Add-On Products
DS Service

Administrator Guide

For DSS 4.3

Version: 13

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CHAPTER 1.

Introduction

This Administrator Guide is intended for system administrators and describes how to set up DS Service.

The document consists of the following chapters:

Introduction giving you the structure of the document as well as an overview of the DS Service software.

How to configure DS Service chapter provides you steps that you need to follow in order to setup the DSS software.

In this chapter:

- **Definitions, Acronyms and Abbreviations**
- **DS Service Overview**

Terminology List

Term	Definition
AD (Active Directory)	Service that provides the means to manage the identities and relationships that make up network environments.
Destination store	The place to where DS Service put the xml file extracted from Exchange Server. In this version of DS Service, Destination Store is Ftp Server, file server or ISS.
DS Service (DSS)	DS Service is a software designed to collect data from Exchange Server and store it in a specific location as well as update data on Exchange Server when receiving request.
Exchange Connector	The system which can use the xml output from DS Service. Digital signs assigned to those systems read the content of the XML files. In this case appointment content for multiple calendar accounts are stored in one XML.
Group or distribution list	List of users joined together as one entity. Created in AD or on Exchange Server.
IIS (Internet Information Service)	A Web server with integrated, reliable, scalable, secure, and manageable capabilities available over an intranet, the Internet, or an extranet, and is a tool for creating a strong communications platform for dynamic network applications.
Microsoft .NET Framework	A set of Microsoft software technologies for connecting information, people, systems, and devices. It enables a high level of software integration through the use of Web services: small, discrete, building-block applications that connect to each other as well as to other, larger applications over the Internet.
Microsoft Exchange Server	Server software enabling you to send and receive electronic mail and other forms of interactive communication through computer networks.
UTC (Coordinated Universal Time)	Equivalent to mean solar time at the prime meridian, formerly expressed in GMT.

DS Service Overview

The two main purposes of DS Service are:

- To extract appointment information from assigned Microsoft Exchange calendar accounts and place this information in standard XML files, so they can be used for further processing by digital signage.
- To collect user input from digital signs. Based on this input, DSS can modify the content of assigned MS Exchange calendar accounts.

The basic DSS components are as follows:

- **DS Service** (A graphical frontend**)**
- **DS Service v4** (Extracts appointments from Exchange. Creates corresponding XML files**)**
- **Digital Sign REST Service** (Writes appointments into Exchange**.** Receives requests from Digital Signs. Updates output XML files and content for the signs)

CHAPTER 2.

How to configure DS Service

DS Service Overview

DS Service is the graphical frontend used to configure the DS Service components. This section contains a brief introduction to it.

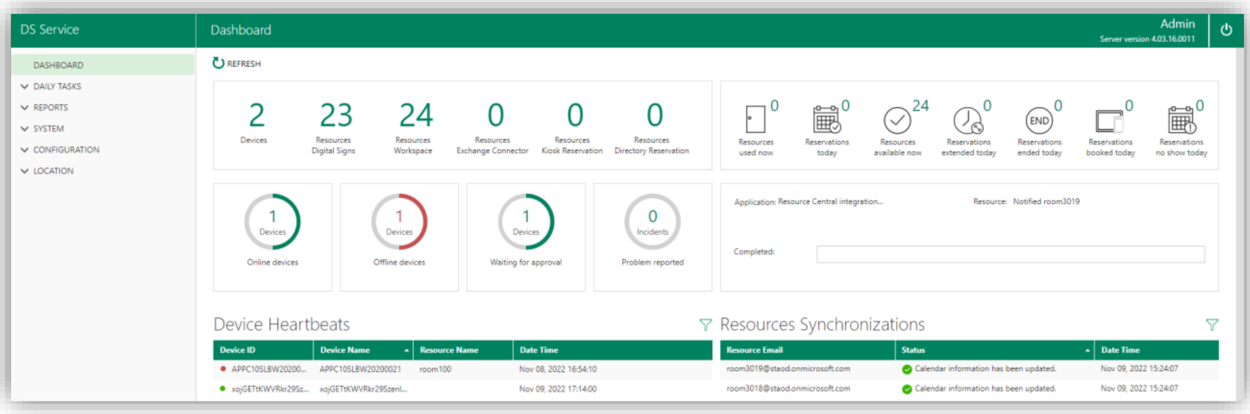


Figure 1. DS Service User Interface

DS Service provides the ability to configure synchronization settings for a particular destination. Likewise, it can be used for specifying common settings applied to Digital Signs.

DS Service includes options for selecting distribution lists to be used in synchronization.

User can book a new meeting if the text “Available” appears on the screen, and the Status banner is green. This is also the initial screen view of the user interface.

DS Service interface pane features 3 sections:

Dashboard – this section features overview of the system and how resources/devices are operating.

Daily Tasks – this section displays the list of reservations booked on a specific date.

Reports – this section features reports that cover all operations of the system.

System & Configuration – these sections feature common settings for all DS Service system to provide DSS with the ability to connect to Exchange Server to retrieve data and save it in an XML file. See the **System Configuration** section of this document for more details.

Location **–** this section provides support information on the devices and resources, which allow you to manage device groups and make changes to resources.

Dashboard

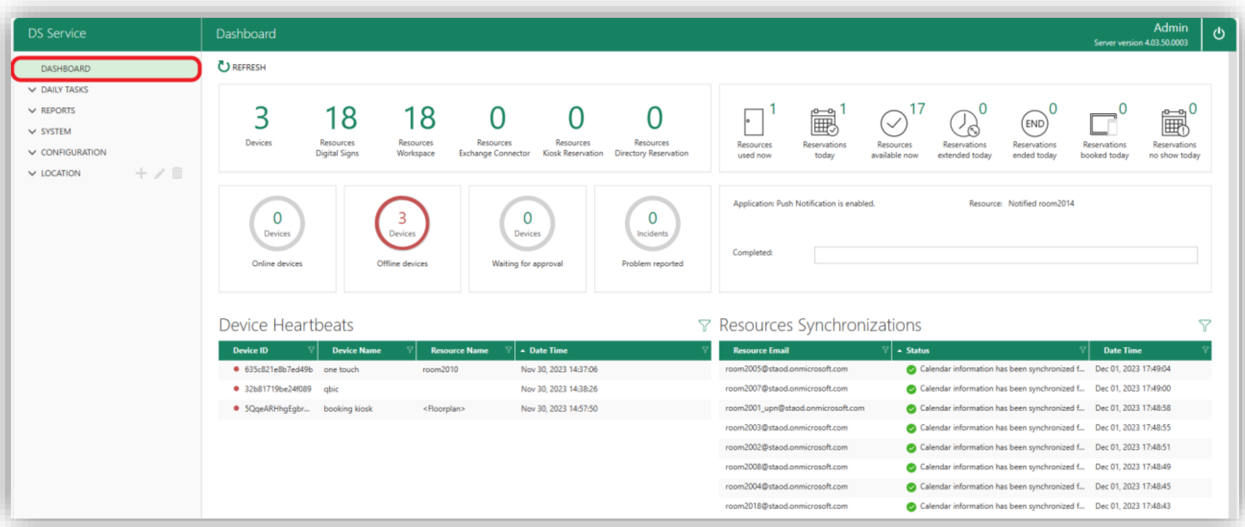
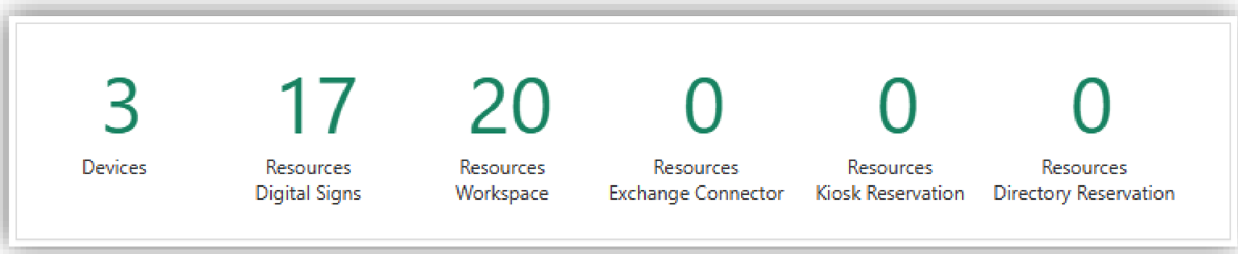


Figure 2. Dashboard section

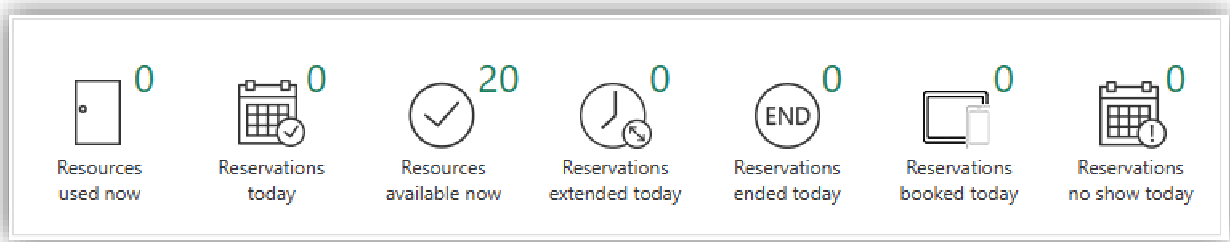
This section provides an overview of the system and how resources/devices are operating.

The top area contains information of number of devices, added/used resources and what happen with them today. You can have a shortcut to go to other pages by clicking specific positions on this screen:

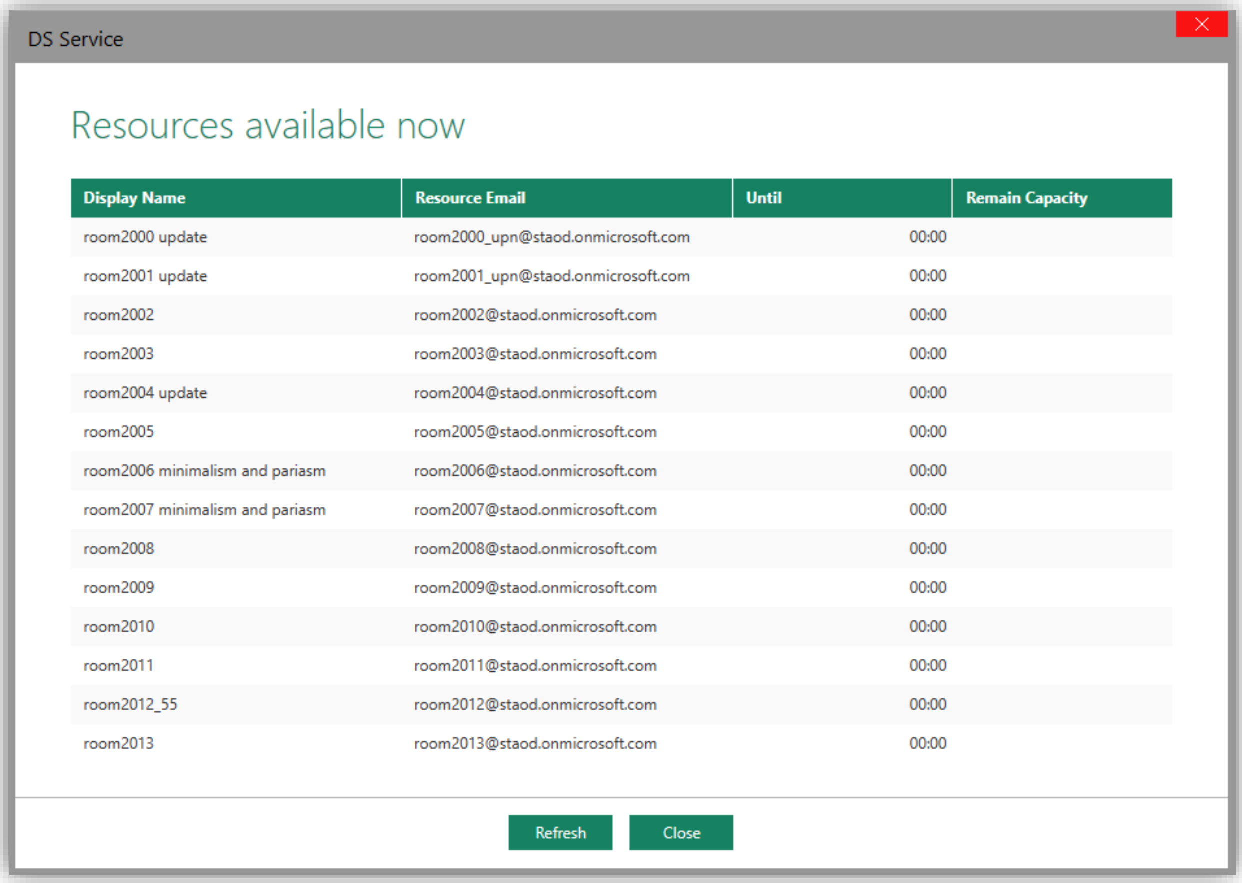


Clicking on the number above “**Devices**” will switch you to **Devices** page under **CONFIGURATION** section.

Clicking on the numbers above “Resources Digital Signs”, “Resources Workspace”, “Resources Exchange Connector”, and “Resources Directory Reservation” will switch you to Resources page under CONFIGURATION section.

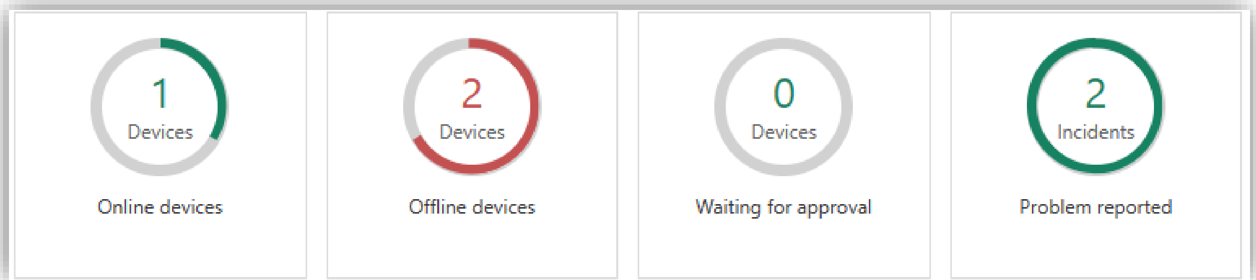


If you click on an icon in the figure above, a pop-up screen will appear and show you the reservations with the conditions you pick. E.g.:



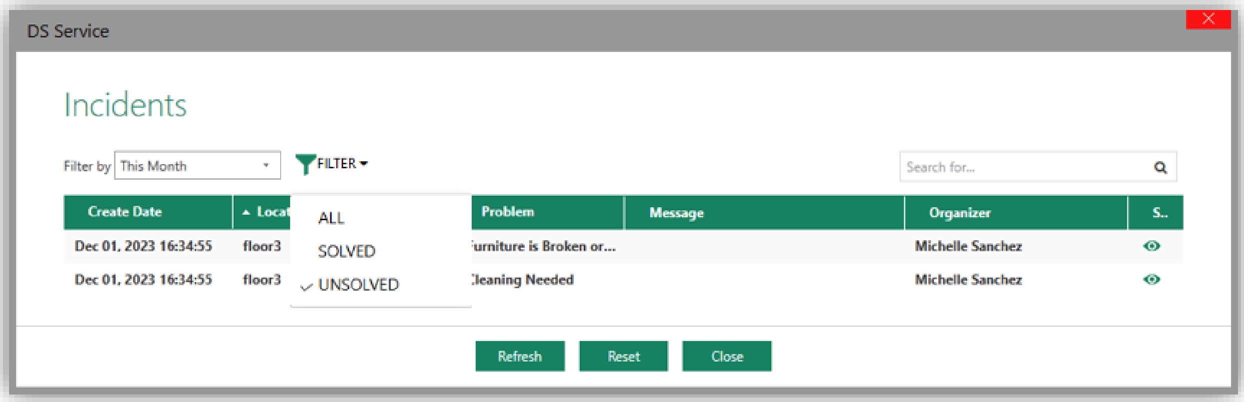
Display Name	Resource Email	Until	Remain Capacity
room2000 update	room2000_upn@staod.onmicrosoft.com	00:00	
room2001 update	room2001_upn@staod.onmicrosoft.com	00:00	
room2002	room2002@staod.onmicrosoft.com	00:00	
room2003	room2003@staod.onmicrosoft.com	00:00	
room2004 update	room2004@staod.onmicrosoft.com	00:00	
room2005	room2005@staod.onmicrosoft.com	00:00	
room2006 minimalism and pariasm	room2006@staod.onmicrosoft.com	00:00	
room2007 minimalism and pariasm	room2007@staod.onmicrosoft.com	00:00	
room2008	room2008@staod.onmicrosoft.com	00:00	
room2009	room2009@staod.onmicrosoft.com	00:00	
room2010	room2010@staod.onmicrosoft.com	00:00	
room2011	room2011@staod.onmicrosoft.com	00:00	
room2012_55	room2012@staod.onmicrosoft.com	00:00	
room2013	room2013@staod.onmicrosoft.com	00:00	

Under the counter above, you will also see the number of **Online devices**, **Offline devices**, and devices waiting for approval from the organizer:



Clicking on 3 former numbers will redirect you to the **Configuration ➔ Devices** section where you can manage these devices. For more details on online/offline devices, refer to Add devices to a location.

Additionally, the Problem reported area is now included to show the number of incidents that clients reported. e.g.:



Here, you can filter the incidents by their status: '***Solved***/***Unsolved***/***All***'

The **Device Heartbeats** and **Resources Synchronizations** provide status of resources.

Actions area describes what actions have been done on the devices. Clicking on filter will show the **Action History** list:

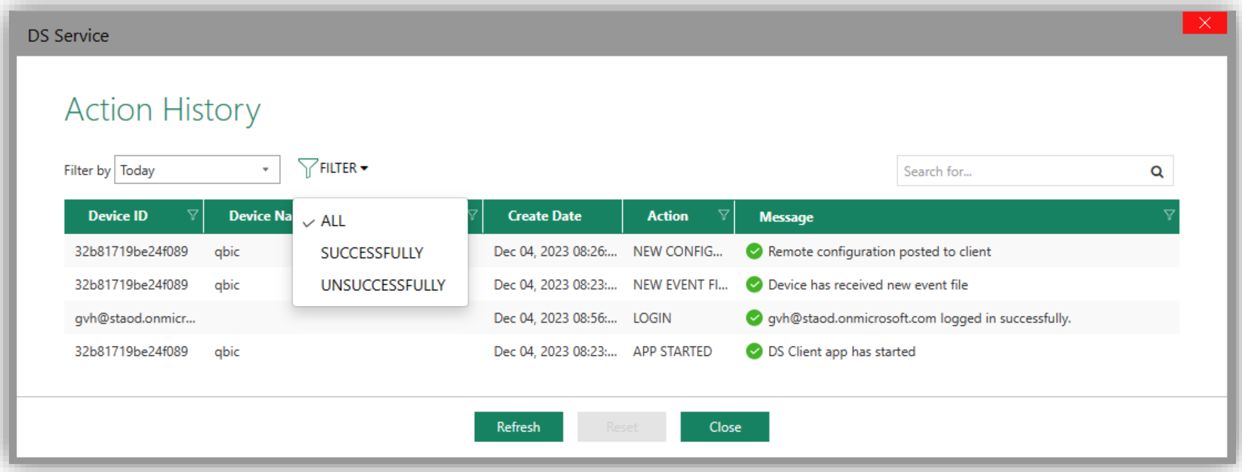


Figure 3. Action filter

Here, you can also filter the list, including '***Successfully***' choice which shows the successful actions, and '***Unsuccessfully***' choice which shows actions that have errors.

The similar filter option also applies to **Device Heartbeats** and **Resources Synchronizations.** The filter will also change how the information is displayed on the Dashboard. Filter will be applied to your account, meaning it will keep your filter on the Dashboard even if you move to other sections, or login then logout with the same account.

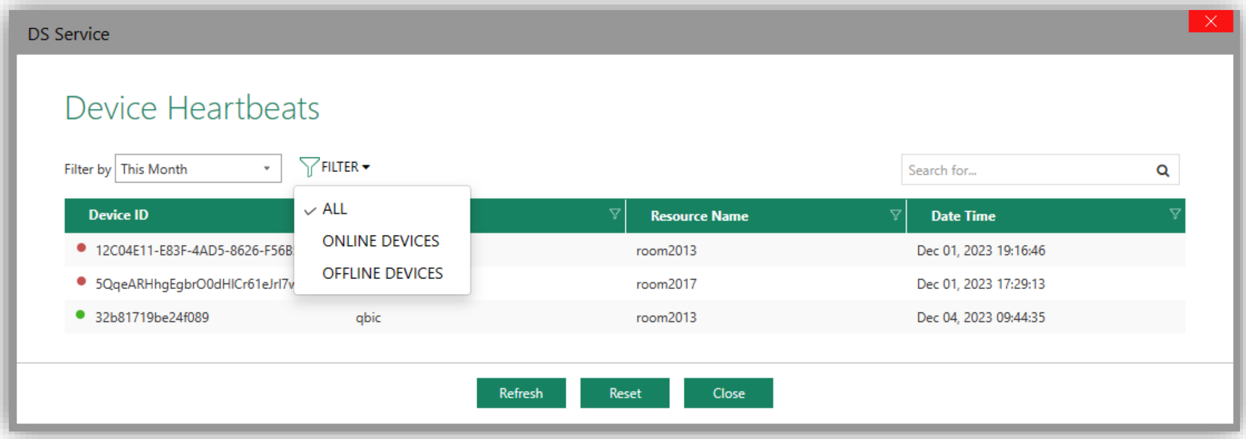


Figure 4. **Device Heartbeats filter**

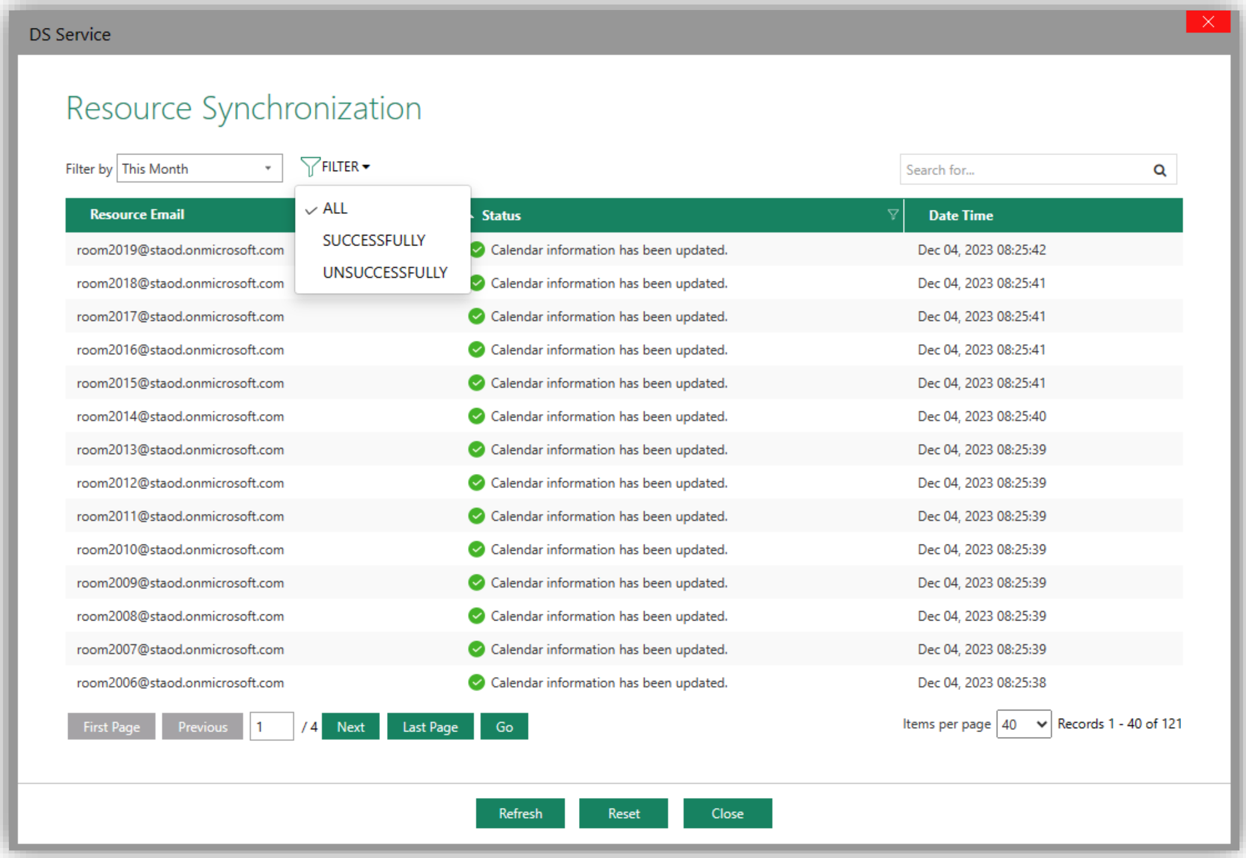


Figure 5. **Resource Synchronization filter**

Daily Tasks

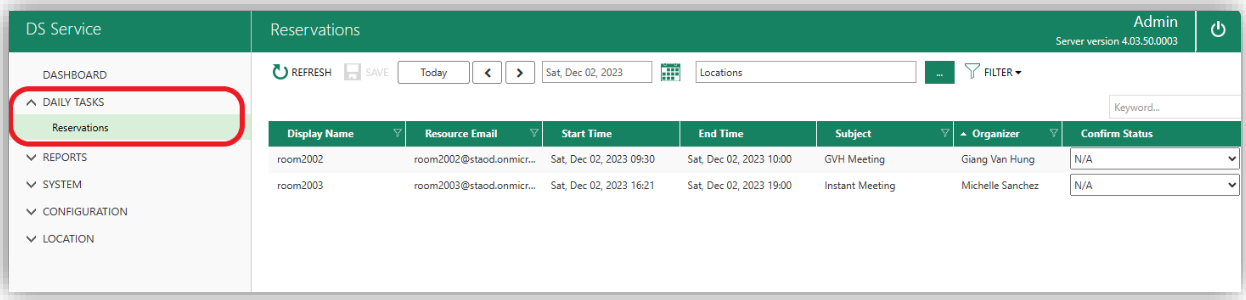
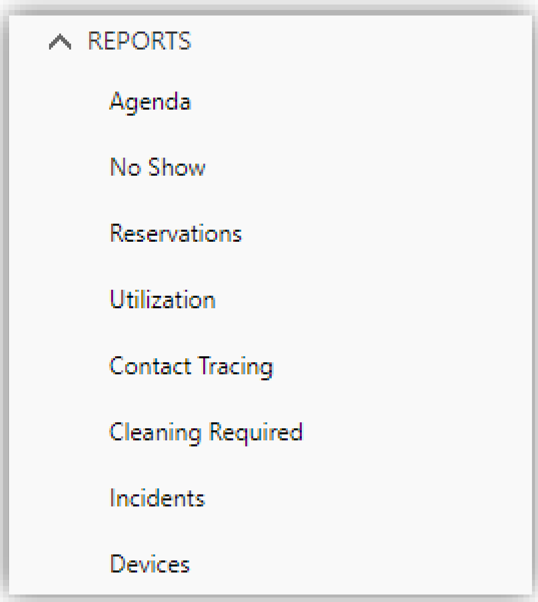


Figure 6. **Daily Tasks section**

This section displays the list of reservations booked on a specific date.
Here you can change the status of reservation, either **Waiting**, **Confirmed**, or **Not Confirmed**.

You can also filter this list by selecting a specific date, specific location, and status.

Reports



This section provides 8 types of reports. Each of these reports can be used to serve your specific purposes.

Figure 7. **Reports section**

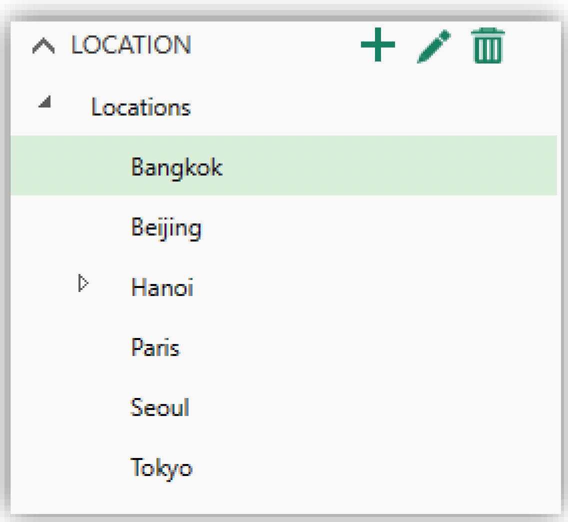
System & Configuration

These navigation pane items open an interface section where the parameters related to all applications with Digital Sign data are specified. These sections enable DS Service to connect to the Exchange Server and synchronize items to necessary stores. This pane includes the following sections:

SYSTEM

- License
- Connections
- Settings
- Outputs
- Parameters

Location



This section lists all the locations created on the server. Clicking on each location will not only show you its devices and resources, but also allows you to create Floorplan for it.

Figure 8. Location

Basic configuration

Upload a license

Synchronization to destination stores performed by DSS cannot take place without a license file permitting this operation. The service will stop if the license has expired.

By default, the product is shipped with a demo license valid for a 30-day trial period. When the trial period is over, the application displays a warning message and stops functioning. A full license can be purchased from your vendor. Visit www.add-on.com for more details.
If you have obtained a valid license, you will need to manually upload it.

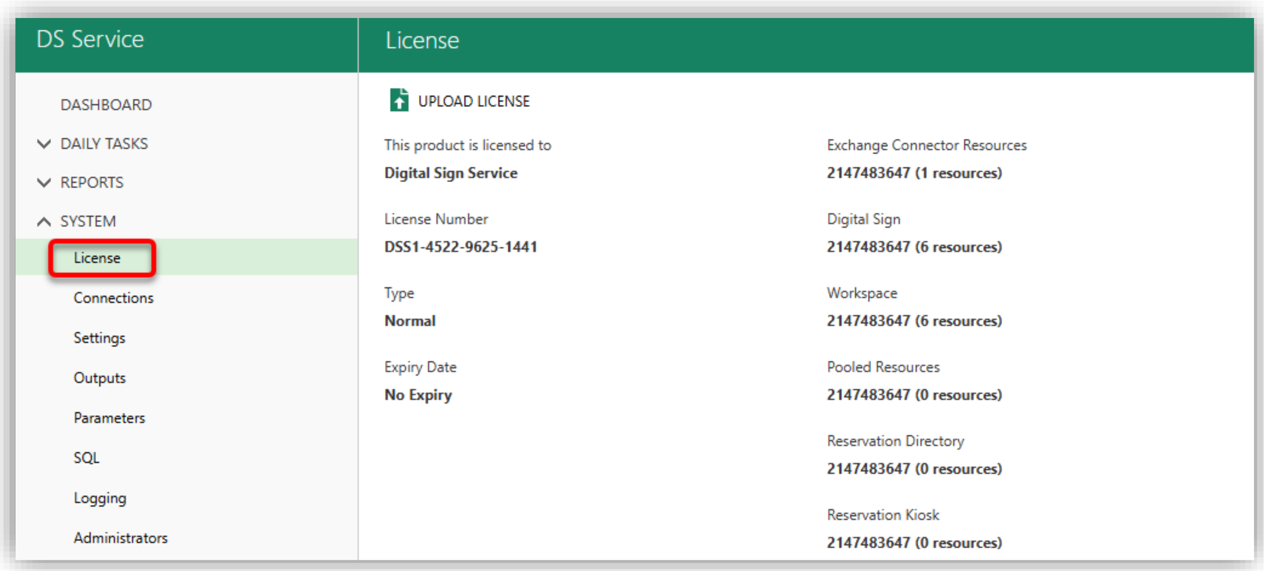


Figure 9. **SYSTEM → License**

To upload the acquired license file, follow the steps described below:

1. Once you have the license file, go to **System** → **License**. Click [**Upload License**] button.
2. Browse to the directory where your license file is located. Select the file and click [**Open**].
3. The license will now be loaded for your copy of DSS.

The **License Number** and **Type** columns contain the respective information on the license number and type (demo, Limited-time or full).
The number out of brackets in each resource type indicates the number of allowed user calendars in the license file. The number in the brackets depicts the number of used licenses (resources added). If the total number of user calendars selected exceeds the total number of users allowed in the license file, DS Service will show a warning message and will not allow more resources to be selected.

The **Expiry date** column can contain a particular date on which the license will expire.
The function & usage of each license type is as follows:

DS Service
Licenses overview

License type	Digital Sign	Desk Sign	Workspace App	Pooled Resources	Reservation Kiosk Resources	Reservation Directory Resources	Lamp indicator (Available/occupied light)	Exchange Connector (Ariadne)
Unique identifier:	YES	YES	YES	-	YES	YES	YES	YES
Typical used for:	Meeting Rooms	Desks (* only for use with hardware devices for desk booking)	Meeting Rooms, Desks	Grouped Desks, Parking spaces, Auditorium seats	ALL	ALL	Meeting Rooms, Desks	Meeting Rooms
FUNCTION								
Ariadne (output)	-	-	-	-	-	-	-	YES
Resources shown on **Door Signs**	YES	-	-	-	-	-	-	-
Resources shown on **Desk Signs**	YES	YES *	-	-	-	-	-	-
Resources shown on **Reservation Directory Signs**	YES	YES	YES	YES	-	YES	-	-
Resources bookable on **Reservations Kiosk**	YES	YES	YES	YES	YES	-	-	-
Resources bookable on **Workspace Booking app**	-	-	YES	YES	-	-	-	-
Resource availability is indicated by **light/lamp**	-	-	-	-	-	-	YES **	-

* For use with Add-On Products Workspace device WS-0350 or Qbic DS-0350 (TD-0350)
** For use with Innes/Qeedjii Lamp model SBL10e

Establish connections

Exchange On-Premise

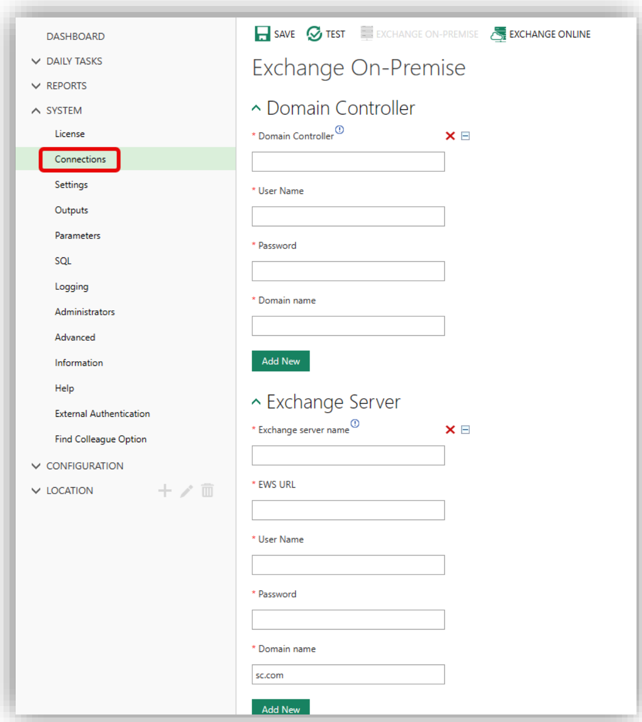


Figure 10. Exchange On-Premise

In this section you can add multiple Domain Controllers and On-Premise Exchange Servers by clicking the [**Exchange On-Premise**] button on the toolbar. But you can only add one Online Exchange Server. If you already added it, the [**Exchange Online**] button will be blurred.

In the **Domain Controller** field, enter the Active Directory machine address.

For **Exchange Server**:

Enter the EWS URL and the Name of Client Access Server (CAS) or Name of Exchange Server where appointments are to be got from.

The service account to be used here must be granted impersonate permission. For information about how to set necessary permission for the account, refer to the KB - [Steps to configure Application Impersonation rights in Exchange Servers]().

NOTE: User Name for Domain Controller/Exchange Server must be only the account name (e.g., johnsmith). Any other formats (such as **abc\johnsmith** or [johnsmith@abc.com]()) are not accepted.

Exchange Online

If **Exchange Online** is selected, you need to create an application on Azure portal and retrieve details to fill in here. For more details, please refer to the following knowledge base articles:
[Create Azure app for reservation management]()
[Create Azure app for mail sending function]()
[Create Azure app for Keyboard function in Digital Sign Client]()
[Create Azure app for use of Workspace with delegated permissions]()
[Create Azure app for use of Workspace with application permissions]()

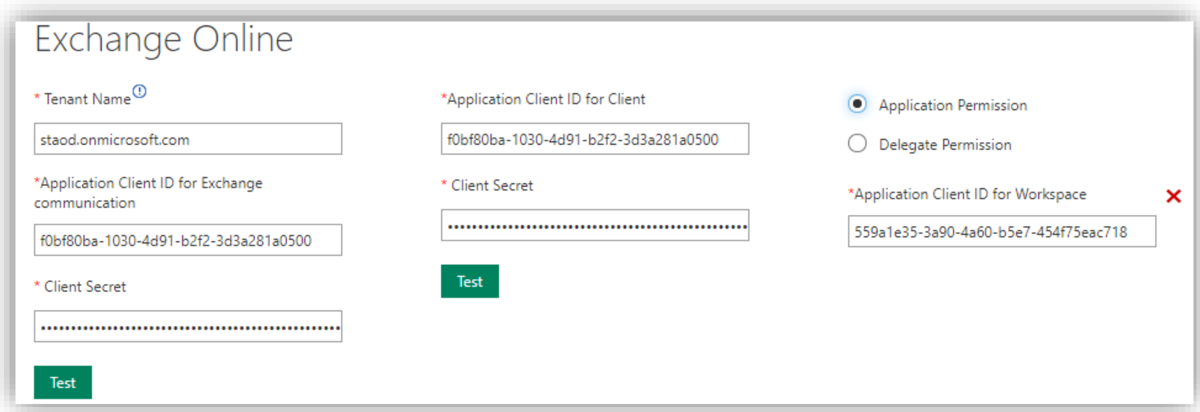


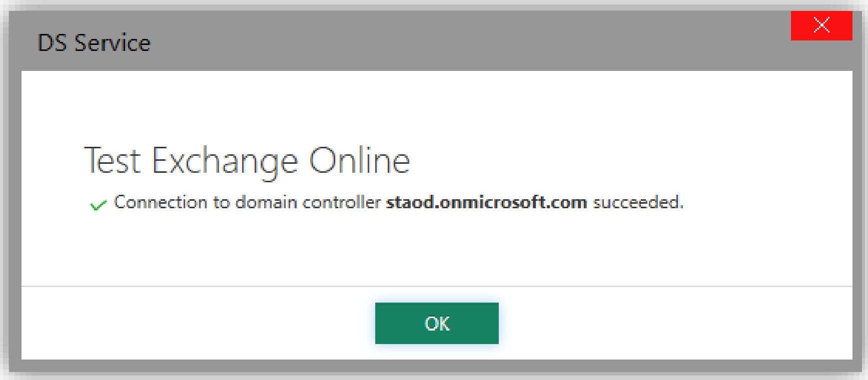
Figure 11. Exchange Online

The Application Client ID for Client and Application Client ID for Workspace sections can be available in response to the selection made in **Settings**.

- If **Use keyboard for user-authentication on digital signage** is selected → **Application Client ID for Client is available**.
- If **Use Workspace app** is selected → **Application Client ID for Workspace** is available. Here you can select either Application or Delegate Permission to be applied on Workspace. For Delegate Permission, apart from App Client ID, you need to provide **Client Secret** as well.

You can test the correctness of the specified access parameters for the Exchange Server by clicking [**Test**] button (you might be required to provide the **User Name** and **Password** again).

If you click [**Test**] button on the top tool bar, the following message shows up for successful connection or you can click [**Test**] button on each section of Exchange Online to check each connection:



Database

In **Database** section, you can select to use Compact database (by default) or SQL Server.

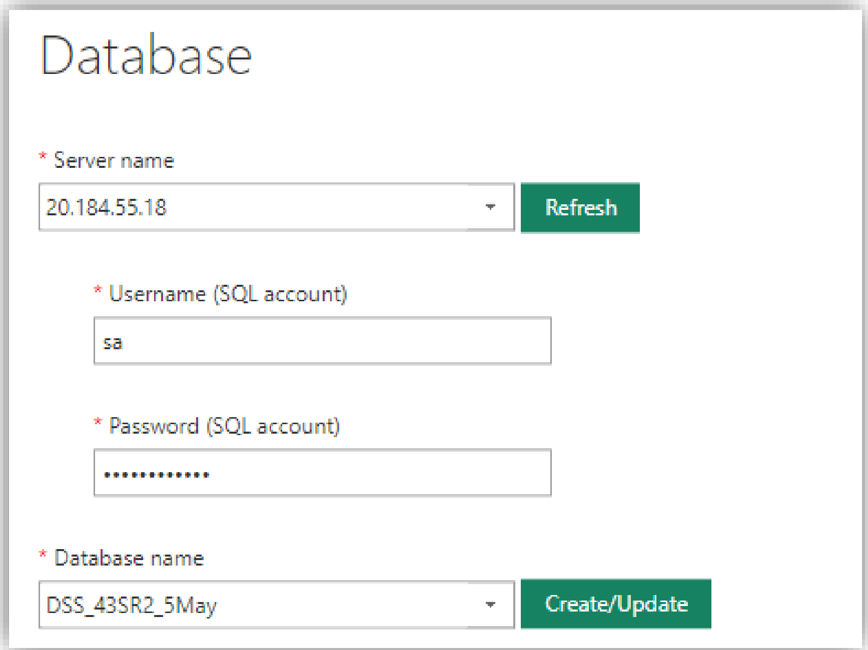
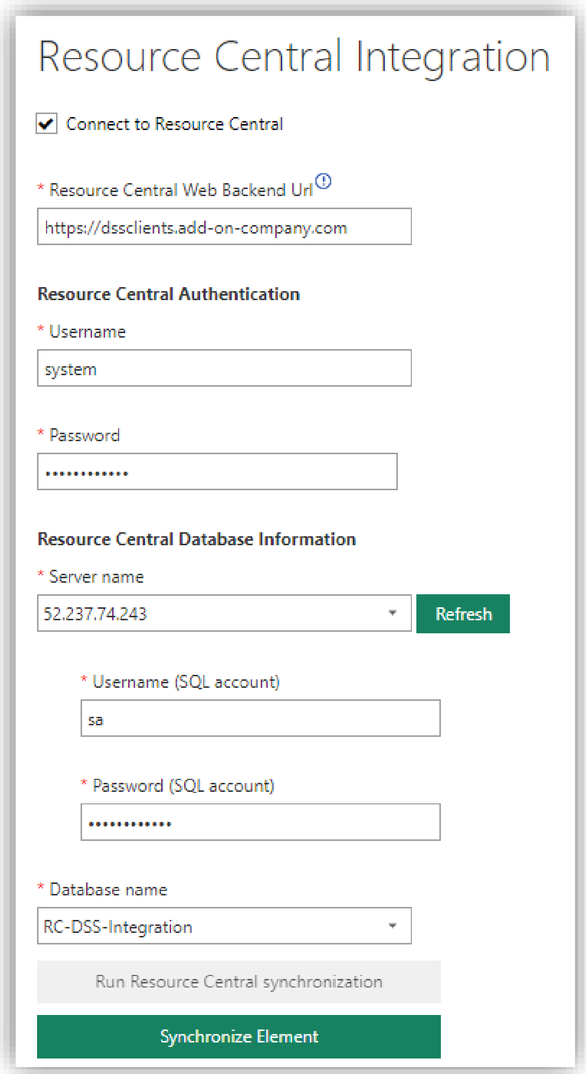


Figure 12. **Database**

Resource Central Integration

In **Resource Central Integration** section, you can configure the connection between DS Service and Resource Central (RC).



Check on **Connect to Resource Central** to enable connection.

Then fill in necessary information of RC such as RC backend URL, RC authentication credentials, RC database details.

NOTE: For RC authentication, the credentials must belong to an existing person in RC system.

When all necessary details have been input, you can click [**Run Resource Central synchronization**] to start the full sync.

Otherwise, you can click [**Synchronize Element**] to select a single element for synchronization.

Refer to ***RC&DSS Integration Guide*** for more details.

NOTE: In case you choose to sync **Reservation** element, there is a new option [**All Resources**] which let you sync all the resources, e.g.:

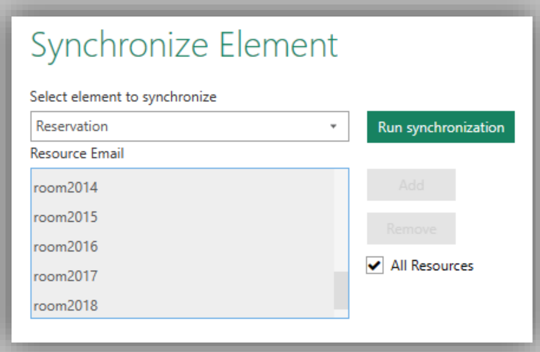


Figure 13. RC integration

Configure Outputs

Filter

DS Service includes a visual interface to set up synchronization filtering. The Filter section (shown in the figure below) contains the following elements that can be adjusted:

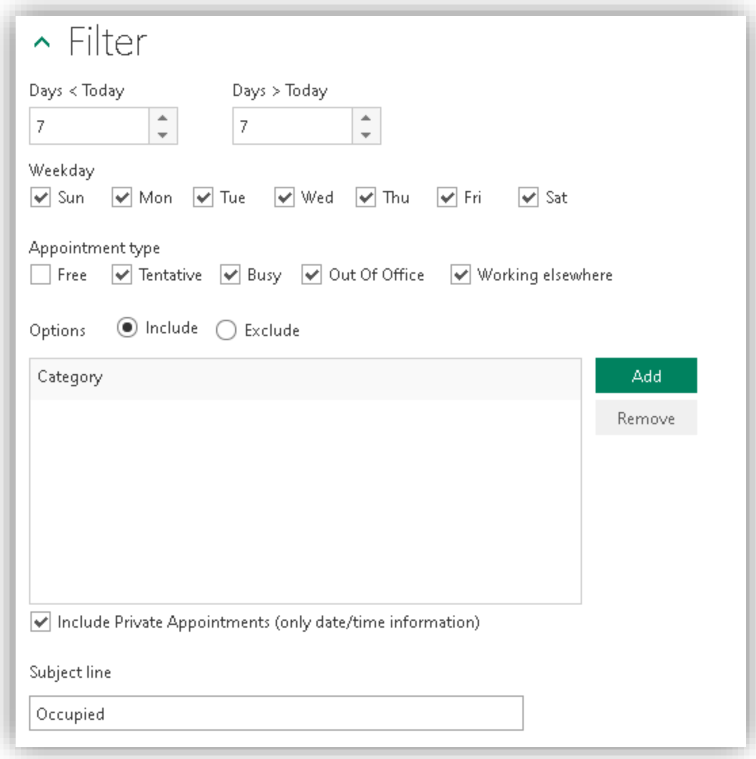


Figure 14. Filter

- **Days < Today** (days before current time) and **Days > Today** (days after current time): Adjust these two elements to define the date range. Only the items within the specified data range will be processed. Use value **0** to remove time restrictions for "before" or "after" periods. The default value for **Days < Today** is 0 and for **Days > Today** is 0. If values for both fields are '0', Today will be employed.

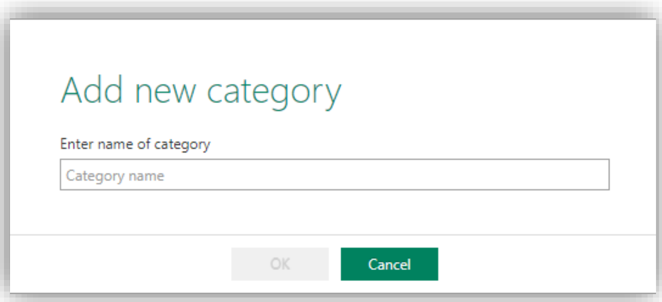
  NOTE: Applied to **Digital Sign Client** and **WorkSpace & Report.**

- **Weekday**: Select the weekdays on which you want to get appointments. All the items in the specified weekdays will be processed. By default, the weekdays from Monday to Saturday will be selected.
- In the **Appointment Types** area select one or more check boxes to indicate an appointment type. Choose among:
  - **Free** – defines the appointments time as free.
  - **Tentative** – indicates that this appointment is still under consideration.
  - **Busy** – indicates that during the appointment you will be busy and do not want to be disturbed.
  - **Out of Office** – specifies that the appointment will take place out of office.
  - **Working elsewhere** – specifies that you will be somewhere else during the appointment.
- **Category Filter** represents a list of appointment categories to be included or excluded.
- **Filter Action (Options)** allows you to include categories to, or exclude categories from, processing. The selected option (**Include** or **Exclude)** applies to all the categories in the list.

  You can modify the list of categories by adding new ones or removing existing ones.

  To add a new category to the list, do the following:

– Click the **Add** button. The **Add New Category** window shows up as shown in the figure below.



– Type in the category name you need.

To remove a category, select that category in the list and click [**Remove**] button.

- **Include Private Appointments** check box allows including private appointments into processing. Select this option for DSS to collect only time and date information from appointments, leaving all text fields empty.
- The **Subject Line** field allows entering a subject value, which will be used to replace the subject line in private appointments prior to storing them to a destination store. This field is available only if the **Include Private Appointment** check box is selected.

Exchange Connector Output

For **Exchange Connector** system, data is synchronized and saved in an xml file namely the ***CustomerID.xml*** file. Therefore, the CustomerID must be specified.

The xml file can be saved in two types of destination store which are FTP Server and File server. Select the checkboxes (**Output to FTP Server** and **Output to File Server**) to determine where to put XML output file.

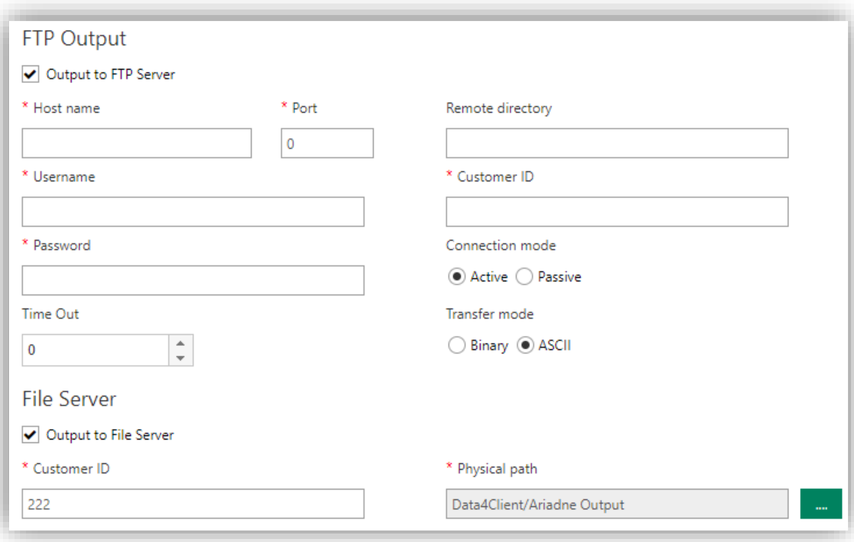


Figure 15. **Exchange Connector Outputs**

Output XML file to FTP Address

Select the **Output to FTP Server** checkbox to enable synchronization to FTP server. The configuration fields for this destination would be enabled.

- In the **Hostname** and **Port** field, enter the name of FTP Server and the port through which data can be transferred.

NOTE: Host name can be an IP address.

- **Username** and **Password:** Specify Username and password to log on to the **FTP Server**.
- **Connection Mode:** To connect to an FTP server that has a firewall enabled, you must connect using a specific connection mode (**Active** or **Passive**) in your FTP program.
- **Time Out:** Enter the inactivity time out value of Ftp server in this field.
- **Transfer Mode:** The output xml file can be transferred via FTP in two different modes, namely the **Binary** mode and **ASCII** mode. The ASCII mode transfers files as 'text' while the Binary mode transfers files as raw data. Users are recommended to choose **ASCII mode** for file transferring.
- **Remote Directory:** Specify the folder of the FTP Server in which the xml output file should be saved in.
- **Customer ID:** The customer ID specified in this section will be used as the name of the XML output file for Exchange Connector.
- You can test the correctness of the specified access parameters for the Digital Signs Output by clicking [**Test**] button. If the setting is incorrect, DS Service will show you messages containing recommendations to check what value is wrong.

Output XML file to File Server

Select the **Output to File Server** checkbox to enable synchronization to File Server. The configuration fields for this destination would be enabled.

To save XML output file to File Server, specify two fields below:

- **Customer ID:** In this field, enter the customer ID for Output.
- **Physical Path:** Relative path on web server where the XML file should be put.

Make advanced settings for the DS Service

The **Settings** section features the following set of elements:

Interval Settings

Figure 16. **Interval Settings**

In the **Appointments synchronization interval** box, specify the frequency (in minutes, equal or more than 1 and not exceeding 1000), at which the data will be synchronized from the Exchange Server.

Check on **Enable period AD synchronization** and specify the time at which the synchronization will be implemented.

Advanced

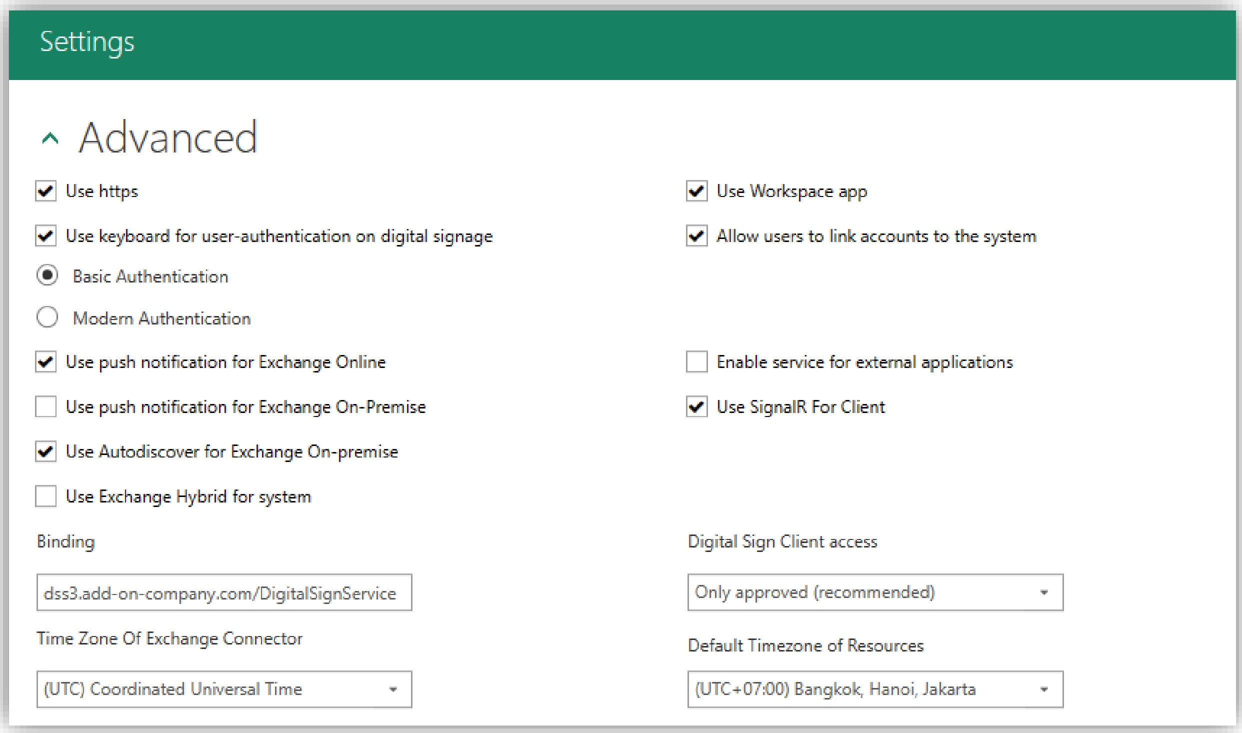
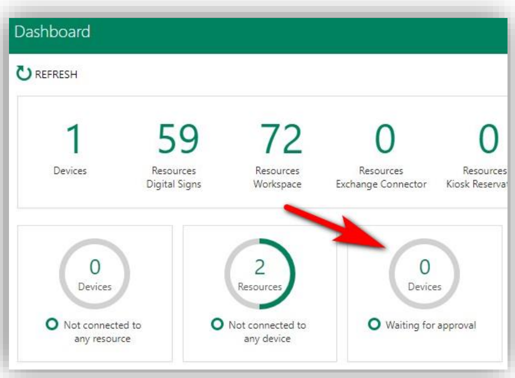


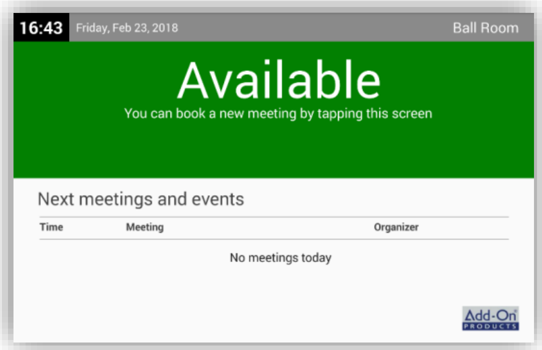
Figure 17. Advanced

- **Use https**: Check this option to select https protocol.
- **Use keyboard for user-authentication on digital signage:** Check this option to enable use of keyboard for entering credentials. You will have 2 additional choices:
  - **Basic Authentication**: this allows accounts without authentication to book reservations on Reservation Kiosk. (This authentication type requires creating Azure app for keyboard function, refer to Create Azure app for Keyboard function in Digital Sign Client).
  - **Modern Authentication**: this only allows accounts with authentication to book reservations on Reservation Kiosk. If you are configuring Modern Authentication for Exchange Online, follow this guide: Create Azure app for Modern Authentication in Digital Sign Client. If you are configuring Modern Authentication for On-premises, follow the guide ***ADFS Configuration for Exchange on-premises***.
- **Use push notification for Exchange Online:** Check this option to enable use of notification for Exchange Online.
- **Use push notification for Exchange On-Premise:** Check this option to enable use of notification for Exchange On-Premise.
- **Allow users to link NFC Card to the system:** Check this option to enable linking NFC card to DS Service.
- **Use Workspace app:** Select this to use Workspace app for use of NFC card.
- **Use Autodiscover for Exchange On-Premise**
- **Use Exchange Hybrid for system:** This option is used when both Exchange Online and Exchange On-premise are configured in Connection category under System section. All accounts, resources, and mailboxes will be migrated from Active Directory of On-premises to Exchange Online.

- **Enable service for external applications:** Select this to allow creating, updating, and deleting NFC card.
- **Use SignalR For Client:** Check on these options will allow changes of Resource type and Resource appointment from DS Service to be instantly applied to Workspace App and DS Client. When applying SignalR on DS-Client, the application will update actions and events automatically once there is any change from Server and Exchange.
- **Binding**: Path to DS Service website, which will be used to create URL in the schedule file.
- **Digital Sign Client access**: Configure if devices need to be approved to access the server. It decides which scenario will be selected for the installation flow involving 2 objects: Server side (interacted via DS Service) and Client side (interacted via Digital Sign Client application):

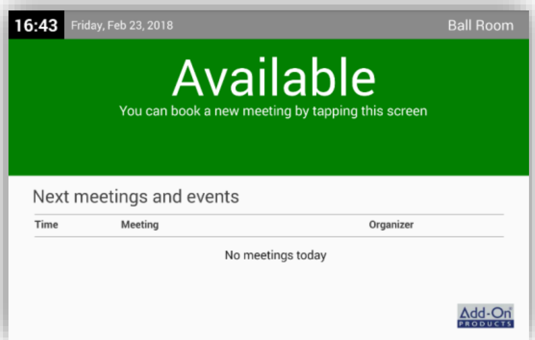
<table>
<tr><th>Flow 1</th><th>Flow 2</th></tr>
<tr><td>
i. DS Service is installed and configured to allow ‘Only approved’ clients.
ii. Digital Sign Client app starts up for the first time, user clicks [SETUP] button.
iii. User provides URL to DS Service and a device name.
iv. Click [Save], the details are verified, and the following screen shows up:


v. At this moment, Digital Sign Client app has to wait for the approval from server side.
vi. On DS Service, a list of devices is waiting for approval:


vii. The administrator will confirm the device and do all necessary configuration for the client side (door sign type, resource name, template, and all others).
</td><td>
1. DS Service is installed and configured to allow access from ‘All’ clients.
2. Digital Sign Client app starts up for the first time, user clicks [SETUP] button.
3. User provides URL to DS Service and a device name.
a. If user selects Configuration managed by Client and click [Save], the Digital Sign Client app on the device turns to the initial screen view:


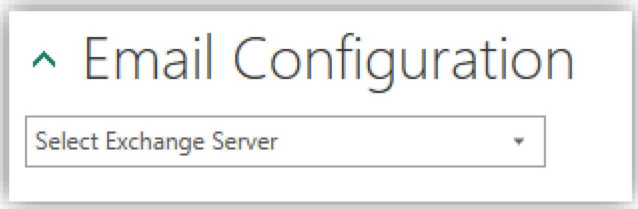
b. If user selects Configuration managed by Server and click [Save], the flow goes on as described from Step 4 in Flow 1.
</td></tr>
</table>

viii. After administrator approves the device, the Digital Sign Client app on the device turns to the initial screen view:



- **Default Time Zone of Resources**: Set default time zone for resources.
- The **Time Zone of Exchange Connector** allows setting up the resource time zone so that the correct time data is displayed in events in output file. Time zone selected in this field will be written in the ***output*** file.

Email Configuration



In this section, you need to select a method to send email to the DS Service system. Selecting a method from the drop-down list will enable **Reservation Confirmation email** and **Error Notification** sections underneath.

Once you have selected Exchange Server, you must fill in the following fields:

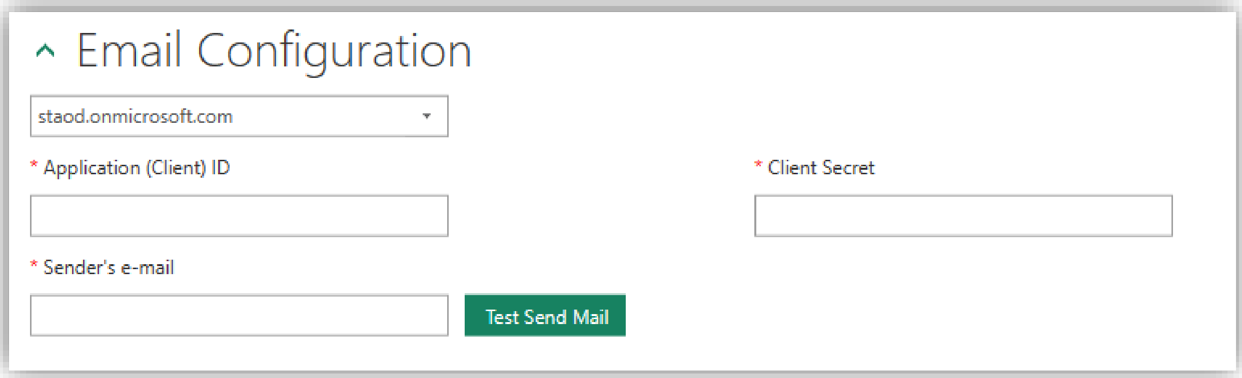
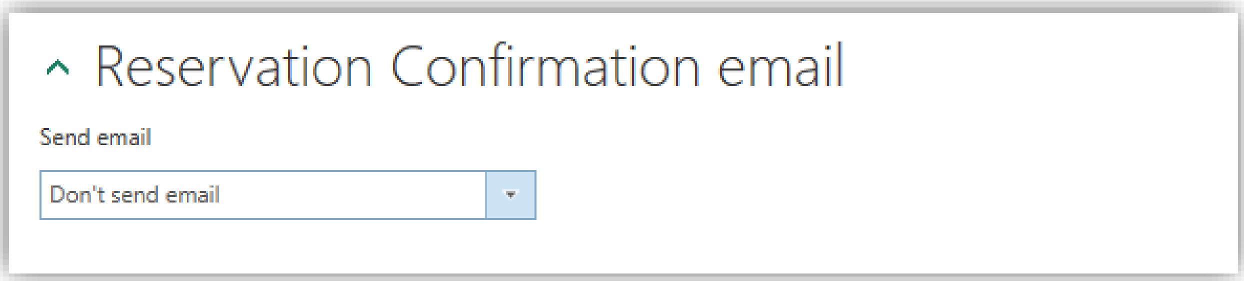


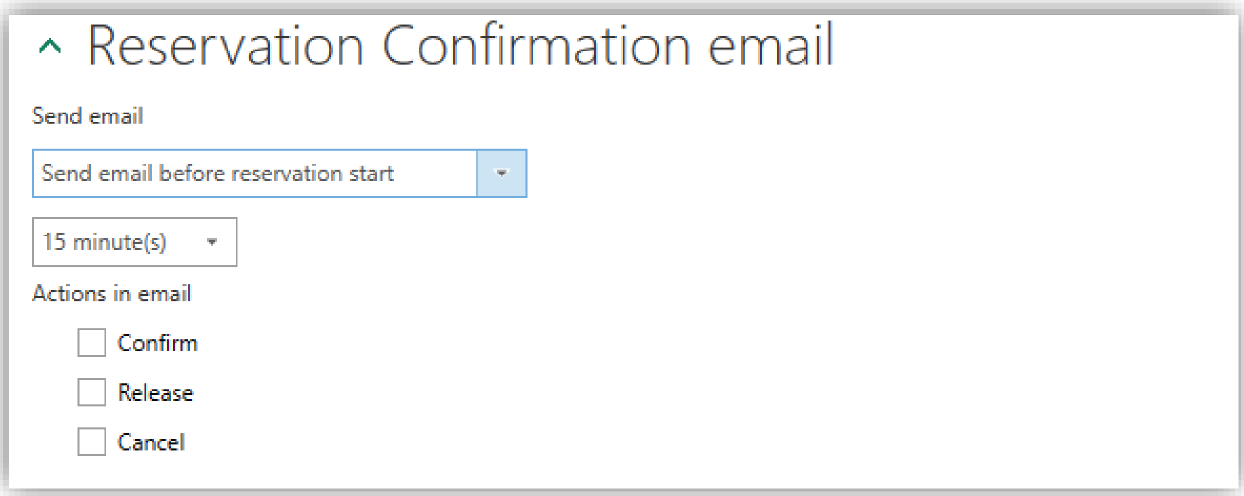
Figure 18. Email configuration

In **Reservation Confirmation email** section, you have 3 choices to send confirmation email:

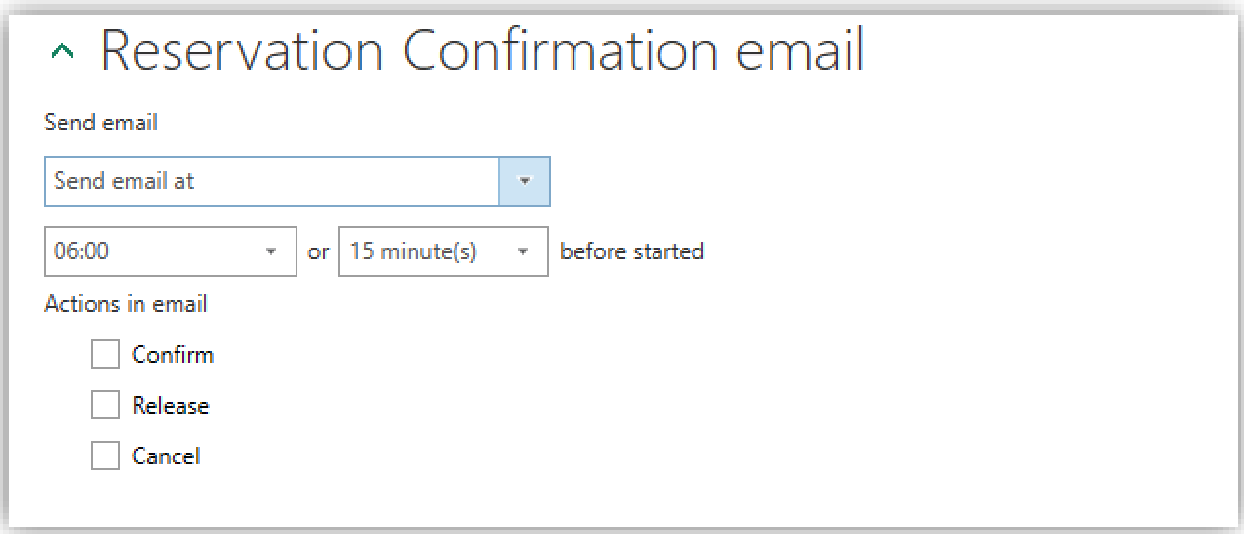
- **Don't send email**:



- **Send email before reservation start**: You can set the time when the email is sent before the start time of the reservation. The options for you include: 15 minute(s), 20 minute(s), 25 minute(s), and 30 minute(s).

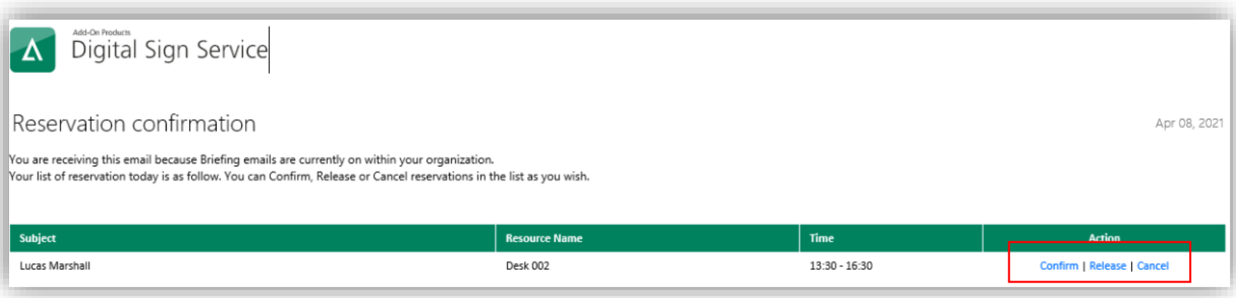


- **Send email at**: You can set exactly the time that you wish the email to be sent. The actions in email to Confirm/Release/Cancel the reservation is displayed for you to select.

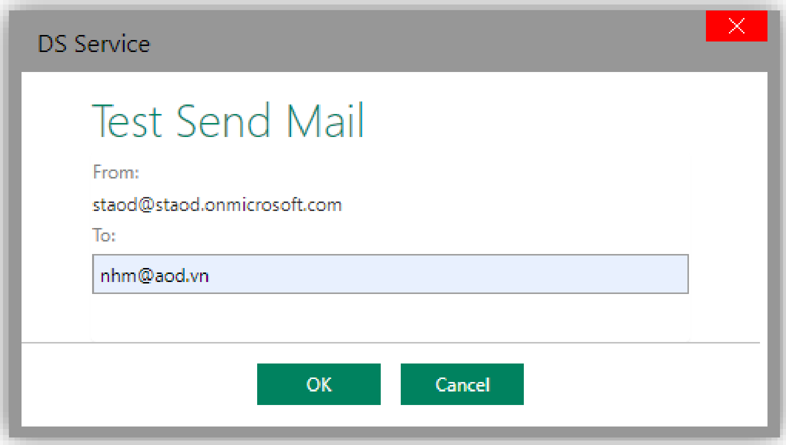


In the **Reservation Reminder email** area, you can select which actions can be taken via **Reservation confirmation email** including Confirm, Release, and Cancel (multiple actions can be selected at the same time).

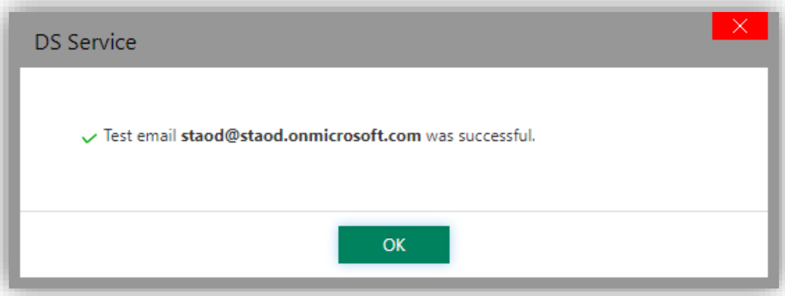
The selected actions will be shown on the email, i.e.:



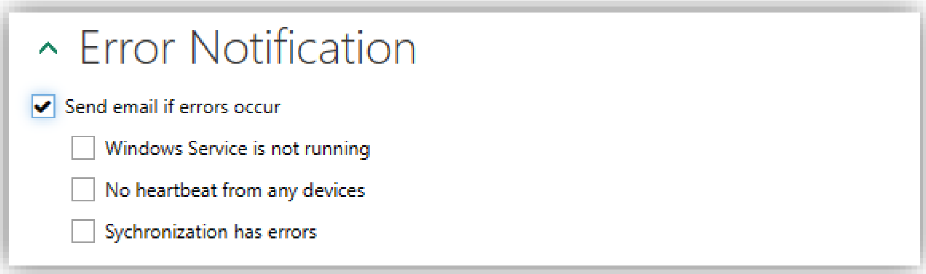
You can also test your Email Configuration by clicking [**Test Send Mail**]. It will prompt the following message:



Enter an email address to receive test mail, then click [**OK**]. If the test mail is sent successfully, you will see the following message:



In the **Error Notification** area, you can set the notification email to be sent if the following error(s) occurs:



Logging

Figure 19. Logging

Logging level helps define what sort of data is to be logged. The **Logging level** drop-down list has 2 options: **Error Only** and **Verbose.**

Select **Error Only**, if you want only error information to be logged. In normal case, the **Error Only** option should be selected.

Select **Verbose** if hard-to-locate problems are to be detected. This option logs more detailed information about the process: errors and all sorts of calendar synchronization events which means the log files will require more hard disk capacity. DSS produces a log file every day. User must manually delete the old and unnecessary log files for releasing disk space.

You can adjust the number of days that the older files will be automatically removed in Clear Log Days box. E.g., if you enter 7 into this box, all log files produced in the past 7 days will be deleted from the hard disk.

Tag

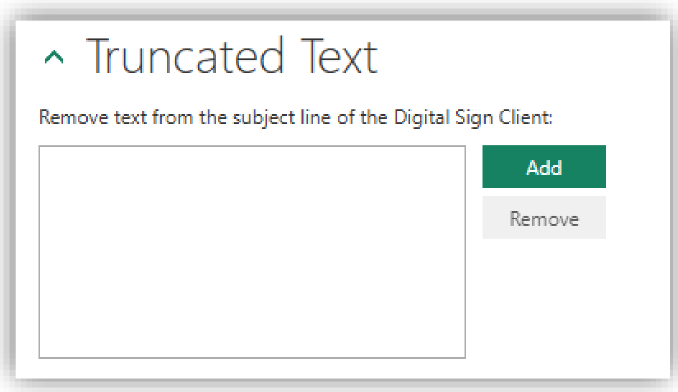
Figure 20. Tag

It is possible to create a note field in the xml file by selecting the **Using Notes tag** check box. DS Service will get data in the appointment's body as many characters as specified in the field below.

In the XML file there always is a Company Name field. When you check the **Company tag** check box and specify a value in the field underneath, DS Service will examine appointment's subject and body to see if there is text matching the specified value. If there is a match, DSS will retrieve all data from the matched text to the end of that line and put it into the Company Name field in the XML file.

If DSS finds out more than one result matching the specified value, the first value will be used.

Truncated Text



This feature of DS Service allows user to remove some text from the subject of an appointment, before saving it to the XML file.

In this section, there is a list of words that will be removed from the subjects.

Click [**Add**] button to insert more text into the list or select a text and click [**Remove**] to delete.

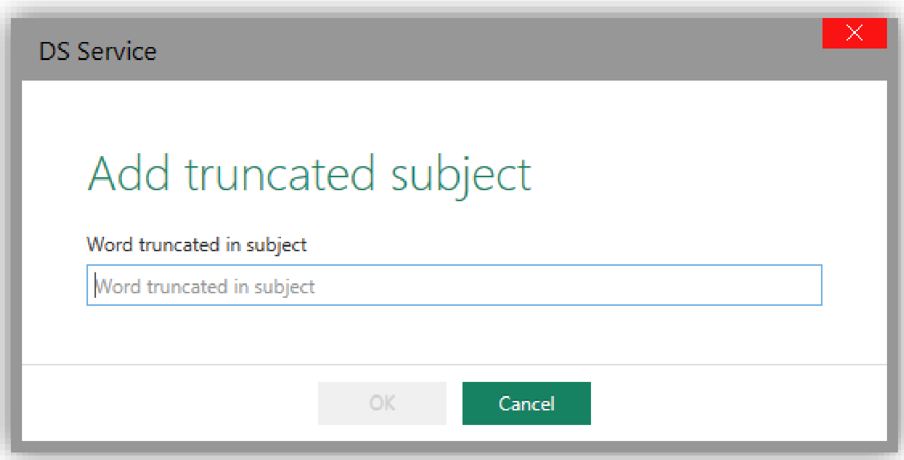


Figure 21. Add truncated subject

The truncated text is not case sensitive and DSS will search for whole word throughout the subject.

Device Configuration

In this section you can configure connection timeout of the service:

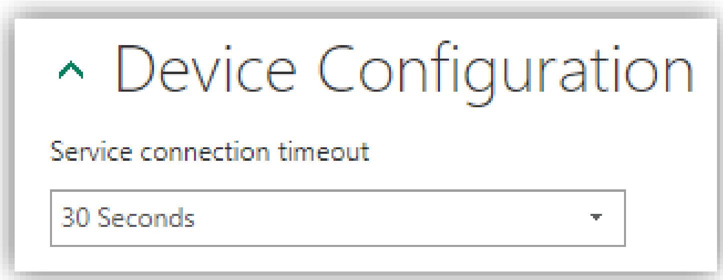


Figure 22. Device configuration

Set up External Authentication

The **External Authentication** section includes following elements:

Login Configuration

This section let you choose between 2 log-in options:

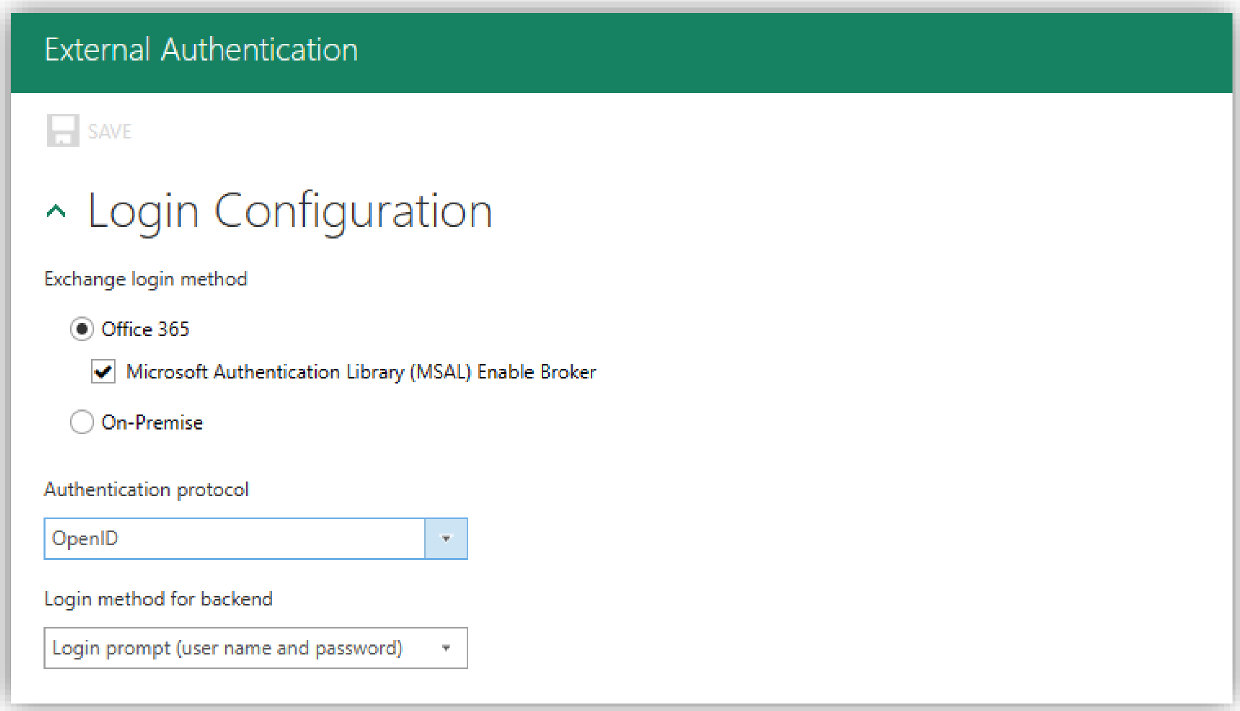
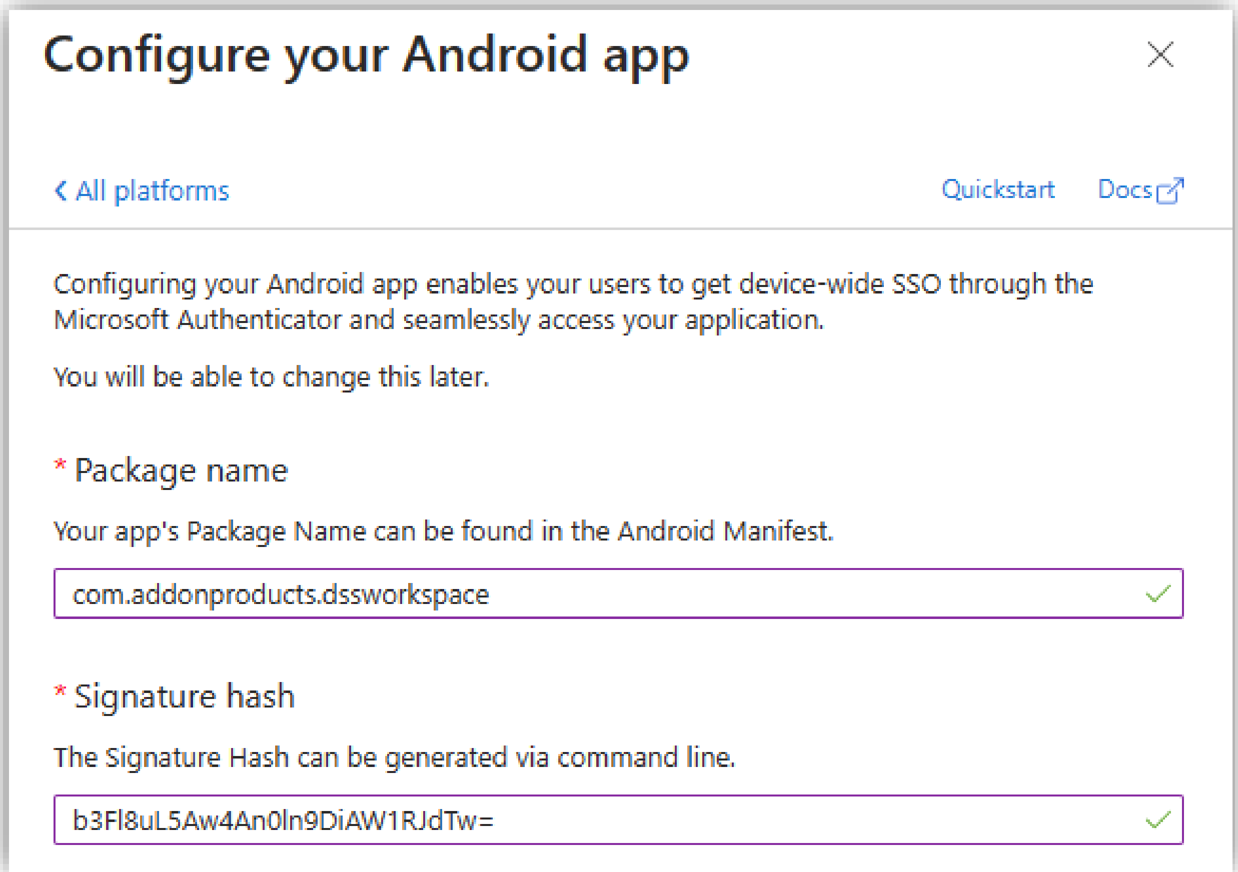


Figure 23. **Login Configuration**

In particular:

1. **Use Office 365** has a new Microsoft Authentication Library (MSAL) Enable Broker option (refer to this article). With this option enabled, the process that you create Azure app for use of Workspace (either application permissions or delegated permissions) has a small change. Specifically, the package name and Signature hash when you configure your Android app is:
    - Package name: “com.addonproducts.dssworkspace”
    - Signature hash: “b3Fl8uL5Aw4An0ln9DiAW1RJdTw=”



For more details on how to create Azure app for use of Workspace, please refer to either guide:

- Create Azure app with application permissions
- Create Azure app with delegated permissions

There are also two Authentication Protocols: Open ID and OAuth2.

2. **Use On-Premise** option uses OAuth2 ADFS or OpenID ADFS to single sign on with Exchange On-Premise.

Next, you can select a **Login method for backend**, either:

- No login (not recommended)
- Login prompt (user name and password)
- Single Sign On
- Login prompt or Single Sign On

NOTE: This option is required if you use **Modern Authentication** in **SYSTEM ➔ Connections ➔ Exchange Online**.

Authentication Information

This section allows you to make configurations for supporting Authentication Web API of Workspace and Digital Sign Client.

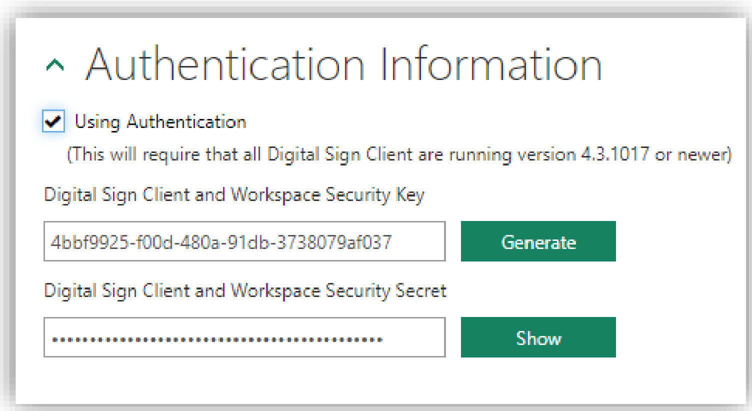


Figure 24. Authentication information

Select **Using Authentication** option to enable use of authentication information, in which a token is created (based on the Digital Sign Client and Workspace **Security Key** and **Security Secret**) for use in Digital Sign Client and Workspace.
This token is valid for one day, and automatically renewed for the next day. Also, you can click [**Generate**] to manually create new **Security Key** and **Security Secret**.

This option provides higher security as it requires authentication information for server connection.

If **Using Authentication** option is disabled, Digital Sign Client and Workspace can connect directly to the server without the requirement of Security Key and Secret.

Configure devices to be used with Digital Sign Client

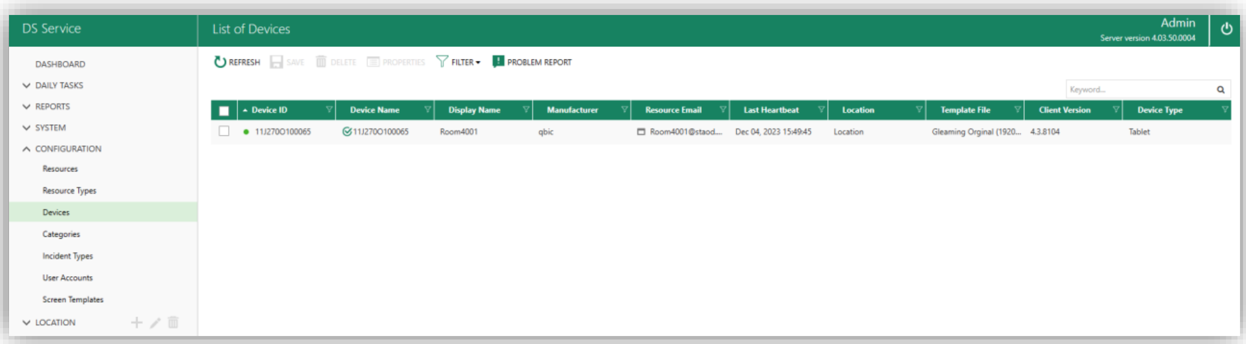


Figure 25. List of devices

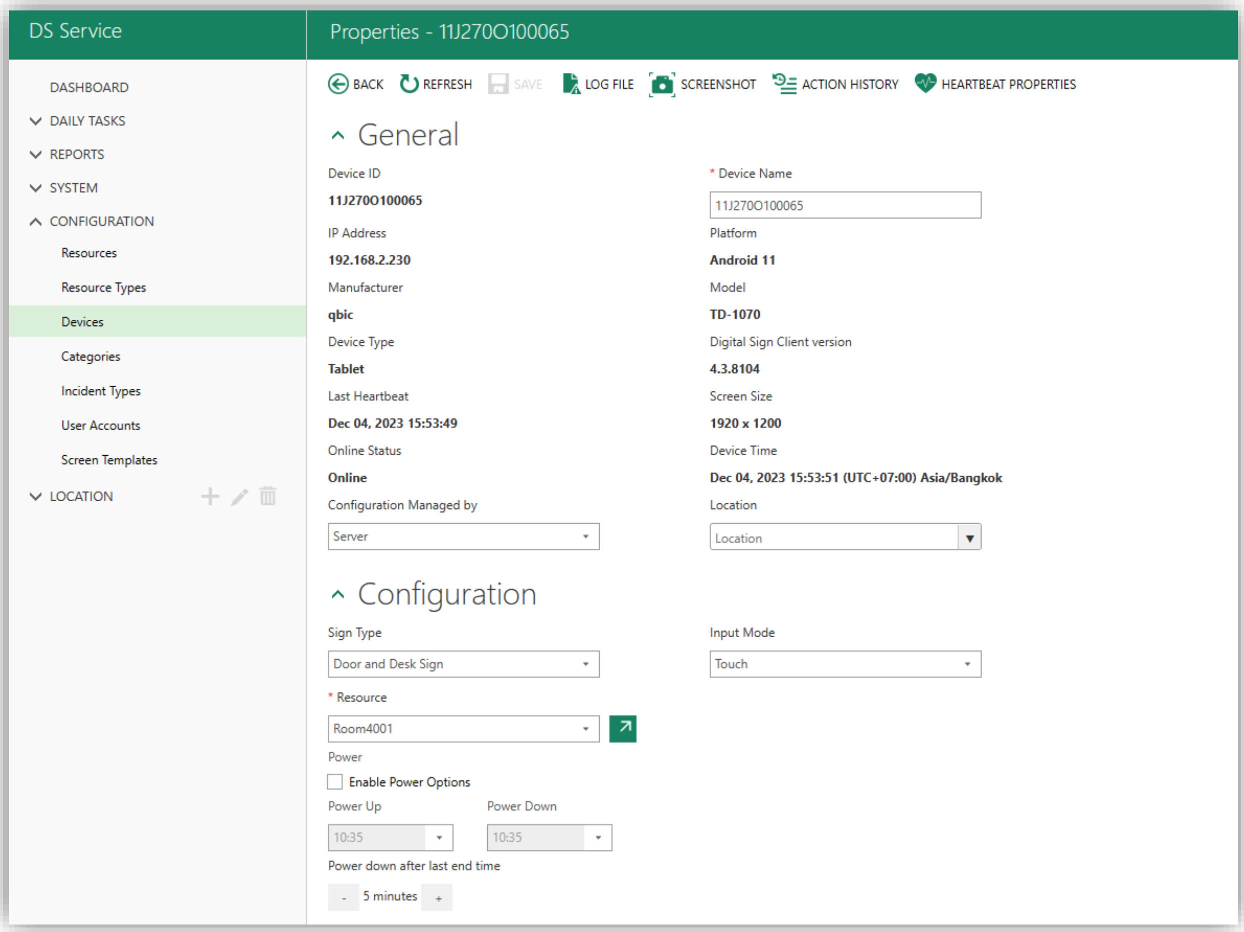
The **Devices** node under **CONFIGURATION** section opens an interface section where all devices are displayed. From this panel you can see which devices are connected to resources and which are not by looking at the Resource Name and Resource Email columns. Additionally, you can see which devices are online/offline by looking at the dot icon color next to the MAC address (Device ID):

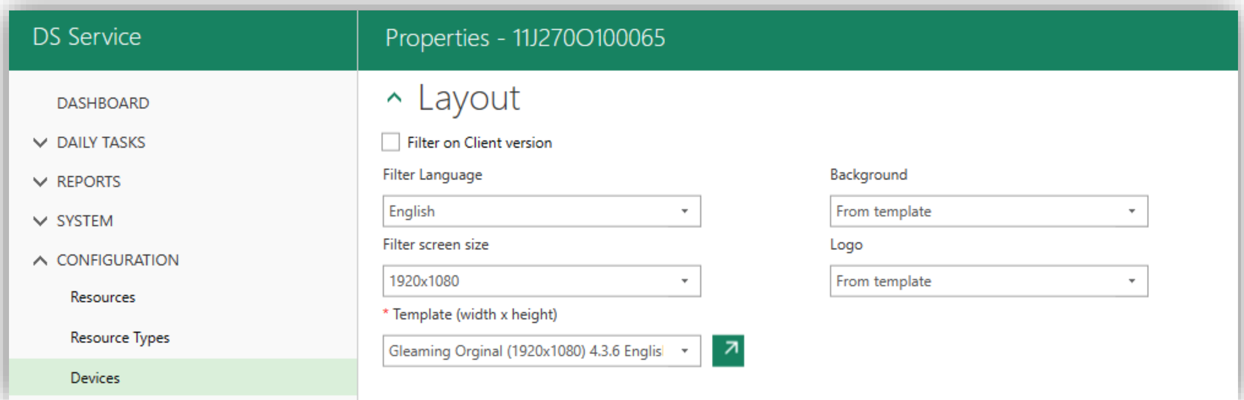
- Green color = device connected to resources
- Grey color = devices not connected to resources

NOTE: All devices asking for permission to connect to the server will be listed in ‘**Waiting for approval**’ node.

Click [**Problem Report**] button to open **Incidents** window in which you can view details of the reported issues.

You can view a device's details by clicking on it or checking on it and clicking [**Properties**] button on the toolbar, its details will be like this:





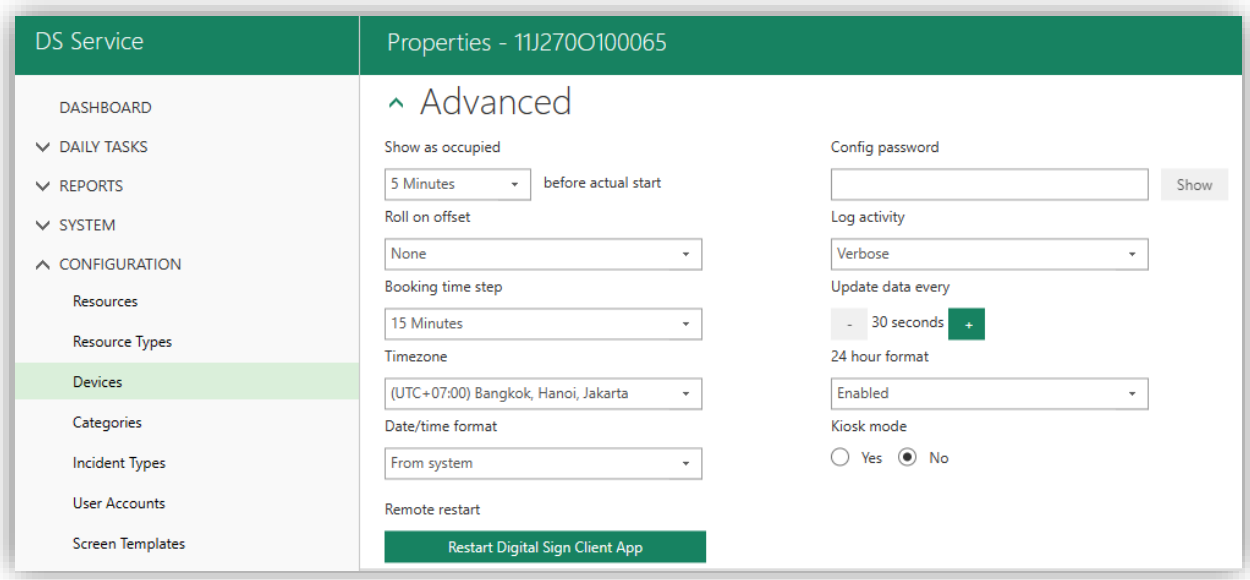


Figure 26. Details of a device

General	
This section displays information of the device and allows you to type Location name to filter.	
Configuration managed by	**NOTE**: This field is only available after the server connection is established. **Client**: The configuration is controlled on Client side. **Server**: The configuration is controlled on Server side.
Location	Select location of the device.
Configuration	
Sign Type (configure if the sign is a door sign or a Reservation Directory Sign)	**Door Sign**: Sign used for a specific room. - **Door and Desk Sign**: User can interact on the screen. - **Door and Desk Sign One-touch**: User can book/end the instant meeting by one touch on the screen.
	Reservation Directory: Sign configured to show information for a number of DSS resources.
	Booking Kiosk: Sign configured to show floor plan of a resource.
Location Floor plan	Select the floor plan that contains location of the device.
Resource name	Select a resource from the list (for Door Sign) or select several specific resources to be displayed (for Reservation Directory Sign).
Enable Power Options	**NOTE**: This option is applicable for **Door and Desk Sign, Door and Desk Sign One-touch, Reservation Directory and Booking Kiosk.** Enable this node to set up time to turn on and off the device. After that you can configure the time to power up and power down.
Confirm Reservation	**NOTE**: This option is applicable for **Door and Desk Sign** and **Door and Desk Sign One-touch**. Enable this node to ask for meeting confirmation and adjust confirmation time.

Information to show	**NOTE**: This option is only applicable for **Reservation Directory Sign**. Along with Resource name, this option allows you to filter resources for the content displayed on the meeting directory screen.
Group appointment by Room	**NOTE**: This option is only applicable for **Reservation Directory Sign**. Enable this option if you want the appointments to be grouped by resources.
Appointment sort order	**NOTE**: This option is only applicable for **Reservation Directory Sign**. Use 2 buttons [Move Up] and [Move Down] to decide the order of the appointment based on their details (Room name, Start time, Subject, etc.). You can also adjust the slide time by increasing/decreasing it.
Input **NOTE**: This section is only available when you select **Door and Desk Sign** or **Door and Desk Sign One-touch** or **Booking Kiosk** for Sign type.	
Auto upgrade	**NOTE**: This option is only applied to Qbic device.
Touch	Enabling this option allows touching the screen to book/confirm/end/extend meeting.
Keyboard	If this option is turned on, when you book/confirm/end/extend meeting there will be an authentication screen displayed, asking for username and password to proceed.
Card reader	**NOTE**: This option is only enabled on Qbic and Glory Star devices. If this option is turned on, when you book/confirm/end/extend meeting there will be an authentication screen displayed, and you have to swipe your card at the [**Home**] button to proceed. Refer to “Card Information” section in ***Digital Sign Client User Guide*** for more details on how to register the card.
Non-interactive	If this option is turned on, every action when you book/confirm/end/extend meeting on the screen is disabled.
Personal ID	If this option is turned on, when you book/confirm/end/extend meeting, there will be an authentication screen displayed, and you have to insert your personal ID to proceed.
Layout	
Filter Language	Select preferred language to be used in the screen interface.
Filter Screen Size	Select preferred screen size to be used in the screen interface.
Template (Width x Height)	You can select suitable screen resolution and language template for the sign.
Background	**NOTE**: This selection overrides design in the template file you select in ’Template (Width x Height)’. Select a background image to be displayed on the Digital Sign Client interface. - **None**: No background image - **Photo Library**: This option enables the [Browse] button and allows you to select background image from the client device. - **From Server**: The background image is established by Administrator in DS Service. - **From Template**: The background image is established in the template file you select in ’Template (Width x Height)’. For more information on how to set up the background on template file, please refer to object ***BackgroundImage***/property ***Source*** of the corresponding sign type in **Digital Sign Client – Design Guide**.

Logo	NOTE: This selection overrides the design in the template file you select in 'Template (Width x Height)'. Select logo to be displayed on the Digital Sign Client interface: - **None**: No background image. - **Photo Library**: This option enables the [Browse] button and allows you to select background image from the client device. - **From Template**: The background image is established in the template file you select in 'Template (Width x Height)'. For more information on how to set up the logo on template file, please refer to object ***LogoImage***/property ***Source*** of the corresponding sign type in **Digital Sign Client – Design Guide**.
Advanced	
Show as occupied	Select Time interval before the start time of an appointment from which the room will be considered "occupied".
Roll on offset	Select time interval to establish display of the next meetings on the sign. This roll-on offset interval takes current time as a benchmark. If the duration from current time to start time of next meeting is less than roll on offset value, the next meeting will be displayed, and vice versa. NOTE: Value in "Roll on offset" field should always be greater than value in "Treat meeting rooms as..." field.
Booking time step	Default time interval for booking an appointment (e.g., If the value here is 15, the default appointment time will be 15:00, 15:15, 15:30, etc.).
Timezone	Select timezone for the appointment.
Date / Time format	Select where format for date / time will be employed.
Config Password	Password to open client Setting screen.
Log activity	Select the level (None, Error or Verbose) that you want the application to apply for event logging.
Update data every	Select time (seconds) for the data update cycle.
24 hour format	Telling time in which the day is divided into 24 hours without showing a.m or p.m.
Kiosk Mode	If you turn on this mode, 3 on-screen buttons (Recent Apps, Home and Back) on the devices are disabled. NOTE: Kiosk Mode is only available on Qbic device (Android), other devices running Android, iOS or Windows do not have this mode.
Remote restart	Click the button to restart Digital Sign Client App.

Toolbar Buttons	Description
BACK	Go back to List of Devices interface.
REFRESH	Reload or update what's displayed or stored.
LOG FILE	View log file of the device.
SCREENSHOT	View screenshot of the device at the moment.
ACTION HISTORY	View a list of actions performed on the device.
HEARTBEAT PROPERTIES	View a status to show whether the device is offline or online, connected or disconnected.

Create sub-location

If you want to create sub-group of locations under a specific node, click on that node and select **Plus** icon as shown in the following figure:

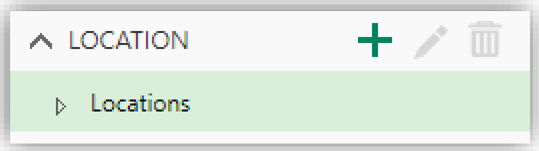


Figure 27. Add a new location

Then you can type the name of the new location and select its sort order…

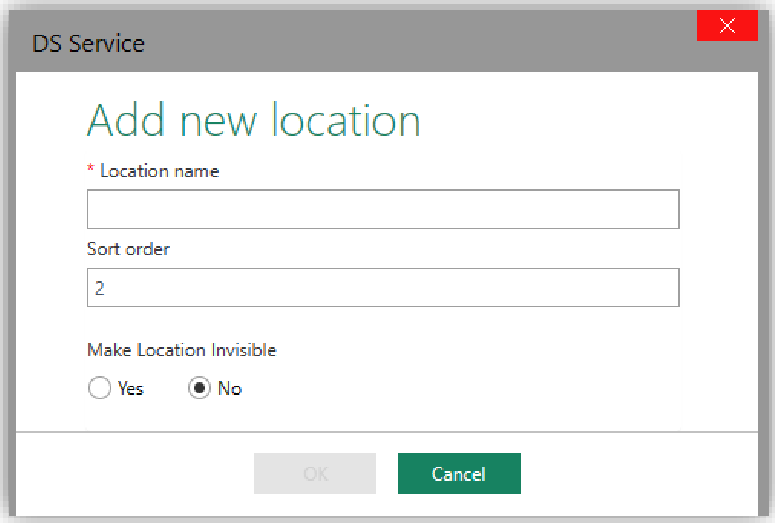
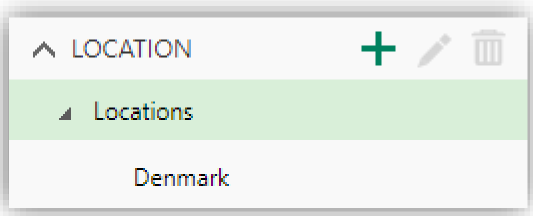


Figure 28. Location details

…and click [**OK**], and the new sub-group shows up under **Locations** node:



To Edit/Delete a location, click on it and select the corresponding icons.

NOTE: You can decide the visibility of the location by selecting Yes/No for **Make Location Invisible** option.

When you select Yes:

- For Workspace app:
  - **Find Colleague**: Only yellow and red spots are displayed.
  - **Resource Agenda**: The hidden location is not available on the floorplan. Also, resources of the hidden location cannot be searched by keyboard, and their QR code cannot be scanned.
  - **New Reservation**: The hidden location is not available on the floorplan. Also, resources of the hidden location cannot be searched by keyboard, and their QR code cannot be scanned.
  - **QR Code**: If the resource in the hidden location is available, it is impossible to scan its QR code. If the reservation of the resource belonging to the hidden location is in progress, the scan goes to Reservation Detail.

- **My Reservation**: The existing reservation of the resource belonging to the hidden location is still visible.
- It is still possible to update\confirm\cancel resources in all existing reservations of the resource belonging to the hidden location.

- For Digital Sign Client:
  - The hidden location is removed from the floorplan.
  - In Door Sign and One-touch, it is impossible to create/end/extend/confirm reservations of the resource belonging to the hidden location.

Add devices to a location

Now you can add devices to this new location group by selecting the new group name from the “Location” column of a device:

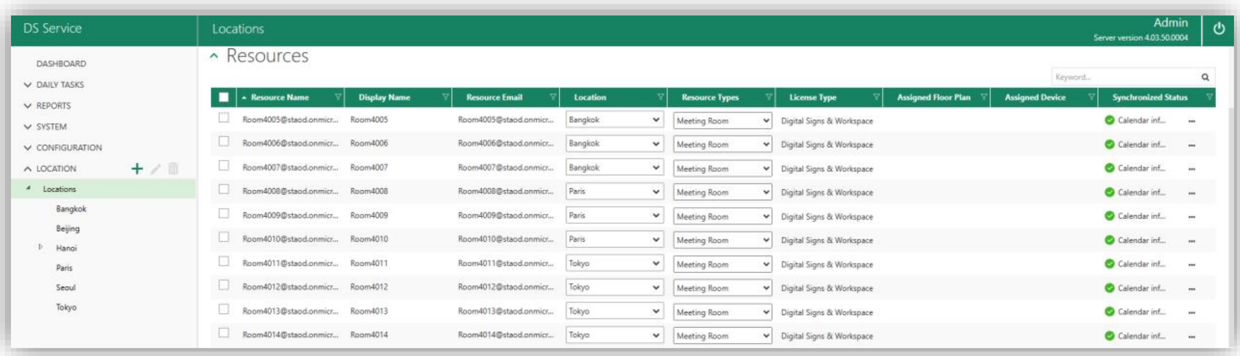


Figure 29. Add device to new group

Click on the arrow button to select a group from the drop-down list, then click [**Save**] to finish.

You will be able to see how many Online devices and Offline devices in total via the Dashboard screen.

Configure floorplan for a location

When booking a resource, it is useful if you can navigate to the resource and see the floor plan / ground map on the screen. The Floor plan section is created to serve that purpose.

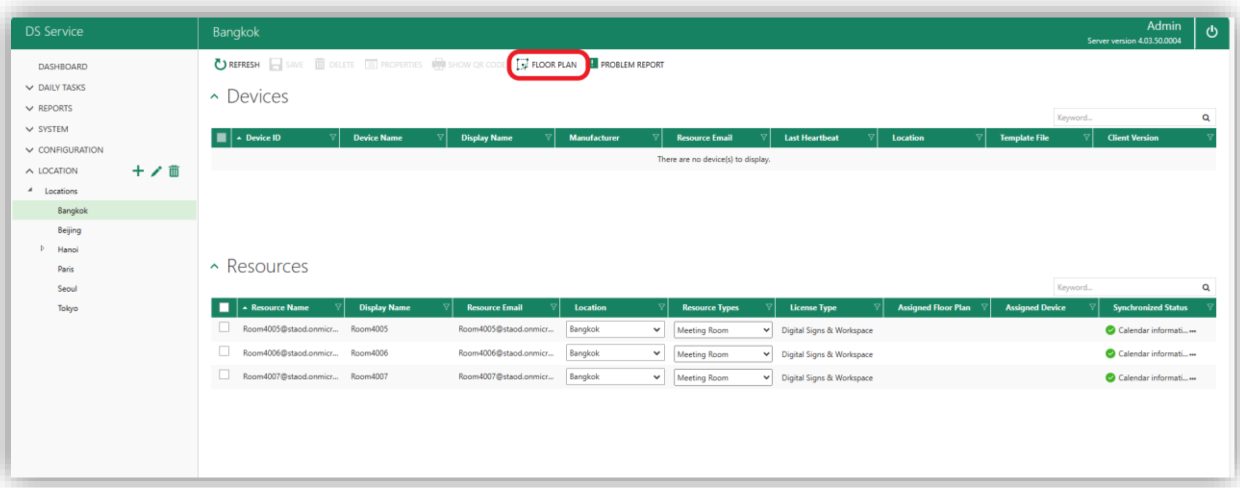


Figure 30. Configure floorplan

Select a location and you can see the button [**Floor plan**]. Click on it and the **Floor Plan Editor** shows up. In this panel, first of all, you need to add a floor plan (a map of the selected location) by clicking [**Add Image**] button. The following window is displayed:

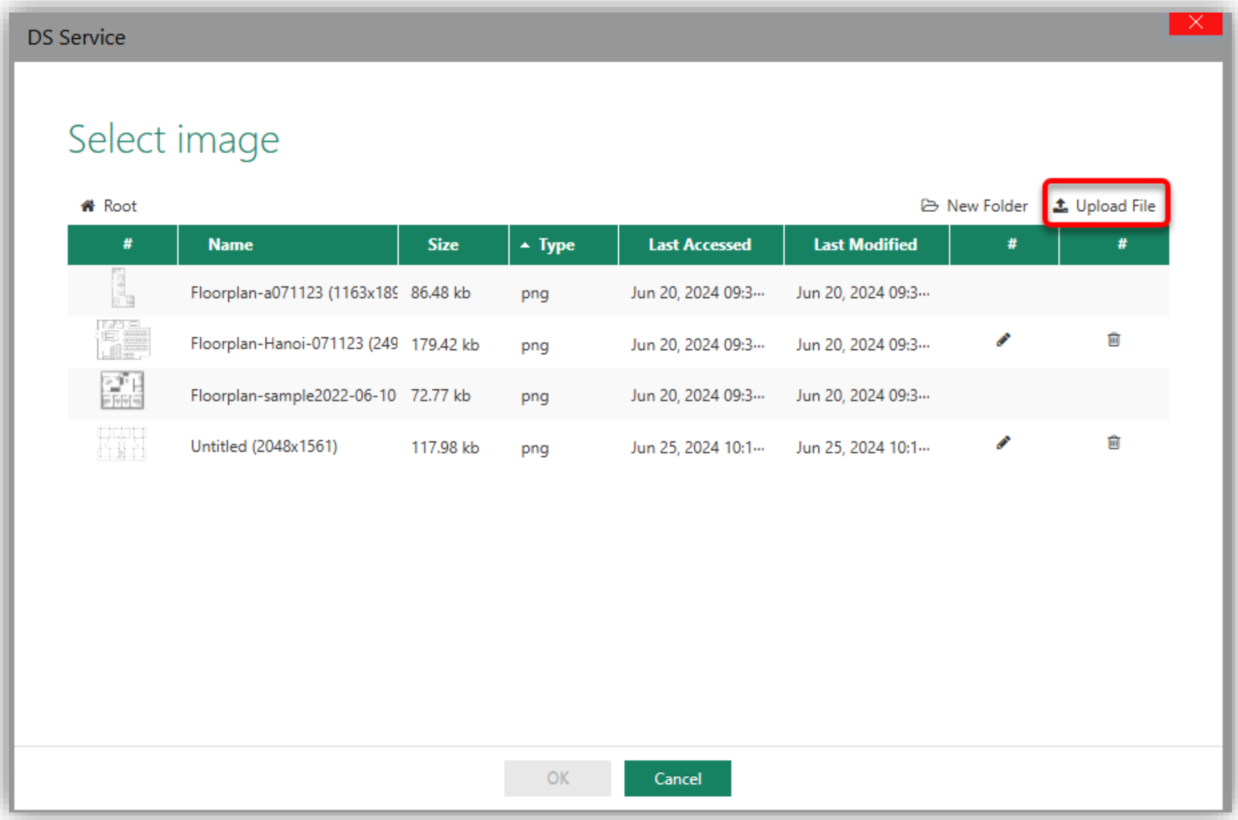


Figure 31. **Select Floor Plan**

In this window, you can select the available floorplan or upload a new one from your computer by clicking [**Upload File**] button. When the floor plan is loaded to the screen, you can now map a resource with a specific location in the floor plan, so that organizer knows better about a resource's location:

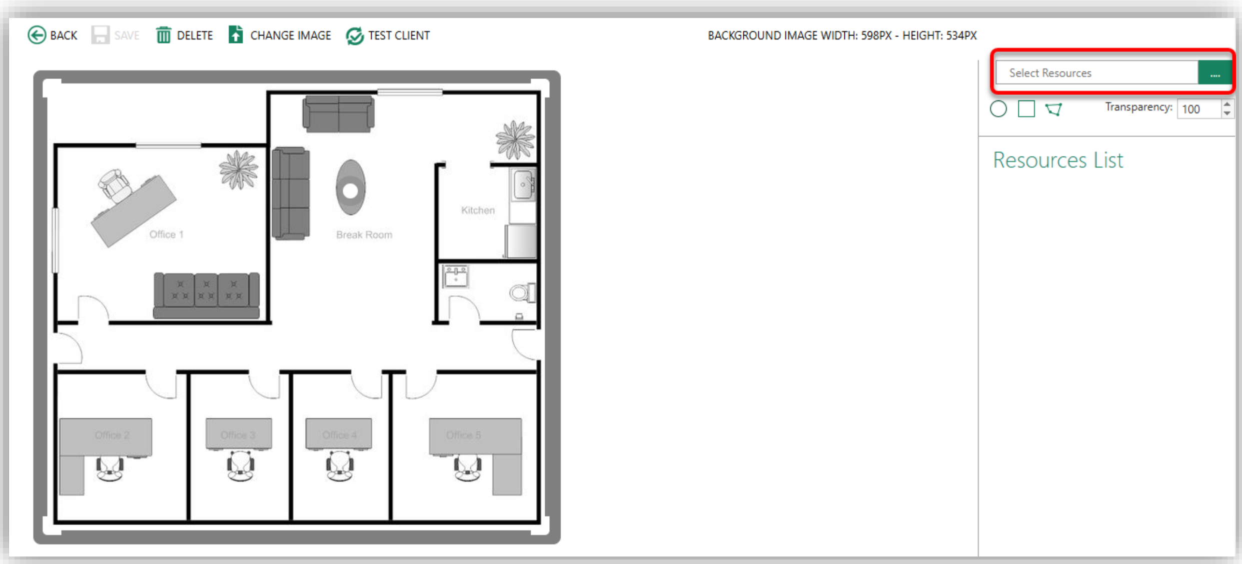


Figure 32. **Add Floor Plan**

Click [**Select Resources**] to add a resource to the list. You can search for it from the pop-up window:

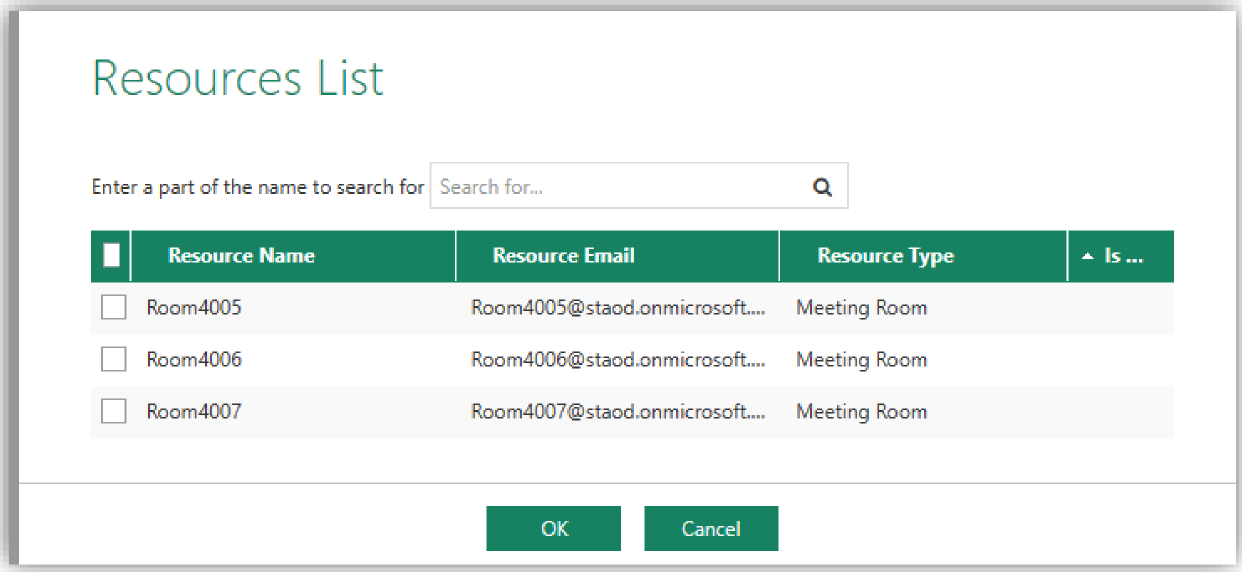
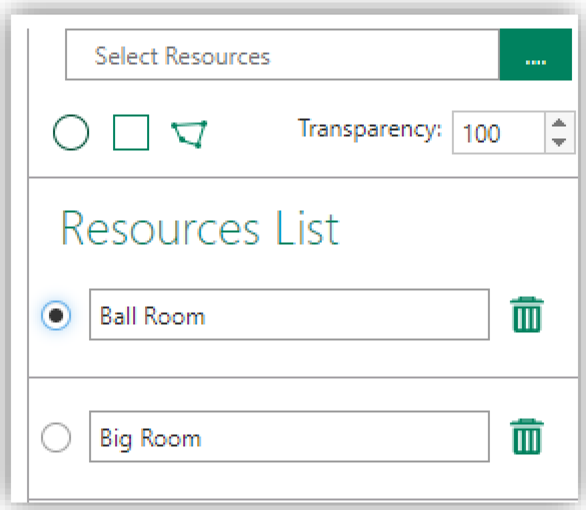
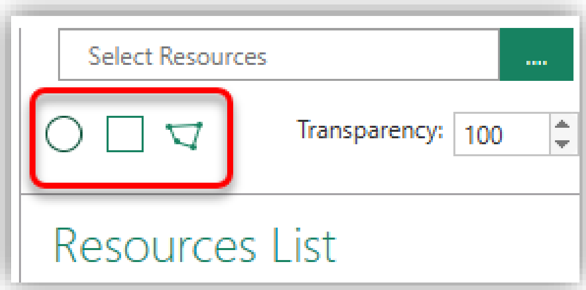


Figure 33. **Select resources**

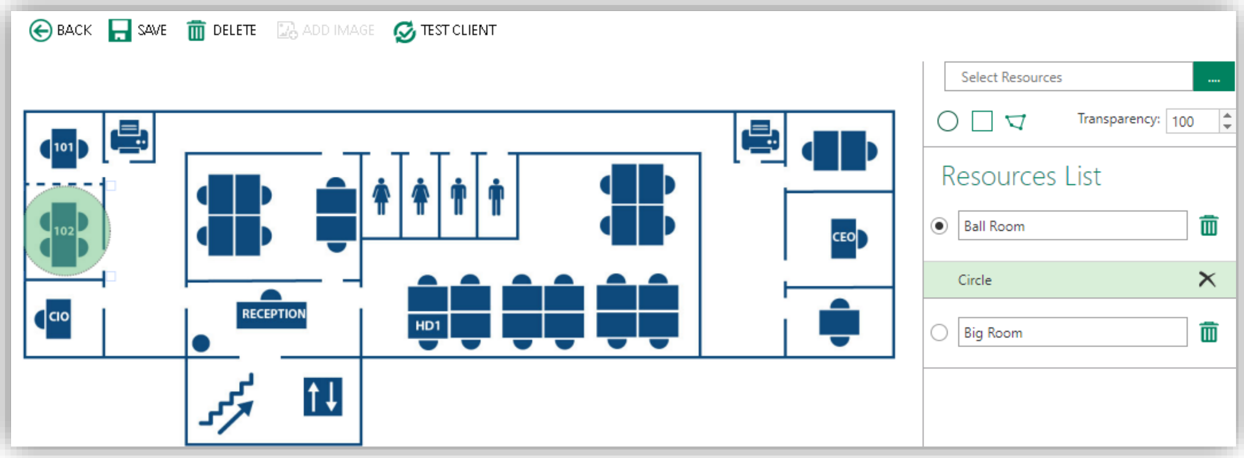
After adding all necessary resources, you need to select a resource from the list on the right panel…



…then select a shape…



… and put it on the floor plan:



You can see in the above example, the shape (Circle) is selected for the resource ‘Ball Room’, and a circle is put into the floor plan.

You can do the same for the other resource. You might select a similar shape (Circle) or different shape (Rectangle or Polygon), and this is the result:

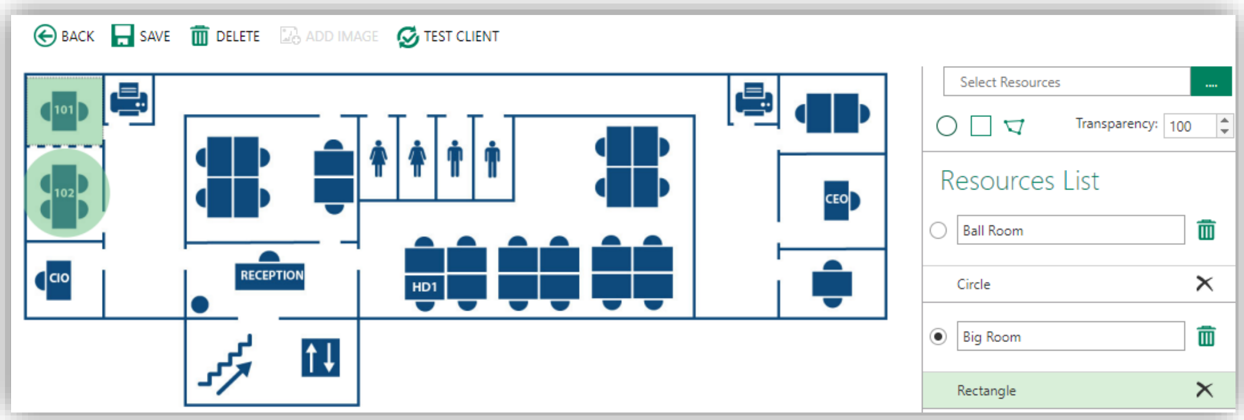


Figure 34. Floor Plan with resources

Then click [**Save**] to finish. You can see the result in **WorkSpace**.

NOTE: Click on [**Test Client**] to know how this feature works on client side.

Add resources

In this section, you can add various types of resources. This can be done one by one, or you can select a group of resources to add as well.

Go to **Configuration** → **Resources**, select [**Add Resources**], the following window shows up:

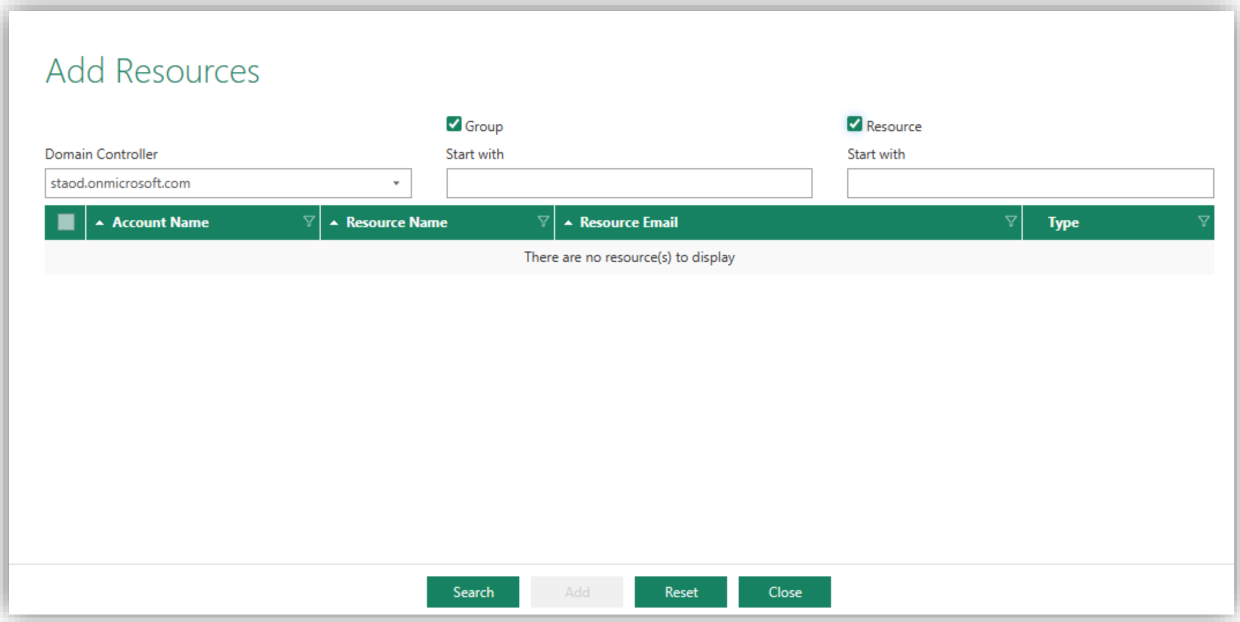


Figure 35. **Add resources**

First you must select the Domain Controller where the resources you are trying to add are contained. Then select group or resource to add by checking the relevant checkbox and type the keyword into the text field.

E.g., Select group searching and type “dss” to the text field, then click [**Search**], the result will contain group whose name matches the input keywords.

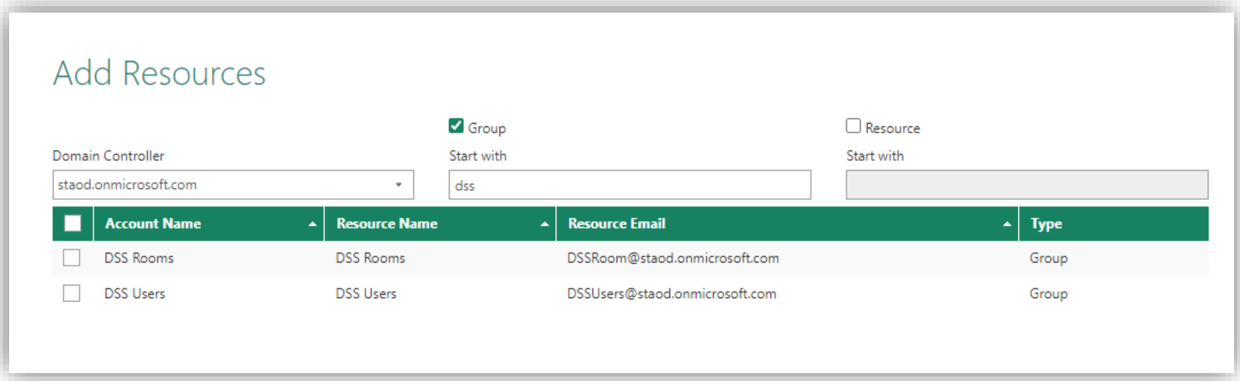


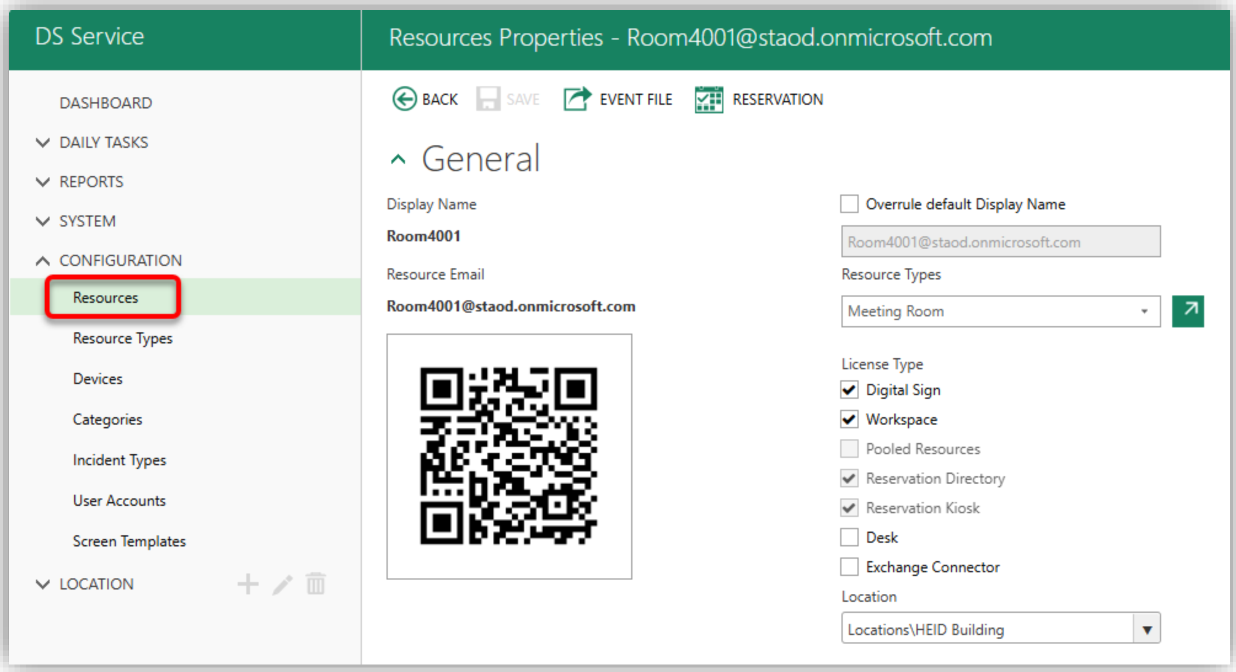
Figure 36. **Search group**

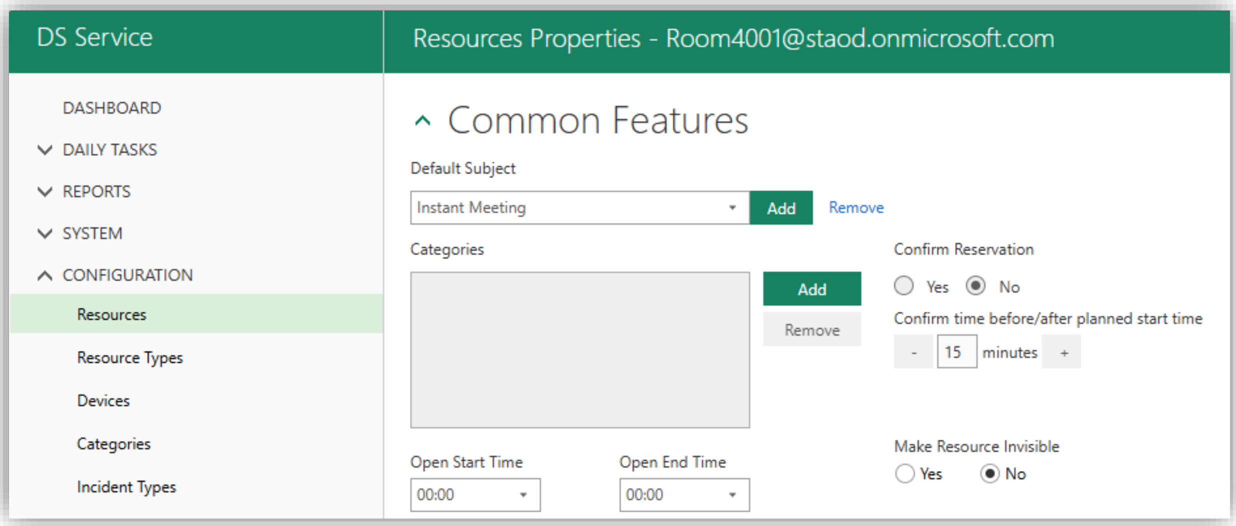
Check on the checkbox next to the group name and click [**Add**], all resources in the group will be added to the system.

You can add specific resources by selecting resource searching checkbox and type keyword to the text field, then click [**Search**]. The result will contain resources whose names match the input keywords.

Apply the same procedure to add **Exchange Connector resources** or **Virtual resources** by clicking relevant buttons on the toolbar.

Clicking on a resource will open its properties:


DS Service
Resources Properties - Room4001@staod.onmicrosoft.com
DASHBOARD
DAILY TASKS
REPORTS
SYSTEM
CONFIGURATION
Resources
Resource Types
Devices
Categories
Incident Types
User Accounts
Screen Templates
LOCATION
BACK
SAVE
EVENT FILE
RESERVATION
General
Display Name
Room4001
Resource Email
Room4001@staod.onmicrosoft.com
Overrule default Display Name
Room4001@staod.onmicrosoft.com
Resource Types
Meeting Room
License Type
Digital Sign
Workspace
Pooled Resources
Reservation Directory
Reservation Kiosk
Desk
Exchange Connector
Location
Locations\HEID Building


DS Service
Resources Properties - Room4001@staod.onmicrosoft.com
DASHBOARD
DAILY TASKS
REPORTS
SYSTEM
CONFIGURATION
Resources
Resource Types
Devices
Categories
Incident Types
Common Features
Default Subject
Instant Meeting
Add
Remove
Categories
Add
Remove
Confirm Reservation
Yes
No
Confirm time before/after planned start time
15
minutes
Open Start Time
00:00
Open End Time
00:00
Make Resource Invisible
Yes
No

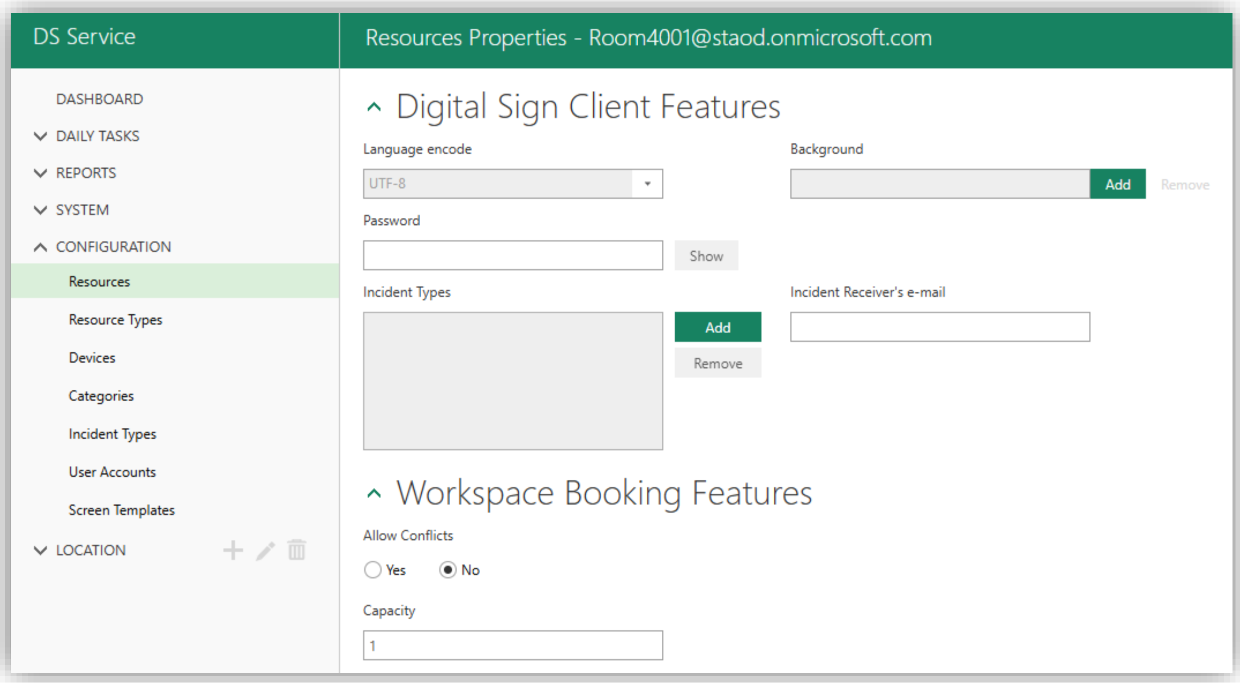


Figure 37. **Resource's details**

In the **Common Features** section, you can decide the visibility of the resource by selecting Yes/No for **Make Resource Invisible** option.

When you select Yes:

- For **Workspace** app:
  - **Find Colleague**: The hidden resource is not available on the floorplan. If your colleague has a reservation booked with this resource, you will see this resource as yellow on the floorplan.
  - **Resource Agenda**: The hidden resource is not available on the floorplan. Also, it cannot be searched by keyboard, and its QR code cannot be scanned.
  - **New Reservation**: The hidden resource is not available on the floorplan. Also, it cannot be searched by keyboard, and its QR code cannot be scanned.
  - **QR Code**: If the hidden resource is available, it is impossible to scan its QR code. If the hidden resource's reservation is in progress, the scan goes to Reservation Detail.
  - **My Reservation**: The existing reservation of the hidden resource is still visible.
  - It is still possible to update\confirm\cancel resources in all existing reservations of the hidden resource.
  - **Open Start Time/Open End Time**: This determines the opening hours of a resource, meaning it will not be available for booking during the closing hours. On both Workspace App and Common Features, users will not be able to select the resources that are in closing hours. These resources will be shown in grey color Closed

NOTE: If the DS Service is integrated with Resource Central, the **Open Start Time** and **Open End Time** on DS Service will be taken from Resource Central. In this case, you will not be able to edit these fields on DS Service.

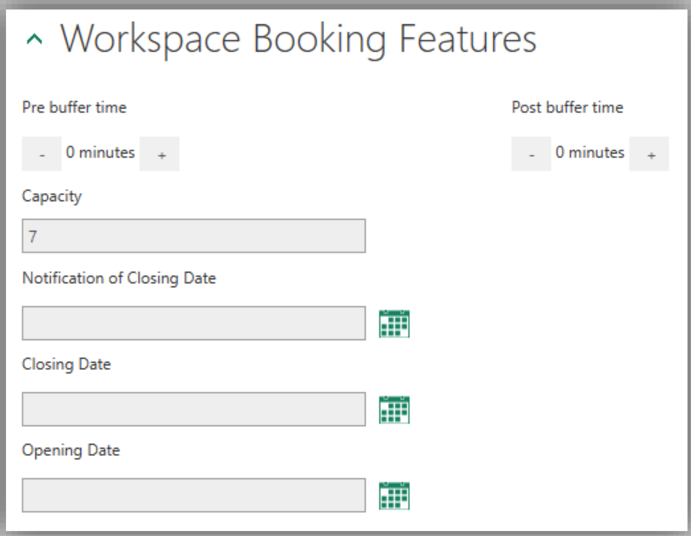
- For **Digital Sign Client**:
  - The hidden resource is removed from the floorplan.
  - In Door Sign and One-touch, it is impossible to create/end/extend/confirm reservations of the hidden resource.
  - The hidden resource is removed from Reservation Directory in Digital Sign Client.

In Workspace Booking Features, you can also decide if conflicts are possible for the resource by selecting Yes/No for **Allow Conflicts** option.

- If **Yes**: the resource can be booked by multiple people at similar time period. It works for all booking methods, whether Resource Agenda, Find Colleague, or New Reservation.
- If **No**: the resource cannot be booked if it is already booked at similar time period.

Make any necessary changes and click [**Save**] to finish.

NOTE: If the DS Service is integrated with Resource Central, the **Open Start Time** and **Open End Time** on DS Service will be taken from Resource Central. In this case, you will not be able to edit these fields on DS Service.



NOTE: To make data refreshed, click [**Full Synchronization**] button to sync data from selected resources' calendars.

Other configurations in DS Service

Advanced

Remote App Upgrade (Digital Sign Client for Android devices)

In this category, you are able to upgrade new Digital Client for Android devices:

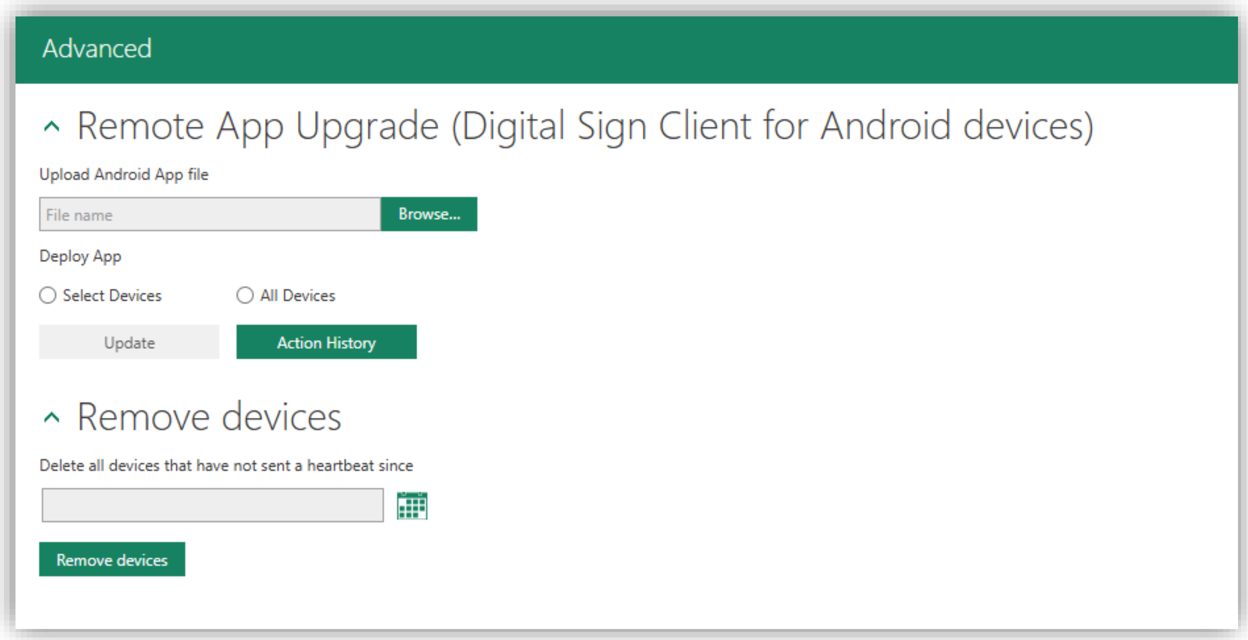


Figure 38. Advanced

Click [**Browse**] to select the new DS Client .APK file from your local disk. If it is uploaded successfully, the new version of DS Client will be displayed under the Browse bar:

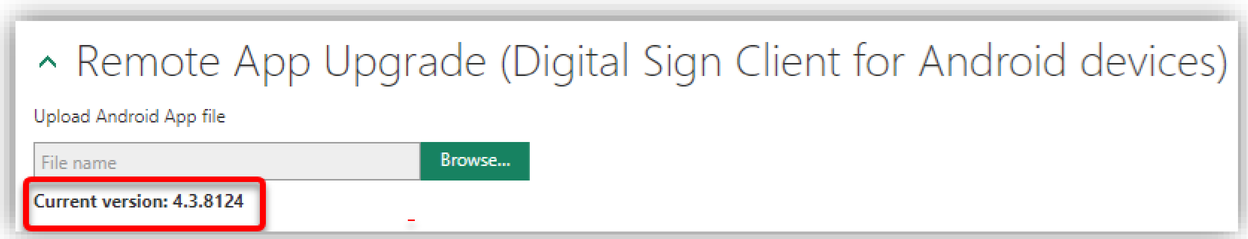


Figure 39. Deploy new DS Client (Android)

Then, you can upgrade this latest version to the Android devices by selecting either ***All Devices*** or ***Select Devices.*** Click [**Update**] to deploy.
To see the Upgrade request and Upgrade time, click [**Action History**] for more information.

NOTE: The devices must be Qbic products, have root access, and run DS Client version SR3+.

Remove devices

From here, you can also remove devices that have not been operative from the time mark that you configure:

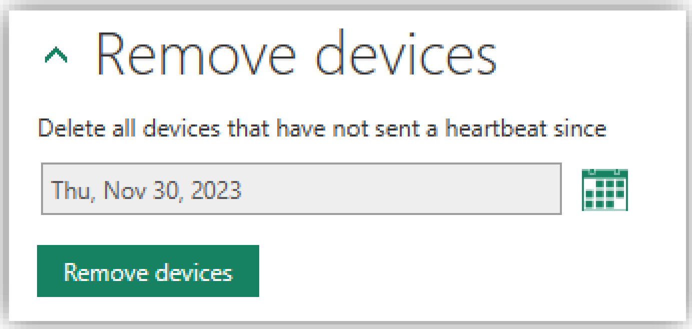


Figure 40. **Remove devices**

Administrators

In this section, you can configure the administrator of the system.

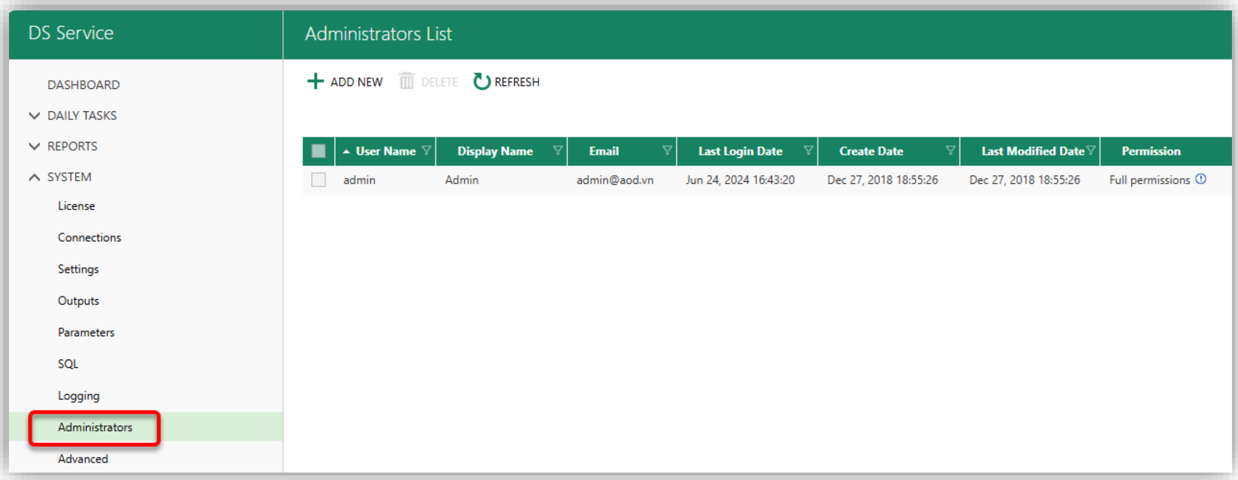


Figure 41. **Administrator list**

When you click [**Add New**], the following window appears, allowing you to add a new administrator. Insert User Name by clicking ▬ and the Display name and Email will be automatically filled in for you. Enter a new password and select the sections that this new admin has permission to configure. If the "Read-Only" box is checked, this admin does not have permission to configure certain sections.
For Locations permission, if you select the detailed location(s), only the information about those locations will be visible when this person access Dashboard, Daily tasks, and Reports section.

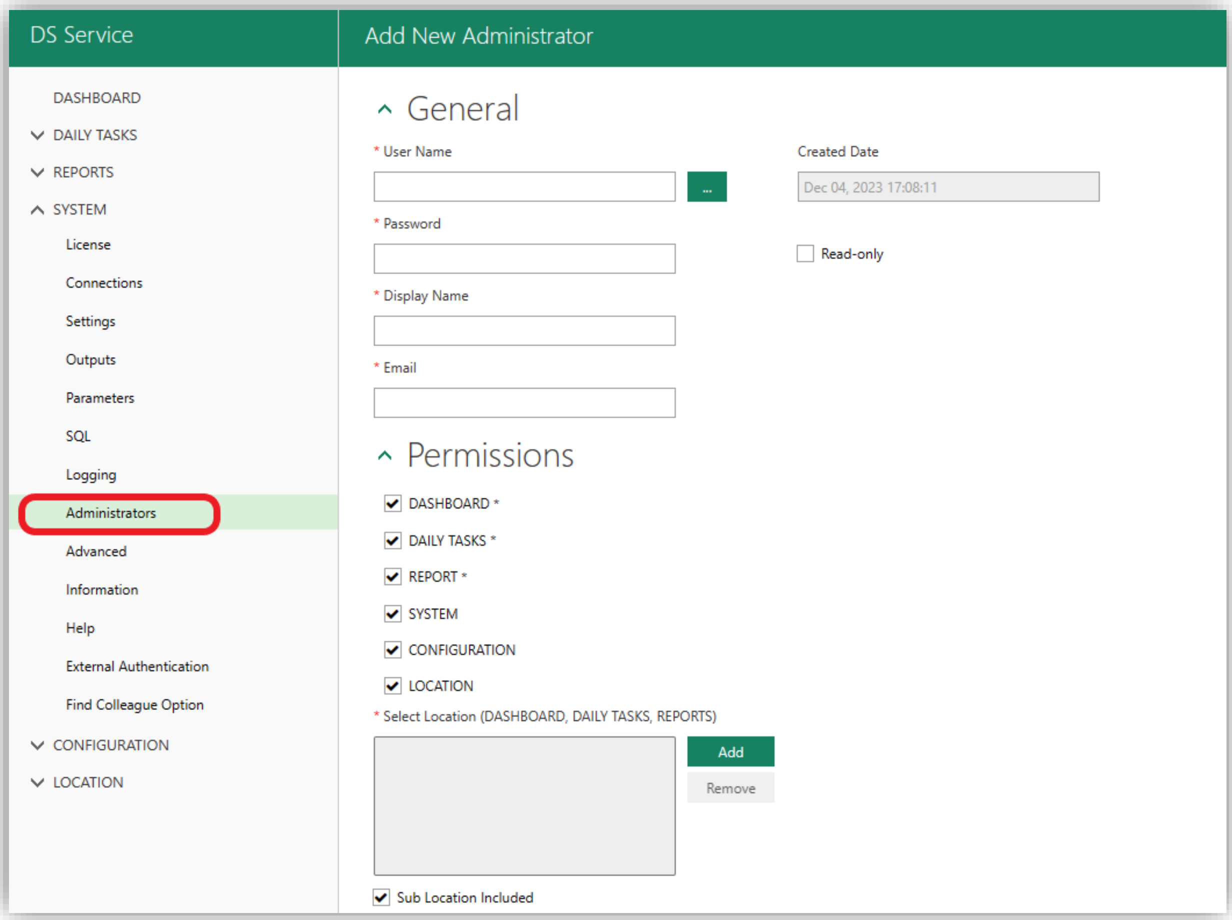


Figure 42. **Add a new administrator**

Click [**Save**] to finish.

Categories

This section is located in **Configuration**, it displays all categories that can be assigned to resources:

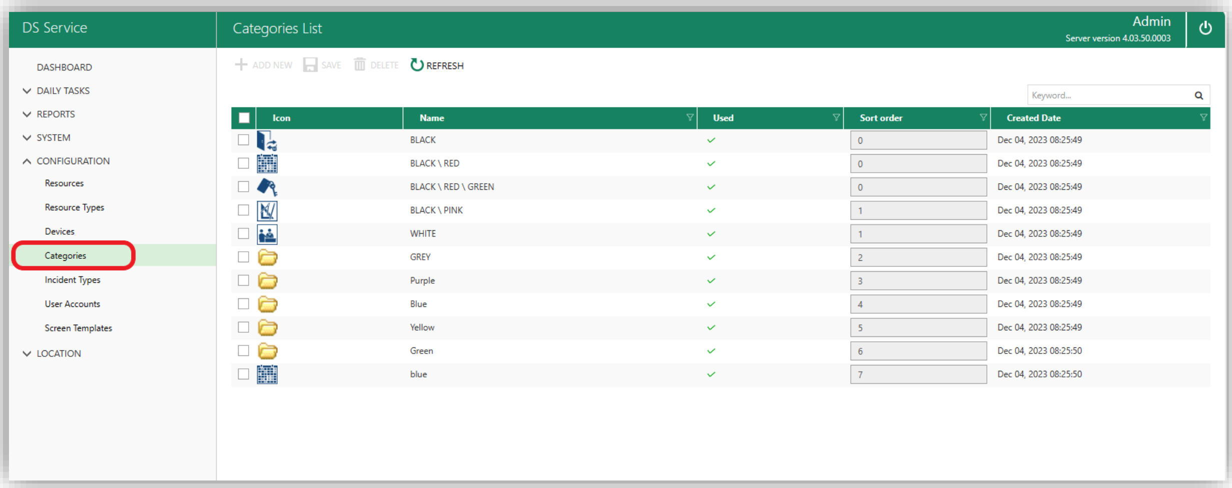


Figure 43. **Categories list**

You can add more categories to this list by clicking [**Add New**] button on the toolbar. These categories can be later assigned to resources in Features section of a resource's details.

Parameters

Parameters are used for system configuration. Every parameter has its own functionality.

In this section, you can create parameters to be used in the system by clicking [**Add New**] button.

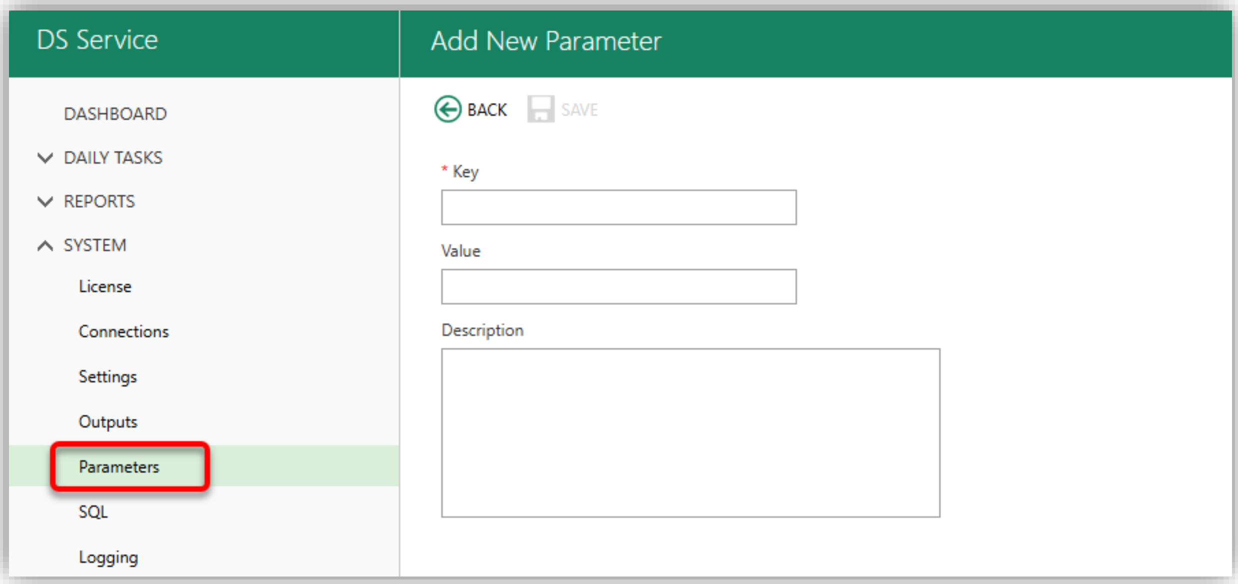


Figure 44. Add a new parameter

For information regarding parameters, please refer to ***DS Service Parameter Guide***.

SQL

This interface is provided for advanced level data management. Through this view, you can execute SQL statements directly on Database and view the result under the form of a table.

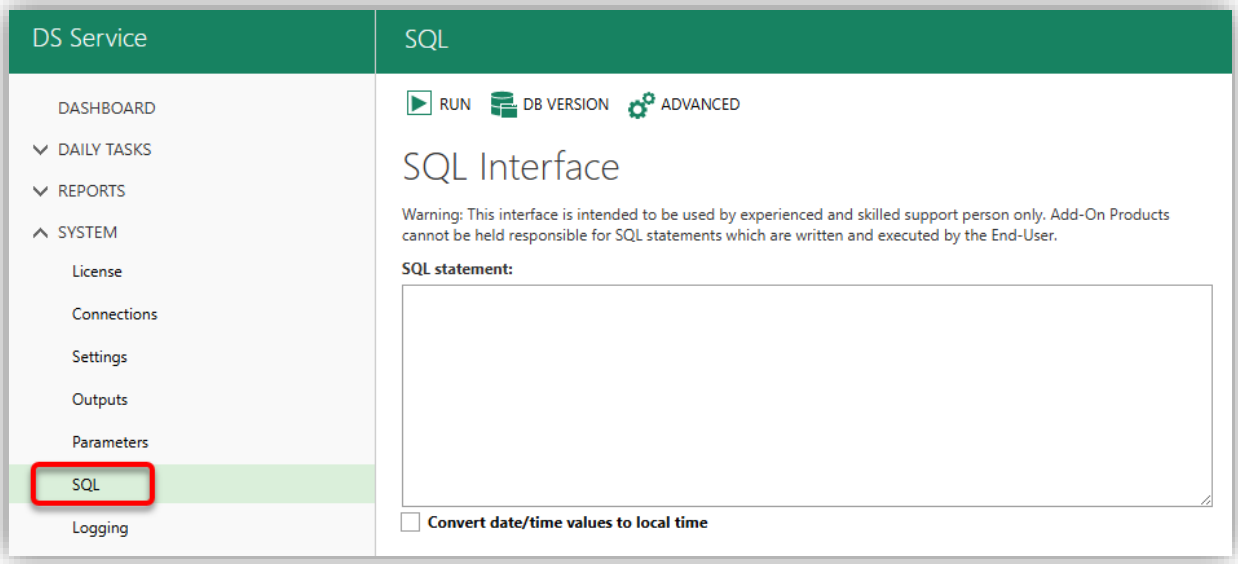


Figure 45. SQL Design

Clicking [**DB version**] button shows the DB version in use:

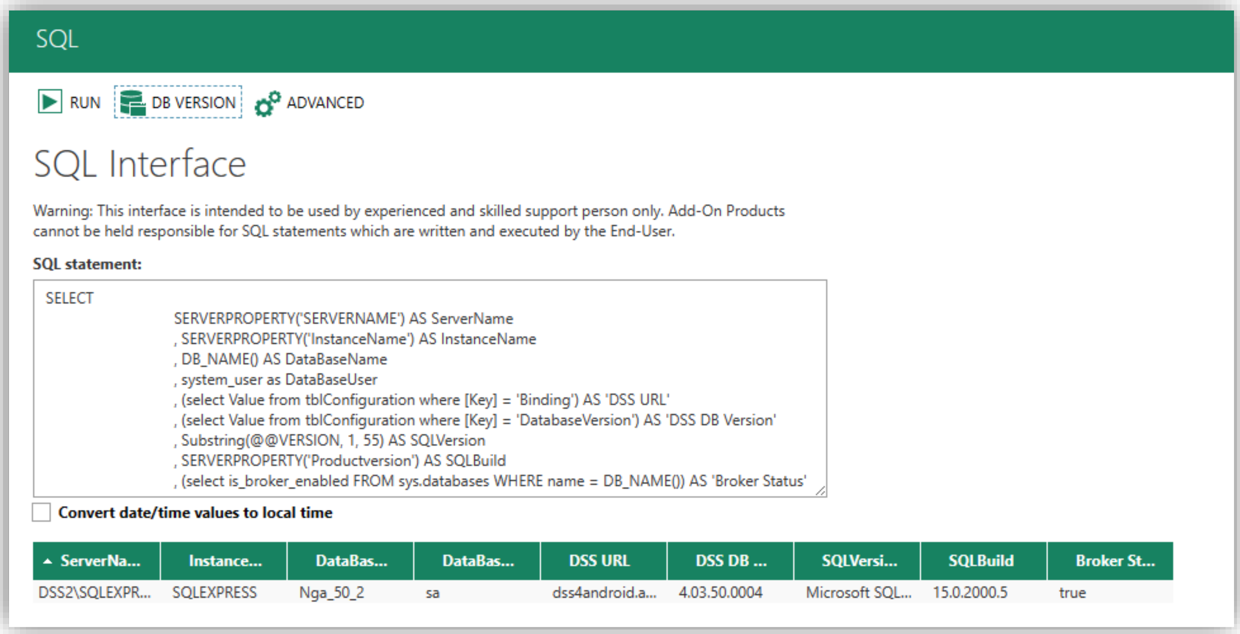


Figure 46. **Show Database version**

The following screen is the advanced mode of **SQL** which is accessed by clicking [**Advance**] button. Through this interface you can download the result of **SQL** queries on your own machine. You can also execute the update query.

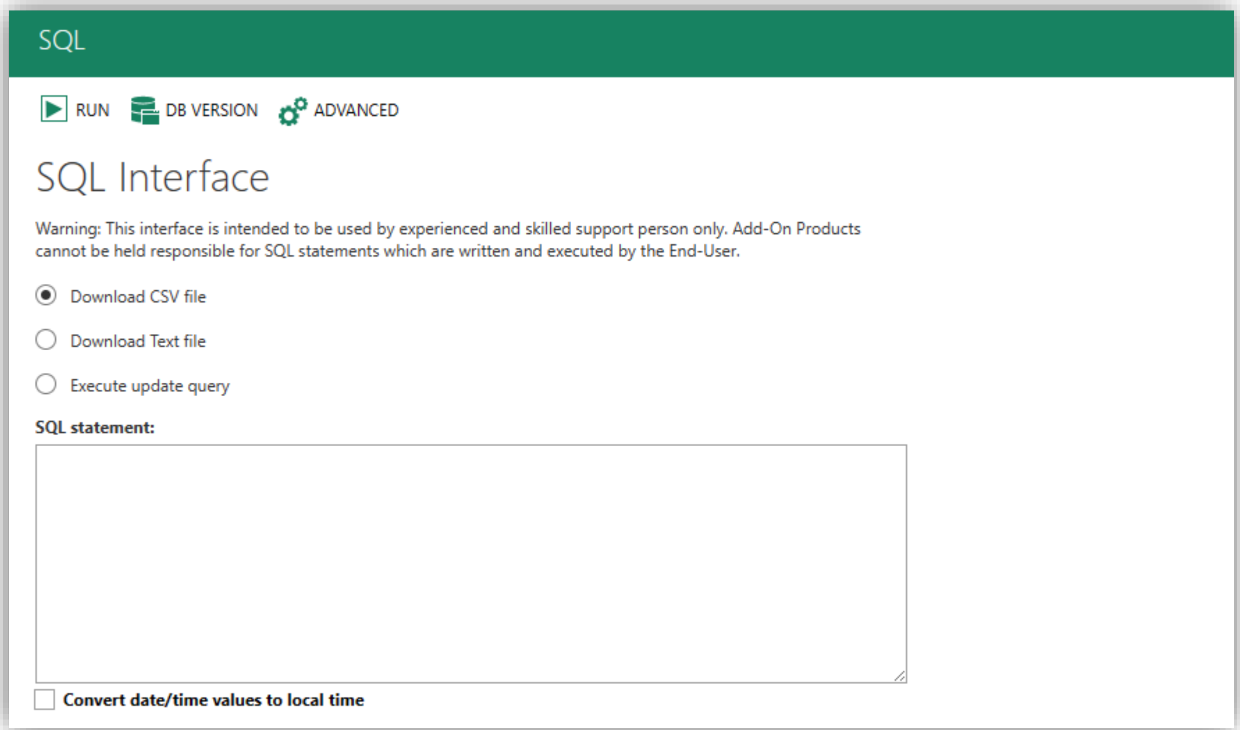


Figure 47. **Advanced mode of SQL**

Toolbar button	Description
Run	Click on Run to execute the query.
DB version	Show DB version in use
Advanced	Advanced mode of SQL

NOTE: It is strongly recommended that this interface must be used by experienced support personnel, who should be proficient in writing/using SQL statements and well aware of the Resource Central Database design. Incorrect use of this interface may halt the Resource Central System or may permanently destroy the data.

Logging

This section displays detailed logs that you can see in the system.

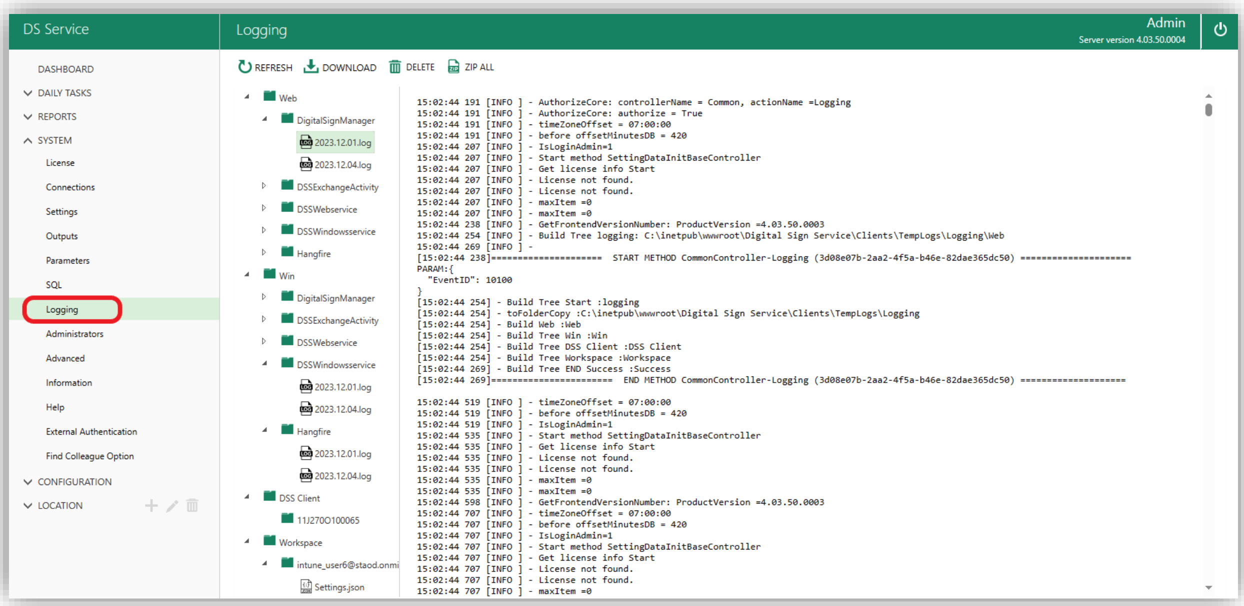


Figure 48. **System – Logging**

Clicking each log file, its content will be displayed on the right panel of the screen.

Information

This section provides you with all information related to the system and application.

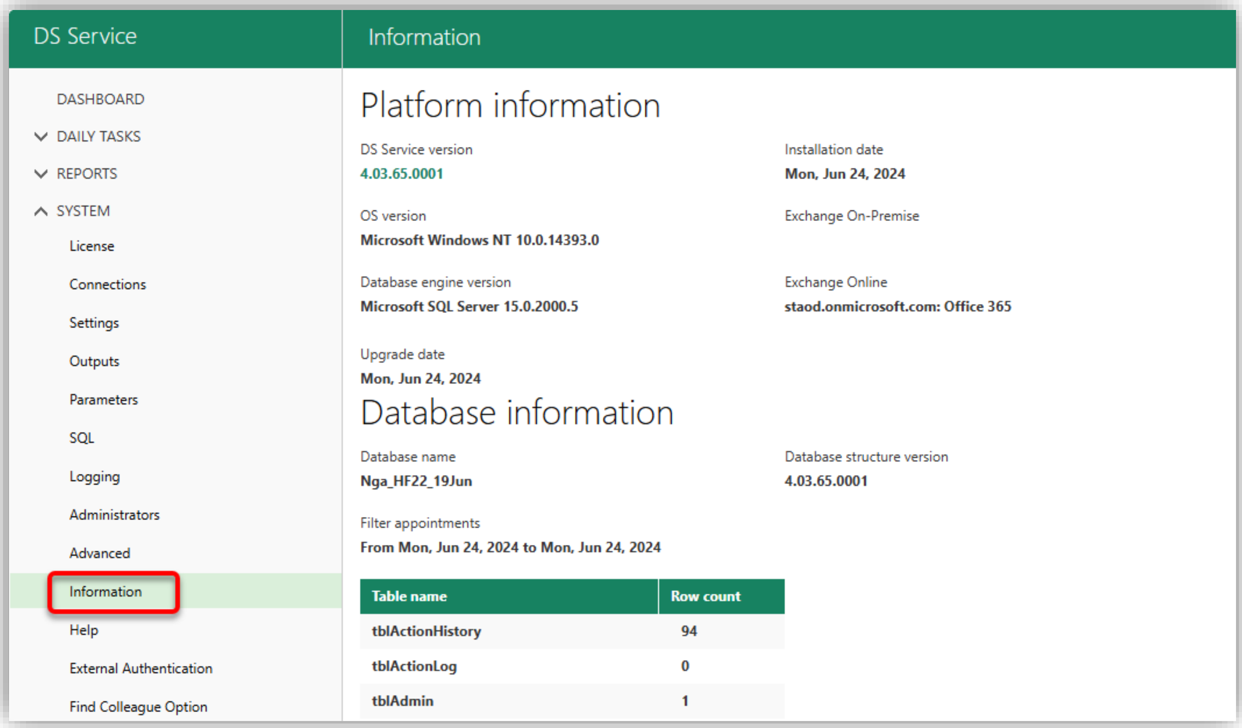


Figure 49. **System information**

Resource Types

This section displays all resource groups used in the system.

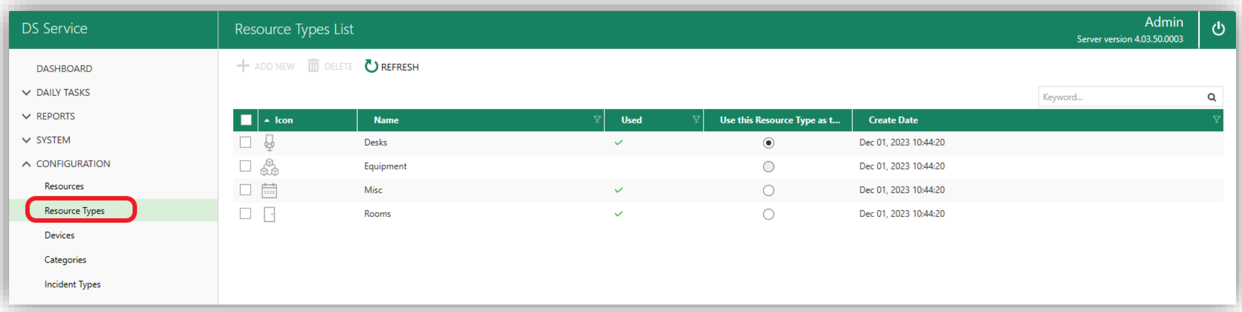


Figure 50. **Resource Types**

You can add more types to this list by clicking [**Add New**] button on the toolbar. These types of resources can be assigned to each resource in Resource list.

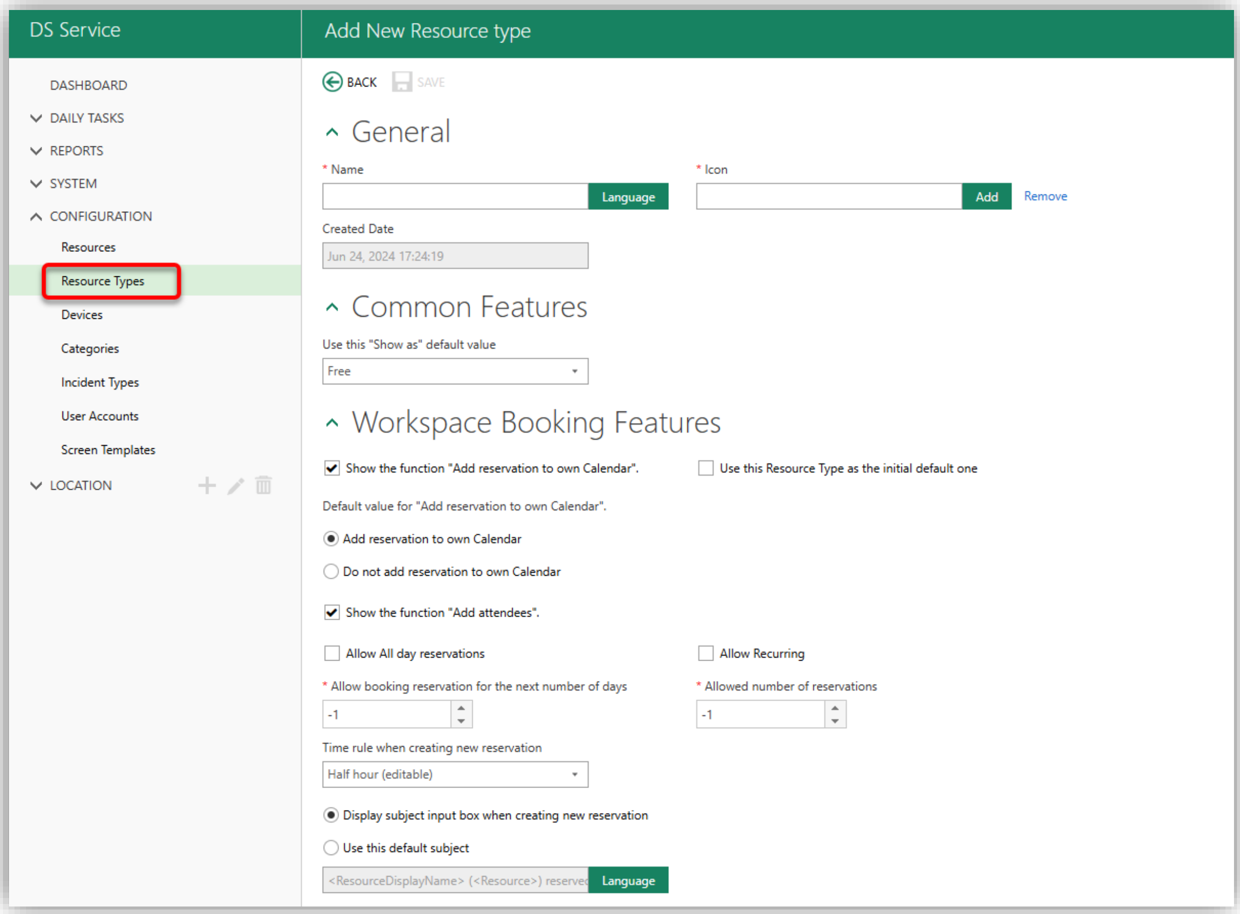
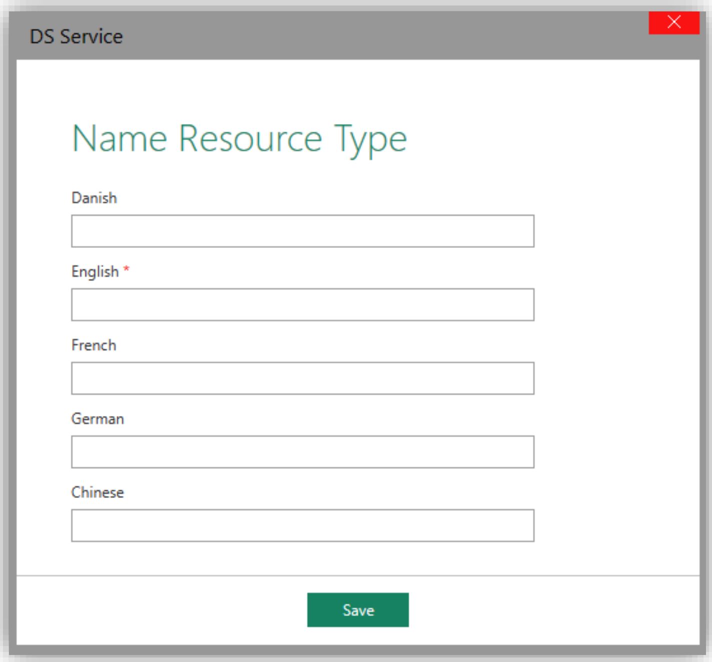


Figure 51. **Add new resource type**



For the “Name” field, you are required to enter English name of it. You can also add translations of that resource type name into other languages. Click [**Save**] to finish naming the resource type.

Next, upload Icon for the resource type from your local disk.

Check on **Show the function to "Add reservation to own Calendar"** to enable this function on Workspace. You can also determine the default value of this function, either add reservation to own Calendar by default or not.

Select a value for **Allow booking reservation for the next number days** with the following options:

Value	Description
-1	No limit. You can book reservations up to the next 1000 days.
0	You can only book reservations today.
Positive integer	You can book reservations in the next (entered number of) days.

These values can be applied to **Number of reservations** field.

You can select "Half hour" or "Workday" in **Time rule when creating new reservation** to define default duration for a reservation.
If you tick on [**Allow All day reservations**], a new option "All day" will be applied for this field. This means new reservation will be automatically set for all day. Users can still disable 'All Day' to select date & time manually on Workspace App (refer to ***DS Service Workspace User Guide***).

If you tick on [**Show the function "Add attendees"**], a new option "People" will be added to Workspace App when a person books a reservation (refer to ***DS Service Workspace User Guide***). It allows the person to add attendees to his/her reservation.

NOTE: The checkbox [**Show the function "Add attendees"**] is only available either if the DS Service is integrated with Resource Central, OR, the checkbox **"Add reservation to own calendar"** is checked.

If you select **Use this default subject** option, and click [**Language**] to define various translation for the subject format, you can use the following factors:

<Resource>
<Organizer>
<ResourceDisplayName>
<OrganizerDisplayName>

From these factors, you can create various formats for your default subject.

For example:

<Resource> reserved by <Organizer>, or
<ResourceDisplayName> (<Resource>) reserved by <OrganizerDisplayName> (<Organizer>)

NOTE:
1. The text input to these language fields is NOT case-sensitive.

2. In regard to removing Default Subject:
- If the resource only has Workspace or Pooled Resources license, you can remove all default subjects and the list becomes empty.
- If the resource has Digital Sign license, you cannot remove all default subjects. It still keeps the current default subject.

Incident types

This section displays all types of incidents created in the system.

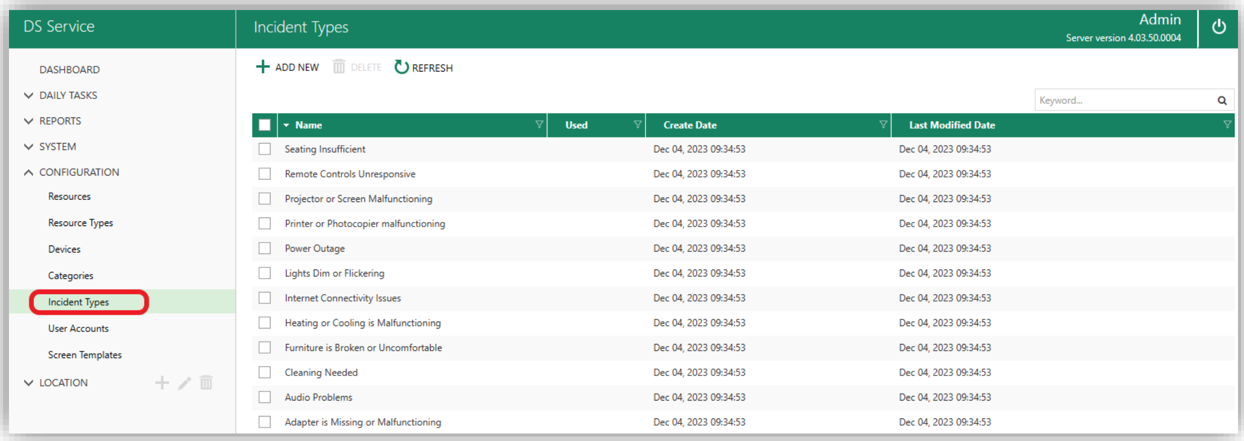
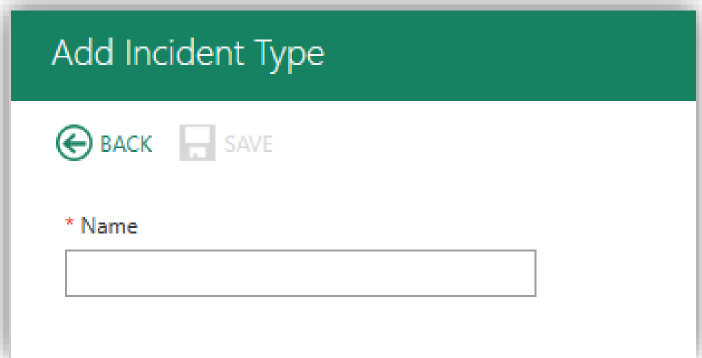


Figure 52. **Incident types**

Click [**Add New**] button to create a new incident type, in which you can enter its name and click [**Save**] to finish.



Screen templates

This section displays all templates used in the system.

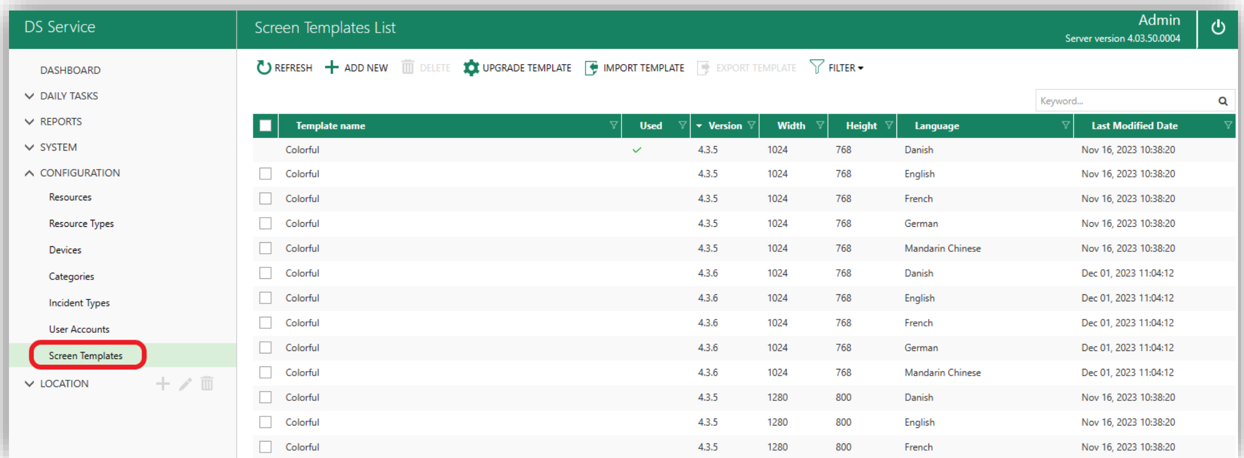


Figure 53. **Screen Templates**

In order to have them displayed here, you have to copy all templates file to the folder Templates. By default, it is located at: *C:\inetpub\wwwroot\DS Service\Clients\Templates*

Button	Description
REFRESH	Refresh the list of templates
ADD NEW	Open Template Editor. Refer to ***DS Service - Template Design Quick Guide*** for more information on how to create a template.
DELETE	Delete selected templates.
UPGRADE TEMPLATE	Upgrade templates to new names/versions.
IMPORT TEMPLATE	Open panel that allows you to import a template from your machine.
EXPORT TEMPLATE	Export selected templates to your machine.
FILTER	Show the chosen conditions (Version/Language/Template in used/Match Device) and hide the unrelated.

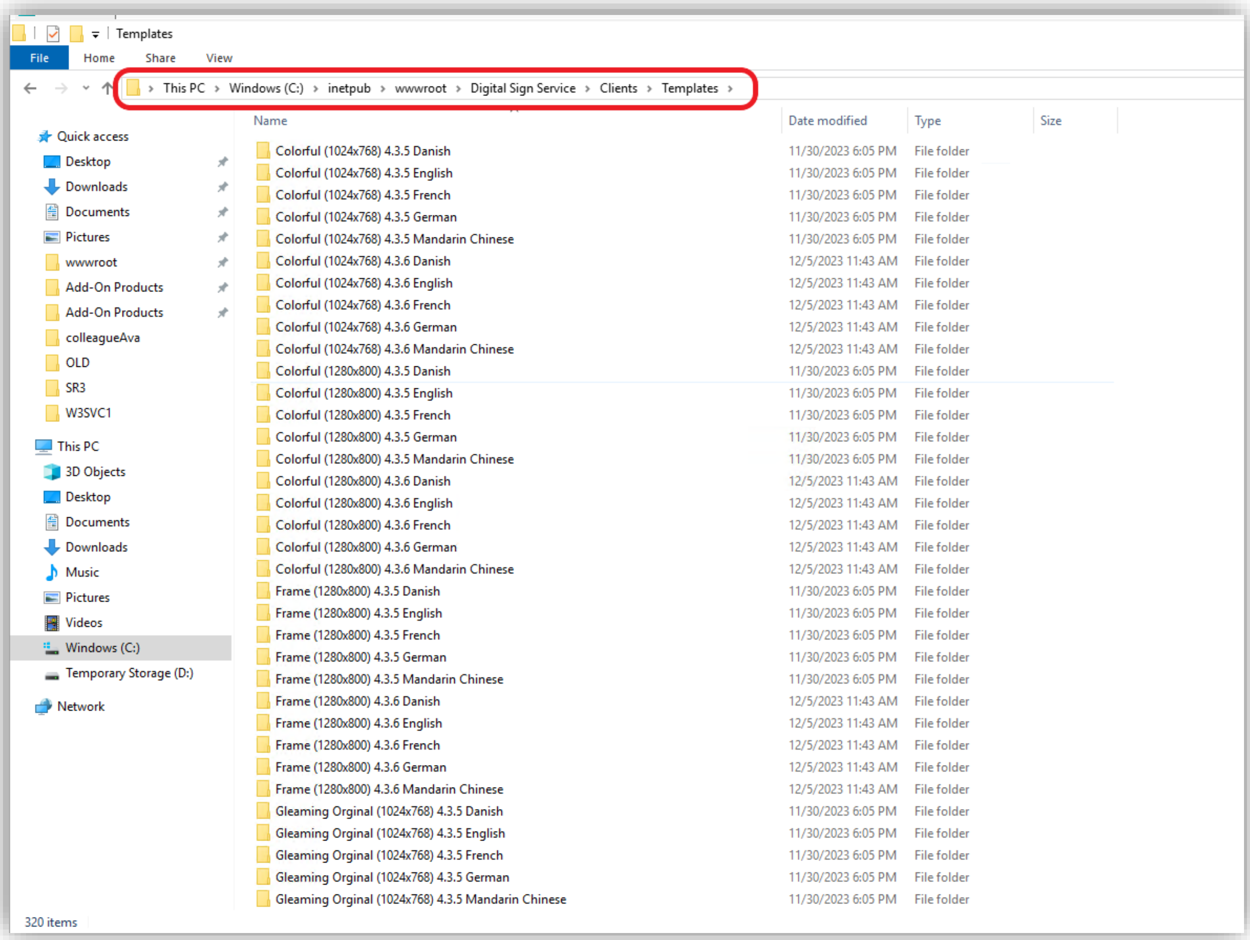


Figure 54. **Template folder**

User Accounts

This section allows you to create a list of users who can interact with the devices.

To create a new user, go to **Configuration** → **User Accounts** and click [**Add New**] on the toolbar. The following panel shows up:

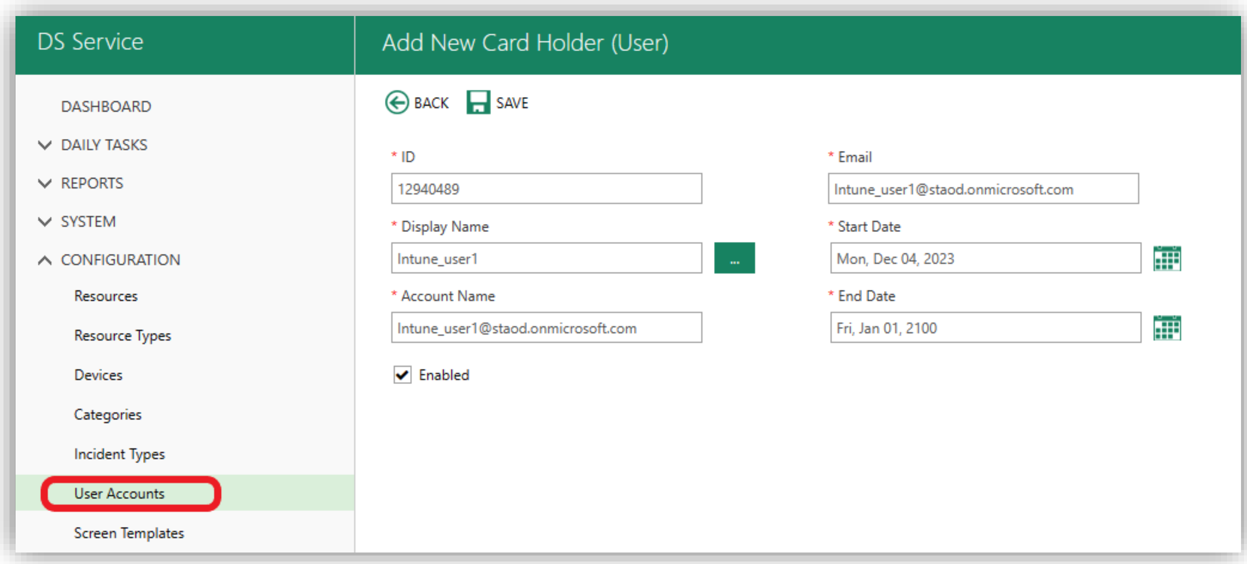


Figure 55. Add a new user

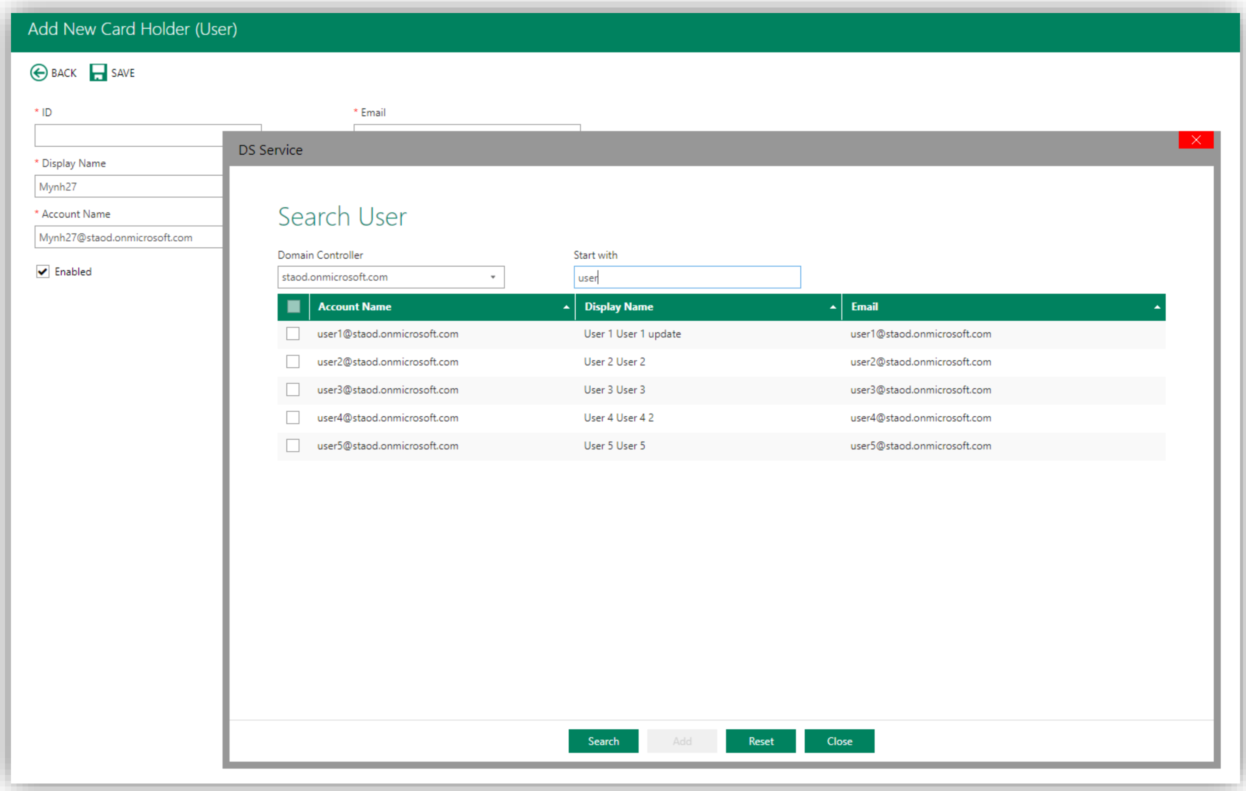
Fill in necessary information, which will be required when this user interacts with the device (book/end/extend meeting). How this information should be entered is configured in a device's details (open a device's properties → **Configuration** → **Input**) or from Client side (in **Digital Sign Client** app, open **Setting** → **Card Information**).

NOTE: In case the entered ID is in either 3 formats: **hex4**, **hex7**, or **decimal**, that ID will be automatically converted to the other two formats (depending on the entered ID type).

E.g.: If the entered ID is in decimal format, it will be converted to hex4 and hex7 format.

This allows a single NFC card to be used on different devices as different manufacturers have various methods to read NFC card.

You can also click [**…**] button to open Search User window:



Here you can search & select a user then click [**Add**]. His/her information will be automatically added to '**Account Name**' and '**Email**' field on the Add New Card Holder screen.

Check on [**Enabled**] to activate this user in the system. Click [**Save**] to finish.

Find Colleague Option

This section lets you add more search options for **Find Colleague** function on Workspace App.

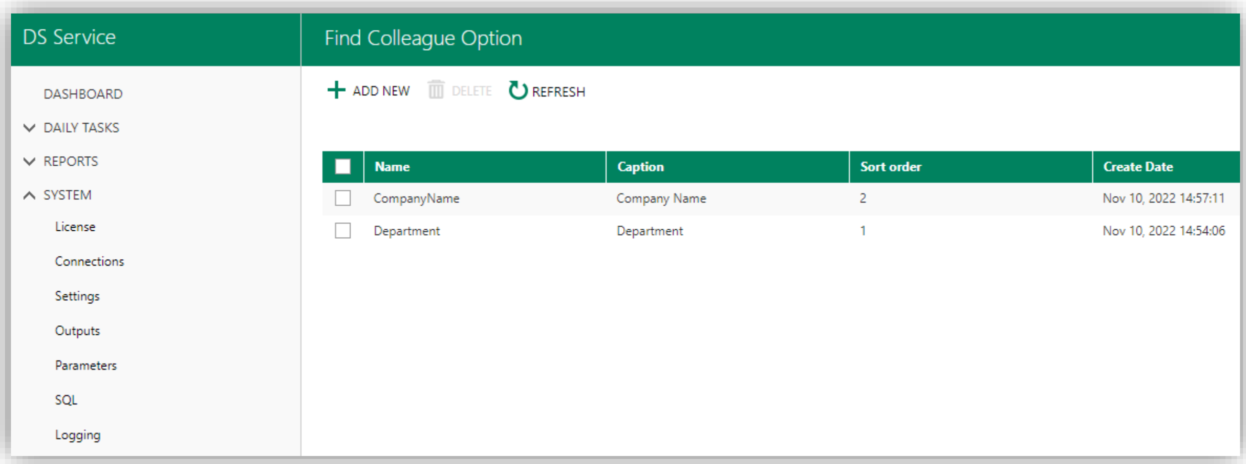
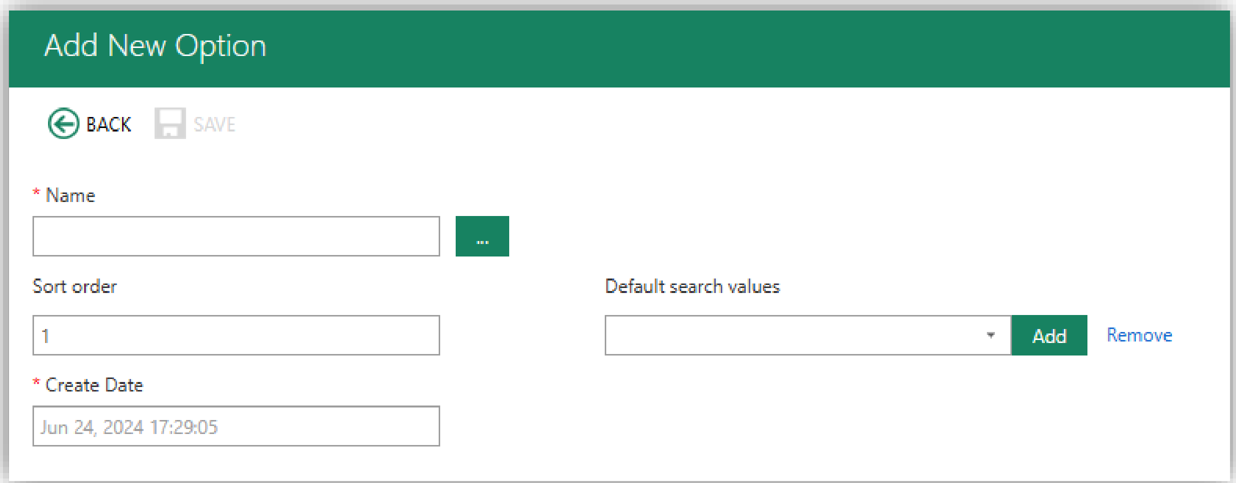


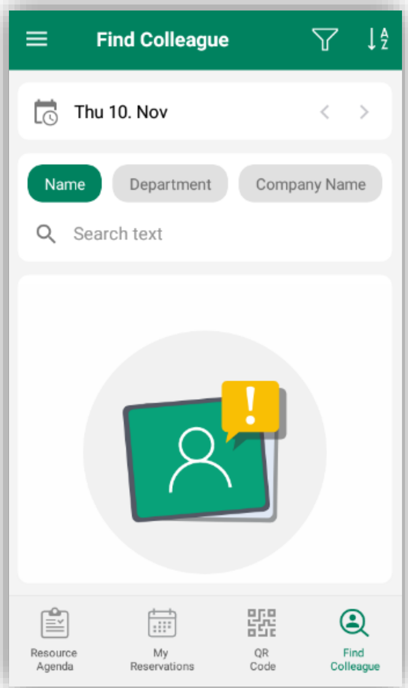
Figure 56. Find Colleague Option

To add new Find Colleague option, click [**Add New**] to open 'Add New Option' screen:



Field	Description
Name	Select one among properties that are synced from Azure AD. It will determine which property that users can use to search their colleagues on Workspace App (e.g., Department, Company Name, City, etc.)
Sort order	A positive integer that determines this property sort order on Workspace App. By default, colleague name will still be shown first on the app.
Default search values	The default search suggestion that will be shown for this property.
Create Date	The date of this property's creation. This field is automatically filled and cannot be edited.

When you are done, click [**Save**] to apply this search property on the Workspace App. On the app, it will be shown similar as follows:



For more details on how to use ‘Find Colleague’ function on Workspace App, please refer to ***Workspace App User Guide***.

Help

This section allows you to upload Help Document of each module, supporting users on different problems. To add new Help Document, click on ... Here, you can choose the file to upload.

NOTE: The Help Documents must be in PDF type to be successfully uploaded.

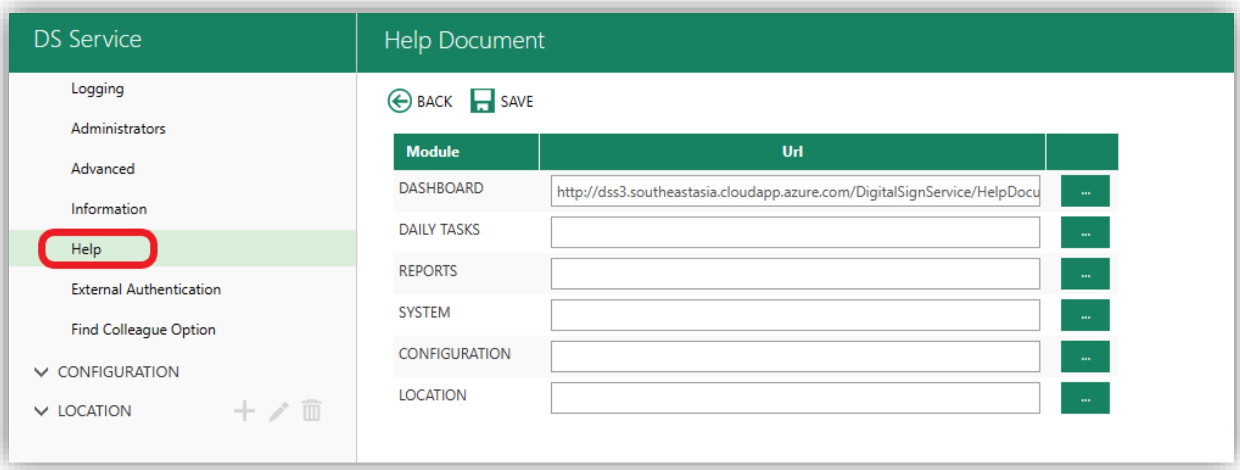
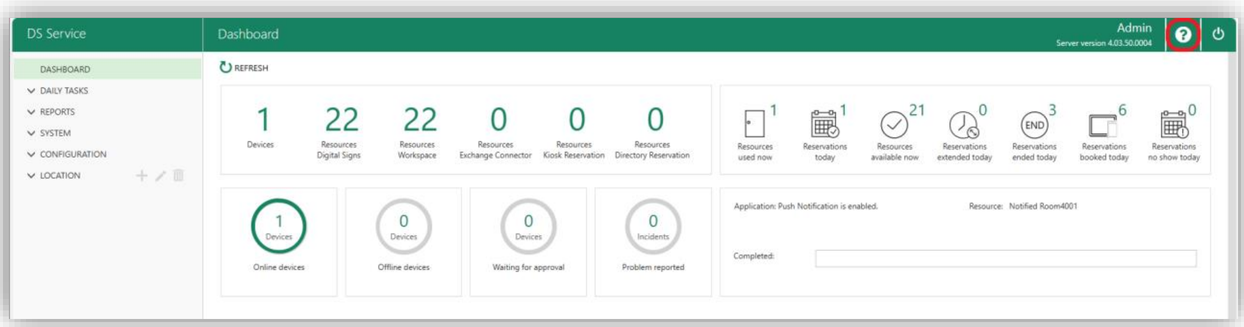


Figure 57. **Help**

After uploading a PDF file to a module, e.g., Dashboard, the function will be displayed on Dashboard section. Clicking on that button will directly take the users to a new page containing the Help Document you uploaded.



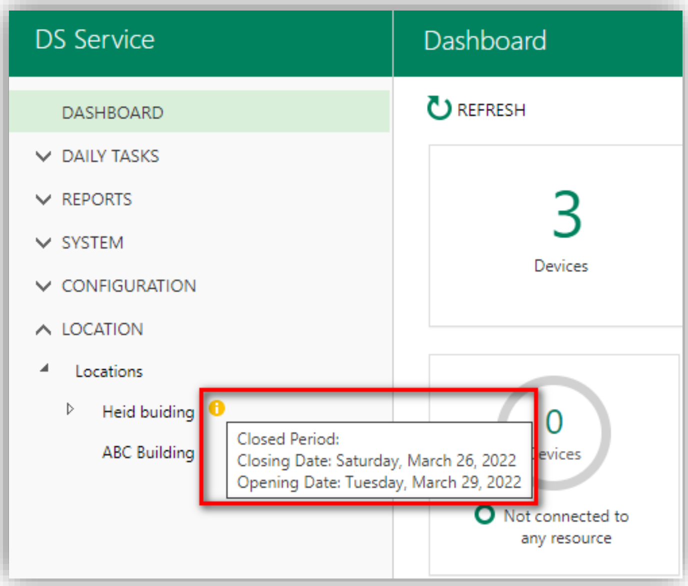
CHAPTER 3.

Appendix

Close location

If your DS Service is synchronized with Resource Central – our solution for booking management, locations listed in **DS Service → Location** may take on '**closed**' status from Resource Central's configuration.

A closed location means all resources associated with this location are closed / unavailable. On DS Service → Location, you will see icon notifying the closed location. Hovering on the icon will show the following message:



This message notifies the closed period, starting from the 'closing date' to 'opening date'.

On Workspace app, users will be notified if the resource is/will be closed with closing date & opening date: