Integration Guide

AllGuard® and Avigilon Integration Plugin

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Disclaimer

This manual supports the following software versions:

- AllGuard desktop client version: 7.0.1 and later
- AllGuard Server version: 7.0.1 and later
- AllGuard Orchestrator version: 1.4.0 and later
- Avigilon Control Center Server version : 7.4.2.2
- Avigilon Control Center Client version: 7.4.2.2
- Avigilon API version: 7.4.2.2

Specification subject to change without notice.

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Introduction

The Avigilon video integration allows AllGuard desktop client users to see live and recorded video for alarms and events that occur in the AllGuard system. The AllGuard integration with Avigilon is a plugin that connects the AllGuard software with the Avigilon Control Center software. The plugin is part of the AllGuard Orchestrator application which manages communication between the Avigilon applications and the AllGuard Server.

The integration requirements are:

- Avigilon Control Center video management system is installed
- An AllGuard suite with the Orchestrator application is installed
- A valid GuardRFID license for the Avigilon integration plugin

Once the requirements are satisfied, the Orchestrator Desktop Configuration Utility application is used to configure the plugin — this tool is used to provide the integration with the address and port of the Avigilon Server, as well as check that the integration is able to see Avigilon video..

The AllGuard Configuration Manager application can be used to start or stop plugin communication. The integration creates log files of events and transactions that can be used for auditing and monitoring purposes.

Pre-Requisites

- The AllGuard Orchestrator must be installed in a location that is accessible by the AllGuard Server.
- Setup an AllGuard Workstation User account to allow the Orchestrator application to communicate with the AllGuard Server.
    - In the AllGuard Configuration Manager software, setup a Workstation User account for the integration.
    - When you create the Workstation User account, grant "Third-Party Application" permissions under the Applications tab.
    - For more information, see the *AllGuard Configuration Manager User Guide*.
- The Avigilon video management software (VMS) has been installed, is connected to the required cameras, and is accessible on the network.
- Setup an Avigilon user account with admin permissions that will be used to connect the Orchestrator application to the VMS.

Initial Installation

To install the full integration, you must install the Orchestrator application which includes the Orchestrator service, Desktop Configuration Utility and the required Avigilon integration plugin.

For large enterprise systems, it is recommended that you install the Orchestrator service and Desktop Configuration Utility on its own server first. Then install the Avigilon integration plugin on a separate server — for more information, see Installing the Avigilon Integration Plugin Only on the next page.

1. Run the Orchestrator installer and follow the prompts.
2. On the Select Components screen, select **Orchestrator Service** and all the **Orchestrator Utilities** options.
3. Next, select the Avigilon integration plugin. You can skip this step if you choose to install the Avigilon integration plugin on a separate server.
4. Select **Next**.
5. When prompted, enter the **Orchestrator Server Port** number. By default, it is set to `9494`

   The Orchestrator Server Port is the inbound port number that the Orchestrator will use on this computer after it has been installed.

6. On the following screen, create a username and password for the AllGuard Message Broker. These credentials are used to communicate with the available plugins.

   If the Orchestrator application is being installed on a server that is separate from the AllGuard Server, the username and password is a placeholder only. You will need to manually add this user to the AllGuard Server through the `add-user.bat` file. For more information, see Manually Adding the Message Broker User on page 4.

7. When you are ready, select **Next** and complete the remaining screens of the wizard.
8. On the last screen, select **Finish**.

Next, configure the Orchestrator service to communicate with the plugins and the AllGuard Server software.

Installing the Avigilon Integration Plugin Only

If you are installing the Avigilon integration plugin on a separate server or adding the Avigilon integration plugin to an existing system, then it is assumed that the Orchestrator service is already installed and accessible on the network.

1. From the installer, only select the Avigilon integration plugin that you want to install.
2. When prompted, enter the URL address of the Orchestrator service .
3. If requested, provide the credentials created for the AllGuard Message Broker.

   Make sure the Message Broker credentials have been created in the AllGuard Server database. For more information, see Manually Adding the Message Broker User on page 4.

4. When you are ready, select **Next** and complete the installation wizard.
5. On the last screen, select **Finish** and allow the select Avigilon integration plugin to install.

Next, configure the new plugins to communicate with the Orchestrator service and the AllGuard software.

Importing the Required SSL Certificate

The Avigilon integration plugin requires an SSL certificate before it can work with the Orchestrator service.

If the Avigilon Control Center software is installed on a separate server from the Avigilon Integration Plugin, make a copy of the Avigilon `public.crt` file that is typically stored in the following location on the Avigilon Control Center host server: `C:\ProgramData\Avigilon\WebEndpoint Config\certificates`

After the Avigilon integration plugin has been installed, complete the following steps to import the required SSL certificate. You can choose to import the certificate using the Java keytool Command or the KeyStore Explorer. The following procedures describes how to import the certificate using Java keytool Command.

1. Stop the Avigilon Integration Plugin.
   a. Open the Windows Services app (`services.msc`).
   b. Locate and right-click the AllGuard Avigilon Integration Plugin service then select **Stop**.
2. Open Windows command prompt as an administrator and change directory to the Avigilon integration plugin folder. The following example shows the default path to the integration plugin — change it to match your final install location.

```
cd C:\Program Files (x86)\AllGuard Orchestrator and
Integration Plugins\avigilon
```

3. Paste a copy of the Avigilon `public.crt` file into the same integration plugin directory.
4. In command prompt, enter `keytool`.

   You should see the following command options from the Java keytool:

```
C:\Program Files (x86)\AllGuard RFID System Orchestrator and Plugins\avigilon>keytool
Key and Certificate Management Tool

Commands:

 -certreq            Generates a certificate request
 -changealias        Changes an entry's alias
 -delete             Deletes an entry
 -exportcert         Exports certificate
 -genkeypair         Generates a key pair
 -genseckey          Generates a secret key
 -gencert            Generates certificate from a certificate request
 -importcert         Imports a certificate or a certificate chain
 -importpass         Imports a password
 -importkeystore     Imports one or all entries from another keystore
 -keypasswd          Changes the key password of an entry
 -list               Lists entries in a keystore
 -printcert          Prints the content of a certificate
 -printcertreq       Prints the content of a certificate request
 -printcrl           Prints the content of a CRL file
 -storepasswd        Changes the store password of a keystore

Use "keytool -command_name -help" for usage of command_name
```

5. Enter the following commands to import the Avigilon certificate:

```
-importcert -keystore CertificateTrustStore.p12 -storepass
changeit -alias AvigilonControlCenterWebEndpoint -file
public.crt
```

6. When asked if you trust this certificate, enter `yes`.

   The certificate is now imported.

7. When you are ready, restart the Avigilon Integration Plugin.
   a. Open the Windows Services app (`services.msc`).
   b. Locate and right-click the AllGuard Avigilon Integration Plugin service then select **Start**.

Manually Adding the Message Broker User

If you installed the Orchestrator service on the same server as the AllGuard Server, you can skip this procedure.

If the Orchestrator service is installed on a separate server from the AllGuard Server, you need to manually add the Message Broker User to the AllGuard Server database or the Orchestrator service cannot communicate with the AllGuard Server.

1. On the computer running the AllGuard Server software, go to the AllGuard Server program folder. This is typically located here: `C:\Program Files\Argus\jboss\bin`
2. Open the `add-user.bat` file.
3. When the Command Prompt window opens, enter the following values:

```
C:\WINDOWS\system32\cmd.exe

What type of user do you wish to add?
 a) Management User (mgmt-users.properties)
 b) Application User (application-users.properties)
(a): b

Enter the details of the new user to add.
Using realm 'ApplicationRealm' as discovered from the existing property files.
Username : as
Password recommendations are listed below. To modify these restrictions edit the add-user.properties configuration file.
 - The password should be different from the username
 - The password should not be one of the following restricted values {root, admin, administrator}
 - The password should contain at least 8 characters, 1 alphabetic character(s), 1 digit(s), 1 non-alphanumeric symbol(s)
Password :
WFLYDM0098: The password should be different from the username
Are you sure you want to use the password entered yes/no? y
Re-enter Password :
What groups do you want this user to belong to? (Please enter a comma separated list, or leave blank for none)[  ]: guest
About to add user 'as'  for realm 'ApplicationRealm'
Is this correct yes/no? yes
Added user 'as' to file 'C:\Program Files\Argus\jboss\standalone\configuration\application-users.properties'
Added user 'as' to file 'C:\Program Files\Argus\jboss\domain\configuration\application-users.properties'
Added user 'as' with groups guest to file 'C:\Program Files\Argus\jboss\standalone\configuration\application-roles.properties'
Added user 'as' with groups guest to file 'C:\Program Files\Argus\jboss\domain\configuration\application-roles.properties'
Is this new user going to be used for one AS process to connect to another AS process?
e.g. for a slave host controller connecting to the master or for a Remoting connection for server to server Jakarta Enterprise Beans calls.
yes/no? yes
To represent the user add the following to the server-identities definition <secret value="YXNz" />
Press any key to continue . . .
```

The Message Broker username and password can be any value, but the other **red** highlighted parameters must be set to the following:

- *Type of User* = b) Application User
- *Group* = guest
- *Is this new user going to be used for one AS process to connect to another AS process?* = yes

Setup in the Configuration Manager

Before the AllGuard system can use the installed integrations, you must configure the AllGuard Server to use the Orchestrator service.

1. Open the AllGuard Configuration Manager software.
2. From the top menu, select **Tools > System Configuration** to open the System Configuration dialog box.
3. From the left menu, select **Third Party Systems Integration**.

   The Orchestrator connection information may already be listed as part of the installation process, but if it is not, enter the requested information:

   - **Base URI** — the address or hostname of the Orchestrator service in this format:

     https://*<IP address>*:*<port number>* — for example: https://localhost:9494

   - **User Name** — enter the default Orchestrator user name (case sensitive)— `Administrator`.
   - **Password** — the password for the Orchestrator user name. The default password is `administrator` (case sensitive).
4. Select **Reload** to show the installed integration plugins.
5. Select **Save** to save the Orchestrator connection settings.

Configuring the Avigilon VMS Integration Plugin

To ensure the Avigilon integration plugin is able to operate as expected, configure the Orchestrator to communicate with the Avigilon Control Center Server.

1. Run as administrator to open the Orchestrator Desktop Configuration Utility.
2. If prompted, enter the Orchestrator IP address or hostname. For example, https://localhost:9494.
3. Then enter the Orchestrator username and password.
4. In the Orchestrator Configurator window, select the **Plugin Configuration** tab.
5. On the following screen, select **Avigilon Integration Plugin**.
6. Add the Avigilon VMS connection information:

   By default, the system assumes that the Avigilon Server is also installed on the same computer.

   - **Avigilon Server Address** – the Avigilon VMS server address.
   - **Avigilon Server port** – the Avigilon server port number
   - **Server Username** – the Avigilon user name that was created for connecting the Orchestrator application to the VMS.
   - **Password** – the password for the Avigilon user name.
7. Select **Apply**.
8. To test the connection between the Orchestrator software and the Avigilon system, select the **Video Service Debug** tab.
   a. If the screen is empty, select **Refresh**.
   b. From the Video Plugins list, select **Avigilon Integration Plugin**.
   c. Select one of the camera links to confirm that the video is streaming correctly to the Orchestrator application.

Setting Up Video in the Configuration Manager

Once the Avigilon integration plugin has been fully installed and configured, you just need to enable the AllGuard system to display video in the AllGuard desktop client software when events occur.

For more information about any of the following steps that must be completed in the AllGuard Configuration Manager software, see the *Configuration Manager User Guide* or the software help files.

1. From the top menu of the Configuration Manager, select **Tools > System Configuration**.

   The System Configuration dialog box is displayed.

2. From the left menu pane, expand and select **Third Party Systems Integration > Video Integration**.
3. In the **Provider** drop down list, select **Avigilon**.
4. In the **Time interval preceding the recorded event** box, enter the length of video (in seconds) that the Avigilon VMS keeps before a recorded event.
5. Select **Save**.
6. Synchronize cameras with the AllGuard Server.
   a. From the left pane in the Configuration Manager window, select the **Cameras** tab.
   b. At the top of the tab, right-click **Cameras** and select **Synchronize with Video Surveillance Provider**.
   c. In the following dialog box, select **Request Available Cameras**.

      A list of cameras that the integration user has permission to see is displayed.

   d. Confirm that all listed cameras are selected then select **Add**.

   The selected cameras are added to the Cameras tab.

7. Assign the required cameras to the Gate.

   Make sure you select cameras that are installed at the physical location where the Gate would be on the floorplan.

   a. Edit a configured Gate.
   b. In the following dialog box, select the **Cameras** tab.
   c. From the left list, select the camera you need then select **>** to add it to the Gate.
   d. When you are ready, select **Submit**.
   e. Repeat this procedure for each Gate that needs to record video of events.
8. Select the events that trigger cameras in each Area.

   The Gates in the Area must include cameras in order to see video of events that occur in the Area.

   a. Edit a configured Area.
   b. In the following dialog box, select the **Trigger Cameras** tab.
   c. Check the events that need to trigger camera recording.
   d. Select **Submit**.
   e. Repeat this step for each Area that needs to record video of events.

9. Next, set up each Workstation user account to display video when events occur.
    a. Edit a configured Workstation Account under the Users tab.
    b. In the following dialog box, select the **Preferences** tab.
    c. Near the bottom of the dialog, choose if video is displayed when warning or alarms occur.
    d. Select **Submit**.
    e. Repeat this step for each Workstation Account that needs to see video of events.
10. To check video from a camera that has been assigned to a Gate, right-click the Gate and select **Live Video from....**

Disabling Integration Plugins in the Configuration Manager

If you need to stop the Avigilon integration plugin from communicating with the AllGuard Server because you are upgrading the system or to perform other maintenance tasks, you can do so from the Configuration Manager.

1. Open the AllGuard Configuration Manager software.
2. From the top menu, select **Tools > System Configuration** to open the System Configuration dialog box.
3. From the left menu, select **Third Party Systems Integration**.
4. In the list of plugins, select one of the following options:

   - — to stop the Avigilon integration plugin from communicating with the AllGuard Server.

   - — to restart communications.
5. Wait until the plugin status has updated, then select **Save**.

Troubleshooting

Integration Logs

Log files are generated as the Orchestrator application and the Avigilon integration plugin perform daily operations.

If you used the default installation directory, the Orchestrator files would be here:

```
C:\Program Files\AllGuard RFID System Orchestrator and Plugins
```

- The Orchestrator <u>output</u> logs would be here:
  - `..\orchestrator\orchestrator.out.log`
- The Orchestrator <u>error</u> logs would be here:
  - `..\orchestrator\orchestrator.err.log`
- The Avigilon integration plugin <u>output</u> logs would be stored in their own directory folder and are identified with the following suffix: `.out.log`
- The Avigilon integration plugin <u>error</u> logs would be stored in their own directory folder and are identified with the following suffix: `.err.log`

Older log files are auto-saved with a timestamp in its filename, while the file without a timestamp is the most current one.

Be aware that the Windows Event Viewer application would also log extra events and errors reported by each of the services, which can be useful in troubleshooting and monitoring activities.

Uninstall the Orchestrator and all Plugins

To uninstall the Orchestrator and all integration plugin services, you can use Windows *Add or remove programs* settings or run the `unins000.exe` file included in the application folder.

The uninstaller will stop and remove all services and related program files. Be aware that the program *folders* need to be manually deleted to fully remove the program. The remaining program folders are typically located here: `C:\Program Files (x86)\AllGuard RFID System Orchestrator and Plugins`