

Integration

2N IP Intercom  
and  
Inception Panel.

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### Who should read this:

Anyone wishing to send events from an Inception panel to a 2N IP Intercom.

### Audience:

The reader should have a good understanding of Inception panel and 2N IP Intercoms.

### Overview:

This document describes how a 2N IP Intercom and the Inner Range Inception panel can be integrated. This document assumes that both the 2N IP Intercom and Inception panel are fully functioning.

### Required equipment:

- 2N IP Intercom (Enhanced License).  
Inception Panel.  
PoE Network and DHCP server.

### 2N IP Intercom prerequisites

- Testing was carried out using firmware versions 2.26.xx & 2.27.xx and 2.28.xx

### Inception Prerequisites

- Inception Firmware version 1.4.3 or higher
- For serial communication, a USB to Serial adaptor is required
- A 3rd Party System that can send or receiving fixed HEX or ASCII messages via TCP or Serial, or controllable via HTTP get requests.

### Introduction:

2N IP Intercoms can send and receive HTTP commands, the feature allows bidirectional communication for HTTP enabled devices, connection can be established to multiple third-party systems simultaneously.

The Inception Panel has support for multiple bidirectional communication methods, however, the “HTTP command set” supports **outbound communication only**, this limits the “out of box” integration capabilities with 2N Intercom, essentially the 2N Intercom becomes a receives for events sent by the Inception panel, the 2N Intercom can use these events to “BeginCall”, “StartMulticastSend”, “SetOutput” or any of the available actions.

Both the 2N Intercom and Inception panel have support for HTTP API or REST API respectively. The API's are fully feature and support function such as Call management, I/O control, Door management and alarm management etc. using the GET, PUT, POST and DELETE requests methods. (refer to the respective product API documentation for a full list of supported features.)

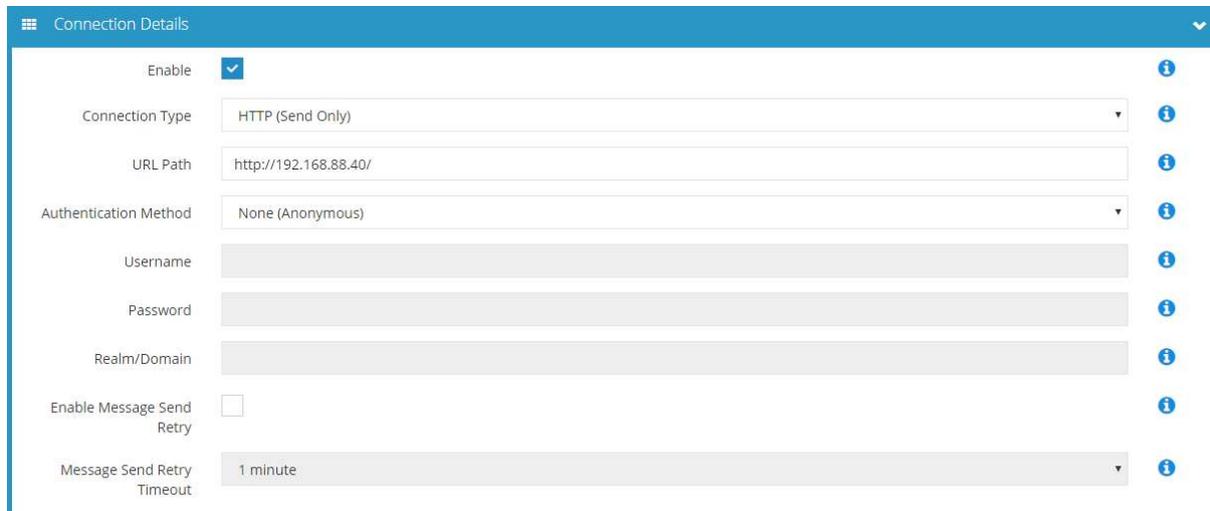
### In summary:

The Inception panel as an “out of the box” solution adds little value or enhancements to the 2N IP Intercom due to the HTTP send command limitation. However, to fully harness the power of both product development of middleware would be required.

## Inception panel configuration:

Before configuring the 3rd Party Automation Interface, it is important that you understand the capabilities of the 2N IP Intercom and have access to the documentation.

Connections are created and edited on the [**Configuration > General > Connections**] page.



Field	Value	Info Icon
Enable	<input checked="" type="checkbox"/>	Yes
Connection Type	HTTP (Send Only)	Yes
URL Path	http://192.168.88.40/	Yes
Authentication Method	None (Anonymous)	Yes
Username		Yes
Password		Yes
Realm/Domain		Yes
Enable Message Send Retry	<input type="checkbox"/>	Yes
Message Send Retry Timeout	1 minute	Yes

You can create as many connections as needed to allow communication both to and from multiple devices.

Connections require several communication parameters to establish and maintain a connection with a 3rd party system, along with any data framing information to indicate when messages start and end.

## HTTP Connection Type for 2N IP Intercoms:

This Connection makes HTTP requests to a specific URL. However, unlike the other connection types, a HTTP connection can only send messages and not receive them. This connection type can be used with systems that expose a HTTP based control interface.

If authentication is required, a HTTP Connection can optionally use Basic or Digest authentication for devices/APIs that require valid user credentials.

When configuring a HTTP connection type you will need to specify the base URL for the requests (e.g. <http://192.168.88.40/>). The automated action responses are then configured with the remainder of the URL (e.g. an action sending text “enu/trigger/[UerDefined]?parameter=value” would send a HTTP request to [http://192.168.88.40/enu/trigger/PlaySound?Sound=\\*9](http://192.168.88.40/enu/trigger/PlaySound?Sound=*9)

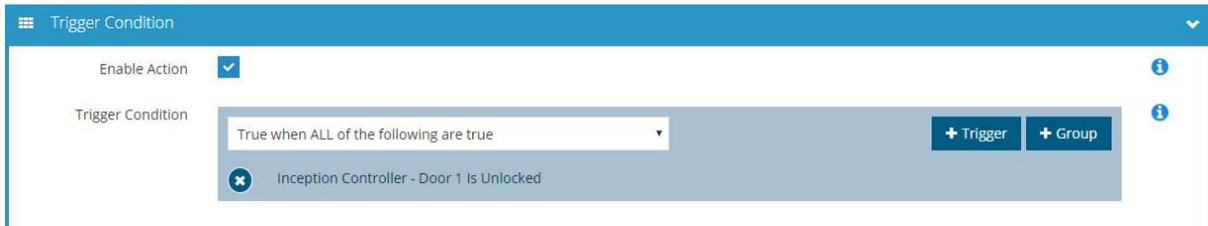
### Configuring an Automated Action:

Once you have configured the connections, the next step is to configure the automated actions. Automated actions are responsible for triggering actions based on received messages or sending messages out via a connection.

Automated actions are created and edited on the [**Configuration > Automated Actions**] page.

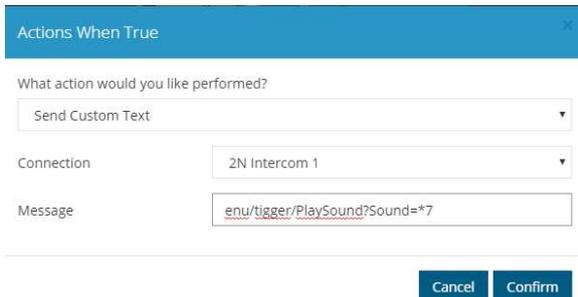
### Automatic action Trigger Condition:

The trigger condition defines what will trigger the action event, such as an area arming or a door unlocking.

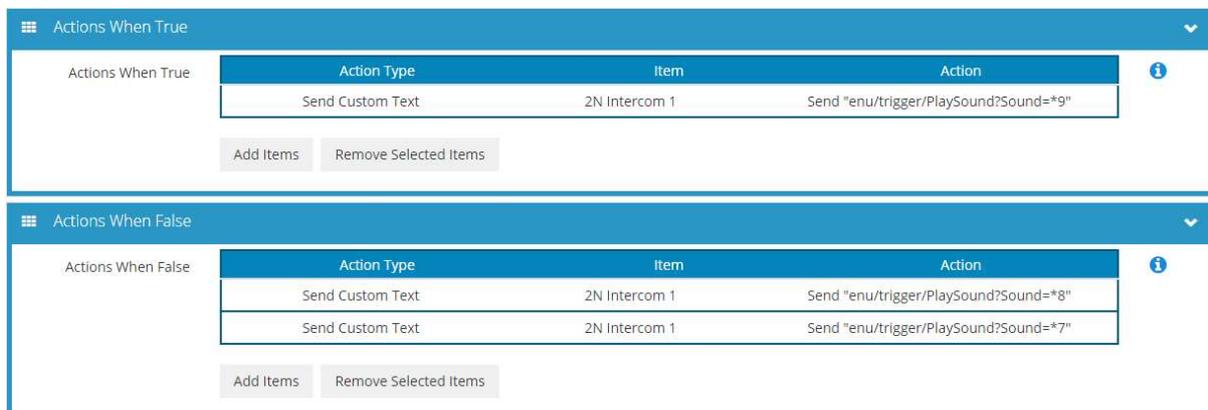


### Automatic action send event:

In order to send a HTTP event, you must use the “Send Custom Text” action. This action can be used with any trigger, such as an area arming or a door unlocking, allowing state changes of items in Inception to trigger actions and tell the 2N IP Intercom about the state change.



Both the Action When True and the Action When False options can be used to send different messages to the 2N IP Intercom within the same automated action. This allows a single automated action to send different messages when an area is armed or disarmed, or when an output is on or off.



## 2N IP Intercom configuration:

Before configuring the 2N IP Intercom, it is important that you understand the capabilities of the 3rd Party Automation Interface for the Inception panel and have access to the documentation.

Automation Functions are created and edited on the [Services > Automation] page.

ENABLED	NAME	STATUS	ACTIONS
<input type="checkbox"/>	OutputChanged	Stopped	
<input type="checkbox"/>	Fingerprint	Stopped	
<input checked="" type="checkbox"/>	Receive HTTP Message	Running	
<input checked="" type="checkbox"/>	Function4	Running	
<input type="checkbox"/>	Function5	Stopped	

You can create up to 5 Automation function, each function can be configured with multiple HTTP Triggers and actions.

## Automation:

The sample below uses a single HTTP Trigger with different actions. Play Sound action and Activate Switch action, flexibility is provided by the Formatter. This allows 3rd party systems to send dynamically messages for greater flexibility.

