

ADMINISTRATORS' GUIDE

IC-RESERVA-10T, IC-RESERVA-15T, IC-RESERVA-21T

RESERVA EDGE FOR ICOMPTEL® TOUCH SCREEN ROOM SIGN

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM



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Thank you for choosing Reserva Edge for iCOMPEL® Touchscreen Room Sign. 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 Edge for iCOMPEL Touchscreen Room Sign 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 displays:



FIGURE 1-1. 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 customize the Reserva media to suit your branding and environment.

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1.2 RESERVA COMPONENTS

Reserva deployments comprise the following components:

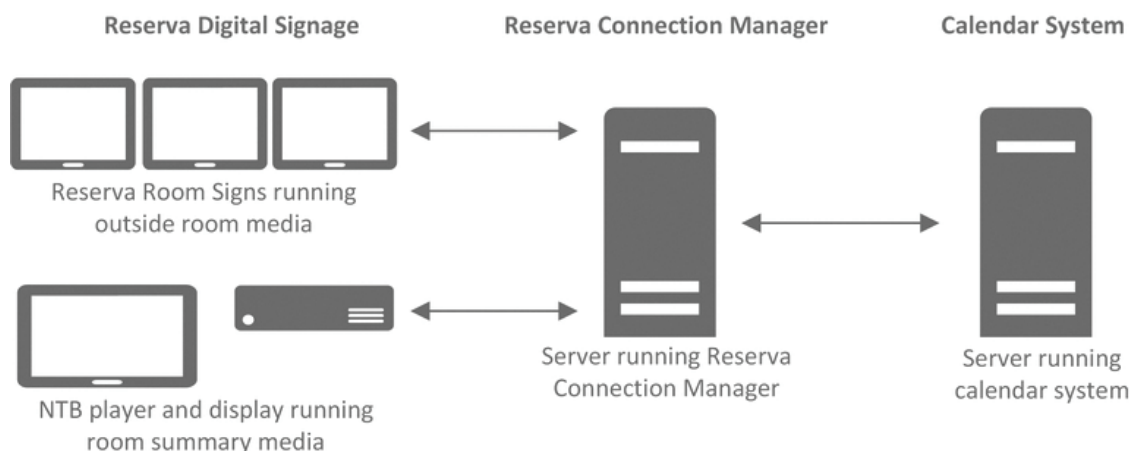


FIGURE 1-2. RESERVA COMPONENTS

Reserva Displays

Reserva supports two types of display:

- ♦ Room sign: Reserva room sign running outside room media.
- ♦ Room summary: ONELAN Net-Top-Box (iCOMPEL Player) 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 a summary of appointments for a number of rooms within your calendar system. The media runs on an iCOMPEL Player 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 customized 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.

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

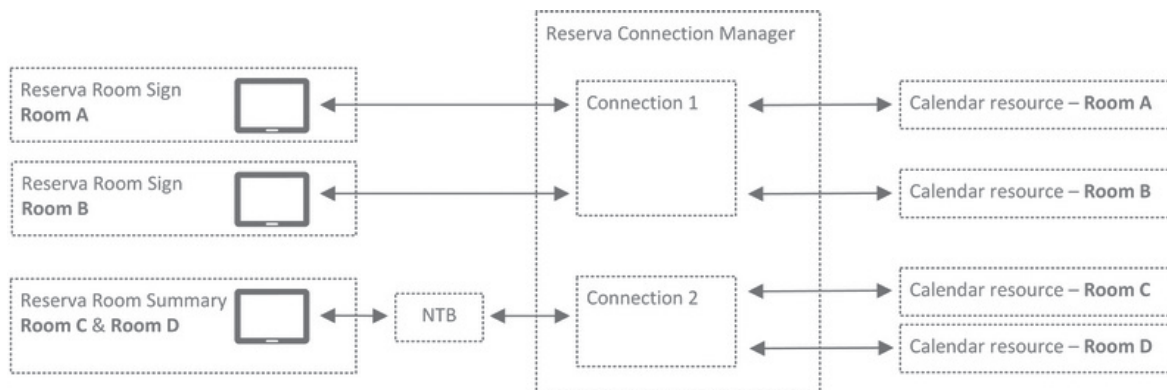


FIGURE 1-3. RESERVA CONNECTIONS

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 synchronized 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.

Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com for information on deploying Reserva with other calendar systems.

1.3 RESERVA DISPLAYS

Two types of Reserva displays 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 iCOMPEL Player and provides summary of appointments for a number of rooms.

1.3.1 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 customized. The next examples include a dark theme without a logo and default language settings.

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Outside Room Sign Interface

The next examples 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.

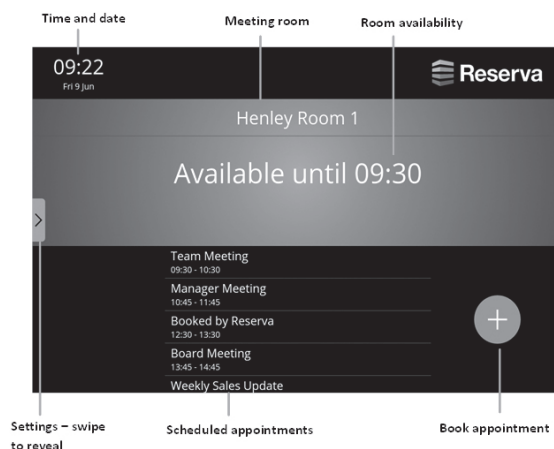


FIGURE 1-4. OPTIONS – MEETING ROOM AVAILABLE

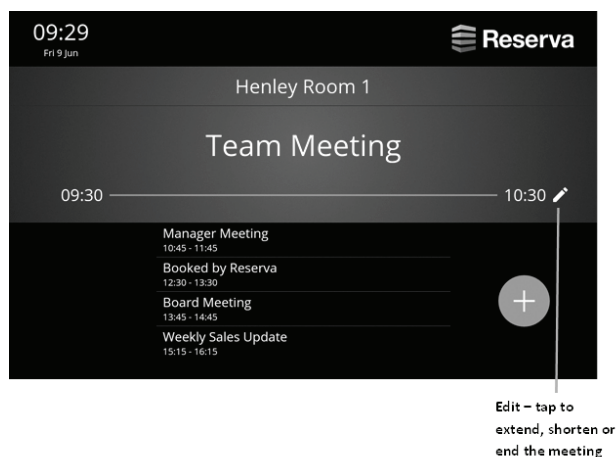


FIGURE 1-5. OPTIONS – MEETING ROOM BUSY

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, "Booked by Reserva" and the start time and end time is shown on a red background.

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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.

1.3.2 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 next.



Time	Meeting Title	Room	Organiser
16:00	Prep for Customer Meeting	Room1	Andy Mottershead
16:30	Budget Meeting	Room 3	Andy Mottershead
16:30	Project Meeting	Room 4	Andy Mottershead
16:30	Customer Meeting	Room1	Andy Mottershead
16:30	Team Meeting	Room2	Andy Mottershead
17:00	Manager Meeting	Room 4	Andy Mottershead

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FIGURE 1-6. 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.

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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 iCOMPEL® Player for each of these displays.

Customization

- ◆ Are you going to customize 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.

2.1.1 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).

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- ◆ 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.

iCOMPEL Player Recommendations

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

2.1.2 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: Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com to discuss deployment of other operating systems or virtual machines.

2.1.3 ICOMPEL PLAYER REQUIREMENTS

If your deployment includes room summary signs, an iCOMPEL Player is required for each room summary sign.

The following iCOMPEL Player versions are supported:

- ◆ iCOMPEL Player Version 10.0 or later

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

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2.1.4 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

An 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, make sure 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 next table 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.



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TABLE 2-1. SUPPORTED CALENDAR SYSTEMS

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 details regarding each calendar system, see the relevant calendar system actions.

Contact Black Box Technical Support at 877-877-2269 or info@blackbox.com for information on deploying Reserva with other calendar systems.

2.2.1 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: Optimizing 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.

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For additional configuration options, please refer to Appendix A: Optimizing 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."

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

2.2.2 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. 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 next.

TABLE 2-2. SUPPORTED CALENDAR SYSTEMS

CALENDAR TYPE	RESERVA CAN EDIT THE CALENDAR	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.



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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.

The next 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).

TABLE 2-3. GOOGLE CALENDAR CONFIGURAITON OPTIONS AND REQUIREMENTS

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.

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

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2.2.3 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 Reserva XML feed.

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

2.2.4 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.

License

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



CHAPTER 2: PLANNING

2.2.5 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 the 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.

License

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

2.2.6 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.

CHAPTER 2: PLANNING

2.3.1 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 signs 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).

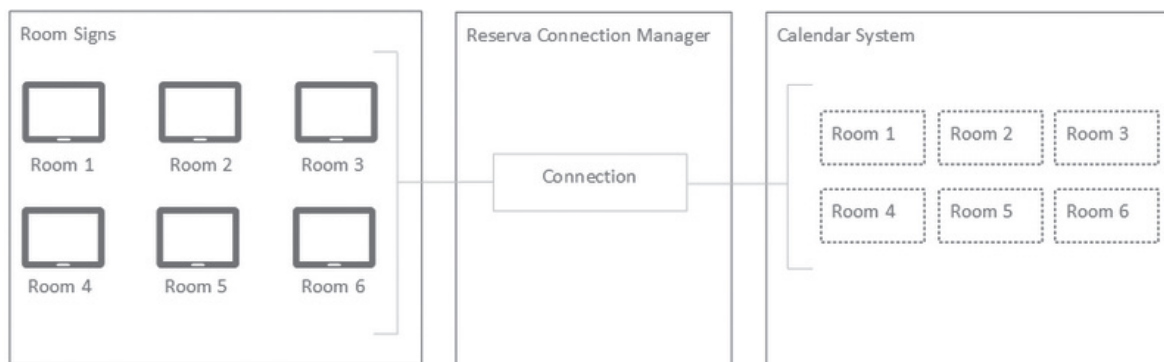


FIGURE 2-1. SIMPLE DEPLOYMENT SCENARIO

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).

2.3.2 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.

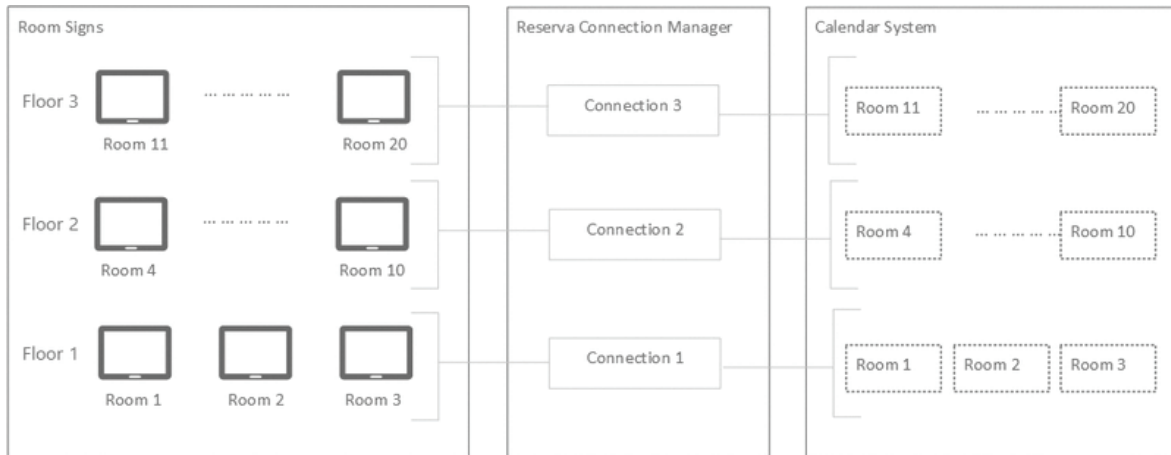


FIGURE 2-2. MEDIUM DEPLOYMENT SCENARIO

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.

CHAPTER 2: PLANNING

2.3.3 EXAMPLE DEPLOYMENT C: MULTIPLE CONNECTIONS W/ 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.

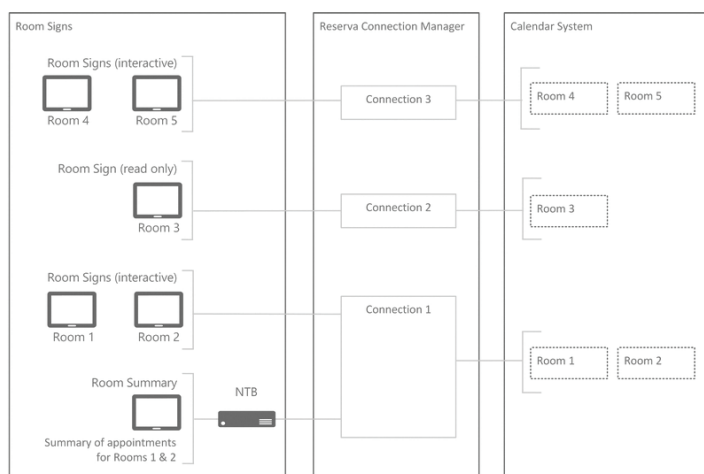


FIGURE 2-3. COMPLEX DEPLOYMENT SCENARIO

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 iCOMPEL Player is required. The iCOMPEL Player 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.

CHAPTER 3: INSTALLING RESERVA

To install Reserva Connection Manager:

1. Download the Reserva Connection Manager V3.11.0 installation zip file from:
www.reservaroomsigns.com/support
2. The zip files include this guide and the Setup application. Start the Setup application:
`Reserva_setup_v3.12.0-190880.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 authorization or Scientia, you must obtain and add the appropriate license to Reserva Connection Manager.

The procedure is detailed below.

To license 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.

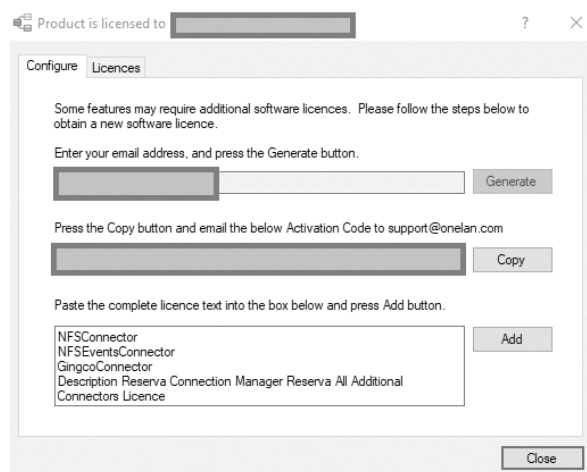


FIGURE 3-1. ACTIVATION CODE

CHAPTER 3: INSTALLING RESERVA

3. Copy the activation code. Send an email confirming the activation code and requesting the desired license feature to techsupport@blackbox.com
4. On receipt of the licensing text from techsupport@blackbox.com, copy the text and paste into the license text box. Click Add.

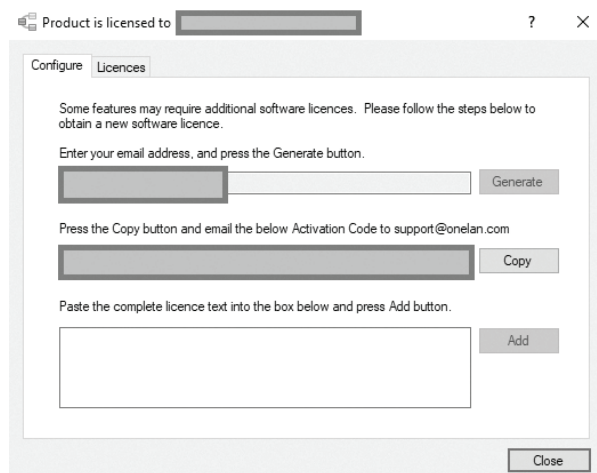


FIGURE 3-2. ADD LICENSE

This completes the licensing of ReserVA Connection Manager to support licensed features. If your deployment includes room summary displays, you require a license for your iCOMPEL Player. A license may be pre-installed. To check and, if necessary, add a license, see license iCOMPEL Player for Room Summary Media.

CHAPTER 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

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:

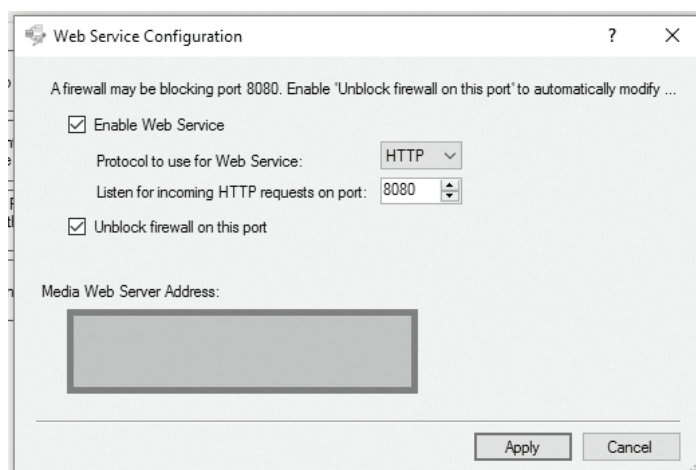


FIGURE 4-1. WEB SERVER CONFIGURATION

If you need to change the port number, follow the next procedure.

CHAPTER 4: CONFIGURING RESERVA

4.1.1 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.

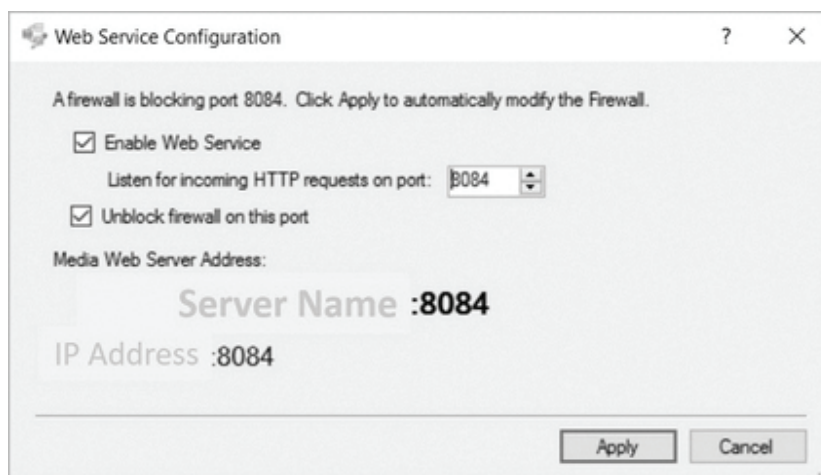


FIGURE 4-2. WEB SERVER – CHANGE PORT

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.

4.1.2 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. The option to unblock the firewall for this port may then appear if it is 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 of the RCM server. It must be the same address that is going to be used by Reserva media to connect to RCM.

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.

CHAPTER 4: CONFIGURING RESERVA

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. rcmserever.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.

1. In the PowerShell prompt enter:

```
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.

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 customized 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 organization, 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.



FIGURE 4-3. CREATE NEW CONNECTION

CHAPTER 4: CONFIGURING RESERVA

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

4.2.1 CELCAT

CELCAT is a read-only Exchange Connector and requires a license to enable. The CELCAT connector tab will only appear with the license 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](#).

4.2.2 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: Optimizing Exchange](#).

4.2.2.1 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.



CHAPTER 4: CONFIGURING RESERVA

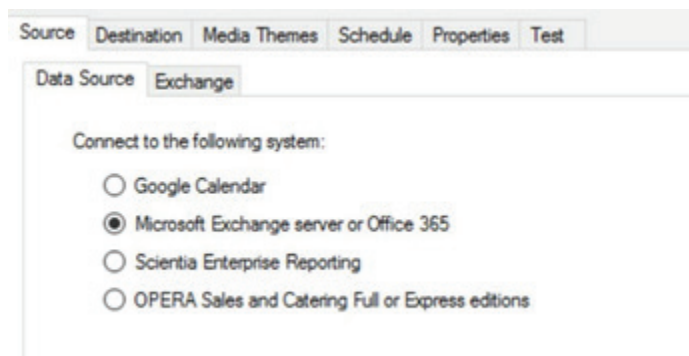


FIGURE 4-4. DATA SOURCE TAB

2. Select the Exchange tab. You can configure a connection to an Office 365 or an Exchange Server. For Exchange Server connections, you can configure the connection manually or automatically.

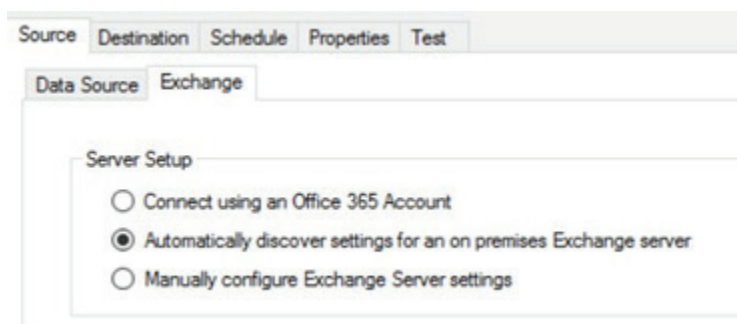


FIGURE 4-5. EXCHANGE TAB

Connect using an Office 365 account: select this option to connect to and configure an Office 365 cloud-based environment.

Automatically discover settings for an on premises Exchange server: select this option to configure a Microsoft Exchange environment, and automatically discover server settings based on the credentials and details you provide. This is the default option if automatic discovery is enabled on your Microsoft Exchange environment.

Manually configure Exchange Server settings: if automatic discovery is not enabled within your Exchange environment, select this option to enter details manually.

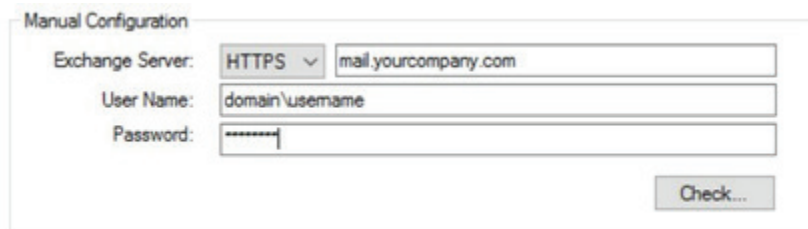
3. Select the appropriate Server Setup option and follow the relevant steps below:

Connect using an Office 365 account: enter the email address and password required to connect to the Office 365 server. To confirm the credentials and connection, select Check.

Automatically discover settings for an on premises Exchange server: enter the email address, user name (domain\username) and password required to connect to the Exchange server. To confirm the credentials and connection, select Check.

CHAPTER 4: CONFIGURING RESERVA

Manually configure Exchange Server settings: select the protocol (in general, this should be set to HTTPS) and enter the Exchange Server host name or IP address (for example, "mail.yourcompany.com"). Enter the user name and password required to connect to the Exchange Server. For example:



The screenshot shows a 'Manual Configuration' dialog box. It contains three input fields: 'Exchange Server:' with a dropdown menu set to 'HTTPS' and a text box containing 'mail.yourcompany.com'; 'User Name:' with a text box containing 'domain\username'; and 'Password:' with a text box containing a masked password '*****'. A 'Check...' button is located at the bottom right of the dialog.

FIGURE 4-6. MANUALLY CONFIGURE EXCHANGE SERVER SETTINGS

To confirm the credentials and connection, select Check.

Contact your network administrator if you are unsure of the details.

The next step is to add room(s).

4.2.2.2 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 screenshot shows a 'Room Names' dialog box. It features a large empty text input field. To the right of the field are two buttons: 'Add...' and 'Remove'.

FIGURE 4-7. ADD BUTTON

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.

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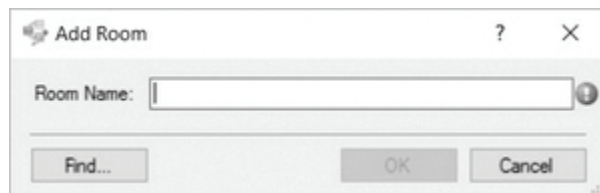


FIGURE 4-8. ADD ROOM DIALOG BOX

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.



FIGURE 4-9. 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.

4.2.3 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.

CHAPTER 4: CONFIGURING RESERVA

4.2.4 USER AUTHENTICATION

On your Exchange Connection, click the User Authentication tab.

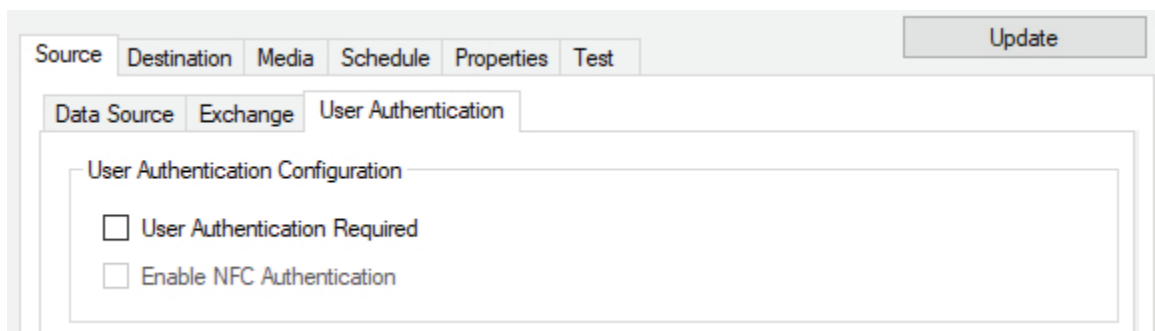


FIGURE 4-10. USER AUTHENTICATION TAB

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

When User Authentication Required is selected, it is also possible to tick Enable NFC Authentication. With this option enabled, the user will be prompted to link a scanned card to their active directory credentials.

We recommend that once user authorization is set up and user cards have been registered, you back up the ReserVA Connection Manager to ensure that should a failure occur, staff do not have to re-register their cards.

4.2.5 GOOGLE CALENDAR

This section explains how to configure Google Calendar Connections.

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

4.2.5.1 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.

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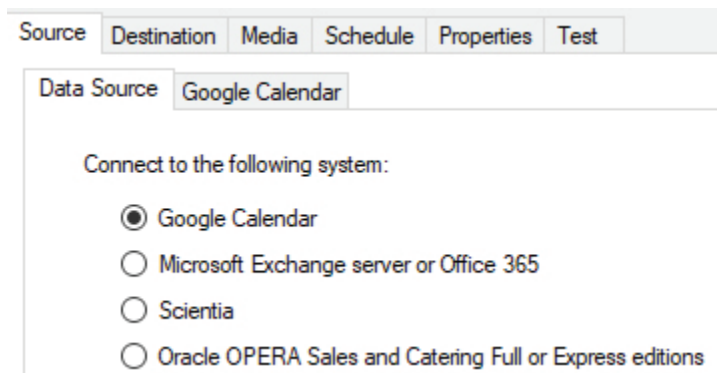


FIGURE 4-11. DATA SOURCE TAB

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

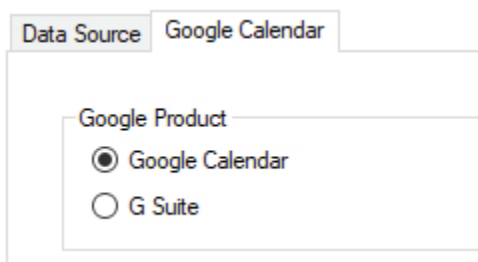


FIGURE 4-12. GOOGLE CALENDAR TAB

3. For authentication, select Sign in with Google.

4. Click the button below.

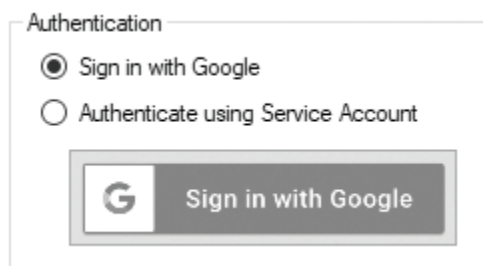


FIGURE 4-13. SIGN IN WITH GOOGLE

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

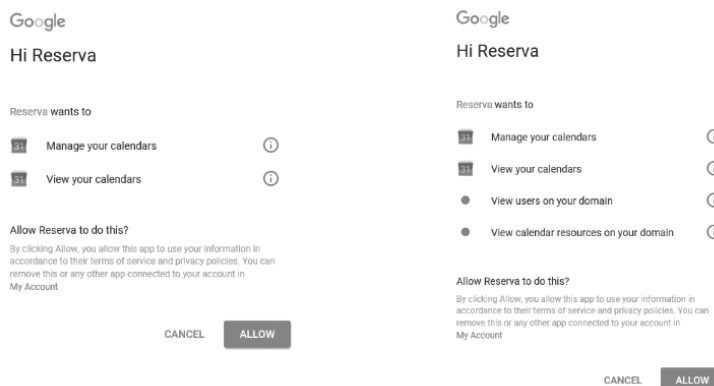


FIGURE 4-14. GRANT PERMISSIONS

6. Click Allow.

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



FIGURE 4-15. ADD CALENDARS

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.

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FIGURE 4-16. LIST OF 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.

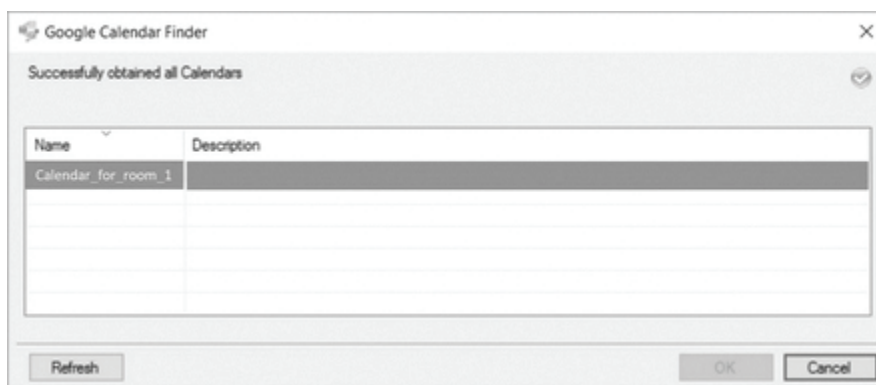


FIGURE 4-17. SELECT CALENDAR

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.

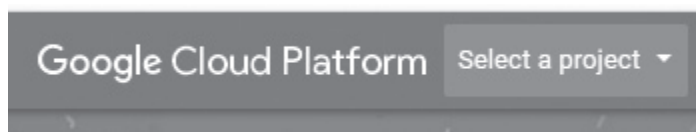


FIGURE 4-18. + ADD PROJECT BUTTON

CHAPTER 4: CONFIGURING RESERVA

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

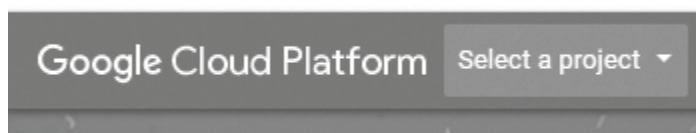


FIGURE 4-19. SELECT A PROJECT BUTTON

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).

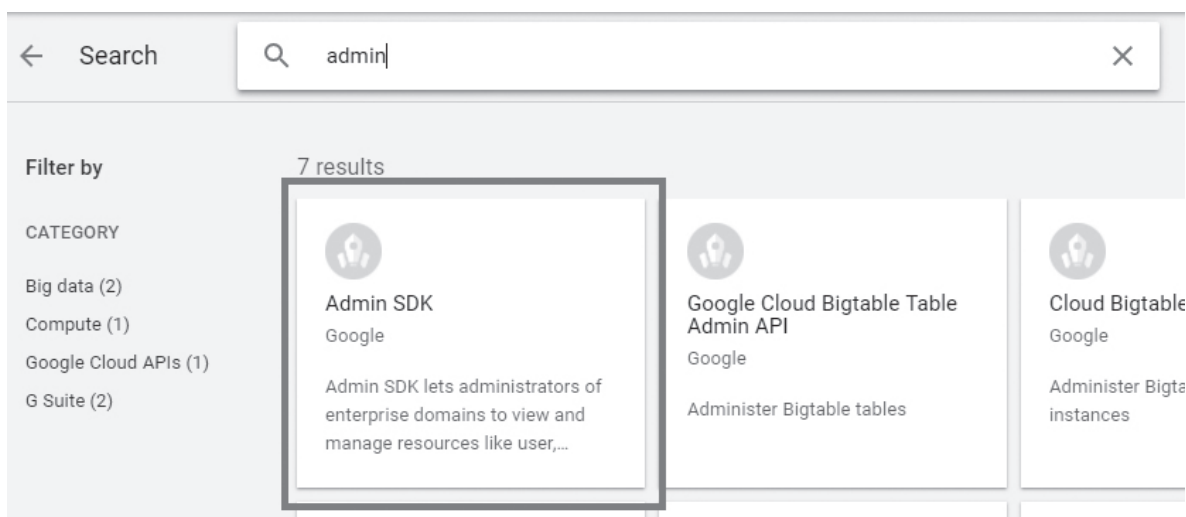


FIGURE 4-20. ADMIN SDK

8. Click on the top left arrow to return to the API library.

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- Repeat step 7 with Google Calendar API.
- Click on the top left Products and Services > API Services > Credentials.
- From the drop-down Create Credentials menu, select Service Account Key.

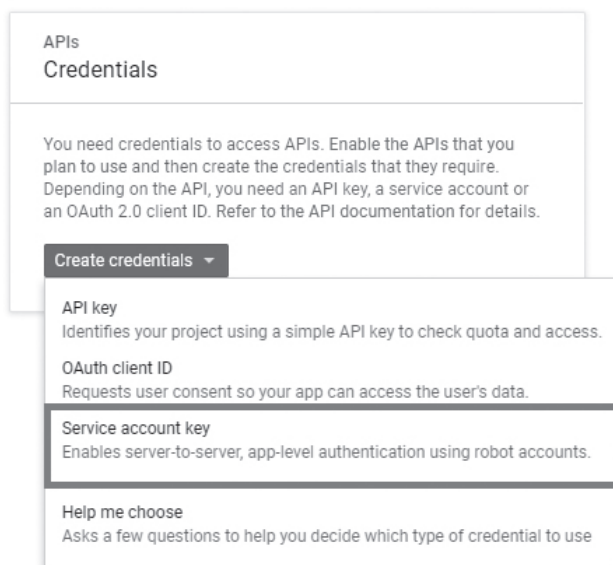


FIGURE 4-21. SERVICE ACCOUNT KEY OPTION

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

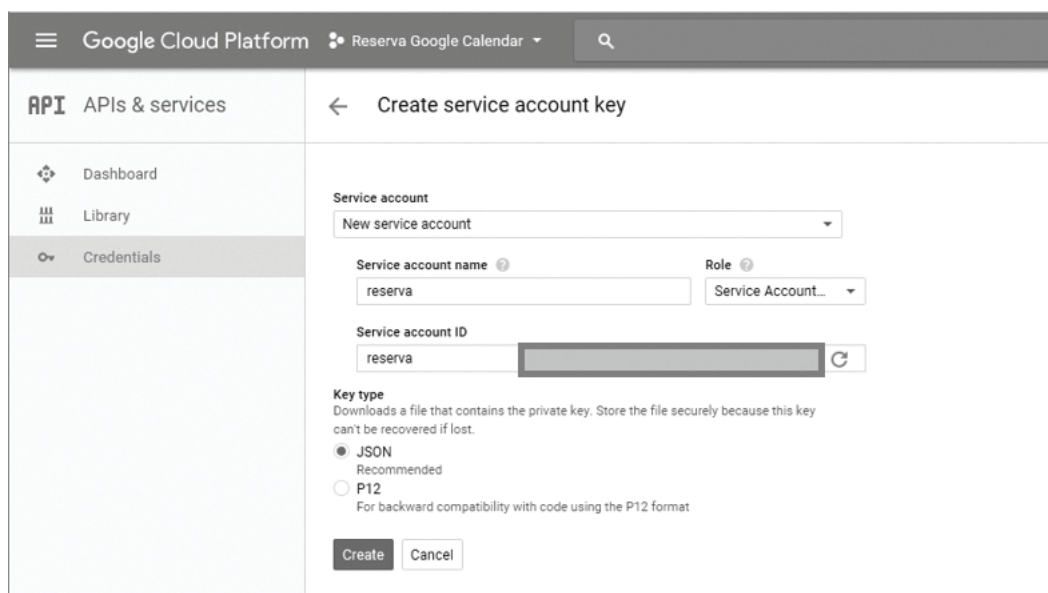


FIGURE 4-22. SERVICE ACCOUNT USER OPTION

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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.

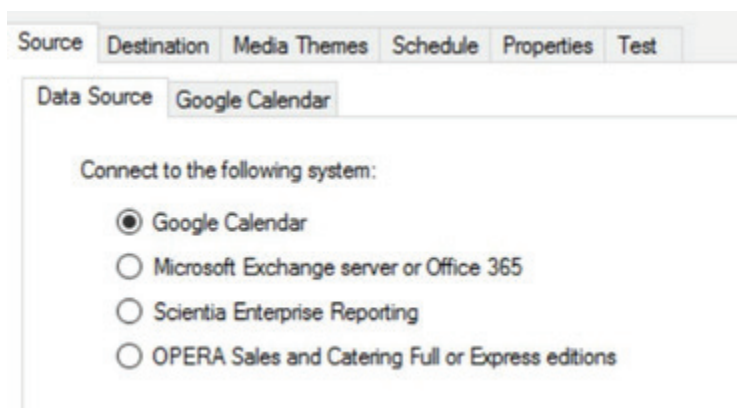


FIGURE 4-23. SELECT GOOGLE CALENDAR

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

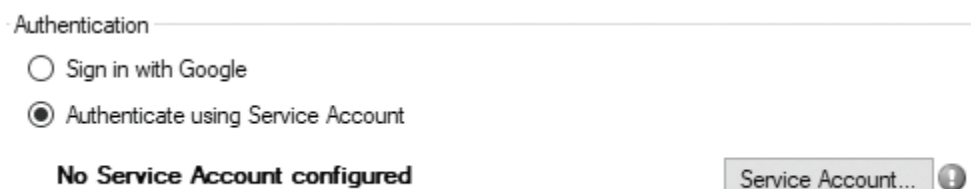


FIGURE 4-24. SERVICE ACCOUNT

CHAPTER 4: CONFIGURING RESERVA

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.

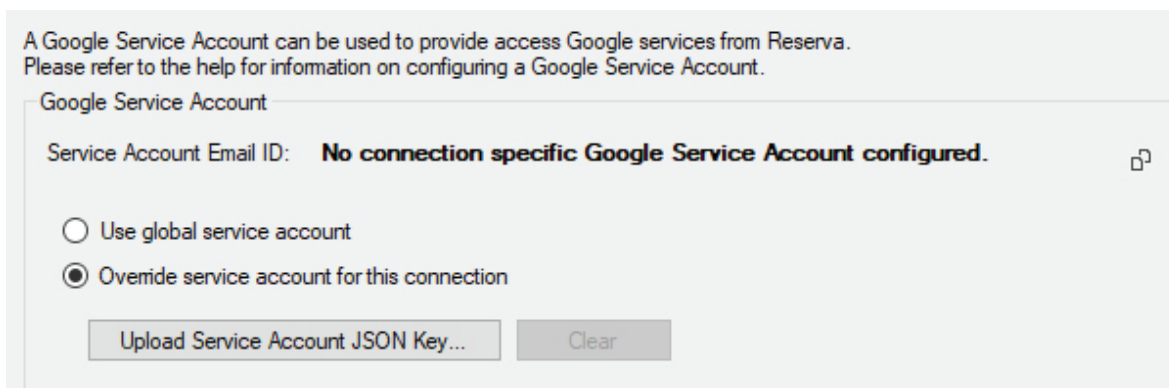


FIGURE 4-25. OVERRIDE SERVICE ACCOUNT

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.

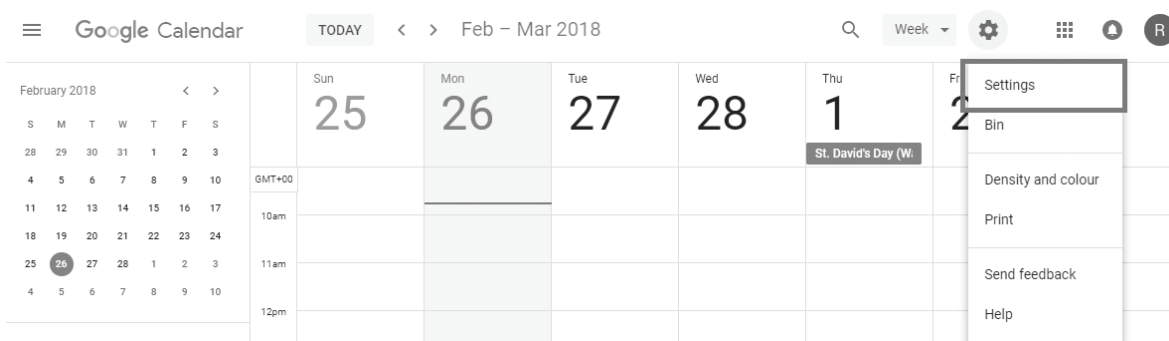


FIGURE 4-26. GOOGLE CALENDAR APP

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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.

Share with specific people

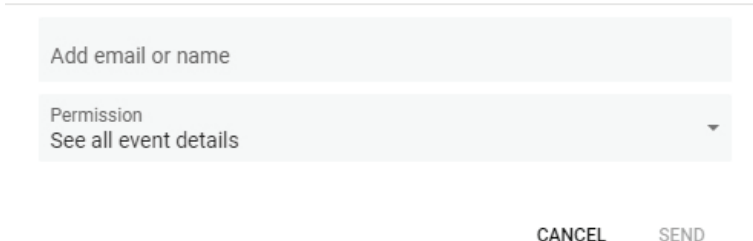


FIGURE 4-27. SHARE WITH SPECIFIC PEOPLE OPTION

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.



FIGURE 4-28. ADD CALENDARS

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.

CHAPTER 4: CONFIGURING RESERVA

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.

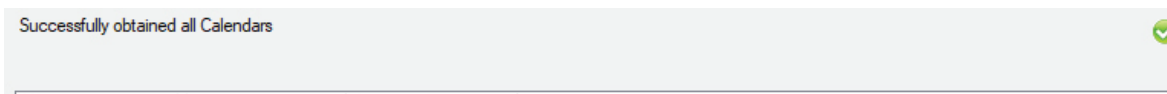


FIGURE 4-29. LIST OF CALENDARS

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.

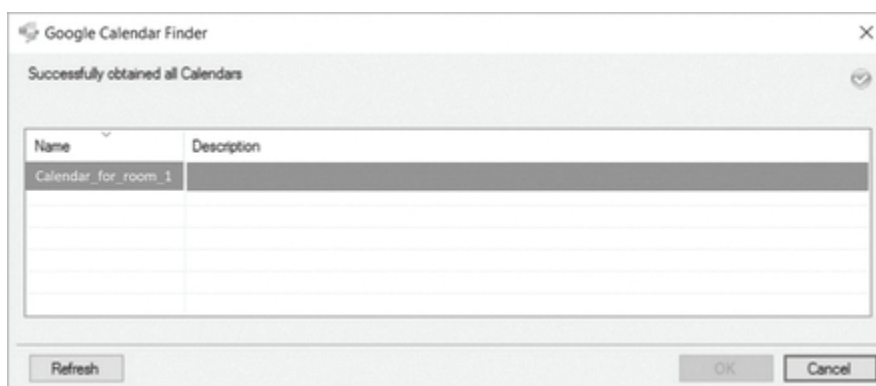


FIGURE 4-30. SELECT CALENDAR

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.

CHAPTER 4: CONFIGURING RESERVA

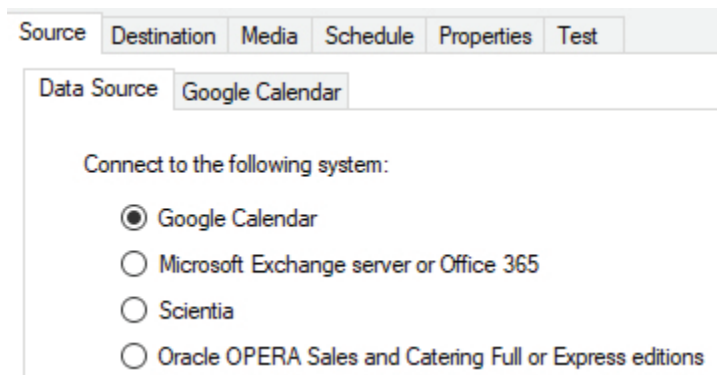


FIGURE 4-31. DATA SOURCE TAB

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

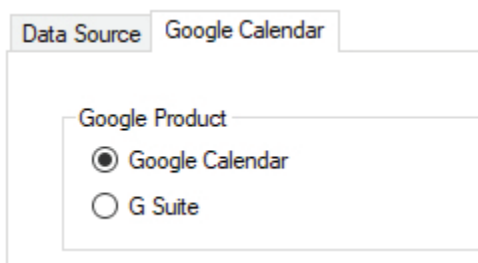


FIGURE 4-32. GOOGLE CALENDAR TAB

3. For Authentication, select, Sign in with Google.

4. Click on the button below.

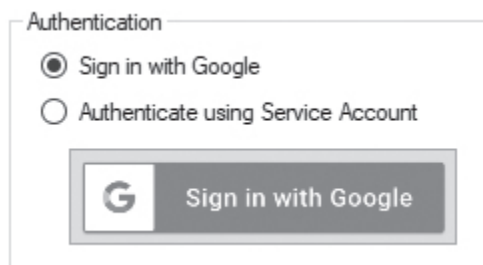


FIGURE 4-33. SIGN IN WITH GOOGLE

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

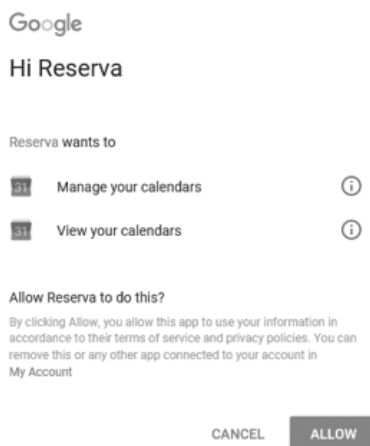


FIGURE 4-34. AUTHENTICATE RESERVA

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.



FIGURE 4-35. ADD CALENDARS

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.

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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.



FIGURE 4-36. LIST OF 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.

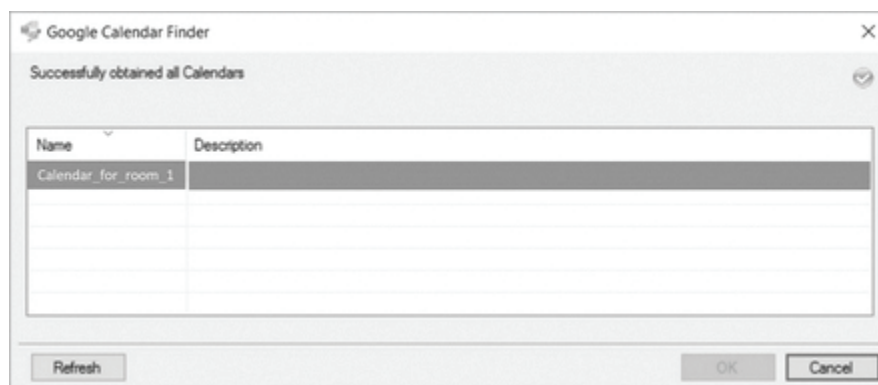


FIGURE 4-37. SHARED GOOGLE CALENDARS LIST

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>.

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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.

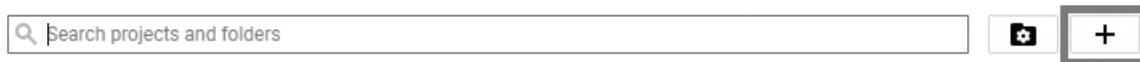


FIGURE 4-38. CREATE A NEW PROJECT

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

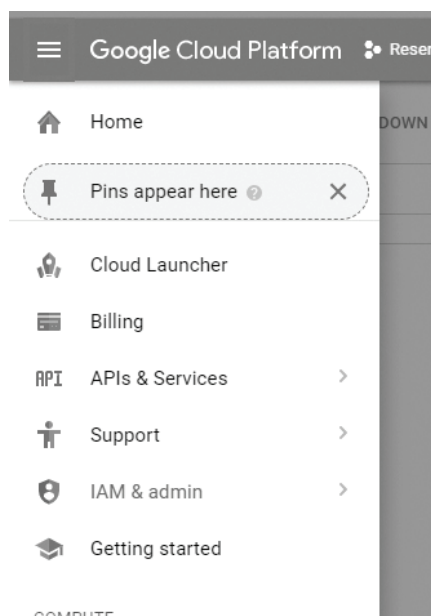


FIGURE 4-39. PINS APPEAR HERE

5. Click on APIs & Services.
6. Click on Library.

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7. Select Admin SDK and click Enable (you can search for easier access using the search bar at the top of the page).

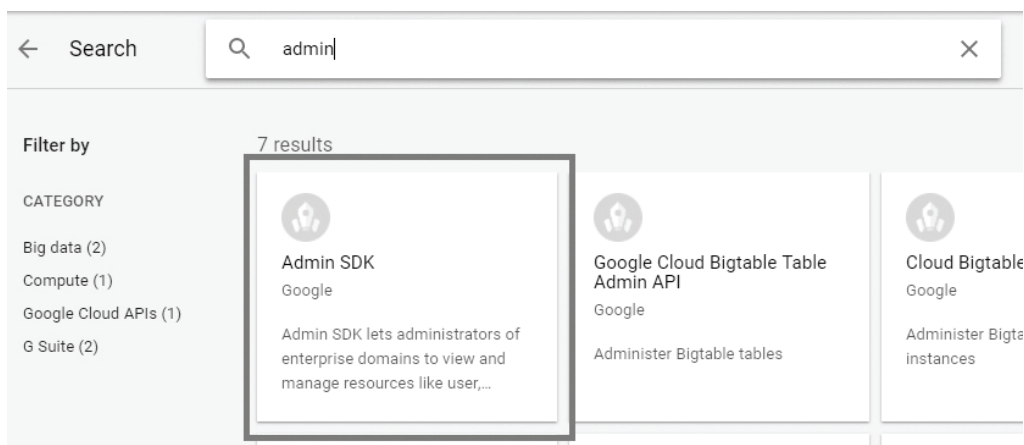


FIGURE 4-40. SELECT ADMIN SDK

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.

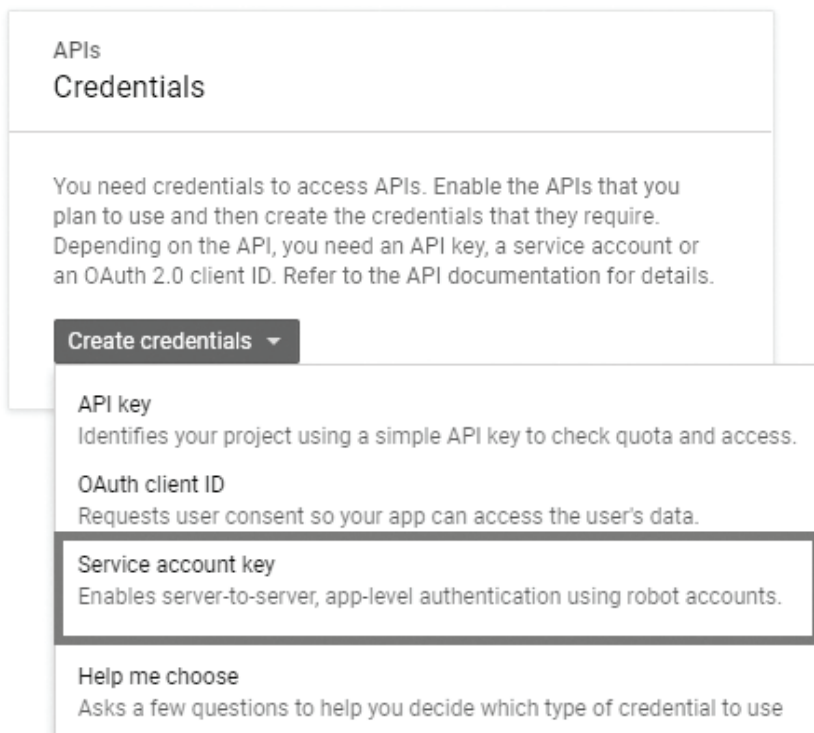
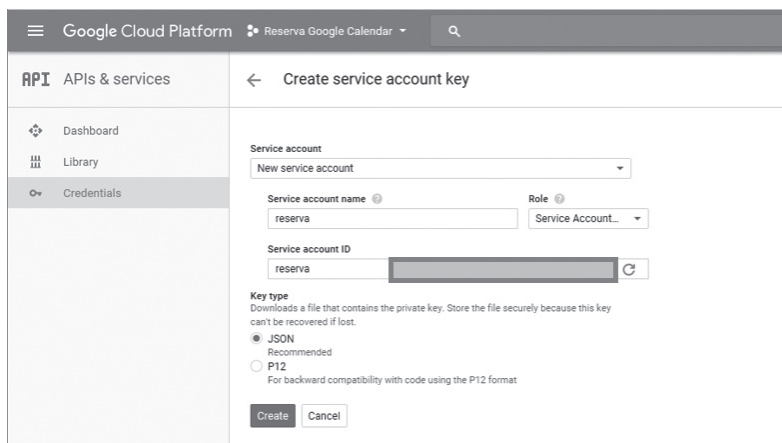


FIGURE 4-41. SERVICE ACCOUNT KEY

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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.



The screenshot shows the Google Cloud Platform interface for creating a service account key. The page title is "Create service account key". On the left, there is a navigation menu with "APIs & services" selected, and sub-items for "Dashboard", "Library", and "Credentials". The main content area contains the following fields and options:

- Service account:** A dropdown menu set to "New service account".
- Service account name:** A text input field containing "reserva".
- Role:** A dropdown menu set to "Service Account...".
- Service account ID:** A text input field containing "reserva" and a copy icon.
- Key type:** A section with a warning: "Downloads a file that contains the private key. Store the file securely because this key can't be recovered if lost." It has two radio buttons: "JSON" (selected) and "P12" (with a note: "For backward compatibility with code using the P12 format").
- Buttons:** "Create" and "Cancel".

FIGURE 4-42. CREDENTIALS

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.

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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.

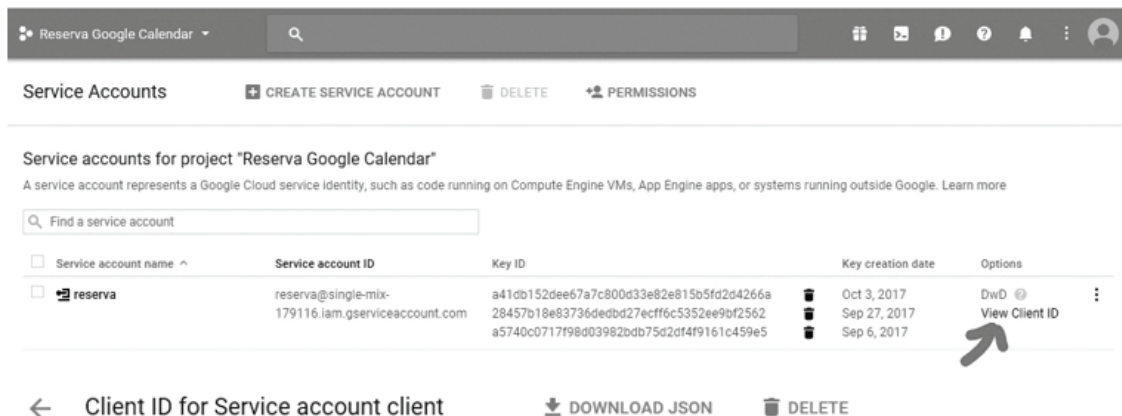


FIGURE 4-43. MANAGE SERVICE ACCOUNTS

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

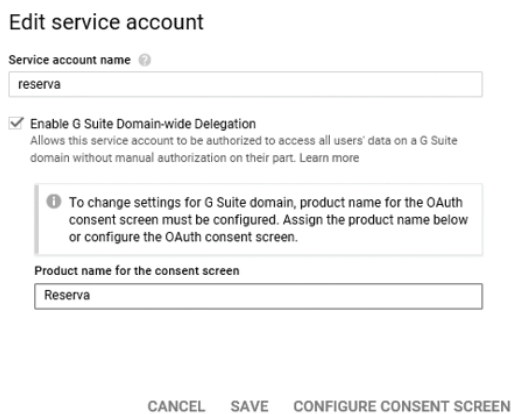


FIGURE 4-44. EDIT SERVICE ACCOUNT

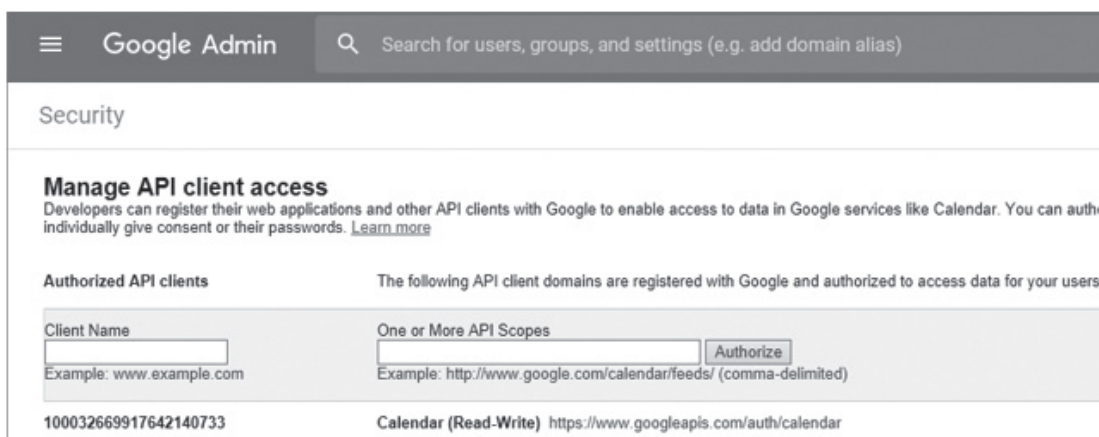
24. Log in to the portal https://admin.google.com

25. Navigate to G Suite Admin > Security > Advanced Settings > Manage API client access.



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26. Enter the Client ID in the Client Name field.



Google Admin Search for users, groups, and settings (e.g. add domain alias)

Security

Manage API client access

Developers can register their web applications and other API clients with Google to enable access to data in Google services like Calendar. You can authorize individually give consent or their passwords. [Learn more](#)

Authorized API clients The following API client domains are registered with Google and authorized to access data for your users.

Client Name	One or More API Scopes	Authorize
Example: www.example.com	Example: http://www.google.com/calendar/feeds/ (comma-delimited)	
100032669917642140733	Calendar (Read-Write) https://www.googleapis.com/auth/calendar	

FIGURE 4-45. ENTER CLIENT ID

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 authorize.

Configure Connection on RCM

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

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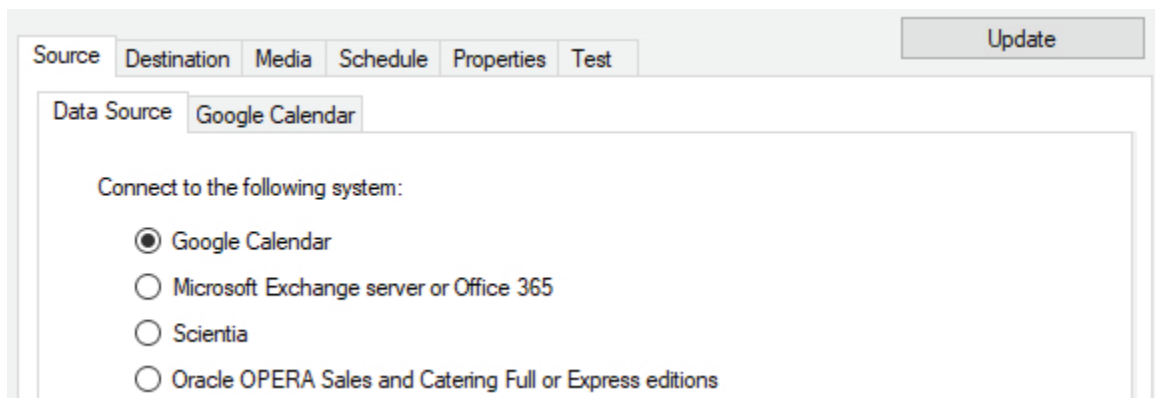


FIGURE 4-46. DATA SOURCE TAB

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

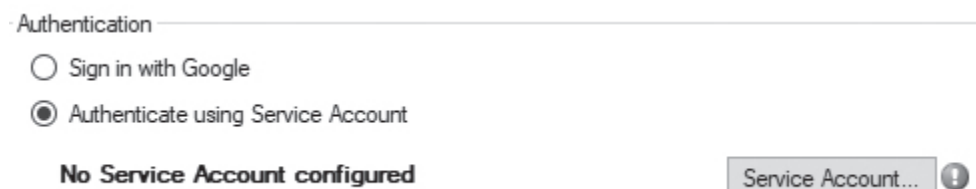


FIGURE 4-47. SELECT G SUITE

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.

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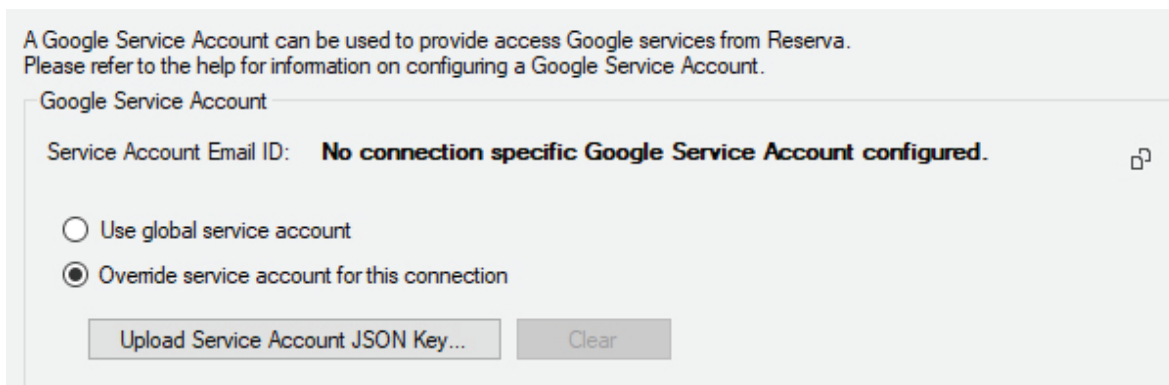


FIGURE 4-48. CONFIGURE SERVICE ACCOUNT

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.

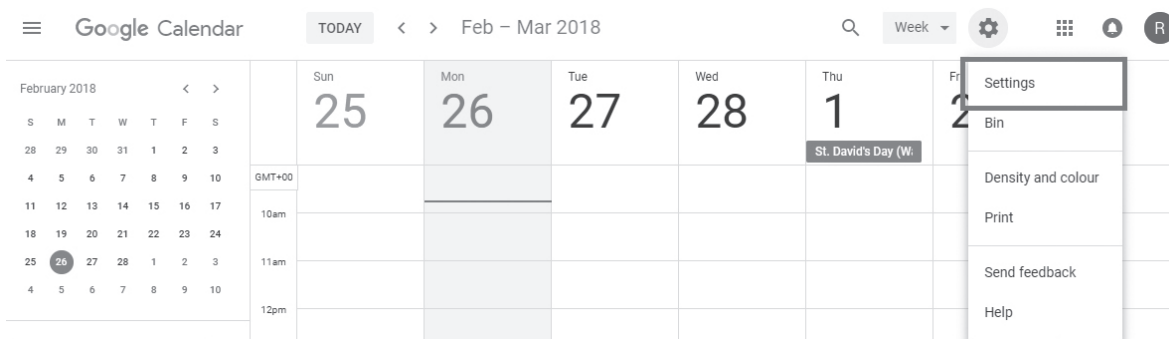


FIGURE 4-49. GOOGLE CALENDAR APP

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.

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Share with specific people

FIGURE 4-50. 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.



FIGURE 4-51. ADD CALENDARS TO CONNECTION

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.

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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.



FIGURE 4-52. LIST OF 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.

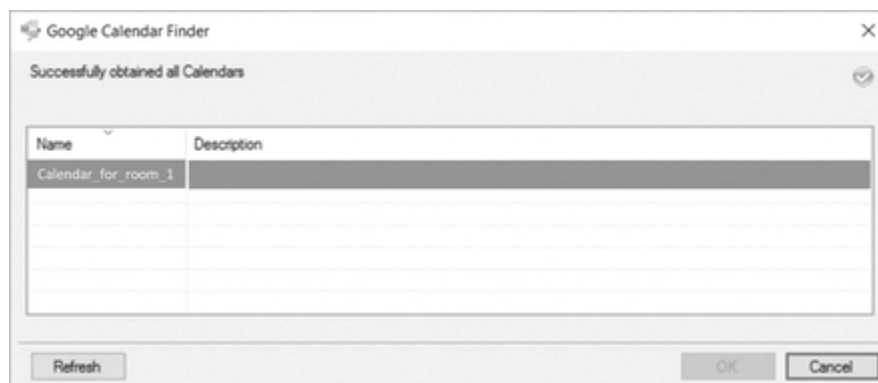


FIGURE 4-53. SELECT CALENDAR

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.

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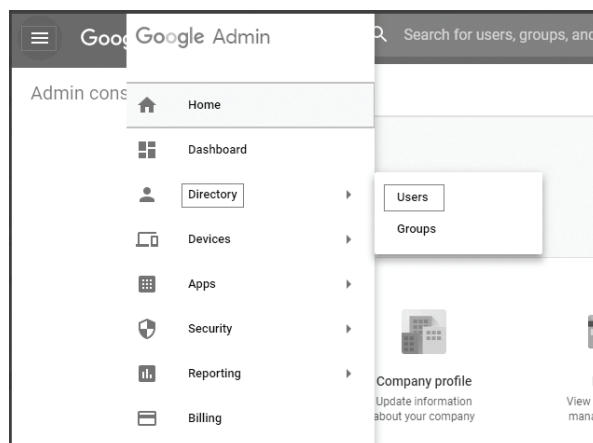


FIGURE 4-54. DIRECTORY > USERS

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 organizer 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.

4.2.6 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.

4.2.6.1 CONFIGURE SCIENTIA CONNECTION

To configure a Connection for Scientia:

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

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Connect to the following system:

- Google Calendar
- Microsoft Exchange server or Office 365
- Scientia
- NFS Rendezvous
- CELCAT

FIGURE 4-55. DATA SOURCE TAB

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.

Data Source Scientia

Scientia Product

- Enterprise Reporting database
- XML Report

Enterprise Reporting

Enterprise Reporting System ODBC System Data Source Name:

Refresh ODBC...

Connect to the database using Windows Authentication
Use 'LocalSystem' account Credentials...

Connect using database authentication:

Login ID: Password:

Locations

Add... Remove

Basic query mode.
Click Advanced Settings button to specify additional settings. Advanced Settings...

FIGURE 4-56. ENTERPRISE REPORTING DATABASE

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or

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

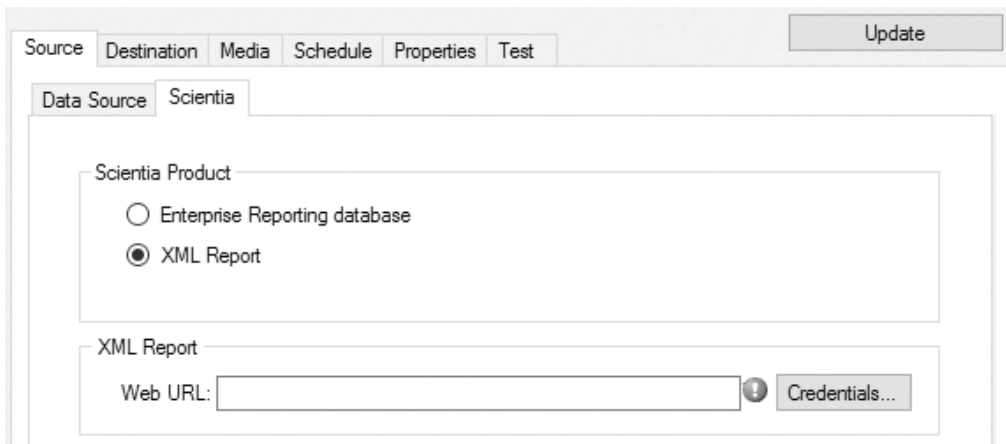


FIGURE 4-57. XML REPORT

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).

4.2.6.2 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 selected the rooms, click OK. The rooms are shown in the Locations list.

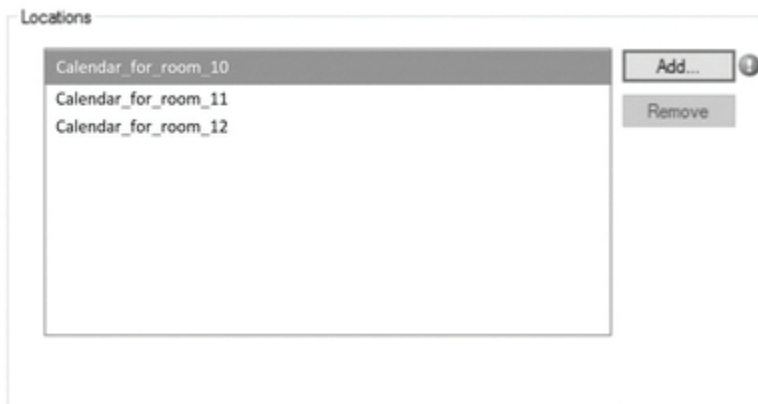


FIGURE 4-58. ADD ROOMS

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You can amend the list using Add and Remove.

The next step is to specify the Connection settings.

4.2.7 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.

4.2.7.1 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.

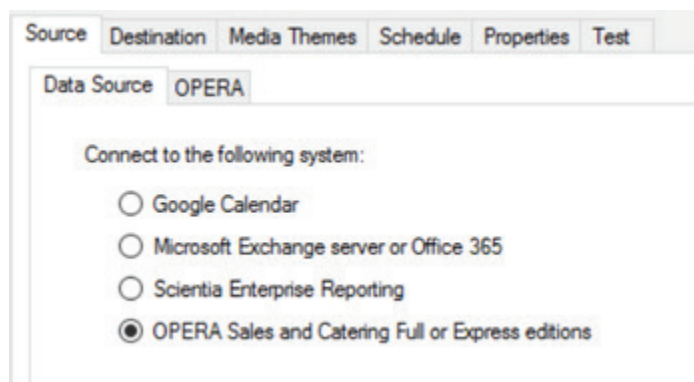


FIGURE 4-59. DATA SOURCE TAB > OPERA

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.

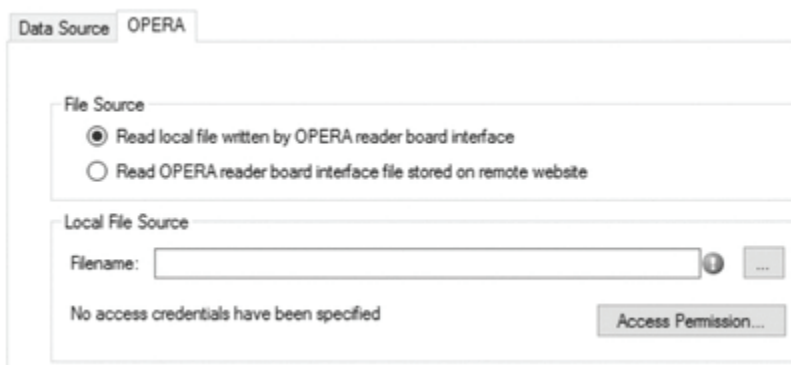


FIGURE 4-60. SPECIFY LOCAL FILE OR WEB URL FOR FILE

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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.

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).

4.2.7.2 ADD ROOM(S) TO AN 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.

We recommend that 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.



FIGURE 4-61. 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.

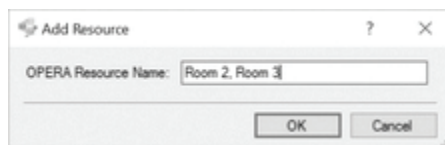


FIGURE 4-62. OK BUTTON

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

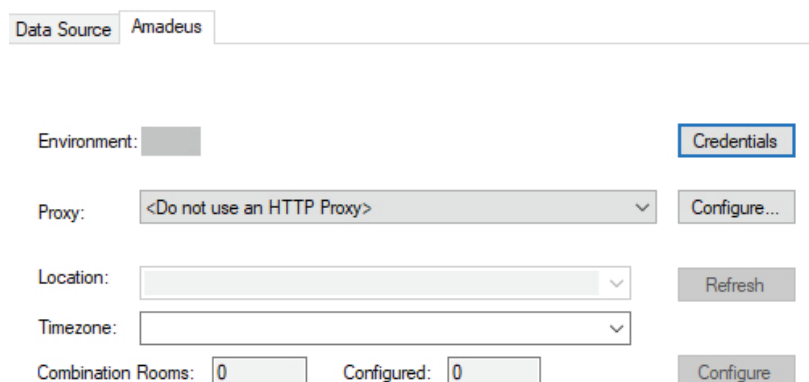
The next step is to specify the Connection settings.

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4.2.8 AMADEUS

Amadeus is a read-only events driven Connector that requires a license 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.



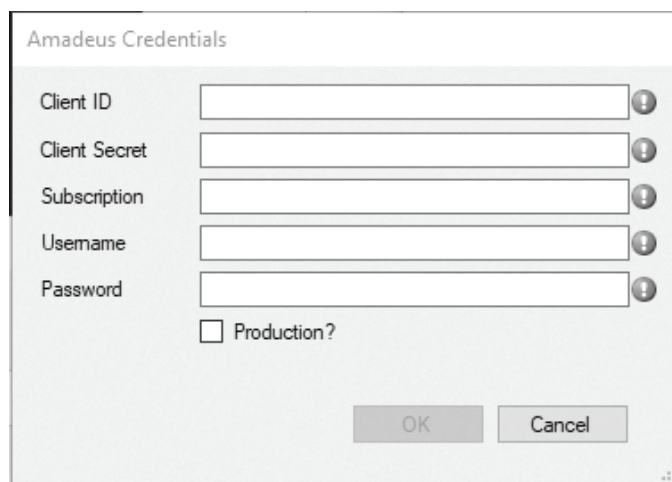
The screenshot shows the 'Amadeus' tab under the 'Data Source' section. It contains several configuration fields and buttons:

- Environment:** A dropdown menu with a 'Credentials' button to its right.
- Proxy:** A dropdown menu set to '<Do not use an HTTP Proxy>' with a 'Configure...' button to its right.
- Location:** A dropdown menu with a 'Refresh' button to its right.
- Timezone:** A dropdown menu.
- Combination Rooms:** A numeric input field with '0' entered, followed by 'Configured: 0' and a 'Configure' button.

FIGURE 4-63. AMADEUS TAB

3. Click Credentials.

NOTE: The Credentials button will only appear if the appropriate Amadeus credentials have not been provided in the product license.



The screenshot shows the 'Amadeus Credentials' dialog box with the following fields and options:

- Client ID:** Text input field with a help icon.
- Client Secret:** Text input field with a help icon.
- Subscription:** Text input field with a help icon.
- Username:** Text input field with a help icon.
- Password:** Text input field with a help icon.
- Production?
- OK** and **Cancel** buttons at the bottom.

FIGURE 4-64. CREDENTIALS BUTTON

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

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FIGURE 4-65. ADD PROXY SCREEN

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 drop-down menu. If no location appears, click Refresh.
8. With Amadeus, the timezone is configured per Connection. Select the desired timezone from the drop-down Timezone menu.
9. You will need to configure any Combination Rooms associated with your Amadeus Connection, to do so, click Configure.

FIGURE 4-66. CONFIGURE BUTTON

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).

Combination Room	
Name	Parts
Ballroom AB	0
Grand Hall AB	0
Grand Hall BC	0
Grand Hall Combined (ABC)	0

Select Parts

- Ballroom A
- Ballroom B
- Grand Hall A
- Grand Hall AB
- Grand Hall B
- Grand Hall BC
- Grand Hall C
- Grand Hall Combined (ABC)

FIGURE 4-67. LIST OF ROOMS

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The next step is to add rooms(s).

4.2.8.1 ADD ROOM(S) TO AN AMADEUS CONNECTION

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

Enabled?	Name
<input type="checkbox"/>	Ballroom A
<input type="checkbox"/>	Ballroom AB
<input type="checkbox"/>	Ballroom B
<input type="checkbox"/>	Executive Room
<input type="checkbox"/>	Garden
<input type="checkbox"/>	Grand Hall A
<input type="checkbox"/>	Grand Hall AB

FIGURE 4-68. LIST OF ROOMS ASSOCIATED WITH DELPHI ACCOUNT

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.

4.2.9 GINGCO

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

4.2.9.1 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.

CHAPTER 4: CONFIGURING RESERVA

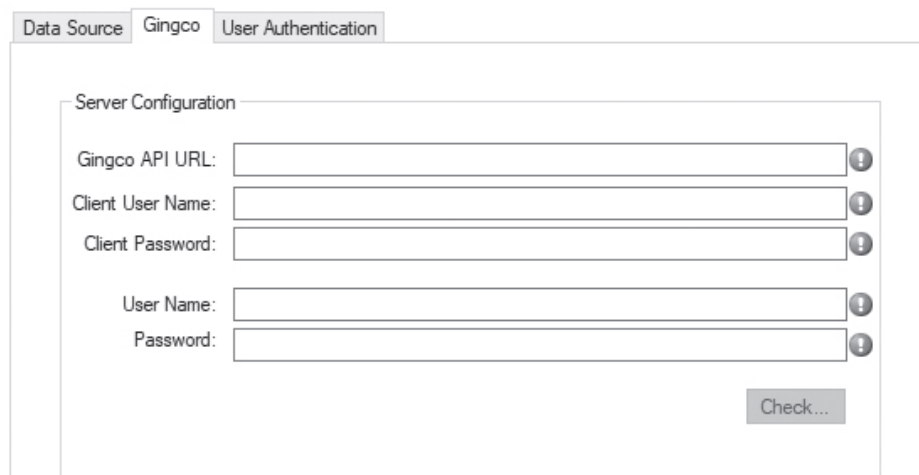


FIGURE 4-69. GINGCO TAB

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

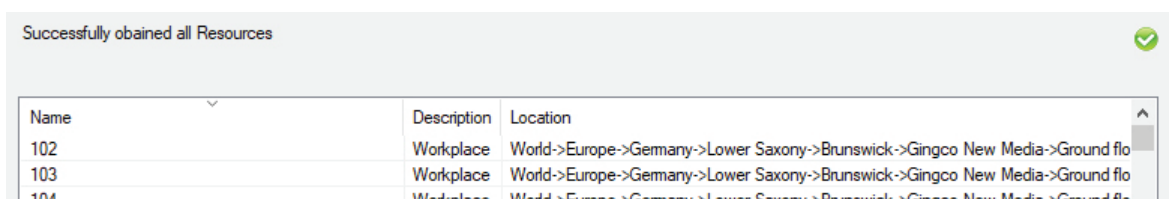
URL and login checks successful

The next step is to add room(s).

4.2.9.2 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.



Name	Description	Location
102	Workplace	World->Europe->Germany->Lower Saxony->Brunswick->Gingco New Media->Ground flo
103	Workplace	World->Europe->Germany->Lower Saxony->Brunswick->Gingco New Media->Ground flo
104	Workplace	World->Europe->Germany->Lower Saxony->Brunswick->Gingco New Media->Ground flo

FIGURE 4-70. LIST OF RESOURCES

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

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4.2.10 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

4.2.10.1 INSTALLING THE CONNECTION MANAGER

Download and extract (onto a windows machine) the valid installer of Reserva Connection Manager that 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.

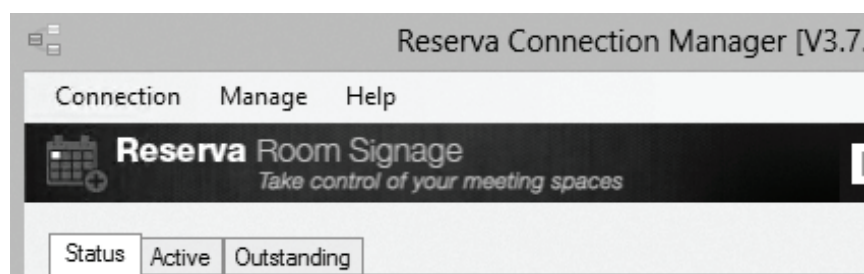


FIGURE 4-71. STATUS TAB

4.2.10.2 LICENSING NFS RENDEZVOUS WORKSPACE

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

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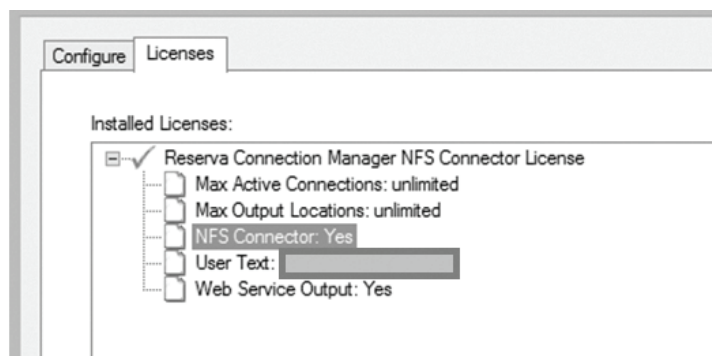


FIGURE 4-72. LICENSES TAB

4.2.10.3 CREATING A CONNECTION

1. If you have not done so already, launch Reserva Connection Manager.
2. Click Create New to open the 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 you are satisfied that the Connection works, click Update and close the Connection editor.
11. In the 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.

4.2.10.4 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.

4.2.10.5 CONFIGURING ICOMPEL PLAYER TO PLAY ROOM SUMMARY

1. Boot up the iCOMPEL Player and connect it to a screen.
2. Log in to the iCOMPEL Player in a web browser using the host name of the device (iCOMPEL Player<serial>. For example, <http://iCOMPEL Player12345>). There is a sticker on the iCOMPEL Player with its serial number.
3. Log in with the relevant credentials. The default username is remote and the default password is 9999.

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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.

The screenshot shows the 'NFS' configuration tab within a software interface. At the top, there are tabs for 'Source', 'Destination', 'Media', 'Schedule', 'Properties', and 'Test'. The 'Data Source' sub-tab is active, showing the following sections:

- Server Configuration:** Includes text input fields for 'NFS API URL' (containing 'http://wscloud1.nfonline.net/tbapi'), 'User Name', and 'Password' (masked with asterisks). A 'Check...' button is located to the right.
- Create Booking Settings:** Includes dropdown menus for 'Region' (set to 'Global'), 'Booking Type' (set to 'External'), and 'User' (set to 'Room Display Panel').
- Room Names:** A list box containing 'LON Room 1', 'LON Room 2', and 'LON Room 3'. To the right are buttons for 'Add...', 'Remove', and 'Modify...'.

At the bottom, there is a note: 'Basic query mode. Click Advanced Settings button to specify additional settings.' and an 'Advanced Settings...' button.

FIGURE 4-73. NFS TAB

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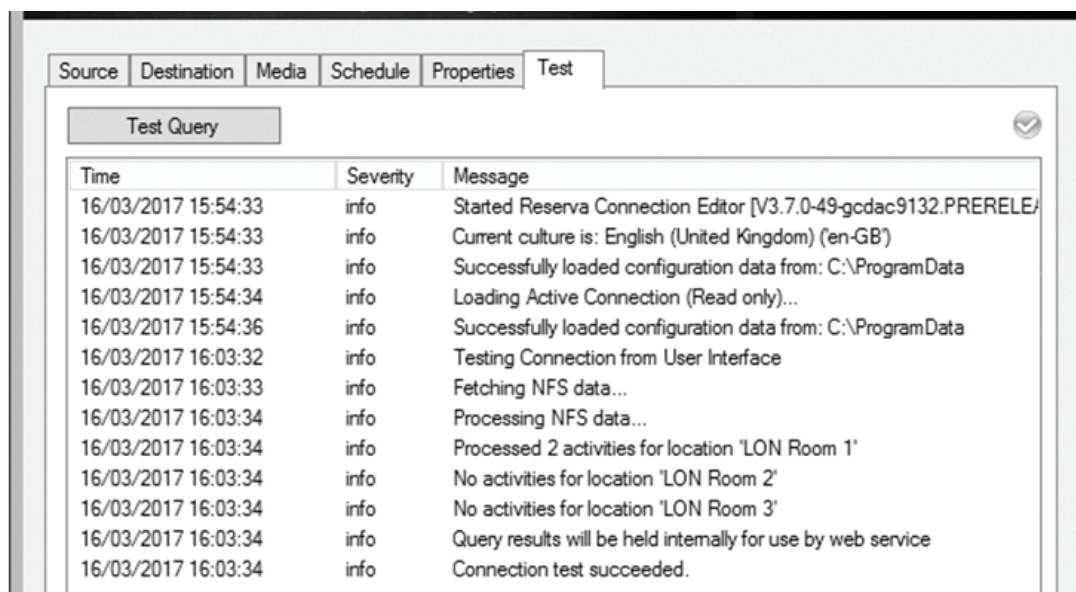


FIGURE 4-74. TEST QUERY

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

4.2.10.6 USER AUTHENTICATION

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

To Enable Authentication

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

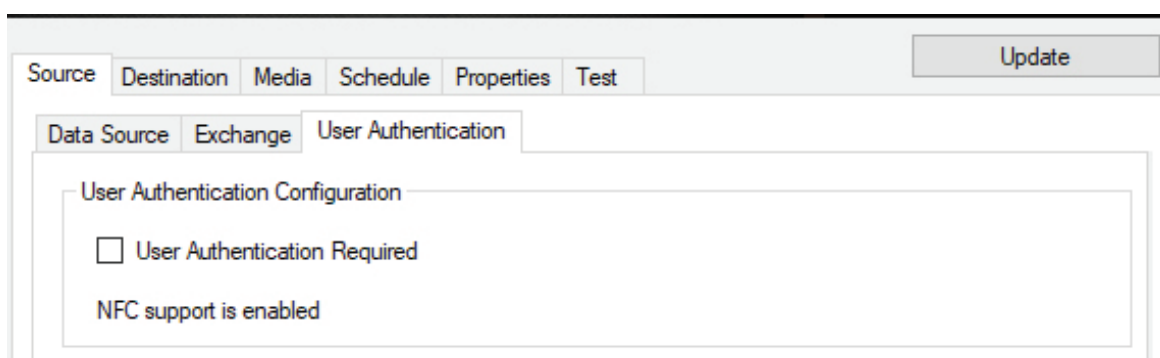


FIGURE 4-75. USER AUTHENTICATION TAB

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

When User Authentication Required is selected, it is also possible to tick Enable NFC Authentication. With this option enabled, the user will be prompted to link a scanned card to their active directory credentials.

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We recommend that once you set up user authentication and register user cards, you back up the Reserva Connection Manager to ensure that if a failure occurs, staff do not have to re-register their cards.

TABLE 4-1. INSTALLATION CHECKLIST

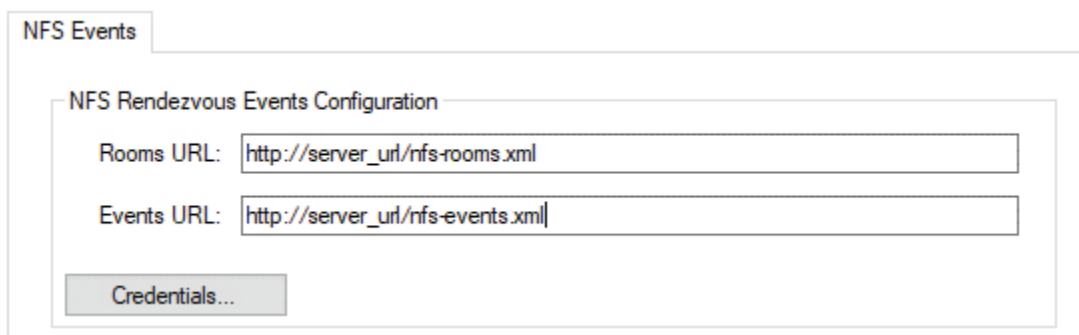
CONFIGURATION		COMMENTS/VALUES/EXAMPLES
NFS Application	Install Workspace Main Application	Minimum version 6.1 (mandatory check)
	Published Workspace Link	http://<ServerName>/Workspace
NFS API	Install NFS API for Workspace	N/A
	Nfs.rendezvous.hibernate.cfg	Configure the Database connection strings to connect to the main workspace database. This would be the same as the main application settings.
	Published API link Documentation link Diagnostics Link	http://<ServerName>/WorkspaceAPI http://<ServerName>/WorkspaceAPI/help http://<Server-Name>/WorkspaceAPI/Diagnostics.html
Reserva Connection Manager	Reserva Connection Manager Windows Services	Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com
	NFS Server Configuration • NFS API URL • User name • Password Create booking settings • Region • Booking type • User	This should be running with a service account with the appropriate permissions. • http://<ServerName>/WorkspaceAPI • Black Box • Global • Internal • Room Display Panel
Reserva Connection Manager	Reserva Connection Manager: add all the desired room names with Reserva panels	Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com
iCOMPEL panels	Configure with Reserva Connection Manager	Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com

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4.2.11 NFS RENDEZVOUS EVENTS

This section explains how to configure NFS Rendezvous Events Connections.

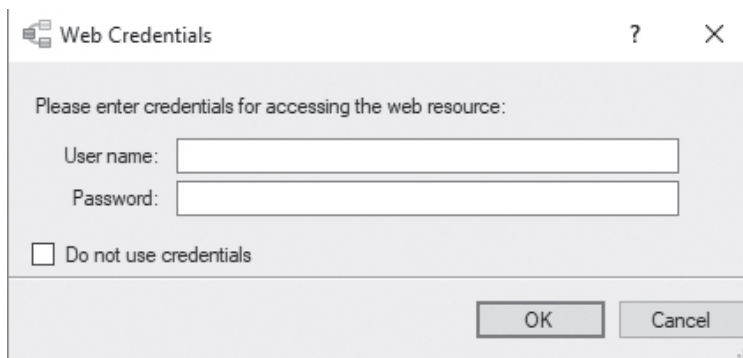
1. From the Connection Data Source tab, select NFS Rendezvous Events.
2. Select the NFS Events tab. Here you will need to complete the URL details.



The screenshot shows a window titled "NFS Events" with a sub-section "NFS Rendezvous Events Configuration". It contains two text input fields: "Rooms URL:" with the value "http://server_url/nfs-rooms.xml" and "Events URL:" with the value "http://server_url/nfs-events.xml". Below these fields is a button labeled "Credentials...".

FIGURE 4-76. NFS EVENTS TAB

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 screenshot shows a dialog box titled "Web Credentials" with a question mark icon and a close button. The text inside says "Please enter credentials for accessing the web resource:". There are two input fields: "User name:" and "Password:". Below these is a checkbox labeled "Do not use credentials" which is currently checked. At the bottom right are "OK" and "Cancel" buttons.

FIGURE 4-77. WEB CREDENTIALS

The next step is to add room(s).

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Add Room(s) to an NFS Rendezvous Events Connector

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



FIGURE 4-78. ADD ROOMS

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

4.2.12 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, regardless of the calendar system.

To specify Connection settings:

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

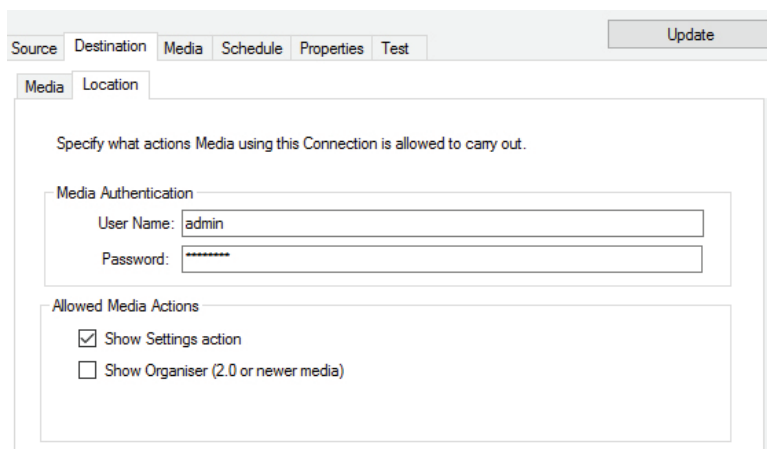


FIGURE 4-79. DESTINATION > LOCATION TAB

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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 that an appointment can be booked.

Web Service Advanced Settings

Modify Appointment

Maximum appointment duration is 6:00 hours

Confirmation

Show Appointment Confirmation action 5 minutes before
and 10 minutes after appointment start time

Work Hours

Allow appointments to be created from 08:30 until 18:00 on

Mon Tues Wed Thu Fri Sat Sun

Miscellaneous

Change time in blocks of 5 minutes

Create or extend appointment in blocks of 5 minutes

Allow booking up to 30 days in advance (2.0 or newer media)
Note, booking is also limited by configured data source date range.

OK Cancel

FIGURE 4-80. MODIFY APPOINTMENT SCREEN

- ◆ 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.

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

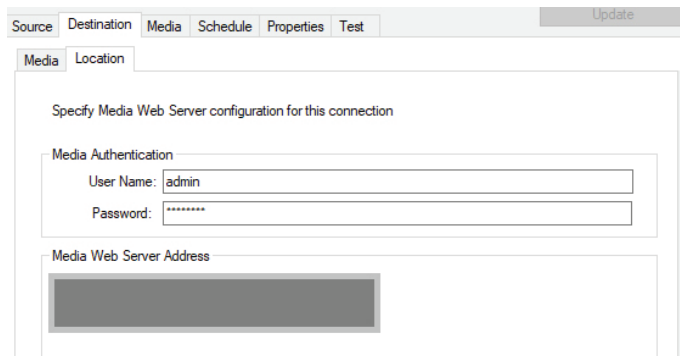


FIGURE 4-81. MEDIA AUTHENTICATION

5. Select the Media tab.

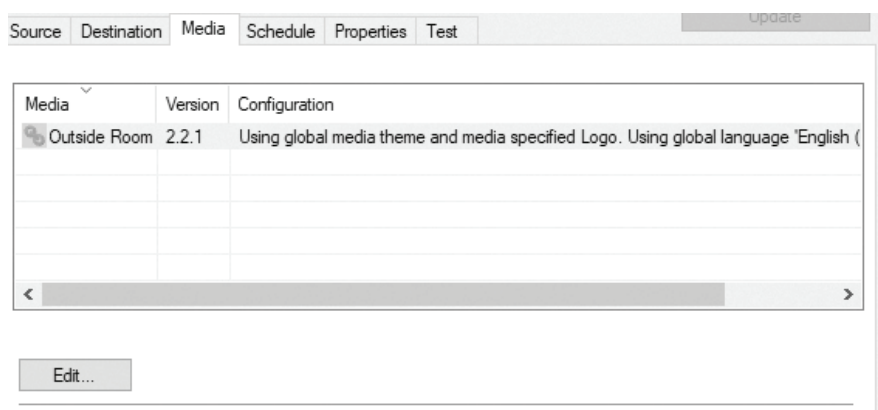


FIGURE 4-82. MEDIA TAB

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

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

FIGURE 4-83. SETTING TABLE

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 organizer will allow for the name of whoever booked the meeting to be shown on the Reserva tablet. When Impersonation is used, the organizer will be shown as the Impersonate user.
- Selecting Hide upcoming appointment detail) will hide upcoming booking information (the booking name and organizer 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 license 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.

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

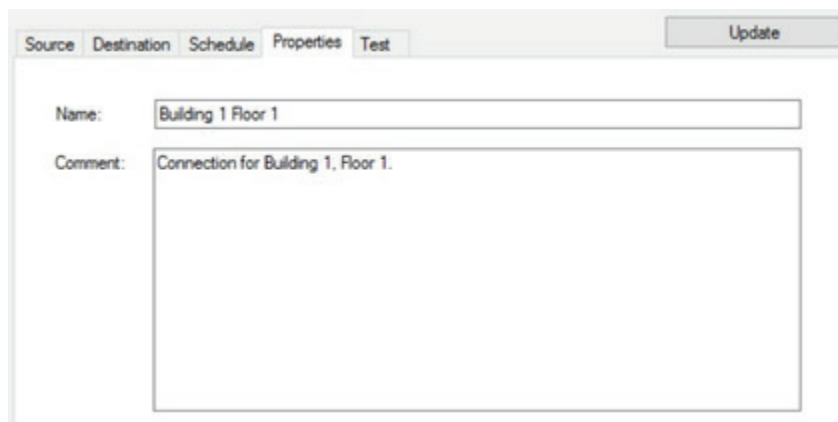


FIGURE 4-84. PROPERTIES TAB

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.

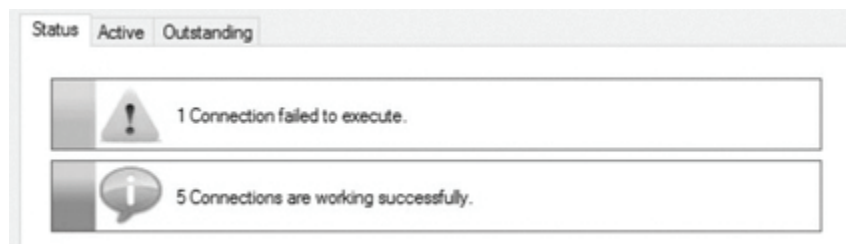


FIGURE 4-85. STATUS TAB

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.

4.2.12.1 AUDIT LOG

A log of media actions requested by your RCM can be found in C:\ProgramData\BlackBox\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.

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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.

4.3.1 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.

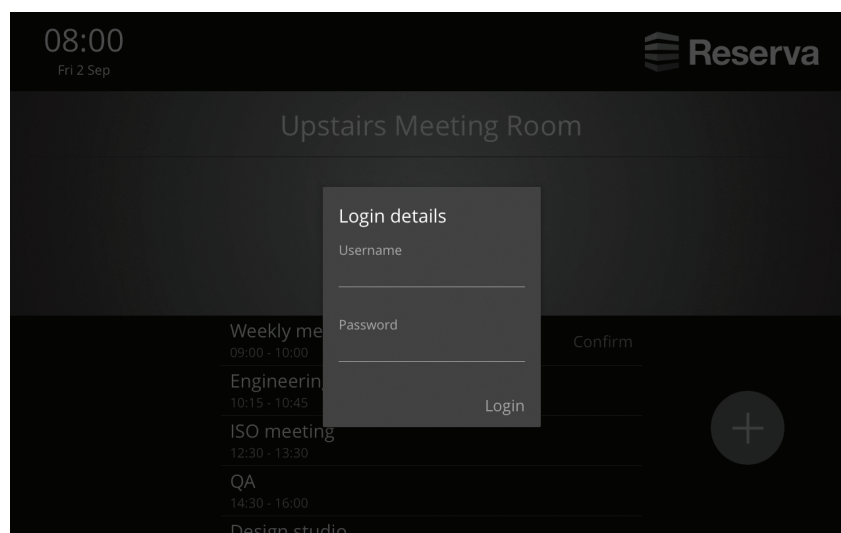


FIGURE 4-86. LOGIN PANE

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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.

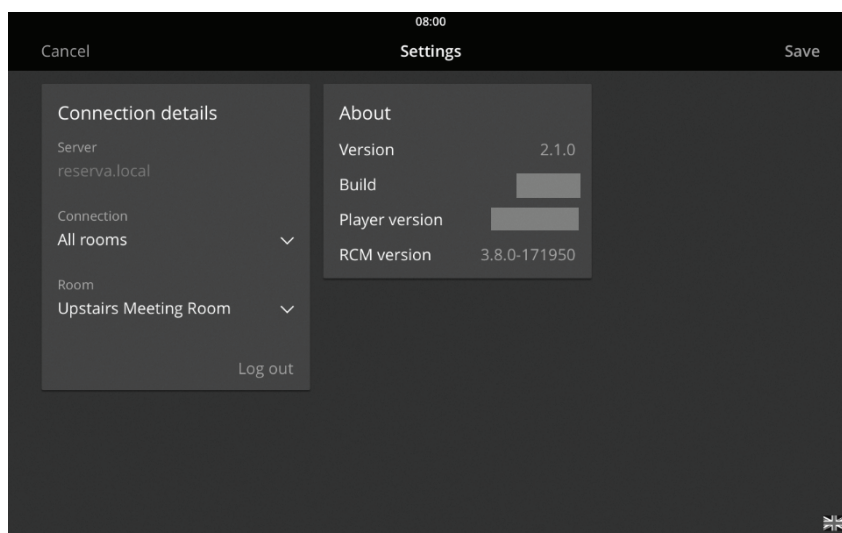


FIGURE 4-87. CONNECTION DETAILS

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 is shown next.

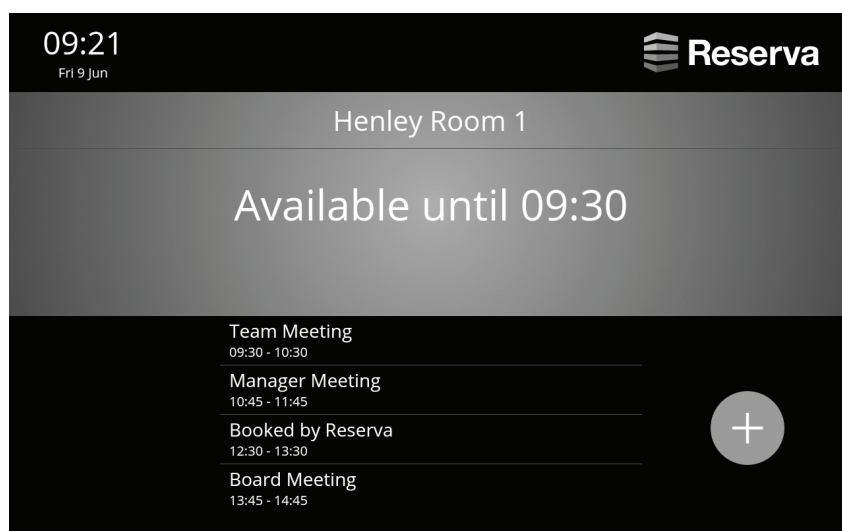


FIGURE 4-88. SPECIFIC ROOM EXAMPLE

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4.3.2 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 next.

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 synchronize 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.

4.3.3 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.



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4.3.4 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 iCOMPEL Player.

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

You configure each iCOMPEL Player 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).

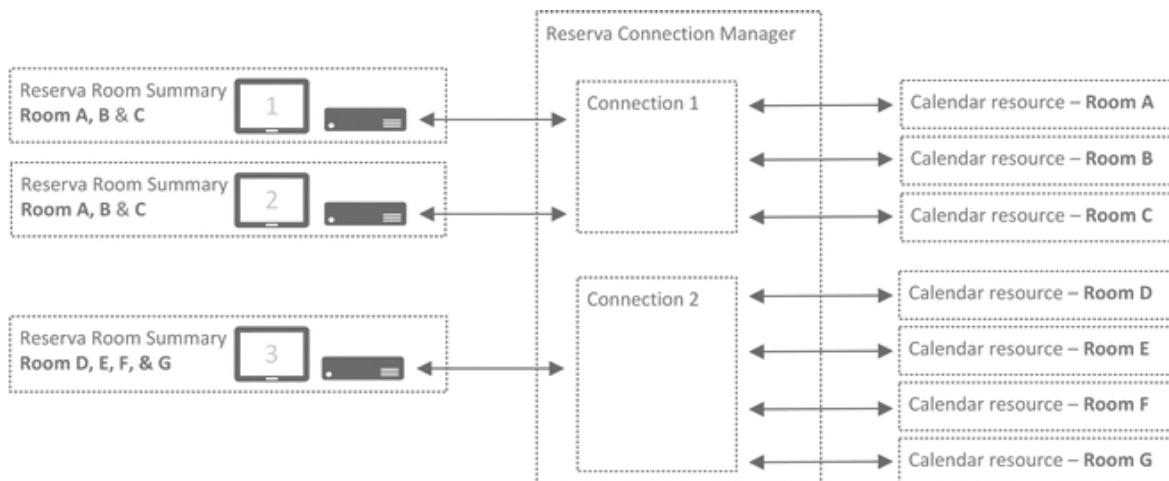


FIGURE 4-89. ROOM SUMMARY EXAMPLE

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.

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4.4.1 CONFIGURE RESERVA ROOM SUMMARY MEDIA

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

NOTE: For more information regarding your particular iCOMPEL Player model, features and configuration, refer to the relevant iCOMPEL Player User Guide. This procedure assumes your iCOMPEL Player 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 Black Box. 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.

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

Configuration of the room summary media includes the following tasks:

- ◆ Obtain Room Summary Media Layout Package.
- ◆ Check iCOMPEL Player license.
- ◆ Configure iCOMPEL Player XML Web Services.
- ◆ Install Room Summary Media Layout Package.
- ◆ Configure Room Summary Media.
- ◆ Configure iCOMPEL Player Schedule.

Obtain Room Summary Media Layout Package

Before configuring the room summary media on your iCOMPEL Player, ensure you have the Reserva room summary media Layout Package. The Layout Package can be downloaded. Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com. The Layout Package is a single file containing all the media and control files needed to install the room summary media layout on your iCOMPEL Player. During configuration of your iCOMPEL Player, you upload the Layout Package file to the iCOMPEL Player.

Check iCOMPEL Player license

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

To configure Reserva room summary media on your iCOMPEL Player:

1. Log on to your iCOMPEL Player.

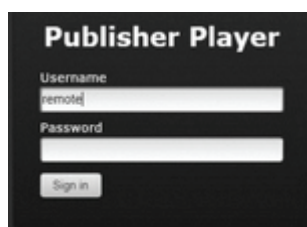


FIGURE 4-90. LOG IN TO ICOMPEL PUBLISHER PLAYER

CHAPTER 4: CONFIGURING RESERVA

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

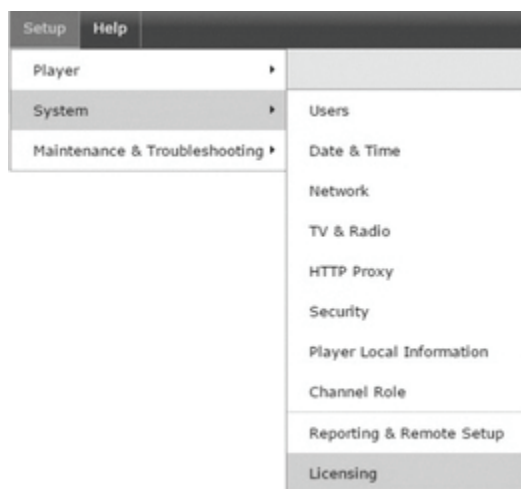


FIGURE 4-91. SETUP > SYSTEM > LICENSING TAB

The Licensing screen appears.

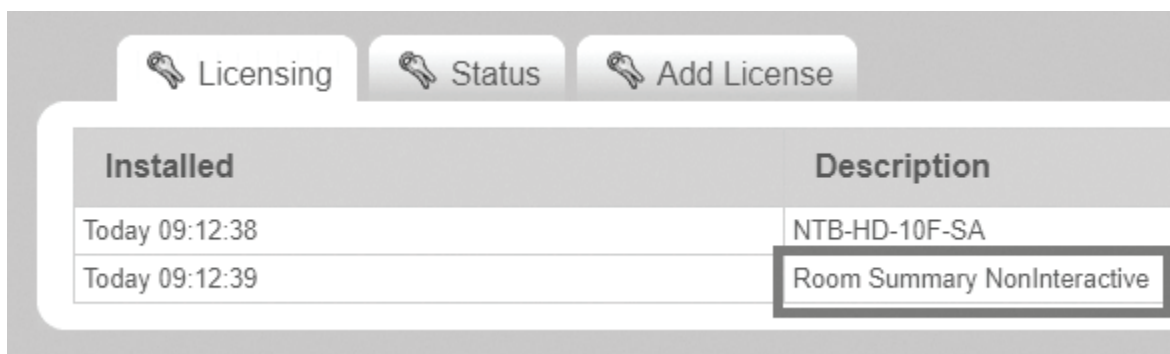


FIGURE 4-92. LICENSING SCREEN

- ◆ If "RoomSummaryNonInteractive" appears in the list of licenses, the iCOMPEL Player 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 license. For more information see License iCOMPEL Player for Room Summary Media (then return to this procedure to complete the room summary media configuration).

Configure iCOMPEL Player XML Web Services

You must configure the iCOMPEL 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 iCOMPEL Player XML web services:

1. Select Setup > Player > Players.

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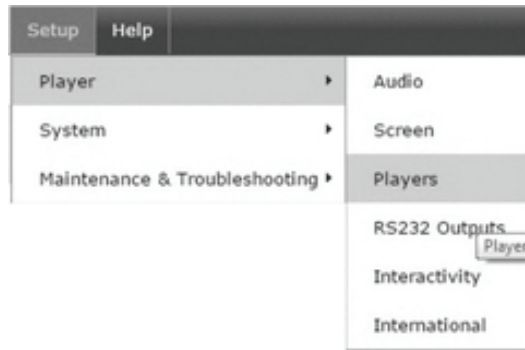


FIGURE 4-93. SETUP > PLAYER > PLAYERS

2. Ensure Allow XML web services to access external sites is selected. Click Save Changes and restart the iCOMPEL Player.

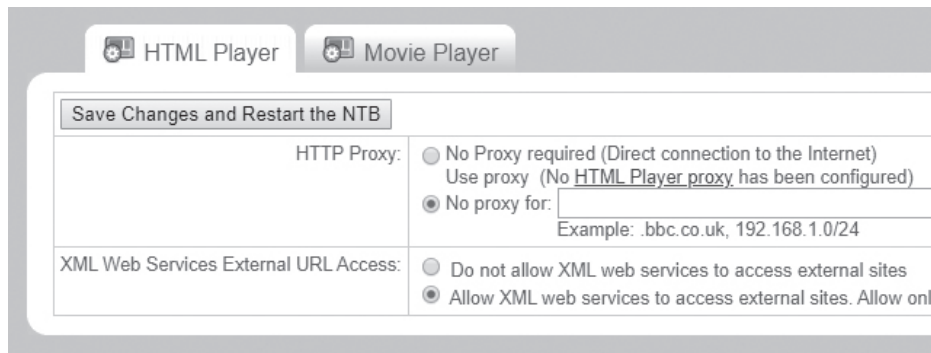


FIGURE 4-94. RESTART PLAYER

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.

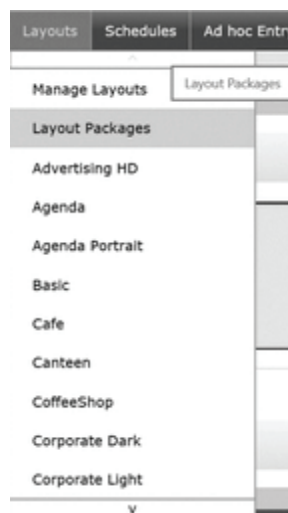


FIGURE 4-95. LAYOUTS > LAYOUT PACKAGES TAB

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

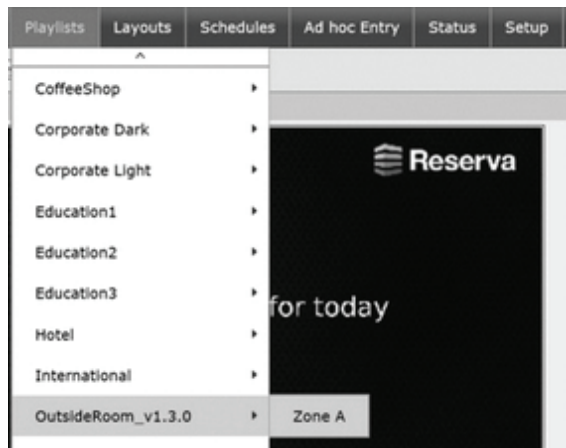


FIGURE 4-96. PLAYLISTS > LAYOUT > ZONE

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



FIGURE 4-97. CLICK ON THIS LINK

Configure Room Summary Media

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

1. Enter the Reserva Web Service Address, Username, and Password.

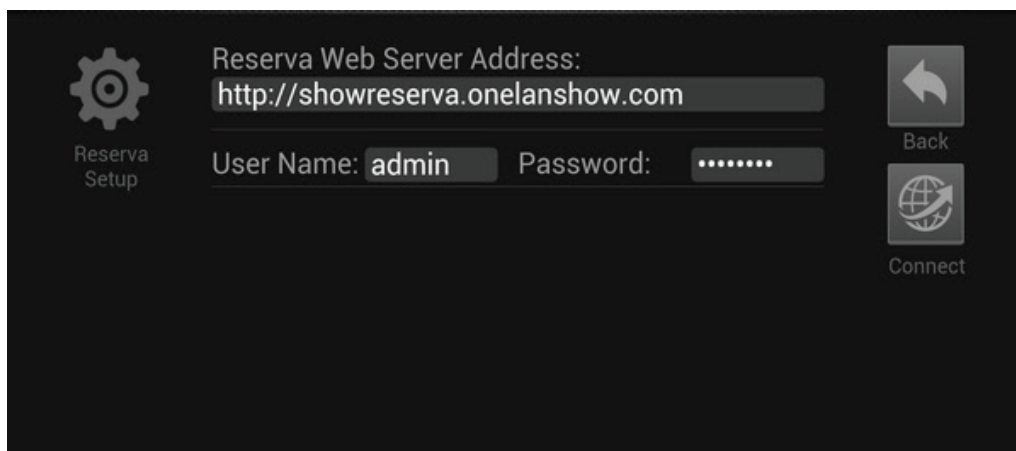


FIGURE 4-98. ENTER WEB SERVER ADDRESS, USERNAME, AND PASSWORD

CHAPTER 4: CONFIGURING RESERVA

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.

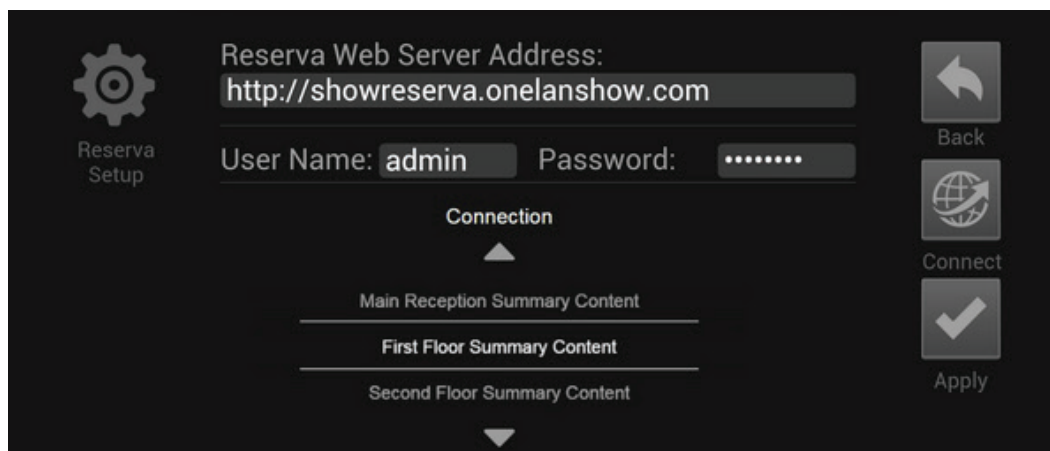


FIGURE 4-99. APPLY CONNECTION

4. Click the browser Back button.

Configure iCOMPEL Player 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 iCOMPEL Player 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.

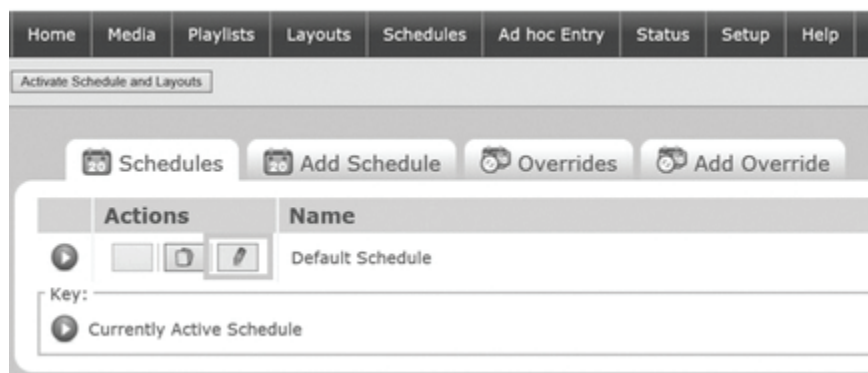


FIGURE 4-100. DEFAULT SCHEDULES

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3. Click the Edit button.

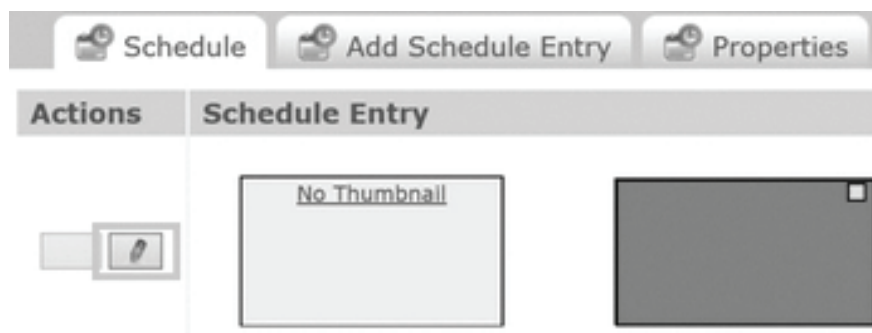


FIGURE 4-101. EDIT SCHEDULES

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

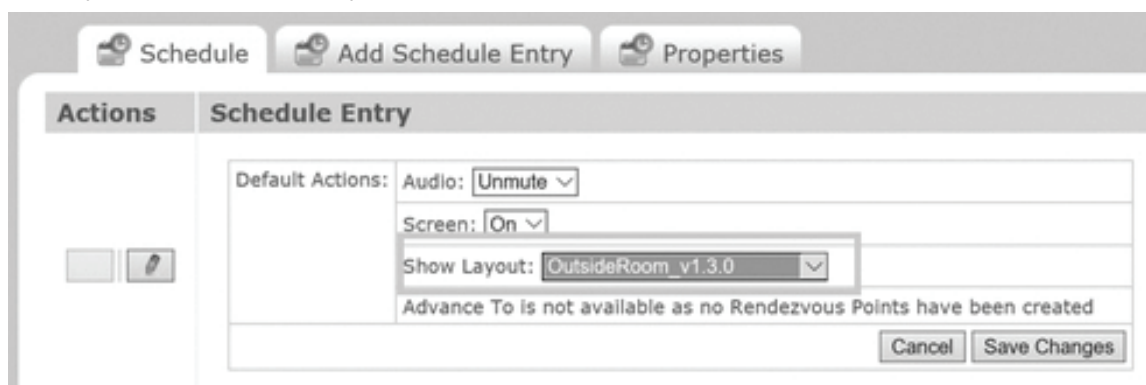


FIGURE 4-102. SHOW LAYOUT MENU

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

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

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.

4.4.2 LICENSE ICOMPEL PLAYER FOR ROOM SUMMARY MEDIA

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

This topic explains how to:

- ◆ Check if a room summary license is installed on your iCOMPEL Player.
- ◆ License your iCOMPEL Player for room summary report.

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

1. Select Setup > System > Licensing.

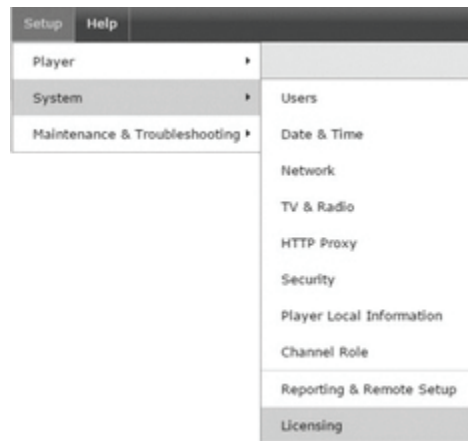


FIGURE 4-103. SETUP > SYSTEM > LICENSING

- If "RoomSummaryMediaNonInteractive" appears, the iCOMPEL Player is licensed to run room summary media and no action is required.

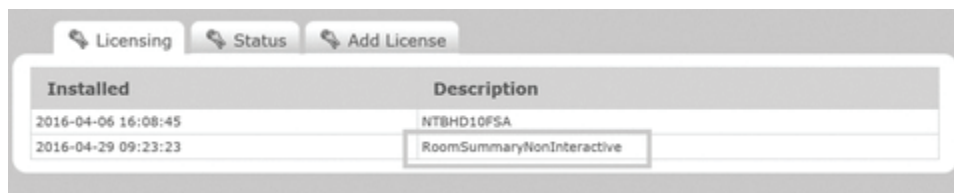


FIGURE 4-104. ROOM SUMMARY MEDIANO NONINTERACTIVE

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

To add a license for room summary:

1. Contact Black Box to request a room summary license for your iCOMPEL Player. You must provide your iCOMPEL Player serial number and request a room summary media license.
2. On receipt of your license details, add the license. Click Add license and copy and paste the license into the text box. Click Add.

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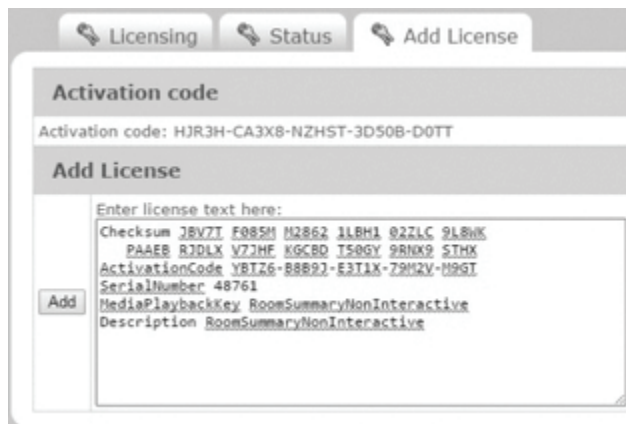


FIGURE 4-105. ADD LICENSE

3. Reboot your iCOMPEL Player.

This completes the room summary media licensing. You can now configure your iCOMPEL Player room summary media. See [Configure Reserva Room Summary Media](#).

4.4.3 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 iCOMPEL Player and select Playlists > Layout > Zone.

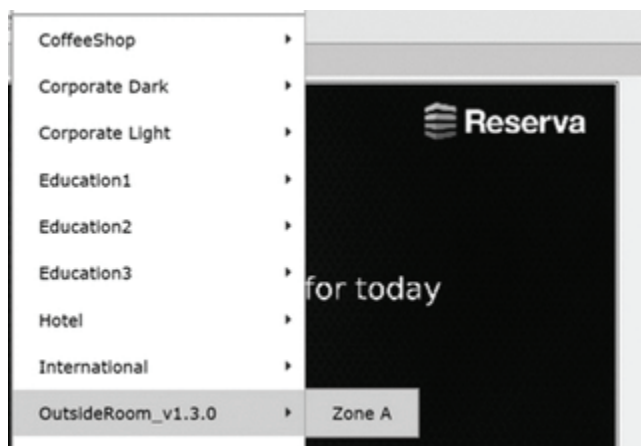


FIGURE 4-106. PLAYLISTS > LAYOUT > ZONE

CHAPTER 4: CONFIGURING RESERVA

2. The Reserva zone playlist window appears.



FIGURE 4-107. RESERVA ZONE PLAYLIST WINDOW

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 CUSTOMIZING RESERVA MEDIA

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

Reserva media can be customized 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 customize 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.

Customization 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.

4.5.1 CONFIGURE RESERVA MEDIA THEMES

You can customize 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.

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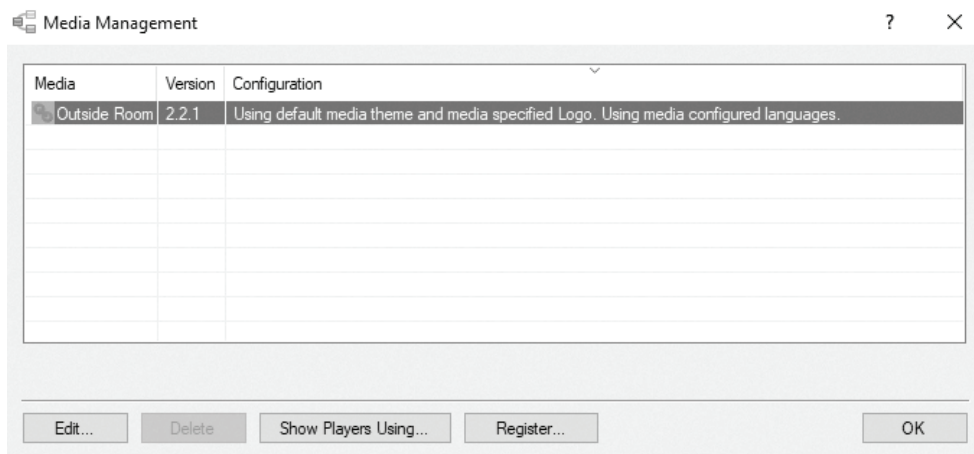


FIGURE 4-108. MEDIA MANAGEMENT DIALOG

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.

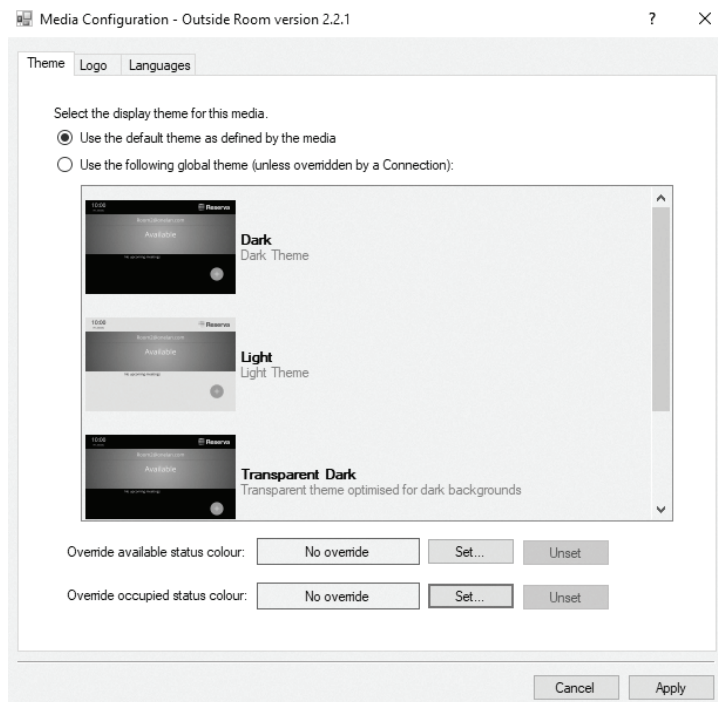


FIGURE 4-109. MEDIA CONFIGURATION DIALOG > THEME TAB

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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 optimized for dark background) or a transparent light theme (a transparent theme optimized for light backgrounds).
 - Alternatively, you can override the status colors displayed by the media for available or occupied (this option is only available in media versions 2.2.1 and newer).
 - Override available status color: this property changes the color of Outside Room Media when a room is available.
 - Override occupied status color: this property changes the color of Outside Room Media when a room is busy or occupied.
 - To set a custom color, click Set... and select the desired color.

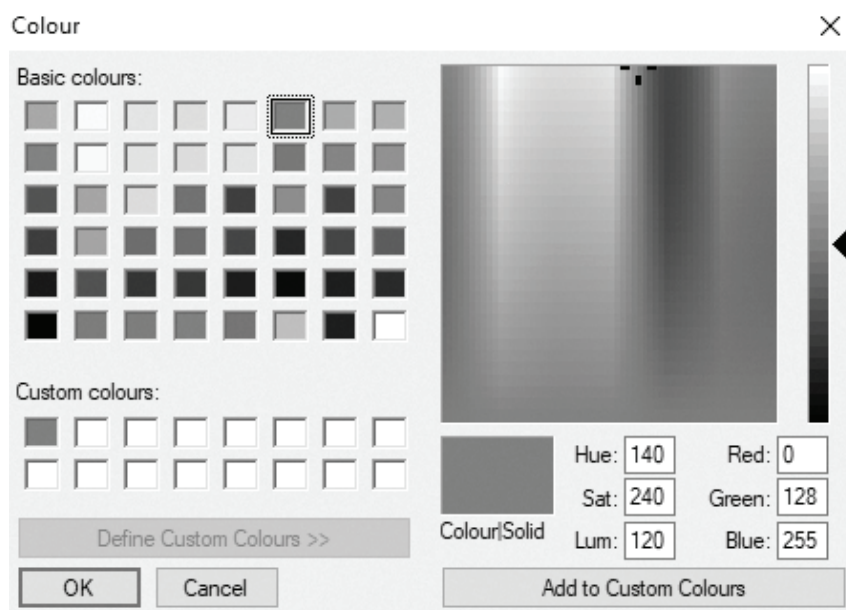


FIGURE 4-110. SELECT COLOR

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

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 next.

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.

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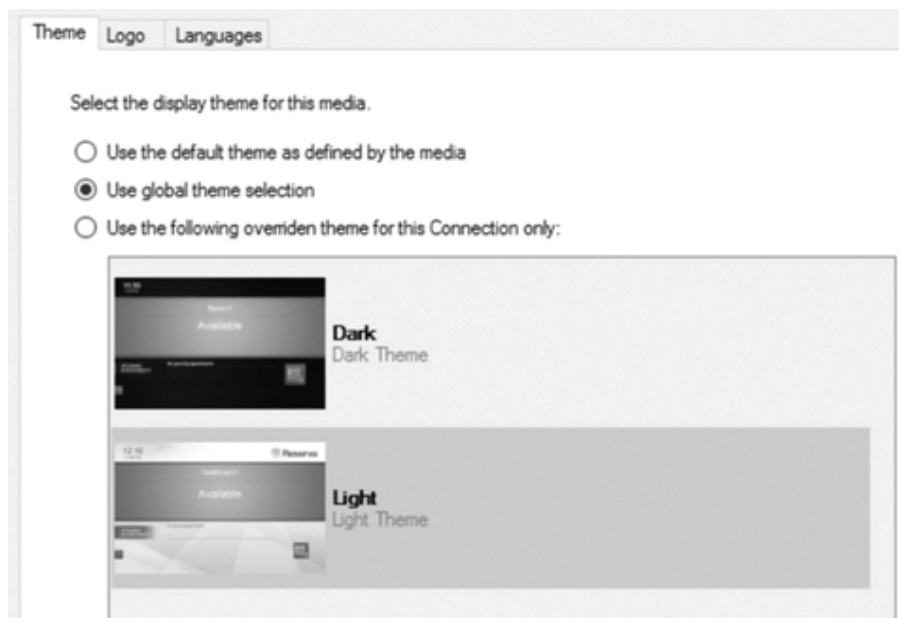


FIGURE 4-111. THEME TAB

- ◆ 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 customize the available and occupied status colors 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.

4.5.2 CONFIGURE RESERVA MEDIA LOGO

You can customize 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 customize 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.

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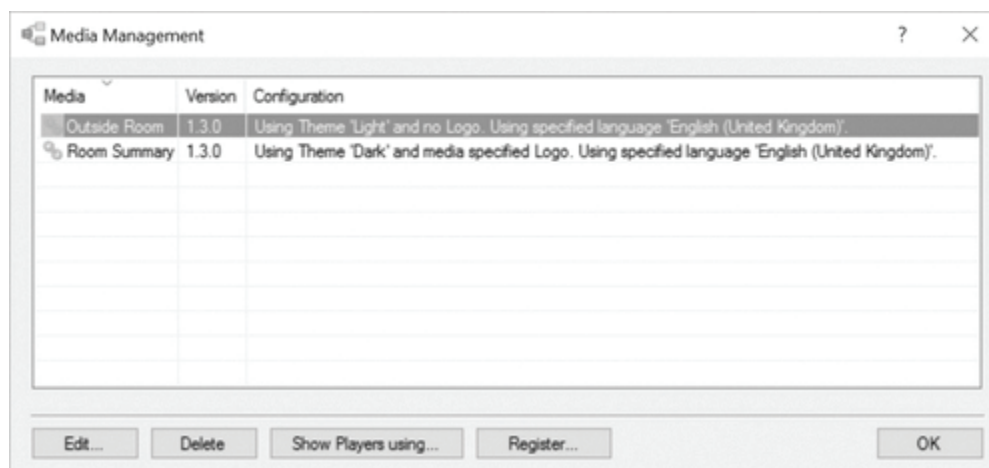


FIGURE 4-112. MEDIA MANAGEMENT DIALOG

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.

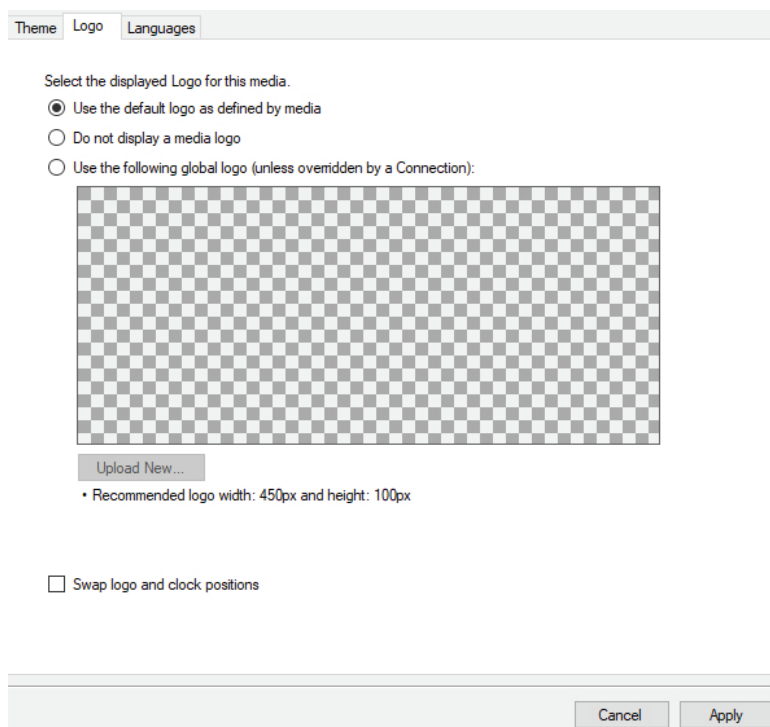


FIGURE 4-113. LOGO TAB

CHAPTER 4: CONFIGURING RESERVA

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.



FIGURE 4-114. LOGO TAB

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 next.

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.

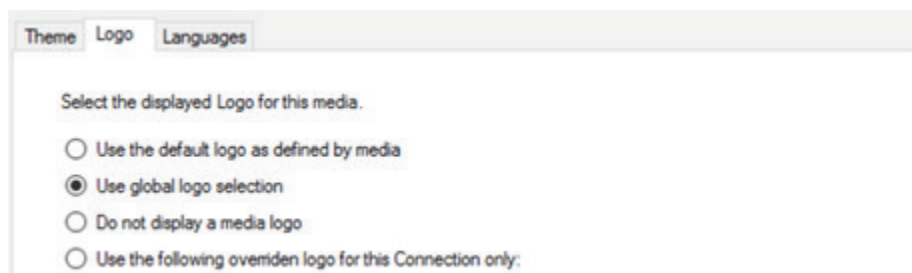


FIGURE 4-115. LOGO TAB, USE GLOBAL LOGO SELECTION

CHAPTER 4: CONFIGURING RESERVA

- ◆ 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.

4.5.3 CONFIGURE RESERVA MEDIA LANGUAGE

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

NOTE: You customize 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 through 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 customized 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.

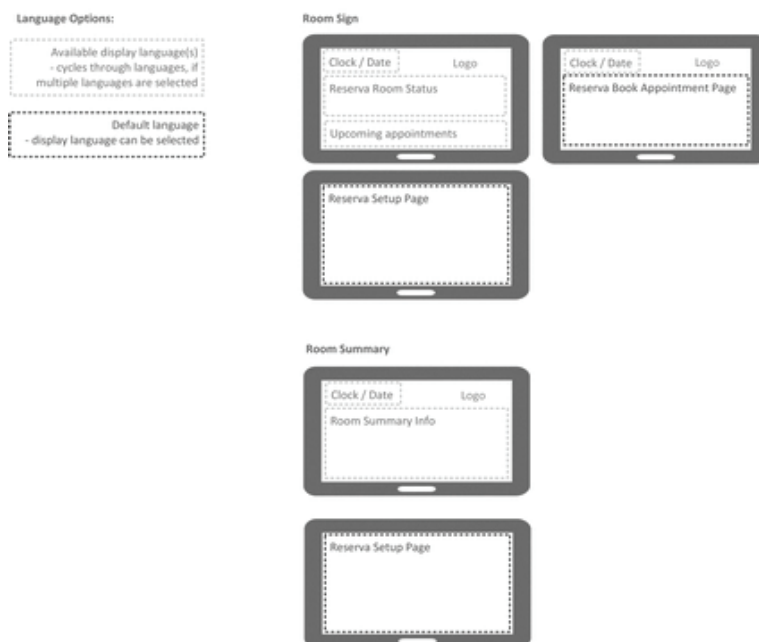


FIGURE 4-116. LANGUAGE OPTIONS

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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.

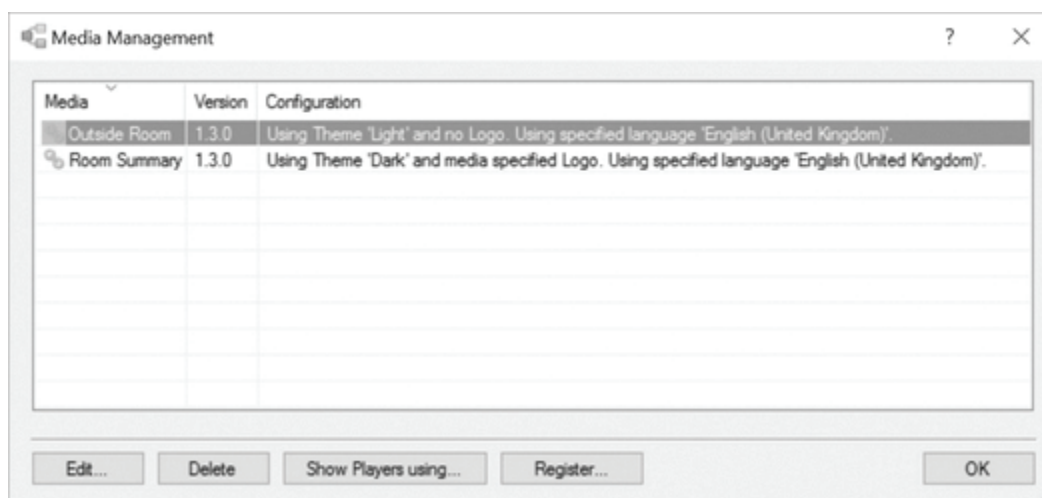


FIGURE 4-117. MEDIA MANAGEMENT DIALOG

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.



FIGURE 4-118. LANGUAGE TAB

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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 next.

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.

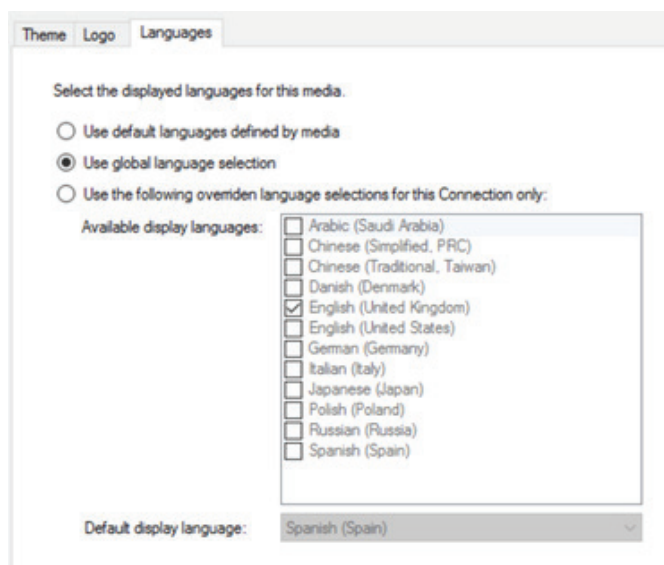


FIGURE 4-119. LANGUAGES TAB

- ◆ 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.

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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.

CHAPTER 5: MANAGING RESERVA

This chapter 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

5.1.1 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 next.

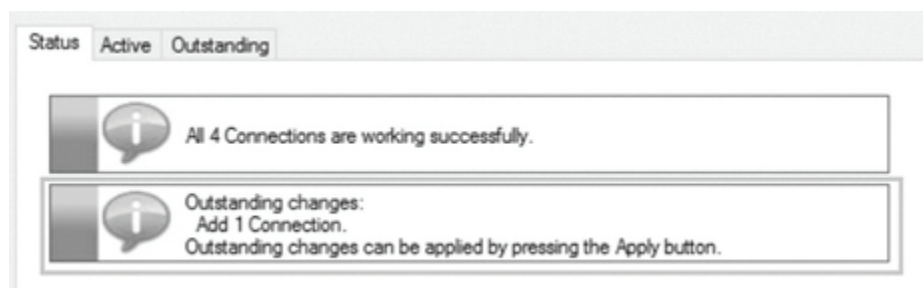


FIGURE 5-1. STATUS PAGE EXAMPLE

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

Make sure 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.

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5.1.2 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
- ◆ 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.

5.1.3 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 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.

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View or modify an Active Connection

To view or modify an Active Connection, select the Connection and click View. The 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.

5.1.4 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.

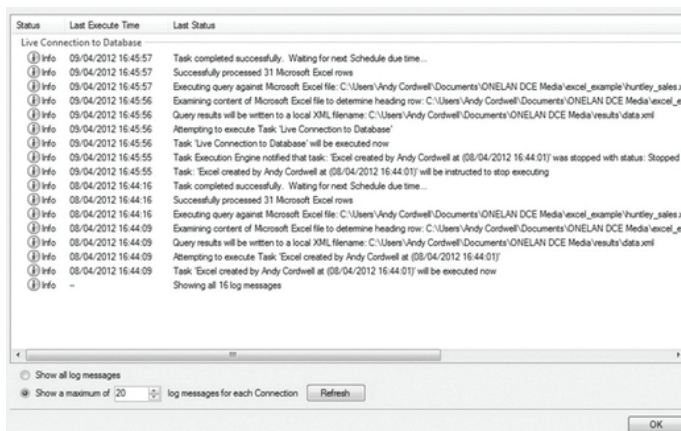


FIGURE 5-2. STATUS MESSAGES

5.1.5 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 next example shows the actions that may appear on the Outstanding page.

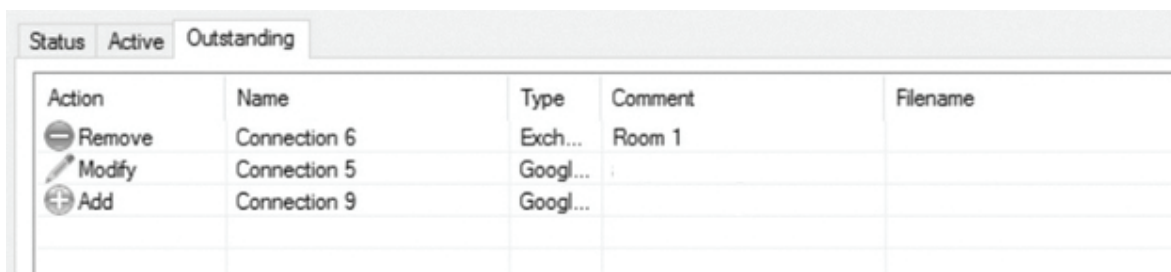


FIGURE 5-3. OUTSTANDING PAGE

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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 next.

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 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 when you select 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.

5.2.1 MANAGING RESERVA MEDIA

Reserva media can be customized, 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.

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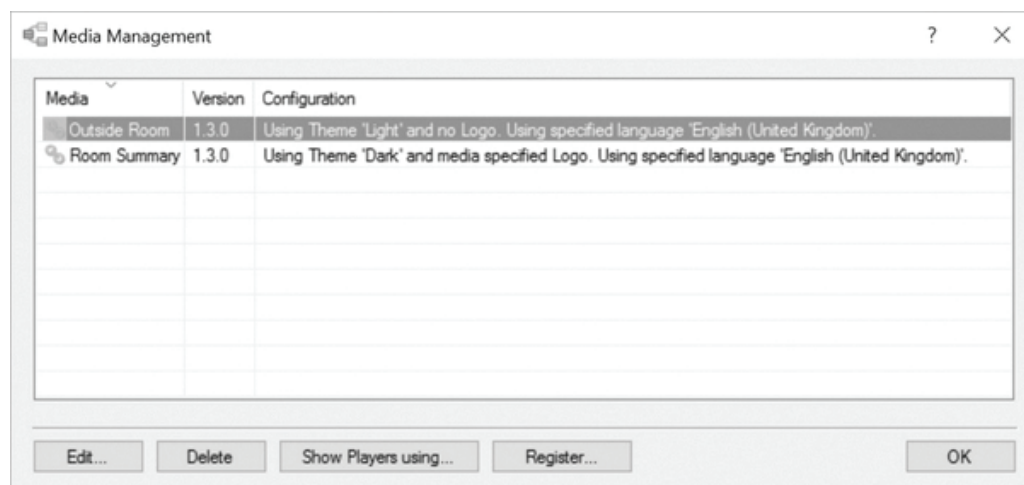


FIGURE 5-4. MANAGE > MEDIA

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.
- **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 customizing 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 iCOMPEL Player) 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.

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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 Black Box. 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.

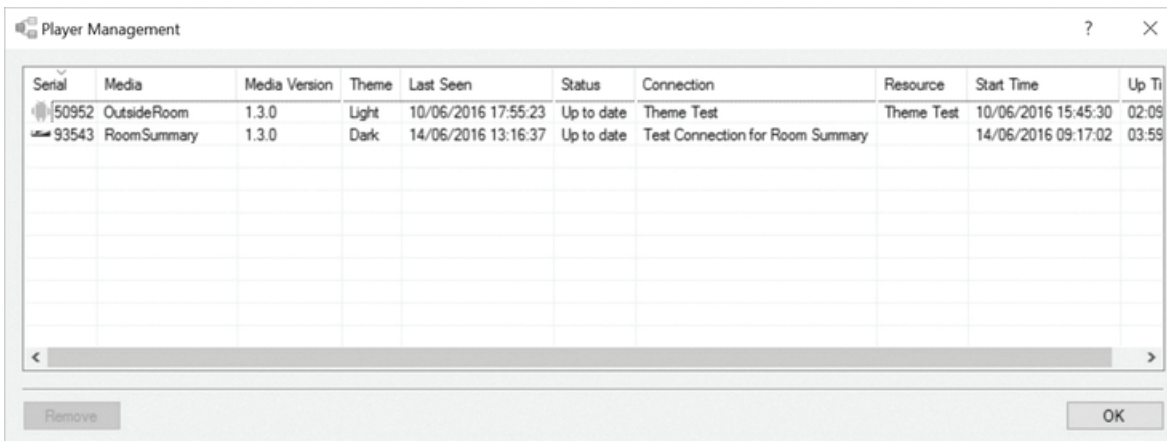
5.2.2 MANAGING RESERVA MEDIA PLAYERS

Reserva supports two types of media and device pairings:

- Outside room media running on a room sign
- Room summary media running on an iCOMPEL Player

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

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



Serial	Media	Media Version	Theme	Last Seen	Status	Connection	Resource	Start Time	Up Ti
50952	OutsideRoom	1.3.0	Light	10/06/2016 17:55:23	Up to date	Theme Test	Theme Test	10/06/2016 15:45:30	02:09
93543	RoomSummary	1.3.0	Dark	14/06/2016 13:16:37	Up to date	Test Connection for Room Summary		14/06/2016 09:17:02	03:59

FIGURE 5-5. MANAGE > PLAYER SCREEN

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The dialog details the following for each player:

- Serial: the serial number for each player (room sign or iCOMPEL Player) using the media. **SYMBOL HERE** denotes a room sign running outside room media and denotes an iCOMPEL Player 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.

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, we recommend that you maintain regular backups of the RCM configuration.

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.

5.4 USER DATABASE

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

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

FIGURE 5-6. DATABASE OF USERS

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.

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

FIGURE 5-7. ADD CARDS MANUALLY

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.

5.5.1 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 organized 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.



FIGURE 5-8. MANAGE > ROOMS AND RESOURCES

The resources are:

- ◆ Seats
- ◆ Screen
- ◆ Phone
- ◆ Videophone
- ◆ Lights
- ◆ Computer
- ◆ Air conditioning
- ◆ Whiteboard
- ◆ Wi-Fi
- ◆ Audio

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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.







Test1				
Resource Type	Quantity	Visible	Issue Reporting Enabled	Reported Issues
 Seat	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 Screen	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 Videophone	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 Lights	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 Computer	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
 Whiteboard	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

FIGURE 5-9. RESOURCES ADDED TO ROOM

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 organizer are all enabled. They can be disabled by unticking the appropriate box for that resource.

When Notifications are configured, Notify Service Desk allows notification emails to be sent to the designated service desk email account and Notify organizer 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.

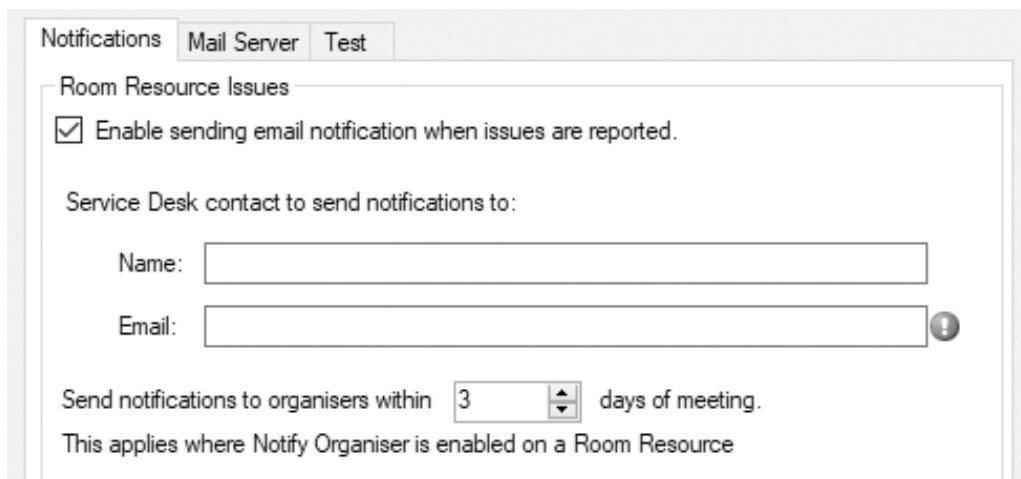
5.5.2 NOTIFICATIONS

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.

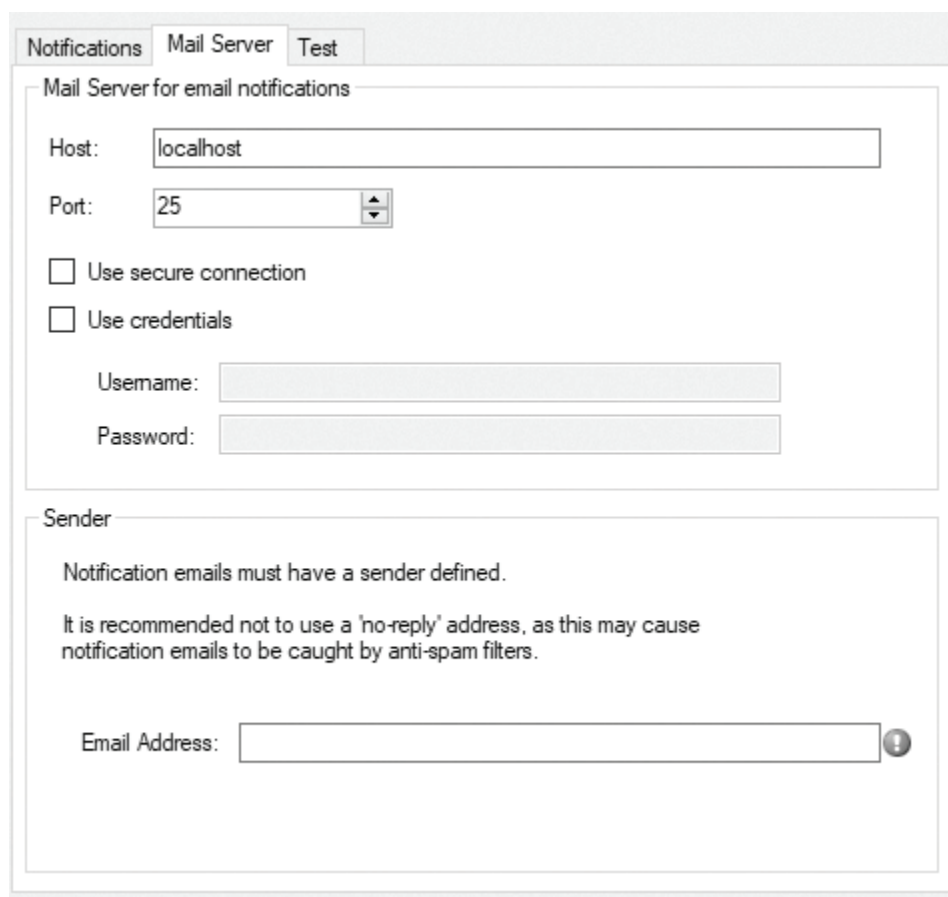
CHAPTER 5: MANAGING RESERVA



The screenshot shows the 'Notifications' tab in a software interface. At the top, there are three tabs: 'Notifications', 'Mail Server', and 'Test'. The 'Notifications' tab is active. Below the tabs, there is a section titled 'Room Resource Issues'. It contains a checked checkbox labeled 'Enable sending email notification when issues are reported.' Below this, there is a label 'Service Desk contact to send notifications to:' followed by two input fields: 'Name:' and 'Email:'. The 'Email:' field has a small information icon to its right. Below the input fields, there is a label 'Send notifications to organisers within' followed by a dropdown menu showing the number '3' and a 'days of meeting.' label. At the bottom of this section, there is a note: 'This applies where Notify Organiser is enabled on a Room Resource'.

FIGURE 5-10. MANAGE > NOTIFICATIONS TAB

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.



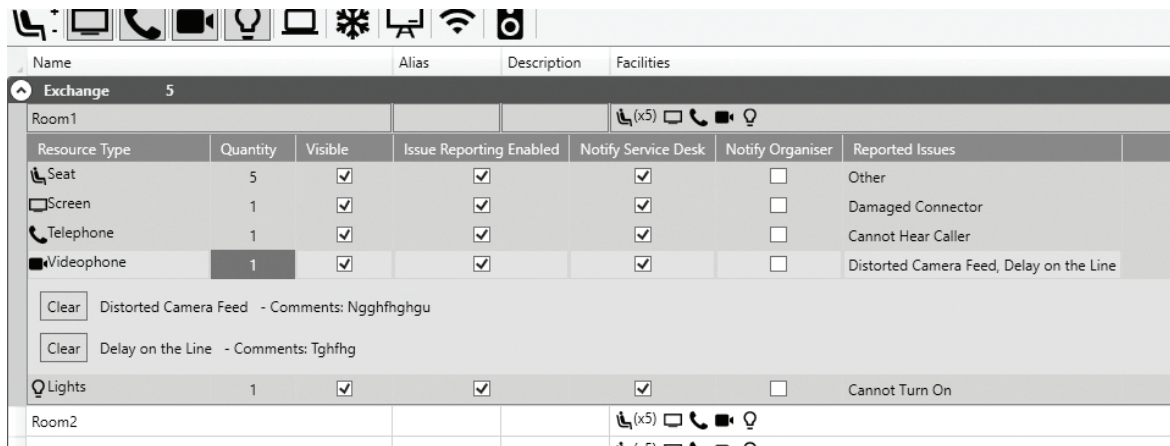
The screenshot shows the 'Mail Server' tab in the same software interface. At the top, there are three tabs: 'Notifications', 'Mail Server', and 'Test'. The 'Mail Server' tab is active. Below the tabs, there is a section titled 'Mail Server for email notifications'. It contains a 'Host:' input field with the value 'localhost', a 'Port:' dropdown menu with the value '25', and two checkboxes: 'Use secure connection' and 'Use credentials', both of which are unchecked. Below these are 'Username:' and 'Password:' input fields. Below the 'Mail Server' section, there is a section titled 'Sender'. It contains a note: 'Notification emails must have a sender defined. It is recommended not to use a 'no-reply' address, as this may cause notification emails to be caught by anti-spam filters.' Below this note is an 'Email Address:' input field with a small information icon to its right.

FIGURE 5-11. MAIL SERVER TAB

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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.



Name	Alias	Description	Facilities			
Exchange	5					
Room1			(x5) [Phone] [Screen] [Light] [Speaker] [Camera]			
Resource Type	Quantity	Visible	Issue Reporting Enabled	Notify Service Desk	Notify Organiser	Reported Issues
Seat	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other
Screen	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Damaged Connector
Telephone	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cannot Hear Caller
Videophone	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Distorted Camera Feed, Delay on the Line
Clear Distorted Camera Feed - Comments: Ngghfghghg						
Clear Delay on the Line - Comments: Tghfhg						
Lights	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cannot Turn On
Room2						(x5) [Phone] [Screen] [Light] [Speaker] [Camera]

FIGURE 5-12. RESOURCES ATTACHED TO ROOM

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.

APPENDIX A: OPTIMIZING EXCHANGE

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

Auto accept meetings

We recommend that you configure Exchange 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 organizer 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.

We recommend 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.

APPENDIX A: OPTIMIZING EXCHANGE

TABLE A-1. 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.

TABLE A-2. 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 mail box RPC requests



APPENDIX B: SCIENTIA DATABASE

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

B.1 OPEN DATABASE CONNECTIVITY (ODBC) 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.

B.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.

B.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 that you test the DSN before configuring and testing your Reserva Connection.

B.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 next.

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

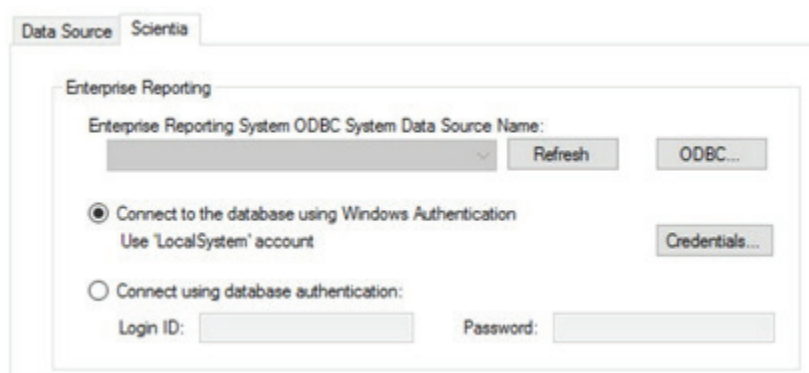


FIGURE B-1. SCIENTIA TAB

APPENDIX B: SCIENTIA DATABASE

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

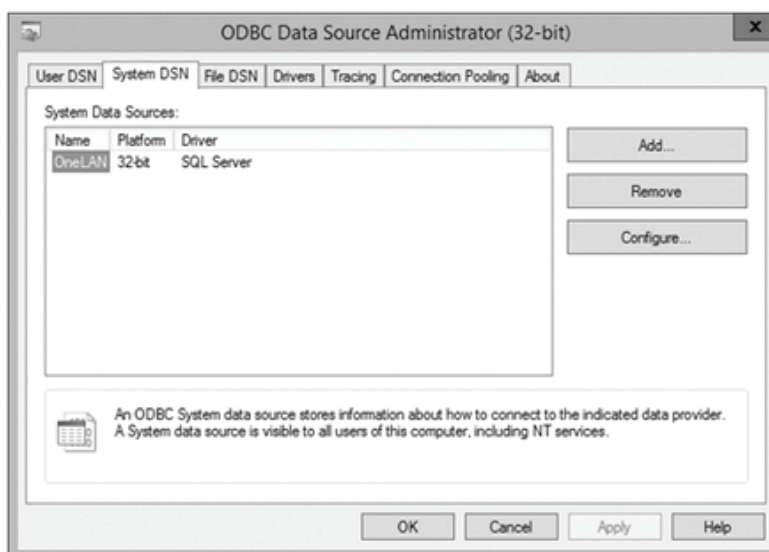


FIGURE B-2. SYSTEM DNS TAB

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

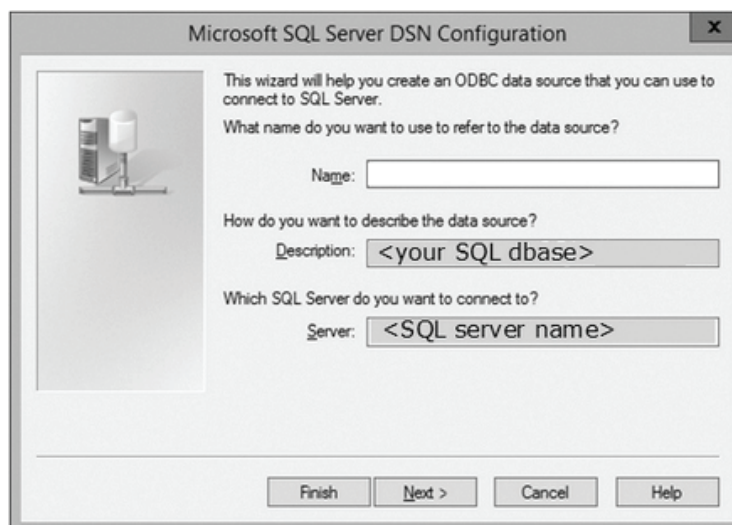


FIGURE B-3. CREATE A DATA SOURCE

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.

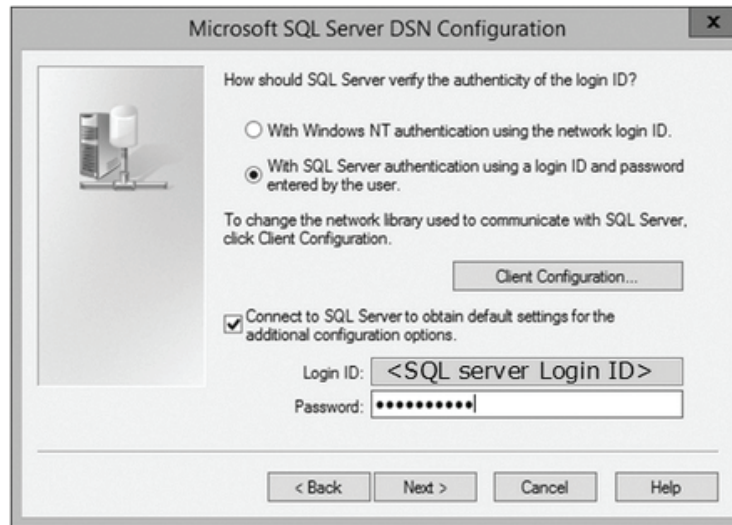


FIGURE B-4. AUTHENTICATION CREDENTIALS

5. Select the required database. Click Next.

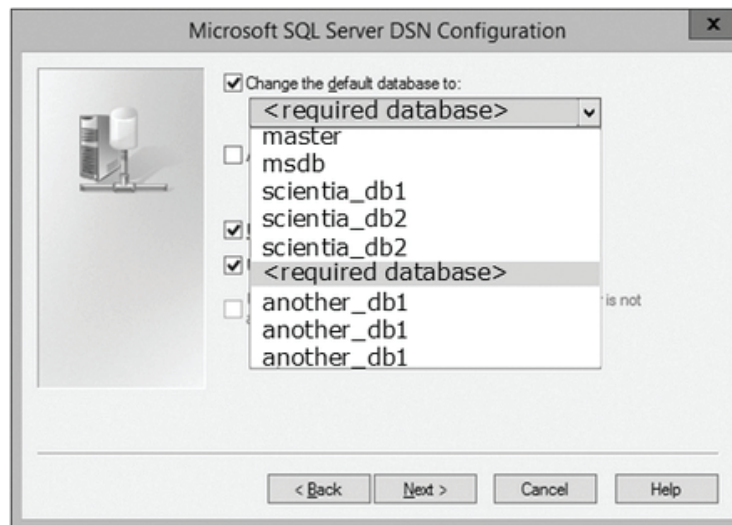


FIGURE B-5. SELECT DATABASE

6. Click Finish.

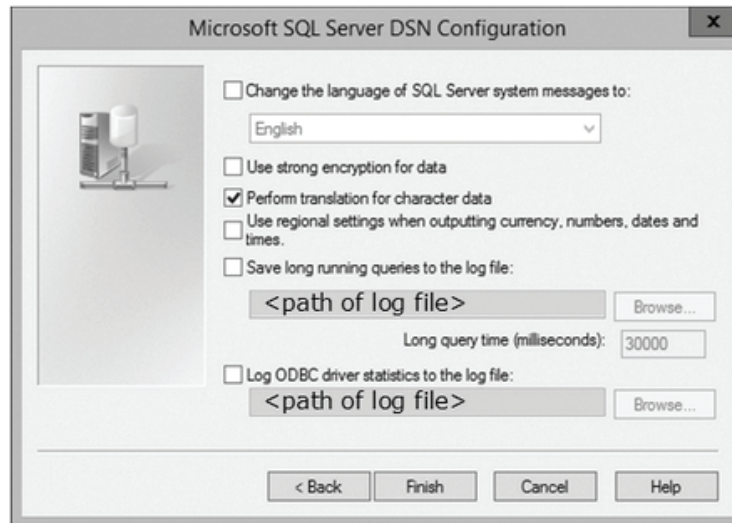


FIGURE B-6. FINISH

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.

C.1 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
```

C.2 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
```

C.3 CREATE ROOMS

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

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

C.4 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 mailbox and appointments.

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

C.5 ADD TO THE ROOM LIST

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

APPENDIX C: POWERSHELL COMMANDS FOR EXCHANGE/365

C.6 SET ATTRIBUTES ON EACH ROOM

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

TABLE C-1. DEFAULT ATTRIBUTES

PROPERTY	DESCRIPTION
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 organizer name won't be appended to the subject text. The organizer 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
```

C.7 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 organization. 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
```


APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

This section describes 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.

TABLE D-1. MANDATORY FIELDS

FIELD	DESCRIPTION
uid	Unique identifier for the room. This should be an identifier 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	Use if different than 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>
```

APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

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 identifier 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>
```



APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

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.

TABLE D-2. MANDATORY FIELDS

FIELD	DESCRIPTION
uid	Unique identifier for the event. In the case of recurring events, the uid must uniquely identify the individual occurrence. The uid can be any string and composed of a mix of other identifiers.
subject	Display name of the event.
description	Use if different than 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:mm:ssZ.

Optional fields

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

TABLE D-3. OPTIONAL FIELDS

FIELD	DESCRIPTION
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 configured to display this together with Subject in some circumstances.
organizer	Display name of the organizer
organizer_email	Email address of the organizer
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 Meeting 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."

APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

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 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>
    <organizer>Organizer Name</organiser>
    <organizer_email>organizer@somewhere</organizer_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>
    <organizer>Organizer Name</organiser>
    <organizer_email>organizer@somewhere</organizer_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">
```

APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

```

<xs:complexType>
  <xs:all>
    <xs:element name="uid" type="xs:string" minOccurs="1" maxOccurs="1">
      <xs:annotation>
        <xs:documentation>Unique identifier 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" minOccurs="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" maxOccurs="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)

```

APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

```

</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="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>

```



APPENDIX D: RQMTS FOR DATA SOURCE INTEGRATION

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-MMdd

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.

APPENDIX E: SPECIFICATIONS**TABLE E-1. SPECIFICATIONS**

SYSTEM	
Processor	Intel Atom
RAM	2 GB
Disc	IC-RESERVA-10T: 16 GB eMMC; IC-RESERVA-15T, IC-RESERVA-21T: 32 GB eMMC
MEDIA	
Supported Media Formats	Video, Image, HTML (web or local), Text (moving or static), RSS, date, and clock formats
NETWORK	
Ethernet	10/100
Wi-Fi®	802.11 b/g/n
PORTS	
USB	IC-RESERVA-10T: (1) USB 2.0; IC-RESERVA-15T, IC-RESERVA-21T: (2) USB 2.0
Network	RJ-45
COM	RS-232
Power	IC-RESERVA-10T: 12 VDC, 2 A or PoE+; IC-RESERVA-15T, IC-RESERVA-21T: 19 VDC, 3.4 A
DISPLAY	
Screen Size	IC-RESERVA-10T: 10.1" (25.7 cm), IC-RESERVA-15T: 15.6" (39.6 cm), IC-RESERVA-21T: 21.5" (54.6 cm)
Resolution	IC-RESERVA-10T: 1280 x 700; IC-RESERVA-15T, IC-RESERVA-21T: 1920 x 1080
Brightness	IC-RESERVA-10T: 350 cd/m ² ; IC-RESERVA-15T: 220 cd/m ² ; IC-RESERVA-21T: 250 cd/m ²
Contrast	IC-RESERVA-10T: 800:1; IC-RESERVA-15T: 800; IC-RESERVA-21T: 3000
Viewing Angle	Horizontal: 178 degrees; Vertical: 178 degrees
Screen Features	Capacitive touchscreen
Network	RJ-45
PHYSICAL	
Dimensions	IC-RESERVA-10T: 11.22" H x 6.48" W x 1.47" D (28.49 x 16.45 x 3.73 cm); IC-RESERVA-15T: 9.8" H x 15.39" W x 1.45" D (24.89 x 39.09 x 3.68 cm); IC-RESERVA-21T: 12.00" H x 20.03" W x 1.81" D (30.48 x 50.87 x 4.59 cm)
Weight	IC-RESERVA-10T: 2.16 lb. (0.98 kg); IC-RESERVA-15T: 5.9 lb. (2.68 kg); IC-RESERVA-21T: 12.34 lb. (5.60 kg)
Power	19 V, 3.4 A
Temperature	32 to 104° F (0 to 40° C)
Cooling	Passive (fanless)
Mounting	IC-RESERVA-10T: Integrated portrait wallmount (suitable for drywall, brick, glass, etc.); IC-RESERVA-15T, IC-RESERVA-21T: Slim-line VESA wallmount included



APPENDIX F: 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 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 IC-RESERVA-xT, where "x" denotes the screen size in inches and the suffix "T" denotes that the device has a touch screen. Three models are available: IC-RESERVA-10T, IC-RESERVA-15T, and IC-RESERVA-21T.

APPENDIX F: GLOSSARY

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 iCOMPEL Player 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).

APPENDIX G: REGULATORY INFORMATION

Regulatory Information can be provided upon request. Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com



APPENDIX G: REGULATORY INFORMATION

Regulatory Information can be provided upon request. Contact Black Box Technical Support at 877-877-2269 or techsupport@blackbox.com



APPENDIX H: DISCLAIMER/TRADEMARKS

H.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

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