

# PANL

## Room Manager 3.1.1

### Part 3 – PRM Management Console

(Ver.5.1.1-3.0.0)



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## Table of Contents

<b>1. About This Guide .....</b>	<b>4</b>
<b>2. Intended Audience.....</b>	<b>4</b>
<b>3. Document References .....</b>	<b>4</b>
<b>4. Getting Started with PRM Management Console .....</b>	<b>5</b>
<b>4.1 Logging In .....</b>	<b>5</b>
4.1.1 <i>Generate Fingerprint and Activate License .....</i>	<i>7</i>
4.1.2 <i>Calendar and Client.....</i>	<i>8</i>
<b>4.2 Change Password.....</b>	<b>13</b>
<b>4.3 Forgot Password .....</b>	<b>14</b>
<b>4.4 PRM Management Console Overview.....</b>	<b>17</b>
<b>4.5 Dashboard.....</b>	<b>19</b>
<b>4.6 Resource Management .....</b>	<b>21</b>
4.6.1 <i>Country Management.....</i>	<i>21</i>
4.6.2 <i>Building Management .....</i>	<i>24</i>
4.6.3 <i>Floor Management.....</i>	<i>26</i>
4.6.4 <i>Room Management.....</i>	<i>28</i>
4.6.5 <i>Amenities Management.....</i>	<i>38</i>
4.6.6 <i>PanL Display Management .....</i>	<i>39</i>
<b>4.7 User Management.....</b>	<b>41</b>
4.7.1 <i>Managing Users .....</i>	<i>41</i>
4.7.2 <i>User Groups Management.....</i>	<i>44</i>
4.7.3 <i>RFID Management .....</i>	<i>48</i>
<b>4.8 Device Mapping .....</b>	<b>50</b>
4.8.1 <i>View Device mapping.....</i>	<i>50</i>
4.8.2 <i>Pair PanLHub with PRM Server.....</i>	<i>52</i>
4.8.3 <i>Edit PanLHub Information .....</i>	<i>52</i>
4.8.4 <i>Unpair PanLHub.....</i>	<i>53</i>
4.8.5 <i>Designate PanLHub as “Not Working”.....</i>	<i>54</i>
4.8.6 <i>Associate PanL Display to a Room.....</i>	<i>55</i>
4.8.7 <i>Unassociate PanL Display from Room.....</i>	<i>55</i>
4.8.8 <i>Edit PanL Display .....</i>	<i>56</i>
4.8.9 <i>Designate PanL Display as “Not Working” .....</i>	<i>57</i>
4.8.10 <i>Edit RFID Module .....</i>	<i>57</i>
4.8.11 <i>Designate RFID Module as “Not Working”.....</i>	<i>58</i>
<b>4.9 Catering Management .....</b>	<b>59</b>
4.9.1 <i>Catering Groups .....</i>	<i>59</i>
4.9.2 <i>Items .....</i>	<i>62</i>
<b>4.10 Equipment Management .....</b>	<b>64</b>
4.10.1 <i>Equipment Groups .....</i>	<i>64</i>
4.10.2 <i>Equipment Items.....</i>	<i>64</i>
<b>4.11 System Log .....</b>	<b>66</b>
<b>4.12 Settings .....</b>	<b>67</b>
4.12.1 <i>PanL Hub and Display.....</i>	<i>67</i>
4.12.2 <i>Calendar and Client.....</i>	<i>69</i>
4.12.3 <i>Notification and Synchronization.....</i>	<i>69</i>
4.12.4 <i>Email Configuration.....</i>	<i>71</i>



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4.12.5	Simple Mail Transfer Protocol (SMTP).....	72
4.12.6	PRM Configuration .....	73
4.12.7	License .....	73
4.12.8	Dashboard.....	74
4.13	Firmware Management.....	76
4.13.1	PanL Firmware Upload.....	76
4.13.2	PanL Firmware Upgrade .....	77
4.14	Notifications.....	78
4.15	About .....	79
4.16	Logout .....	80
5.	Appendix .....	81
5.1	Glossary of Terms, Acronyms & Abbreviations .....	81
5.2	List of Figures .....	81
5.3	List of Tables .....	81
	Revision History .....	82

## 1. About This Guide

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This guide explains the features and functionalities of PRM Management Console.

## 2. Intended Audience

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The intended audience will be System Integrators, Technical / Administrative users who will assist in realizing the capabilities, functions, and the full benefits of the product.



**Note:**

1. Ensure the firmware version and package version number are up-to-date and update/upgrade accordingly.
2. For more information about the latest version and compatibility, contact the BRT Systems sales/support.

## 3. Document References

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Document Name	Document Type	Format
<a href="#">BRTSYS AN 036 PRM User Guide - 1. Introduction</a>	Application Note / User Guide	PDF
<a href="#">BRTSYS AN 037 PRM User Guide - 2. Installation and Configuration</a>		
<a href="#">BRTSYS AN 039 PRM User Guide - 4. PRM Supervisor and PanLHub Supervisor Console</a>		
<a href="#">BRTSYS AN 040 PRM User Guide - 5. Outlook Add-In</a>		
<a href="#">BRTSYS AN 041 PRM User Guide - 6. PanL PD100 Touch Display</a>		

## 4. Getting Started with PRM Management Console

The PRM Management Console is a web browser-based GUI application that serves as a one-stop management tool enabling administrators to configure the PRM Server Software (e.g., manage resource assignment, room booking policies, display panel and calendar configurations). The PRM Management Console can be connected via a secure HTTPS connection using any one of the following web browsers – *Chrome, Mozilla Firefox, Microsoft Edge, or Safari*.

To access the PRM Management Console, ensure that the PRM Server Software is up and running. The steps to access the PRM Management Console are provided below. Open any supported web browser (*Chrome/ Mozilla Firefox/Microsoft Edge/Safari*) and enter the URL. For example - <https://web.prm.local/>.

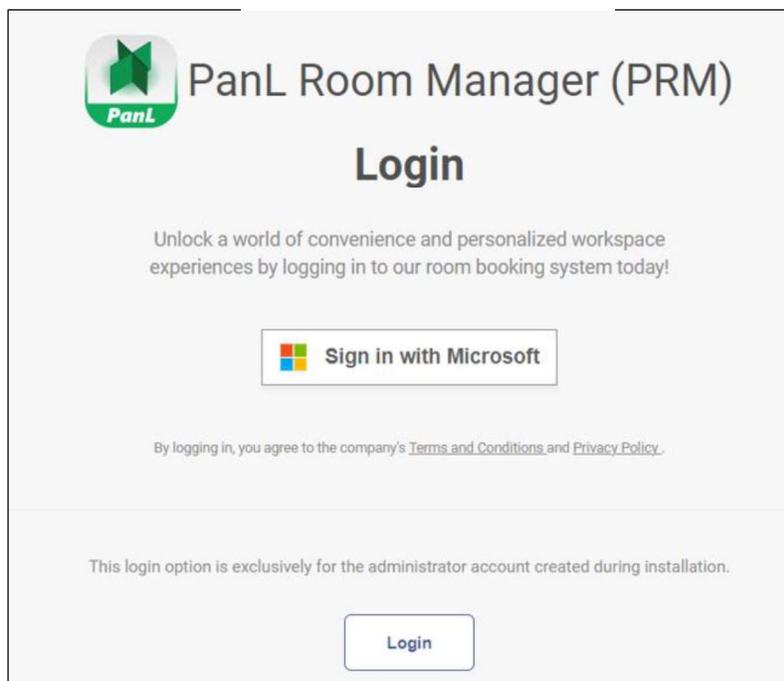
If opening PRM Management Console on a client PC using default BRT System's SSL certificate, please refer to the **Section 4.4 Browser (with BRT SSL) in BRTSYS AN 038 PRM User Guide – 2. Installation and Configuration** @ <https://brtsys.com/resources/> (under *PanL Room Manager (PRM) > Application Notes/Installation Guides/User Guides*).

The PRM Server must have a valid license to access all the PRM features. To obtain the license, the customer must [GENERATE FINGERPRINT](#) (using the license interface) and send the fingerprint file to the vendor (i.e., PRM Support – [support@brtsys.com](mailto:support@brtsys.com)). The vendor in turn will generate and send the license file to the customer's registered email address. Upon receiving the license file, customer must activate it using the license interface. The license interface is available only for SUPERADMIN users. Refer to [section 4.1.1](#) for more information.

### 4.1 Logging In

The login interface will vary depending on whether the system is configured to connect to Microsoft 365 or Exchange Server – see below -

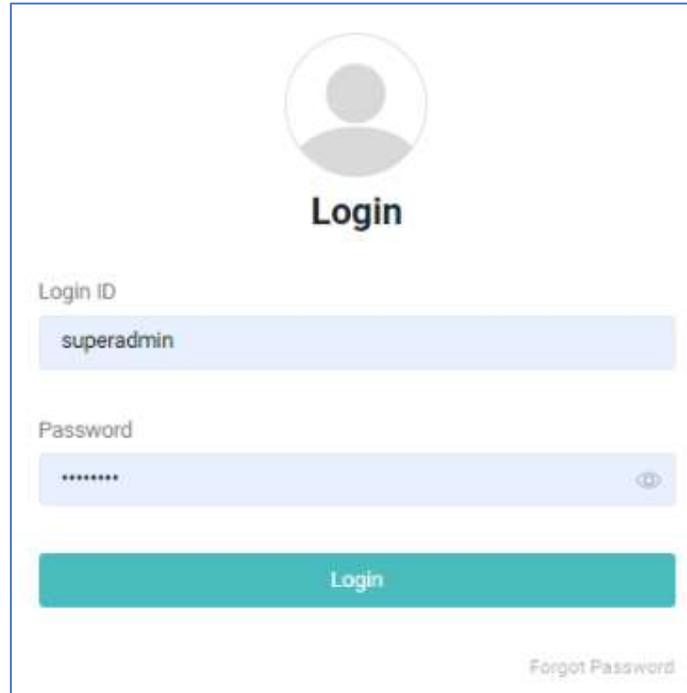
#### Connected to Microsoft 365



There are two types of PRM Users – SUPERADMIN\* user and NON-SUPERADMIN users.

Login as SUPERADMIN user to do the initial configurations like activating PRM licenses, Setting Policies etc. To login as SUPERADMIN, the user must use the username – “superadmin” and “password” (the one configured during the installation).

### Connected to Exchange Server



Login

Login ID

superadmin

Password

\*\*\*\*\*

Login

[Forgot Password](#)

\*The SUPERADMIN user login option is exclusively created during installation.

### 4.1.1 Generate Fingerprint and Activate License

- Ensure that you have logged in to the PRM Management Console as SUPERADMIN. From the PRM Management Console menu, click on *Settings* > *License*. The License interface is displayed with the list of available licenses(s) if any. **For the first time users, the license table will be empty.**

License	License Id	License Type	Rooms License	Users License	Equipment License	Catering License	License Start Date (MM/DD/YYYY)	License Expire Date (MM/DD/YYYY)	License Status
PRM	980540135539837213_1	Expiration	100	100	100	100	01/25/2022	01/01/2031	Active

- To generate fingerprint, click **[GENERATE FINGERPRINT]**. A confirmation dialog box will be displayed. Click **[YES]** to Generate Fingerprint or **[CANCEL]** to cancel the operation. Upon clicking **[YES]**, a fingerprint file with extension **.c2v** (for example - *Current\_..22-04-2023 10-34-07.c2v*) will be generated and saved in the preferred location. Email the file to the vendor (i.e., [PRM Support](#)) to obtain the license key. The license key will be sent as a file with extension **.v2c** (for example - *72543085074299640.V2C*) to the registered email address. Upon getting the license key, click **[ACTIVATE NEW LICENSE]**.
- Click **[Browse]** and select the license key to upload.

Activate License Key

Upload License Key

Current\_..22-04-2023 10-34-07.v2c

Browse

Activate Cancel

- Upon selecting the license file, click **[ACTIVATE]** to upload the license file to the PRM Server and activate the license. Upon activating the license key, the user will be automatically signed out of the PRM Management Console. Log in to the PRM Management Console. A list of menu functions (based on the user's access privileges) is displayed on the left side panel. To access License interface and verify license information, click **Settings** → **License**.

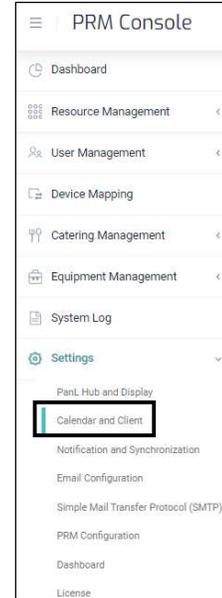


**Note:** Licenses are installed on the virtual machine or native OS. To avoid losing licenses, make sure this machine is backed up. In case the machine is lost, the customer will have to purchase a new PRM license.

### 4.1.2 Calendar and Client

To update calendar and Client settings –

→ Click on the **Settings > Calendar and Client** menu. The system configuration interface is displayed.



Calendar And Client Configurations

#### Exchange Server/Microsoft 365 Configuration

Calendar Type	EXCHANGE	Choose a Microsoft Calendar
Exchange Server URL/IP	https://outlook.office365.com/EWS/Exchange.asmx	Provide a Microsoft Server URL/IP
Exchange Schema Version	Exchange2016	Select a Microsoft Exchange Schema Version
Permission	ImpersonationAll	Choose a permission to grant access to user accounts
Authentication Method	OAuth 2.0 (Modern), Client Credentials	Choose a Microsoft authentication method
Username	imp-prm17@mrbtest1.onmicrosoft.com	
Object ID	[Redacted]	Create application on Azure Active Directory > App registrations > locate the App > Overview. Please copy and paste the Object ID here.
Directory (Tenant) ID	[Redacted]	Create application on Azure Active Directory > App registrations > locate the App > Overview. Please copy and paste the Directory ID here.
Application (Client) ID	[Redacted]	Create application on Azure Active Directory > App registrations > locate the App > Overview. Please copy and paste the Application ID here.
PRM Client Secret Description	BRTSYS_CLIENTSECRET	Create client secret on Azure Active Directory > App registrations > locate the App > Certificates & secrets. Please copy and paste the Client Secret Description here.
PRM Client Secret Value	*****	Create client secret on Azure Active Directory > App registrations > locate the App > Certificates & secrets. Please save this secret value which is only displayed once.

[Test Connection](#)

#### Client Configuration

Login Mode	OpenID Connect (OIDC) Authentication	Choose an authentication method for users to login
PRM Login Redirect URL	https://prm.prm.local/auth/oidc-login	Once the applications have been successfully authorized and granted an authorization code or access token, Azure AD redirects the user to a page on Panel PRM.  To set the Login Redirect URL, you need to copy and paste the link to Azure Portal > Azure Active Directory > App Registrations > New registration > Create a new App > Add a Redirect URL > Add a platform > Redirect URIs.

[Discard Changes](#) [Save](#)

#### 4.1.2.1 If connected to Microsoft 365

- Configure for OAuth 2.0 (Modern) Client Credentials authentication mode (**Recommended**).

##### **Exchange Server/Microsoft 365 Configuration**

Input the following in the respective fields:

- **Calendar Type**  
Refers to the Calendar Type – Exchange / Microsoft 365.
- **Exchange Server URL / IP**  
Refers to the Exchange Server URL/IP address.
- **Exchange Schema Version**  
Refers to the Microsoft Exchange Server Scheme version.
- **Permission**  
Refers to the permission to be granted to user accounts.
- **Authentication Method**  
*OAuth 2.0 (Modern), Client Credentials* - Refers to a standard protocol used for authentication and authorization between different applications and services.
- **Username** – Refers to the Exchange/Microsoft 365 Server login credentials.



**Note:** The *Object ID, Directory (Tenant) ID, Application (Client) ID, PRM Client Secret Description* and *PRM Client Secret Value* field inputs can be obtained from Azure. Refer to the steps given under section [5.2.3 Modern Authentication using OAuth 2.0 – Open ID-Connect \(OIDC\)](#) in [BRTSYS\\_AN\\_038 PRM User Guide – 2. Installation and Configuration @ <https://brtsys.com/resources/>](#) (under *PanL Room Manager (PRM) > Application Notes / Installation Guides / User Guides*) for more details.

- **Object ID** - The Object ID is a unique ID of the service principal object associated with an application. This value can be obtained from Azure Portal > Azure Active Directory > App registrations > Locate the App > Overview.
- **Directory (Tenant) ID** - The Microsoft 365 tenant ID is a globally unique identifier that is unique to each organization or domain. This value can be obtained from Azure Portal > Azure Active Directory > Properties page > Tenant ID.
- **Application (Client) ID** – A Client ID is a unique identifier assigned to a client application during the registration process with the authorization server or identity provider. This value can be obtained from Azure Portal > Azure Active Directory > App Registrations > locate the App > Client ID.
- **PRM Client Secret Description** – A brief description for Client Secret. This value can be obtained from Azure Portal > Azure Active Directory > App Registrations > locate the App > Certificates & Secrets.
- **PRM Client Secret Value** – Client Secret is a confidential value used for authentication between a client application and an authorization server. It should be kept secure and saved during the creation of the Client ID, as it will be hidden once the page reloads. This value can be obtained from Azure Portal > Azure Active Directory > App Registrations > locate the App > Certificates & Secrets.

##### Client Configuration

- **Login Mode** – Refers to the authentication mode for users to login - *OpenID Connect (OIDC) Authentication or PRM Authentication*.

- **Redirect URL** - Once the applications have been successfully authorized and granted an authorization code or access token, Azure AD redirects the user to a page on PanL PRM.
  - **PRM Login Redirect URL:** To set the Login Redirect URL, you need to copy and paste the link to Azure Portal > Azure Active Directory > App Registrations > New registration > Create a new App > Add a Redirect URI > Add a platform > Redirect URIs.
- Configure for OAuth 2.0 (Modern) ROPC authentication mode (optional).

Calendar And Client Configurations

### Exchange Server/Microsoft 365 Configuration

Calendar Type: EXCHANGE (Choose a Microsoft Calendar)

Exchange Server URL/IP: https://outlook.office365.com/EWS/Exchange.asmx (Provide a Microsoft Server URL/IP)

Exchange Schema Version: Exchange2016 (Select a Microsoft Exchange Schema Version)

Permission: ImpersonationAll (Choose a permission to grant access to user accounts)

Authentication Method: OAuth 2.0 (Modern), ROPC (Choose a Microsoft authentication method)

Username: imp-prm17@mrbtest1.onmicrosoft.com

Password: \*\*\*\*\*

Directory (Tenant) ID: [Redacted] (Create application on Azure Active Directory > App registrations > locate the App > Overview. Please copy and paste the Directory ID here.)

Application (Client) ID: [Redacted] (Create application on Azure Active Directory > App registrations > locate the App > Overview. Please copy and paste the Application ID here.)

[Test Connection](#)

### Client Configuration

Login Mode: OpenID Connect (OIDC) Authentication (Choose an authentication method for users to login)

PRM Login Redirect URL: https://prm.prm.local/auth/oidc-login (Once the applications have been successfully authorized and granted an authorization code or access token, Azure AD redirects the user to a page on PanL PRM.)

To set the Login Redirect URL, you need to copy and paste the link to Azure Portal > Azure Active Directory > App Registrations > New registration > Create a new App > Add a Redirect URL > Add a platform > Redirect URIs.

[Discard Changes](#) [Save](#)

Input the following in the respective fields:

- **Calendar Type**  
Refers to the Calendar Type – Exchange / Microsoft 365.
- **Exchange Server URL / IP**  
Refers to the Exchange Server URL/IP address.
- **Exchange Schema Version**  
Refers to the Microsoft Exchange Server Scheme version.
- **Permission**  
Refers to the permission to be granted to user accounts.

- **Authentication Method**  
*OAuth 2.0 (Modern) ROPC* - Refers to a standard protocol used for authentication and authorization between different applications and services.
- **Username/Password** – Refers to the Exchange/Microsoft 365 Server login credentials.
- **Directory (Tenant) ID** - The Microsoft 365 tenant ID is a globally unique identifier that is unique to each organization or domain. This value can be obtained from Azure Portal > Azure Active Directory > Properties page > Tenant ID.
- **Application (Client) ID** – A Client ID is a unique identifier assigned to a client application during the registration process with the authorization server or identity provider. This value can be obtained from Azure Portal > Azure Active Directory > App Registrations > locate the App > Client ID.

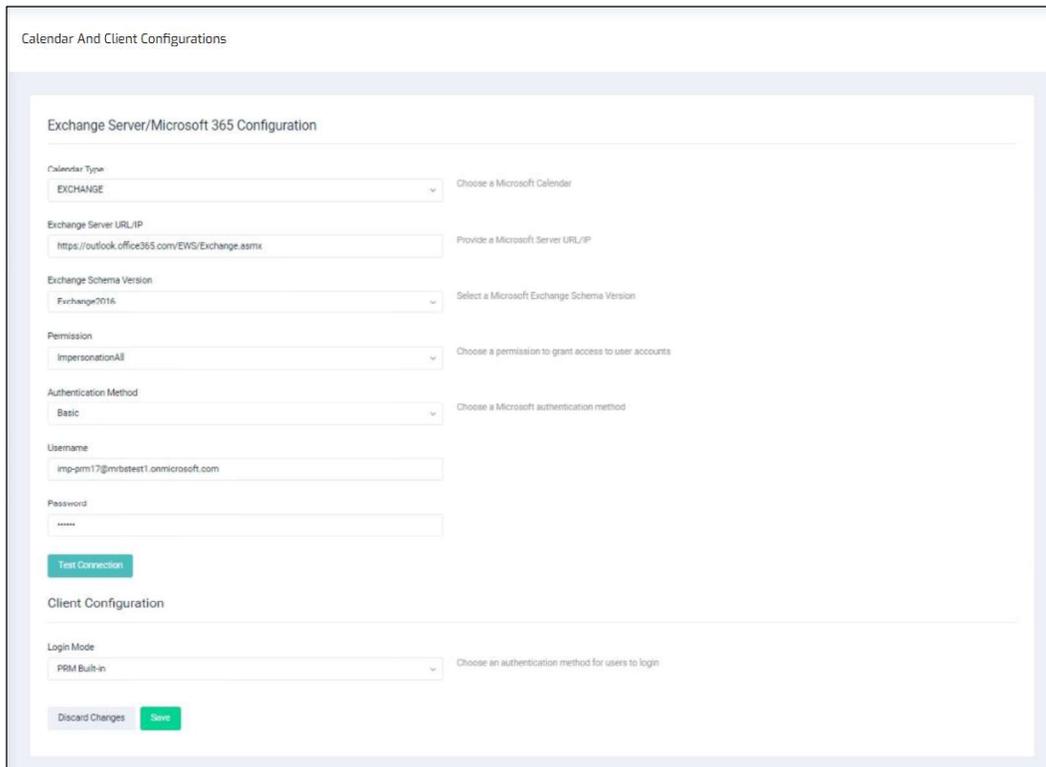
#### Client Configuration

- **Login Mode** – Refers to the authentication mode for users to login - *OpenID Connect (OIDC) Authentication or PRM Authentication*.
- **Redirect URL** - Once the applications have been successfully authorized and granted an authorization code or access token, Azure AD redirects the user to a page on PanL PRM.
  - *PRM Login Redirect URL:* To set the Login Redirect URL, you need to copy and paste the link to Azure Portal > Azure Active Directory > App Registrations > New registration > Create a new App > Add a Redirect URI > Add a platform > Redirect URIs.

Upon configuring for OAuth 2.0 (Modern) Client Credentials or OAuth 2.0 (Modern) ROPC (Resource Owner Password Credentials), click on **[Save]** to store the changes, if any.

#### 4.1.2.2 If connected to Exchange Server

- Configure for *Basic / NTLM authentication / NTLM Ignore Certificate Validation* mode (Optional).



The screenshot displays the 'Calendar And Client Configurations' interface. It is divided into two main sections: 'Exchange Server/Microsoft 365 Configuration' and 'Client Configuration'.

**Exchange Server/Microsoft 365 Configuration:**

- Calendar Type:** A dropdown menu set to 'EXCHANGE'. A note says 'Choose a Microsoft Calendar'.
- Exchange Server URL/IP:** A text input field containing 'https://outlook.office365.com/EWS/Exchange.asmx'. A note says 'Provide a Microsoft Server URL/IP'.
- Exchange Schema Version:** A dropdown menu set to 'Exchange2016'. A note says 'Select a Microsoft Exchange Schema Version'.
- Permission:** A dropdown menu set to 'ImpersonationAll'. A note says 'Choose a permission to grant access to user accounts'.
- Authentication Method:** A dropdown menu set to 'Basic'. A note says 'Choose a Microsoft authentication method'.
- Username:** A text input field containing 'imp-prm17@microsoft.com'.
- Password:** A text input field with masked characters '\*\*\*\*\*'.
- A 'Test Connection' button is located below the password field.

**Client Configuration:**

- Login Mode:** A dropdown menu set to 'PRM Built-in'. A note says 'Choose an authentication method for users to login'.
- At the bottom, there are 'Discard Changes' and 'Save' buttons.

Input the following in the respective fields:

- **Calendar Type**  
Refers to the Calendar Type – Exchange / Microsoft 365.
- **Exchange Server URL / IP**  
Refers to the Exchange Server URL/IP address.
- **Exchange Schema Version**  
Refers to the Microsoft Exchange Server Scheme version.
- **Permission**  
Refers to the permission to be granted to user accounts.
- **Authentication Method**  
*Basic* - Refers to basic authentication for Exchange Server  
*NTLM (New Technology Lan Manager)* - Refers to the server-based authentication.
- **Username / Password** – Refers to the Exchange/Microsoft 365 Server login credentials.

Upon configuring for Basic / NTLM, click on **[Save]** to store the changes, if any.

#### **Exchange Server / Microsoft 365 Test Connection**

Upon updating the calendar server and PRM Server settings, click on **[Test Connection]** to verify the connection between the Exchange/Microsoft 365 Server and PRM Server.

## 4.2 Change Password



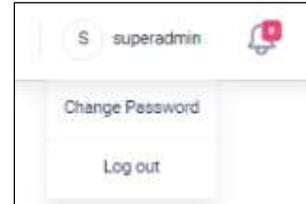
**Note:** The change password function is applicable only for superadmin account. i.e. if the selected *Login Mode = Open ID-Connect (OIDC) Authentication*.

To change the default admin password –

→ Click on **S superadmin**. Select **Change Password**.

→ Enter the following -

- ✓ Old Password
- ✓ New Password
- ✓ Confirm New Password



### Change Password

Old password  
.....

New password  
.....

Your password must include:

- ✓ At least 1 letter
- ✓ At least 1 number
- ✓ 8 to 16 characters
- ✓ Should not reuse the password

Confirm new password  
.....

- ✓ Confirm Password must be the same as Enter Password

Reset Password

Upon entering the required information, click [**Reset Password**].

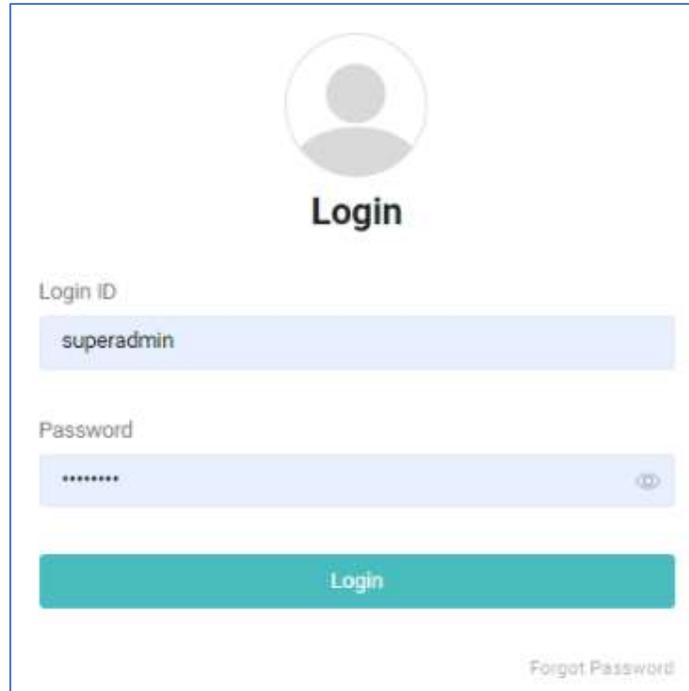
## 4.3 Forgot Password



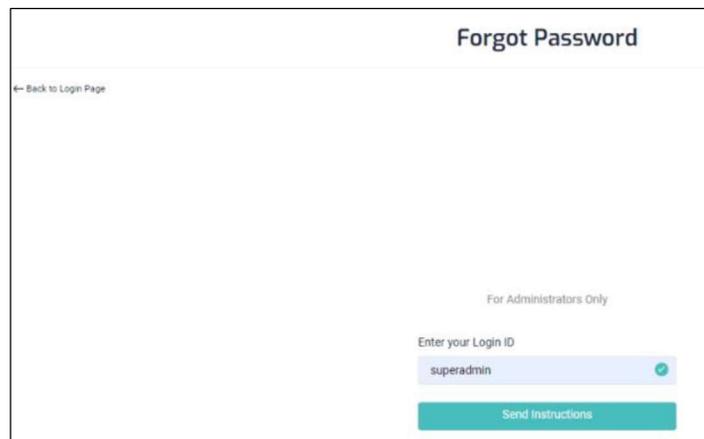
**Note:** The “Forgot Password” function is applicable to only for superadmin account, if the selected *Login Mode = Open ID-Connect (OIDC) Authentication*. On the other hand, this function is applicable for all users, if the selected *Login Mode = PRM Authentication*.

The Forgot Password function allows user to recover a forgotten password. To recover password –

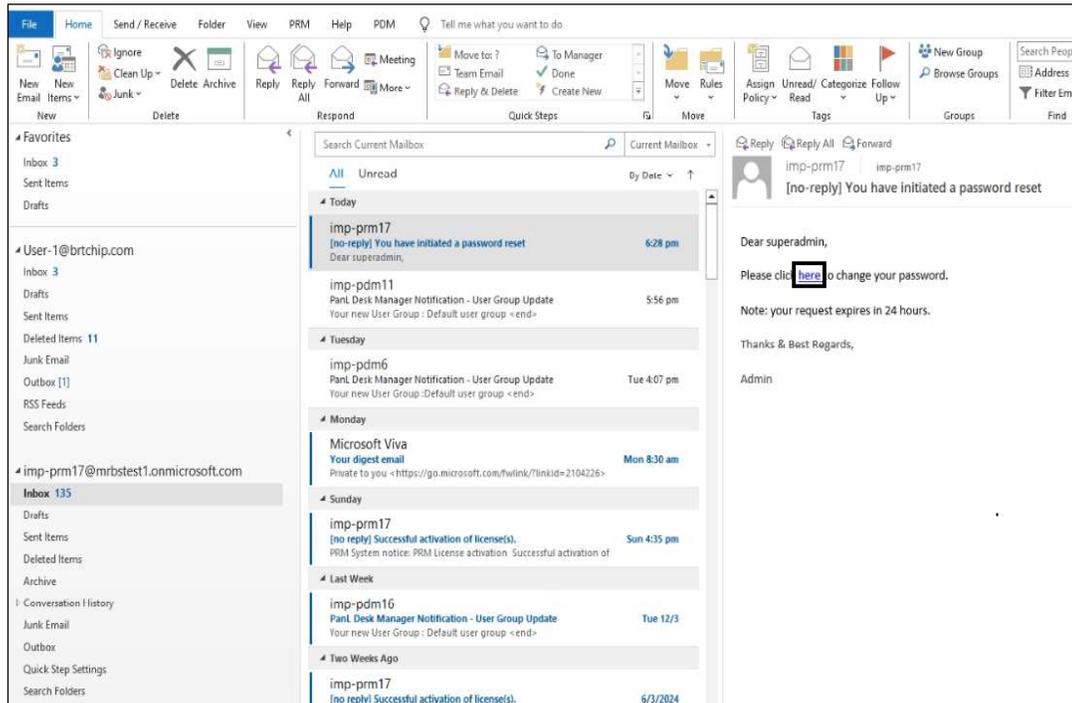
→ Click **Forgot Password?**



→ Enter *superadmin* (to reset password for superadmin) / *Email address* (to reset password for user). Click **[Send Instructions]**. For superadmin, an email is sent to the registered email address that has been configured in the “config.json” file. For user, an email is sent to the email id mentioned in the email id field.



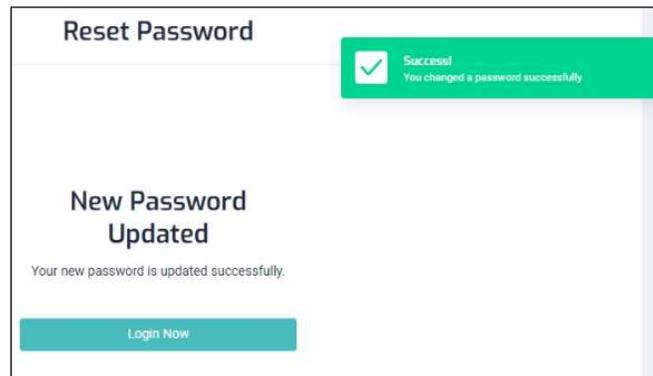
→ Click the link in the email to access the password reset interface.



→ Enter the New Password and confirm. Click **[Reset Password]** to save the new password.

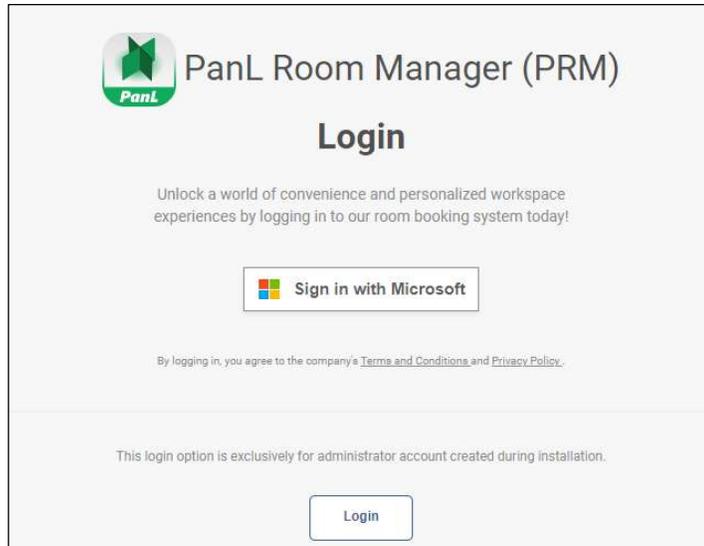


→ A message indicating that the password has been updated is displayed. Click on the link to access the PRM login interface.

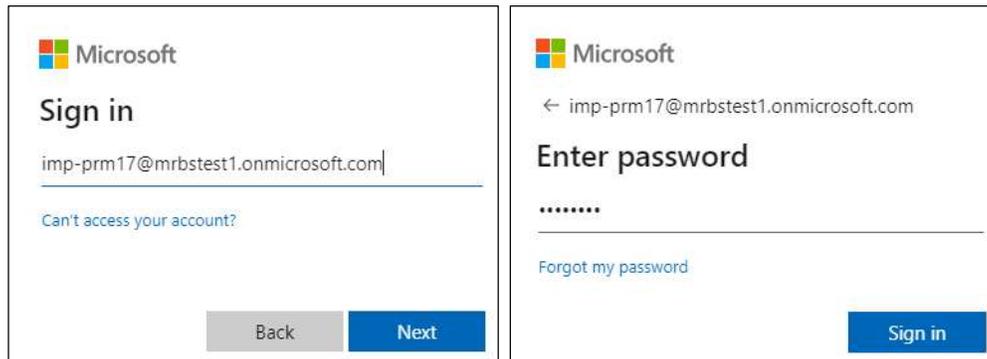


### Logging In with NON-SUPERADMIN Account Credentials

- Open any supported browser and enter the URL, for example – <https://web.prm.local>. Click **[Sign in with Microsoft]**.



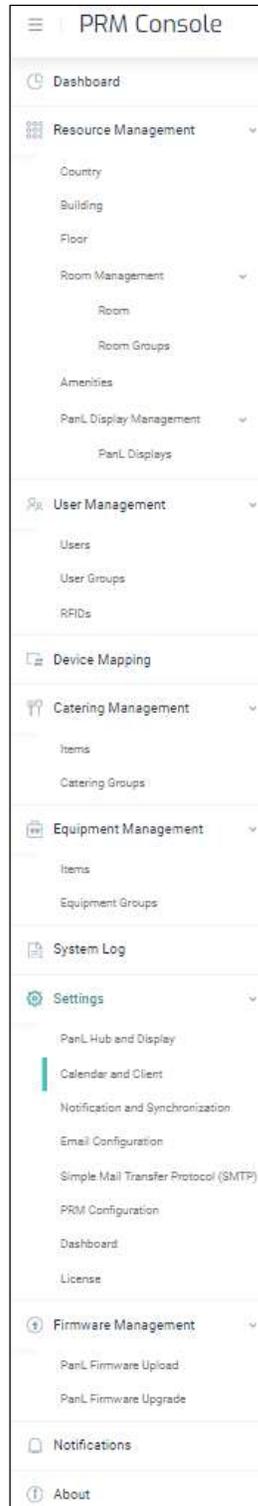
- Enter the *Microsoft User Id* and click **[Next]**; Enter the *password* and click **[Sign in]**.



- PanL Room Manager Management Console user interface is displayed. For the first time users, the PRM Management Console Dashboard will be empty. A list of menu functions (*based on the user's access privileges*) is displayed on the left side panel. To enable or disable permissions refer to [User Groups Management](#).

## 4.4 PRM Management Console Overview

The PRM Management Console menu is displayed on the left and can be extended by clicking on it to display the sub menus. The following table provides an overview of the PRM Management Console Menu/Submenu and their functions.



Menu	Submenu	Functionality	
<b>Dashboard</b>	-	Resource Summary / Booking Summary / Utilization (Room; Booking Density) / Leaderboard (Room; User) / Equipment & Catering Utilization, Miscellaneous etc.	
<b>Resource Management</b>	<b>Country</b>	→ Add / Edit / Delete / Search/ Sort Country Information	
	<b>Building</b>	→ Add / Edit / Delete / Search / Sort Building Information	
	<b>Floor</b>	→ Add / Edit / Delete Floor Information / Search / Sort Floor information	
	<b>Room Management</b>	<b>Room</b>	→ Add/ Export Room Information/ Upload Room Image/ Associate / Un-Associate PanL Displays to a room / Search/ Sort Room information
		<b>Room Groups</b>	→ Add / Edit / Delete / Search / Sort Room Group
	<b>Amenities</b>	→ Add / Edit / Delete Room Amenities / Search / Sort Amenities related information	
<b>PanL Display Management</b>	<b>PanL Displays</b>	→ View a list of PanL Displays	
<b>User Management</b>	<b>Users</b>	→ Add / Export / Edit / Delete / Search / Sort User Information	
	<b>User Groups</b>	→ Add / Edit / Delete / Search / Sort User Group	
	<b>RFIDs</b>	→ Add / Export / Edit / Delete / Search / Sort RFID	
<b>Device Mapping</b>	-	→ View PanL Hub / Device Mapping details	
<b>Catering Management</b>	<b>Items</b>	→ Add / Export / Edit / Delete / Search / Sort Catering Items	
	<b>Catering Groups</b>	→ Add / Edit / Delete / Search / Sort Catering Groups	
<b>Equipment Management</b>	<b>Items</b>	→ Add / Export / Edit / Delete / Search / Sort Equipment	
	<b>Equipment Groups</b>	→ Add / Edit / Delete / Search / Sort Equipment Groups	
<b>System Log</b>	-	→ To view System Log for system analysis purpose	
<b>Settings</b>	<b>PanL Hub and Display</b>	→ Set the rules related to PanL Hub and Display Settings; Working Hours; Meeting Room Settings	
	<b>Calendar and Client</b>	→ Update Exchange Server / O365 Information, Test Exchange Server / O365 connection, Synchronize Exchange Server / O365 Schedule, Additional Exchange Configuration and PRM Server Credentials	
	<b>Notification and Synchronization</b>	→ To configure and synchronize PRM Notification Settings	
	<b>Email Configuration</b>	→ To manage Email Configurations	
	<b>Simple Mail Transfer Protocol (SMTP)</b>	→ To configure SMTP Settings	
	<b>PRM Configuration</b>	→ To configure PRM Server Settings	
	<b>Dashboard</b>	→ To configure Dashboard Settings	
<b>License</b>	→ Generate Fingerprint / Activate License		
<b>Firmware Management</b>	<b>PanL Firmware Upload</b>	→ To upload firmware for PanL Displays	
	<b>PanL Firmware Upgrade</b>	→ To upgrade PanL Display Devices	
<b>Notifications</b>	-	→ To set notifications	
<b>About</b>	-	→ To view version information of PRM Management Console	

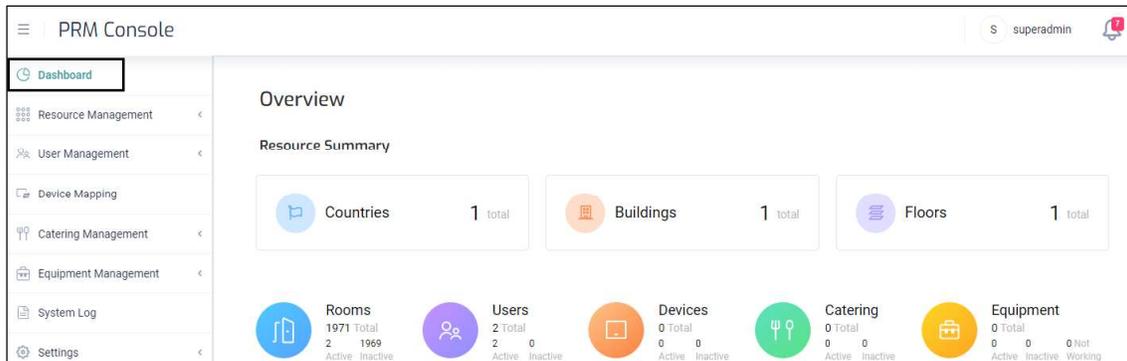
The forthcoming sections discuss each menu/submenu/function in detail.

## 4.5 Dashboard

The dashboard displays insightful statistical information at a weekly, monthly, or yearly basis from processing various room booking and user data. Through observing the statistics, management can plan and restructure room and meeting policies to improve room utilization. The dashboard view varies depending on the permission given to the respective user group. If a particular user group is not configured, then members of that user group will see a blank dashboard upon logging into PRM Management Console. Refer to [Dashboard Settings](#) for more details.

To view the dashboard -

→ Click on the **Dashboard** menu.



### Resource Summary

Dashboard's **Resource Summary** section provides a summary of resources – *Total Number of Countries; Buildings; Floors; Rooms (Active / Inactive); Users (Active / Inactive); Devices (Active / Inactive); Catering Items (Active / Inactive); Equipment (Active / Inactive)*.

### Filters

Users can **filter** Dashboard data based on *Countries; Buildings; Floors & Rooms*. Alternately, users can filter data based on *Date Range*. Upon selecting the required filter criteria and clicking [**APPLY**], the dashboard data is populated based on the applied filter criteria.

### Booking Summary

This section provides pictorial representation (doughnut chart) of information about the **Booking Summary** – *Booking Details / Booking Type / Booking Duration*.

### Utilization

The **Utilization** section provides statistics along with the pictorial / graphical representation related to **Room Utilization, Recaptured Time, Booking Density**. This section also provides a comparison of **Room Utilization VS Room Capacity, User Occupancy VS Room Capacity**.

### Leaderboard

The **Leaderboard** section provides information pertaining to **Room Leaderboard** (*Most Used Rooms / Least Used Rooms*) and **User Leaderboard** (*Most Active Users / Top Ghost Users*).

### Equipment and Catering

This section provides a comparison of **Catering Items VS User Groups** and **Equipment Items VS User Groups**.

## Miscellaneous

The **Miscellaneous** section provides pictorial representation of information pertaining to **Booking Sources** (*Outlook Add-in / On-Spot*) and **Number of Attendees** in the meeting (*Outlook Add-in*).

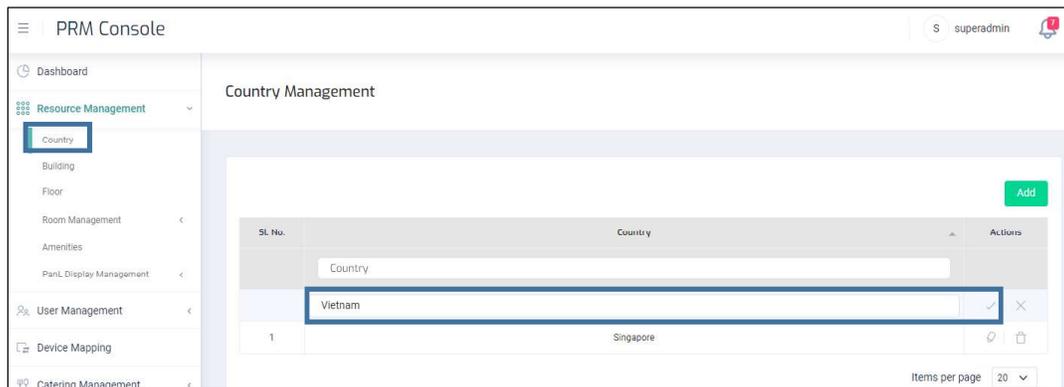
## 4.6 Resource Management

### 4.6.1 Country Management

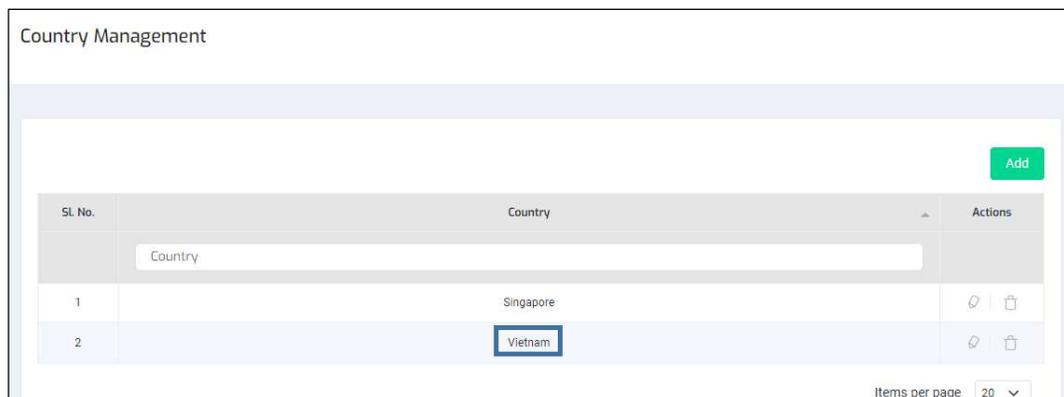
Through the Country Management interface, admin users can add, edit, delete, and search countries within their organization in which the room resides. Multiple countries can be configured for organizations which have multi-site offices.

#### Add Country

→ Click on the **Resource Management > Country** menu; Click **[Add]** and enter the Country name\*, click ✓ to save.

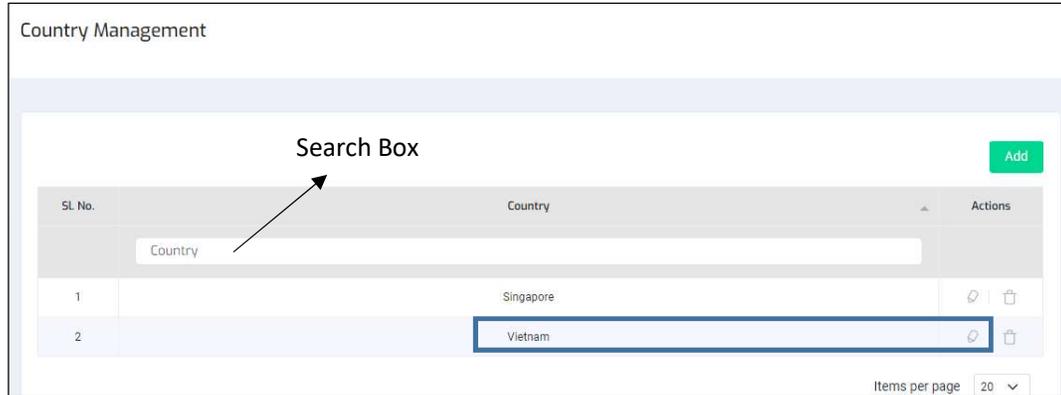


→ The newly added country is displayed on the table and an appropriate message is displayed.



## Edit Country

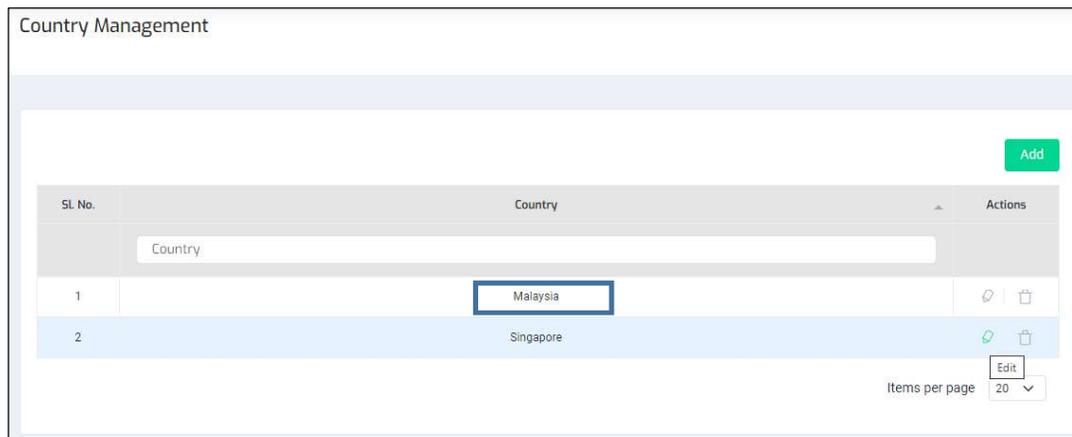
- From the table, click **Edit** for the country that needs to be updated. The search country function can be used by providing the search parameters in the **Search** box to filter based on Country.



- Edit the *Country* details as required and click ✓ to save the updated information.



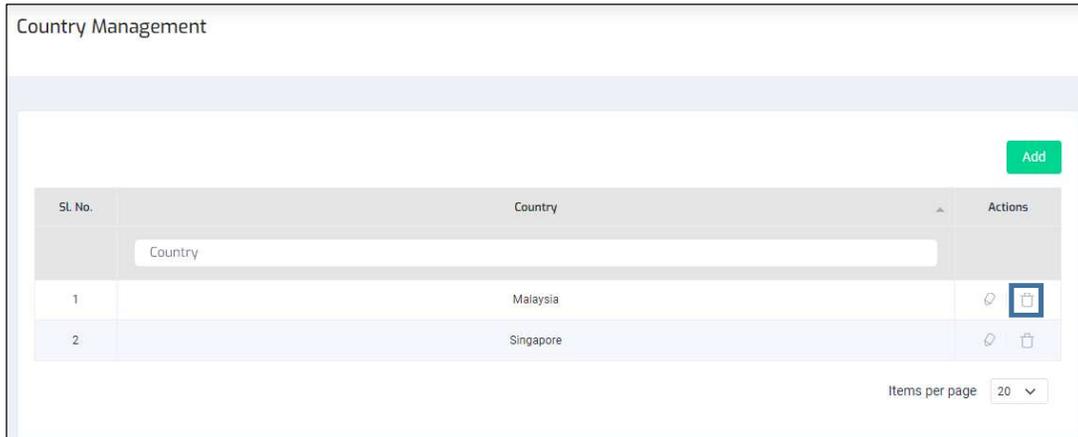
- The updated country is displayed on the table and an appropriate message is displayed.



## Delete Country

To delete country -

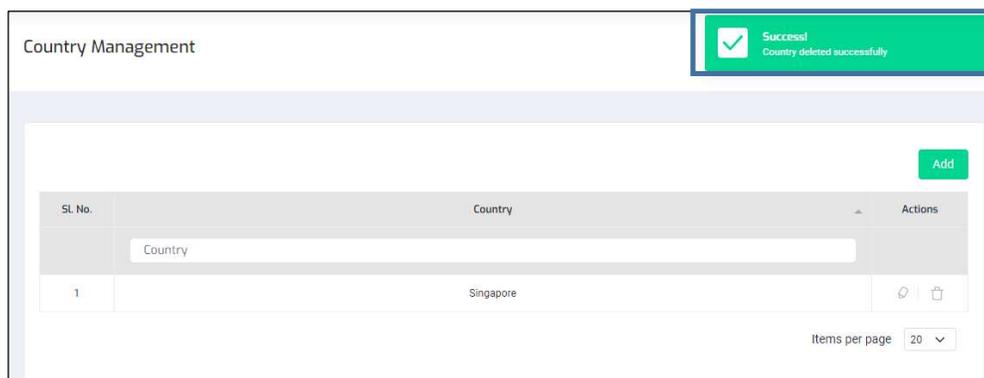
- From the table, click on **Delete** for the country which needs to be deleted. The search country function can be used by providing the search parameters in the **Search** box to filter based on *Country*.



- A confirmation dialog box is displayed. Click **[Delete]** button to delete the country or **[Not Now]** to cancel the delete operation.



- Upon clicking **[Delete]** button, the country details are deleted from the table and an appropriate message is displayed.



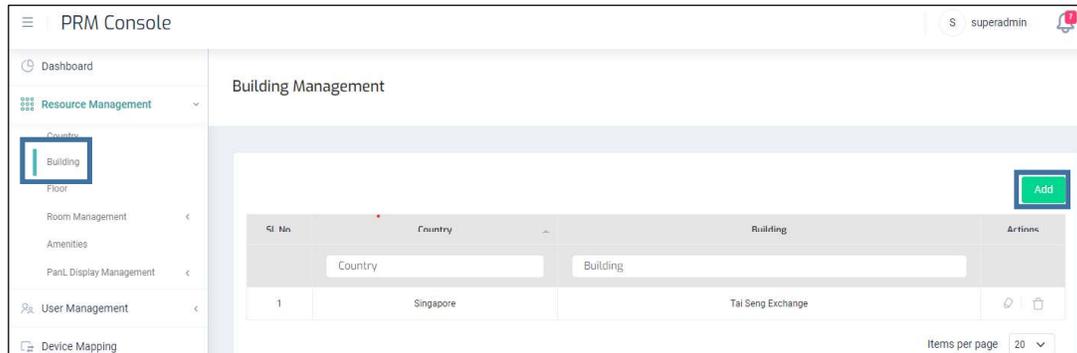
Upon deletion, the data is permanently removed and will no longer be available.

## 4.6.2 Building Management

In the Building Management interface, admin users can create, edit, delete, and search buildings within their organization in which the room resides. Organizations with multi-site offices can configure multiple buildings at different locations or countries.

### Add Building

→ Click on the **Resource Management > Buildings** menu; Click **[Add]**.



→ Enter the following information in the Add New Building interface.

#### Add New Building

Name	Time Zone
<input type="text" value="Enter Name"/>	UTC +08:00
Country	Status
<input type="text"/>	Active
Inactive To	
<input type="text" value="2024-04-06"/>	
Address	
<input type="text" value="Enter Address"/>	
Card Type	Frequency
<input type="text" value="Select a Card Type"/>	<input type="text" value="Select Frequency"/>

\*Please note that you are not allowed to select both high and low frequency cards at the same time. However, you can select dual frequency cards along with either high or low frequency cards. If you only select dual frequency cards, you can select a single frequency for that (low or high frequency).

Please select card(s) first and the frequency will be applied to the selected card(s).

- **Building Name**
- **Time Zone**
- **Country**
- **Building Status – Active / Inactive**
- **Duration** until which the building will be inactive (This field will be displayed and applicable only if the Inactive status is selected)
- **Building Address**
- **RFID Card Type & Frequency** (Refer to the Table 1 for details)

### Room and Equipment Attributes

**Operating Hours**  
Policies utilized only for statistics calculation

Start Time:

End Time:

Monday
  Tuesday
  Wednesday
  Thursday
  Friday
  Saturday
  Sunday

---

**Non Operating Days**  
Policies utilized for statistics calculations and booking restriction

[Add](#)

[Discard Changes](#)
[Save](#)



**Note:** If a building is made inactive, then all the floors/rooms under that building will be made inactive.

- Building's operating hours Start Time and End Time
- Click **[Add]** to add the Non-Operating Days.

(The Panel Display devices will turn on/off based on these settings. The display will turn off after 15 minutes from end time by default if no bookings are made after). Operating hours are used for statistics. Bookings are allowed within operating hours.

Upon providing the necessary information, click **[Save]**. The newly added building information is added to the table.

### Building Management

[Add](#)

Sl No.	Country	Building	Actions
	<input type="text" value="Country"/>	<input type="text" value="Building"/>	
1	Singapore	Tai Seng Exchange	
2	Singapore	Solaris Building	

Items per page:

Card Type	Frequency Type	Frequency
Mifare Desfire EV2 4k	High	13.56MHz
Mifare class 1k	High	13.56MHz
TK4100	Low	125KHz
EM4100	Low	125KHz
Mifare Ultralight	High	13.56MHz
EM4200 + Mifare Class	Dual	125KHz – 13.56MHz
HID Proximity	Low	125KHz
HID iclass+Proximity	Dual	125KHz – 13.56MHz

**Table 1 – RFID Card & Frequency**

## Edit Building

Editing building information is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#).

## Delete Building

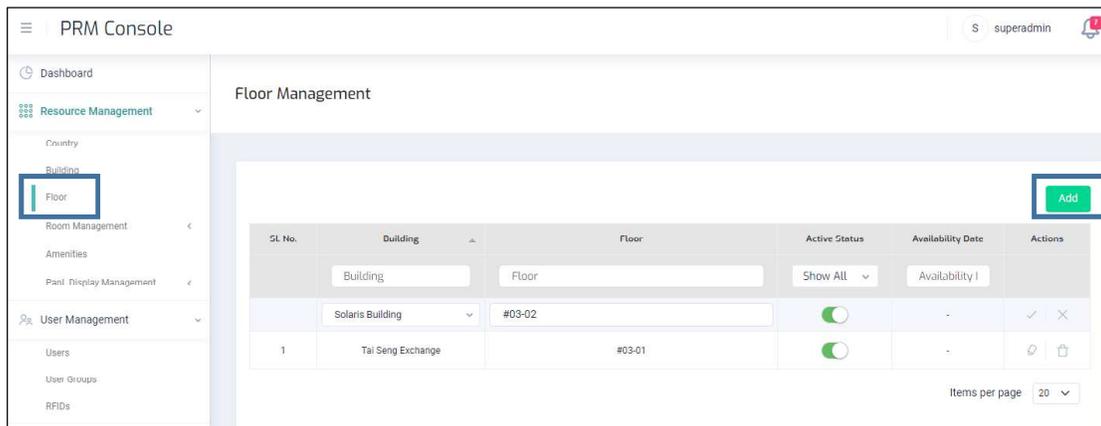
Deleting building information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

## 4.6.3 Floor Management

In the Floor Management interface, admin users can add, edit, delete, and search for floors within a building.

### Add Floor

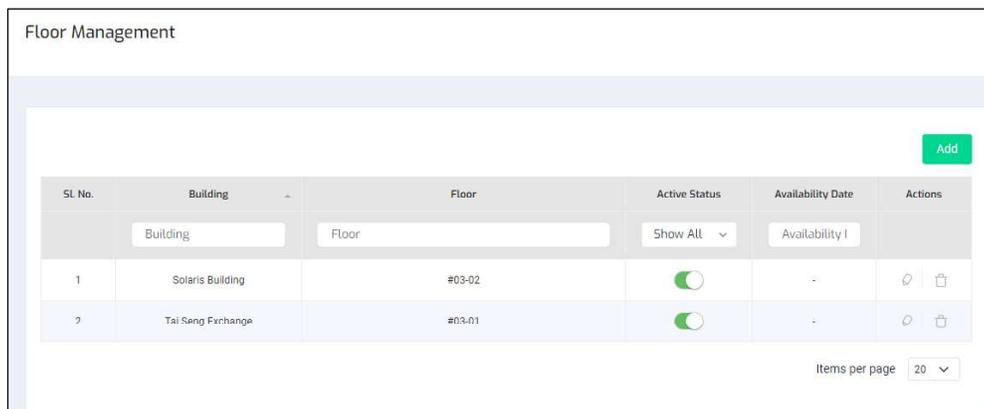
→ Click on the **Resource Management > Floor** menu; Click **[Add]**.



→ Input the following information -

- *Building name* (from the drop-down box)
- *Floor#*
- *Floor Status* – Active / Inactive
- *Available Date* (This field will be displayed and applicable only if the Inactive status is selected)

Upon providing the necessary information, click √. The newly added floor information is added to the table.



### **Edit Floor**

Editing floor information is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#)

### **Delete Floor**

Deleting floor information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

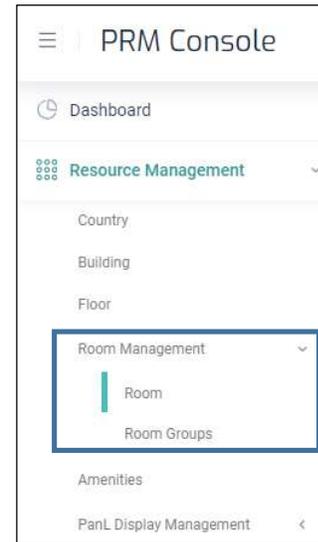
## 4.6.4 Room Management

### Rooms

Through the Room Management interface, admin users can create, edit, delete, and search meeting rooms.

### Add Rooms

- Click on the **Resource Management > Room Management > Room** menu. A list of meeting rooms (if any) will be displayed.



Search the *Email Address*\* associated with the room to configure the attributes. The rooms created in the calendar server should be reflected if synchronization is done. If email address is not found, refer to [Notification Settings](#) and ensure that the sync with the Exchange Server/Office365 timer job is enabled and set it to synchronize as required.

- Alternatively, admin user can click **[Add]** to manually enter a room email address that was created in the calendar server.



**Note:** The room information is stored in the PRM database. Upon synchronizing with the Calendar Server, the data in the PRM database will be overwritten.

- Assign a *Room Name*\*.
- Enter the *Room Capacity*.
- Click on  to save the room information.

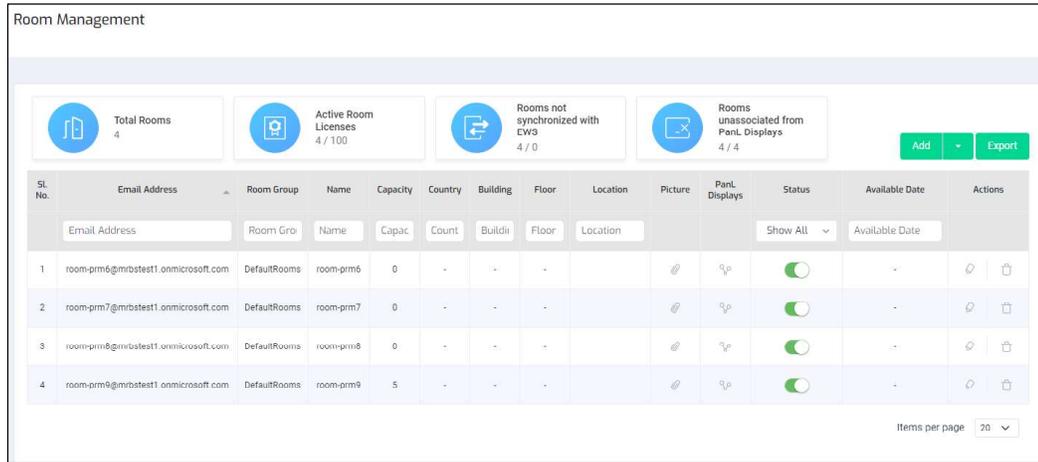
Room Management

Total Rooms 3 Active Room Licenses 3 / 100 Rooms not synchronized with EWS 3 / 0 Rooms unassociated from PanL Displays 3 / 3 Add Export

SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	PanL Displays	Status	Available Date	Actions
	<input type="text" value="Email Address"/>	<input type="text" value="Room Gro"/>	<input type="text" value="Name"/>	<input type="text" value="Capac"/>	<input type="text" value="Count"/>	<input type="text" value="Buildi"/>	<input type="text" value="Floor"/>	<input type="text" value="Location"/>			<input type="checkbox"/>	<input type="text" value="Available Date"/>	<input type="checkbox"/> <input type="checkbox"/>
	<input type="text" value="room-prm9@mrbstest1.onmicrosc"/>	<input type="text" value="Room Gro"/>	<input type="text" value="room-pr"/>	<input type="text" value="5"/>	<input type="text" value="Coun"/>	<input type="text" value="Buildi"/>	<input type="text" value="Floor"/>	<input type="text" value="Location"/>			<input checked="" type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>
1	room-prm6@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-			9p	<input checked="" type="checkbox"/>	-	
2	room-prm7@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-			9p	<input checked="" type="checkbox"/>	-	
3	room-prm8@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-			9p	<input checked="" type="checkbox"/>	-	

Items per page 20

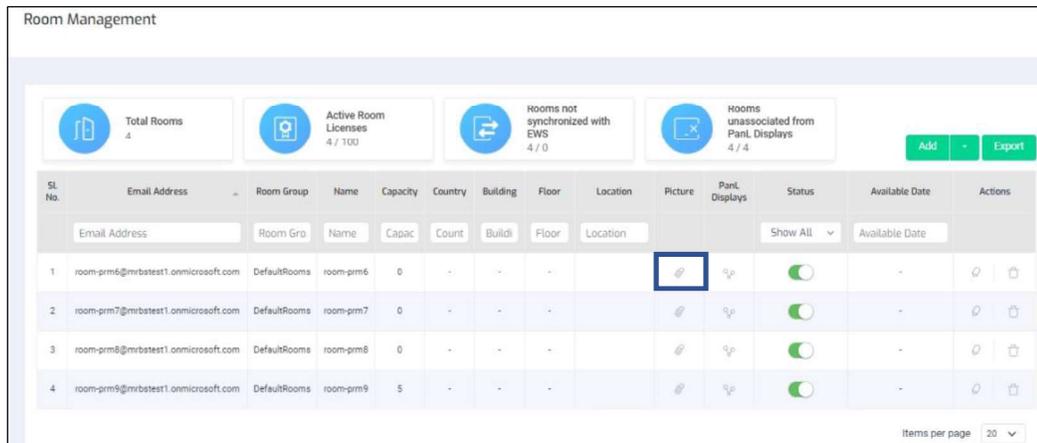
- Upon saving the room information successfully, the newly added room is displayed on the table. The new room is assigned to "DefaultRooms" Room Group. The *country, building and floor* columns are empty. Room(s) can be assigned to a specific room group, country, building, and floor using the [Room Groups](#) interface.



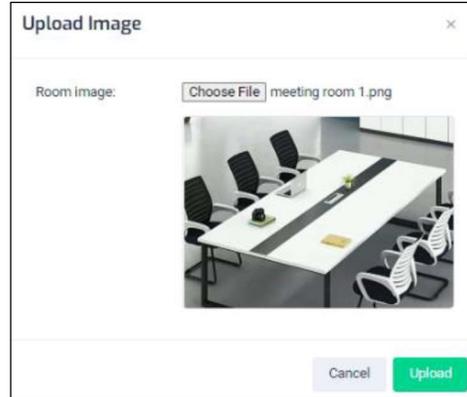
- Click on Associate/Unassociate PanL Displays icon . Refer to the section [Associate PanL Displays to Room/Unassociate PanL Displays from Meeting Rooms](#) for details.
- Set the meeting room Status to *Active* or *Inactive* using the toggle button. If the meeting room status is set to *Inactive*, then select an *Available Date* (the date from which the meeting room will be active).
- Click on to save the room information.

### Upload Meeting Room Image

- Upon saving the meeting room information, upload a picture of the meeting room by clicking on attach icon .



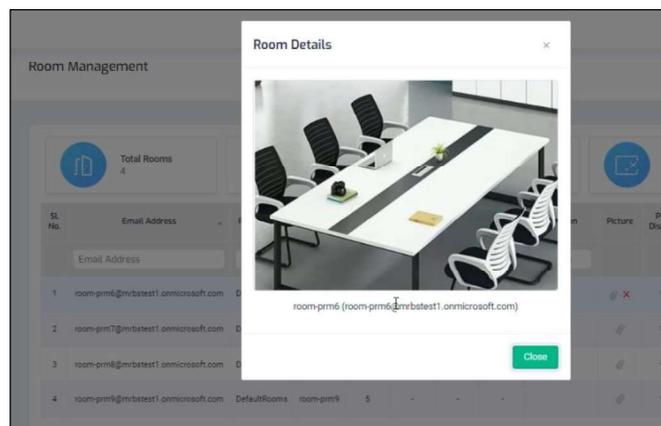
- Choose the meeting room image file and click [Upload].



### View Meeting Room Image

- Upon successfully uploading the file, an appropriate message is displayed. The uploaded image can be viewed by clicking on the attach icon .

Sl. No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	Panel Displays	Status	Available Date	Actions
1	room-prm6@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-					-	 
2	room-prm7@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-					-	 
3	room-prm8@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-					-	 
4	room-prm9@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-					-	 



### Remove Meeting Room Image

- The meeting room image can be deleted by clicking on the Remove icon .

Sl. No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	Panel Displays	Status	Available Date	Actions
1	room-prm6@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-					-	 

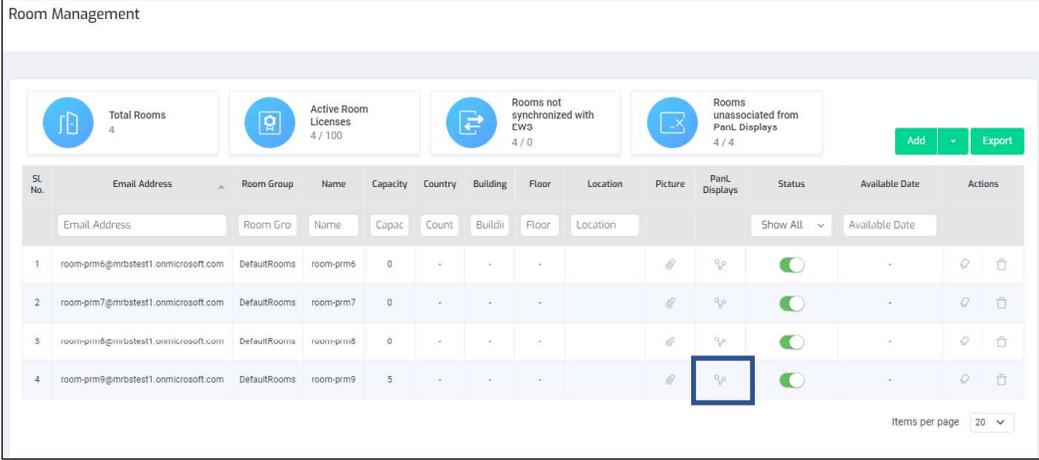
### Associate PanL Displays to Meeting Room



**Note:** Ensure that the Room is assigned to a country, building and floor before associating PanL Displays to Room. The [Room Groups](#) interface can be used to assign room.

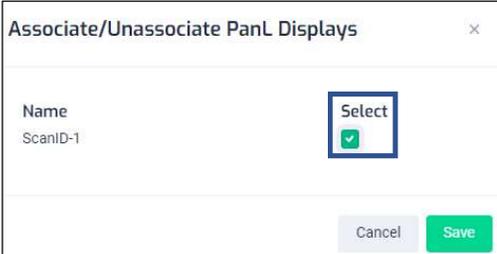
To associate a single or multiple PanL displays to a meeting room –

→ From the table, click on *Associate/Unassociate PanL Displays* icon .



SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	PanL Displays	Status	Available Date	Actions
1	room-prm6@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-					-	
2	room-prm7@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-					-	
3	room-prm8@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-					-	
4	room-prm9@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-					-	

→ The un-associated PanL Displays are displayed (if any). Select any PanL Display to be associated with the meeting room by clicking the checkbox and click **[Save]**.



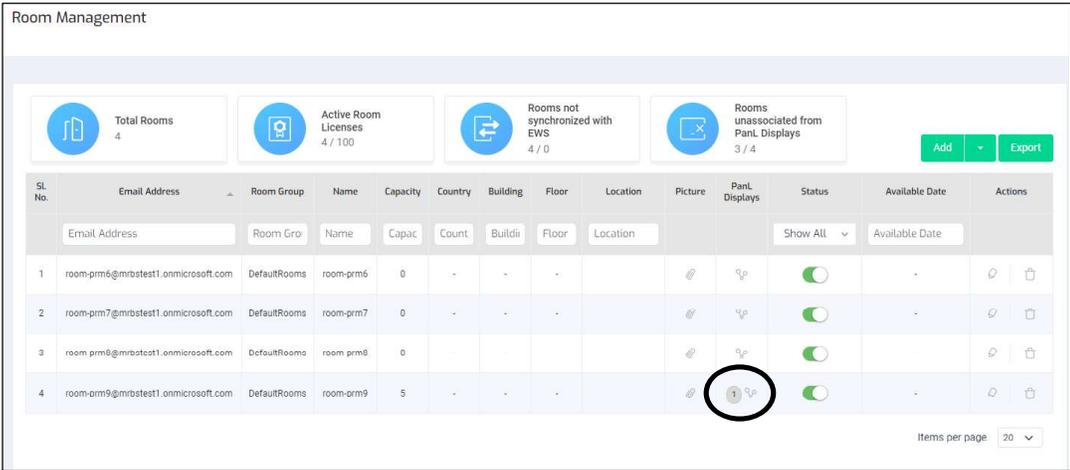
Associate/Unassociate PanL Displays

Name  
ScanID-1

Select

Cancel Save

→ The PanL Display ID associated to a meeting room is indicated on the table. For example, if PanL Display Name or ID is "1", then 1 is displayed.

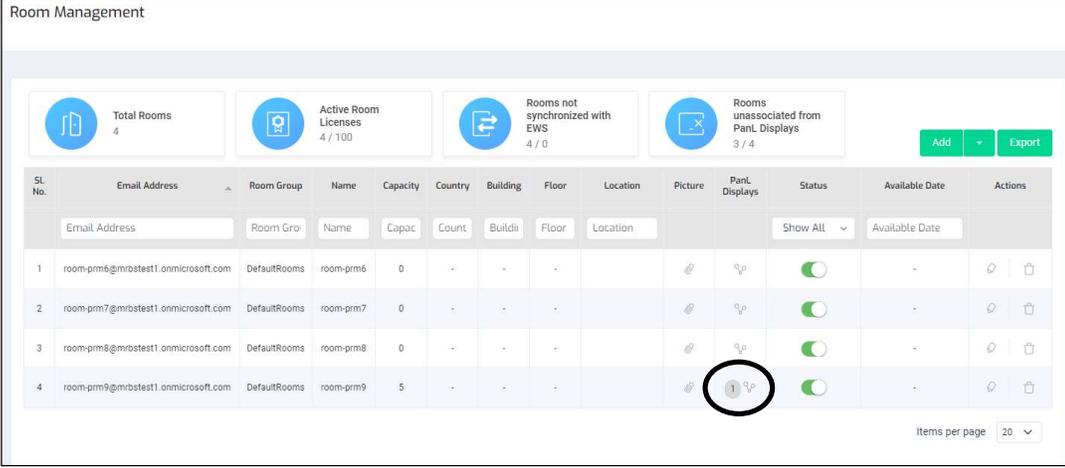


SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	PanL Displays	Status	Available Date	Actions
1	room-prm6@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-					-	
2	room-prm7@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-					-	
3	room-prm8@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-					-	
4	room-prm9@mrbstest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-			1		-	

### Un-associate PanL Displays from Meeting Room

To un-associate PanL Displays from meeting rooms –

→ From the table, click on *Associate/Unassociate PanL Displays* icon  .



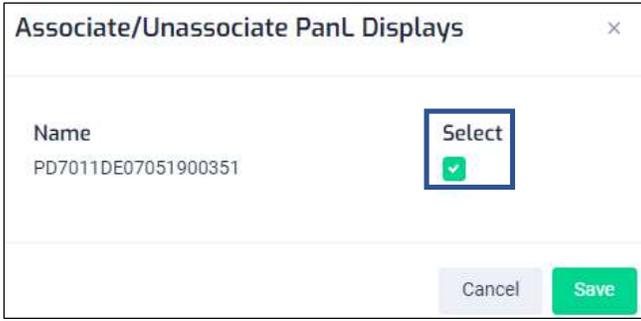
Room Management

Total Rooms 4 | Active Room Licenses 4 / 100 | Rooms not synchronized with EWS 4 / 0 | Rooms unassociated from PanL Displays 3 / 4

SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	PanL Displays	Status	Available Date	Actions
1	room-prm6@mibstest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-				<input checked="" type="checkbox"/>	-	
2	room-prm7@mibstest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-				<input checked="" type="checkbox"/>	-	
3	room-prm8@mibstest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-				<input checked="" type="checkbox"/>	-	
4	room-prm9@mibstest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-				<input checked="" type="checkbox"/>	-	

Items per page 20

→ The list of associated PanL Displays (if any) is displayed. Un-associate the PanL Displays by deselecting the checkbox and click **[Save]**.



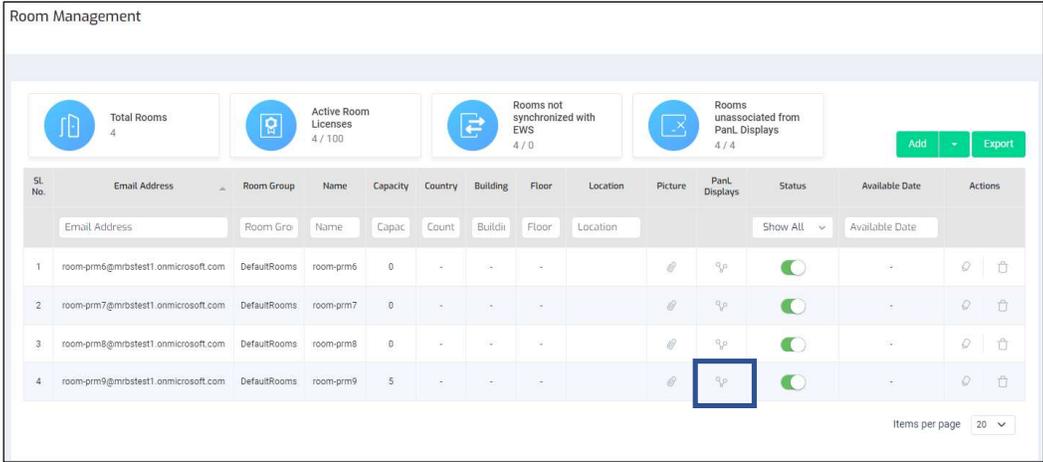
Associate/Unassociate PanL Displays

Name  
PD7011DE07051900351

Select

Cancel Save

→ The PanL Display Name or ID will be removed as shown below.



Room Management

Total Rooms 4 | Active Room Licenses 4 / 100 | Rooms not synchronized with EWS 4 / 0 | Rooms unassociated from PanL Displays 4 / 4

SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	PanL Displays	Status	Available Date	Actions
1	room-prm6@mibstest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-				<input checked="" type="checkbox"/>	-	
2	room-prm7@mibstest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-				<input checked="" type="checkbox"/>	-	
3	room-prm8@mibstest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-				<input checked="" type="checkbox"/>	-	
4	room-prm9@mibstest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-				<input checked="" type="checkbox"/>	-	

Items per page 20

### Edit Room

Editing room information is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#).

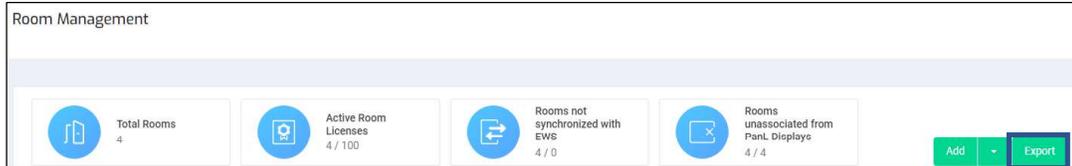
### Delete Room

Deleting room information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### Export Room Configuration to a CSV File

To export all the room configuration to a .csv file for reporting or future configuration purposes –

→ Click **[Export]**.



→ "Rooms.csv" file can be opened or stored.

The screenshot shows an Excel spreadsheet titled 'rooms.csv'. The data is as follows:

address	roomName	location	capacity	groupName
room-prm9@mrbstest1.onmicrosoft.com	room-prm9		5	DefaultRooms
room-prm8@mrbstest1.onmicrosoft.com	room-prm8		0	DefaultRooms
room-prm7@mrbstest1.onmicrosoft.com	room-prm7		0	DefaultRooms
room-prm6@mrbstest1.onmicrosoft.com	room-prm6		0	DefaultRooms

Sample Rooms.csv file

### Import Room Configuration from a CSV File

To import room configurations in bulk –

→ Click on **Add** drop down control and select **[IMPORT]**. Click **Download** link to download an import sample template or click **[Choose File]** and select the .csv file to upload.



→ Upon selecting the file, the upload function button is enabled. Click **[Upload]**.

→ The preview of the uploaded data is displayed in the table.

The screenshot shows a 'Preview' table with the following data:

No.	Room Name	Email Address	Location	Capacity	Group Name	Status	Active Status	Actions
<input type="checkbox"/>	1	room-prm9@mrbstest1.onmicrosoft.com		5	DefaultRooms	<span style="color: red;">!</span>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	2	room-prm8@mrbstest1.onmicrosoft.com		0	DefaultRooms	<span style="color: red;">!</span>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	3	room-prm7@mrbstest1.onmicrosoft.com		0	DefaultRooms	<span style="color: red;">!</span>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	4	room-prm6@mrbstest1.onmicrosoft.com		0	DefaultRooms	<span style="color: red;">!</span>	<input type="checkbox"/>	<input type="checkbox"/>

- If any invalid rows found, click on the ! icon to see the reason for the invalid rows and try to fix it. Alternatively, if it cannot be fixed, delete them before saving. Click **[Save]**.

Preview

Active Room Licenses 4 / 100

Delete Selected Delete All Invalid Data (0)

No.	Room Name	Email Address	Location	Capacity	Group Name	Status	Active Status	Actions
1	room-prm9@mrbtest1.onmicrosoft.com	room-prm9		5	DefaultRooms			

Save

- A confirmation window is displayed. Click **[Yes]** to save the room information or **[No]** to discard the changes.

Save Rooms

Are you sure you want to save rooms ?

Yes No

- Upon saving, an appropriate message is displayed. To view the rooms, click on the link "Click here to View rooms".

Import Rooms

Sample Template [Download](#)

Upload CSV  No file chosen

1 room(s) out of 1 are successfully saved [Click here to View rooms.](#)

- The room management interface is displayed with the updated room list.

Room Management

Total Rooms 4 Active Room Licenses 4 / 100 Rooms not synchronized with EWS 4 / 0 Rooms unassociated from Panel Displays 4 / 4

Add Export

SL No.	Email Address	Room Group	Name	Capacity	Country	Building	Floor	Location	Picture	Panel Displays	Status	Available Date	Actions
1	room-prm6@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm6	0	-	-	-					-	
2	room-prm7@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm7	0	-	-	-					-	
3	room-prm8@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm8	0	-	-	-					-	
4	room-prm9@mrbtest1.onmicrosoft.com	DefaultRooms	room-prm9	5	-	-	-					-	

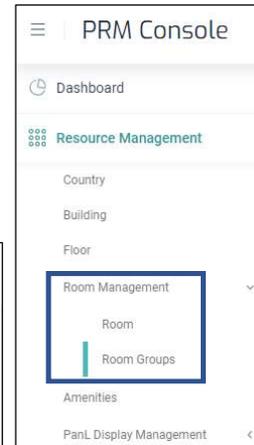
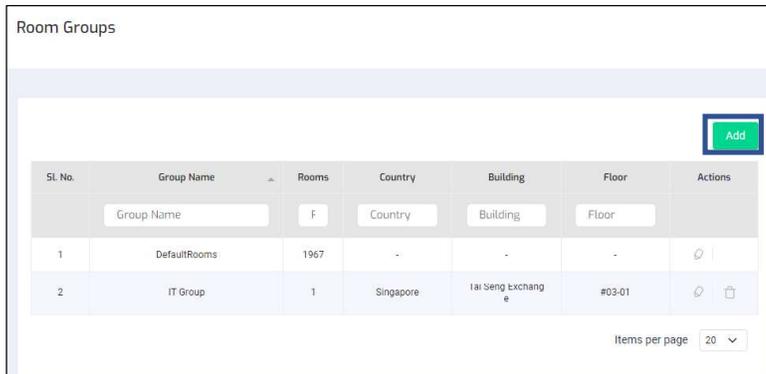
Items per page 20

## Room Groups

Through the Room Groups interface, admin users can create, edit, delete, and search room groups.

To add Room Groups –

- Click on the **Resource Management > Room Management > Room Groups** menu. A list of room groups (if any) will be displayed. Click **[Add]** to add a new room group.



The Create Room Group interface is displayed. Input the following – *Group Name; Country; Building and Floor*. Click **[Add rooms]**.

Group Name: Room Group 2

Country: Singapore

Building: Tai Seng Exchange

Floor: #03-01

Rooms in this group: **Add rooms**

**POLICIES** | AMENITIES

**Allow Booking**  
When enabled, rooms in this group are available for bookings.

**Minimum/Maximum Hours per Booking**  
When enabled, you can set minimum and maximum booking duration.

**On-spot Booking**  
When enabled, on-spot bookings are allowed for this group.

- Select the room. Users may also search for a particular room using the Filter box. Click **[OK]**.



→ The selected room is added.

Assign the relevant [Room Booking Policies](#) and Amenities to the room group. Click [**Save**].

**Room Booking Policies**

Room Booking	When enabled	When disabled	Default State
Allow Booking	Rooms in this group are available for bookings.	Rooms in this group are NOT available for bookings.	Disabled
Min. & Max. Hours per Booking	Can set the minimum & maximum duration per booking	Cannot set the minimum & maximum duration per booking	Disabled
On-Spot Booking	On-spot booking is allowed for this group	This room group cannot perform on-spot booking	Disabled
	Can select/de-select the <i>Only on-spot booking</i> checkbox. If the checkbox is selected, then only on-spot bookings are allowed for this room group		
Allow to End & Extend a Booking	This room group is allowed to end and extend the booking	Bookings are restricted on the display panel for this room group	Disabled
Other Room Booking	This room group is allowed to book other room using this room's PanL Display	This room group is NOT allowed to book other room using this room's PanL Display	Disabled
Same day Booking	This room group is allowed to do same day bookings	This room group cannot do same day booking but can-do Advanced Booking OR Window Booking	Disabled

Advanced Booking	The room group must book in advance no less than "X" hours	The room group cannot do advance booking but can-do Same day Booking OR Window Booking	Disabled
Window Booking	This room group can set a window rule in which bookings can be done by setting values for the following fields – <ul style="list-style-type: none"> <li>Cannot book in advance no less than "X" Hours</li> <li>Advance bookings are not allowed to be made beyond "Y" hours</li> </ul>	Room group is NOT allowed to set a window rule for bookings	Disabled
Recurrence Booking	This room group is allowed to make recurrent bookings; Room group can select/de-select the <i>Cancel booking series if unclaimed</i> checkbox. If selected, members can define the number of times.	Room group is NOT allowed to make recurrent bookings	Disabled
Claim Booking	Users must claim rooms to confirm booking. Unclaimed rooms will be released. The Claim Window Start Time Offset & End Time Offset can be set. Claim functionality will be ignored for the duration configured in the "Claim Ignore Duration" field.	Claim booking option will not be available.	Disabled

**Table 2 – Room Booking Policies**

→ The newly added room group is displayed on the table.

Room Groups

[Add](#)

Sl. No.	Group Name	Rooms	Country	Building	Floor	Actions
	<input type="text" value="Group Name"/>	<input type="text" value="F"/>	<input type="text" value="Country"/>	<input type="text" value="Building"/>	<input type="text" value="Floor"/>	
1	DefaultRooms	1964	-	-	-	
2	IT Group	0	Singapore	Tai Seng Exchange	#03-01	
3	Room Group 2	4	Singapore	Tai Seng Exchange	#03-01	

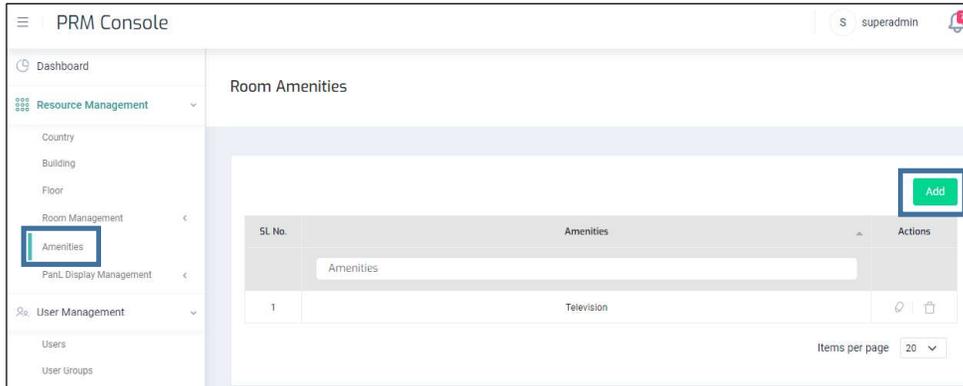
Items per page 20 v

## 4.6.5 Amenities Management

Through the Amenities Management interface, admin users can *add*, *edit*, and *delete* amenities.

### Add Amenities

→ Click on the **Resource Management > Amenities** menu; Click **[Add]**.



Adding amenities information is like adding country information. Please refer to the steps given under [Country Management > Edit Country](#).

### Edit Amenities

Editing amenities information is like editing country information. Please refer to the steps given under [Country Management > Edit Country](#).

### Delete Amenities

Deleting amenities information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

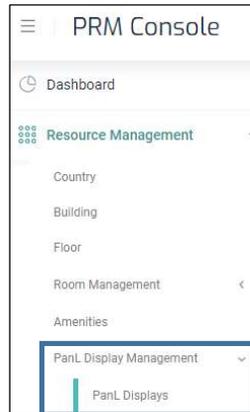
## 4.6.6 PanL Display Management

### PanL Displays

#### View PanL Displays

To view the information of the PanL Displays connected to the PanLHub(s) in the PRM network –

→ Click on the **Resource Management > PanL Display Management > PanL Displays** menu.



→ The details of the PanL Displays (*Name, UUID, Display Type and Associated Room, if any*) are displayed. If a PanL Display is associated to a room, the email address of the room is displayed.

Sl. No.	Name	UUID	Room	Actions
1	ScanID-1	PD7011DE07051900351	<a href="#">Assign Room</a>	

Items per page 20

#### Associate PanL Display to a Meeting Room

To associate PanL Display to a room –

Sl. No.	Name	UUID	Room	Actions
1	ScanID-1	PD7011DE07051900351	<a href="#">Assign Room</a>	

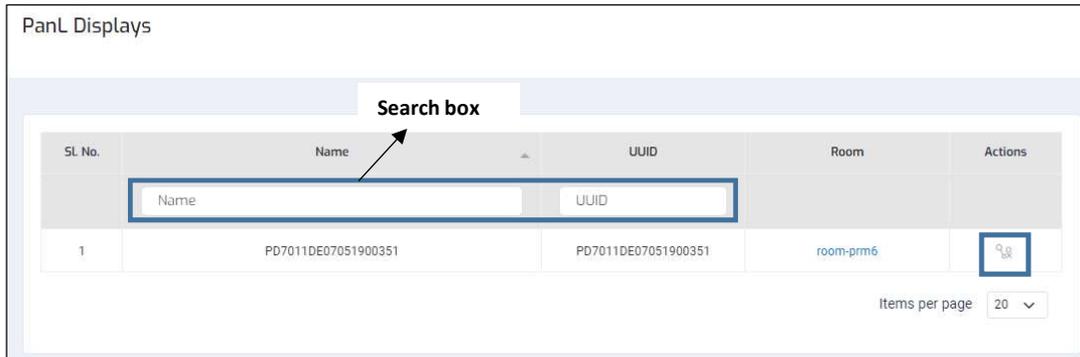
Items per page 20

Click on the link **Assign Room**. The Room Management interface is displayed. Refer to [Associate PanL Displays to Meeting Room](#) for more details.

### Un-associate PanL Display from the room

To un-associate PanL Display from the room -

- From the table, click Unassociate icon  for the PanL Display which needs to be un-associated. The search function can be used by providing the search parameters in the Search box to filter the PanL Displays based on the *PanL Display Name*, *UUID*, *PanL Display Type* or *Room*.



- A confirmation dialog box is displayed. Click **[Yes]** to delete or **[No]** to cancel the delete operation.



Upon clicking **[Yes]**, the information related to un-associated PanL Display devices will no longer be displayed on the table.

## 4.7 User Management

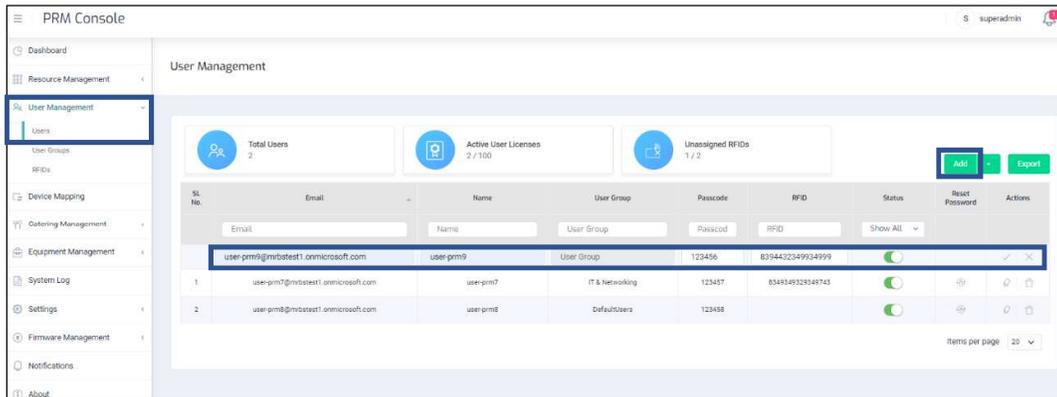
Through the User Management interface, admin users can add, edit, delete, and search users within their organization.

### 4.7.1 Managing Users

#### Add User

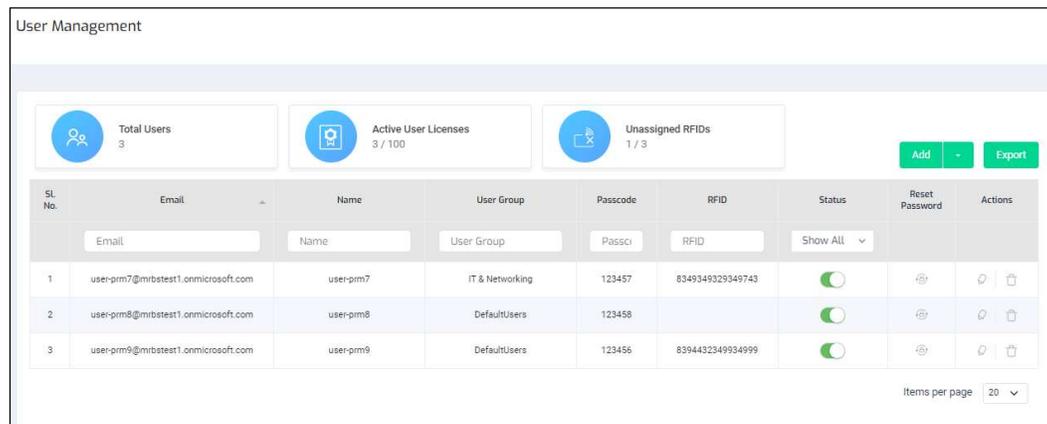
To add user information –

→ Click on the **User Management > Users** menu. To add new user, click **[Add]**.



- Enter the user's *Email Address* that is already created in the calendar server.
- Assign a user's *Name*.
- By default, users are assigned to *DefaultUsers* User Group. Later, if required, users can be re-assigned to a different User Group using the User Groups interface.
- Assign a 6-character *Passcode* (containing only hexadecimal A-F, 0-9) for PanL Display user authentication
- Associate *RFID* code for PanL Display user authentication via RFID card. Refer to [RFID](#).
- Set the user's status to *Active* or *Inactive* using the toggle button.
- [Reset Password](#) function sends an email to the user which contains user passcode and PRM Outlook Add-In password
- Click on ✓ to save the newly added user information.

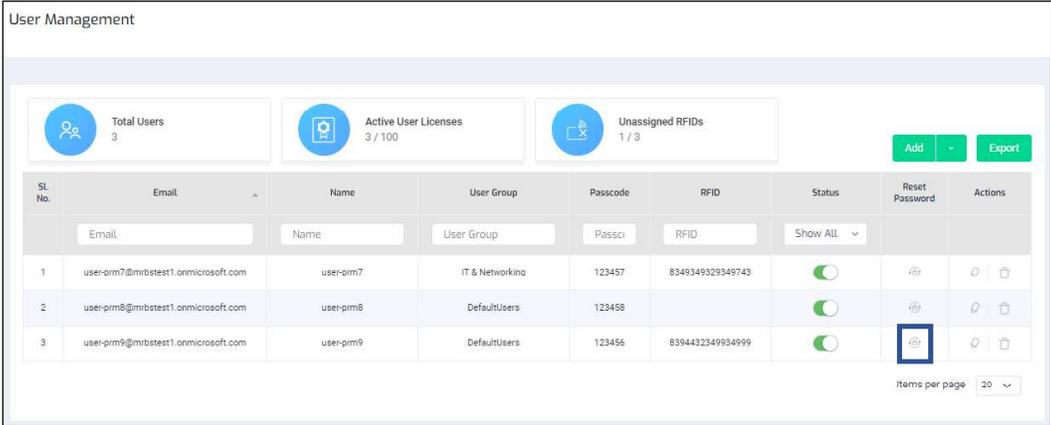
→ The newly added user details are displayed on the table.



## Reset Password (\*Applicable only if the Login Mode is “PRM Authentication”)

The reset password function is available for only users logged in with Login Mode as “PRM Authentication”. The login mode is set via **Settings > Calendar and Client interface – Login Mode** drop-down control field under *Client Configuration*.

1. From the table, click on Reset Password icon .

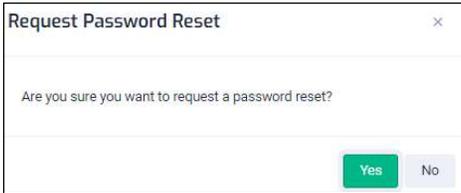


User Management

Total Users: 3, Active User Licenses: 3 / 100, Unassigned RFIDs: 1 / 3

Sl. No.	Email	Name	User Group	Passcode	RFID	Status	Reset Password	Actions
1	user-prm7@mrbstest1.onmicrosoft.com	user-prm7	IT & Networking	123457	8349349329349743	<input checked="" type="checkbox"/>		 
2	user-prm8@mrbstest1.onmicrosoft.com	user-prm8	DefaultUsers	123458		<input checked="" type="checkbox"/>		 
3	user-prm9@mrbstest1.onmicrosoft.com	user-prm9	DefaultUsers	123456	8394432349934999	<input checked="" type="checkbox"/>		 

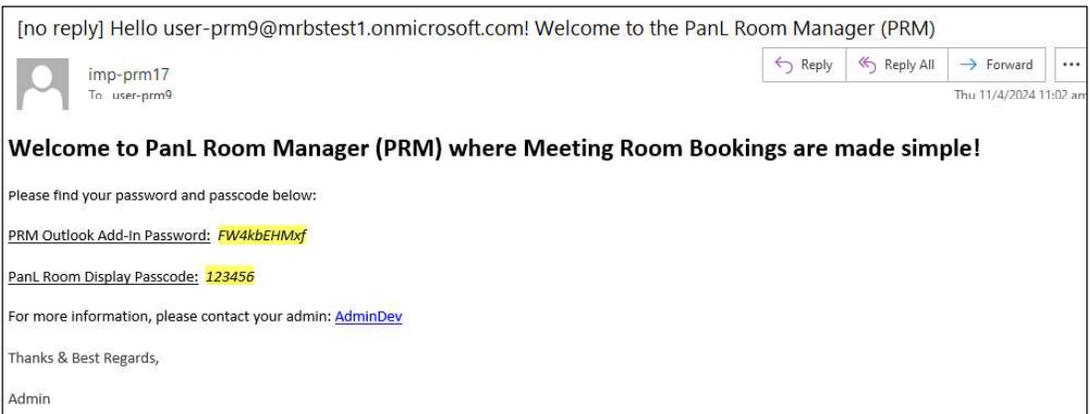
2. A confirmation dialog box is displayed. Click **[Yes]** to reset the password or **[No]** to cancel the operation.



Request Password Reset

Are you sure you want to request a password reset?

3. Upon password reset, users will receive the new *PRM Outlook Add-In Password* and *PanL Room Display Passcode* in an email (as shown in the below picture) using which they can login. Users must ensure that the password is changed using the PRM Management Console’s [Change Password](#) function.



[no reply] Hello user-prm9@mrbstest1.onmicrosoft.com! Welcome to the PanL Room Manager (PRM)

imp-prm17  
To: user-prm9

Thu 11/4/2024 11:02 am

**Welcome to PanL Room Manager (PRM) where Meeting Room Bookings are made simple!**

Please find your password and passcode below:

PRM Outlook Add-In Password: **FW4kbEHMxf**

PanL Room Display Passcode: **123456**

For more information, please contact your admin: [AdminDev](#)

Thanks & Best Regards,  
Admin



**Note:** For PRM users logged in with Microsoft account (i.e. *Login Mode = OIDC Authentication*), the reset password icon / function is not displayed. The Microsoft account users can reset their password by following the [Reset forgotten password](#) procedure.

### Edit User Information

Editing user information is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#)

### Delete User Information

Deleting user information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### Export User Details to a CSV File

To export all the user details to a .csv file for reporting or future configuration purposes, click **[Export]**. The steps for exporting user details are same as that of [Export Room Configurations to a CSV File](#).

### Import User Details from a CSV File

To import user configuration in bulk, click  drop down control and select **[IMPORT]**. The steps for importing user details are same as that of [Import Room Configurations from a CSV File](#).

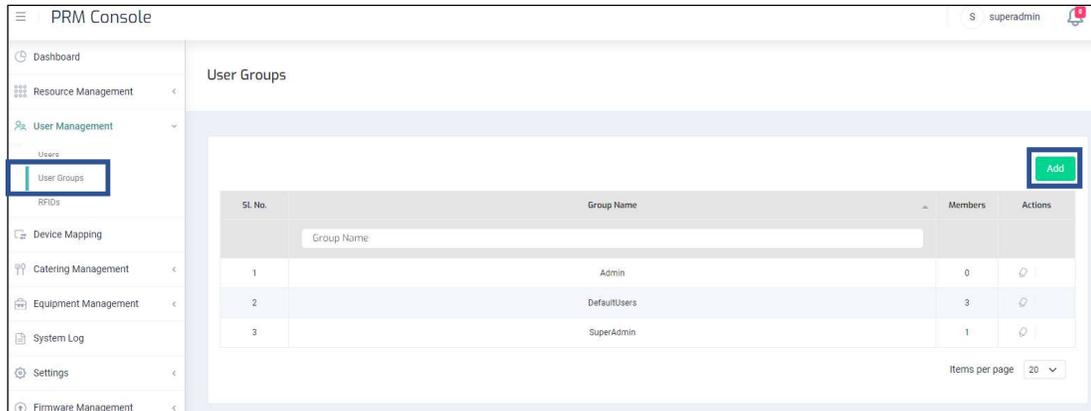
## 4.7.2 User Groups Management

Through the User Groups interface, admin users can create user groups, add users to user groups, assign permissions and policies to user groups, edit, and delete user groups.

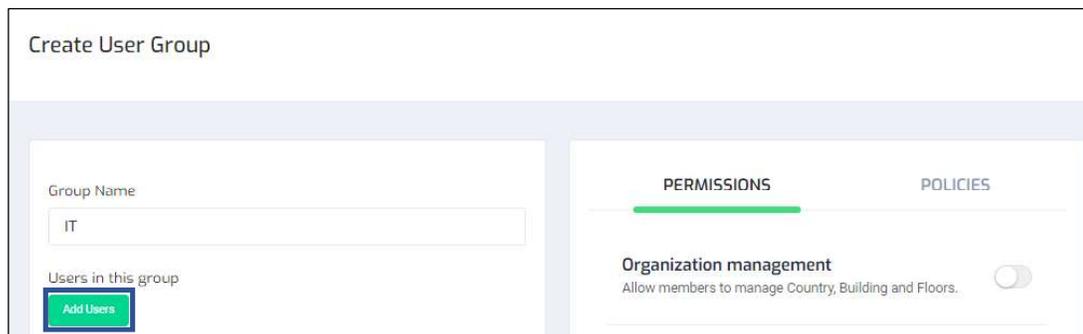
### Add User Group

To add user group -

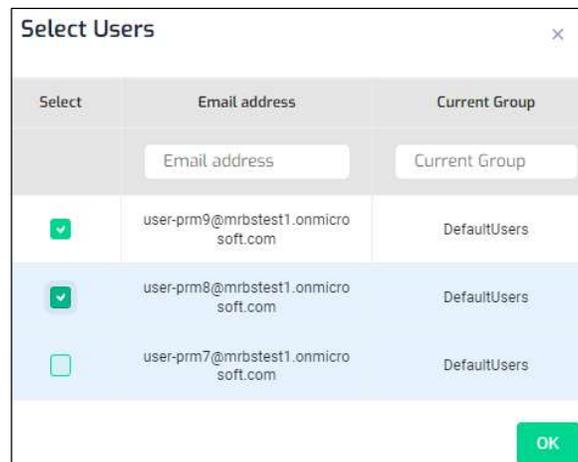
- Click on the **User Management > User Groups** menu. A list of user groups (if any) is displayed on the table. Click **[Add]**.



- The Create User Group interface is displayed. Enter the *Group Name*. Click **[Add User]**.



- Select the users. A particular user may be searched using the Search box. Click **[OK]**.



→ The selected user(s) are added. Assign the relevant [Permissions](#) and [Policies](#) to the user group. Click **[Save]**.

### User Group Permissions

User Group Permissions	When enabled 	When disabled 	Default State 
Organization Management	Members are allowed to manage the Countries, Buildings & Floors	Members are NOT allowed to manage the Countries, Buildings & Floors	Disabled 
User Management	Members are allowed to manage Users & User Groups	Members are NOT allowed to manage Users & User Groups	Disabled 
Room Management	Members are allowed to manage Room & Room Groups	Members are NOT allowed to manage Rooms & Room Groups	Disabled 
Room Group Access	Members of this group can access the rooms of the added room group. Click [ADD ROOM GROUP] and select the room group.	Members of this group do not have access to any rooms	Disabled 
Equipment Management	Members are allowed to manage equipment (i.e., Add / Edit/ Delete Equipment)	Members are NOT allowed to manage equipment	Disabled 

Equipment Group Access	Members of this group can access the equipment of the added equipment group. Click <b>[ADD BUILDING]</b> .	Members of this group do not have access to any equipment	Disabled
Catering Management	Members are allowed to manage catering (i.e., Add / Edit/ Delete Catering)	Members are NOT allowed to manage catering	Disabled
Catering Group Access	Members of this group can access the catering items of the added catering group. Click <b>[ADD BUILDING]</b> .	Members of this group do not have access to any catering items	Disabled
System Settings Management	Members are allowed to manage System Configuration	Members are NOT allowed to manage System Configuration	Disabled

**Table 3 – User Group Permissions**

**User Group Policies**

PERMISSIONS
POLICIES

**Room usage quota**

Add room usage quota for members in this group.

<input type="checkbox"/> Daily	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>
<input type="checkbox"/> Weekly	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>
<input type="checkbox"/> Monthly	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>

**Equipment usage quota**

Add equipment usage quota for members in this group.

<input type="checkbox"/> Daily	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>
<input type="checkbox"/> Weekly	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>
<input type="checkbox"/> Monthly	Number of hours	<input type="text" value="0"/>	Get notification before (hours)	<input type="text" value="0"/>

**Booking hours**

Set booking hours for members in this group.

Start Time:  Time Zone:

End Time:   All Day Event

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

**Bypass resource policies**

Allow members to bypass policies.

Except Device level policies such as On-spot Booking, End and Extend Booking, and Other Room Booking are not bypassed

[Product Page](#)  
[Document Feedback](#)

46  
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User Group Policies	When enabled	When disabled 	Default State 
Room usage quota	Can limit user room booking hours by daily, weekly, monthly	Cannot limit user room booking hours	Disabled 
Equipment usage quota	Can limit user equipment booking hours by daily, weekly, monthly	Cannot limit user equipment booking hours	Disabled 
Booking Hours	Can set user booking hours	Cannot set user booking hours	Disabled 
Bypass resource policies	Members are allowed to bypass room booking and user group policies	Members are NOT allowed to bypass room booking and user group policies	Disabled 

**Table 4 – User Group Policies**

### 4.7.3 RFID Management

Through the RFID interface, admin users can add and associate RFID cards to users.

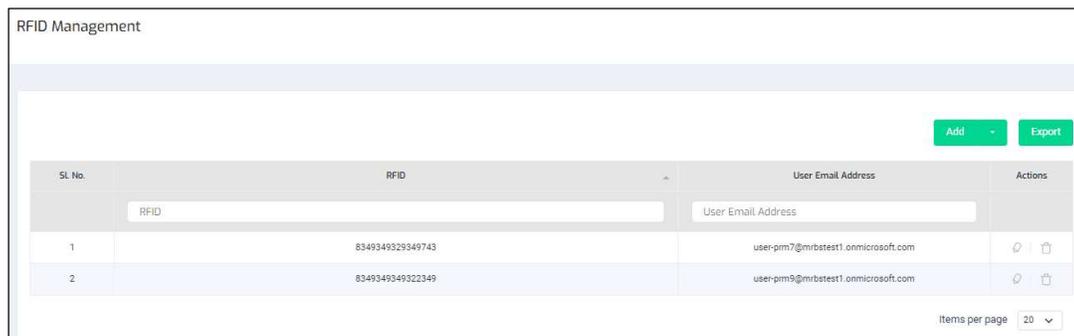
#### Add RFID

To add RFID -

- Click on the **User Management > RFIDs** menu. A list of RFID numbers (if any), associated with the users will be displayed on the table.



- Click **[Add]** and input the following information –
  - Enter the *RFID Number*. [RFID number should contain a maximum of 16 character consisting of digits (0-9) and alphabets (a-f)]
  - Assign *User Email Address*. More than 1 RFID Card can be assigned to a user.
  - Click on to save the newly added RFID information.
- The newly created RFID details will be displayed on the table. An appropriate message indicating the successful addition of user is displayed.



#### Edit RFID Information

Editing RFID information is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#)

#### Delete RFID Information

Deleting RFID information is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### Export RFIDs to a CSV File

To export all the RFIDs to a .csv file for reporting or future configuration purposes, click **[Export]**. The steps for exporting RFID are same as that of [Export Room Configurations to a CSV File](#).

### Import RFIDs from a CSV File

To import RFID configurations in bulk, click  drop down control and select **[IMPORT]**. The steps for importing RFID are same as that of [Import Room Configurations from a CSV File](#).

## 4.8 Device Mapping

The Device Mapping interface provides an analogue display of the entire PRM system between the PRM Server, PanLHub(s) and PanL Display(s). Admin users can also view linkage status and execute various functions.

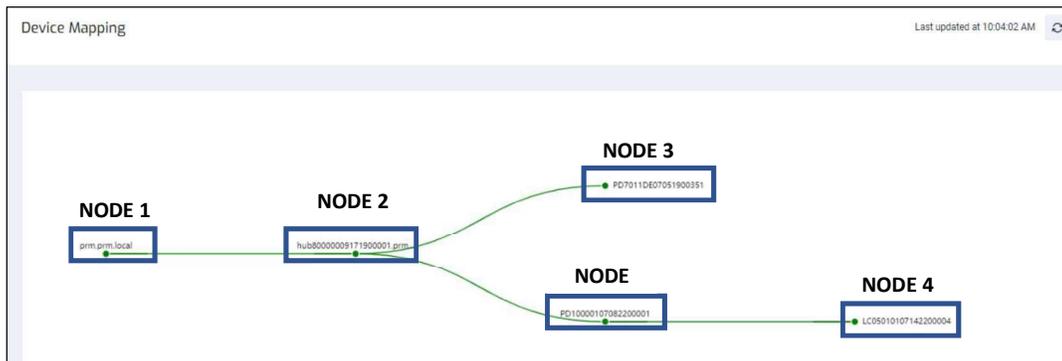
### 4.8.1 View Device mapping

To view device mapping –

→ Click on the **Device Mapping** menu.



→ The device map tree is displayed. The *PRM Server* is at node level 1. The *PanLHubs* are displayed at node level 2. *PanL Displays* are at node level 3 and *RFID Readers* are displayed at node level 4.

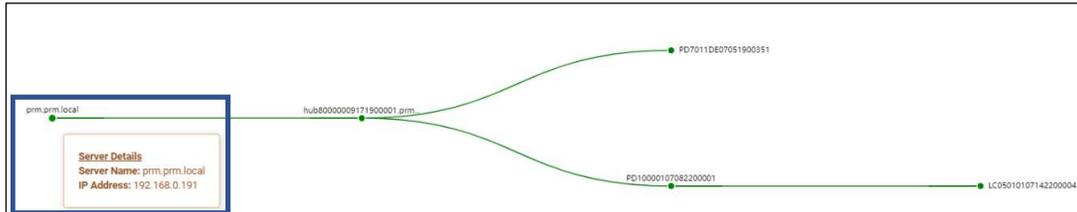


A list of PanLHub(s) which falls within the same network as the PRM Server are displayed on the table. Click on ▼ to view the list of PanL Displays which are connected to the PanL Hub (if any).

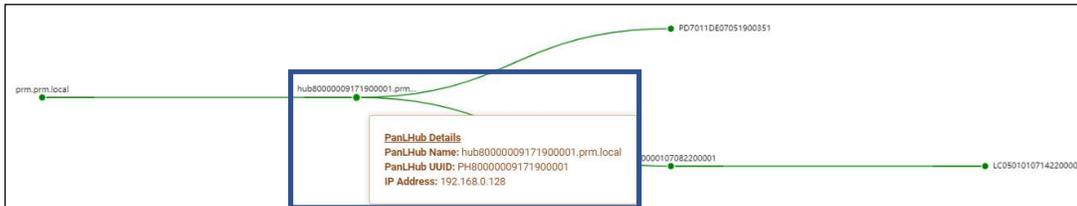
PanLHub					
PanLHub Type	Name	UUID	IP Address	Action	
▼ PanLHub80	hub80000009171900001.prm.local	PH80000009171900001	192.168.0.128	⊞	
Not-Working Devices List					
Sl. No.	Device Type	Name	UUID	IP Address	Actions
1	PD100	PD10000107082200001	PD10000107082200001		⊞

A list of PanLHub / PanL Display devices (if any) that are set as not working are displayed as part of "NOT WORKING DEVICES LIST" table.

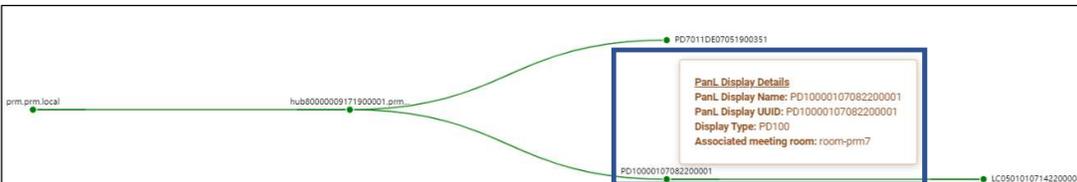
Click on the **Server Node** ● to view the *PRM Server* details (such as *PRM Server Name* and *IP address*).



Click on the **PanLHub Node** to view the *PanLHub* details (such as *Hub name*, *UUID* and *IP address*).



Click on the **PanL Display Node** to view the *PanL Display* details (such as *PanL Name*, *UUID* and *Display Type*).



Click on the **RFID Reader Node** to view the *RFID* details (such as *RFID Name* and *UUID*).

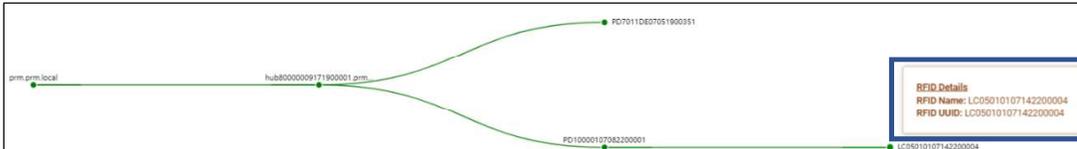


Table 5 and Table 6 depicts the PanLHub and PanL Display states represented by different colour codes-

**PanLHub States**

Color Code	State	Description
●	UNPAIRED	Indicates that PanLHub is discovered within the same network as PRM Server but not linked to server.
●	PAIRED	Indicates that PanLHub is linked to PRM Server.
●	LOST LINK	PanLHub not being able to reach PRM Server. Check network connections

**Table 5 – PanLHub States**

**PanL Display States**

Color Code	State	Description
●	UNASSOCIATED	Indicates that PanL Display is not yet associated to a meeting room
●	ASSOCIATED	Indicates that PanL Display is associated to a meeting room
●	LOST LINK	PanL Display not being able to reach PanLHub. Check RJ45 cable connection points.

**Table 6 – PanL Display States**

## 4.8.2 Pair PanLHub with PRM Server

To Pair PanLHub with PRM Server –

→ Right click on the PanLHub node  and select **Pair**.



→ Upon successful pairing, an appropriate message indicating the same is displayed. The node color switches from *blue* to *green*. The PanL Displays connected to the Hub will also be displayed (if any).



## 4.8.3 Edit PanLHub Information

To edit PanLHub –

→ Right click on the PanLHub node  and select **Edit PanLHub**.



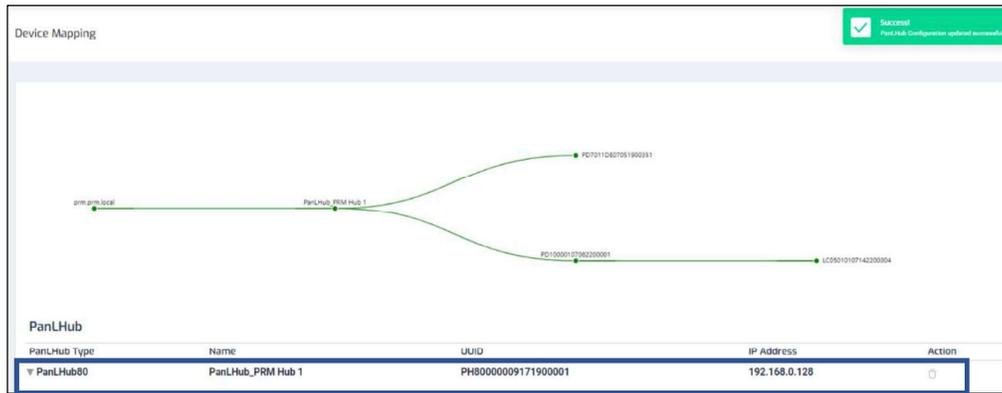
→ Edit the *PanLHub Name* as required and click **[Save]** to update the changes (if any). The PanLHub table will be updated with the changes.

### Edit PanLHub

PanLHub Name:

IP Address:

UUID:



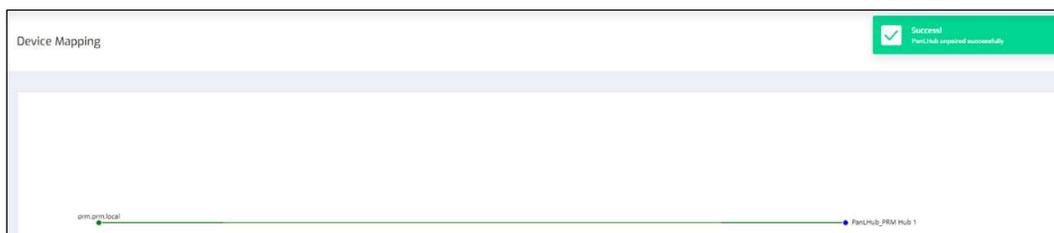
### 4.8.4 Unpair PanLHub

To Unpair PanLHub –

→ Right click on the PanLHub node and select **Unpair**.



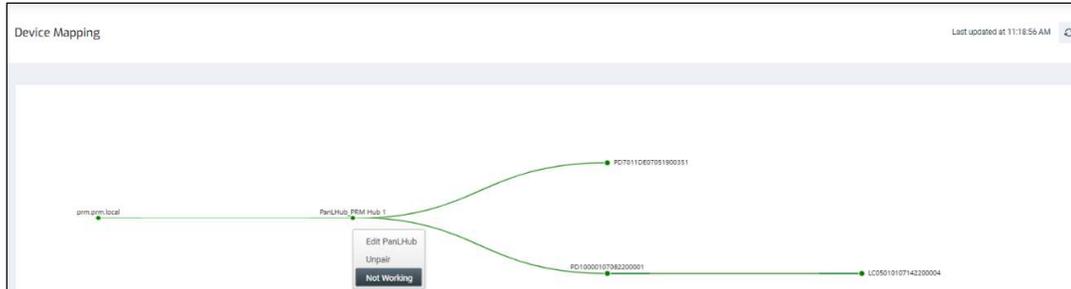
→ Upon successful un-pairing, an appropriate message indicating the same is displayed. The node color switches from *green* to *blue*.



### 4.8.5 Designate PanLHub as "Not Working"

To designate PanLHub as "Not Working" –

- Right click on the PanLHub node  and select **Not Working**.



- A confirmation message is displayed. Click **[Proceed and clear the name]** to proceed and cleared the configured name or **[Proceed and keep the name]** to proceed and keep the configured name or **[Not now]** to discard the operation for now.

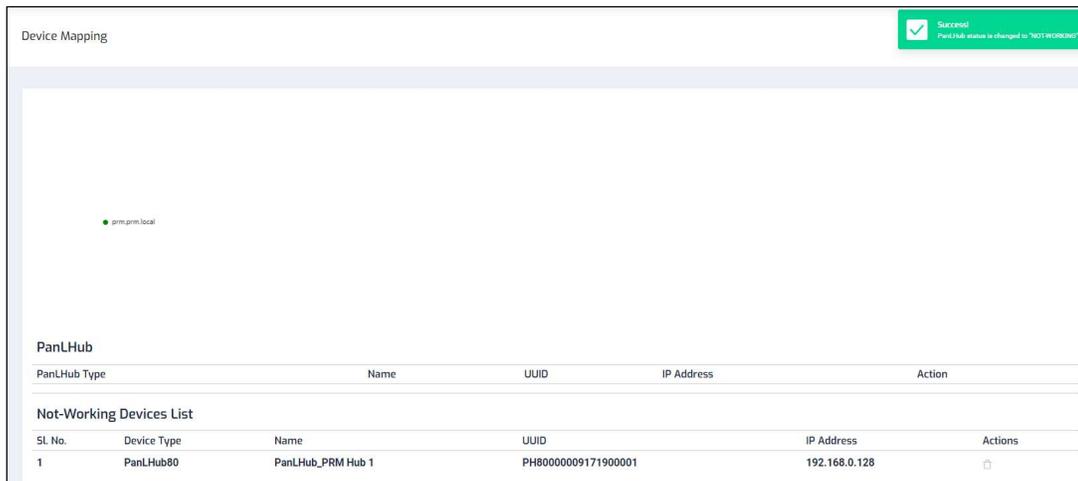
Set PanLHub to "NOT-WORKING"

Setting the PanLHub to "NOT-WORKING" will disassociate the connected PanL Display(s) from configured meeting rooms.

Do you want to clear the configured name of the PanL Display(s)?

**Proceed and clear the name** **Proceed and keep the name** Not now

- The PanLHub is removed from the device map tree and added as part of the *Not-Working Devices List* table for inventory tracking purposes. If PanLHub is deleted from the Not-Working Devices List, it will be available again under the device map tree.



Device Mapping

Success! PanLHub status is changed to "NOT-WORKING"

PanLHub

PanLHub Type	Name	UUID	IP Address	Action
--------------	------	------	------------	--------

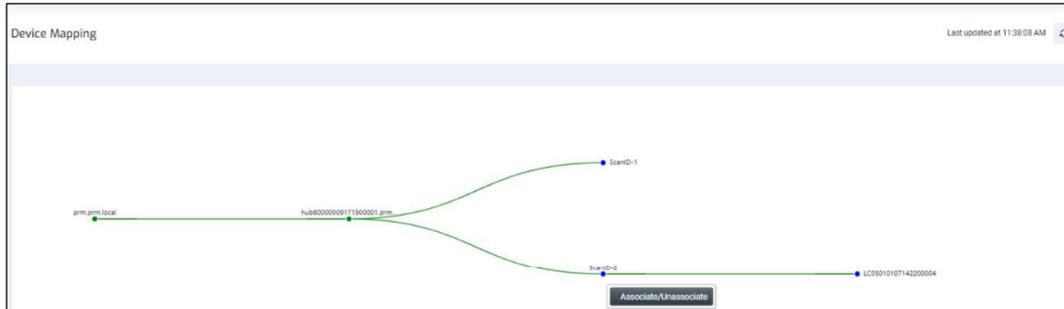
Not-Working Devices List

Sl. No.	Device Type	Name	UUID	IP Address	Actions
1	PanLHub80	PanLHub_PRM Hub 1	PH800000917190001	192.168.0.128	

## 4.8.6 Associate PanL Display to a Room

PRM System assigns a default ID for PanL Displays that are not associated with a meeting room indicated with a *blue* color node. To associate PanL Display to a meeting room –

1. Double click on the PanLHub Display node  to access the Associate/Un-associate PanL Display interface. Alternately, right click on the node to view the Associate/Un-associate menu.



2. The Associate/Un-associate PanL Display interface pops up. Select the *Room email* address and click **[Save]**.



Upon successfully associating the PanL Display with a meeting room, the node color switches from *blue* to *green* ( → ).

## 4.8.7 Unassociate PanL Display from Room

To un-associate PanL Display from room –

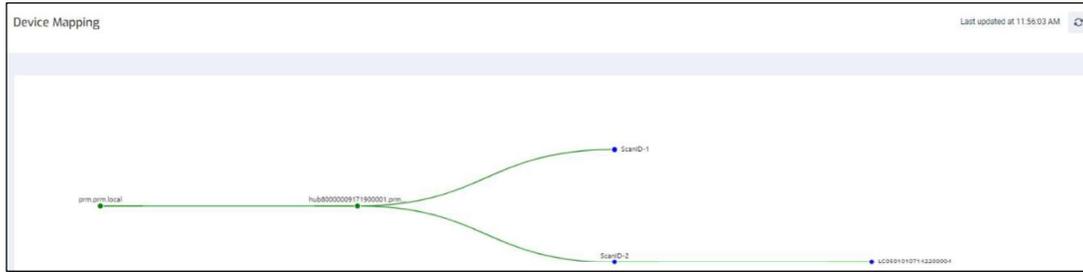
1. Double click on the PanLHub Display node . Alternately, right click on the node to view the Associate/Unassociate menu.



2. The Associate/Unassociate PanL Display interface pops up. Remove the *Room* address and click **[Save]**.



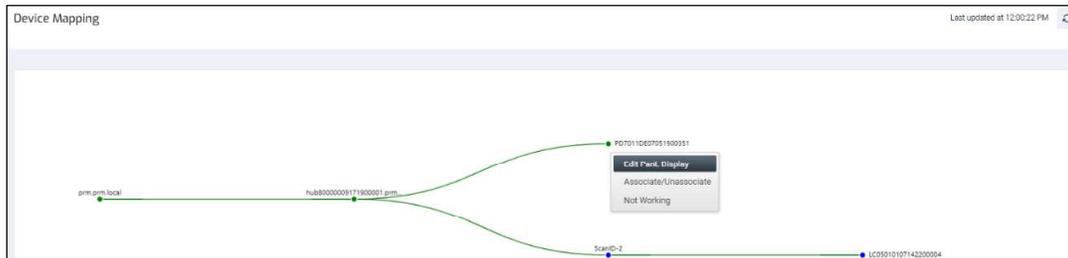
- Upon successfully unassociating the PanL Display from meeting room, the node color switches from green to blue ( ● → ● ).



### 4.8.8 Edit PanL Display

To edit PanL Display –

- Right click on the PanL Display node ● and select **Edit PanL Display**.



- Edit the *PanL Display Name* as required and click **[Save]**, if any. The changes if any are updated in the Device Map Tree and PanLHub table.

**Edit PanL Display** ✕

---

PanL Display Name:

---

PanLHub				
PanLHub Type	Name	UUID	IP Address	Action
▲ PanLHub80	hub80000009171900001.prm.local	PH80000009171900001	192.168.0.128	

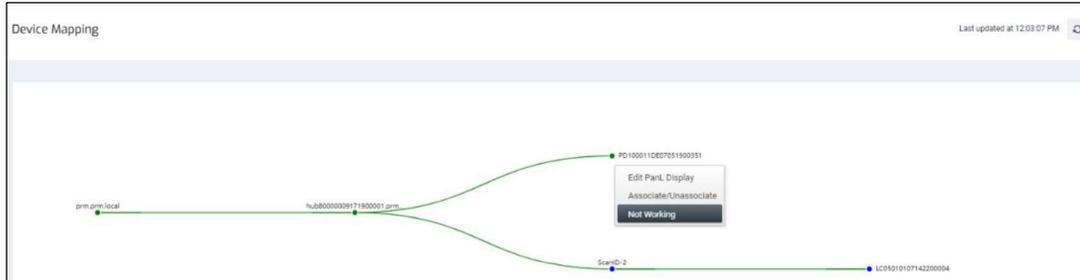
  

PanL Displays					
Name	UUID	RFID Name	RFID UUID	Room	Action
PD100011DE07051900351	PD7011DE07051900351	N/A	N/A	room-prmB	
ScanID-2	PD10000107082200001	LC05010107142200004	LC05010107142200004		

### 4.8.9 Designate PanL Display as “Not Working”

To designate PanL Display as “Not Working” –

1. Right click on the PanL Display node  and select **Not Working**.



2. A confirmation message is displayed. Click **[Yes]** to proceed or **[No]** to discard the operation.



3. Upon successfully designating a PanL Display as not working, an appropriate message is displayed. PanL Display is removed from the device mapping tree and added as part of the *Not-Working Devices List* table for inventory tracking purposes. If the PanL Display is removed from the Not-Working Devices List, it will be available again under the device map tree.

PanLHub				
PanLHub Type	Name	UUID	IP Address	Action
▼ PanLHub80	hub80000009171900001.prm.local	PH80000009171900001	192.168.0.128	

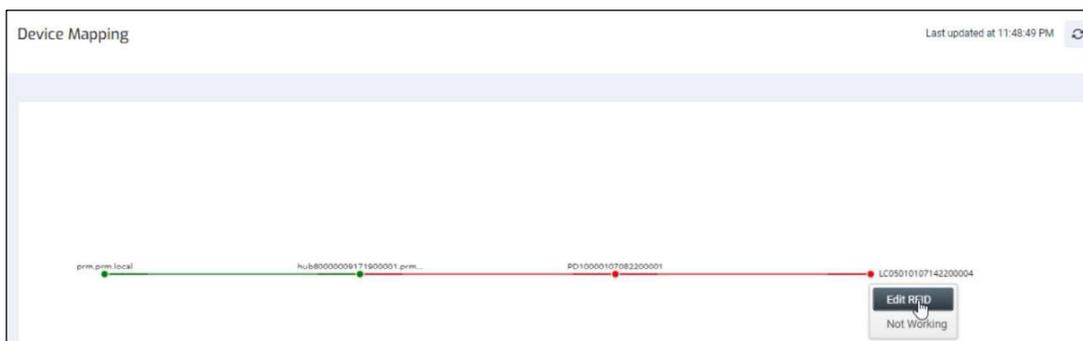
  

Not-Working Devices List				
Sl. No.	Device Type	Name	UUID	Actions
1	PD70Plus	PD100011DE07051900351	PD7011DE07051900351	

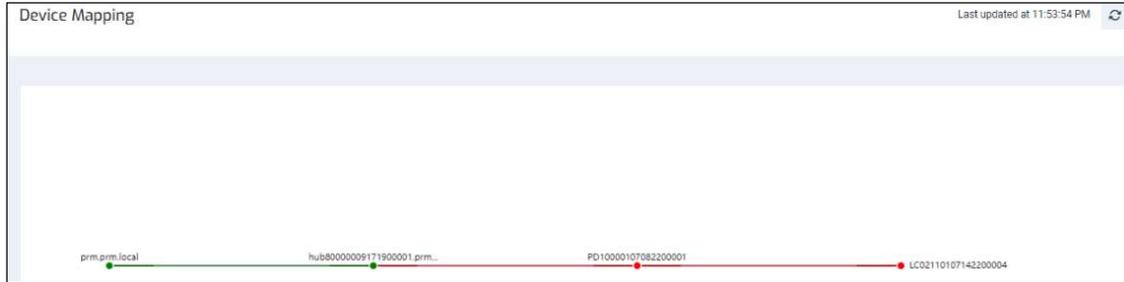
### 4.8.10 Edit RFID Module

To edit RFID –

1. Right click on the RFID node  and select **Edit RFID**.



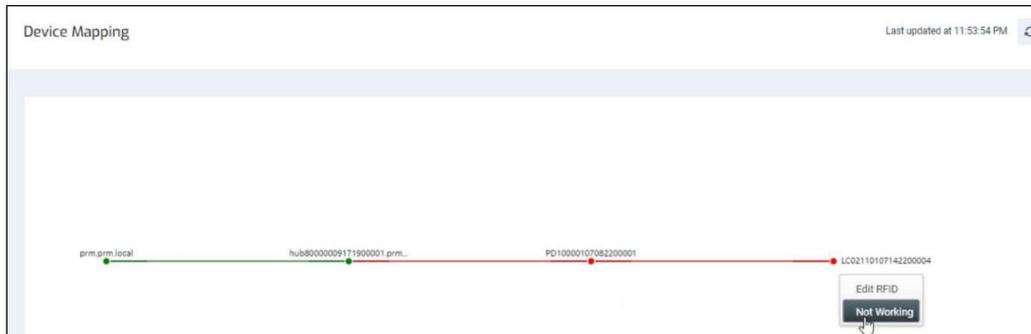
2. Edit the *RFID Module Name* as required and click [**Save**], if any. The changes if any are updated in the Device Map Tree.



### 4.8.11 Designate RFID Module as “Not Working”

To designate RFID Module as “Not Working” –

1. Right click on the RFID node and select **Not Working**.



2. A confirmation message is displayed. Click [**Yes**] to proceed or [**No**] to discard the operation.

3. Upon successfully designating a RFID Module as not working, an appropriate message is displayed. RFID Module is removed from the device mapping tree and added as part of the *Not-Working Devices List* table for inventory tracking purposes. If the RFID Module is removed from the Not-Working Devices List, it will be available again under the device map tree.

Not-Working Devices List					
Sl. No.	Device Type	Name	UUID	IP Address	Actions
1	PD70Plus	PD100011DE07051900351	PD7011DE07051900351		
2	RFID	LC02110107142200004	LC05010107142200004		

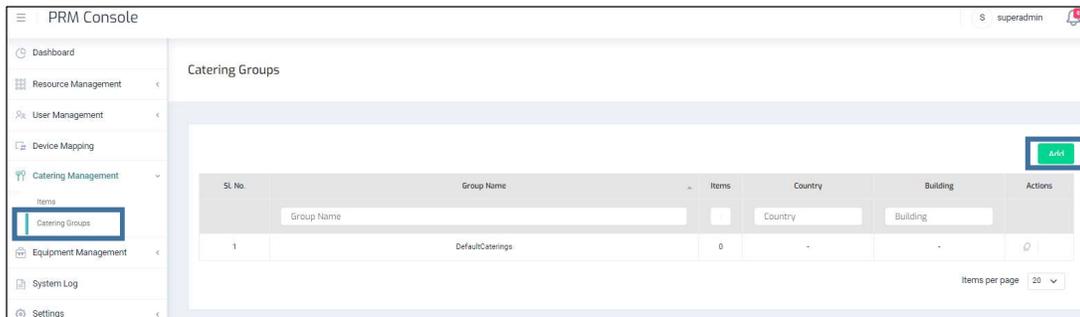
## 4.9 Catering Management

Through the Catering Management interface, admin users can add, edit, delete, and search catering items and catering groups within their organization. Catering items / groups that are created and made active can be added to a room booking request via PRM Outlook Add-In.

### 4.9.1 Catering Groups

#### Add New Group

→ Click on the **Catering Management > Catering Groups** menu; Click **[Add]**.

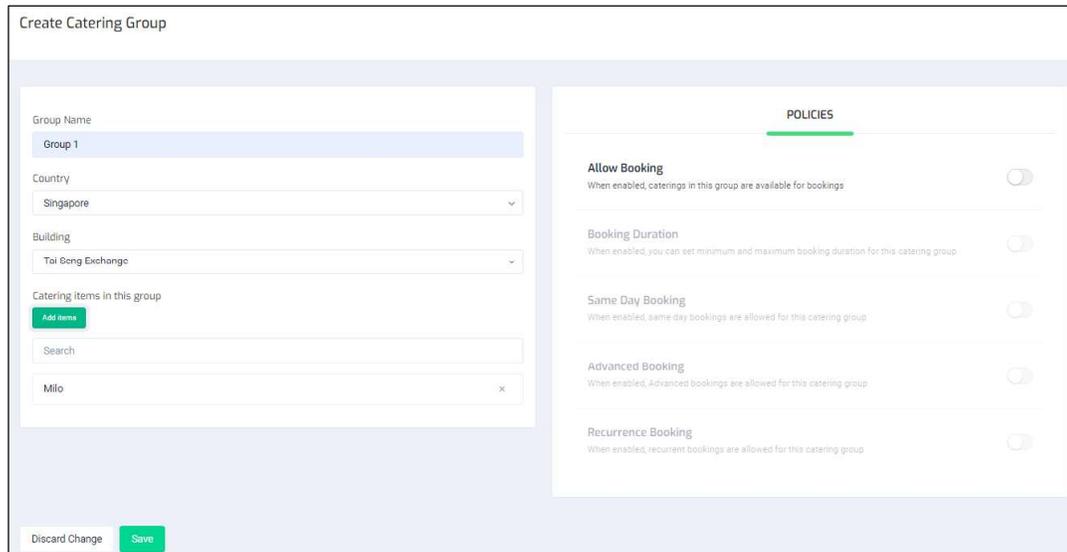


→ The Create Catering Group interface is displayed. Enter the *Group Name*, *Country*, *Building*. Click **[Add Items]**.

→ Select the catering. Click **[OK]**.



→ The selected catering(s) is added. Assign the relevant [Policies](#) to the catering group. Click **[Save]**.



### Catering Group Policies

Catering Group Policies	When enabled	When disabled	Default State
Allow Booking	Caterings in this group are available for bookings	Caterings in this group are NOT available for bookings	Disabled
Booking Duration	Users can set minimum and maximum booking duration for this catering group	Member CANNOT set minimum and maximum booking duration for this	Disabled
Same Day Booking	Same day bookings are allowed for this catering group	Same day bookings are NOT allowed for this catering group	Disabled
Advanced Booking	Advanced bookings are allowed for this catering group	Advanced bookings are NOT allowed for this catering group	Disabled
Recurrence Booking	Recurrent bookings are allowed for this catering group	Recurrent bookings are NOT allowed for this catering group	Disabled

**Table 7 – Catering Group Policies**

→ The newly added catering group is displayed.

Catering Groups

Sl. No.	Group Name	Items	Country	Building	Actions
1	DefaultCaterings	0	-	-	
2	Group 1	1	Singapore	Tai Seng Exchange	

Items per page 20

### Edit Catering Group

→ From the table, click **Edit** for the catering group that needs to be updated.

Catering Groups

Sl. No.	Group Name	Items	Country	Building	Actions
1	DefaultCaterings	0	-	-	
2	Group 1	1	Singapore	Tai Seng Exchange	

Items per page 20

Update the catering group as required and click **[Save]** to save the updated information. The updated catering group is displayed on the table and an appropriate message is displayed.

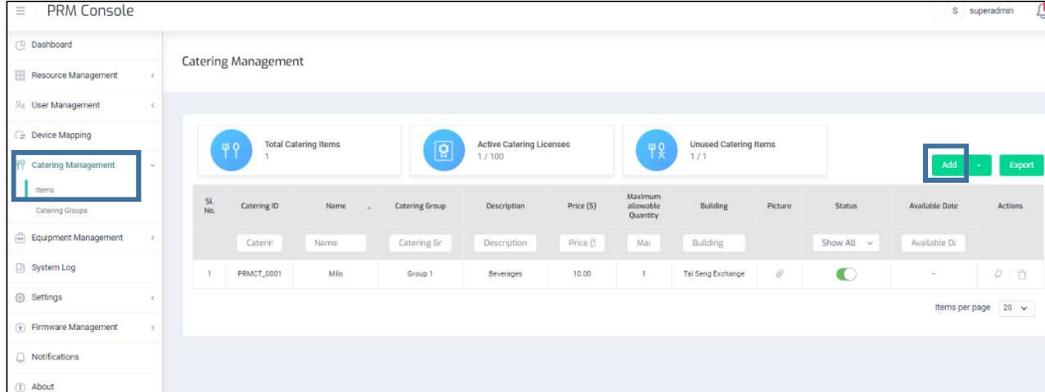
### Delete Catering Group

Deleting catering group is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

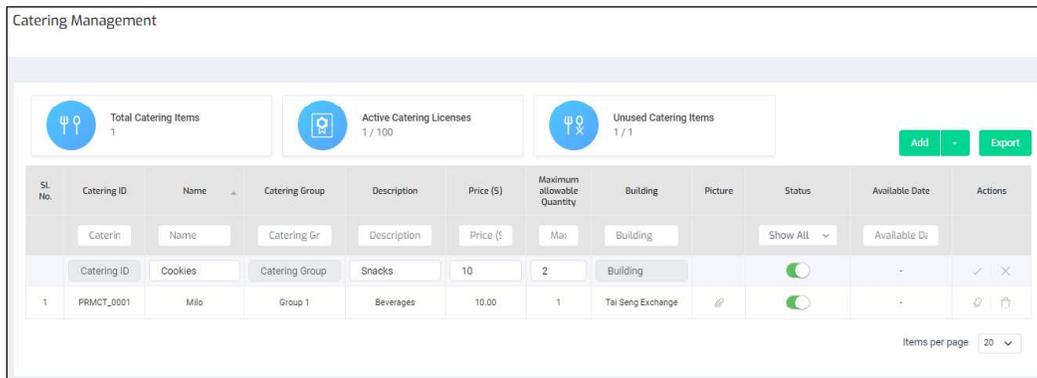
## 4.9.2 Items

### Add Catering Items

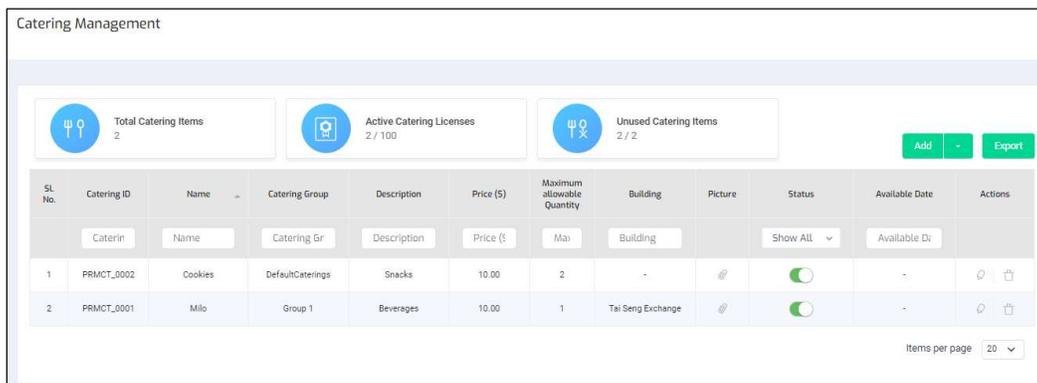
→ Click on the **Catering Management > Items** menu; Click **[ADD]**.



→ Enter the *Catering Item Name, Description, Price, Maximum Allowable Quantity*. Click ✓ to save the newly added catering item.



→ The newly added item is displayed as part of the table.



→ Click  to upload image of the catering item.

### Edit Catering Items

Editing catering items is similar to editing country information. Please refer to the steps given under [Country Management > Edit Country](#).

### Delete Catering Items

Deleting catering items is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### Export Catering Items to CSV File

To export all Catering configurations to a .csv file for reporting or future configuration purposes, click **[Export]**. The steps for exporting catering items are similar to that of [Export Room Configurations to a CSV File](#).

### Import Catering Items from CSV File

To import Catering Items in bulk, click  drop down control and select **[IMPORT]**. The steps for importing Catering Items are similar to that of [Import Room Configurations from a CSV File](#).

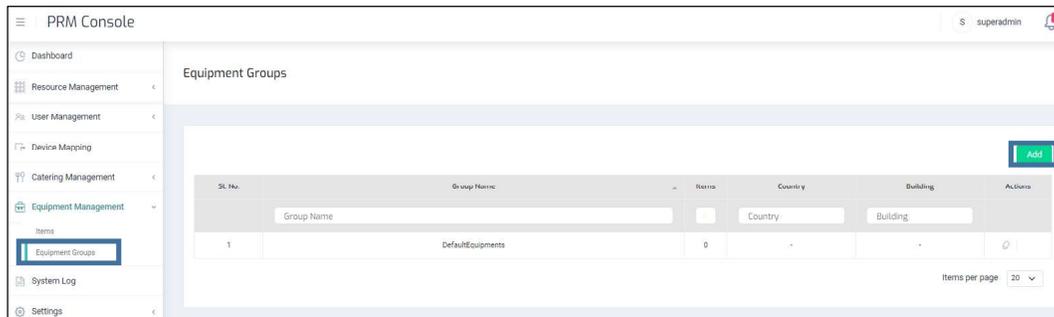
## 4.10 Equipment Management

Through the Equipment Management interface, admin users can add, edit, delete, and search equipment items and equipment groups within their organization. Equipment items / groups that are created and made active can be added to a room booking request via PRM Outlook Add-In.

### 4.10.1 Equipment Groups

#### Add New Group

→ Click on the **Equipment Management > Equipment Groups** menu; Click **[Add]**.



Adding equipment group is similar to adding catering group. Please refer to the steps given under [Add new catering group](#).

#### Edit Equipment Group

Editing equipment group is similar to editing catering group. Please refer to the steps given under [Edit catering group](#).

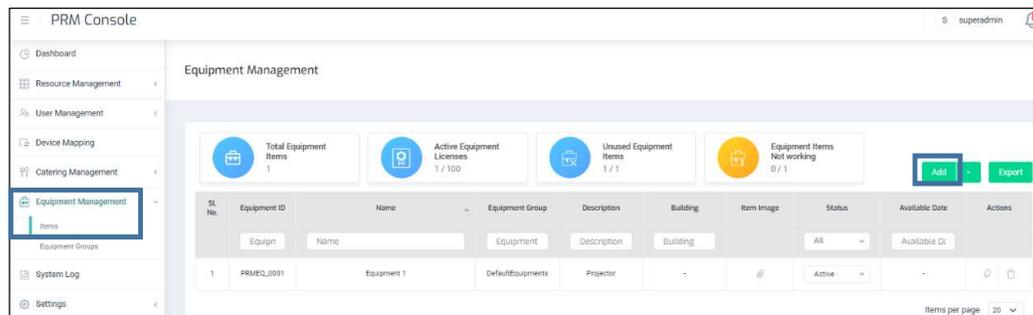
#### Delete Equipment Group

Deleting equipment group is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### 4.10.2 Equipment Items

#### Add Equipment Items

→ Click on the **Equipment Management > Items** menu; Click **[Add]**.



Adding equipment items is similar to adding catering items. Please refer to the steps given under [Add new catering items](#).

### Edit Equipment Items

Editing equipment items is similar to editing catering items. Please refer to the steps given under [Edit catering group](#).

### Delete Equipment Items

Deleting equipment items is similar to deleting country information. Please refer to the steps given under [Country Management > Delete Country](#).

### Export Equipment Items to CSV File

To export all Equipment configurations to a .csv file for reporting or future configuration purposes, click **[Export]**. The steps for exporting equipment items are similar to that of [Export Room Configurations to a CSV File](#).

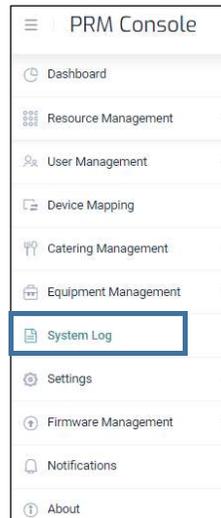
### Import Equipment Items from CSV File

To import equipment items in bulk, click  drop down control and select **[IMPORT]**. The steps for importing equipment items are similar to that of [Import Room Configurations from a CSV File](#).

## 4.11 System Log

To view the system log for system analysis purposes–

→ Click on the **Log > System Log** menu.



→ The System log is displayed. Click [**Download**] to download the system log.

System Log Last updated at 2:04:53 PM 

[Download](#)

```

2024-04-09 13:59:56.648 - http: GET /pair/status 200 15 - 0.583 ms
2024-04-09 13:59:58.950 - http: GET /license-manager/getLicenseDetails 200 59 - 917.898 ms
2024-04-09 14:00:00.177 - http: POST /apl/entitysync/ 200 16 - 3.758 ms
2024-04-09 14:00:01.649 - http: GET /pair/status 200 15 - 0.563 ms
2024-04-09 14:00:06.657 - http: GET /pair/status 200 15 - 0.681 ms
2024-04-09 14:00:10.594 - http: GET /license-manager/getLicenseDetails 200 59 - 1005.773 ms
2024-04-09 14:00:11.652 - http: GET /pair/status 200 15 - 2.296 ms
2024-04-09 14:00:16.653 - http: GET /pair/status 200 15 - 2.763 ms
2024-04-09 14:00:22.180 - http: GET /license-manager/getLicenseDetails 200 59 - 919.429 ms
2024-04-09 14:00:22.181 - http: GET /pair/status 200 15 - 2.542 ms
2024-04-09 14:00:26.682 - http: GET /pair/status 200 15 - 1.763 ms
2024-04-09 14:00:31.682 - http: GET /pair/status 200 15 - 0.562 ms
2024-04-09 14:00:33.655 - http: GET /license-manager/getLicenseDetails 200 59 - 914.556 ms
2024-04-09 14:00:36.688 - http: GET /pair/status 200 15 - 0.596 ms
2024-04-09 14:00:41.682 - http: GET /pair/status 200 15 - 0.599 ms
2024-04-09 14:00:45.648 - http: GET /license-manager/getLicenseDetails 200 59 - 1018.733 ms
2024-04-09 14:00:46.682 - http: GET /pair/status 200 15 - 0.586 ms
2024-04-09 14:00:51.701 - http: GET /pair/status 200 15 - 0.593 ms
2024-04-09 14:00:57.394 - http: GET /license-manager/getLicenseDetails 200 59 - 918.407 ms
2024-04-09 14:00:57.399 - http: GET /pair/status 200 15 - 3.225 ms
2024-04-09 14:01:00.136 - http: GET /pair/status 200 15 - 0.749 ms
2024-04-09 14:01:00.188 - http: POST /apl/syncpanls/ 200 457 - 16.754 ms
2024-04-09 14:01:01.719 - http: GET /pair/status 200 15 - 0.596 ms
2024-04-09 14:01:06.736 - http: GET /pair/status 200 15 - 0.711 ms
2024-04-09 14:01:08.947 - http: GET /license-manager/getLicenseDetails 200 59 - 916.625 ms
2024-04-09 14:01:11.730 - http: GET /pair/status 200 15 - 0.593 ms
2024-04-09 14:01:16.731 - http: GET /pair/status 200 15 - 0.628 ms
2024-04-09 14:01:18.881 - error: Streaming subscription connection is lost
2024-04-09 14:01:18.882 - debug: Fetch calendar view for room room-prm@mrbstest1.onmicrosoft.com 2024-04-09T0
5:30:18.881Z
2024-04-09 14:01:20.868 - http: GET /license-manager/getLicenseDetails 200 59 - 917.843 ms
2024-04-09 14:01:20.869 - info: Streaming subscription is closed successfully
2024-04-09 14:01:21.753 - http: GET /pair/status 200 15 - 0.711 ms
2024-04-09 14:01:21.871 - info: Streaming subscription connection is open successfully

```

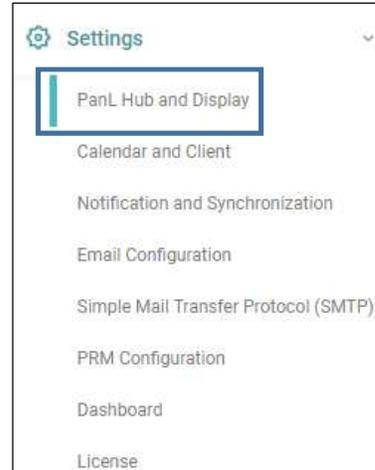
## 4.12 Settings

Different configurations related to calendar server, room booking policies, notifications, email templates, SMTP and other PRM settings can all be done through this interface.

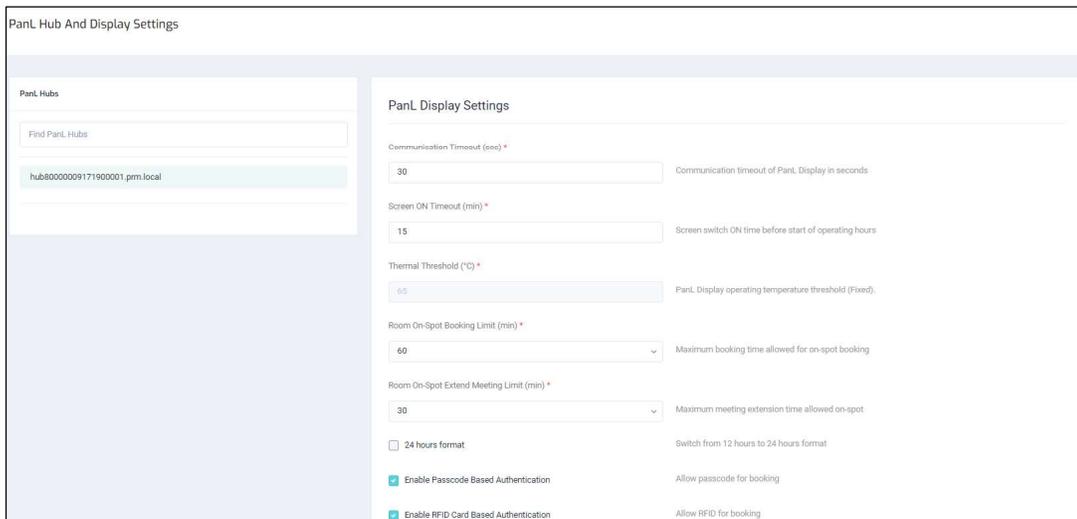
### 4.12.1 PanL Hub and Display

To configure PanLHub and PanL Display settings,

→ Click on the **Settings > PanL Hub & Display**.

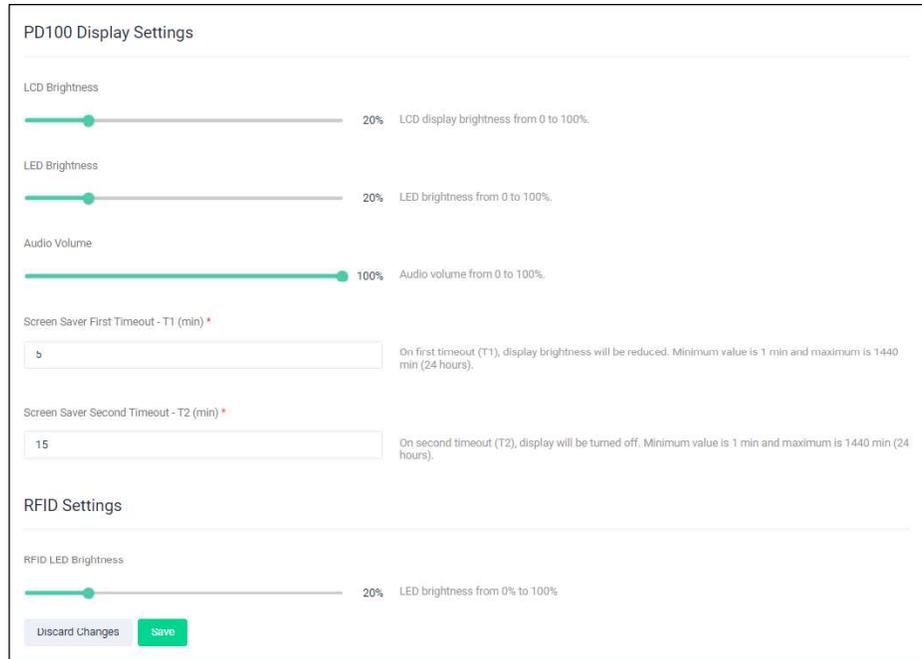


→ The PanL Hub and Display Settings interface is displayed.



**PanL Display Settings**

→ To set the room booking features and on-spot booking policies of PanL Displays, search and select the PanLHub in which the PanL Displays which needs to be configured are connected to (refer to [Device Mapping](#)). Set the following **PanL Display Settings** attributes as required –



**PanL Display Settings Policy**

PanL Display Settings	Description
• <i>Communication Timeout (Sec.)*</i>	Communication timeout of PanL Display in seconds
• <i>Screen ON Timeout (Min.)*</i>	Screen switch ON time before start of operating hours
• <i>Thermal Threshold (°C)*</i>	PanL Display operating temperature threshold (Fixed)
• <i>Room On-Spot Booking Limit (Min.)*</i>	Maximum booking time allowed for on-spot booking
• <i>Room On-Spot Extend Meeting Limit (Min.)*</i>	Maximum meeting extension time allowed on-spot
• <i>24 Hours Format</i>	Switch from 12 Hours to 24 Hours format
• <i>Enable Passcode based Authentication</i>	Allows passcode for booking if enabled (i.e. check box selected)
• <i>Enable RFID card-based Authentication</i>	Allows RFID for booking if enabled (i.e., check box selected)

PD100 Display Settings	Description
• <i>LCD Brightness</i>	LCD Display brightness from 0 to 100%
• <i>LED Brightness</i>	LED brightness from 0 to 100%.
• <i>Audio Volume</i>	Audio volume from 0 to 100%.
• <i>Screen Saver First Timeout -T1 (min)*</i>	On first timeout (T1), display brightness will be reduced. Minimum value is 1 min and maximum are 1440 min (24 hours).
• <i>Screen Saver Second Timeout -T2 (min)*</i>	On second timeout (T2), display will be turned off. Minimum value is 1 min and maximum are 1440 min (24 hours).

RFID Settings	Description
<ul style="list-style-type: none"> <li>RFID LED Brightness</li> </ul>	LED brightness from 0% to 100%

**\* Indicates these fields are mandatory**

Upon setting the PanL Display attributes, click **[Save]**.

### 4.12.2 Calendar and Client

To update Calendar and Client settings refer to the steps provided under the section [Calendar and Client](#).

### 4.12.3 Notification and Synchronization

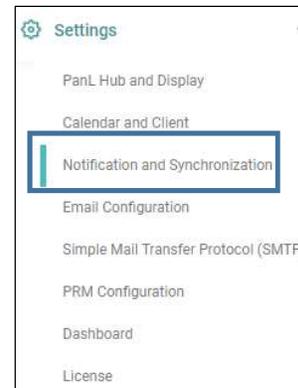
Through the notification interface, admin users can enable or disable notifications that will be received by users via PRM Outlook Add-In or by admin users through the PRM Management Console. Admin users can also configure various timer jobs such as dashboard statistics refresh rate to run periodically.

To configure notification settings,

→ Click on the **Settings > Notification and Synchronization** menu

→ The Notification Settings interface is displayed. The interface is divided into 2 sections, namely, **Notification Settings** and **Timerjob Settings**.

- **Notification Settings** (wherein the notification that is being sent to Admin or normal user can be enabled/disabled)



Notification And Synchronization

---

**Notification Settings**

Enable All Notifications

Enable Room/Equipment/Catering change notification

Maximum number of notifications



---

**Email Notification Settings**

Enable All Email Notifications

Notify license expiry before (no. of days)

Notify client secret expiry before (no. of days)



---

**Exchange Server/O365 Synchronization Scheduler**

Enable Cron Job Scheduler to automatically synchronize the meeting room accounts with Microsoft Exchange Server/O365

Synchronizes **Every week** On **Sun** At **01:00 AM**

<b>Notification Settings</b>	<b>Description</b>
<i>Enable All Notifications</i>	Enable or disable all PRM notifications to users/admin
<i>Enable Room/Equipment/Catering change notification</i>	Enable or disable notifications to users with respect to room/equipment/catering property changes
<i>Maximum number of notifications</i>	Maximum number of notifications displayed
<b>Email Notification Settings</b>	
<b>Description</b>	
<i>Enable All Email Notifications</i>	Enable or disable user/admin to receive any email notifications
<i>Notify license expiry before (no. of days)</i>	Set the number of days before license expiration that the license expiration notification should be sent
<i>Notify client secret expiry before (no.of. days)</i>	Set the number of days before client secret expiration that the client secret expiration notification should be sent

- **Timerjob Settings** (wherein the timer job schedule time can be configured)

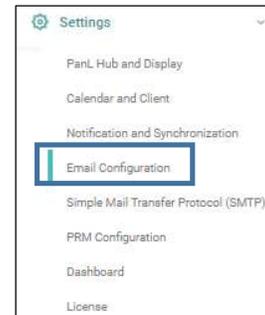
<b>Timer Job Settings / Name</b>	<b>Description</b>
<i>Sync with Exchange Server/Microsoft 365</i>	Enable or disable synchronizing the room accounts from calendar server to PRM System periodically.

Upon updating the notification settings, click **[Save]**.

## 4.12.4 Email Configuration

The email templates for system and booking related notifications can be configured by admin user as below. Booking related notification emails will be sent automatically to normal users while system related notification emails will be sent to admin users. Ensure that the *Enable All Email Notifications* feature is enabled under Notification settings.

- Click on the **Settings > Email Configurations** menu.
- The email templates that can be edited are displayed.



### Email Configurations

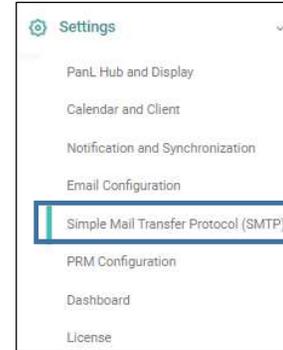
A screenshot of the 'Email Configurations' page. The main section is titled 'Welcome Email (PRM Authentication)'. It has a checkbox 'Enable Welcome Email (PRM Authentication)' which is checked. Below this is a 'Subject' field with the text '[no reply] Hello ##employeeName! Welcome to the PanL Room Manager (PRM)'. The 'Body' field contains a rich text editor with the following content: 'Welcome to PanL Room Manager (PRM) where Meeting Room Bookings are made simple! Please find your password and passcode below: PRM Outlook Add-in Password: ##password PanL Room Display Passcode: ##passcode For more information, please contact your admin: ##admin Thanks & Best Regards, Admin'. Below the main editor are several other email templates listed with dropdown arrows: 'Welcome Email (OpenID Connect (OIDC) Authentication)', 'Password Reset', 'Password/Passcode Reset By Admin', 'Account Locked', 'Catering Unavailable', and 'Equipment Unavailable'. At the bottom, there are two buttons: 'Discard Changes' and 'Save'.

Each email template has an *Enable/Disable* feature and consists of a default email subject title and content. Any strings which start with “##” signifies a dynamic text which is pulled from the PRM System. Upon updating the email settings, click **[Save]**.

### 4.12.5 Simple Mail Transfer Protocol (SMTP)

To configure **Simple Mail Transfer Protocol (SMTP)** settings for email transmissions,

- Click on the **Settings > Simple Mail Transfer Protocol (SMTP)** menu.
- The SMTP interface is displayed. Update the following attributes as required –



#### Simple Mail Transfer Protocol (SMTP)

**Host \***

**Port \***

**Username \***

**Password \***

Discard Changes
Save

- *Host\** - Refers to the SMTP Server URL
- *Port\** - Refers to the Port number used by the server. It can be either 25 or 587. 25 is Unsecured port and 587 is secured port.
- *Username\** and *Password\** - Refers to the SMTP Server credentials.

**\* Indicates that all these fields are mandatory**

Upon updating the SMTP settings, click **[Save]**.

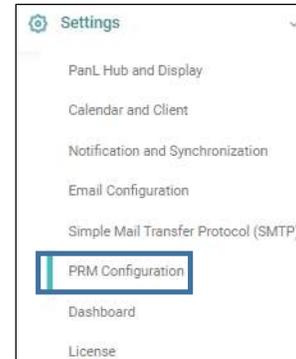
## 4.12.6 PRM Configuration

To configure PRM configurations,

→ Click on the **Settings > PRM Configuration** menu.

→ The PRM configuration interface is displayed. Update the following attributes as required –

- *PRM Server Domain* - Refers to the PRM Server Domain Name
- *PRM Management Console Domain*
- *Maximum Number of PanL Displays per PanLHub\**
- *PanLHub Unreachable Notification Mail Timeout (m)\**
- *Maximum Number of PanLHub Connection Checks\**
- *Maximum Number of PanLHub Pair Tries\**
- *Preconfigured Hub IP Address – Hub IP address can be assigned manually if the Auto Discovery is not successful*



**\* Indicates that all these fields are mandatory**

A screenshot of the 'PRM Configuration' form. The form has a title 'PRM Configuration' and contains several input fields. The first field is 'PRM Server Domain' with the value 'prm.prm.local'. The second field is 'PRM Management Console Domain' with the value 'web.prm.local'. The third field is 'Maximum Number Of PanL Displays Per PanLHub \*' with the value '16'. The fourth field is 'PanLHub Unreachable Notification Mail Timeout (m) \*' with the value '5'. The fifth field is 'Maximum Number Of PanLHub Connection Checks \*' with the value '3'. The sixth field is 'Maximum Number Of PanLHub Pair Tries \*' with the value '10'. The seventh field is 'Preconfigured HUB IP Addresses' with the value '10.76.13.11,10.77.12.11'. At the bottom of the form, there are two buttons: 'Discard Changes' and 'Save'.

Upon updating the PRM Configuration, click **[Save]**.

## 4.12.7 License

To generate fingerprint and activate license, refer to the steps provided under the topic [Generate Fingerprint and Activate License](#).

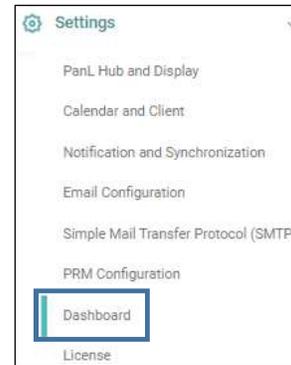
### 4.12.8 Dashboard

Through the Dashboard settings interface, admin users can configure (i.e., *enable / disable*) the access permission (*Edit / View*) for different types of dashboard statistics for a particular user or user group.

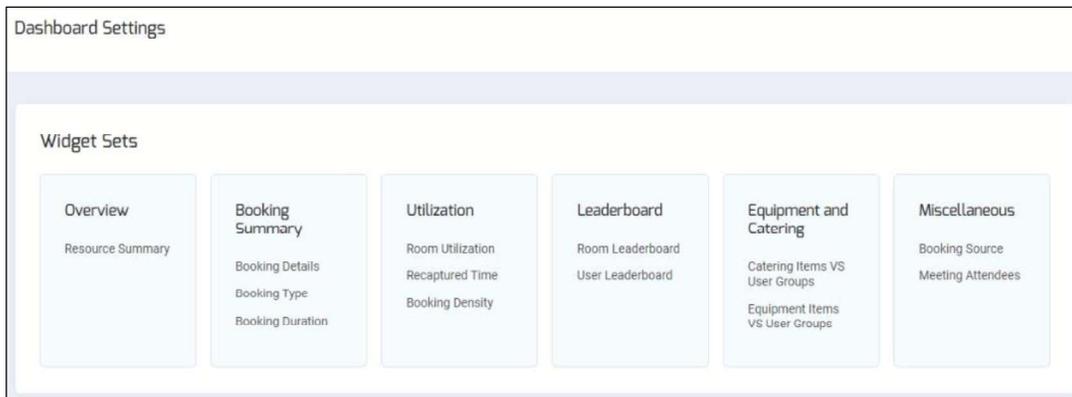
For example, if *User Group 1* is allowed to view the utilization statistics in the dashboard interface, then the *View* permission should have been *enabled* for *User Group 1* in the Dashboard Settings.

To configure dashboard settings,

→ Click **Settings > Dashboard** menu.



→ The dashboard settings interface is displayed. Click on the icon to edit the permissions against a particular user group. Note that the **Default User Group, Admin, Super Admin** user permissions cannot be edited.



Filter User Group...

No.	User Group	Overview	Booking Summary	Utilization	Leaderboard	Equipment and Catering	Miscellaneous	Actions
1	Admin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	DefaultUsers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	SuperAdmin	<input checked="" type="checkbox"/>						
4	IT & Networking	<input type="checkbox"/>						

Filter User Group...

No.	User Group	Overview	Booking Summary	Utilization	Leaderboard	Equipment and Catering	Miscellaneous	Actions
1	Admin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	DefaultUsers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	SuperAdmin	<input checked="" type="checkbox"/>						
4	IT & Networking	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>						

→ Upon providing the relevant permissions (by checking the checkbox), click ✓. The updated information is available on the table.

Dashboard Settings

Widget Sets

- Overview**  
Resource Summary
- Booking Summary**  
Booking Details  
Booking Type  
Booking Duration
- Utilization**  
Room Utilization  
Recaptured Time  
Booking Density
- Leaderboard**  
Room Leaderboard  
User Leaderboard
- Equipment and Catering**  
Catering Items VS User Groups  
Equipment Items VS User Groups
- Miscellaneous**  
Booking Source  
Meeting Attendees

Filter User Group...

No.	User Group	Overview	Booking Summary	Utilization	Leaderboard	Equipment and Catering	Miscellaneous	Actions
1	Admin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	DefaultUsers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	SuperAdmin	<input checked="" type="checkbox"/>						
4	IT & Networking	<input checked="" type="checkbox"/>						

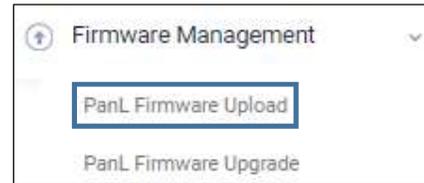
## 4.13 Firmware Management

To upgrade the PanL Display firmware, admin users will have to first upload the latest firmware to PRM Server through the *Firmware Upload* interface and then perform a PanL Display firmware upgrade through the *Upgrade PanL Display* interface.

### 4.13.1 PanL Firmware Upload

To upload latest PanL Display Firmware to PRM Server,

- Click on the **Upgrade Management > PanL Firmware Upload** menu.



- Select the *Firmware File* to be uploaded by clicking the **[Browse]** button. Based on the selected firmware file, the file contents – *Firmware Name*, *Version number*, *RFID Version number*, *Checksum* and *Remark* are automatically populated in the respective field. Click **[Upload]**.

The screenshot shows the 'PanL Display Firmware' upload form. The 'Firmware File' field contains 'PanL100\_1.3.0-2.0.1(2.7).bin'. Below it, the 'File Contents' table is populated with the following data:

Sl. No.	Firmware Name	Version	RFID Version	Checksum	Remark	Actions
1	PanL100_1.3.0-2.0.1	1.3.0-2.0.1	2.7	2144df1c	Valid	✕

Below the table, a message states '1/1 is valid. Good to go'. There are 'Clear' and 'Upload' buttons at the bottom.

- Upon successful upload, the uploaded firmware details are displayed on the Firmware History table.

The screenshot shows the 'PanL Display Firmware' upload form after a successful upload. The 'Firmware History' table is populated with the following data:

Sl. No.	Firmware Name	Version	RFID Version	Checksum	Uploaded Time	Actions
1	PanL100_1.3.0-2.0.1	1.3.0-2.0.1	2.7	2144df1c	4/9/2024, 5:55:48 PM	🗑️

At the bottom right, there is an 'Items per page' dropdown menu set to 20.

### 4.13.2 PanL Firmware Upgrade

To update the PanL Display Firmware, ensure that the PanL Display is unassociated. Refer to [Unassociate PanL display](#) for more information.



→ Click on the **Upgrade Management > PanL Firmware Upgrade** menu.

→ The latest firmware will be shown on the top right corner.

Click on ▼ to view the list of PanL Displays connected to the PanLHub. The current version of the display will be indicated in red if it is currently not updated to the latest version.

A screenshot of the 'PanL Display Upgrade Management' interface. It shows the 'PD100 Latest Version' as 1.3.0.2.0.1 (2.7). Below this, there is a 'PanL Hubs' section with one hub listed: 'hub80000009171900001.prm.local(PH80000009171900001)' with IP Address: 192.168.0.128. Below the hub, there is a 'PanL Displays' table with one display listed: 'ScanID-65' with UUID 'PD10000107082200001', MAC ID '11', and Current Version '1.2.0.3.4.1 (2.7)'. The 'Action' column for this display has a blue 'UPGRADE' button.

Name	UUID	MAC ID	Current Version	Action
ScanID-65	PD10000107082200001	11	1.2.0.3.4.1 (2.7)	UPGRADE

→ Click the **UPGRADE** link to upgrade the PanL Display's Firmware. Once the upgrade is triggered, the status will change to *IN PROGRESS*. A notification will appear upon successful upgrade, the *current version* column is updated to the latest version indicated in green.

A screenshot of the 'PanL Display Upgrade Management' interface, similar to the previous one, but the 'UPGRADE' button has been replaced by 'IN PROGRESS'. The 'Current Version' column for the display 'ScanID-65' is now highlighted in green, indicating it has been updated to the latest version.

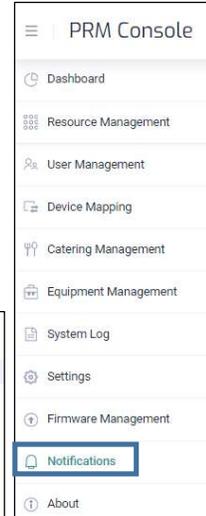
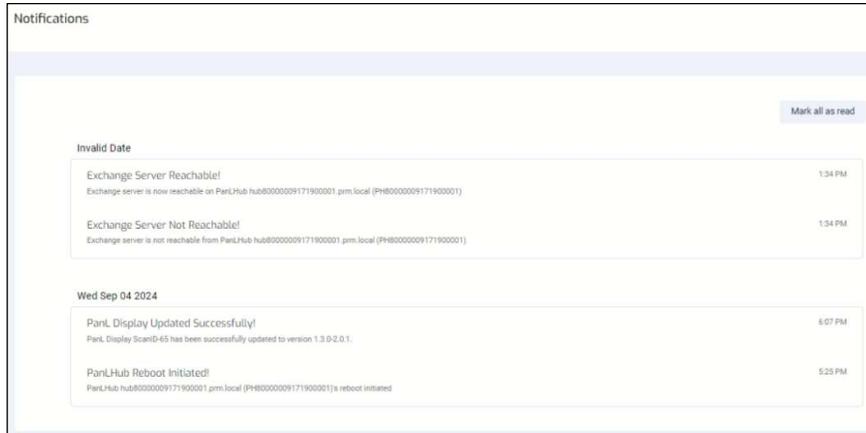
Name	UUID	MAC ID	Current Version	Action
ScanID-65	PD10000107082200001	11	1.3.0.2.0.1 (2.7)	IN PROGRESS

## 4.14 Notifications

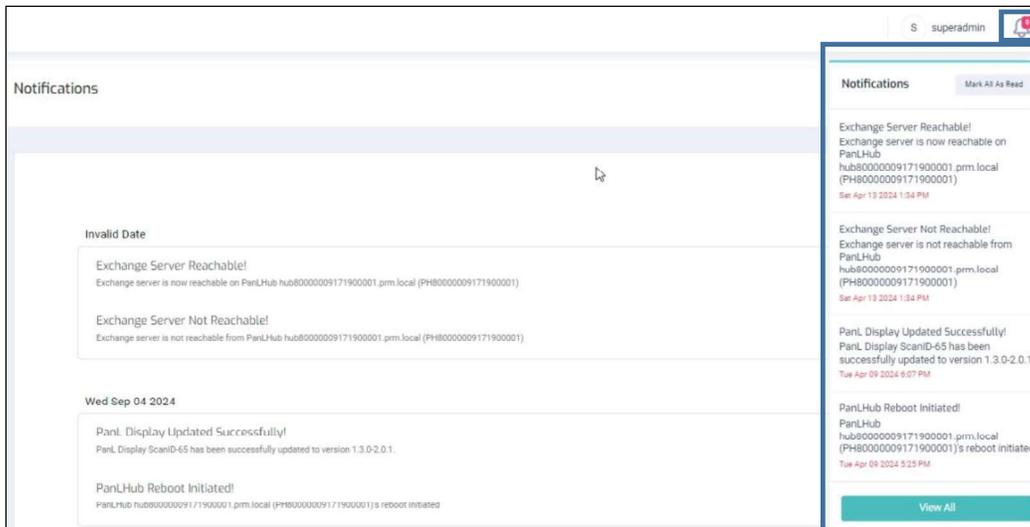
This function is used to view a list of system notifications from PRM, if any.

To view PRM system notifications,

- Click **Notifications** menu.
- The notifications interface will display a list of notifications, if any. Click **[Mark all as read]** to mark all the notifications as read.



Alternatively, the PRM notifications, can also be viewed, by clicking on the bell icon  next to the user's login. Click **[View All]** to view all the notifications in the Notifications interface.

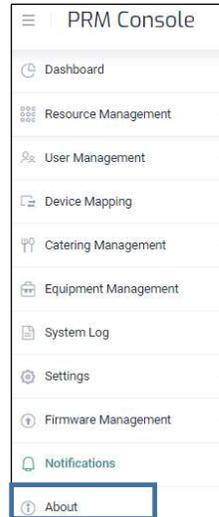


## 4.15 About

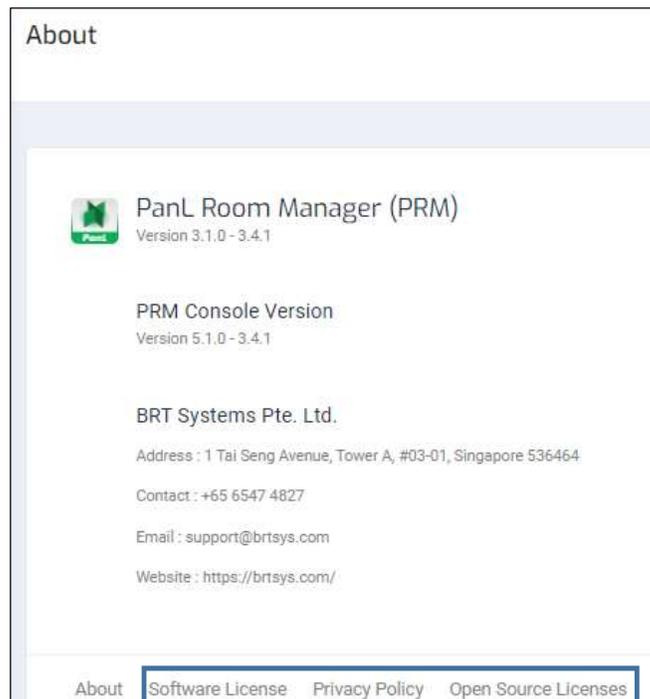
This function is used to view the PanL Room Manager system related information such as Product information, PanLHub software version number etc.

To view PRM system information,

1. Click **About** menu.



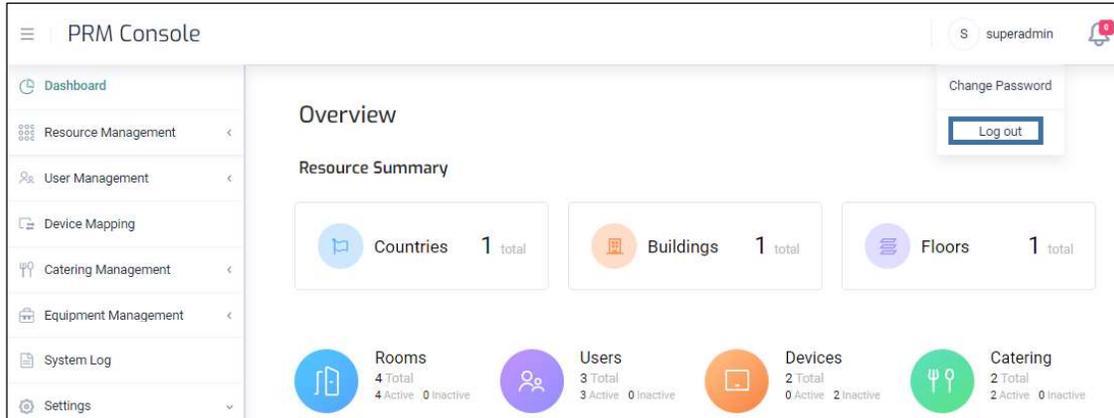
2. The PRM system related information such as *Product information*, *PRM Management Console version*, *Copyright* and *Support* contact details are displayed. Click on **Software License / Privacy Policy / Open Source Licenses** links to access the respective information.



## 4.16 Logout

To log out of PRM Management Console,

Click on the  icon. From the resulting menu, click **[Log out]**.



## 5. Appendix

### 5.1 Glossary of Terms, Acronyms & Abbreviations

Term or Acronym	Definition or Meaning
Booking Density	The percentage of rooms that have been utilized in hour resolution over time.
Room Utilization	The percentage of rooms utilized over a period
HTTPS	Hypertext Transfer Protocol Secure
Ghost User	A ghost user is a user who has booked a room, but did not show up to claim the room booking
IP	The Internet Protocol (IP) is the network layer communications protocol in the Internet protocol suite for relaying datagrams across network boundaries.
NTLM	New Technology LAN Manager is an outmoded challenge-response authentication protocol from Microsoft
OIDC	OpenID Connect is an identity authentication protocol that is an extension of open authorization (OAuth) 2.0 to standardize the process for authenticating and authorizing users when they sign in to access digital services.
PRM	The PanL Room Manager is designed to support from large to small organizations to automatically manage meeting room booking issues such as room booking conflicts, ghost bookings, under-utilized rooms, etc.
Recaptured Time	The amount of time spent on the released desks.
ROPC	The Resource Owner Password Credentials grant is designed for obtaining access tokens directly in exchange for a username and password.
SSL	Secure Sockets Layer is an encryption-based Internet security protocol.
URI	A Uniform Resource Identifier is a unique sequence of characters that identifies a logical or physical resource used by web technologies.
URL	A Uniform Resource Locator, colloquially known as an address on the Web, is a reference to a resource that specifies its location on a computer network and a mechanism for retrieving it.

### 5.2 List of Figures

NA

### 5.3 List of Tables

<b>Table 1 – RFID Card &amp; Frequency</b> .....	25
<b>Table 2 – Room Booking Policies</b> .....	37
<b>Table 3 – User Group Permissions</b> .....	46
<b>Table 4 – User Group Policies</b> .....	47
<b>Table 5 – PanLHub States</b> .....	51
<b>Table 6 – PanL Display States</b> .....	51
<b>Table 7 – Catering Group Policies</b> .....	60

## Revision History

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Version 1.0	Initial release for PanL Room Manager (PRM) V2.5.0	14-08-2023
Version 2.0	Updated release for PRM Ver.3.1.1 (PRM Management Console Ver.5.1.1-3.0.0)	04-07-2024