Reserva

Take control of
your meeting rooms

Reserva Room Signage
Installation Instructions & Administration Guide

ONELAN Digital Signage

Reserva Room Signage
Installation Instructions and Administration Guide

V3.14.2 (213201)

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Reserva is a range of dedicated meeting room signage which offers a compact and attractive door side display with dynamic integration to multiple Calendar systems.

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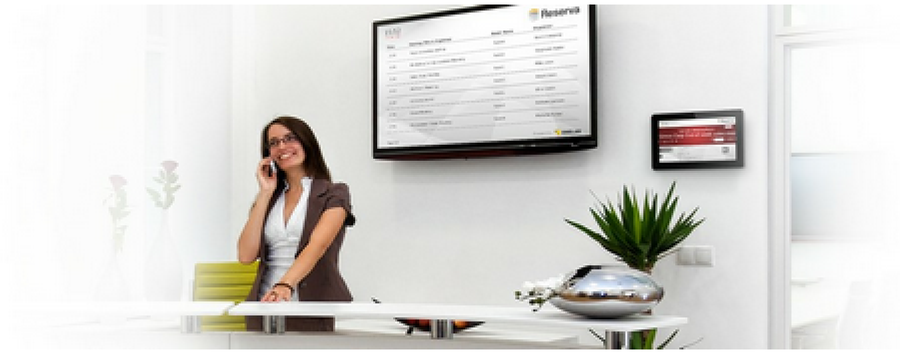
Part I

Introduction

1 Introduction

Thank you for choosing Reserva Connection Manager. This guide is for administrators responsible for deploying Reserva and explains how to plan, install, configure and manage a Reserva deployment.



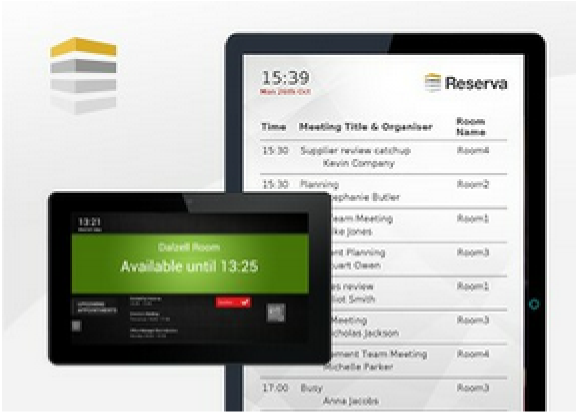
Other resources include:

- User guide: a concise guide explaining how your end users book meeting rooms and manage bookings using a Reserva room sign.
- Reserva Connection Manager help: context-sensitive help, providing further details regarding administration of Reserva.

1.1 About Reserva

Reserva provides intuitive digital displays to allow efficient use of your meeting rooms and collaboration spaces. Reserva is linked dynamically with your calendar system, ensuring room information is up to date and accurate. Meeting rooms are managed more efficiently, avoiding issues such as the inconvenience of double bookings or meeting rooms shown as busy, despite being vacant (for example, where attendees are unable to make meetings at short notice).

Reserva provides two types of display:



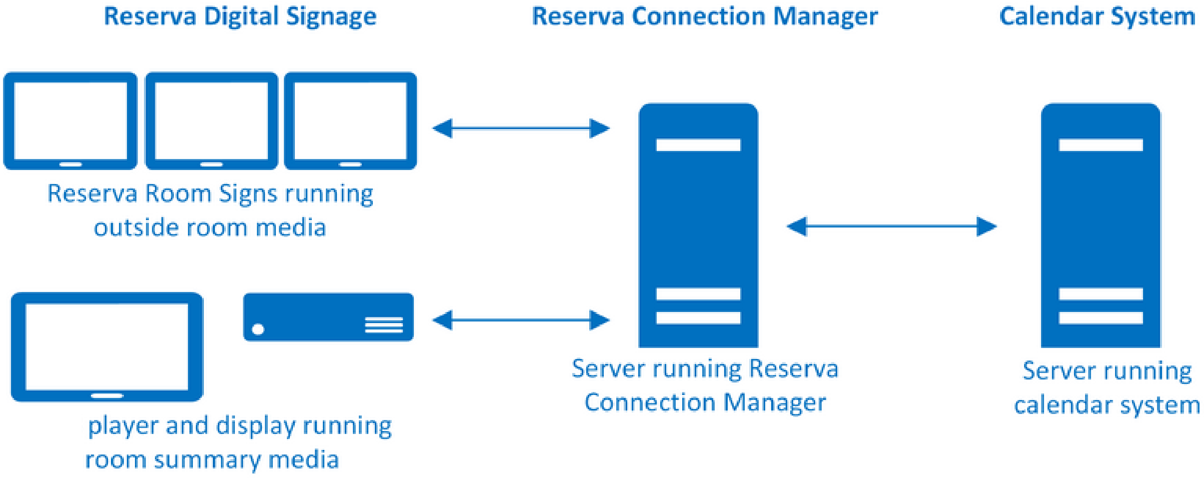
Reserva room sign and room summary display

- **Reserva room sign**
  Interactive room sign, showing the current status of a meeting room along with a summary of upcoming appointments. Using the interactive touchscreen, users can book, confirm, extend/shorten and cancel appointments.
- **Reserva room summary display**
  Provides a clear summary of appointments across a collection of meeting rooms. Typical deployments of room summary displays include reception areas and foyers. The room summary content can be displayed in full screen or within a 'zone' within a screen layout with multiple 'zones'.

Reserva digital displays are available in a range of sizes to complement your requirements and space considerations. For example, you might decide to mount smaller room signs alongside meeting rooms, larger room signs for big rooms such as auditoriums, and large room summary displays in your reception to provide a summary of appointments across multiple meeting rooms. You can customise the Reserva media to suit your branding and environment.

1.2 Reserva Components

Reserva deployments comprise the following components:



Reserva Components

Reserva Displays

Reserva supports two types of display:

- Room sign: Reserva room sign running outside room media.
- Room summary: ONELAN Net-Top-Box (NTB) and display running room summary media.

Reserva Media

- **Reserva Outside Room Media**
  Linked to a single room within your calendar system, the interactive room sign shows the status of the meeting room and a list of upcoming appointments. It allows users to book and manage their appointments.
- **Reserva Room Summary Media**
  Provides summary of appointments for a number of rooms within your calendar system. The media runs on an NTB and can be displayed in full screen mode or within a specified zone in a multi-zone layout. The media is read-only.

Both outside room media and room summary media can be customised to include a logo of your choice and a dark or light theme to complement your branding. You can also specify language options to suit your location and user requirements.

Reserva Connection Manager

Reserva Connection Manager allows you to set up, manage and monitor your Reserva deployment.

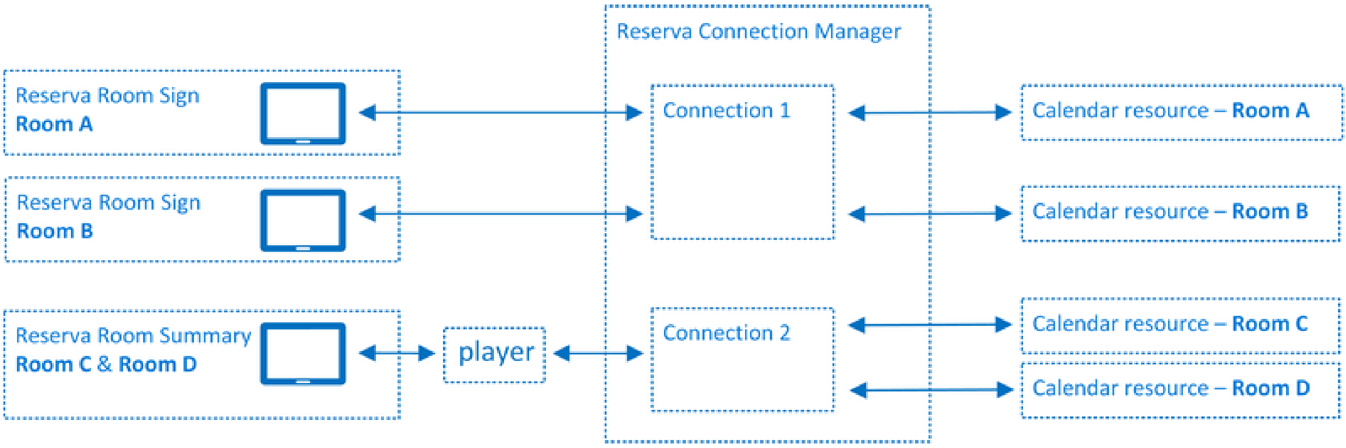
You configure Reserva outside room media and room summary media for a specific Connection. The Connection specifies the room information to present on the room sign or room summary display and how often the information is updated. For room signs, the Connection also specifies the options available to the end users.

You add the required rooms from your calendar system to the Connection. Room signs are configured to show the details for a specific room added to the Connection. Room summary media presents a summary of appointments for all rooms added to the Connection.

Reserva Connection Manager allows you to add, modify and test Connections.

Note: Reserva Connection Manager installs the Reserva Room Signage Service on the server running Reserva Connection Manager. The service is required, starts automatically and runs in the background.

Reserva components are configured to communicate as shown in the example below:



Reserva Connections

In this example, the room signs for Room A and Room B are interactive and configured to allow users to book appointments. The room summary for Room C and Room D provides a summary of the appointments for both Room C and Room D and is non-interactive (the summary information is read-only).

Calendar System

Reserva integrates with your preferred calendar system, ensuring meeting room information and bookings are accurate, up to date and synchronised across all room signs.

This version of Reserva supports Microsoft Exchange, Google Calendar, Scientia and Oracle OPERA, NFS Rendezvous Workspace, Amadeus and Gingco.net/Estate. For more details regarding the supported calendar system and requirements, see Calendar Requirements.

Please contact ONELAN at sales@onelan.com for information on deploying Reserva with other calendar systems.

1.3 Reserva Displays

Two types of Reserva display are available:

- **Reserva room sign** - outside room media runs on the room sign, showing the status of the meeting room, a list of upcoming appointments and booking options.
- **Reserva room summary** - room summary media runs on an NTB and provides summary of appointments for a number of rooms.

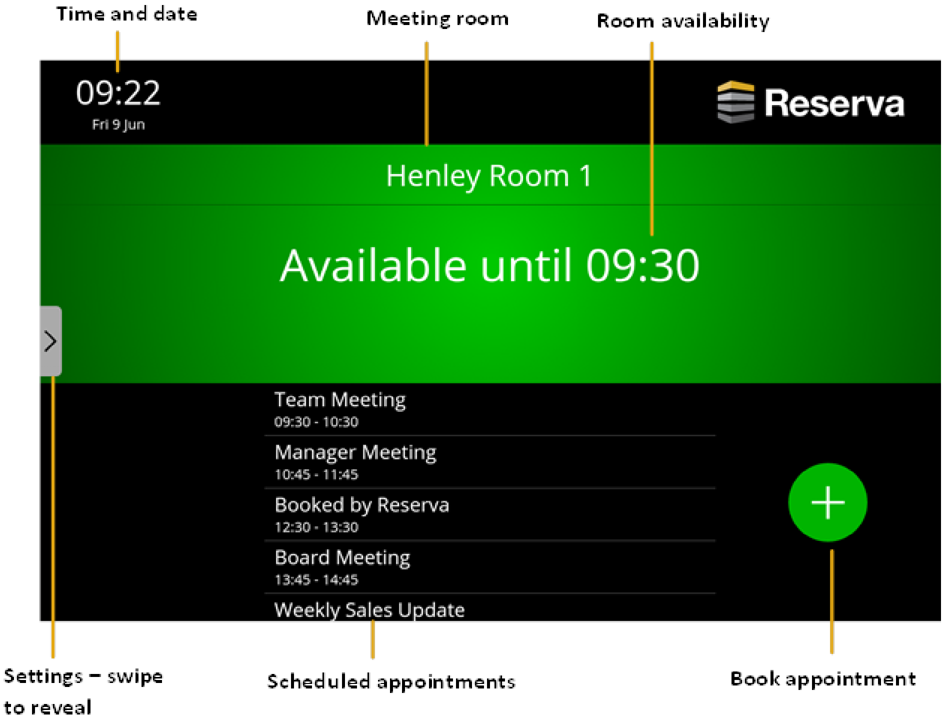
Room Sign Interface

Reserva room signs running outside room media show meeting room availability, a summary of scheduled appointments and booking options. The options available depend on the meeting room status (available or busy) and the options you enable for your end users. Each Reserva room sign is configured to display the information for a specific room in your calendar system.

Note: The media can be customised. The examples below include a dark theme without a logo and default language settings.

Outside Room Sign Interface

The examples below show all options, including interactive features. The first example shows the room sign options for an available meeting room, the second shows the options available when a meeting room is busy.



Options - Meeting Room Available

Options - Meeting Room Busy

Room Sign Features

These features are available on all devices:

Time and date

The current time and date is shown in the top left corner. Room signs automatically display the time and date for your time zone. You can update this manually if required.

Meeting room

The meeting room name is shown. This is the room name as defined in the calendar system.

Room availability

If the room is available, the availability (for example, 'Available until tomorrow at 14:00') is shown on a green background.

If the room is busy, the meeting title (in the example above, 'Booked by Reserva' and the start time and end time is shown on a red background.

Scheduled appointments

A list of scheduled appointments is shown in the **Upcoming Appointments** area.

Interactive Features

These features must be enabled for your end users. You can configure the options per Connection.

Book an appointment

Users can book a new appointment and specify the meeting name. The appointment is added to the calendar and the meeting room is reserved.

You can configure the maximum number of days in advance that users can book appointments. For example, you might allow users to book appointments up to 30 days in advance.

Confirm appointment

Users are prompted to confirm the appointment before the meeting starts. If the appointment is not confirmed ahead of the meeting, users are reminded to confirm the appointment once the meeting starts. Provided they confirm, the meeting room is reserved.

If the appointment is not confirmed, the appointment is removed from the calendar automatically and the meeting room is shown as available. This ensures rooms are not shown as busy when attendees are unable to make the meeting.

You can configure the timing for confirming appointments. For example, you might prompt users to confirm appointments 5 minutes before the scheduled start time and allow users up to 10 minutes (from the scheduled start time) to confirm their appointment.

Extend or shorten an appointment

Users can cancel an appointment during the meeting. For example, if other attendees are unable to join the meeting and the room is no longer needed, the appointment can be cancelled. This removes the appointment from the calendar and the meeting room is shown as available.

Each interactive feature can be enabled or disabled per Connection. See Specify Connection Settings.

Room Summary Interface

Reserva room summary media shows a list of appointments for a number of rooms in your calendar system. This information is read-only. An example is shown below.

Room Summary Example

If the list of appointments spans more than one page, as shown in the example, the display cycles through the pages.

Meetings scheduled as 'all day' meetings appear at the top of the list, followed by all other individual meetings. Meetings are shown in order, according to the scheduled start time for each appointment.

Part II

Planning

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2 Planning

Before you deploy Reserva, it is important to plan your deployment and determine the features you require.

This section provides guidance and recommendations to help with your planning, together with three example deployment scenarios.

2.1 Reserva Connection Manager Requirements

Considerations

Reserva room sign media and room summary media are configured for a specific Connection. The Connection specifies the room information to present, how often the information is updated and the options available to the end users. Room sign media show the details for a specific room within your calendar system; room summary media provides a list of the appointments for a number of rooms within your calendar system.

There are a number of factors you need to consider during the planning phase:

Room Signs

- The number of room signs in your deployment.
- What features do your users require? This will determine the room sign options you need to configure.

Room Summary

- Do you require room summary displays? If your deployment includes room summary signs, you will need an NTB for each of these displays.

Customisation

- Are you going to customise the outside room media or room summary media to use a logo of your choice? If so, you need to ensure the logo is appropriate for the theme and of the correct resolution (the recommended logo size is 450 pixels width x 100 pixels height).

Calendar Integration

- How many calendar systems are you working with? For example, does your deployment include a single calendar system or are you working with a number of different calendar systems?
- If you are working with a number of different calendar systems are they of the same type? For example, Scientia, or a mix of systems, such as Scientia and Google.

Networking

- If your deployment spans offices or sites, do they share the same network and/or calendar systems?

These factors help your deployment needs.

Configuration Recommendations

Reserva Connection Manager Recommendations

Recommended configuration and sizing for Reserva Connection Manager:

- For ease of management and administration, we suggest you install one Reserva Connection Manager per site.

Connection Configuration Recommendations

Recommended configuration and sizing for each Connection:

- We recommend up to 50 rooms (or calendars where there is a one-to-one mapping of room and calendar, as is the case with Google Calendar) per Connection.
- All room signs have the same options enabled and the same access credentials (this is mandatory).
- A single calendar system per Connection (this is mandatory).
- For ease of management and administration, we suggest you configure a Connection per floor on other logical grouping (assuming all room signs within the group are to be configured with the same options).

Note: If you require more than 50 rooms for a particular Connection, do not exceed 200 rooms. This is the maximum number of rooms per Connection tested and supported.

NTB Recommendations

If your deployment includes room summary displays, an NTB is required for each display. Each NTB must be licensed to run the room summary media. The licence may have been purchased and installed during the sales process (see License NTB for Room Summary Media).

Minimum System Specification

This section details the minimum system requirements for the server running Reserva Connection Manager.

A PC or Server that meets the following:

Requirements

- Processor: 1 GHz or faster 32-bit (x86) or 64-bit (x64) processor
- Memory: 1 GB RAM (32-bit) or 2 GB RAM (64-bit)
- Disk space: 1 GB of available disk space
- Network: always connected (a permanent network connection is required).
- Domain: added to your domain.

Supported Operating Systems

Server

- Microsoft Windows® Server 2016 (64 bit-version only). Recommended operating system for production deployments.
- Microsoft Windows® Server 2012 R2 (64-bit version only). Recommended operating system for production deployments.
- Microsoft Windows® Server 2008 R2 (64-bit version only). Recommended operating system for production deployments.

Desktop

- Microsoft Windows® 10 (64-bit version only)
- Microsoft Windows® 8.1 (32-bit and 64-bit versions are supported)
- Microsoft Windows® 7 with Service Pack 1 (32-bit and 64-bit versions are supported)

Virtual

- VMware Workstation version 12

Note: Please contact ONELAN Limited to discuss deployment of other operating systems or virtual machines.

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NTB Requirements

If your deployment includes room summary signs, an NTB is required for each room summary sign. The following NTB versions are supported:

- NTB Version 10.0 or later

Each NTB must be licensed to run the room summary media. The licence may have been purchased and installed during the sales process (see License NTB for Room Summary Media).

Networking Requirements

Overview

Reserva outside room media and room summary media are configured to connect to the Web Service (hosted on the server running Reserva Connection Manager) to obtain configuration settings and meeting room information. The Web Service is installed with Reserva Connection Manager.

Depending upon the chosen calendar system the Reserva Connection Manager may require additional network connectivity. This is detailed in the relevant Calendar system requirements sections.

You must ensure anti-virus and firewall software is configured to allow the Reserva room signs to communicate with the Reserva Web Service.

Reserva Connection Manager Web Service Port

A HTTP connection is established between the media on each device (room sign or room summary) and the Reserva Connection Manager. By default, the media connects with Reserva Connection Manager using (HTTP) port 8080. If necessary, you can change the port. You must ensure your firewall and network restrictions allow communication using the specified port. For more information regarding configuration of the Web Service, see Configure Reserva Web Service.

2.2 Calendar System Requirements

Before you deploy Reserva, it is important to ensure you have the necessary calendar systems configured.

This version of Reserva supports the following calendar systems:

- Microsoft Exchange® Server and Office 365
- Google Calendar and Google Calendar for Business (Google Apps for Business)
- Scientia Enterprise Reporting
- Oracle OPERA Sales and Catering
- NFS Rendezvous Workspace
- Gingco.net/Estate

The table below shows the supported calendar systems and whether or not Reserva is able to edit the calendar. This determines whether or not interactive features are supported. For example, Reserva can edit Microsoft Office 365 calendars so outside room interactive features, such as booking an appointment, can be configured. Scientia calendars are read-only so although Reserva can present room information and availability, interactive features are not supported.

Calendar System	Reserva can edit the calendar	Interactive Features
Microsoft Exchange	Yes	Supported
Microsoft Office 365	Yes	Supported

Scientia Enterprise Reporting	No	Not supported
Scientia XML	No	Not supported
CELCAT	No	Not supported
NFS Rendezvous Workspace	Yes	Not supported
Oracle OPERA Sales and Catering	No	Not supported
Google Calendar	Yes	Supported
Google Calendar for Business	Yes	Supported
G Suite	Yes	Supported
Gingco.net/Estate	No	Not supported
Amadeus	No	Not supported

For further detail regarding each calendar system, see the relevant calendar system actions.

Please contact sales@onelan.com for information on deploying Reserva with other calendar systems.

Microsoft Exchange® and Office 365 Calendar Requirements

This section explains the choices and requirements if you are configuring Microsoft Exchange® and/or Office 365 Calendar Connections.

These are the same requirements as for CELCAT Connections.

Supported Versions

The following versions are supported:

- Exchange Server 2010
- Exchange Server 2013
- Exchange Server 2016
- Exchange Online using Office 365

Microsoft Exchange

To configure Microsoft Exchange Connections, you require:

- **Server:** the address (IP address or host name) of the server running Microsoft Exchange®.
- **Credentials:** the email address, user name and password for your Microsoft Exchange® calendar. The user must have access and the required permissions to access the necessary Exchange® mailboxes (for more information, see Appendix A: Optimising Exchange®). We recommend a unique user name and password for each Connection.
- **Calendar accounts:** ensure the required Exchange® mailboxes are configured for your deployment.

  Note: If not configured already, we recommend a unique Exchange® mailbox for each room. For example, for Room A you should have a corresponding Exchange® mailbox.

For additional configuration options, please refer to Appendix A: Optimising Exchange®.

Microsoft Office 365 (Exchange Online)

To configure Office 365, you require:

- Credentials: the email address and password for your Office 365 (Exchange® Online) calendar. This user must have access and the required permissions to view and modify (if appropriate) the required Exchange® mailboxes. We recommend a unique user name and password for each Connection.

- Calendar accounts: ensure the necessary calendar account(s) are configured for your deployment.

  Note: If not configured already, we recommend a unique Exchange® Online mailbox for each room. For example, for 'Room A' you require a corresponding Exchange® Online mailbox.

Microsoft Office 365 Room Finder

To locate rooms using the Add Room finder options when setting up Connections for Office 365, you need to create a Room List Distribution file. This file ensures the finder list is automatically populated with the available rooms.

Note: This is optional as you can add rooms manually - by typing the room names - if you do not create the file.

To create a room list, the Exchange administrator connects to Exchange Online using Windows PowerShell. Using PowerShell commands, the administrator creates a Room List Distribution Group and adds the required rooms to the list. Once Exchange Online is updated, rooms will be viewable in the Add Room finder.

For more information, please refer to Microsoft Office TechNet https://technet.microsoft.com and the Office 365 Education blog article *'Get a Room! Enable Room Finder with Room List Distribution Groups.'*

Please contact your network or IT administrator if you are unsure of these details.

Google Calendar Requirements

This section explains the choices and requirements for Google Calendar Connections.

Supported Versions

The following versions of Google Calendar are supported:

- Google Calendar
- Google Calendar for Business (Google Apps for Business).

RCM also supports G Suite Connections. Please contact your administrator for configuration changes to G Suite.

Features and Choices

Google Calendars can be either Public or Shared and this determines the features available in your Reserva deployment.

The options are shown below:

Calendar Type	Editable by Reserva	Calendar available to anyone via the internet
Shared	Yes. Shared calendars can be edited by Reserva. Therefore, with appropriate configuration and room signs, users can make and manage bookings.	No. You control who can access the calendar.
Public	No. Reserva cannot edit Public calendars. However, Reserva can query Public calendars and show room availability (free or busy).	Yes. Public calendars are indexed and searchable.

The primary consideration is likely to be whether or not your users need the ability to make and manage bookings. If so, you require the calendar to be a Shared calendar. Configuration and integration with Shared calendars requires some additional steps, as detailed below. If displaying room availability (free/busy) only is acceptable, and the calendar being available on the internet is not a concern, a Public calendar may be appropriate.

Configuration

To configure Google Calendar Connections, you require the following calendar details:

- **Calendar Accounts:** ensure the necessary calendar account(s) are configured for your deployment. You require a Google Calendar for each room/resource.

Configuration differs depending on the calendar type:

- **Public:** Google Calendars set to 'Public' are available to anyone, indexed and searchable on the internet. If you use a public calendar within your Reserva deployment, the calendar is read-only. Reserva is unable to edit the calendar and so features such as booking appointments are not available. You require the Calendar ID when adding Connections for Public calendars.
- **Shared**: Google Calendars set to 'Shared' can be edited by Reserva. With the appropriate settings enabled, users can book and manage appointments. You need a Google Service Account when adding Connections for Shared calendars. The calendar is shared with a Google Service Account and Reserva uses this account to read and write to the calendar.

This table provides a summary of the Google Calendar configuration options and requirements. It lists the calendar type (shared or public), whether the calendar requires a Google Service Account, how the calendar is shared and whether or not the calendar is read-only or can be edited by Reserva (e.g. if it is possible to book appointments using Reserva room signs).

Google Calendar	Google Service Account	Sharing	Actions Allowed from Reserva	Calendars auto-discovered
Shared	Yes	With Service account	Read/write	Yes. Calendars shared with the Google Service Account appear when adding a Shared calendar.
Public	No	Public	Read-only	No. You add the calendar manually using the Calendar ID or URL.

Note: You require a dedicated Google Calendar for each room/resource. Therefore, for each Google Calendar you configure, you are adding a room/resource (there are no additional tasks required to add a room).

Google Service Account

One of the methods for authenticating a Google Calendar Connection is with a **Google Service Account**. You can alternatively use **Sign in with Google**. These steps will be covered in configuring a Google Calendar Connection.

The Google Service Account allows Reserva to query and edit Google Calendars. This account is used by Reserva to authenticate and interact with the Google Calendar APIs.

Please contact your network or IT administrator if you are unsure of these details.

Scientia Enterprise Reporting Requirements

This section explains the choices and requirements if you are configuring Scientia Calendar Connections.

Note: If your system includes Connections to Scientia, these are read-only Connections. Room signs can present room information and availability but it is not possible to edit the calendar, so interactive features such as making a booking are not available.

Supported Versions

The following versions of Scientia Enterprise are supported:

- Version 3.1.1
- Version 3.10
- Version 3.11

ODBC Database

You need the details for the database containing your Scientia calendar system details. The supported database options:

- Microsoft SQL Server
- Oracle

You need the credentials required to authenticate with the database.

Open Database Connectivity (ODBC) Driver and Data Source Name (DSN)

You must ensure the ODBC driver is installed on Reserva Connection Manager. You will also need the DSN details to configure and connect to the Scientia database.

For further details, see Appendix B: Scientia Database Configuration.

XML

You need to have the Scientia XML Presentation Layer. This has to be configured with the ONELAN Reserva XML feed.

For more information about the Scientia XML feed and how this can integrate with your Syllabus Plus timetable please contact your Scientia/Cyon account manager.

Oracle OPERA Calendar Sales and Catering Calendar Requirements

This section explains the choices and requirements if you are configuring Oracle OPERA Sales and Catering Calendar Connections.

Note: OPERA Connections are read-only. Reserva can present room information and availability. However, interactive features such as booking an appointment are not supported.

Supported Versions

The following versions of Oracle OPERA Sales and Catering are supported:

- Full and Xpress: Version 4.x to Version 5.0.03.03

OPERA Reader Board and Export File

Reserva reads events and retrieves room information from the specified OPERA file. The file is exported and updated using the OPERA reader board export feature. The file can be hosted on the server running Reserva Connection Manager or a remote server (accessible using FTP, HTTP or SFTP protocols). You specify the file location during configuration of OPERA Connections.

For more information regarding your OPERA calendar and reader board export feature, contact your OPERA administrator.

Licence

You require a licence for this feature. See Licensing Reserva Connection Manager for Licensed Features.

NFS Rendezvous Workspace Requirements

This section explains the requirements if you are configuring NFS Rendezvous Workspace Connections.

Requirements:

Reserva Connection Manager (version 3.7.0 or above must be installed on LAN where the Reserva panels are connected.

Rendezvous Workspace System (version 6.1 or above) with access to the main application and details of the workspace API.

Licence

You require a licence for this feature. See Licensing Reserva Connection Manager for Licensed features.

Gingco Requirements

This section explains requirements for Gingco.net/Estate Connections.

Configuration

To configure Gingco.net/Estate Connections you require the following:

- Access to the Gingco system
- A client/user password for accessing the API
- A real/user password for the user that RCM will do the bookings under

2.3 Common Deployment Scenarios

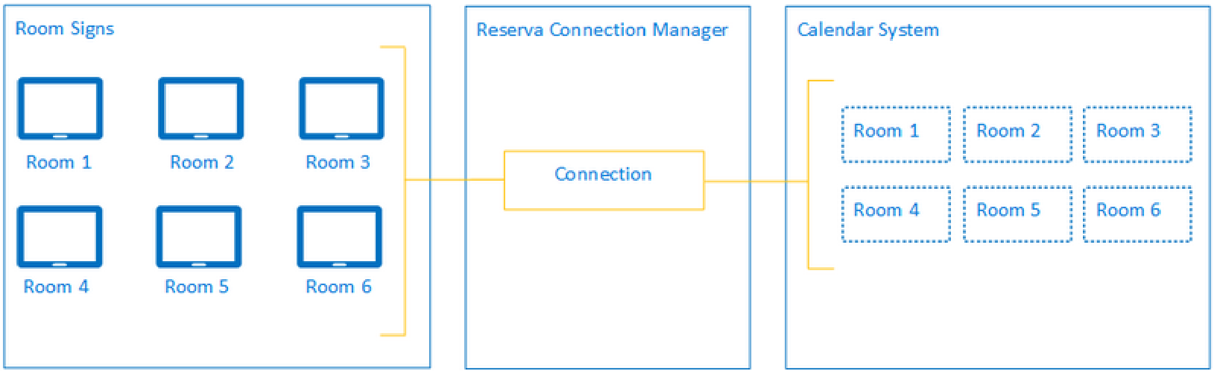
There are various factors that determine the requirements and design for each deployment. For example, for smaller and simple deployments, one Reserva Connection Manager and one Connection is sufficient. For larger and more complex deployments, you may require more than one Reserva Connection Manager, multiple Connections and different room sign configurations.

These example deployment scenarios provide more information and guidance:

- Example Deployment A: Single Connection - comprising one Reserva Connection Manager and one Connection.
- Example Deployment B: Multiple Connections - comprising one Reserva Connection Manager with multiple Connections.
- Example Deployment C: Multiple Connections and Room Sign Configurations - comprising one Reserva Connection Manager with multiple Connections and both room signs and room summary displays.

Example Deployment A: Single Connection

This example is a simple deployment comprising a single Reserva Connection Manager and Connection, serving 6 room signs. All room sign provide the same options (in this case, interactive features allowing users to book and manage appointments). All room signs are located on one site and share the same calendar system).



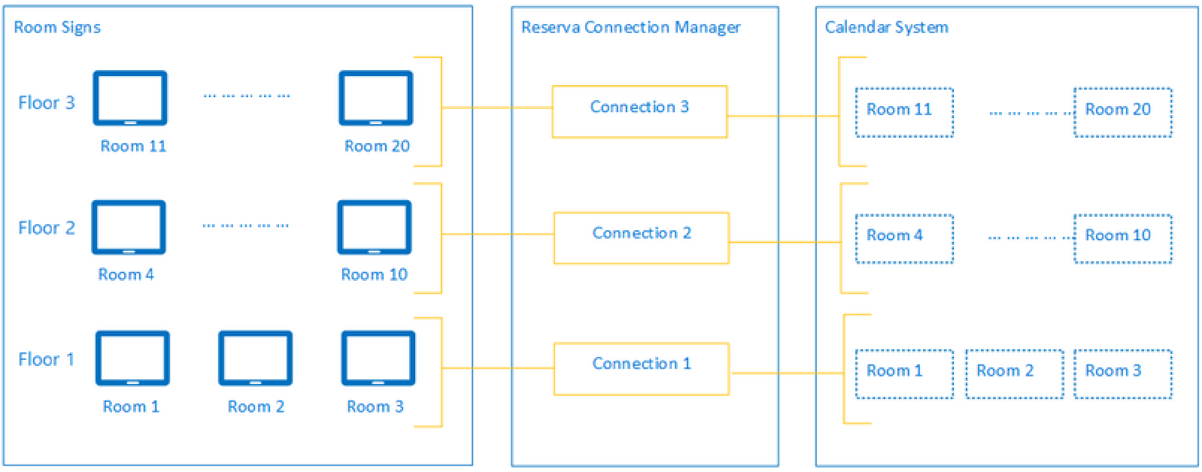
Simple Deployment Scenario

In this deployment:

- One Reserva Connection Manager is deployed and one Connection configured to serve all room signs.
- Each room sign is configured for a specific calendar room (for example, Room 2 is configured to Room 2 in the calendar system).
- All room signs share the same Connection and therefore have the same features enabled (for example, the ability to book appointments and extend and shorten meetings, as configured in the Connection settings).
- All room signs are located on the same site and linked to the same calendar system (in this example, a Shared Google Calendar, allowing Reserva read and write access).

Example Deployment B: Multiple Connections

This example comprises one Reserva Connection Manager with multiple Connections, and one calendar system. A Connection is provided for each floor.



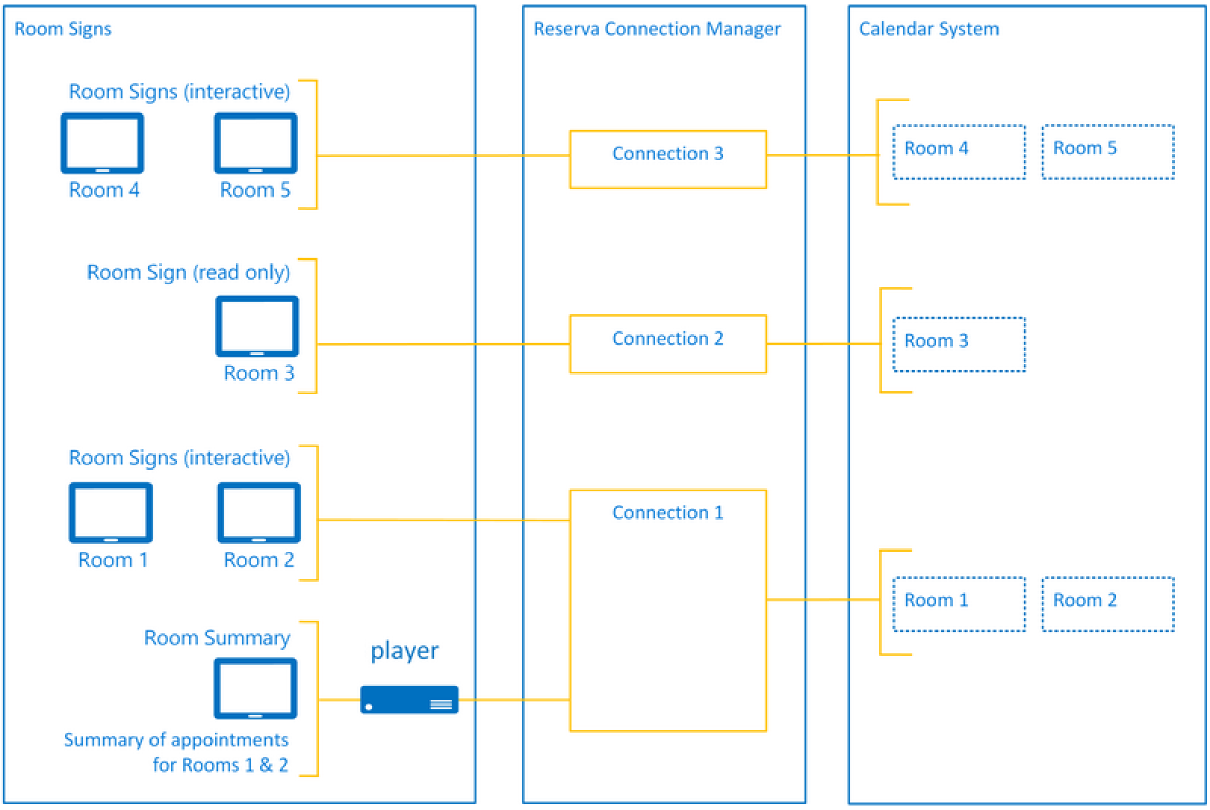
Medium Deployment Scenario

In this deployment:

- One Reserva Connection Manager is deployed with three Connections.
- Each Connection supports a number of room signs, all located on the same floor.
- Each room sign is configured for a specific calendar room (for example, Room 4 is configured for Room 4 in the calendar system).
- All room signs have the same interactive features enabled (for example, the ability to book appointments and extend and shorten meetings as configured in the Connection settings).
- All room signs are located on the same site and linked to the same calendar system.

Example Deployment C: Multiple Connections with Room Signs and Room Summary Displays

This example shows a complex deployment comprising one Reserva Connection Manager with multiple Connections and one calendar system. It includes room signs and a room summary display.



Complex Deployment Scenario

In this deployment:

- One Reserva Connection Manager is deployed with three Connections.
- Various Connections are required to support the different room sign configurations:
    - A room summary display shows a summary for Room 1 and Room 2. This is configured for Connection 1. In this example, the room summary display is located in the reception area and shows the appointments scheduled for two training rooms. As shown, an NTB is required. The NTB runs the room summary media.
    - Room 1 and Room 2 each have a room sign, configured for Connection 1. In this example, the room signs are configured to allow booking and management appointments for Room 1 and Room 2 respectively.
    - For Room 3, the room sign shows room availability and upcoming appointments. This is configured for Connection 2. No interactive features such as booking an appointment, are enabled on this Connection.
    - Room 4 and Room 5, each have a room sign, configured for Connection 3. In this example, the room signs are configured to allow booking and management appointments for Room 4 and Room 5 respectively.
- All rooms signs and the room summary display are located in the same office and are linked to the same calendar system.

Part III

Installing Reserva

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3 Installing Reserva

To install Reserva Connection Manager

1. Download the Reserva Connection Manager V3.14.2 installation zip file from: `https://reservaroomsigns.com/support/`
2. The zip files include this guide and the Setup application. Start the Setup application: `ONELAN_Reserva_Setup_V3.14.2-213201.release.exe`
3. Follow the onscreen instructions to complete the installation.

After installing Reserva Connection Manager, continue to the Configuring section to complete your deployment. See Configuring Reserva.

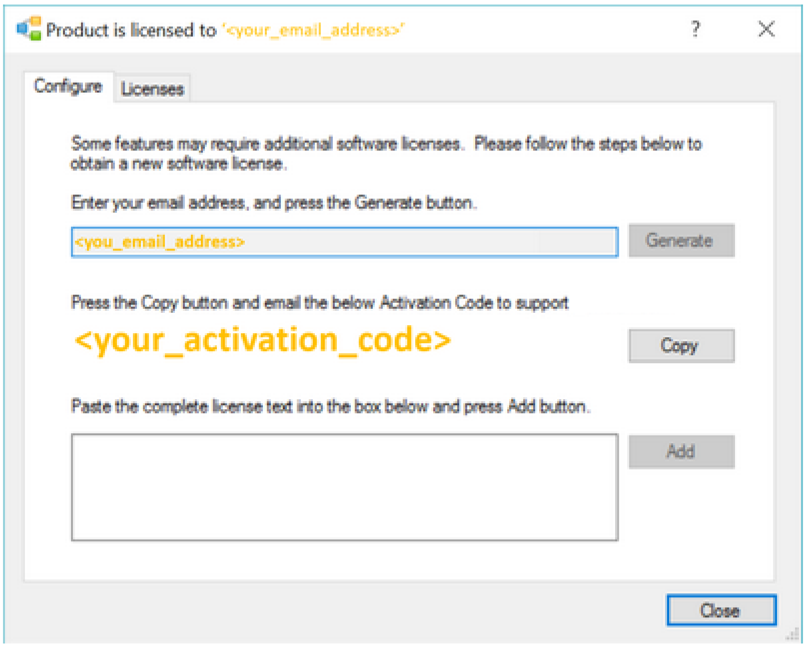
3.1 Licensing Reserva Connection Manager for Licensed Features

If your deployment includes certain features or particular calendar systems including: Oracle OPERA Sales and Catering calendar system, CELCAT, NFS Rendezvous Workspace, NFC authorisation or Scientia, you must obtain and add the appropriate licence to Reserva Connection Manager.

The procedure is detailed below:

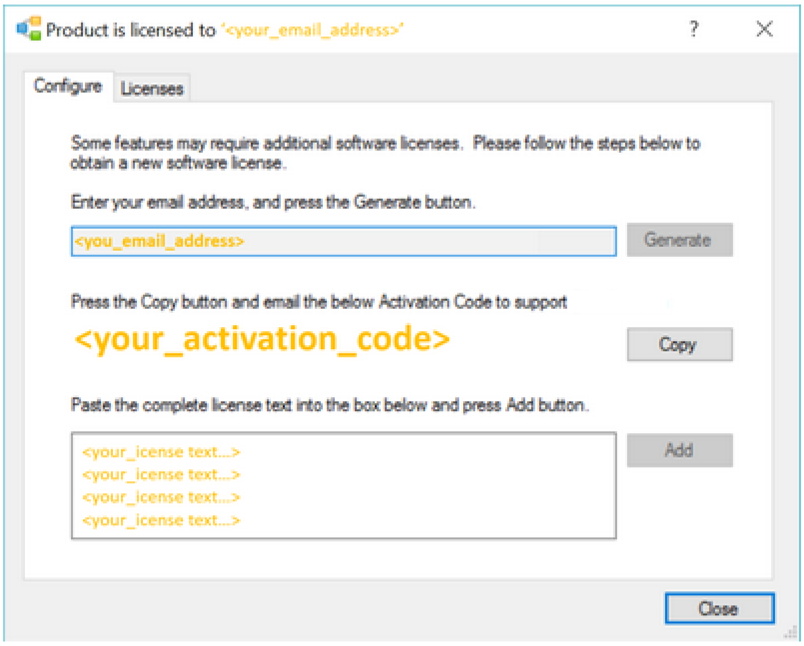
To licence Reserva Connection Manager

1. Open Reserva Connection Manager and select **Manage** > **Licensing**. The Licensing dialog appears.
2. Enter your email address and click **Generate**. Your activation code will appear.



3. Copy the activation code. Send an email confirming the activation code and requesting the desired licence feature to sales@onelan.com.
4. On receipt of the licensing text from sales@onelan.com, copy the text and paste into the licence

text box. Click **Add**.



This completes the licensing of Reserva Connection Manager to support licensed features,

If your deployment includes room summary displays, you require a licence for your NTB. A licence may be pre-installed. To check and, if necessary, add a licence, see Licence NTB for Room Summary Media.

Part IV

Configuring Reserva

4 Configuring Reserva

Following installation of Reserva Connection Manager, you must complete the following tasks:

- Configure the Web Service if the defaults are not sufficient.
- Create one or more Connections and configure Calendar Connection Settings.
- Configure Room Signs
- Configure Room Summary Displays if your deployment includes room summary displays.

4.1 Configure Reserva Web Service

There are two different web services available for use with Reserva: **Room Sign Web Service** (for use by Reservaroom signs) and **Web Service (including Room Usage Analytics)** (for the use of Room Analytics).

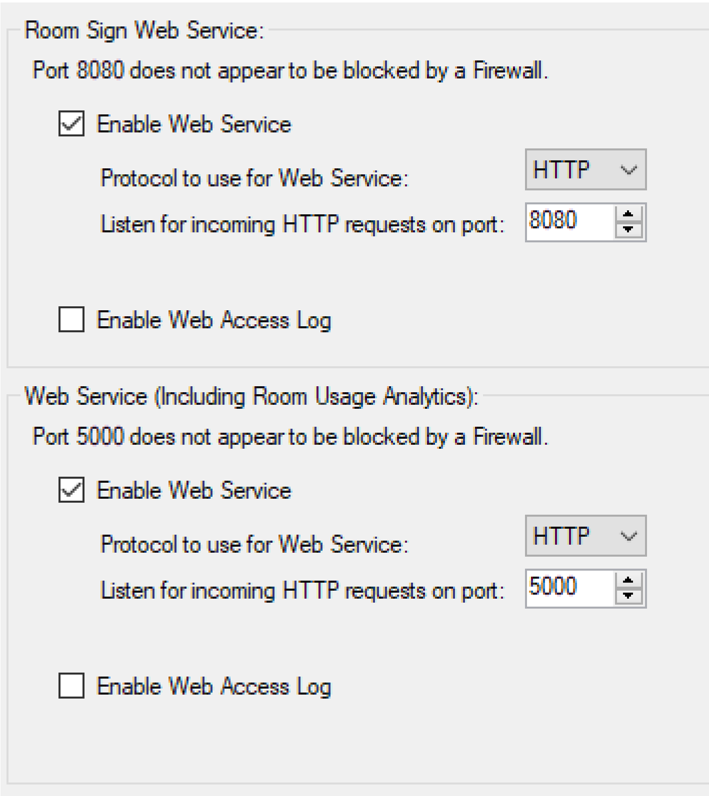
Note: For most deployments, the default Web Service port (HTTP 8080) is appropriate and it is not necessary to configure the Web Service. However, if necessary, you can change the Web Service port number as detailed below.

Reserva outside room media and room summary media are configured to connect to the relevant Reserva Connection Manager Web Service to obtain configuration settings and meeting room information.

The default settings for the Web Service:

- **Web Server Address:** Name and IP address of the server running Reserva Connection Manager.
- **Protocol:** either HTTP or HTTPS, select the required protocol from the drop down menu.
- **Port:** 8080 (HTTP) or 8443 (HTTPS). These are the default port numbers. You can change the port as required.

For example:



Web Server Configuration

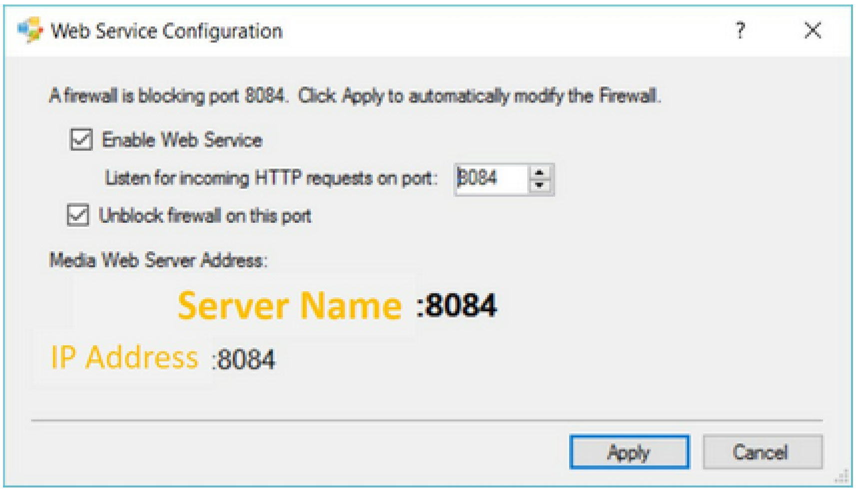
If you need to change the port number, follow the procedure below:

Modify Web Service Port Number

To change the Web Service port number

1. From the Reserva Connection Manager Manage menu, select **Web Service**. The Web Service Configuration dialog appears.
2. Enter the required port number and click **Apply**.

   Note: If the web Service detects the port selected is blocked by your firewall, you are prompted to unblock the port.



Web Server - Change Port

   If prompted to unblock the port, ensure Unblock firewall on this port is select and click Apply. The Web Service attempts to modify the firewall to allow Reserva Connections on the specified port.

3. You are prompted to confirm the port number change. Click **Yes** to save and apply the change.

Configuring HTTPS for RCM Connections

Configuring HTTPS is a global connection setting for Reserva and does not need to be configured individually per active Connection. HTTPS options are set by navigating to **Manage** > **Web Service**.

1. When HTTPS is selected, the port will change to 8443 by default for the **Room Sign Web Service** and 5001 for **Web Service (Including Room Usage Analytics)**. The option to unblock the firewall for these ports may then appear if they are not already unblocked.
2. The port can be changed to any other available port in the same way as for HTTP.

Next you will need to create an SSL certificate

There are two different options for creating an SSL certificate

Option 1: From a certificate issuing authority

This will depend on your IT processes, contact your administrator for more information. A certificate needs to be acquired for the Fully Qualified Domain Name (FQDN) of the RCM server. It must be the same address that is going to be used by Reserva media to connect to RCM. This should cover the public FQDN as well as the server's name.

Once received, the certificate will need to be installed into the Local Machine certificate store on the RCM server. Consult Windows documentation and help guides from the certificate issuing authority for more information.

Once installed, you will need to make a note of the certificate Thumbprint value. This is found in the certificate properties on the **Details** tab in the Thumbprint field.

Option 2: Self signed certificate

This should not be used for public facing servers

For environments on a private network, it is possible to create a self-signed SSL certificate.

Note: Self-signed certificates are generally discouraged and future OS and browser updates may prevent self-signed certificates from working.

1. Open a PowerShell prompt as Administrator: right click on PowerShell link and click **Run as Administrator.**
2. Issue the following command: `New-SelfSignedCertificate -DnsName "[SERVER_DNS_NAME]" -CertStoreLocation Cert:\LocalMachine\My`

Replace [`SERVER_DNS_NAME`] with the appropriate RCM server name e.g. rcm-serever.yourdomain.somewhere. This will create a certificate and put it in the local store. A thumbprint will be outputted for the certificate. Make a note of this value.

Once you have an SSL certificate, you will need to bind it to the Reserva Connection Manager and HTTPS port. You can use the same SSL certificate for both the **Room Sign Web Service** and **Web Service (Including Usage Analytics)**, but it is important to note that the appid will be a different value for each web service.

1. In the PowerShell prompt enter:
   a. For **Room Sign Web Service**: `netsh http add sslcert ipport=0.0.0.0:8443 certhash=[THUMBPRINT] appid=`{F551CBF6-7800-4E57-BEE3-EC5CFAFABC2C`}`

      Replace [THUMBPRINT] with the thumbprint from the certificate creation.

      Note: If you have obtained the thumbprint from the certificate properties window, the thumbprint must be entered with no spaces.

      The appid of `F551CBF6-7800-4E57-BEE3-EC5CFAFABC2C` is specific to RCM and should not be changed.

   b. For **Web Service (Including Web Analytics)**: `netsh http add sslcert ipport=0.0.0.0:5001 certhash=[THUMBPRINT] appid=`{8a68d8de-e8db-4a15-85ba-0c81e2aa9f30`}`

      Replace [THUMBPRINT] with the thumbprint from the certificate creation.

      Note: If you have obtained the thumbprint from the certificate properties window, the thumbprint must be entered with no spaces.

      The appid of `8a68d8de-e8db-4a15-85ba-0c81e2aa9f30` is specific to RCM and should not be changed. The ipport should match the configured port for **Web Service (Including Room Usage Analytics)**.

   For self signed certificates, you may need to specify the MY certificate store too:

   ```
   netsh http add sslcert ipport=0.0.0.0:8443 certhash=
   [THUMBPRINT] appid=`{F551CBF6-7800-4E57-BEE3-EC5CFAFABC2C`}
   certstorename=MY
   ```
2. After this, the Reserva service may need to be restarted.

Note: If the port number is changed in RCM, the certificate will then need to be bound to the new port.

4.2 Create and Configure a Connection

The Reserva outside room media and room summary media are configured to retrieve information for a specific Connection. The Connection specifies the room information to present, how often the information is updated and the options available to the end users.

Reserva Connection Manager is capable of running one Connection or multiple Connections simultaneously. Each Connection can be configured and customised as required. A Connection can be linked to several rooms/resources. However, it is recommended that no more than 50 rooms are added to a Connection.

For simple deployments, one Reserva Connection Manager may be sufficient. For more complex deployments and scenarios, or for ease of administration and organisation, multiple Reserva Connection Managers and Connections are required. For more guidance and examples, see Planning.

Note: When configuring a Connection for the room summary media (where the display shows appointments for a number of rooms), all rooms added to the Connection are shown on the summary display. Room summary media shows the appointments for all rooms added to the Connection.

Create New Connection

To create a new connection

1. Open Reserva Connection Manager and click the **Create New** button.

Create New Connection

2. Configuration of Connections differs depending on your calendar system. See the following topics:

   - Configure CELCAT Connection
   - Configure Microsoft Exchange® Connection
   - Configure Google Calendar Connection
   - Configure G Suite Connection
   - Configure Scientia Connection
   - Configure Oracle Opera Connection
   - Configure NFS Connection
   - Configure Gingco Connection

CELCAT

CELCAT is a read-only Exchange Connector and requires a licence to enable. The CELCAT connector tab will only appear with the licence key enabled.

CELCAT integration allows the system to display room events from Exchange room mailbox calendars. As a read-only Exchange Connector, CELCAT can only display meetings and changes via the platform it uses for a calendar (e.g. Outlook) but it cannot be used to book and/or modify meetings.

Note: With CELCAT, it is not possible to enable interactive features due to read-only functionality.

To configure and add rooms to a CELCAT Connection, see Microsoft Exchange and Office 365.

Microsoft Exchange and Office 365

This section explains how to configure Microsoft Exchange and Office 365 Connections.

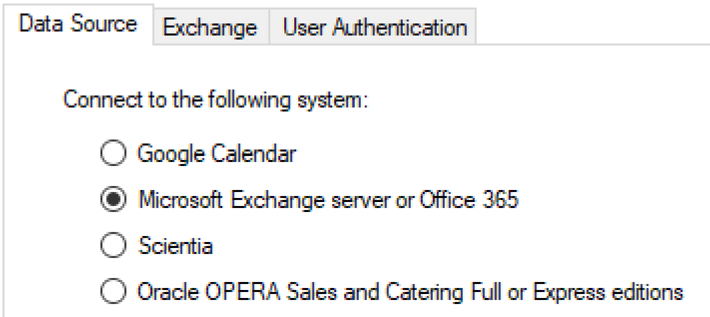
For more information regarding the requirements, see Microsoft Exchange® and Office 365 Requirements.

For additional configuration options, please refer to Appendix A: Optimising Exchange®.

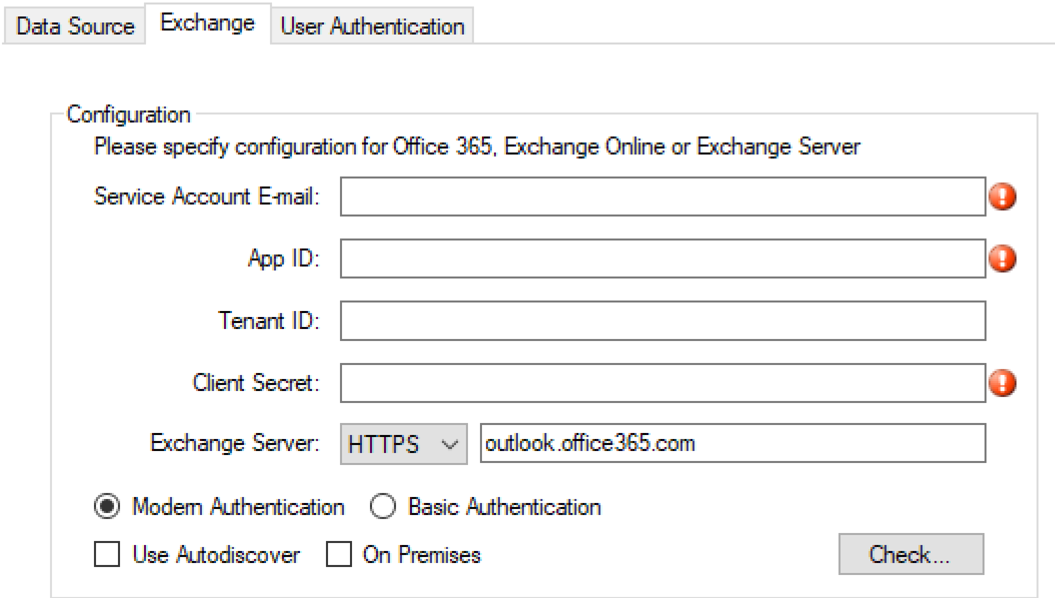
Configure Microsoft Exchange or Office 365 Connection

To configure a Connection for Microsoft Exchange or Office 365

1. From the Connection **Data Source** tab, select **Microsoft Exchange or Office 365**.



2. Select the **Exchange** tab. You can configure a connection to an Office 365, Exchange Online or an Exchange Server. Select either **Modern Authentication** or **Basic Authentication**.



Note: Exchange Online/Office 365 support for basic authentication is being discontinued from Microsoft from October 2020. It is recommended that you use **Modern Authentication**.

For Modern Authentication: To configure **Modern Authentication**, you will need client credentials by registering Reserva as an application with **Application Permissions** in **Azure AD**. The credentials you will need to make a note of are the **Applicant (client) ID**, **Directory (tenant) ID** and the **Client Secret**. For full instructions, see **Registering Reserva as an application with Azure AD** in Optimising Exchange.

1. Enter an email to use as the **Service Account Email**.
2. Enter the **Application (client) ID** under **App ID**.
3. Enter the **Directory (tenant) ID** under **Tenant ID**.

   Note: This may be left empty if you are using multiple tenants.

4. Enter the **Client Secret** under **Client Secret**.
5. For an account that is hosted in Office 365, the default server is **outlook.office365.com** for **Exchange Server**. For accounts that are not hosted in Office365 or are known to be on a different server, then enter the server host name. The server should be the one that hosts the **Exchange Web Service** endpoint. The server protocol is normally **HTTPS** but the drop-down menu allows the selection of **HTTP** if necessary.

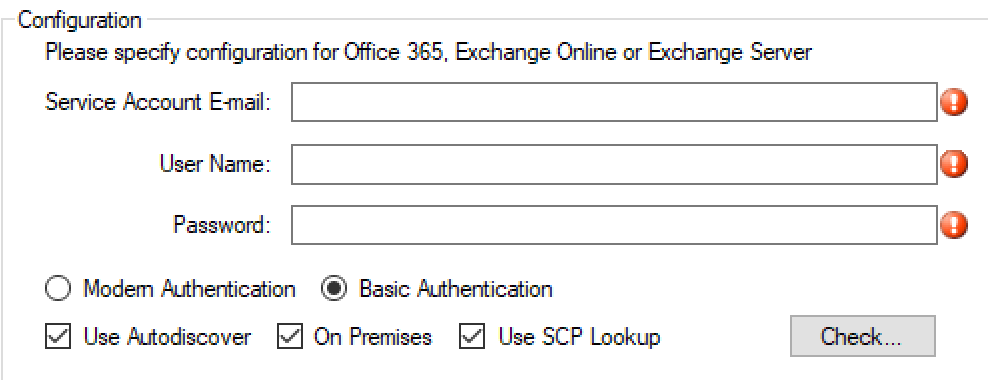
6. Alternatively, **Use Autodiscover** can be selected. This will use the email address provided to discover the endpoint server on the **Exchange Web Service**. For this option, the email address domain will need to have the correct **Autodiscover** DNS settings configured.
7. Click **Check** to test the Connection and confirm the settings are valid.

   Note: The **On Premises** option will not normally be required, but might be of use to hybrid environments. When **Use Autodiscover** and **On Premises** are selected, an additional option for **Use SCP Lookup** is provided and, when it is available, is enabled by default. This uses on-premises **Active Directory Autodiscover SCP** objects to locate the **Exchange Web Service** endpoint.

For Basic Authentication:

1. Enter the email of your **Service Account Email** and **Password**.
2. For an account that is hosted in Office 365, the default server is **outlook.office365.com** for **Exchange Server**. For accounts that are not hosted in Office 365 or are known to be on a different server, then enter the server host name. The server should be the one that hosts the **Exchange Web Service** endpoint. The server protocol is normally **HTTPS** but the drop-down menu allows the selection of **HTTP** if necessary.
3. Alternatively, **Use Autodiscover** can be selected. This will use the email address provided to discover the endpoint server on the **Exchange Web Service**. For this option, the email address/domain will need to have the correct **Autodiscover DNS** settings configured.
4. If your Exchange is hosted on-premises, then select **On Premises**. If the server is known, specify this and if there is a username that is different from the email address or you only have a username, then fill this in under **User Name**. This must be in the format **DOMAIN\user**.
5. If the server is not known, select **Use Autodiscover** to attempt to discover the Exchange server.

   Note: When both **Use Autodiscover** and **On Premises** are selected, a further option **Use SCP Lookup** will be available. When this option is available, it is enabled by default and uses on-premises **Active Directory Autodiscover** objects to help locate the Exchange server. This option can be deselected if it causes slow-down of your system.



6. Click **Check** to test the Connection and confirm the settings are valid.

Please contact your network administrator if you are unsure of the details.

The next step is to [add room(s)](#).

Add Room(s) to a Microsoft Exchange or Office 365 Connection

You specify the rooms for each Connection. Reserva Connection Manager will retrieve events for the room(s) added to the Connection.

To add rooms to your Connection

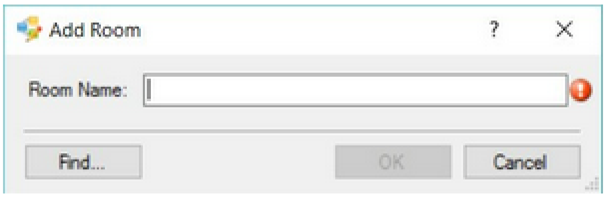
1. To add rooms to the Connection, click **Add**.

   The Add Room dialog appears.

2. To view the available rooms, click **Find**. Alternatively, enter the name of the required **Room Name**.

   Multiple rooms can be entered and separated by a semicolon.

   Note: You can use the **Find** option provided that you are on the same domain as the Exchange server. If you are on a different domain, the **Find** option is not available.



3. Select the required room(s). To select multiple rooms, hold the Ctrl or Shift key and select the required rooms. Once you have selected the rooms, click **OK**.
4. Click **OK** to add the selected room(s) to the Connection.
5. The rooms are shown in the Room Names list.

   You can amend the list using **Add** and **Remove**.

Note: If your Exchange Connection has an existing room list associated with it, Reserva Connection Manager will not automatically query AD. It will still fetch room lists.

Exchange Push Notification

Without push notification enabled, Reserva will periodically poll the Exchange server for local changes and update the system when changes are found. Turning this feature on, allows the Exchange server to automatically push out any changes when they are made to the connected Reserva Connection Manager.

To enable Push Notification

Push notification is the default option.

On the **Advanced Settings** tab, ensure that the **Use Legacy Exchange Polling** radio button is de-selected. Re-selecting this will return the polling settings legacy exchange.

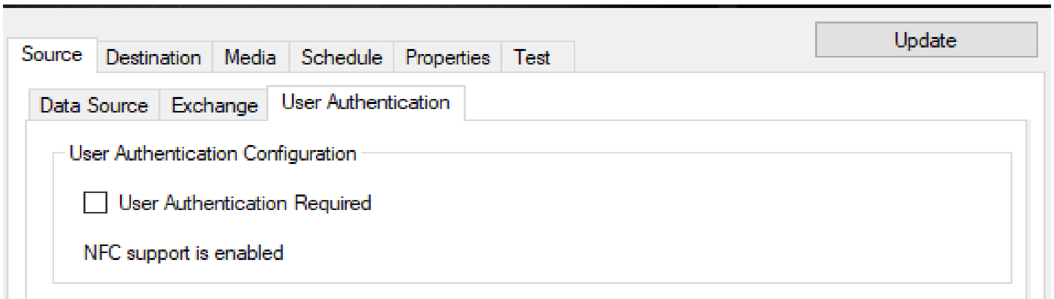
Note: Turning on push notification demands an open connection per room mailbox. This will consume budget on the service account and potentially cause it to run out with a large number of room mailboxes configured resulting in denial of service. Impersonation is therefore recommended as this allows the budget to be consumed for each individual room mailbox.

The option to enable Impersonation on room mailboxes can be found on the Advanced Settings tab of the Exchange connector. The default setting is for this to not be selected as it requires the

Exchange administrator to add the impersonation role to the service account used to log into Exchange.

User Authorisation

On your Exchange Connection, click the **User Authentication** tab.



Selecting **User Authentication Required** will enable authorisation. The Reserva tablet will require the user's username and password from the active directory.

NFC is also supported as a licensed feature. Users will be prompted to link a scanned card to their active directory credentials. NFC tag IDs are stored against an account in the user database.

It is recommended that once user authorisation is set up and user cards have been registered the Reserva Connection Manager is backed up to ensure that should a failure occur, staff do not have to re-register their cards.

Google Calendar

This section explains how to configure Google Calendar Connections.

For guidance on features, choices and considerations, see Google Calendar Requirements.

Configure Google Connections

Google has two different products for use with Reserva Connection Manager: Google Calendar and G Suite. Google Calendar allows basic Calendar bookings and shared Calendar access.

G Suite offers features including Domain shared Resources, Domain wide delegation (including Impersonation) and Domain wide Calendar sharing.

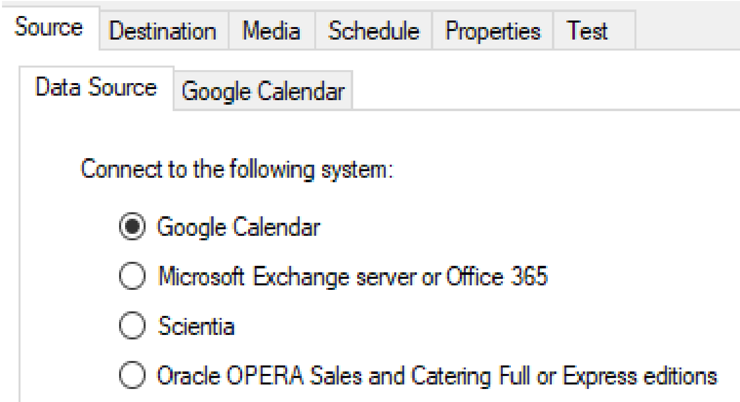
There are also two different methods for configuring a Google Calendar or G Suite Connection: **Sign in with Google** or **Authenticate using a Service Account**.

This section explains how to configure a Connection with these four different options:

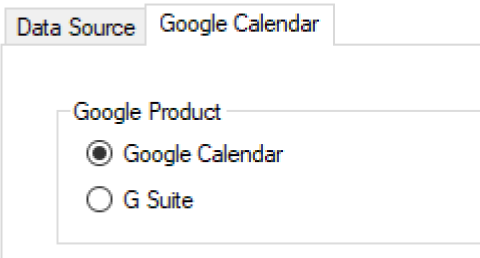
- Google Calendar Connection Sign in with Google
- Google Calendar Connection Authenticate with Service Account
- Google G Suite Connection Sign in with Google
- Google G Suite Connection Authenticate with Service Account

To configure a Connection for Google Calendar using Sign in With Google

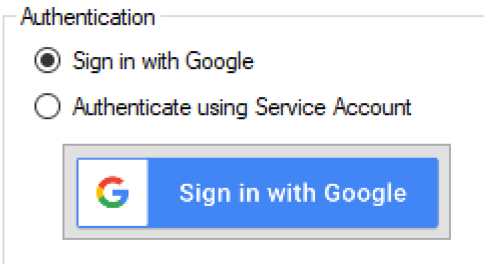
1. In RCM, click on **Connection** > **Create New** and on the **Data Source** tab, select **Google Calendar**.



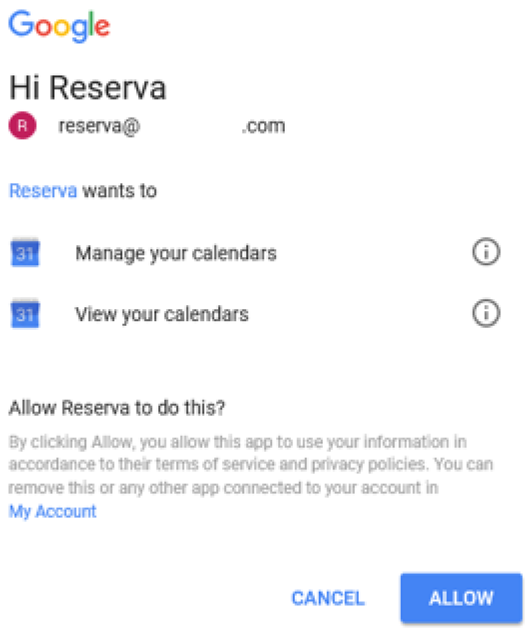
2. On the **Google Calendar tab**, select **Google Calendar**.



3. For authentication, select **Sign in with Google**.
4. Click the button below



5. A new browser window will open and you will be requested by Google to authenticate and grant Reserva permissions for your account.



6. Click **Allow**.
7. To add Calendars to your Connection, click the down arrow next **to** Add in the Calendars section.

8. You can add public or shared calendars:

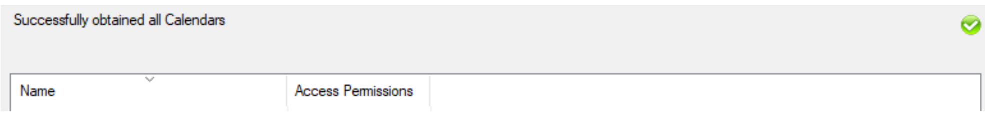
   Public: Google Calendars set to 'Public' are available to anyone, indexed and searchable on the internet. If you use a public calendar within your Reserva deployment, the calendar is read-only. Reserva is unable to edit the calendar and therefore features such as booking appointments are not available. To add a public calendar to your Connection, the Calendar ID is required.

   Shared: Google Calendars set to 'Shared' have the scope to be edited by Reserva with the correct permissions enabled. With these settings enabled, users can book and manage appointments.

   For more information, see Google Calendar Requirements.

   For **Public** Google Calendars:

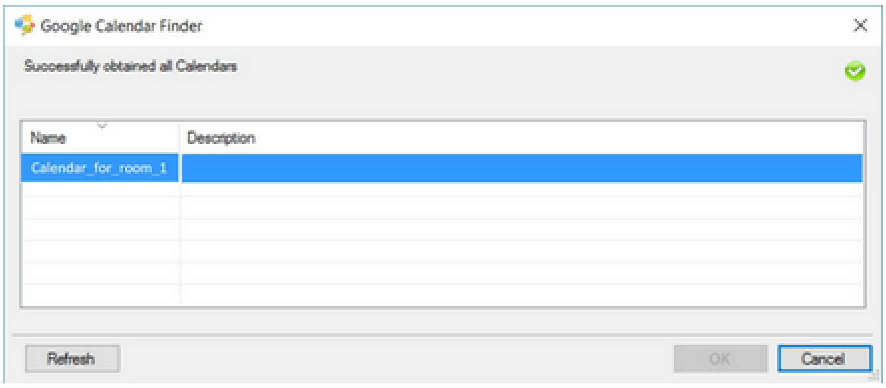
   1. Select **Add Public** from the drop down menu.
   2. RCM will obtain a list of your public calendars.

   3. Select the desired Calendars from the list.
   4. Click **OK**.

   For **Shared** Google Calendars

1. Select **Add Shared Calendars** from the drop down menu.
2. Select the Calendar you require and click **OK**.



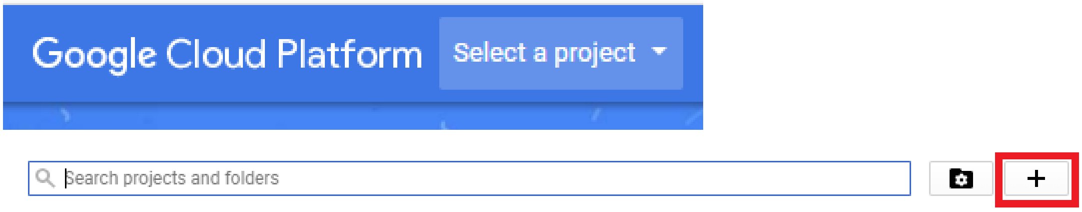
To Configure a Connection for Google Calendar using Authenticate with Service Account

Create a service account

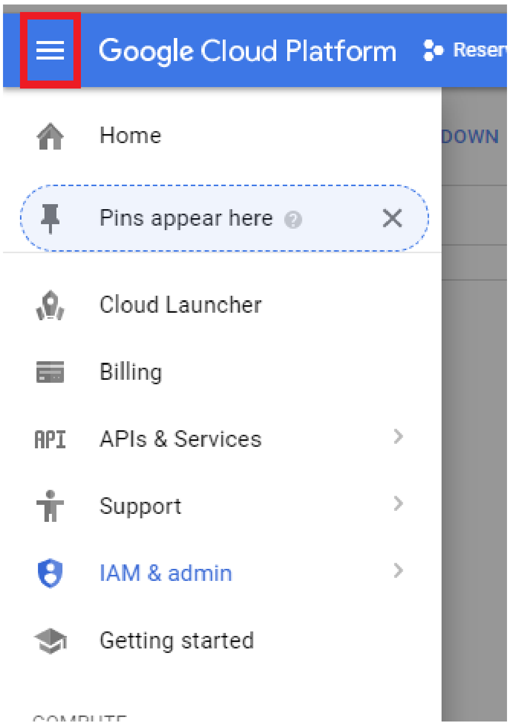
1. Start the Google Developer Console. If prompted, log on to your Google account:

   https://console.developers.google.com/start.

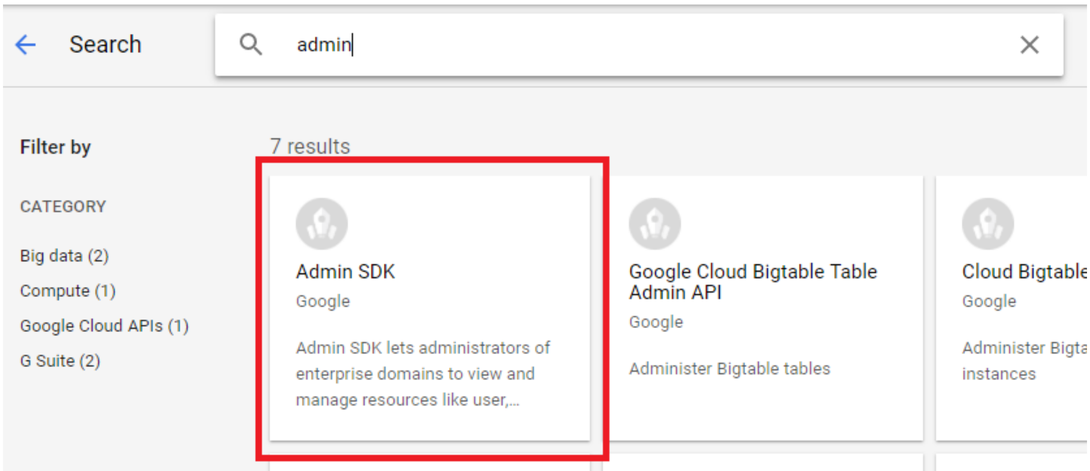
2. To create a new project, click on the drop down menu next to the **Google Cloud Platform** logo and then click on the **+** button on the top right of the pop up.



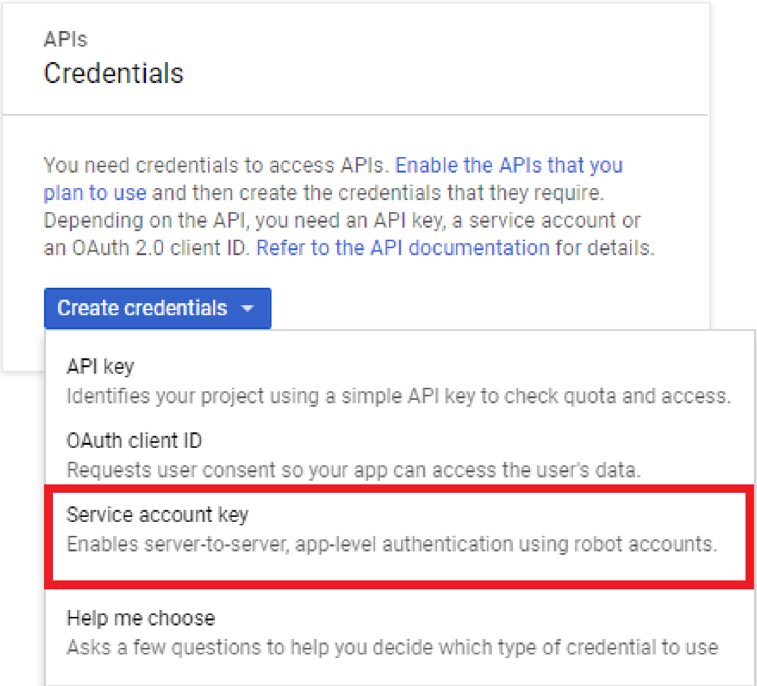
3. Give the project a name and click **Create**.
4. On your project, click on the **Product & Services** button on the top left corner.



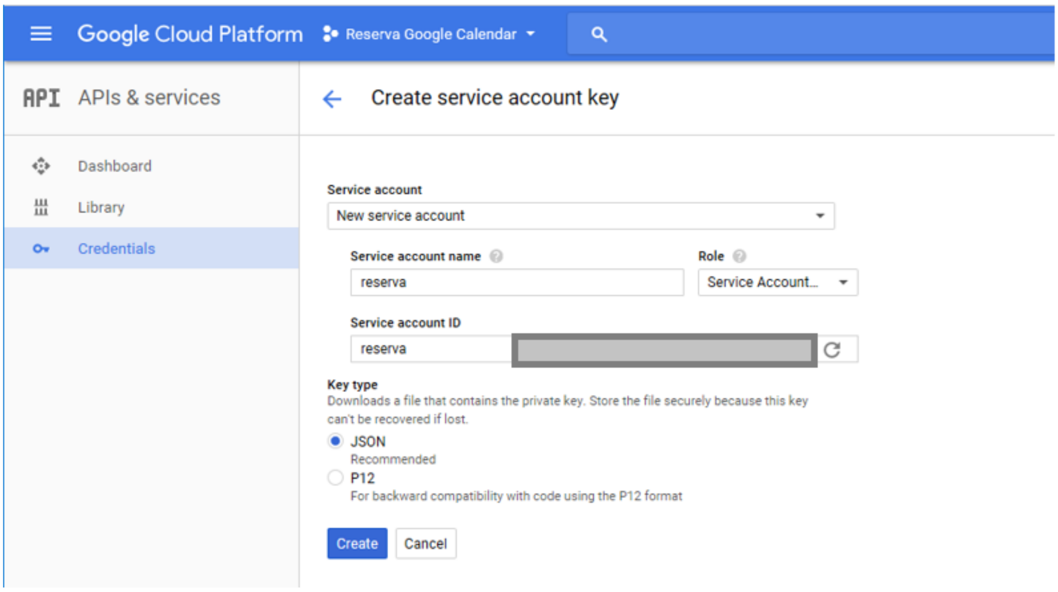
5. Click on **APIs & Services**.
6. Click on **Library**.
7. Select **Admin SDK** and click **Enable** (you can search for easier access) using the search bar at the top of the page).



8. Click on the top left arrow to return to the API library.
9. Repeat step 7 with **Google Calendar API**.
10. Click on the top left **Products and Services** > **API Services** > **Credentials**.
11. From the drop down **Create Credentials** menu, select **Service Account Key**.



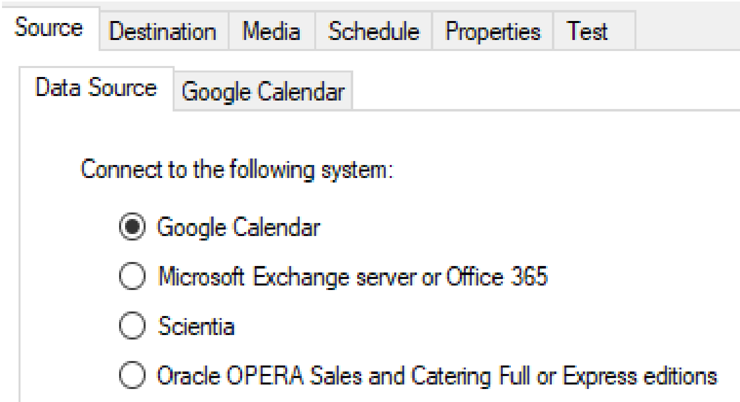
12. Create a service account by clicking on the drop down menu and selecting **New Service Account**.
13. Enter a name for the account.
14. Under credentials, create a service account key. For the role, select **Service Account User** from the drop down menu.



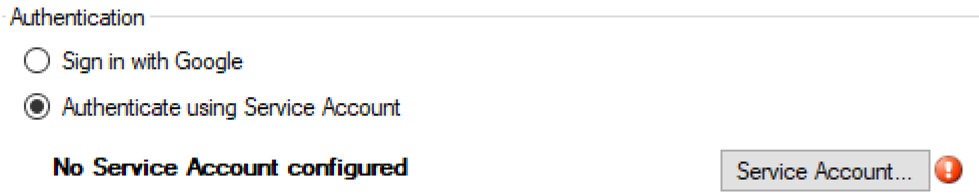
15. For the key type, ensure that JSON is selected.
16. Click **Create**.
17. A .json file will then be downloaded. Save this private key file and keep it secure. This will be needed for upload into the Reserva Connection Manager.

Configure Connection on RCM

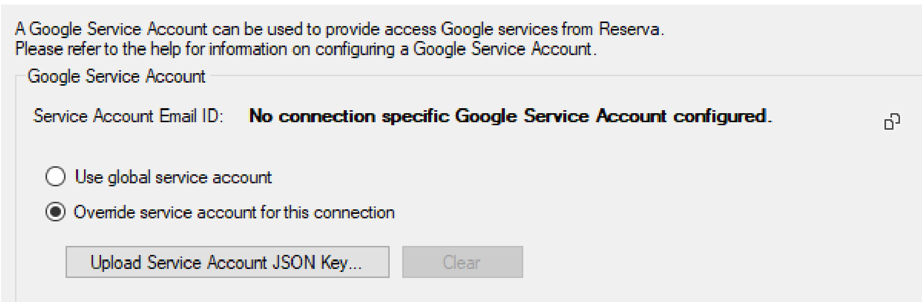
1. In RCM, click on **Connection** > **Create New** and select **Google Calendar**.



2. On the Google Calendar tab, select **Google Calendar**.
3. For authentication, select **Authenticate using a Service Account**.
4. Click **Service Account**.



5. You will now be prompted to configure your Service Account. If a Global Service Account is already configured then that will be selected by default. Select **Override service account for this connection**.



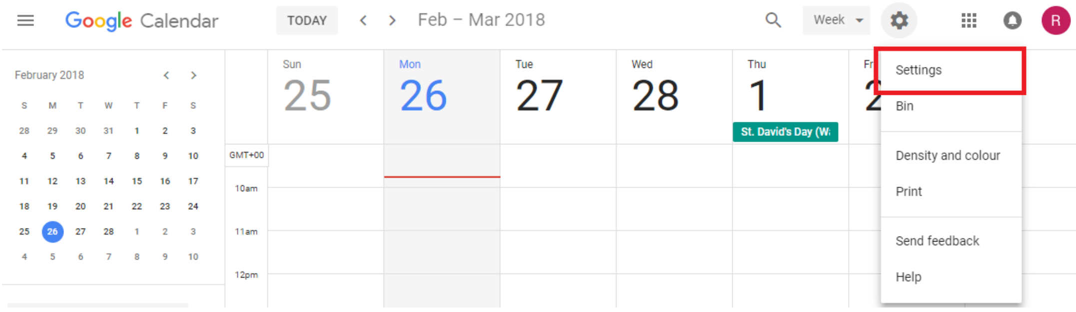
6. Click **Upload Service Account JSON Key...**. Once a file explorer window open, navigate to where your .json file is saved and select it.
7. Click **OK**.

Now that you have a Service Account associated with your RCM Google Calendar Connection, you need to share Google Calendars with your Google Service Account.

Share Google Calendar with Google Service Account

Make sure you still have the Google Service Account email address and .json file available.

1. Log on to the required Google account and open the Google calendar App. Click **Settings**.



2. From the left-hand side, select the Calendar you want to share.
3. From the drop down menu. select **Share with Specific People**.
4. On the right hand side, click **Add people**.

5. Under **Permission**, select the required permission
   - See only free/busy (hide details): will give restricted read-only access.
   - See all event details: will give read-only access.
   - Make changes to events: will give read/write access.
   - Make changes and manage sharing: will give read/write access and allow sharing managing.
6. Click **Send**.

Next you need to add these Calendars to your RCM Connection

Add Calendars to RCM Connection

1. On your RCM Google Calendar Connection. to add Calendars to your Connection, click the down arrow next to **Add** in the Calendars section.

2. You can add public or shared calendars:

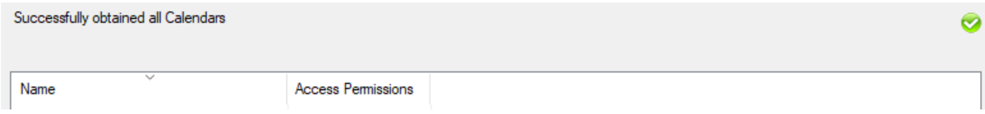
   Public: Google Calendars set to 'Public' are available to anyone, indexed and searchable on the internet. If you use a public calendar within your Reserva deployment, the calendar is read-only. Reserva is unable to edit the calendar and therefore features such as booking appointments are not available. To add a public calendar to your Connection, the Calendar ID is required.

Shared: Google Calendars set to 'Shared' have the scope to be edited by Reserva with the correct permissions enabled. With these settings enabled, users can book and manage appointments.

For more information, see Google Calendar Requirements.

For **Public** Google Calendars:

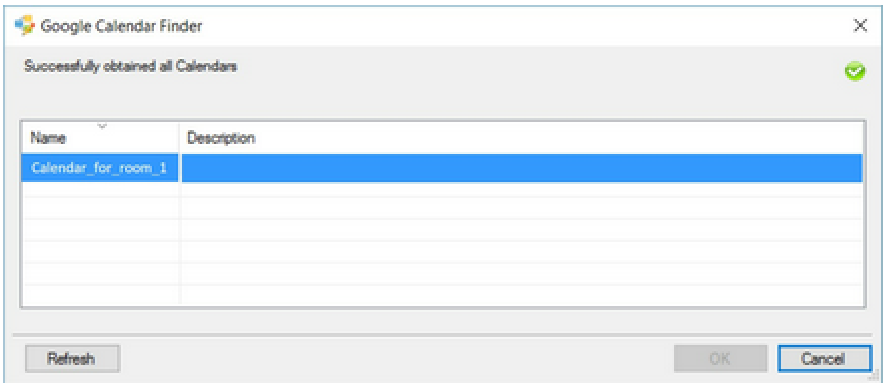
1. Select **Add Public** from the drop down menu.
2. RCM will obtain a list of the public calendars shared with the Service Account.



3. Select the desired Calendars from the list.
4. Click **OK**.

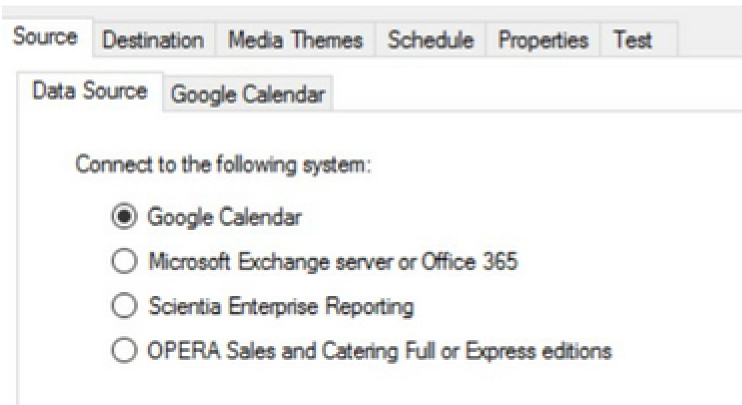
For **Shared** Google Calendars

1. Select **Add Shared Calendars** from the drop down menu.
2. Google Calendars shared with the Google Service Account appear in the Google Calendar list. Select the Calendar you require and click **OK**.

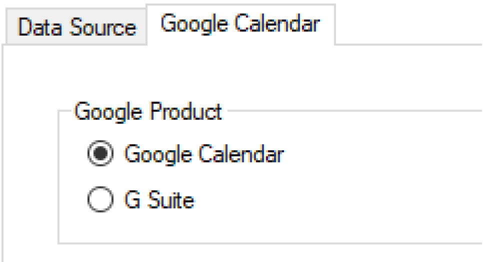


To configure a Connection for G Suite using Sign in With Google

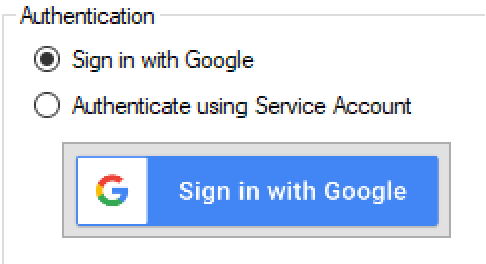
1. In RCM, click on **Connection** > **Create New** and on the **Data Source** tab, select **Google Calendar**.



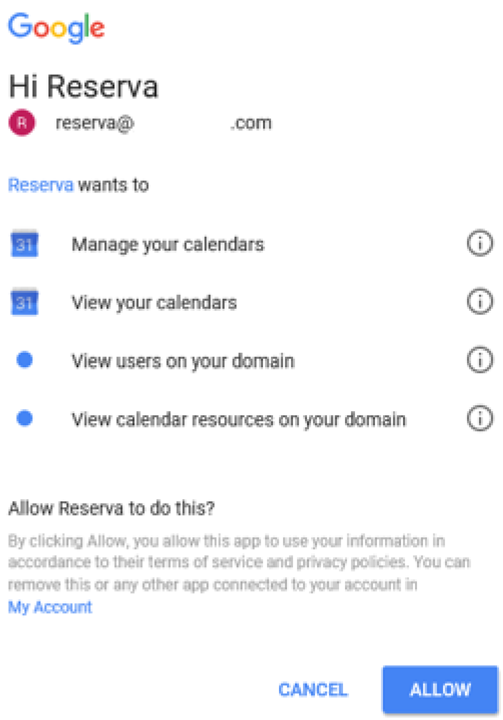
2. On the **Google Calendar** tab, select **G Suite**.



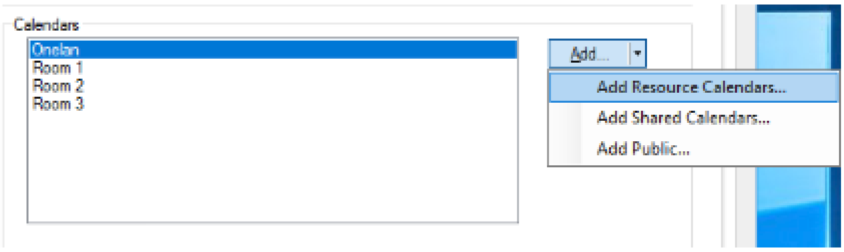
3. For Authentication, select, **Sign in with Google**.
4. Click on the button below.



5. A new browser window will open and you will be requested by Google to authenticate and grant Reserva permissions for your account.



6. G Suite requires additional permissions to be able to list Calendar Resources using Room Finder.
7. Click **Allow.**
8. To add Calendars to your Connection, click the down arrow next to **Add** in the Calendars section.



9. You can add resource, public or shared calendars:

Resource: When using Resource Calendars in G Suite, the configured Google account, by default, will be able to make and modify its own bookings in the Resource Calendar when booked by your Reserva. You may need to grant modify permissions to the Calendar to be able to modify events booked by other users. This can be done by sharing the Resource Calendar.

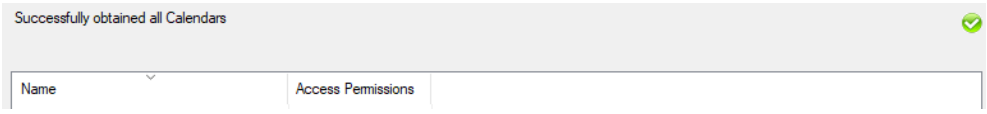
Public: Google Calendars set to 'Public' are available to anyone, indexed and searchable on the internet. If you use a public calendar within your Reserva deployment, the calendar is read-only. Reserva is unable to edit the calendar and therefore features such as booking appointments are not available. To add a public calendar to your Connection, the Calendar ID is required.

Shared: Google Calendars set to 'Shared' have the scope to be edited by Reserva with the correct permissions enabled. With these settings enabled, users can book and manage appointments.

For more information, see Google Calendar Requirements.

For **Public** Google Calendars:

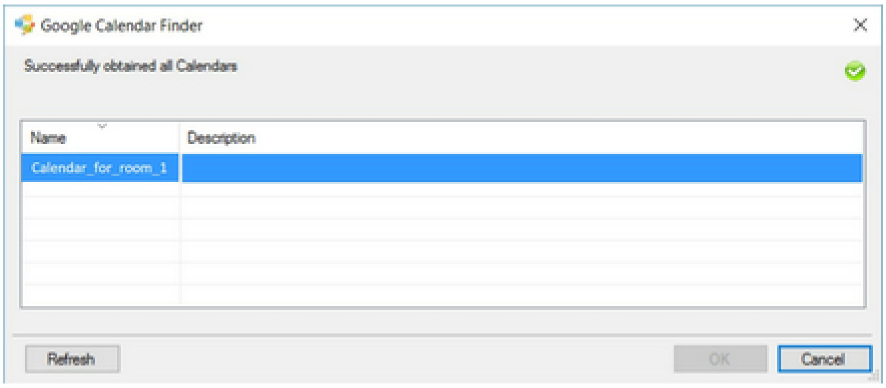
1. Select **Add Public** from the drop down menu.
2. RCM will obtain a list of your public calendars.



3. Select the desired Calendars from the list.
4. Click **OK**.

For **Shared** Google Calendars

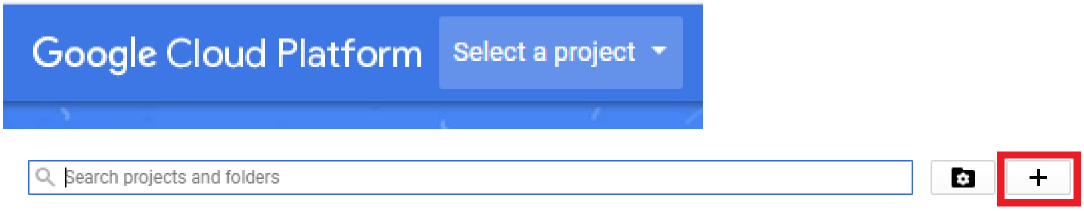
1. Select **Add Shared Calendars** from the drop down menu.
2. Shared Google Calendars appear in the Google Calendar list. Select the Calendar you require and click **OK**.



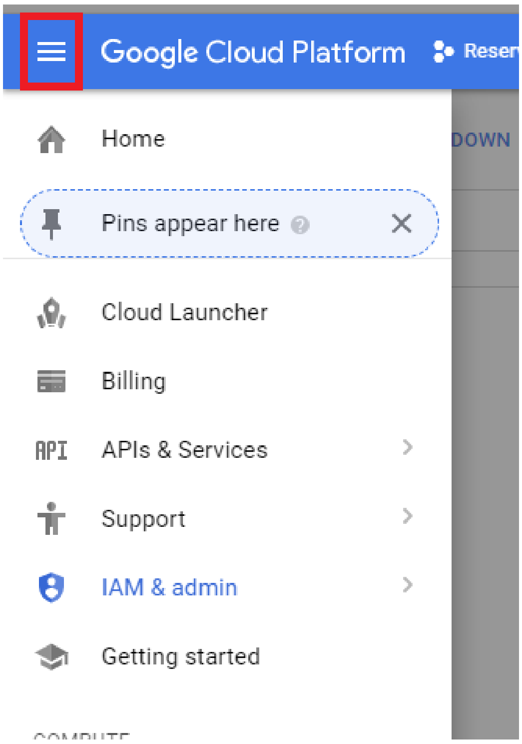
To Configure a Connection for G Suite using Authenticate using Service Account

Create a Google Service Account

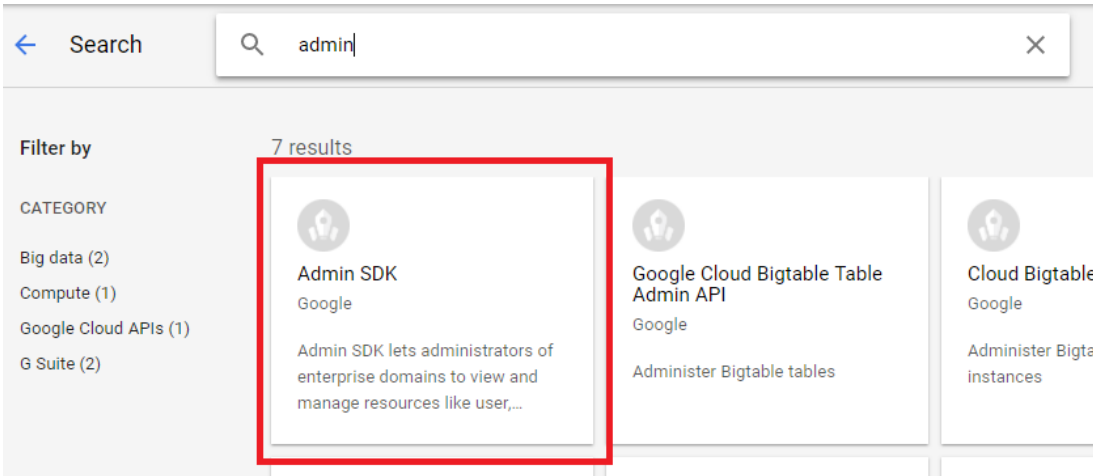
1. Start the Google Developer Console. If prompted, log on to your Google account:
   https://console.developers.google.com/start.
2. To create a new project, click on the drop down menu next to the **Google Cloud Platform** logo and then click on the **+** button on the top right of the pop up.



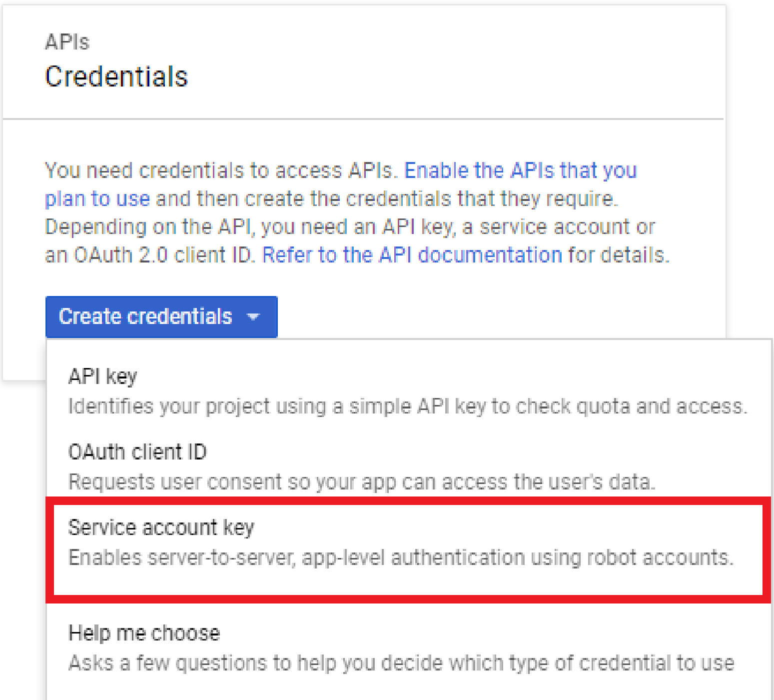
3. Give the project a name and click **Create**.
4. On your project, click on the **Product & Services** button on the top left corner.



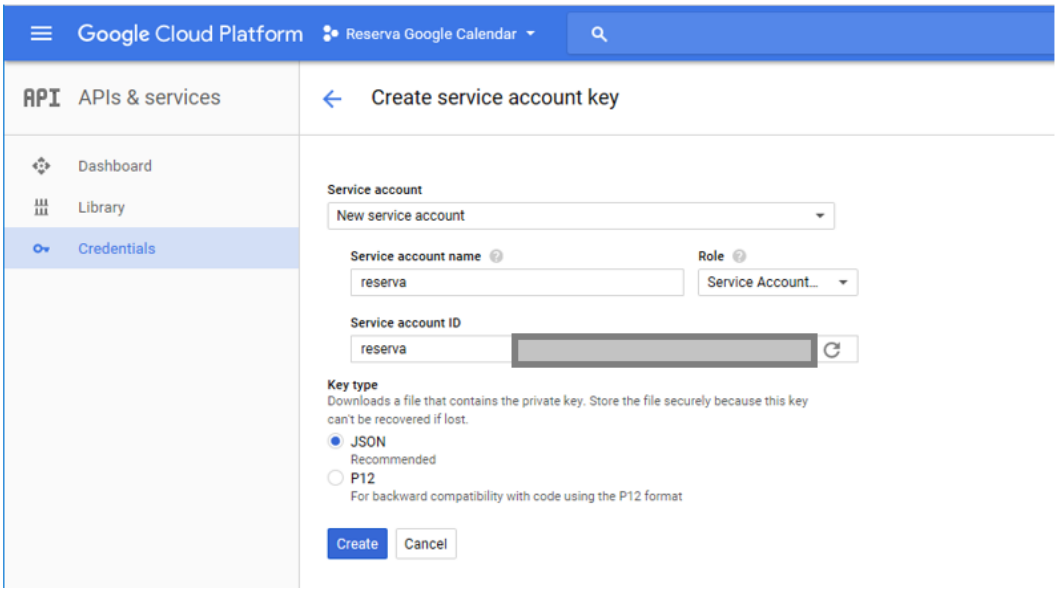
5. Click on **APIs & Services**.
6. Click on **Library**.
7. Select **Admin SDK** and click **Enable** (you can search for easier access using the search bar at the top of the page).



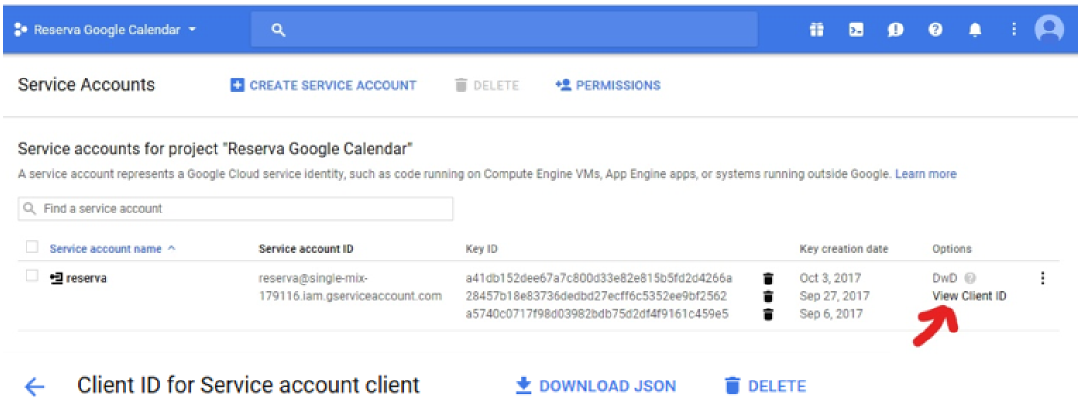
8. Click on the top left arrow to return to the API library.
9. Repeat step 7 with **Google Calendar API**.
10. Click on the top left **Products and Services** > **API Services** > **Credentials**.
11. From the drop down **Create Credentials** menu, select **Service Account Key**.



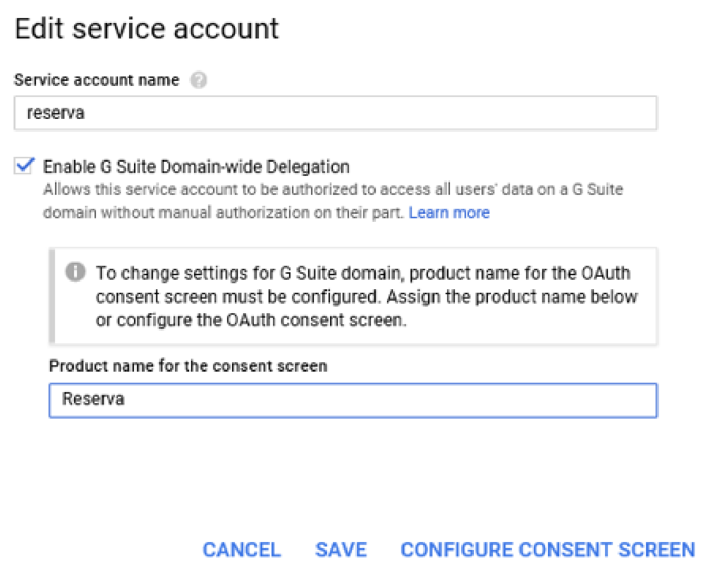
12. Create a service account by clicking on the drop down menu and selecting **New Service Account**.
13. Enter a name for the account.
14. Under credentials, create a service account key. For the role, select **Service Account User** from the drop down menu.



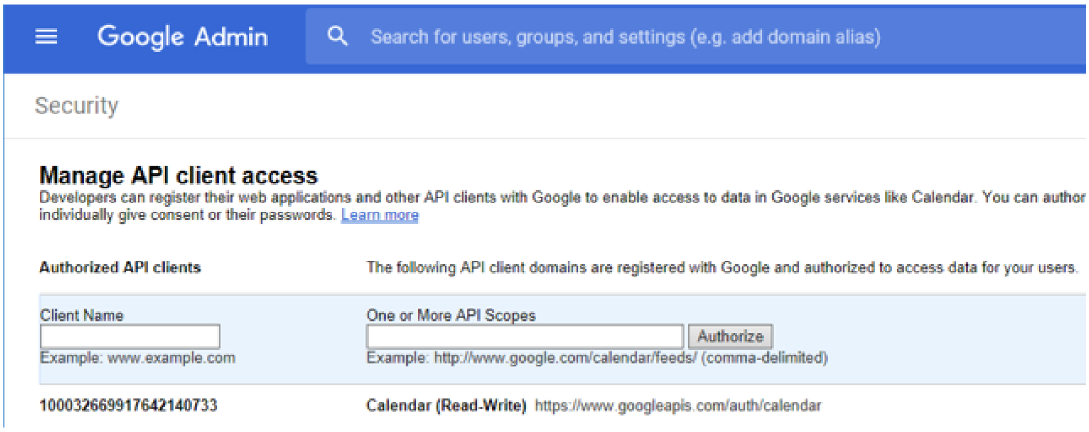
15. For the key type, ensure that JSON is selected.
16. Click **Create**.
17. A .json file will then be downloaded. Save this private key file and keep it secure. This will be needed for upload into the Reserva Connection Manager.
18. To link this Service Account to your chosen Calendar, copy the Service Account ID you created.
19. Open the Calendar belonging to the account you wish to link to and select the Calendar you wish to link.
20. Select **Settings & Sharing** and then select **Share with Specific People**.
21. Click **Add People** and then paste the Service Account ID you copied and set the permissions to the appropriate level of read/write access.
22. Navigate to **Credentials** > **Service account key** and click on **Manage service accounts**. Using the menu to the far right of the service account, select **Edit**.



23. Enable Domain-wide Delegation by selecting **Enable G Suite Domain-wide Delegation**.



24. Log in to the portal https://admin.google.com
25. Navigate to **G Suite Admin** > **Security** > **Advanced Settings** > **Manage API client access**.
26. Enter the Client ID in the **Client Name** field.



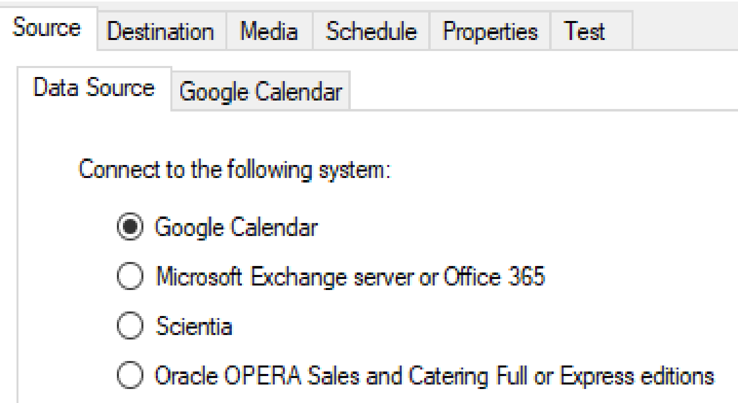
27. Enter the following API scopes:
https://www.googleapis.com/auth/calendar
https://www.googleapis.com/auth/admin.directory.resource.calendar.readonly
https://www.googleapis.com/auth/admin.directory.user.readonly

    Note: These must be entered as one line and with commas to separate them.

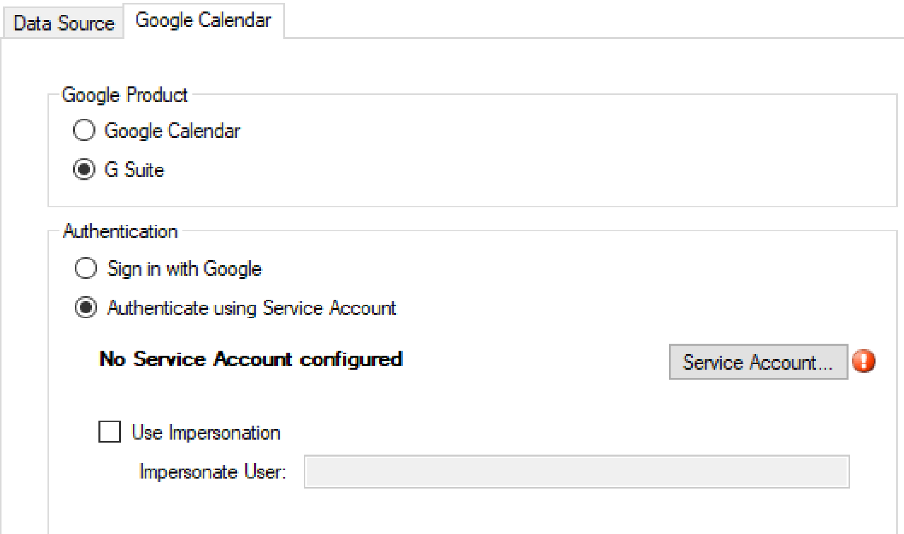
28. Click **Authorise**.

Configure Connection on RCM

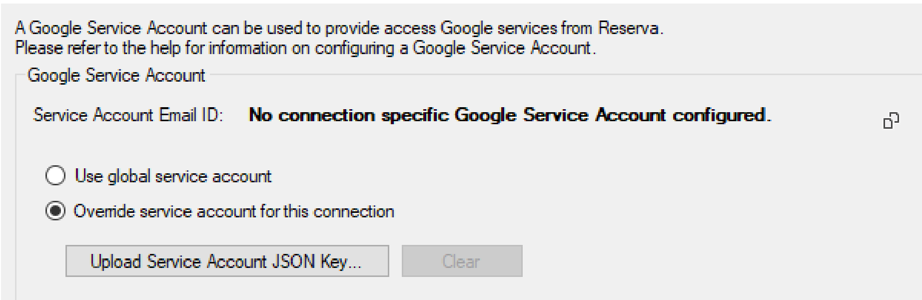
1. In RCM, click on **Connection** > **Create New** and select **Google Calendar**.



2. On the Google Calendar tab, select **G Suite**.



3. For authentication, select **Authenticate using a Service Account**.
4. Click **Service Account**.
5. You will now be prompted to configure your Service Account. If a Global Service Account is already configured then that will be selected by default. Select **Override service account for this connection**.



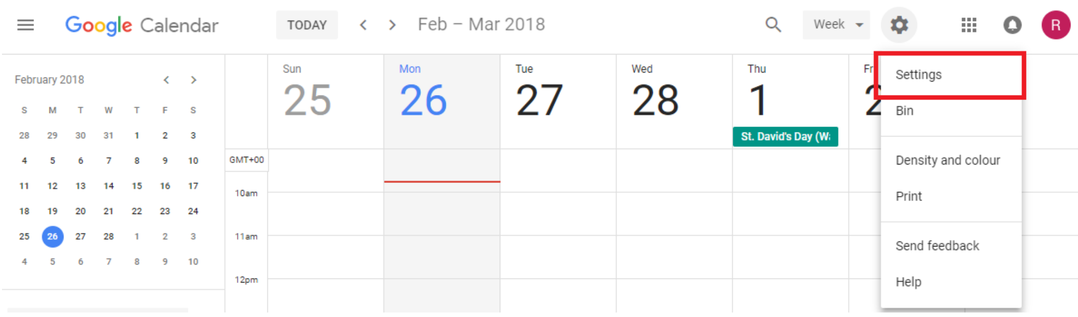
6. Click **Upload Service Account JSON Key...**. Once a file explorer window open, navigate to where your .json file is saved and select it. Click **OK**.

Now that you have a Service Account associated with your RCM Google G Suite Connection, you need to share Google Calendars with your Google Service Account.

Share Google Calendar with Google Service Account

Make sure you still have the Google Service Account email address and .json file available.

1. Log on to the required Google account and open the Google calendar App. Click **Settings**.

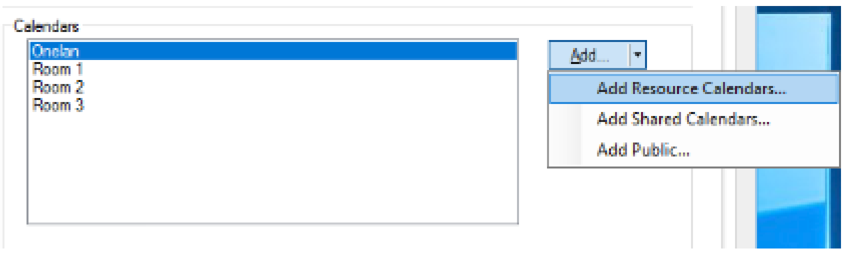


2. From the left-hand side, select the Calendar you want to share.
3. From the drop down menu. select **Share with Specific People**.
4. On the right hand side, click **Add people**.

5. Under **Permission**, select the required permission
   - See only free/busy (hide details): will give restricted read-only access.
   - See all event details: will give read-only access.
   - Make changes to events: will give read/write access.
   - Make changes and manage sharing: will give read/write access and allow sharing managing.
6. Click **Send**.

Next you need to add these Calendars to your RCM Connection

1. In RCM, to add Calendars to your Connection, click the down arrow next to **Add** in the Calendars section.



2. You can add resource, public or shared calendars:

Resource: When using Resource Calendars in G Suite, the configured Google account, by default, will be able to make and modify its own bookings in the Resource Calendar when booked by your Reserva. You may need to grant modify permissions to the Calendar to be able to modify events booked by other users. This can be done by sharing the Resource Calendar.

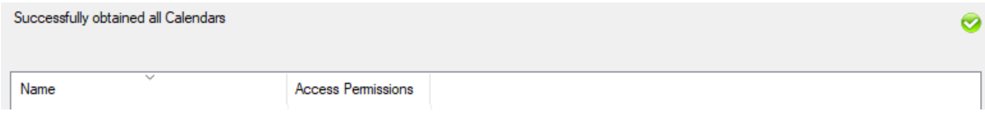
Public: Google Calendars set to 'Public' are available to anyone, indexed and searchable on the internet. If you use a public calendar within your Reserva deployment, the calendar is read-only. Reserva is unable to edit the calendar and therefore features such as booking appointments are not available. To add a public calendar to your Connection, the Calendar ID is required.

Shared: Google Calendars set to 'Shared' have the scope to be edited by Reserva with the correct permissions enabled. With these settings enabled, users can book and manage appointments.

For more information, see Google Calendar Requirements.

For **Public** Google Calendars:

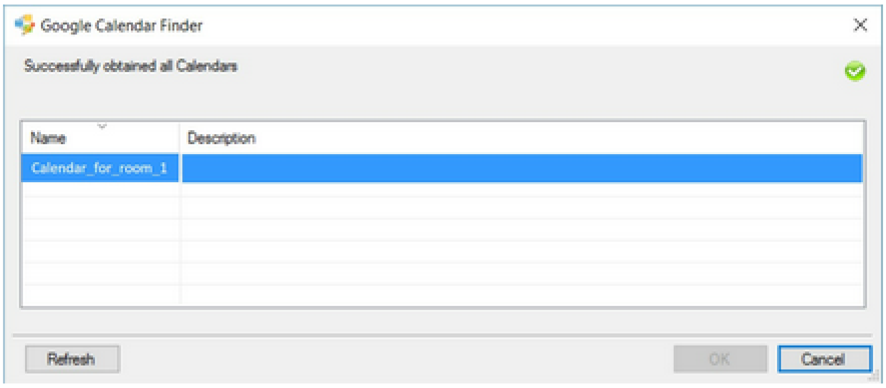
1. Select **Add Public** from the drop down menu.
2. RCM will obtain a list of your public calendars.



3. Select the desired Calendars from the list.
4. Click **OK**.

For **Shared** Google Calendars

1. Select **Add Shared Calendars** from the drop down menu.
2. Google Calendars shared with the Google Service Account appear in the Google Calendar list. Select the Calendar you require and click **OK**.

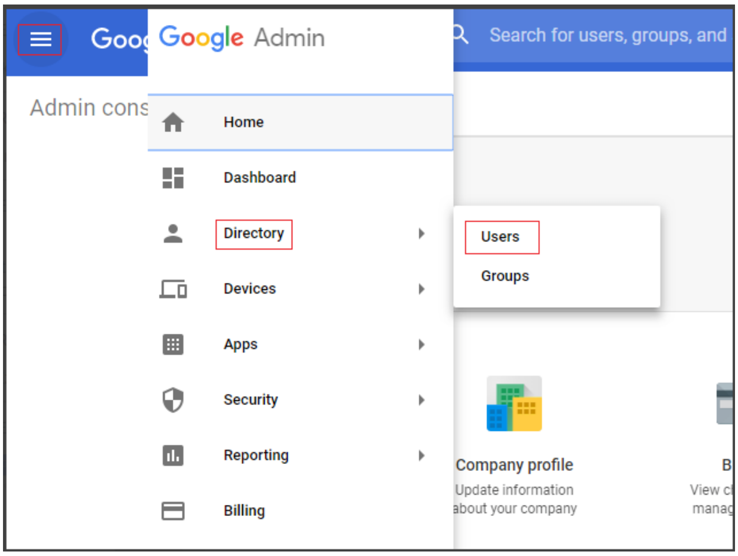


Impersonation

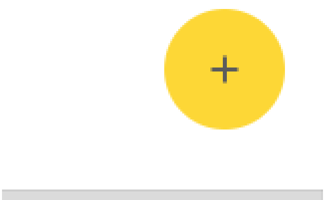
Note: To enable Impersonation you will need to follow the additional steps of creating an Impersonate user prior to creation of a service account.

Create an Impersonate User

1. Go to https://admin.google.com (you will only be able to access this page if you have G Suite).
2. Select **Main menu** (top left corner) and navigate to **Directory** > **Users**.



3. In the bottom right hand corner, click the **+** button.



4. Click **Add User**.
5. Create the Impersonate user, entering a name and email for it.
6. Click **Create**.

Note: The Impersonate user will need to have a Google+ profile created for it so that you can associate a first and last name with it. Otherwise, the organiser will just show as the Calendar name rather than the Impersonate user.

You will then need to create a service account (following the steps **Create a Google Service Account** - you must ensure that Domain-wide Delegation is enabled) and then **Configure the Connection on RCM**.

To enable Impersonation, under **Authentication** tick the **Use Impersonation** option and enter the email address of the user that was created for Reserva Impersonation use.

Scientia

This section explains how to configure Scientia Connections.

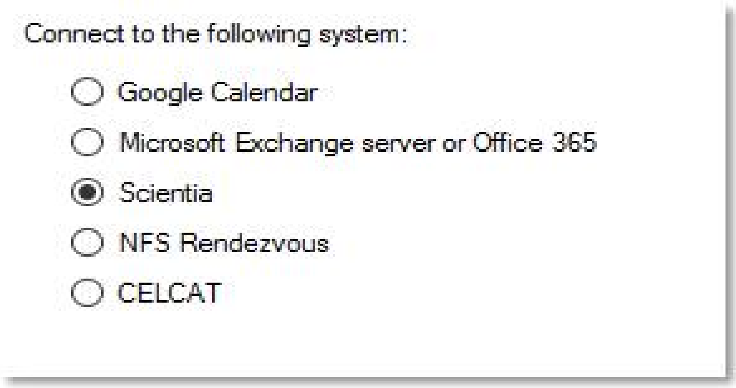
For information regarding the requirements and guidance, see Scientia Requirements.

For information regarding the Open Database Connectivity (ODBC) driver and Data Source Name (DSN) requirements, see Appendix B: Scientia Database Configuration.

Configure Scientia Connection

To configure a Connection for Scientia

1. From the Connection Data Source tab, select Scientia.

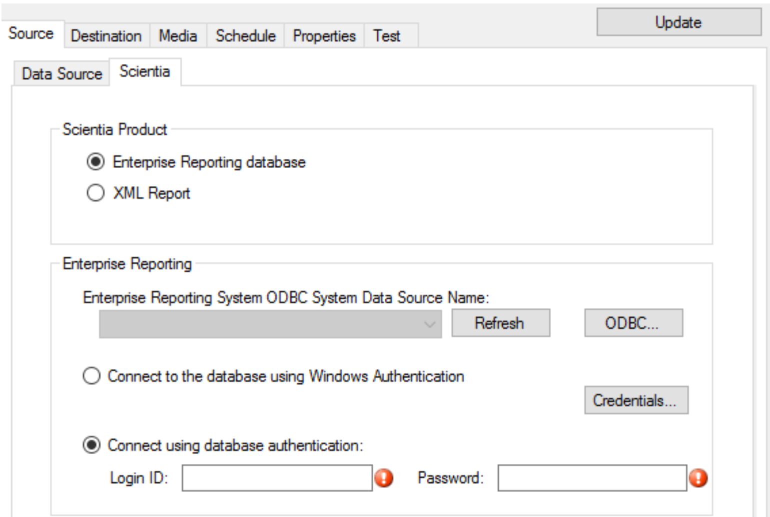


2. Select the Scientia tab and in the Scientia Product section, select one of the following:

   Enterprise Reporting System ODBC System Data Source Name: select the required ODBC DSN.

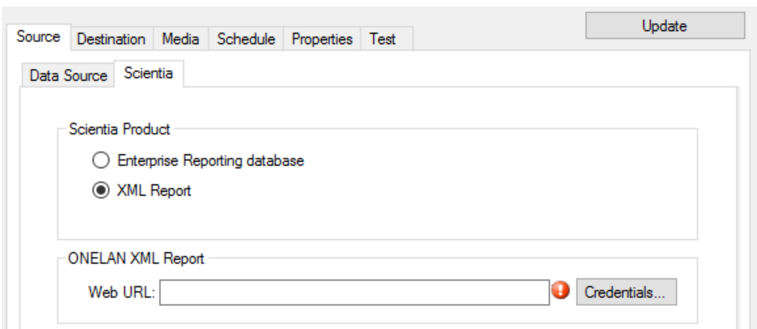
   Note: you can click ODBC to launch the ODBC Data Source Administrator tool to create or modify DSN entries. For more information regarding the Enterprise Reporting System ODBC options and configuration, see [Appendix B: Scientia Database Configuration]. If you make changes or create a new ODBC DSN, click **Refresh** to update the DSN list.

   Authentication: select the required authentication (Windows authentication or database authentication) option and enter the required credentials. Click **OK**.



   or

   ONELAN XML Report: enter the relevant Web URL. This option will make use of a read-only Scientia XML hosted on a web server.



Please contact your network administrator if you are unsure of the details.

The next step is to add room(s) (identified as Locations within a Scientia environment).

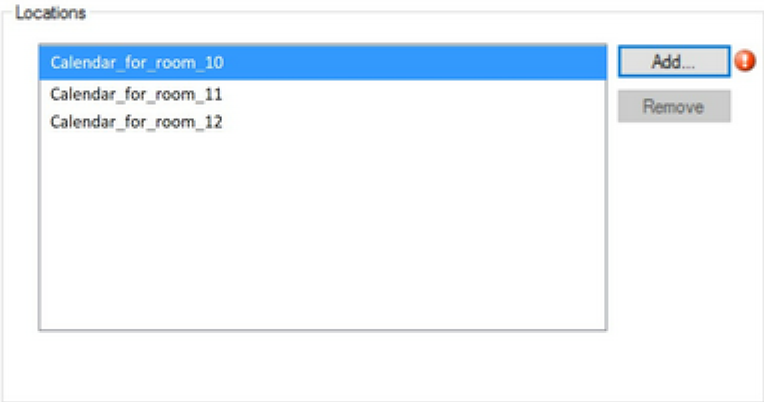
Add Room(s) to a Scientia Connection

You specify the rooms for each Connection. Reserva Connection Manager will retrieve events for the room(s) added to the Connection.

Note: Within Scientia, rooms are known as locations.

To add rooms to your Scientia Connection

1. To add rooms to the Connection, in the Locations area, click **Add**. The Scientia - Location Finder dialog appears. Select the required room(s). To select multiple rooms, hold the **Ctrl** or **Shift** key and select the required rooms. Once you have select the rooms, click **OK**. The rooms are shown in the Locations list.



You can amend the list using **Add** and **Remove**.

The next step is to specify the Connection settings.

Oracle OPERA

This section explains how to configure Oracle Opera Connections.

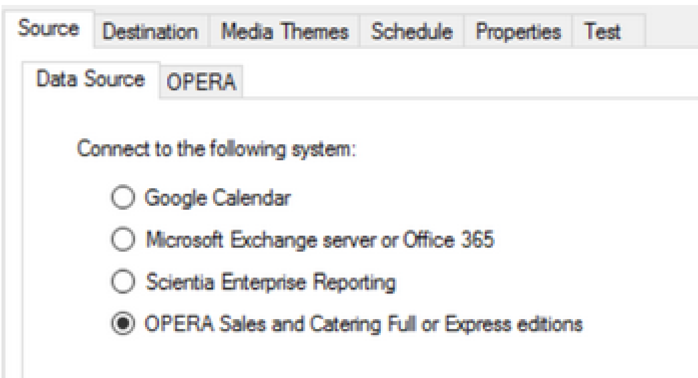
Note: Oracle OPERA Sales and Catering calendar is supported.

For more information regarding the requirements and guidance, see Oracle OPERA Calendar Requirements.

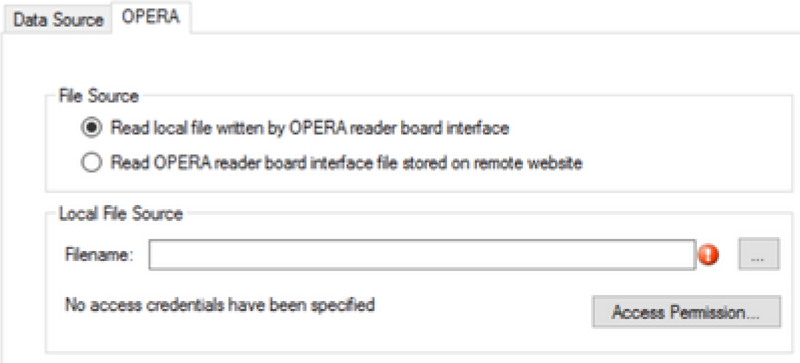
Configure Oracle OPERA Connection

To configure a Connection for Oracle OPERA

1. From the Connection Data Source tab, select **OPERA Sales and Catering Full or Express editions**.



2. Select the **OPERA** tab. You specify the OPERA file used by Reserva to read events and retrieve room information. You can specify a local file or the URL for a file located on a web server:



Read local file written by OPERA reader board interface: select this option to link an OPERA file on the local file system. Locate the file.

Read OPERA reader board interface file stored on remote website: select this option to link an OPERA file to link an OPERA file located on a remote server (for example, a web server). The file must be accessible using FTP, HTTP or SFTP protocols. Specify the path and proxy details as required.

3. If credentials are required to access the file, click **Access Permissions** and enter the credentials (user name, domain and password). Click **OK**.

Please contact your network administrator if you are unsure of the details.

The next step is to add room(s) (identified as Resources within an OPERA environment).

Add Room(s) to a Oracle OPERA Connection

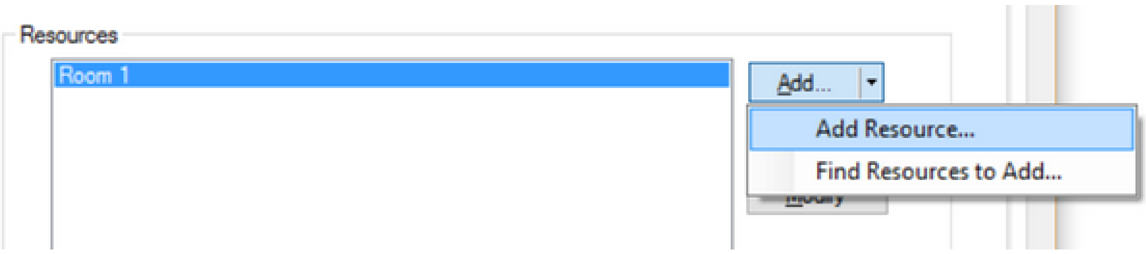
You specify the rooms for each Connection. Reserva Connection Manager will retrieve events for the room(s) specified,

Note: within OPERA, rooms are known as resources.

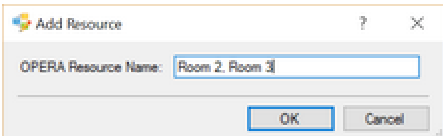
It is recommended you add rooms manually as shown below.

To add rooms to your OPERA Connection

1. To add rooms to the Connection, in the Resources area, click **Add** > **Add Resource**.



2. The Add Resource dialog appears. Enter the required room(s). To enter multiple rooms, type each room name followed by a comma, as shown in the example below. Once you have entered the required room names, click **OK**. The rooms are shown in the Resources list.



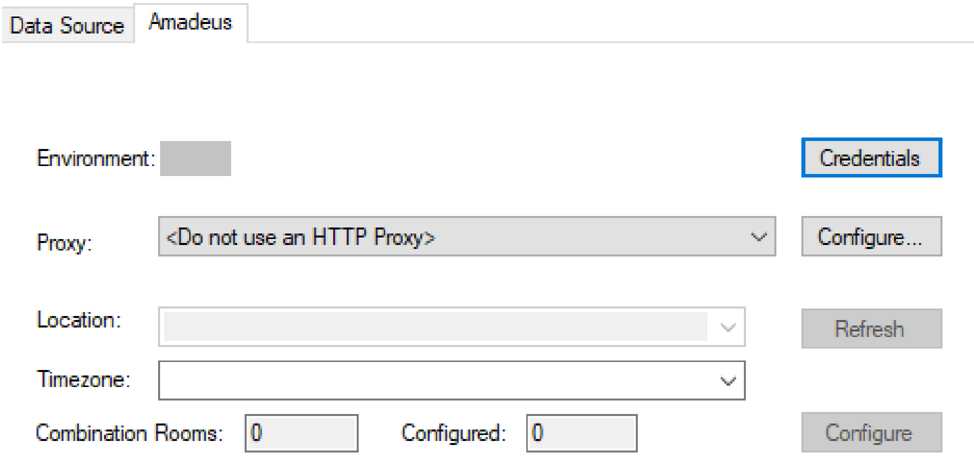
You can amend the list using **Add**, **Remove** and **Modify**.

The next step is to specify the Connection settings.

Amadeus

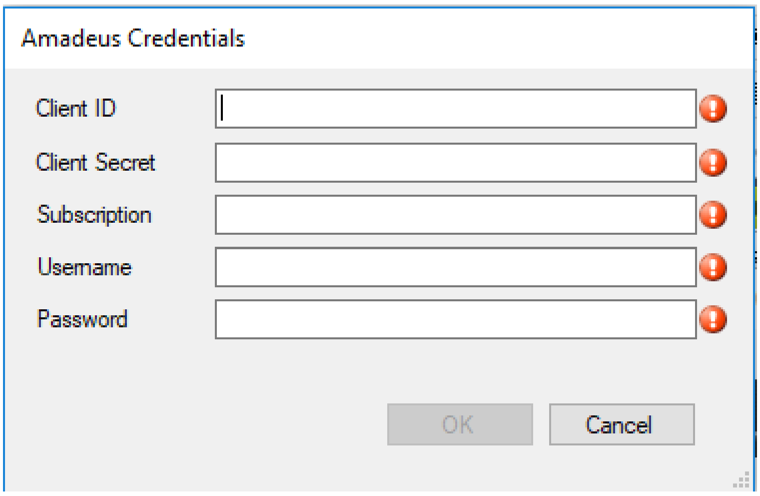
Amadeus is a read-only events driven Connector that requires a licence to use. See Licensing for more information.

1. From the Connection **Data Source** tab, select **Amadeus**.
2. Select the **Amadeus** tab. Here you will need to complete the Connection details.

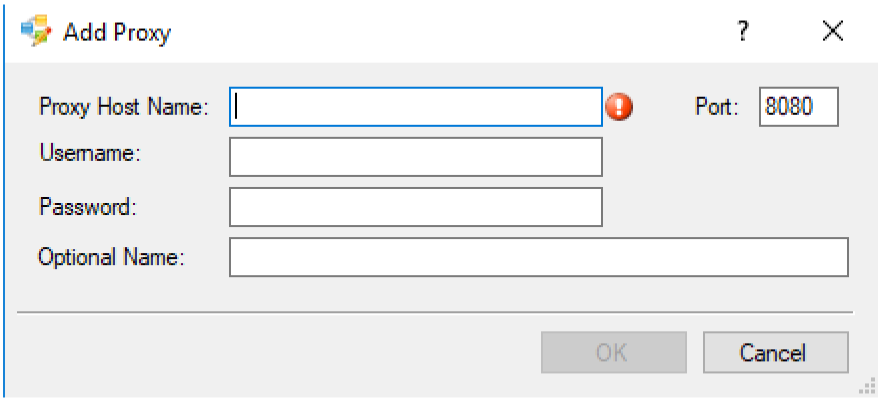


3. Click **Credentials**.

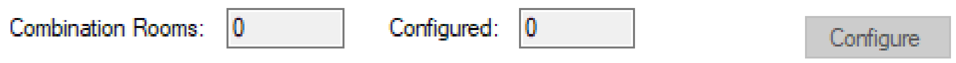
   Note: The **Credentials** button will only appear if the appropriate Amadeus credentials have not been provided in the product licence.



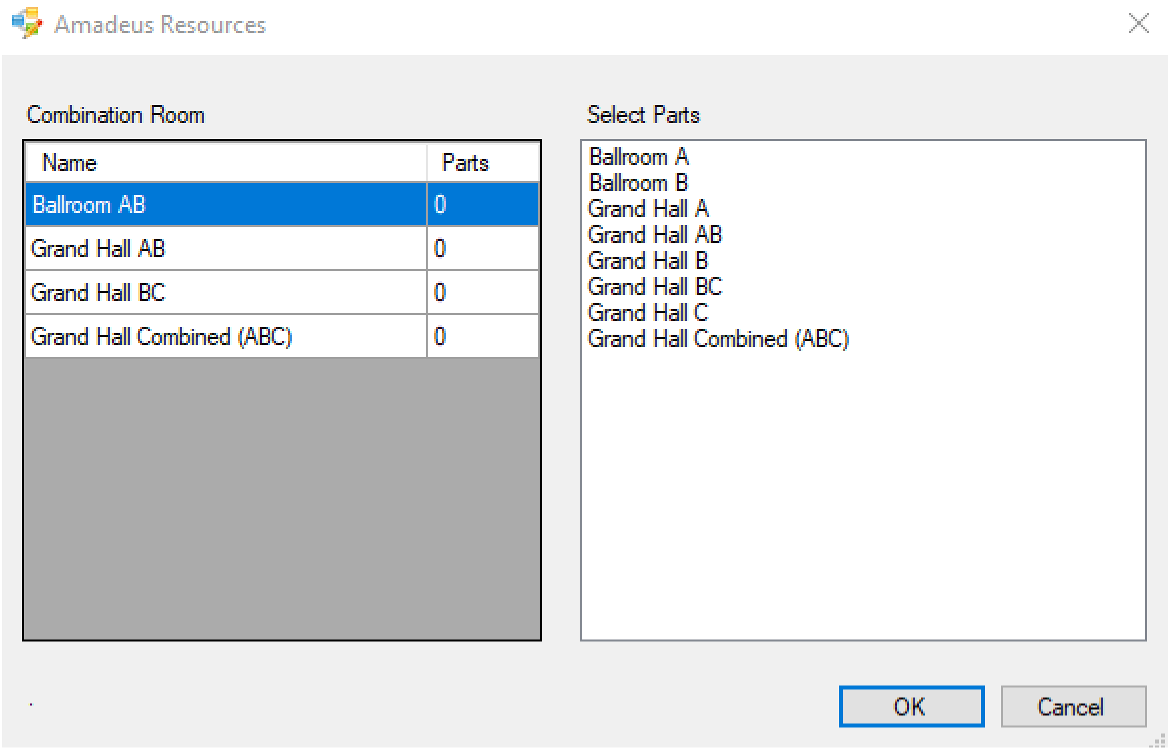
4. Enter the credentials used for your Amadeus account. Click **OK**.
5. To configure a HTTP Proxy, click **Configure**.



6. For more information regarding HTTP and HTTPS, see Configure Web Service.
7. The Amadeus credentials entered should allow the appropriate **Location** to be selected from the dropdown menu. If no location appears, click **Refresh**.
8. With Amadeus, the timezone is configured per Connection. Select the desired timezone from the dropdown **Timezone** menu.
9. You will need to configure any Combination Rooms associated with your Amadeus Connection, to do so, click **Configure**.



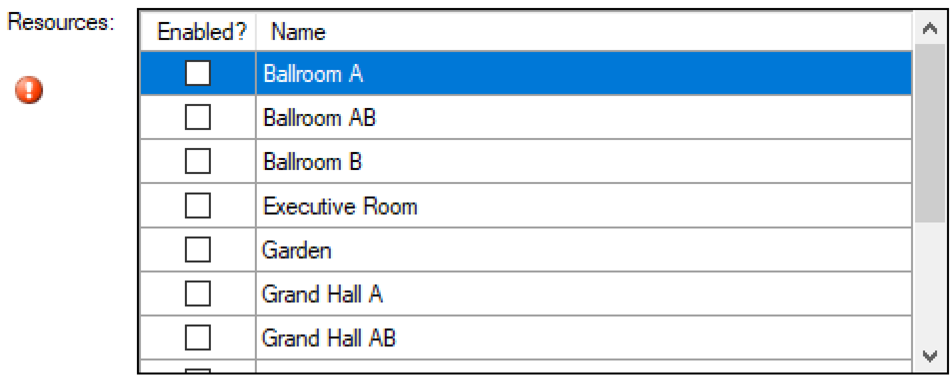
10. The list of combination rooms associated with your Amadeus account should appear. For each combination room, select the relevant constituent rooms (in the example below, for Ballroom AB, select Ballroom A and Ballroom B).



The next step is to add rooms(s).

Add Room(s) to an Amadeus Connection

1. A list of rooms associated with your Delphi account should appear under **Resources**.



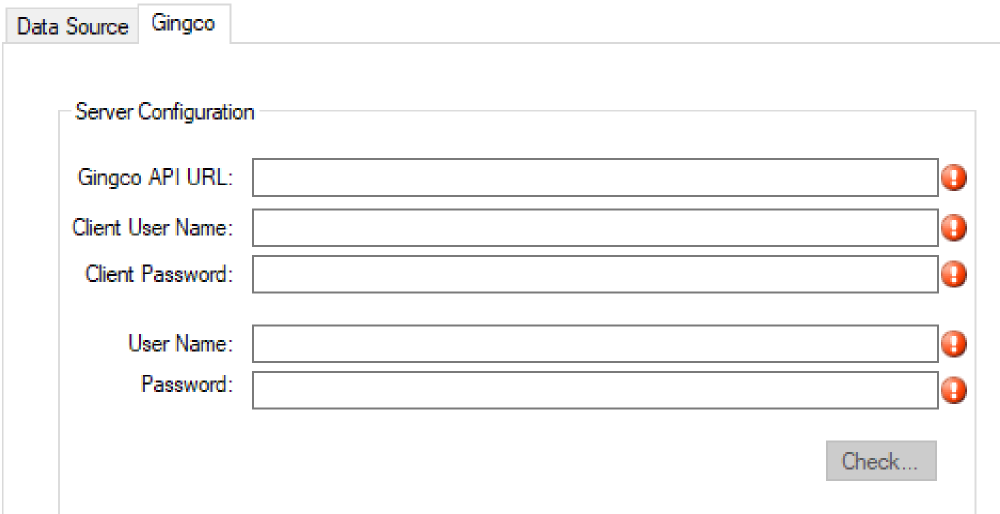
2. If the list does not populate, click **Refresh** (next to **Location**).
3. To add a room to your Amadeus Connection, click the tickbox of that room in the **Enabled?** column.

Gingco

Gingco.Net/Estate provides advanced room booking options such as Setup and Breakdown, allowing time before or after appointments to prepare the room.

Configure Gingco.Net/Estate Connection

1. From the Connection **Data Source** tab, select Gingco.Net/Estate.
2. Select the **Gingco** tab. Here you will need to complete the server configuration details.



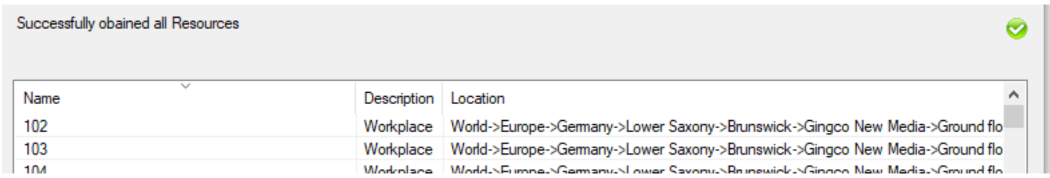
3. When the relevant fields are completed, click **Check** and the following should appear.

URL and login checks successful

The next step is to add room(s).

Add Room(s) to a Gingco Connection

1. To add rooms to the Connection, click **Add**.
2. A list of all obtained Resources will appear.



3. Select the desired Resources, you can highlight more than one at a time. Click **OK**.

NFS Rendezvous Workspace

This section explains how to configure NFS Rendezvous Workspace Connections. Setup and Breakdown for meetings is supported on RCM.

Prerequisites:

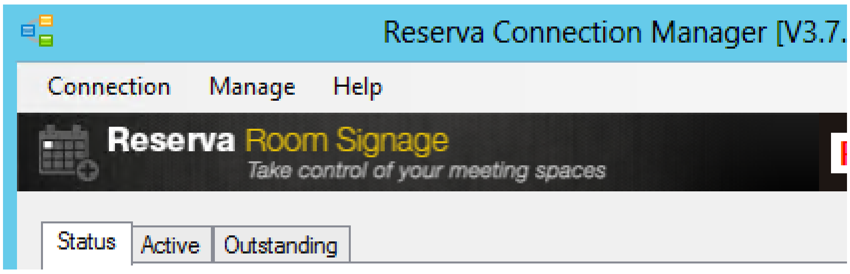
- Reserva Connection Manager (version 3.7.0 or above) must be installed on LAN where the Reserva room panels are connected.

- Rendezvous Workspace System (version 6.1 or above) with access to the main application and details of the workspace API.

Reserva Server Configuration

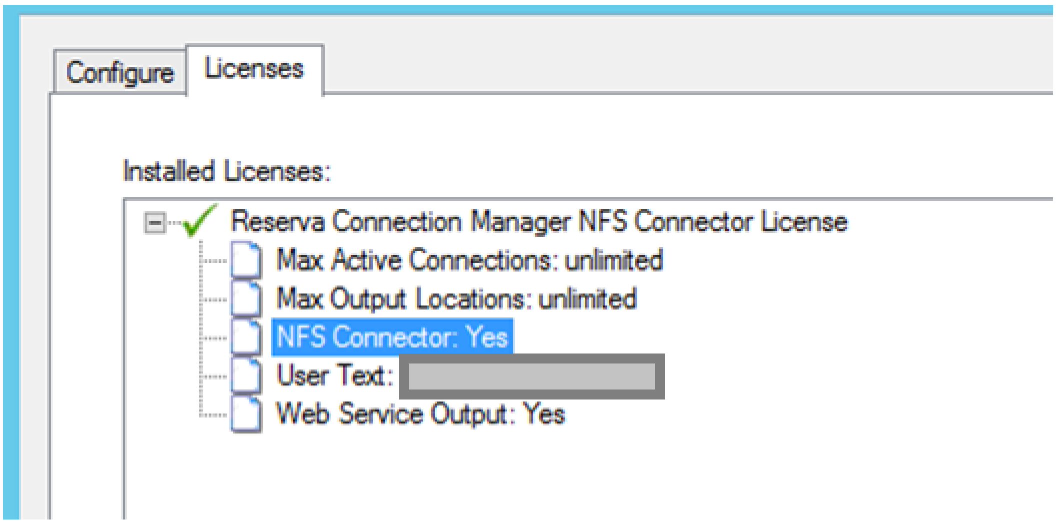
Installing Reserva Connection Manager

Download and extract (onto a windows machine) the valid installer of Reserva Connection Manager which is version 3.7.0 or above. This version of Reserva introduces support for NFS Rendezvous Workspace. Once extracted, run the .exe file and follow the wizard to install Reserva.



Licensing NFS Rendezvous Workspace

1. Launch Reserva Connection Manager.
2. Navigate to **Manage** > **Licensing**.
3. Copy the activation code and email it to support@onelan.com.
4. The licence required for NFS Rendezvous Workspace will be included in the reply. Copy and paste this into the text box and click **Add**.
5. The licence will issue and Reserva will close.



Creating a connection

1. If not done so already, launch Reserva Connection Manager.
2. Click **Create New** to open the Reserva Connection Editor.
3. Select **NFS Rendezvous Workspace** as the Data Source.
4. An NFS Rendezvous Workspace tab will now appear, click this and fill in the details of your NFS server.
5. Click **Check** to verify these details.
6. Once verified, complete the **Booking Settings** and add the relevant rooms.
7. Select the destination tab and make a note of the web server address and media authentication (default is admin, password).

8. Go to the **Properties** tab and name the Connection.
9. The Connection can now be tested by going to the **Test** tab and clicking **Test Query**.
10. Once satisfied the Connection works, click **Update** and close the Reserva Connection Editor.
11. In the Reserva Connection Manager, click **Apply** to apply the Connection.

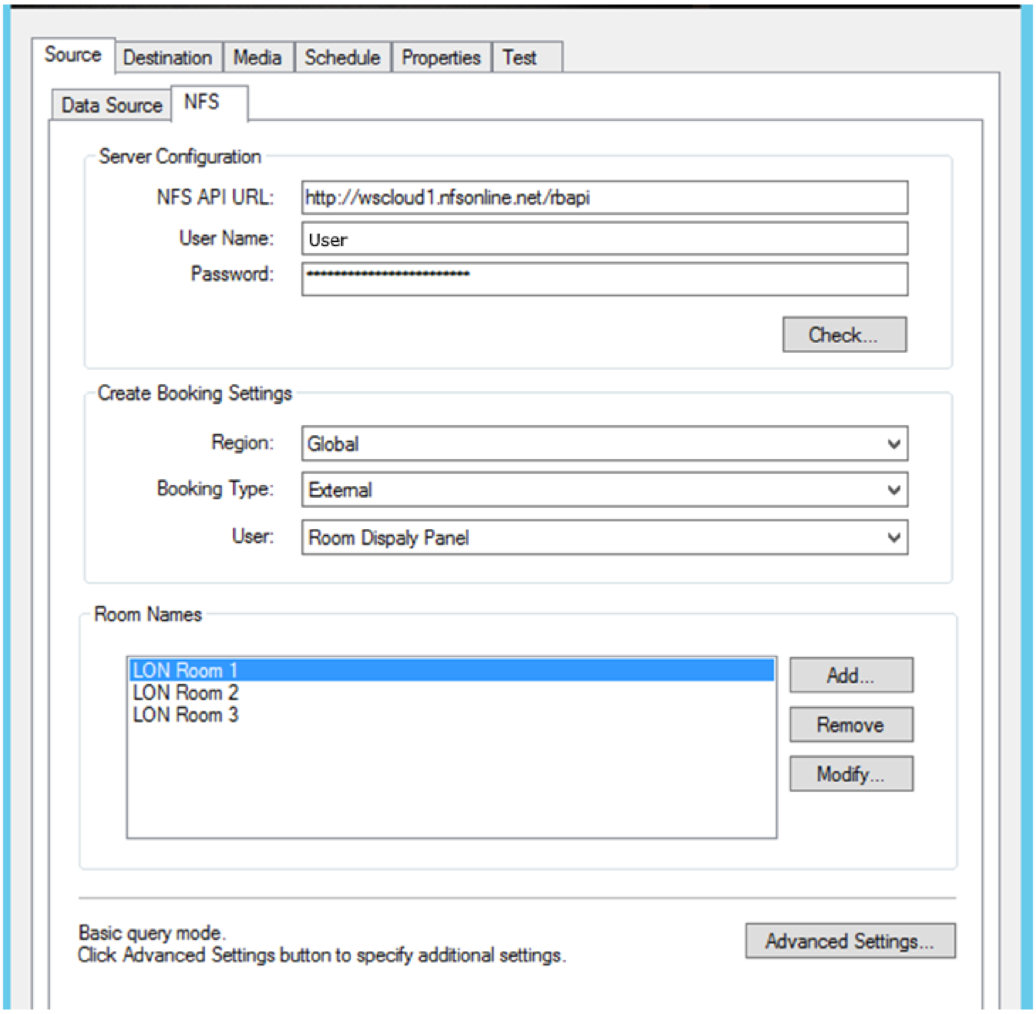
    Note: If the default port is blocked by your local firewall, click **Manage** > **Web Service** and click **Apply**.

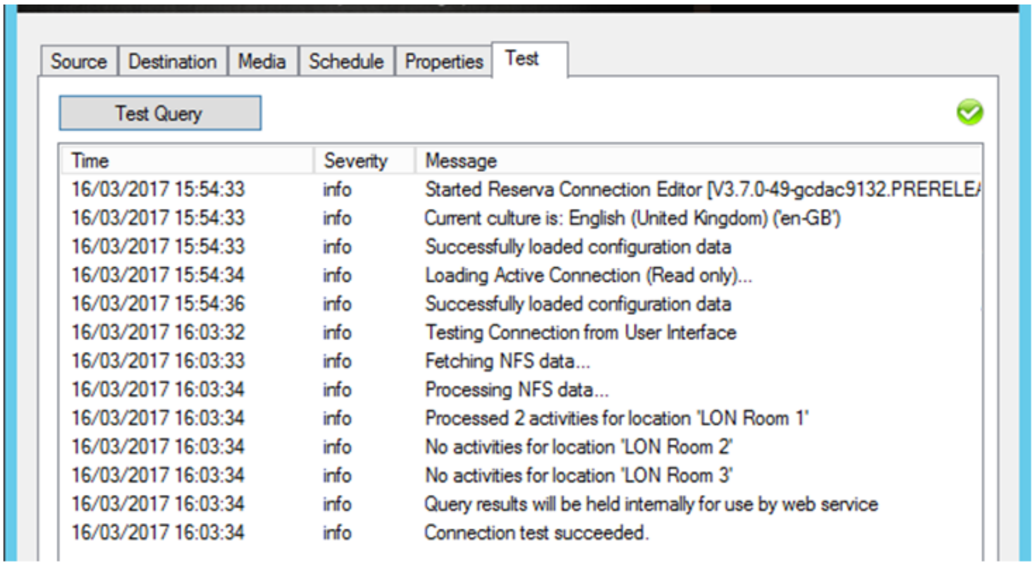
Configuring Android devices to play room content

1. Boot up your Android device and follow the user wizard to complete the initial setup.
2. Once complete, Reserva content will display.
3. Fill in the web server, username and password credentials noted in Creating a Connection, step 7.
4. Click **Connect** and select your Connection and Resource.
5. Click **Apply**.

Configuring NTB to play room summary

1. Boot up the NTB and connect it to a screen.
2. Log in to the NTB in a web browser using the host name of the device (typically hostname includes serial number, for example, http://device12345). There is a sticker on the NTB with its serial number.
3. Log in with the relevant credentials. The default username is *remote* and the default password is *9999*.
4. Once logged in, click the green rectangle in the top left hand corner which will take you to the playlist.
5. Click the index.html file in the playlist.
6. A page will open to allow configuration of the Reserva settings.
7. Fill in the web server, username and password noted in Creating a Connection, step 7.
8. Click **Connect** and select your Connection and Resource.
9. Click **Apply**.
10. Close the tab.
11. Click **Reactivate Schedule and Layouts**.





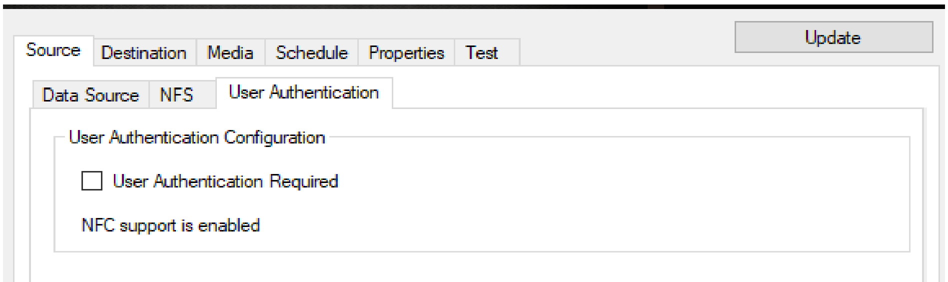
Note: There are no specific changes to either the Workspace server or system configuration for the ONELAN interface.

User Authorisation

Authorisation is an optional feature. When enabled, actions such as creating, confirming, editing and ending appointments will require authorisation.

To Enable Authorisation

On your NFS Rendezvous Workspace Connection, click the **User Authentication** tab.



Selecting **User Authentication Required** will enable authorisation. The Reserva tablet will require the user's username and password from the active directory.

NFC is also supported as a licensed feature. Users will be prompted to link a scanned card to their active directory credentials. NFC tag IDs are stored against an account in the user database.

It is recommended that once user authorisation is set up and user cards have been registered the Reserva Connection Manager is backed up to ensure that should a failure occur, staff do not have to re-register their cards.

Installation Checklist

Configuration		Comments/values/example
NFS Application	Install Workspace Main Application	Minimum version 6.1 (mandatory check)
	Published Workspace Link	http://<ServerName>/Workspace
NFS API	Install NFS API for Workspace	Contact ONELAN for the NFS Webservice API installation guide
	Nfs.rendezvous.hibernate.cfg	Configure the Database connection strings to connect to the main workspace database. This would be the same as the main application settings.
	Published API link	http://<ServerName>/WorkspaceAPI
	Documentation link	http://<ServerName>/WorkspaceAPI/help
	Diagnostics Link	http://<ServerName>/WorkspaceAPI/Diagnostics.html
Reserva Connection Manager	Reserva Connection Manager ONELAN Reserva Windows Services	To be completed by the ONELAN installation engineer. This should be running with a service account with the appropriate permissions.
	NFS Server Configuration • NFS API URL • User name • Password	 • http://<ServerName>/WorkspaceAPI • ONELAN
	Create booking settings • Region • Booking type • User	 • Global • Internal • Room Display Panel

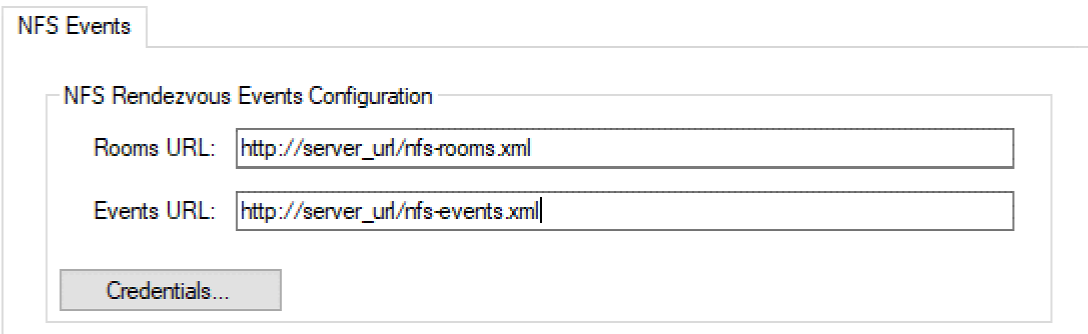
Reserva Connection Manager	Reserva Connection Manager: add all the desired room names with Reserva panels	To be carried out by ONELAN installers or dealers.
ONELAN panels	Configure with Reserva Connection Manager	To be carried out by ONELAN installers or dealers.

NFS Rendezvous Events Read Only (XML)

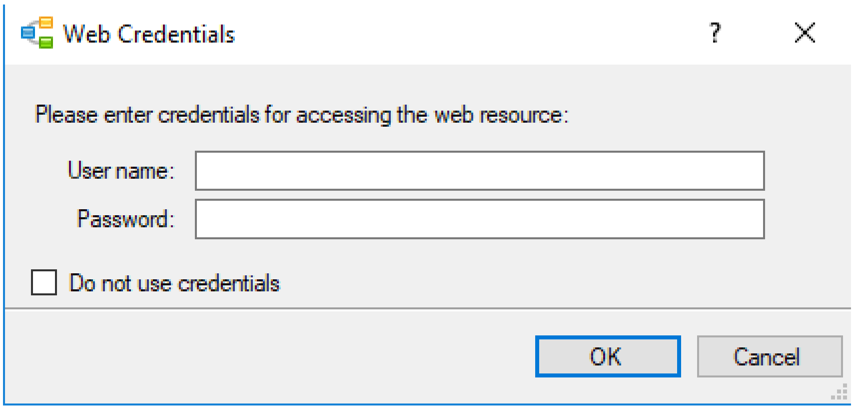
This section explains how to configure NFS Rendezvous Events read only Connections. For more information regarding XML schemas, please see Appendix D.

Configure NFS Rendezvous Events Connection

1. From the Connection **Data Source** tab, select NFS Rendezvous Events read only (XML).
2. Select the **NFS Events** tab. Here you will need to complete the URL details.



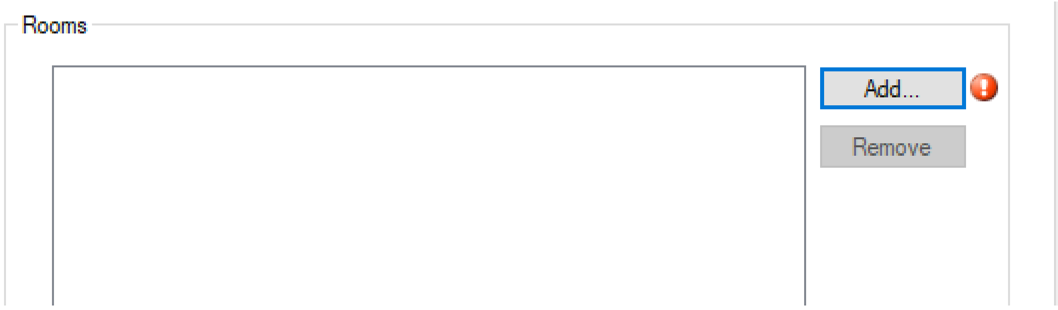
3. If you wish to use credentials, click the **Credentials** button. By default, **Do not use credentials** is selected. De-selecting that option will allow you to enter your desired credentials.



The next step is to add room(s).

Add Room(s) to an NFS Rendezvous Events Connector

1. To add rooms to the Connection, click **Add**.



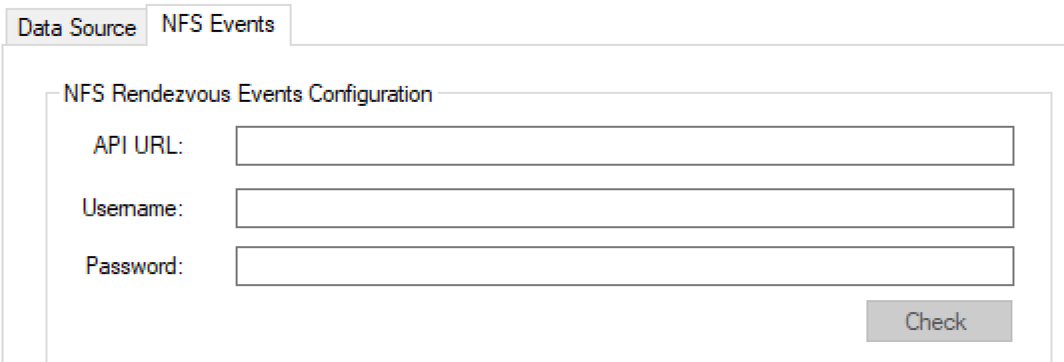
2. A list of obtained Resources will appear.
3. Select the desired Resources, you can highlight more than one at a time. Click **OK**.

NFS Rendezvous Events Interactive (REST API)

This section explains how to configure NFS Rendezvous Events interactive Connections.

Configure NFS Rendezvous Events Connection

1. From the Connection **Data Source** tab, select NFS Rendezvous Events interactive (REST API).
2. Select the **NFS Events** tab. Here you will need to complete the URL and credential details.

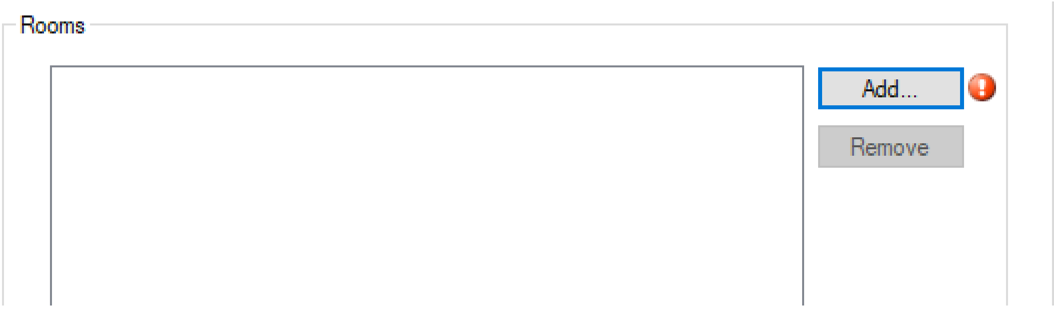


3. Without credentials the **NFS Settings** section will be greyed out. With your credentials entered, click **Check**.
4. Use the drop-down menus to select the desired NFS settings.

The next step is to add room(s).

Add Room(s) to an NFS Rendezvous Events Connector

1. To add rooms to the Connection, click **Add**.



2. A list of obtained Resources will appear.
3. Select the desired Resources, you can highlight more than one at a time. Click **OK**.

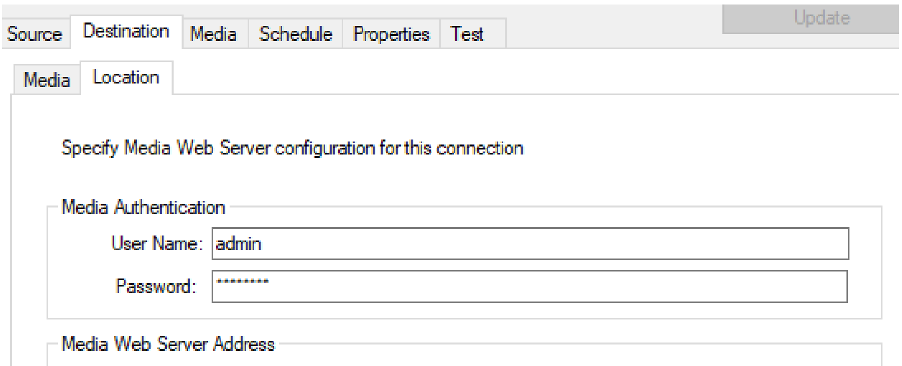
Specify Connection Settings

You must specify the settings for each Connection. These include the credentials used to authenticate outside room media and room summary media, and the options available to your end users.

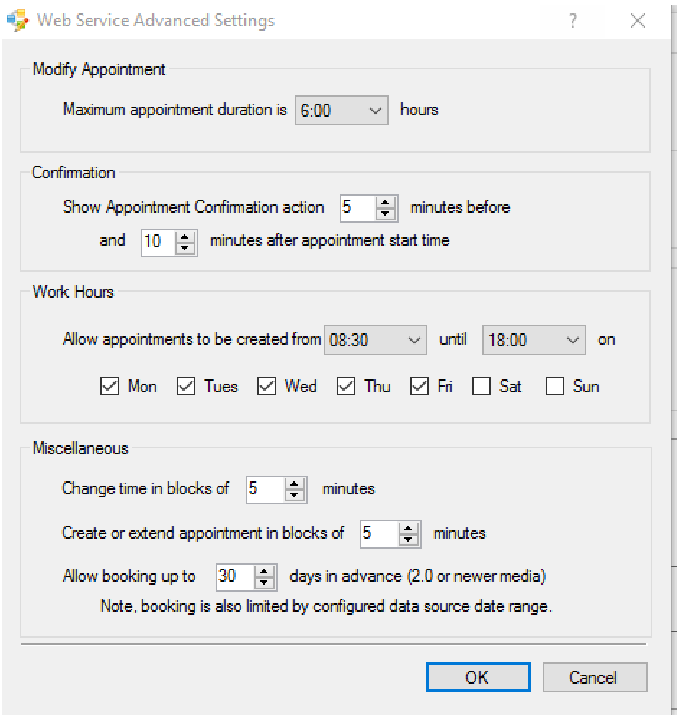
Note: This procedure is the same for all Connections, irrespective of the calendar system.

To specify Connection settings

1. Select the **Destination** tab and then the **Location** tab..



2. Select the Media Authentication **User Name** and **Password**. These credentials are used to authenticate outside room media and room summary media configured to use this Connection. You require these credentials when installing and configuring the media. The default user name is *admin* and the default password is *password*.
3. The **Advanced Settings** button at the bottom of the Destination tab window will open a new window where further options can be set including: the maximum duration of an appointment, the hours during which an appointment can be booked and the number of days in advance an appointment can be booked,



- **Modify Appointment** specifies the maximum appointment duration that can be set when extending an appointment.

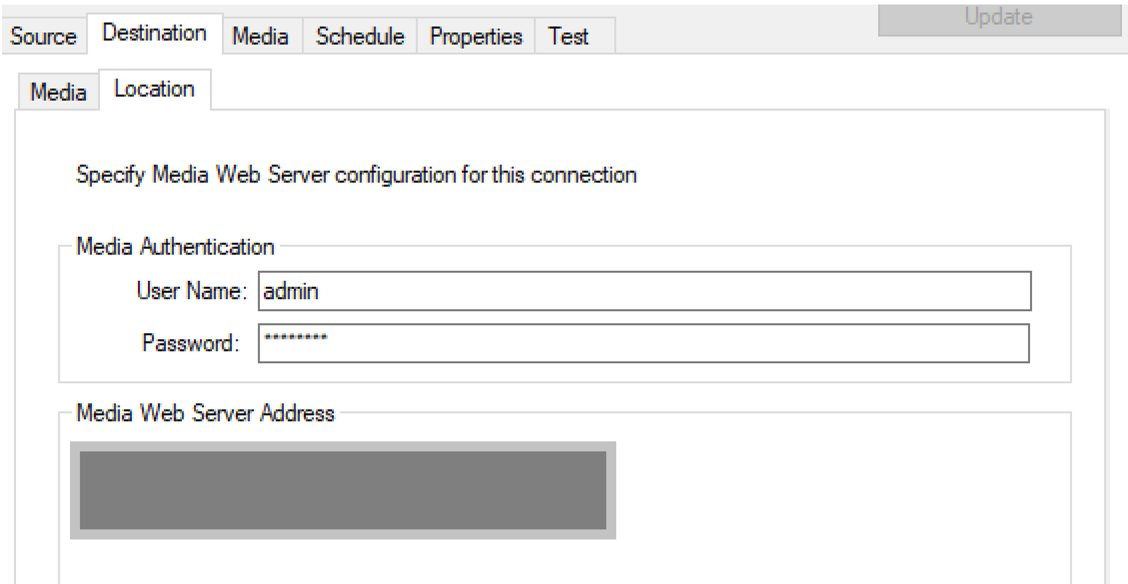
  Note: **Extend appointment** must be enabled in the **Settings** table on the **Media** tab (see step 6) for this option to be available.
- **Confirmation** specifies the time period during which the **Confirm appointment** button is shown. This is expressed as a number of minutes before the current appointment start time and the number of minutes after the appointment has started.

  Note: **Confirm appointment** must be enabled in the **Settings** table for this option to be available.
- **Work hours** specifies the time and days of the week during which a user may book an appointment on the device.

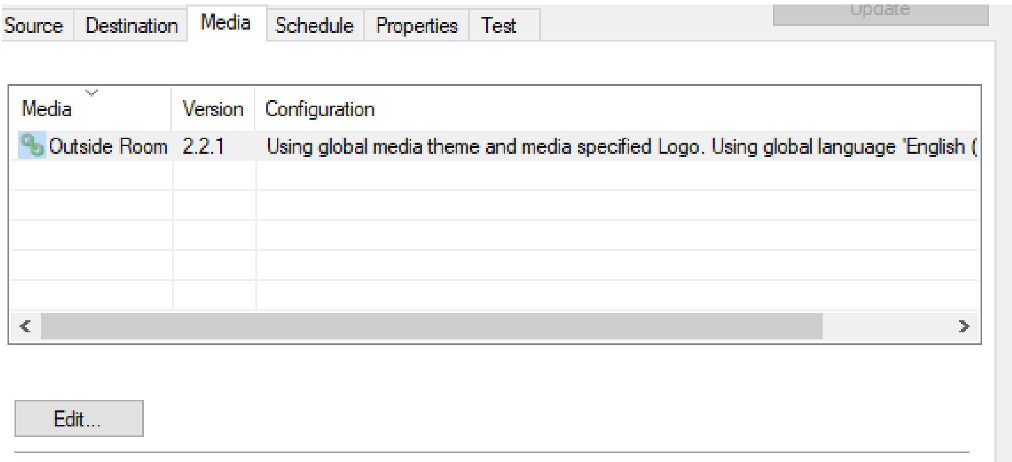
  Note: **Create appointment** must be enabled in the **Settings** table for this option to be available.
- **Change time in blocks of x minutes** specifies the resolution of the minutes selection in the media.
- **Allow booking up to x days in advance** specifies how far ahead appointments can be booked.

  Note: This property is also limited by the configured data source date range

4. Make a note of the **Media Web Server Address**. You need this information when installing and configuring room signs.



5. Select the **Media** tab.



6. Here you can configure the Reserva media by clicking **Edit...** See Customising Reserva Media for these steps. Also on this tab you will find the **Setting** table.

Setting	Media Version
☑ Appointments must be confirmed ☐ Appointments may be deleted/ended ☑ Appointments may be created ☑ Allow appointment end time to be changed ☑ Show settings action	All
☐ Show organiser	2.0 or newer
☐ Hide upcoming appointment detail Limit upcoming appointments to 7 days ☑ Enable Find Free Room ☐ Enable Room Resource Error Reporting ☐ Requires Authorisation	2.2 or newer
☑ Enable LED Status Lights (where present)	2.2.1 or newer

7. In the **Setting** table, select the options to enable on outside media configured for this Connection. This determines the features available to your end users. For example, to allow users to schedule their own appointments, select **Appointments may be created**.These options are applicable to outside room media; they are not applicable to room summary media.

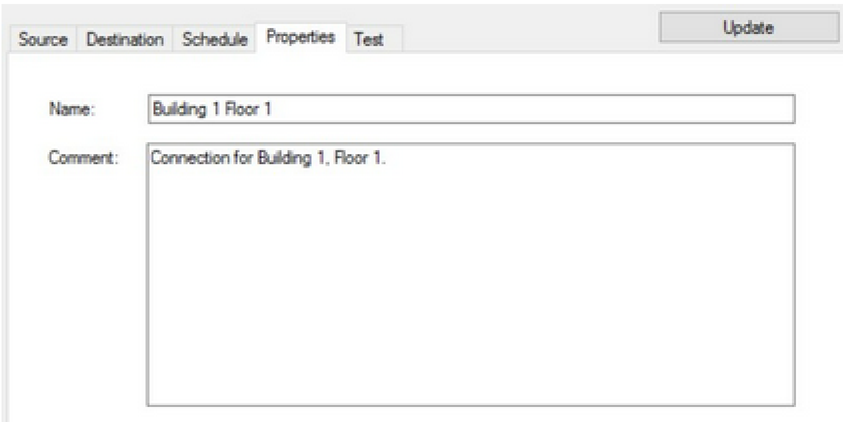
   Note: The **Media Version** column specifies the minimum media version required for the particular feature.

   - Enabled options are available to all users.
   - Enabling **Show Organiser** will allow for the name of whoever booked the meeting to be shown on the Reserva tablet. When Impersonation is used, the organiser will be shown as the Impersonate user.
   - Selecting **Hide upcoming appointment detail**) will hide upcoming booking information (the booking name and organiser name). Once an appointment starts, booking information will appear as normal.
   - You can also limit the number of days ahead of time that the Reserva will display upcoming appointments. For example, if you set **Limit upcoming appointments** to 1 days, the tablet will only show appointments for the current day and the day ahead.
   - **Enable Find Free Room** will only work when a Connection has more than 1 room associated with it.
   - **Enable Room Resources Error Reporting** allows for the reporting of faulty room resources. See room resources for more information.

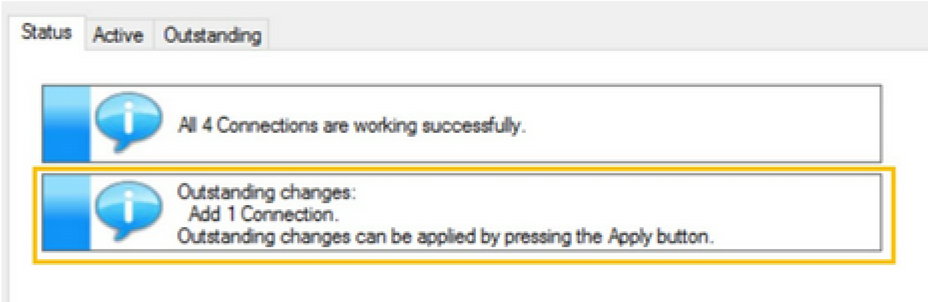
     Note: **Enable Room Resources Error Reporting** requires a licence to use. See Licensing for more information.

   - **Enable LED Status Lights (where present)** will allow LED status lights on the Reserva panel to indicate whether the room is busy or available.

8. Select the **Properties** tab and enter a name for your Connection.



9. To test the Connection, click on the **Test** tab and select **Test Query**. The log messages window shows the test tasks, status messages and test results. If necessary, address any issues and repeat the test to confirm the Connection test is successful.
10. Reserva regularly tests active Connections automatically. To view and, if necessary, change the test scheduling, select the **Schedule** tab and update timing as required.
11. Click **Update**. Close the Connection dialog.
12. Reserva Connection Manager shows the new Connection, ready to be added to the deployment.



13. Click **Apply** to add the new Connection, and apply any other pending changes.
14. The new Connection is shown in the list of Active Connections on the Active tab.

    Note: To view and modify a Connection, select the Connection in the Active list and click **View**. The Connection details appear.

Audit Log

A log of media actions requested by your RCM can be found in C:\ProgramData\ONELAN\Reserva\logs\media_audit.log

It is a simple list of JSON entries per line with date and method, connection ID (if applicable) and a copy of the request from the media. It contains all media actions such as booking creation, extension and cancellation.

4.3 Configuring Room Signs

This section explains how to configure your Reserva room signs. Topics include:

- Configure Reserva outside room media that runs on the room sign.
- Set the room sign time and date.
- Set the room sign time zone.
- Reconfigure room sign.

Configure Reserva Room Sign Media

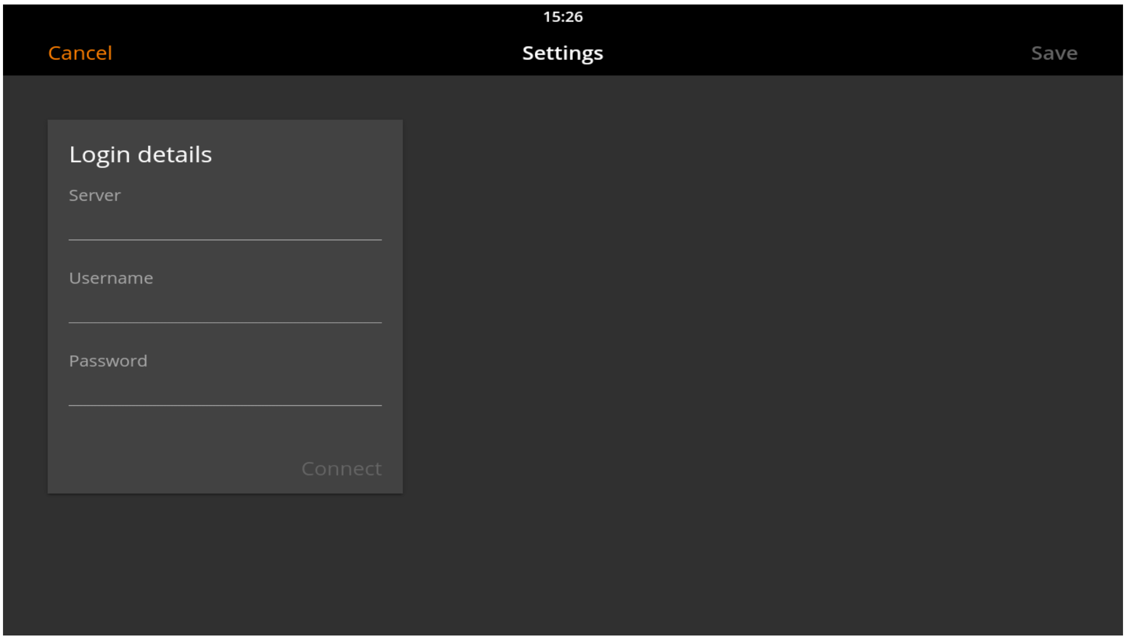
After setting up the required Connections you configure the outside room media on each room sign, for the appropriate Connection and room. Once configured, the room sign shows the relevant room information and options.

Each room sign is configured to display the information for a single room within your calendar system. To connect to a specific room, you specify the Connection and room.

To configure Reserva outside room media

1. Switch on the device and follow the onscreen instructions to:
    - Connect to the relevant network (to allow the room sign to communicate with Reserva Connection Manager).
    - Specify an Access Code. This code is required to access the device management features.
    - Ensure the room sign time and date is correct. The time and date should be correct. However, if you need to make any changes, see Set the Room Sign Date and Time.
2. You are prompted to provide the Reserva **Web Server Address**, **User Name** and **Password**.

    Note: You must ensure to include https:// in the server login pane in order to use the https protocol.



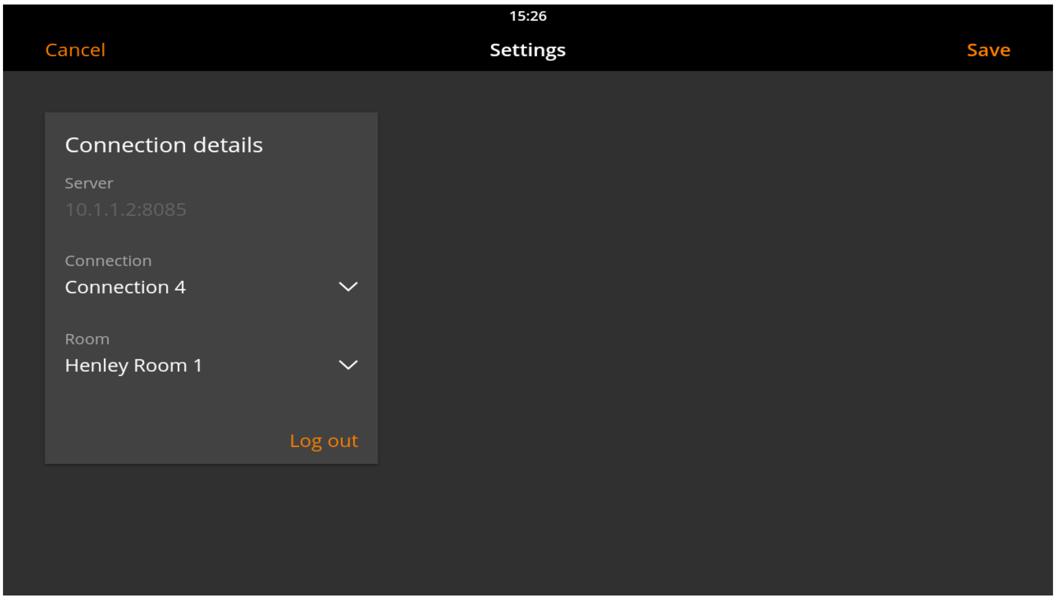
Reserva Web Server Address: the IP address or host name of the server running the Reserva Connection Manager.

Note: If you modified the Web Service default port (8080) you must append the relevant port number, for example '10.0.1.18:8081'.

User Name and Password: the user name and password specified in the Reserva Connection Manager for media Authentication.

Note: You can check these details using Reserva Connection Manager. See Specify Connection Settings.

3. Tap **Connect** to connect to the Reserva Connection Manager. The list of available Connections and Rooms appear.
4. Select the required Connection and, if applicable, Room:
   - To connect to a specific room within your calendar system: select the required **Connection** and **Room Name**. Tap **Save**.
   - To configure a summary for a number of rooms within your calendar system: select the required **Connection**. Tap **Save**.



5. This completes the initial setup. The room sign presents the room information and relevant/enabled options. For example, the availability of a specific room within your calendar system:

Set the Room Sign Date and Time

Reserva room signs automatically display the time and date for your time zone. You can override the date and time manually or using a Network Time Protocol (NTP) service. Both options are detailed below.

To change the time and date manually

1. Tap five times on the time and date, displayed in the top left corner of the screen.
2. At the prompt, enter the access code (as specified during the initial configuration) and tap **Unlock**. The Player Management Screen appears.
3. Tap **Support and Maintenance Menu**. The Support and Maintenance screen appears.
4. Tap **Show Android Settings**. The device settings options appear.
5. In the Systems section, tap **Date & Time**. Tap **Automatic date & time** to deselect the automatic date and time functionality. This allows you to specify your own settings.
6. To change the date, tap **Set Date**. The Set date dialog appears. Set the date and tap **Done** to apply the change.
7. To change the time, tap **Set Time**. The Set time dialog appears. Set the time and tap **Done** to apply the change.
8. Tap the **Back** button to return to the **Support and Maintenance page**.

To configure the room sign to synchronise and set the time based on the NTP protocol

1. Tap five times on the time and date, displayed in the top left corner of the screen.
2. At the prompt, enter the access code (as specified during the initial configuration) and tap **Unlock**. The Player Management screen appears.
3. Tap **Configuration**. The Configuration screen appears.
4. Tap **Enable NTP** (if not already enabled).
5. Tap **NTP Host**. The NTP Host dialog appears. Enter the NTP Host path and tap **OK**.
6. Tap **Done** to accept the change and return to the Player Management screen.

Set the Room Sign Time Zone

Reserva room signs automatically display the time and date for your time zone. If you need to change the time zone manually, follow this procedure:

To set the room sign time zone manually

1. Tap five times on the time and date, displayed in the top left corner of the screen.
2. At the prompt, enter the access code (as specified during the initial configuration) and tap **Unlock**. The Player Management screen appears.
3. Tap **Support and Maintenance Menu**. The Support and Maintenance screen appears.
4. Tap **Show Android Settings**. The device settings options appear.
5. In the systems section, tap **Date & Time**. Tap **Automatic time zone** to deselect the automatic date and time functionality. This allows you to specify your own settings.
6. To change the time zone, tap **Select time zone**. The list of time zones appears. Select the time zone you require.
7. Tap the **Back** button to return to the Support and Maintenance page.

Reconfigure Room Sign Media

A Reserva room sign can be reconfigured at any time, using the Settings option. For example, you may need to reconfigure the room sign to retrieve information for a different meeting room.

Note: If the Settings icon is not visible, you can enable the option. It is set per Connection. Navigate to the Destinations tab and select the **Show settings icon** option and apply the change. See Specify Connection Settings.

To view and update the room sign settings

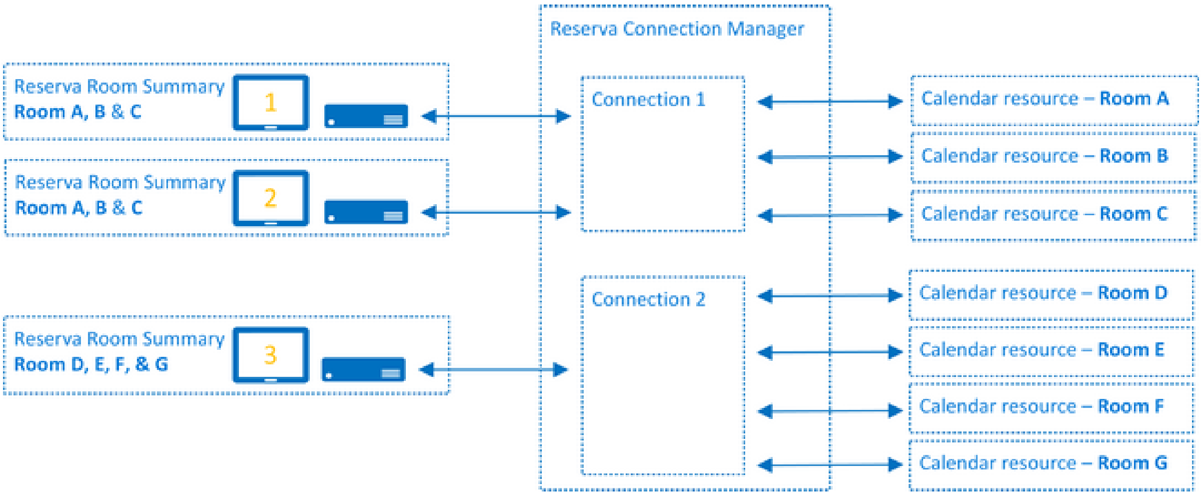
1. Tap the **Settings** icon. The Reserva Setup screen appears.
2. Specify the required details (for example, select a different Connection and Room Name).
3. Tap **Apply** to save the changes and return to the main screen.

4.4 Configuring Room Summary

This section explains how to configure Reserva room summary media on your NTB.

Reserva room summary media runs on your NTB and provides a summary of the appointments scheduled for the meeting rooms added to a specified Connection.

You configure each NTB to show a summary of appointments for all rooms added to a Connection. Your room summary display is configured for the required connection. In the example below, screens 1 and 2 show a summary of the appointments for room A, B and C (rooms added to Connection 1), and screen 3 shows a summary of the appointments for D, E, F and G (rooms added to Connection 2).



Reserva Room Summary Configuration

Room summary media and outside room media can share Connections. Where both room summary media and outside room media are served by the same Connection, the room summary media ignores the interactive feature settings (media actions, set per Connection). These settings are not relevant to room summary media.

Configure Reserva Room Summary Media

After setting up the required Connections, you configure the Reserva room summary media on your NTB. The room summary media shows a summary of the appointments for the rooms added to the Connection.

Note: For more information regarding your particular NTB model, features and configuration, please refer to the relevant NTB User Guide. This procedure assumes your NTB is set up already and describes how to configure Reserva room summary media only.

The procedure below explains how to configure the room summary media using the Layout Package available from ONELAN. This results in the room summary media displayed in full screen (in a single zone layout). However, if preferred, you can reconfigure the layout as a multi-zone layout. Please refer to your NTB User Guide for further details.

The NTB is configured to show a mix of media including Reserva room summary information. The NTB display is divided into zones and the recommended sizing for the zone configured to display Reserva room summary media is shown below:

Configuration of the room summary media includes the following tasks:

- Obtain Room Summary Media Layout Package.
- Check NTB Licence.
- Configure NTB XML Web Services.
- Install Room Summary Media Layout Package.
- Configure Room Summary Media.
- Configure NTB Schedule.

Obtain Room Summary Media Layout Package

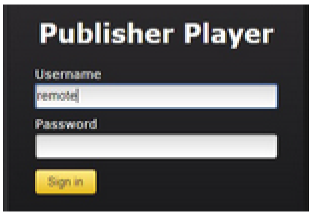
Before configuring the room summary media on your NTB, ensure you have the Reserva room summary media Layout Package. The Layout Package can be downloaded from https://reservaroomsigns.com/support/. The Layout Package is a single file containing all the media and control files needed to install the room summary media layout on your NTB. During configuration of your NTB, you upload the Layout Package file to the NTB.

Check NTB Licence

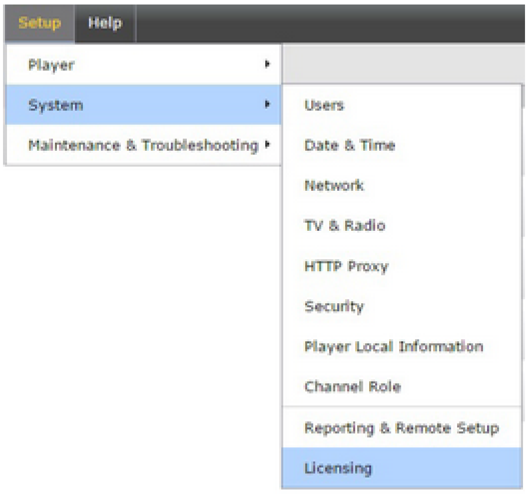
A licence is required to enable room summary media support. The licence may have been purchased and installed during the sales process. The procedure shows you how to check if your NTB includes the licence already.

To configure Reserva room summary media on your NTB

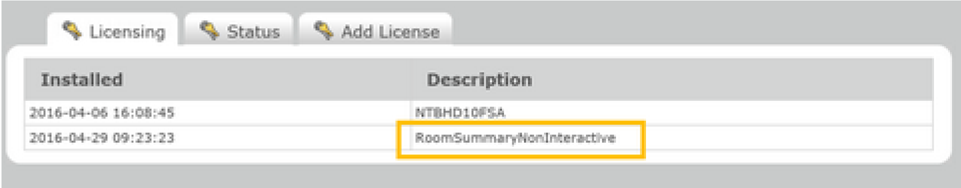
1. Log on to your NTB.



2. To check if your NTB is licensed to run the room summary media, select **Setup** > **System** > **Licensing**.



The Licensing screen appears.



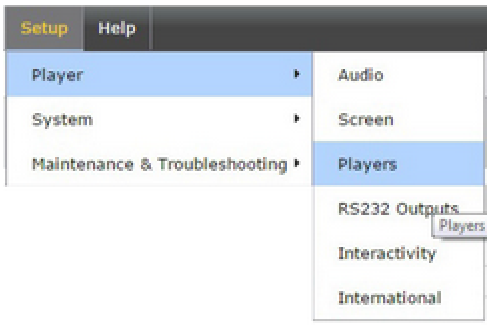
- If 'RoomSummaryNonInteractive' appears in the list of licences, the NTB is licensed to run room summary media and no further licensing is required. Continue to Step 3.
- If 'RoomSummaryNonInteractive' is not on the list, you must obtain and apply a room summary licence. For more information see License NTB for Room Summary Media (then return to this procedure to complete the room summary media configuration).

Configure NTB Player XML Web Services

You must configure the NTB Player to allow XML web services to external sites, to allow the room summary media to retrieve the room summary information from Reserva Connection Manager.

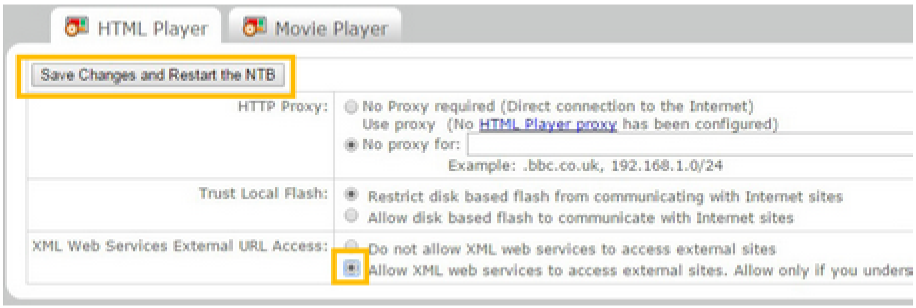
To configure the NTB Player XML web services:

1. Select **Setup** > **Player** > **Players**.



2. Ensure **Allow XML web services to access external sites** is selected. Click **Save Changes**

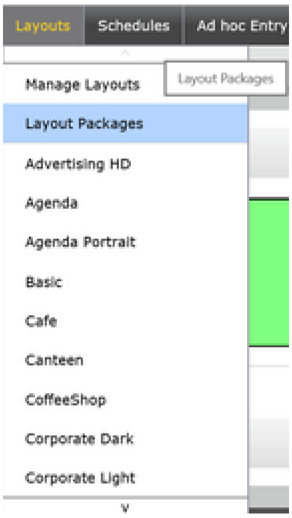
and restart the NTB.



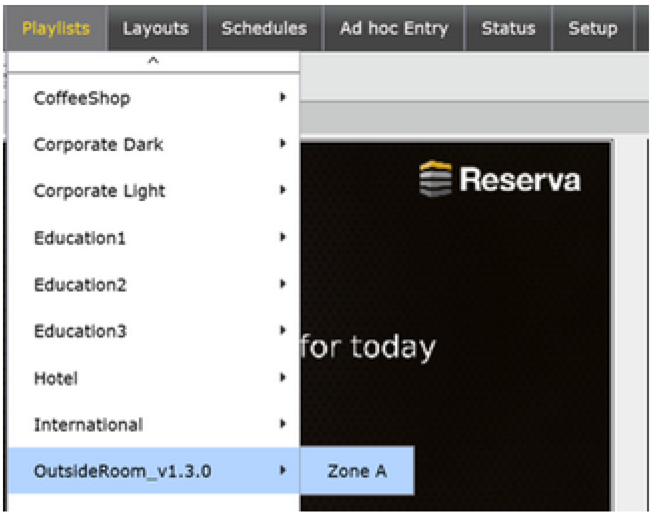
Install Room Summary Media Layout Package

To install the Reserva room summary media layout package:

1. To upload the Layout Package file, select **Layouts** > **Layout Packages**.



2. Click **Browse** and select the Reserva room summary layout package. Click **Upload**.
3. Select **Playlists** > **Layout** > **Zone**.

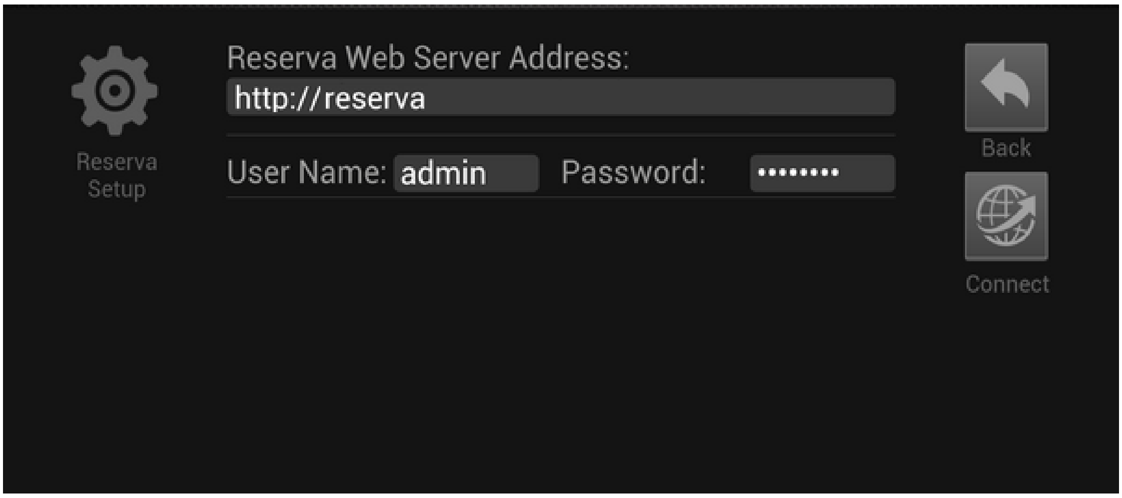


4. Click index.html link to open the Reserva configuration page.

Configure Room Summary Media

To configure the Reserva room summary media for the required Connection.

1. Enter the Reserva **Web Service Address, User Name** and **Password**.

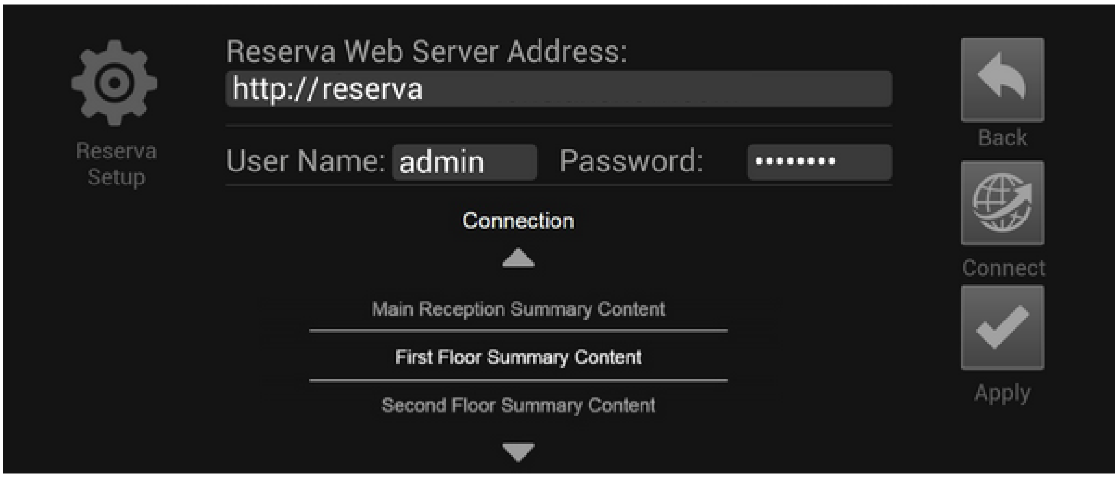


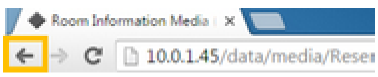
Reserva Web Server Address: the IP address or host name of the server running the Reserva Connection Manager.

User Name and Password: the user name and password specified in Reserva Connection Manager for Media Authentication.

Note: You can check these details using Reserva Connection Manager. See Specify Connection Settings.

2. Click **Connect** to connect to the Reserva Connection Manager. The list of available Connections appears.
3. Select the required Connection. Click **Apply**.



4. Click the browser **Back** button. For example: 

Reserva Room Signage

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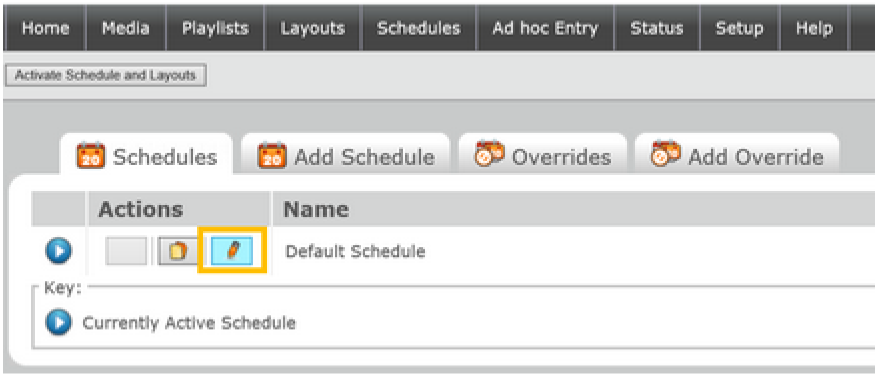
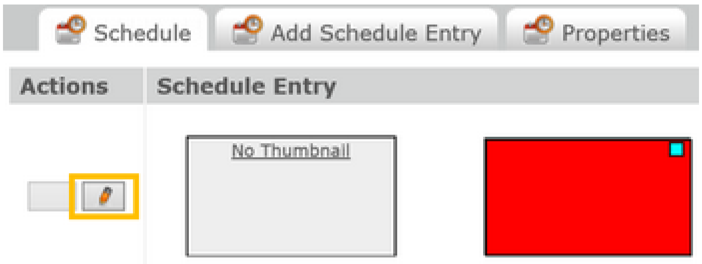
Configure NTB Schedule

To complete the configuration, you add the new Layout to a schedule and activate the schedule. The schedule determines the layout to display and the specific times and dates for the schedule. For more information regarding schedules and layouts, refer to your NTB User Guide or online help. In the steps below, a room summary layout is added to the default schedule.

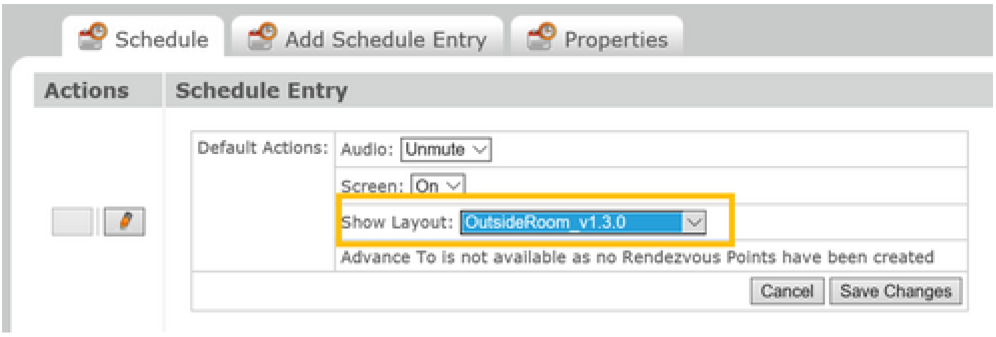
1. Select **Schedules** > **Manage Schedules**.
2. Click the **Edit** option for the Default Schedule.



3. Click the **Edit** button.



4. From the Show Layout menu, select the Layout and click **Save Changes**.



5. Click **Activate Schedules and Layouts** to apply the changes. 

This completes the room summary media configuration. The NTB presents a summary of the appointments for the rooms added to the Connection.

Meetings schedules as 'all day' meetings appear at the top of the list, followed by all other individual meetings. Meetings are shown in order, according to the scheduled start time for each appointment.

License NTB for Room Summary Media

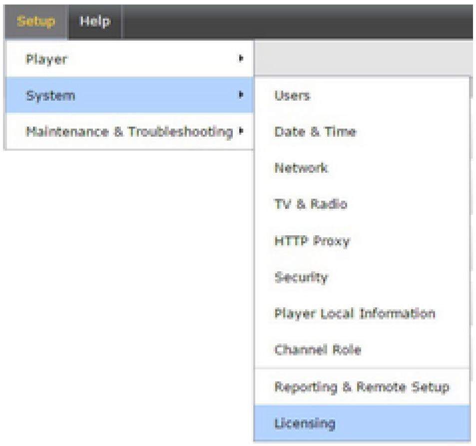
A licence is required to allow your NTB to run the room summary media. The licence may have been purchased and installed during the sales process. If so, no additional licensing steps are required. However, if the licence is not installed, you must obtain and add the license.

This topic explains how to:

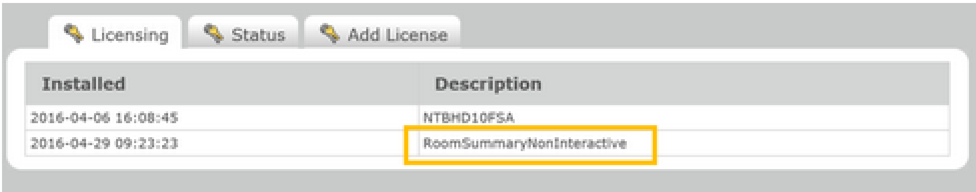
- Check if a room summary licence is installed on your NTB.
- License your NTB for room summary report.

To check if your NTB is licensed to run the room summary media:

1. Select **Setup** > **System** > **Licensing**.



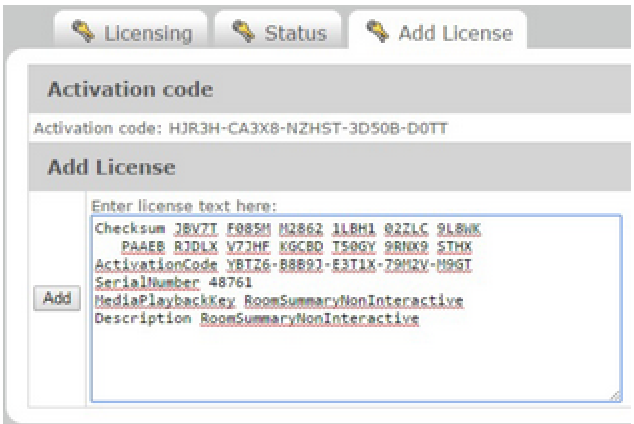
- If 'RoomSummaryMediaNonInteractive' appears, the NTB is licensed to run room summary media and no action is required.



- If 'RoomSummaryMediaNonInteractive' is not on the list, you must obtain and apply a room summary licence as shown below.

To add a licence for room summary

1. Contact ONELAN to request a room summary licence for your NTB. You must provide your NTB serial number and request a room summary media licence.
2. On receipt of your license details, add the licence. Click **Add Licence** and copy and paste the licence into the text box. Click **Add**.



3. Reboot your NTB.

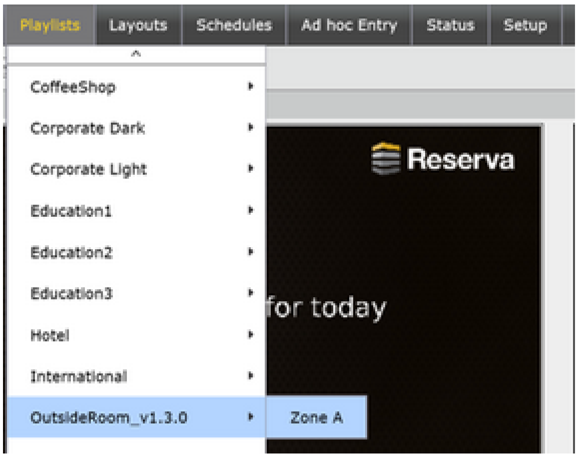
This completes the room summary media licensing. You can now configure your NTB room summary media. See Configure Reserva Room Summary Media.

Reconfigure Room Summary Media

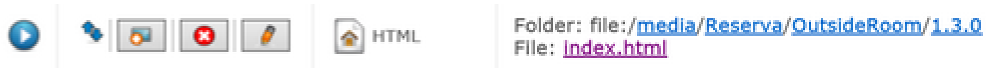
Reserva room summary media can be reconfigured at any time. For example, you may need to reconfigure the room summary media to retrieve summary information for rooms on a different Connection.

To reconfigure room summary media

1. Log on to your NTB and select **Playlists** > **Layout** > **Zone**.



2. The Reserva zone playlist window appears.



3. Click the index.html to open the Reserva configuration page.
4. Modify the Configure Room Summary Media. For more information regarding the configuration options, see Configure Reserva Room Summary Media.

4.5 Customising Reserva Media

This section explains how to customise Reserva outside room media and room summary media.

Reserva media can be customised to complement your branding and environment. For example, you can upload a logo of your choice and set a dark or light theme. You can also specify the display language.

You customise outside room media and room summary media separately. This gives you the flexibility to configure different branding for outside room media and room summary media, as required.

Note: If your deployment includes a mix of media versions, you configure the theme settings per version too. For example, some room signs are running outside room media version 'x' and others are running version 'y', you configure the theme for each version separately.

You set the options globally, for outside media and for room summary media. You can also override the global settings on a per Connection basis, allowing you to specify different options for different locations for example.

Customisation options

- Theme: you can set the theme to dark or light.
- Logo: you can use the default logo, specify your own logo or remove the logo.
- Language: you also specify the language settings.

Configure Reserva Media Themes

You can customise the theme for outside room media and room summary media. You can select a light or dark theme, to match your design and branding.

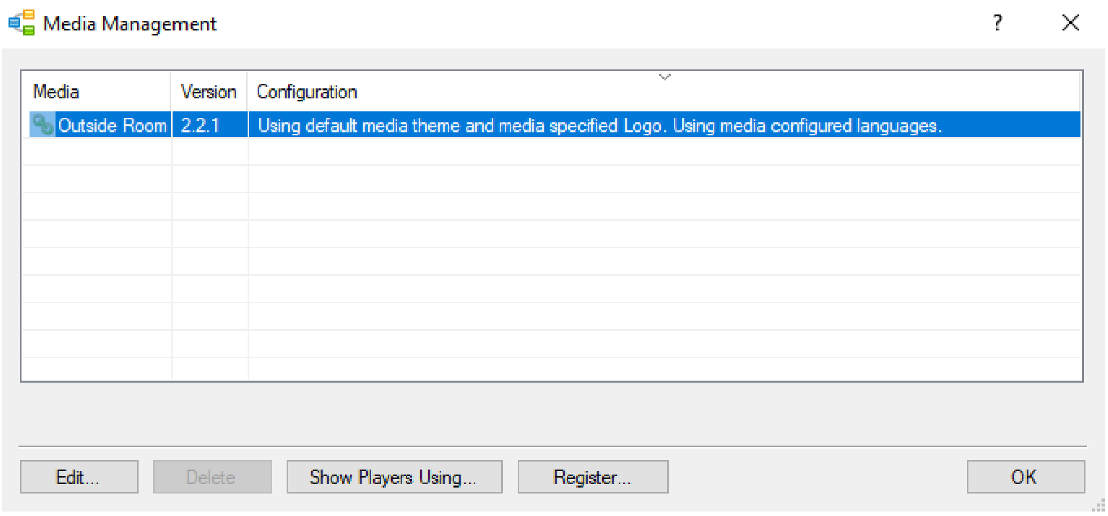
Note: Theme changes are configured separately for Outside Room Media and Room Summary Media.

Theme settings are set globally, for outside media and for room summary media. You can also override the global settings on a per Connection basis.

If your deployment includes a mix of media versions, then each one will need to be configured individually.

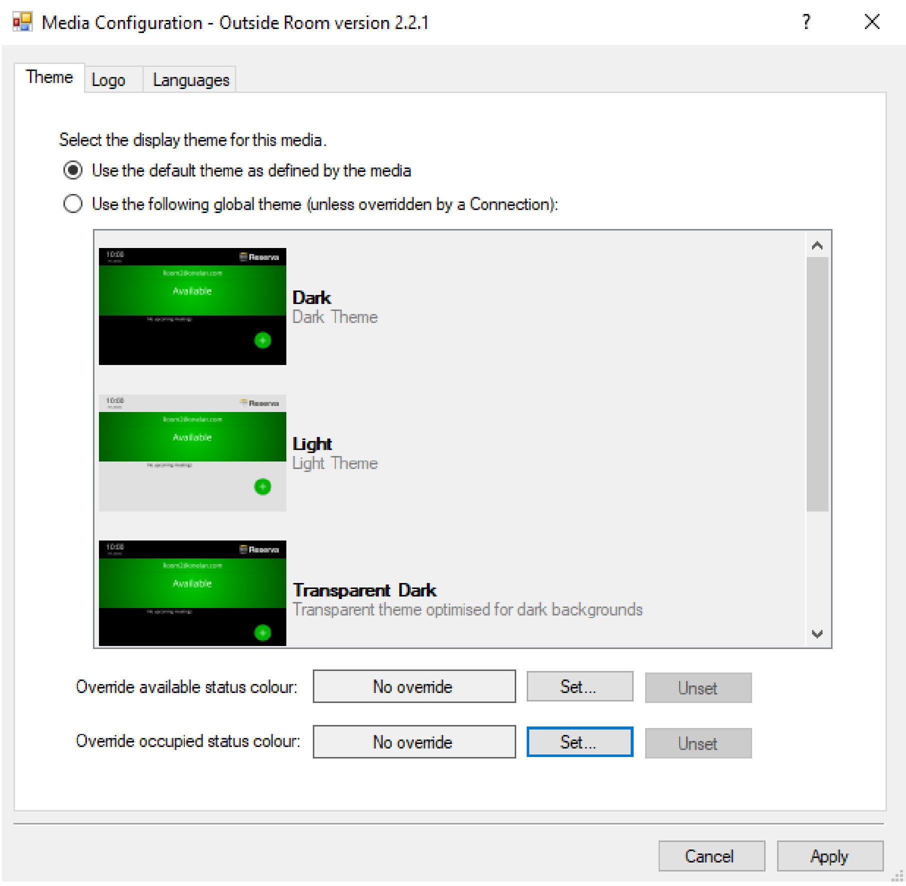
To configure Reserva media theme (global setting)

1. From the Reserva Connection Manager window, select **Manage** > **Media**. The Media Management dialog appears.

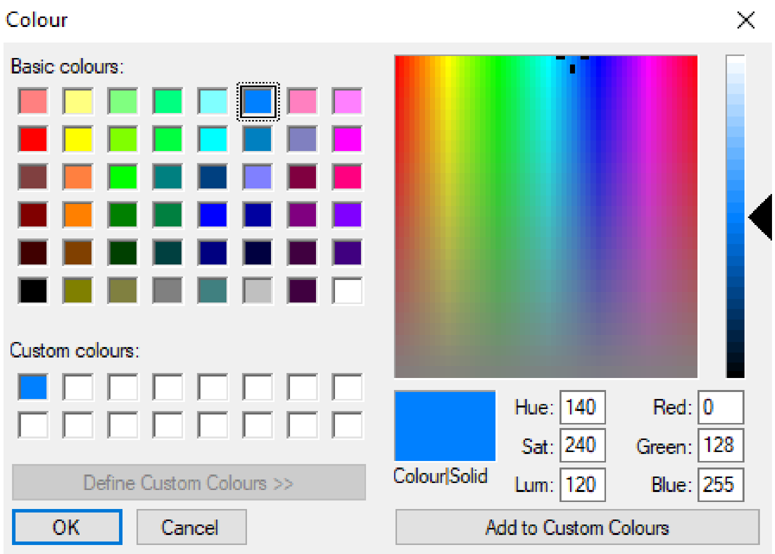


   Note: Reserva Connection Manager retrieves media configuration details when the media connects. In the example above, media configuration details have been retrieved from outside room media (version 2.2.1).

2. Select the media to configure (Outside Room or Room Summary) and click **Edit**. Alternatively, double-click the media to configure. The Media Configuration dialog appears with the Theme tab selected.



3. Select one of the following:
   - **Use the default theme as defined by the media.** This defaults to the theme settings as set on the device.
   - **Use the following global theme (unless overridden by a Connection).** You can specify a dark theme, a light theme, a transparent dark (a transparent theme optimised for dark background) or a transparent light theme (a transparent theme optimised for light backgrounds).
     - Alternatively, you can override the status colours displayed by the media for available or occupied (this option is only available in media versions 2.2.1 and newer)
     - **Override available status colour**: this property changes the colour of Outside Room Media when a room is available.
     - **Override occupied status colour:** this property changes the colour of Outside Room Media when a room is busy or occupied.
       - To set a custom colour, click **Set...** and select the desired colour.



- Once set, your Reserva Room displays will show the overriding colours selected. You may want to test the display to ensure that text is still readable with your selected status colour.

4. Click **Apply**. Click **Yes** to confirm and return to the Media Configuration dialog.
5. Click **OK** to close the dialog and accept the changes.

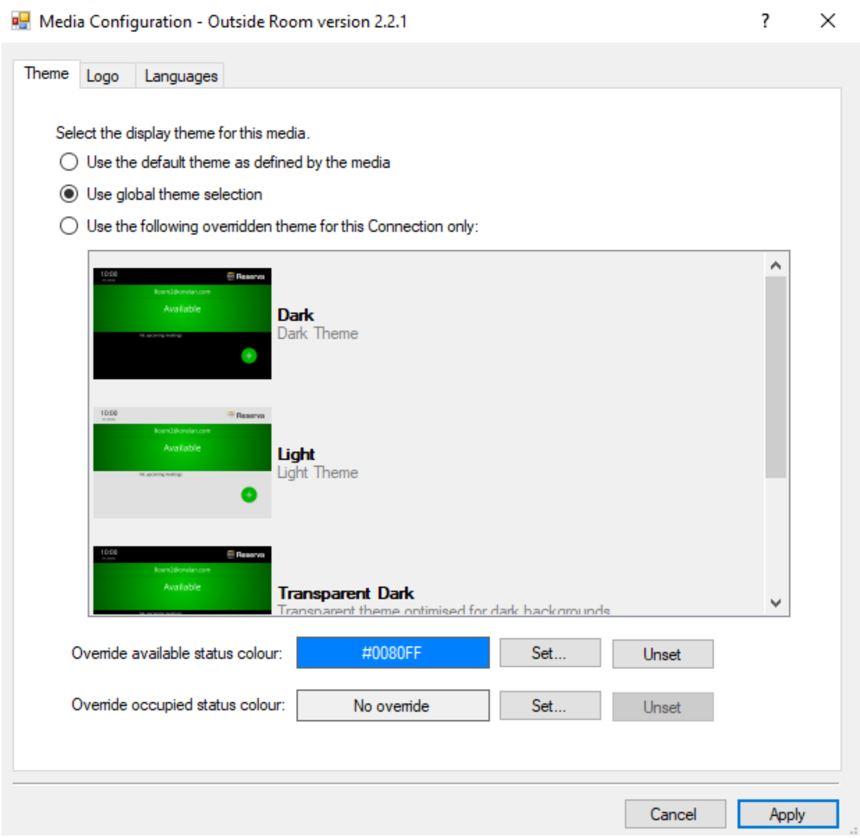
The theme settings are applied the next time the device polls the Web Service (typically within a few minutes). This is the global setting, applied to media of the same type and version.

You set the theme for each media type (room summary and room sign) and each version.

You can override the global theme setting per Connection as detailed below.

To configure Reserva media theme per Connection

The procedure to configure the media theme setting for a Connection is very similar to setting a global theme. The only difference is the theme selection options:



- **Use the default theme as defined by the media.** This defaults to the theme settings as set on the device.
- **Use global theme selection**. This defaults to the global theme selection.
- **Use the following overridden theme for the Connection only**. You can specify a light, dark, transparent light or transparent dark theme for the Connection. You can also customic the available and occupied status colours for the Outside Room Media that is connected to your selected Connection.

To override the theme setting for the selected Connection, select **Use the following overridden theme for the Connection only** and select the theme.

The theme settings are applied for the selected Connection and applicable to media of the same type and version.

Configure Reserva Media Logo

You can customise the logo options for outside room media and room summary media. You can use the default logo, upload your own logo or remove the logo from the design.

Note: You can customise the media separately for outside room media and room summary media.

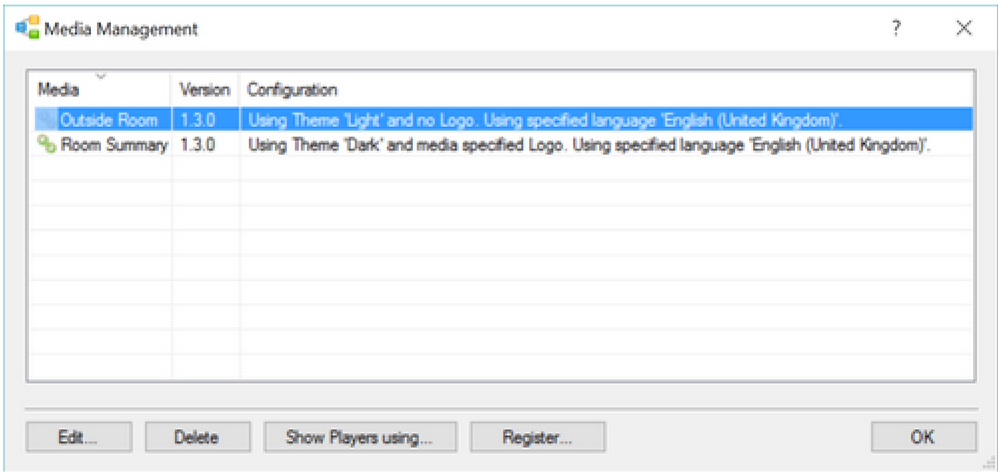
If you upload your own logo, the recommended logo size is: width 450 pixels, height 100 pixels.

Logo settings are set globally, for outside media and for room summary media. You can also override the global settings on a per Connection basis.

If your deployment includes a mix of media versions, you configure the logo settings per version too.

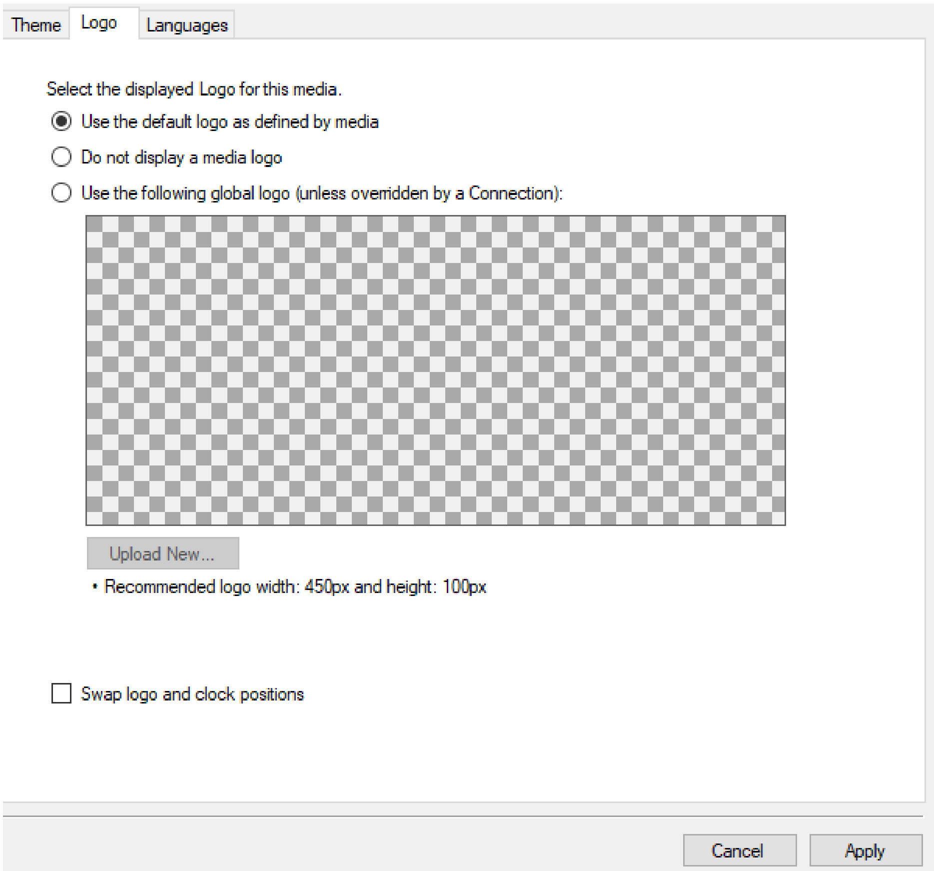
To configure Reserva media logo (global setting)

1. From the Reserva Connection Manager Manage menu, select **Media**. The Media Management dialog appears.



Note: Reserva Connection Manager retrieves media configuration details when the media connects. In the example above, media configuration details have been retrieved from outside room media (version 1.3.0) and room summary media (1.3.0).

2. Select the media to configure (Outside Room or Room Summary) and click **Edit**. Alternatively, double-click the media to configure. The Media Configuration dialog appears, with the Theme tab selected.
3. Select the **Logo** tab.



4. Select one of the following:
   - **Use the default logo as defined by media.** This defaults to the theme settings as set on the device.

- **Do not display a media logo**. Remove the logo from the design.
- **Use the following global logo (unless overridden by a Connection)**. To use your own logo, click **Use the following global logo (unless overridden by a Connection)**. Click **Upload New** and select your logo.

5. There is also the option **Swap logo and clock positions**. Ticking the box will swap the logo and clock positions from the default (logo on the right-hand side of the display).

   Note: This option is only supported on Room Media version 2.2.1 and newer.
6. Click **Apply**. Click **Yes** to confirm and return to the Media Configuration dialog.
7. Click **OK** to close the dialog and accept the changes.

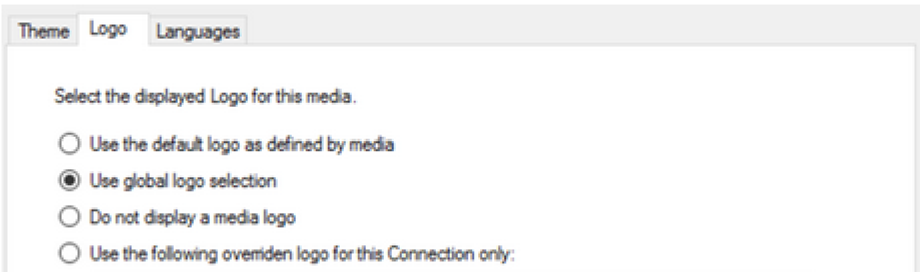
The logo settings are applied the next time the device is polled (typically within a few minutes). This is the global setting, applied to media of the same type and version.

You set the logo for each media type (room summary and room sign) and each version. You configure the logo per type and version.

You can override the global logo setting per Connection as detailed below.

To specify the logo for a Connection

The procedure to configure the logo for a Connection is very similar to setting a global logo. The only difference is the logo selection options:



- **Use the default logo as defined by the media.** This defaults to the theme settings as set on the device.
- **Use global logo selection**. Use the logo defined globally.
- **Do not display a media logo.** Remove the logo from the design.
- **Use the following overridden logo for this Connection only.** Specify a logo for this Connection.

To specify a logo for the selected Connection, select **Use the following overridden theme for this Connection only** and upload and apply a logo of your choice, as described above.

The logo settings are applied for the selected Connection, applied to media of the same time and version. It is also possible to swap the positions of the logo and clock per Connection by ticking **Swap logo and clock positions**.

You set the logo for each media type (room summary and room sign) for each version.

Configure Reserva Media Language

You can customise the language options for outside room media and room summary media.

Note: You customise the media separately for outside room media and room summary media.

You can set the following language options:

- **Available display language**: the language for the 'home' screen on both outside room media and room summary media. If more than one language is selected, the media cycles though each environment where you have a need to display the Reserva media is a selection of languages. For example, a room summary display in a foyer could be customised to display the room summary information in English and Japanese.
- **Default display language**: the language for the set up screen for room summary media and the set up and book appointment screen for outside room media. However, if additional Available display languages are set, they can be selected using the language menu that appears on the set up and book appointment screens.

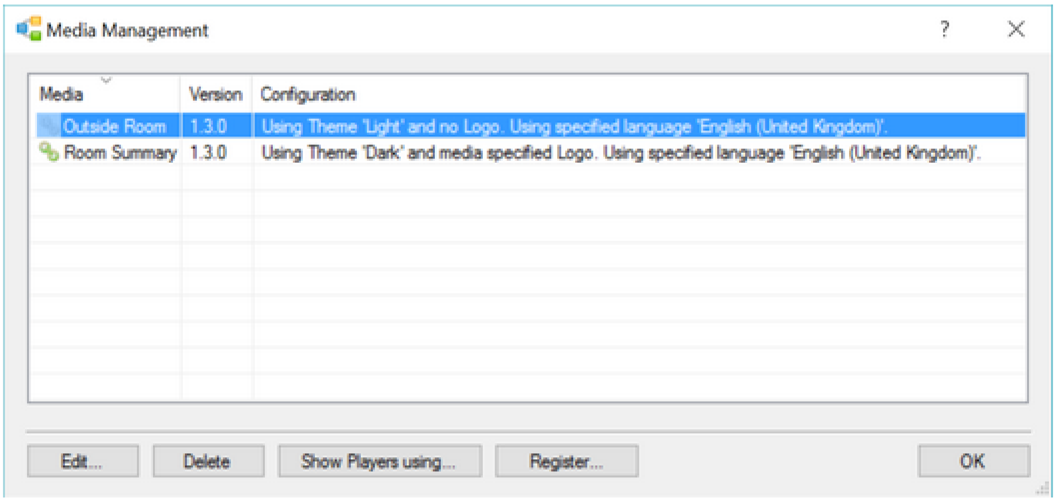
Language options

Language settings are set globally, for outside media and for room summary media. You can also override the global settings on a per Connection basis.

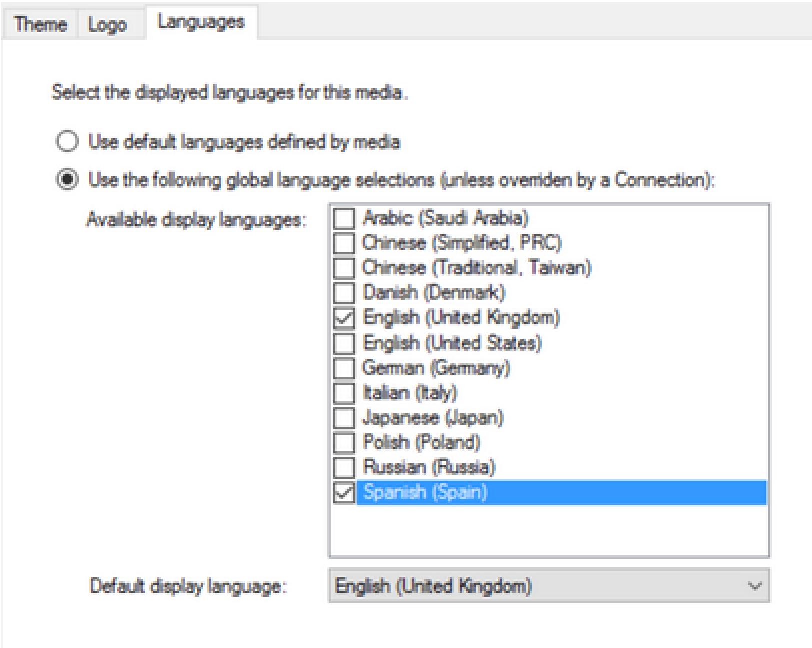
Note: If your deployment includes a mix of media versions, you configure the language settings per version too.

To configure Reserva media language (global setting)

1. From the Reserva Connection Manager Manage menu, select Media. The Media Management dialog appears.



2. Select the media to configure (Outside Room or Room Summary) and click Edit. Alternatively, double-click the media to configure. The Media Configuration dialog appears with the Languages tab selected.
3. Select the **Language** tab.



4. Select your language options:
   - Use default languages defined by the media. To use the language settings as set on the device.
   - Use the following global language selections (unless overridden by a Connection). This allows you to set the global language settings for all media, unless overridden on a per Connection basis. You can set Available display languages and a Default display language.

   Available display language: language for the home screen. If you select more than one display language, the media cycles through the languages.

   Default display language: language for the setup screen for room summary media and the setup and book appointment screens for outside room media. If additional Available display languages are set too, they can be selected using the language menu that appears on the setup and book appointment screens.
5. Click **Apply**. Click Yes to confirm and return to the Media Configuration dialog.

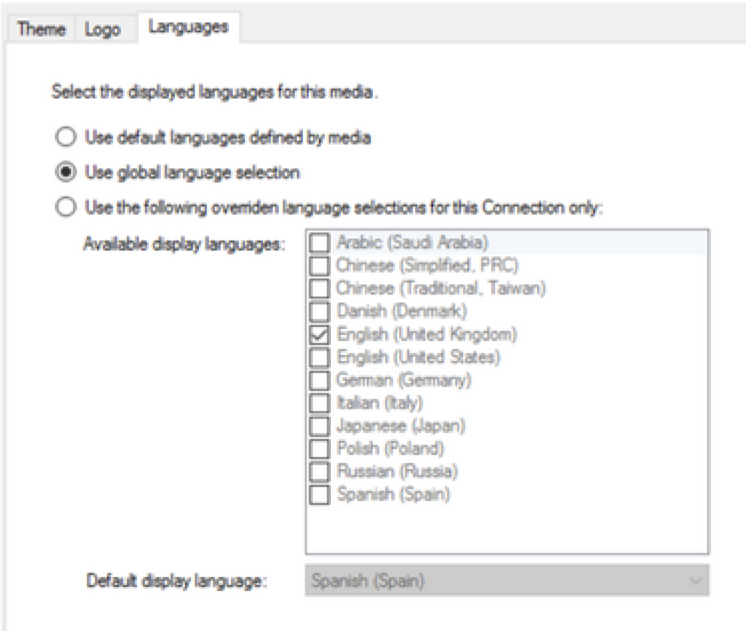
6. Click **OK** to close the dialog and accept the changes.

The language settings are applied the next time the device is polled (typically within a few minutes). This is the global setting, applied to media of the same type and version.

You can override the global language setting per Connection as detailed below.

To specify language settings for a Connection

The procedure to configure language settings for a Connection is very similar to setting the global language settings. The only difference is the language selection options:



- Use the default languages defined by the media. Use the language settings as set on the device.
- Use the global language selection. Use global language settings (as set above).
- Use the following overridden language settings for the Connection only. Set language settings for the selected Connection. You can set Available display languages and Default display language.

  Available display languages: language for the home screen. If you select more than one display language, the media cycles through the languages.

  Default display language: language for the setup screen room summary media and setup screen and book appointment screen for outside room media. If additional Available display languages are set too they can be selected using the language menu that appears on the setup and book appointment screens.

To override the language settings for the selected Connection, select **Use the following overridden language selections for the Connection only** and specify the required language settings.

The language settings are applied for the selected Connection, applied to media of the same type and version.

You set the language for each media type (room summary and room sign) and each version.

Part V

Managing Reserva

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5 Managing Reserva

This section explains how to manage and monitor your Reserva deployment. It covers:

- Managing Reserva Connections.
- Managing Reserva Media and Players.

5.1 Managing Reserva Connections

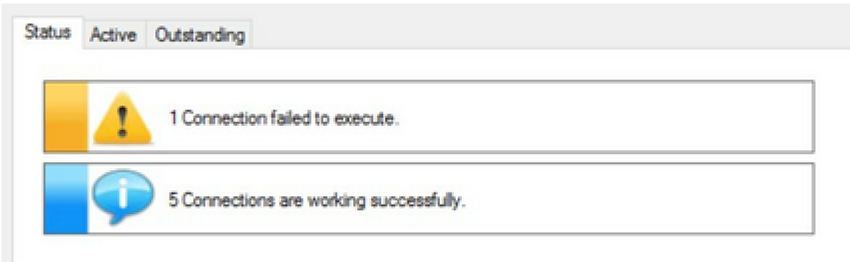
Reserva Connection Manager provides a summary of your deployment and allows you to monitor and manage Connections.

This section covers the following:

- The status page where you can view the status of your deployment.
- Monitoring active Connections.
- Managing active Connections.
- Reviewing and applying updates to Connections.
- Viewing Connection status messages.

Status Page

The Status page provides a summary of your deployment, showing active Connections plus any pending updates and error messages. An example is shown below:



In this example, there is a problem with one Connection and five Connections are active without any issues. No updates are pending.

Please ensure that anti-virus and firewall software is set to allow the Reserva room signs to communicate with the Reserva Web Service. An error is reported if Reserva Connection Manager identifies an issue when attempting to open an IP socket on the local host to determine the live service status.

Monitoring Connections

The Active page shows the status and details for all active Connections.

Reserva Connection Manager executes (tests) active Connections regularly and provides a summary. The summary table includes the following details:

- **Status** - one of the following:

	Connection live with no issues
	Connection failed to execute. The reason for the failure is shown in the Last Status column.
	Connection status unknown. Reserva Connection Manager is unable to obtain the status from the ONELAN Reserva service.
	New Connection. This Connection is ready to be made active.

- **Name** - Connection name. The name is specified on the Connection Properties tab.
- **Type** - the Calendar system used. For example, Exchange.
- **Last Execute Time/Next Executive Time** - the most recent Connection test and the next scheduled Connection test.
- **Last Status Message** - description to accompany the most recent test. An asterisk indicates that changes were applied to the Connection since the test.
- **Comment** - a Connection comment. Additional text to accompany the Connection Name as specified on the Connection Properties tab.

You can reorder columns by dragging and dropping as required. You can also sort details alphabetically by clicking on the appropriate column title.

To view a log of detailed status messages for a Connection, select the required Connection in the table and select **View Status Messages** from the **Connection** menu. Alternatively, you can right-click on the required Connection and select **View Status Messages**.

Managing Active Connections

The following options are available on the Active page.

Note: Outstanding actions are applied when you click **Apply**. This allows you to apply the changes when convenient and to avoid disruption to active Connections.

Create a New Connection

Click the Create New button to add a new Connection. The Reserva Connection Editor dialog appears. Specify the Connection details and properties (for more information, see Create New Connection). Once you have entered the new Connection details and saved the changes, the Connection is ready to be added to your deployment. Click **Apply** to make the Connection active.

Add an Existing Connection File

You can add a new Connection to your deployment using an existing Connection file. From the **Connection** menu, select **Add Existing**. Select the required file and click OK. The Connection is ready to be added to your deployment. Click **Apply** to make the Connection active.

Remove an Active Connection

To remove an active Connection, select the Connection and click **Remove**. The Connection is ready to be removed. On the **Outstanding Actions** page, click **Apply** to remove the Connection.

View or modify an Active Connection

To view or modify an Active Connection, select the Connection and click **View**. The Reserva Connection Editor appears. After you have made and saved changes, the Connection is ready to be modified. On the **Outstanding Actions** page, click **Apply** to make the changes.

Undo Changes

You can undo pending changes. Pending actions are shown on the Outstanding and Active page. Select the required update and click **Undo**.

Apply Changes

To apply all outstanding actions, click **Apply**. This restarts the Connection service and applies all outstanding changes.

Viewing Connection Status Messages

If an active Connection is not working as expected, you can view status messages for the Connection. Select the connection on the Active page and from the Connection menu, click **View Status Messages**. The Status messages dialog appears as shown:

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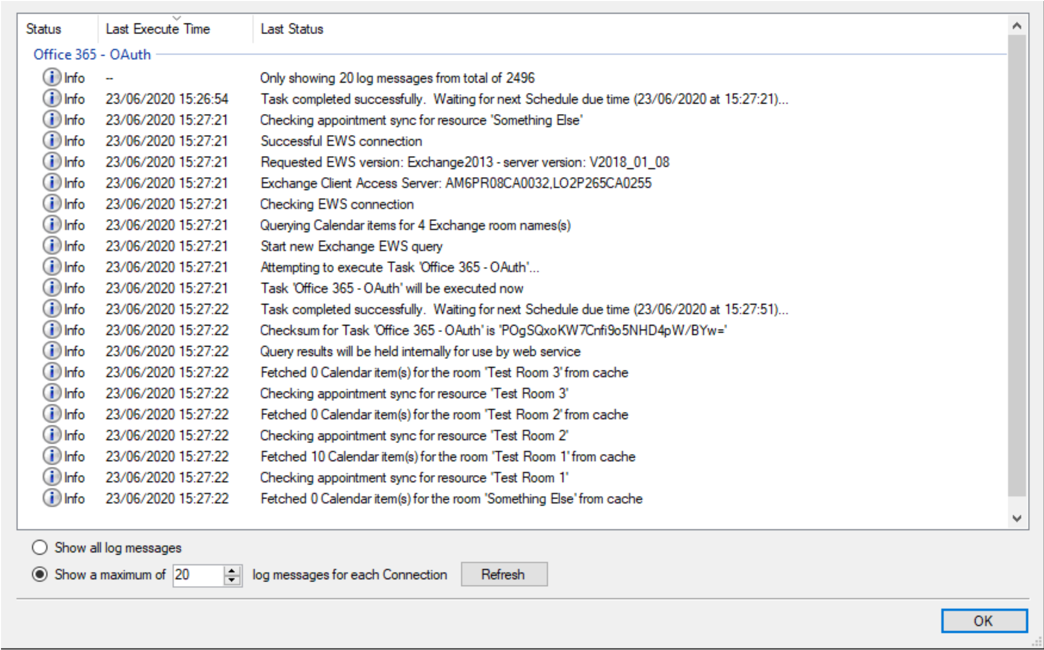
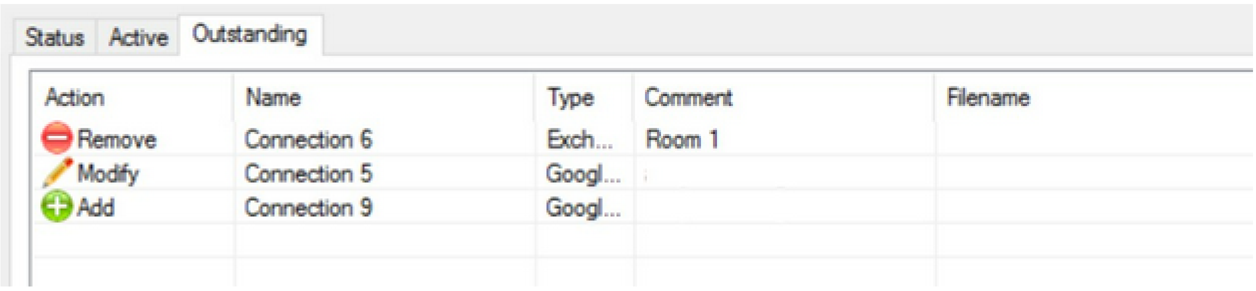


Reviewing and Applying Updates to Connections

All pending changes are shown on the Outstanding page. To apply all outstanding actions, click Apply. This restarts the Connection service and applies all outstanding changes. A summary of outstanding actions is also shown on the Status page.

The below example shows the actions that may appear on the Outstanding page:



Outstanding Updates

They are:

- **Add** - new connection be made active.
- **Modify** - updates to Connection to be applied.
- **Remove** - Connection to be removed.

To apply the changes, click **Apply**.

Note: Before applying pending changes, you can review and amend changes as detailed below.

Add

To make the Connection active, click **Apply**.

Note: Before making the new Connection active, you can review the details and, if necessary, make further changes. To view the details, select the Connection and click View. The Reserva Connection Editor dialog appears, showing the details for the new Connection. You can make further changes as required.

If you no longer need the new Connection, select the relevant Connection and click **Undo Add**. This removes the Connection.

Note: If you undo a new Connection that you added using a Connection file, this Connection file is not deleted.

Modify

Updates to the Connection are applied on selection of **Apply**.

Note: Before applying the changes, you can view the details and, if necessary, cancel the change.

To view the details, select the Connection and click View. The Connection Editor dialog appears showing the details for the Connection. You can make further changes as required.

To cancel updates to the Connection, select the required Connection and click **Undo Changes**.

Remove

To remove a Connection, click Remove.

Note: If you change your mind and decide to keep the Connection, select the Connection and click **Undo Remove**.

5.2 Managing Reserva Media and Players

This section explains how to manage Reserva media and players (room signs and room summary displays) using the media.

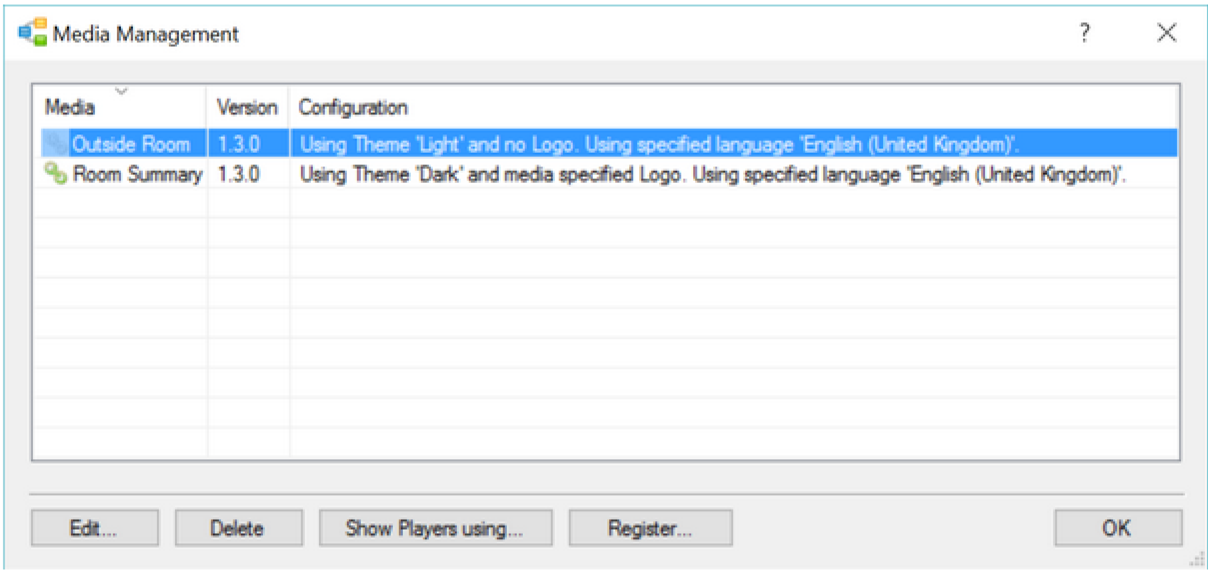
Managing Reserva Media

Managing Reserva Media Players

Managing Reserva Media

Reserva media can be customised, including theme (dark or light), logo (use the default, upload your own logo or remove the logo) and language options. The media management options allow you to view and manage the Reserva media configurations.

To view the Media Management dialog, select **Manage** > **Media**.



Note: Reserva Connection Manger retrieves media configuration details when the media connects. In the example above, media configuration details have been retrieved from outside room media (version 1.3.0) and room summary media (1.3.0).

The dialog details the following:

- **Media**: the media is managed separately for outside room media (room signs) and room summary media.

indicates the media is being used. indicates the media is not in use.

- **Version**: media version is shown. If your deployment includes a mix of some media versions, you configure the theme settings per version too. For example, some room signs are running outside room media version 'x' and others are running version 'y', you configure the theme for each version separately.
- **Configuration**: this provides a summary of the configuration including theme, logo and language settings.

Modify Media Configuration

To modify media, select the media to configure (outside room or room summary) and click **Edit**. Alternatively, double-click the media to configure. The Media Configuration dialog appears. You can modify the theme, logo and language settings as required. For more information, see Customising Reserva Media .

View Players using Media

To view a list of the players (room signs and room summary displays) using a media configuration, select the media option (outside room or room summary) and click **Show Players using**. A list of the players using the selected media appears. The dialog includes the following information:

- **Serial:** the serial number of the devices (room sign or NTB) using the media.
- **Media:** the media type (outside room media (room signs) or room summary media).
- **Theme:** the theme (dark or light).
- **Last seen:** the date and time the media on the device polled the Web Service.
- **Status:** the status of the media which is either up to date or pending changes.
- **Connection:** the Connection the device is using.
- **Resource:** the calendar resource - for example, Room 1. This is applicable to outside room media only (not applicable to room summary media).
- **Start time:** the date and time the device was powered up (since the last report).
- **Up time:** the time since the device last booted to the last time it polled the Web Service.

Remove Media Configuration

You can remove a media configuration that is no longer required or used. This allows you to ensure you only maintain media configurations that are current relevant, simplifying management of your media. To remove a media configuration, select **Manage** > **Media**, then select the media to remove and click **Delete**.

If the media is in use by one or more players the Delete option will be unavailable and these players will need to be removed from the media first. In the same window click **Show Players Using** to display players using the selected media. Select one or more players and click Remove or right click and select **Remove**.

Note: You may have to shut down the players or shut down the service to be able to remove them if they are active. Otherwise, they will reappear.

Register Media Configuration

1.3. or later media will automatically register their supported media once they have contacted the server. It is possible to also manually register media by selecting **Manage** > **Media** and clicking on Register. You will need a media registration file for this which would typically be supplied by ONELAN. This option is provided for future use to updated or provide custom media registration files without the need for a media release.

To register a media configuration, select the required media and click **Register**.

Managing Reserva Media Players

Reserva supports two types of media and device pairings:

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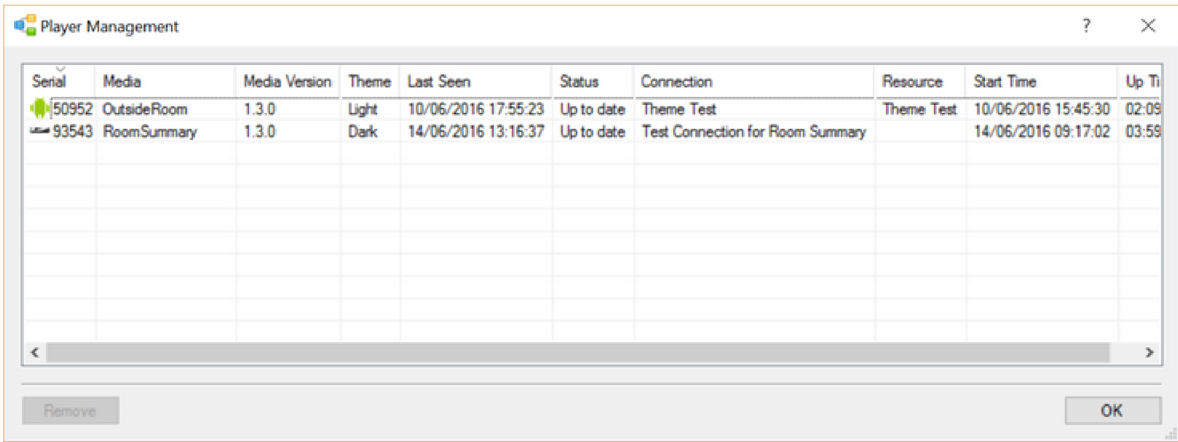
- Outside room media running on a room sign.
- Room summary media running on an NTB.

In this topic, room sign and NTB devices are referred to collectively as Players.

To view the Player Management features, select **Manage** > **Player**. The Player Management dialog appears.



The dialog details the following for each player:

- **Serial:** the serial number for each player (room sign or NTB) using the media. denotes a room sign running outside room media and denotes an NTB running room summary media.
- **Media:** the media type (outside room media (room signs) or room summary media).
- **Media version:** the version number of the media running on the player.
- **Theme:** the theme (dark or light).
- **Last seen:** the date and time the media on the player polled the Web Service.
- **Status:** the status of the media which is either up to date or pending changes.
- **Connection:** the Connection the player is using. This is applicable to outside room media only (not applicable to room summary media).
- **Resource:** the Calendar resource - for example, Room 1.
- **Start time:** the date and time the player was powered up (since the last report).
- **Up time:** how long the player has been connected.
- **Restarts:** the count indicates the number of times the device has started, where supported. NTB devices don’t support a restart count and will show N/A.
- **Lost Connection:** the count is an approximation. Connections can be marked as lost due to a server restart, device/player or media restart.

Remove Player Manually

If a player does not connect to the Web Service within 7 days, Reserva automatically removes the Player from the deployment (the Player is removed from the list and the database). However, you can manually remove players if necessary. For example, when replacing a player you can remove the player during the upgrade, rather than wait for the automatic removal. To remove a player manually, select the required Player and click **Remove**. The Player is removed from the deployment.

5.3 Backing up your Reserva Connection Manager

In case of problems, it is recommended that regular backups of the RCM configuration are maintained.

To create a manual backup, saving all connections and databases, navigate to **Manage** > **Backup**. This will save the configuration in a zip file that will exclude log and cache files.

Saving an individual configuration can be done separately.

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5.4 User Database

When User Authorisation is enabled, Reserva Connection Manager will store a database of users and their credentials. To view this database, navigate to **Manage** > **Users...**

File Users Help

ID	Email	Full Name	Tags		Creation Date	Modified Date
1	1@1.com	lee	281	MIFARE Ultralight	11/01/2018 14:13:55	11/01/2018 15:52:56
10	10@1.com	eugene	280	MIFARE Plus	11/01/2018 15:22:40	11/01/2018 15:52:56

New users can be manually added by entering their email and name into the appropriate columns. In the Tags column, a tag ID can be entered and a MIFARE tag can be selected from the drop down menu - these combinations must be unique within the table.

Values in the email and ID fields must be unique and therefore cannot be repeated in a database of users.

Multiple cards can be assigned to an individual user. However, these can only be added manually and cannot be imported.

279	MIFARE DESFire E
<Tag ID>	MIFARE Classic
<Tag ID>	MIFARE Classic

An ID will be automatically generated for the manually entered user.

It is also possible to import a table of users. To do so, click **Import** to import a .csv file.

To export the table of users, click **Export** to export a .csv file.

5.5 Rooms and Resources

Each room can have multiple resources attributed to it including: the number of seats available, whether it has a screen available, air conditioning, Wi-Fi and others.

Rooms and Resources Manager

To add resources to a room in your Reserva deployment, open the Reserva Rooms and Resources Manager by navigating to **Manage** > **Rooms and Resources**.

This will include a list of the rooms associated with your Connections and a toolbar of resources at the top of the manager.

Note: Rooms are organised in collapsible lists by their data source i.e. All rooms added to Exchange Connections will appear under **Exchange** and all calendars added to a Google Calendar Connection will appear under **Google**.

The resources are:

- Seats
- Screen
- Phone
- Videophone
- Lights
- Computer
- Air conditioning
- Whiteboard

- Wi-Fi
- Audio

Add Resources

To add resources to the desired room, select the room from the list and click on the appropriate resources. These resources will now appear under the room in the room list.

Deselecting the icon will remove the resource from the room.

Note: The **Seat** resource can only be added by clicking the **+** button on the seat icon. To remove seats, click the **-** button.

Meeting Room 2				(x10)		
Resource Type	Quantity	Visible	Issue Reporting Enabled	Notify Service Desk	Notify Organiser	Reported Issues
Seat	10	☑	☑	☑	☑	
Screen	1	☑	☑	☑	☑	
Telephone	1	☑	☑	☑	☑	
Videophone	1	☑	☑	☑	☑	
Computer	1	☑	☑	☑	☑	

Double clicking in the **Quantity** column will allow you to type a value for the quantity for the **Seat** resource (and that resource only).

To apply changes, click **Apply**.

Leaving **Visible** ticked will allow the resource icon to appear on that room's Reserva Room Sign.

By default, **Issue Reporting Enabled**, **Notify Service Desk** and **Notify Organiser** are all enabled. They can be disabled by unticking the appropriate box for that resource.

When Notifications (see below) are configured, **Notify Service Desk** allows notification emails to be sent to the designated service desk email account and **Notify Organiser** will allow notification emails to be sent to the person who booked the meeting room.

Room Aliases

Next to the room **Name** column, there is an **Alias** column. This allows you to enter a custom name for the room. If this field is left blank, the room name in the **Name** column will be used.

Room Analytics

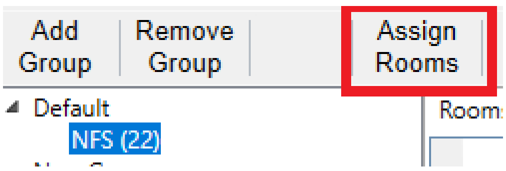
If you have configured Room Analytics, ticking the **Analytics** box for rooms will allow for data collection.

Groups

By default, groups default to their **Data Source**. That is, all rooms associated with a particular Connector will belong to a group with that Data Source's name.

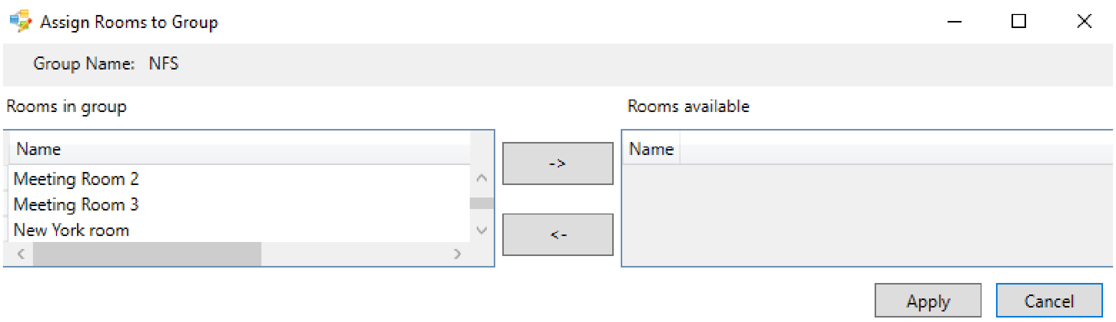
Assign Rooms

To create a non-default group, you can reassign rooms.



With the appropriate group selected, click **Assign Rooms**. Use the arrows to move rooms from **Rooms in group** to **Rooms available** and click **Apply**. These rooms can then be assigned to a new group.

Group Properties



On the **Group Properties** tab, you can rename your group, apply a time zone to all rooms in that group and apply tags. Once changes have been made, click **Apply** to apply them.

Tags

Tags are user-defined and can be used to custom sorting with the use of **Room Analytics**.

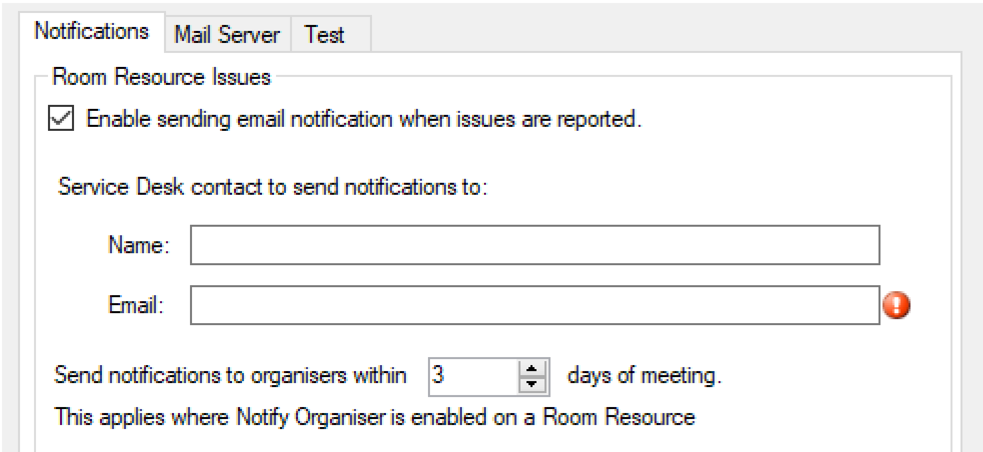
While a room can only ever belong to one group, they can have multiple tags associated with them.

Notifications

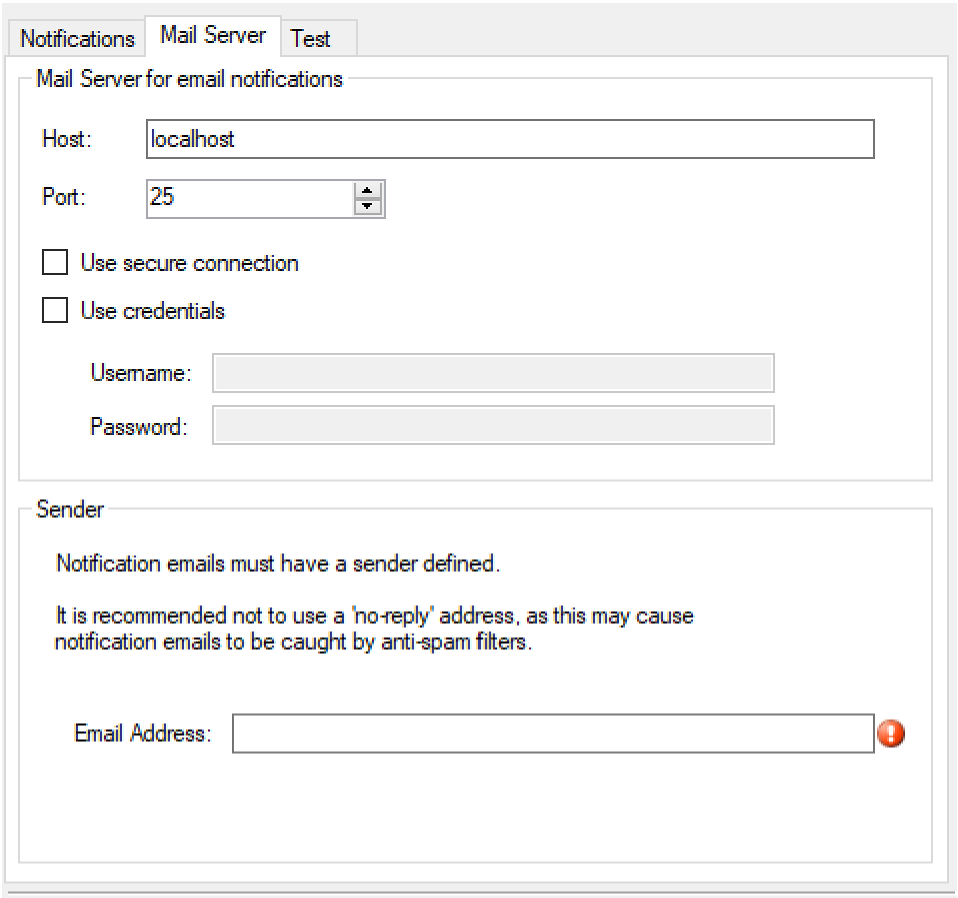
It is possible to configure notifications to be sent from the Reserva Room Sign via email. This must be enabled via the Media tab of the Connection the room has been added to (**Enable Room Resource Error Reporting**). If notifications are enabled, it will become possible for meeting attendees to report problems such as broken air conditioning.

To configure notifications

1. In main RCM menu, navigate to **Manage** > **Notifications**

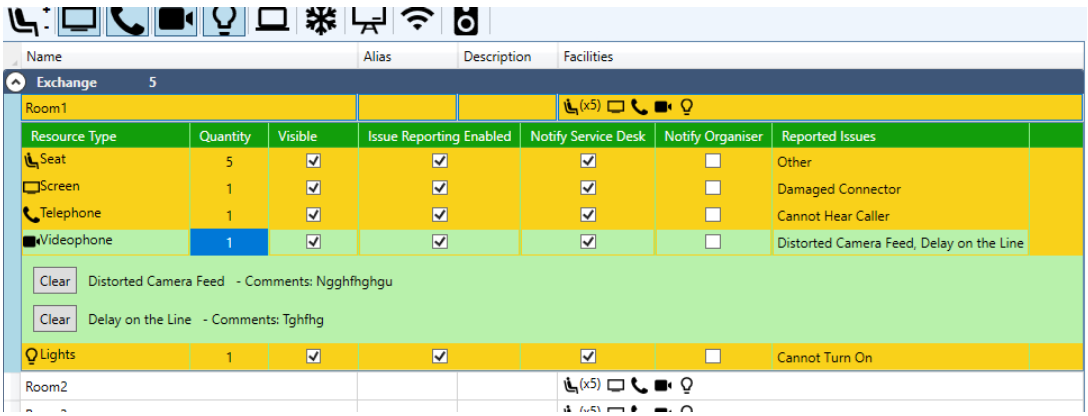


2. Tick the box for **Enable sending email notification when issues are reported** and then complete the fields for Name and Email for whoever the notifications should be sent to.
3. Select the **Mail Server** tab.



4. Complete the appropriate fields to specify the mail server to be used.
5. The **Sender** email address will determine the account notification email will be sent from.
6. On the **Test** tab, you can send a test email to a designated email address.
7. Click **OK**.

Once a user reports a resource issue, the affected room entry will show a list of all resources attached to that room and any faulty resources will appear in yellow. Clicking onto a faulty resource will bring up a list of all reported issues as well as comments.



Once a resource has been fixed, you will need to click onto the relevant room and press the **Clear** button to remove the fault and click **Apply**.

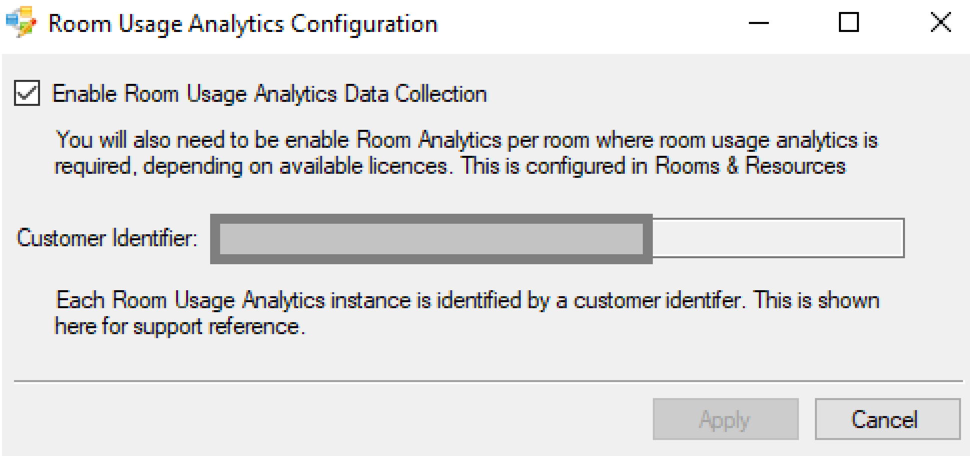
Note: For Microsoft Exchange or Office 365 Connections, if a meeting is booked through Outlook then that user becomes the Organiser of the meeting and therefore any notifications will be sent to that user if notifications have been enabled. However, if a meeting is booked through a Reserva room sign then the Organiser will be listed as whoever owns the account used by RCM to access the mailbox for the room (typically a service account). Therefore, the person booking the room via the tablet won't receive any notification emails e.g. for faulty resources.

5.6 Room Analytics

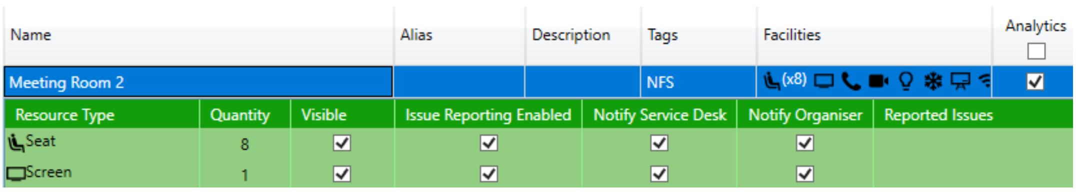
Room analytics is a licensed feature where data regarding room usage is collected and then, in a separate web UI, the data is presented in a range of graphs displaying different aspects of user behaviour and room utilisation. See Licensing for more information.

To Enable Room Analytics

1. Navigate to Manage > Room Analytics



2. Tick the **Enable Room Usage Analytics Data Collection** tick box.
3. Click **Apply**.
4. Enable the Web Service by navigating to **Manage** > **Web Service** and ticking **Enable Web Service** under **Web Service (including Room Usage Analytics)**.
5. Click **OK**.
6. To determine the rooms from which data are collected, navigate to **Manage** > **Rooms and Resources**.
7. In the Rooms and Resources manager, tick the **Analytics** box for all relevant rooms. Room Analytics can be enabled on a per room basis, or by selecting the **Analytics** box for all rooms in a group, depending on how many rooms you have licensed for Room Analytics.



8. Once happy you have selected the appropriate rooms, click **Apply**.

Part VI

Appendix A: Optimising Exchange

6 Appendix A: Optimising Exchange

This section details recommendations and options to optimise integration with Microsoft Exchange®.

Auto accept meetings

It is recommend that Exchange® is configured to automatically accept or decline meetings.

If this is not enabled, there will be a discrepancy between the information display on Reserva room signs and the information in Exchange®. This discrepancy will be present from the point at which an appointment is added, or modified, until the change is approved manually in Exchange®. During this time, it is possible for conflicted meetings to be booked for the same resource (mailbox).

Resource permissions

All accounts used by Reserva require, at a minimum, Reviewer permission within Exchange.

If a Reserva Connection is configured to allow users to create, cancel or modify meetings, the Exchange® account for the Connection also requires Editor permission.

Room Resource Display Properties

You can use the Exchange® AddOrganizerToSubject mailbox property to automatically display the organiser within the appointment subject, if required.

Privacy

The Exchange® DetailLevel mailbox property specifies the level of calendar detail to be published and display on the room signs. The following values can be specified:

- AvailabilityOnly
- LimitedDetails
- FullDetails
- Editor

Note: The default value is AvailabilityOnly.

Remove Private Meeting Property

The Exchange® RemovePrivateProperty boolean mailbox property indicates if Exchange will show details for meetings that are marked as private.

It is recommended that the setting is disabled (false) for each mailbox used by Reserva, indicating that private meetings will be displayed with obscured details.

Throttling

Exchange® may throttle the number of requests that each user is allowed to execute.

These are per user limits and the impact avoided or minimised by using one user per account per Connector.

Exchange 2013 Settings

Property	Description
`EwsCutoffBalance`	Defines the resource consumption limits for Exchange Web Services (EWS) user before that user is completely blocked from performing operations on a specific component.
`EwsMaxBurst`	Defines the amount of time that an EWS user can consume an elevated amount of resources before throttling is applied. This is measured in milliseconds. This value is set separately for each component.
`EwsRechargeRate`	Defines the rate at which an EWS user's budget is recharged (budget grows by) during the budget time.

Exchange 2010 Settings

Property	Description
`EWSPercentTimeInAD`	Defines the percentage of time per minute during which a specific user can execute Active Directory requests.
`EWSPercentTimeInCAS`	Defines the percentage of time per minute during which a specific user can execute Client Access server code.
`EWSPercentTimeInMailboxRPC`	Defines the percentage of time per minute during which a specific user can execute mailbox RPC requests

6.1 Configuration steps in Azure AD required for Modern Authentication

To use **Modern Authentication** for Exchange Connections, you will need to register Reserva as an application with Azure AD using **Application Permissions** and to create a **Client Secret** for use in Reserva. This needs to be configured by the administrator of your Exchange Online/365 account.

Note: **Modern Authentication** is only supported in Exchange Online / 365 or Hybrid environments.

To do so:

Registering Reserva as an Application with Azure AD

1. Open a browser and navigate to the Azure Active Directory admin center. Log in using a **personal account** (your Microsoft account) or a **Work or School Account**.
2. Select **Azure Active Directory** in the left-hand navigation, then select **App registrations** under **Manage**.
3. Select **New registration**. On the **Register an application** page, set the values as follows:
    1. Enter a friendly **Name** for your app (for example, Reserva).
    2. Set **Supported account types** to the choice that makes sense for your setup:
        - **Accounts in this organizational directory only** for single tenant.
        - **Accounts in any organizational directory** for multi-tenant.

        (Options including personal Microsoft accounts should not be required)
    3. For **Redirect URI**, change the drop-down to **Public client/native (mobile & desktop)** and set the value to `urn:ietf:wg:oauth:2.0:oob`
4. Click **Register**. On the next page, copy the value of the **Application (client) ID** and **Directory (tenant) ID** and save them, you will need these later.

Configure application permissions

Note, the following applies default permissions of **full_access_as_app**. This is required for **Exchange Web Services** access to **Exchange Online / 365**. You will be able to restrict access to specific mailboxes in the section below.

1. Select **API permissions** from the left-hand nvaigation under **Manage**.
2. Select **Add a permission** to bring up **Request API permissions** page.
3. Select the **APIs my organization uses** tab.
4. In the search box, start typing `Office 365 Exchange Online` and select this option when it appears.
5. On the next page, select **Appliction permissions** and then select **full_access_as_app**.
6. Click **Add permissions**.
7. Select **Grant admin consent for [organisation]** and accept the consent dialog.
8. Select **Certificates & Secrets** from the left-hand navigation under **Manage**.
9. Select **New client secret**, enter a short description, select an **Expiry** and select **Add**.

    Note: If an expiry other than **Never** is selected, then the seceret will need to be updated in Reserva when it expires. **Never** is recommended for a service application. The secret can be changed or permissions revoked at any time by the administrator.
10. Copy the **Value** of the newly added client secret and save it, you will need it later.

Note: Only Client Secrets are supported in Reserva. Certificates are not supported.

Restrict mailbox access

To restrict access to desired mailboxes use the following steps to define an **Application Access Policy** to restrict the application's access.

1. Connect to **Exchange Online PowerShell**. See the following document for information:

   [Connect to Exchange Online PowerShell]

2. Create a distribution group for Reserva Rooms. Note, this is different to room distribution lists as it needs to be a group of type **Security** to be able to assign an **Application Access Policy**.

   ```
   New-DistributionGroup -Name ReservaRooms -Type Security -Notes
   "Reserva Rooms"
   ```

3. Add rooms to the distribution group. This would need to be repeated for all desired rooms.

   ```
   Add-DistributionGroupMember -Identity ReservaRooms -Member room1
   ```

4. Create an **Application Access Policy** for the rooms.

   ```
   New-ApplicationAccessPolicy -AccessRight RestrictAccess -AppId "[APP_
   ID]" -PolicyScopeGroupId "ReservaRooms" -Description "Restrict access
   to Reserva Rooms"
   ```

   Replace **[APP_ID]** with the **Application (client) ID** noted earlier on registering **Reserva** as an application.

5. Grant access to the service account. This is required to allow Reserva to find and resolve rooms.

   ```
   New-ApplicationAccessPolicy -AccessRight RestrictAccess -AppId "[APP_
   ID]" -PolicyScopeGroupId [SERVICE_ACCOUNT_EMAIL] -Description "Policy
   for Reserva service account for basic access and room lookup"
   ```

   Replace **[APP_ID]** with the **Application (client) ID** noted earlier on registering **Reserva** as an application.

   Replace **[SERVICE_ACCOUNT_EMAIL]** with the email address of the service account to be used for **Reserva**.

6. To test the access that will apply for the policies set, the following command can be used:

   ```
   Test-ApplicationAccessPolicy -Identity [MAILBOX] -AppId "[APP_ID]"
   ```

   Replace **[APP_ID]** with the **Application (client) ID** noted earlier on registering **Reserva** as an application.

   Replace **[MAILBOX]** with the ID of the mailbox you want to check the application has access to or to check a mailbox is denied access as expected (e.g. a non-room mailbox, other than the service account).

Note - An access policy can take up to an hour to apply to Reserva

The `Test-ApplicationAccessPolicy` command may succeed as PowerShell is connected directly to Exchange Online environment and gets immediate changes before they have propagated.

Part VII

Appendix B: Scientia Database

7 Appendix B: Scientia Database

This section provides more information regarding the requirements and configuration of the database for Scientia Calendar Connections.

7.1 Open Database Connectivity (ODBC) driver and Data Source Name (DSN)

You must ensure the Open Database Connectivity driver is installed on Reserva Connection Manager. You also require the Data Source Name details to configure and connect to the Scientia database. The DSN information and ODBC driver allow Reserva to connect to and query the Scientia database.

Note: If integrating with multiple databases, you require a DSN for each of them.

7.2 ODBC Driver Installation

ODBC functionality is supported and built into Microsoft Windows. A suitable driver may be installed on the server running Reserva Connection Manager by default. If not, you can download the required ODBC driver and installation instructions from Microsoft.

7.3 ODBC Connection Details

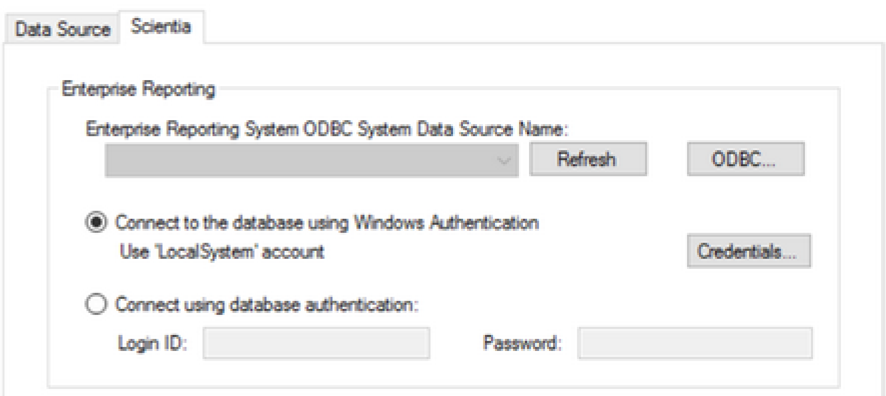
Reserva Connection Manager requires an ODBC *System* DSN that is configured to allow connection and communication with the Scientia database. The DSN includes the details required by the ODBC driver to allow Reserva to connect and query the Scientia database.

The DSN details are specific to your database. You must ensure the DSN is configured correctly. You can use the DSN test function to check the configuration. We recommend you test the DSN before configuring and testing your Reserva Connection.

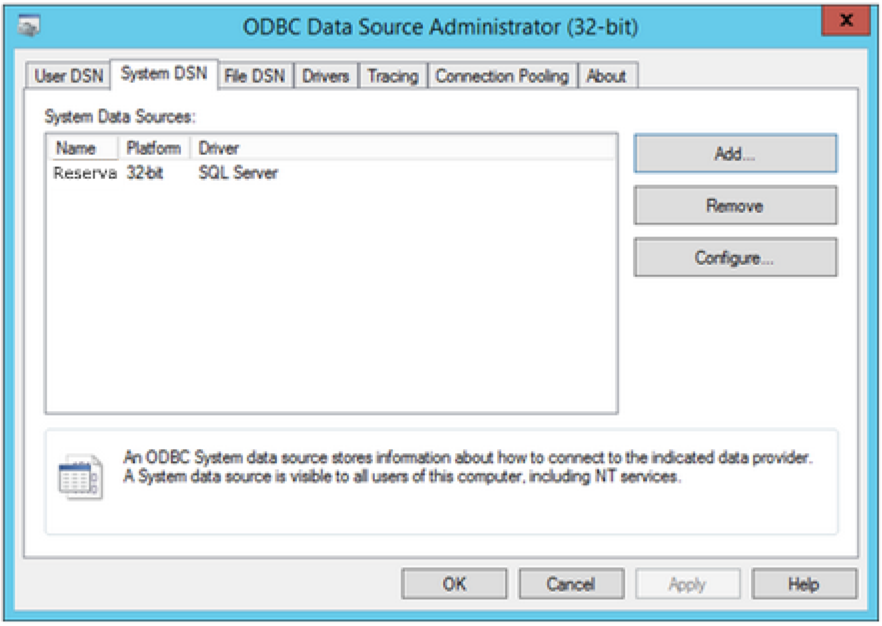
7.4 Managing ODBC System Data Source

You use the Data Source Administrator tool to manage and create ODBC DSNs. An example of the process to configure a DSN for Microsoft SQL Server is shown below:

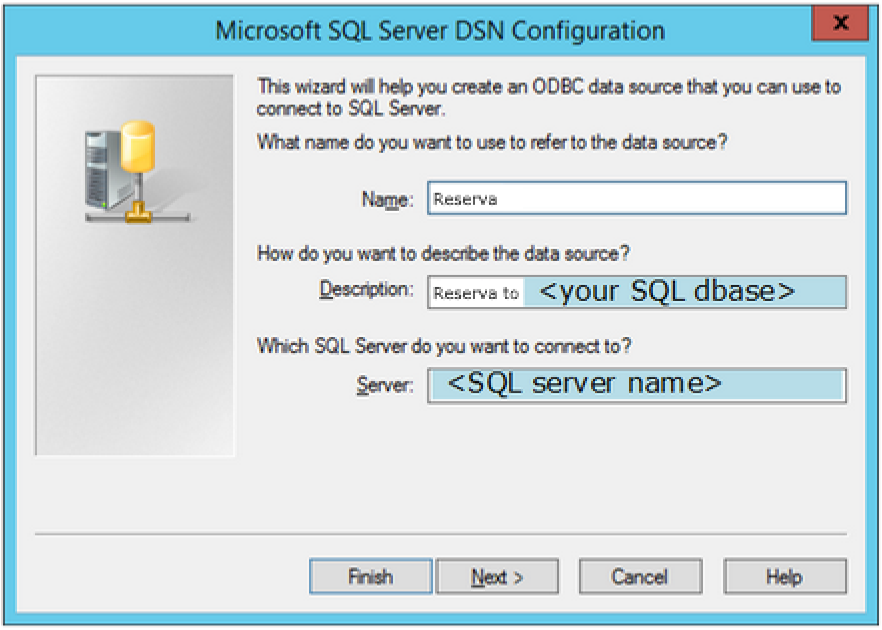
1. From Reserva Connection Manager, click **ODBC** to launch the ODBC Data Source Administrator tool.



2. You require a System DNS as shown in the example below:



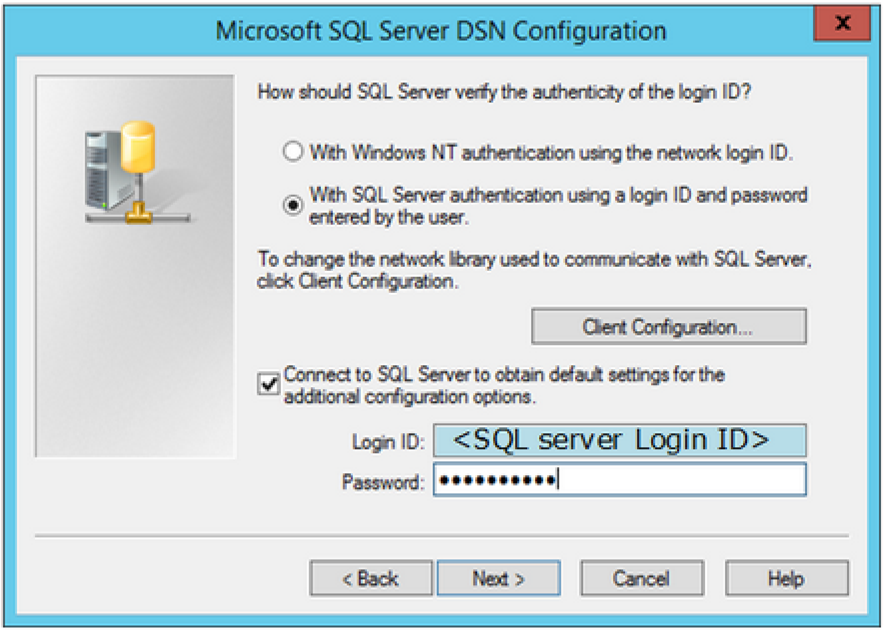
3. You can create a data source as shown in the example below. Click **Add** to start the wizard.



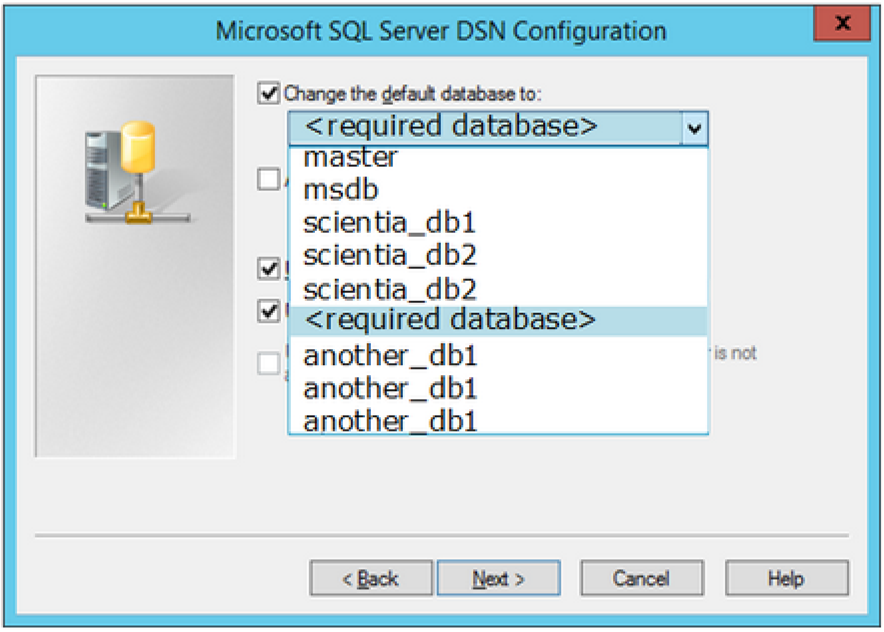
Enter the name and description and select the SQL Server you want to connect to.

Click **Next**.

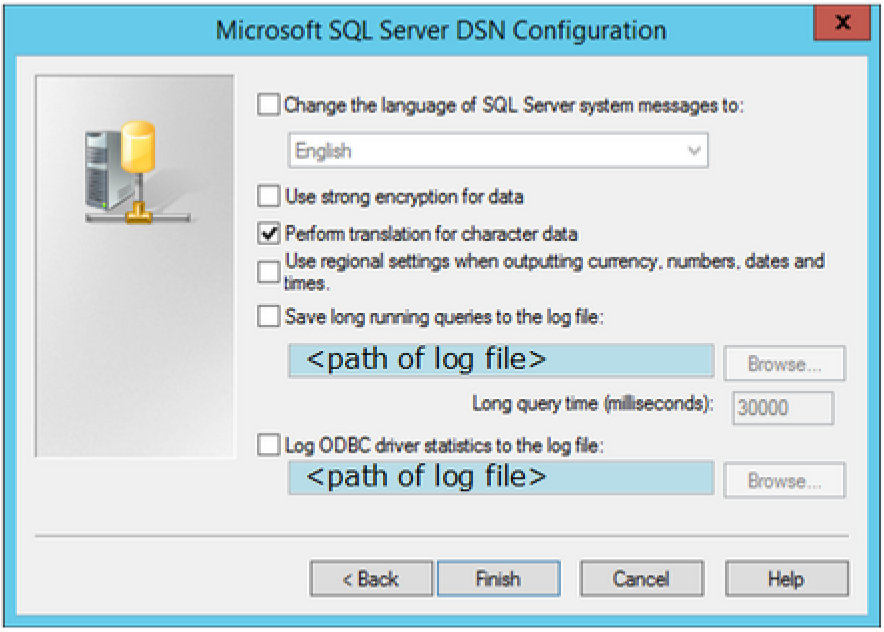
4. Enter the authentication credentials used to access the SQL Server. Click **Next**.



5. Select the required database. Click **Next**.



6. Click **Finish**.


Microsoft SQL Server DSN Configuration
Change the language of SQL Server system messages to:
English
Use strong encryption for data
Perform translation for character data
Use regional settings when outputting currency, numbers, dates and times.
Save long running queries to the log file:
<path of log file>
Browse...
Long query time (milliseconds):
30000
Log ODBC driver statistics to the log file:
<path of log file>
Browse...
< Back
Finish
Cancel
Help

Part VIII

Appendix C: Power-Shell Examples for Exchange

8 Appendix C: PowerShell Commands for Exchange/365

This section provides examples of Exchange PowerShell commands for setting up rooms with Reserva Connection Manager.

Note: These examples cover standard Exchange on-premises and Office 365 environments only.

The `@my.domain` addresses and names/aliases used within the examples are sample text only. These room names, descriptions, aliases and email addresses should be replaced as appropriate.

Create Service Account (if not already set up)

First, set a password for the account. This will prompt for a password as a secure string and set it in the variable `$password`.

```
$password = Read-Host "Password:" -AsSecureString
```

Office 365/Exchange Online

```
New-Mailbox -MicrosoftOnlineServicesID reserva@my.domain -Alias
reserva -Name Reserva -DisplayName "Reserva Service Account"
-PrimarySmtpAddress reserva@my.domain -Password $password
```

Exchange on premises

```
New-mailbox -UserPrincipalName reserva@my.domain -Alias reserva -Name
Reserva -Display name "Reserva Service Account"
-PrimarySmtpAddress reserva@my.domain -OrganizationalUnit Users
-Password $password
```

Create room list

Note: The domain part of the SMTP address must match the domain of the account used to query rooms.

```
New-DistributionGroup -NameRooms -DisplayName "Rooms"
-PrimarySmtpAddress rooms@my.domain -RoomList
```

Create rooms

Repeat for each room (optional if you already have rooms)

```
New-Mailbox -Name "TestRoom1" -DisplayName "Test Room 1"
-Room
```

Assign permission to the service account

All mailbox accounts used by RCM require, at a minimum, Reviewer permission.

If a Connection is configured to allow users to create, cancel or modify appointments then Editor permission is required at a minimum. These permissions are set on the room mailbox calendar folder.

```
Add-MailboxFolderPermission -Identity "TestRoom1:\Calendar" -
AccessRights Editor -User reserva@my.domain
```

FullAccess can also be set on the mailbox itself. This may ensure full access by RCM to the mail-box and appointments.

```
Add-MailboxPermission -Identity "TestRoom1"
-AccessRights FullAccess -User reserva@my.domain
```

Add to the room list

```
Add-DistributionGroupMember Identity Rooms -Member "TestRoom1"
```

Set attributes on each room

These are the advised default attributes for a room for use with Reserva

`AutomateProcessing AutoAccept`	This auto-accepts bookings in the room
`DeleteSubject $False`	This ensures that the subject is retained when inviting the room to a meeting
`AddOrganizerToSubject $False`	This means that the organiser name won't be appended to the subject text. The organiser is still available as a property on the booking anyway
`RemovePrivateProperty $False`	This will allow the use of the private meeting flag when inviting a room to a meeting

```
Set-CalendarProcessing -Identity "TestRoom1" -AutomateProcessing
AutoAccept -DeleteSubject $False -AddOrganizerToSubject $False -
RemovePrivateProperty $False
```

Impersonation Role

The impersonation role allows a service account to impersonate room mailboxes. This applies particularly to the Push (streaming subscriptions) method that RCM uses to connect with Exchange by default.

Push subscriptions will open Connections for each mailbox or mailbox group in Exchange and wait on notifications. Exchange and, in particular, Office 365 may limit the number of subscriptions and Connections per service account. However, using impersonation means that the limits are per room mailbox.

The impersonation role can be used as an alternative to setting up mailbox permissions per room mailbox. This applies to both push and legacy polling methods in RCM.

If impersonation is being used, this must also be enabled in RCM under the Exchange Connection Advanced settings.

Scope limited to room mailboxes

By default, an impersonation role is wide open and applies to all mailboxes in the organisation. However, you can limit the scope of impersonation to, for example, just room mailboxes.

```
New-ManagementScope -Name ReservaImpersonationScope
- RecipientRestrictionFilter {RecipientTypeDetails
e.g. "RoomMailbox"}
```

Impersonation role assignment

```
New-ManagementRoleAssignment -Name ReservaImpersonation
-Role ApplicationImpersonation -User reserva@my.domain
-CustomRecipientWriteScope ReservaImpersonationScope
```

Further information can be found in the following articles:

- Connect to Exchange Online PowerShell
- Open the Exchange Management Shell
- Enable Room Finder with Room List Distribution Groups

Part IX

Appendix D: Requirements for Data Source Integration with Reserva

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9 Appendix D: Requirements for Data Source Integration with Reserva

This section desribes the XML schema for integration with Reserva using an XML Events connector.

Room List

This is an XML feed that provides a list of the available rooms and their unique identifiers. This is required to configure rooms in Reserva.

Mandatory fields

These fields must be provided for all rooms.

uid	Unique identifier for the room. This should be an identifer that is used to filter queries for room events such as through an XML feed parameter.
name	This value is set separately for each component. Name of the room. This is typically used for display.
description	Description if different to the room name (for example, to provide a more detailed description of the room in Room Finder).

Room List XML Example

The following is an example of an XML room list:

```
<?xml version="1.0" encoding="utf-8" ?>
<rooms xmlns="http://www.reserva.co.uk/2016/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://www.reserva.co.uk/2018/XMLSchema
rooms.xsd">
   <room>
      <uid>ROOM_ID_1</uid>
      <name>Room 1</name>
      <description>Room 1 Description</description>
   </room>
   <room>
      <uid>ROOM_ID_2</uid>
      <name>Room 2</name>
      <description>Room 2 Description</description>
   </room>
   <room>
      <uid>ROOM_ID_3</uid>
      <name>Room 3</name>
      <description>Room 3 Description</description>
   </room>
   <room>
      <uid>ROOM_ID_4</uid>
      <name>Room 4</name>
      <description>Room 4 Description</description>
```

```
   </room>
</rooms>
```

Room List XML Schema (XSD)

The following is an XML schema that defines the requirements for the XML format and may be useful for validation.

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
attributeFormDefault="unqualified" elementFormDefault="qualified"
      targetNamespace="http://www.reserva.co.uk/2018/XMLSchema"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
   <xs:element name="rooms">
      <xs:complexType>
         <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded"
name="room">
               <xs:complexType>
                  <xs:sequence>
                     <xs:element name="uid" type="xs:string"
minOccurs="1" maxOccurs="1" >
                        <xs:annotation>
                           <xs:documentation>Unique identifer for the
location</xs:documentation>
                        </xs:annotation>
                     </xs:element>
                  <xs:element name="name" type="xs:string"
minOccurs="1" maxOccurs="1" >
               <xs:annotation>
                  <xs:documentation>Name of the
location</xs:documentation>
               </xs:annotation>
                  </xs:element>
                     <xs:element name="description" type="xs:string"
minOccurs="1" maxOccurs="1" >
                        <xs:annotation>
                           <xs:documentation>Description for the
location</xs:documentation>
                        </xs:annotation>
                     </xs:element>
                  </xs:sequence>
               </xs:complexType>
            </xs:element>
         </xs:sequence>
      </xs:complexType>
   </xs:element>
</xs:schema>
```

Event Data

This is an XML feed that provides event data for Reserva for a specific room.

Mandatory fields

These fields must be provided for all events

uid	Unique identifier for the event. In the case of recurring events, the uid must uniquely identify the individual occurence. The uid can be any string and composed of a mix of other identifiers.
subject	Display name of the event.
description	Description if different to the room name (for example, to provide a more detailed description of the room in Room Finder).
start_time	UTC* ISO 8601 formatted start date/time
end_time	UTC* ISO 8601 formatted end date/time

* Times should be UTC ISO 8601 formatted to avoid time confusions e.g. **yyyy-MM-ddTHH:m-m:ssZ**.

Optional fields

These fields can be provided if the information is available but are not required.

location	Location name of the event. ***Note***: This is unused in Reserva at present.
parent_event_name	The name of the parent event if applicable. This can be shown if the parent event display is enabled in Reserva through the hospitality mode.
description	An additional description field for the event. Reserva can be con-figured to display this together with Subject in some circumstances.
organiser	Display name of the organiser.
organiser_email	Email address of the organiser.
all_day	Flag indicating an all-day event (this can optionally be inferred from start and end times).
private	Flag indicating if the event is private (subject name will be hidden if so).
confirmed	Flag indicating if the event is confirmed (for systems that support tentative and confirmed events). This can also be provided in **Meet-ing Status**.
cancelled	Flag indicating if the event has been cancelled (some data sources retain events in the output feed but flag them as cancelled in stead of deleting the event).
meeting_status	A field indicating the event status such as scheduled, cancelled or confirmed. Some data sources provide this to allow filtering of events. By default, values of scheduled, cancelled or confirmed will be processed. All other values will be ignored and will be assigned scheduled state. This is used for legacy reasons to allow filtering of

	a data source. Typically, this field can be ignored or set to a default value of 'scheduled.'

Events XML example

The following is an example of an XML data source. For XML sources for use with Reserva this format should be adopted.

```xml
<?xml version="1.0" encoding="utf-8" ?>
<events xmlns="http://www.reserva.co.uk/2016/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://www.reserva.co.uk/2016/XMLSchema
events.xsd">
   <event>
      <uid>123456789ABCDEFG</uid>
      <subject>Event Subject</subject>
      <start_time>2016-09-28T13:00:00Z</start_time>
      <end_time>2016-09-28T14:00:00Z</end_time>
      <location>Room 1</location>
      <description>Details about event</description>
      <organiser>Organiser Name</organiser>
      <organiser_email>organiser@somewhere</organiser_email>
      <all_day>false</all_day>
      <private>false</private>
      <confirmed>true</confirmed>
      <cancelled>false</cancelled>
      <meeting_status>scheduled</meeting_status>
   </event>
   <event>
      <uid>ABCDEFG123456789</uid>
      <subject>Another Event Subject</subject>
      <start_time>2016-09-28T14:00:00Z</start_time>
      <end_time>2016-09-28T15:00:00Z</end_time>
      <location>Room 1</location>
      <description>Details about event</description>
      <organiser>Organiser Name</organiser>
      <organiser_email>organiser@somewhere</organiser_email>
      <all_day>false</all_day>
      <private>false</private>
      <confirmed>true</confirmed>
      <cancelled>false</cancelled>
      <meeting_status>scheduled</meeting_status>
   </event>
</events>
```

Events XML Schema (XSD)

The following is an XML schema that defines the requirements for the XML format and may be useful for validation.

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema attributeFormDefault="unqualified"
elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
            targetNamespace="http://www.reserva.co.uk/2016/XMLSchema"
xmlns="http://www.reserva.co.uk/2016/XMLSchema events.xsd">
   <xs:element name="events">
      <xs:complexType>
         <xs:sequence>
            <xs:element name="event" minOccurs="0"
maxOccurs="unbounded">
               <xs:complexType>
                  <xs:all>
                     <xs:element name="uid" type="xs:string"
minOccurs="1" maxOccurs="1">
                        <xs:annotation>
                           <xs:documentation>Unique identifer for the
event. In the case of recurring events, it must uniquely identify the
individual occurrence.</xs:documentation>
                        </xs:annotation>
                     </xs:element>
                     <xs:element name="subject" type="xs:string" minOc-
curs="1" maxOccurs="1">
                        <xs:annotation>
                           <xs:documentation>Display name of the
event</xs:documentation>
                        </xs:annotation>
                     </xs:element>
                     <xs:element name="start_time" minOccurs="1" maxOc-
curs="1" >
                        <xs:annotation>
                           <xs:documentation>Start date/time. ISO 8601
formatted, preferably UTC</xs:documentation>
                        </xs:annotation>
                        <xs:simpleType>
                           <xs:restriction base="xs:dateTime">
                              <xs:pattern value="\d{4}-\d\d-
\d\dT\d\d:\d\d:\d\d([zZ]|[+\-]\d\d:\d\d)"/>
                           </xs:restriction>
                        </xs:simpleType>
                     </xs:element>
                     <xs:element name="end_time" minOccurs="1"
maxOccurs="1" >
                        <xs:annotation>
```

```
                    <xs:documentation>End date/time. ISO 8601
formatted, preferably UTC</xs:documentation>
                  </xs:annotation>
                  <xs:simpleType>
                    <xs:restriction base="xs:dateTime">
                      <xs:pattern value="\d{4}-\d\d-
\d\dT\d\d:\d\d:\d\d([zZ]|[+\-]\d\d:\d\d)"/>
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="location" type="xs:string"
minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>Location name of the
event (optional)</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="parent_event_name"
type="xs:string" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>Name of a parent event if
applicable (optional)</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="description" type="xs:string"
minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>Description for the event
(optional)</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="organiser" type="xs:string"
minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>Display name of the
organiser (optional)</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="organiser_email"
type="xs:string" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>Email address of the
organiser (optional)</xs:documentation>
                  </xs:annotation>
                </xs:element>
```

```
                    <xs:element name="all_day" type="xs:boolean"
minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                          <xs:documentation>Flag indicating an all-
day event (optional)</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="private" type="xs:boolean"
minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                          <xs:documentation>Flag indicating the event
is private (optional)</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="confirmed" type="xs:boolean"
minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                          <xs:documentation>Flag indicating the event
has been confirmed (optional)</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="cancelled" type="xs:boolean"
minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                          <xs:documentation>Flag indicating the event
has been cancelled</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="meeting_status" type-
e="xs:string" minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                          <xs:documentation>A field indicating the
status of the meeting, used for filtering. (optional)
                          Values of Scheduled, Cancelled or Confirmed
will be processed. All other values will be ignored</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                 </xs:all>
              </xs:complexType>
           </xs:element>
        </xs:sequence>
     </xs:complexType>
  </xs:element>
</xs:schema>
```

XML Feed

Integration using an XML Event connector uses HTTP/HTTPS XML feeds and the above XML should be returned from two URLs. The first should return the list of rooms and the other returning events for a specific room. The event feed should also allow filtering by date.

Room list URL spec:

http|https://[server]/[rooms]

No parameters required.

Events URL spec:

http|https://[server]/[events]?room=[room_uid]&startdate=yyyy-MM-dd&enddate=yyyy-MM-dd

Parameters

- **room**: the unique identifier of the room as provided in the Room List XML
- **startdate**: this should filter events in the feed to only those starting on or after this date
- **enddate**: this should filter events in the feed to only those ending on or before this date

For example, a typical URL for a Room List would be:

http://server/rooms.asp

and for Events:

http://server/events.asp?room=ROOM_1_ID&startdate=2018-02-01&enddate=2018_02_30

The date formats should be in the ISO 8601 format yyyy-MM-dd to avoid confusion with locales.

Part X

Glossary

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10 Glossary

Appointment

Reserva Room Signage is designed for use in academic and corporate environments. The term 'Appointment' is used generically to describe a meeting, seminar, lecture, conference, tutorial session, or similar booked in the calendar system.

Book Appointment

If configured, users can book appointments using Reserva room signs. This add an appointment to the calendar system.

You can configure the maximum number of days in advance that users can book appointments. For example, you might allow users to book appointments up to 30 days in advance. You can change this setting per Connection for Exchange and Office 365 (on the Connection dialog, select **Exchange** > **Advanced Settings** and modify the data range as required).

Confirm Appointment

If enabled, users are prompted to confirm their appointments before they start. If an appointment is not confirmed ahead of the meeting, users are reminded to confirm the appointment once the meeting starts. Provided they confirm, the meeting room is reserved. If the appointment is not confirmed, it is automatically removed from the calendar and the meeting room is shown as available. This ensures that rooms are not shown as busy when attendees are unable to make the meeting.

You can configure the timing for confirming appointments. For example, you might prompt users to confirm appointments 5 minutes before the scheduled start time and allow them up to 10 minutes from this scheduled start time to confirm their appointment. This is configurable per Connection (navigate to **Advanced Settings** on the **Destination** tab).

Cancel Appointment

If enabled, users can cancel an appointment during the meeting. For example, if other attendees are unable to join the meeting and the room is no longer needed, the appointment can be cancelled. This removes the appointment from the calendar and the meeting room is shown as available.

If this feature is enabled, any user has the ability to cancel meetings regardless of whether or not they booked the appointment. For many implementations, this may not be appropriate.

Connection

A Connection specifies the room information to present to Reserva room signs, how often the information is updated and the options available to the end users. Each Reserva room sign is configured to display the information for a specific Connection, linking the room sign to a specific room (or rooms) within your calendar system.

Extend (or shorten) Appointment

If enabled, users can extend or shorten appointments during the meeting. If more time is needed for a meeting then it can be extended (provided the room is not booked for that time already) and the room reservation is updated accordingly.

Interactive Feature

Interactive features that can be made available on Reserva room signs. These include:

- Appointments must be confirmed
- Appointments may be created
- Appointments may be deleted
- Allow appointment end time to be changed
- Show settings icon

These features are enabled and disabled per Connection on the Connection **Destination** tab.

Reserva Room Sign

Reserva room signs comprise the device running the Reserva outside room and media.

Reserva room signs are available in a range of sizes to suit your environment and space considerations. Room signs are identified with the product code 'ROOM-x(T)', where 'x' denotes the screen size and the suffix '(T)' denotes that the device has a touch screen. For example, 'ROOM-15T' is a room sign with a 15.6" interactive touch screen.

Reserva Connection Manager

The Reserva Connection Manager application, installed on a domain joined PC or server allows you to set up, manage and monitor your Reserva deployment.

Outside Room Media

The media is linked to a single room within your calendar system and shows the status of the meeting room and list of upcoming appointments. It allows users to book and manage their appointments.

Room

The term room (and, in some cases, resource) is used generically to describe a meeting room, conference room, lecture theatre, auditorium etc., that can be booked in your calendar system. The equivalent term varies across calendar systems. For example, the term Location is used in a Scientia calendar system.

Room Sign

An interactive room sign, showing the current status of a meeting room along with a summary of upcoming appointments. Using the interactive touch screen, users can book, confirm, extend/shorten or cancel appointments.

Room Summary

Room summary provides a clear summary of appointments across a collection of meeting rooms. Typical deployment of room summary displays include reception areas and foyers, helping guide staff, students and guests to the correct meeting room and collaboration spaces. The room summary content can be displayed in full screen or within a 'zone' within a screen layout with multiple 'zones'.

Room Summary Media

The room summary media provides a summary of appointments for a number of rooms within your calendar system. The media runs on an NTB and can be displayed in full screen mode or within a specified zone in a multi-zone layout. The media is read-only.

Settings Icon 

If enabled, the settings icon appears on the main Reserva room sign screen. It allows access to the room sign connection settings, linking the room sign with a specific Connection and room (or rooms) within your calendar system. If enabled, all users are able to view and change Connection details. You can disable the icon per Connection (on the **Destination** tab, Allowed Media Action).

11 Contact ONELAN

If you have any questions about Reserva Room Signage please contact ONELAN Limited Support:

Name	Contact
Email:	support@onelan.com
Telephone:	+44 (0) 1491 877713

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