Grid Software User Guide

Version 1.0 – April 2016

Table of Contents

1 About This User Guide

This user guide contains two main sections:

- Section 3 – Procedural ("How to") information on common tasks you may want to perform with PLUS Grid. Where appropriate the procedures reference additional information in the reference material section.
- Section 4 – Reference material for each of the screens in the main PLUS Grid modules (PLUS Manage, PLUS Hardware, and PLUS Server Client).

1.1 Terminology

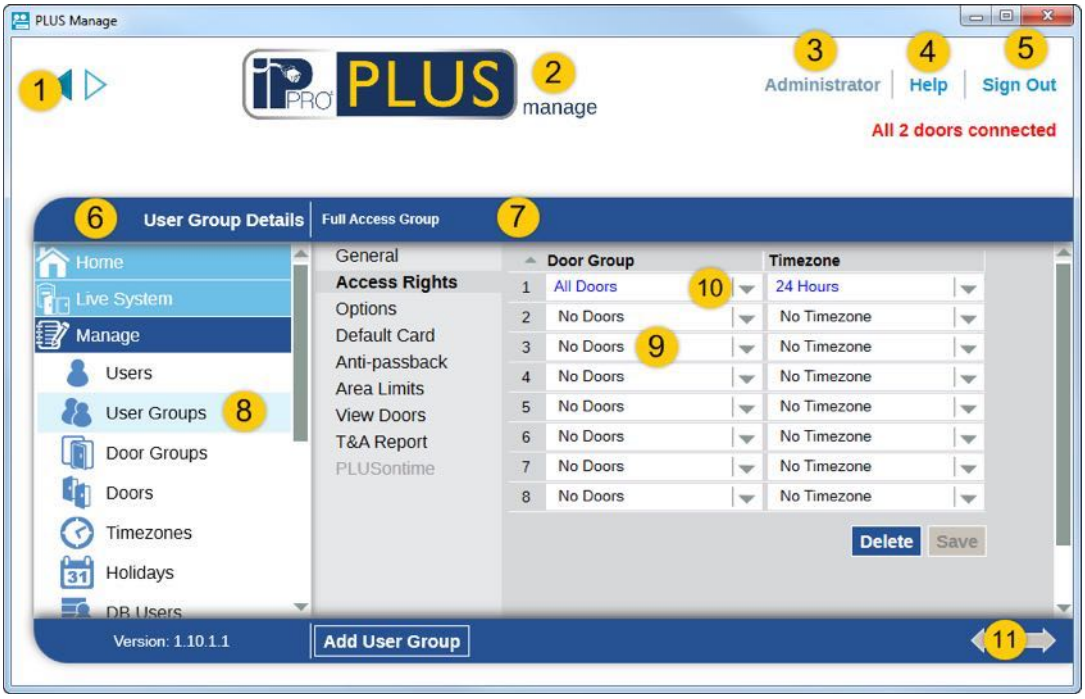
The following terminology is used in the user guide content:

- Operator / DB User = Person using PLUS Grid software
- User = Person whose access is managed by the PLUS software/system
- Installer = Person who installs the physical IPPro® hardware
- Customer = Company who is benefiting from the IPPro® System

2 General Information

2.1 Navigating Interfaces

PLUS Grid PC software is designed with common layout characteristics and features. A sample interface is shown below, and the corresponding table below describes the numbered features.



The following table describes each of the navigation features on the screen.

No	Feature	Description
1	Back and Next buttons	These allow you to navigate backwards and forwards between screens already visited.
2	Product name	This shows you which PLUS module you are currently using.
3	User	This shows which operator (DB User) is currently logged in to the software.

No	Feature	Description
4	Help	This link opens help menus, where you can get more information related to the tasks you are performing.
5	Sign Out	This lets you log out of the current DB user.
6	Screen name	This label gives the name of the screen you are currently on. The *Home* screen shows quick links to popular tasks.
7	Sub-screen name	The sub-screen label reflects a specific tab you are on, or an item's name when adding/editing an item, such as a user.
8	Menus	The menus allow you to navigate to particular screens in the software. If a menu has sub-options, when you click the menu name a list of the options appears below it in the menus area and you should click the option you want; if a menu has no sub-options, the screen for the menu item appears in the main area of the screen.
9	Main Screen	This is where the data/settings corresponding to the selected menu item/option are shown.
10	Hyperlinks	If an item in search results is displayed in BLUE text, it is a hyperlink. Click it to view more detailed information on that item.

No	Feature	Description
11	Page forward  Page back 	Click to move backwards and forwards through a series of records.

2.2 Login Screen

To log in to your selected PLUS Grid software module, launch the module and on the login screen enter your username and password. By default, Administrator is the only user with a null password.

If there is a problem connecting to the server, an error with details of the problem is displayed.

Click **Grid Server Settings** to access a screen where you can edit/test your connection to the server.

2.3 Grid Server Settings

The following table describes the data that appears on the *Grid Server Settings* screen.

Field Name	Description
Host Name or IP	The name or IP address of the PLUS Grid server. This will be the name of the computer you are using
Port	The communication port for the PLUS Grid server.
Test Connection	Click to test the connection to the specified host and port. An on-screen message indicates whether the connection succeeded. If you edited the server details and want to save the changes, click **Save**. Otherwise, click **Cancel** to return to the login screen.

2.4 Exporting

On a number of screens, you will see an **Export** option in the top right-hand corner (**Export**). In this case, the data displayed on the screen may be exported to a CSV (Comma Separated Value) file. The separator character used in the exported file is set on the *Settings - General* tab (see page 129).

Click **Export**, and in the dialog that appears specify the required file name and location, then click **Save**. The file may be opened later in a text editor, or a spreadsheet software such as Microsoft Excel.

2.5 Printing

On a number of screens, you will see a **Print** option in the top right-hand corner (**Print**). In this case, the data displayed on the screen may be printed using any configured printing device on your local machine.

Click **Print** to open the *Print* dialog for your computer, from which you can select your preferred printer.

2.6 General Tips on Searching

- When you enter text in a search field, the system searches for both full and partial matches.
  For example, consider searching for a user record using the search term "Ann" in the Name field. A user's name is made up of their first name and last name, and if the specified term appears anywhere in either of these, it is considered a match. So searching for "Ann" might show results for "**Ann**-Marie Boyle", "Jo**ann**e Murphy", and "Joseph H**ann**".

- To sort search results alphabetically by the values in certain columns, click the column title. The first click sorts the information in alphabetic order (A to Z) or numeric order (0-n). Click a second time to sort in reverse-alphabetic order (Z to A) or reverse-numeric order (n-0). Search results can only be sorted by the values in certain columns.

- When sorting search results, if multiple pages of search results are returned, sorting all results returned is limited to user listings only, and only applies for the user name, group number, and user number columns. On other pages and for other values on user listings screens, only the results shown on the current page of search results are sorted.

3 How To

3.1 Managing Users

3.1.1 Add a User

A user is a person who holds an access control credential (card, fob, PIN, biometric, etc.) and whose access is managed through the PLUS software.

You can add and edit users through PLUS Manage.

When you add a user, you can specify profile details such as their name, user group, validity period, PIN numbers (if applicable) and card details.

You can:

- Create a permanent user (see page 12)
- Create a temporary user (see page 13) - Fewer details are specified for temporary users, making setup quicker.
- Create a new user based on an existing user (see page 14)

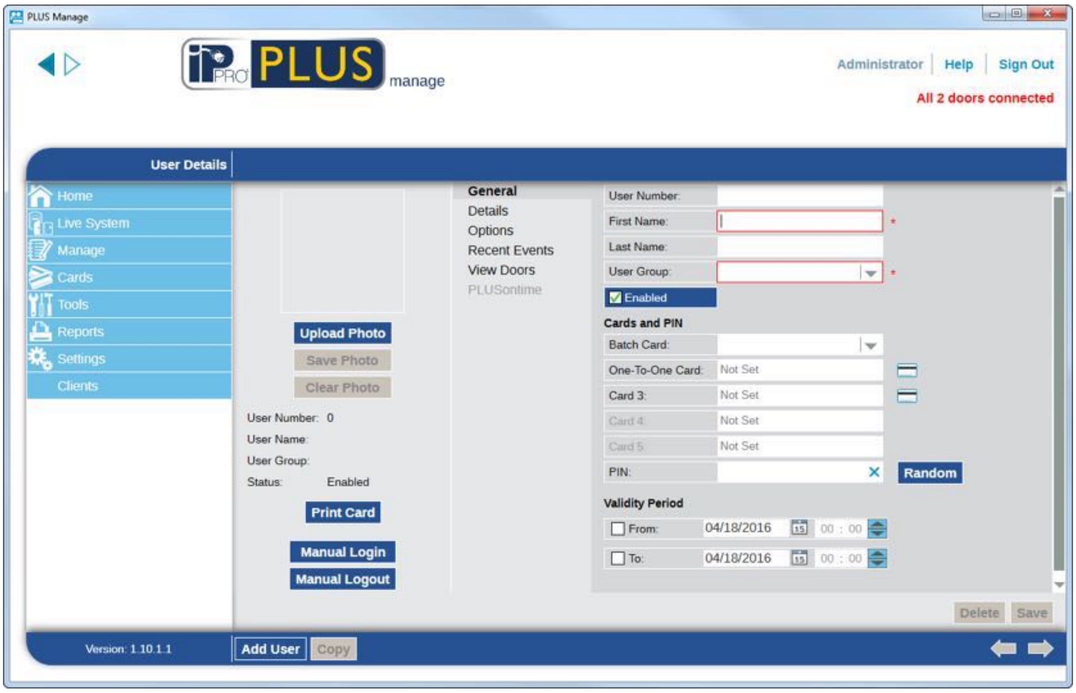
You can specify a validity period for both permanent and temporary users - this allows you to limit the date/time range during which they will have access rights. Once a user is registered on the system, you can reset their validity period at any time to allow/disallow access without having to delete and recreate the user each time they need access.

A user's basic access rights are inherited from the User Group to which they are assigned.

Adding a permanent user

1. In PLUS Manage, click **Add User** on the *Home* screen, or click **Manage - Users**, then click **Add User** in the top right corner of the *Users* screen.

   The *User Details* screen appears.



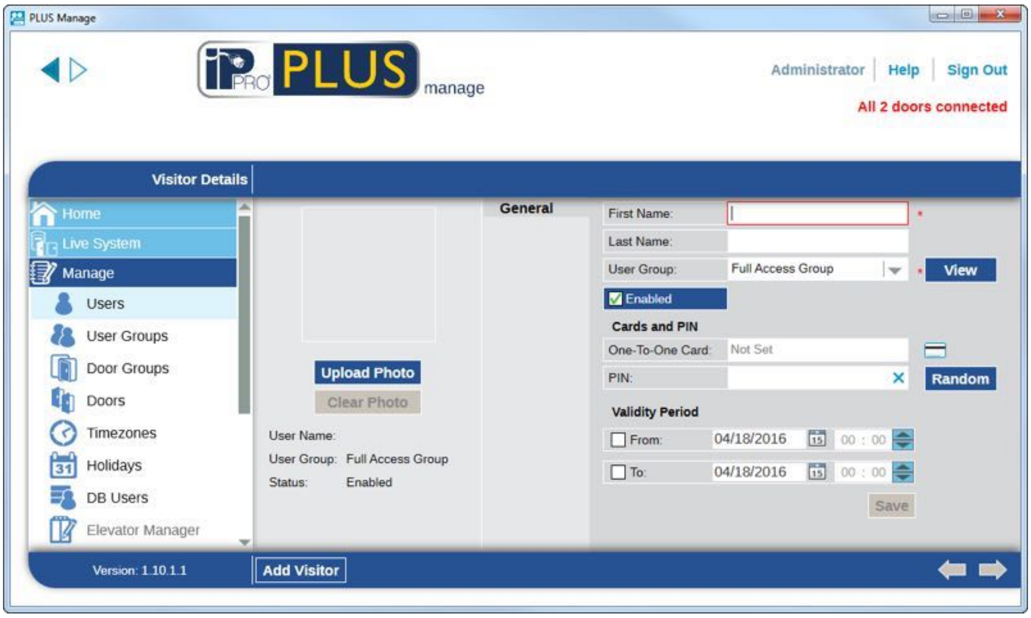
2. On the *User Details* screen, enter information about the new user.
   For more information on the tabs and fields available on this screen, see User Details Screen (see page 75).

3. Click **Save** to create a record for a permanent user based on the supplied information.

Adding a temporary user

1. In PLUS Manage, click **Manage - Users**, then click **Add Visitor** in the top right corner of the *Users* screen.

   The *Visitor Details* screen appears.



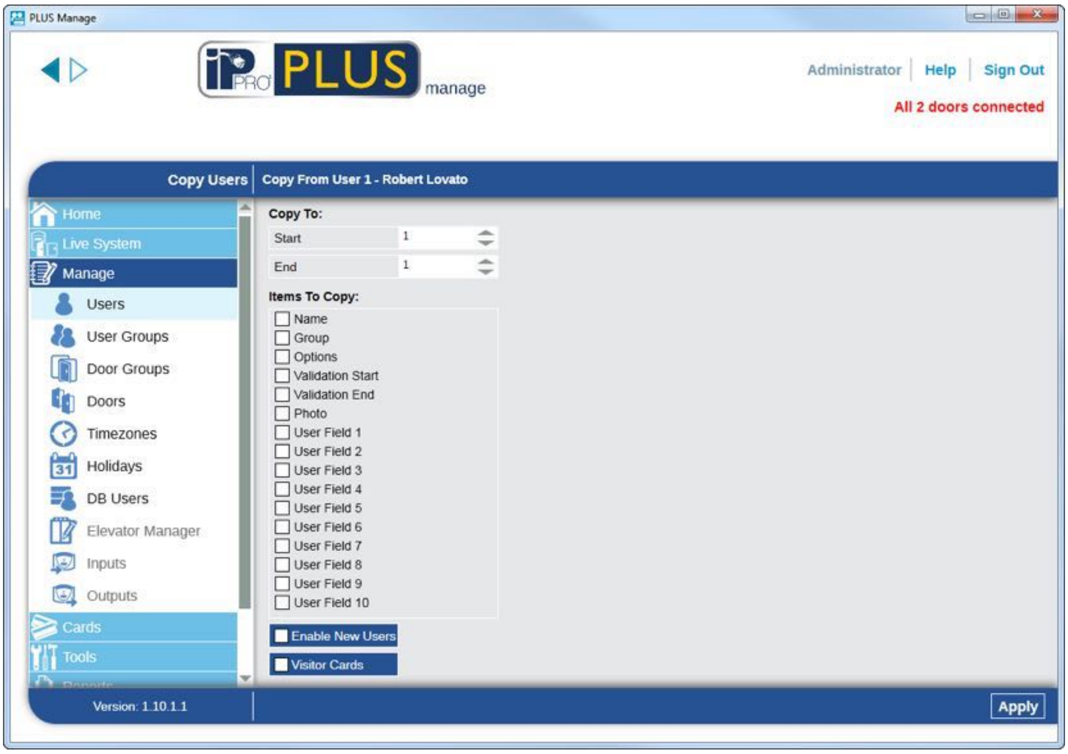
2. On the *Visitor Details* screen, enter information about the new temporary user. For more information on the tabs and fields available on this screen, see Visitor Details Screen

3. Click the **General** tab, then click **Save** to create a record for a temporary user based on the supplied information.

Copying an existing user

1. In PLUS Manage, click **Manage - Users**, then using the *Search/Advanced Search* options on the *Users* screen, find and select the existing user you want to base your new user(s) on.
   For more information on the search options on the *Users* screen, see Users Screen (see page 72).
2. On the *User Details* screen, click **Copy**.

   The *Copy Users* screen appears.



3. Specify the start and end range of users you want to copy selected details to. If the users already exist, their current details will be overwritten. If they do not already exist, users with the copied details will be created.
   NOTE: You should verify whether or not user IDs in the specified range are already in use before you copy user details.
4. Select the check box for each property from the selected user you wish to copy to the specified existing/new users.
5. To enable any new users created by the operation, select the *Enable New Users* check box.
6. To assign visitor cards for any new users created by the operation, select the *Visitor Cards* check box.

7. Click **Apply**. The selected details are copied to the specified new/existing user records.

   If you created new users, you may want to edit additional properties for them on the *User Details* screen now.

Notes:

- *First Name* and *User Group* are mandatory fields for permanent and temporary users. At a minimum, you must specify values for these before you can save a new user record.
- The user's PIN will default to the PIN of their assigned User Group unless you specify an alternative PIN.
- The *User Number* and field is automatically populated with the next available numbers.

3.1.2 Check Which Doors a User Can Access

You can select any system user in PLUS Manage and view a list of all the doors they have been granted access to.

Checking which doors a user can access

1. In PLUS Manage, click **List Users** on the *Home* screen, or click **Manage - Users**, then using the *Search*/*Advanced Search* options on the *Users* screen, find and select the user whose access rights you want to check by clicking on the user Name.
   For more information on the search options on the *Users* screen, see Users Screen (see page 72).
2. Click the **View Doors** tab on the *User Details* screen.

3. The panel on the right lists all doors the user has access to, and the time zone during which their access rights are valid.

   Note: The user gets access to all doors granted through their user group's access rights.

3.1.3 Set Access Rights for an Individual User

In PLUS Grid, all users must be a member of a user group, and they inherit their basic access rights from that user group. In PLUS Manage, this can be done by using the links on **Manage – Home**. The recommended order would be (1) Timezone, (2) Door Group, (3) User Group, (4) User.

For information on creating time zones, see Add a Time Zone (see page 65).

For information on creating door groups, see Add a Door Group (see page 93).

For more information on creating user groups, see Add a User Group (see page 20).

For more information on creating users, see Add a User (see page 11).

For more information on specifying group access rights, see Set Group Access Rights (see page 22).

3.1.4 Extend User Validity

You may optionally assign a validity period to users.

- If you do not specify a validity period, the user is always valid.
- If a *From* validity date and time is specified, this is the time from which the user is allowed access. Access is denied to the user before this time.
- If a *To* validity date and time is specified, this is the last time that access will be allowed to the user. After this time, access will be denied.
- If no time is specified the assumed time is midnight on the specified date.

PLUS Manage allows you to:

- Extend the validity of a single user (see page 17)
- Extend the validity of multiple users (see page 18)

Extending the validity of a single user

1. In PLUS Manage, click **Manage - Users**, then using the *Search*/*Advanced Search* options on the *Users* screen search for the user for which you want to extend validity.
   For more information on the search options on the *Users* screen, see Users Screen (see page 72).
2. Click the user's name in the search results area to view details of that user on the *User Details* screen.

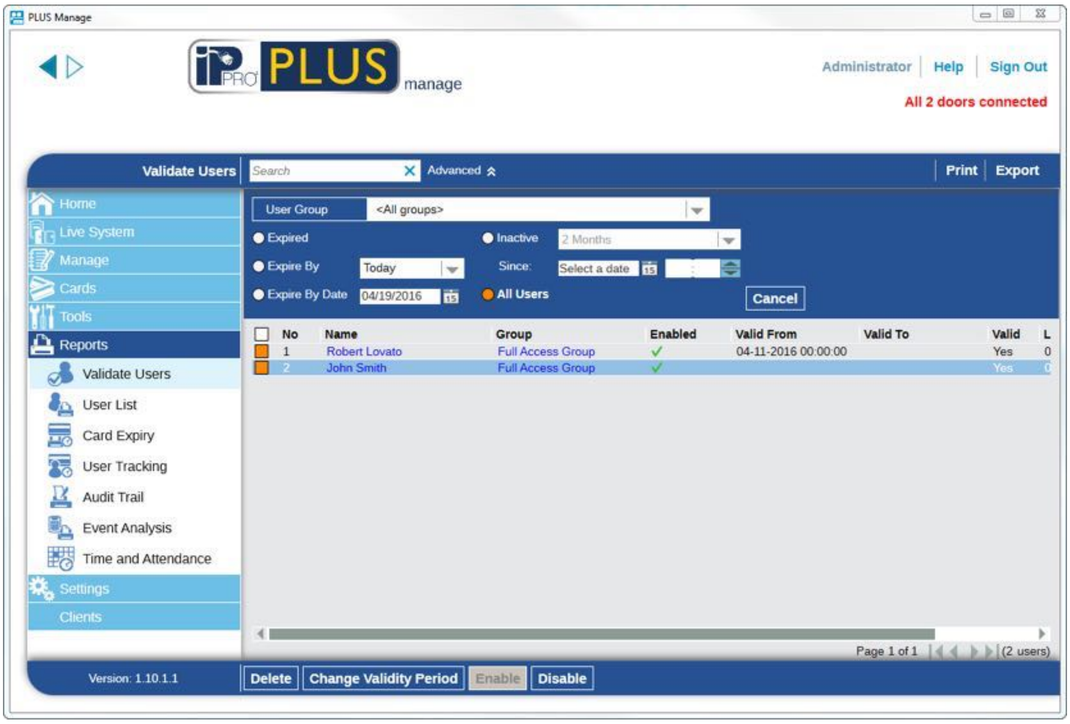
3. At the bottom of the **General** tab, under *Validity Period*, ensure the *To* check box is selected, then enter a new *To* date and time for the user's validity.

4. Click **Save**.

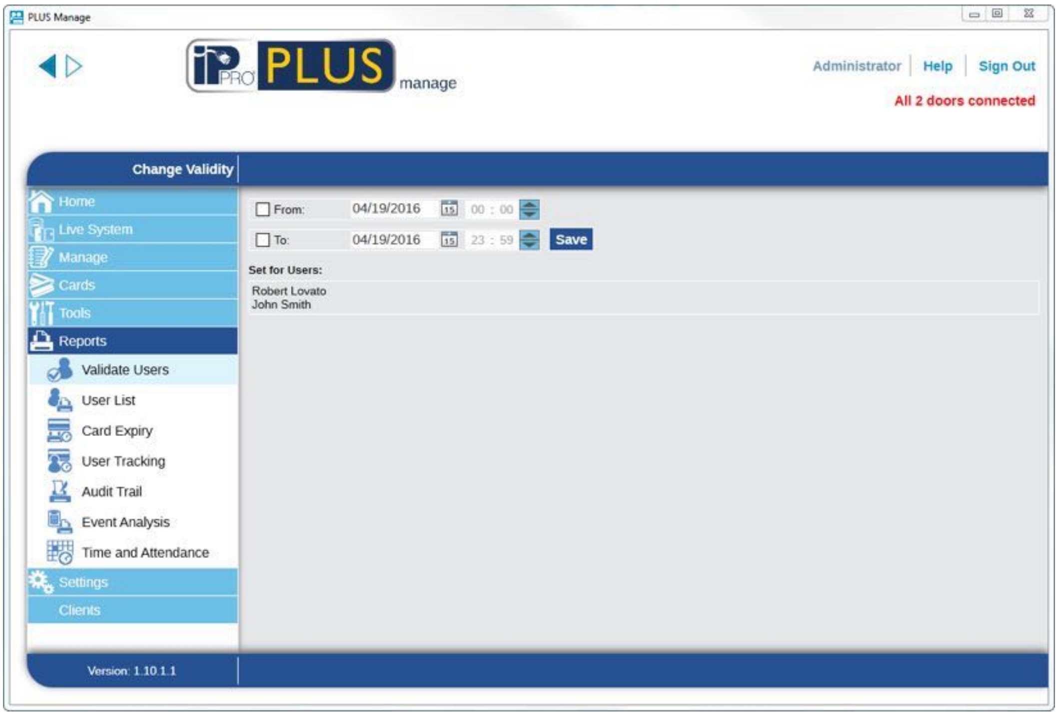
Extending the validity of multiple users

1. In PLUS Manage, click **Manage - Users**, then using the *Search/Advanced Search* options on the *Users* screen search for the users for which you want to extend validity.
   For more information on the search options on the *Users* screen, see Users Screen (see page 72).
   OR
   In PLUS Manage, click **Reports - Validate Users**, then using the *Search/Advanced Search* options on the *Validate Users* screen search for the users for which you want to extend validity.
   For more information on the search options on the *Validate Users* screen, see Validate Users Screen (see page 126).

2. Select the check box for each user whose validity you want to extend.



3. Click **Set Validity** on the *Users* screen, or **Change Validity Period** on the *Validate Users* screen.



4. Select the *To* check box, then enter a new *To* date and time for the users' validity.

5. Click **Save**.

3.1.5 Add a User Group

User groups are used to define common settings and access rights for a set of users.

When you create a user profile, you select one user group to which the user belongs, and their access rights are those assigned to that group. If the group's rights change, then so do those of all members of the group.

PLUS Manage allows you to create and edit user groups.

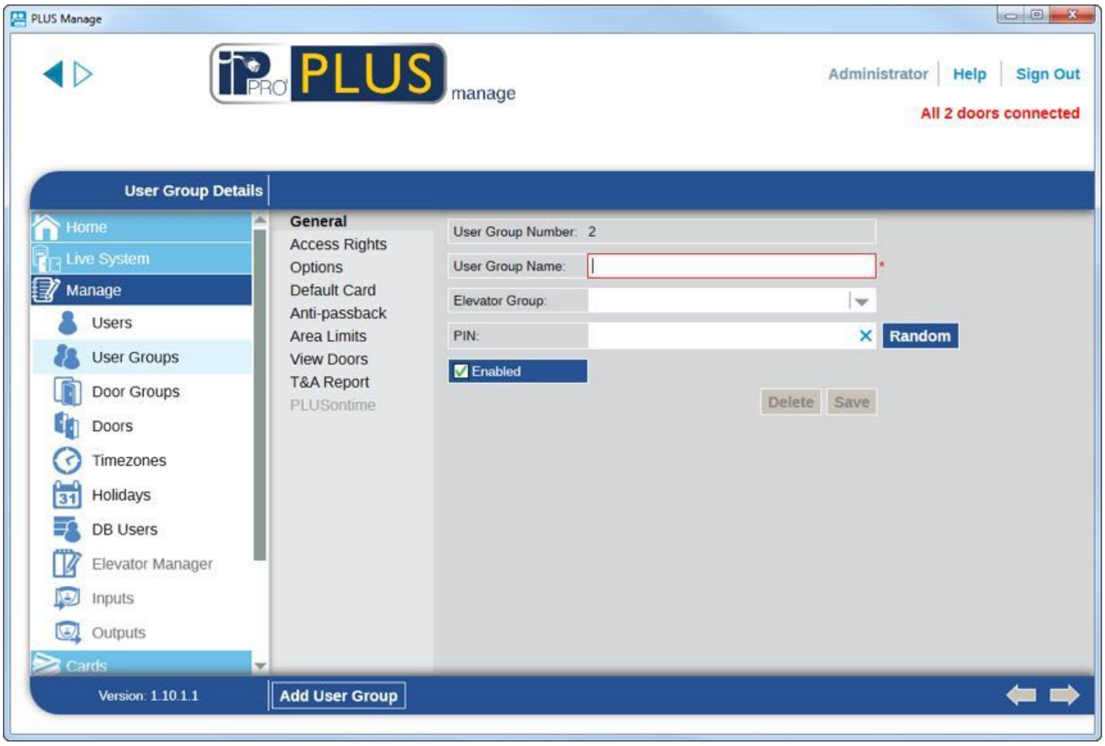
You can:

- Create a user group manually through the *User Group Details* screen (see page 20)
- Create a user group using the *User Group Wizard button* *(see page 21)*

Add a user group through the User Group Details screen

1. In PLUS Manage, click **Manage - User Groups**, then click **Add User Group** in the top right corner of the *User Groups* screen.

   The *User Group Details* screen appears.

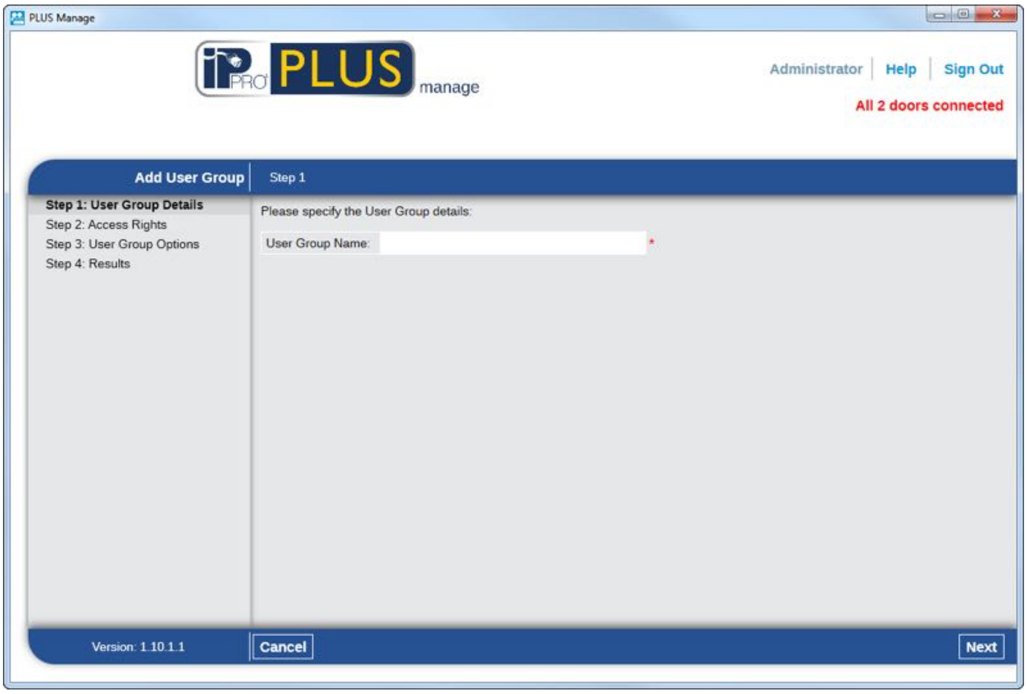


2. On the *User Group Details* screen, enter information about the new user group.
   For more information on the tabs and fields available on this screen, see User Group Details Screen (see page 86).

3. Click **Save** to create a record for the user group.

Add a user group using the User Group Wizard

1. In PLUS Manage, click **Add User Group** on the *Home* screen to open the *Add User Group Wizard* which walks you through adding a user group step by step.



2. Follow the wizard's onscreen instructions to add a new user group, clicking **Next** in the bottom right of the screen after each step, and **Finish** at the end.

3.1.6 Set Group Access Rights

In PLUS Grid, all users must be a member of a user group, and PLUS Manage allows you to set up to eight door group/time zone combinations to specify access rights for all users assigned to a user group.

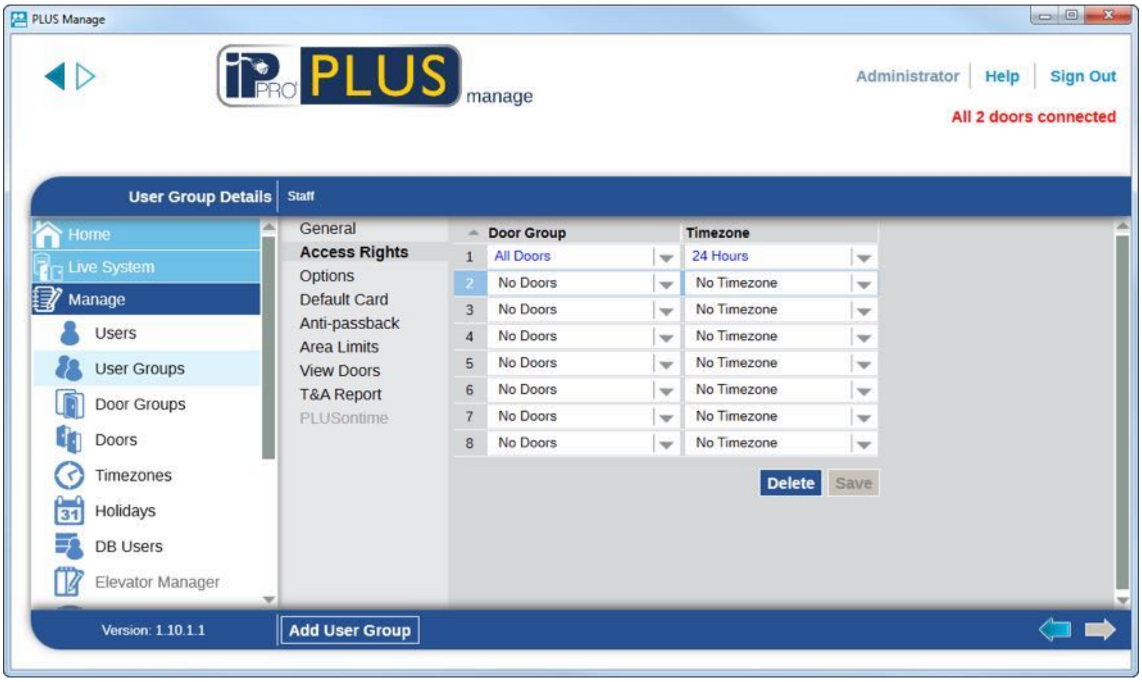
For more information on creating user groups, see Add a User Group (see page 20).

For more information on creating users, see Add a User (see page 11).

For information on creating time zones, see Add a Time Zone (see page 65).

Setting user group access rights

1. In PLUS Manage, click **Manage - User Groups**, then search for the user group for which you want to set access rights.
2. Click the user group's name in the search results area to view details of that group on the *User Group Details* screen.
3. Click the **Access Rights** tab on the *User Group Details* screen.



4. Specify up to eight door group/time zone combinations using the drop-down lists provided.
   For each door group/time zone combination, users in the current user group will have access to doors in the selected door group during the period specified by the corresponding time zone.

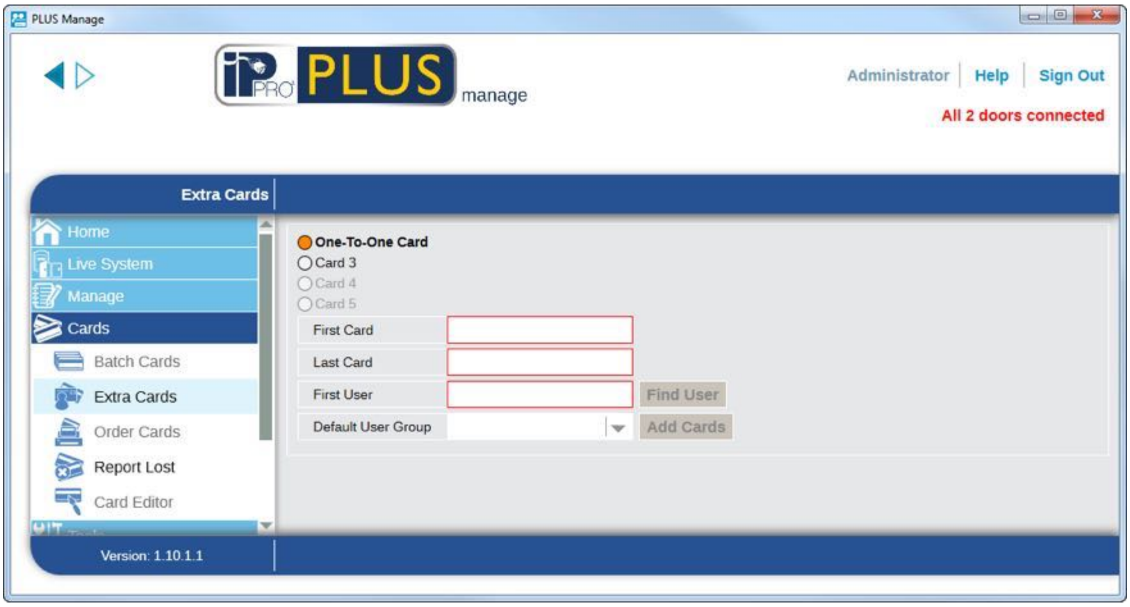
5. Click **Save** when you have specified all door group/time zone combinations required.

3.1.7 Add A Batch Cards

PLUS Manage allows you to create and assign a batch of credential cards for new system users. Users are created with basic details only, and you should edit their records to complete their profile information after creating the batch.

Adding a sequential batch of cards

1. In PLUS Manage, click **Cards - Extra Cards**.
   The *Extra Cards* screen appears.

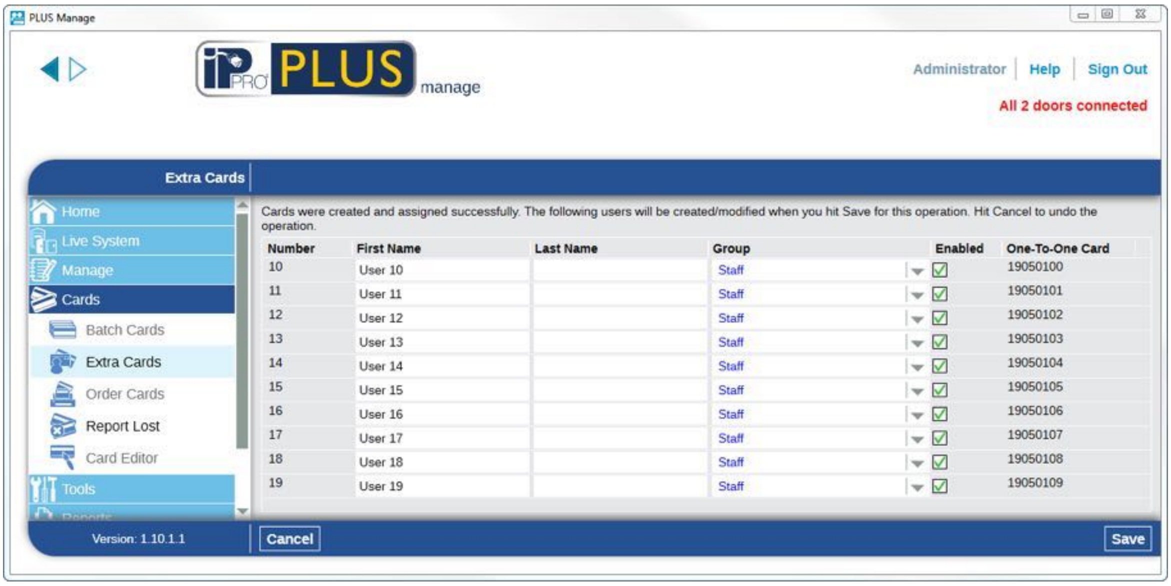


2. Each user may be assigned two (2) cards. Select *One-To-One Card* if you want the batch to be added as the first credential, or *Card 3* if you want the batch to be added as the second credential.

3. In the *First Card* and *Last Card* fields, enter the numbers of the first and last cards in the sequential batch you want to create .

4. In the *First User* field, enter the number of the first user that the batch cards will be assigned to. Cards will be assigned to users sequentially by user number. If the user already exists, the card is assigned to them; if the user doesn't exist, they are created. Clicking (**Find User**) will find the first available user.

5. Select the *Default User Group* for any new users created by this process.
6. Click **Add Cards**. NOTE: You will get an error if you attempt to add a card number that already exists in the database.
   The *Extra Cards* screen shows a summary of new users that will be created by this process.



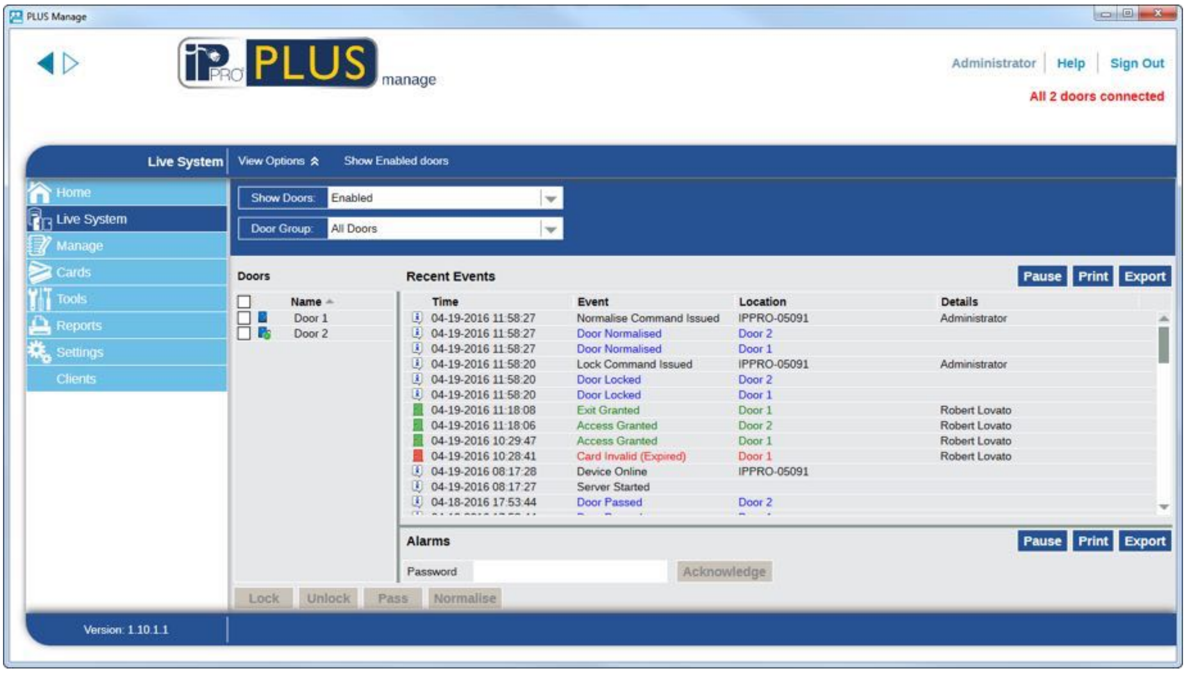
7. Make any required edits to each new user's *First Name*, *Last Name*, *Group* and *Enabled* status on this screen, then click **Save**.

3.2 Monitoring the System Using PLUS Manage

3.2.1 Monitor User Activity

PLUS Manage allows you to monitor users' activity.

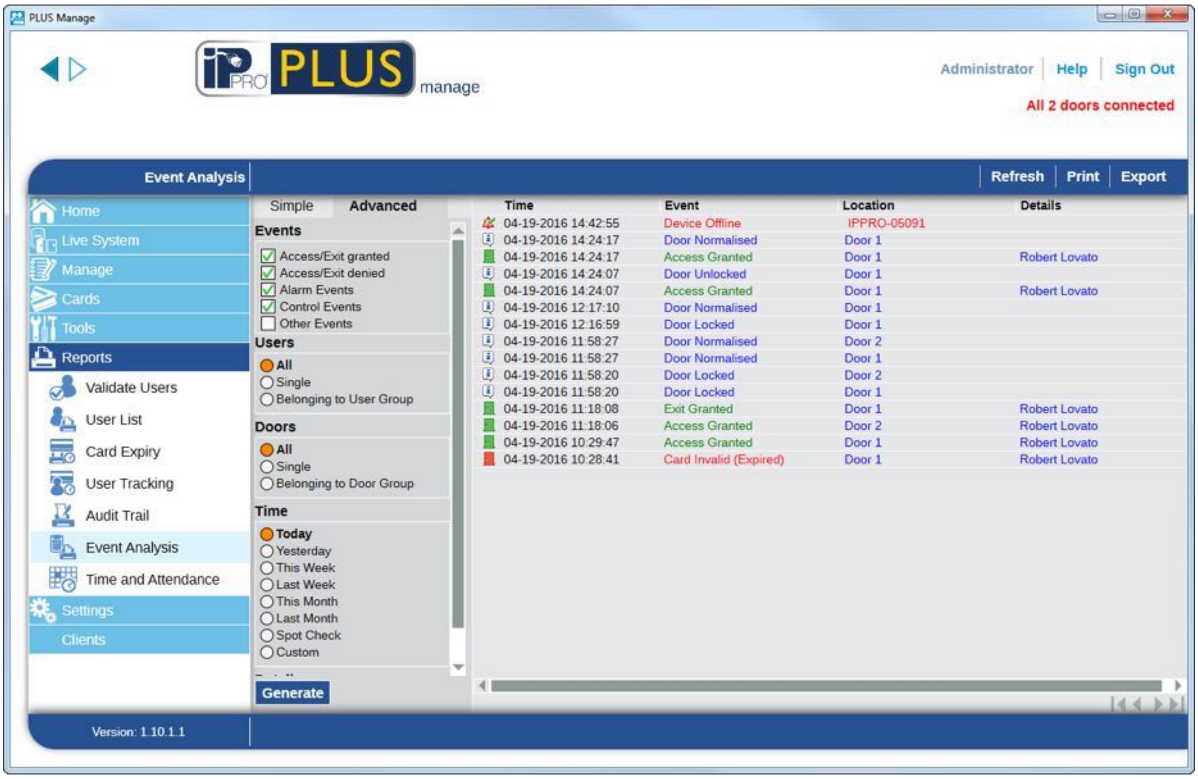
- In PLUS Manage, on the *Live System* screen, the *Recent Events* area includes details of the time, location and summary information for events on the system, including when users access doors, or are denied access. Other events may also be listed, including alarms, system events, controllers and doors going offline, unknown cards, and exit granted/denied. For an event involving a user, such as an *Access Granted* or *Access Denied* event, click the user's name in the *Details* column to view the user's profile on the *User Details* screen. Click the **Back** icon () at the top of the *User Details* screen to return to the *Home* screen.



- In PLUS Manage, on the *Manage-Users* screen, you can view the last known location of every user on the system. The *Search/Advanced Search* facility allows you to filter for a sub-set of users only.

Click the name of any user on this screen to view the *User Details* screen for that user, which includes a summary of their Recent Events. For more information, see User Details Screen (see page 75).

- In PLUS Manage, the *Advanced* search options on the *Reports - Event Analysis* screen allow to you filter for events involving a specific user, or all users in a particular user group. You can further filter for specific event types, events at a particular door or at doors in a particular door group, or events in a specific time frame. For more information, see Event Analysis Screen (see page 124).



3.2.2 Monitor Door Activity

PLUS Manage allows you to monitor activity at a door group, or at a specific door.

- In PLUS Manage, the *Advanced* search options on the *Reports - Event Analysis* screen allow to you filter for events at a specific door, or for all doors in a particular group. You can further filter for specific event types, events for a particular user or users in a particular user group, or events in a specific time frame. For more information, see Event Analysis Screen (see page 124).

3.2.3 Generate a List of All Users on Site (Muster Report)

A Muster Report lists all users currently on site. A user is considered to be on site if they entered through a perimeter door, but have not been detected exiting through a perimeter door. If multiple users enter/exit but only one user in the group authenticates at the door, users who did not use their cards may be incorrectly assumed to be present/absent.

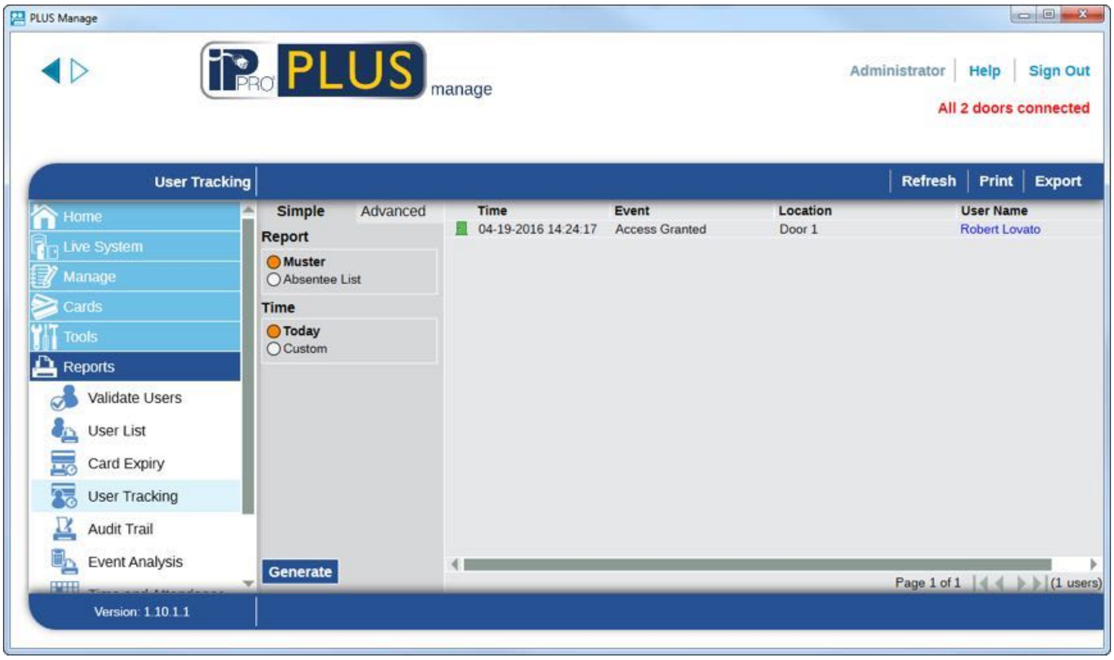
Which doors are considered perimeter doors for the site is set in PLUS Manage, by selecting the door group containing those doors from the *Perimeter Doors* drop-down list on the **Settings - Doors** tab. For more information, see Settings - Doors Tab (see page 130).

Note:

- Muster and absentee reports are only valid if your physical system is configured appropriately. You need access control points at each entrance and exit to your site, and each user must use their cards when entering & exiting the site.

Generating a Muster Report

1. In PLUS Manage, click **Reports - User Tracking**.



2. At *Report*, select *Muster*.
3. At *Time*, select whether you want the report for *Today* or for a *Custom* period. If you select a *Custom* period, additional fields appear where you can specify a date/time range.
4. Click **Generate**.

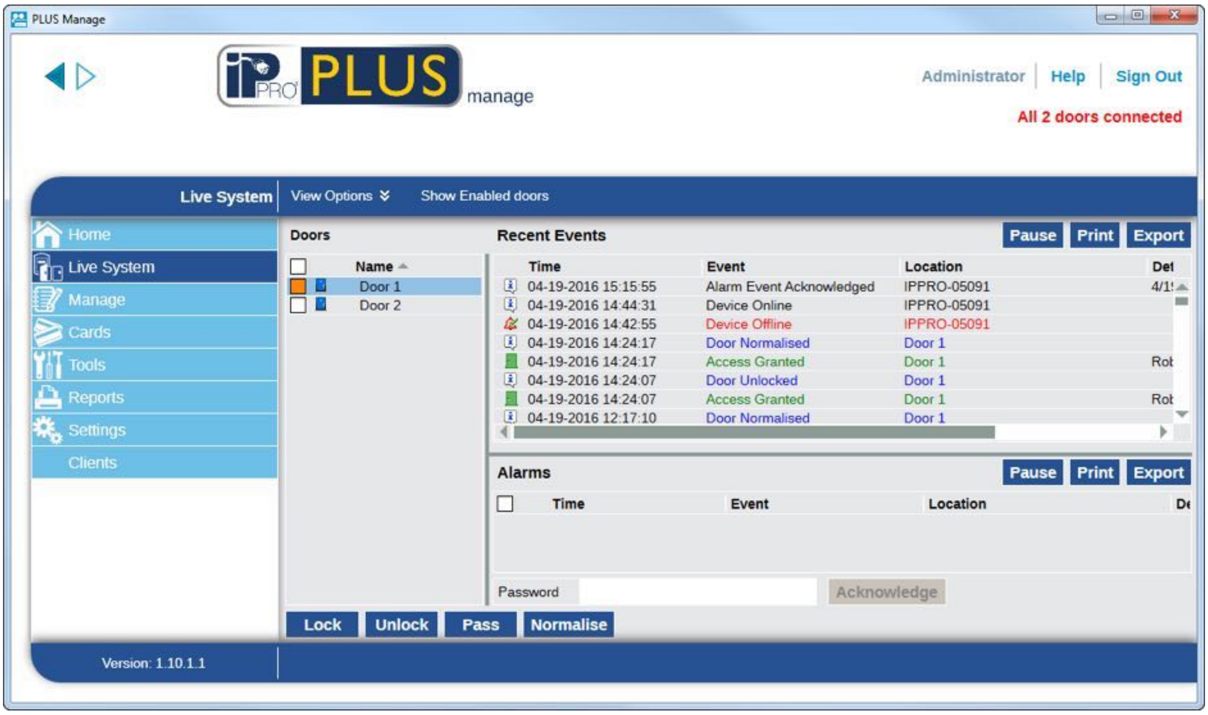
   You can **Print** or **Export** your report using the links at the top right of the *User Tracking* screen.

   For more information on the *Simple/Advanced* search options on the *User Tracking* screen, see User Tracking Screen (see page 120).

3.2.4 Send a Command to a Door

In PLUS Manage, on the *Live System* screen, the *Doors* area shows the status of all doors on the system. Hover over the icon for any door to see its status in a popup. You can send a command to a door by selecting the door, then clicking **Lock**, **Unlock**, **Pass** or **Normalize** at the bottom of the screen.

Note: You must have the right to command doors before you can use these actions.



3.3 Configuring the Hardware

3.3.1 Add a Controller

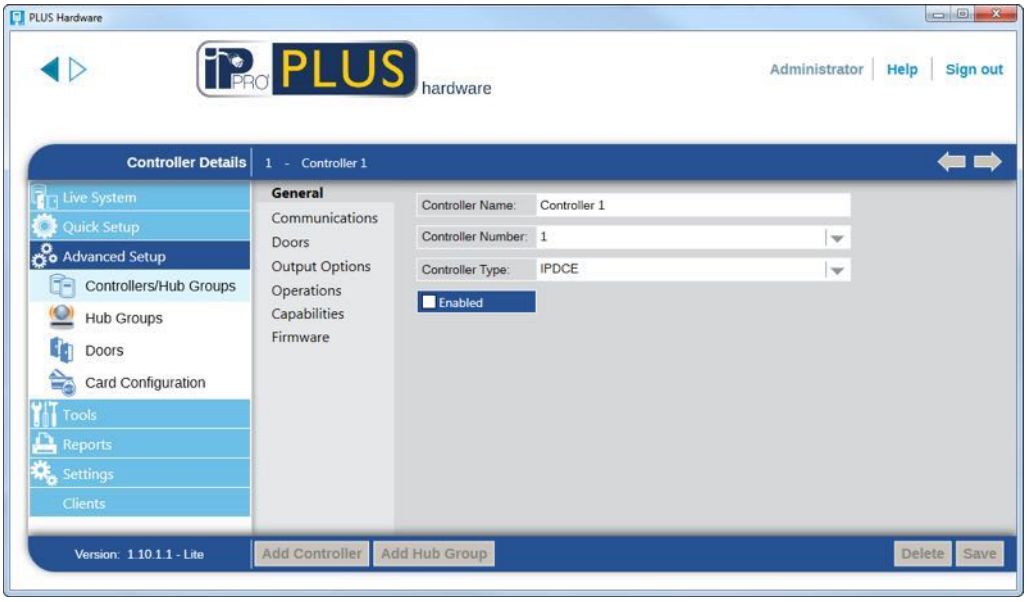
PLUS Hardware allows you to configure controller properties, and to specify which doors are connected to that controller.

You can:

- Add one controller manually through the *Add Controller* screen (Recommended) (see page 31)
- Add one or more controllers at once using the *Add Controller Wizard* *(see page 33)*

Adding a controller manually

1. In PLUS Hardware, click **Advanced Setup – Controllers/Hub Groups**, and click **Add Controller** in the top right corner of the *Controllers* screen.



The *Controller Details* screen appears.

2. Specify details for the new controller.
   For more information on the tabs and fields available on this screen, see Controller Details Screen (see page 141).

   At a minimum, you must specify:

   - On the **General** tab:
     - A unique *Controller Number*
     - The *Enabled* status
     - The Controller Type
   - On the **Communications** tab:
     - The connection type (direct), and connection details.
   - On the **Doors** tab:
     - If a door is to be added to the system, select the *In DB* check box and ensure the door is *Enabled*.
3. Click **Save** to add the new controller to the system.

Adding a controller using the Add Controller Wizard

In PLUS Hardware, click **Quick Setup - Add Controller**, or click **Add Controller** on the *Live System* screen to open the *Add Controller Wizard* which walks you through adding one or more new controllers step by step.

- **Step 1: Set Number of Controllers.** Specify the *Number of Controllers* you want to install.
  Click **Next** to continue.

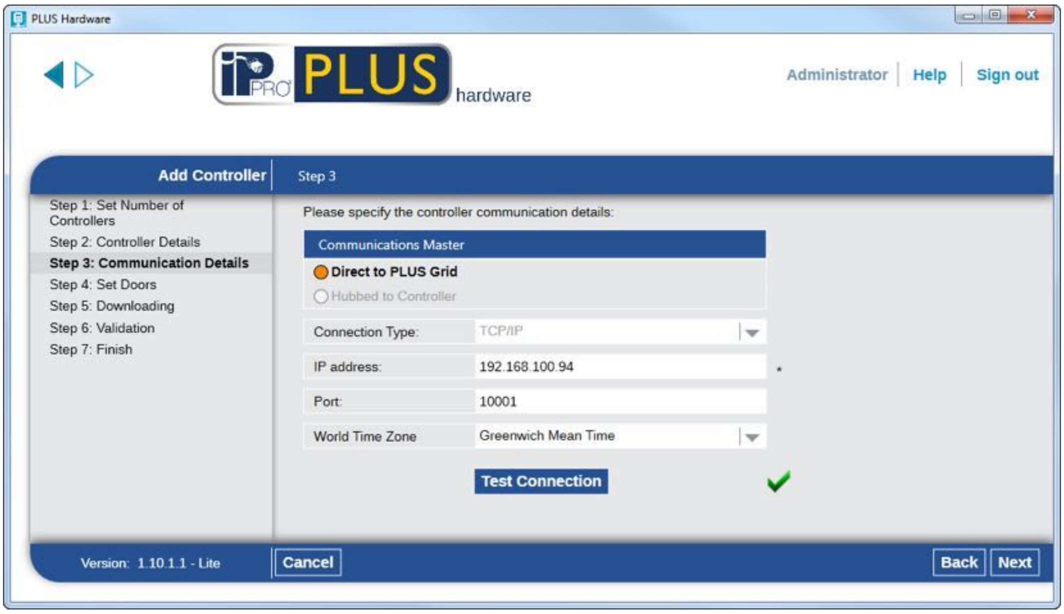
- **Step 2: Controller Details.** Specify the *Controller Name*, *Controller Number*, and *Controller Type*. To enable the controller once added, select the *Enabled* check box.
  Click **Next** to continue.

- **Step 3: Communication Details.** Specify how the controller is connected to the system. The IPDCE controller will always use *Direct to PLUS Grid.* Enter the IP address of the controller to be added, and select the World Time Zone.

  You can test your communication settings by clicking **Test Connection**.

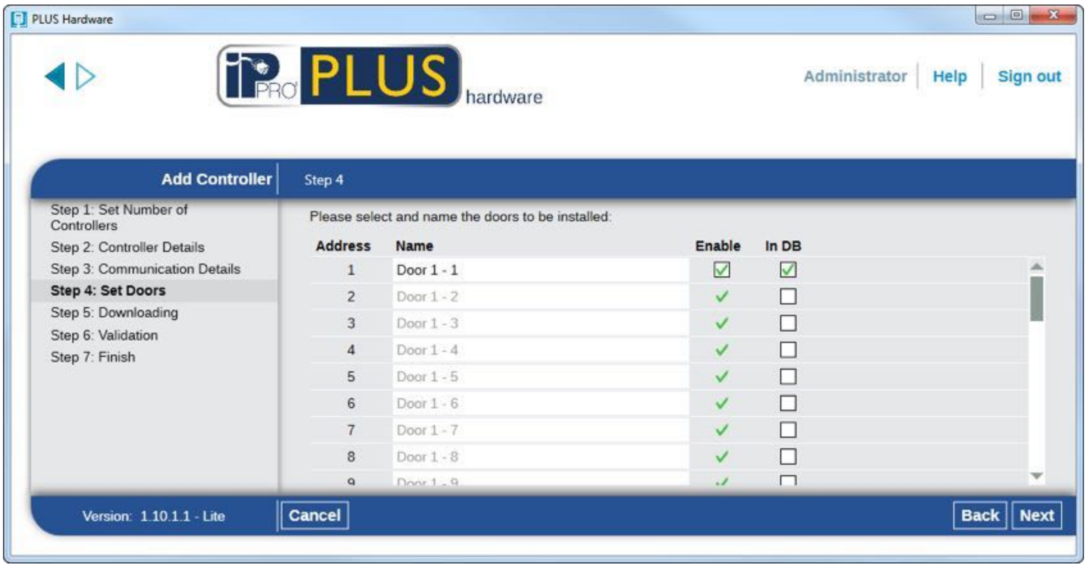
  A green checkmark will appear if communication is successful.

  Click **Next** to continue.

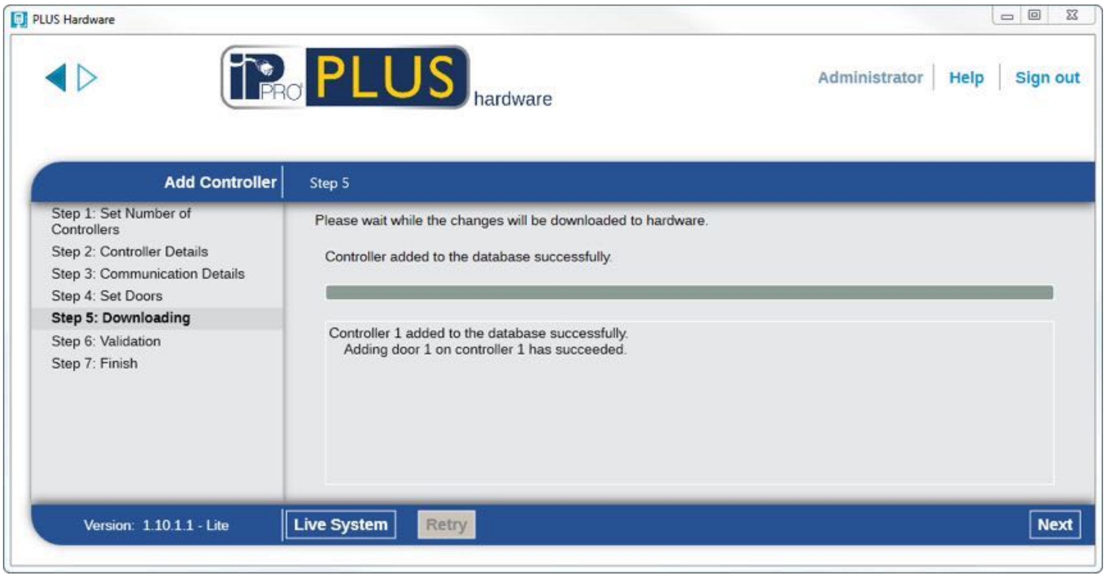


- **Step 4: Set Doors.** For each additional door station (IPDSE) connected to the controller, select whether it is enabled and whether its details should be stored in the database. Address 1 is always the IPDCE controller.
  Click **Next** to continue.

  Note: If you selected to add more than one controller, the wizard returns to *Step 2: Controller Details* screen for the next controller at this point, unless you have already specified all controllers, in which case it proceeds to *Step 5: Downloading* screen.



- **Step 5: Downloading.** The progress bar and status area below the bar indicate how the download is progressing. When the download is complete, click **Next** to continue.



- **Step 6: Validation.** Validate the installed doors by selecting the check box for each door and clicking **Lock**, **Unlock**, **Pass** or **Normal** to issue commands to the selected doors, confirming whether they are connected and responding to commands. **The check boxes will only be available if the controller was enabled in Step 2.**
  Click **Next** to continue.

- **Step 7: Finish.** A report on the results of the *Add Controller* wizard will appear. Click **Finish**.

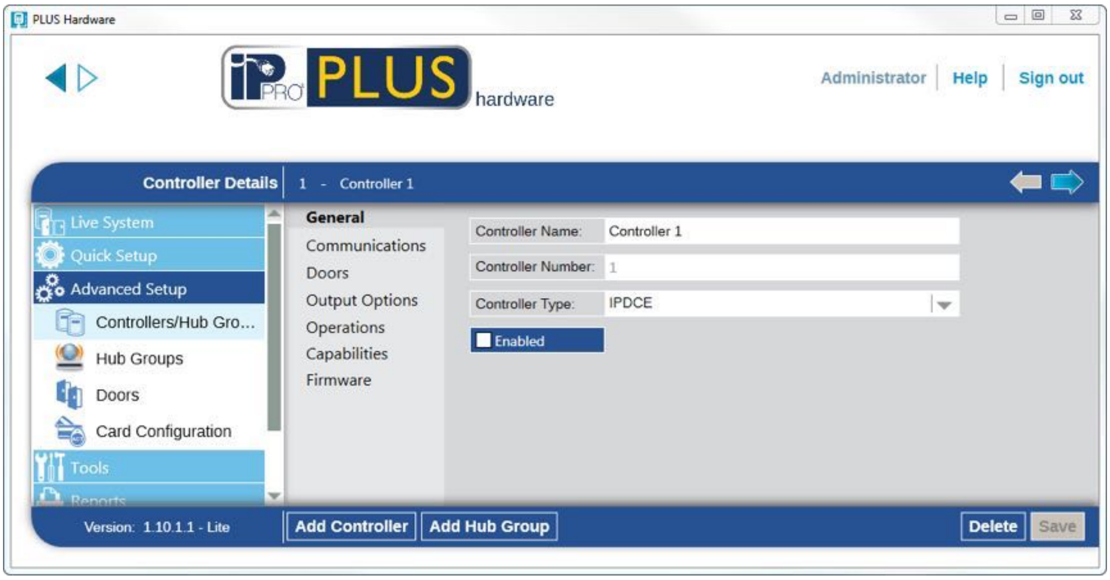
3.3.2 Enable/Disable Controllers

PLUS Hardware allows you to enable/disable controllers individually or in bulk.

Note: Disabling a controller is a way to disconnect that controller from the software, but the controller continues to operate independently unless physically disconnected. Enabling a controller connects it to the system software, but it must be physically connected and accessible on the TCP/IP network.

Enabling/disabling individual controllers

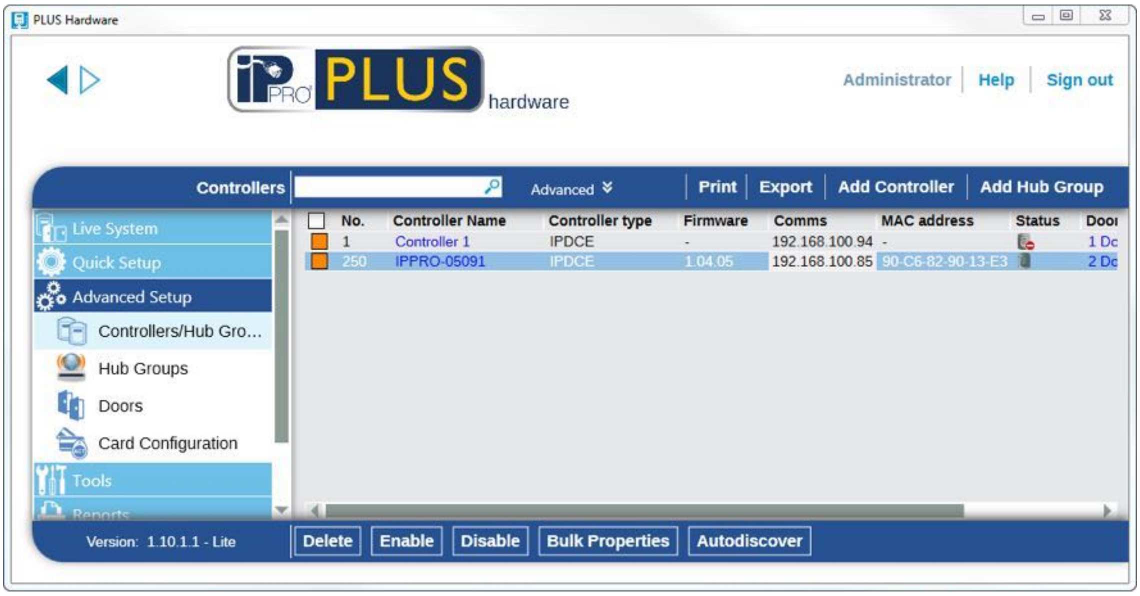
1. In PLUS Hardware, click **Advanced Setup - Controllers**, then use the *Search*/*Advanced Search* options on the *Controllers* screen to find the controller you want to enable/disable.
   For more information on the search options on the *Controllers* screen, see Controllers Screen (see page 139).
2. Click on the blue controller name to view its details on the *Controller Details* screen.



3. On the **General** tab of the *Controller Details* screen, select the *Enabled* check box to enable the controller, or de-select it to disable the controller.
4. Click **Save**.

Enabling/Disabling Multiple Controllers

1. In PLUS Hardware, click **Advanced Setup - Controllers**, then use the *Search*/*Advanced Search* options on the *Controllers* screen to find the controllers you want to enable/disable.
   For more information on the search options on the *Controllers* screen, see Controllers Screen (see page 139).
2. In the search results, select the check box for each controller you want to enable/disable.



3. Using the controls on the bottom of the screen, Click **Enable** to enable all selected controllers, or click **Disable** to disable all selected controllers.

3.3.3 Add a Door

Doors are physical gateways linked to controllers, such as pedestrian doors, gates, or turnstiles.

PLUS Hardware allows you to add doors to the system and to configure basic properties for their operation.

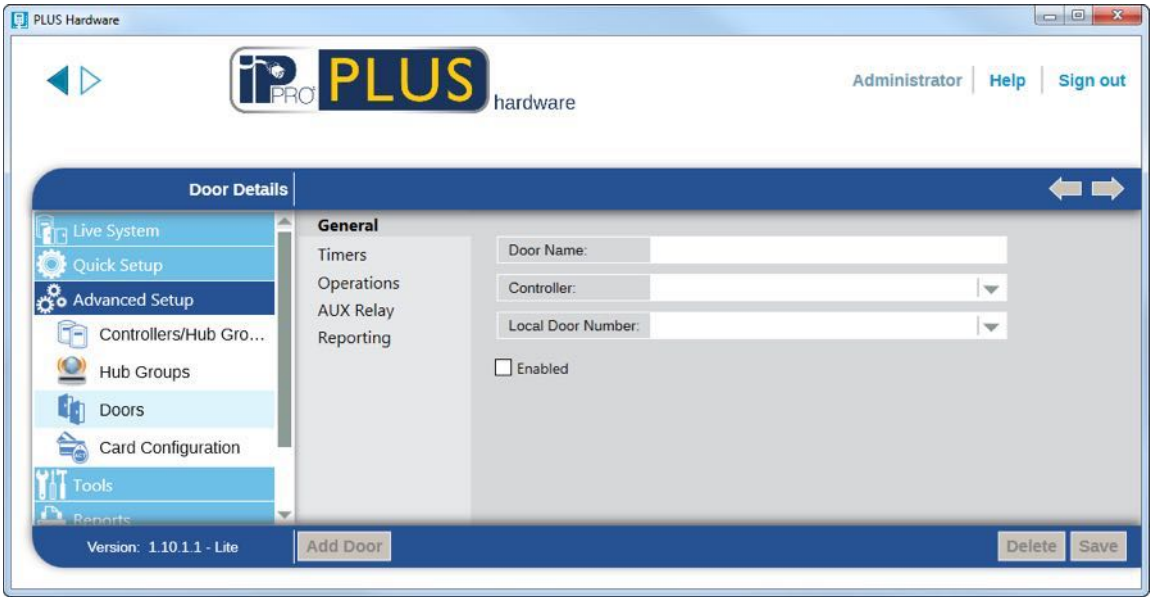
You can:

- Add one door manually through the *Add Door* screen (see page 39)
- Add one or more doors at once using the *Add Door Wizard* (see page 40)

Adding a door manually

1. In PLUS Hardware, click **Advanced Setup - Doors**, and click **Add Door** in the top right corner of the *Doors* screen.

   The *Door Details* screen appears.

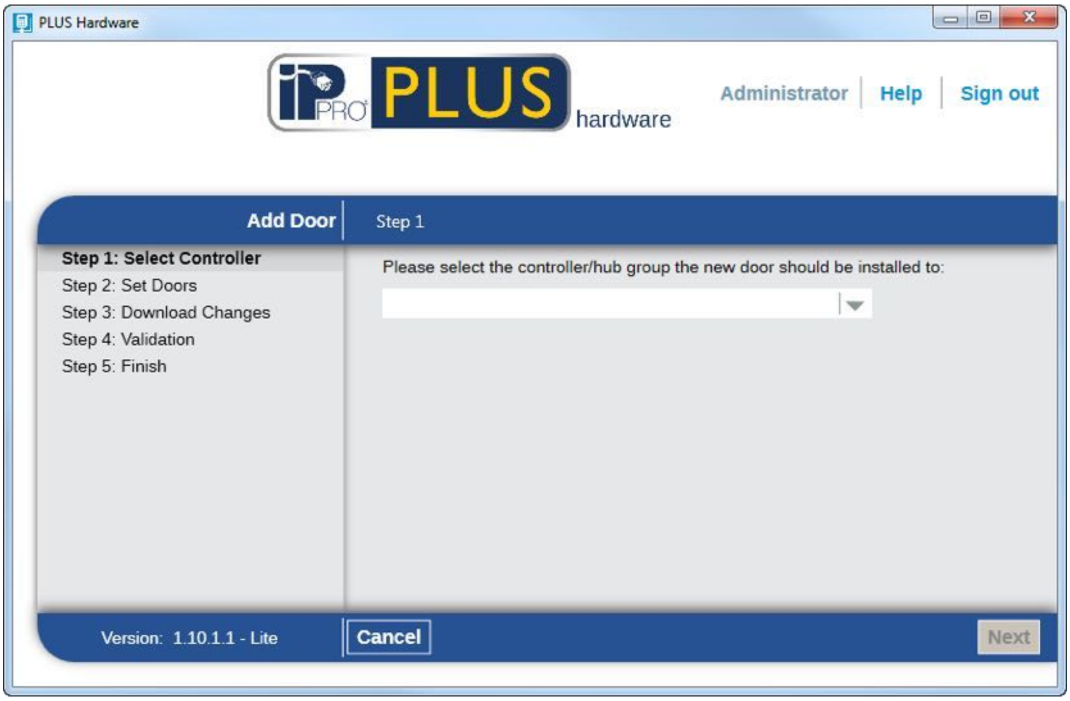


2. Specify details for the new door.
   For more information on the tabs and fields available on this screen, see [Door Details Screen](#) (see page 150).

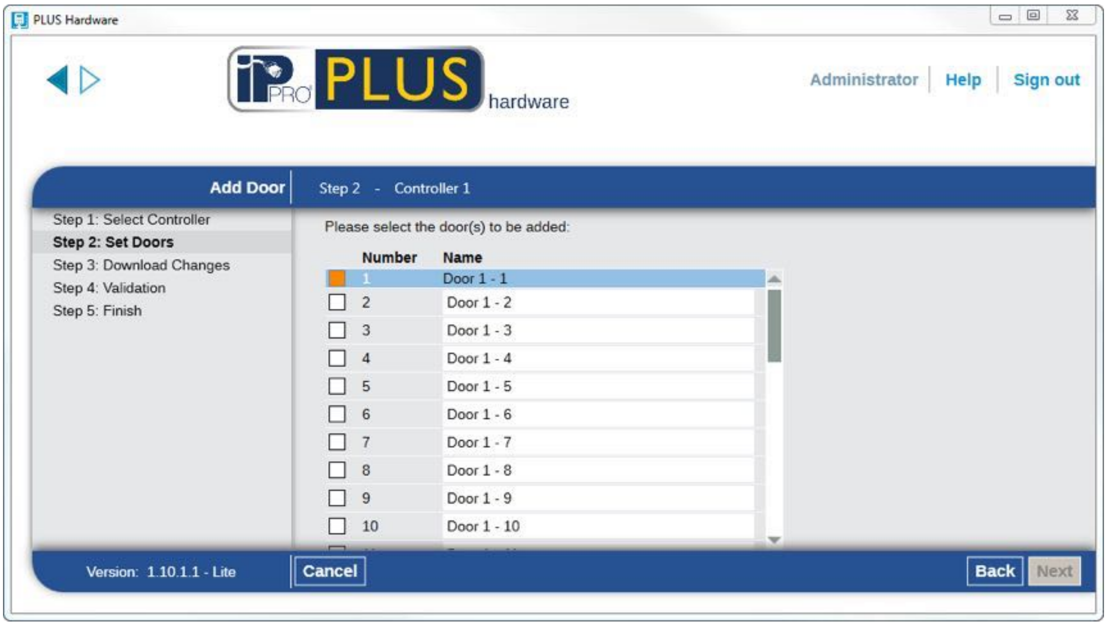
3. Click **Save** to add the new door to the system.

Adding a door using the Add Door Wizard

In PLUS Hardware, click **Quick Setup - Add Door**, or click **Add Door** on the *System Live* screen, to open the *Add Door Wizard* which walks you through adding one or more new controllers step by step.



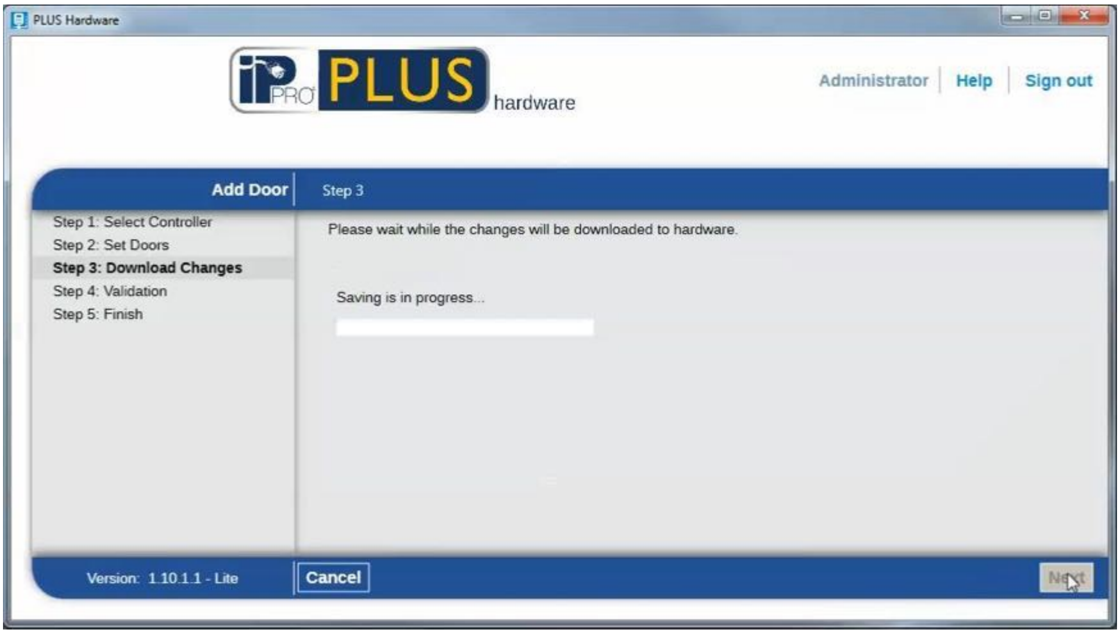
- **Step 1: Select Controller.** Select the controller to which the new door should be installed.
  Click **Next**.



- **Step 2: Set Doors.** Select which door(s) to add and enter a description of each door in the *Name* field. You will not be able to edit existing doors.

  Click **Next**.

- **Step 3: Download Changes.** Changes are downloaded to the controller. The progress bar and status area indicate how the download is progressing.



- **Step 4: Validation.** Validate the installed doors by selecting the check box for each door and clicking **Lock**, **Unlock**, **Pass** or **Normal** to issue commands to the selected doors, confirming whether they are connected and responding to commands. Only enabled doors can be validated.

  Click **Next** to continue.

- **Step 5: Finish.** A report on the results of the *Add Door* wizard.

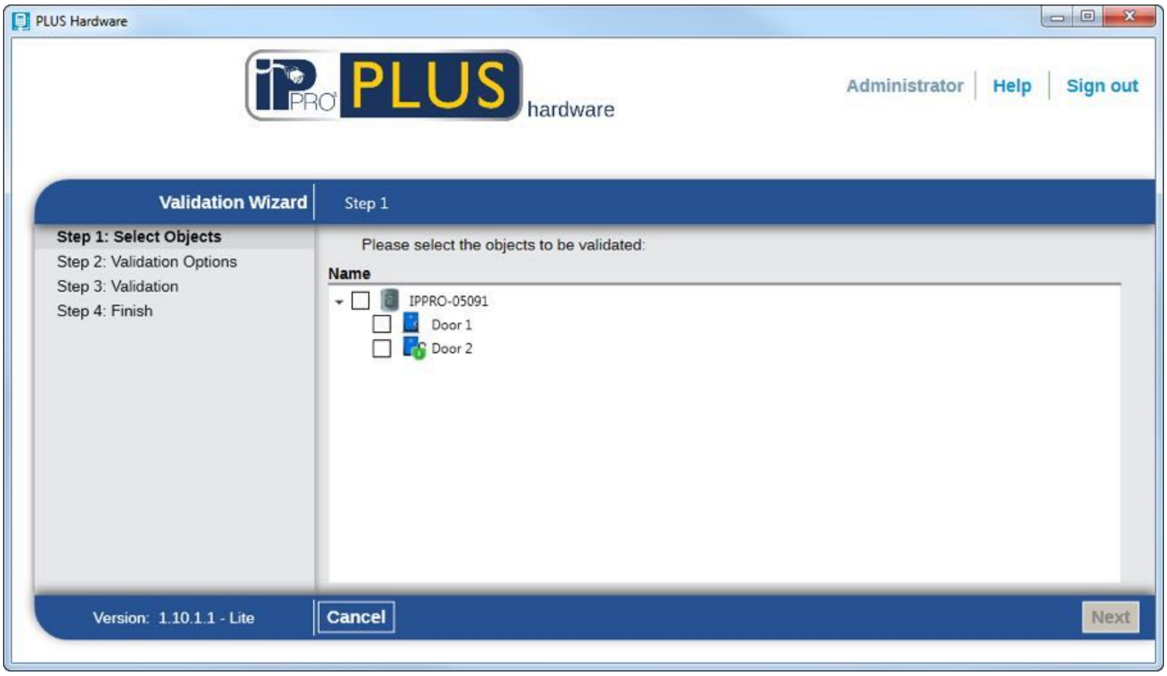
  Click **Finish**.

3.3.4 Test Controllers/Doors

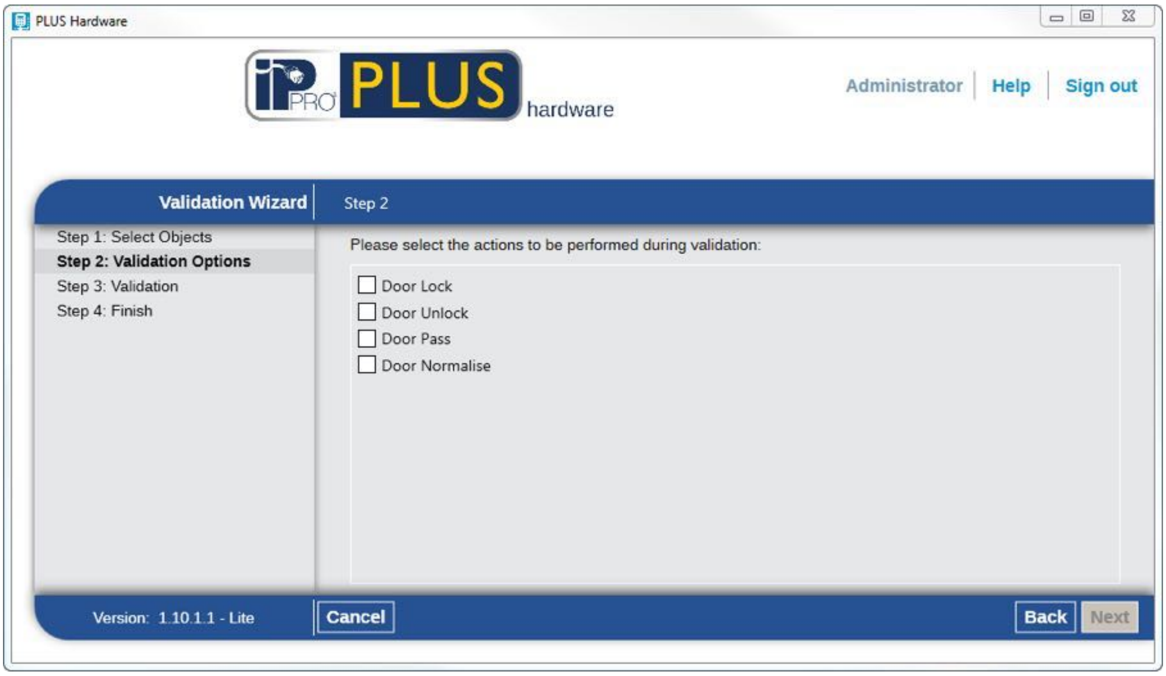
PLUS Hardware allows you to remotely test online controllers and doors using the Validation Wizard. The Validation Wizard sends specified commands to controllers/doors on the network and validates their responses to determine whether or not they are functioning correctly.

Testing controllers/doors

1. In PLUS Hardware, click **Tools - Validation Wizard**. The *Validation Wizard* appears.

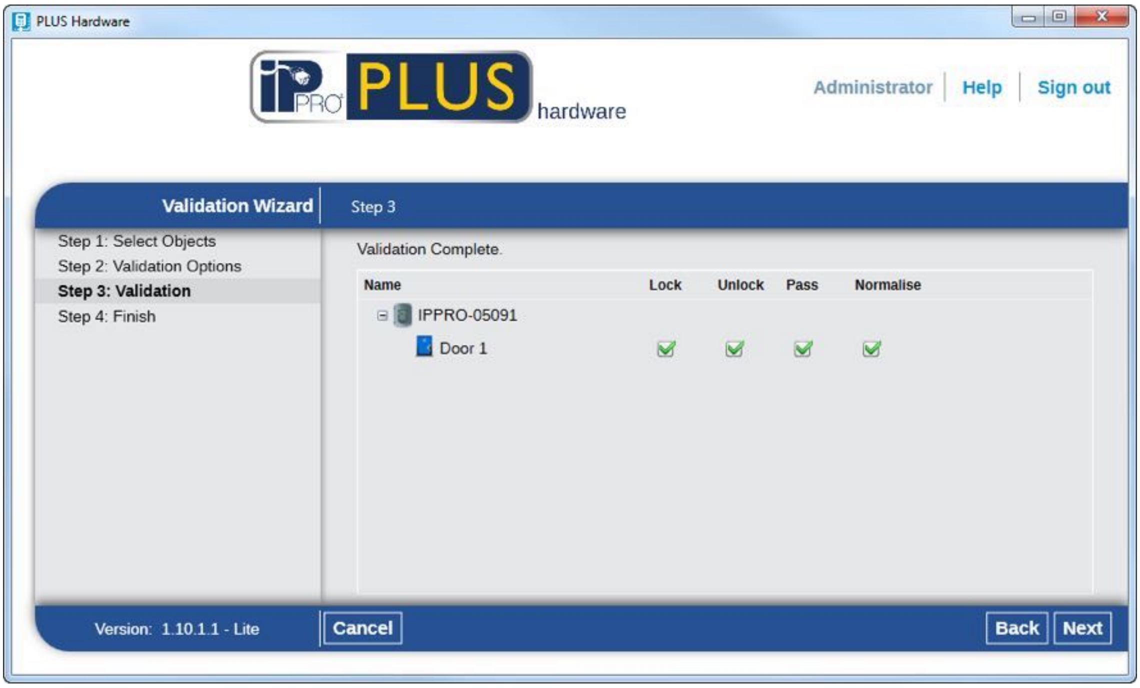


2. Select the controllers/doors to be validated and click **Next**.

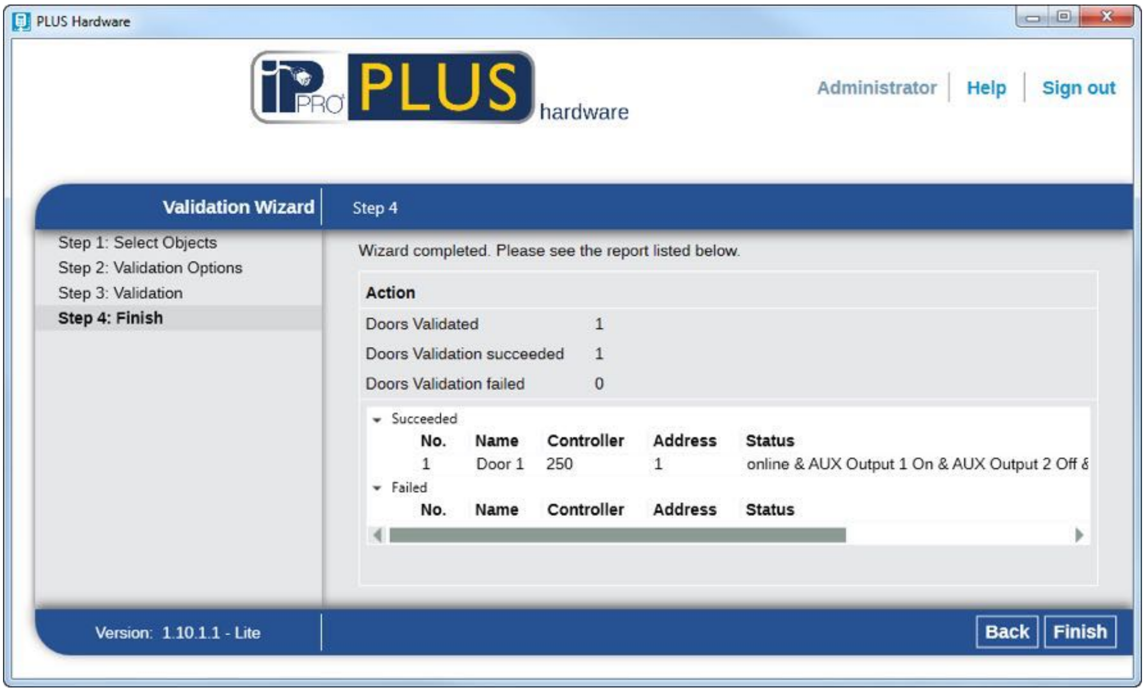


3. Select which command options to test during validation (Door Lock, Door Unlock, Door Pass, Door Normalize) and click **Next**.
   PLUS Hardware validates the selected hardware and commands, and displays a report which indicates whether or not each test was successful.

   Note: "Success" means the command could be issued. The result of the test on the hardware has to be separately assessed. That is, if you command a door to lock, the software reports whether the lock command was issued and received. To validate that the door was actually, physically locked, then you must check the door itself.



4. PLUS Hardware displays a summary of the test results.
   Review the report, take note of any hardware that failed validation so that you can investigate and repair or replace as appropriate, then click **Next**.

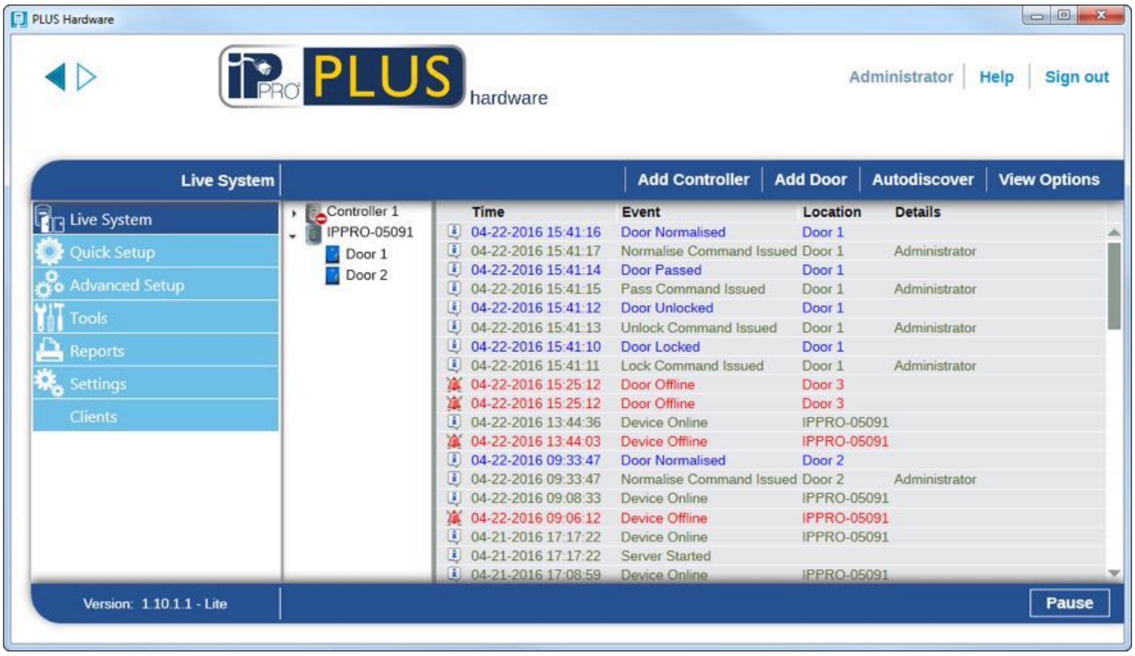


5. Click **Finish**.

3.3.5 Check the System Hardware Status

There are a number of ways to check the status of your PLUS Grid system hardware.

- In PLUS Hardware, click **System Live** to see the status of all configured controllers, and doors on the system, and to view live information on events occurring across the system.
  For more information, see System Live Screen (see page 136).



- In PLUS Hardware, click **Reports - System Status** to see a quick summary of the statuses of controllers and doors on the system. This report can be printed or exported using the links at the top-right corner of the screen. For more information, see System Status (see page 159).

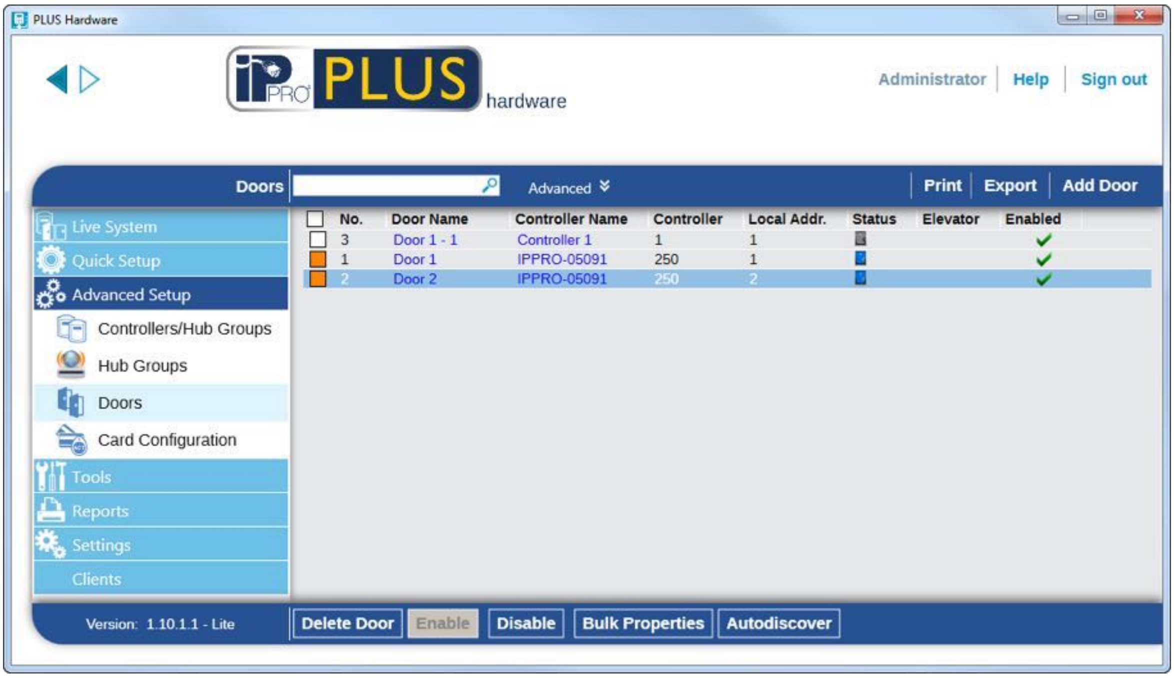
- In PLUS Hardware, click **Reports - System Snapshot** to see a list of all controllers and doors with summary information about each device and its current status, and also a list of recent system events. This report can be printed or exported using the links at the top-right corner of the screen.
  For more information, see System Snapshot (see page 159).

3.3.6 Set Properties for Multiple Doors

If you want to set a property for multiple doors, PLUS Hardware allows you to do this in bulk instead of editing each door individually.

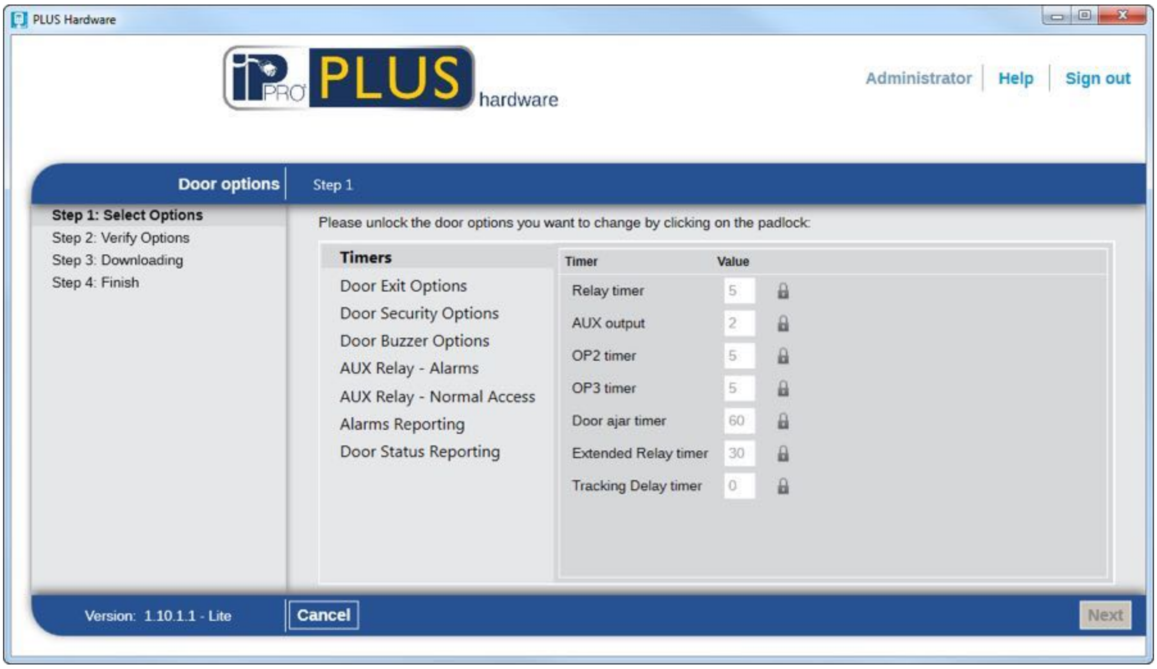
Setting properties for multiple doors

1. In PLUS Hardware, click **Advanced Setup - Doors**, then use the *Search*/*Advanced Search* options on the *Doors* screen to find the doors for which you want to set properties.
   For more information on the search options on the *Doors* screen, see Doors Screen (see page 149).
2. In the search results, select the check box for each door for which you want to set properties.



3. Click **Bulk Properties**.
   The *Door Options Wizard* appears.

   Note: The properties displayed are the system defaults and do not reflect the current values on the selected controllers. Only selected properties will be downloaded.

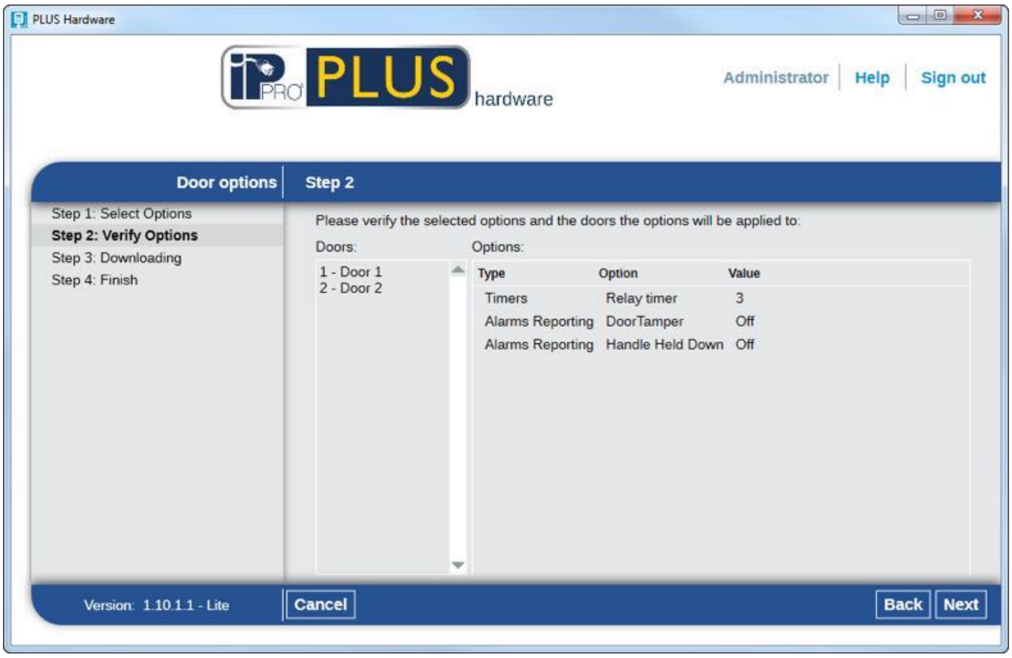


- **Step1: Select Options.**
  - Click the lock icon to lock ( ) or unlock ( ) an option. Only the unlocked options will be applied to the selected doors; the settings for locked options will be ignored.
  - On the **Timers** tab, set the required timer values
  - On remaining tabs, set the required properties to enable/disabled:
    - For timers, enter a time in seconds that the corresponding output should be activated when it is fired.
    - Select the check box for an option to mark it as enabled for all selected doors, or leave the check box de-selected for an option to mark it as disabled for all selected doors.

Click **Next**.

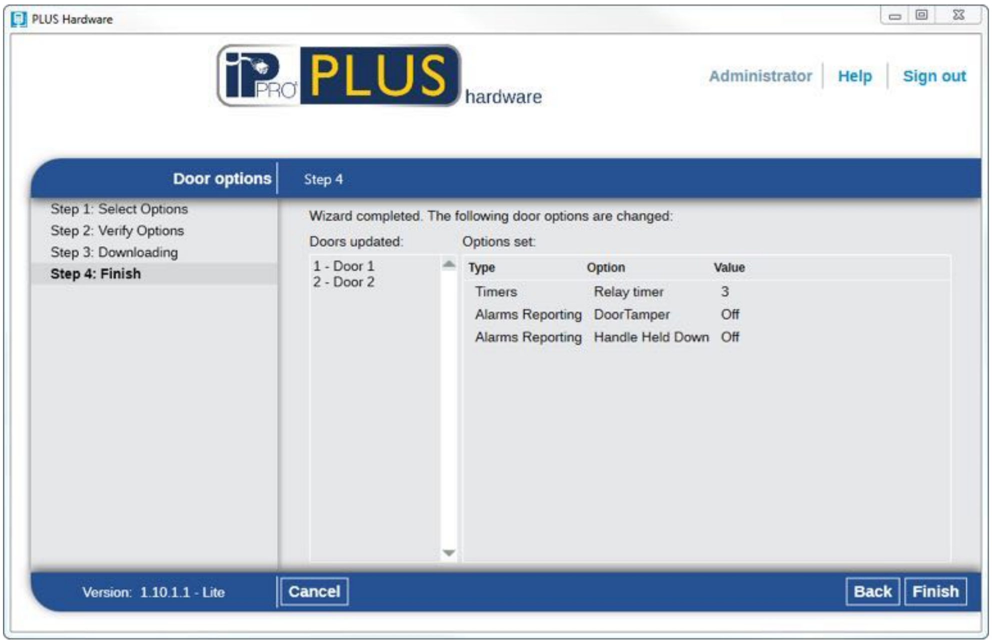
- **Step 2: Verify Options.** This screen itemizes the enabled/disabled settings the wizard will apply to the selected doors. Review the details carefully before proceeding. If any settings are incorrect, click **Back** to return to the previous screen and amend them.

  Note: There is no **Undo** option.



If you are satisfied that the options that will be applied are all correct, click **Next**.

- **Step 3: Downloading.** PLUS Hardware applies the enabled/disabled options to the selected doors. A progress bar indicates how the download is progressing.
- **Step 4: Finish.** Once all settings have been applied, the *Finish* screen summarises the changes made.
  Click **Finish** to return to the *Doors* screen.

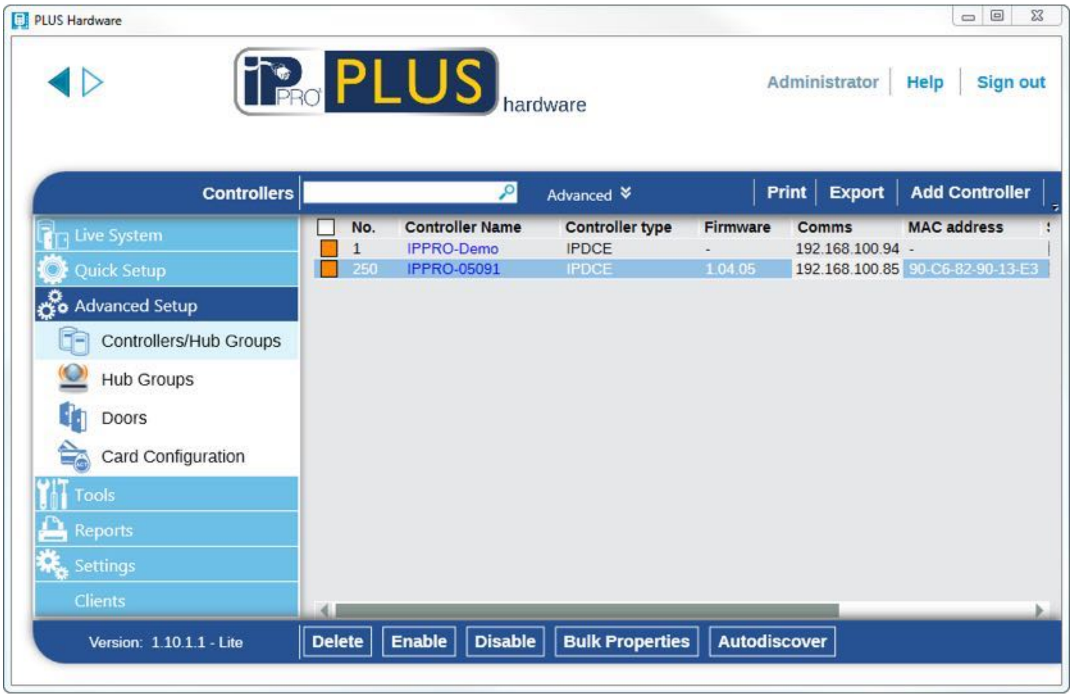


3.3.7 Set Properties for Multiple Controllers

If you want to set a property for multiple controllers, PLUS Hardware allows you to do this in bulk instead of editing each controller individually.

Setting properties for multiple controllers

1. In PLUS Hardware, click **Advanced Setup - Controllers**, then use the *Search*/*Advanced Search* options on the *Controllers* screen to find the controllers for which you want to set properties.
   For more information on the search options on the *Controllers* screen, see Controllers Screen (see page 139).
2. In the search results, select the check box for each controller for which you want to set properties.



3. Click **Bulk Properties**.
   The *Controller Options Wizard* appears.

4. For each tab (**Door 1 Options**, **Door 2 Options**, **Operations - General**, and **Operations - Printer**), set the required properties to enable/disabled:

    1. Click the lock icon to lock () or unlock () an option.
       The enabled/disabled settings for unlocked options will be applied to the selected controller; the settings for locked options will be ignored.

    2. Select the check box for an option to mark it as enabled for all selected controllers, or leave the check box de-selected for an option to mark it as disabled for all selected controllers.

       Note: The check box does not reflect the actual value currently on the controllers.

5. Click **Next**.

   The *Verify Options* screen appears itemizing the enabled/disabled settings the wizard will apply to the selected controllers. Review the details carefully before proceeding. If any settings are incorrect, click **Back** to return to the previous screen and amend them.

6. If you are satisfied that the options that will be applied are all correct, click **Next**.
7. PLUS Hardware applies the enabled/disabled options to the selected controllers. A progress bar indicates how the download is progressing.
8. Once all settings have been applied, the *Finish* screen summarizes the changes made. Click **Finish** to return to the *Controllers* screen.

3.3.8 See What Hardware is on the Network

Using PLUS Hardware, you can generate a report that provides a snapshot of all the IPPro hardware on your network.

In PLUS Hardware, click **Reports - System Snapshot** to see a list of all controllers, doors with summary information about each device and its current status, and also a list of recent system events. This report can be printed or exported using the links at the top-right corner of the screen.
For more information, see System Snapshot (see page 159).

Alternatively, go to **Advanced Setup** and choose what type of hardware you want to review. You can list doors and controllers.

3.3.9 Configure Timers

You can:

- Configure door timers (see page 52)

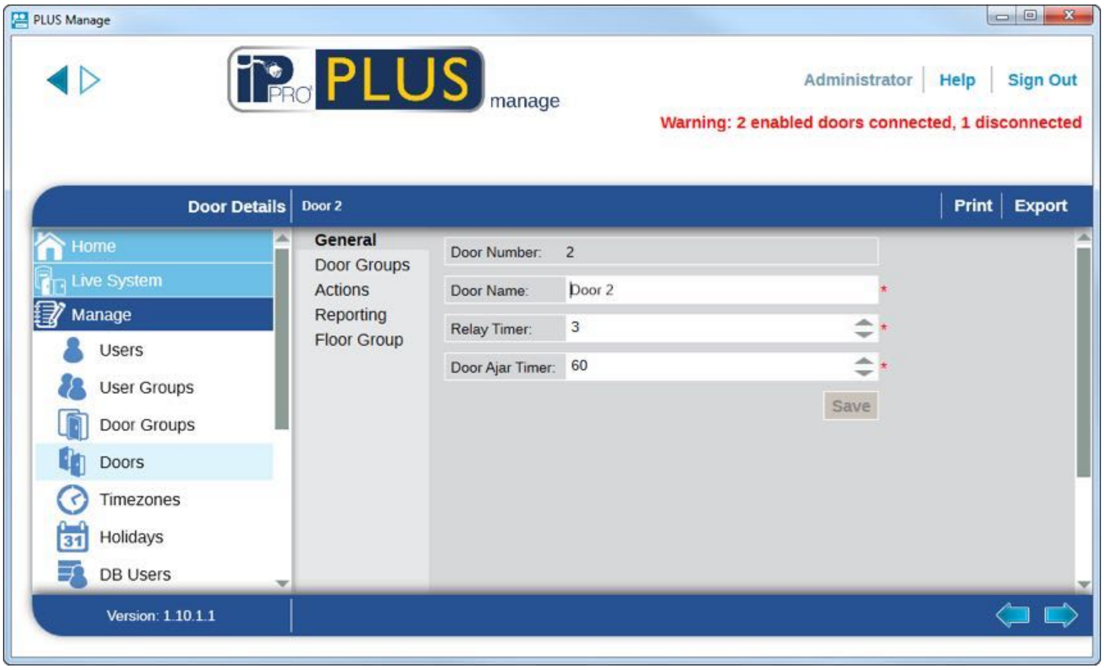
Configuring timers for a door

1. In PLUS Hardware, click **Advanced Setup - Doors**,
   OR in PLUS Manage, click **Manage - Doors.**
2. Using the *Search*/*Advanced Search* options on the *Doors* screen, find the door for which you want to configure timers.
   For more information on the search options on the *Doors* screen in PLUS Hardware, see Doors Screen (see page 149).
   For more information on the search options on the *Doors* screen in PLUS Manage, see Doors Screen (see page 96).
3. In the search results area on the *Doors* screen, click the Door Name of the door you want to configure.
   The *Door Details* screen appears.
4. In PLUS Hardware, on the **Timers** tab, you can specify the following timers: *Relay Timer*, *AUX Output*, *OP2 Timer*, *OP3 Timer*, *Door Ajar Timer*, *Extended Relay Timer*, *Tracking Delay Timer*.

For more information, see Door Details - Timers Tab (see page 151).

Or

In PLUS Manage, on the **General** tab, you can specify values for the *Relay Timer* and the *Door Ajar Timer*.
For more information, see Door Details - General Tab (see page 97).



5. Click **Save**.

3.4 Managing the System

3.4.1 Add a Door Group

Door groups are a convenient way of grouping a number of doors to simplify granting/denying access to that group of doors. Door groups are essential for applying user group access rights. **NOTE**: "All Doors" is a default Door Group and cannot be modified.

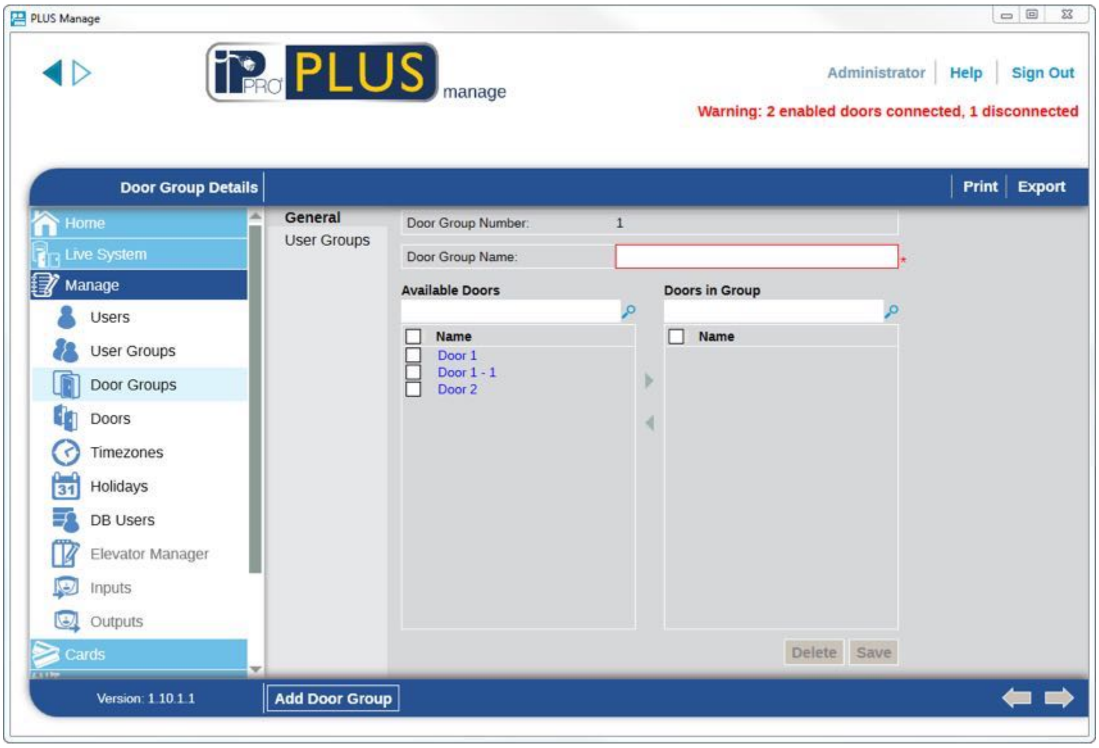
PLUS Manage allows you to create and edit door groups. Doors must be added to the system through PLUS Hardware before they can be assigned to door groups. For more information, see How do I add a Door (see page 38). Any given door may belong to multiple door groups.

You can:

- Create a door group manually through the *Door Group Details* screen (see page 55)
- Create a door group using the *Door Group Wizard* (see page 56)

Adding a door group through the Door Group Details screen

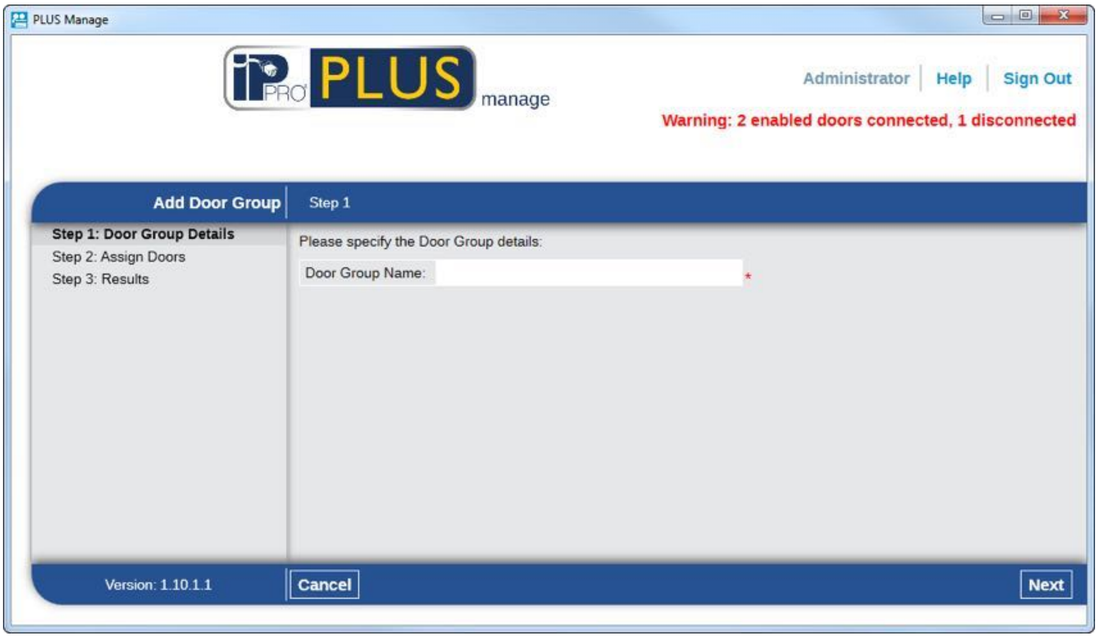
1. In PLUS Manage, click **Manage - Door Groups**, then click **Add Door Group** in the top right corner of the *Door Groups* screen.



2. Specify the *Door Group Name* on the **General** tab.
3. Specify the doors in the door group on the **General** tab:
   - To add a door, select the door in the *Available Doors* list, then click the right-arrow ().
   - To remove a door, select it in the *Doors in Group* list and click the left-arrow ().
4. Click **Save** to create a record for the door group.

Adding a door group using the Door Group Wizard

1. In PLUS Manage, click **Add Door Group** on the *Manage – Home* screen to open the *Add Door Group Wizard* which walks you through adding a door group step by step.



2. Follow the wizard's onscreen instructions to add a new door group, clicking **Next** in the bottom right of the screen after each step and **Finish** at the end.

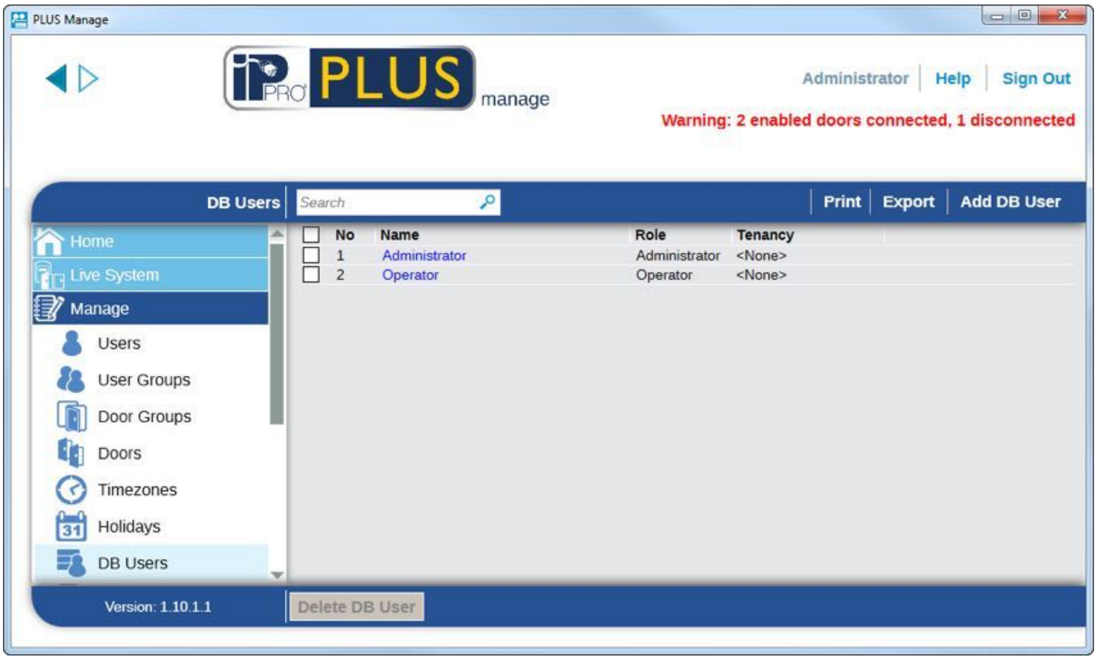
3.4.2 Configure PLUS Grid Software Operator Access Rights

PLUS Manage allows you to configure operators (also called DB Users) of PLUS Grid software through the *DB Users* screen. An operator is any person who uses the PLUS Grid software. You can restrict an operator's access to particular data and functions when using the software.

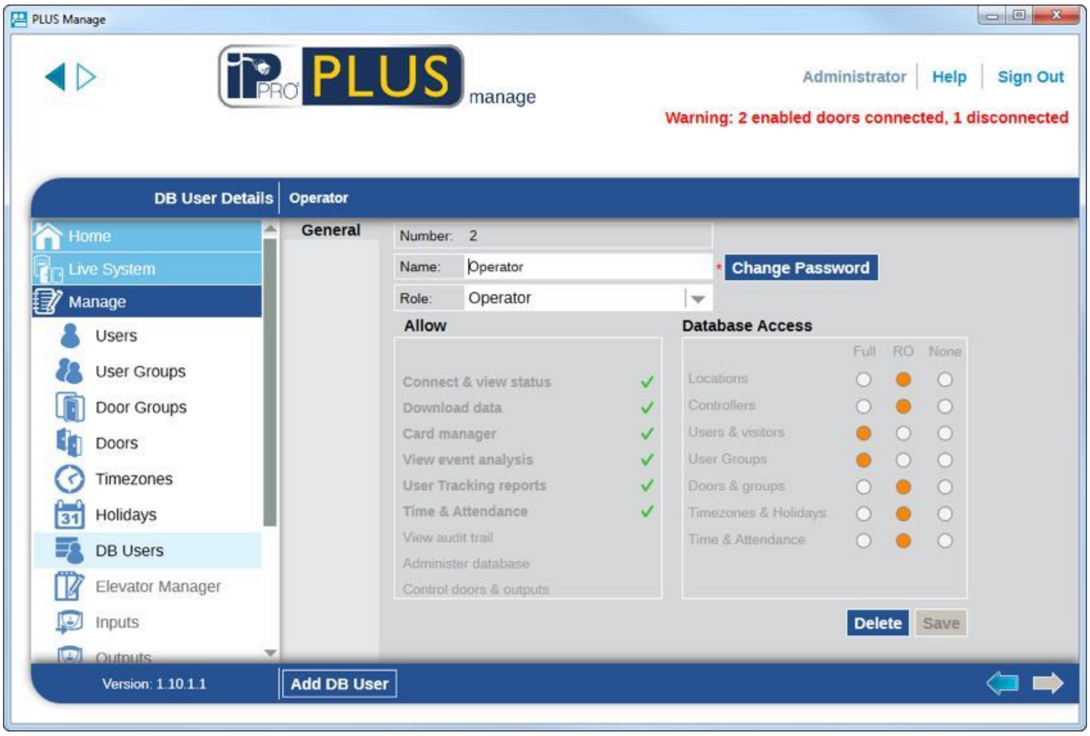
Note: Only Administrators can view or change PLUS Grid access rights.

Configuring Operator access rights

1. In PLUS Manage, click **Manage – DB - Users**.



2. To edit an existing operator's access rights, click their name.
   The *DB User Details* screen appears.
   For more information on this screen, see DB User Details Screen (see page 107).



3. From the *Role* drop-down list:
    - Select a standard role to assign the operator a pre-defined combination of rights to access functions and data.
      The *Allow* and *Database access* areas reflect the rights for the selected role.

      Or

    - Select *Custom* to specify a customized combination of rights.
      When you select *Custom*, you can optionally select which clients the operator should have access to. The appropriate rights are assigned by the system to allow the DB User to access the selected clients.
      Alternatively, select the user's required rights from the *Allow* and *Database Access* areas.
4. Click **Save**.

Note: If a user does not have sufficient minimum access rights for a client, then the client will be disabled in the **Clients** menu.

3.4.3 Synchronize Controller Information

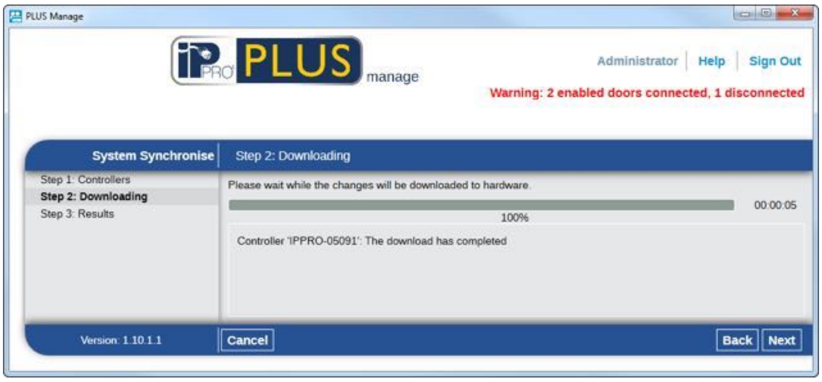
The System Synchronize Wizard in PLUS Manage and PLUS Hardware allows you to download the entire database to one or more controllers. Controllers remain offline during downloads, meaning that they cannot be commanded during this time, nor will they report events. Remote Door stations will have limited functionality during the download. You should only do a download if you are entirely sure it is required.

Note: Synchronizing controllers means that all data entered on the controller directly, via its web server, will be lost.

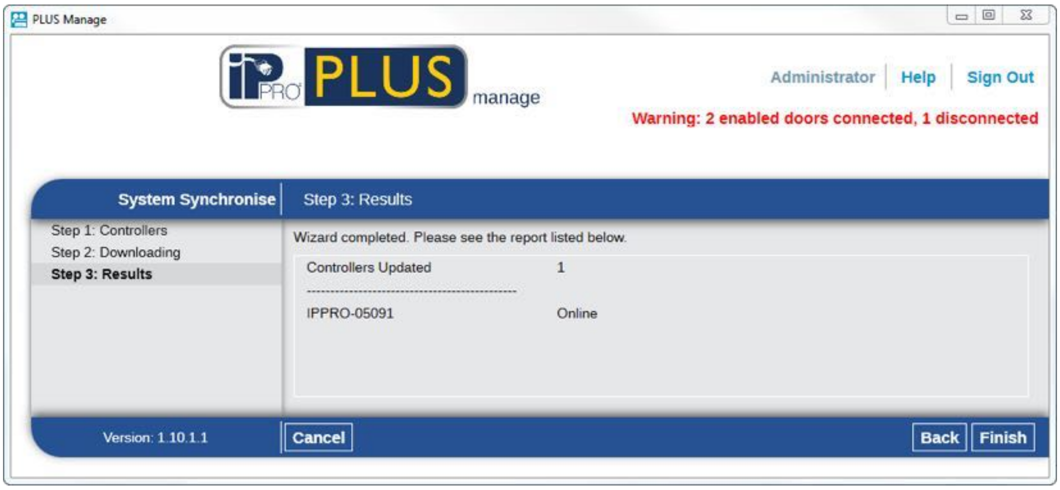
Synchronizing controller information

In PLUS Manage or PLUS Hardware, click **Tools - System Synchronize**. The *System Synchronize Wizard* appears.

- **Step 1: Controllers.** This screen indicates whether each controller is up to date or not.
  Select which controllers you want to download to, then click **Next**.



- **Step 2: Downloading.** This screen shows a progress bar which indicates the overall progress of the system synchronization. The message area shows information for each controller as data is downloaded.
  When the download has fully completed, click **Next**.



- **Step 3: Results.** This screen shows the results of the synchronization operation: the number of controllers updated and their current statuses.

  Click **Finish** to leave the wizard.

3.4.4 Configure a Door's Actions

Actions are settings automatically applied by a door controller at specified times without the need for user intervention.

For example:

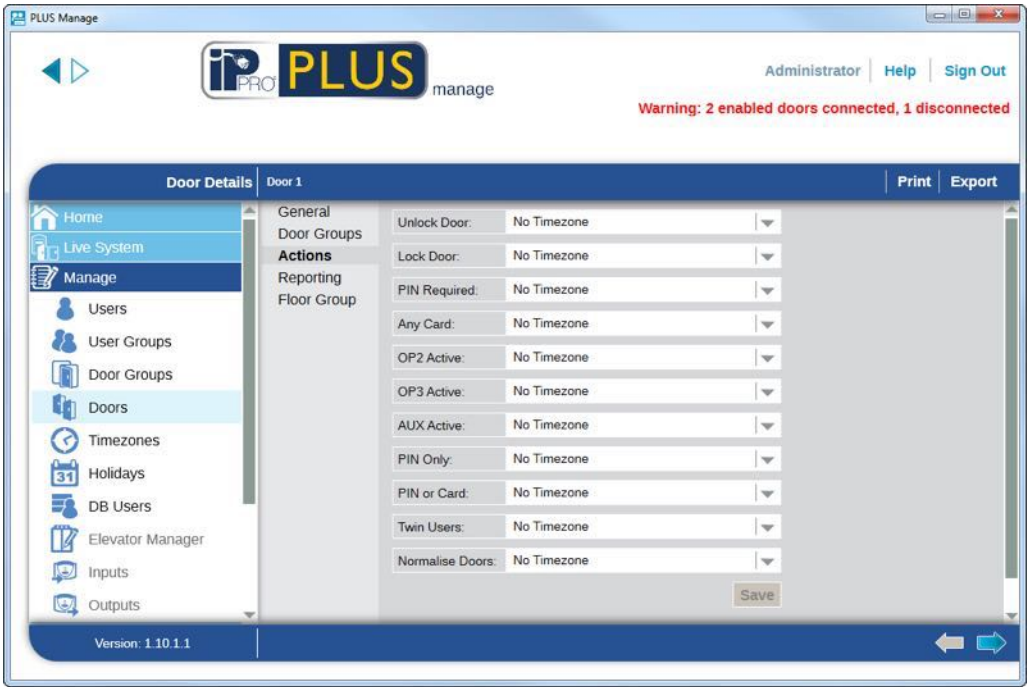
- A door may require additional security out of office hours where a PIN may be required.
- A door may be set to have card and PIN access 24 hours. This is common for rooms that require a high level of security.
- A door may be automatically opened during business hours.

Actions may be used to control external devices via the controller outputs, or to alter the security level of a door at certain times. Each action may be inactive (default) or have any defined time zone assigned.

NOTE: Before configuring a door's actions, you should ensure you have created all the time zones required. For more information, see How to add a Time Zone (see page 60).

Configuring a door's actions

1. In PLUS Manage, click **Manage - Doors**. If the door whose actions you want to configure is not immediately visible, use the *Search*/*Advanced Search* options on the *Doors* screen, find the door for which you want to configure actions.
2. In the search results area on the *Doors* screen, click the name of the door you want to configure.
   The *Door Details* screen appears.
3. Click the **Actions** tab of the *Door Details* screen.



4. For each listed action, select a time zone from the corresponding drop-down list to determine when the action applies for this door.

   For a description of each of the available actions, see Door Details - Actions Tab (see page 98).
5. Click **Save** when you have finished configuring required action/time zone combinations.

Note: Some timed actions are mutually exclusive. In this case, only one timed action should be selected where the times zones overlap. Examples are: *Lock Door* and *Unlock Door*, OR *PIN Required*, *PIN or Card*, and *Any Card*.

3.4.5 Configure Fire Doors

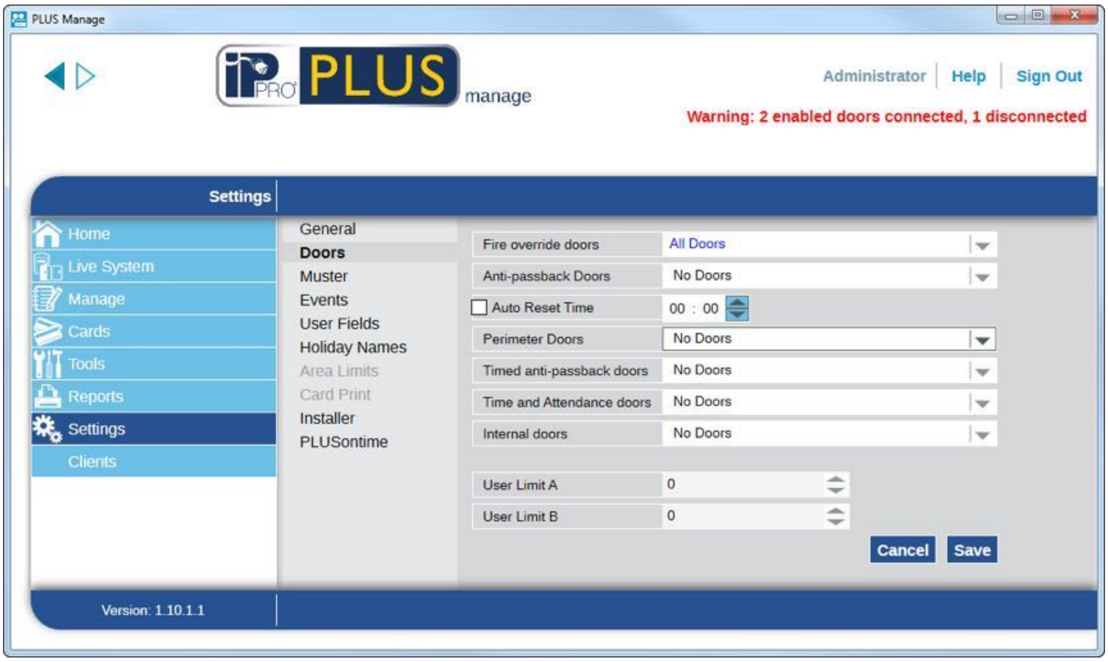
Fire doors are automatically opened in the event of a fire to allow free passage of users. In PLUS Grid, fire doors are specified by (1) adding them to a door group, then (2) making that door group as the one containing *Fire override doors*.

To set up fire doors:

1. In PLUS Hardware, add the controllers and connected doors to the system. For more information, see Add a Controller (see page 31) and Add a Door (see page 38).
2. Physically wire your infrastructure so that a common 0V output from the fire panel is brought separately to the AUX input of each IPDCE controller. Each controller that receives the fire alarm signal will automatically unlock the assigned fire doors in the event of the fire alarm and normalize the doors immediately once the fire condition is cancelled.
3. In PLUS Manage, create a new door group for fire doors, and specify which doors will be opened automatically in the case of a fire. For more information, see Add a Door Group (see page 54).
4. In PLUS Manage, specify that this door group is the one containing *Fire override doors*. See below.

Making a door group as one containing Fire Override doors

1. In PLUS Manage, click **Settings**.
2. On the *Settings* screen, click the **Doors** tab.



3. At *Fire override doors*, select the door group containing fire doors.
4. Click **Save**.

3.4.6 Configure Holidays

PLUS Manage allows you to specify up to 9 holiday types (see page 64), and to assign at most one holiday type to each day of the year (see page 64).

When you specify time zones (periods when access rights apply), you can mark them as active for week days and also for days assigned specific holiday types. For more information on specifying time zones see Add a Time Zone (see page 65).

Configuring holiday types

1. In PLUS Manage, click **Settings**.
2. Click the **Holiday Names** tab.

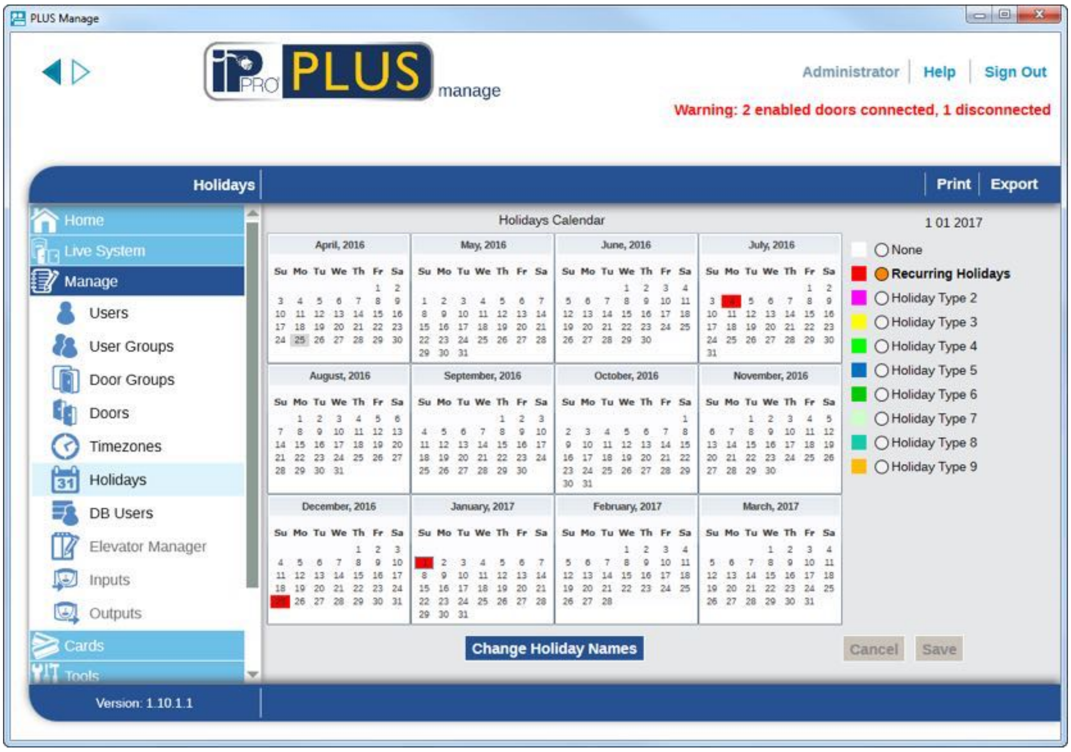
3. Enter names for up to nine holiday types and click **Save**.

Marking days of the year as holidays

1. In PLUS Manage, click **Manage - Holidays**.
   The *Holidays* screen shows a 12 month calendar starting at the current month, and a list of color-coded holiday types.
   The current date is selected by default.
   Dates flagged as holidays are highlighted in the corresponding holiday type color.

   Note: Adding a holiday for a specific day/month combination leaves that holiday for that date in the system for each subsequent year. You should periodically review your holidays, for instance moving company holidays.

   For more information, see Holidays Screen (see page 105).



2. To assign or change the holiday type for any date, select that date on the calendar and click the radio button for the holiday type to assign that type. Only one holiday type may be assigned to each date.
3. To remove a holiday type for any date, select that date on the calendar and click the *None* radio button.
4. Click **Save**.

3.4.7 Add a Time Zone

A time zone consists of up to 8 time periods. Each period specifies a time range and the days and holidays for which the period is active. The time zone is active when any of its periods are active. Time zones are primarily used for two purposes:

(a) Time zones are used to specify when a user/group's access rights are valid.

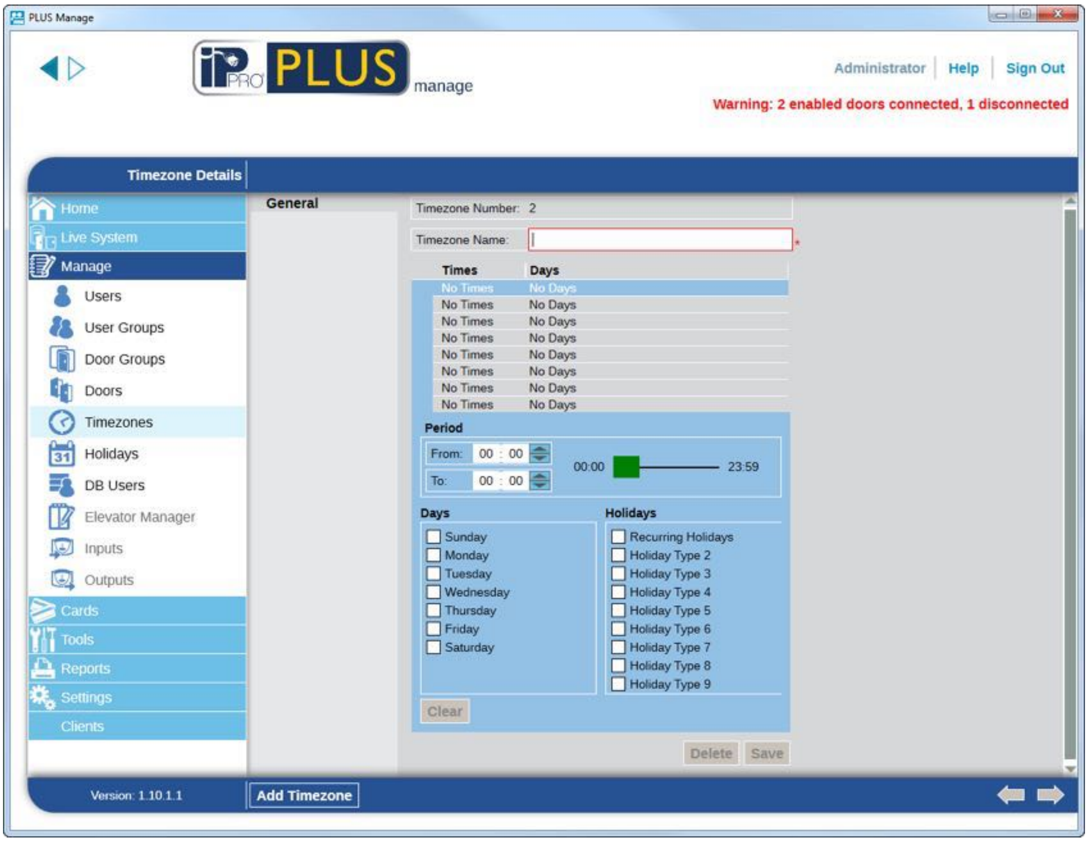
(b) Time zones are used to schedule Door Actions (See Page 60)

Time zones can be created and edited in PLUS Manage.

Adding a Time Zone

1. In PLUS Manage, click **Add Time Zone** on the *Home* screen, or click **Manage - Time Zones**, then click **Add Time Zone** in the top right corner of the *Time Zones* screen.

   The *Time Zone Details* screen appears.



2. Enter the *Timezone Name* on the **General** tab.
3. In the lower section of the **General** tab, specify the *Times/Days* combinations when this time zone is active.
   To specify a *Times/Days* combination, select a row, and in the fields below specify the corresponding *Period* (*From* and *To* times), and select the *Days* and *Holidays*.
4. Click **Save** to create the time zone.

4 Reference Information

The following sections provide reference information on the screens in PLUS Manage (see page 67), PLUS Hardware (see page 133) and Server Client(see page 167).

The reference sections do not include screen shots of the software - please refer to the relevant software module while reviewing this information.

4.1 PLUS Manage

4.1.1 About PLUS Manage

PLUS Manage allows you to manage an installed IPPRo PLUS Grid system. You can configure and manage card holders, user groups, door groups, timezones, holidays, and access rights across the system. You can run reports on system activity, including event analysis, audit reports, and user validity and activity.

See Also

Navigating PLUS Interfaces (see page 8)

PLUS Manage Menus (see page 104)

4.1.2 About PINs

PINs only need to be assigned for systems requiring Card & PIN or PIN Only usage.

PINs can be set for individuals or for user groups.

If a PIN is set for a user group, it must be unique across all user groups on the system.

If a PIN is set for a user group, the user group's PIN becomes the default PIN for all users in that group, but can be overridden on a user-by-user basis.

If you enter a personal PIN for a user, this will override the default user group PIN for that user. If you delete an individual PIN for a user, their PIN then reverts to the user group PIN (if set).

You cannot delete a default PIN at the user level.

4.1.3 General

4.1.3.1 PLUS Manage Home Screen

The *Home* screen provides quick access to the most frequently used PLUS Manage features. Click any of these to be brought directly to the relevant screen:

- List Users. For more information, see Users Screen (see page 72).
- Add User. For more information, see User Details Screen (see page 75).
- Add Cards. For more information see Extra Cards Screen (see page 23).
- Add User Group. For more information, see Add User Group Screen. (see page 21)
- Add Door Group. For more information, see Add Door Group Screen (see page 93).
- Add Timezone. For more information, see Time Zone Details Screen (see page 103).

4.1.3.2 PLUS Manage Menus

The following menus are available in PLUS Manage.

- Home. For more information, see Home Screen (see page 68).
- Manage. For more information, see PLUS Manage - Manage Menu (see page 68).
- Cards. For more information, see PLUS Manage - Cards Menu (see page 70).
- Tools. For more information, see PLUS Manage - Tools Menu (see page 70).
- Reports. For more information, see PLUS Manage - Reports Menu (see page 70).
- Settings. For more information, see About Settings (see page 71).
- Clients. For more information, see PLUS Manage - Clients Menu (see page 71).

4.1.3.3 PLUS Manage - Manage Menu

The following options are available on the **PLUS Manage - Manage** menu.

- Users. For more information, see About Users (see page 72).
- User Groups. For more information, see About User Groups (see page 84).
- Door Groups. For more information, see About Door Groups (see page 92).
- Doors. For more information, see About Doors (see page 95).
- Time zones. For more information, see About Timezones (see page 102).
- Holidays. For more information, see About Holidays (see page 104).
- DB Users. For more information, see About DB Users (see page 106).

4.1.3.4 PLUS Manage - Cards Menu

The following options are available on the **PLUS Manage - Cards** menu.

- Extra Cards. For more information, see Extra Cards Screen (see page 109).
- Report Lost. For more information, see Report Lost Screen (see page 110).

4.1.3.5 PLUS Manage - Tools Menu

The following options are available on the **PLUS Manage - Tools** menu.

- System Synchronize. For more information, see System Synchronize Screen (see page 113).

4.1.3.6 PLUS Manage - Reports Menu

The following options are available on the **PLUS Manage - Reports** menu.

- Validate Users. For more information, see Validate Users Screen (see page 126).
- User List. For more information, see User List Screen (see page 114).
- Card Expiry. For more information, see Card Expiry Screen (see page 117).
- User Tracking. For more information, see User Tracking Screen (see page 120).
- Audit Trail. For more information, see Audit Trail Screen (see page 122).
- Event Analysis. For more information, see Event Analysis Screen (see page 124).

4.1.3.7 About Settings

The *Settings* screen allows you to configure preferred settings/values for a range of functions in PLUS Manage, such as the names of user fields and holidays, area limits and event filters.

See Also

Settings Screen (see page 129)

4.1.3.8 PLUS Manage - Clients Menu

Click any of the client software options in the **Clients** menu to open the corresponding software module for PLUS Grid. The selected module opens in front of the current module.

You must have logon access to use each client, and which tasks you will be able to perform depends on the access rights you have been granted.

The following options are available (if you have full access rights) on the **PLUS Manage - Clients** menu.

- PLUS Hardware. For more information, see About PLUS Hardware (see page 133).
- PLUS SiteMaps Monitor. SiteMaps Monitor is an optional add-on to the PLUS Grid system. It is a real-time access control tool that provides visual navigation through the system of maps created with SiteMaps Editor, allows you to issue basic commands on access control objects on the maps, and allows you to monitor events and status changes from the PLUS system via maps in live mode. For more information, please refer to the online help included in SiteMaps Monitor.
- PLUS SiteMaps Editor. SiteMaps Editor is a visual designer tool that creates a list of maps from pre-designed graphics that represent infrastructure units of an access control site, and places PLUS controlling units (doors, inputs/outputs, etc.) on those maps according to their physical location in the building. For more information, please refer to the online help included in SiteMaps Editor.

4.1.4 Users

4.1.4.1 About Users

Users are access control card holders. The system allows you to set up new users and provide their details, including their name, user group, validity periods, PIN numbers (if applicable) and card details.

Different data can be recorded for permanent and temporary users of the system.

See Also

Users Screen (see page 72)

User Details Screen (see page 75)

About User Groups (see page 84)

About Reports (see page 113)

4.1.4.2 Users Screen

The *Users* screen is accessed through the **Manage - Users** menu item in PLUS Manage.

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *Users* screen. (see page 73)
- The columns on the *Users* screen search results area. (see page 74)

The following options are also available on this screen:

- To print the user list, click **Print** (Print) to open the *Print* dialog for your computer, from which you can select your preferred printer.
- To export the user list, click **Export** (Export), and in the dialog that appears specify the required file name and location, then click **Save**. The file may be opened later in a text editor, or a spreadsheet software such as Microsoft Excel.
- To add a new user (see page 11), click **Add User** (Add User).
- To add a visitor (a user that is flagged as a visitor and may require fewer or different details), click **Add Visitor** (Add Visitor).

Note: You can select the box(es) for one or more users in the search results area, then click **Delete User**, **Enable**, **Disable**, **Set Validity** or **Print Cards** at the bottom of the screen to quickly perform any of these operations on the selected user(s). In the case of **Set Validity**, you are prompted to specify the required start/end date/times for the validity period. In the case of **Print Cards**, you are prompted to specify card properties before printing.

Search Fields

Field Name	Description
Search	Enter all or part of the registered name for the user whose record you want to view and click the **Search** icon ( ). A list of matching records is displayed in the *Search Results* area. **Example:** Searching for "Ann" might show results for "**Ann**-Marie Boyle", "Jo**anne** Murphy", and "Joseph H**ann**".
Advanced. Click **Advanced** to see the following additional search fields. You can use one or more fields to specify your search criteria.	
User Number	Enter the user's number. The system will return an exact match if found.
First Name	Enter all or part of the user's first name.
Last Name	Enter all or part of the user's last name.
Group	Select the group to which the user is assigned.
Card number	Enter the user's card number. The system will return an exact match if found.
State	Select the user's state: *Enabled*, *Disabled* or *All* (either).
Selectable field	At the final search field, select one additional user field to search on, and enter matching text.

Results

The following table describes each of the columns on the *Users* screen search results area.

Column Name	Description
No.	The unique number that identifies this user on the system. (Sortable.)
Name	The user's name. Click to view full details for this user on the *User Details* screen (see page 75). (Sortable.)
Enabled	A green check-mark is displayed for accounts that are enabled. If an account is enabled, the user's card/PIN is operative, though usage may be restricted by a validity period, if set. If an account is disabled, the user's card/PIN will not work. An account must be both enabled *and* valid for the user's card/PIN to work.
Valid	A green check-mark is displayed for accounts that are valid. A user's account is valid if either the current date and time fall within the set validity period, or if no validity period was set for the user. An account must be both enabled and valid for the user's card/PIN to work.
Group	The group this user is a member of. Click to view full details for this group on the *User Group Details* screen (see page 86). (Sortable.)
Card number	The user's card number (if applicable).

Column Name	Description
Last column	The default value displayed in the last column is determined by the *Optional Column* setting on the *Settings - General* tab (see page 129), but you can change which user field value is shown using the *Advanced* search settings.

4.1.4.3 User Details Screen

The following table describes the data that appears on the left of the *User Details* screen in PLUS Manage.

Field Name	Description
Photo	If a photo of the user has been added to the system, it appears here. Click **Upload Photo** to add a photo of the user to the system.
User Name	The user's name. The user's name is made up of the specified *First Name* and *Last Name*, and is displayed in logged event lists and queries. Although the combined name may be up to 65 characters in length, only the first 16 characters will be visible locally on the door controller LCD. If the combined name exceeds this length, the first name is automatically abbreviated when downloaded.
User Group	The group this user is a member of.
Status	Whether this user is *Enabled* or *Disabled* on the system.

Field Name	Description
Configuration Tabs A set of tabs on the right of the screen allow you to configure different settings for each user. For more information on these tabs, click the links below. • General Tab. For more information, see User Details - General Tab (see page 76). • Details tab. For more information, see User Details - Details Tab (see page 78). • Options tab. For more information, see User Details - Options Tab (see page 79). • Recent Events tab. For more information, see User Details - Recent Events Tab (see page 81). • View Doors tab. For more information, see User Details - View Doors Tab (see page 81).	

4.1.4.4 *User Details - General Tab*

The following table describes the data that appears on the *User Details - General* tab.

Field Name	Description
User Number	The user's unique identifying number on the system. A default unique value is assigned when a new record is created. If you want to edit this value, it must be changed before the user record is saved for the first time.

Field Name	Description
First Name	The user's first name. This is a mandatory field.
Last Name	The user's surname.
User Group	The group to which the user is assigned. This is a mandatory field. Click the blue group's name to see more information on the group. The user group determines the access rights for the user. Each group contains a combination of timezone and door group pairs, which determine the doors the user is allowed through and at what times. For more information, see About User Groups (see page 84).
Enabled	If this check box is selected, the user is enabled on the system; if not, they are disabled.
Cards and PIN	
Cards assigned to the user are listed here. Click the card icon on the right of the field to set up a new card for this user. For more information, see Card Add Screen (see page 82).	
PIN	**Note:** PINs are only applicable for sites where PINs are used. The user's current PIN is not displayed for security reasons. You can reset a user's PIN here. To delete a PIN, click the **X** at the right of the record. In this case, the

Field Name	Description
	default PIN for the user group this user is assigned to becomes their new PIN. To reset a PIN, either enter a PIN in this field, or click **Random** to generate a random PIN. Take note of the new PIN to give to the user. The PIN is only displayed until you click **Save**, then it is hidden. For more information on PINs, see About PINs (see page 67).
Validity Period	
From	The date from which the user is allowed access. Access is denied to the user before this date. Access will be granted to the user after midnight on the Valid From date. If the box is unchecked then access will be allowed up to the Valid To date. If you do not specify a validity period, the user is always valid.
To	The last day that access will be allowed to the user. After this date, access will be denied. If the box is unchecked, then access will be allowed indefinitely from the Valid From date. If you do not specify a validity period, the user is always valid.

4.1.4.5 User Details - Details Tab

10 fields appear on this screen - their names are configurable on a per-system level on the Settings - User Fields Tab (see page 131) in PLUS Manage. Enter information appropriate for the configured field names.

Click the down arrow to the right of a field to see existing field values for all other users. You can select an existing value from this drop-down list, or enter type in a new one.

4.1.4.6 *User Details - Options Tab*

The following table describes the data that appears on the *User Details - Options* tab.

To enable any of these options for the current user, select the check box for that option. To disable an option, de-select the check box. Settings made here override settings inherited from the user's assigned User Group.

Field Name	Description
Toggle Relay	This option causes the relay to toggle whenever the user is granted access. If the door was in its normal state, it is unlocked, and the green reader LED will flash. The door relay is held open so users have free access. If the door was already unlocked, then it is returned to normal operation. This option may be assigned to individual users or to groups.
Extended Relay	This option causes the door relay to remain active for an extended period of time when access is granted. For more information, see Door Details - Timers Tab (see page 151).
Activate OP2	This option causes the local OP2 output to be fired for a predetermined period of time whenever the user is granted access. This option may be assigned to individual users or to groups.
Activate OP3	This option causes the local OP3 output to be fired for a predetermined period of time whenever the user is granted access. This option may be assigned to individual users or to groups.
Arm/Disarm	Feature disabled.

Field Name	Description
Monitor User	Users with this option may be located quickly in the User Tracking Screen (see page 120).
Verify Visually	A user with this option will have their photograph pop-up on the screen when they access one of the doors.
Visitor Card	Users with this option are considered as visitors in the system.

4.1.4.7 User Details - Recent Events Tab

This tab displays a list of recent events for the user.

Field Name	Description
Time	The time of the event.
Event	The event.
Location	The location (door or barrier) of the event.
Details	Details of the event.

4.1.4.8 User Details - View Doors Tab

This tab shows a list of door/time zone combinations valid for this user.

A user can only access a door during the period specified by the associated time zone.

4.1.4.9 *Upload Photo Screen*

The following table describes the data that appears on the *Upload Photo* screen in PLUS Manage.

Field Name	Description
Source Type	Select whether the photo will come from: • *File* (click **Open** to open a dialog where you can browse for and select the image file to use) • *Video* (select the *Video Source* from the drop-down provided, then click **Capture** to take a picture) • *Twain* (click **Acquire** to scan the image).
Source	Shows the full original image opened/captured/acquired. You can click and drag to select a cropped area of the image to use as the final user photo.
Preview	Shows the final user photo. This is either the full or cropped image from the *Source* area. Click **Apply** to save.

4.1.4.10 *Card Add Screen*

When adding a card for a user (see User Details - General Tab (see page 76)), this screen allows you to specify a source from which to read the number of a presented card. Select the source type, then the specific source and click **Capture** to read the card number. Click **Save** to return to the *User Details - General* tab with the card number now populated.

4.1.4.11 Copy User Screen

The following table describes the data that appears on the *Copy Users* screen.

Field Name	Description
Copy To	Specify the start and end range of users you want to copy selected details to. If the users already exist, their current details will be overwritten. If they do not already exist, users with the copied details will be created. You should verify whether or not user IDs in the specified range are already in use before you copy user details.
Items to copy	Select the check box for each property from the selected user you wish to copy to the specified existing/new users.
Enable new users	Select this check box to enable any new users created by the operation.
Visitor cards	Select this check box to assign visitor cards for any new users created by the operation.

Click **Apply** to copy details to new/existing users.

4.1.5 User Groups

4.1.5.1 About User Groups

User groups are used to define common settings and access rights for a set of users.

When you create a user profile, you select one user group to which the user belongs (see User Details - General Tab (see page 76)), and their access rights are those assigned to that group. If the group's rights change, then so do those of all members of the group.

See Also

User Groups Screen (see page 85)

User Group Details Screen (see page 86)

About Users (see page 72)

Users Screen (see page 72)

User Details Screen (see page 75)

4.1.5.2 User Groups Screen

The following table describes the search field and results columns on the *User Groups* screen.

Note: All User Groups are displayed on this screen at the same time, with no pagination.

Field Name	Description
Search	Enter all or part of the name of the group you want to view and click the **Search** icon ( ). A list of matching records is displayed in the *Search Results* area. Example, searching for "Team" might show results for "**Team** A", "Security **Team**", and "S**team** Cleaner Operators".
No	The unique number that identifies this group on the system. (Sortable.)
Name	The group's name. Click to view full details for this user on the *Group Details* screen (see page 86). (Sortable.)
Enabled	A green check-mark is displayed for groups that are enabled. (Sortable.)
Number of Users	The number of users in the group. Click to see a list of users in this group on the Users Screen (see page 72). (Sortable.)
Access Rights	The first door group/time zone combination assigned to this group. Up to 8 combinations may be assigned per group. To view all access rights assigned, view the User Group Details - Access Rights Tab (see page 89). (Sortable.)

Click **Add User Group** at the top of this page to open a blank User Group Details screen (see page 86) from which you can add a new user group.

Select the check box for one or more user groups in the list area and click **Delete User Group** at the bottom of the screen to delete the selected user group(s).

4.1.5.3 Group Details Screen

The Group Details screen has a number of tabs showing different settings for the selected group. For more information on these tabs, click the links below.

- General tab. For more information, see User Group Details - General Tab (see page 87).
- Access Rights tab. For more information, see User Group Details - Access Rights Tab (see page 89).
- Options tab. For more information, see User Group Details - Options Tab (see page 89).
- Anti-passback tab. For more information, see User Group Details - Anti-passback Tab (see page 91).
- Area Limits tab. For more information, see User Group Details - Area Limits Tab (see page 91).

Click **Add User Group** at the bottom of this page to open a blank *User Group Details* screen from which you can add a new user group.

4.1.5.4 User Group Details - General Tab

The following table describes the data that appears on the *User Group Details - General* tab.

Field Name	Description
User Group Number	The user group's unique identifying number on the system. This is a unique number between 1 and 250. A default unique value is assigned when a new record is created. If you want to edit this value, it must be changed before the user group record is saved for the first time.
User Group Name	The user group's name. This is a mandatory field. The name may be up to 32 characters in length.
Elevator Group	This feature is disabled.

Field Name	Description
PIN	The PIN code for users in this group if they have not been assigned an individual user PIN. PINs must be unique for user groups. For more information on PINs, see About PINs (see page 67). **Note:** PINs only need to be assigned for systems requiring Card & PIN usage. The user group's current PIN is not displayed for security reasons. You can delete or reset a user group's PIN here. To delete a PIN, click the **X** at the right of the record. To reset a PIN, either enter a PIN in this field, or click **Random** to generate a random and unique PIN. Take note of the new PIN. The PIN is only displayed until you click **Save**, then it is hidden.
Enabled	If this check box is selected, the user group is enabled on the system; if not, it is disabled.

4.1.5.5 User Group Details - Access Rights Tab

This tab shows the access rights for users in this User Group. Up to 8 combinations of Door Group and Time Zone can be assigned for each User Group.

Users can only access each specified door group when the corresponding time zone is active.

See Also

About Door Groups (see page 92)

About Time Zones (see page 102)

4.1.5.6 User Group Details - Options Tab

The following table describes the data that appears on the *User Group Details - Options* tab.

To enable any of these options for the current user group, select the check box for that option. To disable an option, de-select the check box.

Field Name	Description
Toggle Relay	This option causes the relay to toggle whenever a user in this group is granted access. If the door was in its normal state, it is unlocked, and the green reader LED will flash. The door relay is held open so users have free access. If the door was already unlocked, then it is returned to normal operation. **Note:** A different setting on the User Details - Options Tab (see page 79) overrides the setting at group level.
Activate OP2	This option causes the local OP2 output to be fired for a predetermined period of time whenever a user in this group is granted access. **Note:** A different setting on the User Details - Options Tab (see page 79) overrides the setting at group level.

Field Name	Description
Activate OP3	This option causes the local OP3 output to be fired for a predetermined period of time whenever a user in this group is granted access. **Note:** A different setting on the User Details - Options Tab (see page 79) overrides the setting at group level.
Tracking Bypass	This option allows tracking functions to be bypassed for users in this group. This means that anti-passback & user-limiting functions do not apply to users in this group.

4.1.5.7 Group Details - Anti-passback Tab

The anti-passback feature is designed to stop users giving their cards to other users seeking to gain access to an area. It does this by requiring users to exit an area before re-entry is granted.

When a user is granted access through a timed anti-passback door, then the user will not be granted access again, until either:

- the anti-passback time period expires

  or

- the user exits.

The anti-passback period can be set from 0 days, 0 hours and 0 minutes, up to 7 days, 23 hours and 59 minutes. The anti-passback period has resolution of one minute.

To disable anti-passback, set the time to 0 days, 0 hours 0 minutes.

To enable anti-passback, set the time to any other value in the allowed range.

Timed anti-passback only functions on doors which are configured as timed anti-passback doors.

4.1.5.8 User Group Details - Area Limits Tab

User Group Area Limits allow you to restrict how many users from a user group can access a defined area at one time. This may be useful, for example, to restrict access to a car park according to the number of available parking spaces.

The User Group limit should be lower than the overall area limit. Once the group limit is reached, no more users from that group can enter the area until a member of the group leaves. Users from other groups may still enter the area until the overall area limit is reached.

Areas are defined by assigning a door group under Settings - Area Limits Tab (see page 132). When a valid user enters one of the doors in the door group, the count increments. The count is decremented when a card holder leaves through one of the doors in the door group. When a limit is reached, access is denied to the next user who tries to access the area.

Notes:

- Entry and Exit readers are required on the doors for this feature to work.
- Only users explicitly entering and exiting with their cards can be counted.

4.1.6 Door Groups

4.1.6.1 About Door Groups

Door groups are a convenient way of grouping a number of doors to simplify granting/denying access to that group of doors.

See Also

Door Groups Screen (see page 93)

Door Group Details Screen (see page 93)

Add Door Group Screen (see page 95)

4.1.6.2 Door Groups Screen

The **Manage - Door Groups** screen shows a list of all the door groups configured on the system. “All Doors” is the default Door Group.

Field Name	Description
No	The unique number that identifies this door group on the system. (Sortable.)
Name	The door group's name. Click to view full details for this user on the Door Group Details Screen (see page 93). (Sortable.)
Number of Doors	The number of doors in the group. (Sortable.)

Click **Add Door Group** at the top of this page to open a blank Door Group Details screen (see page 93) from which you can add a new door group.

Select the check box for one or more door groups in the list area and click **Delete Door Group** at the bottom of the screen to delete the selected door group(s).

4.1.6.3 Door Group Details Screen

The *Door Group Details* screen has two tabs showing different settings for the selected door group. For more information on these tabs, click the links below.

- General tab. For more information, see Door Group Details - General Tab (see page 94).

Click **Add Door Group** at the bottom of this page to open a blank *Door Group Details* screen from which you can add a new user group.

4.1.6.4 Door Group Details - General Tab

The following table describes the data that appears on the *Door Group Details - General* tab.

Field Name	Description
Door Group Number	The door group's unique identifying number on the system. A default unique value is assigned when a new record is created. If you want to edit this value, it must be changed before the door group record is saved for the first time.
Door Group Name	The door group's name.
Available Doors	This list shows all doors available to be added to this door group. Click a door name to view details of that door on the Door Details screen (see page 97). To add a door to the *Doors in Group* list, select the door in this list, then click the right-arrow ( ). To add all doors, click the double-right-arrow ( ). **Note:** The right-arrow is disabled ( ) until you have selected a door.
Doors in Group	This list shows the doors in this door group. Click a door name to view details of that door on the Door Details screen (see page 97). To remove a door, select it in the *Doors in Group* list and click the left-arrow ( ). To remove all doors, click the double-left-arrow ( ).

4.1.6.5 Add Door Group Screen

This wizard allows you to add a door group to the system by following these steps:

- **Step 1: Door Group Details.** Enter a *Door Group Name* and click **Next**.
- **Step 2: Assign Doors.** Select the doors you want to add to the group from the *Available Doors* list and click the right-arrow ( ) to add them to the *Doors in Group* list. You can use the *Search* field at the top of the list to locate a particular door if you know its name. When you have added all required doors, click **Next**.
- **Step 3: Results.** A summary of the door group you created is shown. Click **Finish**.

4.1.7 Doors

4.1.7.1 About Doors

Doors are physical gateways linked to controllers, such as doors, gates, or turnstiles.

PLUS Manage allows you to view a list of all doors configured on the PLUS Grid system and to configure certain, limited properties for those doors. Adding and managing doors is mainly done through PLUS Hardware. For more information, see About PLUS Hardware (see page 133).

See Also

Doors Screen (see page 134)

Door Details Screen (see page 135)

4.1.7.2 Doors Screen

The *Doors* screen shows a list of doors configured on the system.

Field Name	Description
No	The unique number that identifies this door on the system. (Sortable.)
Name	The door's name. Click to view full details for this user on the Door Details Screen (see page 97). (Sortable.)
Enabled	A green check-mark is displayed for doors that are enabled. . (Sortable.)

4.1.7.3 Door Details Screen

The *Door Details* screen has a number of tabs showing different settings for the selected door. For more information on these tabs, click the links below.

- General tab. For more information, see Door Details - General Tab (see page 97).
- Door Groups tab. For more information, see Door Details - Door Groups Tab (see page 98).
- Actions tab. For more information, see Door Details - Actions Tab (see page 98).
- Reporting tab. For more information, see Door Details - Reporting Tab (see page 100).

4.1.7.4 Door Details - General Tab

The following table describes the data that appears on the *Door Details - General* tab.

Field Name	Description
Door Number	The door's unique identifying number on the system.
Door Name	The door's name.
Relay Timer	How long in seconds the door relay is activated in response to a valid card or to operation of the request-to-exit (egress) switch.
Door Ajar Timer	How long in seconds the door may remain open before a door ajar condition occurs.

4.1.7.5 Door Details - Door Groups Tab

The *Door Details - Door Groups* tab shows which door groups the current door belongs to.

The *Available Door Groups* list shows a list of door groups to which the current door does not belong, and the *Door member of* list shows the door groups to which they do belong. Click a door group name to view details of that door group on the Door Group Details screen (see page 93).

To add the door to a door group, select the required group in the *Available Door Groups* list, then click the right-arrow ().

To remove the door from a door group, select the required group in the Door member of list, then click the left-arrow ().

4.1.7.6 Door Details - Actions Tab

Actions are settings automatically applied by a door controller at specified times without the need for user intervention. They may be used to control external devices via the controller outputs, or to alter the security level of a door at certain times. Each action may be inactive (default) or have any defined time zone assigned.

The following table describes the data that appears on the *Door Details - Actions* tab.

For each available action, select a time zone from the corresponding drop-down list to determine when the action applies for this door.

Field Name	Description
Unlock Door	The time zone assigned to this action determines when the door is automatically unlocked. When a door is unlocked, users have free access without needing to swipe a card. The door relay is held open for this time, and the green reader LED will flash.
Lock Door	The time zone assigned to this action determines when the door is automatically locked. When a door is locked, all users will be denied access irrespective of their programmed access rights. The door relay is held closed for this time, and the red reader LED will flash.

Field Name	Description
PIN Required	The time zone assigned to this action determines when Card and PIN operation is in force on the door. When a card is presented during this time, a valid user or group PIN must be entered to gain access.
Any Card	The time zone assigned to this action determines when *any* proximity/magnetic stripe card will be allowed access. The only check performed is that a card is presented: the format is irrelevant. Example: This could be used to allow access to a bank ATM lobby to anybody with a magnetic stripe card.
OP2 Active	The time zone assigned to this action determines when the OP2 output is active. This could be used to control an externally connected device.
OP3 Active	The time zone assigned to this action determines when the OP3 output is active. This could be used to control an externally connected device.
AUX Active	The time zone assigned to this action determines when the AUX output is active. This could be used to control an externally connected device.
PIN Only	The time zone assigned to this action determines when PIN Only operation is in force for the door. During this time, all card swipes will be ignored, and a valid user PIN must be entered to gain access.
PIN or Card	The time zone assigned to this action determines when either a valid PIN or Card operation is required to gain entry. During this time, any valid card or PIN must be entered to gain access.

Field Name	Description
Twin Users	The time zone assigned to this action determines when two valid cards must be presented to gain access. This is typically used in high security applications where two people must be in the room at the same time.
Normalize Doors	The time zone assigned to this action determines when the door is normalized. That is, the door returns to its default state.

See Also

About Timezones (see page 102)

4.1.7.7 Door Details - Reporting Tab

Selections on this tab determine which additional events are logged to the door controller's system event log.

The following table describes the data that appears on the *Door Details - Reporting* tab.

Field Name	Description
Alarms	
Door Ajar	A door ajar event is logged if the door has been open for longer than a predetermined period of time.
Door Forced	A door forced event is logged if the door is opened without being explicitly commanded to open by the controller. This would typically occur if the locking mechanism is bypassed or if the door is physically forced open.
Door Tamper	A door tamper event is logged if the door is tampered with, that is, if the door station or controller is opened.

Field Name	Description
Mains Fault	A mains fault event is logged if the mains supply fails. This should be ticked for any doors with a monitored power supply.
Read Error	A read error event is logged when an incorrect read occurs on an entry or exit reader. An additional error number may be displayed giving further details on the error.
Door Status	
Exit Button Used	An exit granted (push button) event is logged when a user presses the request-to-exit (egress) switch.
Door Opened	A door opened event is logged when the door is physically opened.
Door Closed	A door closed event is logged when the door is physically closed.
Door Contact	A door opened/closed event is logged when the door contact changes.

4.1.8 Time zones

4.1.8.1 About Time zones

A time zone consists of up to 8 time periods. Each period specifies a time range and the days and holidays for which the period is valid. The time zone is valid when any of its periods are valid.

Time zones are used to specify when a user/group's access rights are valid.

See Also

Time Zones Screen (see page 102)

Time Zone Details Screen (see page 103)

About Holidays (see page 104)

User Group Details - Access Rights Tab (see page 89)

4.1.8.2 Time Zones Screen

The *Time Zones* screen shows a list of time zones configured on the system.

Field Name	Description
No	The unique number that identifies this time zone on the system. (Sortable.)
Name	The time zone's name. Click to view full details for this time zone on the Time Zone Details Screen (see page 103). (Sortable.)

Field Name	Description
Active	A green clock icon indicates that the time zone is currently active. (Sortable.)
Times and Days	A summary of the times and days for which this time zone applies.

4.1.8.3 Time Zone Details Screen

The *Time Zone Details* screen has two tabs showing different settings for the selected time zone. For more information on these tabs, click the links below.

- General tab. For more information, see Time Zone Details - General Tab (see page 103).

4.1.8.4 Time Zone Details - General Tab

The following table describes the data that appears on the *Time Zone Details - General* tab.

Field Name	Description
Time zone Number	The time zone's unique identifying number on the system. This is a unique number between 1 and 255 (Timezone 255 is reserved for 24 Hours access for all days). A default unique value is assigned when a new record is created. If you want to edit this value, it must be changed before the time zone record is saved for the first time.
Time zone Name	The time zone's name.
Times	The lower part of this tab shows a list of the Times/Days combinations when this time zone is active.

Field Name	Description
Days	To specify a Times/Days combination, select a row, and in the fields below specify the corresponding Period (From and To times), and select the Days and Holidays. The time zone is valid during any of the specified Times/Days combinations.

See Also

Settings - Holiday Names Tab (see page 132)

4.1.9 Holidays

4.1.9.1 About Holidays

Holidays are special days during the year that can change how timezones operate.

PLUS Manage allows you to specify 9 holiday types. Time zones, used when specifying valid times for access rights and door actions, can be configured to include days of a particular holiday type.

For user access to be allowed on holiday days, the holiday type must be included in the time zones used when defining a user or group's access rights.

For a door action to occur on a holiday, the holiday type must be included in the time zone used when specifying the door action.

Example: A *Lock Door* action may be set up to occur on a particular holiday date. To configure this:

1. Assign the date to a holiday type. (See Holidays Screen (see page 105).)
2. Assign the holiday type to a timezone. (See Time Zone Details - General Tab (see page 103).)

3. Assign the timezone to the Lock Door action for the relevant door. (See Door Details - Actions Tab (see page 98).)

   The door will now lock on this particular date.

Note: Each day can only have one assigned holiday type in PLUS Grid.

See Also

About Timezones (see page 102)

User Group Details - Access Rights Tab (see page 89)

Door Details - Actions Tab (see page 98)

4.1.9.2 Holidays Screen

This screen shows a 12 month calendar starting at the current month, and a list of color-coded holiday types.

The current date is selected by default.

Dates flagged as holidays are highlighted in the corresponding holiday type color.

To assign or change the holiday type for any date, select that date and click the *None* radio button to remove an assigned holiday type, or click the radio button for a holiday type to assign that type. Only one holiday type may be assigned to each date.

Note: Adding a holiday for a specific day/month combination leaves that holiday for that date in the system for each subsequent year. You should periodically review your holidays, for instance moving bank holidays.

See Also

Settings - Holiday Names Tab (see page 132)

4.1.10 DB Users

4.1.10.1 About DB Users

DB Users allow you to configure operators of PLUS Grid software, and assign them access to particular data and functions when using the software.
Only Administrators can view or change DB Users.

See Also

DB Users Screen (see page 106)

DB User Details Screen (see page 107)

4.1.10.2 DB Users Screen

The *DB Users* screen shows a list of operators configured on the system.

Field Name	Description
No	The unique number that identifies this operator on the system. (Sortable.)
Name	The operator's name. Click to view full details for this operator on the DB User Details Screen (see page 107). (Sortable.)
Role	The operator's role. This determines which functions they can use and what data they can see. (Sortable.)

Click **Add DB User** at the top of this page to open a blank DB User Details screen (see page 107) from which you can add a new operator.

Select the check box for one or more operators in the list area and click **Delete DB User** at the bottom of the screen to delete the selected operator(s).

4.1.10.3 DB User Details Screen

The *DB User Details* screen has two tabs showing different settings for the selected operator. For more information on these tabs, click the links below.

- General tab. For more information, see DB User Details - General Tab (see page 107).

Click **Add DB User** at the bottom of this page to open a blank DB User Details screen from which you can add a new operator.

4.1.10.4 DB User Details - General Tab

The following table describes the data that appears on the *DB User Details - General* tab.

Field Name	Description
Number	The operator's unique identifying number on the system. A default unique value is assigned when a new record is created. If you want to edit this value, it must be changed before the operator record is saved for the first time.
Name	The operator's name.
Role	The role assigned to the operator. Roles are pre-defined combinations of rights to access functions and data. The *Allow* and *Database access* areas on this screen reflect the rights for the selected role. Custom indicates a combination of rights that was customized for the operator.
Application	When you select the *Custom* role only, these selections become available. These are a convenient shortcut to allow you to assign the rights necessary for an operator to use the corresponding client. Selecting a client will over-write existing rights for the user.

Field Name	Description
Allow	Which PLUS Grid functions the operator should have access to.
Database Access	The type of access the operator has to each data type in the PLUS Grid database. *Full* means Read and Write access; *RO* means Read Only access; *None* means no access.

4.1.10.5 Change Password Screen

To change an operator/DB user's password, click **Change Password** on the DB User Details - General Tab (see page 107), and on the *Change Password* screen enter and confirm the new password then click **Save**.

4.1.11 Cards

4.1.11.1 About Cards

Cards are physical items presented to door readers by users in order to authenticate themselves and gain access according to their access rights.

Note: The **Card Editor** option on this menu launches the Card Editor which allows you to design the appearance of cards.

See Also

Extra Cards Screen (see page 109)

Report Lost Screen (see page 110)

4.1.11.2 Extra Cards Screen

The following table describes the fields that appear on the *Extra Cards* screen.

Field Name	Description
Card Type	Select the type of card you want to add.
First Card	To create a range of extra cards, enter the number of the first card here.
Last Card	To create a range of extra cards, enter the number of the last card here.
First User	Click **Find User** to find the first available user number from which a sufficiently long sequence of free user numbers exists to assign the extra cards sequentially.
Default User Group	To set the default user group of users created during this operation, select the user group here.

Click **Add Cards** to create a list of users and assigned cards according to your settings.

A summary screen shows a list of users to be created based on your settings. You can modify the first name, last name, group and enabled status for each user here before clicking **Save** to create them on the system.

Note: The users are *not* created on the system *until* you click **Save** on the results screen.

4.1.11.3 Report Lost Screen

This screen allows you to disable, or reset the validity for, a user's cards if they report them as lost/stolen.

The following table describes the search fields available on the *Report Lost* screen.

See below for information on the data in each of the columns on the *Report Lost* screen search results area (see page 175).

Field Name	Description
Search	Enter all or part of the registered name for the user whose cards you want to view and click the **Search** icon ( ). A list of matching records is displayed in the *Search Results* area. **Example:** Searching for "Ann" might show results for "**Ann**-Marie Boyle", "Jo**ann**e Murphy", and "Joseph H**ann**".

Field Name	Description
Advanced. Click **Advanced** to see the following additional search fields.	
By Card Number	Select this option to search for a record using the number of the user's card. Enter the card number in the corresponding field and press **Return**. Only cards that match the number exactly are returned in the search results.
By User	Select this option to search for a record using details of the user who owns the card. Enter all or part of the user's *First Name*, *Last Name*, or *User Number*, then press **Return**. Partial matches are returned for first name and last name, as with the default *Search* field. If you specify a user number, only the user that matches the number exactly is returned in the search results.

The following table describes each of the columns on the *Report Lost* screen search results area.

Column Name	Description
No	The unique number that identifies this user on the system. (Sortable.)
User	The user's name. Click to view full details for this user on the *User Details* screen (see page 75). (Sortable.)
Enabled	A green check-mark is displayed for accounts that are enabled. If an account is enabled, the user's card/PIN is operative, though usage may be restricted by a validity period, if set. If an account is disabled, the user's card/PIN will not work. An account must be both enabled *and* valid for the user's card/PIN to work.
Expiration	When the user's account is set to expire.
OneToOne	The number of the user's One-To-One card, if they have one.
Card 3	The number of the user's third card, if they have one.

4.1.12 Tools

4.1.12.1 System Synchronize Screen

The System Synchronize Wizard allows you to download the entire database to one or more controllers. Synchronizing controllers means that all data entered on the controller directly via the web server will be lost. Controllers remain offline during downloads, meaning that they cannot be commanded during this time, nor will they report events. Remote Door stations will have limited functionality during the download. You should only do a download if you are entirely sure it is required.

Follow the on-screen instructions, clicking **Next** between steps and **Finish** at the end.

- **Step 1: Controllers.** This screen indicates whether each controller is up to date or not. Select which controllers you want to download to.
- **Step 2: Downloading.** The progress bar shows the overall progress of the system synchronization. The message area shows information for each controller.
- **Step 3: Results.** The results of the synchronization operation are shown: the number of controllers updated and their current statuses.

4.1.13 Reports

4.1.13.1 About Reports

PLUS Manage allows you to generate a number of reports on PLUS Grid data according to specific criteria. This section describes the report types available.

See Also

User List Screen (see page 114)

Card Expiry Screen (see page 117)

User Tracking Screen (see page 120)

Audit Trail Screen (see page 122)

Event Analysis Screen (see page 124)

4.1.13.2 User List Screen

The *User List* report is accessed through the **Reports - User List** menu item in PLUS Manage.

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *User List* screen. (see page 114)
- The columns on the *User List* screen search results area. (see page 116)

Search Fields

Field Name	Description
Simple Tab Filter	
Users	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *All* - all users. • *With Access to Door* - select a particular door. • *Belonging to User Group* - select a particular user group.
Advanced Tab Filter	
Only Enabled Users	Select to report on enabled users only.

Field Name	Description
Users	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *All* - all users. • *With Access to Door* - select a particular door. • *Belonging to User Group* - select a particular user group. • *Range* - specify a range of user numbers to report on. • *User Details* - select any user details field type to search on and specify all or part of the required value for that field.
Show	Select whether to show the user's photo in the first column of the search results, and what information to show in the last two columns of the search results.

Click **Generate** to generate a report according to your search criteria.

Results

The following table describes each of the columns on the *User List* screen search results area.

Column Name	Description
Photo	This column only appears if *Show photo* is selected in the *Advanced* search criteria. It shows a small version of the user's photo.
No.	The unique number that identifies this user on the system. (Sortable.)
User	The user's name. (Sortable.) Click a user's name to view the user's profile on the *User Details* screen (see page 75). Click the **Back** icon ( ) at the top of the *User Details* screen to return to the *Users* screen.
Enabled	A green check-mark is displayed for accounts that are enabled.
Group	The group this user is a member of. Click to view full details for this group on the User Group Details Screen (see page 86). (Sortable.)
Card number	The user's One-to-One card number. You can change which card number is shown using the *Advanced* search settings.
Last column	The default value displayed in the last column is determined by the Optional Column setting on the Settings - General Tab (see page 129), but you can change which user field value is shown using the *Advanced* search settings.

4.1.13.3 Card Expiry Screen

The *Card Expiry* report is accessed through the **Reports - Card Expiry** menu item in PLUS Manage.

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *Card Expiry* screen. (see page 117)
- The columns on the *Card Expiry* screen search results area. (see page 119)

Search Fields

Field Name	Description
Simple Tab Filter	
Users	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *All* - all users. • *With Access to Door* - select a particular door. • *Belonging to User Group* - select a particular user group.
Expiry In	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *1 Week* - select to view accounts expiring in the next week. • *Number of Days* - specify a number of days. • *On Date* - specify a particular date.

Field Name	Description
Advanced Tab Filter	
Users	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *All* - all users. • *Users With Access to Door* - select a particular door. • *Belonging to Group* - select a particular user group. • *Range* - specify a range of user numbers to report on.
Expiry In	Select criteria for users to report on by choosing from one of the following options and entering additional information in any fields that appear: • *1 Week* - select to view accounts expiring in the next week. • *2 Weeks* - select to view accounts expiring in the next 2 week. • *3 Weeks* - select to view accounts expiring in the next 3 week. • *4 Weeks* - select to view accounts expiring in the next 4 week. • *Number of Days* - specify a number of days. • *On Date* - specify a particular date.

Click **Generate** to generate a report according to your search criteria.

Results

The following table describes each of the columns on the *Card Expiry* screen search results area.

Column Name	Description
No.	The unique number that identifies this user on the system. (Sortable.)
User	The user's name. Click to view full details for this user on the *User Details* screen (see page 75). (Sortable.)
Enabled	A green check-mark is displayed for accounts that are enabled. (Sortable.)
Group	The group this user is a member of. Click to view full details for this group on the User Group Details Screen (see page 86). (Sortable.)
Valid From	The date the user's account is valid from. (Sortable.)
Expiry Date	The date the user's account expires. (Sortable.)
Expired	Whether the user's account is expired. (Sortable.)

4.1.13.4 User Tracking

The *User Tracking* report is accessed through the **Reports - User Tracking** menu item in PLUS Manage.

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *User Tracking* screen. (see page 120)
- The columns on the *User Tracking* screen search results area. (see page 121)

Search Fields

Field Name	Description
Simple Tab Filter	
Report	Select whether to generate a *Muster* report (all users currently on site), or an *Absentee List* report (users not on site).
Time	Select whether to generate the report for *Today* or a *Custom* time period.
Advanced Tab Filter	
Report	Select the report type to generate.
Doors	Select a door type or group to report on.
Users	Select whether to report on all users, users in a particular group, or users with Monitor User set on the User Details - Options Tab (see page 79).
Options	Select whether to show the user's photo in the first column of the search results, whether to report on enabled users only, and what information to show in the last column of the search results for all reports except the Absentee List.

Field Name	Description
Time	Specify the time period to report for.

Click **Generate** to generate a report according to your search criteria.

Results

The following table describes each of the columns on the *User Tracking* screen search results area.

Note: Results on the current results page only may be sorted.

Column Name	Description
Photo	This column only appears if *Show photo* is selected in the *Advanced* search criteria. It shows a small version of the user's photo.
Time	The event time.
Event	The event type.
Location	The event location.
User Name	The user's name. Click to view full details for this user on the *User Details screen* (see page 75).
Last Column	This column appears for all reports except for *Absentee List*. The default value displayed in the last column is determined by the *Optional Column* setting on the Settings - General Tab (see page 129), but you can change which user field value is shown using the *Advanced* search settings.

4.1.13.5 Audit Trail

The *Audit Trail* report is accessed through the **Reports - Audit Trail** menu item in PLUS Manage.

See below for descriptions of:

- The search fields available on the *Audit Trail* screen. (see page 122)
- The columns on the *Audit Trail* screen search results area. (see page 123)

Search Fields

Field Name	Description
Time	Select whether to generate the report for *Today, This Week, This Month* or a *Custom* time period.
Select database user	Select the database user (Operator) to report on.
Show audit trail events	Select which events to include in the report.

Click **Generate** to generate a report according to your search criteria.

Results

The following table describes each of the columns on the *Audit Trail* screen search results area.

Note: Results on the current results page only may be sorted.

Column Name	Description
Time	The event time.
User	The Operator name. Click to view full details for this operator on the DB User Details Screen (see page 107).
Event	The event type.
Details	Details related to the event, for example the particular record edited if the event was *Record modified*.
User or record name	The name of the record modified.

4.1.13.6 Event Analysis

The *Event Analysis* report is accessed through the **Reports - Event Analysis** menu item in PLUS Manage.

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *Event Analysis* screen. (see page 124)
- The columns on the *Event Analysis* screen search results area. (see page 125)

Search Fields

Field Name	Description
Simple Tab Filter	
Users	Select *All* to report on all users, or *Single* to open the user lookup screen where you can select a particular user to report on.
Time	Select whether to generate the report for *Today,* a particular time (*Spot Check*) or a *Custom* time period. A *Spot Check* report includes a time period either side of the specified time - this is specified by the *Spot interval* value on the Settings - General Tab (see page 129).
Advanced Tab Filter	
Events	Select the event types to include in the report.
Users	Select *All* to report on all users, users *Belonging to User Group* to report on users in a selected User Group only, or *Single* to open the user lookup screen where you can select a particular user to report on.

Field Name	Description
Doors	Select *All* to report on all doors, *Single* to report on one particular door, or *Belonging to Door Group* to report on all doors in a particular door group.
Time	Select whether to generate the report for *Today, This Week*, *This Month*, a particular time (*Spot Check*) or a *Custom* time period. A *Spot Check* report includes a time period either side of the specified time - this is specified by the *Spot interval* value on the Settings - General Tab (see page 129).

Click **Generate** to generate a report according to your search criteria.

Results

The following table describes each of the columns on the *User Tracking* screen search results area.

Column Name	Description
Time	The event time. (Sortable.)
Event	The event type. (Sortable.)
Location	The event location. (Sortable.)
Details	Details for the event. (Sortable.)

4.1.13.7 Validate Users Screen

The *Validate Users* report is accessed through the **Reports - Validate Users** menu item in PLUS Manage.

The *Validate Users* screen allows you to:

- Search for users whose validity period has expired, or will soon expire.
- Search for inactive users, whose cards have not been recently used. Inactive users may have lost their cards, or no longer be in the relevant company or organisation.

Once you have identified the user(s) of interest, select one or more users and click the relevant button at the bottom of the screen to delete, enable or disable their accounts, or to edit their validity period (see Change Validity Screen).

See below for descriptions of:

- The *Simple* and *Advanced* search fields available on the *Validate Users* screen. (see page 126)
- The columns on the *Validate Users* screen search results area. (see page 127)

Search Fields

Field Name	Description
Search	Enter all or part of the registered name for the user whose record you want to view and click the **Search** icon ( ). A list of matching records is displayed in the *Search Results* area. **Example:** Searching for "Ann" might show results for "**Ann**-Marie Boyle", "Jo**ann**e Murphy", and "Joseph H**ann**".
Advanced. Click **Advanced** to see the following additional search fields. Specify criteria and click **Search**. To report on users with expired/expiring validity, use the *Expired*, *Expire By* and *Expire By* date fields.	

Field Name	Description
To report on inactive users, use the *Inactive* field.	
User Group	Select the group to which the user is assigned.
Expired	Select to view users who have already expired, that is, their validity period has ended.
Inactive	Select to view users who have been inactive for a period of time, and select the required time period from the corresponding drop-down list.
Expire By	Select to view users who are due to expire in a certain timeframe, and select whether that timeframe is *Today*, *Next Week* or *Next Month* from the corresponding drop-down list.
All Users	Select to view all users.
Expire By Date	Select to view users who are due to expire by a certain date, and specify that date.

Results

The following table describes each of the columns on the *Validate Users* screen search results area.

Column Name	Description
No.	The unique number that identifies this user on the system. (Sortable.)
Name	The user's name. Click to view full details for this user on the *User Details* screen (see page 75). (Sortable.)

Column Name	Description
Group	The group this user is a member of. Click to view full details for this group on the User Group Details Screen (see page 86). (Sortable.)
Enabled	A green check-mark is displayed for accounts that are enabled.
Valid From	When the user is valid from.
Valid To	When the user is valid until.
Valid	A green check-mark is displayed for accounts that are valid. A user's account is valid if either the current date and time fall within the set validity period, or if no validity period was set for the user.
Last activity	The last date and time activity was recorded for the user.

4.1.14 Settings

4.1.14.1 About Settings

The *Settings* screen allows you to configure preferred settings/values for a range of functions in PLUS Manage, such as the names of user fields and holidays, area limits and event filters.

See Also

Settings Screen (see page 129)

4.1.14.2 Settings Screen

The Settings screen has a number of tabs showing different settings for PLUS Manage. For more information on these tabs, click the links below.

- Settings - General tab. For more information, see Settings - General Tab (see page 129).
- Settings - Doors tab. For more information, see Settings - Doors Tab (see page 130).
- Settings - User Fields tab. For more information, see Settings - User Fields Tab (see page 131).
- Settings - Holiday Names tab. For more information, see Settings - Holiday Names Tab (see page 132).
- Settings - Installer tab. For more information, see Settings - Installer Tab (see page 133).

4.1.14.3 Settings - General Tab

The following table describes the data that appears on the *Settings - General* tab.

Field Name	Description
Language	The language used in the PLUS Manage interface.
Export CSV Separator	The separator character used when exporting tabular data from PLUS Manage. For more information, see Exporting (see page 10).
Items Per Page	The number of items to show per page when search results are displayed. Maximum of 200.
Spot Interval	Some reports can be generated according to a spot check time. In this case, the spot interval determines the number of minutes before and after the spot check time for which data is included.

Field Name	Description
Optional Column	The default value displayed in the last column of screens showing user lists (for example Users Screen (see page 72) or User Tracking Screen (see page 120)) is determined by this setting.
Auto Logout Time (mins)	The number of minutes after which an Operator will be logged out of PLUS Manage if they are idle. Set to 0 to disable auto logout.

4.1.14.4 Settings - Doors Tab

The following table describes the data that appears on the *Settings - Doors* tab.

Field Name	Description
Fire override doors	The door group containing doors that are opened automatically via an input from the fire alarm system. In practice, this input is brought separately to each controller that is then responsible for opening any of its doors that have been defined in this group.
Anti-passback doors	The door group containing doors that are in the system's anti-passback area. Anti-passback operation is local to each controller, so if there is only one desired anti-passback area, these doors must all reside on the same controller. If the anti-passback group includes doors on more than one controller, then each controller effectively implements a separate independent area.
Auto Reset Time	If selected, then the corresponding field contains the time of the day when the anti-passback buffer is automatically reset. This ensures that users who failed to exit properly will be allowed in again. If the box is unchecked, then the anti-passback buffer must be reset manually in PLUS Monitor. For more information, see Tools Screen (see page 113).

Field Name	Description
Perimeter doors	The door group containing doors on the perimeter of the installation. This allows the system to keep track of which users are in or out of the installation at a given time. This information is used when generating a muster report. For more information, see User Tracking Screen (see page 120).
Timed anti-passback doors	The door group containing doors that will not re-open for the same card during the anti-passback timed period. For more information, see User Group Details - Anti-passback Tab (see page 129).
Time and Attendance doors	The door group containing doors used for recording user entrances and exits for time and attendance purposes.
Internal doors	The door group containing doors inside the perimeter of the installation. These doors deny access if the cardholder has not already entered through the perimeter or anti-passback doors.
User Limit A User Limit B	These user limits may be used to generate outputs when the number of users in an area falls below a specified minimum. If user limiting is enabled, these limits specify the maximum number of users that will be allowed in that area. The two limits operate independently. Refer to the controller output options for details.

4.1.14.5 Settings - User Fields Tab

This tab defines the labels that will appear through the system for user fields 1-10.

See Also

Users Screen (see page 72)

User Details Screen (see page 75)

About Reports (see page 113)

4.1.14.6 Settings - Holiday Names Tab

This tab defines the labels that will appear through the system for holiday types 1-9.

See Also

Holidays Screen (see page 105)

Time Zone Details - General Tab (see page 103)

4.1.14.7 Settings - Area Limits Tab

PLUS Grid supports up to 8 different counting areas. Limits on the number of users permitted in each of these areas can be specified on this screen.

Each counting area is assigned a door group. When a valid card holder enters one of the doors in the door group the area count is incremented. When the limit is reached, then access is denied. The count is decremented when a card holder leaves through one of the doors in the door group.

Notes:

- Entry and Exit readers are required on the doors for this feature to work.
- Area limits may also be set for members of a particular user group. In this case, even if the overall area limit is not reached, if the limit for the user group is reached no more members of that user group will be granted admission to the area until a group member leaves.

See Also

User Group Details - Area Limits Tab (see page 91)

4.1.14.8 Settings - Installer Tab

This tab shows the name and a brief description for the current PLUS Grid installation.

4.2 PLUS Hardware

4.2.1 About PLUS Hardware

PLUS Hardware manages the access control hardware on the system. It is used to add or update controllers and doors.

See Also

Navigating PLUS Grid Interfaces (see page 7)

PLUS Hardware Menus (see page 133)

4.2.2 General

4.2.2.1 PLUS Hardware Menus

The following menus are available in PLUS Hardware.

- System Live. For more information see System Live Screen (see page 136).
- QuickSetup. For more information see PLUS Hardware - QuickSetup Menu (see page 134).
- Advanced Setup. For more information see PLUS Hardware - Advanced Setup Menu (see page 134).
- Tools. For more information see PLUS Hardware - Tools Menu (see page 134).
- Reports. For more information see PLUS Hardware - Reports Menu (see page 134).
- Settings. For more information see PLUS Hardware - Settings Menu (see page 135).
- Clients. For more information see PLUS Hardware - Clients Menu (see page 135).

4.2.2.2 PLUS Hardware - QuickSetup Menu

The following options are available on the **PLUS Hardware - QuickSetup** menu.

- Add Controller. For more information, see Add Controller (see page 137).
- Add Door. For more information, see Add Door (see page 138).

4.2.2.3 PLUS Hardware - Advanced Setup Menu

The following options are available on the **PLUS Hardware - Advanced Setup** menu.

- Controllers. For more information, see About Controllers (see page 139).
- Doors. For more information, see About Doors (see page 148).
- Card Configuration. This menu is not used by most IPPRo installations. To add user cards, use PLUS Manage.

4.2.2.4 PLUS Hardware - Tools Menu

The following options are available on the **PLUS Hardware - Tools** menu.

- System Synchronize. For more information, see System Synchronize (see page 158).
- Validation Wizard. For more information, see Validation Wizard (see page 158).

4.2.2.5 PLUS Hardware - Reports Menu

The following options are available on the **PLUS Hardware - Reports** menu.

- System Status. For more information, see System Status (see page 159).
- System Snapshot. For more information, see System Snapshot (see page 159).

4.2.2.6 PLUS Hardware - Settings Menu

The *Settings* screen allows you to configure preferred settings/values for a range of functions in PLUS Hardware, such as default options for controllers and doors, interface language and event filters.

See Also

Settings Screen (see page 160)

4.2.2.7 PLUS Hardware - Clients Menu

Click any of the client software options in the **Clients** menu to open the corresponding software module for PLUS Grid. The selected module opens in front of the current module.

You must have logon access to use each client, and which tasks you will be able to perform depends on the access rights you have been granted.

The following options are available (if you have full access rights) on the **PLUS Hardware**
- Clients menu.

- PLUS Manage. For more information, see About PLUS Manage (see page 67).
- PLUS SiteMaps Monitor & Editor are third-party software tools.

4.2.3 System Live Screen

This screen provides an overview of the live system.

The system tree on the left hand side of the screen allows you to view all configured controllers and their connected doors on the network. The icon for each entity indicates its status. Hover your pointer over an icon to see a popup describing the status. Right-click a controller or door in the tree structure to see a context menu with the following options:

- **Expand All** - Select to fully expand the tree structure, showing all doors connected to all controllers.

  Note: You can expand the list of doors for a particular door by clicking the ▸ icon to the left of the controller name.

- **Collapse All** - Select to collapse the tree structure, showing all controllers, but no connected doors.

  Note: You can collapse the list of doors for a particular door by clicking the ▾ icon to the left of the controller name.

- **Actions** - Select to view a list of actions you can perform on a door: **Lock**, **Unlock**, **Pass**, **Normalize**, **Switch Outputs ON**, **Switch Outputs OFF**.
- **Validate** - Select to validate a door, confirming whether it is connected and responding to commands. For more information, see Validation Wizard (see page 158).
- **Details** - Select to view more information on the selected controller/door. For more information, see *Controller Details* screen (see page 141) or *Door Details* screen (see page 150).

The **View Options** drop-down menu at the top right of the screen also allows you to filter what information is displayed in the tree structure.

- To view one or more of *Controllers* and *Doors* select the appropriate boxes under **View Options I View**.
- To view only those doors reporting problems, click **View Options I View I Problem Hardware**. Examples of possible problems are tampering detected, low battery, or the glass on a Break Glass Station is broken.
- **Note:** You cannot view **Problem Hardware** at the same time as controllers or doors.

Other links at the top right of the screen provide quick access to the Quick Setup wizards for adding controllers and doors.

The large panel on the right-hand side of the screen shows live information on events occurring across the system. For each event, the time, location, event type and details are shown.

Click the **Pause** button at the bottom of the screen to pause the stream of events being displayed. This allows you to examine the details of one or more events currently on screen without them scrolling out of view.

Quick setup buttons at the top of the screen provide easy access to the *Add Controller* or *Add Door* wizards.

See Also

Add Controller (see page 137)

Add Door (see page 138)

4.2.4 QuickSetup

4.2.4.1 About QuickSetup

The QuickSetup menu contains links to a number of wizards which take you through the setup of common components step by step.

The following wizards are available here:

- Add Controller (see page 137)
- Add Door (see page 138)

4.2.4.2 Add Controller

Follow the wizard's onscreen instructions to add and configure a new controller, clicking **Next** in the bottom right of the screen after each step and **Finish** at the end.

You can edit the controller settings later through the Controller Details Screen (see page 141).

4.2.4.3 Add Door

Follow the wizard's onscreen instructions to add and configure a new door, clicking **Next** in the bottom right of the screen after each step and **Finish** at the end.

You can edit the controller settings later through the Door Details Screen (see page 150).

4.2.5 Advanced Setup

4.2.5.1 About Advanced Setup

Advanced Setup allows you to configure new controllers and doors without using the Wizards provided. You can also edit existing controllers and doors. More settings are available through the *Advanced Setup* screens than through the Wizard.

See Also

About Controllers (see page 139)

About Doors (see page 148)

4.2.5.2 Controllers

About Controllers

A controller is a device which stores card details and provides managed access for one or more doors. PLUS Hardware allows you to configure controller properties, and to specify which doors are connected to that controller.

See Also

Controllers Screen (see page 139)

Controller Details Screen (see page 141)

Controllers Screen

The following table describes the search fields and results columns on the *Controllers* screen.

Field Name	Description
Search	Enter all or part of the name of the controller you want to view and click the **Search** icon ( ). A list of matching records is displayed in the *Search Results* area.
Advanced	Click **Advanced** to search for a controller by number and/or name. If you specify a *Controller Number*, an exact match is returned. If you specify a *Controller Name*, partial matches are returned.
No.	The unique number that identifies this controller on the system. (Sortable.)

Field Name	Description
Controller Name	The controller's name. Click to view full details for this controller on the Controller Details Screen (see page 141). (Sortable.)
Controller Type	The controller type.
Firmware	The firmware version on the controller (where available).
Comms	The IP address or NetBios name of the controller.
MAC Address	The MAC address of the controller.
Status	The controller status. Hover your pointer over the icon to see the status in a popup.
Doors	The number of doors connected to the controller, including the controller. Click to view a list of the connected doors on the Doors Screen (see page 149).
I/Os	Future use. The number of I/O modules connected to the controller.
Enabled	A green checkmark is displayed for controllers that are enabled.

Controller Details Screen

The *Controller Details* screen has a number of tabs showing different settings for the selected controller. For more information on these tabs, click the links below.

- General tab. For more information, see Controller Details - General Tab (see page 142).
- Communications tab. For more information, see Controller Details - Communications Tab (see page 143).
- Doors tab. For more information, see Controller Details - Doors Tab (see page 144).
- Output Options tab. For more information, see Controller Details - Output Options Tab (see page 145).
- Operations tab. For more information, see Controller Details - Operations Tab (see page 147).
- Capabilities tab. For more information, see Controller Details - Capabilities Tab (see page 148).
- Firmware tab. For more information, see Controller Details - Firmware Tab (see page 148).

Controller Details - General Tab

The following table describes the data that appears on the *Controller Details - General* tab.

Field Name	Description
Controller Name	The controller name.
Controller Number	The controller number. This cannot be edited once the controller is first saved.
Controller Type	The controller type.
Enabled	If this check box is selected, the controller is enabled on the system; if not, it is disabled.

Controller Details - Communications Tab

The following table describes the data that appears on the *Controller Details - Communications* tab.

Field Name	Description
Communications Master	Whether the PLUS Grid server communicates directly with the controller, or communicates via another controller (hubbed). All IPDCE controllers will be connected directly to PLUS Grid
Connection Type	If you are communicating directly with the controller, the connection type is shown. • TCP/IP - Select if communicating over TCP/IP. NOTE: All IPDCE controllers will use TCP/IP.
IP Address Port	The IP address or NetBios name and listening port of the PLUS LAN Interface device. Port number should always be 10001. This field only appears if *Direct to PLUS Grid* is selected at *Communications Master* and *TCP/IP* is selected at *Connection Type*.

Field Name	Description
World Time Zone	Select the world time zone the controller is operating in.

Click **Test Connection** to check that there is a live connection between the database and the controller.

Controller Details - Doors Tab

The following table describes the data that appears on the *Controller Details - Doors* tab.

Field Name	Description
Address	The address of the door on the controller. This is always 1 for the IPDCE. If additional door stations are connected to the controller, they will appear below Address 1.
Name	The door's name.
Enable	If this box is selected, the door is enabled.
In DB	If this box is selected, the door details are recorded in the database. De-selecting this box deletes the door from the database when you click **Save**.

Controller Details - Output Options Tab

Controller output options allow the onboard OP2, OP3 and AUX outputs on a multi-door controller to perform different functions to those normally programmed by the door or user settings.

The following table describes the data that appears on the *Controller Details – Output Options* tab.

Field Name	Description
AUX for all doors	When this option is selected, the AUX output on door 1 operates if the AUX output for any of the doors connected to the controller is active.
OP2 = Tech Fault	When this option is selected, the AUX output on door 1 operates if a technical fault condition exists. Technical faults include mains faults, tampers or doors offline.
OP3 = Any Door Open	When this option is selected, the OP3 output on door 1 operates if any of the doors connected to the controller are open.

Field Name	Description
AUX = Users present	When this option is selected, the AUX output on door 1 operates while one or more users are within the anti-passback or perimeter area (if configured). The output activates immediately when a user enters the defined area, and de-activates when all users have exited. The deactivation of the output will be postponed by the period of time defined by the delay timer. This may be used (for example) to switch off lighting when no users are present, or to indicate to an alarm system that it is clear to arm.
OP2 = User Limit A	When this option is selected, the OP2 output on door 1 operates when the number of users within the anti-passback or perimeter area reaches or exceeds *User Limit A* specified on the Settings - Doors Tab (see page 130).
OP3 = User Limit B	When this option is selected, the OP3 output on door 1 operates when the number of users within the anti-passback or perimeter area reaches or exceeds *User Limit B* specified on the Settings - Doors Tab (see page 130).

Controller Details - Operations Tab

The following table describes the data that appears on the *Controller Details - Operations* tab.

Field Name	Description
General	• Web Server – If selected, the built-in web server of the IPDCE will be accessible. Deselecting this option will disable the web server. • Auto Daylight Savings - If selected, the controller automatically adjusts for daylight savings. • User Limiting - If selected, when the number of users inside the perimeter area is equal to the maximum of either User Limit A or User Limit B then the controller prevents any more users from entering. For more information, see Settings - Doors Tab (see page 130).

Controller Details - Capabilities Tab

This screen shows the hardware capabilities of the controller. For example, the number of doors it can control, the number of users it can support, and the number of I/O modules.

Controller Details - Firmware Tab

This screen shows the version of firmware currently installed on the controller.

4.2.5.3 Doors

About Doors

Doors are physical gateways linked to controllers, such as doors, gates, or turnstiles.

PLUS Hardware allows you to add doors to the system and to configure basic properties for their operation.

See Also

Doors Screen (see page 149)

Door Details Screen (see page 150)

Doors Screen

The *Doors* screen shows a list of all doors configured on the system.

The following table describes the search fields and results columns on the *Doors* screen.

Field Name	Description
No	The unique number that identifies this door on the system. (Sortable.)
Door Name	The door's name. Click to view full details for this door on the Door Details Screen (see page 150). (Sortable.)
Controller Name	The name of the controller the door is connected to. Click to view full details for this controller on the Controller Details Screen (see page 141). (Sortable.)
Controller	The controller number. (Sortable.)
Local Addr.	The local address for the door at the controller. (Sortable.)
Status	The door's current status. (Sortable.)
Elevator	An elevator icon is shown if the door is connected to an elevator.
Enabled	A green check-mark is displayed for doors that are enabled.

Door Details Screen

The *Door Details* screen has a number of tabs showing different settings for the selected door. For more information on these tabs, click the links below.

- General tab. For more information, see Door Details - General Tab (see page 150).
- Timers tab. For more information, see Door Details - Timers Tab (see page 151).
- Operations tab. For more information, see Door Details - Operations Tab (see page 152).
- AUX Relay tab. For more information, see Door Details - AUX Relay Tab (see page 154).
- Reporting tab. For more information, see Door Details - Reporting Tab (see page 156).

Door Details - General Tab

The following table describes the data that appears on the *Door Details - General* tab.

Field Name	Description
Door Name	User editable door name.
Controller	The controller the door is connected to.
Local Door Number	The local door number.
Enabled	Whether the door is currently enabled.

Door Details - Timers Tab

The following table describes the data that appears on the *Door Details - Timers* tab. All times are in seconds.

Field Name	Description
Relay Timer	How long the door relay is activated in response to a valid card or to operation of the request-to-exit (egress) switch.
AUX Output	How long the AUX output is activated when it is fired.
OP2 Timer	How long the OP2 output is activated when it is fired.
OP3 Timer	How long the OP3 output is activated when it is fired.
Door Ajar Timer	How long the door may remain open before a door ajar condition occurs
Extended Relay Timer	How long the door relay is activated in response to a valid card for a user with the *Extended Relay* option. In this case, the door relay is activated for an extended period of time for users who require longer to access the door, for example, wheelchair users. For more information, see User Details - Options Tab (see page 79).
Tracking Delay Timer	How long the controller waits before updating the count of the number of users in the tracking area.

Door Details - Operations Tab

The following table describes the data that appears on the *Door Details - Operations* tab.

Field Name	Description
Door Exit	• Release button - If selected, the request-to-exit input is enabled. When this switch is momentarily closed, the main relay timer is activated for its programmed period of time, and a user is allowed to exit. An exit event may also be recorded in the system log. • Free exit – Used in entry/exit applications only. Normally, the controller applies the same group access rules to users exiting the area as it applies to users being granted access. If this option is selected, normal access rights are ignored and any enabled card can exit irrespective of time etc. • Exit PIN's - Normally in PIN only or PIN & card operation, codes are used only to gain entry through the door. If this option is selected, the controller requires a PIN code when exiting also. • Exit PIR - If selected, a Passive Infrared (PIR) device can be used in place of a traditional push button exit switch. This ensures that the door remains unlocked while the PIR is active.
Door Security	• Interlock - If selected, only one door of a connected pair may be open at any one time. The interlock output (usually OP3) of each door should be connected to the interlock input (Usually AUX) of the other door. Because this is an electrical interlock, doors on different controllers may be interlocked with each other. In this case the 0V lines of all the devices should be connected together. • Toggle Operation - If selected, the door can be toggled open or closed by users with the Toggle Relay option enabled. For more information, see User Details - Options Tab (see page 79) or User Group Details - Options Tab (see page 89). • Fail-Safe Relay - When using normally energized locking devices, there may be problems with the door remaining locked during a power outage when a stand-by battery is

Field Name	Description
	discharging. If the battery is partially depleted, the voltage may not be high enough to power the controller but may still be producing enough current to keep the solenoid energized. If this option is selected, the action of the relay is reversed so that the door will fail open in a power outage. • Intruder Panel - The AUX input on the door may be connected to an Intrusion Panel. When this signal is low, the controller knows the panel is armed and denies access to users. • Anti-tailgate - Normally when a card is swiped, the relay is activated for a pre-determined period of time. During this period, the door may be physically opened and closed any number of times as the locking mechanism is disengaged. If this option is selected, the relay time is truncated to one second when the door is opened. This means that the locking mechanism re-engages so the door cannot be reopened without swiping another card. Door Contact required. • Break Glass - If selected, the output relay is activated when the glass is broken on an SDC 491 Break Glass emergency station. • Access only - If selected, the main relay output at the access point is activated if a valid card is presented at an access reader. For an exit reader at the access point, ensure that *Exit Granted* is selected under *AUX Relay - Normal Access* (see page 154) to activate the AUX relay on an exit event. • Airlock & Bollard options are not used.
Door Buzzer	• Silent operation - Normally the door controller gives an audible success or fail indication when a card is swiped, in addition to activating the red or green indicator on the reader. If this option is selected, this audible indication is suppressed. • Chime - If this option is selected, the door controller's buzzer sounds momentarily when the door is opened. The buzzer (AUX) output is also activated for a short period of time. • Guest button - When an external keypad is being used to gain entry, this option allows the "Bell" button on the keypad to be used to momentarily activate the (AUX) output of the controller.

Door Details - AUX Relay Tab

The AUX relay is a programmable output on all door controllers. The various settings below may be enabled to determine the conditions for activating this output.

The following table describes the data that appears on the *Door Details - Relay* tab.

Field Name	Description
Alarms	The conditions under which an alarm is triggered. • Door forced - If selected, the output is activated if the door is opened without being explicitly commanded to open by the controller. This would typically occur if the locking mechanism is bypassed or if the door is physically forced open. It is reset when a valid card is swiped. • Door ajar - If selected, the output is activated if the door has been open for longer than a predetermined period of time. It is reset once the door is closed or when a valid card is swiped. • Access denied - If selected, the output is activated for 2 seconds if an invalid card is swiped. • Exit denied - If selected, the output is activated for 2 seconds if an invalid card is swiped at an exit reader. • Duress code used - If selected, the output is activated if a duress PIN code is entered. This is when a number 1 greater than the valid PIN is entered in PIN Only or PIN & Swipe operation. • Break Glass - If selected, the output relay is activated when the glass is broken on an SDC 491 Glass Break Station. It is when a valid card is swiped.

Field Name	Description
Normal Access	The conditions under which normal access is permitted. • Access granted - If selected, the output is activated if a valid card is swiped. It remains active while the door relay is active. • Exit granted - If selected, the AUX relay output is activated if a valid card is presented at an exit reader. For an access reader ensure that *Access only* is selected from the *Operations – Door Security* section (see page 152) to activate the main relay on an access event. • Door opened - If selected, the output is activated while the door is open. • Follow main relay - If selected, while the main relay is active, the Aux relay is also active. • Arm Intruder panel - If selected, the AUX relay pulses for the AUX time when a user with the arm/disarm option presents a valid card or PIN. This output must be wired into an input on the alarm panel which signals arming or disarming.

Door Details - Reporting Tab

Selections on this tab determine which additional events are logged to the door controller's system event log.

The following table describes the data that appears on the *Door Details - Reporting* tab.

Field Name	Description
Alarms	
Door Ajar	A door ajar event is logged if the door has been open for longer than a predetermined period of time.
Door Forced	A door forced event is logged if the door is opened without being explicitly commanded to open by the controller. This would typically occur if the locking mechanism is bypassed or if the door is physically forced open.
Door Tamper	A door tamper event is logged if the door is tampered with, that is, if the door station or controller is opened.
Mains Fault	A mains fault event is logged if the mains supply fails. This should be selected for any doors with a monitored power supply.
Read Error	A read error event is logged when an incorrect read occurs on an entry or exit reader. An additional error number may be displayed giving further details on the error.

Field Name	Description
Normal Access	
Exit Button Used	An exit granted (push button) event is logged when a user presses the request-to-exit (egress) switch.
Door Opened	A door opened event is logged when the door is physically opened.
Door Closed	A door closed event is logged when the door is physically closed.
Door Contact	A door opened/closed event is logged when the door contact changes.

4.2.6 Tools

4.2.6.1 System Synchronize Screen

The System Synchronize Wizard allows you to download the entire database to one or more controllers. Synchronizing controllers means that all data entered on the controller directly, via its keypad, will be lost. Controllers remain offline during downloads, meaning that they cannot be commanded during this time, nor will they report events. Door stations will have limited functionality during the download. You should only do a download if you are entirely sure it is required.

Follow the on-screen instructions, clicking **Next** between steps and **Finish** at the end.

- **Step 1: Controllers.** This screen indicates whether each controller is up to date or not. Select which controllers you want to download to.
- **Step 2: Downloading.** The progress bar shows the overall progress of the system synchronization. The message area shows information for each controller.
- **Step 3: Results.** The results of the synchronization operation are shown: the number of controllers updated and their current statuses.

4.2.6.2 Validation Wizard

The Validation Wizard allows installers to test selected doors, confirming whether they are connected and responding to commands. Only Controllers and Doors that are enabled and online are shown.

Follow the on-screen instructions, clicking **Next** between steps and **Finish** at the end to leave the Wizard.

- **Step 1: Select Objects.** From the tree structure, which shows a list of controllers and the doors connected to each one, select which doors to test.
- **Step 2: Validation Options.** Select which actions to test during validation. Options are: Door Lock, Door Unlock, Door Pass, and Door Normalize.
- **Step 3: Validation.** The Validation screen shows the validation progress: which doors have been validated, and whether they responded to each selected action.
- **Step 4: Finish.** A summary report of the validation tests appears at the end.

4.2.7 Reports

4.2.7.1 System Status

This screen provides an overview of the statuses of controllers, doors and I/O modules on the system.

This report can be printed or exported using the links at the top-right corner of the screen.

Click the arrow ( ) to the left of a status type to see a list of the components with that status.

4.2.7.2 System Snapshot

This screen provides an overview of the system's operations.

The panel at the top of the screen shows a list of all controllers and doors with summary information about each device and its current status.

The panel at the bottom of the screen shows a list of recent system events, with the time and location of each event, plus summary details.

This report can be printed or exported using the links at the top-right corner of the screen.

4.2.8 Settings

4.2.8.1 About Settings

The *Settings* screen allows you to configure preferred settings/values for a range of functions in PLUS Hardware, such as default options for controllers and doors, interface language and event filters.

See Also

Settings Screen (see page 160)

4.2.8.2 Settings Screen

The *Settings* screen has a number of tabs showing different settings for PLUS Hardware. For more information on these tabs, click the links below.

- General tab. For more information, see Settings - General Tab (see page 160).
- Controller Settings tab. For more information, see Settings - Controller Settings Tab (see page 161).
- Installation tab. For more information, see Settings - Installation Tab (see page 162).
- Controllers Security tab. For more information, see Settings - Controller's Security Tab (see page 162).
- Default Options - Door tab. For more information, see Settings - Default Options - Door Tab (see page 163).
- Event Filter tab. For more information, see Settings - Event Filter Tab (see page 164).
- Email Notification tab. For more information, see Settings - Email Notification Tab (see page 164).
- Information tab. For more information, see Settings - Information Tab (see page 166).

4.2.8.3 Settings - General Tab

The following table describes the data that appears on the *Settings - General* tab.

Field Name	Description
Language	The language used in the PLUS Manage interface.
Export CSV Separator	The separator character used when exporting tabular data from PLUS Hardware. For more information, see Exporting (see page 11).
Auto Logout Time (mins)	The number of minutes after which an idle DB user/operator is logged out.

Field Name	Description
Confirm deleting Doors in Controller Details	If selected, operators are prompted to confirm door deletion if they de-select the "In DB" box for a door on the Controller Details - Doors Tab (see page 144). This is to prevent accidental deletions.

4.2.8.4 Settings - Controller Settings Tab

The following table describes the data that appears on the *Settings - Controller Settings* tab.

Field Name	Description
General	Select *Allow International Characters* to allow international characters in the names of controllers. This should only be selected if you are connecting to controllers that correctly display European character sets. If connecting to controllers that display only English characters, leaving this box unchecked prevents unsupported characters from being entered into certain database fields.
Controller	Specify the following controller settings: • Download names - If selected, User, Door, Group and Time zone names are transmitted to controllers during a download. This allows controllers to locally display and print the correct names for logged events. On larger systems, selecting this option may significantly increase the time taken to download the database to the system (System Synchronize (see page 113)). • Global PIN Only - If selected, PIN Only operation is required on the entire system. No readers are connected to the system. • Global PIN & Swipe - If selected, PIN & Swipe operation is required for all doors in the system at all times. PIN & Swipe settings may also be set up individually for each door on the system.

4.2.8.5 Settings - Installation Tab

The following table describes the data that appears on the *Settings - Installation* tab.

Field Name	Description
Installation Name	The name of the PLUS Grid installation.
Installation Notes	A description of the installation.

4.2.8.6 Settings - Controller's Security Tab

The following table describes the data that appears on the *Settings - Controller's Security* tab in PLUS Hardware.

Field Name	Description
Transmit PIN Codes to Controller	If selected, the installer and operator PIN codes are transmitted to all controllers when downloading the database (System Synchronize (see page 113)). If not selected, controller PINs must be administered on an individual basis.
Installer	The PIN code required to access the **Installer** menu on the individual controllers. This menu is used to configure the card format and interfacing aspects of the controller. This is normally a six-digit code with a default value of 999999.
Operator	This is the PIN code required to access the **User** menu on the individual controllers. This menu is used to configure the access rights of users on the controller. This is normally a six digit code with a default value of 123456.

4.2.8.7 Settings - Default Options - Door Tab

This screen shows default options for new doors. These may be customized on a per-door basis.

For more information, see:

- Door Details - Operations tab (see page 152).
- Door Details - AUX Relay tab (see page 154)
- Door Details - Timers tab (see page 151)
- Door Details - Reporting tab (see page 156)

4.2.8.8 Settings - Event Filter Tab

You may optionally specify an event filter to determine which events are recorded in the memory of individual controllers. If the filter is enabled, only selected events are recorded in the controller log.

The following table describes the data that appears on the *Settings - Event Filter* tab.

Field Name	Description
Enable Filter	If this check box is selected, the filter is enabled.
Events	Which events are logged for controllers.
Log Events from Group	Which door group events are logged for.

4.2.8.9 Settings - Email Notification Tab

The following table describes the data that appears on the *Settings - Email Notification* tab.

Field Name	Description
SMTP Server Settings	Specify details for the SMTP server PLUS Grid will use to send notification emails. This information can be obtained from the network administrator in charge of email services.
Email Addresses	Specify the From and To email addresses to use on notification emails.

Field Name	Description
Notification Options	Specify details of when and how notifications should be sent. • Email Header - Notifications will be sent with this subject. • Email Contact - Notifications will include the name specified here. This allows you to specify that messages sent to a shared/generic email address are for the attention of a particular individual. • Timezone - Notifications will be sent when this timezone is active. • Alert Events - Notifications will be sent for the event types selected here.

You can test your settings work by clicking **Send Email** to send a test message to the address specified in the *Email To* field.

Click **Default** to return all email notification settings to PLUS defaults.

4.2.8.10 Settings - Information Tab

The following table describes the data that appears on the *Settings - Information* tab.

Field Name	Description
Client logfiles directory	Specify the full path to the directory in which log files should be saved.
PLUS Hardware logfile	Specify the full path to the PLUS Hardware log file.
PLUS Manage logfile	Specify the full path to the PLUS Manage log file.

4.3 PLUS Server Client

4.3.1 About PLUS Server Client

PLUS Server Client offers a range of tools for managing the PLUS Grid database and server. Using this application, you can stop/start the service, assign a new database, upgrade controller firmware, monitor controller communications in great detail, and perform a range of other specialized tasks. Events can be purged, users exported or imported, and simple backups can be done.

See Also

Navigating PLUS Client Interfaces (see page 7)

Live System (see page 167)

Database (see page 168)

DB Users (see page 169)

Firmware Upgrade (see page 169)

Monitoring Communications (see page 170)

4.3.2 Live System

This screen displays information about the live PLUS Grid system.

- *Service* - This area shows information about the PLUS Grid Windows service. You can check service details and state, and stop and start the service from here. This Windows service must be running in order to use PLUS Grid. The service normally starts up automatically when the server machine reboots. You can **Stop** and **Start** the service in those exceptional cases where you need to reboot the service. (You can also use the **Restart** option, which stops then starts the service.) When you stop the service, all activity on clients will cease abruptly and all controllers will be disconnected from the software, so you should warn operators before stopping and restarting the service. To check which operators are currently active on the system, use the DB Users screen (see page 169).
- *Server* - This area shows whether the PLUS Grid server is currently running. If the Windows service has been started, this should show an *Up* status. If it is *Down*, there is a problem. The server can be down if either the Windows hosting service has not started, or if it cannot contact a valid PLUS database.

- *Controllers* - This area shows a list of registered and enabled controllers (and disabled controllers with enabled doors) and their current states. You can click the expand icon ( ) beside a controller name to view a list of doors connected to that controller and their current states.
- *Recent Events* - This area shows the time, location, event type and details for recent events (live).

4.3.3 Database

This screen displays information about the PLUS Grid database.

- *Database Settings* - This area shows details of the current PLUS Grid database, including name, status and a summary of the data types and volumes. You can change which database is in use, or create a new database from here. You can also specify a connection string.
- *Tools* - This area allows you to backup or restore an PLUS Grid database, and to export and import user details.
  - **Backup** - You can perform a limited, emergency backup using this tool. **Warning:** This backup does not store log events, audit events, or user photographs. This backup would allow you to quickly and conveniently restore your system to some stable state before performing a large set of changes. However, it is highly recommended that backups be performed using SQL Server itself, rather than this limited tool.
  - **Restore** - Backups taken using the **Backup** tool can be restored using this tool. Log events, user photographs, and audit events are not backed up, so cannot be restored.
  - **Export Users** - This tool allows you to export the current set of users to a CSV (comma separated value) file. All enabled users are exported. This list of users can be later restored using the **Import Users** tool.
  - **Import Users** - This tool allows you to restore a set of users previously exported, or to import a new set of users. You can choose to delete the existing set of users in the database or to attempt to merge the new list with the existing users. Where an imported user has the same user number as an existing user, the imported user overwrites the existing user.
  - **Export Photos** - This tool allows you to export all user photographs to a folder of your choice.
  - **Purge Log Events** - When the log events table grows large, it has a detrimental impact on system performance. It is highly recommended that you regularly purge the log events table of unwanted, legacy events. You can choose to purge all events, all but events in the last

month, all but events in the last three months, or all but events in the last six months. Purging log events can take a considerable amount of time.

4.3.4 DB Users

This screen displays information about the PLUS Grid operators (database users).

- *DB Users Currently Online* - Displays a list of operators currently online. The particular PLUS Grid application in use is shown (for example, PLUS Manage), plus information on when the operator's logon started, activity duration, PC location and state.
  You can log an operator out by selecting the check box to the left of their name and clicking **Disconnect**. This action cancels any activity the operator is currently performing, abruptly.
- *User's Recent Actions* - Displays information on recent activities performed by the selected operator.

4.3.5 Firmware Upgrade

Updating firmware to the latest available version from the manufacturer is highly recommended.

When you update the firmware on a controller, it shuts down normal operation for the period of the upgrade, which can take several minutes depending on the network conditions. All data about users, cards, and access rights are deleted from a controller when the firmware is updated.

You can optionally unlock doors connected to a controller while the firmware upgrade is in progress to allow users to gain access. If you do not want to leave connected doors unlocked for the duration of the upgrade, only update firmware when you are confident that the controller is not required.

If a firmware upgrade file is available, this screen allows you to select the firmware and which controllers to upgrade. You must have the password required to access the firmware upgrade in order to apply it.

1. Click **Select Firmware** to open a dialog where you can browse to and select the firmware file you are upgrading to.
   Ensure that you have a firmware version later than the version currently on your controller types.
2. In the *Password* field, enter the firmware password (obtainable from PLUS). This will be validated when you click **Upgrade Firmware**.

3. Optionally, you can choose the *Controller Type* to filter the controller list at the bottom of the screen for controllers matching that type.
4. From the controller list at the bottom of the screen, select each controller for which you want to upgrade firmware.

   Note: Controllers must be online in order for you to do an upgrade, but all controllers are listed.
5. To open doors connected to the selected controllers, allowing free access, while the firmware upgrade is in progress, select the *Open doors during upgrade?* check box. If doors are not opened, users will not be able to gain access until the upgrade is complete and data synced to the controller.
6. To automatically sync data to the selected controllers following the firmware upgrade, select the *Do full download when finished flash upgrade?* check box. If you do not select this option, you must manually sync data to the controllers using the System Synchronize tool in PLUS Manage or PLUS Hardware (see page 59) following the firmware upgrade.
7. When you are ready, click **Upgrade Firmware**.
   If the password is correct, the controller types match the firmware type, and if they are all online, then the firmware is upgraded.

4.3.6 Monitoring Communications

This screen allows you to select one or more controllers to monitor their communications with the software. This feature can be useful for in-depth trouble-shooting.

- *Controllers* - Displays a list of controllers on the system. You can select particular controllers to monitor/stop monitoring, and specify the number of minutes for which monitoring should last. Results of a trace of the activity between controllers and the software are shown in the *Communications* area.
  If you want to view details from an existing log file, you can select it here too.
- *Communications* - This area shows events as they occur for monitored controllers. You can clear this area by clicking **Clear View**. Details displayed here are also saved into the ServerClient.log log file, available through the **View Files** button.