IndigoVision

Gallagher

Integration

Administrator's Guide

IndigoVision®
a Motorola Solutions Company

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1   ABOUT THIS GUIDE

This guide is provided for system administrators integrating Gallagher Command Centre system with IndigoVision Control Center suite.

Safety notices

This guide uses the following formats for safety notices:

⚠️ **Warning**	*Indicates a hazardous situation which, if not avoided, could result in death or serious injury.*

⚠️ **Caution**	*Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.*

Notice	*Indicates a hazardous situation which, if not avoided, may seriously impair operations.*

💡	*Additional information relating to the current section.*

References

The following documents are referenced in this document. The paths are to the default locations where the documents can be found.

1. Gallagher Controller API Interface Specification on Gallagher CD
   Gallagher Manuals – ***Gallagher FTCAPI Interface Spec.pdf***
2. Gallagher Help – Gallagher Command Centre User Guide
   available through the help menu of the Gallagher Command Centre main window
3. Control Center Help
   Start > IndigoVision > Control Center > Control Center Help
4. IndigoVision Portal for Integration software downloads and other IndigoVision partner resources.
   https://partners.indigovision.com
5. IndigoVision OPC Alarms and Events Integration Admin Guide
   Start > IndigoVision Gallagher Integration

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6. Gallagher Command Centre OPC Data Server Interface Specification on Gallagher CD Gallagher Manuals – ***Gallagher Command Centre OPC Data Server Interface Spec - v2.2.pdf***

2 OVERVIEW

The IndigoVision Gallagher Integration allows Gallagher Command Centre access control systems to communicate with IndigoVision Control Center installations.

Gallagher Command Centre users can be alerted by Control Center alarms or relays, monitor live video from cameras and play back recorded video from IndigoVision NVRs. Additionally, Gallagher events such as door alarms or denied access can be used to trigger events in IndigoVision Control Center.

The IndigoVision Gallagher Integration is comprised of three components:

- **Gallagher Alarms Integration**

  The Gallagher Alarms Integration supports forwarding zone alarms and detector activations and deactivations from the IndigoVision Control Center suite to the Gallagher Command Centre.

- **OPC Alarms and Events Integration**

  The OPC Alarms and Events Integration supports forwarding alarm activations from the Gallagher Command Centre to the IndigoVision Control Center suite.

- **Video Integration**

  The Video Integration allows live and recorded video streams to be displayed in the Gallagher Command Centre system.

All three of these components are installed using the IndigoVision Gallagher Integration installer, but can be deselected for installation during the installation process if not required.

Compatibility

The following section contains information about the supported application and operating system versions, as well as the supported camera hardware.

Gallagher Command Centre

For a list of supported Gallagher Command Centre versions, refer to the product datasheet.

Microsoft Windows

For a list of supported Windows operating systems, refer to the product datasheet.

Supported cameras

The following IndigoVision cameras and encoders are supported:

- 9000 Range
- 11000 Range
- BX Range

- GX Range
- UX Range
- SP Range
- Ultra Range
- Ultra 5K Fixed Camera

The Integration also supports all third party ONVIF, VSM and Camera Gateway cameras supported by Control Center v17.2.

Licensing

The IndigoVision Gallagher Integration is a licensed product which can be installed on a physical or virtual machine. It requires a valid software license or licensed USB dongle to be installed on the same machine. If you are using a licensed USB dongle from an existing installation, you do not need an additional software license.

The IndigoVision Gallagher Video Integration component does not require a license to operate and may be installed on as many devices as is required.

The Gallagher Command Centre must be configured with a valid license. For installations where the IndigoVision Gallagher Integration and Gallagher Command Centre are installed on separate servers, the Gallagher license must be installed on both machines.

► For more information on Gallagher Licensing, refer to the Gallagher Configuration Client User Guide included with the Gallagher installation files.

► For more information, *see "Installation" on page 11*.

3 DEPLOYMENT SCENARIOS

The IndigoVision Gallagher Integration can be set in a range of configurations depending on the needs of the system, with either IndigoVision Control Center or Gallagher Command Centre as the master system.

The following examples provide guidance on system design, the Integration components and an overview of the necessary configuration.

Scenario 1: IndigoVision Control Center operator can see events raised by the Gallagher Command Centre System (ToIv)

Configured events in the Gallagher Command Centre can be seen in IndigoVision Control Center and used to trigger events such as alarm recording or audio alerts. There is no connection back to Gallagher to acknowledge Gallagher events. In this case, IndigoVision Control Center acts as the master device.

Integration components used:

- IndigoVision OPC Alarms and Events Integration

► For more information, *see "Configuration of OPC Alarms and Events Integration" on page 17*.

Scenario 2: Gallagher Command Centre operator can see alarms and events raised by IndigoVision Control Center (FromIv)

Alarms and detector activations triggered by IndigoVision Control Center can be seen and acknowledged in Gallagher Command Centre. In this case, Gallagher Command Centre acts as the master device.

Integration components used:

- IndigoVision Gallagher Alarm Integration

► For more information, *see "Configuration of IndigoVision Gallagher Alarms Integration" on page 23*

Scenario 3: Monitor live and recorded video from IndigoVision cameras and NVRs

Live and recorded video from IndigoVision cameras and NVRs can be monitored from within Gallagher Command Centre. No event-based interaction is required.

Integration components used:

- IndigoVision Gallagher Video Integration

► For more information, *see "Configuration of IndigoVision Gallagher Video Integration" on page 27*

Scenario 4: Two-way event communication

This configuration provides full two-way communication between IndigoVision Control Center and Gallagher Command Centre. Gallagher Command Centre users can view and action alarms and detector activations from IndigoVision Control Center and also use the alarm management features of Control Center, such as recording video on alarm. In this configuration, Gallagher Command Centre acts as the master device.

Integration components used:

- IndigoVision OPC Alarms and Events Integration
- IndigoVision Gallagher Alarm Integration
- IndigoVision Gallagher Video Integration (optional)

This scenario involves Scenario 1 and 2 above, optionally including Scenario 3 as required.

► For more information on Scenario 1, *see "Scenario 1: IndigoVision Control Center operator can see events raised by the Gallagher Command Centre System (ToIv)" on page 9*

► For more information on Scenario 2, *see "Scenario 2: Gallagher Command Centre operator can see alarms and events raised by IndigoVision Control Center (FromIv)" on page 9*

► For more information on Scenario 3, *see "Scenario 3: Monitor live and recorded video from IndigoVision cameras and NVRs" on page 9*

Multi-server installations

The IndigoVision Gallagher Integration can be installed either on the same machine as Gallagher Command Centre or a remote networked machine. Installing on a remote machine requires additional configuration to allow the integration to connect with the Gallagher system.

► For more information about additional configuration required, *see "OPC Alarms and Events Integration – DCOM configuration" on page 13*

If video is required on a remote Gallagher Command Centre Workstation, each workstation requires a copy of the IndigoVision Gallagher Video Integration to be installed.

► For more information about remote installation, *see "Installing IndigoVision Gallagher Integration on a remote machine" on page 13*

4 INSTALLATION

This section describes the installation process for the IndigoVision Gallagher Integration:

Pre-installation

Before installing the IndigoVision Gallagher Integration, you must prepare the Gallagher system.

Preparing for Gallagher Alarms Integration

To enable the Gallagher Alarms Integration (FromIv Alarms feature) to communicate with the Gallagher system, do the following:

1. Install the Visual C++ redistributables for the Gallagher Controller API.

   On the Gallagher installation disk, navigate to *Utilities\Controller API 8.10.xx\Visual C++ Redistributable for Visual Studio 2017*.

   Run *VC_redist.x86.exe* and follow the on-screen instructions.

Notice   *A notification window may appear stating that another version of this product is already installed. In this case, installation of the redistributables is not required.*

2. Ensure the Gallagher Controller API is installed on the machine on which you want to install the Integration.

   On the Gallagher installation disk, navigate to *Utilities\Controller API 8.10.xx*.

   Run *GallagherFTCAPISetup_8.10.xx.msi* and follow the on-screen instructions.

3. If you are installing the Gallagher Integration on Windows Server, then navigate to the *Control Panel > System > Advanced System Settings > Advanced Tab > Performance > Settings... > Data Execution Prevention* tab, and select *Turn on DEP for essential Windows programs and services only*.

4. Ensure that a valid Gallagher license is present in the *C:\ProgramData\Gallagher\Command Centre* directory, or an equivalent location, on the machine where the Integration will be installed. If the directory does not exist then it should be created. The Gallagher license file has the format CommandCentre.lic and can be found within the above location on the Gallagher Command Centre machine.

5. You can install the Gallagher Controller API and the IndigoVision Gallagher Integration on the same machine as Gallagher Command Centre.

Integration installation

To install the Gallagher Integration:

1. Download the integration from the IndigoVision Portal.
   ► For more information, *see "References" on page 5*
2. Open the Gallagher folder and run ***Setup.exe***.
3. Follow the on-screen instructions.

By default, all three components of the Gallagher Integration are installed. If some of the components are not required, the **Custom Setup** page can be used to deselect components for installation.

Post-installation

After the IndigoVision Gallagher Integration is installed, it must be configured before it can be used.

► For more information on configuring the OPC Alarms and Events Integration, *see "Configuration of OPC Alarms and Events Integration" on page 17*

► For more information on configuring the Gallagher Alarms Integration, *see "Configuration of IndigoVision Gallagher Alarms Integration" on page 23*

► For more information on configuring the Gallagher Video Integration, *see "Configuration of IndigoVision Gallagher Video Integration" on page 27*

License the Integration

To run the Gallagher Alarms Integration and the OPC Alarms and Events Integration services, you must install a valid license. This can be a hardware or software license and allows the Gallagher Integration to run on a single specific machine. For multi-server installations, both the Gallagher Alarms Integration and the OPC Alarms and Events Integration must be installed on the same machine.

Notice   *The Gallagher Video Integration license allows the Integration to be installed on as many machines as required.*

You can manage the software license using the License Manager tool, which is installed as part of the IndigoVision Gallagher Integration standard installation.

1. Create a Client to Vendor file (c2v) that contains a fingerprint of the machine. This is then sent to IndigoVision Order Management.
2. Apply a Vendor to Client file (v2c) provided by IndigoVision.

You can transfer a license from one machine to another using the License Manager tool.

Installing with multiple network adapters or multiple IP addresses

When the IndigoVision Gallagher Integration is installed on a machine with multiple network adapters or multiple IP addresses, configure the property `IntegrationModuleIP` in the `System` section of the System configuration file.

► For more information, *see "System configuration file (System.conf)" on page 39*

Notice	*If you are upgrading from a previous release of the IndigoVision Gallagher Integration, you may need to add this property to the System configuration file.*
	Examples are available in the sample System configuration files, located in the IndigoVision Gallagher Integration installation folder.

Installing IndigoVision Gallagher Integration on a remote machine

When Gallagher Command Centre is installed on a machine, the installer performs many background tasks which prepare it for use. If the IndigoVision Gallagher Integration is to be installed on a separate machine, these changes must be made manually.

OPC Alarms and Events Integration – DCOM configuration

DCOM permission is required to allow the Integration to communicate with a remote Gallagher Server. To configure the DCOM settings, follow the steps below.

Notice	*There are security implications with allowing anonymous DCOM communications. It is recommended that these machines are not exposed to the internet. If WAN control is required, communication must be routed through a VPN.*

To enable DCOM access on the Gallagher Command Centre machine:

1. From the *Start* menu, do the following:
   a. Select *Run*.
   b. Enter `mmc comexp.msc /32`.
   c. Press *Enter*.
2. Navigate to *Console Root* > *Component Services* > *Computers*.
3. Right-click on *My Computer* and click *Properties*.
4. Select the *COM Security* tab. Under *Access Permissions*, click *Edit Default…*.
5. Click *Add* and add the user `Anonymous Logon`.
6. Ensure that the user has permissions for both Local Access and Remote Access, then click *OK*.
7. If `Everyone` is not present, add it.
8. In the *Group or user names* box, ensure that `Everyone` has permission for both Local and Remote Access.
9. Close the window and click on *Edit limits…*.
10. Repeat from step 5 to add the relevant permissions.
11. Close the window.
12. Under *Launch and Activation Permissions*, click *Edit Default…*.
13. Repeat step 5 through step 10 to add the relevant permissions.
14. Close the window and expand *My computer > DCOM Config*.
15. Locate and right-click *CCNTSAD*, then select *Properties*.
16. Select the *Security* tab.
17. Under *Launch and Activation Permissions*, select the *Customize* radio button and click *Edit…*.
18. Select `Everyone` and select *Allow* for all local and remote permissions.

19. If `Anonymous Logon` is not present, add it and ensure that the user has full local and remote allow permissions.

20. Repeat step 1 through step 13 on the machine where the IndigoVision Gallagher Integration is installed to complete the configuration.

Gallagher Alarms Integration – FTCAPI installation

The Gallagher Alarms Integration requires the Gallagher FTCAPI to be installed on the same machine to communicate with Gallagher Command Centre.

Notice   *When setting up the External System Server, the certificate file from the remote machine must be used, with the corresponding certificate file stored into the correct folder on the remote machine.*

► For more information on External System Server setup, *see "External System configuration in Gallagher Command Centre" on page 24*.

Firewall

Any firewall in use on the Gallagher Integration machine needs to be amended to allow access to the following services:

- Command Center Server (port 1072)
- IndigoVision Gallagher Integration (IndigoVision recommends port 1073)
  - ► For more information, *see "External System configuration in Gallagher Command Centre" on page 24*
- OPC traffic (port 135)

Upgrading

This section describes the procedures required to upgrade Gallagher Integration.

Upgrading from versions earlier than v3.0

Starting from version 3.0, the Gallagher Command Centre can use a stateful representation of Control Center detectors. This means that the Gallagher alarm can be processed only when the corresponding Control Center detector returns in a normal state.

The new behavior proceeds in the following sequence:

1. An NVR fault detector is triggered.
2. A new alarm is generated in the Gallagher System.

   The alarm can be acknowledged, but it cannot be processed until the NVR fault is restored.
3. The NVR fault is restored.
4. The alarm can be processed.

The new behavior reserves the use of the External Event Group 0:

- If detector events are configured to use External Event Group 0, then the Gallagher Alarms Integration service will not start.
- If you have existing detector events configured to use External Event Group 0, then remap these events to a different External Event Group.

Notice	*The available External Event Groups are 1 to 29.*

To upgrade from the earlier versions and activate the new behavior, do the following:

1. In the `[Events]` section of the system configuration file, enter the following setting:

   `EnableLegacyFromIvDetectorBehaviour=false`

2. Restart the Integration.

► For a sample configuration file, *see "System configuration file (System.conf)" on page 39*

Upgrading from versions earlier than v7.80

Gallagher Command Centre v7.80 introduces External System Servers, used to specify the machine running the Gallagher Integration. When creating an External System Server, the administrator must generate a security certificate per server and store the generated configuration file within the Gallagher Command Centre folder.

It is no longer required to specify the Listen Port within the registry as this is now configured through the External System Server.

► For a sample configuration file, *see "External System configuration in Gallagher Command Centre" on page 24*

Improvements to Gallagher security for network communications have impacted support for older controllers. The Gallagher Integration is no longer compatible with 3000/5000 or pre-7.80 6000 controllers. Alarms from IndigoVision (FromIv) can only be forwarded when the key device for the Gallagher license is a 6000 controller running v7.80 software. Sending Gallagher alarms and events to IndigoVision Control Center suite (ToIv) is unaffected by these changes.

5   CONFIGURATION OF OPC ALARMS AND EVENTS INTEGRATION

The following section describes the steps required to configure the Gallagher OPC Alarms and Events Integration.

🔆   *This is an example configuration and requires customization to suit your individual site requirements.*

Integration credentials

To connect the IndigoVision OPC Alarms and Events Integration to the Gallagher system, a suitable Gallagher user must be created, with the details stored in the system registry.

Notice   *The logon credentials for the OPC user are stored in plain text in the registry. It is recommended to use credentials that do not overlap with other accounts and limit the permissions the OPC user account has within Gallagher.*

Create a dedicated Gallagher user

To create a dedicated Gallagher user, do the following:

1. From the **Gallagher Configuration Client**, select *Manage > Operator Groups*.
2. Right-click and select *New > Operator Group*.
3. Name the group *OPC Operators* and leave the window open on the *Operator Privileges* section.
4. From the **Gallagher Configuration Client**, select *Manage > Operator Privileges*.
5. Privileges can now be dragged to the **OPC Operators** group. The following list is a possible configuration, but it depends on the configuration of the Gallagher installation.
   - Edit Alarms
   - Launch Configuration Client
   - Maintenance Override
   - Override
   - Override – Open Door
   - Run Macros
   - View Events and Alarms

- •   View Site

6. Click *OK* to finish creating the **OPC Operators** group. The *Operator Privileges* window can be closed but leave *Operator Groups* open.

7. Select *Manage > Cardholders* and right-click to create a *New > Cardholder*.

8. In the *General* tab, provide the first name `opc`.

9. Select the *Operator Configuration* tab and drag the *OPC Operators* group into the *Operator Group Membership* box. Click *Apply*.

   This enables the *Command Centre Logon* checkbox.

10. Enable the *Command Centre Logon* checkbox.

11. Provide the login name `opc`, and a password of your choice.

12. Uncheck *Force password change* at next logon checkbox.

13. Click *Ok* to finish creating the cardholder.

Notice   *The password is stored in plain text, so do not use account credentials that have been used elsewhere.*

Add the user to the registry

After the user is created in Gallagher, it must be added to the system registry as follows:

1. From *Start Menu > Run*, enter `regedit` and click *Ok* to open the Registry Editor.

2. Navigate to *Computer\HKEY_LOCAL_ MACHINE\SOFTWARE\WOW6432Node\Cardax\Command Centre FT*.

3. Add the following string values:
   - •   `OPCUserName`
   - •   `OPCPassword`

4. Double-click each REG_SZ value and enter the username and password specified instep 11 of Create a dedicated Gallagher user.

5. Close the Registry Editor.

6. From the **Windows Services** window, restart the **FT Command Centre Service**.

Configuring the IndigoVision OPC Integration

There are five main configuration files that need to be configured for the IndigoVision OPC.

The IndigoVision OPC Alarms and Events Integration Admin Guide contains detailed information on configuration.

► For more information, *see "References" on page 5*

To access these files, from the *Start Menu* open the IndigoVision Gallagher Integration folder.

- • **System**

   This covers the overall system configuration of the OPC component, including IP addresses of each server, the connection-specific configuration and logging configuration.

- • **Tolv Alarm Servers**

   This file specifies the IndigoVision Alarm servers to be used by the Integration.

- • **Tolv Configuration**

Referenced in the above Tolv Alarm Servers file. This maps the relationship between the received OPC events from Gallagher and the External Events in IndigoVision Control Center.

- **Tolv Alarm Actions**

  Maps the relationship between OPC Alarm Actions received from Gallagher and the Zone actions in IndigoVision Control Center.

- **Categories**

  Lists all the categories that the OPC Alarms and Events Integration receives from Gallagher.

Only the configuration files relevant to your current installation need to be configured. For example, if your system does not intend on making use of the Alarms Actions feature, the configuration file does not need to be changed.

The IndigoVision OPC Alarms and Events service will need to run as a Windows user with permission to connect to Gallagher. One way is to configure the IndigoVision OPC Alarms and Events service to run as the same Windows user as the Gallagher services. To configure this, do the following:

1. Open the *Start* menu and select *Run*.
2. Enter `Services.msc` and click *Ok*.
3. Locate the four Gallagher services (all start with `FT`) and access their properties.
4. Select *Log On* and confirm the user currently used to run the services. This is usually the Network Service User.
5. Close this window.
6. Access the same page for the **IndigoVision OPC Alarms and Events** service.
7. Ensure that the same user is being used for both services.

Notice   *The configured Windows account for the IndigoVision OPC Alarms and Events service is not retained on upgrade.*

Connecting to Gallagher OPC server

The following settings must be configured in the `[OPCServer]` section of the system configuration file:

```
ProgId=CCFTES.OPCEventServer
ClassId={9787F924-EADE-11D2-B21A-006097CA0286}
```

Gallagher events

The following table relates Gallagher terminology to the OPC standard terminology used in this document:

Table 1   Terminology

Gallagher	OPC
Event Group	Category
Event Type	Condition

Gallagher	OPC
Action: Log an event	Simple event
Action: Raise an alarm	Condition related event
Processed	Acknowledged
Acknowledged	N/A

Event categories (Gallagher event groups), Event types (Conditions), and messages are defined in the Gallagher help file *Event_Alarm_Messages.chm*. This can be accessed by opening the Gallagher Installation folder and navigating to *Command Centre > Client > Resources > en*.

Mapping Gallagher events to IndigoVision Alarms

This section describes an example where you want to capture an event raised by the Gallagher, which is in this case a failed door entry.

Notice   *When debug logging is enabled on the Integration, any messages received are written to the log. This can be useful when finding event information.*

Configure the IndigoVision Gallagher Integration

The event information needs to be gathered from Gallagher. Do the following:

1. Create a new Detector in Control Center to be triggered by the Gallagher event, noting the Input Number used. For this example, `55`.
   - ► For more information, *see "References" on page 5*
2. Enable debug logging on the Gallagher Integration and trigger the event. An entry similar to the following appears in the log:
   ```
   2019-08-26 10:08:29.928 [system] ToIv stateless event 'Door
   1:18:inactive:Shuto, Abby was denied access into Access Zone 1 through Door
   1. Reason\072 no zone privilege.' is not configured to send to Alarm Server
   '172.16.240.90'.
   ```
3. Ensure that the ToIv Alarms Server configuration has been set to the Alarm server used by Control Center.
4. From the *Start Menu*, open the *ToIv* folder within the *Gallagher Integration* folder.
5. The format of the entry is as follows:
   ```
   IvDetectorNumber,Event source: Event Category:Alarm State:Eventmessage
   ```
   From the examples above:
   ```
   55,Door 1:18:inactive: Shuto, Abby was denied access into Access Zone 1
   through Door 1. Reason\072 no zone privilege.
   ```
   Where `55` is the Input Number of the detector created in step 1.
6. Add lines for each zone with the corresponding Control Center event.
7. Close the file.
   The Integration displays a message that the service should be restarted.
8. Click *Yes* to restart the Integration service.

Acknowledging and processing alarms

The OPC Alarms and Events Integration supports acknowledging and clearing alarms triggered by Gallagher. When an alarm in Gallagher Command Centre is acknowledged, the corresponding alarm in Control Center is also acknowledged. When an alarm in Gallagher Command Centre is processed, the corresponding alarm in Control Center is cleared.

Configuration example

A valid OPC event must be configured, for example:

```
55,Door 1:18:inactive: Shuto, Abby was denied access into Access Zone 1 through
Door 1. Reason\072 no zone privilege.
```

This is used to trigger a zone in the Control Center named test zone. For this example, the alarm server address is 172.16.240.90.

1. From the *Start* menu, open the **System configuration** for the OPC Alarms and Events integration.
2. Enable alarm actions by setting *EnableAlarmActionsToIv* to true in the **[Events]** section.
3. From the *Start* menu, open the *Tolv Alarm Actions File*.
4. Add an entry, using the following format, to inform the integration which zones need to be cleared:
```
<Alarm Server IP address>:<Iv Zone Name>,<Event name>,<optional log message>
```
From the example above, this is as follows:
```
172.16.240.90:test zone, Door 1, test zone acknowledged
```
5. Close and save the file.
6. When prompted, restart the Integration service.

6 CONFIGURATION OF INDIGOVISION GALLAGHER ALARMS INTEGRATION

The Gallagher Integration integrates the sending of alarms and events from the IndigoVision Control Center suite to Gallagher Command Centre through the IndigoVision Gallagher Alarms Integration.

IndigoVision Gallagher Alarms Integration configuration files

There are three main configuration files that need to be configured for the IndigoVision Gallagher Alarms Integration. You can access them from the *IndigoVision Gallagher Integration* folder in the *Start Menu*. The configuration files are the following:

- **System**

  This file covers the overall system configuration of the Gallagher Alarms component, including the IP addresses of each server, the connection-specific configuration and logging configuration.
- **FromIv Alarm Servers**

  This file specifies the IndigoVision Alarm servers to be used by the Integration.
- **FromIv**

  Referenced in the **FromIv Alarm Servers** file. This maps the IndigoVision events to the External System Item Identity (ESIidentity) or External Event Group.

About External System Items

Before configuring FromIv events, consider how you want to represent IndigoVision zone alarms and detector activations within Gallagher.

You can use an External System Item to represent a zone the following ways:

- To see when new zone alarms are received, map the zone to the External System Item within the FromIv configuration file.
- To have a different alarm in Gallagher for each detector activation, map each Control Center detector to an External Event Group within the FromIv configuration file.
- To ensure that alarms can only be processed when the detector has been deactivated, ensure the following:
  - Legacy FromIv detector behavior is disabled within the System Configuration file.
  - A different External Event Group is used for each detector.

You can also use an External System Item to represent a Control Center detector:

- Use only one External Event Group for each External System Item.
- Disable legacy FromIv detector behavior within the System Configuration file.

- This ensures that only the alarm in Gallagher Command Centre is processed once the Control Center detector has been deactivated.

If you are using the legacy configuration method within the System configuration file, IndigoVision alarms or detector activations are mapped against one External System Item. Multiple External Event Groups can be used to represent zones or detectors.

External System configuration in Gallagher Command Centre

The following section describes how to configure External System items within Gallagher Command Centre for mapping to IndigoVision zones and detectors.

1. Configure a Gallagher External System Server for the machine where the Gallagher Integration is installed.
   a. In the Gallagher Configuration Client, open the **External Systems** window, right-click and then select *New… > External System Server*.
   b. Enter a suitable name to describe the machine then view the *Setup* section.
   c. Provide the Host Name for the machine with the Integration. An IP address can be provided.
   d. Choose a non-default value for *Port* if another application is using the same port or if the Gallagher Integration has been installed on the same machine as Gallagher Command Centre.
   e. Click *Import Certificate…* and locate the *GallagherFTCAPI.pem* certificate file created by the Gallagher Controller API installation. This can be found on the machine where the Gallagher Integration is installed by navigating to the installation directory for the Gallagher Controller API. By default, the location is *C:\Program Files (x86)\Gallagher\Gallagher FTCAPI*.

Notice	*For installations where the FTCAPI and Integration are installed on a separate machine from Gallagher, the .pem file from the remote location must be used.*

   f. Click *Export Configuration…* and copy this file to the location where the Gallagher Controller API is installed on the Gallagher Integration machine.
2. Create a Gallagher External System for the Gallagher Integration:
   a. In the Gallagher Configuration Client, open the **External Systems** window, right-click and then select *New… > External System*.
   b. Enter a suitable name to describe the Gallagher Integration then view the *API Setup* section.
   c. Select the controller that is a key device for the license copied when preparing for Gallagher Alarms Integration.
   ► For more information, *see "Preparing for Gallagher Alarms Integration" on page 11*
   d. Select the External System Server created in step 1.
   e. Enter a unique identity.
3. Create External System Items to map to zones and detectors within Control Center, depending on the desired behavior. To create External System Items, do the following:
   a. In the **External Systems** window, right-click and then select *New… > External System Item*.

b. Enter a suitable name to describe the zone or detector then view the **Event Response** section.

c. Configure suitable Action Plans for the Event Groups to be mapped against FromIv events.

d. Select the **External System** created for the Gallagher Integration in the previous steps.

e. Enter a unique value for `Identification`. This should match the External System Item (ESI) Identifier for the mapped event within the From IV Configuration file.

Notice   *For installations where acknowledgment of IndigoVision Control Center events from within Gallagher Command Centre is required, both the Name and the Identification field of the External System Item must be identical.*

If you are using the legacy configuration method, only one External System Item must be created, using the Identity value configured within the System configuration file for the Identification of the External System Item.

To use System Events to represent whether the Gallagher Integration can connect to the Gallagher Command Centre, an External System Item must be created where the Identification matches the Identity specified within the System configuration file.

Notice   *External Event Group 0 is reserved by the Gallagher Alarms Integration.*

IndigoVision Control Center Configuration

If the IMOnline, IMOffline, 3rdPartyOnline, and 3rdPartyOffline input numbers are defined in the system configuration files, and are relevant, they must be configured in Control Center.

Map an IndigoVision alarm or event to a Gallagher alarm or event (FromIv)

This section shows how to map a FromIv event between IndigoVision Control Center and Gallagher Command Centre.

For this example, an Alarm Zone in Control Center named **IvAlarmZone** is used with a suitable detector within named **IvDetector**. Additionally, there is a Gallagher External System Item set up in Gallagher Configuration Client named **GallagherEsi**. An External

Event Group has been configured in the Event Response page of the ESI properties with a suitable Action Plan and Alarm Zone. In this example, External Event Group 1 is used.

The format of the FromIv entry is as follows:

```
<event type>:<IvZoneName>:<Detector name>, <External System Item
name>:<EsiGroup>:<EventLogEntry>
```

If the Alarm zone is to be used as the trigger, the Detector name does not need to be included.

Using the example setup above, the following line is used to trigger an event if the IndigoVision Control Center zone is in the alarm state.

```
ZONE:IvAlarmZone,GallagherEsi:1:Iv Alarm Zone triggered.
```

Alternatively, if the detector is to be used, the format of the entry is as follows:

```
DETECTOR:IvAlarmZone:IvDetector,GallagherEsi:1:Iv Alarm Zone
triggered.
```

7 CONFIGURATION OF INDIGOVISION GALLAGHER VIDEO INTEGRATION

To view a live or recorded video stream in Gallagher Command Centre, do the following in Gallagher Configuration Client:

1. Configure Gallagher DVR System.
2. Configure Gallagher DVR Cameras.
3. Add DVR Cameras to action plans for viewing recorded video.

DVR System configuration

To configure a DVR System to work with Gallagher Video Integration, do the following:

1. Right-click the DVR System and select **Properties**.
2. Click the **DVR Setup** tab.
3. Select **IndigoVision live video** from the **Live Video** drop-down menu.
4. To enable viewing two or more live video cameras at the same time, select **Open a new window for each view** on the **Viewing Windows** group.
5. Select **IndigoVision Playback video** from the **Stored** drop-down menu.
6. Configure the username and password for the cameras associated with the DVR System if required.
   - ► For more information, refer to "Adding a new external system" in the Gallagher Command Centre User Guide.
7. For IndigoVision proprietary protocol PTZ devices, specify what priority the Gallagher Video Integration must use for connecting to the camera for PTZ control.

   In the Configuration box in the **Configuration** tab, enter PTZPriority=x, where x is a value from 1 to 10, with 1 being the highest priority and 10 the lowest. If no priority is specified, the default 5 is used.
   - ► For more information, *see "References" on page 5*

Notice *All cameras associated with a DVR System must use the same username and password.*

DVR Camera configuration

To configure a DVR Camera to work with Gallagher Video Integration, do the following:

1. Right-click the DVR Camera, and select **Properties**.
2. On the **Setup** tab, select the configured DVR System.

IndigoVision proprietary protocol devices

To configure IndigoVision proprietary protocol devices, do the following:

1. Configure the Identification property for IndigoVision proprietary protocol cameras using the following format:

   ```
   <IP>:<Encoder number>:<Stream number>:<Video connection>
   ```

   - **IP**: IP address of the IndigoVision camera (mandatory)
   - **Encoder number**: Default value is 1 (optional)
   - **Stream number**: Default value is 1 (optional)
   - **Video connection**: Video connection type for proprietary protocol devices (optional). Must be one of the following:
     - Reliable
     - Best Effort
     - Multicast
     - Firewall-Friendly

   If not specified, the default setting is Reliable.

   If the optional items are left empty, the default values are used.

   Examples:

   ```
   10.16.6.203
   10.16.6.203:2
   10.16.6.203:2:3
   10.16.6.203::2:Multicast
   10.16.6.203:2::Multicast
   10.16.6.203:::Firewall-Friendly
   ```

2. Update the configuration text with the following entries as required:

   ```
   Audio=0, 1, or 2
   PTZ=true or false
   PTZProtocol= <PTZ type>
   ```

   - **Audio**: Specifies the audio channel, 1 or 2, to enable streaming audio (optional).
   - **PTZ**: If the the device is a PTZ device, enter `PTZ=true`, otherwise leave blank (optional).
   - **PTZProtocol**: The protocol file that should be used by the integration (optional).

   Example:

   ```
   Audio=1
   PTZ=true
   PTZProtocol= IndigoVision IP Dome v2
   ```

ONVIF protocol and Video Stream Manager devices

1. Configure the Identification property for both ONVIF protocol cameras and cameras configured through the Video Stream Manager (VSM) using the following format:

   ```
   ONVIF:<IP>:<Profile Name>:<Video connection>:<Port>
   ```

   in which:

   - **ONVIF**: Indicates that the camera uses the ONVIF protocol (mandatory)
   - **IP**: IP address of the ONVIF or VSM camera (mandatory)
   - **Profile Token**: Token for the ONVIF profile to use for streaming (mandatory)
   - **Video connection**: Video connection type for ONVIF protocol or VSM cameras (mandatory if specifying port). Must be one of Best Effort, Reliable, Firewall Friendly, Multicast. If not specified, the default setting is Reliable.

- **Port**: The port used to access the camera. For ONVIF cameras this is optional but should always be specified for VSM cameras. The default is port 80.

  For example: `ONVIF:10.16.6.203:Profile1:Reliable:8080`

  The optional items can be empty and the default values will be used.

  Examples:
  ```
  ONVIF:10.16.6.203:Profile1
  ONVIF:10.16.6.203:Profile1:Multicast
  ONVIF:10.16.6.203:Profile1:FirewallFriendly
  ONVIF:10.16.6.203:Profile1:BestEffort:8080
  ONVIF:10.16.6.219:jpeg200_high_profile:Reliable:12001
  ```

2. Update the configuration text with the following entries as required:
   ```
   ServiceID= urn:uuid:48343338-3733-3431-3730-8ce7483c6fb7
   AccessURL= http://10.1.159.91/onvif/device_service
   PTZ=true or false
   Audio=0 or 1
   ```

   in which:

   - **ServiceID**: The Service ID of the device (required for playback and mandatory for BX100 devices)
   - **AccessUrl**: The Access URL of the device (optional)
     ▶ For more information, *see "Access URLs and Service IDs" on page 30*
   - **PTZ**: Whether the device is a PTZ device (optional)
   - **Audio**: Whether streaming audio should be enabled for the camera, where `Audio=0` disables audio and `Audio=1` enables audio (optional)

Camera Gateway devices

1. Configure the Identification property for ONVIF protocol cameras operating through Camera Gateway using the following format:
   ```
   CG:<CameraName>:<Profile Name>:<Video connection>
   ```

   in which:

   - **CG**: Indicates that the camera is a Camera Gateway device (mandatory)
   - **CameraName**: Unique name for the Camera Gateway device (mandatory)
   - **Profile Token**: Name of the profile to use for streaming (mandatory)
   - **Video connection**: Video connection type for ONVIF protocol devices (mandatory if specifying port). Must be one of Best Effort, Reliable, Firewall Friendly, Multicast. If not specified, the default setting is Reliable.

   The optional items can be empty and the default values will be used.

   Examples:
   ```
   CG:SonyCamera:000000
   CG:BoschCamera:000000:Multicast
   CG:AxisCamera:000000:FirewallFriendly
   ```

2. Update the configuration text with the following entries as required:
   ```
   ServiceID= urn:mg:0p7zPivdSCKeJt2FWmOvMA2
   AccessURL=<URL for accessing the PTZ>
   http://172.16.129.199:47002/Mv-
   ElwWBhwwGFsOECvbo6A2/02691c050e2f41a98b37e0a3efa33969/onvif/device_
   service
   PTZ=true or false
   Audio=0 or 1
   ```

   in which:

   - **ServiceID**: The Service ID of the device (mandatory)

- **AccessUrl**: The Access URL of the device (mandatory)
    - ► For more information, *see "Access URLs and Service IDs" on page 30*
- **PTZ**: Whether the device is a PTZ device (optional)
- **Audio**: Whether streaming audio should be enabled for the camera, where `Audio=0` disables audio and `Audio=1` enables audio (optional)

For example:

```
ServiceID= urn:mg:0p7zPivdSCKeJt2FWmOvMA2
AccessURL=http://172.16.129.199:47002/Mv-
ElwWBhwwGFsOECvbo6A2/02691c050e2f41a98b37e0a3efa33969/onvif/device_
service
PTZ=true
```

Action plan configuration

Action plans are used when their associated event of interest is triggered. To view recorded footage in Gallagher Command Centre, first add a camera to an action plan using the following steps:

1. In Gallagher Command Centre, click **Configure > Action Plans**.
2. Right-click the action plan being used to generate alarms and events, and select **Properties**.
3. In the **Armed or Disarmed** tab, drag-and-drop the cameras that relate to the alarm source into the **Cameras, Macros and External System Items** box.
4. Click **OK**.
    - ► For more information, see "Editing Action Plans with DVR Cameras" in the Gallagher Command Centre User Guide.

Access URLs and Service IDs

To get both the Access URL and Service IDs when required, run the Control Center Support Info tool and select **Device information**.

This command creates a .zip file containing a **devices.txt** file. The .txt file contains details of all the cameras in the site database. An example of one of the entries is below showing the Access URL and Service ID.

- BX400 HD
    - **Type:** Transmitter
    - **Standard:** ONVIF
    - **Service ID:** urn:uuid:0b6b62ea-b49a-49dc-906a-00d08908d712
    - **Access URL:** http://10.1.166.6/onvif/device_service
    - **Available:** Yes
    - **Manufacturer:** IndigoVision
    - **Model:** BX400 HD
    - **Firmware Ver:** 3.2.5.0
    - **Time Offset:** -00:00:00.977
    - **NTP Server:** Unknown

Both entries can then be copied and pasted into the configuration box.

View live video streams in Gallagher Command Centre

To view live video streams in Gallagher Command Centre, you must first configure a viewer.

1. Click *Viewer Configuration*.
2. Click *New Viewer* and select *Monitor Site Viewer*.
3. Enter a name for the viewer in the *Name* box, and click *Close*.
4. Double-click *Camera* in the Tile Toolbox.
5. Click *Click to Configure* on the Camera window.
6. Click *Please select a camera*, select the camera, and click *OK*.
7. Click *Close*, click *Save*, then *Log Off*.

After you have configured a viewer, you can view live video.

1. Log back in to Gallagher Command Centre.
2. Select the required viewer.

View recorded video streams in Gallagher Command Centre

To view recorded video streams in Gallagher Command Centre, you must first configure a viewer.

1. Click *Viewer Configuration > New Viewer*.
2. Select *Alarm Viewer*.
3. Enter a name for the viewer in the *Name* box, and close the window.
4. In the Tile Toolbox, double-click *Camera*.
5. On the *Camera* window, click *Click to Configure*.
6. Click *Stored footage from Action Plan Camera(s)*.
7. Close and save your work, then log off.

After you have configured a viewer, you can view recorded video.

1. Log back in to Gallagher Command Centre.
2. Select the configured viewer.
3. Click on the alarm of interest.

8 TROUBLESHOOTING

OPC Alarms and Events Integration

This section provides troubleshooting information for the Gallagher Integration alarm features.

OPC Alarms and Events Integration cannot connect

If the OPC Alarms and Events Integration cannot connect, do the following:

1. Check the log file on the Integration machine for any errors that may help identify the problem.

   If there is not enough detail, set the logging level to debug for the Integration, and then restart the Integration.

2. Look for any errors such as the following:

   ```
   COM exception caught in Client::Run: Unknown error 0xC1000001
   COM exception caught in Client::Run: Unknown error 0xC100015F
   ```

   If you can see one of these, then the OPC username and password may not been configured.

► For more information on configuring the OPC username and password, *see "Integration credentials" on page 17*.

► For more troubleshooting, see "IndigoVision OPC Alarms and Events Integration Admin Guide".

IndigoVision OPC Alarms and Events cannot connect to Gallagher

If the OPC Alarms and Events Integration cannot connect to the Gallagher system, check the logs for the following messages:

```
Exception caught in Client::Run: Unable to Advise connection point
of IOPCEventSink. Access is denied.
```

This is a permissions issue which prevents the OPC Alarms and Events Integration from communicating with Gallagher.

To resolve this issue, do the following:

1. Open the *Start* menu and select *Run*.
2. Enter `Services.msc` and click *Ok*.
3. Locate the four Gallagher services (all start with `FT`) and access their properties.
4. Select *Log On* and confirm the user currently used to run the services. This is usually the Network Service User.
5. Close this window.
6. Access the same page for the **IndigoVision OPC Alarms and Events** service.
7. Ensure that the same user is being used for both services.

```
Fatal error happened in Client::Connect: Unable to connect to OPC
server. Error: Access is denied.
```

Occasionally, the user that the OPC Integration uses to connect to Gallagher can become blocked. To confirm that this is the case, do the following:

1. Try to log into the configuration tool as the operator.
2. If an error message is returned stating that login has been unsuccessful, log in as an administrator
3. Navigate to *Manage > Cardholders*.
4. Right-click *opc* and select *Properties*.
5. Click the *Operator Configuration* tab and control the *Unblock* button.

   If the button is not grayed out, the user has been blocked.
6. Click *Unblock* to restore the user.

IndigoVision Gallagher Alarms and Events Integration

This section provides troubleshooting information for the Gallagher Alarms and Events Integration.

Gallagher Alarms Integration cannot connect

If the Gallagher Alarms Integration cannot connect to Gallagher (as notified by a 3rdPartyOffline alarm sent to Control Center on start-up, if configured) check the following:

1. Check the log file on the Integration machine for any errors that may help identify the problem.

   It may help to set logging level to debug for the Integration, if there is not enough detail, and then restart it.
2. Look for any errors such as:

   ```
   Unable to connect to server (start up phase): Could not
   create Gallagher External Event Input instance (COM).
   CoCreateInstance error (REGDB_E_CLASSNOTREG) -
   GallagherFTEIAPI not registered.
   ```
   or
   ```
   Unable to connect to server: Could not create Gallagher
   External Event Input instance (COM). CoCreateInstance error
   (0x80004005).
   ```

   If one of those is seen then there are several known possible causes:

   • The GallagherFTEIAPI component is not registered.

     Check that the Gallagher Middleware software is installed and that the minimum version is installed for the version of the Gallagher software. If not, uninstall and reinstall the Gallagher Middleware software.

   • Another process is already listening on port 1072. See step 6 below.

   • The Windows registry is corrupted.

     In the unlikely event that this is or may be the cause contact your system administrator.
3. Look for an error such as:

   ```
   Unable to connect to server: Could not create Gallagher
   External Event Input instance (COM). CoCreateInstance error
   (0xc12e0001) - Unknown error 0xC12E0001.
   ```

If this is seen then there are several known possible causes:

- The External System Server has not been correctly configured. Ensure that the External System Server has been created with the certificate imported and settings exported.
  - ► For information on how to setup External Systems, *see "External System configuration in Gallagher Command Centre" on page 24*
- The controller acting as a key device for the license is offline or is not compatible. The Gallagher Integration will not communicate with 3000/5000 or pre-7.80 6000 controllers. A 6000 controller running v7.80 software must be used.
- If the integration and the Gallagher Command Centre are installed on a different machines, ensure that the Gallagher FTCAPI has been installed on the same machine as the Integration.

  Additionally, when setting up the External System Server in Gallagher, ensure that the certificate from the remote machine is used. By default, this is located in ***C:\Program Files (x86)\Gallagher\Gallagher FTCAPI***. The resulting configuration file must also be stored in this folder on the remote machine.

4. Look for an error such as:

   ```
   Unable to connect to server: Failed to send heartbeat to
   Gallagher. Error (0x8000000a) The Gallagher API is not ready
   to accept events. (E_PENDING)
   ```

   If this is seen then there are several known possible causes:

   - The Gallagher Integration license is valid but does not match the license on the Gallagher Command Centre.
   - The Gallagher Integration has been configured with a Gallagher identity in ***System.conf*** that does not match the Gallagher External System Item's identity.
   - The Gallagher External System and/or External System Item are incorrectly configured.

5. Check that a firewall is not blocking the port (1072 or 1073).

6. Check that there are no port conflicts with another process listening on the same port as the Gallagher Integration.

   A tool that can be used to help identify ports in use is netstat. The `-a` option lists all ports in use. Refer to netstat documentation for more information.

FromIv Events not appearing in Gallagher

If alarms are not appearing in Gallagher, then the following end-to-end check for a single alarm may help to determine the source of the problem.

1. Check that the Gallagher Alarms Integrations service is running.
2. Check that the Integration has been configured correctly.
3. Enable debug level logging.

   Do this by setting `Level=debug` in the `[Log]` section of the system configuration file, then restart the IndigoVision Gallagher Alarms Integrations service.

   This will allow the Integration to log all alarms and events received from the Alarm Server, not just those that have been mapped in the Alarms From IV configuration file.

4. Verify that the Gallagher Alarms Integration is sending alarms or events to Gallagher by opening the most recent Gallagher Alarms Integration log file, and check for messages stating that the alarm has been sent. For example:

   ```
   2010-10-26 16:13:51 [system] Event 'IvZone01:Alarmed' received from
   FromIv Alarm Server '10.16.6.74'
   ```

```
2010-10-26 16:13:51 [system] Queuing event: "GallagherIM1:5:Zone Alarm 01
from 10.16.6.74" for sending to Gallagher external group 5
2010-10-26 16:13:51 [system] Alarm '10.16.6.74:IvZone01:Alarmed
(GallagherIM1:5:Zone Alarm 01 from 10.16.6.74)' queued for sending to
Gallagher.
2010-10-26 16:13:51 [system] Event "GallagherIM1:5:Zone Alarm 01 from
10.16.6.74" sent to Gallagher External System Item [GallagherIM1]
```

5. If step 4 does not identify that an alarm has been sent for the IndigoVision alarm of interest then look to see if the Gallagher Alarms Integration is receiving the event or alarm but has not been configured. For example:

```
2010-10-26 16:20:59 [system] FromIv Zone '10.16.6.74:'IvZone11' is not
configured to send to the 3rd party system.
```

If the alarm is seen in the log file as not being configured, then the Alarms From IV configuration file and/or Alarms Server configuration file is not correctly configured to forward this event to the Gallagher system.

Control Center cannot acknowledge or process events within Gallagher Command Centre

Check the following:

1. Confirm that the ESIs used to trigger events in Gallagher have identical name and identification fields.
2. Confirm that the Gallagher OPC Alarms and Events Integration has been installed and configured.

   Although the Gallagher Alarm and Events integration is used to send information from the Control Center to Gallagher, the OPC integration is required to return information back to the Control Center.
3. Ensure that the **EnableAlarmActionsToIv** setting in the OPC system configuration file is set to `true`.
4. Check the log and look for any messages similar to:

```
ToIv stateless event 'Zone:60:inactive:Gallagher Log message. zone -
AccessDenied' is not configured to send to Alarm Server '172.16.240.90'.
```

   This indicates that an Alarm Action has not been created for the relevant alarm.

► For more information, *see "Acknowledging and processing alarms" on page 21*

License issues

You should not encounter license issues if the Gallagher Integration is installed on a machine that has not had Aladdin HASP software installed previously.

However, possible issues may occur if the machine to be installed on has previously had Aladdin HASP software installed on it.

Before installing the Gallagher Integration, uninstall IndigoVision software that is licensed with either a hardware or software license.

Check that the Sentinel HASP Dongle is Active

If the Sentinel dongle is working correctly, a red LED is illuminated on the dongle.

Check that the device drivers are listed in Device Manager:

1. Navigate to *Control Panel > System*.
2. Select the *Hardware* tab.

3. Select *Device Manager*.
4. Navigate to *Universal Serial Bus Controllers*, and expand the list.
5. Check that the following are listed:
   - SafeNet Inc. Sentinel HL Key
   - SafeNet Inc. HASP Key
   - SafeNet Inc. USB Key

IndigoVision Gallagher Video Integration

This section provides troubleshooting information for the Gallagher Video Integration.

Gallagher Video Integration cannot connect

The following status message is displayed on the DVR Camera window when the integration cannot connect to the Gallagher system:

```
"Connection Failed"
```

This may be due to the following issues:

- The IP address entered for the camera is incorrect.
- The network connection to the camera has been lost.
- The camera has been switched off.
- The port entered for the camera is incorrect.

Gallagher Video Integration cannot retrieve the Access URL or Service ID

The following status message is displayed on the DVR Camera window when the integration is unable to retrieve the Access URL for an ONVIF device automatically.

```
"Retrieving Access URL... Ensure the device is online, or override the Access
URL"
```

This may be due to the following issues:

- The IP address of the device is incorrect
- The camera is offline

The camera does not respond

One of the following status messages is displayed on the DVR Camera window when the camera does not respond:

```
"Not responding"
```

This may be due to the following issues:

- The Encoder Number is not valid for the camera.
- The Stream Number is not valid for the camera.

The video stream is rejected

The following status message is displayed on the DVR Camera window when the camera does not respond:

```
"No license."
```

This may be due to the following issue:

- There may be insufficient camera licenses within Gallagher Command Centre.

To confirm:

1. Log in to the Gallagher Configuration Client
2. Go to *File > Server Properties*.
3. Click the *Limits* tab and confirm the available licenses and the current camera count.

The camera is private

The following status message is displayed on the DVR Camera window when the camera doesn't respond:

`"Locked out."`

This may be due to the following issue:

- The camera has been locked by the administrator.

Not authorized

The following status message is displayed on the DVR Camera window when the camera doesn't respond:

`"Not authorized"`

This may be due to the following issue:

- Either the username or password for the camera is not correct.

Notice *As the username and password are specified at the DVR level, all cameras in the system must have the same access credentials. For increased security, IndigoVision recommends creating a common Gallagher-specific user with limited permissions on each camera.*

PTZ cannot connect

The following status message is displayed on the DVR Camera window when the integration cannot connect to the PTZ device:

`"PTZ: Unable to connect to the camera."`

This may be due to the following issues:

- Another user with a higher PTZ priority value is connected to the camera.
- The ONVIF profile provided may not support PTZ.

The following status message is displayed on the DVR Camera window when the integration cannot connect to the PTZ device:

`"An unspecified error occurred. This was most likely caused by a connectivity error. Check camera is online, the credentials are correct, and that the camera is responding to commands."`

This may be due to the following issues:

- The PTZProtocol file name is not correct. The files can be found in: *C:\Program Files (x86)\IndigoVision\Integration\Gallagher Video\PTZ*

A SYSTEM CONFIGURATION FILES FOR ALARM INTEGRATION

This section contains examples of the configuration files required by the Gallagher Alarms Integration.

► For more information about OPC Alarms and Events configuration files, *see "References" on page 5*

System configuration file (System.conf)

System Configuration File (System.conf)

This file lists the configurable system parameters that are independent of alarms and events.

The usage of the parameters listed in the sample configuration file below is explained in their comments:

```
[AlarmServer]
#
# The IP address of the primary Alarm Server (NVR-AS) must be specified if SystemEvents
# are enabled.
#
# IP=0.0.0.0
[System]
#
# IntegrationModuleIP is the IP of this machine that should be used to send
# events. It should match the External System which is configured in Control
# Center.
# Note: This must be specified for machines with multiple IP addresses. It may
# be omitted for machines with just a single IP address.
#
# IntegrationModuleIP = 0.0.0.0
[Gallagher]
#
# MANDATORY: A Gallagher External System Item identifier is required when the
# Mapping approach specified in the [Events] section "configuration" or system
# events are configured in the [ThirdPartySystemEvents] section to send to
# Gallagher.
#
# If system events are not configured and the Mapping approach of
# "ESIconfiguration" has been used, this parameter can be omitted.
#
# Identity=indigovision
```

```
[Events]
#
# The Mapping approach.
#
# The default and recommended Mapping is "ESIconfiguration".
# This allows IndigoVision alarms or detectors to be mapped to multiple
# External System Item identifiers.
# For more details on configuring External Systems and mapping of events, refer
# to the IndigoVision Gallagher Integration Module Admin Guide.
#
# Mapping=ESIconfiguration
#
# Set to "configuration" to use the legacy configuration approach to send all
# IndigoVision alarms and detector activations to the ESI specified in the
# [Gallagher] Identity parameter. This is not the recommended approach and
# should only be used for upgrading existing installations using this approach.
#
# Mapping=configuration
#
Mapping=ESIconfiguration
#
# OPTIONAL: Control whether to use legacy behaviour for FromIv detector events.
#
# When set to 'true', Gallagher events created by the Integration can be
immediately
# processed (default behaviour).
# When set to 'false', Gallagher events created by the Integration can be
processed
# only when the Control Center detector is deactivated. This is supported only
# when the Mapping parameter above is set to ESIconfiguration.
# If the parameter is not provided then the legacy behaviour will be enabled.
#
EnableLegacyFromIvDetectorBehaviour=false
[SystemEvents]
#
# SystemEvents are events that may be sent to Control Center to report the
# status of, or problems with, the Integration Module.
#
# The number assigned to a system event is a user-defined event number
# that corresponds to an external system input number of an alarm source
# in Control Center.
#
#
# If IMOffline is defined, an event with this number will be sent
# to the NVR/Alarm Server whenever the Integration Module is about to go
# offline.
# Reasons for going offline include a manual service stop request, the host
# pc shutting down, or when the USB license dongle is removed or expires
# (trial dongles only).
#
# IMOffline=1
#
# If IMOnline is defined, an event with this number will be sent
# to the NVR/Alarm Server whenever the Integration Module has
# successfully started up.
```

```
#
# IMOnline=2
#
# If the 3rdPartyOffline property is defined, an event with this
# number will be sent to the NVR/Alarm Server whenever the Gallagher
# (via the Integration Server Module) connection is lost.
#
# 3rdPartyOffline=3
#
# If the 3rdPartyOnline property is defined, an event with this
# number will be sent to the NVR/Alarm Server whenever the Gallagher
# (via the Integration Server Module) connection is re-established
# after a previous 3rdPartyOffline event has occured.
#
# 3rdPartyOnline=4
[ThirdPartySystemEvents]
#
# ThirdPartySystemEvents are events that may be sent to Gallagher to report the
# status of, or problems with, the Integration Module.
#
# The number assigned to a Gallagher system event corresponds to a
# Gallagher external group number.
#
# Note that all system events sent to Gallagher are forwarded to the ESI
# specified in the [Gallagher] Identity parameter.
#
# If the AlarmServerOffline property is defined, an event will
# be sent to Gallagher using the external group number specified
# whenever an IndigoVision alarm server (NVR-AS) goes offline.
# The value, if set, must be a valid Gallagher External Group
# (i.e. in the range 0 to 29).
#
# AlarmServerOffline=0
#
# If the AlarmServerOnline property is defined, an event will
# be sent to Gallagher using the external group number specified
# whenever an IndigoVision alarm server (NVR-AS) comes online
# after being offline.
# The value, if set, must be a valid Gallagher External Group
# (i.e. in the range 0 to 29).
#
# AlarmServerOnline=0
[Log]
#
# The log level.
# The default log level is "info", which will log each alarm sent to the
# NVR/Alarm Server and all errors.
#
# Change to "err" to minimize the log output to just errors.
# Change to "debug" to maximize log output.
#
# Logging level
# err (minimize output, log errors only)
# info (log alarms and errors)
```

```
# debug (maximize output, log all information)
#
# Level=info
```

Alarms from IndigoVision configuration file(s)

During installation, one default Alarms from IndigoVision configuration file (FromIv.conf) is located in the FromIv folder.

► For more information on using more than one Alarms from IndigoVision configuration file, *see "Alarm Servers configuration file (FromIvAlarmServers.conf)" on page 44*

There is one mapping entry per line in the mapping file. Each entry is a comma-separated pair as shown in the example below.

```
# This file contains the event type of 'ZONE', the zone name
# and Gallagher ESI identifier (if applicable),
# Gallagher event group and event log entry.
# The event type of 'ZONE' and the zone name are separated by a ':'.
# These parameters together form a single unit that uniquely
# describes the IndigoVision event.
#
# This is separated from the Gallagher event entry by a ','.
#
# The Gallagher event entry is composed of an ESI identifier (if applicable),
# an External Event Group and an event log entry separated by a ':'
#
# Valid values for the Gallagher External Event Group are integers
# in the range of 1 to 29.
# For zone events, or detector events if legacy detector behaviour is enabled,
# the External Event Group 0 may also be used.
#
# Note that External Event Groups 10-29 are only supported by Gallagher Command
# Centre v7.50 and later.
# For ESIconfiguration events mapping approach:
# ZONE:ZoneName,ESIidentity:EventGroup:EventLogEntry
#
# For configuration mapping approach:
# ZONE:ZoneName,EventGroup:EventLogEntry
# For detector events, the zone containing the detector needs to be specified,
along
# with the detector name.
# Detector definition example:
#
# DETECTOR:ZoneName:DetectorName
# Assuming the Alarm Server is configured with unique zone names and
# detector names are unique within each zone, these parameters together form a
# single unit that uniquely describes the IndigoVision zone or detector.
# This is separated from the Gallagher event name by a ','
#
# An optional third field, separated by another comma can be added
# with a description of the event mapping.
# Examples:
#
# When IndigoVision to Gallagher events mapping approach
# is configuration:
```

```
# ZONE:IvZone01,1:GallagherEvent01
# ZONE:IvZone02,2:GallagherEvent02
# DETECTOR:IvZone03:Detector1,3:GallagherEvent03
#
# When IndigoVision to Gallagher event mapping approach
# is ESIconfiguration:
# ZONE:IvZone01,esiIdentity1:1:GallagherEvent01
# ZONE:IvZone02,esiIdentity2:2:GallagherEvent02
# DETECTOR:IvZone03:Detector1,esiIdentity3:3:GallagherEvent03
# The ZoneName cannot contain the characters ',' or ':' or '\'.
# The Gallagher ESI identifier (if applicable) and
# the event log entry cannot contain the characters ',' or '\'.
# Also, any leading or trailing whitespace will be stripped.
#
# However, octal escape codes can be added to include these characters.
# Note that as the backslash is used as the escape character then the
# backslash itself requires to be escaped via an octal escape code.
#
# The valid range for octal escape codes is \001 to \177
#
# Some frequently used escape codes:
# Character ' ': => \040 - for allowing leading or trailing spaces
# Character ':': => \072
# Character ',': => \054
# Character '\': => \134
# Examples:
# ZONE:IvZone\07201,1:GallagherEvent01
# ZONE:IvZone\05402,esiIdentity\1342:2:GallagherEvent\04002
```

The first element of each entry uniquely identifies the following:

- The alarm based on the event type (ZONE) and the zone name.
- The alarm based on the event type (DETECTOR), the zone name, and the detector name.

The second element is a string equal to the Gallagher event name.

Both elements can include special characters by utilizing octal escape code. For example, in order to produce the mappings of:

```
Zone of  "IvZone:102" to Gallagher event of "Gallagher\Event,102"
Detector of "Detector:1" in zone "IvZone03" to Gallagher event of
GallagherEvent103
```

The following mappings should be entered:

```
ZONE:IvZone\072102,1:GallagherEvent01
DETECTOR:IvZone03:Detector\0721,esiIdentity3:3:GallagherEvent103
```

Notice   *Alarms from IV configuration file names cannot include leading or trailing white space. Such filenames cannot be mapped in the Alarm Servers Configuration file.*

Alarm Servers configuration file (FromIvAlarmServers.conf)

This file contains a list of IndigoVision Alarm Server IP addresses that receive IndigoVision alarms. Each Alarm Server IP address is associated with an Alarms From IndigoVision configuration file as shown in the example.

```
#
# List of each FromIv Alarm Server (NVR-AS)
# and its FromIv file (without .conf extension)
#
# Each mapping entry consists of two (optionally three) comma separated fields
#
# The first field is the IP address of the Alarm Server
#
# The second field is the Alarms From IV configuration file excluding file
# extension of ".conf". All Alarms From IV configuration files are located in
# the "FromIv" folder. For example an entry of "FromIv" indicates that the
# Alarms From Iv configuration file is .\FromIv\FromIv.conf
#
# The optional third field can be used to provide a description.
#
# Note that it is possible to set up all Alarm Servers to use the one default
# Alarms From Iv configuration file by entering "FromIv" as the second field
# for all entries.
# IP address, FromIv file, Description (optional)
# Example:
#
# 0.0.0.0, FromIv, Default FromIv/FromIv.conf
```

All the entries should include a valid IP address for the first field. Anything written after '# ' is considered as a comment.