User Guide

Room Scheduling

Room Scheduling System

Room Agent™ Room Booking Software and TouchLink® Pro Touchpanels

Extron Electronics
INTERFACING, SWITCHING AND CONTROL

68-3051-01 Rev. C
01 18

Safety Instructions

Safety Instructions • English

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안전 지침 • 한국어

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Conventions Used in this Guide

Notifications

The following notifications are used:

ATTENTION:
- Risk of property damage.
- Risque de dommages matériels.

NOTE: A note draws attention to important information.

TIP: A tip provides a suggestion to make working with the application easier.

Software Commands

Commands are written in the fonts shown here:

```
^AR Merge Scene,,Op1 scene 1,1 ^B 51 ^W^C
```

```
[Ø1] R ØØØ4 ØØ3ØØ ØØ4ØØ ØØ8ØØ ØØ6ØØ [Ø2] 35 [17] [Ø3]
```

Esc X19 *X1* X34* X37* X35 CE ←

NOTE: For commands and examples of computer or device responses mentioned in this guide, the character "Ø" is used for the number zero and "O" represents the capital letter "o."

Computer responses and directory paths that do not have variables are written in the font shown here:

```
Reply from 2Ø8.132.18Ø.48: bytes=32 times=2ms TTL=32
```

```
C:\Program Files\Extron
```

Variables are written in slanted form as shown here:

```
ping xxx.xxx.xxx.xxx –t
```

```
SOH R Data STX Command ETB ETX
```

Selectable items, such as menu names, menu options, buttons, tabs, and field names are written in the font shown here:

From the **File** menu, select **New**.

Click the **OK** button.

Extron Glossary of Terms

A glossary of terms is available at **http://www.extron.com/technology/glossary.aspx**.

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Introduction

- About this Guide
- About the Room Scheduling System
- Features

About this Guide

This guide contains installation, configuration, and operating information for the Extron Room Scheduling System, consisting of the Room Agent Room Booking Software and compatible Extron TouchLink Pro touchpanels. The guide also provides guidelines for configuring supported calendar servers, Microsoft® Exchange™, Microsoft Office 365™, and Google™ Calendar™ to work with Room Agent software.

About the Room Scheduling System

Room Agent software turns compatible Extron TouchLink Pro touchpanels (TLP Pro 520M, TLP Pro 720M, and TLP Pro 720T) into full-featured room booking appliances that conveniently display meeting information and availability for rooms (see figure 1). With Room Agent, one or more touchpanels can be connected directly to and become clients of Microsoft Exchange, Office 365, and Google Calendar. The network traffic generated by touchpanel and server communication is minimal.

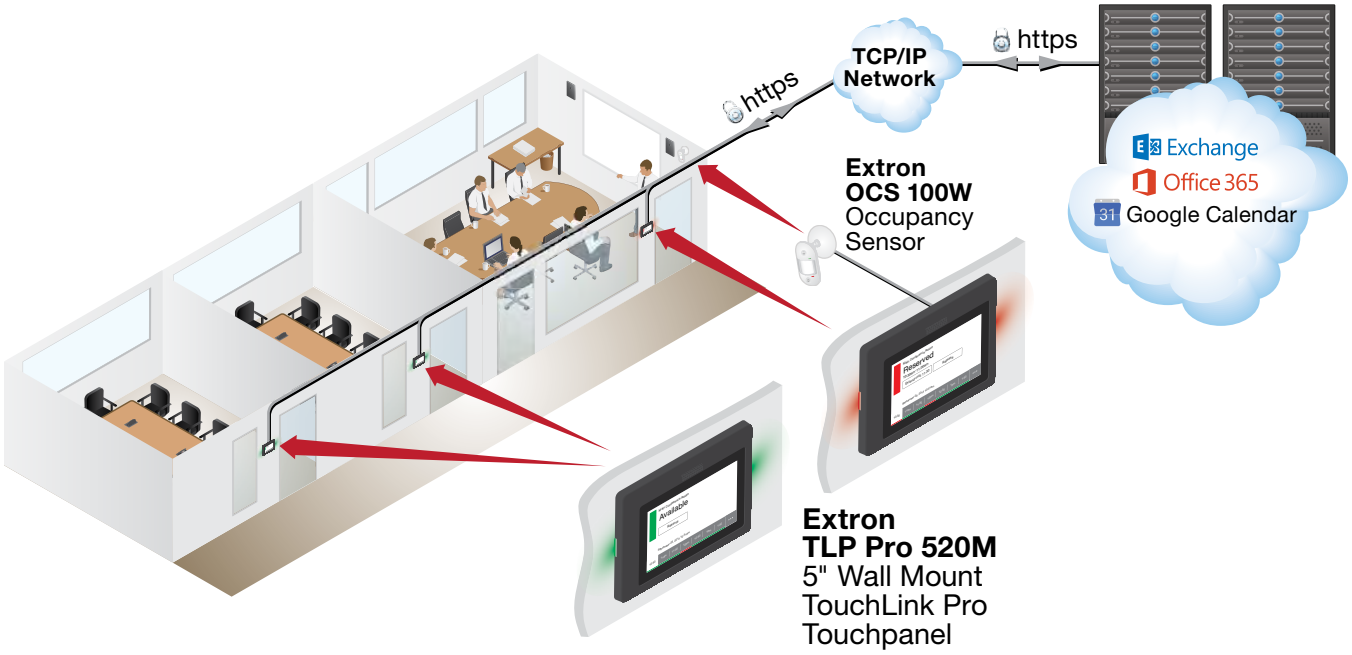


Figure 1. Typical Extron Room Scheduling System Application

As clients, the touchpanels require no special programming. Users can book a room from any device connected to the room calendar, including their mobile devices or a connected touchpanel.

Room Agent software, installed on a computer with network access, allows system administrators to set up the TouchLink Pro touchpanels as room scheduling appliances by filling in the required fields that correspond with areas of the user interface. Customization options allow a variety of fields to be shown or hidden, depending on user preference.

Booking a room from the touchpanel is as easy as tapping the **Reserve** button on the panel. The intuitive interface also provides at-a-glance room availability and a timeline view of the status of the room for half a day (see figure 2). In addition to the customizable touchpanel interface, bright LEDs within the bezel provide at-a-glance room availability status from down the hall.

Figure 2. Typical Room Display on a TLP Pro 520M Touchpanel

When they are configured as room booking appliances, compatible Extron touchpanels seamlessly tie to a Microsoft Exchange server, Office 365, or Google Calendar without complicated setup or programming. Simply connect the touchpanel to your computer, open the free Room Agent software, and fill in the required user interface fields. You can then make on-demand reservations from the touchpanel, computer, or any smartphone or tablet that connects to Microsoft Exchange, Office 365, or Google Calendar. Customization options allow fields to be shown or hidden, depending on user preference.

System Benefits

The Room Scheduling System can be integrated into any network and requires minimal network bandwidth for communication between each touchpanel and the room calendar server. Benefits of being room calendar server clients, communicating directly with the room calendar server, include:

- **Ensures the security of information** — Each touchpanel maintains a separate connection to a dedicated resource calendar that is assigned to the room associated with the panel through Exchange, Office 365, or Google Calendar. Each resource calendar has a unique username and password that the touchpanel uses to connect to the server. Administrators can manage the information of each room scheduling touchpanel using tools, accounts, and privileges provided by their Exchange, Office 365, or Google Calendar console.
- **Simplifies system management** — This direct communication simplifies user access management for the administrator, and does not require any middleware or additional products to be placed on the network.
- **Eliminates a single point of failure** — The Room Scheduling System requires no middleware or intermediate server between the touchpanels and the calendar server, eliminating the possibility of a single point of failure.

Security Overview

- All communications between the Room Agent software and the touchpanels, and between the touchpanels and the calendar room server are encrypted.
- Each conference room is assigned a unique room mailbox. This mailbox is restricted so that it cannot be used for interactive log-ons (the ability to send or receive e-mail).
- As part of the Room Agent software configuration process, the administrator enters the authentication information for each room. These values are sent as part of the configuration file to the touchpanel (see **Communications Settings Window** on page 17). No other user ids or passwords are used.
- The software encrypts the account data. If a password is displayed on the user interface it is obscured, and any sensitive information is encrypted when stored on the administrator PC.
- Administrators can choose to save the touchpanel configurations, including the account credentials, on their PCs in a password-protected file.

  NOTE: The protected configuration files include the authentication data for each account. Use discretion when allowing access to these files.

- All touchpanels are password protected. The system administrator can change the touchpanel password from the configuration software.

  NOTE: All touchpanels ship with the default, case-sensitive, password "`extron`." Extron strongly recommends that you change the password for each touchpanel during the configuration process.

Network Traffic

The traffic generated on the network consists of requests for data and responses from the room calendar server. Communications occur at regular intervals, such as when requesting meetings, sending meeting invitations, or when administrators retrieve an activity file for a room from the touchpanel. Touchpanel configuration, typically completed once during the initial setup of the system, also produces traffic on the network. The touchpanel provides options to create an ad hoc meeting, extend a meeting, end a meeting, and confirm a meeting using the **Check-In** button, provided that these options were made available to the user when the administrator configured the touchpanel.

Compatible Touchpanels

The following Extron touchpanel models are compatible with the Room Agent software:

- **TLP Pro 520M Touchpanel** — A 5-inch (measured diagonally), wall-mounted touchpanel with an 800x480 capacitive glass touchscreen.
  - **Dimensions** — Enclosure: 5.43" W x 3.74" H x 1.64" D (13.8 cm W x 9.5 cm H x 4.2 cm D)
    Faceplate: 6.31" W x 4.61" H (16.0 cm W x 11.7 cm H)
  - **Mounting options** —
    - The touchpanel can be mounted in a wall.
    - The touchpanel can be mounted on a non-porous surface, such as a conference room window (with the following optional Extron mounting hardware: SMB 1 Low Profile Surface Mount Box and GMK 1 Glass Mount Kit).
- **TLP Pro 720M Touchpanel** — A 7-inch (measured diagonally), wall-mounted touchpanel with an 800x480 resistive glass touchscreen.
  - **Dimensions** — Enclosure: 5.7" H x 7.4" W x 2.3" D (14.6 cm H x 18.9 cm W x 5.8 cm D) (excluding mounting flange)
    Faceplate: 6.9" H x 8.7" W x 0.5" D (17.5 cm H x 22.1 cm W x 1.3 cm D)
  - **Mounting** — The touchpanel can be mounted in a wall.
- **TLP Pro 720T Touchpanel** — A 7-inch (measured diagonally) touchpanel with an 800x480 resistive glass touchscreen.
  - **Dimensions** — 6.1" H* x 7.5" W x 7.3" D (15.5 cm H* x 19.0 cm W x 18.6 cm D) (*Maximum height includes the base, which is discarded for optional rack mounting.)
  - **Mounting** —
    - The touchpanel has a stand that allows it to be placed on a desktop.
    - The touchpanel can be mounted to an optional Extron SMA-1 swivel mount adapter.
    - The touchpanel can be mounted to a two-gang, UL-certified junction box; a two-gang mud ring; or directly onto any solid surface, such as brick, wood, masonry, or drywall (with an optional Extron LPVM-1 Low Profile VESA Mount).

All touchpanels can receive power and communication over a single Ethernet cable. Power over Ethernet (PoE) eliminates the need for a local power supply. PoE requires a PoE injector, which is sold separately.

Features

- Make on-demand reservations from the touchpanel, computer, or any smartphone or tablet that connects to Microsoft Exchange, Office 365, and Google Calendar.
- Make meeting rooms available as soon as a scheduled meeting ends.
- Deploy a single touchpanel, or multiple touchpanels with similar settings very easily.
- Room Agent software provides easy integration with Microsoft Exchange 2007, 2010, 2013, and 2016, as well as Office 365 for convenient scheduling right from Outlook.
- No annual subscription or maintenance fees.
- Each TouchLink Pro touchpanel model communicates directly with Microsoft Exchange, Office 365, and Google Calendar.
- All communication between the touchpanel and Microsoft Exchange, Office 365, or Google Calendar is encrypted and secure.
- Two bright LED indicators make it easy to see if a room is occupied or available even from down the hall.
- Two color themes, custom loaded background images, and transparency controls provide personalized branding options.
- Power over Ethernet - PoE allows the room scheduling touchpanel to receive power and communication over a single Ethernet cable, eliminating the need for a local power supply.
- Multi-language support – Extron Room Scheduling supports a number of different languages. See **Supported Languages** on page 58 for a complete list.
- **Check in** button confirms attendance for the scheduled meeting and retains the reserved status of the room, even if the start of the meeting is delayed.
- Optimize meeting room usage by automatically releasing an inactive room using occupancy sensors with TLP Pro 520M touchpanels
- Customizable date and time formats with a preview showing how the user interface will look on the touchpanel.
- Customizable room availability hours allow you to select the start and end times for the availability of a room.
- View details of the meetings scheduled for the day.
- Each panel now captures and retains a downloadable scheduling activity file that provides Exchange information as well as information input directly on the touchpanel.
- Exchange auto-discovery streamlines system setup.
- Room Agent software can handle all panel firmware updates.

Touchpanel Overview

This section describes operating the scheduling system from the distributed touchpanels. Topics include:

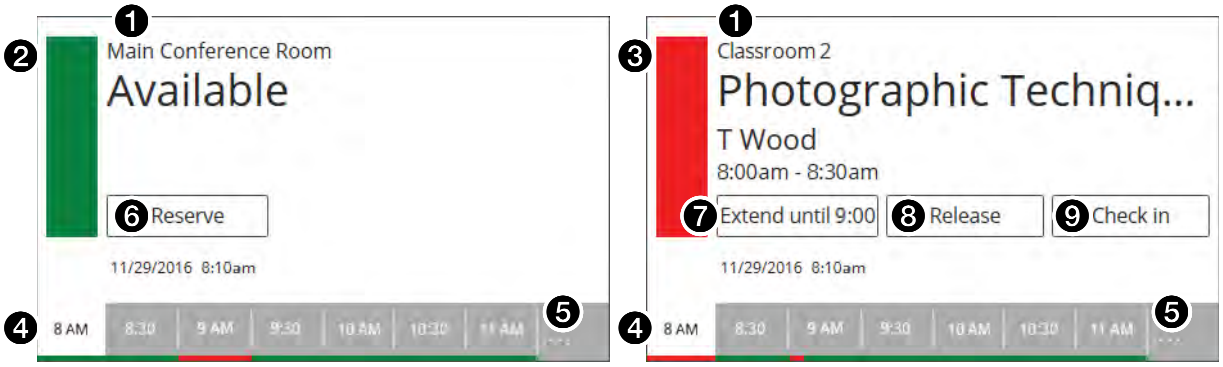
- **Overview**

This section presumes that you have installed and configured the Extron Room Agent software and the desired calendar server. See the following sections if necessary:

- **Room Agent Installation and Configuration**, beginning on page 10
- **Microsoft Environment Setup**, beginning on page 46
- **Google Calendar Environment Setup**, beginning on page 53

Overview

Once the system is installed and configured, you can use a touchpanel (see figure 3) to check the availability of the associated room and to reserve a room now or in the future. The display is highly customizable with the Room Agent software (see **Layout tab** on page 34), so your touchpanels may not exactly resemble the sample displays shown below.



Room Available Display

Room Unavailable Display

Figure 3. Typical Room Scheduling System Touchpanel Displays

1. **Data fields** (see the **next page**)
2. **Room available (green) flag** (see the **next page**)
3. **Room unavailable (red) flag** (see the **next page**)
4. **Timeline** (see the **next page**)
5. **Full day (· · ·) button** (see **page 8**)
6. **Reserve button** (see **page 8**)
7. **Extend button** (see **page 8**)
8. **Release button** (see **page 9**)
9. **Check in button** (see **page 9**)

❶ **Data fields** (see **figure 3** on the previous page) — Five fields, of various type sizes, each of which can display a variety of informational messages, defined using the Room Agent software (see **Layout tab** on page 34. Four fields are above and one is below the position of the **`Reserve`** button (❻, the **Room Available** display shown in figure 3) or **`Extend`** button (❼, the **Room Unavailable** display) on the panel. Each field can be left blank or can display any one of the following:

- The room name
- The meeting subject
- The meeting organizer (full name or first initial and last name)
- The meeting duration
- The current date, time, or both, displayed in a variety of formats (such as 12-hour or 24-hour time)

❷ **Room available (green) flag** (see **figure 3**) — Indicates the room is free for the selected block of time (see the Timeline [❹]). When the room is free, the **`Reserve`** (❻) button may also be displayed (if it is programmed to appear using the Room Agent software, see **Layout tab**).

Green LEDs on the touchpanel bezels provide at-a-glance room availability status from down the hall.

❸ **Room unavailable (red) flag** (see **figure 3**) — Indicates the room is reserved for the selected block of time (see the Timeline [❹]). When the room is reserved, the **`Extend`** (❼), **`Release`** (❽), and **`Check in`** (❾) buttons may also be displayed (if they are programmed to appear using the Room Agent software, see **Layout tab**).

Red LEDs on the touchpanel bezels provide at-a-glance room availability status from down the hall.

> **NOTE:** These indicators reflect the reservation only, not if the actual scheduled meeting has taken place.

❹ **Timeline** (see **figure 3**) — Indicates a 4-hour span of time, in half-hour increments, starting from the current half hour. The touchpanel displays the controls and indicators for a selected half-hour block. Unless you have selected a different block, the current half hour is the time block displayed. The bottom edge displays the availability of the room for the entire 4 hours; green is free, red is reserved.

The block selected (white) is usually the current half-hour. To select a different block of time for a proximately 5 seconds, touch the desired half-hour increment. The other touchpanel controls, such as **`Reserve`** (❻) and **`Release`** (❽), are displayed for the selected block of time, whether the current or future half hour block.

> **NOTE:** The timeline increments are half-hour blocks, but the display of availability and unavailability along the bottom edge is not limited to half hours. See the brief meeting in the 9:00 block on the **Room Unavailable** display in **figure 3**.

❺ **Full day (· · ·) button** (see **figure 3** on page 6) — Touch this button to display a timeline of the full day availability for approximately 5 seconds (see figure 4). You can set the starting and end time of the timeline.

Figure 4. Today's Availability Display

Touch on the **`Today's Availability`** timeline (figure 4, ❶) to temporarily pop up an inset (figure 5, Ⓐ) showing just the availability of a block of time. This inset has no controls within it, but the scroll left (◀) and scroll right (▶) buttons (Ⓑ) on either side of the inset allow you to step the time that is displayed in the inset backward and forward.

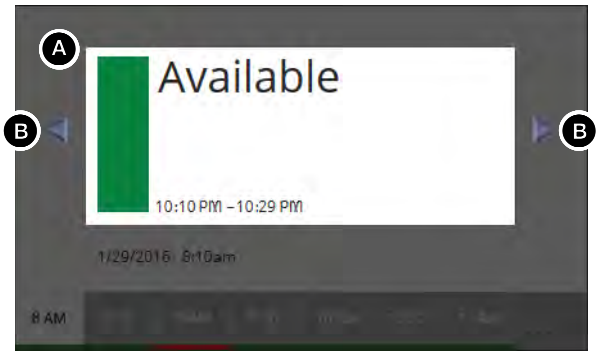


Figure 5. Today's Availability Inset Display and Scroll Buttons

NOTE: If the touchpanel has no connection with the calendar server, the **`Full day`** button is displayed in red (· · ·) and the timeline that pops up displays no meaningful data.

❻ **Reserve button** (see **figure 3**) — This button appears on the room available display when two conditions are met:

- The room is available in the selected 30-minute block on the timeline (see ❹ on the previous page).
- The button is programmed to appear using the Room Agent software (see **Layout tab** on page 34).

Touch the button to reserve the room for the selected 30-minute block. The touchpanel displays the red **`Room unavailable`** flag (❸) for the selected 30-minute block and the meeting subject field, if enabled (see **Layout tab**) displays the walk-up **`Subject`** message. The default message is "**`adHoc`**," but this can be changed.

❼ **Extend button** (see **figure 3**) — This button appears on the room unavailable display when two conditions are met:

- The room is available directly after the unavailability selected on the timeline (❹). The available block can be:
  - The selected 30-minute block if the unavailability is less than 30 minutes.
  - The 30-minute block directly after the selected block if the unavailability is in a full 30-minute block.
- The button is programmed to appear using the Room Agent software (see **Layout tab**).

Touch the button to extend the reservation until the next top or bottom of the hour (*X*:00 or *X*:30) for the selected 30-minute block.

❽ **Release button** (see **figure 3** on page 6) — This button appears on the room unavailable display when two conditions are met:

- The room is unavailable in the selected 30-minute block on the timeline (see ❹ on page 7).
- The button is programmed to appear using the Room Agent software (see **Layout tab** on page 34).

Touch the button to release the reservation. The touchpanel displays the green `Room available` flag (❷) for the selected 30-minute block and the meeting subject field, if enabled (see **Layout tab**) displays the message `Available`.

❾ **Check in button** (see **figure 3**) — This button appears on the room unavailable display when two conditions are met:

- The room is unavailable in the selected 30-minute block on the timeline (❹).
- The button is programmed to appear using the Room Agent software (see **Layout tab**).

How long **`Check in`** can be displayed, before and after the scheduled start of the meeting, can be programmed using the Room Agent software.

Touch the button to confirm that the room is taken.

If the button is **not** touched, and depending on the programming, the touchpanel:

- Automatically releases the room
- Hides the **`Check in`** button
- Does nothing

Room Agent Installation and Configuration

NOTES: This manual assumes that one or more touchpanels are already installed, cabled, and ready to serve as room booking appliances.

- **Installation**
- **Configuration**
- **Show Available Network Adapters**
- **Update Firmware**

Installation

The Room Agent software is available at no charge at **www.extron.com**.

Minimum System Requirements

- **CPU** — Intel® Core 2 Duo or equivalent processor
- **Operating System** — Windows® 7,Windows 8.1, or Windows 10
- **Memory** — 4 GB of RAM
- **Hard disk space** — 500 MB of available hard disk space
- **Display Resolution** — 1280 x 768 minimum
- **Network connection** — A data transfer rate of 10 Mbps. **Recommended**: 100 Mbps.
- Microsoft .NET Framework 4.5.1

Install the Software

The Room Agent software, version 1.3 or newer, is available on the Extron website. Download and install the program as follows:

NOTE: This procedure was written using Microsoft® Internet Explorer®. Depending on the browser you use, some steps or indications may be different.

1. Visit the website **www.extron.com** and click the **Download** tab (see figure 6, ❶).

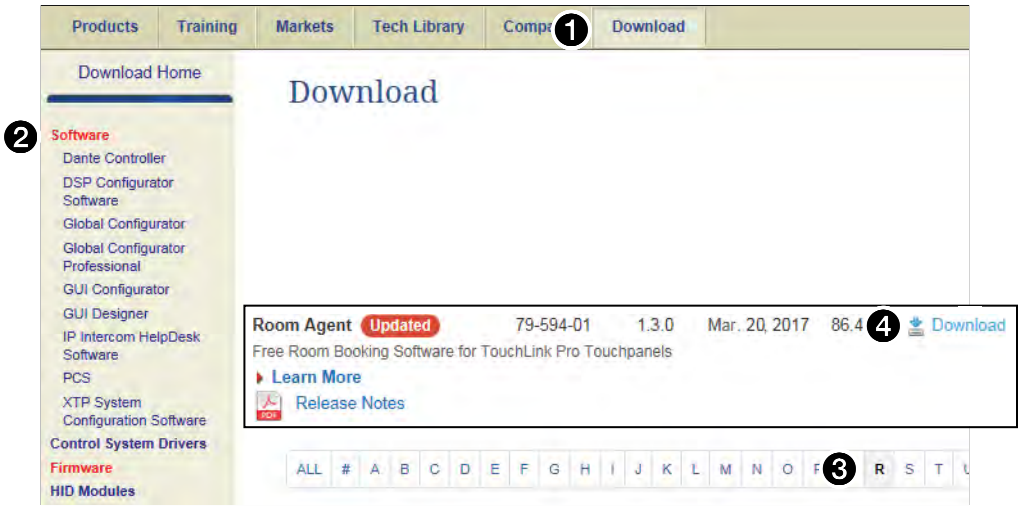


Figure 6. Downloading the Room Agent Software Package

2. Click the **Software** link (❷).
3. Click the **R** filtering letter (❸) to jump to the nearest page of downloads.
4. Click **Download** for the Room Agent (❹).

   The Log in dialog box appears (see figure 7).

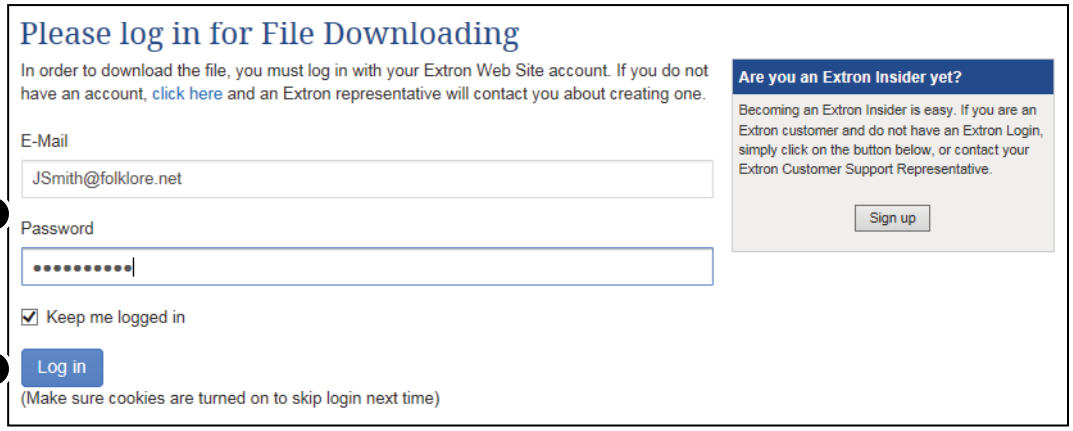


Figure 7. Log in Center Dialog Box

5. Enter the **E-Mail address** and **Password** associated with your Extron website account (see **figure 7** on the previous page, ❶).

TIPS:

- Contact the Extron S3 Sales & Technical Support Hotline to obtain website credentials.
- Click **Keep me logged in** to eliminate steps 5 through 7 in future downloads.

The **Download Center** page asks you to confirm that the firmware version of your touchpanels is 2.0 or newer (see figure 8).

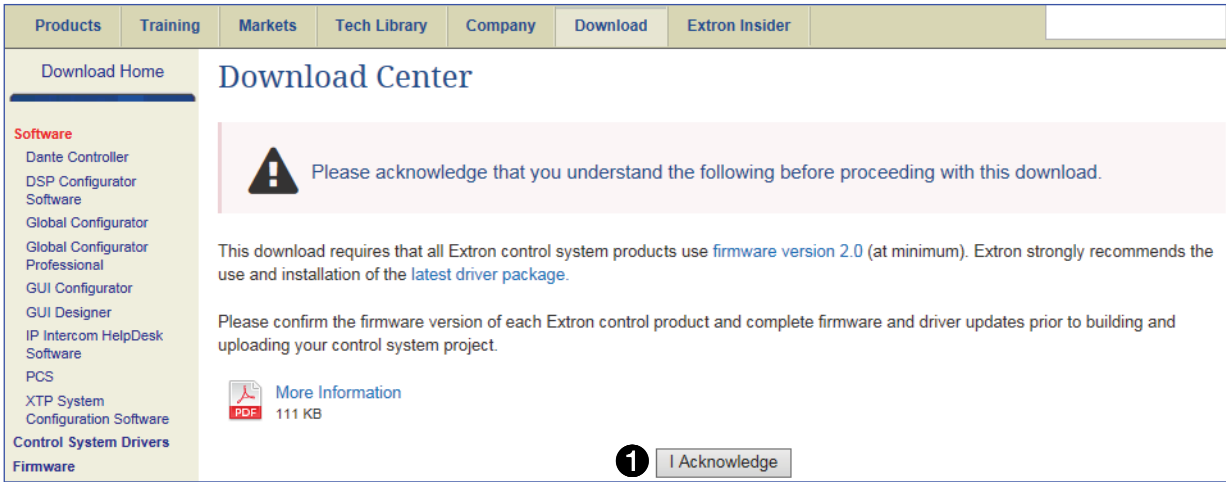


Figure 8. Firmware Version Confirmation

6. Click **I Acknowledge** to confirm your firmware version (see figure 8, ❶).
7. Click **Log in** to copy the software to the computer (see **figure 7**, ❷).
8. If your browser asks you to confirm that you want to continue, click **Run** or make a similar confirmation (see figure 9, ❶).

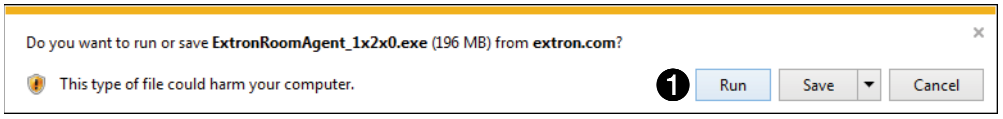


Figure 9. Download Warning and Confirmation

NOTE: Figure 9 may appear different or may not appear at all, depending on your Web browser choice and its security settings.

9. Follow the on-screen instructions. By default, the installation creates the following folder and group folder. It places the entries shown below into correct group folders and on the PC desktop:

- **Folder** — `C:\Program Files\Extron\Extron Room Agent`

  NOTE: `C:\Program Files(x86)\...` for 64-bit Windows OS.

- **Group folder** — `Extron Electronics\Extron Room Agent`
  - **Room Agent Help**
  - **Room Agent Quick Help**
  - **Room Agent**
  - **Uninstall Room Agent**

Configuration

Before you start the Room Agent software:

1. Ensure all the touchpanels have been mounted and are connected to the network.
2. Ensure you know whether Microsoft Exchange, Office 365, or Google Calendar is to be the calendar server and the network location of the server.
3. Ensure that you know the IP addresses of all the touchpanels in the system (especially those that are not on the same subnet as the control PC).
4. Ensure that you know the passwords for all the touchpanels. By default, the password is "`extron`". If the passwords have not already been changed, you should do so during configuration.

Start the Program

NOTE: Also, see **System Communications Overview** on page 57.

Start the Extron Room Agent software by double-clicking the desktop icon or as follows:

1. Click **`Start > All Programs > Extron Electronics > Extron Room Agent > Extron Room Agent`**.

   The Room Agent software opens in the Panel Management view (the **`Panel Management`** tab selected) (see figure 10).

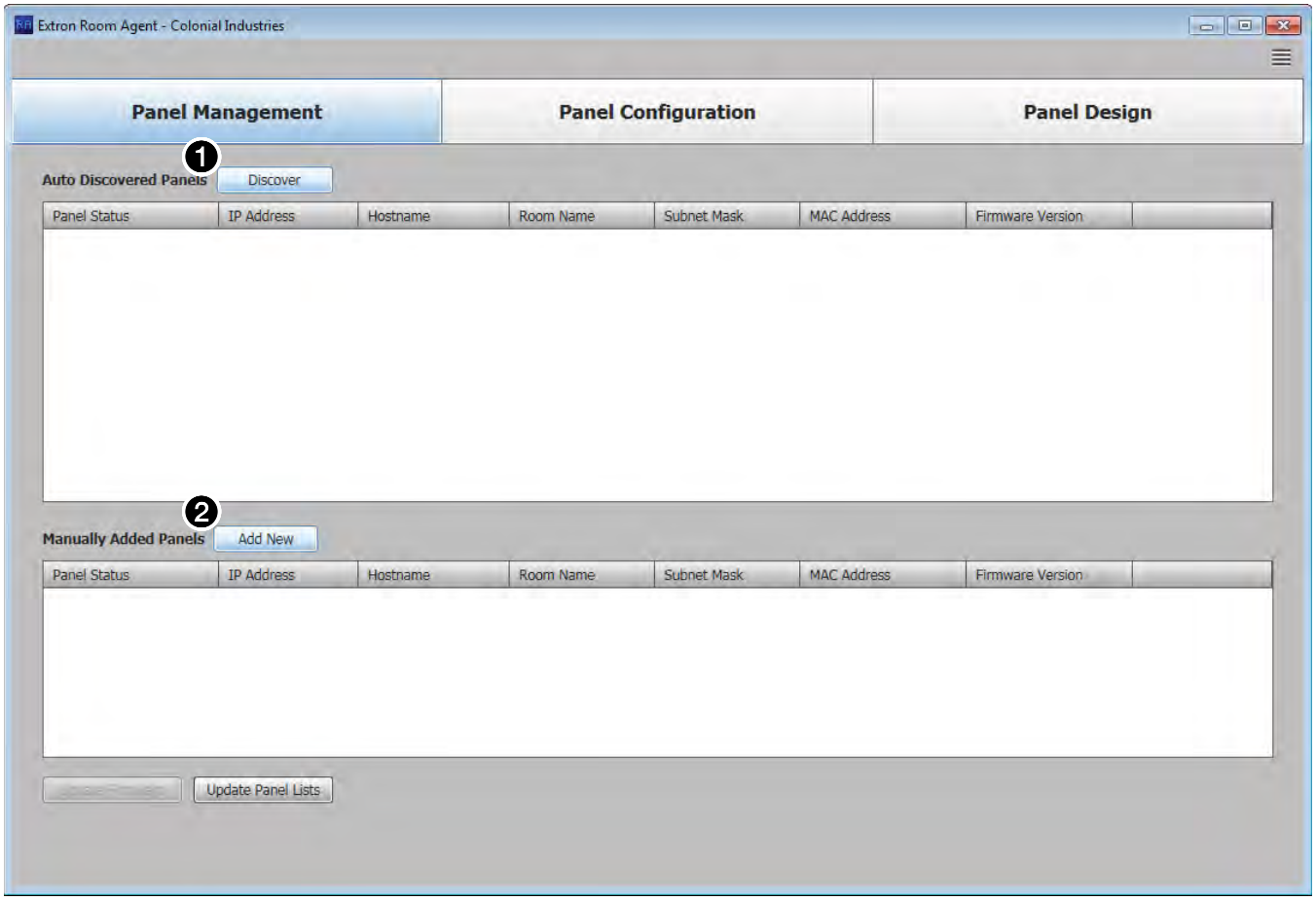


Figure 10. Room Agent Startup — Panel Management View

Automatically Discover Touchpanels

Automatically discover touchpanels that are on the same subnet as the computer running the Room Agent software as follows:

NOTE: Any touchpanels not on the same subnet as the computer running Room Agent must be added manually to the list using the **Manually** Add Panels pane (see "Manually Add Panels").

1. If Panel Management view is not currently displayed, click the **Panel Management** tab.
2. Click the **Discover** button above the **Auto Discovered Panels** pane (see **figure 10**, ❶ on the previous page).

   The **Discover** button becomes the **Stop Discovery** button. Touchpanels that are located on the same subnet are automatically discovered and displayed (see figure 11).

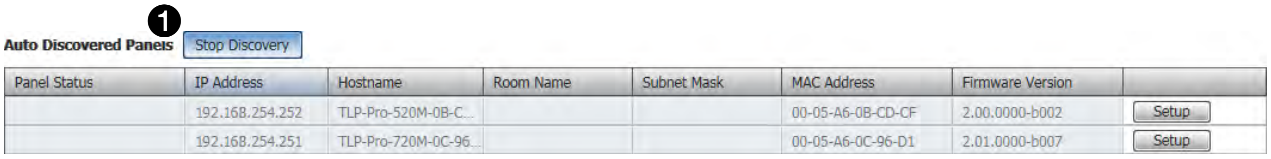


Figure 11. Auto Discovered Panels Pane

NOTES:

- Touchpanels ship with control firmware installed. Room Agent requires that touchpanels run different, scheduling, firmware, version 2.01.0000-b004 or higher to connect to them. If you receive the message **Cannot connect to this device**, click **OK** in the message dialog box, **STOP HERE** and update the touchpanel firmware (see **Update Firmware**, beginning at step 5, on page 42).
- Any touchpanels not on the same subnet as the computer running Room Agent must be added manually to the list using the **Manually Add Panels** pane (see "Manually Add Touchpanels").

3. When all of the touchpanels are displayed, click the **Stop Discovery** button to end the search (see figure 11, ❶).

Manually Add Touchpanels

Manually add touchpanels that are on a different subnet than the computer running the Room Agent software as follows:

1. If Panel Management view is not currently displayed, click the **Panel Management** tab.
2. Click the **Add New** button above the **Manually Added Panels** pane (see **figure 10**, ❷).

   The **Add New Panel** dialog box opens (see figure 12).

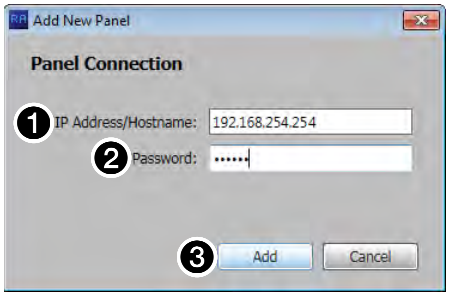


Figure 12. Add New Panel Dialog Box

3. Enter the IP address of the desired touchpanel in the `IP Address/Hostname:` field (see **figure 12**, ❶ on the previous page).
4. If the touchpanel is password protected, enter the password in the `Password:` field (❷).

   NOTE: All touchpanels ship with the default, case-sensitive, password "`extron`".

5. Click the **Add** button (❸). Room Agent searches for the requested touchpanel and, if found, adds it to the `Manually Added Panels` pane (see figure 13).

   NOTE: Touchpanels ship with control firmware installed. Room Agent requires that touchpanels run different, scheduling, firmware, version 2.01.0000-b004 or higher to connect to them. If you receive the message `Cannot connect to this device`, click **OK** in the message dialog box, **STOP HERE** and update the touchpanel firmware (see **Update Firmware**, beginning at step 5, on page 42).

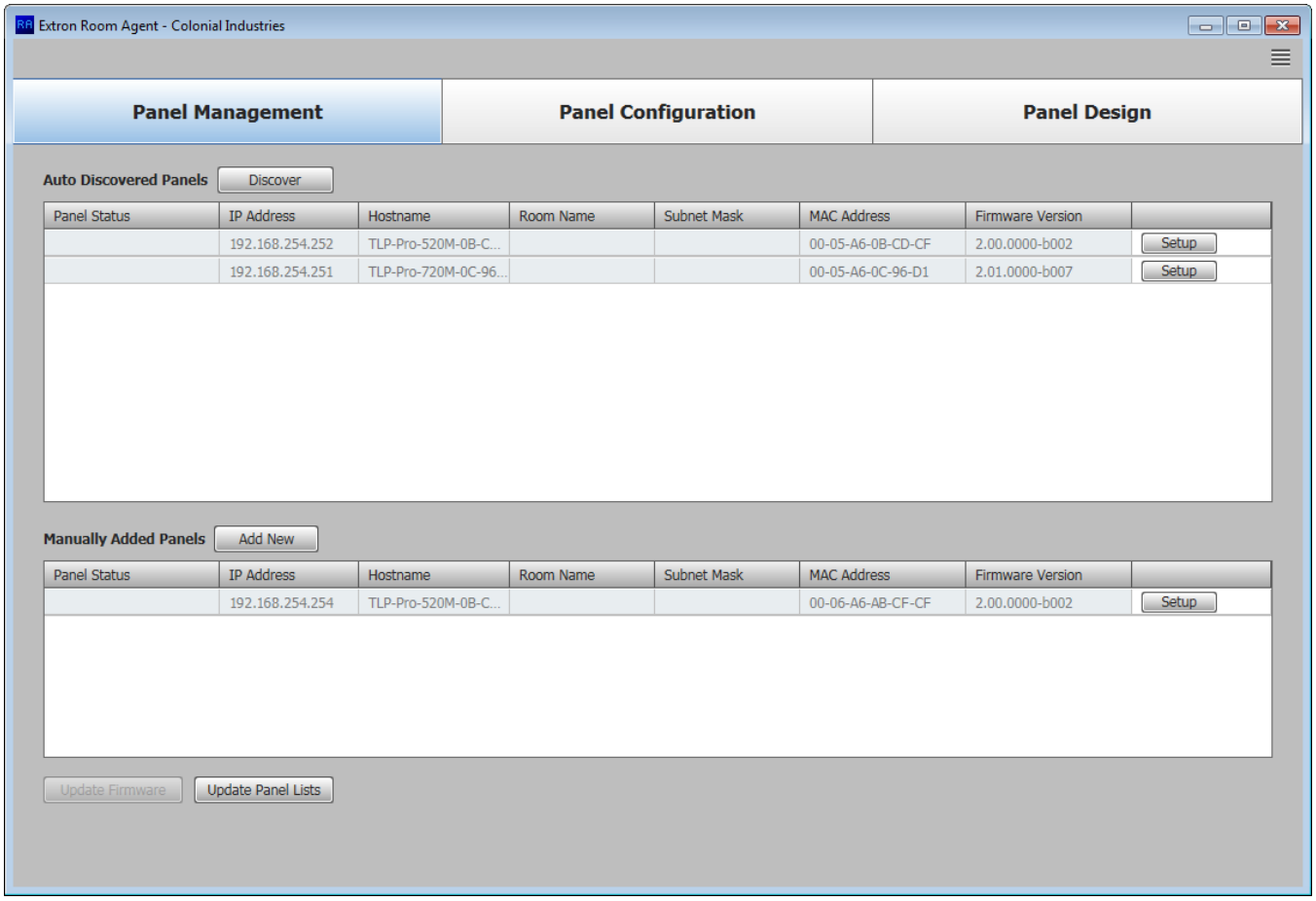


Figure 13. Panel Management View with Touchpanels Assigned

Panel Management Tab

Connect to the touchpanel

Each panel requires setup as follows:

1. Click the **`Setup`** button for the touchpanel to be set up.

> **NOTE:** The X button deletes a touchpanel from the list.

The `Panel Connection` dialog box opens (see figure 14).

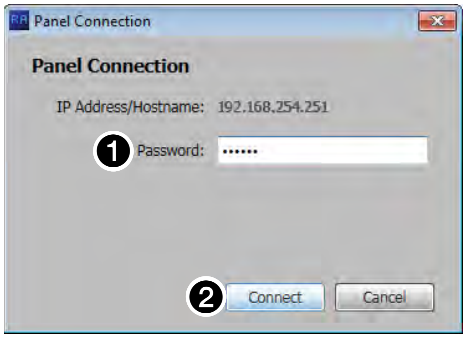


Figure 14. Panel Connection Dialog Box

2. If applicable, enter a password in `Password` block (see figure 14, ❶).

> **NOTE:** All touchpanels ship with the default, case-sensitive, password "`extron`".

3. Click the **`Connect`** button (❷).

   The Room Agent connects to and synchronizes with the panel. Once synced, Room Agent displays the `Device Management` window with either the `Communication Settings` tab (see **figure 15** on the next page) or `General Settings` tab (see **figure 16** on page 18) selected.

Communication Settings window

The **Communication Settings** tab on the Device Management window (see figure 15) provides a set of tools for managing the following internet settings of the connected touchpanel:

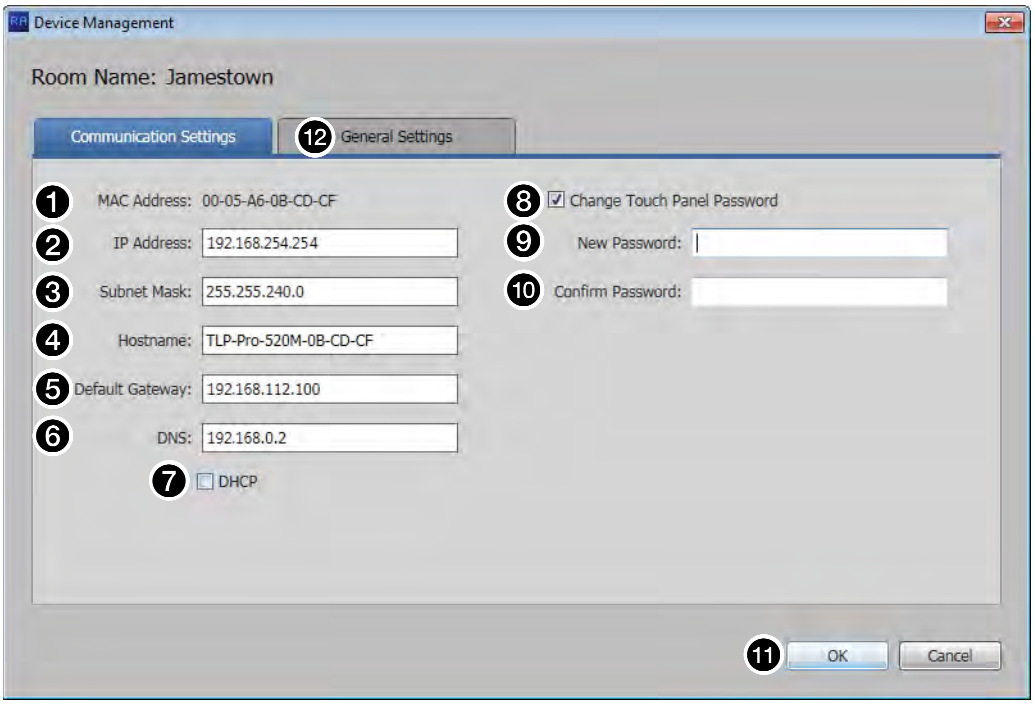


Figure 15. Device Management Window, Communications Settings

❶ MAC Address (displayed only)
❷ **IP Address**
❸ **Subnet Mask**
❹ **Hostname**
❺ **Default Gateway**
❻ **DNS** (Domain Name System) server
❼ **DHCP** (Dynamic Host Configuration Protocol)

When the **DHCP** checkbox (see figure 15, ❼) is selected, only the **Hostname** can be edited. All other settings (other than DHCP itself) are displayed only and unavailable for editing. To edit all settings (other than the MAC address), **DHCP** must be deselected (unchecked).

NOTE: If you configure the touchpanels with a static IP address and you use a host name for the exchange server, ensure that you provide the DNS server address.

The **Communication Settings** tab also allows users to change the password of the touchpanel.

NOTE: All touchpanels ship with the default, case-sensitive, password "extron". Extron recommends that you change the password.

Change the password as follows:

1. Click (select) the **Change Touch Panel Password** checkbox (❽).
2. Enter the new password in the **Password** (❾) and **Confirm Password** (❿) fields.

Once you have made all desired changes available from the **Communication Settings** tab, click either the **OK** button (⓫, the Device Management window closes) or the **General Settings** tab (⓬, then general settings are displayed, see **figure 16** on the next page).

General Settings window

The **General Settings** tab on the Device Management window (see figure 16) provides a set of tools for managing display, time, and audio settings of the connected touchpanel.

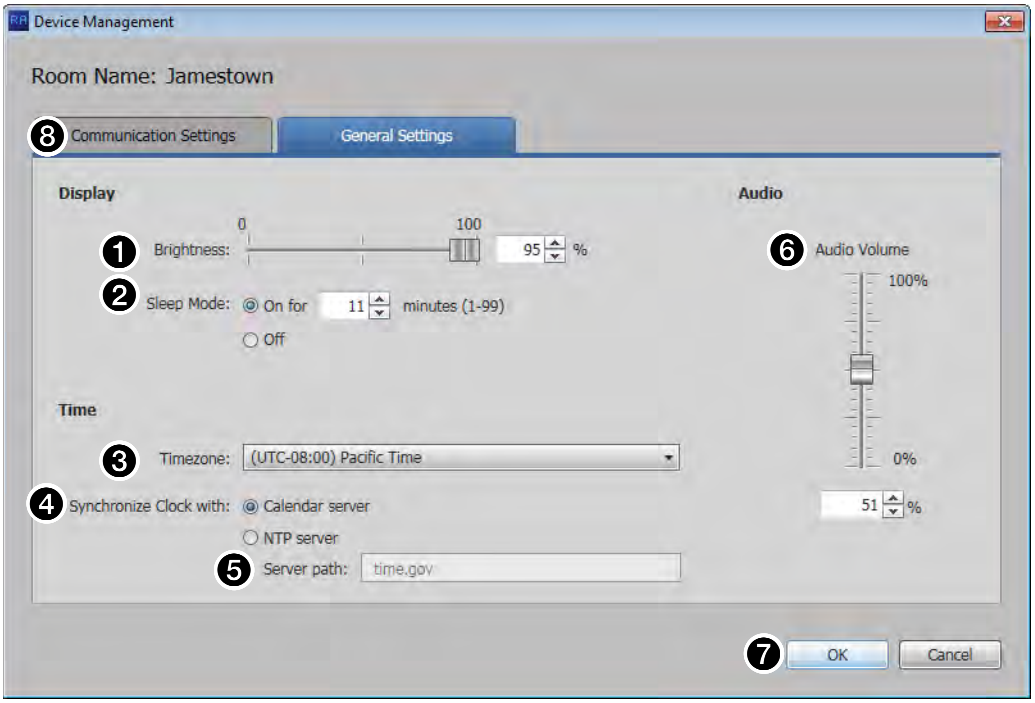


Figure 16. Device Management Window, General Settings

❶ **Display Brightness** — Set the touchpanel illumination brightness, from **0** to **100** (percent) using this fader control.

❷ **Display Sleep Mode** — Toggle Sleep mode **On** and **Off** by selecting the appropriate radio button. If Sleep mode is **On**, use the **Minutes** field to specify between **1** and **99** minutes.

❸ **Timezone** — Use the drop-down list to select the appropriate time zone.

❹ **Synchronize Clock with** — Toggle the clock synchronization source between the **Calendar server** and **NTP** (Network Time Protocol — a networking protocol for clock synchronization between computer systems) by selecting the appropriate radio button.

> **NOTE:** If you select **NTP**, specify the path to the NTP server in the **Server path:** field (❺).

❺ **Server path:** (available only if NTP is selected in ❹) — Specify a path for the NTP server.

❻ **Audio Volume** — Set the touchpanel audio volume, from **0** to **100** (percent) using this fader control.

Once you have made all desired changes available from the **General Settings** tab, click either the **OK** button (❼, the **Device Management** window closes) or the **Communication Settings** tab (❽, then communication settings are displayed, see **figure 15** on the previous page).

Panel Configuration Tab

The **Panel Configuration** window (see figure 17) provides a set of tools for selecting among the supported calendar servers and managing the settings of the selected server.

NOTE: Until you designate the calendar server for your system, only the **Select a Calendar Type** drop-down list (❶) is available for selection.

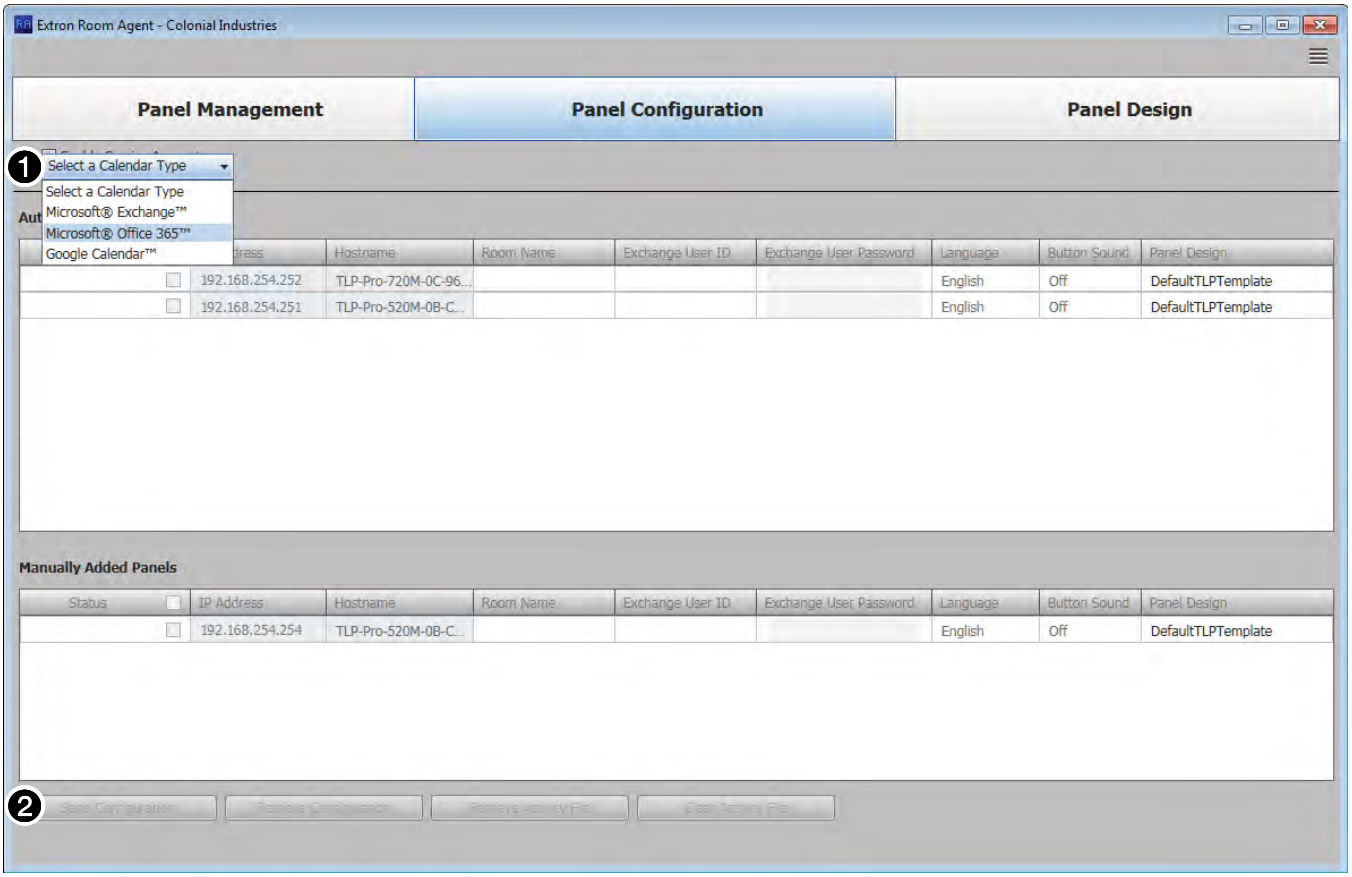


Figure 17. Panel Configuration Window, Initial View

Click the **Select a Calendar Type** drop-down list (❶) and select among the choices shown in figure 17. The appearance and available selections of the **Panel Configuration** tab vary depending on the selection:

The function of the **Configuration** and **Activity** buttons (❷) is common to all Calendar Type selections. See **Common Panel Configuration tab functions** on page 31. For all other functions on these windows:

- If you selected **Microsoft® Exchange™**, see **Exchange configuration** on the next page.
- If you selected **Microsoft® Office 365™**, see **Office 365 configuration** on page 26.
- If you selected **Google Calendar™**, see **Google Calendar configuration** on page 27.

Exchange configuration

When you select **Microsoft® Exchange™** (see figure 17, ❶ on the previous page), the Panel Configuration window displays the settings necessary to connect to the touchpanels and configure them for Microsoft Exchange (you may also commonly hear this referred to as "Exchange On Premises" or "on Prem") (see figure 18).

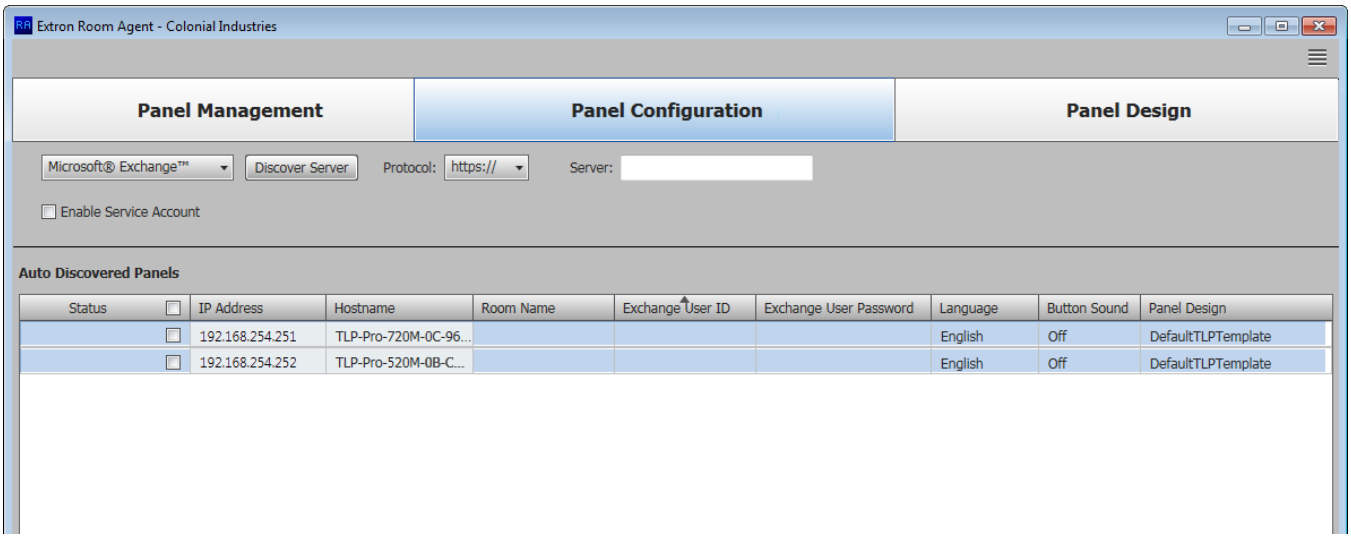


Figure 18. Panel Configuration Window, Exchange View

Connect to the server

Connect to the Microsoft Exchange server as follows (see figure 19):

Figure 19. Establishing a Connection the Microsoft Exchange Server

1. If necessary, click the **Protocol** drop-down list and select between **https://** and **http://** (see figure 19, ❶).

NOTE: https:// is the correct choice for virtually all applications.

2. Click the **Discover Server** button (❷). The Auto Discover Microsoft Exchange Server dialog box opens (see figure 20).

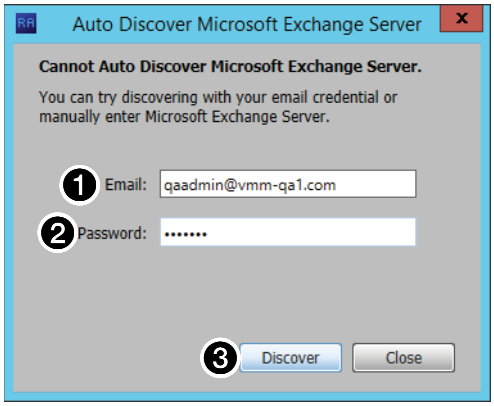


Figure 20. Auto Discover Dialog Box

3. Enter your **Email** credentials (see figure 20, ❶) and the **Password** (❷).

4. Click the **Discover** button (see **figure 20**, ❸ on the previous page). Room Agent finds the calendar server and fills in the **Server** field (see **figure 19**, ❸ on the previous page). Room Agent is connected to the server.

Configure touchpanels

Configure the touchpanels for Exchange as follows (see figure 21):

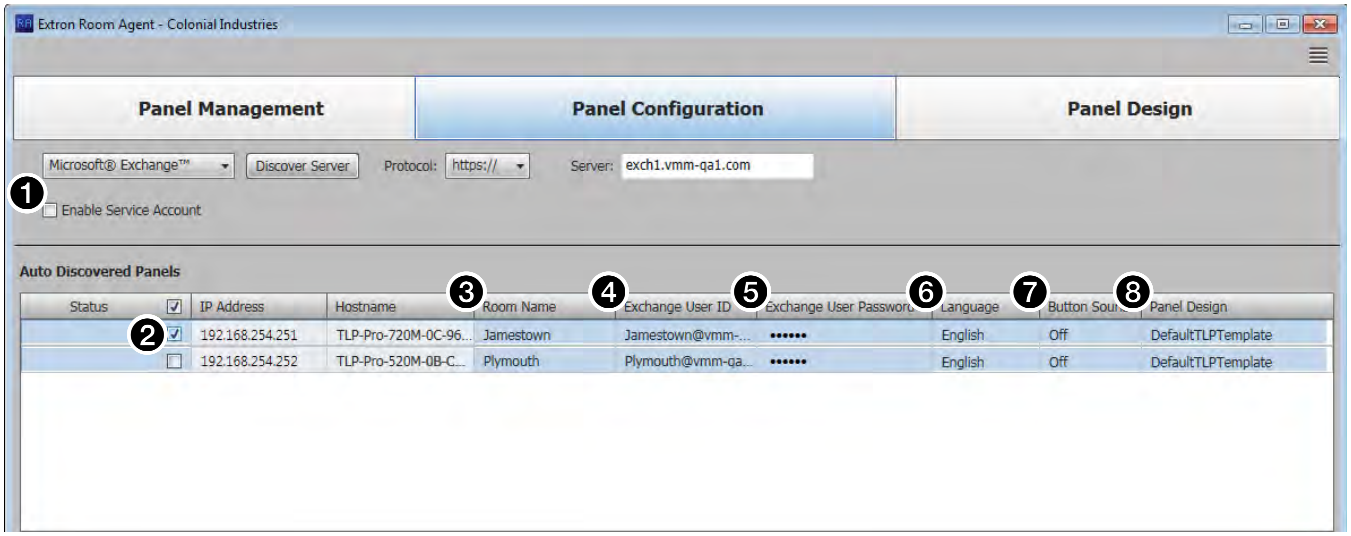
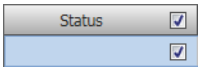


Figure 21. Touchpanel Configuration

NOTE: The **Enable Service Account** checkbox (see figure 21, ❶) allows one or more service accounts to be used to configure the touchpanels. See **Use service accounts** beginning on the next page to configure and use service accounts.

1. Select (check) one or more **Status** checkboxes (❷).



2. For the direct entry settings, **Room Name** (❸), **Exchange User ID** (Exchange credentials, ❹), and **Exchange User Password** (❺):

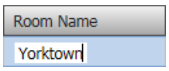
NOTES:

- If service accounts are enabled, the **Exchange User ID** and **Exchange User Password** columns are titled **Service Account** and **Room Resource Account** (see **figure 22** on the next page).
- The **Exchange User ID** requires the User Principal Name (UPN, the name of a Windows network user in an e-mail address format) for the room resource user ID. The UPN **must** have an SMTP e-mail address assigned to it.

a. Click in the desired field.

b. Type the desired value.

c. Type the keyboard <**Tab**> key to exit the field.



3. For the drop-down lists, **Language** (see figure 21, ❻ on the previous page), **Button Sound** (❼), and **Panel Design** (❽):

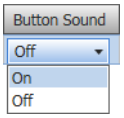
NOTES:

- The **Language** menu includes a number of different languages. See **Supported Languages** on page 58 for a complete list.
- The **Button Sound** menu consists of **On** and **Off**.
- The **Panel Design** menu includes the **DefaultTLPTemplate**, which is the default that is installed as part of the Room Agent software, as well as any templates that you have created and saved (see **Templates pane** on page 40).

a. Click in the desired field.

b. Click the drop-down list button (▾).

c. Click the desired setting.



Use service accounts

The Room Agent software can use the service account functions of the Exchange and Office 365 "impersonation" feature as a single point to manage the configuration of multiple touchpanels. One example of this application is a facility where passwords are changed every few months; rather than change the password on multiple touchpanels, an administrator can change the password of one service account tied to multiple touchpanels.

Enable and add service accounts —

1. If necessary, access the Exchange server `Active Directory Users and Computers` window or the Office 365 `Admin center` page and create one or more service accounts with valid e-mail addresses.

NOTE: The service account requires the UPN, the name of a Windows network user in an e-mail address format. The UPN **must** have an SMTP e-mail address assigned to it.

2. On the Room Agent software `Panel Configuration` page, select the **Enable Service Account** checkbox (see figure 22, ❶). The **Service Account Manager** button appears (❷). The **Exchange User ID** and **Exchange User Password** columns become **Service Account** (❸) and **Room Resource Account** (❹).

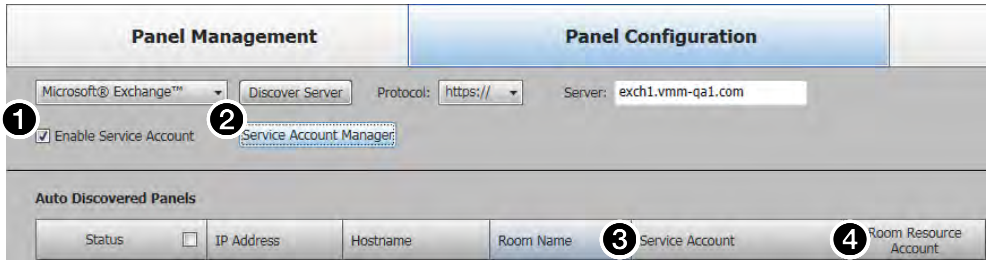


Figure 22. Enable Service Accounts

NOTE: Figure 22 shows **Microsoft® Exchange™** selected. With the exception of the selection, the appearance is identical when **Microsoft® Office 365™** is selected.

3. Click the **Service Account Manager** button (see **figure 22**, ❷ on the previous page). The Service Account Manager dialog box opens with the **Assign Service Account** tab selected (see figure 23, ❶).

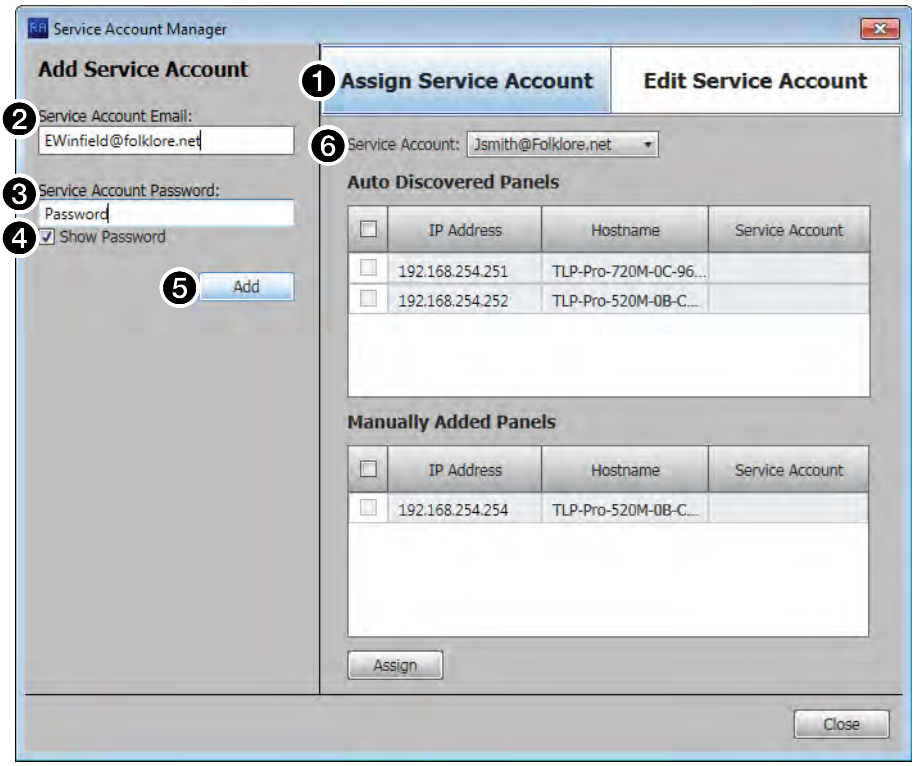


Figure 23. Add Service Accounts

4. Enter a valid **Service Account Email** address (❷).
5. Enter the **Service Account Password** (❸).

> **TIP:** The **Service Account Password** field is normally masked (•••). Select the **Show Password** checkbox (❹) to see the password characters as you type.

6. Click **Add** (❺). The Add Service Account area displays the message `Service Account has been added and is ready to be assigned to panels`. The account is added to the **Service Account** drop-down list (❻).
7. Repeat steps 4 through 6 for each service account.

Assign service accounts —

1. If necessary, click the **Assign Service Account** tab (see figure 24, ❶).

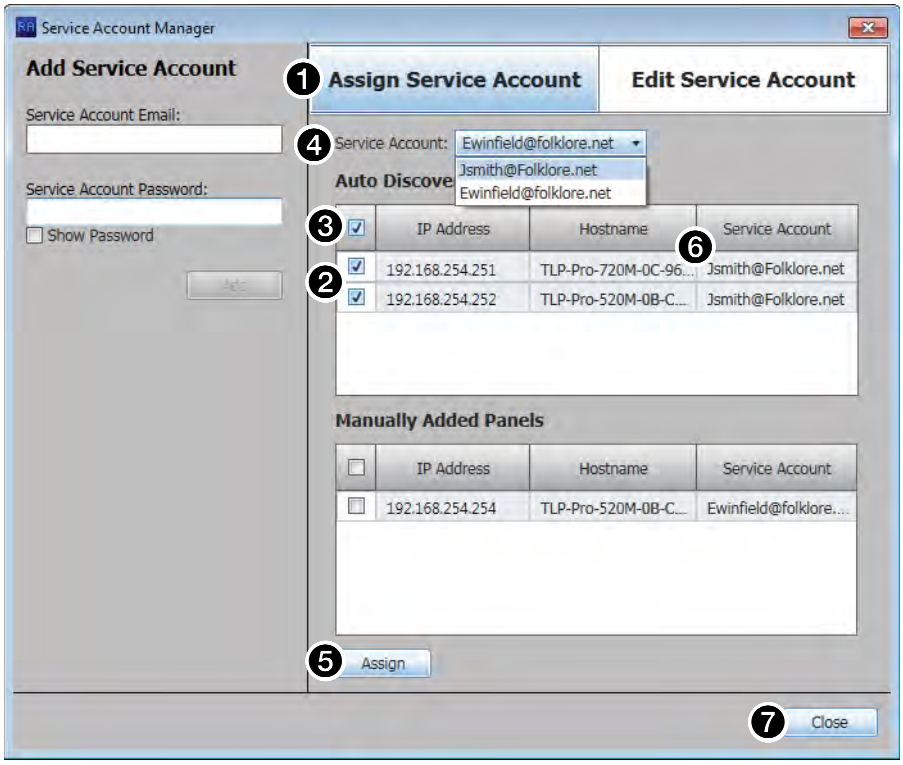


Figure 24. Assign Service Accounts

2. Select (check) one or more touchpanel **IP Address** checkboxes (❷).

> **TIP:** Select either the **Auto Discovered Panels** or **Manually Entered Panels** checkbox (❸) to select all panels in that pane.

3. Select the desired service account among the entries in the **Service Account** drop-down list (❹).
4. Click **Assign** (❺). The selected Service Account is assigned to the designated touchpanels (❻).
5. Repeat steps 2 through 4 to assign other service accounts to other touchpanels.
6. Click **Close** (❼). The Service Account Manager dialog box closes and the Room Agent software returns to the Panel Configuration Window displayed. For the touchpanels with service accounts that are enabled, the normal **Exchange User ID** and **Exchange User Password** columns are titled **Service Account** and **Room Resource Account** (see figure 25).

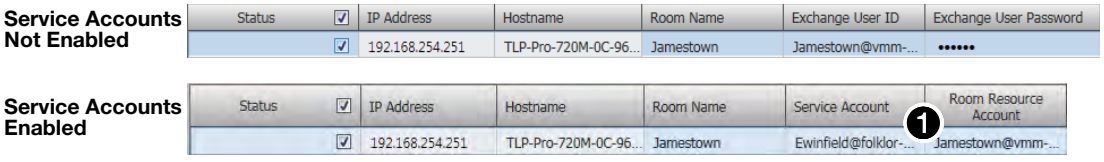


Figure 25. Display With Service Accounts Enabled and Not Enabled

7. For each touchpanel, enter the e-mail address used as the fully qualified room resource in the **Room Resource Account** column (see figure 25, ❶).

Edit a service account password —

1. If necessary, open the `Service Account Manager` dialog box (see **Enable and add service accounts**, steps 2 and 3, beginning on page 22).
2. Click the **`Edit Service Account`** tab (see figure 26, ❶).

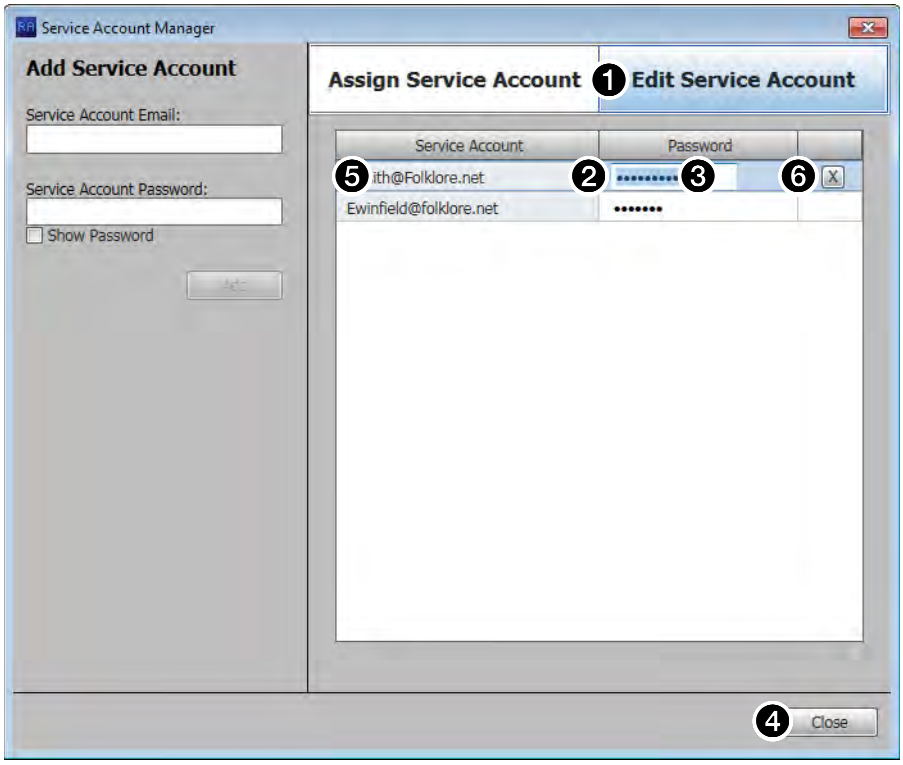
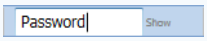


Figure 26. Edit Passwords

3. Double-click in the **`Password`** field for the service account to be edited (❷).
4. Highlight the password and type a new value (❸).
5. Type the keyboard <**`Enter`**> key.

TIPS:

- The **`Password`** field is normally masked (•••). Delete the existing password to activate the `Show` feature to see the password characters as you type.



- Click **`Show`** to toggle between **`Show`** and **`Hide`**.
- After you type <**`Enter`**>, the **`Password`** field is again masked.

6. Click **`Close`** (❹).

Delete a service account password —

1. If necessary, open the `Service Account Manager` dialog box (see **Enable and add service accounts**, steps 2 and 3, beginning on page 22).
2. Click the **`Edit Service Account`** tab (see figure 26, ❶).
3. Double-click in the **`Password`** field for the service account to be deleted (❷).
4. Select (click) a service account (❺).
5. Click **`Delete`** (⊗) button (❻).
6. Click **`Close`** (❹).

Office 365 configuration

When you select **Microsoft® Office 365™** (see **figure 17**, ❶ on page 19), the **Panel Configuration** window displays the settings necessary to configure the touchpanels for Microsoft Office 365 (see figure 27).

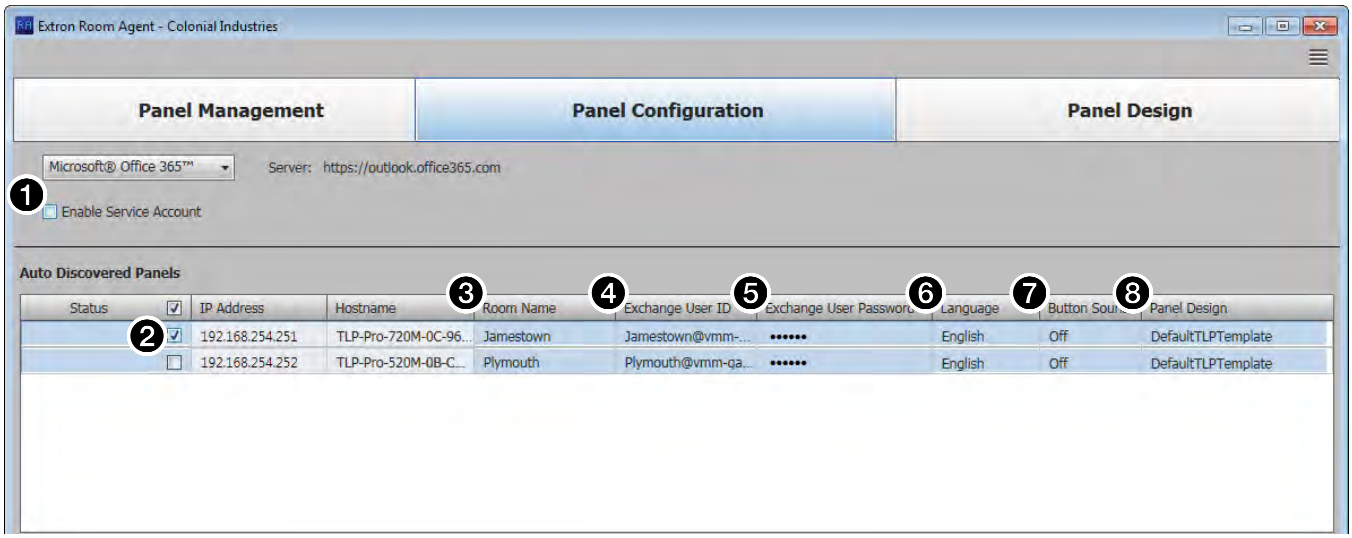


Figure 27. Panel Configuration Window, Office 365 View

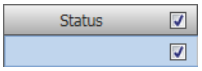
NOTE: The **Enable Service Account** checkbox (see figure 27, ❶) allows one or more service accounts to be used to configure the touchpanels. See **Use service accounts** beginning on page 22 to configure and use service accounts.

Connect to the server

Connection to the touchpanels is made automatically, through the Office 365 server.

Configure touchpanels

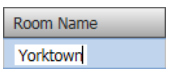
Configure the touchpanels for Office 365 as follows:



1. Select (check) one or more **Status** checkboxes (see figure 27, ❷).
2. For the direct entry settings, **Room Name** (❸), **Exchange User ID** (Exchange credentials, ❹), and **Exchange User Password** (❺):

NOTES:

- If service accounts are enabled, the **Exchange User ID** and **Exchange User Password** columns are titled **Service Account** and **Room Resource Account**.
- The **Exchange User ID** requires the User Principal Name (UPN, the name of a Windows network user in an e-mail address format) for the room resource user ID. The UPN **must** have an SMTP e-mail address assigned to it.



a. Click in the desired field.
b. Type the desired value.
c. Type the keyboard <**Tab**> key to exit the field.

3. For the drop-down lists, **Language** (see figure 27, ❻ on the previous page), **Button Sound** (❼), and **Panel Design** (❽):

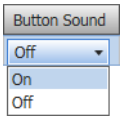
NOTES:

- The **Language** menu includes a number of different languages. See **Supported Languages** on page 58 for a complete list.
- The **Button Sound** menu consists of **On** and **Off**.
- The **Panel Design** menu includes the **DefaultTLPTemplate**, which is the default that is installed as part of the Room Agent installation, as well as any templates that you have created and saved (see **Templates pane** on page 40).

a. Click in the desired field.

b. Click the drop-down list button (▾).

c. Click the desired setting.



Google Calendar configuration

When you select **Google Calendar™** (see figure 17, ❶ on page 19), the Panel Configuration window displays the settings necessary to configure the touchpanels for Google Calendar (see figure 28). If you select Google Calendar, you can have multiple devices using the same calendar or multiple calendars.

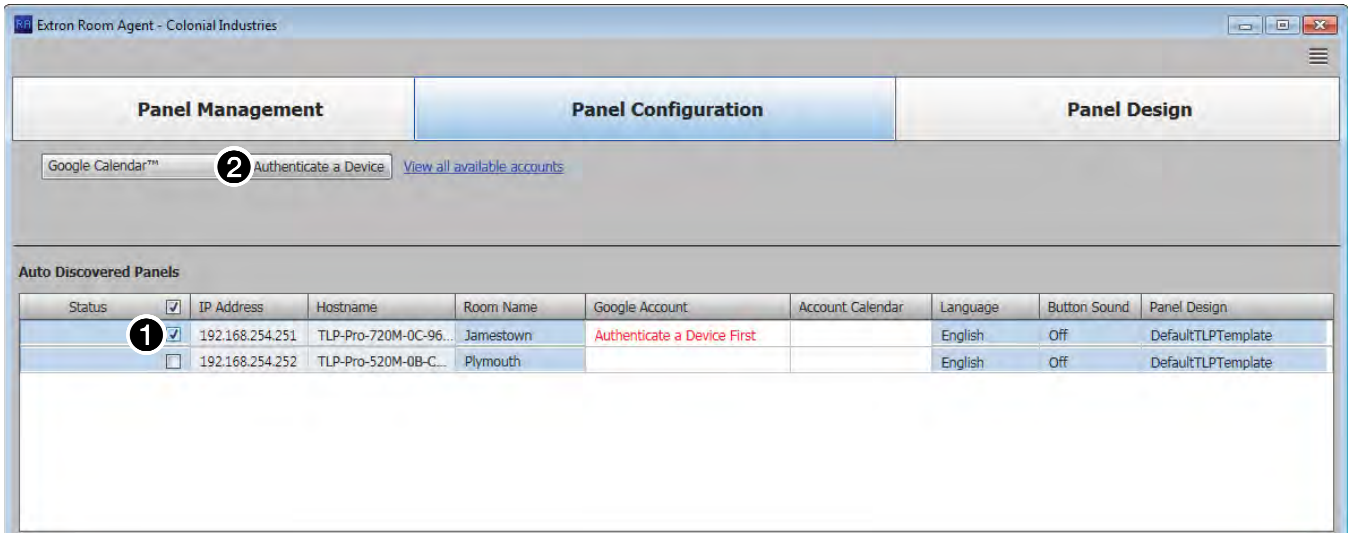
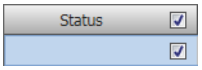


Figure 28. Panel Configuration Window, Google Calendar View

Configure touchpanels

NOTE: You must have downloaded a JSON file to configure touchpanels for Google Calendar (see **Download the JSON File** on page 53.

Configure the touchpanels for Google Calendar as follows:



1. Select (check) one or more **Status** checkboxes (see figure 28, ❶).
2. Click **Authenticate a Device** (❷) to connect to the calendar that will be associated with that touchpanel. The Authenticate a Device to Google dialog box opens (see figure 29 on the next page).

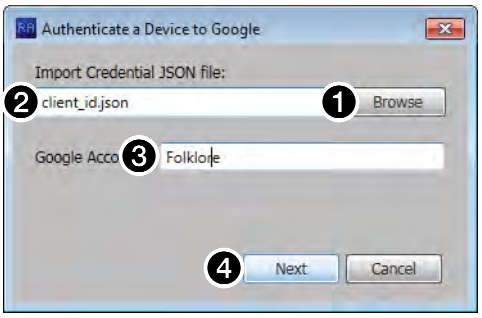


Figure 29. Authenticate a Device to Google Dialog Box

3. Click **`Browse`** (❶). The `Open` dialog box opens (see figure 30).

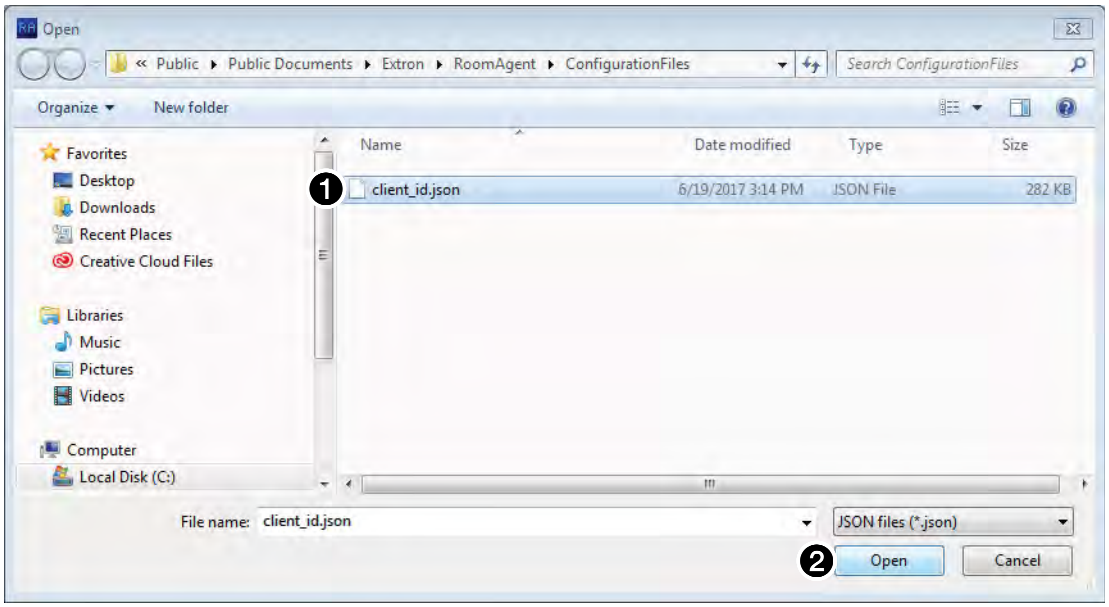


Figure 30. Open Dialog Box

4. Navigate to the folder where you saved the JSON file. Select the file (❶).
5. Click **`Open`** (❷). The `Authenticate a Device to Google` dialog box returns to the top with the JSON file entered in the **`Import Credential JSON File`** field (see figure 29, ❷).
6. Enter a value in the **`Google Account`** field (❸).

> **NOTE:** You can enter anything for the **`Google Account`**, such as an e-mail address or a meaningful name. The software uses this value as an identifier to keep track of Google accounts.

7. Click **`Next`** (❹). The `Authenticate a Device to Google` dialog box closes.

The Room Agent software retrieves a user code and prompts you to enter the code on a Google Web page (see figure 31).

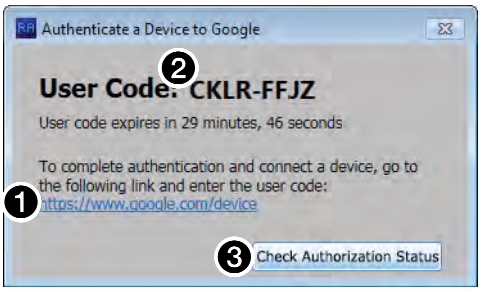


Figure 31. User Code Dialog Box

NOTE: The **Check Authorization Status** button (❸) is not available for selection until after you have authenticated the device in step 9.

8. Click on the link (❶). Room Agent opens a separate browser to the Google **Device** page.
9. Follow the steps on the Google **Device** page to authenticate the device. When the Google Device page prompts for it, enter the **User Code** provided (❷).

NOTE: The **Product Name** that you enter during Google calendar environment setup (see **step 12** on page 55) is the name that appears on the Google **Device** page.

When you are finished, the **Check Authorization Status** button in the Room Agent **User Code** dialog box is enabled (❸).

10. Click **Check Authorization Status** (❸).

The Room Agent software checks the authorization status. Assuming no errors, it reports **Complete!** (see figure 32).

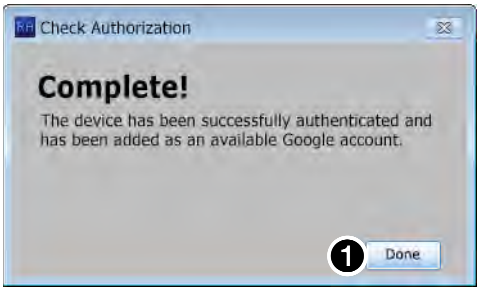


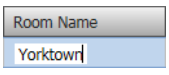
Figure 32. Completion Dialog Box

11. Click **Done**.

The Room Agent software appends the name of the **Import Credential JSON File**, entered in step 5, to the end of the **Google Account**, entered in step 6, and displays the new value in the **Google Account** field of the **Panel Configuration** window (see **figure 33**, ❶, on the next page).

The **Panel Configuration Window** displays other fields appropriate for Google Calendar configuration.

12. For the direct entry **Room Name** (❷) setting:



   a. Click in the field.
   b. Type the desired value.
   c. Type the keyboard <**Tab**> key to exit the field.

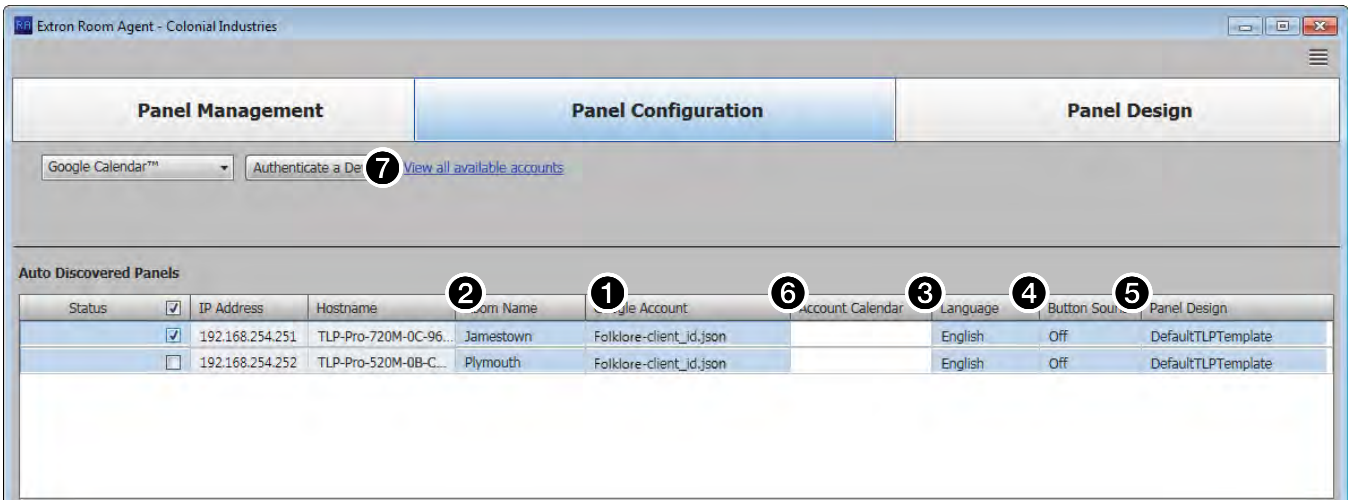


Figure 33. Panel Configuration Window, Google Calendar View, Continuation

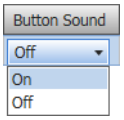
13. For the drop-down lists in figure 33, **`Language`** (❸), **`Button Sound`** (❹), and **`Panel Design`** (❺):

> **NOTES:**
> - The **`Language`** menu includes a number of different languages. See **Supported Languages** on page 58 for a complete list.
> - The **`Button Sound`** menu consists of **`On`** and **`Off`**.
> - The **`Panel Design`** menu includes the **`DefaultTLPTemplate`**, which is the default that is installed as part of the Room Agent installation, as well as any templates that you have created and saved (see **Templates pane** on page 40).

a. Click in the desired field.

b. Click the drop-down list button (▾).

c. Click the desired setting.



14. Observe the **`Account Calendar`** field (❻). The field shows the individual calendar from the Google account. For GSuite Resource calendars, this should be the Resource Name. If this field is left empty, Room Agent defaults to the calendar owner address.

> **NOTE:** The Google Administrator typically assigns each room a calendar and opens access to all users that are allowed to book the rooms.

You can also click **`View all available accounts`** (❼) to show the status of all of the Google accounts that provide calendars (see figure 34).

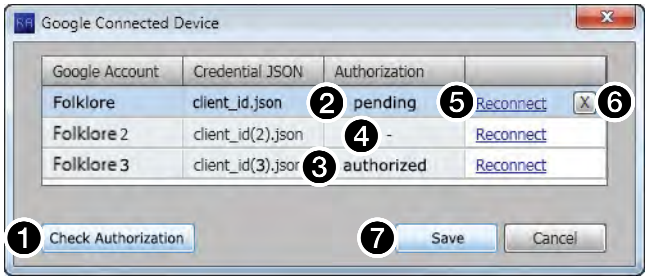


Figure 34. View All Accounts Dialog Box

> **NOTE:** The **`Google Account`** field is the value entered in **step 6** on page 28.

Click **Check Authorization** to poll the authorization status for all Google accounts (see figure 34 on the previous page, ❶). The possible authorization status are:

- `pending` (❷)— The Google authorization for this account has been started but not yet approved.
- `authorized` (❸)— This account is authorized for Google Calendar.

NOTE: Before you start the authorization process, the indicated status is -(❹).

Click **Reconnect** (❺) to retrieve the user code and verification. This is similar to the device authentication procedure, step 7 through step 10, beginning on page 28.

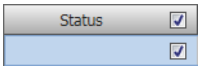
Click ⊗ (❻) to delete a selected account. **Save** (❼) becomes available when an account is deleted, click it to save the list of Google accounts.

Common Panel Configuration tab functions

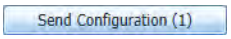
Send and retrieve the configuration

The send and receive configuration functions push and pull configurable settings between the Room Agent software and one or more touchpanels.

Send or receive one or more configurations as follows:

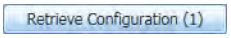


1. Select (check) one or more **Status** checkboxes.
2. Click the **Send Configuration** button to send the Room Agent settings to the touchpanels and implement them in the panels.

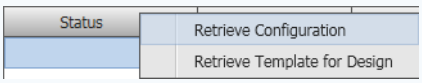


— or —

Click the **Retrieve Configuration** button to fetch configurable settings from one or more touchpanels and embed them in the Room Agent settings and fields.



TIP: Or, easily retrieve the configuration for a single touchpanel by right-clicking the touchpanel in the `Status` column and then clicking the pop-up **Retrieve Configuration** button.



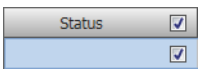
The Room Agent software reports that the `Status` is in progress (⟳) and then reports either `Config Sent`. or `Config Retrieved`.

Retrieve and clear the activity file

Each touchpanel maintains an activity file, a log of scheduling information for the assigned room. The activity file includes items such as the meeting subject, meeting organizer, booking date, meeting date and starting time, and duration, among other data. The activity file can be retrieved and written to the PC running the Room Agent software as an Microsoft Excel spreadsheet or cleared (erased) from the touchpanel.

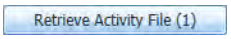
NOTE: The touchpanel has 4 Mb of activity file memory. The number of entries varies depending on the size of each entry, but may number in the hundreds. When the memory becomes full, the newest entries overwrite the oldest. There is **no** notification when the memory becomes full.

Retrieve or clear one or more activity files as follows:



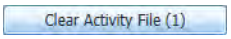
1. Select (check) one or more **Status** checkboxes.

2. Click the **`Retrieve Activity File`** button to fetch the schedule log and from one or more touchpanels and save it in a spreadsheet. The Room Agent software opens the `Panel Activity File` dialog box (see figure 35). **Proceed to step 4**.



— or —

Click the **`Clear Activity File`** button to erase the schedule log from one or more touchpanels.



For the clear operation, the Room Agent software reports that the `Status` is in progress (⟳) and then reports `Cleared.` and `All panel activity logs have been cleared successfuly.`

3. Click **`OK`** to exit the clear operation.
4. Enter a name for the retrieved activity file (see figure 35, ❶).

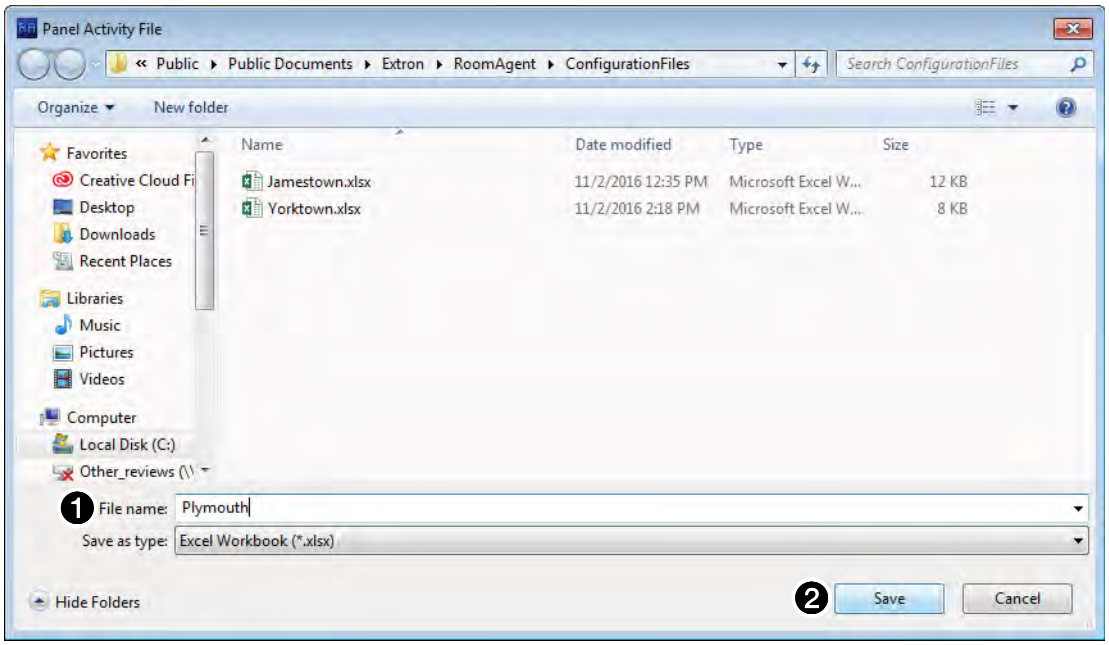


Figure 35. Panel Activity File

5. Click **`Save`** (❷). The Room Agent software saves the file. It reports that the `Status` is in progress (⟳) and then reports `Activity retrieved.` and `All activities have been retrieved successfully.`

Retrieve a template

Templates allow you to create a number of customized touchpanel appearances. Templates are selectable using the **`Panel Design`** menu in the `Panel Configuration` window (see **figure 21**, ❼ on page 21 for an example). Templates can be created using a variety of tools in the `Panel Design` window (see **Panel Configuration Tab** on page 19) and saved in the template pane (see **Templates pane** on page 40).

You can retrieve the template assigned to a touchpanel, for example to use as a starting point for designing a new touchpanel layout, as follows:

1. Right-click the touchpanel in the `Status` column (see ❶, at right).

2. Click the pop-up **`Retrieve Template for Design`** button (❷). The `Retrieve Template` dialog box opens (see **figure 36** on the next page).

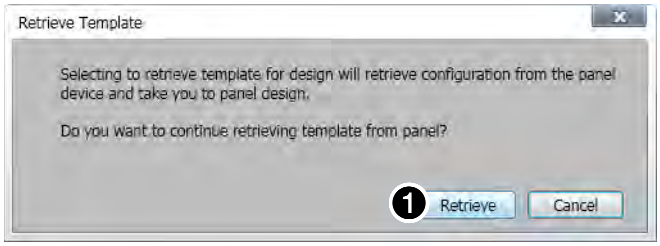


Figure 36. Retrieve Template Dialog Box

3. Click **`Retrieve`** (see figure 36, ❶). Room Agent software displays the `Retrieving Template ...` activity indicator while it loads the template and then automatically jumps to the `Panel Design` window (see **Panel Configuration Tab** on page 19).

Panel Design Tab

The `Panel Design` window (see figure 37) provides a set of tools for customizing the appearance and function of the connected touchpanels. The window consists of the design pane (❶, see **Design pane** on the next page), the preview pane (❷, see **Preview pane** on page 39), and the `Templates` pane (❸, see **Templates pane** on page 40).

NOTE: The preview pane contains hardcoded, **sample**, entries. The layout and appearance of this pane change to reflect your changes in the design pane, but, other than the date and time, the contents, such as "`Main Conference Room`", do not change.

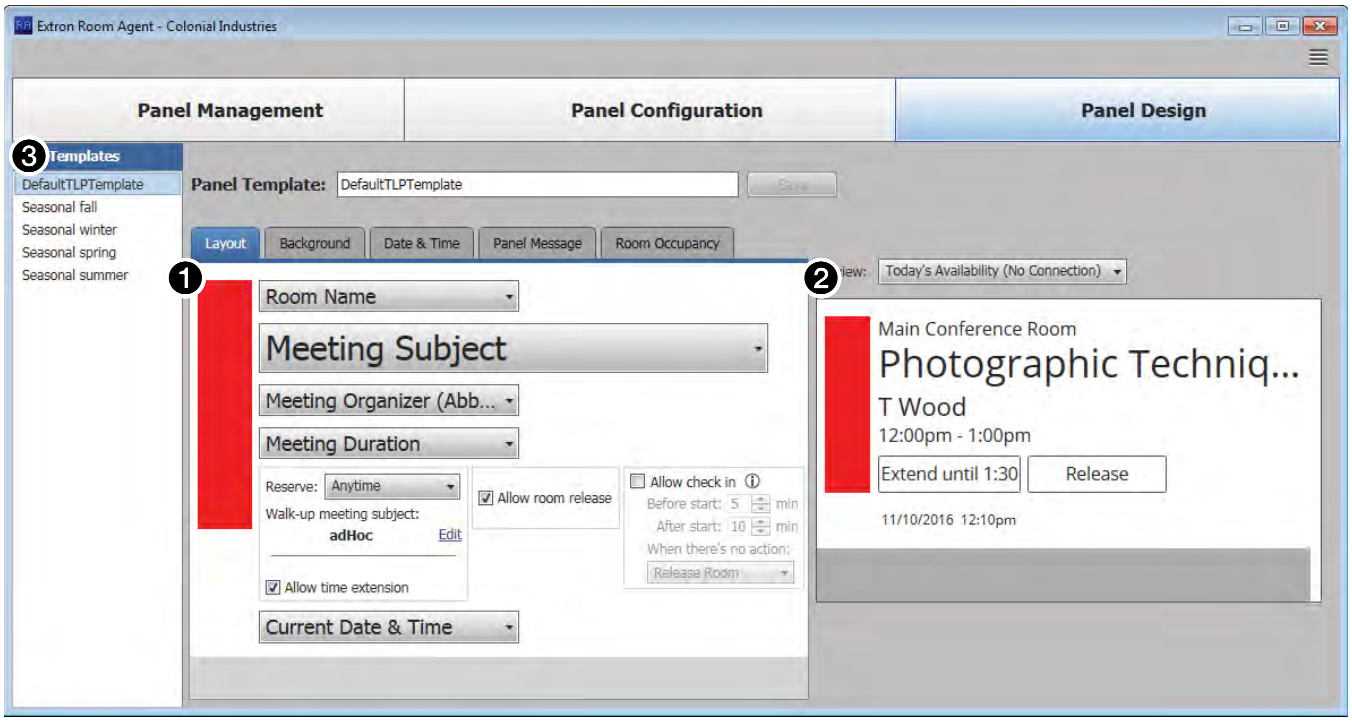


Figure 37. Panel Design Window, Layout Tab Selected

Design pane

Layout tab

If necessary, click the **Layout** tab (see figure 38, ❶) to make changes to the following:

- The arrangement of the fields on the display
- Whether or not you can locally (on the touchpanel):
  - Reserve the room
  - Release the room
  - Extend the meeting time

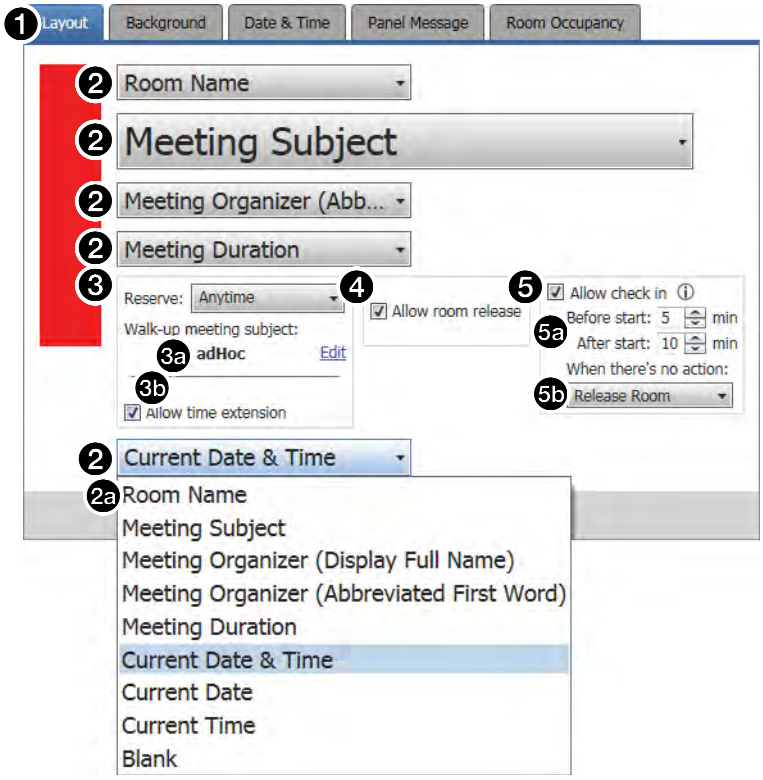
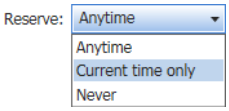


Figure 38. Panel Design Pane, Layout Tab

❷ **Data field drop-down lists** — These five menus are positioned within the pane to correspond to data positions on the touchpanels and in the preview pane (see figure 37, ❷ on the previous page). All menus contain the same options (see figure 38, ❷a). Select among the options to choose the data displayed in the corresponding position. Watch the preview pane to see how your selections affect the appearance of a touchpanel. Selecting **Blank** causes no data in the associated position.

❸ **Reserve: drop-down list** — Use this drop-down list to select whether the **Reserve** button appears on the touchpanel and how it functions. The **Reserve** button allows user to book the room locally, on the touchpanel itself. **Anytime** allows you to reserve any half-hour segment displayed on the touchpanel.



3a **Subject field** (see **figure 38** on the previous page) — This field shows the meeting subject displayed on the touchpanel when a room is reserved from the panel. "`adHoc`" is the default subject. Change the meeting subject as follows:

1. Click the **`Edit`** link (see figure 39, ❶).

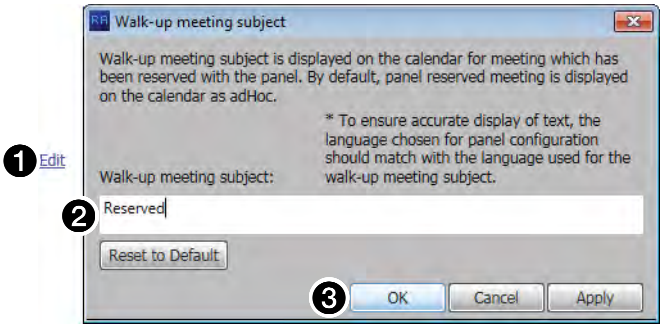


Figure 39. Walk-up Meeting Subject Dialog Box

2. Type the new subject name in the `Walk-up meeting subject:` field (❷).
3. Click **`OK`** (❸).

3b **Allow time extension checkbox** — Check and uncheck this box to select whether the **`Extend until`** button appears on the touchpanel. **`Extend until`** extends the reservation of a room in half-hour increments **IF** no previously scheduled reservation exists in the extension period. The **`Extend until`** button does not appear if there is a conflict.

☑ Allow time extension

4 **Allow room release checkbox** — Check and uncheck this box to select whether the **`Release`** button appears on the touchpanel. **`Release`** frees up a room, for example if the meeting ends early.

☑ Allow room release

5 **Allow check in checkbox** — Check and uncheck this box to select whether the **`Check in`** button appears on the touchpanel for a scheduled meeting. **`Check in`** disappears from a touchpanel once it is pressed.

☑ Allow check in

If checked, additional controls (5a and 5b) appear on the touchpanel to control how the **`Check in`** button functions.

5a **Before start and After start fields** — Use the scroll buttons or type a value into these fields to define how long the **`Check in`** button appears.

Before start: 5 min
After start: 10 min

- **`Before start:`** controls how many minutes the **`Check in`** button displays before the scheduled start of a meeting.
- **`After start:`** controls how many minutes the **`Check in`** button appears after the scheduled start of the meeting.

5b **When there's no action drop-down list** — Select among the options to choose how the **`Check in`** button and room reservation behave when no action is taken.

When there's no action:
Release Room
Release Room
Hide check in
Do not hide check in

- **`Release room`** — The scheduling software releases the room when the **`After start:`** time has expired.
- **`Hide check in`** — The scheduling software hides the **`Check in`** button on the touchpanel and releases the room when the **`After start:`** time has expired.
- **`Do not hide check in`** — The touchpanel continues to display the **`Check in`** button until it is pressed.

Background tab

If necessary, click the **Background** tab (see figure 40, ❶) to make changes to the following:

- The color theme (dark or light) of the touchpanel display:
- Any background image
- The opacity of any background image

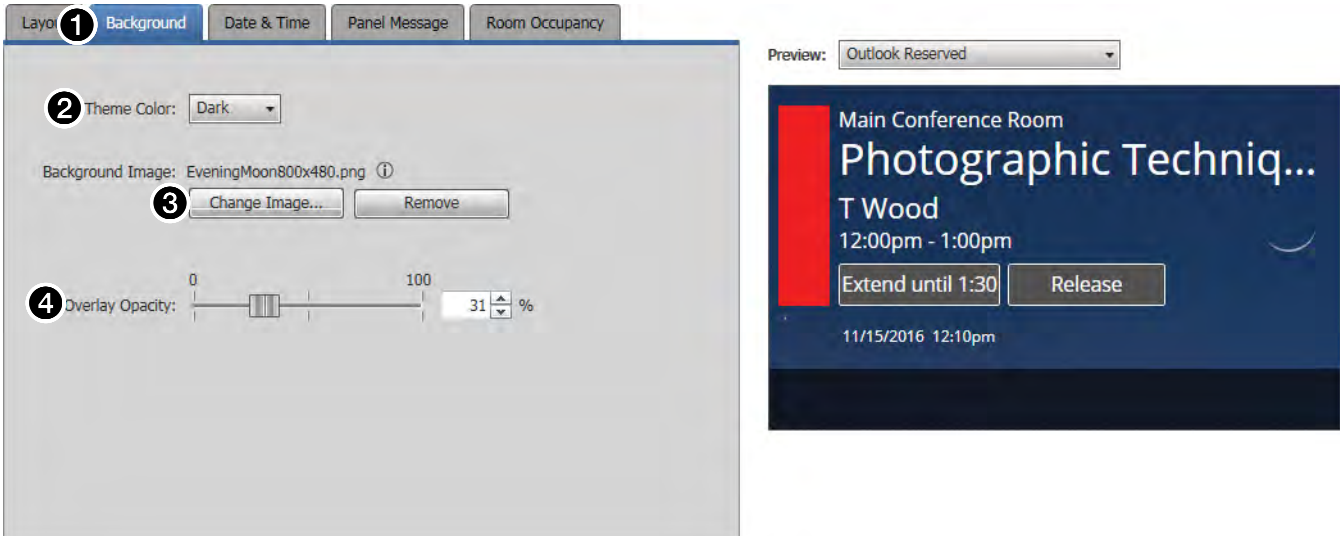
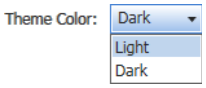


Figure 40. Panel Design Pane, Background Tab and Preview Pane

❷ **Theme color: drop-down list** — Use this drop-down list to select either **Light** (black text on a light background) or **Dark** (white text on a dark background).



❸ **Background image:** —

- **Change Image... button** — Click to open a dialog box to assign a background image (see figure 41 and the following procedure).
- **Remove button** — Click to clear any assigned background image.

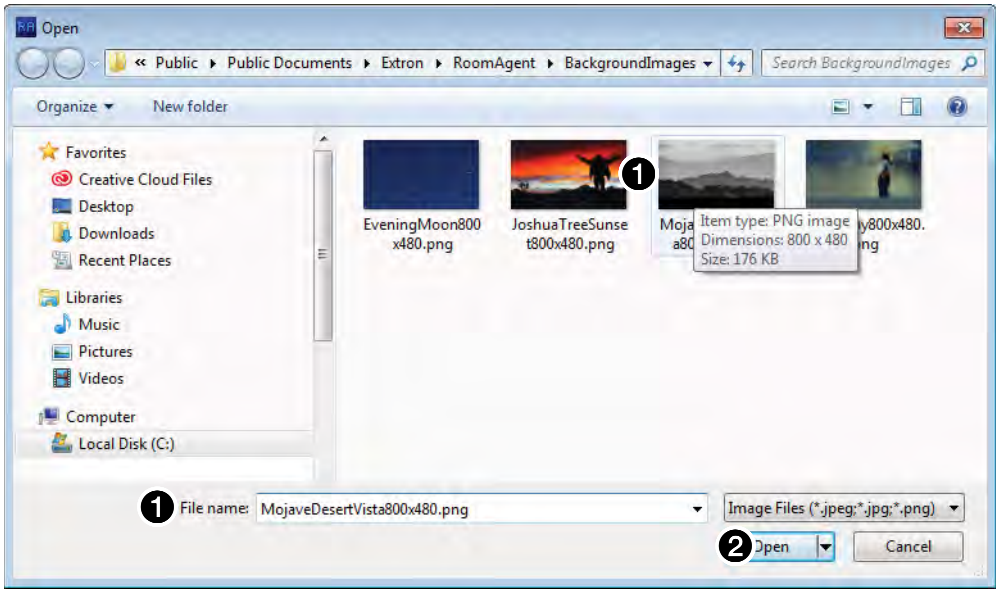


Figure 41. Open Dialog Box and Assign a Background Image

Assign or change a background image as follows:

NOTE: Room Agent software and the scheduling system support image files with the following traits only:

- JPEG or PNG format
- 800x480 resolution
- 8-bit color

1. Click the **`Change Image...`** button (see **figure 40**, ❸ on the previous page). The **`Open`** dialog box opens.
2. Navigate to the folder where you saved the background image file. Select the file (see **figure 41**, ❶ on the previous page).
3. Click **`Open`** (❷). The **`Open`** dialog box closes and the newly assigned background image is displayed in the preview pane (see **figure 40**).

❹ **Overlay Opacity** (see **figure 40**) —Click and drag this fader control or type a value directly in the field to set the opacity of any displayed background image.

Date & Time tab

If necessary, click the **`Date & Time`** tab (see figure 42, ❶) to make changes to the date and time format.

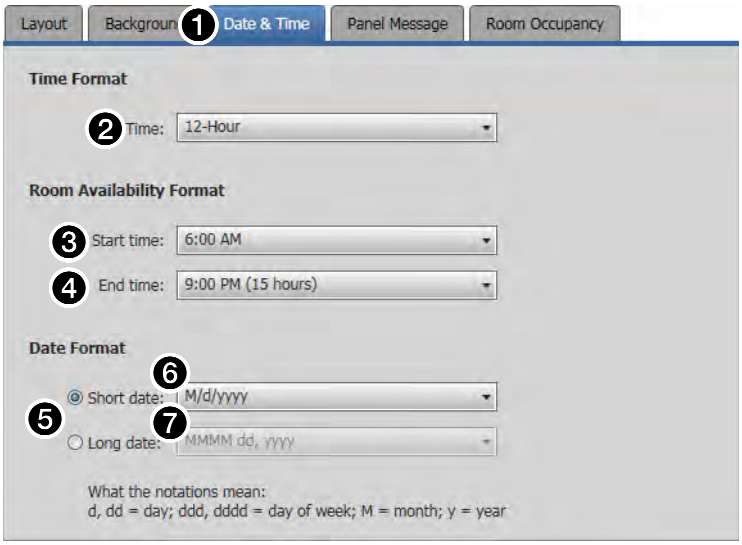


Figure 42. Panel Design Pane, Date & Time Tab

❷ **Time Format, Time: drop-down list** — Use this drop-down list to select among **`12-Hour`** (1:3Ø PM, for example), **`24-Hour US`** (13:3Ø),and **`24-Hour International`** (13.3Ø).

❸ **Room Availability Format, Start time: drop-down list** — Use this drop-down list to select the start time of room availability display, in half-hour increments.

❹ **Room Availability Format, End time: drop-down list** — Use this drop-down list to select the end time of room availability display, in half-hour increments. The menu also shows the quantity of time the room availability is displayed.

❺ **Date Format radio buttons** — Use these radio buttons to select the format to display on the touchpanel. After you select either **`Short date`** or **`Long date`**, the associated drop-down list (see ❻ and ❼ on the next page) becomes available for selection.

❻ **Short date: drop-down list** — Use this drop-down list, available when the **Short date** radio button is selected, to select among short date (in which the month is represented by a numeral) display formats.

❼ **Long date: drop-down list** — Use this drop-down list, available when the **Long date** radio button is selected, to select among long date (in which the month is spelled out) display formats, such as day month year or month day year and whether to include the day of the week.

Panel Message tab

If necessary, click the **Panel Message** tab (see figure 43, ❶) to make changes to the message displayed when the panel has no connection to the calendar server.

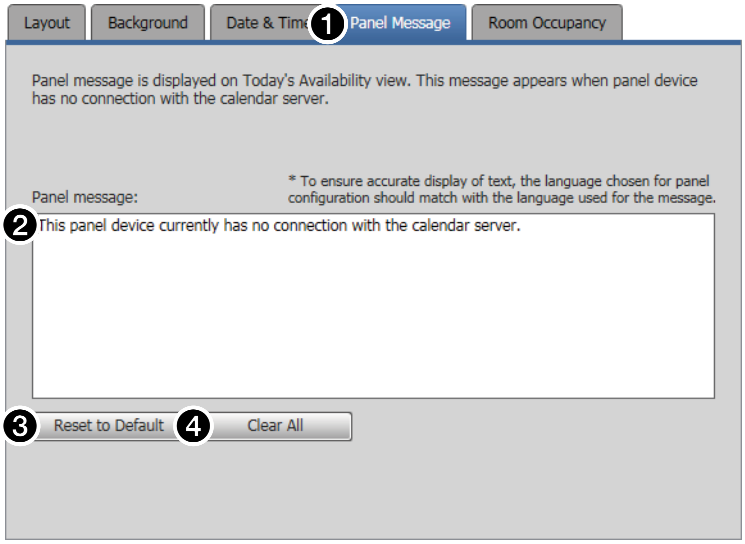


Figure 43. Panel Design Pane, Panel Message Tab

❷ **Panel message: field** — Type in the panel message to be displayed.

❸ **Reset to Default button** — Click to return the default panel message (displayed in figure 43).

❹ **Clear All button** — Click to clear the panel message.

Room Occupancy tab

NOTES:

- This screen is always selectable and behaves as described, but only TLP Pro 520M touchpanels have the digital I/O connectors necessary to connect the OCS 100 Occupancy Sensors.
- See **Occupancy Sensor Configuration** on page 59 for an overview of connecting the occupancy sensors to TLP Pro 520M touchpanels.

If necessary, click the **`Room Occupancy`** tab (see figure 44, ❶) to access the settings for rooms equipped with occupancy sensors.

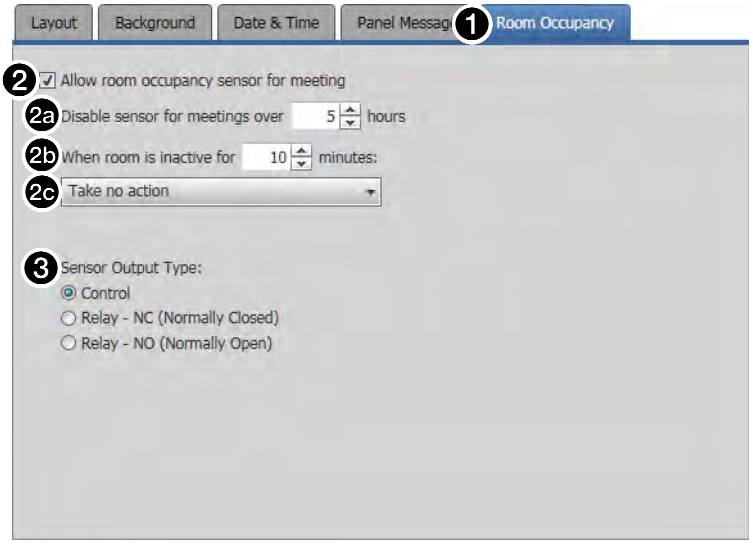


Figure 44. Panel Design Pane, Room Occupancy Tab

❷ **Allow room occupancy sensor for meeting checkbox** — Check and uncheck this box to enable and disable the use of room occupancy sensors to determine if a meeting has started.

If checked, additional controls (see ❷a through ❷c) become available to control how the sensors function.

❷a **Disable sensor field** — Use the scroll buttons or type a value into this field to disable the sensors for longer meetings.

❷b **When room is inactive field** — Use the scroll buttons or type a value into this field to set a time of room inactivity after the scheduled start time, after which the room **may** be released for another meeting (as defined in ❷c). This field may not contain **`0`** minutes.

❷c **When room is inactive drop-down list** — Use this drop-down list to select between **`Take no action`** (leave the room reserved) and **`Release room`** (make the room available for other users).

❸ **Sensor Output Type radio button** — Select one of these radio buttons to denote how the occupancy sensor is wired to the TLP Pro 520M touchpanel:

- **`Control`**
- **`Relay - NC (Normally Closed)`**
- **`Relay - NO (Normally Open)`**

Preview pane

The preview pane (see figure 45, ❶) shows the effects of changes that you make using the controls within the panel design pane.

NOTE: The preview pane contains hardcoded, **sample**, entries. The layout and appearance of this pane change to reflect your changes in the design pane, but, other than the date and time, the content, such as "`Main Conference Room`", do not change.

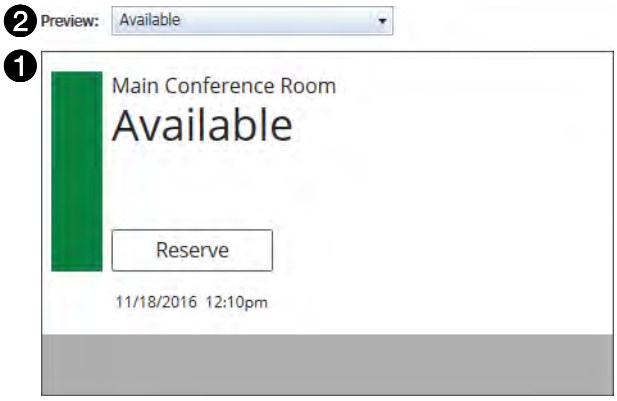
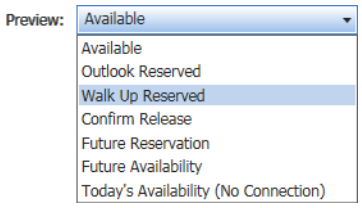


Figure 45. Preview Pane and Drop-down list



❷ **Preview: drop-down list** — The **`Preview:`** drop-down list lets you select among various display possibilities so that you can further refine the appearance of touchpanels in all of these circumstances.

Templates pane

Templates, such as the default **`DefaultTLPTemplate`**, which is the default that is installed as part of the Room Agent installation, allow you to create a number of customized touchpanel appearances. Each touchpanel in a system can have its own template, assigned on the `Panel Configuration` window (see **figure 21**, ❼ on page 21 for an example). Select the templates on the `Templates` pane (see figure 46).

Figure 46. Templates Pane and Drop-down list

- To assign the appearance of a displayed template to the touchpanels, double-click a displayed template (❶).
- To delete a template, click the ⊗ (❷).
- To add a new template:
  - Type a name in the `Panel Template:` field (❸).
  - Click the **`Save`** button (❹).

Show Available Network Adapters

Room Agent can show you all of the network interfaces available on the computer for you to use in communications and allow you to select the active one. Type <**Ctrl**>+<**Shift**>+<**F2**> to open a dialog box displaying the available controllers (see figure 47).

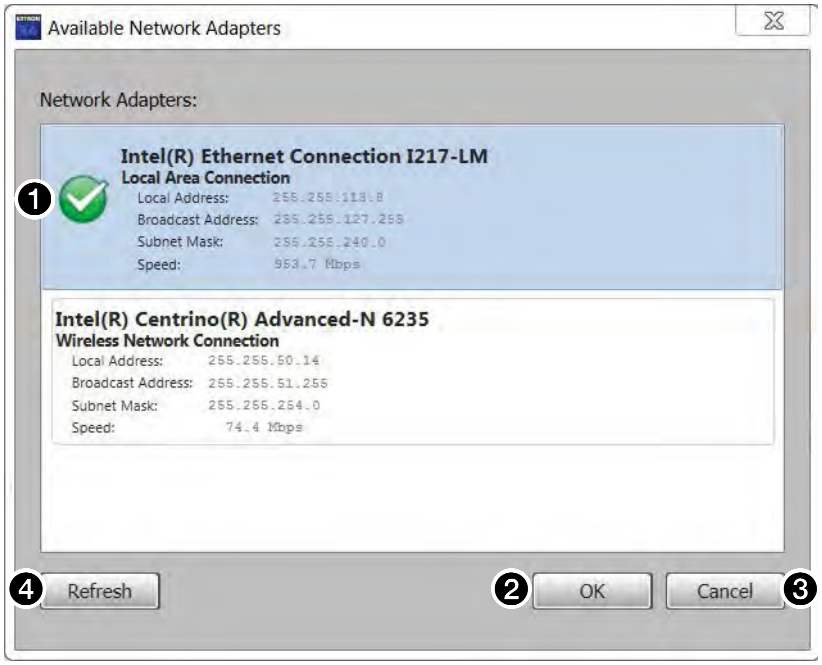


Figure 47. Available Network Controllers Dialog Box

Select a network controller as follows:

1. Click the desired controller (❶).
2. Click **OK** (❷).

To close the dialog box without selecting the controller, click **Cancel** (❸). To refresh the view, click **Refresh** (❹).

Update Firmware

Room Agent reports `Cannot connect to this device` if touchpanel firmware version is the shipped-from-the-factory firmware (firmware for the touchpanels as part of control systems) or older than 2.01.0000-b004.

NOTE: The latest firmware for all compatible panels is automatically downloaded onto your PC when you install the Room Agent software. New versions of Room Agent software may have new firmware that supports new features.

Update touchpanel firmware for any reason as follows:

NOTE: Whenever you download a new version of Room Agent software, you should update firmware to take advantage of the any new features the software provides.

1. Click the **`Setup`** button for a touchpanel to be updated.

   NOTE: The X button deletes a touchpanel from the list.

   The `Panel Connection` dialog box opens (see figure 48).

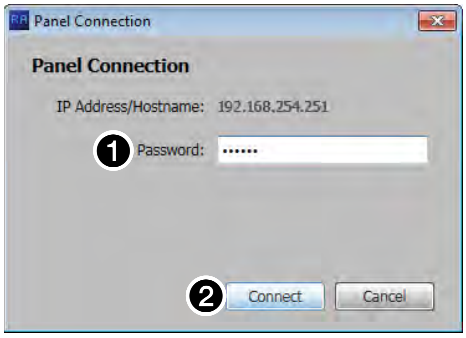


Figure 48. Panel Connection Dialog Box

2. If applicable, enter a password in **`Password`** field (❶).

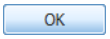
   NOTE: All touchpanels ship with the default, case-sensitive, password "`extron`".

3. Click the **`Connect`** button (❷).

   NOTE: This step and this connection are necessary to send a firmware file to the panel.

   The Room Agent software connects to and synchronizes with the panel. Once synced, Room Agent displays the `Device Management` window with either the `Communication Settings` tab (see **figure 15** on page 17) or `General Settings` tab (see **figure 16** on page 18) selected.

4. Click **`OK`**. The `Device Management` window closes and the `Panel Configuration` window is displayed (see **figure 49** on the next page).



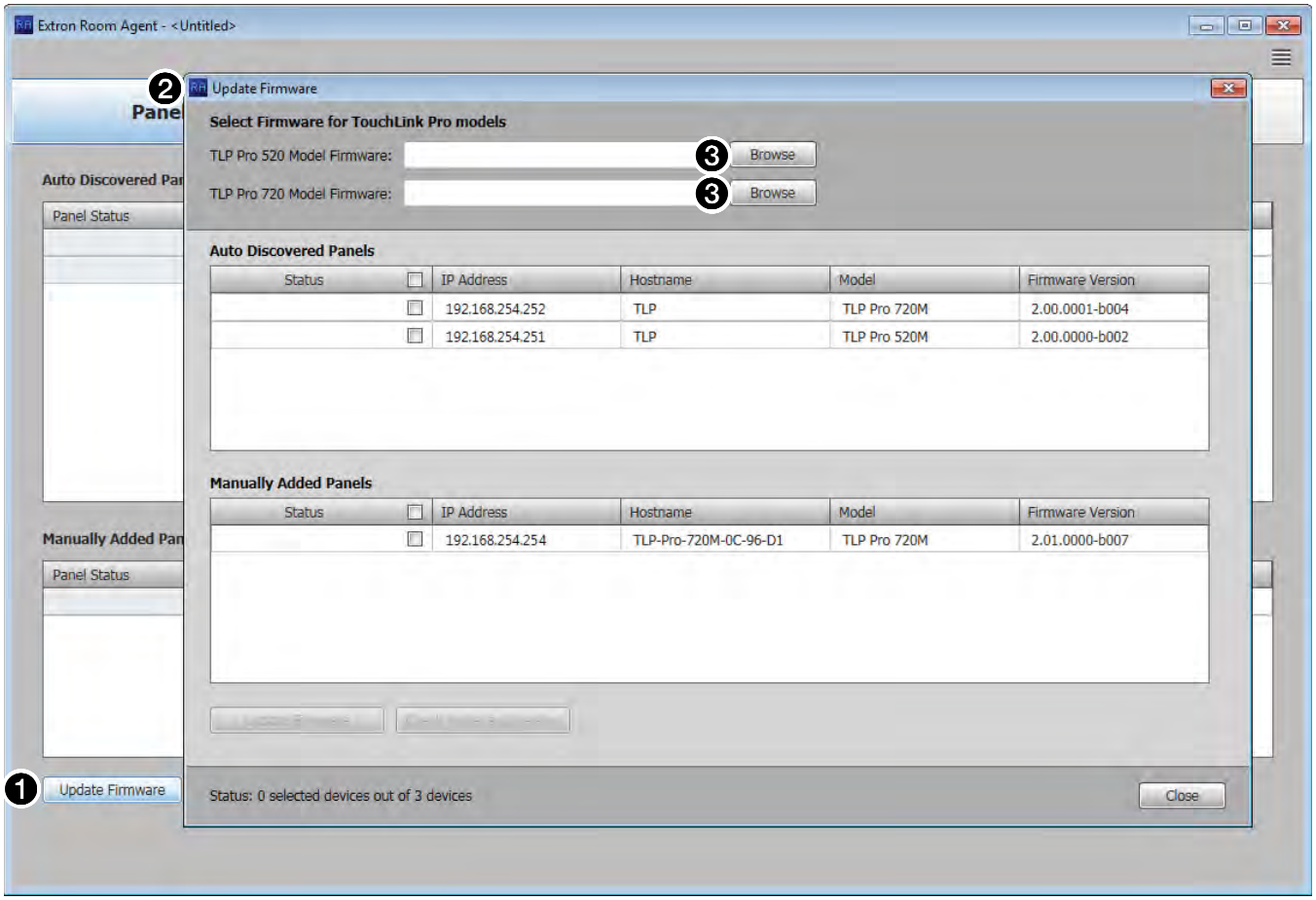
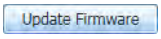


Figure 49. Firmware Update

5. Click the **`Update Firmware`** button (see figure 49, ❶). The `Update Firmware` window opens (❷).



6. Click the **`Browse`** button for either the **`TLP Pro 720 Model Firmware`** or **`TLP Pro 520 Model Firmware`** (❸). The `Open Firmware File` dialog box opens in the appropriate folder for the firmware (see **figure 50** on the next page).

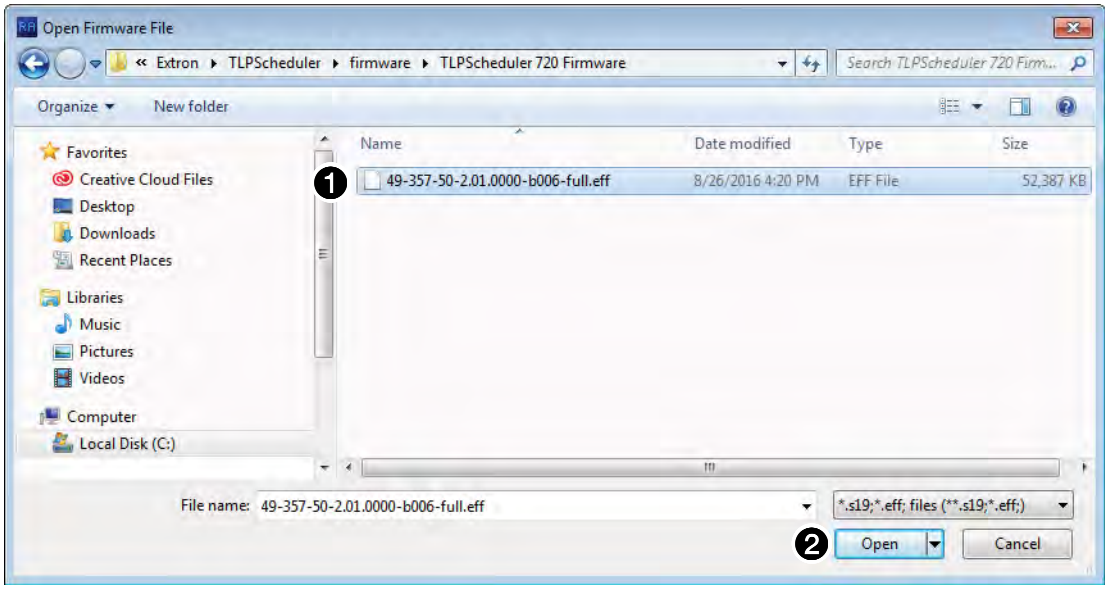


Figure 50. Firmware File Selection

7. Select the file (see figure 50, ❶).
8. Click **`Open`** (❷). The `Update Firmware` window returns to the top with the firmware file selected (see figure 51, ❶).

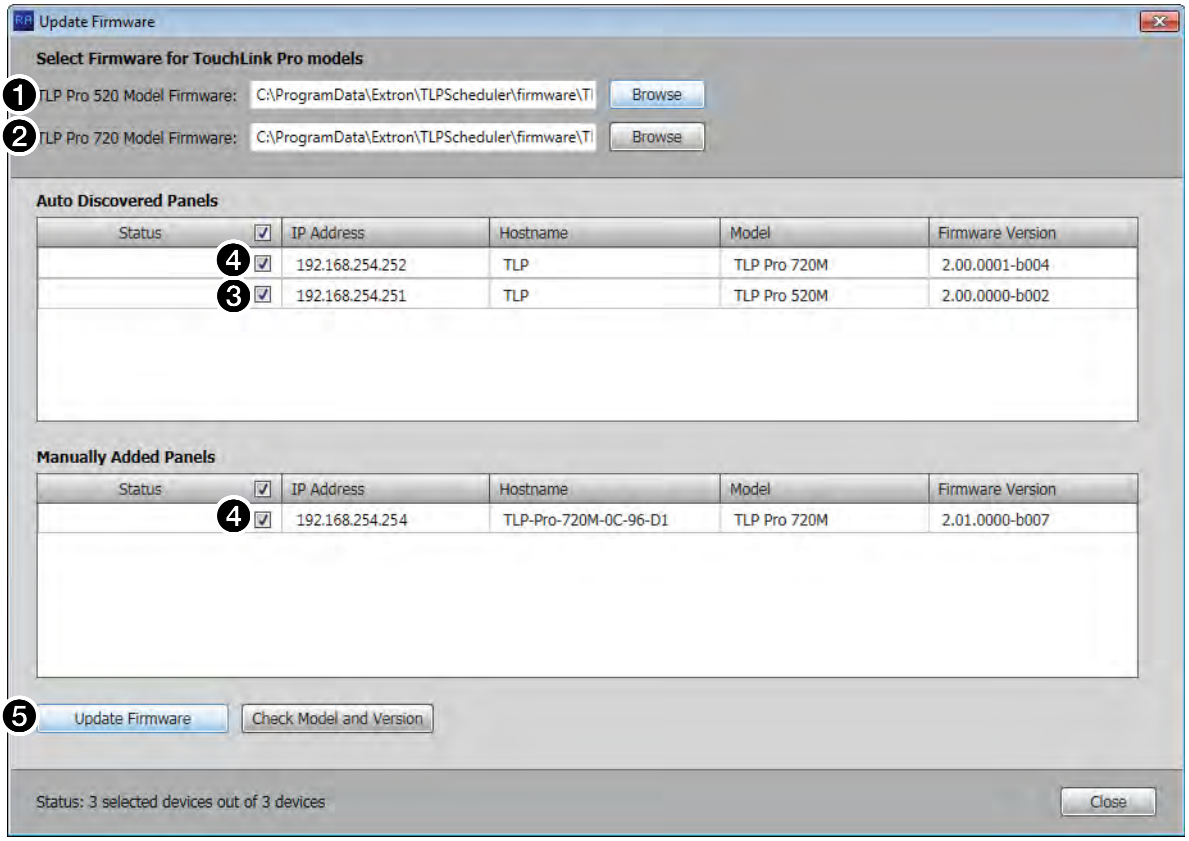


Figure 51. Selecting Firmware Files and Touchpanels

9. If desired, repeat **steps 2 through 4**, beginning on page 42 for the other touchpanel type. The `Update Firmware` window returns to the top with the firmware file selected (❷).

10. Select (click) one or more checkboxes for the touchpanels that you want to update (see **figure 51**, ❸ and ❹ on the previous page). Ensure that you have the correct firmware file selected for the touchpanels you select.

    Once firmware files and touchpanels are selected, the **`Update Firmware`** button becomes available for selection (❺).

11. Click the **`Update Firmware`** button (❺). The `Status` column reports the status of the update (see figure 52). When the `Status` is `Updated`, the update is complete.

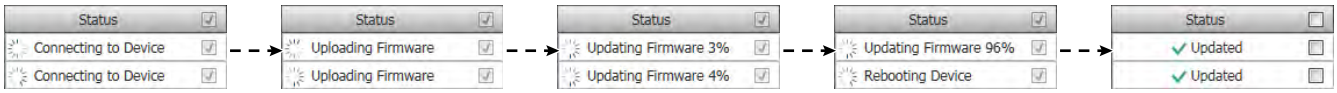
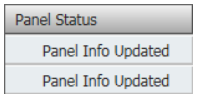


Figure 52. Firmware Update Status Flow

12. Click the **`Close`** button to return to the Panel Management view (see **figure 13** on page 15). Room Agent reports `Panel Info Updated` in the `Panel Status` column.



Microsoft Environment Setup

This section provides guidance for an experienced IT person to set up the Room Scheduling System in a Microsoft environment (Office 365 and Exchange). Topics include:

- **Platform Versions**
- **Before You Begin**
- **Set up the Room Scheduling System in the Microsoft Environment**

The Extron Room Scheduling System works within the Microsoft environment (Exchange and Office 365) by tying compatible touchpanels to room mailboxes. This tie allows Microsoft Outlook users to view the availability of a room and reserve it. This section guides system administrators through linking the Scheduling System to the Rooms.

Platform Versions

The Extron Room Scheduling System works with cloud-based Microsoft Office 365 as well as the following Microsoft Exchange versions maintained on the premises of your facility:

- Exchange 2007, Service Pack 1
- Exchange 2010
- Exchange 2013
- Exchange 2016

In Exchange servers, the Room Scheduling System uses the Exchange Web Services (EWS) protocol to tie in to the server room mailboxes; no plugins or additional software are required on the server.

The Room Scheduling System subscribes to the room mailboxes. The EWS protocol includes push notifications. The server pushes change notifications to the Room Scheduling System whenever calendar changes occur.

Before You Begin

Complete all of the following steps before starting to set up the Room Scheduling System:

- ☐ Ensure all of the desired touchpanels are installed in the appropriate locations (see **Touchpanel Installation Overview**, beginning on page 60).
- ☐ Ensure that all rooms are listed in the Exchange server (Exchange on premises) or Exchange online (Office 365).
- ☐ Compile a list of the following for all touchpanels designated as room scheduling devices and all rooms.
  - ☐ **Touchpanel IP addresses** — Each touchpanel in the system requires a unique IP address. The default address for all compatible touchpanels is 192.168.254.251. See the following applicable manuals, available at **www.extron.com**, to assign unique IP addresses to each touchpanel:
    - *TLP Pro 720 and TLP Pro 1020 Series User Guide*
    - *TLP Pro 521M and TLP Pro 520M User Guide*
  - ☐ **Touchpanel passwords** — All touchpanels ship with the default, case-sensitive, password "`extron`." See the applicable manuals listed above to assign different passwords.
  - ☐ **Exchange User IDs** — The Exchange User ID requires the User Principal Name (UPN, the name of a Windows network user in an SMTP e-mail address format) for the room resource user ID. The UPN **must** have an SMTP e-mail address assigned to it.
    - Abbreviated Exchange User IDs (aliases) will not work.
    - See **Verify the Exchange User ID is the UPN (Exchange)** on the next page or **Verify the Exchange User ID is the UPN (Office 365)** on page 50) or if you are not certain that your Exchange User IDs are UPNs.
  - ☐ **Room passwords**

Verify the Exchange User ID is the UPN (Exchange)

NOTE: The guidelines in this section are intended for IT professionals only. Installers or integrators attempting to follow these guidelines should do so only in close coordination with the IT department of the organization where the Room Scheduling System is to be installed.

Verify the UPN as follows:

1. Access the Exchange server `Active Directory Users and Computers` window (see figure 53).

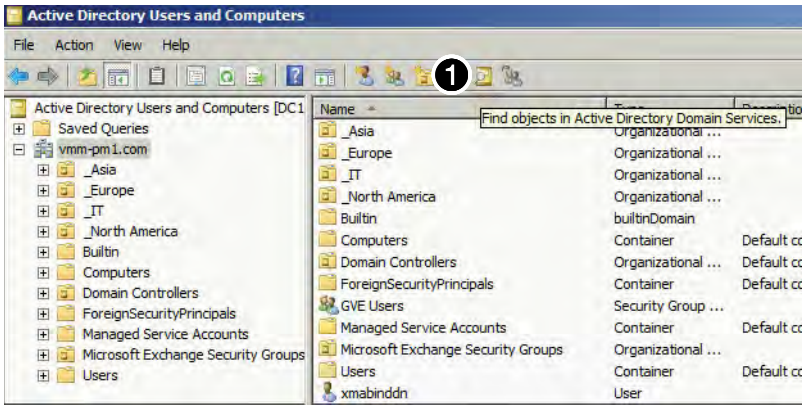


Figure 53. Active Directory

2. Click the **`Find object`** (🔍) icon (see figure 53, ❶). The `Find Users, Contacts, and Groups` dialog box opens (see figure 54).

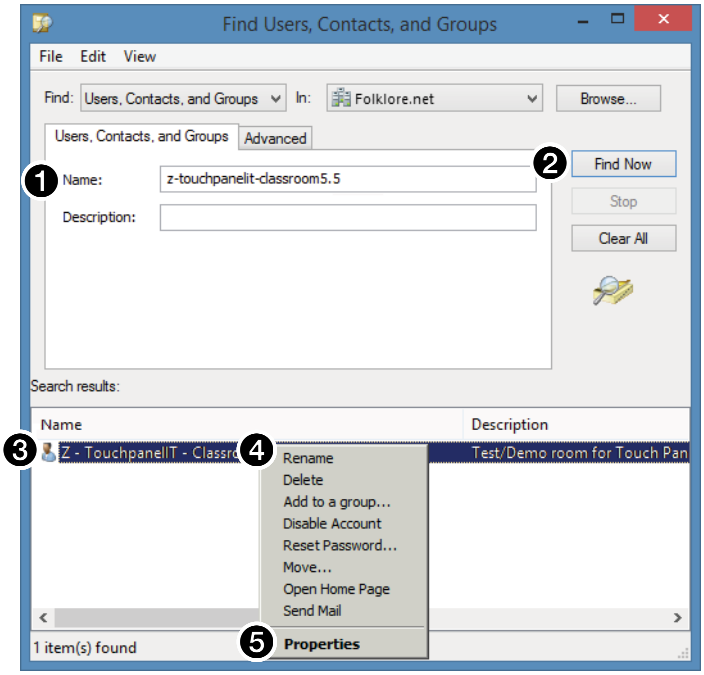


Figure 54. Find Users, Contacts, and Groups Dialog Box

3. Enter the name of the room to be verified in the `User, Contacts, and Groups` **`Name`** field (❶).
4. Click **`Find Now`** (❷). The `Search results:` pane displays the room (❸).
5. <Right-click> the room in the `Search results:` pane (❹) and click **`Properties`** (❺).

The **Properties** dialog box opens (see figure 55).

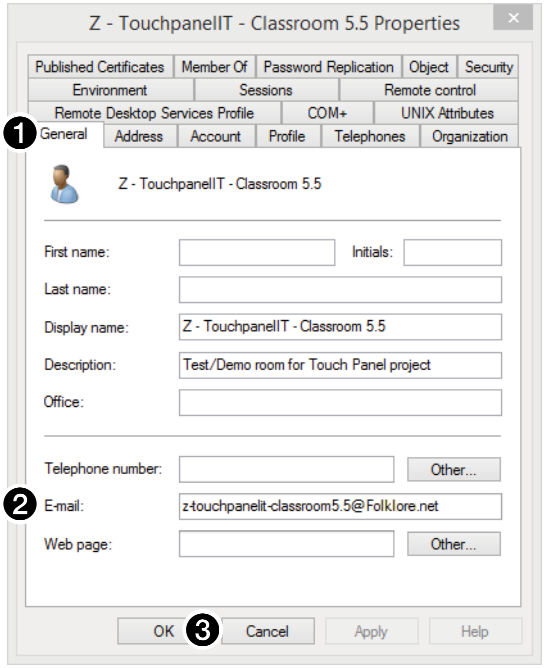


Figure 55. E-mail Address Displayed on the General Tab

6. If necessary, click the **General** tab (❶). The general properties for the room are displayed.
7. Note the room e-mail address shown (❷). This value is the UPN, the value used as the **only** valid Exchange User ID for this room in the Room Scheduling System.
8. Click **Cancel** to exit the display (❸).
9. Repeat steps 3 through 8 for each desired room.

TIP: Write down the UPNs of all rooms for setting up the Room Scheduling System.

Verify the Exchange User ID is the UPN (Office 365)

NOTES:

- The guidelines in this section are intended for IT professionals only. Installers or integrators attempting to follow these guidelines should do so only in close coordination with the IT department of the organization where the Room Scheduling System is to be installed.
- This information is correct as of June 2017. However, this site is not controlled by Extron and may change.

Verify the UPN as follows:

1. Access the Office 365 `Admin center` page (see figure 55).

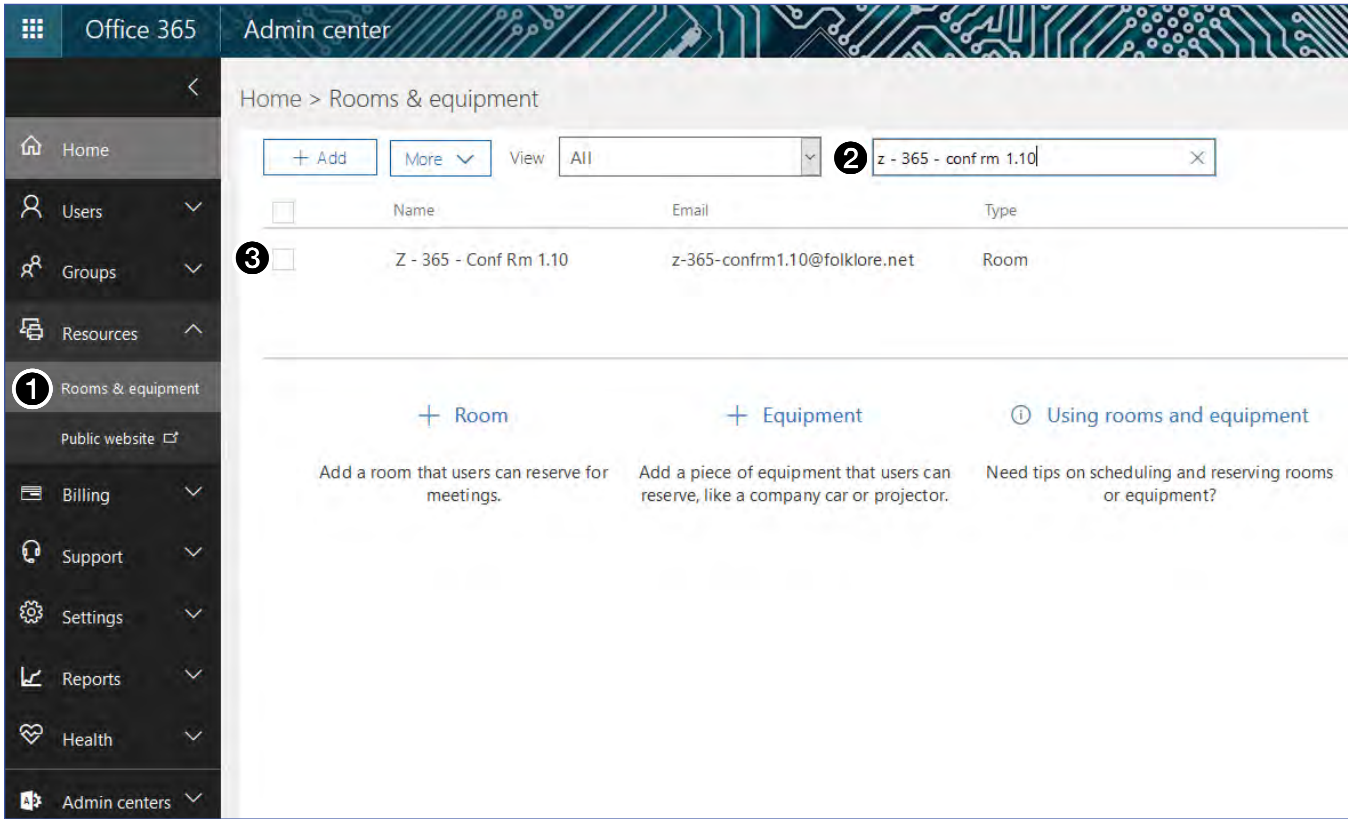


Figure 56. Active Directory

2. Click **`Resources > Rooms & equipment`** (see figure 55, ❶). The `Home > Rooms & Equipment` pane displays.
3. Enter the room name in the `Room` field (❷) and type <**`Enter`**> on the keyboard. The room information appears (❸).
4. Click on the room information (❸). The dialog box for the selected room opens (see **figure 57** on the next page).

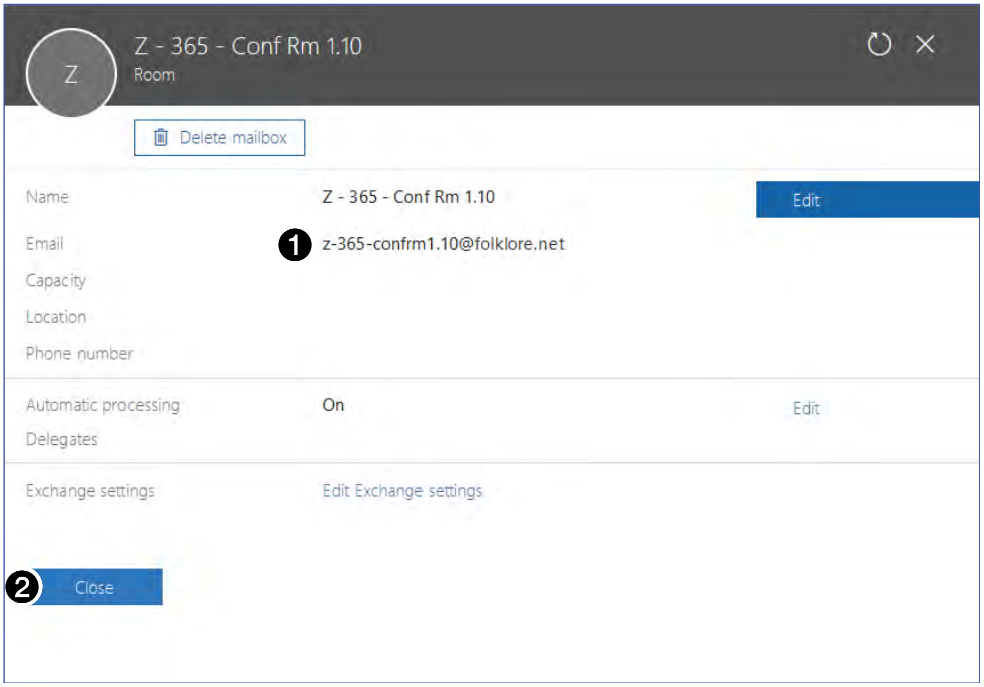


Figure 57. Room Information Dialog Box

5. Note the room e-mail address shown (see figure 57, ❶). This value is the UPN, the value used as the **only** valid Exchange User ID for this room in the Room Scheduling System.
6. Click **`Close`** to exit the display (❷).
7. Repeat steps 2 through 6 for each desired room.

TIP: Write down the UPNs of all rooms for setting up the Room Scheduling System.

Set up the Room Scheduling System in the Microsoft Environment

Perform the following operations to set up the Room Scheduling System:

- ☐ Start the Room Agent software as an administrator (see **Start the Program** on page 13).
- ☐ Discover any touchpanels that are on the same subnet as the computer running Room Agent software (see **Automatically Discover Touchpanels** on page 14).
- ☐ Manually add any touchpanels from a different subnet than the computer that is running Room Agent software (see **Manually Add Touchpanels** beginning on page 14).
- ☐ Perform the following for **each** touchpanel in the system:
  - ☐ Connect to the touchpanel (see **Connect to the touchpanel** on page 16).
  - ☐ Verify or change settings (internet variables and password) on the **`Communication Settings`** tab (see **Communication Settings window** on page 17).

NOTE: If you change any settings but the **Hostname**, the touchpanel disconnects and you must rediscover or manually find it again. A better approach is to set these values ahead of time using the on-screen menus of the touchpanel (see *TLP Pro 720 and TLP Pro 1020 Series User Guide* and *TLC Pro 521M and TLP Pro 520M User Guide* at **www.extron.com**).

- ☐ Verify or change settings (touchpanel appearance, time, and audio clicks) on the **General Settings** tab (see **General Settings window** on page 18).

☐ Customize the appearance of your touchpanels as desired. See the following:

- **Layout tab** on page 34
- **Background tab** on page 36
- **Date and Time tab** on page 37
- **Panel Message tab** on page 38

☐ Select the calendar server, Microsoft Exchange or Microsoft Office 365 (see **Panel Configuration Tab** on page 19.

- ☐ **If you selected Microsoft Exchange above**, configure the Room Agent software to connect with the touchpanels through the Exchange server (see **Exchange configuration** on page 20).

  NOTE: For Microsoft Office 365, connection is made automatically through the Office 365 server.

☐ Configure one or more touchpanels (see **Configure touchpanels** on page 21 [for Microsoft Exchange] or **Configure touchpanels** on page 26 [for Microsoft Office 365]).

NOTES:

- The two "Configure touchpanels" procedures linked above are identical; you can refer to either.
- The IP Address and Hostname variables are set when you discover or manually add touchpanels.
- The only values that you must enter are the Exchange User ID and the Exchange User Password.
- The **Panel Design** menu includes the **DefaultTLPTemplate**, which is the default that is installed as part of the Room Agent software, as well as any templates that you have created and saved (see **Templates pane** on page 40).

☐ Send the configuration to selected touchpanels (see **Send and retrieve the configuration** on page 31).

Google Calendar Environment Setup

This section provides guidance for an experienced IT person to set up the Room Scheduling System in a Google Calendar environment. Topics include:

- **Download the JSON File**
- **Set up the Room Scheduling System in the Google Environment**

Download the JSON File

NOTE: The guidelines in this section are intended for IT professionals only. Installers or integrators attempting to follow these guidelines should do so only in close coordination with the IT department of the organization where the Room Scheduling System is to be installed.

The Room Scheduling System integrates the Google Calendar of your organization into the Room Scheduling System. To do this, you need to download the JSON file as follows:

NOTES:

- The following procedure assumes that you already have a Google account with the necessary administrative rights.
- The screen images in this procedure were created using the Google Chrome™ browser. Your screen images may appear different.
- This information is correct as of June 2017; however, this site is not controlled by Extron and may change.

1. Open a browser on the computer where Room Agent is installed.
2. Log into your Google account.
3. Access the Google Developers Console for a Google Calendar API (**https://console.developers.google.com/flows/enableapi?apiid=calendar**).
4. From the drop-down list , select **`Create a Project`** and click **`Continue`**. The Google Calendar API show the **`Go to Credentials`** button.

5. Click **`Go to Credentials`**. The `Credentials` page opens (see **figure 58** on the next page).

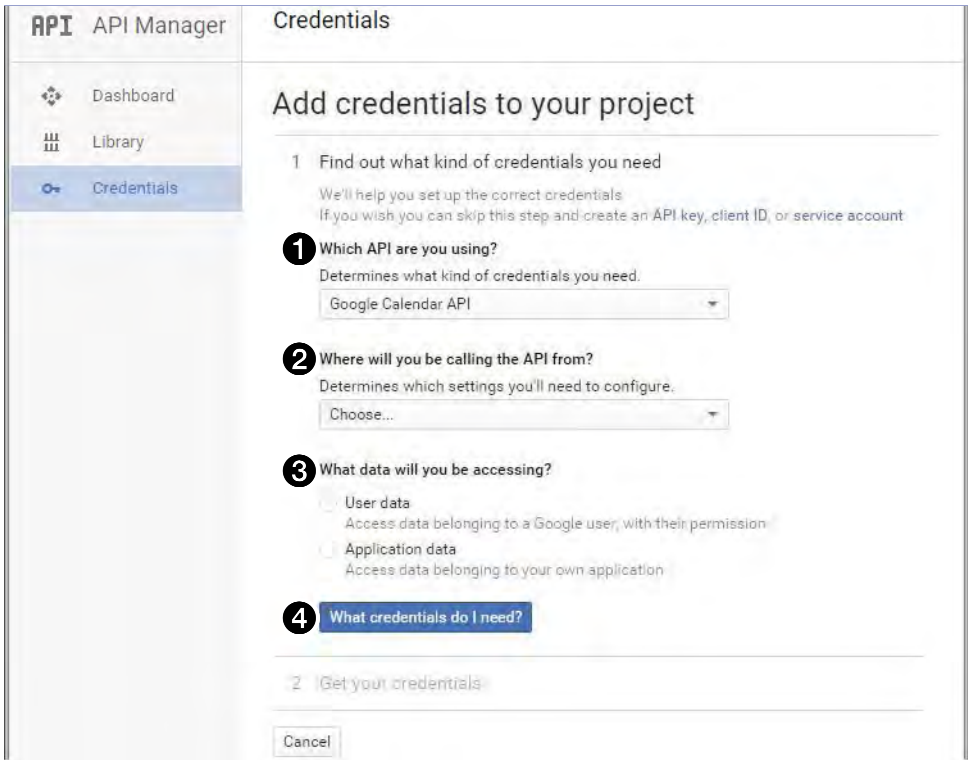


Figure 58. Determine Credentials Needed

6. From the `Which API are you using?` drop-down list, select **`Calendar API`** (❶).
7. From the `Where will you be calling the API from?` drop-down list, select **`Other UI (e.g. Windows, CLI tool)`** (❷).
8. From the `What data will you be accessing?` drop-down list, select **`User data`** (❸).
9. Click **`What Credentials do I need`** (❹). The `Add Credentials` page opens (see figure 59).

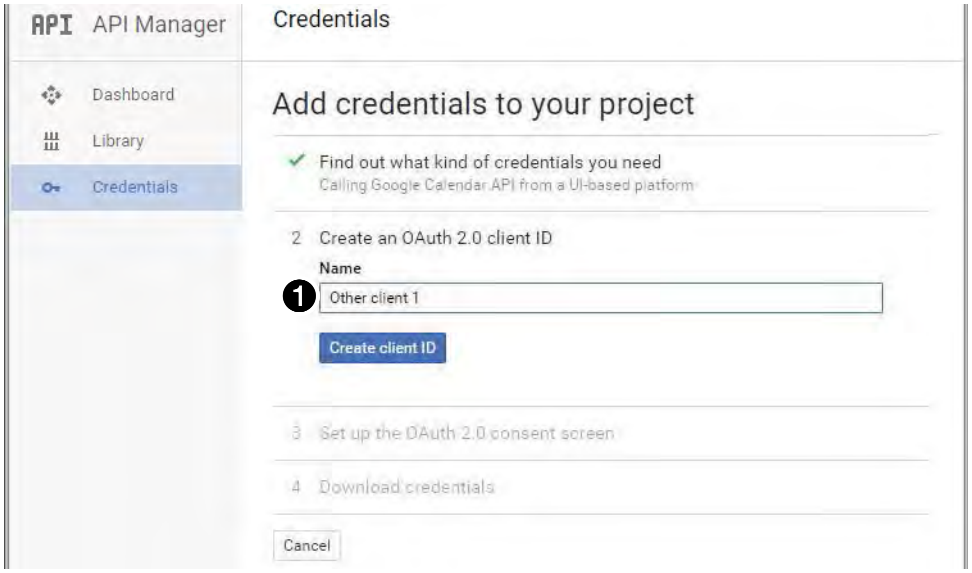


Figure 59. Add Credentials

10. Enter a name and click **`Create Client ID`** (see **figure 59**, ❶, on the previous page). The **`OAuth 2.0 Consent`** fields open (see figure 60).

Figure 60. Set up OAuth fields

11. Enter the **`Email address`** used to access the Google Calendar (❶).
12. Enter a **`Product Name shown to users`** (❷). This name appears on the Google `Device` page during the Google Calendar setup (see **step 9** on page 29).
13. Click **`Continue`** (❸). Your `Client ID` is shown in the `Download credentials` area (see figure 61, ❶).

Figure 61. Download JSON file

14. Click **`Download`** (❷) to save the JSON file. This file is required to authenticate the device during configuration (see **Google Calendar Configuration** on page 27).
15. Click **`Done`** (❸).

Set up the Room Scheduling System in the Google Environment

Perform the following operations to set up the Room Scheduling System:

- ☐ Start the Room Agent software as an administrator (see **Start the Program** on page 13).
- ☐ Discover any touchpanels that are on the same subnet as the computer running Room Agent software (see **Automatically Discover Touchpanels** on page 14).
- ☐ Manually add any touchpanels from a different subnet than the computer that is running Room Agent software (see **Manually Add Touchpanels** beginning on page 14).
- ☐ Perform the following for **each** touchpanel in the system:
  - ☐ Connect to the touchpanel (see **Connect to the touchpanel** on page 16).
  - ☐ Verify or change settings (internet variables and password) on the **Communication Settings** tab (see **Communication Settings window** on page 17).

    NOTE: If you change any settings but the **Hostname**, the touchpanel disconnects and you must rediscover or manually find it again. A better approach is to set these values ahead of time using the on-screen menus of the touchpanel (see *TLP Pro 720 and TLP Pro 1020 Series User Guide* and *TLC Pro 521M and TLP Pro 520M User Guide* at **www.extron.com**).

  - ☐ Verify or change settings (touchpanel appearance, time, and audio clicks) on the **General Settings** tab (see **General Settings window** on page 18).
- ☐ Customize the appearance of your touchpanels as desired. See the following:
  - **Layout tab** on page 34
  - **Background tab** on page 36
  - **Date and Time tab** on page 37
  - **Panel Message tab** on page 38
- ☐ Select the Google Calendar server, (see **Panel Configuration Tab** on page 19.
  - ☐ Configure the Room Agent software to connect with the touchpanels through the Calendar server (see **Google Calendar configuration** on page 27).
- ☐ Configure one or more touchpanels (see **Configure touchpanels** on page 27).
  - ☐ Authenticate the device to Google (identify the JSON credentials).
  - ☐ Enter a valid Google account name.

    NOTES:
    - The IP Address and Hostname variables are set when you discover or manually add touchpanels.
    - The Room Agent software appends the name of the **Import Credential JSON File** to the end of the **Google Account** and displays the new value in the **Google Account** field
    - The **Panel Design** menu includes the **DefaultTLPTemplate**, which is the default that is installed as part of the Room Agent software, as well as any templates that you have created and saved (see **Templates pane** on page 40).

- ☐ Send the configuration to selected touchpanels (see **Send and retrieve the configuration** on page 31).

Reference Information

This section provides a central location for additional Room Scheduling System information, including:

- **System Communications Overview**
- **Supported Languages**
- **Occupancy Sensor Configuration**
- **Touchpanel Installation Overview**

System Communications Overview

The following table is a summary of ports and protocols used by the Extron Room Scheduling System.

Port	Protocol	Service	Description
80	TCP	HTTP	Used by touchpanel and redirects to TCP port 443
123	UDP	NTP	Used by touchpanel for NTP Service
443	TCP	HTTPS	Bidirectional communication between the touchpanel and the calendar server
4502	UDP	Discovery	Used by Room Agent software to discover touchpanels on the local subnet
4503	TCP	SSH	Internal system messaging between the touchpanel and the Room Agent software
4522	TCP	SFTP	Initiated from the Room Agent software; used when retrieving an activity file from the touchpanel and upgrading firmware
5353	UDP	mDNS	Multicast DNS

Figure 62 diagrams the general communications flow for the Extron Room Scheduling System.

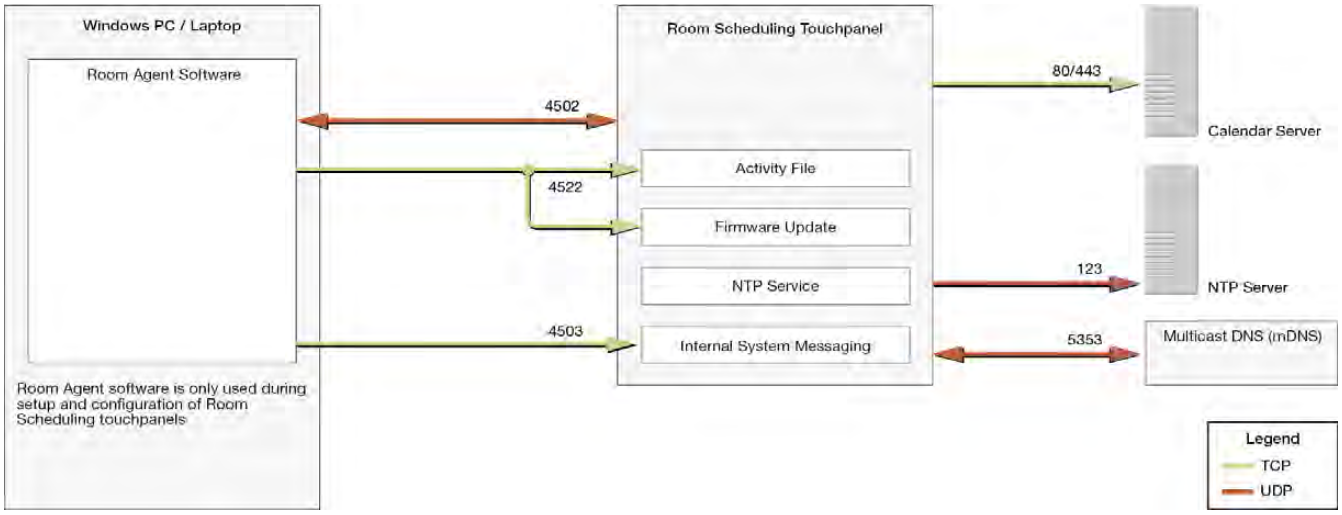


Figure 62. Room Scheduling Communication Flow Diagram

Supported Languages

As of Room Agent software release 1.3.0, the software supports touchpanel displays in the following languages:

- English
- Arabic
- Chinese (simplified)
- Chinese (traditional)
- Croatian
- Czech
- Danish
- Dutch
- Finnish
- French
- German
- Hebrew
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portugese
- Russian
- Serbian
- Slovenian
- Spanish
- Swedish
- Thai
- Turkish
- Vietnamese

Occupancy Sensor Configuration

TLP Pro 520M touchpanels have digital I/O connectors necessary to connect room occupancy Sensors. Figure 63 shows how to wire the sensors to the touchpanels and configure the panels.

NOTES:

- Figure 63 shows the Extron OCS 100C (ceiling) Occupancy Sensors. OCS 100W (wall) sensors are wired identically. If you use other sensors, check the connections and wiring in the documentation for your sensors.
- Figure 63 is a configuration drawing only and does not show power to the sensors.

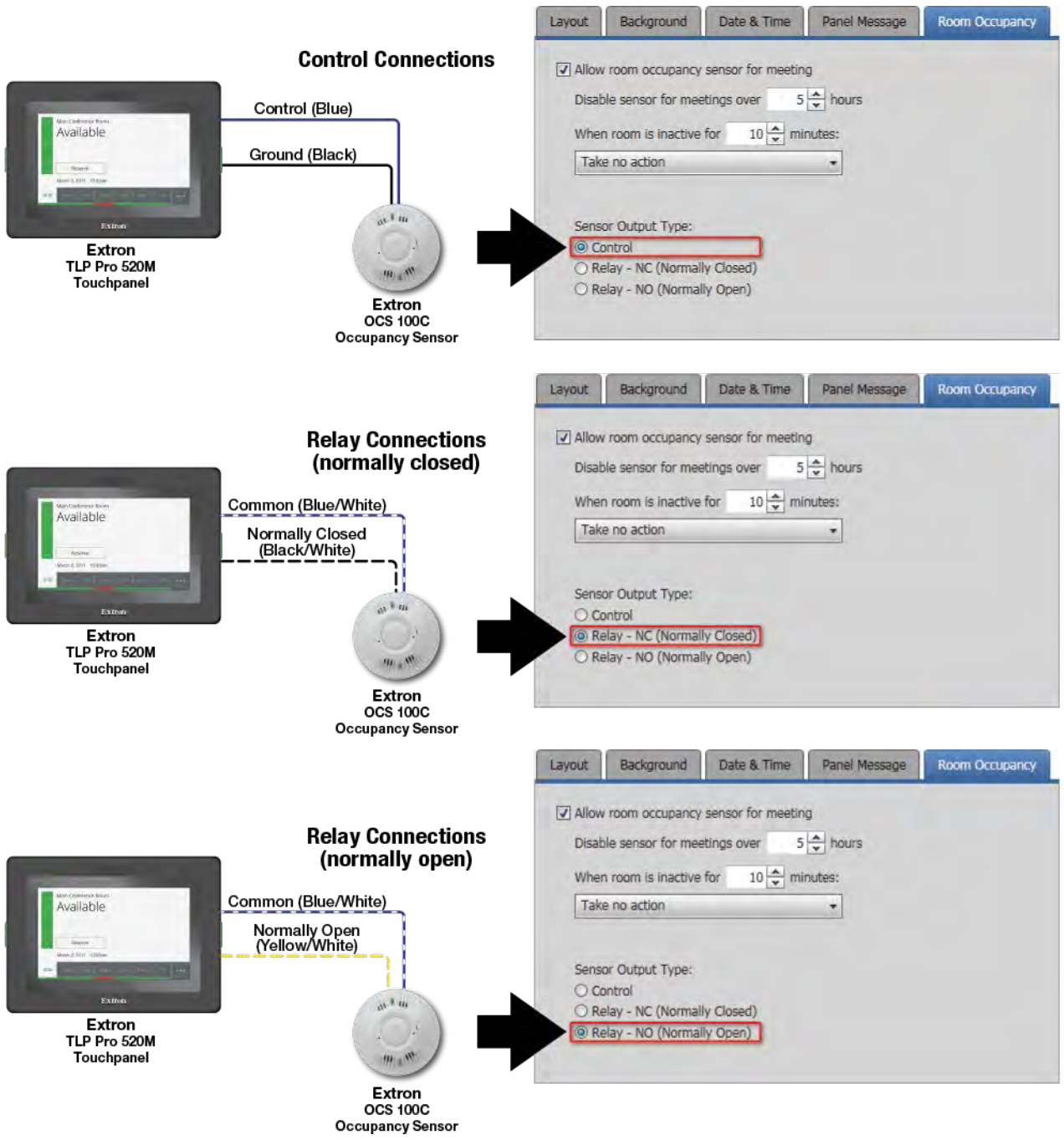


Figure 63. Occupancy Sensor Connection and Touchpanel Configuration

Touchpanel Installation Overview

The Extron touchpanel models have the following mounting capabilities:

- **TLP Pro 520M Touchpanel** —
  - Mountable in a wall
  - Mountable on a non-porous surface, such as a conference room window (with the optional Extron SMB 1 Low Profile Surface Mount Box and GMK 1 Glass Mount Kit)
- **TLP Pro 720M Touchpanel** — Mountable in a wall
- **TLP Pro 720T Touchpanel** — Mountable to a two-gang, UL-certified junction box; a two-gang mud ring; or directly into or onto any solid surface, such as brick, wood, masonry, or drywall (with an optional Extron LPVM-1 Low Profile VESA Mount)

All touchpanels can receive power and communication over a single Ethernet cable. Power over Ethernet (PoE) eliminates the need for a local power supply. PoE requires a PoE injector, which is sold separately.

ATTENTION:

- The following guidelines are overviews only. For complete touchpanel installation instructions and safety guidelines, see the *TLP Pro 720 and TLP Pro 1020 Series User Guide* and *TLC Pro 521M and TLP Pro 520M User Guide* and the appropriate installation guides, at **www.extron.com**.
- Les consignes suivantes n'offrent qu'une description succincte. Pour accéder aux consignes complètes d'installation et de sécurité des écrans tactiles, veuillez consulter les manuels *TLP Pro 720 and TLP Pro 1020 Series User Guide* et *TLC Pro 521M and TLP Pro 520M User Guide*, ainsi que les autres manuels d'installation pertinents, sur **www.extron.fr.**

Wall Mounting

Mount the touchpanel directly into drywall as follows:

ATTENTION:

- Do not install the touchpanel in a fire resistant rated wall or partition assembly.
- Veuillez ne pas installer les écrans tactiles dans un mur protégé par un dispositif coupe-feu ou dans une cloison.
- All structural steps and electrical installation must be performed by qualified personnel in accordance with local and national building codes and electrical codes.
- Toute étape structurelle et installation électrique, doit être effectuée par un personnel qualifié, conformément aux codes du bâtiment, aux codes incendie et sécurité, et aux codes électriques, locaux et nationaux.

☐ Use the cut-out template (available from **www.extron.com**) to mark the wall at a suitable location.

☐ Use a drywall saw or jigsaw to cut away the hole.

☐ Route the cables, leaving enough slack to connect them to the back of the touchpanel.

☐ Plug the cables into the rear panel connectors.

☐ Install the touchpanel.

Window Mounting (TLP Pro 520M)

Mount the touchpanel to a conference room window or other non-porous surface as follows:

- ☐ Obtain an optional Extron SMB 1 Low Profile Surface Mount Box and a GMK 1 Glass Mount Kit.
- ☐ Decide where to place the touchpanel and clean the glass surface.
- ☐ Affix the adhesive patch included with the glass mount kit.
- ☐ Affix the glass mount kit plate to the adhesive patch.
- ☐ Mount the surface mount box to the glass mount kit.

  NOTE: If required, drill a hole in the side of the surface mount box to run cables and raceway from the side of the mounting kit.

- ☐ Secure the surface mount box to the glass mount kit.
- ☐ Secure the wall plate adapter to the surface mount kit.
- ☐ Run cables through the cable cutout and connect them to the back panel of the touchpanel.

  NOTE: If required, mount an adhesive raceway (not provided) to run the cables.

- ☐ Press the touchpanel onto the wall plate adapter. Four catches hold it in place.

Tabletop Mounting (TLP Pro 720T)

With the included stand, the touchpanel can be placed on a desktop. The unit can be secured to the desktop using screws and can be secured with an optional Kensington security lock.

If desired, mount the touchpanel to an optional Extron SMA-1 swivel mount adapter, allowing it to be permanently mounted and swivel up to 180° in either direction, as follows:

- ☐ Use the cut-out template (available from **www.extron.com**) to mark the table at a suitable location.
- ☐ Drill a hole in the table.
- ☐ Secure the conduit, insulation disk, and swivel disk to the table.
- ☐ Configure the set screws to allow for the desired degree of swivel.
- ☐ Place the mounting hole in the touchpanel base over the swivel mount adapter conduit.
- ☐ Secure the unit with the swivel mount adapter backing plate and locking nut.

VESA Mounting (TLP Pro 720T)

- ☐ Remove the back and base covers from the touchpanel.
- ☐ If necessary, cut the zip tie holding the twisted pair cables to the touchpanel base and remove the cables.
- ☐ Remove the four spanner drive security screws holding the hinges to the touchpanel.
- ☐ Lift the touchpanel away from the base.
- ☐ If necessary, connect the cables and use a zip tie to secure them to the back of the touchpanel.
- ☐ Secure a VESA D 75 mm mount kit to the back of the touchpanel. Follow the instructions provided with the mounting kit.

Extron Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

USA, Canada, South America,
and Central America:
Extron Electronics
1230 South Lewis Street
Anaheim, CA 92805
U.S.A.

Japan:
Extron Electronics, Japan
Kyodo Building, 16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan

Europe and Africa:
Extron Europe
Hanzeboulevard 10
3825 PH Amersfoort
The Netherlands

China:
Extron China
686 Ronghua Road
Songjiang District
Shanghai 201611
China

Asia:
Extron Asia Pte Ltd
135 Joo Seng Road, #04-01
PM Industrial Bldg.
Singapore 368363
Singapore

Middle East:
Extron Middle East
Dubai Airport Free Zone
F13, PO Box 293666
United Arab Emirates, Dubai

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions, or if modifications were made to the product that were not authorized by Extron.

NOTE: If a product is defective, please call Extron and ask for an Application Engineer to receive an RA (Return Authorization) number. This will begin the repair process.

USA: 714.491.1500 or 800.633.9876 **Europe:** 31.33.453.4040
Asia: 65.6383.4400 **Japan:** 81.3.3511.7655

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

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