XPRESSENTRY

XPressEntry / Apollo APACS Synchronization
Revision 12/19/2025

For use with the
XPressEntry Mobile Access Control System

By

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Contents

Purpose

This document is intended to instruct users on how to synchronize an XPressEntry system with Apollo APACS system. XPressEntry has the capability of providing access control and emergency evacuation management from a handheld device. For XPressEntry setup information, see the document, "XPressEntry Installation and Upgrade" found at **https://telaeris.com/documentation**.

Requirements

1. Windows 7 / 8 / 8.1 / 10 or server type equivalent
2. XPressEntry 3.4+
3. Minimum APACS
   a. APACS 3.7, DB version 146
   b. APACS 3.9.4, DB version 163 for API rev.17 support
4. APACS license with support for web sessions

Setting up Apollo APACS to Synchronize with XPressEntry

It is assumed Apollo APACS is installed on a server. Please contact your Apollo dealer to receive the installer. XPressEntry communicates with Apollo APACS by using web services that provide access to APACS configuration.

For installation of XPressEntry, you should have Administrator privileges on the machine that it is installed on. You should additionally be an Administrator or super user in the Apollo APACS system.

Order of Operations

1. Applying the API Certificate
2. Start APACS API Service
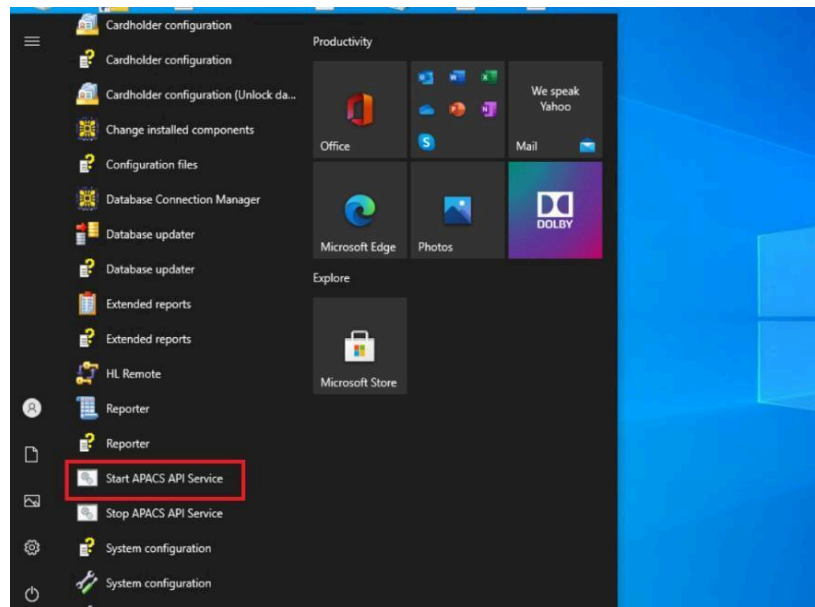3. Configuring APACS

Applying the API Certificate

- By default, **APACSAPIService.exe** is configured to listen on all IP addresses available in the PC.
- Default listening port is TCP 8081 (i.e. https://localhost:8081/api).
- Default settings are set to use **HTTPS protocol** and require you to generate certificates before the API can be accessed.

These settings can be changed in **APACSAPIService.exe.config file**. Changing the protocol to HTTP will allow you to use the API without having any certificates, but we recommend using certificates in production environments.

Start API Service

To start the APACSAPIService, click on the **Start Menu** and open the **Apollo** folder and then click **Start APACS API Service**.
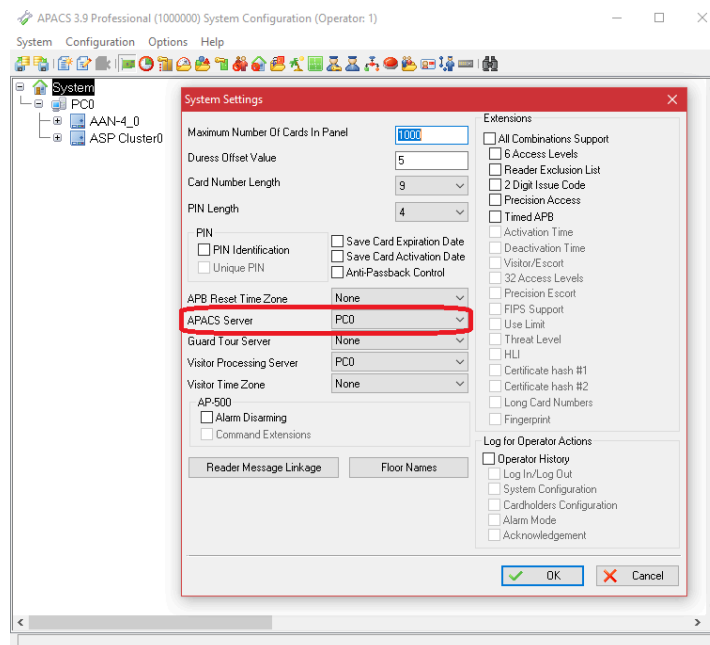
Figure 1 – Start APACS API Service

Configuring APACS System

1. To open the system settings, double click the **System** tab.
2. You need to add at least one PC hardware device and assign it as the **APACS Server** in main system settings (check below image).

*Note: You will need to be logged in with **Installer permissions** to do this.*

Figure 2 – Configure APACS System

Setup APACS Data and Settings

Handhelds

For **every physical** XPressEntry handheld reader, you should have **two logical readers** in the APACS System. They should be distinguished with the words **Entry/Exit** or **IN/OUT** at the end of them. These readers are only theoretical and represent the location in which an XPressEntry Mobile Reader will be used.

Enable Synchronization

XPressEntry uses a module called **Data Manager** to synchronize all data with APACS. From the main page of XPressEntry, go to **XPressEntry / Settings** (ALT+S or Tools > Settings)

Figure 3 – XPressEntry
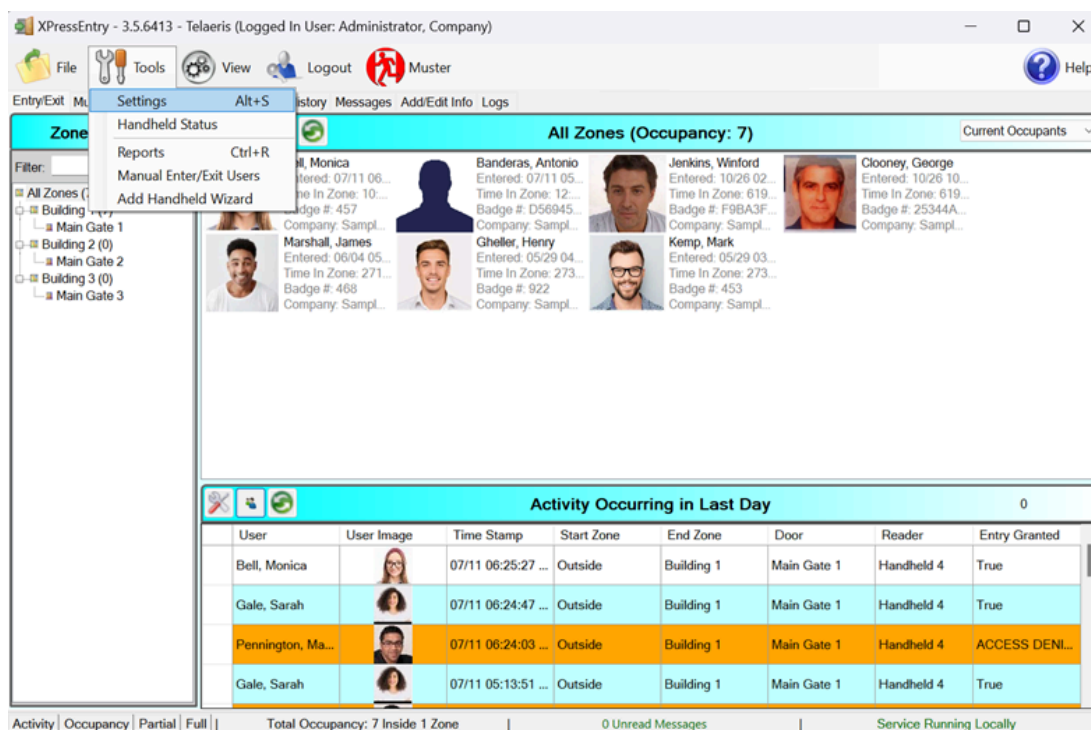
General Tab

1. From the **Settings** page, select the **General > Logging** Page.
2. **Set the Log level to DEBUG or VERBOSE** – this will allow you to view log entries during the sync process.
   a. **Max log size** – 5000 or higher
   b. **Max log age** – 1 Day or higher
3. Once the integration is complete, set the log level to **ERROR** so only error messages will be tracked.

Figure 4 – Logging Settings
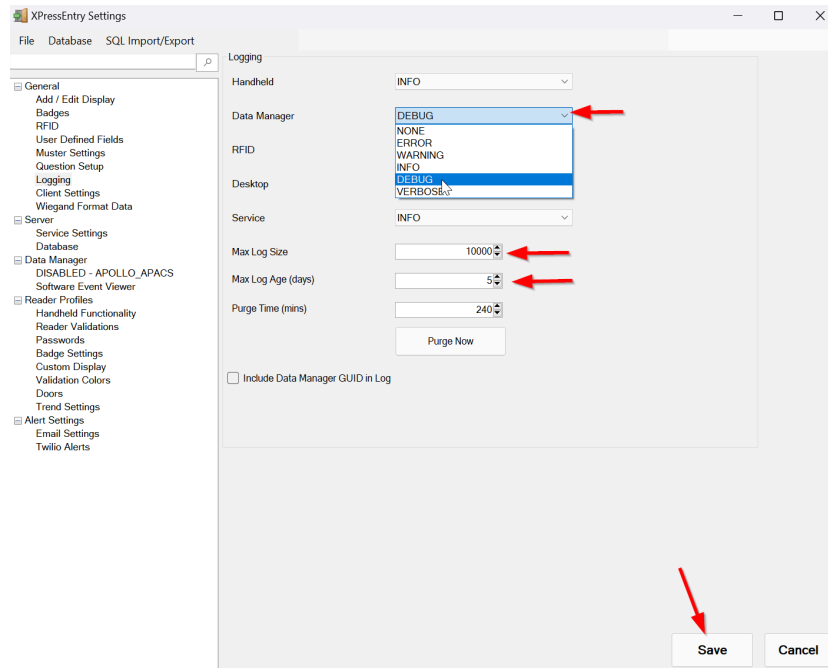
Reader Profile Tab

The Reader Profile Tab is where you configure the handhelds. Click the **Reader Validation Tab** and make sure **Door Readers** is the only mode that is checked under **Validations**. Click **Save** when finished.

Figure 5 – Reader Validations
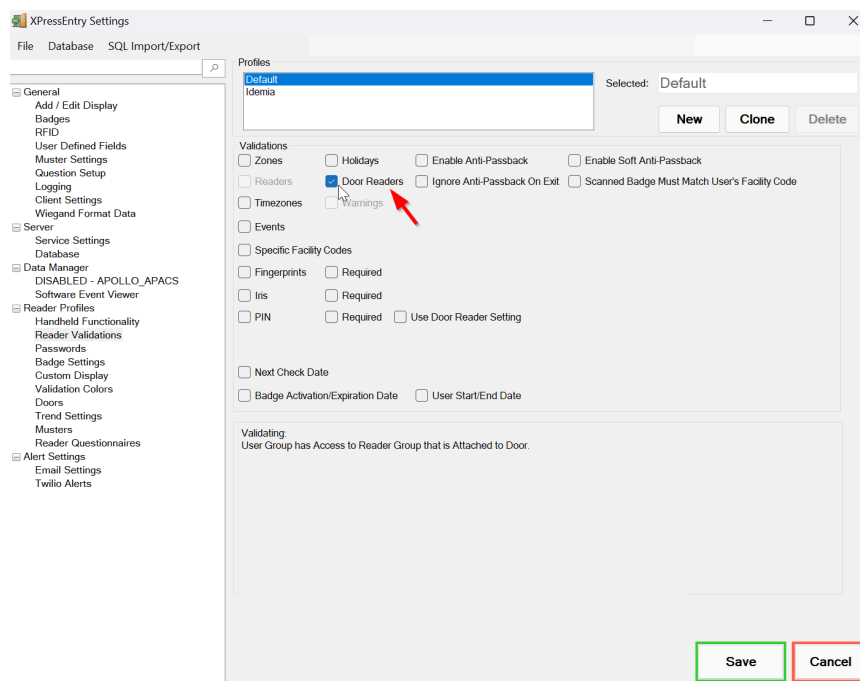
Data Manager Tab

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

1. **Type** – This is the integration type. Select **APOLLO APACS > Add > Save**.

2. Go to **Data Manager > APOLLO APACS** in sidebar menu.
3. **Setup Data Manager** – This sends you to the setup form for APOLLO APAC's data manager.

Figure 6 – Data Manager

Sync Timers

XPressEntry uses Timers to pull APACS Data into XPressEntry.

Figure 7 – Sync Timers

1. **Download Activity Frequency** – Pulls reader scan records into XPressEntry and stores them in

XPressEntry's activity table. This function also updates the zone occupancy.
2. **Occupancy Sync Frequency** – Updates the zone occupancy without storing the activity records.
3. **Partial Sync Frequency** – Pulls all data excluding cardholder data, including readers, areas, access levels.
    a. Do use this sync to quickly **update any table** in XPressEntry.
    b. Do use this sync to quickly **add a new user** into XPressEntry from APACS.
    c. Do **NOT** use this sync to **delete a user** from XPressEntry who was deleted in APACS.
    d. Do **NOT** use this sync to **update a user** from XPressEntry who was changed in APACS.
4. **Full Sync Update Frequency** – Updates all tables by pulling all necessary records from APACS. A 30,000-cardholder system might take around 20 minutes to sync with images.
    a. It is recommended to run a full sync **once per day** in the middle of the night when the system is not busy.
5. **Custom Sync Frequency** – Updates a set of tables that the user configures. To configure, right click **Custom Sync Now** and select **Edit Custom Sync.**

Figure 8 – Custom Sync
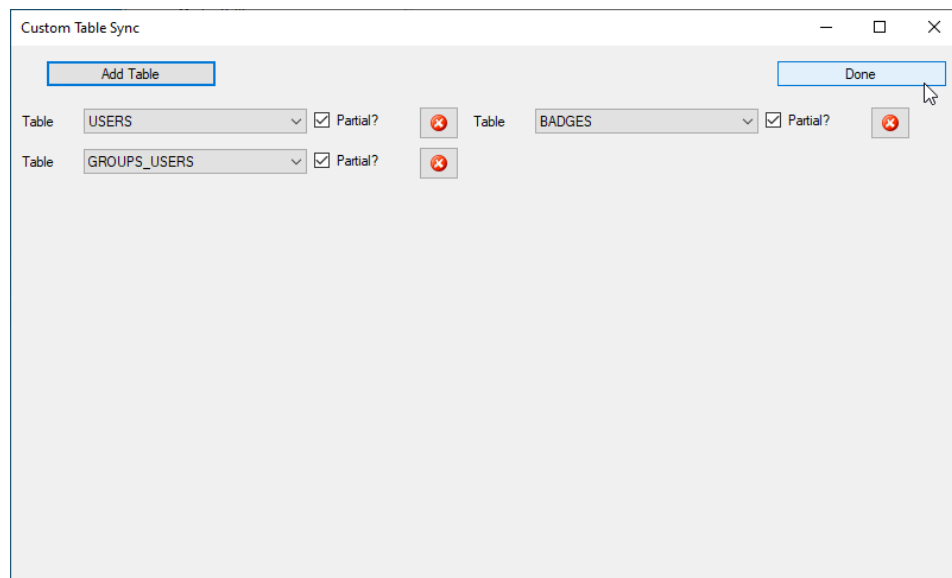
Sync Options

Figure 9 – Sync Options

1. **Pull Data Manager Occupancy** – Enables use of the Occupancy Sync.
2. **Pull Data Manager Activities into XPressEntry** – Enables use of the Activity Sync.
3. **Push XPressEntry Activities to Data Manager** – Enables XPressEntry to push Scan data to APACS.
4. **Send Activities Retry Count** – Number of times XPressEntry will attempt to resend an activity if it fails.
5. **Watch Tables via Software Events** – Creates a live data connection to the Access Control System to watch for system changes.
6. **Enable Message Queue** – Turns on Message Queue for software events to be used instead of database queue.
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 APACS specific settings.
13. **Clear DataManager Settings** – Resets all settings on the two above tabs, as well as the APACS specific settings.

14. **Clear External Data** – Deletes all data synced from APACS from the XPressEntry Database

Apollo APACS Setup Page

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

Figure 10 – APACS Setup

a. **Server** – The server IP address where the Apollo APACS is installed.

b. **Port** – Port Number for the connection. The default listening port is **TCP 8081**.

c. **User Name and Password** – APACS Login details.
   i. Username and password must match to ones that are defined in APACS database as operators.

d. **Use SSL** – Check this if using a secure connection (HTTPS).

e. **Download Pictures** – Enabling this will download user images from Apollo APACS. (Enabled by default).

f. **Create Doors** – Enabling this will create doors out of each reader automatically.

g. **Pull Cardholder Groups As Companies** – Check this if you want to download and map Cardholder groups as Companies.

h. **Pull Only Active Badges** – Enabling this will only download active badges from Apollo APACS.

i. **Pull Only Users with Active Badges** – Enabling this will only download users who have active badges assigned in Apollo APACS.

j. **Enable Audit Log Change Listener** - Enabling this will receive the latest cardholder updates from Apollo.

k. **Data Change Check Interval** - Interval to pull latest cardholder updates from Apollo.

l. **Users Per Query** – Number of users need to be downloaded in a single API call.
i. Used to optimize API calls.
m. **Badges Per Query** – Number of badges need to be downloaded in a single API call.
i. Used to optimize API calls.
n. **Activities Per Query** – Number of cardholder activities need to be downloaded in a single API call.
i. Used to optimize API calls.
o. **Defaults** – Clears all data entered and returns to default value.
p. **Custom User Mapping** – This section is used to pull the Cardholder's Advanced Fields from Apollo.

2. Click **Test Connect** after entering all the data correctly. This will connect to the Apollo APACS using the given user's name and password and the result will display "*Connection Success!*". If there is any issue with the connection, the same result window will display "*Connection Failure!*". Exit this form. Click **Save** on the Data Manager tab of the Settings page.
3. Select **Full Sync Now** to pull all data from APACS. Once the sync has finished, all relevant APACS records will then display in XPressEntry.

APACS Sync Check

The purpose of this section is to help the operator understand exactly what data XPressEntry is pulling from Apollo APACS. For a quick setup, please navigate to the next section, *"Configuring XPressEntry using APACS Data".*

The mapping of each Data pulled from Apollo is shown below.

Table 1 – Mapping Data

Apollo APACS	XPressEntry
AAN Reader	Reader
AAN4 Reader	Reader
ASP Reader	Reader
Card Holder	Users
Cards	Badges
Access Level	Groups
APB Zones	Zones
Global APB Zones	Zones
Time Zones	Time Zones
Holidays	Holidays

All External Records (From Apollo APACS) will display in red as an **External Record** at the top of the form. This label will not display any records that were created from within
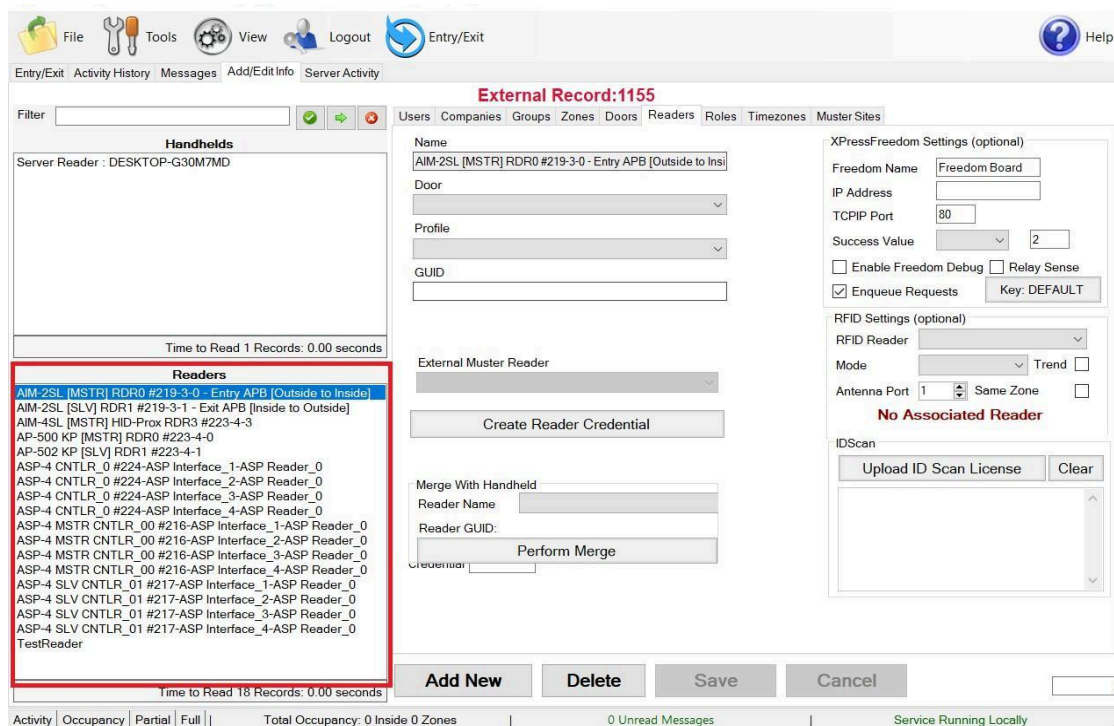
XPressEntry.

Readers

All Readers should be available to view in the **Readers** tab under **Add/Edit Info**.
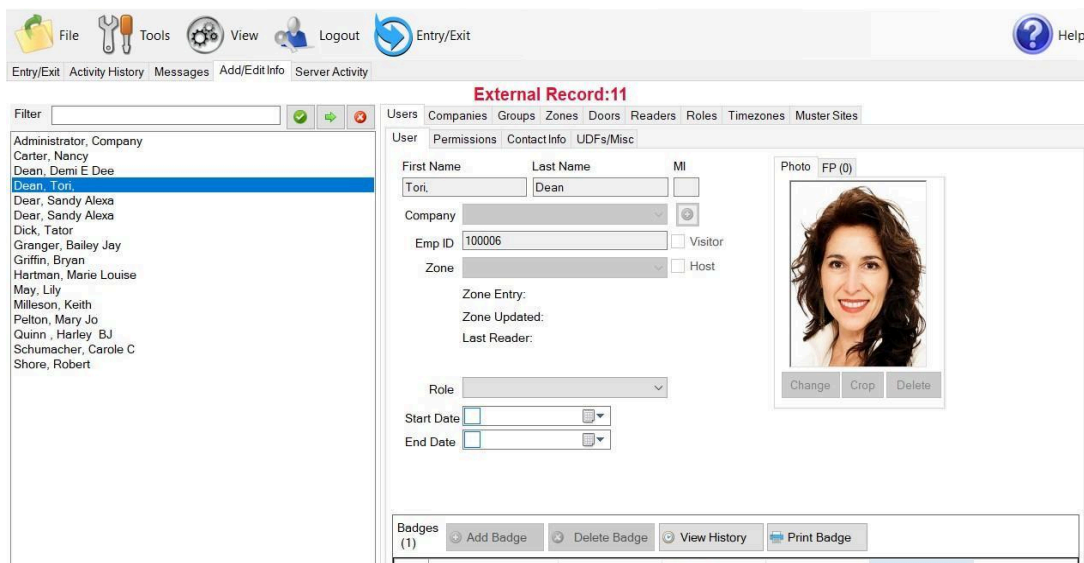
Here is a sample of a properly synchronized readers:

Figure 11 – Readers

Users

Here is a sample of a properly synchronized user:

Figure 12 – Users

XPressEntry will pull the user's **image** and **badge number** from Apollo APACS. The badge number can be seen at the bottom of the screen.

Figure 13 – Apollo APACS Cardholders

These users are seen in the **Cardholder Configuration** software in **APACS**.

User Permissions

Users in XPressEntry have the same permissions to each reader as they do in APACS.
This is regardless of whether the user is assigned an Access Code, Reader Group, or direct access to a Reader. However, the way in which the data is displayed is a little different.

The following is an example of the permissions a user has in **APACS** vs. how the data is displayed in XPressEntry.

Figure 14 – Apollo APACS Permissions

The **"Building Main"** has two readers assigned in the Access Level settings in the APACS System Configuration as seen in the below image.

Figure 15 – XPressEntry Permissions

To see the readers user **"Dean, Tori"** has access to, navigate to the **Groups** tab. Select **"Building Main"** from the list on the left. See below.

Figure 16 – XPressEntry Permissions Readers
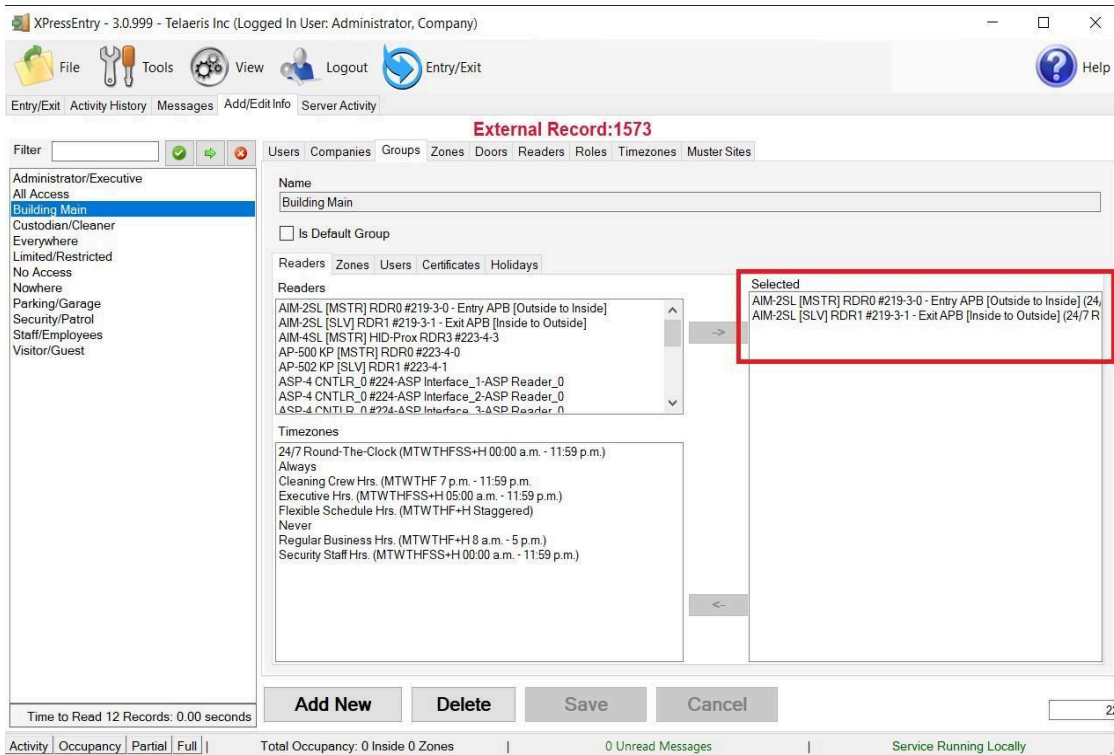
Each user with assigned permissions in Apollo APACS will have the same permissions in XPressEntry.

Groups

Apollo APACS Access Level are mapped to Groups in XPressEntry.

Figure 17 – Apollo APACS Access levels
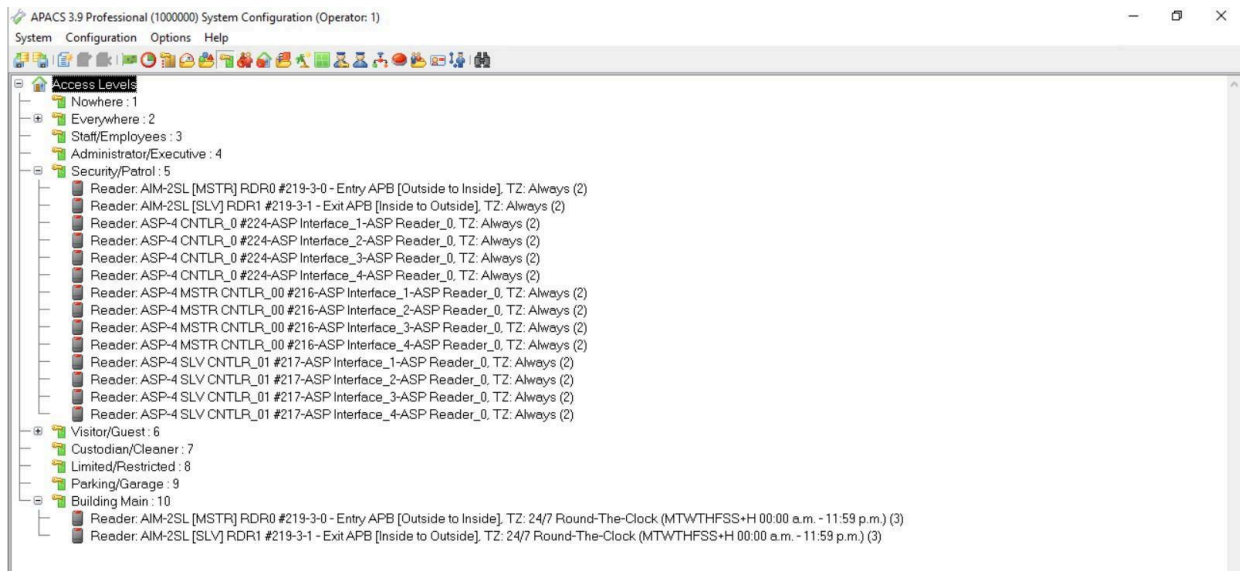
Figure 19 – XPressEntry Groups

Zones

The **APB Zones** and **Global APB Zones** in Apollo APACS should be available to view in the **Zone** tab under **Add/Edit Info**.

Here is a sample of a properly synchronized Zones:

Figure 20 – XPressEntry Zones

Timezones

Timezones are pulled from Apollo APACS. Timezones should be available to view in the **Timezones** tab under **Add/Edit Info**. If a single Time Zone has multiple standard time ranges for different days of the week, XPressEntry will create additional intervals to support this. Also, XPressEntry will ignore the time zone intervals with same start and end time.

Figure 21 – XPressEntry Timezones

Figure 22 – Apollo APACS Timezones

Holidays

Holidays are the simplest tables to pull from Apollo APACS. All the "Holidays" should be available to view in the "Holidays" tab.

Figure 23 – XPressEntry Holidays

Figure 24 – Apollo APACS Holidays

Configuring XPressEntry Using Apollo Data

Now that XPressEntry has access to the Apollo database, it needs to be configured to use this information. The tabs that need to be configured are the **Doors**, **Readers**, and **Zones**.

Doors

Entry/Exit permissions in XPressEntry are set by doors. Doors contain **two readers** – an exit and an entry reader. Door access is determined by the User's access to the door's reader. For **entry**, permission is based on the user's access to the door's **external entry reader**. For **exit**, permission is based on the user's access to the door's **external exit reader**.

Doors should be set by the user for each Handheld Reader in XPressEntry.

The XPressEntry Integration with Apollo APACS does not require additional start and end zones. However, XPressEntry can help keep track of what "zones" people are in if configured correctly.

While pulling readers from Apollo APACS, a door is created in XPressEntry with respect to each reader as shown in the below image.

Figure 25 – XPressEntry Doors

a. **Zones** – For each door, set the start zone and end zone. This will "enter" a user in the specified zone when they enter or exit (or scan at an Apollo APACS reader).
b. **External Readers** – Attach the logical entry and exit readers that you created in Apollo APACS.

XPressEntry requires that you manually set up the doors in the system. There should be a door in XPressEntry for each physical station that an employee will have a handheld.

a. To create a door, select **Add New** at the bottom of the form.
b. Enter a name that clearly describes what this door represents.
c. Select **Outside** for Start Zone and **Building** for End Zone.
d. Since each door is created based on a reader, the **External Entry Reader** will _always_ be the Selected Reader. External Exit Reader is one of the Exit readers you created in Apollo **APACS**.

Doors can also be added for each of the physical door readers. If XPressEntry is set up to pull activities, it will move people in the system based on the reader they were scanned at and the zones attached to the door.

*Note: In the XPressEntry system, editing of any external data is disabled by default. To enable the settings, you need to go to the **XPressEntry Settings > General > Add/Edit Display** then check the option **"Allow Editing of External Data"** in the External Data Section.*

Figure 26 – External Data Settings
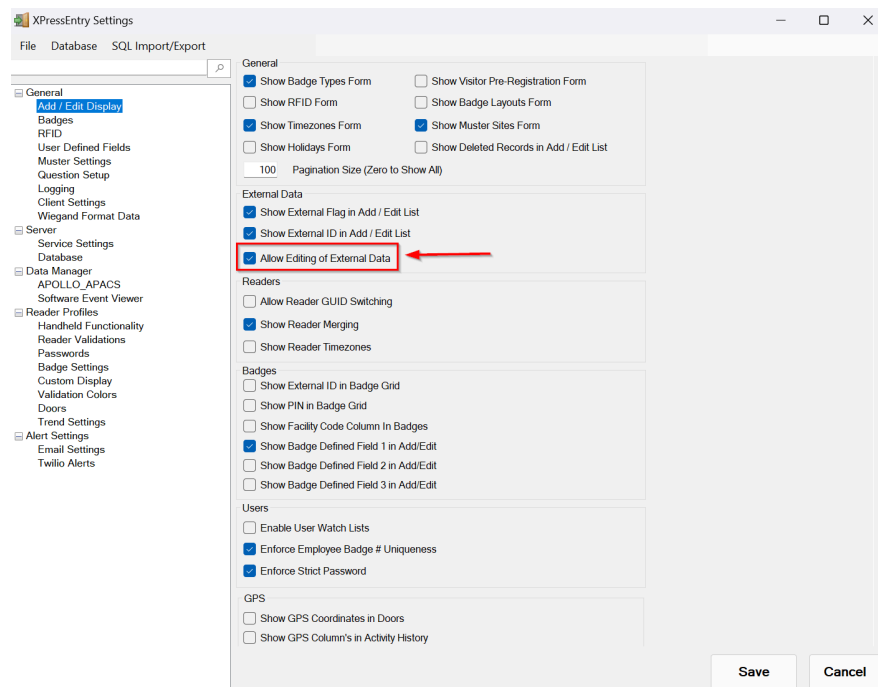
Readers

In XPressEntry Apollo integration, it is not necessary to associate any reader in the system with a handheld. This association can be done on the **handheld** when it comes time to scan.

A handheld unit can logically represent **any reader** in the building. 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, let us say that you have handheld A stationed at door A. **Door A** has two readers associated with it: Reader **A-Entry** and Reader **A-Exit**. The employee holding the handheld sets the handheld's door to **Reader A**. When the employee sees a cardholder walking **towards the building**, he sets 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.

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. He sets 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 Apollo APACS if that option has been set by Data Manager.

If XPressEntry is configured to **push activities**, they will appear in the Alarm Mode Software. You can also track the user location via **Alarm Mode > Commands > Cardholder location > Select user**.

If XPressEntry is configured to **pull activities**, the **occupancy** of the system will change each time a person scans at a reader that is mapped to a door in XPressEntry.

You may want to pull activities if:

1. You want to use XPressEntry to manage Emergency Evacuations.
    a. XPressEntry uses Apollo APACS activities to determine who is on and who is off campus.
    b. In the case of a mustering event, XPressEntry will have an up-to-date list of who is on site on this day.
    c. Using this list, XPressEntry can be utilized to "muster" or mark people as safe to create a list of people who are still on site.
2. You want to use XPressEntry's features to determine who is on site, and what areas people are in.

When Apollo APACS is configured to **"Watch Table via Software Events"** in **Sync Options** within the Data Manager, the live events change in Apollo APACS will be pulled in XPressEntry immediately. Such as

updates to:
1. Live Activity
2. Cardholder
3. Badges
4. Access Level
5. Time Zones

Figure 27 – Watch Apollo Live Events
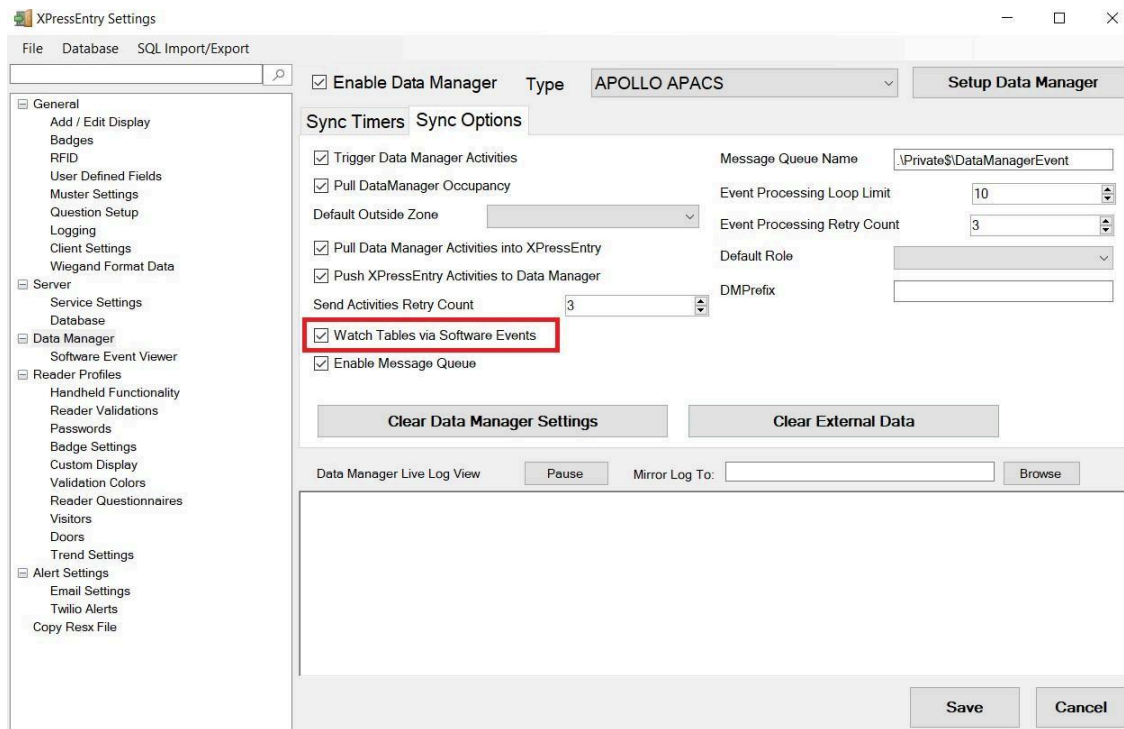
For more information about the functionality of XPressEntry, please look at the XPressEntry manual.