

MorphoManager

BioBridge

S2 NetBox

Quick Start Guide



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Introduction

BioBridge is an enrollment and synchronization middleware that overlays enrollment and demographic synchronization between MorphoManager and third party data sources. The infrastructure is extensible and supports interfacing to multiple third party systems (one at a time) by the implementation of an interface. BioBridge is not dependent on the underlying technology platform required for integration.

BioBridge supports the following version of S2 Netbox:

- 4.4.03

Support

Please contact your installer for additional support.

Setting up BioBridge

The following areas of MorphoManager will need to be configured as part of the S2 NetBox BioBridge setup:

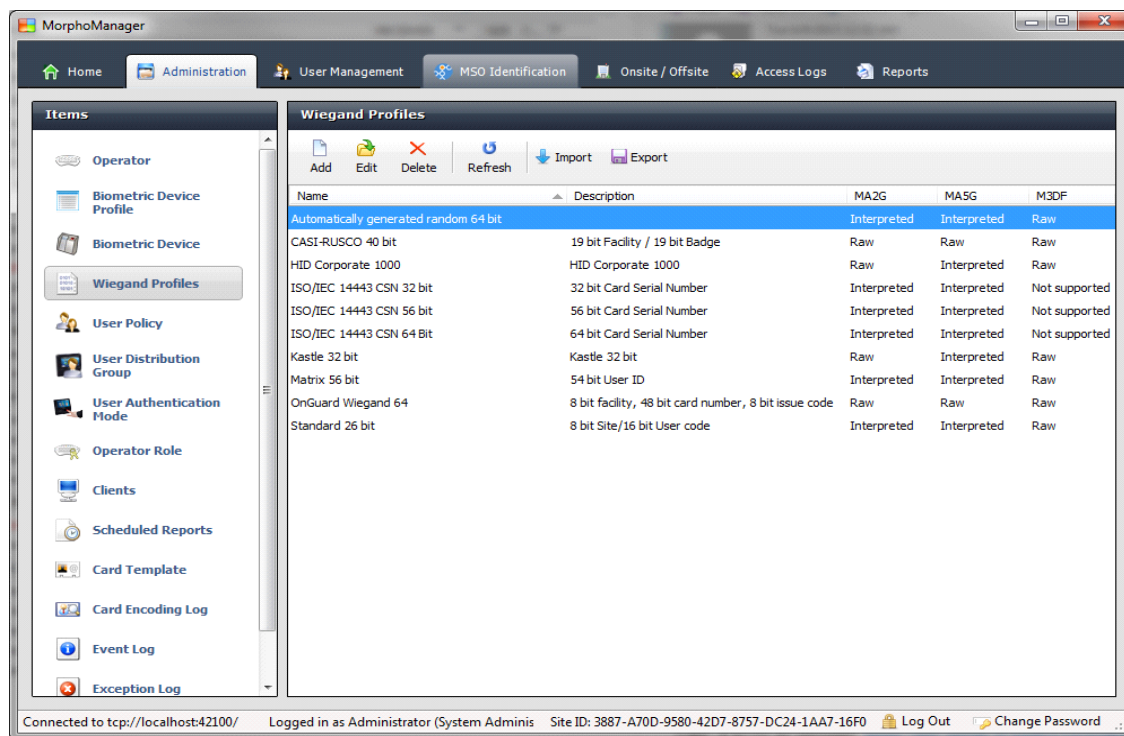
- Wiegand Profiles
- Biometric Device Profiles
- Biometric Device
- User Policy
- User Distribution Group
- BioBridge System Configuration


Wiegand Profiles

Wiegand Profiles define what information is output over the Wiegand Out interface of the Morpho Biometric Devices when a user is identified. This is most typically used in conjunction with an Access Control System.

- From Administration tab select Wiegand Profile
- Click **Add** button to create a custom Wiegand profile.

The Wiegand formatting used can vary from system to system, but some common formats are listed below.



 The actual setting of the Wiegand Profile from this list will be done at the User Policy and Biometric Device Profile Level. Please refer to those sections for further details.

Biometric Device Profile

The Biometric Device Profile will define common settings and parameters for one or more biometric devices. This profile can be applied when adding units into the system from the Biometric Device section of Administration.

- From Administration tab select Biometric Device Profile.
- Click **Add** button to create a new Biometric Device Profile.

The screenshot shows the MorphoManager web application interface. The top navigation bar includes Home, Administration, User Management, MSO Identification, Onsite / Offsite, Access Logs, and Reports. The left sidebar lists various system components, with 'Biometric Device Profile' selected. The main content area is titled 'Adding Biometric Device Profile' and contains the following configuration options:

- Name:** Text input field.
- Description:** Text input field.
- Configuration Mode:** Dropdown menu set to 'Express'.
- Realtime logging enabled:** Check box (unchecked).
- Log retrieval interval:** Text input field with '300' and '(seconds)' label.
- Display name encoding code page:** Dropdown menu set to 'Western Europe (Default) (ISO-8859-1)' with a note '(Applicable to MA500 series only)'. Below it, a note reads: '(MA 100, MA J, MA 500, MA VP, MA Sigma, MA Sigma Lite, MA Sigma Lite+, and MorphoWave only. Only applicable to new user adds or rebuild)'. There is also a 'Duplicate check on biometrics:' checkbox (unchecked).
- MorphoAccess heartbeat interval:** Text input field with '30' and '(seconds)' label.
- MA Sigma, MA Sigma Lite, MA Sigma Lite+ Only Settings:**
 - Allow Remote Enrollment:** Check box (unchecked).
 - Default User Policy for Remote Enrollment:** Dropdown menu set to 'Default'.

At the bottom of the form are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

The status bar at the bottom of the window shows: 'Connected to tcp://localhost:42100/ Logged in as Administrator (System Admini: Site ID: B45E-4B3F-2A3F-4FD1-BD85-58AA-2986-32BB Log Out Change Password'.

In order to create the most basic profile utilizing biometrics stored on the devices that can be used, simply give the profile a name and click **Finish**. Please reference the [MorphoManager User Manual](#) for more detail on all the various properties that can be assigned to a Biometric Device Profile including the use of smartcards.



If you plan on using a Wiegand Profile, you will need to set the Wiegand Profile for the Biometric Device(s) here. The Wiegand Profile you choose for your devices must marry to the one being utilized for your users set in the User Policy section of this guide.

Biometric Device(s)

A Biometric Device is the device used to verify users and allow access to doors. They record a log of every attempt to gain access. MorphoManager is used to manage user's access to Biometric Devices.

- From Administration tab select Biometric Device.
- Click **Add** button to create a new Biometric Device.
- Enter the details for the device including the Hardware Family the device falls into, the IP address, and the Biometric Device Profile.

Items

Operator

Biometric Device Profile

Biometric Device

Wiegand Profiles

User Policy

User Distribution Group

User Authentication Mode

Operator Role

Clients

Scheduled Reports

Card Template

Card Encoding Log

Event Log

Exception Log

Adding Biometric Device

Enter the details for this Biometric Device

Name:

Description:

Location:

Asset ID:

Export Value:

Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Hardware Family:

Serial Number:

IMEI Number:

Hostname/IP Address:

Port: 11010

Biometric Device Profile:

Include in Time & Attendance Exports:

Change User Onsite / Offsite Status:

Onsite Key: No Key

Offsite Key: No Key

Back Next Finish Cancel

- Once the required details are entered click **Finish**.
- Below is a screenshot of how the Biometric Device Screen looks after the configuration and the devices are online.

Home Administration User Management MSO Identification Onsite / Offsite Access Logs Reports

Items

Operator

Biometric Device Profile

Biometric Device

Wiegand Profiles

User Policy

User Distribution Group

User Authentication Mode

Operator Role

Clients

Scheduled Reports

Card Template

Card Encoding Log

Event Log

Exception Log

Biometric Device

Add Edit Delete Refresh Get Logs Set Date/Time Rebuild Set Offline

Name	Description	Location	Biometric D...	Status	Tasks
MA sign Multi			Default	Online	0

Details Logs Queued Tasks (0) Failed Tasks (0) Hide Details

MA sign Multi

Description:

Hardware Type: MA SIGMA Multi

Serial Number: 1431SMS0000243

Firmware version: 1.3.2

Hostname/IP Address: 10.10.214.11:11010

User Slots: 0 / 3000

Time Zone: (UTC-05:00) Eastern Time (US Canada)

Device Status: Online

User Policy

User policies are used to apply access rights and rules to all members of the group.

To Configure BioBridge, MorphoManager’s UserPolicy with an Access Mode “**Per User**” must be selected.

This will create User Distribution Groups (groups of Biometric Devices) that can place the enrolled user into specific devices.

- From Administration tab select User Policy.
- Click **Add** button to create a new User Policy.

Adding User Policy

Enter the details for this User Policy

Name:

Description:

Access Mode: All Biometric Devices and Clients ▾
 Allow MA 500 database selection during user enrollment

Time Mask Mode: 24 Hours, 7 Days a Week ▾

Extended User Details: Display extended user details

Wiegand Profile: Automatically generated random 64! ▾

User Authentication Mode: Biometric (1:Many) ▾

Wave Enrollment Minimum Hands: None ▾

Finger Biometric Enrollment Minimum Fingers: Two ▾

Preferred Finger One: Left Index Finger ▾

Preferred Finger Two: Right Index Finger ▾


Preferred Duress Finger: Left Middle Finger ▾

Show Photo Capture Page:

Show Wave Biometric Capture Page:

Show Finger Biometric Capture Page: (User Authentication Mode requires templates)

Navigation: Back Next Finish Cancel

 If you plan on using a Wiegand Profile, you will need to set it here in order for the users enrolled in this User Policy to have a particular Wiegand Profile. The Wiegand Profile you choose for your users must marry to the one you utilize for your biometric access devices set in the Biometric Device Profile section of this guide.

The default User Policy will be set to utilize an authentication mode of Biometric (1: Many). To utilize another authentication mode (such as encoding smartcards) additional User Policies can be created.

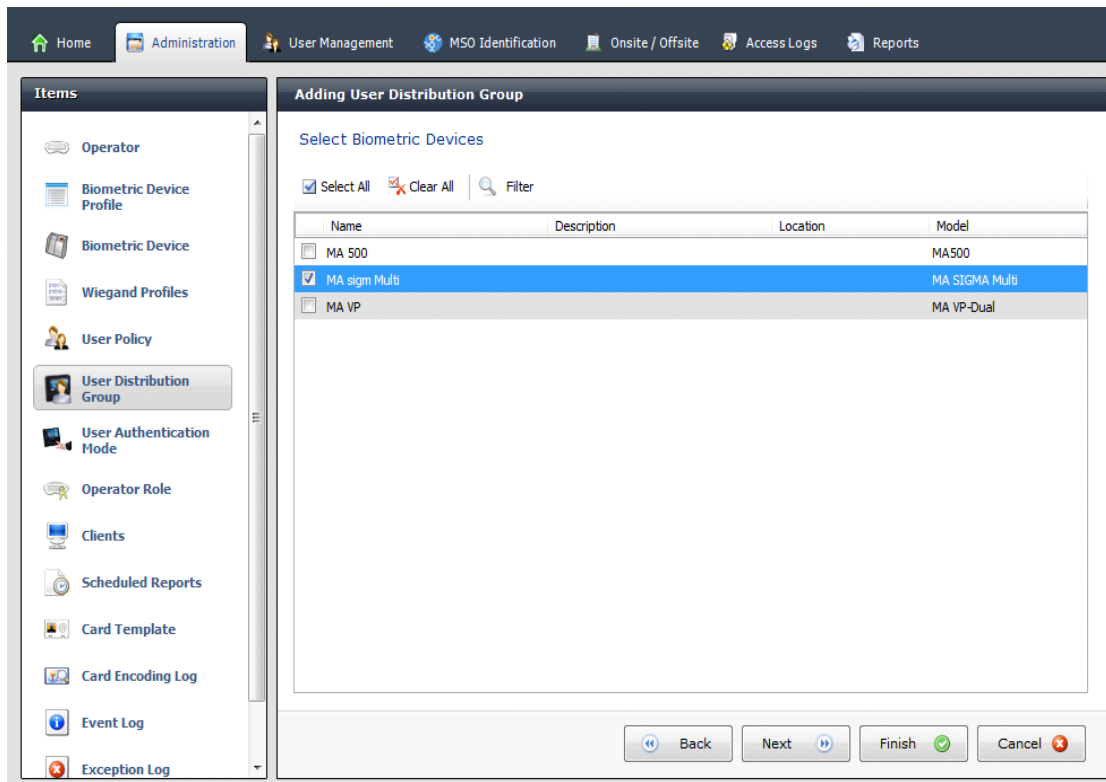
Please reference the MorphoManager User Manual for more detail on all the various properties that can be assigned to a User Policy including Wiegand Profile, Finger Biometric Enrollment Minimum, Fingers, Access Modes and User Authentication Modes.

User Distribution Groups

User Distribution Groups are designed to distribute users onto groups of MA readers or MorphoManager Clients. In order to be utilized the user must be in a User Policy that has its Access Mode set to “Per User”. Then the User Distribution Groups will be selectable when creating (or editing) a user.

- From Administration tab select User Distribution Group.
- Click **Add** button to create a new User Distribution Group.

Below is the screenshot where group will only be placing users on one of the three devices installed on the system.



BioBridge System Configuration

The last step in the process is to configure BioBridge specifications to S2 Netbox.

From Administration, select System Configuration.
Select the BioBridge Tab in System Configuration.

The screenshot displays the 'System Configuration' interface with the 'BioBridge' tab selected. The main content area is titled 'MorphoManager BioBridge Settings'. It contains several configuration options:

- System:** A dropdown menu currently set to 'None', with a 'Configure connection' button to its right.
- Wiegand Profile:** A dropdown menu.
- Grouping Mode:** A dropdown menu.
- Enable Forced User Policy:** A checkbox labeled 'Enabled' which is currently unchecked.
- Forced User Policy:** A dropdown menu set to 'Default'.
- User Synchronization Start Time:** A time selector set to '00:00'.
- User Synchronization End Time:** A time selector set to '23:59'.
- Delay Between Each User Synchronization (ms):** A numeric input field set to '50'.
- Allow User Sync While User Cache Is Refreshing:** A checkbox labeled 'Enabled' which is currently unchecked.
- User Cache Schedule:** A grid of checkboxes for each day of the week (Sunday through Saturday) and each hour of the day (0:00 through 23:00). All checkboxes are currently checked.

At the bottom, there is a section for 'User Distribution Group Mappings' with a table:

Access Groups	User Distribution Group

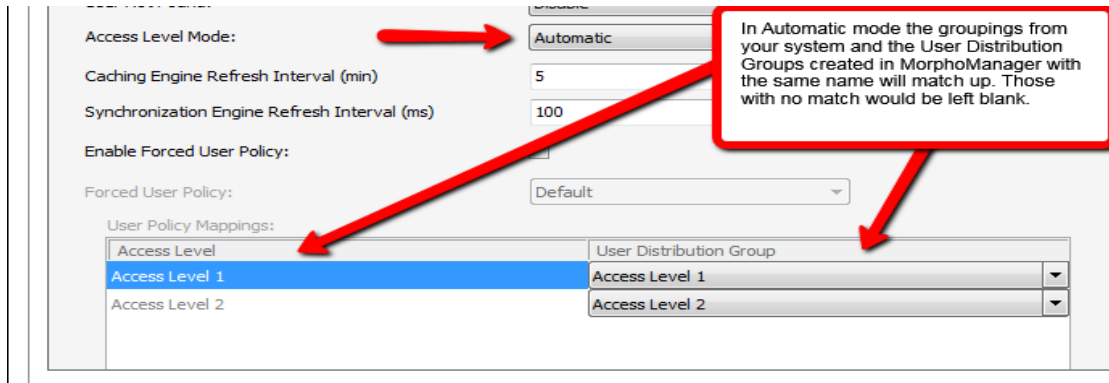
System: From the System drop down menu choose S2 Netbox and click the **Configure connection** button. A BioBridge connection box window will pop up. Fill in all the required fields and click OK.

NOTE: The Authentication details required (above) can be retrieved via the S2 NetBox Web Interface (Setup > Site Settings > Network Controller > API section). Note the API must be enabled for integration to be possible. See screenshot below for an example.

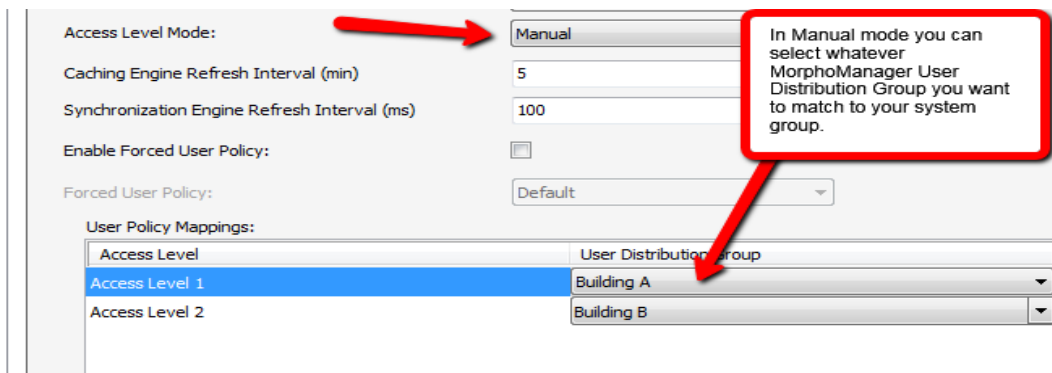
Wiegand Profile: Select the Wiegand format in use from the drop down menu.

Grouping Level Mode: This setting determines how MorphoManager should map S2 Netbox users into MorphoManager User Distribution Groups.

Automatic: This mode will automatically match Access Level groups from S2 Netbox to the ones created in MorphoManager User Distribution Group if they have the same naming convention.



Manual: If the Access Level grouping names of S2 Netbox and the User Distribution Group(s) created in MorphoManager are not the same, then selecting which S2 Netbox Access Level maps to which MorphoManager User Distribution Group can be done manually in the User Policy Mappings.



For basic setups, the following settings do not require any changes:

Enable Forced User Policy

By activating this feature, you can select a User Policy from the drop down menu. The 3rd party user will automatically be placed in this User Policy during the enrollment process started in the BioBridge Enrollment Client. The User Policy selected here must be a “Per User” access mode policy.

User Synchronization Start Time and End Time

The user synchronization engine will only be permitted to run in this time frame.

Delay between Each User Synchronization

The duration that the User Synchronization Engine will sleep between each user sync. Increase the delay time to use less system resources, but this will also extend the time it takes for all the users to be updated.

Allow User Sync While User Cached Is Refreshing

When enabled, the User Synchronization engine will run in parallel to the User Cache Refresh. This is very taxing on system resources. It is recommended to disable this setting when using large databases.

User Cache Refresh Schedule

The specified times when the user cache refresh may start. The ideal schedule would be 24/7, but this is not always possible with large databases.

Using the BioBridge Enrollment Client

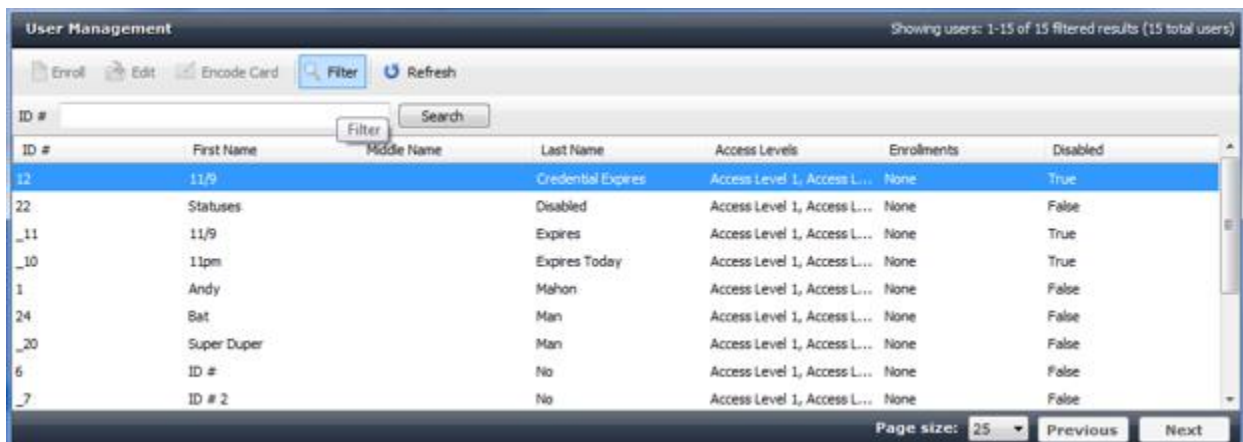
After configuring BioBridge you will now utilize the BioBridge Enrollment Client. This client will check if BioBridge Integration has been enabled and configured. If it is has not the application will display the message “BioBridge integration has not been enabled and configured” and you will need to go back to MorphoManager/Administration/System Configuration/BioBridge to configure it properly.

If BioBridge integration is configured the application will display a user management screen. The screen will consist of a toolbar and a data grid.

Toolbar

The toolbar will have the following items:

- Enroll
- Edit
- Encode Card
- Filter
- Refresh
- Search Field



The screenshot shows the 'User Management' interface. At the top right, it says 'Showing users: 1-15 of 15 filtered results (15 total users)'. The toolbar includes buttons for 'Enroll', 'Edit', 'Encode Card', 'Filter', and 'Refresh'. Below the toolbar is a search field with a 'Filter' button and a 'Search' button. The main area is a data grid with the following columns: ID #, First Name, Middle Name, Last Name, Access Levels, Enrollments, and Disabled. The grid contains several rows of user data, with the first row highlighted in blue.

ID #	First Name	Middle Name	Last Name	Access Levels	Enrollments	Disabled
12	11/9		Credential Expires	Access Level 1, Access L...	None	True
22	Statuses		Disabled	Access Level 1, Access L...	None	False
_11	11/9		Expires	Access Level 1, Access L...	None	True
_10	11pm		Expires Today	Access Level 1, Access L...	None	True
1	Andy		Mahon	Access Level 1, Access L...	None	False
24	Bat		Man	Access Level 1, Access L...	None	False
_20	Super Duper		Man	Access Level 1, Access L...	None	False
6	ID #		No	Access Level 1, Access L...	None	False
_7	ID # 2		No	Access Level 1, Access L...	None	False

At the bottom right of the grid, there is a 'Page size: 25' dropdown menu and 'Previous' and 'Next' buttons.

Enroll

Enroll will start the enrollment of the selected user. The enrollment process will be derived from the standard MorphoManager user add/edit wizard with the following pages (For details on the enrollment process please see the User Management section of the MorphoManager User Manual):

- Authentication Type (Only if more than one mode is configured)
- 3D Face Selection
- 3D Face Enrollment
- Finger Selection
- Finger Enrollment

If a card based authentication method is configured the operator will be prompted if they want to encode a card.

Edit

Opens the already enrolled user details for viewing or editing.

Encode Card

Encode card will display an animation of the card being presented to a SDI 011 and wait for the card encoding to complete or be cancelled.

Filter

The screenshot shows a 'Filter' dialog box with the following sections:

- User Details:** Input fields for First Name, Middle Name, Last Name, and ID #. Radio buttons for 'Any' (selected), 'Enabled', and 'Disabled'.
- Access Level:** 'Select All' and 'Clear All' buttons. A list with 'Access Level 1' (selected) and 'Access Level 2'.
- User Wiegand values:** Input field for 'User ID'.
- Sort By:** Three dropdown menus: 'Primary: Last Name Ascending', 'Secondary: Disabled Ascending', and 'Tertiary: First Name Ascending'.
- Buttons:** 'Reset Filters', 'OK', and 'Cancel'.

Filter will show a popup inline form that allows filtering on the following items:

- First Name
- Middle Name
- Last Name
- ID #
- Enabled/Disabled
- Access Level

Refresh

Refresh will update the data currently being shown using the currently set filter conditions.

Search Field

The Search Field can be used to find individual users quickly and/or to migrate users from S2 NetBox to the BioBridge Enrollment Client without waiting for a cache refresh.

Data Grid

The data shown in the data grid is a combination of your system and MorphoManager. Only users that exist in your system will be shown. A MorphoManager user does not exist until the user is enrolled. By default pagination is set for the first 25 BioBridge users to be shown. Operators may change the pagination to 25, 50, 100 & 250.

The data grid will have the following columns:

- ID #
- First name
- Middle name
- Last name
- Access Level – All of the Access Level groups that your user is a member of in your system.(Comma separated values)
- Enrollments (None, Finger, Finger & 3D Face, 3D Face) (Derived from linked MorphoManager User)
- Disabled- A value of either True or False will be present.

The screenshot shows the 'User Management' interface. At the top, it says 'Showing users: 1-15 of 15 filtered results (15 total users)'. Below this are buttons for 'Enroll', 'Edit', 'Encode Card', 'Filter', and 'Refresh'. A search bar is present with 'Filter' and 'Search' buttons. The main data grid has the following columns: ID #, First Name, Middle Name, Last Name, Access Levels, Enrollments, and Disabled. The first row is highlighted in blue and shows ID # 12, First Name 11/9, Middle Name Credential Expires, Last Name Access Level 1, Access L..., Access Levels None, Enrollments True, and Disabled True. Other rows include users with names like 'Statuses', 'Expire', 'Expire Today', 'Mahon', 'Man', 'Man', 'No', and 'No'. Below the grid, there are 'Page size: 25', 'Previous', and 'Next' buttons. The 'Details' panel below the grid has tabs for 'Details', 'Logs', and 'Finger Biometrics'. The 'Details' tab is active and shows a message: 'User has not been enrolled'. Below this message are fields for 'Date of Birth:', 'Selected Authentication:', 'User Group:', 'Disabled:', and 'Authentication Identifier:'. At the bottom of the details panel are 'Export Photo' and 'Add Photo' buttons. The footer of the interface shows 'Connected to tcp://127.0.0.1:42024/', 'Logged in as Administrator (System Admini...', 'Site ID: DC14-B610-C7B1-4C52-B381-0C8C-C086-4AE9', 'Log Out', and 'Change Password'.

Enrolled user will show their MorphoManager details in the “Show Details” panel below the data grid. This area will be blank if the user has not been enrolled.

Embedded enrollment setup

Embedded enrollment is not supported for S2 Netbox.