

XPressEntry

XPressEntry / Genetec

Revision 07/10/2023

For use with the
XPressEntry Mobile Access Control System

By



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Purpose

This document is intended to instruct users on how to synchronize an XPressEntry system with a Genetec Security Center system.

Installation Pre-requisites

1. Genetec Security Center 5.8+ GA or newer
2. Genetec SDK 5.8+ or newer
3. Synergis™ Software Appliance
 - a. Installed via Cloud Link device or as a service via Windows.
4. XPressEntry Server 3.3+ (Provided by Telaeris)
5. Genetec Administrator User Login Access
6. Synergis™ Appliance User Login Access
7. TCP Ports 5500 and 8012 are open between XPressEntry and Genetec

License Requirements

1. Genetec SDK License Certificate Part Number: **GSC-1SDK-Telaeris-XPressEntry**
2. XPressEntry License with Genetec Feature Enabled

Synchronizing Genetec Security Center with XPressEntry

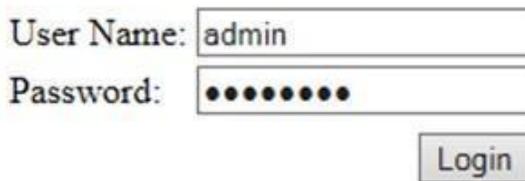
It is assumed that Genetec Security Center and Synergis™ Cloud Link appliance is installed.

Setup Synergis™ RIO Protocol

Enable RIO Protocol on Synergis™ Cloud Link

1. To enable the RIO Protocol on the Synergis™ Cloud Link appliance, open a web browser on a PC that can communicate with the Synergis™ Cloud Link appliance.
2. Add the following into the URL: [https://\[UnitIP\]/Features/DuiRIO/Enabled/Set?value=true](https://[UnitIP]/Features/DuiRIO/Enabled/Set?value=true), where **[Unit IP]** is the **IP address** of your Synergis™ Cloud Link appliance.
3. Login to the Synergis software.
 - a. Default username: admin

Login



User Name:

Password:

- b. Default password: software
4. After successfully logging in, click the link below. If successful, you will receive a confirmation that says, Feature Enabled.

Login successful

[Logout](#)

<https://genetec57.ad.telaeris.com/Features/DuiRIO/Enabled/Set?value=true>

```
<?xml version="1.0" encoding="ISO-8859-1"?>  
<Response>Feature enabled</Response>
```

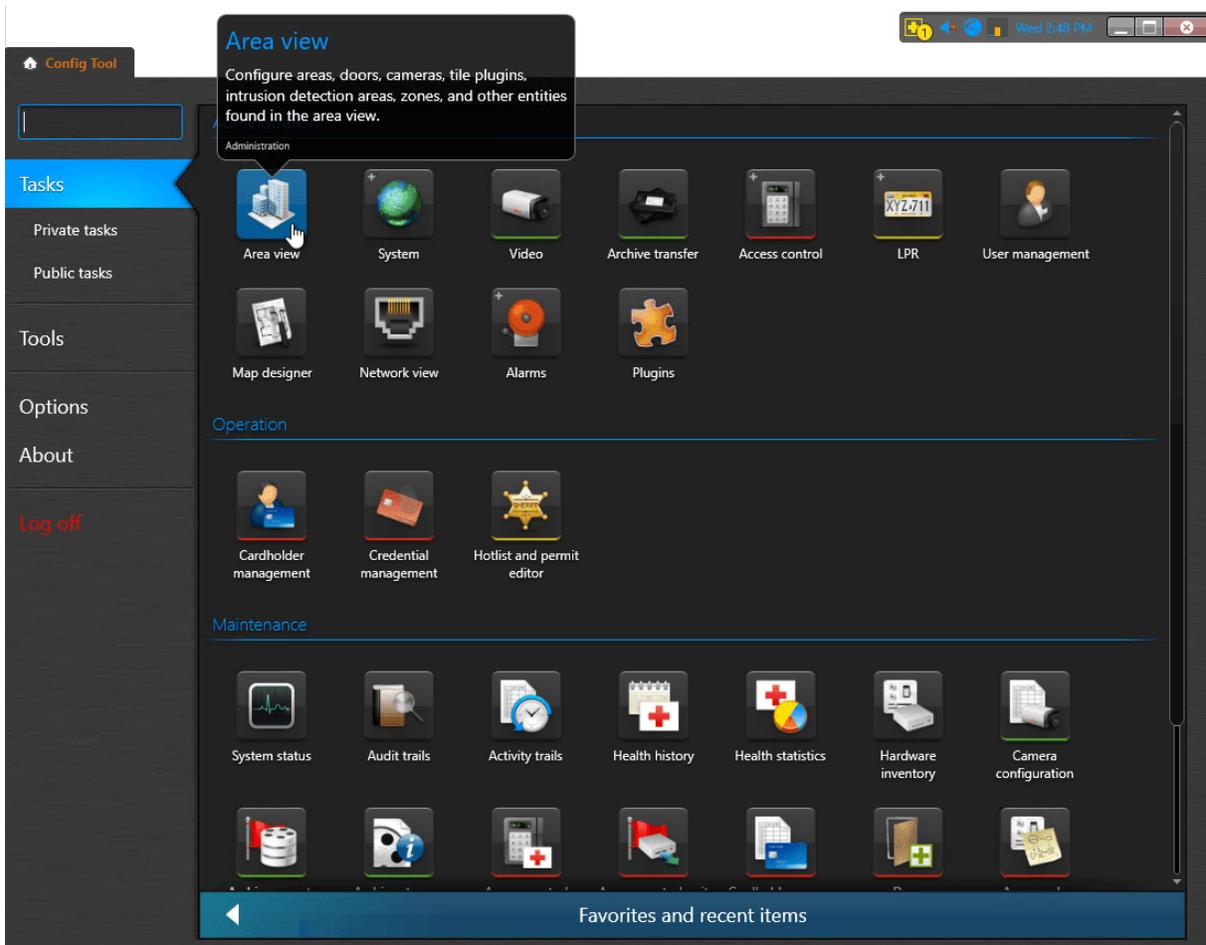
Setup Genetec Data and Settings

Handhelds

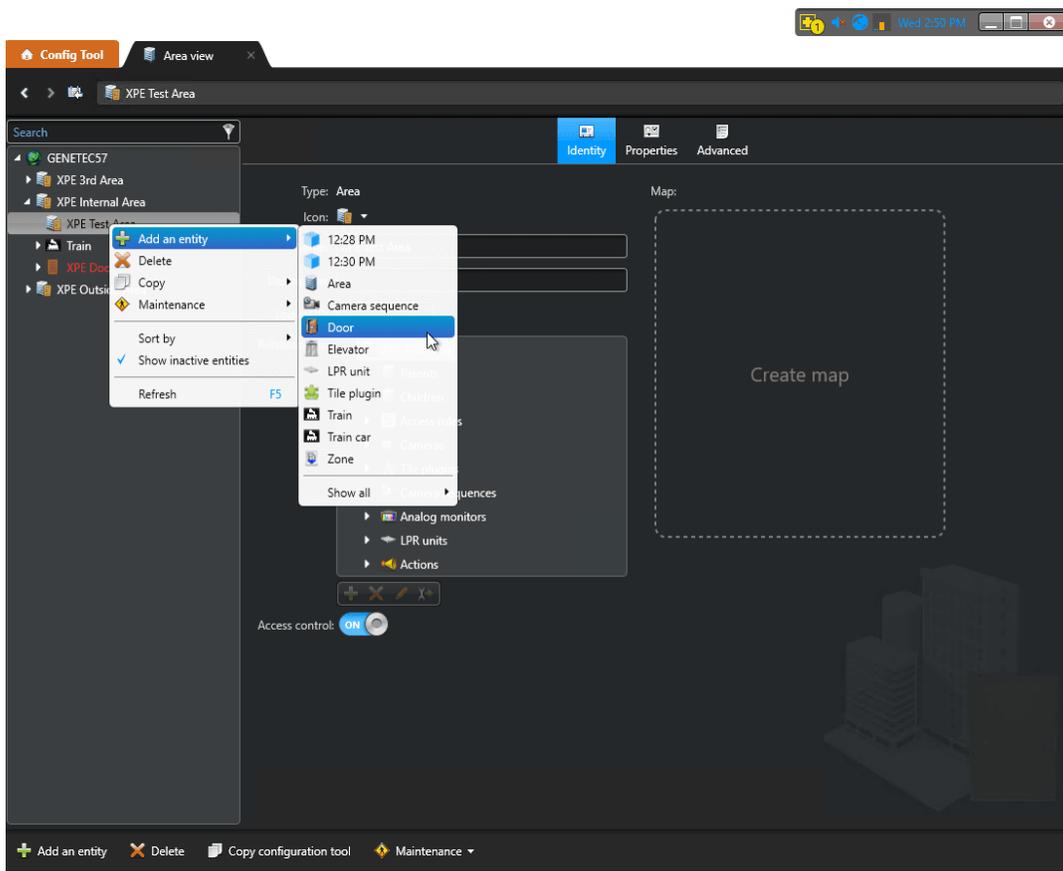
A Genetec door should be created for every physical XPressEntry handheld reader. Each door must have at least one to two readers. The door created will have to match an interface name created under the Synergis™ RIO hardware.

Create Door

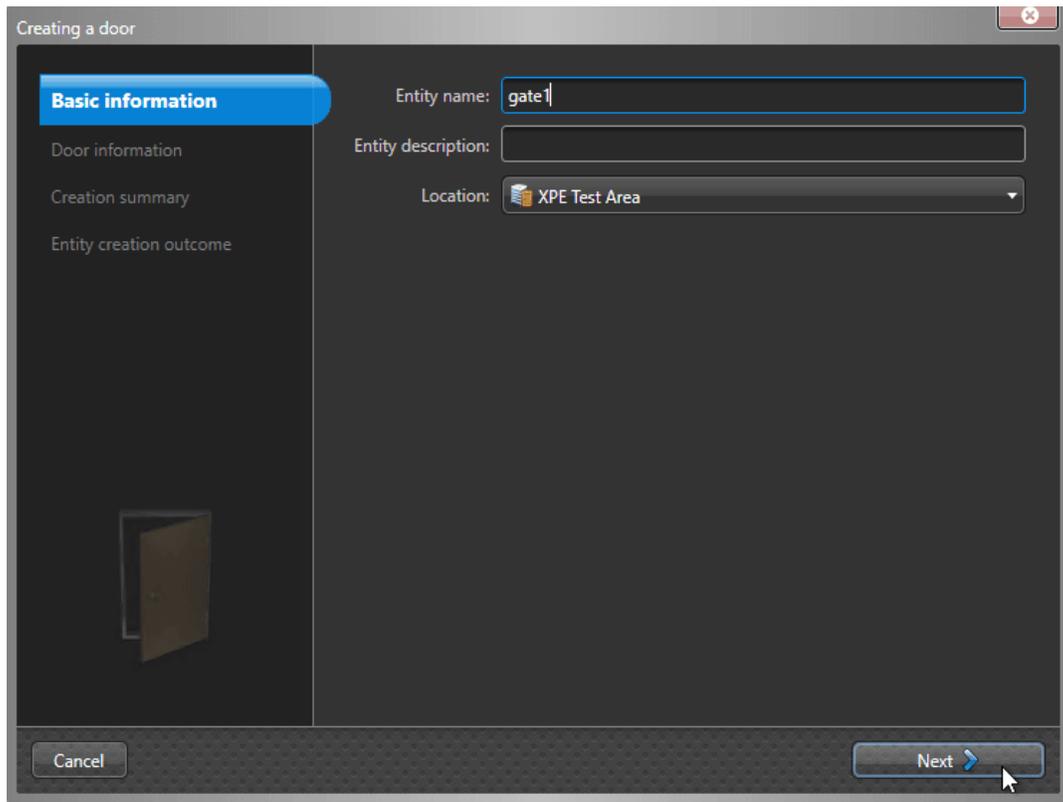
1. Go to **Config Tool > Area View**.



2. Right click the entity under which you would like to add the door. Typically, this is done under an **Area**.



The **door entity name** must be *exactly* what the **interface address** was created as in the previous step. We used **gate1** as the Address name in the RIO Channel, so we will call our door **gate1**.



3. Set the **Access Control Unit** to the Synergis™ Cloud Link appliance that was used to setup the RIO Protocol.
4. Set the **Interface module** created in the RIO Protocol that we are using. Click **Next** > **Create** > **Close**.

Creating a door

Basic information

Door information

Creation summary

Entity creation outcome

Alpha door side: In

Omega door side: Out

Access control unit: Synergis appliance

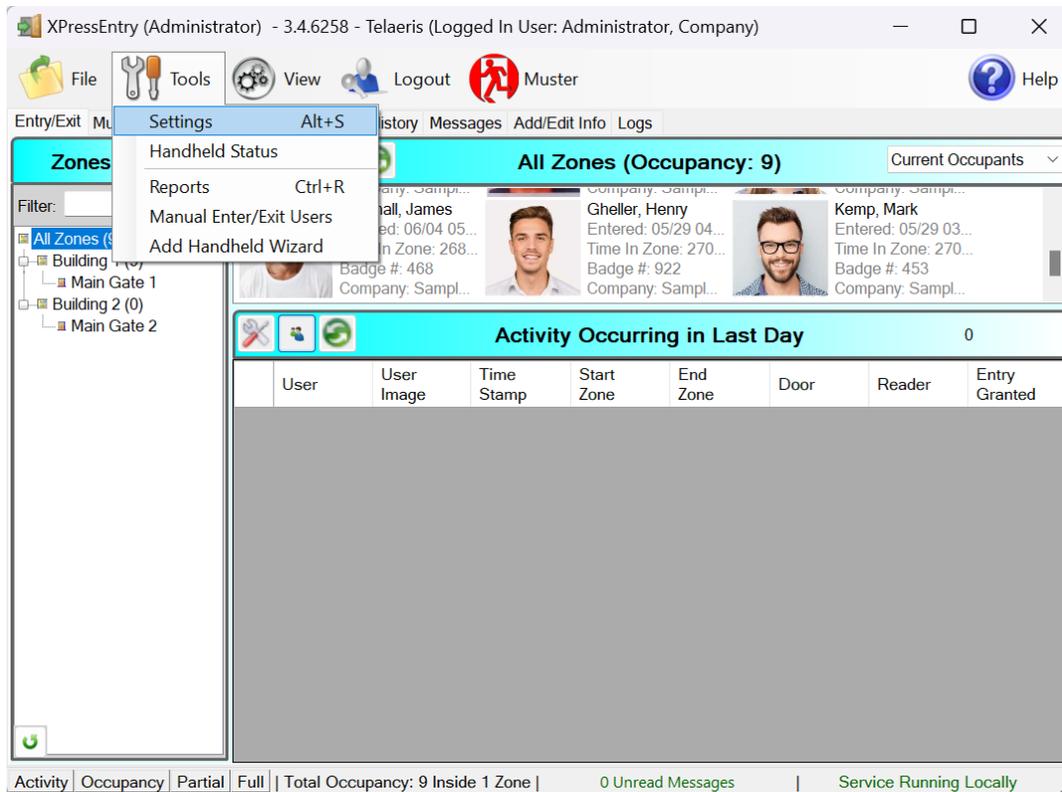
Interface module: Telaeris - XPressEntry Server (xpressentry - gate1)

Cancel Back Next

Enable XPressEntry Synchronization

XPressEntry uses a module called **Data Manager** to synchronize Genetec data into XPressEntry. From the main

page of XPressEntry, go to **XPressEntry / Settings (ALT+S)**.

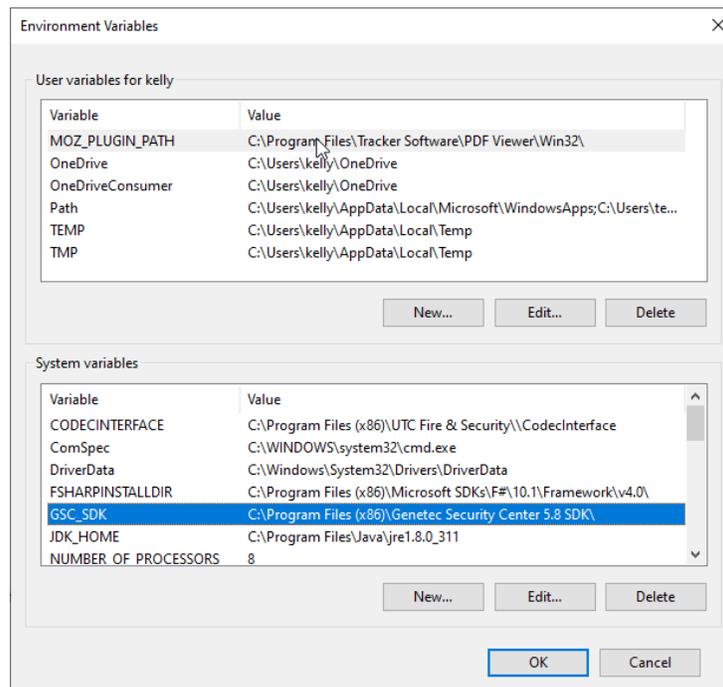


Choosing the Genetec SDK to Run

XPressEntry requires the Genetec SDK to be installed on the same machine as XPressEntry. XPressEntry can support the Genetec SDK 5.8 and newer. The version of Genetec SDK must be **within two versions** of the version of Genetec Security Center that is installed. For example, Genetec SDK version 5.8 could be used for Genetec Security Center versions 5.8 or 5.9.

Environmental Variables

XPressEntry determines where to find the Genetec SDK through an environmental variable. Make sure the path of this variable points to the appropriate Genetec SDK folder as shown below.



Binding Redirect Based on SDK Version

You may need to change the SDK version that XPressEntry targets. You will be editing **XPressEntryService.exe.config** and **XPressEntryServer.exe.config**.

1. Navigate to the XPressEntry installation folder. Open XPressEntryService.exe.config as an administrator. (C:\Program Files (x86)\Telaeris\XPressEntry\XPressEntryService.exe.config) At the very bottom, you will find a section that looks as follows:

```
<dependentAssembly>
<assemblyIdentity name="Genetec.sdk" publicKeyToken="a446968a32b751de"
culture="neutral" />
<bindingRedirect oldVersion="0.0.0.0-5.8.0.0" newVersion="5.8.0.0" />
</dependentAssembly>
```

2. If you are using 5.9, Change the **NewVersion** to 5.9.0.0 and so forth depending on version of the SDK you are running. Save the file.
3. Do the same in the XPressEntryServer.exe.config file. The location of the Genetec.sdk binary redirect may differ.

Data Manager Tab

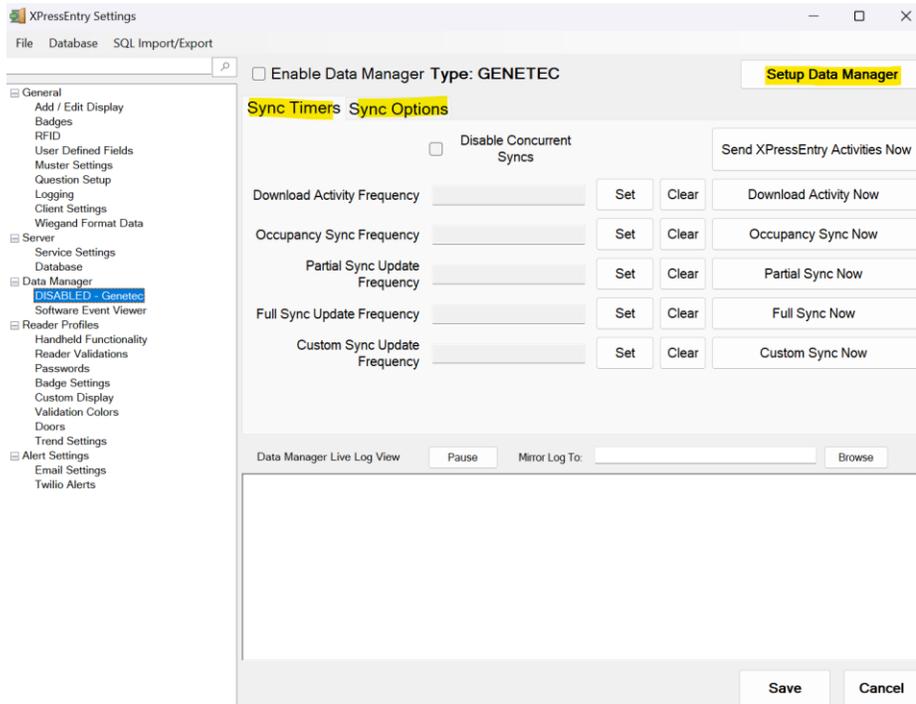
From the Settings page select the **Data Manager Tab**.

1. **Type** – This is the integration type. Select **Genetec > Add > Save**.
2. Go to **Data Manager > Genetec** in the sidebar menu.
3. **Setup Data Manager** – This sends you to the setup form for Genetec's data manager.

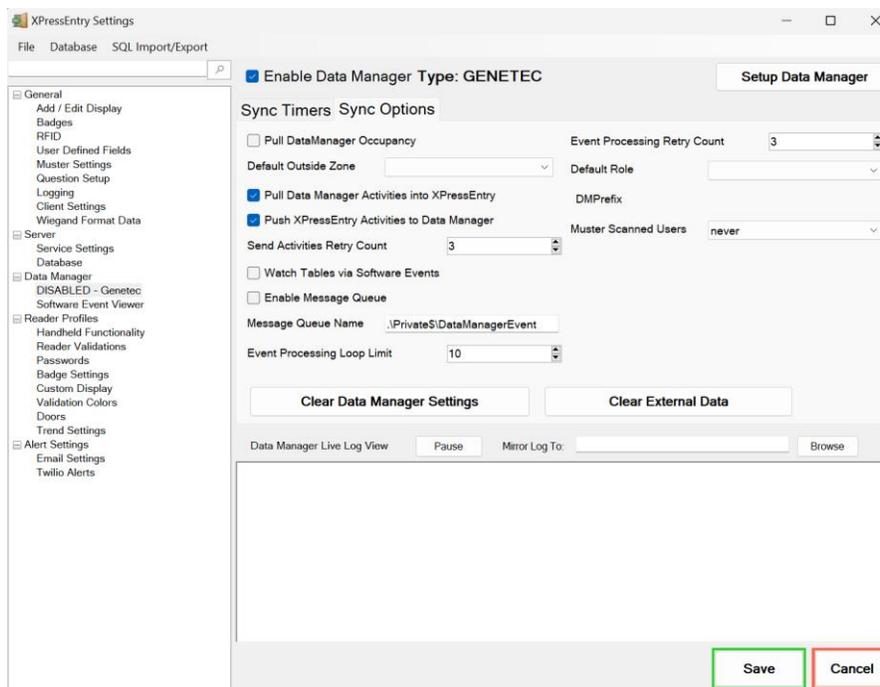
The screenshot shows the 'XPressEntry Settings' application window. The left sidebar contains a tree view with categories like General, Server, Data Manager, Reader Profiles, and Alert Settings. The 'Data Manager' category is expanded, showing 'DISABLED - Genetec' and 'Software Event Viewer'. The main area displays the configuration for 'Genetec'. The 'Type' dropdown is set to 'GENETEC'. There are 'Add' and 'Remove' buttons. Below, there are input fields for 'Name' and 'Prefix'. A large text area contains the text 'Genetec - Prefix(GENETEC)'. At the bottom right, there are 'Sanity Check Data', 'Save', and 'Cancel' buttons.

Sync Timers

XPressEntry can use Timers to pull Genetec Data into XPressEntry.



1. **Download Activity Frequency** – Not used by Genet
2. **Occupancy Sync Frequency** – Updates the zone occupancy without storing the activity records.
3. **Partial Sync Frequency** – Updates all tables except **cardholders** and **cards**.
4. **Full Sync Update Frequency** – Updates all tables by pulling all necessary records from Genetec. This function may take some time.
 1. It is recommended to run a full sync **once per day** in the middle of the night when the system is not busy.
2. **Custom Sync Frequency** – Updates a set of tables that the user configures.



Sync Options

1. **Pull Data Manager Occupancy** – Enables use of the Occupancy Sync.
2. **Default Outside Zone**

3. **Pull Data Manager Activities into XPressEntry** – Enables use of the Activity Sync.
4. **Push XPressEntry Activities to Data Manager** – Enables XPressEntry to push Scan data to Genetec.
5. **Send Activities Retry Count** – Number of times XPressEntry will attempt to resend an activity if it fails.
6. **Watch Tables via Software Events** – Creates a live data connection to the Access Control System to watch for system changes.
7. **Message Queue Name** – Name of windows message queue for software events.
8. **Event Processing Loop limit** – Max records to process from the event queue.
9. **Event Processing Retry Count** – Number of times XPressEntry will attempt to process a message queue event on failure.
10. **Default Role** – The default XPressEntry Role that will be assigned to users if the integration does not otherwise assign a role. Entrants are recommended but not required.
11. **Muster Scanned Users** – Enables sync to convert scans from specific readers to be converted into Muster Scans which mark users as safe. Muster readers must be configured in the reader data. Please see *Mustering Documentation* for more details.
12. **Setup DataManager Button** – Opens Genetec specific settings.
13. **Clear DataManager Settings** – Resets all settings on the two above tabs, as well as the Genetec specific settings.
14. **Clear External Data** – Deletes all data synchronized from Genetec from the XPressEntry Database.

Genetec Data Manager Setup Page

Genetec Data Manager

General Custom

Genetec Security Center Login

Server: genetec510

User: admin

Password:

Synergis RIO Login

RIO Server: genetec510CloudLink

RIO User: admin

RIO Password:

Enable RIO

Accept Untrusted Certificate
(Setting Untrusted Cert to False requires a service restart)

Occupancy Settings

Update Cardholder Occupancy

Download Activity # Hours: 4

Data Settings

Download Related Data Use Raw Badge Data from Genetec

Cardholder Software Events

Credential Software Events

Access Rule Software Events

RIO Door Settings

Always Show Selected Doors Online

Door 1 Test

Door 2

Door 3

Door 4

Door 5

Front Entrance

Main Gate

RIO Reader Timeout (mins): 1

Custom Card Formatting

Custom Card Format

Card # Start Bit: 0 Card # Bit Length: 0

FC Start Bit: 0 FC Bit Length: 0

Source Columns: Destination Columns

Source Field	XPressEntry Field
UDF1	udf1 (UDF2)
EmailAddress	email (UDF1)
*	

Status

Press the **Setup Data Manager** button to get the Genetec specific setup screen.

1. **Genetec Security Center Login** – Input the Genetec Security Center Application Server and login details here.
2. **Synergis RIO Login** – Input the Synergis Appliance and Synergis RIO login here.
3. **Occupancy Settings** – Tracks occupancy and activities from Genetec. Used for occupancy counts and mustering scenarios.
 - a. Update Cardholder Occupancy – Enables occupancy syncing.
 - b. Download Activities # Hours – When syncing, pull only activities from the input X # of hours.
4. **Data Settings** – Select the type of data to be transferred from Genetec. Software events are generated when changes are made to data from Genetec Security Desk or Config Tool.
 - a. Download Related Data
 - b. Cardholder Software Events – Pull Cardholder software events, including cardholder activity.
 - c. Credential Software Events
 - d. Access Rule Software Events
5. **RIO Door Status** – A RIO door reader status can be enabled to register as **online** for XPressEntry readers if the RIO based readers use a prefix door filter. A RIO door will only be marked **online** if a handheld is connected to the XPressEntry server, and Entry/Exit mode is currently utilizing the door. **This is optional.**
 - a. XPE Login and XPE Password is a login for an XPressEntry admin. We require this to pull reader data from the local database for mapping purposes.
 - b. The Door filter prefix matches the prefix used to create Genetec RIO based doors.
6. **Custom Card Formatting** – Use if utilizing custom card formats in Genetec.
 - a. Custom Card Format – Enables the use of custom card formats.
 - b. Card # Start Bit – Set the start bit for card.
 - c. Card # Bit Length – Set the bit length for card.
 - d. FC (Facility Code) Start Bit – Set the start bit for FC.
 - e. FC (Facility Code) # Bit Length – Set the bit length for FC.
7. **Genetec Custom Fields** – Associate Cardholder custom fields with an XPressEntry data field. Optional Data fields in XPressEntry include employee_no, user_field_data_1 to user_field_data_10. Reach out to helpdesk@telaeris.com for assistance on any other custom data fields.
8. **Test Connect** – Test the connection status with the inputted credentials to Genetec Security Center.
9. **Defaults** – Reset all data on the Settings form.
10. **OK** – OK to confirm settings.

11. **Custom Events** – Cardholder, credential, and area activities can be connected to a Genetec Custom event. The name of the custom event in Genetec must be inputted to the associated custom event action.

The screenshot shows the 'Genetec Data Manager' application window with the 'Custom' tab selected. The window contains a list of five custom event types, each with an adjacent text input field for configuration:

- Custom Events
- Custom Cardholder Granted
- Custom Cardholder Denied
- Custom Credential Granted
- Custom Credential Denied
- Custom Area Event

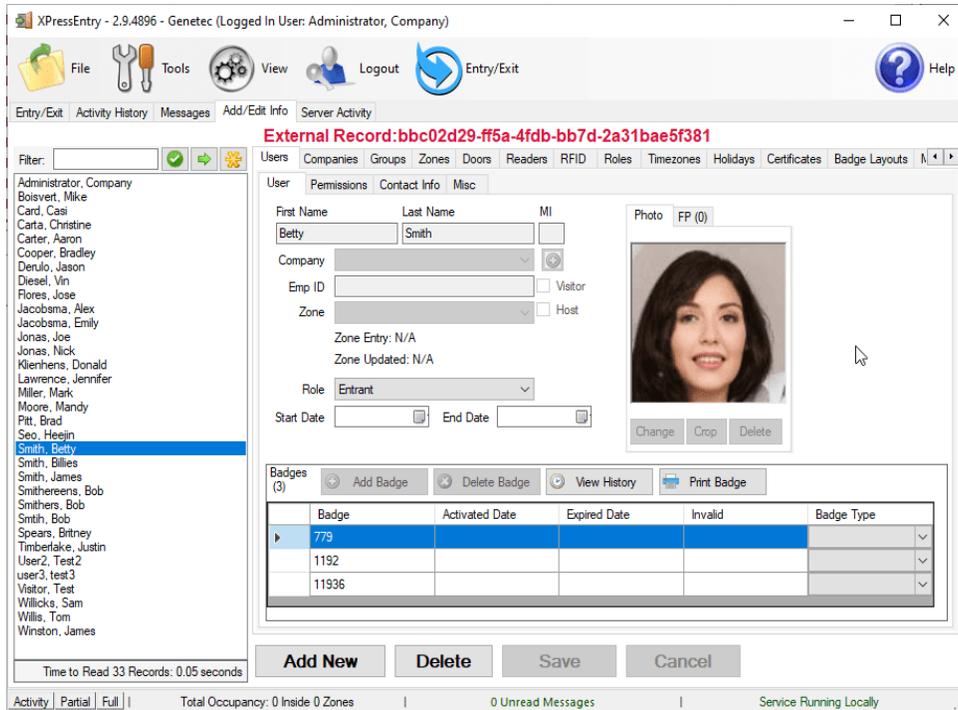
At the bottom of the window, there are three buttons: 'Test Connect', 'Defaults', and 'OK'. A 'Status' label is located at the bottom left of the window.

Setup XPressEntry Data

After setting up the data manager, run the initial Full Sync to pull data from Genetec. Once the Genetec System is set up and synchronizing, you will see all this data represented in XPressEntry under the Add/Edit Info tab. Data which is imported from Genetec cannot be changed and is greyed out in XPressEntry without proper permissions.

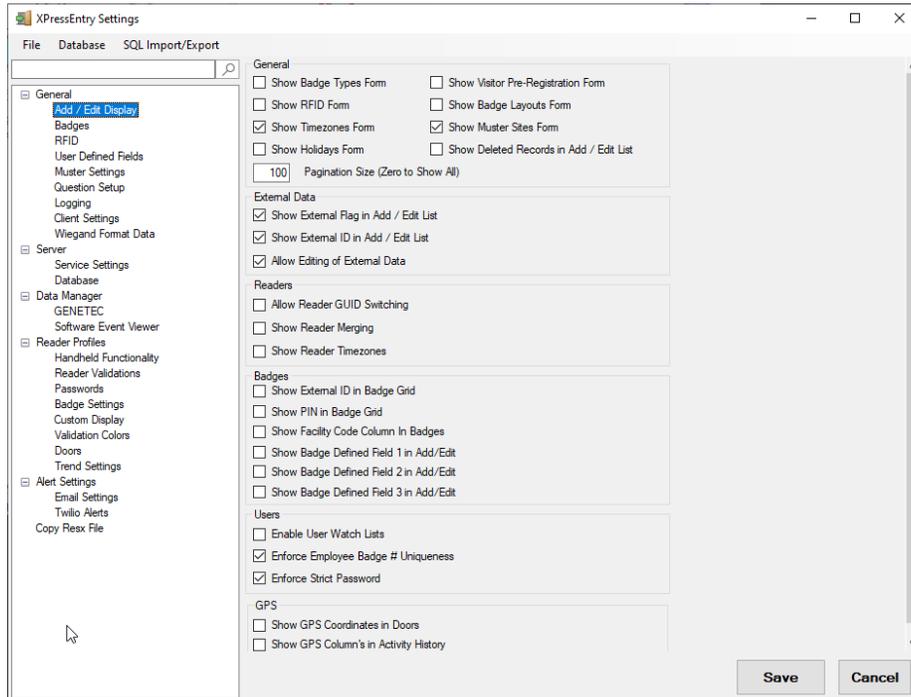
Users

Here is a sample of a properly synchronized user:



By default, all external data (data that has been synced from Genetec) will show **External Record** and an external record number. The external record and record number can be hidden.

If you wish to hide this, go to **Tools > Settings > General tab > Add/Edit Display**, and check or uncheck **Show External Flag** and **Show External ID**. Show external flag will supersede the show external ID.



User Permissions

Users in XPressEntry have the same access rules in Genetec to each individual reader.

The screenshot displays the XPressEntry (Administrator) software interface. The title bar indicates the user is logged in as Administrator, Company. The main window shows a list of users on the left, with 'Jenkins, Sara' selected. The right pane shows the 'Permissions' tab for the selected user, including sections for 'Access Groups', 'Direct Zone Permissions', and 'Allowed Times'. The 'Access Groups' section lists 'Lockdown rule' and 'All open rule'. The 'Direct Zone Permissions' section has a 'Zone Name' field. The 'Allowed Times' section has a table with columns for 'Timezone Name', 'Start', 'EndTime', 'Mon', and 'Tue'. The interface also includes a top menu bar with options like File, Tools, View, Logout, Entry/Exit, Muster, and Help. A status bar at the bottom shows 'Activity | Occupancy | Partial | Full | Total Occupancy: 1 Inside 1 Zone | 0 Unread Messages | Service Running Locally'.

External Record: deea5459-ce51-471d-9771-eb4e4f195e30

Filter: []

Users Companies Groups Zones Doors Readers Roles Time

User Permissions Contact Info UDFs/Misc

Access Groups

Lockdown rule
All open rule

Direct Zone Permissions

Zone Name

Allowed Times

Timezone Name	Start	EndTime	Mon	Tue

Add New Delete Save Cancel

Time to Read 22 Records: 0.46 seconds

Activity | Occupancy | Partial | Full | Total Occupancy: 1 Inside 1 Zone | 0 Unread Messages | Service Running Locally

Creating RIO Readers and Mapping it to Doors

The screenshot shows the 'Genetec Data Manager' window with the 'Custom' tab selected. The interface is divided into several sections:

- Genetec Security Center Login:** Server: genetec510, User: admin, Password: [masked].
- Synergis RIO Login:** RIO Server: genetec510CloudLink, RIO User: admin, RIO Password: [masked].
- Occupancy Settings:** Update Cardholder Occupancy checked, Download Activity # Hours: 4.
- Data Settings:** Download Related Data, Cardholder Software Events, Credential Software Events, Access Rule Software Events, and Use Raw Badge Data from Genetec are all checked.
- RIO Door Settings:** Always Show Selected Doors Online is unchecked. A list of doors is shown with checkboxes: Door 1 Test (unchecked), Door 2 (checked), Door 3 (checked), Door 4 (checked), Door 5 (unchecked), Front Entrance (unchecked), and Main Gate (checked). RIO Reader Timeout (mins) is set to 1. An 'Update RIO' button is present.
- Custom Card Formatting:** Custom Card Format is unchecked. Card # Start Bit, Card # Bit Length, FC Start Bit, and FC Bit Length are all set to 0.
- Source Columns:** A dropdown menu is set to 'UDF1'.
- Destination Columns:** A dropdown menu is set to 'email (UDF1)'. A green plus button is next to it.
- Table:** A table with 2 columns: 'Source Field' and 'XPressEntry Field'.

Source Field	XPressEntry Field
UDF1	udf1 (UDF2)
EmailAddress	email (UDF1)
- Buttons:** Test Connect, Defaults, and OK.
- Status:** A field at the bottom left.

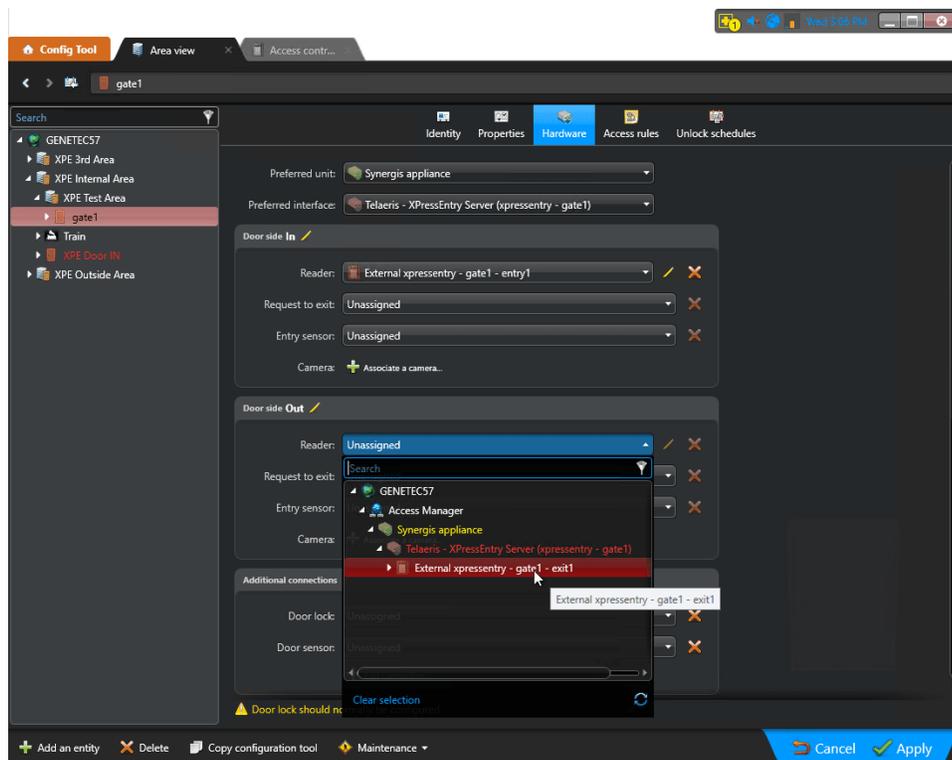
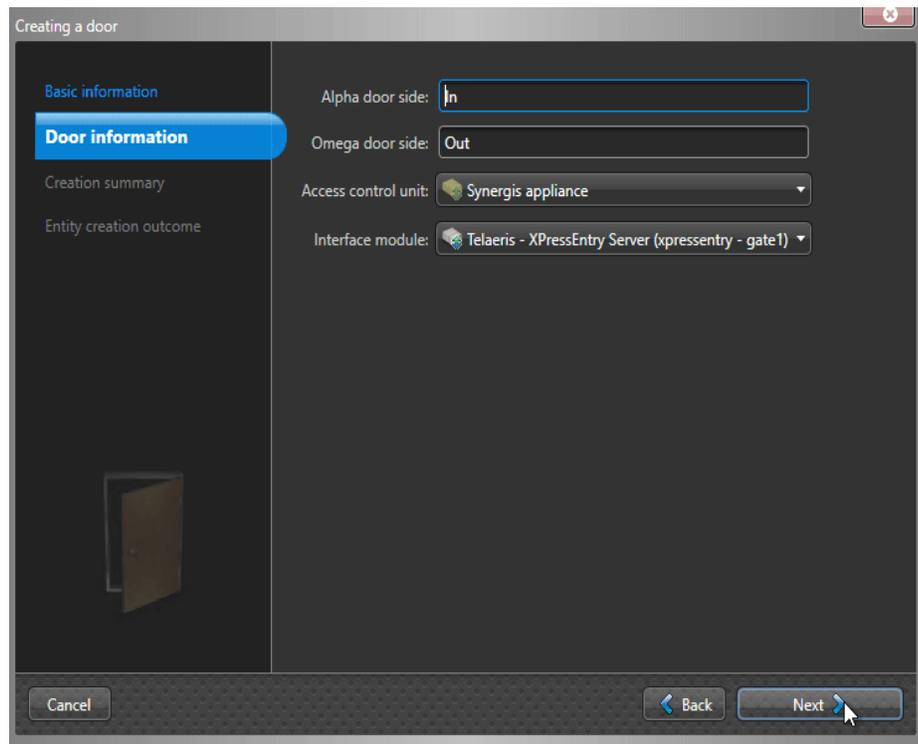
The Doors list will now populate under **RIO Door Settings** following the doors creation in Genetec and synchronization into XPressEntry via a full or partial sync.

1. We need to create the RIO objects on the Genetec side for each door/handheld mapping that we wish to use.
2. Handheld 1 Door and Handheld 2 Door are going to be used. Check the checkboxes for the two doors.
3. Click on **Update RIO** and accept the confirmation to create the RIO readers in Genetec based on the door we want to use.

Add Readers to Door

In most situations, you should add **two** readers (an **entry** and an **exit**) for each door. There should be at least one XPressEntry handheld for each door you are tracking.

1. Assign the **Door Side** reader with the **ReaderLabels** created from the RIO Protocol. The **Alpha** side is the Entry Reader, while the **Omega** side is the Exit Reader. Click Apply when done.

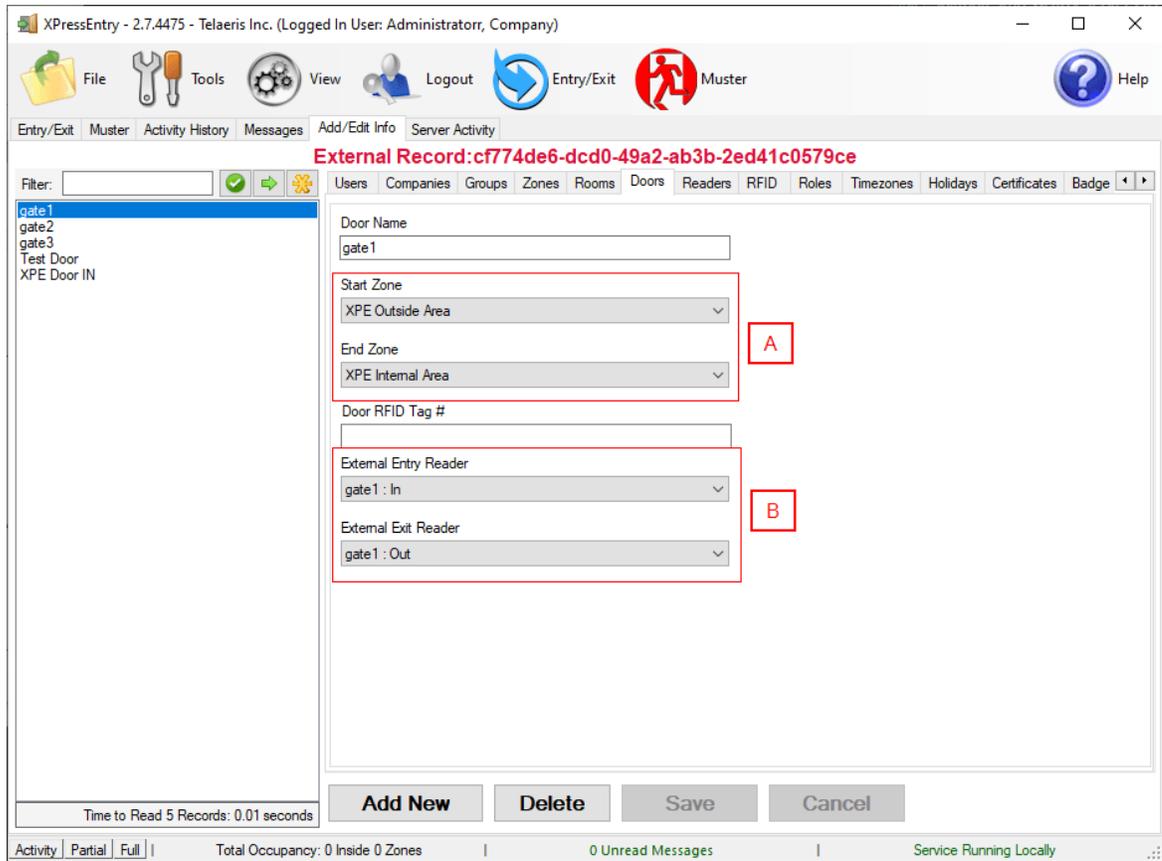


2. Do not forget to add the door or parent entity to an access group.
3. **Always show selected door online** – If this is checked, all readers assigned and checked below in the list will always show as online in Genetec regardless of if the door is assigned to a handheld that is online.
 - a. If this is unchecked, the door will only show online in Genetec IF the handheld is online in XPressEntry.

Doors

Entry/Exit permissions in XPressEntry are set by doors. Doors contain up to two readers – an entry and an exit reader. Door access is determined by the user’s access to the door’s external entry or exit reader. Doors should be set by the user for each Handheld Reader in XPressEntry. Allowing editing of external data will be required. Navigate to **Tools > Settings > General tab > Add/Edit Display** and check “**Allow Editing of External Data.**” Click save.

1. The XPressEntry Integration with Genetec requires both a start and end zone assigned. If no zone is assigned, handheld activity will not populate to Genetec.
2. For most situations, each door’s zones should be set to the default: **outside** and **building**. For proper occupancy tracking, set the **start** and **end** zone from area’s populated within **Genetec**.
 - a. The start zone is the area the user would be entering from, and the end zone is where the end user will end up. **Entry** reader will tie in the **alpha** side door reader in Genetec, which should be associated with the **end zone** area in XPressEntry.



3. **Zones** – For each door, set the **start** zone to **Outside** and the **end** zone to **Building**. This helps to determine directionality. If occupancy tracking is enabled, set the start and end zones to the desired zone
4. **External Readers** - Attach the logical entry and exit readers that you created in Genetec to a door. The readers are named based on the door. Entry reader **alpha** side is named **gate1: In** where the omega side is named **gate1: Out**.

Readers

A handheld unit can logically represent any Synergis RIO door/reader combination created in Genetec. When the handheld is issued to an employee at a specific door, the employee must first set the door on the handheld. The XPressEntry Reader that the handheld represents is based on whether the handheld is in entry mode or exit mode.

For example, handheld A is stationed at door A. Door A has two readers associated with it: Reader A-Entry and Reader A-Exit created from Genetec. The employee holding the handheld sets the handheld's door to Reader A. When the employee sees a cardholder walking towards the building, they set the handheld to Entry mode and scans the cardholder's badge. The handheld in entry mode identifies itself as reader A-Entry and sends an activity to the server with access granted or access denied.

Later, there is heavy volume exiting Door B. Door B has two readers associated with it: Reader B-Entry and Reader B-Exit. The employee from door A is called to help and brings handheld A.

They set the door on his handheld to Door B and the mode to Exit. When he begins scanning people walking out of the door, the handheld identifies itself as Reader B-Exit and sends each scan as an activity to the server.

Activities

XPressEntry will synchronize activities to Genetec if that option has been set in the Data Manager. This allows XPressEntry to track cardholder locations for use with Mustering and location tracking.

The screenshot displays the XPressEntry software interface for a mustering site. The window title is "XPressEntry (Administrator) - 3.0.999 - Telaeris (Logged In User: Administrator, Company)". The interface includes a menu bar with options like File, Tools, View, Logout, and Entry/Exit. Below the menu is a toolbar with icons for Finish, a red X, and a refresh button. The main area is titled "Mustering Site : Building 1" and is split into two columns: "Scanned (0)" and "Missing (3)".

The "Missing (3)" section lists three individuals:

- Gold, James**: Badge: 726, Zone: Building 1 Inside Area, 07/13 03:13:25 PM
- Mills, Tara**: Badge: 60, Zone: Building 1 Inside Area, 07/13 03:13:20 PM
- Harper, May**: Badge: 728, Zone: Building 1 Inside Area, 07/13 03:13:13 PM

Below this is a section titled "Muster Activity in Last 5 Minutes" with a table header:

User	Badge #	Time Stamp	Reader
------	---------	------------	--------

The status bar at the bottom shows: Activity | Occupancy | Partial | Full | Total Occupancy: 1 Inside 1 Zone | 0 Unread Messages | Service Running Locally

Entry/Exit activities will be sent to Genetec and can be monitored in Genetec Security Desk. After a handheld device is grants or denies access, this data is then synced to the XPressEntry Server. The XPressEntry server will then send the data to Genetec Monitoring in Security Desk.

Zones / Doors

Filter:

- All Zones (2)
 - Building (1)
 - Test Door
 - Building 1 Inside Area (1)
 - Main Gate
 - Front Entrance

All Zones (Occupancy: 2)

Current Occupants



Gold, James
 Entered: 07/13 03:30:13 PM
 Time In Zone: 00:01:25
 Badge #: 726
 Zone: Building_1_Inside_Area

Activity Occurring in Last Day

0

User	User Image	Time Stamp	Start Zone	End Zone	Door	Reader	Entry Granted
Harper, M...		07/13 03:...	Building 1...	Outside		Server Re...	True
Mills, Tara		07/13 03:...	Building 1...	Outside		Server Re...	True
Gold, Jam...		07/13 03:...	Building 1...	Building 1...	Front Entr...	Handheld 5	True
Gold, Jam...		07/13 03:...	Building 1...	Building 1...	Front Entr...	Server Re...	True

Security Desk | Credential... | Monitoring | Cardholder...

Search

- GENETEC510
 - Building 1 Inside Area
 - Door 1 Test
 - Door 3
 - Door 4
 - Door 5
 - Front Entrance**
 - Main Gate
 - Building 1 Internal Muster
 - Building 1 Outside Area
 - Building 2 Inside Area
 - Building 2 Internal Muster
 - Building 2 Outside Area

1 Front Entrance 7/13/2023 3:30:13 PM Access granted James Gold 2

James Gold



3 4

Door

Closed

Locked

Title

Hide area view | Monitoring (1) | Synchronize video | Show original streams | Change tile pattern | Clear all | Open the Vault | Switch to map mode | Hide controls