, start the Security Center Config Tool software. Log in using the Admin account.

In the Config Tool window, select the **Tasks** section and then the **Alarms** task. This will open an **Alarms** tab.

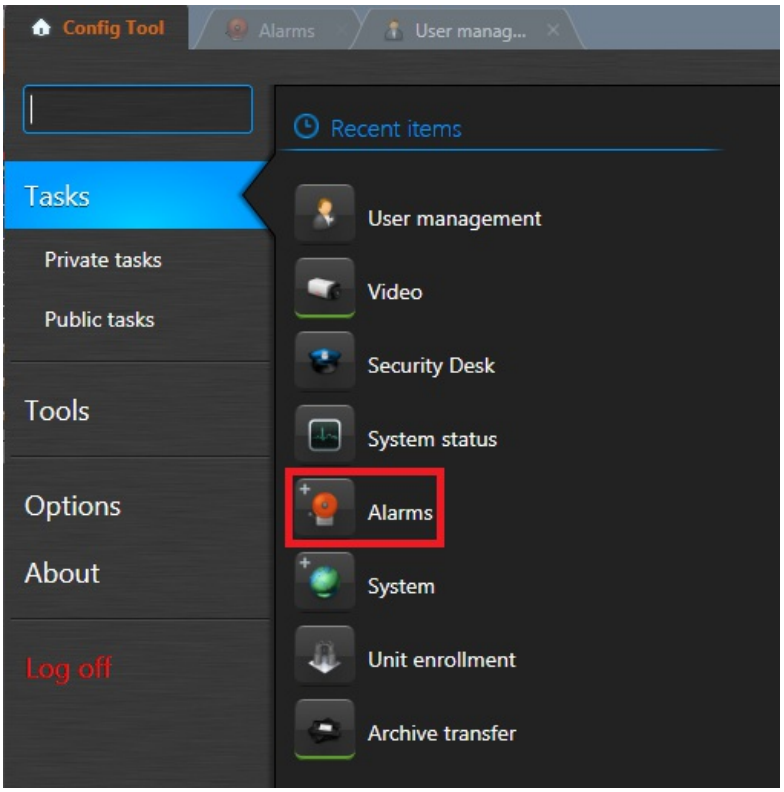

Figure 36. Starting the Alarms Task

On the left side of the Alarms tab is a list of currently defined alarms. Select one of the alarms in the list, then click on the **Properties** icon. In the Attached entities section, click on the **+** sign. This will pop up a camera selection window.

NOTE: If the list of alarms is very long, you can find the alarms for an APU or zone more easily by searching for the APU or zone's name. The figure below shows only the alarms for a particular APU.

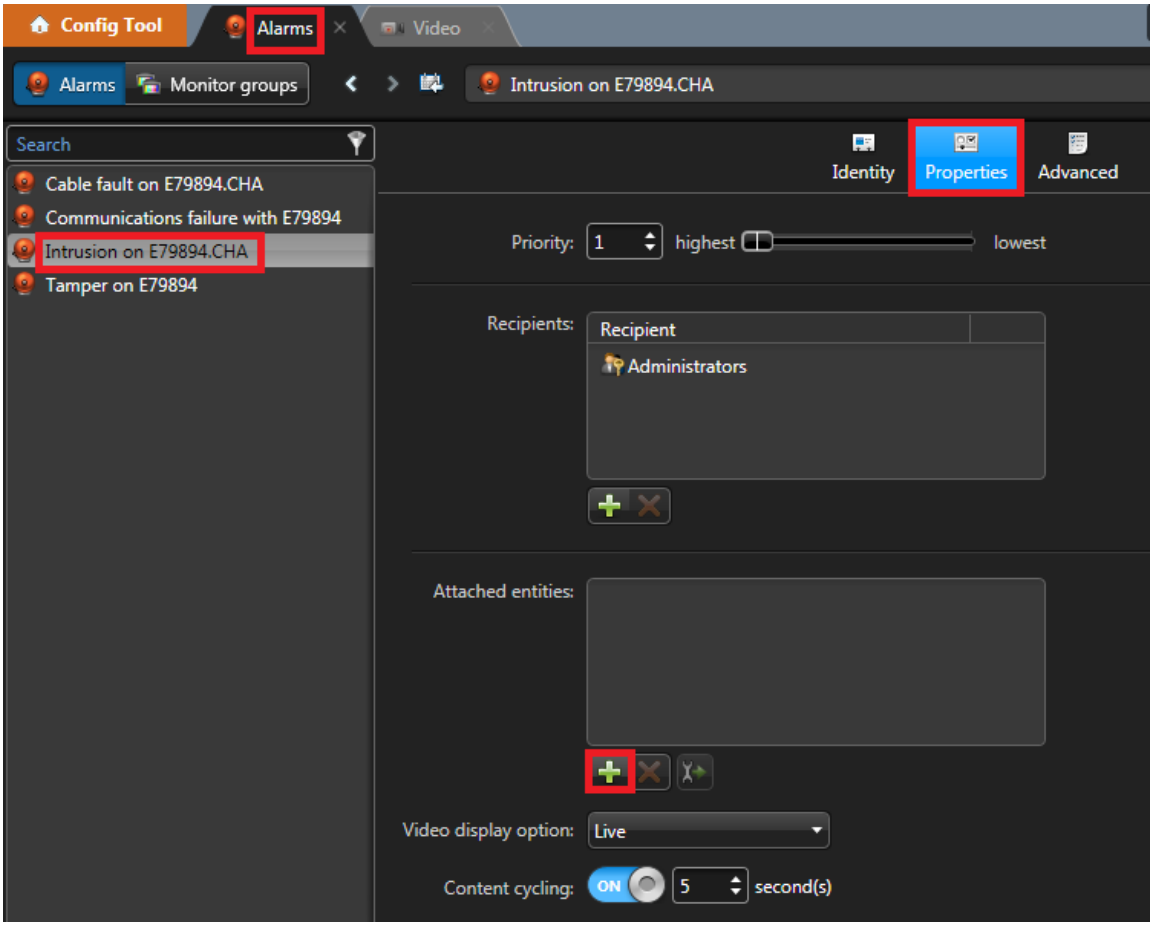

Figure 37. Starting to attach a camera

In the camera selection window, select the camera and press the **Add** button.

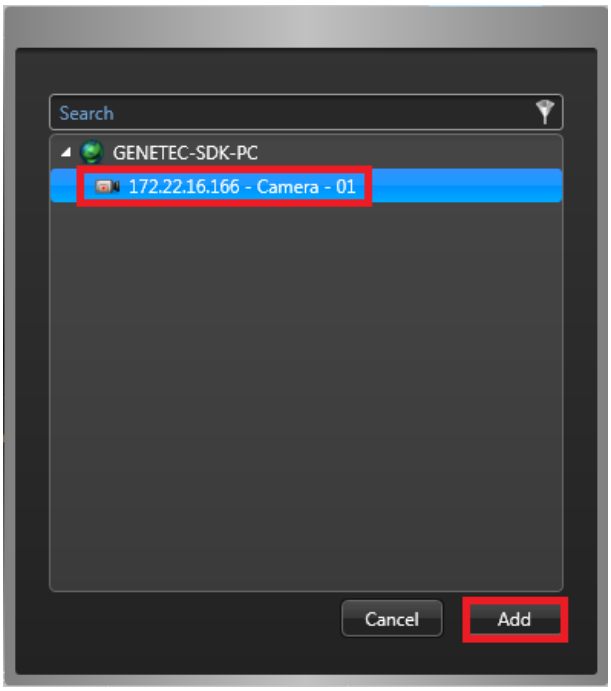

Figure 38. Selecting the camera

Back on the **Alarms** tab, click on the **Identity** icon. In the Relationships section, click on the **Actions** item, then click on the **+** sign. This will pop up an **Events-to-action** window.

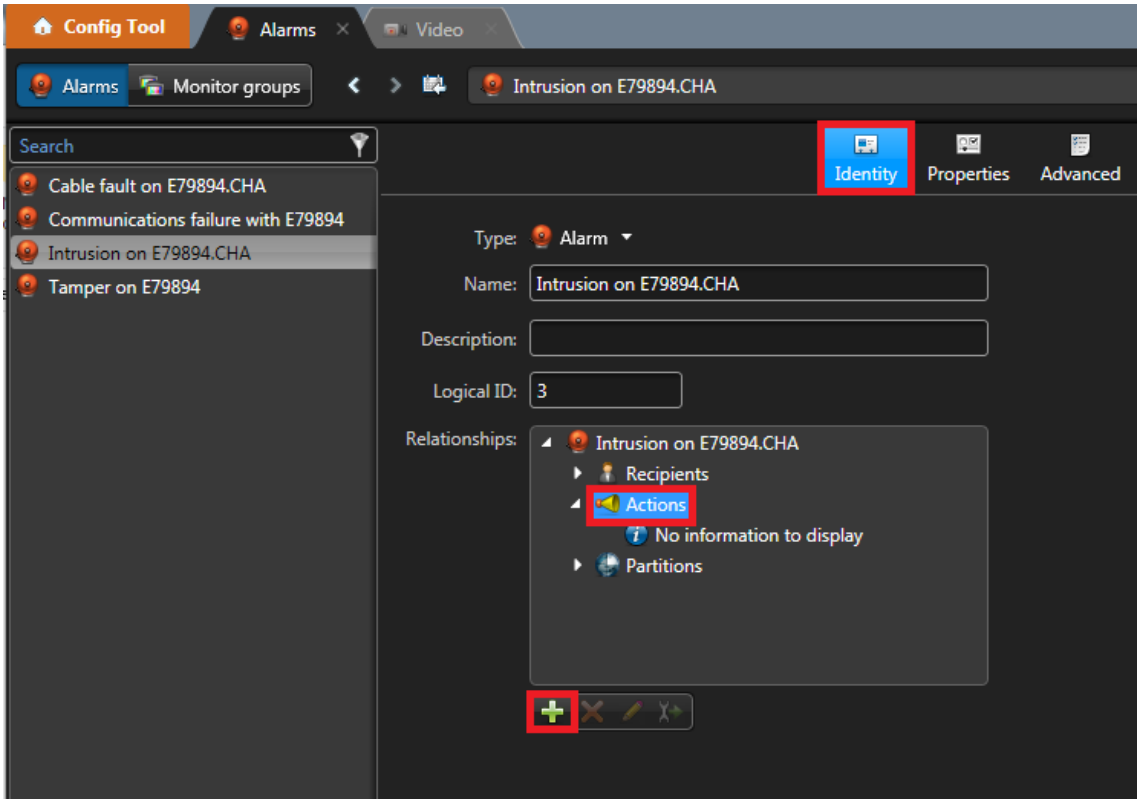

Figure 39. Adding an action for an alarm

In the Event-to-action window, select the **Alarm triggered** option from the **When** dropdown and select the **Go to preset** option from the **Action** dropdown. Then select the camera and preset number and press the **Save** button.

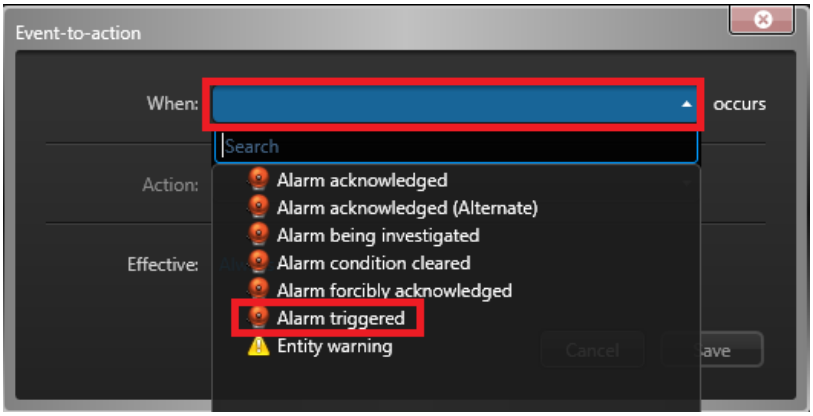

Figure 40. Selecting the Alarm Triggered condition

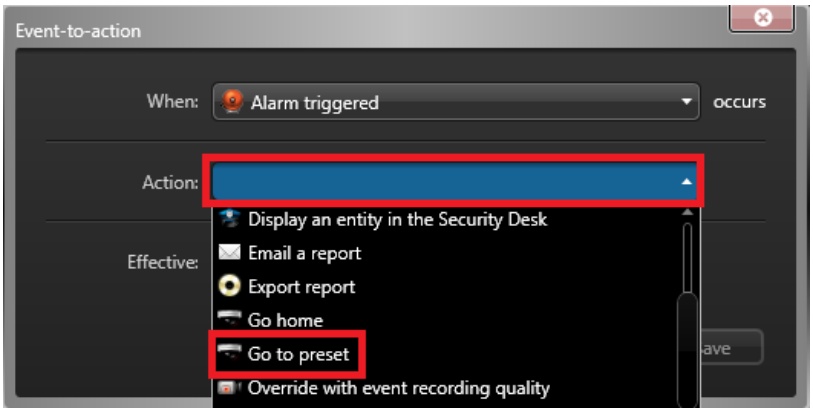

Figure 41. Selecting the Go To Preset action

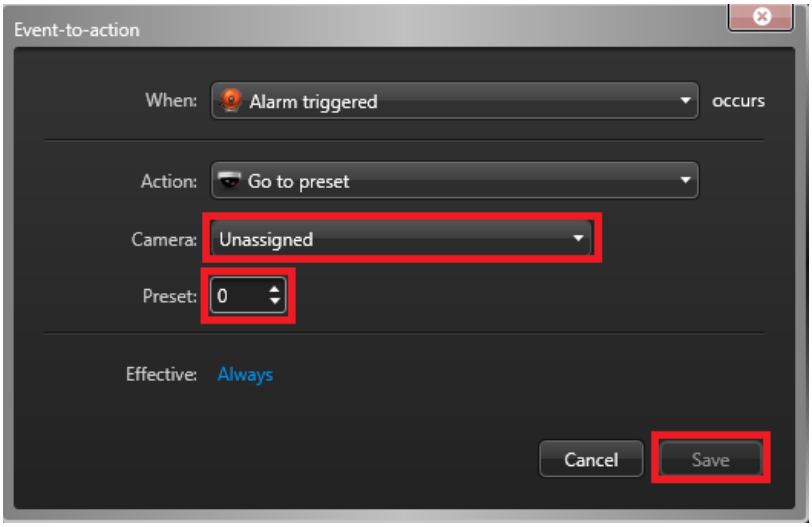

Figure 42. Selecting the camera and preset number

The camera preset trigger should be enabled. Test the mechanism by triggerring the alarm and observing the camera view within **Security Desk**.

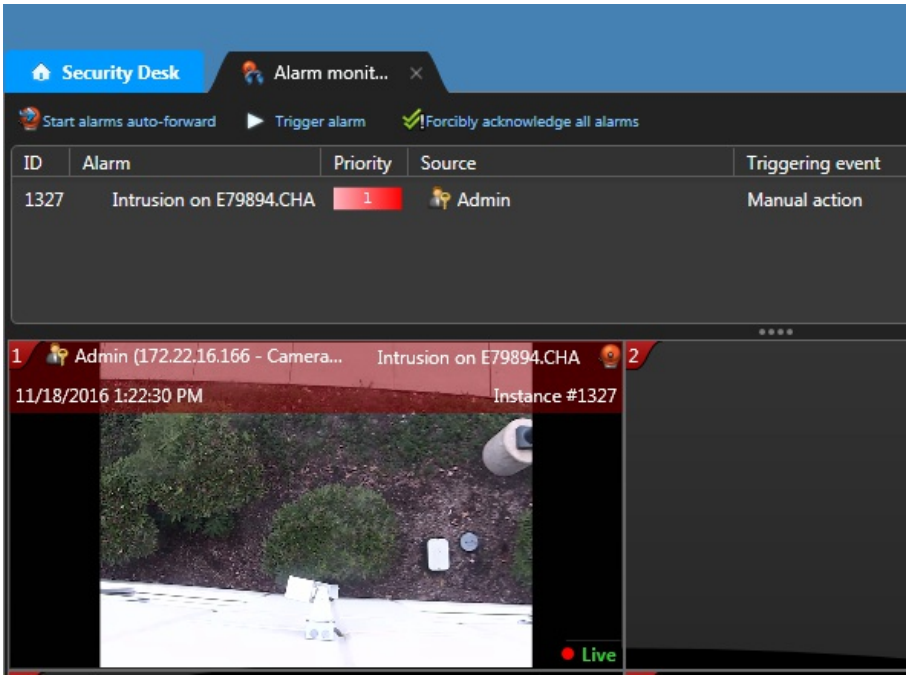

Figure 43. The view from a camera preset from a manually triggered alarm.

About Fiber SenSys

Fiber SenSys is the market leading manufacturer of fiber-optic intrusion detection solutions for government and military installations, airports, oil refineries, electrical substations, nuclear power plants, water purification and storage, corporate headquarters, and manufacturing facilities. As the only fiber optic solution that is PL-1 Nuclear Certified, Fiber SenSys products offer superior operations in the harshest environments. Simple installation with hand tools and designed for a 20 year lifespan, Fiber SenSys offers the lowest Total Cost of Ownership in the industry. In addition to keeping intruders out, Fiber SenSys intrusion detection systems can be used to protect the most important resources. Please visit the company's website where additional software and product information can be found: fibersensys.com.

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