



UNIFIED VIDEO, ACCESS & SECURITY SYSTEMS



INCEPTION

Tech Guide - Integrations
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INNERRANGE.COM

Contents

Overview

This technical note covers the integration functionality within Inception, documenting all steps required to connect the Inception system to a supported third-party system.

Introduction

Integrated Connections allow the Inception's functionality to be extended beyond the typical intruder and access control functionality already provided, providing rich integration into external systems. One such integration that Inception supports is Inner Range's own "IR Video" range, allowing the Inception to connect to, monitor, and control IR Video NVRs and cameras.

Integrations are represented in Inception as two different components: Integrated Connections and Integrated Devices. The Inception's connection to a third-party device, be it an NVR, camera, or some other device, is stored as an Integrated Connection. A *Refresh Devices* can then be performed against this connection to populate all devices linked to this connection. For example, if connecting to an IR Video NVR, an Integrated Connection is configured with the NVR's details, and then a *Refresh Devices* will pull in all cameras connected to the NVR and populate them in the Inception system as Integrated Devices. The NVR itself would also be configured as an Integrated Device, allowing for its state to also be monitored.

Configuration

Web Page Profile Permissions

This section will provide a walkthrough on fully configuring an Integrated Connection to an IR Video NVR that has multiple cameras attached to it. Before starting, ensure that the IP address of the NVR is known, as well as the NVR's administrator username and password.

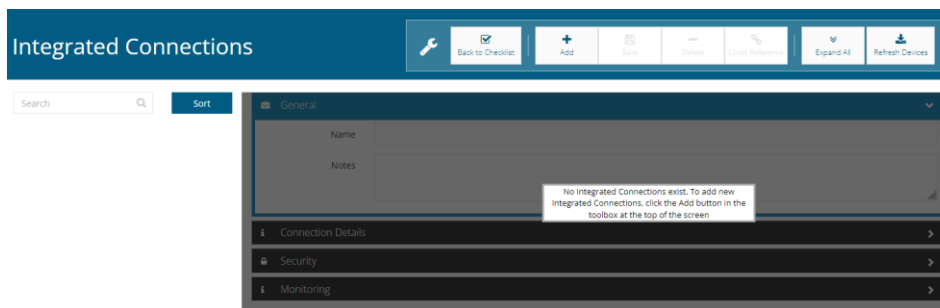
First, ensure that the currently logged in user has the appropriate Web Page Profile permission to view and edit Integrated Connections and Integrated Devices. This can be done by navigating to *[Configuration > Users > Web Page Profiles]*, selecting the Web Page Profile linked to the user, and confirming that, under *Item Editing Permissions*, both *Integrated Connections* and *Integrated Devices* are set to *Modify*.

Integrated Connections	Modify	▼	?
Integrated Devices	Modify	▼	?

Configuration

Creating an Integrated Connection

Integrated Connections can be created and managed on a dedicated page, found by navigating to [Configuration > Integrations > Integrated Connections].



Upon clicking the *Add* button, a guided wizard will commence that will walk through the initial configuration and connection to a third-party device. Note that the Integrated Connection will not be saved until the wizard has been completed, removing any risk of half completed Integrated Connections persisting.

Setup Integrated Connection
✕

This wizard provides a guided walkthrough for configuring an integrated connection for the first time.
[Read More...](#)

Name:

Integration Type:

Cancel
Next

The *Setup Integrated Connection* step allows the naming of this Integrated Connection, as well as selecting the type of integration to use. As at the time of writing, the only supported *Integration Type* is Inner Range's *IR Video*, which is used to connect to our *IR Video* NVRs and cameras. Clicking *Next* will then move on to the *Connect to Device* step.

Configuration

Connect to IR Video Device ✕

Enter the connection details of the device you are attempting to connect to below, then click *Next*.

[Read More...](#)

IP Address:

Port:
Default HTTPS Port: 443

Admin Username:

Admin Password:

[Back](#) [Next](#)

Clicking *Next* will move on to the *Load Devices* step, where any child devices linked to this connection can be pulled.

IR Video: Load Devices ✕

From the table below, select the discovered child devices that should be added to the Inception system, then click *Next*.

[Read More...](#)

Devices fetched successfully

Name	Type	Model	Change	Include
Bretts IR NVR	NVR	NVR3908E2-P8-JA	Add	<input checked="" type="checkbox"/>
Channel05	Camera	SN-IPR8050HCAA-B2.8-13	Add	<input checked="" type="checkbox"/>
Dual Lens Out The Window	Camera	IR-VE-1082V0-P2	Add	<input checked="" type="checkbox"/>
Looking At PTZ Dome	Camera	IR-VE-6040V0-30X	Add	<input checked="" type="checkbox"/>
Out The Door	Camera	IR-VE-2081V0-2	Add	<input checked="" type="checkbox"/>
PTZ Dome	Camera	IR-VE-6040V0-30X	Add	<input checked="" type="checkbox"/>

[Previous](#) [Refresh](#) [Next](#)

Configuration

Upon this step being shown, the Inception system will automatically attempt to fetch all devices associated with this connection. The devices fetched could just be one device (for example, when connecting directly to a camera), or multiple devices (for example, connecting to an NVR and fetching both the NVR and all its connected cameras).

The *Include* column allows the selection of which devices to save in the Inception system as Integrated Devices. Any that are not selected on this screen will not be saved in Inception. If in the future these devices are required to be present in the Inception system, a manual *Refresh Devices* will need to be performed (explained later in this document).

If the fetching of devices fails for any reason, an error code will appear above the table, and the *Refresh* button can be used to reattempt the device fetching.

IR Video: Load Devices ✕

From the table below, select the discovered child devices that should be added to the Inception system, then click *Next*.
[Read More...](#)

Failed to fetch devices: No connection could be made because the target machine actively refused it. (192.168.140.248:442)

ID	Name	Type	Model	Change	Include
----	------	------	-------	--------	---------

[Previous](#) [Refresh](#) [Next](#)

Clicking *Next* will move to the *General Configuration* step.

IR Video: General Configuration ✕

Decide whether the integrated connection should monitor events and log to review, then click *Save*.
[Read More...](#)

Enable Monitoring

Enable Review Logging

[Previous](#) [Save](#)

Configuration

When *Enable Monitoring* is ticked, the Integrated Connection will receive all events sent from the connected device, including any events occurring on any child devices connected to this device as well. If *Enable Monitoring* is ticked, *Enable Review Logging* will appear as an available option. Ticking this will result in all monitored events also being logged to review.

NOTE: It is recommended to leave *Enable Review Logging* unchecked, as this can result in a large amount of extraneous review events being logged, which could result in the Inception's review limit being reached prematurely.

Clicking *Save* will finalize the Integrated Connection process, creating a new Integrated Connection in the Inception system with the settings provided during the wizard, as well as create a new Integrated Device for each device that was marked to be included during the *Load Devices* step.

If, in the future, the *Admin Password* of the Integrated Connection needs to be revealed, this can be done by clicking the little reveal button next to the *Admin Password* field.



Admin User Name: admin

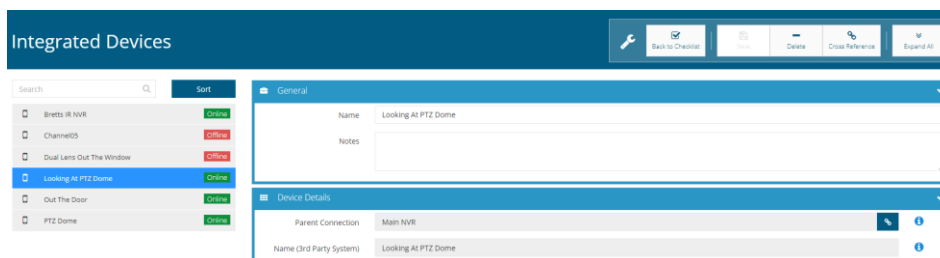
Admin Password: [Redacted] [Reveal]

Event Polling Frequency: 30 seconds

This password can only be revealed if the logged in user has the *Allow Password Reveals* checkbox ticked within their *Web Page Profile*.

Integrated Devices

Once fetched from the third-party system, any Integrated Devices linked to an Integrated Connection can be found on the *Integrated Devices* page ([\[Configuration > Integrations > Integrated Connections\]](#)).



From this page, Integrated Devices can be managed and deleted as necessary, however they cannot be added. Each Integrated Device has a reference to its *Parent Connection*, as well as a button that directly links to that Integrated Connection.

Configuration

If the Integrated Device supports PTZ, then two additional properties will be displayed in the editor: *Supported PTZ Presets* and *Supported PTZ Tours*.

Supports PTZ

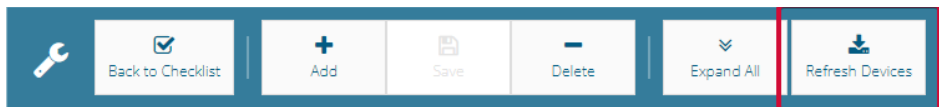
Supported PTZ Presets (Server Rack, 1);(Keylocker, 2);(The Other PTZ Camera, 3);

Supported PTZ Tours

These values are provided by the Integrated Device and reflect what's been configured on the third-party system. If these presets are changed on the third-party system, a *Refresh Devices* will need to be performed on the parent Integrated Connection.

Refresh Devices

Once an Integrated Connection has been fully configured, it may still be required to repopulate Integrated Devices, due to new devices being added, or existing devices being configured/deleted. This can be done on the *Integrated Connections* page by selecting the Integrated Connection, then clicking on the *Refresh Devices* button.



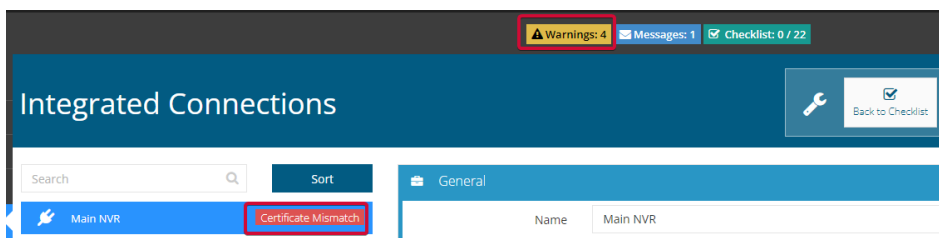
This will repull a list of all linked devices from the Integrated Device and display them in a table. From here, any desired changes can be included, then applied by clicking *Apply Changes*.

HTTPS Connection Management

To promote and ensure network security, all Integrated Connections created in the Inception system are configured to use HTTPS, and this cannot be changed. Upon initial connection, the Inception will collect store the *Trusted Certificate Fingerprint* of the third-party device's certificate.



If the *Trusted Certificate Fingerprint* stored in Inception is detected to be different than the connected device, due to the certificate changing on the third-party device, the Integrated Connection will refuse to connect to the third-party device and a system warning will be generated on the Inception system.



Configuration

Integrated Connections - Certificate Hash Mismatch

The following Integration Connections currently have a certificate that do not match the fingerprint of the last valid certificate:

- Main NVR

You may resolve this by navigating to the **[Configuration > Integrations > Integrated Connections]** page and using the 'Manage Certificate' button next to the *Trusted Certificate Fingerprint* property of the affected Integrated Connection, allowing you to update the system's certificate fingerprint to match the connection's fingerprint.

[Resolve](#)

To resolve this issue, the stored *Trusted Certificate Fingerprint* must be updated to match the new certificate fingerprint of the third-party device's certificate. This can be done manually, by editing the *Trusted Certificate Fingerprint* field, or can be automatically updated by clicking the link button next to the property.



Clicking this button will open a dialog that allows the automatic matching of the stored *Trusted Certificate Fingerprint* with that of the third-party device.

Manage Integration Certificate [Close]

This dialog allows you to view the selected Integrated Connection's current trusted certificate, and match the stored trusted fingerprint to the connection's fingerprint if it does not match.

Current Trusted Certificate Fingerprint:

[Redacted]

Integration Certificate Fingerprint:

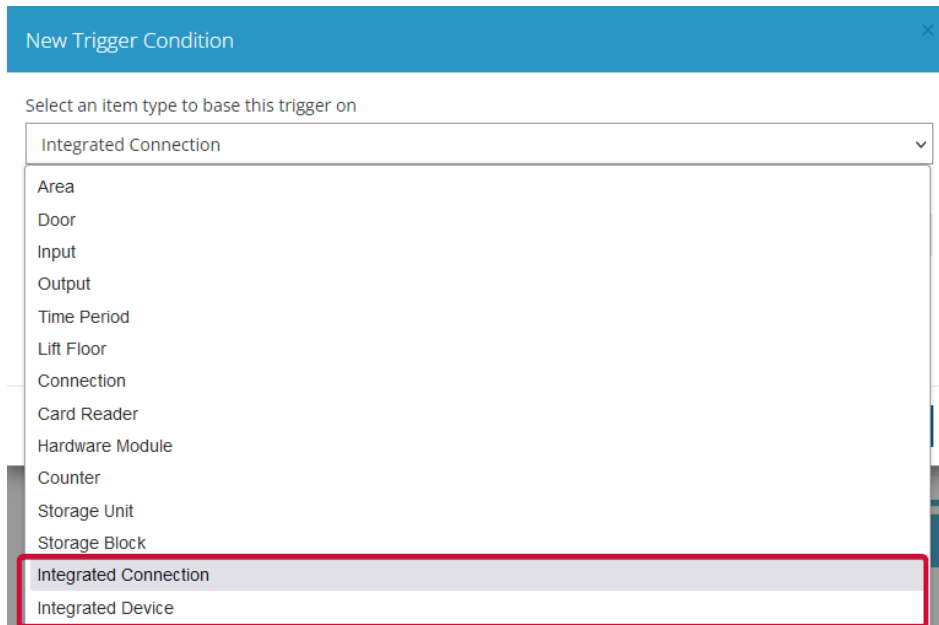
[Redacted]

[Cancel](#) [Update Certificate Fingerprints](#)

Configuration

Automated Action Triggers

Events that come through from both Integrated Connections and their linked Integrated Devices can be used as triggers for Inception's Automated Actions. When configuring an Automated Action's trigger condition, two new trigger types are now available: *Integrated Connection* and *Integrated Device*.



Once an item type is selected, the specific connection/device and the desired state can then be selected. Integrated Connections currently only have one state that can be monitored, *Connection Error*, while Integrated Devices have the following state options:

- Device Offline
- IP Conflict
- Cable Disconnected
- Network Disconnected
- Illegal Access
- Video Signal Lost
- Video Signal Abnormal
- Disk Alarm
- Disk Full
- Disk Attenuation
- Motion Detection
- Physical Alarm Input
- Line Crossed
- Double Virtual Fence
- Loitering Analysis
- Illegal Parking
- Intrusion Analysis

Configuration

Once configured, any event of the selected type will correctly transition the Automated Action's state between *True* and *False*. For example, the following Automated Action will arm all areas in a building once a line crossed event has been detected from a vault camera:

The screenshot displays the configuration interface for an Automated Action, organized into three main sections:

- General:** Contains a text field for the Name, set to "Lockdown Building On Vault Line Crossed", and a text area for Notes.
- Trigger Condition:** Features an "Enable Action" checkbox which is checked. Below it, the "Trigger Condition" is set to "True when ALL of the following are true". A single condition is listed: "Vault Camera (PTZ) Is Line Crossed". There are "+ Trigger" and "+ Group" buttons to the right.
- Actions When True:** A table with columns for Action Type, Item, and Action. One action is configured: Control Area (Item: All Areas, Action: Arm Area). Below the table are "Add Items" and "Remove Selected Items" buttons.
- Actions When False:** A section at the bottom, currently empty, with a right-pointing arrow.

With this configuration, once the select camera (*Vault Camera (PTZ)*) sends a *Line Crossed* event to the Inception system, the Automated Action's state will transition to *True*, and the Inception will arm all areas on the system.

Configuration

Automated Action Actions

Automated Actions can also be used to send commands to connected Integrated Devices. When adding a new entry to either *Actions When True* or *Actions When False*, a new *Control Integrated Device* option is now available as an option.

Actions When True

What action would you like performed?

- Control Integrated Device
- Control Output
- Control Area
- Control Door
- Control Input
- Control Custom Input
- Control SIFER/OSDP Reader
- Control Siren
- Control Floor
- Control Storage Unit
- Send Custom Text
- Run Scheduled Task
- Forgive Anti-Passback
- Send Custom Text to Notifier
- Control Counter
- Control Integrated Device

Once a target Integrated Device has been selected, the following control types can be selected:

- Send to PTZ Preset
- Control PTZ Tour
- Control Physical Output

An Integrated Device's available PTZ Presets and PTZ Tours, if any, can be found within the Integrated Device's settings, under *Supported PTZ Presets* and *Supported PTZ Tours* respectively. These can then be copied across into relevant field within the Automated Action's action definition.

Supported PTZ Presets

(Server Rack, 1);(Keylocker, 2);(The Other PTZ Camera, 3);

Supported PTZ Tours

Configuration

Actions When True

What action would you like performed?

Control Integrated Device

Integrated Device: Vault Camera (PTZ)

How To Control: Send to PTZ Preset

Ptz Preset Id: Server Rack

Cancel **Confirm**

For example, the following Automated Action will send a PTZ camera to the *Server Rack* PTZ preset upon the *Default Area* being armed.

General

Name: Eyes On Server Rack When Armed

Notes:

Trigger Condition

Enable Action:

Trigger Condition: True when ALL of the following are true

- Default Area Is Armed

+ Trigger + Group

Actions When True

Action Type	Item	Action
Control Integrated Device	Vault Camera (PTZ)	Set PTZ Preset to Server Rack

Add Items Remove Selected Items

Actions When False

Action Type	Item	Action
-------------	------	--------

Add Items Remove Selected Items



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