



**XPressEntry / Vanderbilt ACT PRO**  
**Data Manager Synchronization**  
Revision 03/15/2022

For use with the  
XPressEntry Mobile Access Control System

By

◆TELAERIS, Inc.

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## Purpose

This document is intended to instruct system administrators on how to synchronize an XPressEntry system with Vanderbilt ACT PRO system.

### Installation Pre-requisites #

ACT PRO 3.2.0.64 or later installed.

ACT PRO and XPressEntry should be installed in places on a network where they can talk to each other(or on the same box)

## Limitations

API doesn't allow to push scans from XPressEntry reader to ACT PRO as a usual event, it is rather pushed as Manual Login/ Manual Logout. Invalid/Access Denied scans on XPressEntry handhelds can never be sent to ACT Pro as of now.

XPressEntry won't be able to get live updates happening to users/cards/groups since API doesn't provide a mean to subscribe for live updates.

## Overall Order of Operations

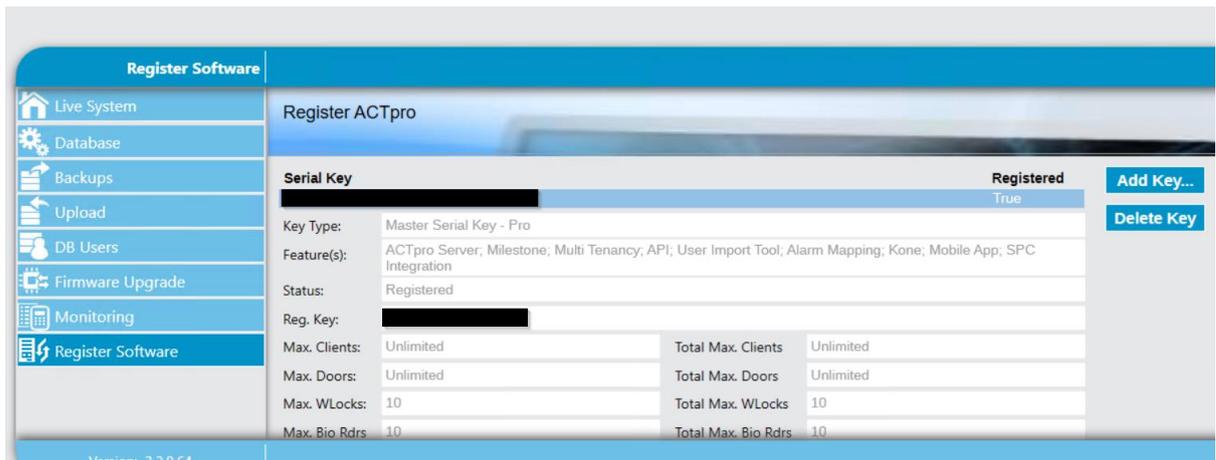
- Setup Vanderbilt ACT PRO to enable the API. This typically includes creating a User Account or credentials within that system
- Setup Readers/Panels/etc in other system to receive events if available to data manager
- Enable Data Manager Synchronization from XPressEntry.
- Initial Data Synchronization and Setup XPressEntry Data
- Set up XPressEntry Handheld Readers
- Scan data on card reader and validate functionality

## Setting Up Vanderbilt ACT PRO to Synchronize with XPressEntry

It is assumed that Vanderbilt ACT PRO is installed on a server.

XPressEntry has been tested on Vanderbilt ACT PRO Version 3.2.0.64. For integrations into other versions of Vanderbilt ACT PRO, please contact Telaeris to confirm compatibility.

- ACTpro-API key must be installed in ACTpro software, the ACTpro -API key is an additional cost and purchased through normal channels.



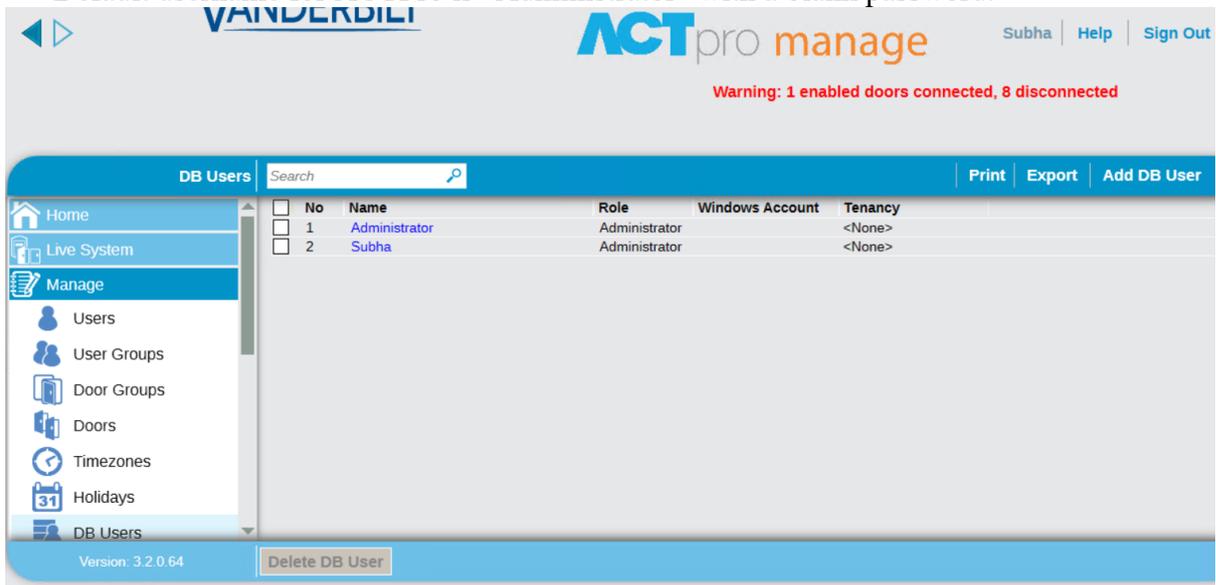
- The ACTpro server and client machines must be registered on the same domain.
- If ACTpro server is installed and running on a different computer from the development environment, the “app.config.xml” of XPE Service and Vanderbilt Data Manager file should be updated to reference the server address, the default reference is localhost.

```

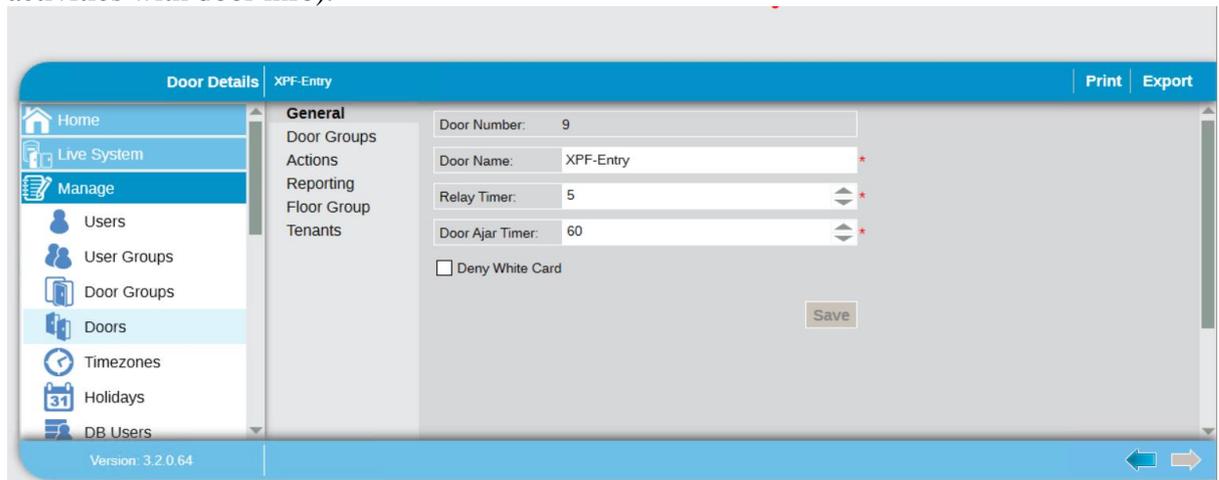
<system.serviceModel>
  <bindings>
    <netTcpBinding>
      <binding name="NetTcpBinding_IActEnterprisePublicAPI_Ext">
        <security>
          <transport sslProtocols="None" />
        </security>
      </binding>
    </netTcpBinding>
  </bindings>
  <client>
    <endpoint address="net.tcp://10.10.7.4:8004/ActEnterprisePublicUintAPI"
      binding="netTcpBinding" bindingConfiguration="NetTcpBinding_IActEnterprisePublicAPI_Ext"
      contract="ACTPublicAPI.IActEnterprisePublicAPI_Ext" name="NetTcpBinding_IActEnterprisePublicAPI_Ext">
      <identity>
        <servicePrincipalName value="host/ACT_PRO.ad.telaeris.com" />
      </identity>
    </endpoint>
  </client>
</system.serviceModel>
</configuration>

```

- We must have an administrator user in ACT Pro to connect from XPE. Default username for ACTPro is “Administrator” with a blank password.

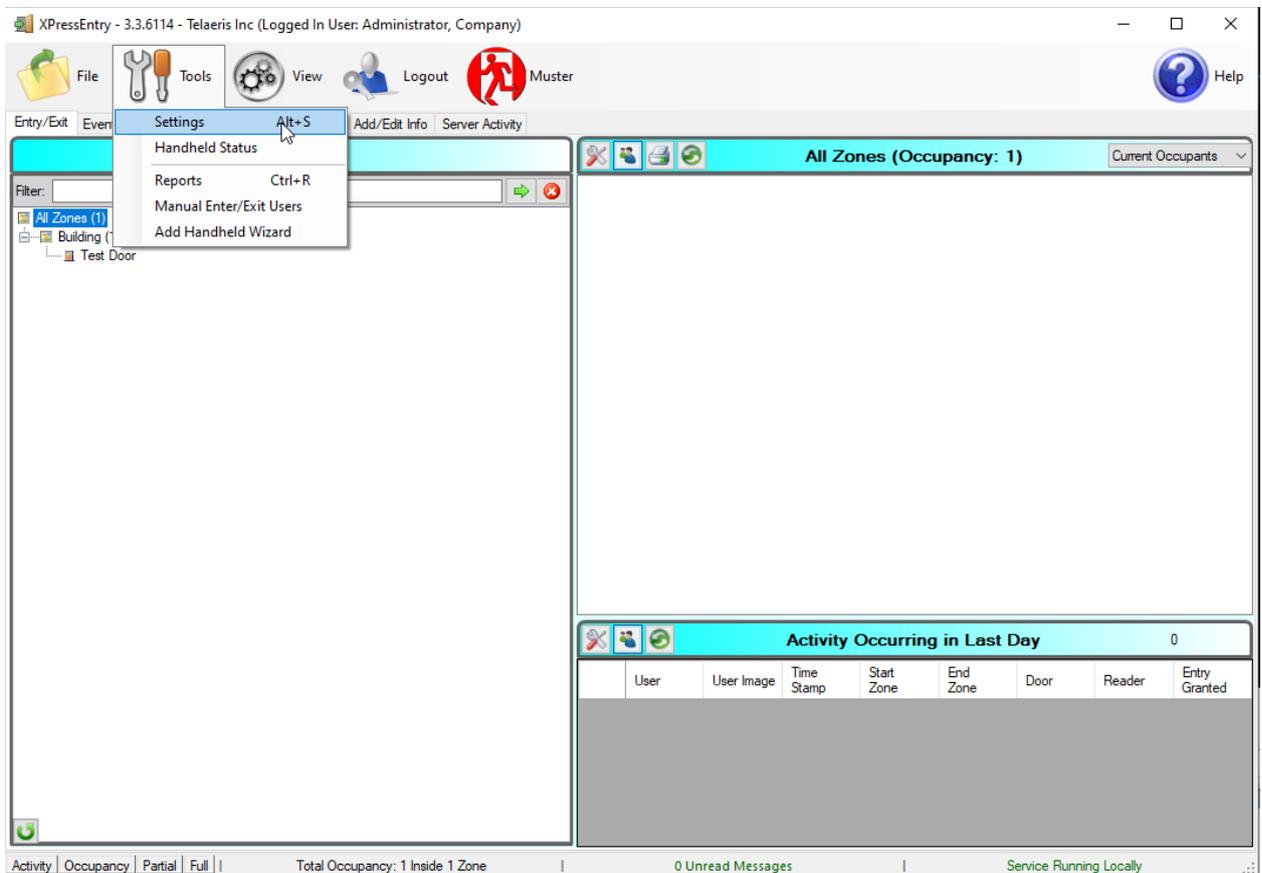


Create a demo door for XPE Handhelds (Not Applicable for now since we cannot send activities with door info).



## Enable XPressEntry Synchronization

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



From the Settings, select the Data Manager.

- Check “Enable Data Manager, select “VANDERBILACTPRO” from data manager types and click on Setup Data Manager to configure Vanderbilt ACTPro.

The screenshot shows the XPressEntry Settings application window. The 'Data Manager' section is expanded in the left sidebar. The main area shows the 'Sync Timers' tab with the following settings:

- Enable Data Manager
- Type: VANDERBILACTPRO
- Buttons: Setup Data Manager
- Disable Concurrent Syncs
- Buttons: Send XPressEntry Activities Now
- Download Activity Frequency: [input] Set Clear Download Activity Now
- Occupancy Sync Frequency: [input] Set Clear Occupancy Sync Now
- Partial Sync Update Frequency: [input] Set Clear Partial Sync Now
- Full Sync Update Frequency: [input] Set Clear Full Sync Now
- Custom Sync Update Frequency: [input] Set Clear Custom Sync Now

- Type- This is the integration type. Select VANDERBILACTPRO.
- Setup Data Manager- Sends you to the setup form for VANDERBILACTPRO’s data manager settings.
- Save and Apply Settings- Saves all settings from the setup form, update frequencies, and activity Synchronization options.
- Update Frequency options- Sets and clears the intervals in which the data manager updates XPressEntry.
- Sync Now functions- Runs an immediate update.
- Send XPressEntry Activities Now- Used to send XPressEntry handheld activities to Paxton.

Set the Update Frequency to as often as you want the system to fully update. Note that only one update can run at a time and if this value is very low the system will constantly try to update (this is not always a problem).

1. Full Sync Update- This sync will grab all relevant records from Paxton and update them in XPressEntry. If there is a large number of users in Paxton, this sync option can take some time.
2. Partial Sync Update- This sync will grab records from all tables but will only pull users that have been updated since the last data pull. This is valuable when you do not want to wait for a long sync, but want to add new or updated users into the XPressEntry system.
  - a. Do use this sync to quickly update any table in XPressEntry.
  - b. Do use this sync to quickly pull user changes into XPressEntry from Paxton.

- c. Do NOT use this sync to delete a user from XPressEntry who was deleted in Paxton.
- 3. Activity and Occupancy Sync Update-
  - a. XPressEntry can pull Occupancy information from Paxton, based on card scans within the Paxton system. If a user scans into the system, the user can be added to the system occupancy within XPressEntry. If a user scans at an exit reader in Paxton, the user can be removed from the XPressEntry occupancy. This is commonly used for Emergency Evacuation management.
  - b. When pulling Occupancy, XPressEntry moves users to the zones they are entering when they scan at a reader.
  - c. When pulling Activities, XPressEntry moves users to the zones they are entering when they scan at a reader AND XPressEntry keeps a log of the activity in its activity history.

All of these options can be changed at any time. Changing any option will immediately take effect.

## Configure ACT Pro Settings

The screenshot shows the 'Vanderbilt Data Manager Setup' window with the following fields and options:

- Domain Credentials:**
  - Domain:
  - User Name:
  - Password:
- Database Credentials:**
  - User Name:
  - Password:
- Manual Login/Logout Zones:**
  - Login:
  - Logout:
- ACTPro Server IP:**
- Port:**
- Server Timezone:**
- Hours for activity download:**
- Page Size:**

Buttons at the bottom:

Status: \_\_\_\_\_

## Domain Credentials

**Domain Name** : Windows Client Credentials domain name, even if ACT Pro Server and XPressEntry are installed on different machines, they should be on same domain.

**User Name (Domain)** : Windows Client Credentials user name for the system where ACT Pro is installed.

**Password (Domain)** : Windows Client Credentials Password

## Database Credentials

**UserName** : ACT Pro DBUser username

**Password** : ACT Pro DBUser password

**ACTProServer IP** : IP address of the ACT Pro server. Use “localhost” if it is in the same system as XPressEntry.

**Port** : API Port for ACT Pro Server. 8004 is the default value.

**Server Timezone** : Timezone of the ACTPro Server. This is required to process the activity time correctly. Default is PST.

**Manual Login Zone** : Zone into which a user is entered when a manual login is performed.

**Manual Logout Zone** : Zone into which a user is exited when a manual logout is performed.

**Hours for activity download** : Past hours through which we need to download the activities.

**Page Size** : Page size to fetch the records. Default is 100.

Click “Test Connect” after entering all the data correctly, this will connect to the ACTPro API using the given user's name and password and the result will display “Connection Success!” is connected to ACT Pro successfully. Is any error in the connection it will show in the same result window.

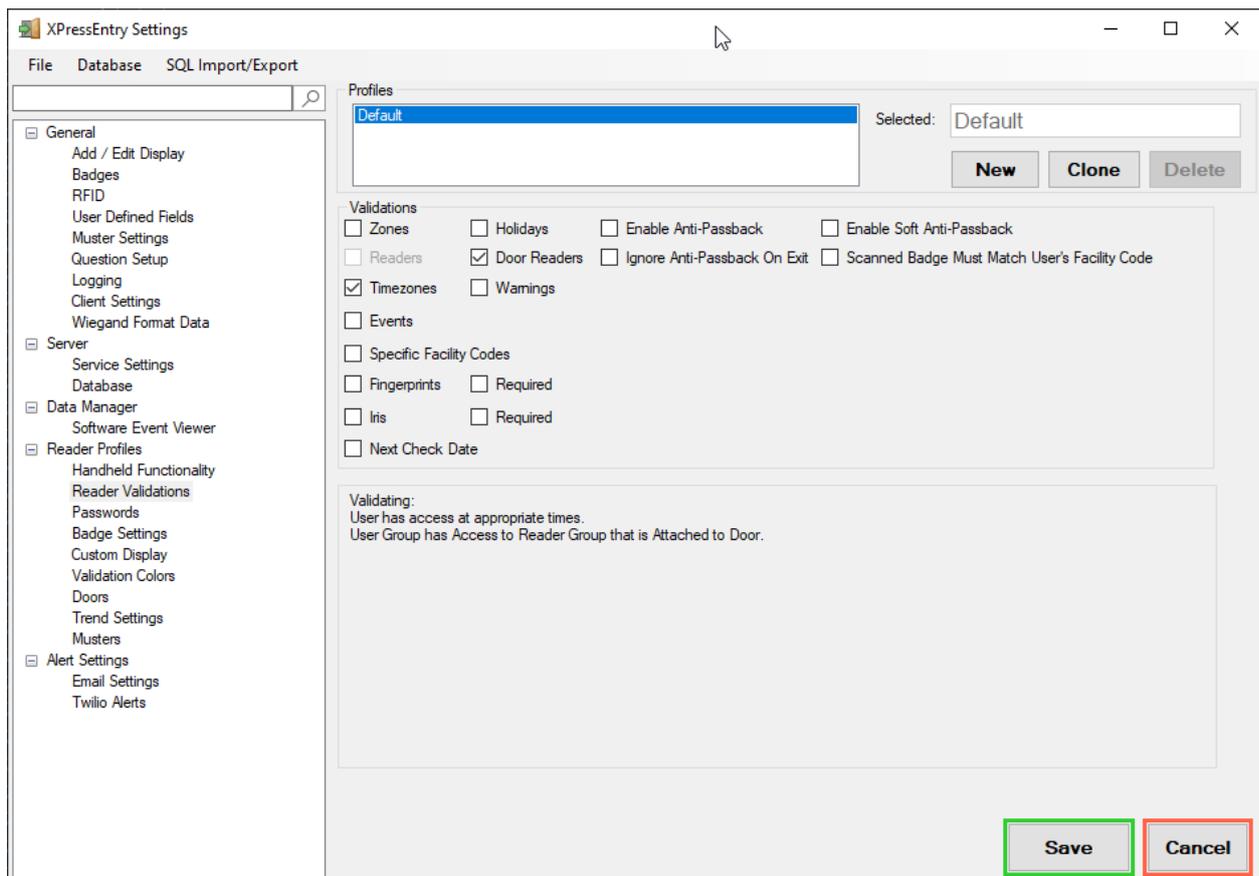
The Defaults button is to clear all the entered data and set to defaults value.

Exit out of this form. On the Data Manager tab of the Settings form, select “Save and Apply Settings”. It is now time to begin syncing data.

Select “Full Sync Now” to pull all data from ACTPro. Once the sync has finished, all relevant ACTPro records should now display in XPressEntry.

## Reader Profile Tab

The Reader Profile Tab is where you configure the handhelds.



The only important change to make on this tab is to make sure “Door Readers” and “Timezones” are checked under “Reader Validations”. Select “Save” at the bottom right when finished.

## ACTPro Sync Check

The purpose of this section is to help the operator understand exactly what data XPressEntry is pulling from ACTPro API. For a quick setup, please navigate to the next section, “Configuring XPressEntry using ACTPro Data”.

## ACT Pro - XPressEntry Mapping

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

Table 1 – Mapping Data

<b>Vanderbilt ACTPro</b>	<b>XPressEntry</b>
Door	Door
Door	Reader
Users	Users
Cards	Badges
User Groups	Groups
Time Zones	Time Zones
Holidays	Holidays

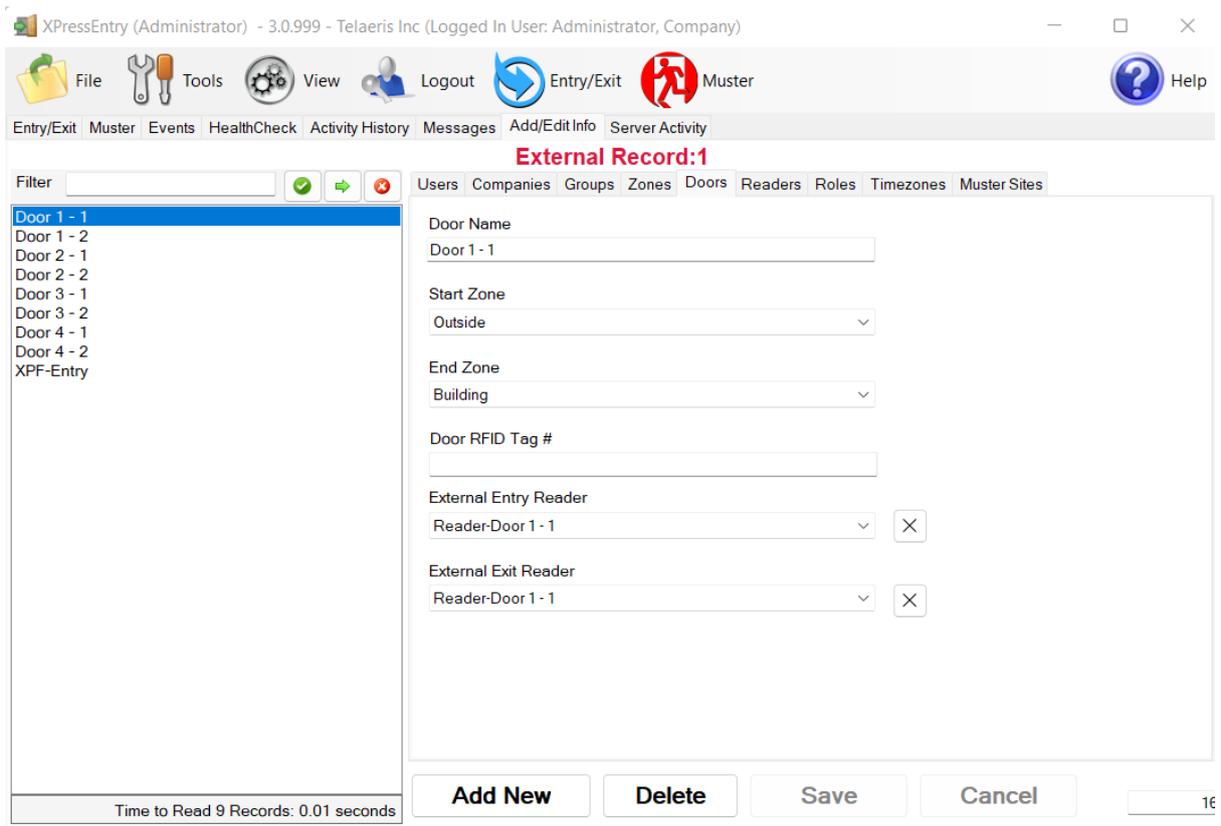
All External Records (From ACT Pro) will display in red as an “External Record” at the top of the form. This label will not display for any records that were created from within XPressEntry.

Below are the Mapping details of each Data pulled from ACT Pro.

## Doors

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

Figure 9 – Doors



## ACT Pro Doors

The screenshot shows the 'ACT Pro Doors' interface. The 'Doors' menu item is selected in the left sidebar. The main area displays a table of configured doors with the following data:

No.	Door Name	Controller Name	Controller	Local Addr.	Firmware	Status	Elevator	Enabled
1	Door 1 - 1	Controller 1	1	1				✓
2	Door 1 - 2	Controller 1	1	2				✓
3	Door 2 - 1	Controller 2	2	1				✓
4	Door 2 - 2	Controller 2	2	2				✓
5	Door 3 - 1	Controller 3	3	1				✓
6	Door 3 - 2	Controller 3	3	2				✓
7	Door 4 - 1	Controller 4	4	1				✓
8	Door 4 - 2	Controller 4	4	2				✓
9	XPF-Entry	TelaerisController	5	1				✓

At the bottom of the interface, there are buttons for 'Delete Door', 'Enable', 'Disable', 'Bulk Properties', and 'Autodiscover'. The version number '3.2.0.64' is displayed in the bottom left corner.

**Readers** – Since ACT Pro doesn't have separate readers, readers are created from each door in XPressEntry automatically.

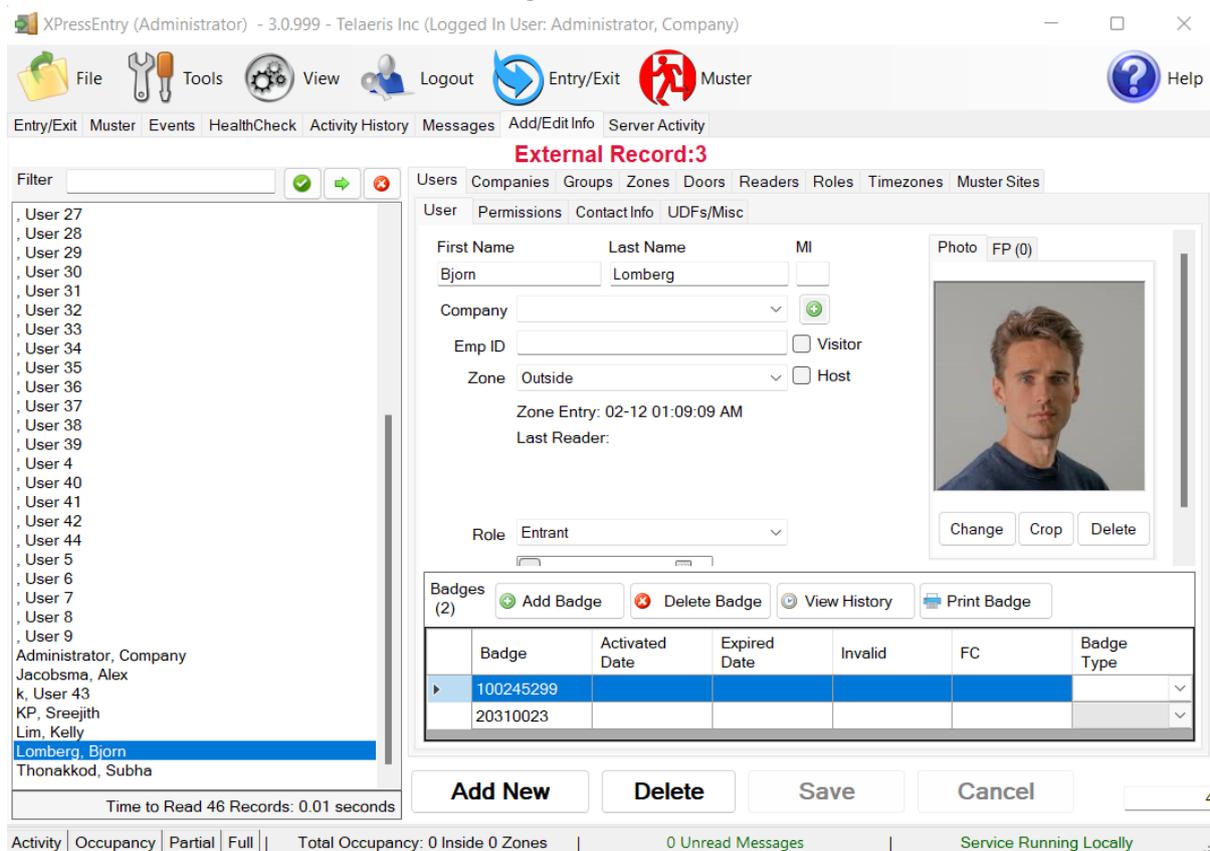
The screenshot shows the XPressEntry (Administrator) interface. The window title is "XPressEntry (Administrator) - 3.0.999 - Telaeris Inc (Logged In User: Administrator, Company)". The top menu bar includes File, Tools, View, Logout, Entry/Exit, and Muster. Below the menu bar is a navigation bar with tabs for Entry/Exit, Muster, Events, HealthCheck, Activity History, Messages, Add/Edit Info, and Server Activity. The main interface is divided into several sections:

- Filter:** A search box with a green checkmark, a green arrow, and a red X icon.
- Handhelds:** A list of handheld devices. The first entry is "Handheld 1" with server readers "DESKTOP-MU40SF7". Below the list is a status bar: "Time to Read 3 Records: 0.00 seconds".
- Readers:** A list of readers. The first entry is "Reader-Door 1 - 1". Below the list is a status bar: "Time to Read 9 Records: 0.01 seconds".
- Configuration Panel:** A central panel for configuring the selected reader. It includes:
  - Name:** Handheld 1
  - Door:** Door 1 - 1
  - Profile:** Default
  - GUID:** ddc7f9cdd90d466
  - External Muster Reader:** Reader-XPF-Entry
  - Buttons:** "Clear Reader Credential" and "Show Reader Setup QR".
- XPRESSFreedom Settings (optional):**
  - Freedom Name:** Freedom Board
  - IP Address:** 10.10.3.255
  - TCPIP Port:** 80
  - Success Value:** LED (dropdown), 2 (input)
  - Enable Freedom Debug:**  (checked)
  - Relay Sense:**  (unchecked)
  - Enqueue Requests:**  (checked)
  - Key:** DEFAULT
- RFID Settings (optional):**
  - RFID Reader:** (dropdown)
  - Mode:** (dropdown), Trend  (unchecked)
  - Antenna Port:** 1 (dropdown), Same Zone  (unchecked)
  - Status:** No Associated Reader
- IDScan:**
  - Buttons:** "Upload ID Scan License" and "Clear"

## Users

Here is a sample of a properly synchronized user:

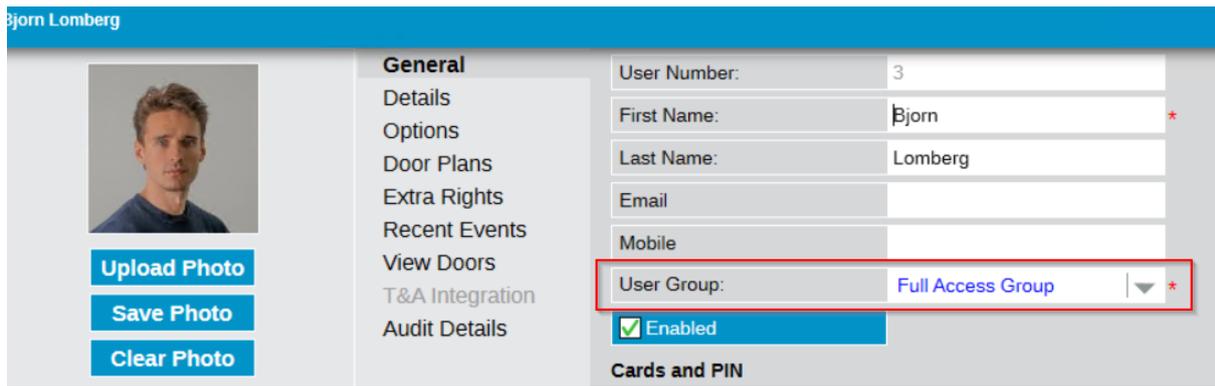
Figure 10 – Users



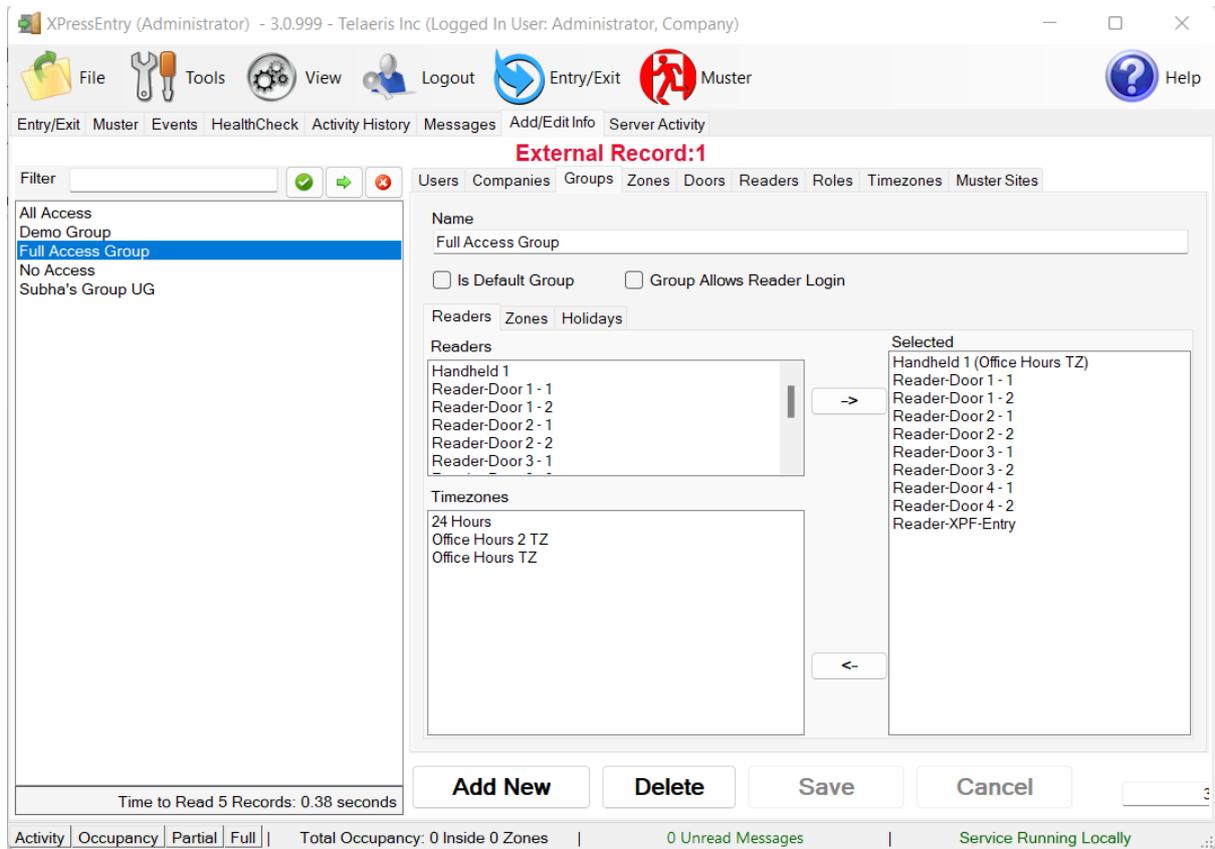
XPressEntry will pull the user’s image and badge number from ACT Pro. The badge number can be seen at the bottom of the screen.

Figure 11 –ACT Pro Users

## User Permission



## Groups



Since XPE has no separate User Groups and Door Groups, User Groups has been mapped to Groups, and readers has been included in each group according to the door group.

Figure 12 –ACT Pro User Groups

User Groups						
No	Name	Enabled	Number Of Users	Access Rights	Elevator Gr	
<input type="checkbox"/>	1	Full Access Group	✓	14	All Doors-24 Hours	
<input type="checkbox"/>	2	Subha's Group UG	✓	30	Subha's Doors DG-Office Hours TZ	
<input type="checkbox"/>	3	Demo Group	✓	1	All Doors-24 Hours	

Door Group Details		All Doors
<b>General</b>		Door Group Number: 255
User Groups		Door Group Name: All Doors *
Tenants		
<b>Available Doors</b>		<b>Doors in Group</b>
<input type="checkbox"/>	Name	<input type="checkbox"/>
		<input type="checkbox"/> Door 1 - 1
		<input type="checkbox"/> Door 1 - 2
		<input type="checkbox"/> Door 2 - 1
		<input type="checkbox"/> Door 2 - 2
		<input type="checkbox"/> Door 3 - 1
		<input type="checkbox"/> Door 3 - 2
		<input type="checkbox"/> Door 4 - 1
		<input type="checkbox"/> Door 4 - 2
		<input type="checkbox"/> XPF-Entry

## Configuring XPressEntry Using ACT Pro Data

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

### Doors

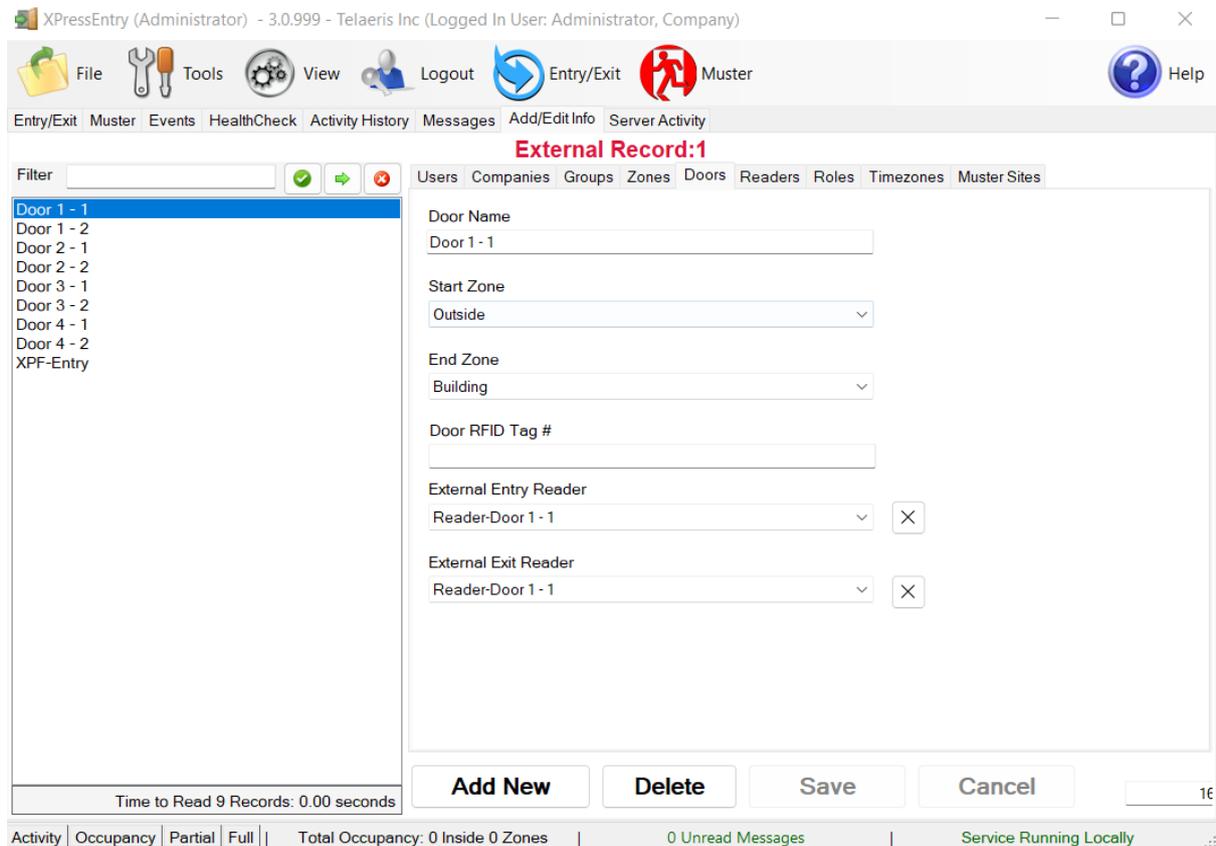
Entry/Exit permissions in XPressEntry are set by doors. Doors contain two readers, an exit and an entry reader. Door access is determined by the User's access to the door's reader. For entry, permission is based on the user's access to the door's external entry reader. For exit, permission is based on 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 ACT Pro could use default zones created by XPressEntry while installation or could create more zones manually in XPressEntry, since ACT Pro does not have zones.

While pulling doors from ACT Pro a reader is created in XpressEntry with respect to each door as shown in the below image.

Figure 22 – XpressEntry Doors



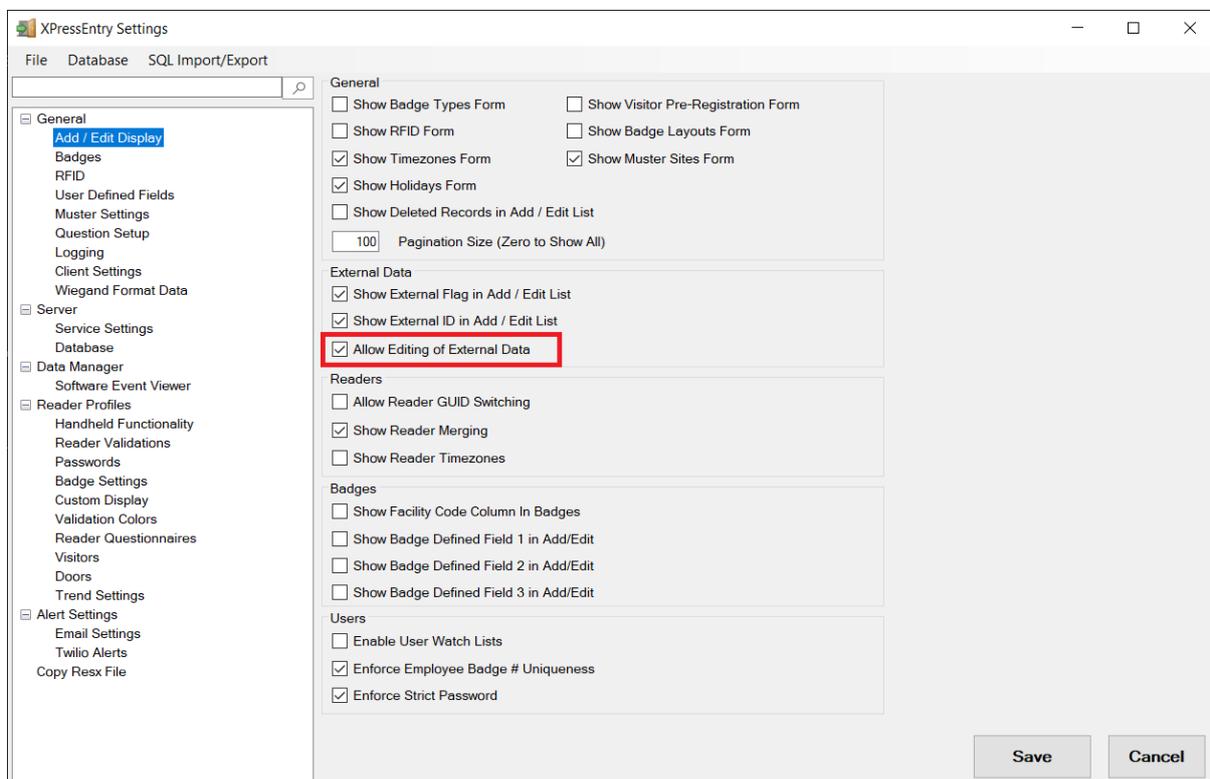
- a. Zones - For each door, set the start zone and end zone. This will “enter” a user in the specified zone when they enter or exit (or scan at ACT Pro door).
- b. External Readers - Attach the logical entry and exit readers that are created automatically while pulling doors from ACT Pro.

There should be a door in XPressEntry for each physical station that an employee will have a handheld. Select “Outside” for Start Zone and “Building” for End Zone.

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.

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 Tab, Select Add/Edit Display then check the option “Allow Editing of External Data” in the External Data Section.

Figure 23 – External Data Settings



## Readers

In XPressEntry’s ACT Pro 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 ACT Pro 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 in the Alarm Mode > Commands > Cardholder location > Select user.

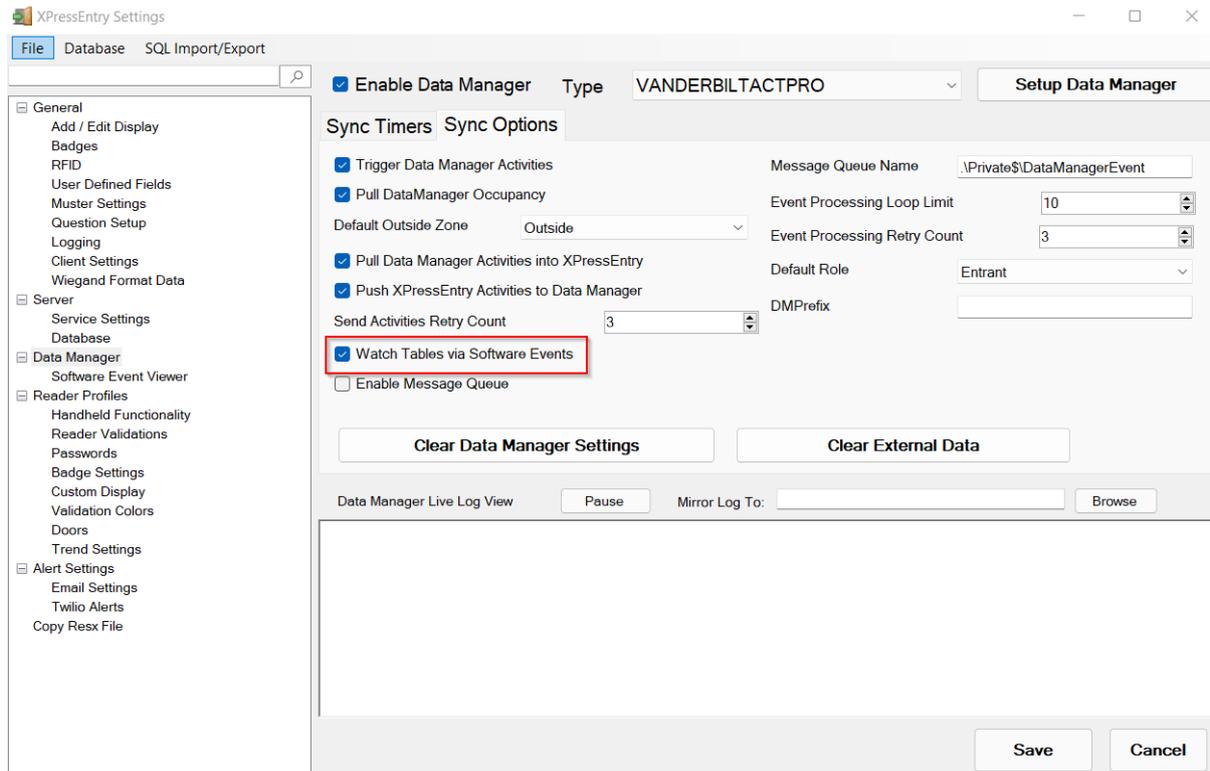
If XPressEntry is configured to "pull" activities, the occupancy of the system will change each time a person scans at a reader that is mapped to a door in XPressEntry.

You may want to pull activities if...

1. You want to use XPressEntry to manage Emergency Evacuations.
  - a. XPressEntry uses ACT Pro 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.

In Addition to these When the ACT Pro is configured to “Watch Table via Software Events” in Sync options. The live events change in ACT Pro will be pulled in XPressEntry immediately. Such as: Live Activity updates, Cardholder, Badges, Access Level and Time Zones updates.

Figure 24 – Watch ACT Pro Live Events



For more information about the functionality of XPressEntry, please look at the XPressEntry manual.