XPRESSENTRY

XPressEntry / AMAG

Revision 06/23/2023

For use with the
XPressEntry Mobile Access Control System

By

TELAERIS

Important Notice

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Purpose

The purpose of this page is to instruct the user on how to synchronize an XPressEntry System with the AMAG Symmetry software.

Requirements

It is assumed that a version of Symmetry is installed on a server prior to integration with XPressEntry.

1. Symmetry 8.1 or older
    a. Advanced Reporting 8.1 (or 8.1.3) ISO is required for Integration. Please contact your AMAG dealer to receive the Advanced Reporting installer.
2. Symmetry HSE 8.1
    a. Requires **patch number 180601** from AMAG. Without this patch, transactions submitted to Symmetry from XPressEntry will not be able to identify the user.
3. Symmetry 9.X
    a. Contains Advanced Reporting database views built in. No additional Advanced Reporting installer is needed.
4. All versions
    a. Data Connect License from AMAG
    b. Must configure Data Connect for database integration, not for text file integration
        i. Set DataExportEnabled=1 within the multimax.ini
        ii. Set DataImportEnabled=1 within the multimax.ini

Minimum Database Permissions Required

At a minimum, the service account running the XPressEntry service needs the following permissions to the AMAG database.

1. multiMAX- db_datareader
2. multiMAXImport- db_datareader and db_datawriter
3. multiMAXExport- db_datareader
4. For Symmetry 9.0+
    a. multiMAXTxn- db_datareader

Setting Up Symmetry to Synchronize with XPressEntry

Data Connect

XPressEntry communicates with Symmetry in three ways:

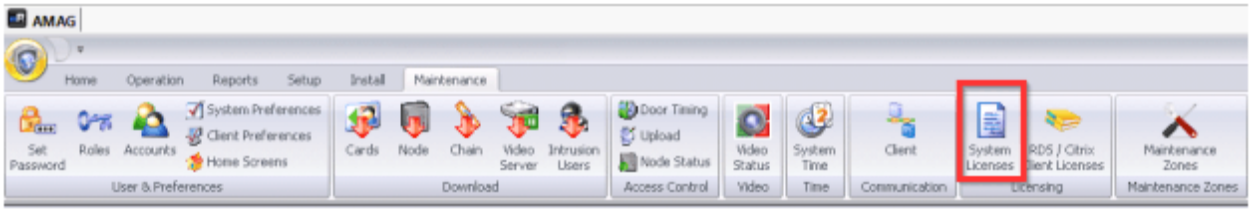
1. Pulling data from Database Views
2. Pulling data updates from the Data Connect export table
3. Data Connect Insert

If you do not have a Data Connect License, please contact your Symmetry Dealer.

Applying the License Key

1. To add the license key to your Symmetry system, go to the Maintenance tab and select **System Licenses**.
2. Select **Add** and enter your license key information.

3. Once the license has been applied, **restart Symmetry** to configure the new options.



Configuring Data Connect

1. Navigate to the Data Import form via **Operation > Data > Data Import**.
2. Set the Import **Database Scan Period** to as often as you would like Symmetry to scan for newly imported transaction records. Select **OK**.

Setup Symmetry Data and Settings

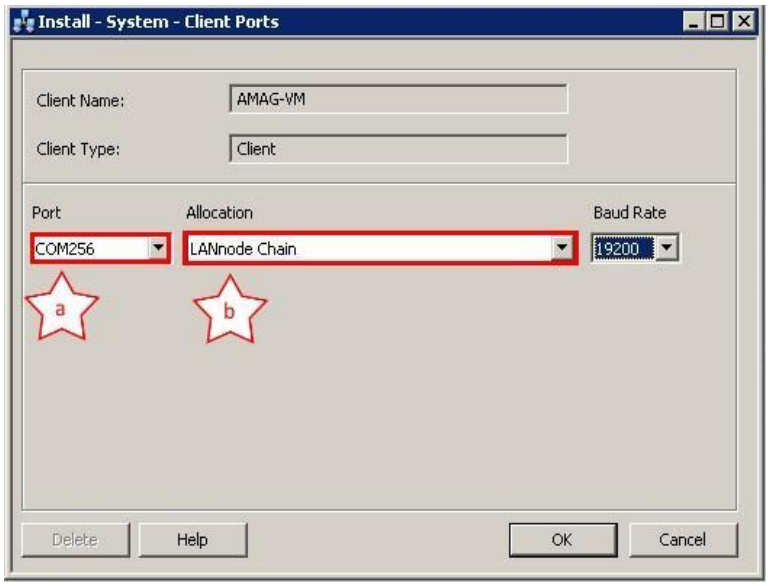
Handhelds

For **every physical** XPressEntry handheld reader, you should have **two logical** readers in the Symmetry 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.

XPressEntry LAN Chain

To begin, you should add the readers to the Symmetry system. To add the readers to the Symmetry system, you:

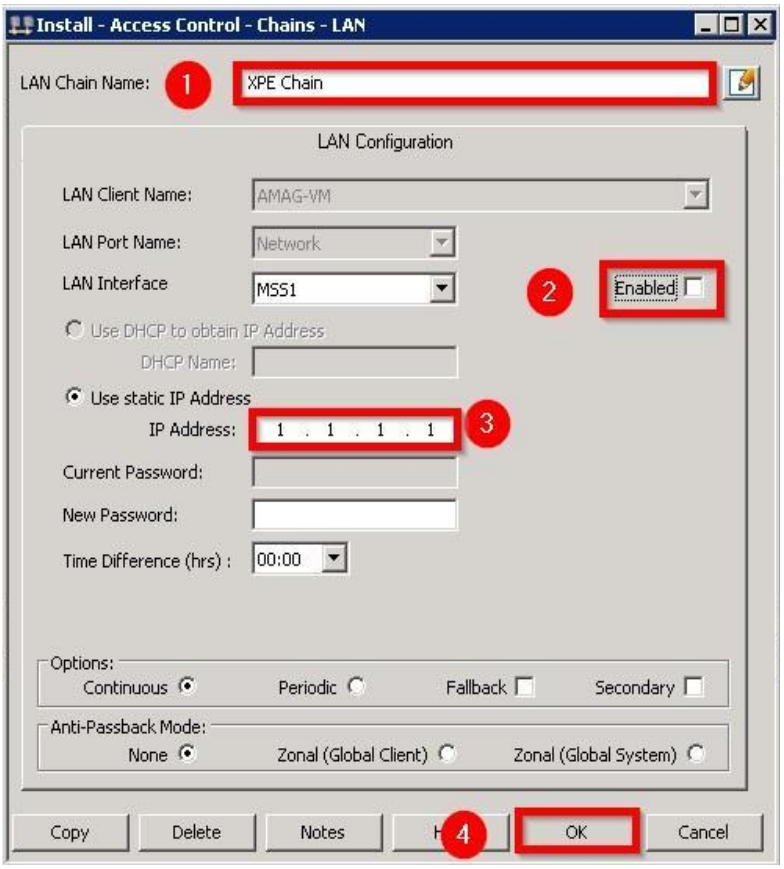
1. Need to be logged in with **Installer Permissions**
2. Must first create or specify a **LAN Chain**.
    a. It does not matter what the LAN Chain is named, but it is helpful for the name to be related to XPressEntry for organization purposes. To do this, you must first select a **LAN Chain port**.
    b. Select **Client Ports** under the Install tab. Select **New**.
    c. Select from the list of available ports and fill the other two fields out as shown below.



i. **Port** – Select a port that is not and will not be in use.
ii. **Allocation** – Select LANnode Chain.

d. Select OK.

3. After specifying the type of port, select **Chains > LAN** under the install tab and click **New**. The IP Address can be outside of the active domain. Make sure that enabled is **not checked**.

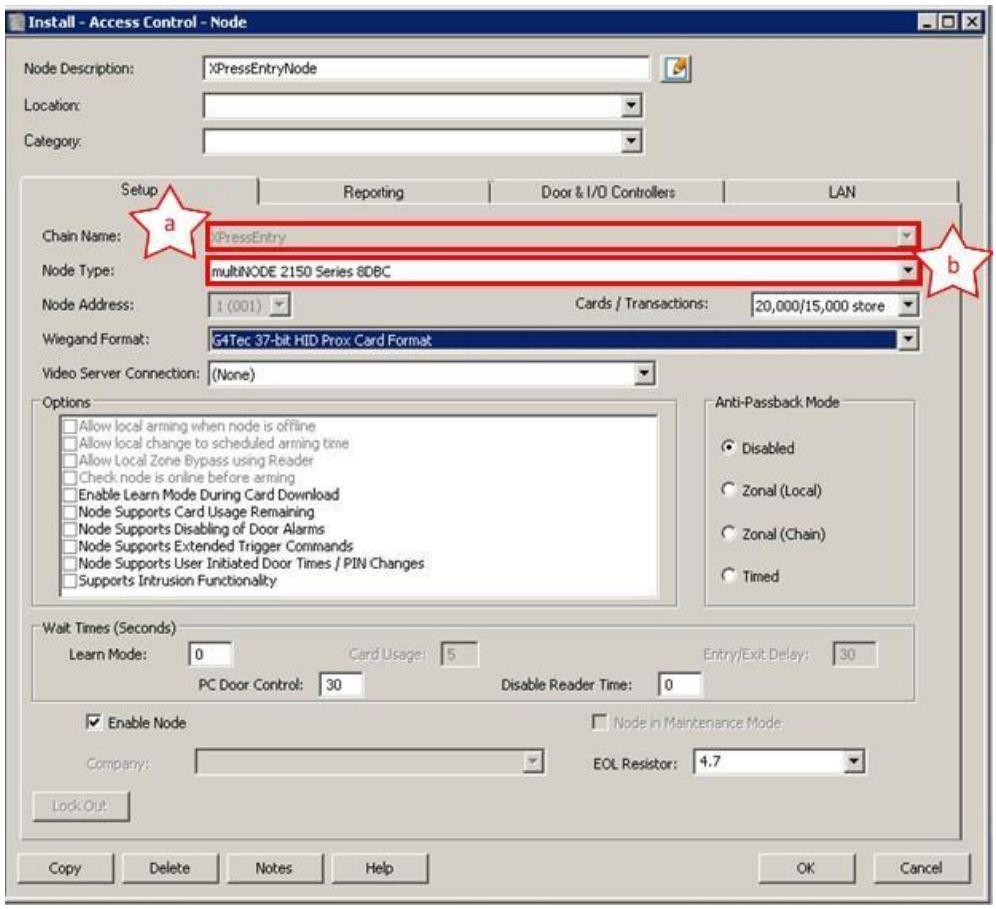


a. **LAN Chain Name** (1)– The name that will carry the Nodes which carry your handheld readers.
b. **Enabled** (2) – Does not need to be enabled because the chain name is logical only.
c. **IP Address** (3) – Fill in a fake IP address. Because the reader is theoretical, it does not actually use an IP address.
d. When finished, press **OK**.

XPressEntry Nodes

Once you have created a LAN Chain, you will need to create one or more nodes in order to add XPressEntry Handhelds.

1. Under the **Install** tab, select **Node**.
2. Choose **multiNODE 2150 Series 8DBC** and ensure that **Enabled** is checked. This will allow you to add 8 handhelds to this node. Select **OK**.



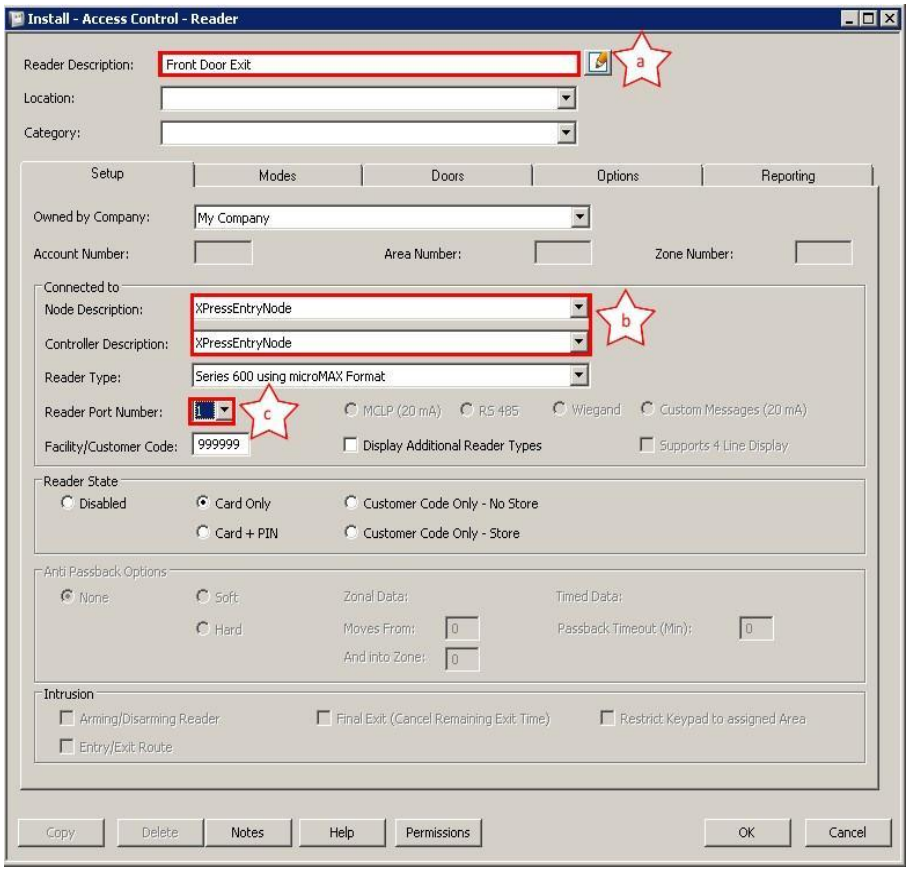
a. **Chain Name** – Select the Chain that you created during the second step.
b. **Node Type** – Determines the number of handhelds that can be stored in this node. Use one of the multiNODE 2150 Series node types.
    i. **multiNODE 2150 Series 8DBC** – Carries 8 Readers
    ii. **multiNODE 2150 Series 4DBC** – Carries 4 Readers
    iii. **multiNODE 2150 Series 2DBC** – Carries 2 Readers

Adding XPressEntry Handhelds

After creating the LAN chains and nodes, we can add the handheld readers to the system.

1. Under the **Install** tab, select **Reader**.
2. For **each** physical XPressEntry handheld that you have, create **two** logical handhelds in the Symmetry system: one for **entry** and one for **exit**.
3. Under the **Setup** tab, select the **company** the reader belongs to.
4. In the **Connected To** grouping, select the node you created above as well as the type of controller you had selected for the node. Each reader created in the **same** node will have a **different** port number. Select OK when finished.
    a. **Reader Description** – This is the name of the logical reader. Its name should contain the location of the reader and the directionality (Entry or Exit).
    b. **Node Description** – This is the node you created.
    c. **Reader Port Number** – There are eight of them if the node type is multiNODE

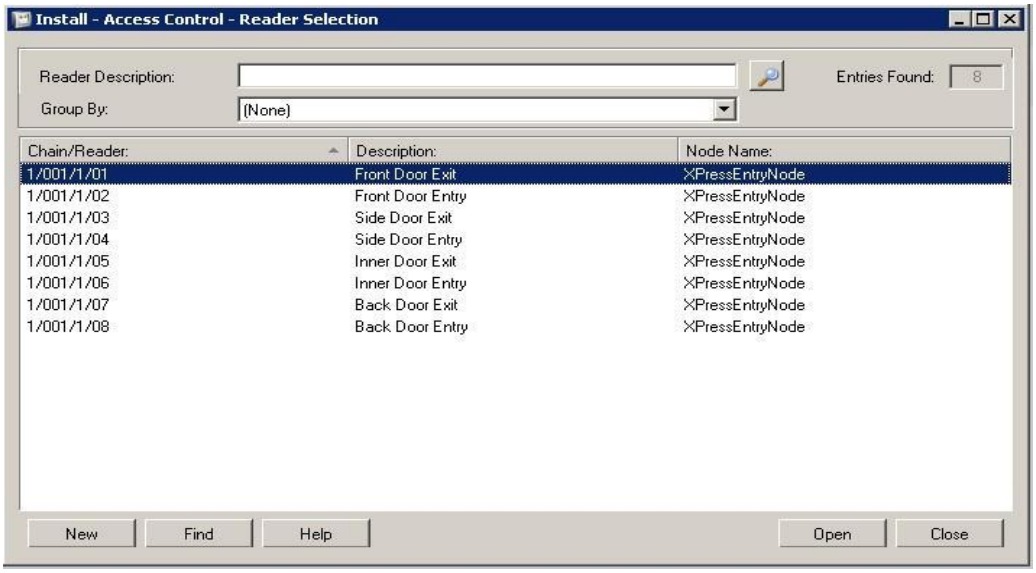
2150 Series 8DBC.



In most situations, you should add two readers (an exit and an entry) for each door. Usually, there should be at least one XPressEntry handheld for each door you are tracking. We will go into the way this works when we review XPressEntry.

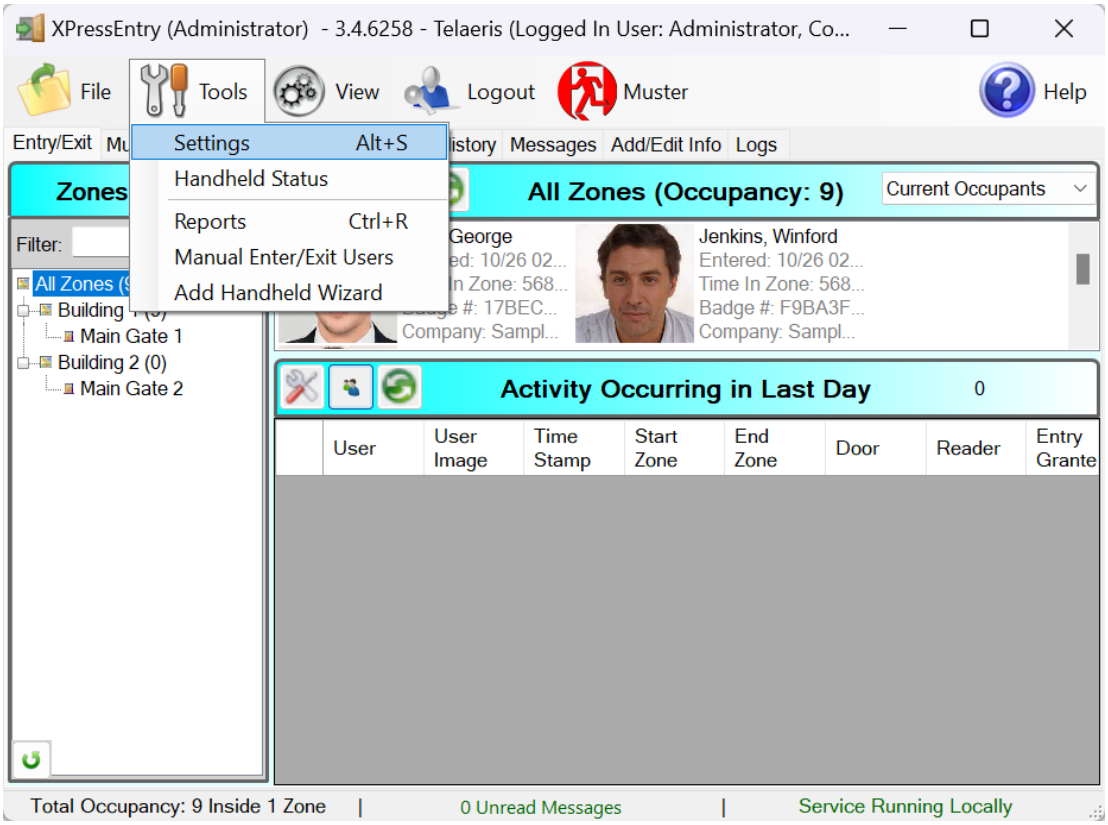
All Readers

After creating four physical readers, the list of readers should look like the example below. If the eight-door controller was selected, a separate node will need to be created for the fifth handheld.



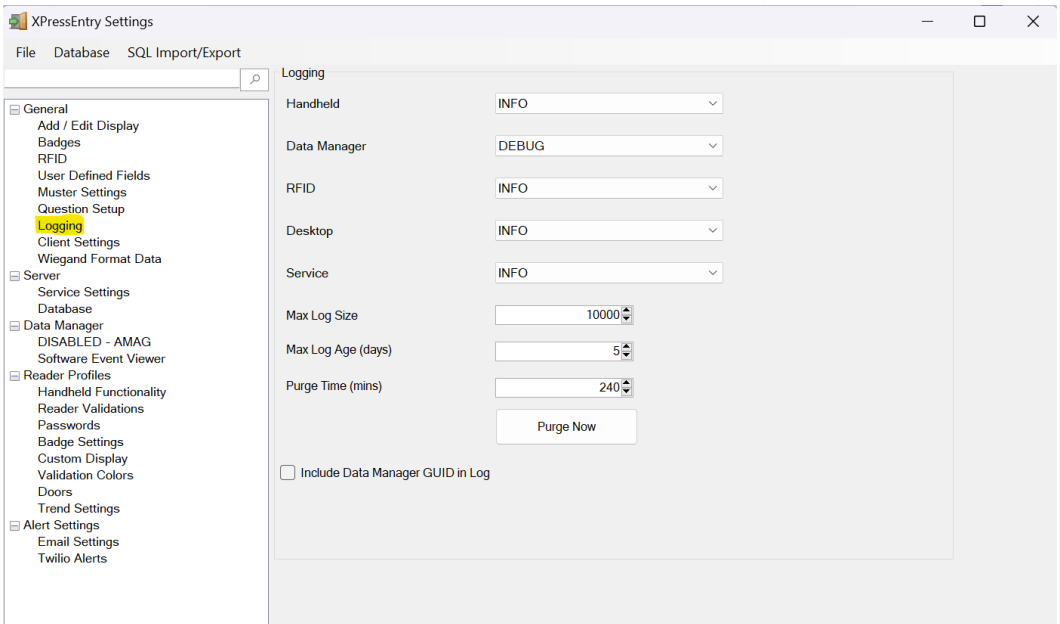
Enable Synchronization

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



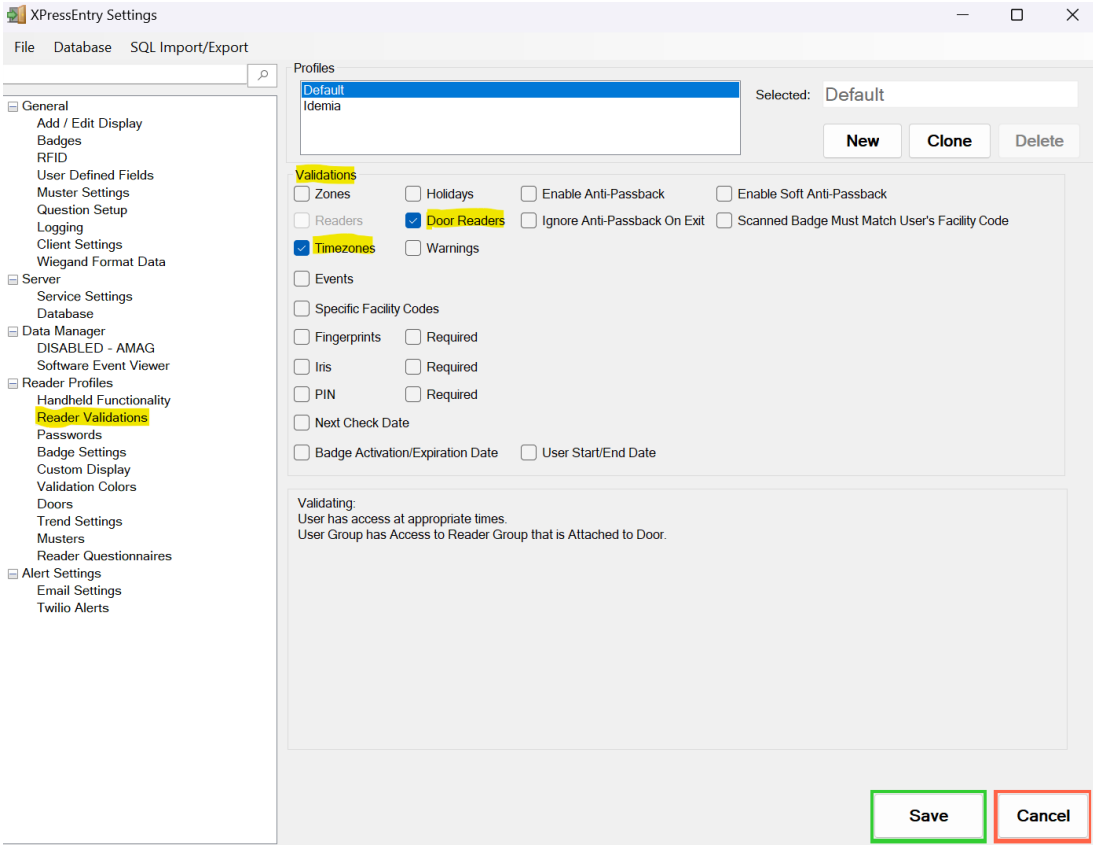
General Tab

1. From the **Settings** page, select the **Logging** Page.
2. **Set the Log level to Debug or SQL** – 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 **Critical** so only error messages will be tracked.



Reader Profile Tab

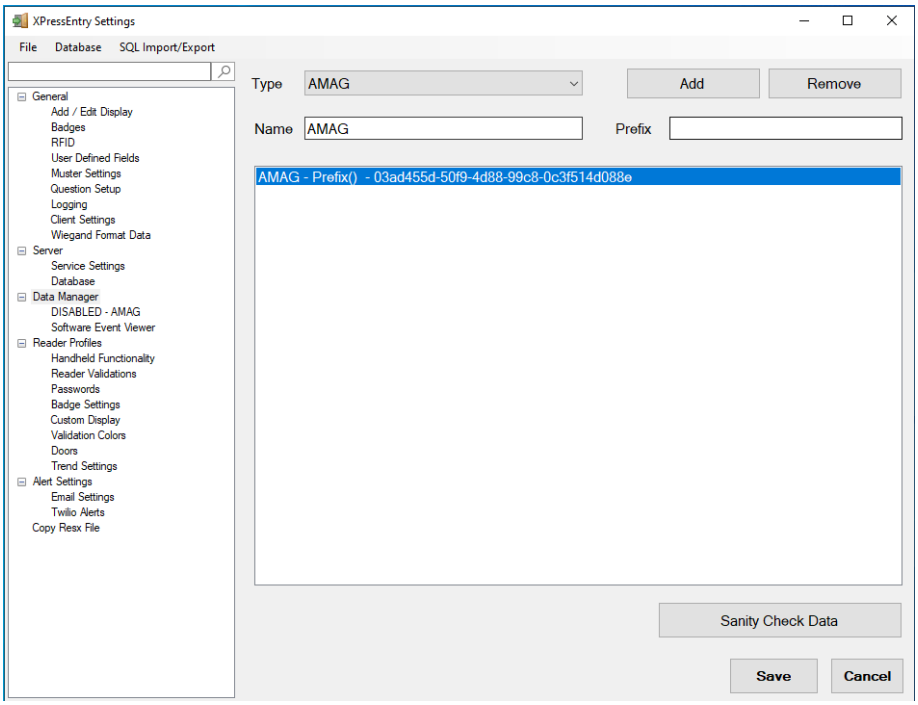
The **Reader Profile Tab** is where you configure the handhelds. Make sure the **Door Readers** and **Time Zones** are the only modes that are checked under **Reader Validations**. Select **Save** at the bottom right when finished.



Data Manager Tab

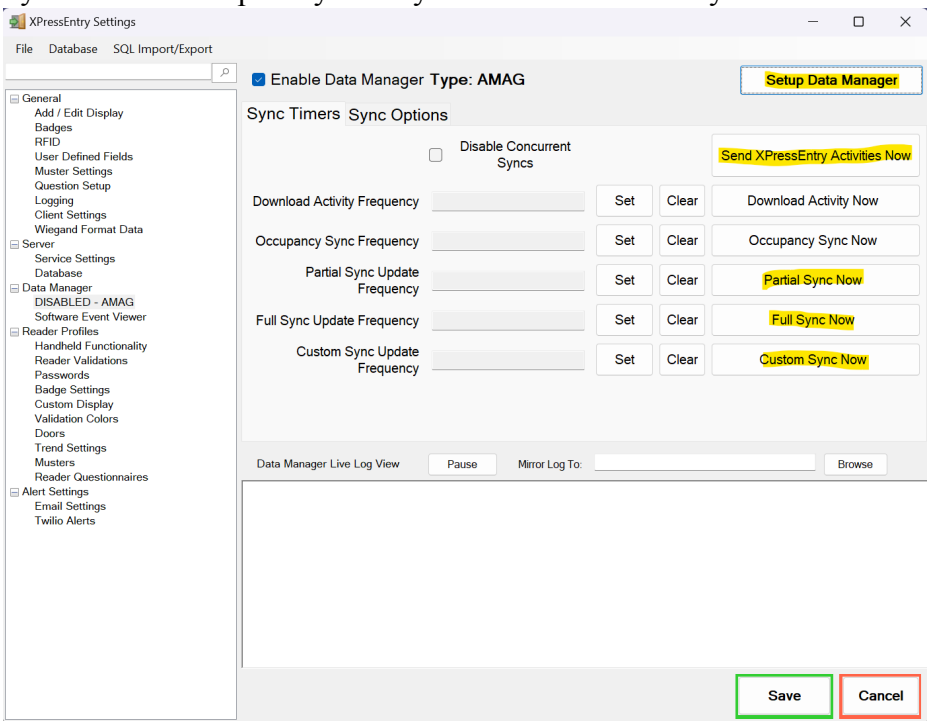
From the Settings page select the **Data Manager Tab**.

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



Sync Timers

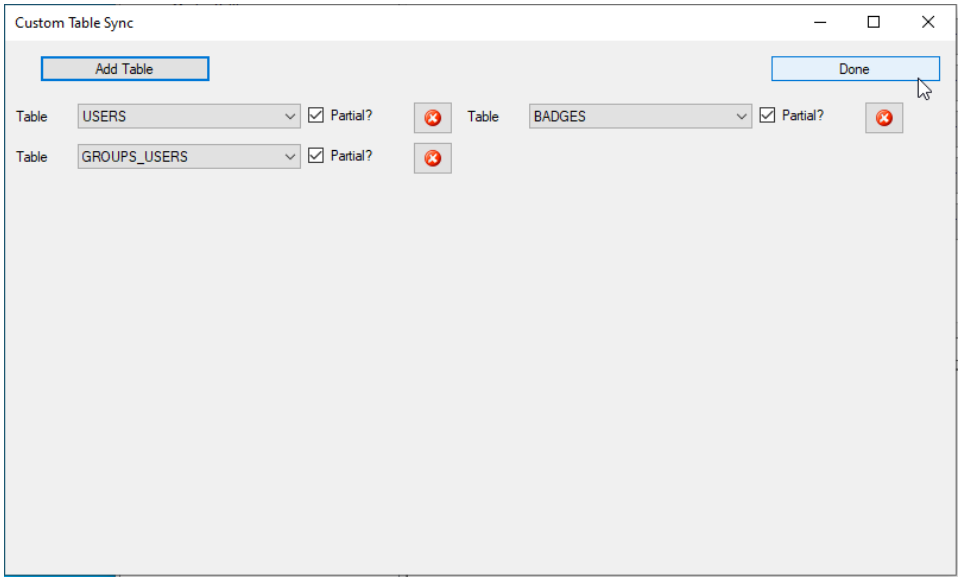
XPressEntry uses Timers to pull Symmetry Data into XPressEntry.



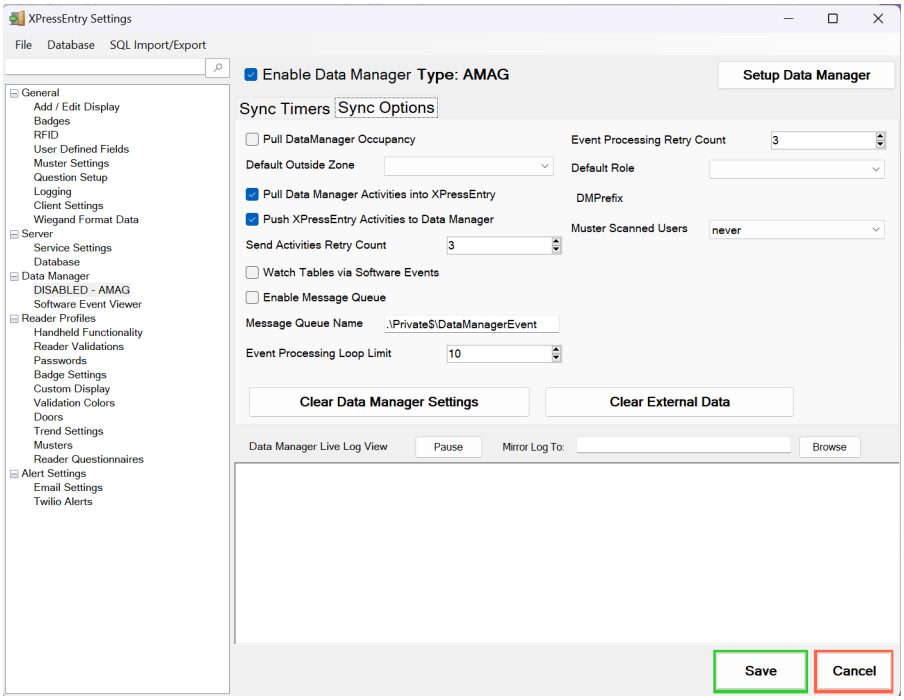
1. **Download Activity Frequency** – Pulls reader scan records into XPressEntry and stores them in XPressEntry's activity table. This function also updates the zone occupancy.
2. **Occupancy Sync Frequency** – Updates the zone occupancy without storing the activity records.
3. **Partial Sync Frequency** – Updates all tables BUT only updates **user**, **card**, and **group**

data changes that have occurred since the last partial sync.

4. **Full Sync Update Frequency** – Updates all tables by pulling all necessary records from Symmetry. This function may take some time.
    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.
    a. To configure, right click **Custom Sync Now** and select **Edit Custom Sync**. For an AMAG integration, it is recommended to set the following:



Sync Options



1. **Pull Data Manager Occupancy** – Enables use of the Occupancy Sync.
2. **Default Outside Zone** – Not used by AMAG.
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 Symmetry.
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. Not used by AMAG integration.
7. **Enable Message Queue** – Turns on Message Queue for software events to be used instead of database queue. Not used by AMAG integration.
8. **Message Queue Name** – Name of windows message queue for software events. Not used by AMAG.
9. **Event Processing Loop limit** – Max records to process from the event queue. Not used by AMAG.
10. **Event Processing Retry Count** – Number of times XPressEntry will attempt to process a message queue event on failure. Not used by AMAG.
11. **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.
12. **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.
13. **Setup DataManager Button** – Opens AMAG specific settings.
14. **Clear DataManager Settings** – Resets all settings on the two above tabs, as well as the AMAG specific settings.
15. **Clear External Data** – Deletes all data synced from AMAG from the XPressEntry Database.

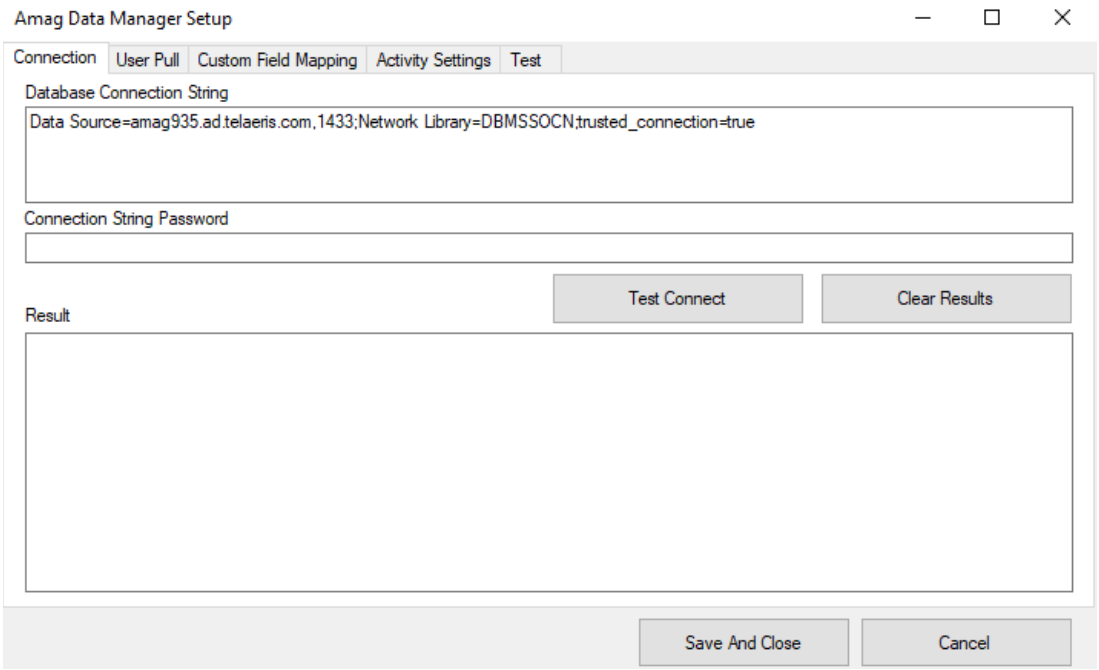
Symmetry Setup

The following sections demonstrate how to configure the sync with Symmetry. Once completed, select **Test Connection**, or Save Settings if on the Activity Tab. Then Exit the form.

On the Data Manager tab of the Settings form, select **Save** and **Apply Settings**. You are then ready to complete a full Sync.

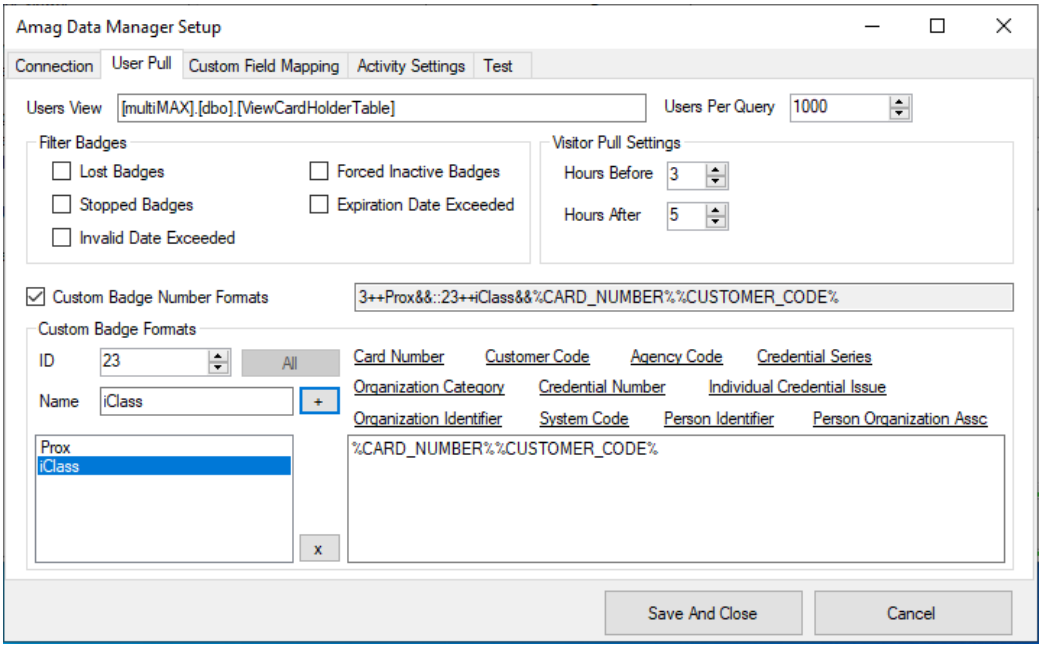
Connection Tab

Press the **Setup Data Manager** button to get the AMAG specific setup screen. Set the database connection string to connect to the Symmetry Database.



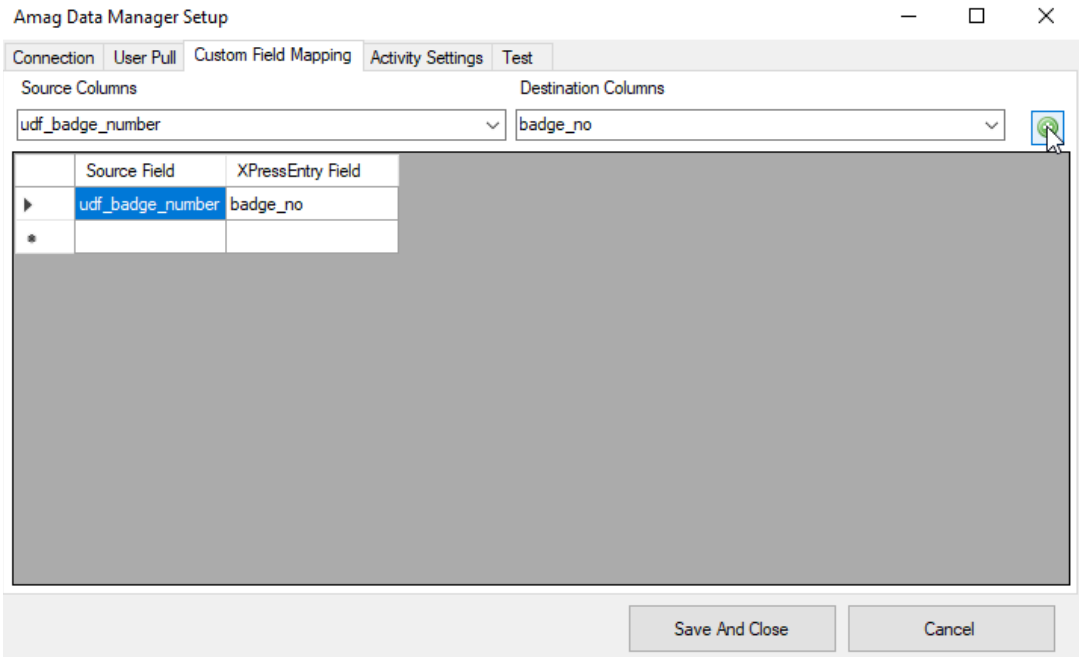
1. Connection Settings
    a. Configure the connection string to point to the Symmetry Database. It is recommended that your connection string uses **Windows Authentication (**Trusted_Connection=Yes or equivalent Integrated Security).
    b. If you do not use Windows Authentication, you may hide the password in the connection string by placing it in the Connection String Password box. In the connection string, add **@Password** as a placeholder for your password (as shown in the connection string above).
        i. This password is **not secure**. Using this feature in a production environment can result in a security breach.
    c. Select **Test Connect**. If configured correctly, the result will display **Successfully Connected to the Symmetry database!**

User Pull Tab



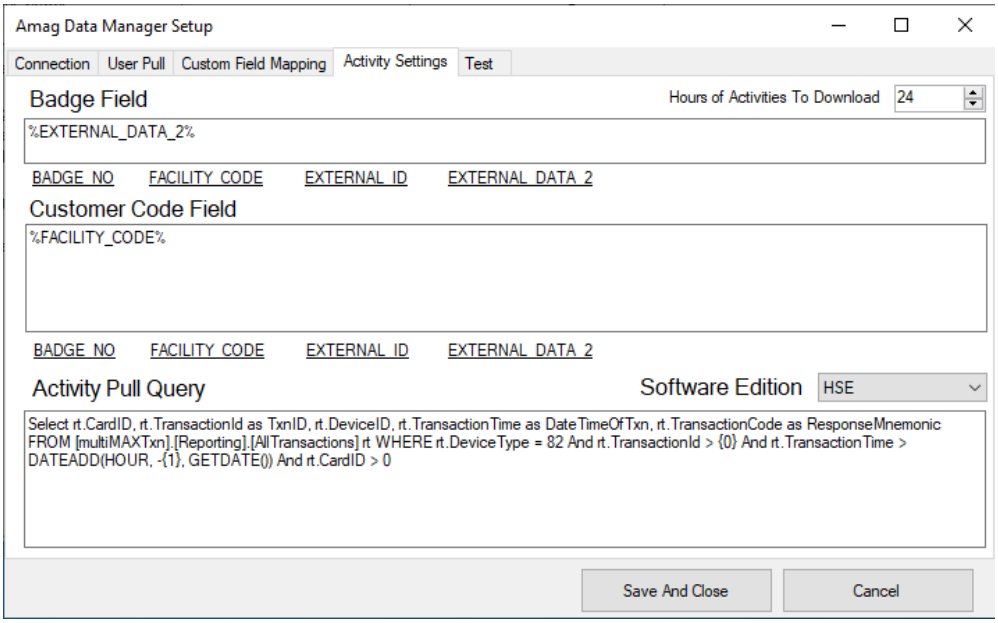
1. **Users View** – The database view XPressEntry pulls users from. A custom view can be used, but it must include all fields that the **ViewCardHolderTable** view contains.
2. **Users Per Query** – The number of users that are pulled per query. XPressEntry will continue to query the users table until all records have been pulled.
3. **Filter Badges Section** – Does not pull badges from AMAG that contain the selected invalid statuses.
4. **Visitor Pull Setting** – In partial syncs, only pulls visitors **X** number of hours before and after their arrival time.
5. **Custom Badge Number Formats** – XPressEntry can define which Symmetry fields make up the card number that XPressEntry will use to identify the badge for 1 or more card formats. Set the **ID** of the card format, give it a **name**, and double click the **underlined fields** in the order that will compose the card number.

Custom Field Mapping



To custom map a User field from Symmetry's database to XPressEntry's database, type the column name in the **Source** column and select a column name in the **Destination** column. Any field name in the source field column must exist within the **Users View** (see previous section).

Activity Settings Tab



The Activity Settings tab allows you to format the way XPressEntry pushes Activity records, as well as adjust the query to pull Symmetry Activities.

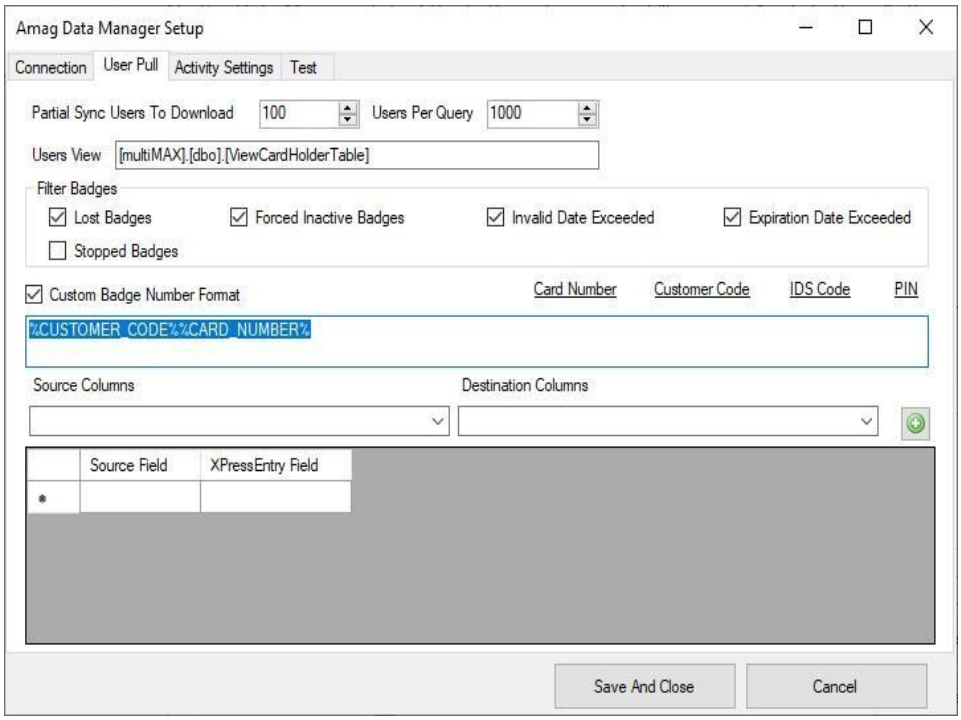
1. **Badge Field** – The badge information XPressEntry will send when submitting activities to Symmetry. In most cases should be **%EXTERNAL_DATA_2%**
2. **Customer Code Field** – The facility code XPressEntry will send when submitting activities to Symmetry. In most cases should be **%FACILITY_CODE%**
3. **Activity Pull Query and Software Edition** – The software edition usually determines what the activity pull query should be, but activity pull query can be customized if needed.

Select Save Settings once all fields are configured.

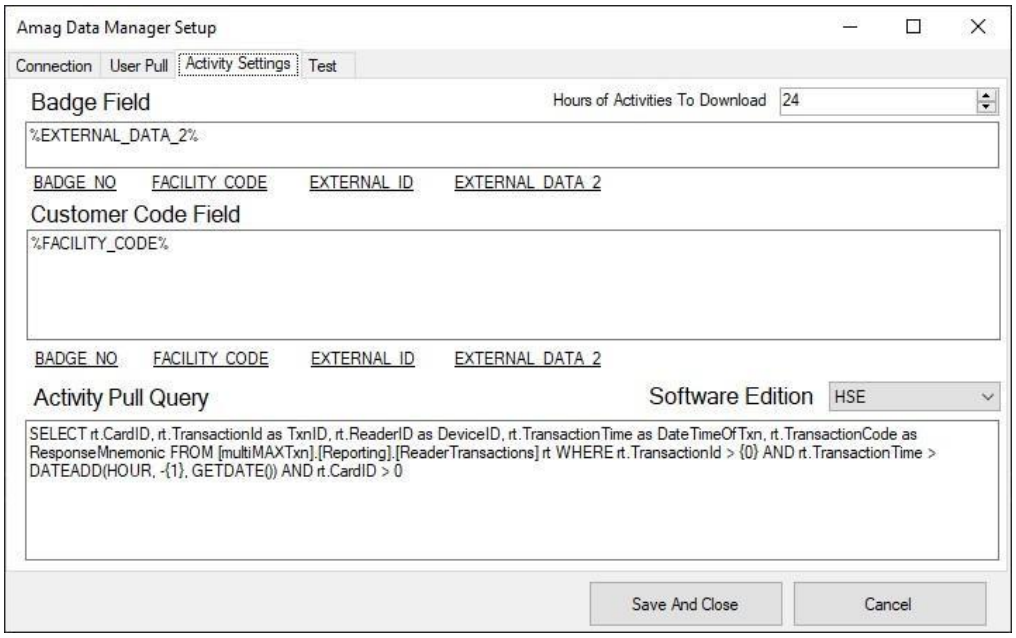
HSE SR Series Setup

There are a few specific options that need to be selected when syncing XPressEntry with an HSE system:

1. Under the **User Pull Tab**, you are required to set up a Custom Badge Number Format. SR series cards are concatenated together from two fields. Because of this, you must pull both the **customer_code** field and **card_number** field from AMAG into the badge number within XPressEntry. Enable the Custom Badge Number Format as shown below:



2. Under the **Activity Settings Tab**, Software Edition should be set to **HSE**



Symmetry Sync Check

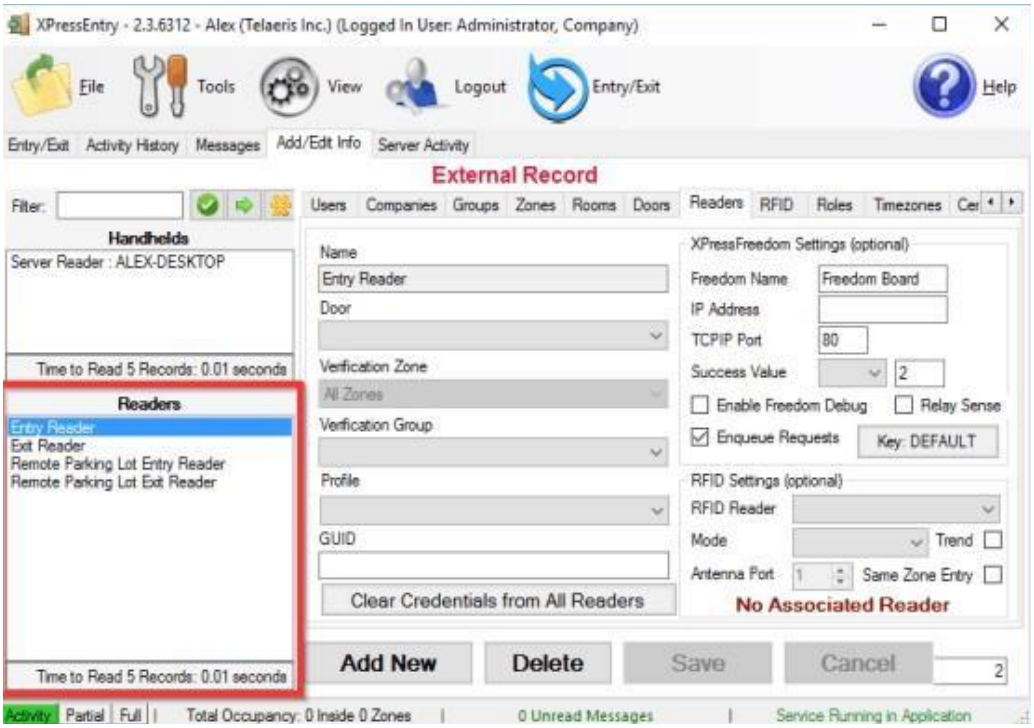
The purpose of this section is to help the operator understand exactly what data XPressEntry is pulling. For a quick setup, please navigate to the next section, **Configuring XPressEntry using Symmetry Data.**

Symmetry > XPressEntry

1. Companies > Companies
2. Cardholders > Users
3. Cards > Badges
4. Readers > Reader
5. TimeCodes > TimeZones
6. Access Codes > Groups
7. User/Access Codes > Groups
8. Reader Groups > Groups
9. User/Reader Groups > Groups
10. Reader/Users Permission > Groups

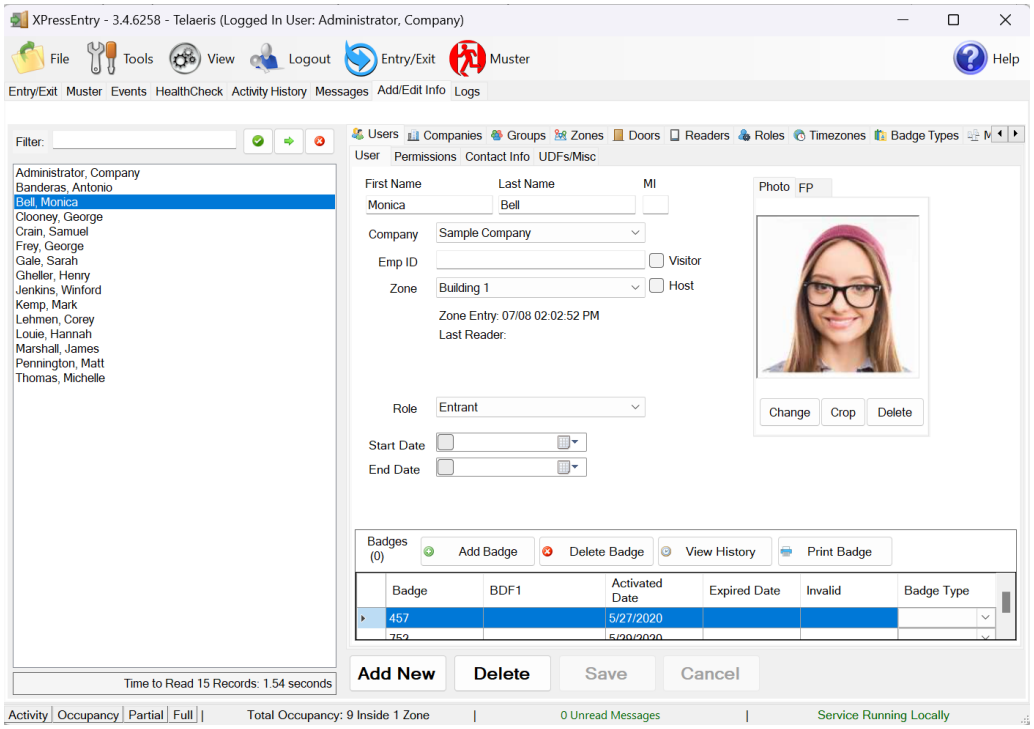
Companies and Readers

Companies and Readers are the simplest tables to pull from Symmetry. All Companies and Readers should be available to view in their respective tabs.



Users

Here is a sample of a properly synchronized user:



All External Records (From Symmetry) 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.

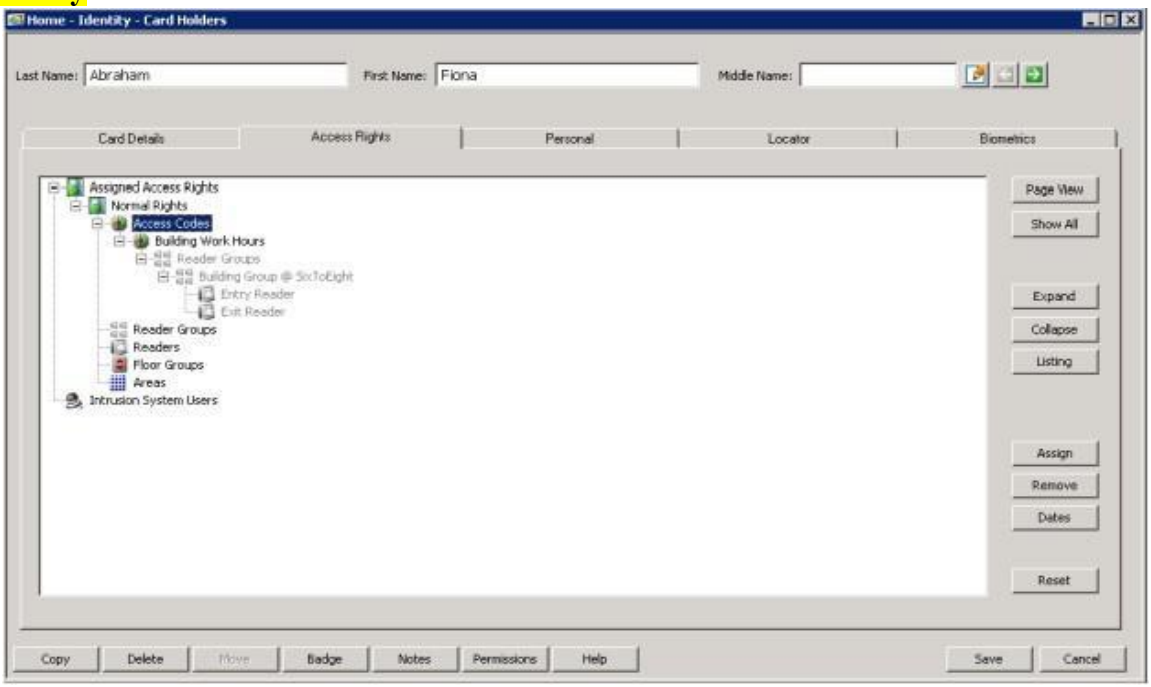
XPressEntry will pull the user's **image** and **badge number** from Symmetry. The badge number can be seen at the bottom of the screen.

User Permissions

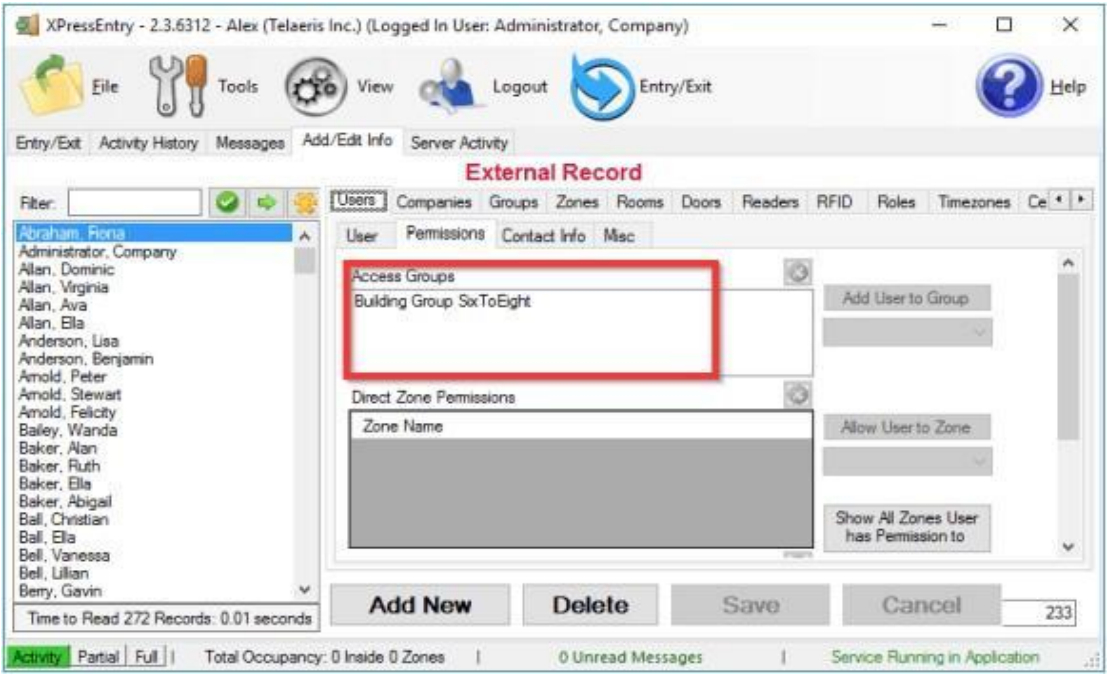
Users in XPressEntry have the **same permissions** to each reader as they do in Symmetry. This is regardless of whether the user is assigned an Access Code, Reader Group, or direct access to a Reader. However, the way in which the **data** is displayed is a little **different**.

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

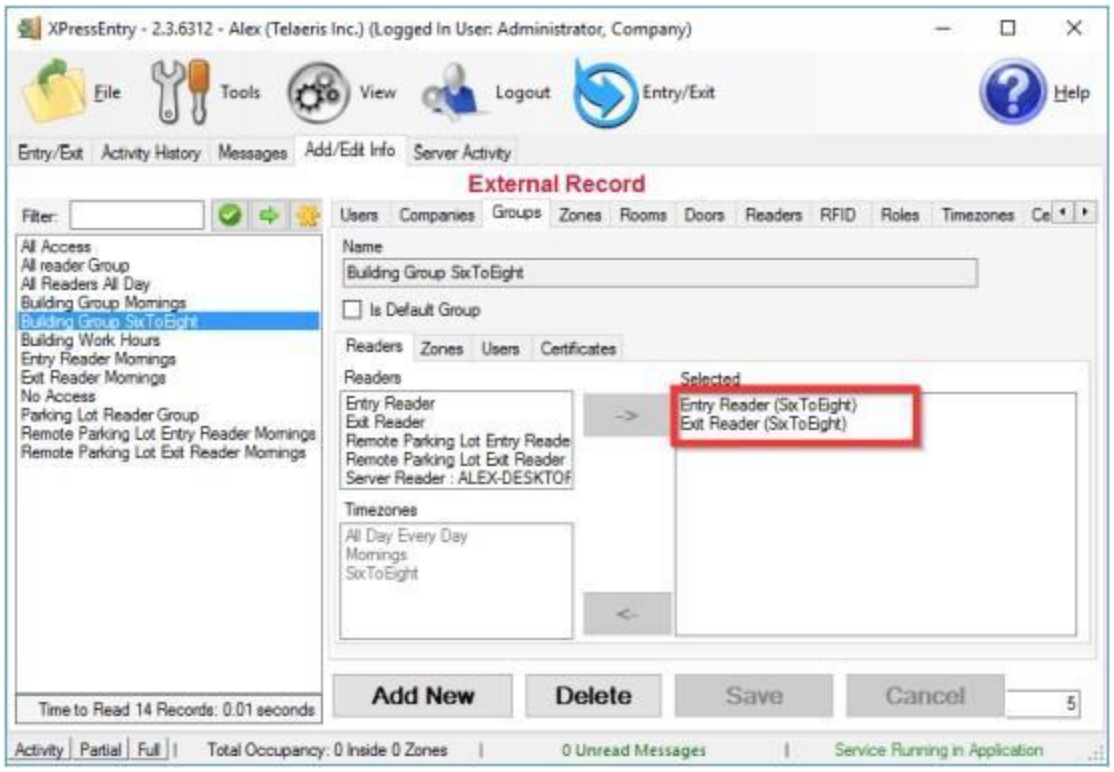
Symmetry



XPressEntry



To see the readers Fiona has access to, navigate to the **Groups** tab. Select **Building Group SixToEight** from the list on the left.



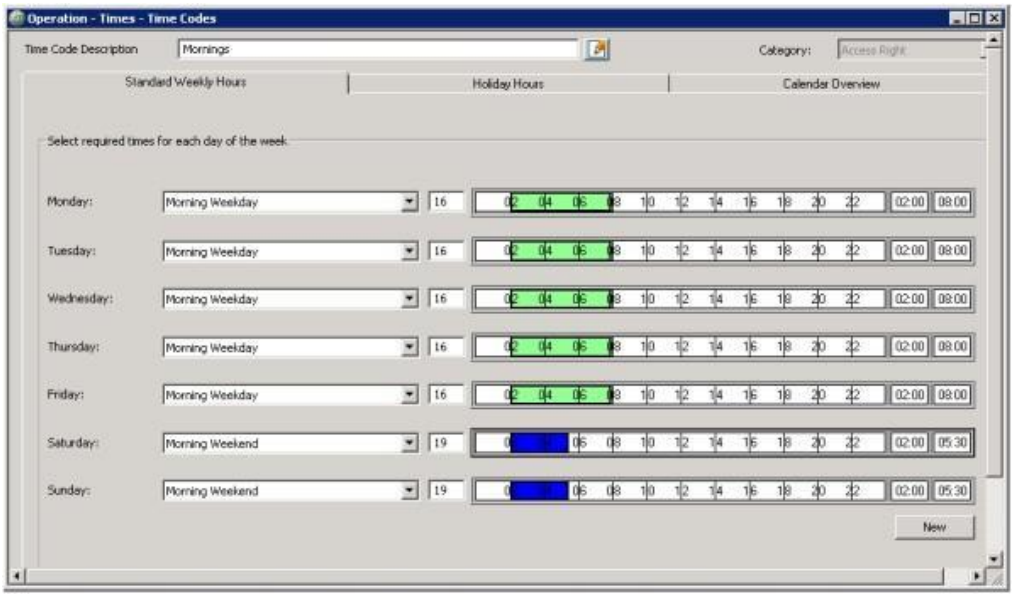
Permissions in Symmetry can be assigned in 3 different ways.

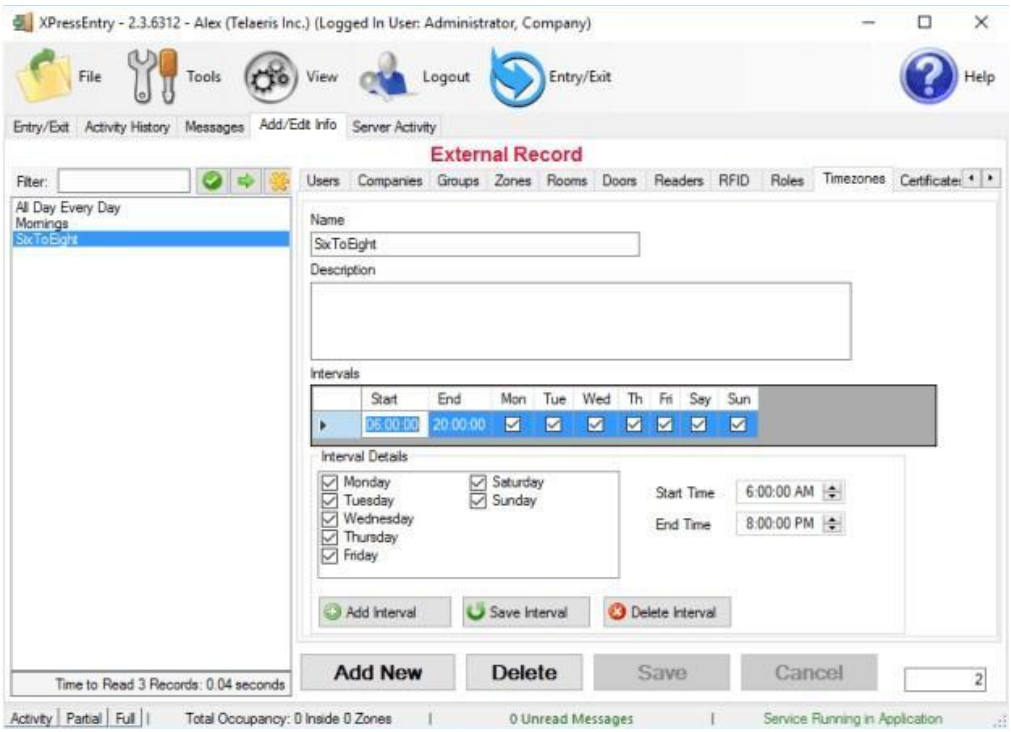
1. **Access Code** – XPressEntry pulls all readers associated with the Access Code at the reader's specified time.

2. **Reader Group** – XPressEntry creates a Group for each Time Code a Reader Group uses.
    a. Ex – 5 people are given access in Symmetry to Reader Group 1 between 9 AM and 5 PM. 7 People are given access in Symmetry to Reader Group 1 between 6 PM and 4 AM.
    b. XPressEntry creates 2 groups – 1 for the day shift and 1 for the night shift. Each group contains all readers in Reader Group 1 and access at the specified time.
3. **Direct Reader Access** – XPressEntry creates a Group for each Reader/Time Code combination used in the Symmetry Database.
    a. Ex – 5 people are given access in Symmetry to Reader 1 between 9 AM and 5 PM. 7 people are given access in Symmetry to Reader 1 between 6 PM and 4 AM.
    b. XPressEntry creates 2 groups, one for the rest group of people and one for the second with access to the single reader at the specified time.

Time Zones

Time Codes are pulled from Symmetry to create Time Zones. If a single Time Code has multiple standard time ranges for different days of the week, XPressEntry will create additional intervals to support this.





Configuring XPressEntry using Symmetry Data

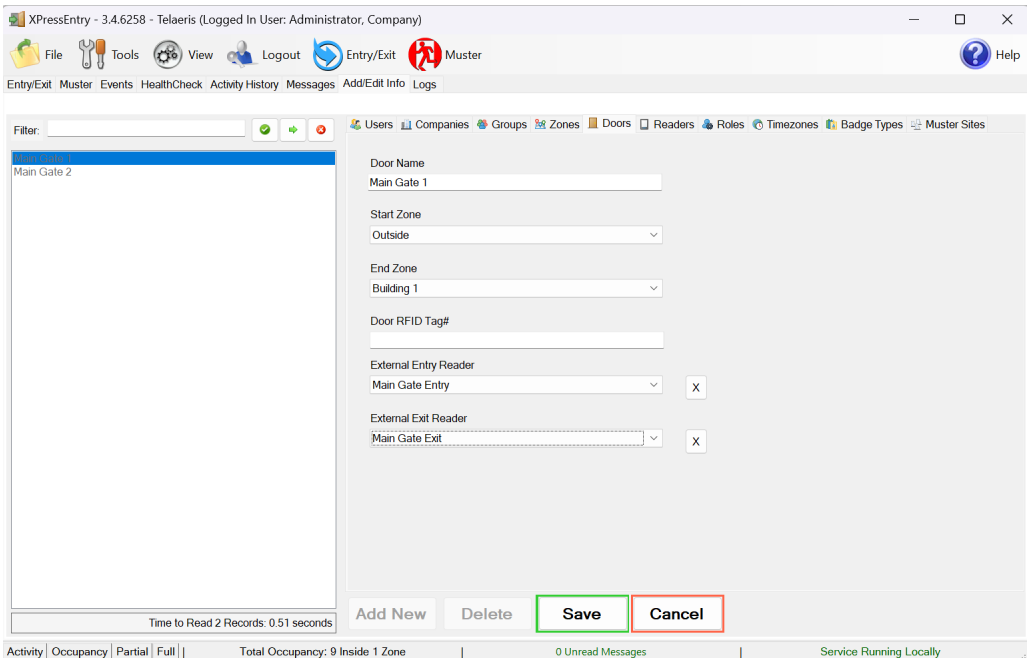
Now that XPressEntry has Symmetry's database, it needs to be configured to use this information. The tabs that need to be configured are the Doors, Readers, and Zones.

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 Symmetry does not require additional start and end zones. However, XPressEntry can help keep track of what **zones** people are in if configured correctly.



1. **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 a Symmetry reader).
2. **External Readers** – Attach the logical entry and exit readers that you created in Symmetry to a door.

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

1. To create a door, select **Add New** at the bottom of the form. Enter a name that clearly describes what this door represents.
2. Select **Outside** for Start Zone and **Building** for End Zone.
3. **External Entry Reader** is one of the entry readers you created in Symmetry. **External Exit Reader** is one of the Exit readers you created in Symmetry.

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.

Readers

In XPressEntry's AMAG 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**.

1. Ex – You have handheld A stationed at **Door A**.
2. Door A has two readers associated with it – Reader **A-Entry** and Reader **A-Exit**.
3. 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.

4. Later, there is heavy volume exiting **Door B**.
5. 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.

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

Activities

XPressEntry will synchronize activities to Symmetry if that option has been set by Data Manager. If XPressEntry is configured to **push** activities, they will appear in the **Activity View** (Home > Monitoring > Activity). 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 Symmetry 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.