

Room & Resource Reservation Plugin

Central Christian Church (AZ) and Bricks and Mortar

Introduction

So you've gotten the room management plugin. It looks awesome and will help your organization, but you're a little bit freaked out over all the new stuff. Not to worry, here's a quick rundown of the new stuff pieces that you'll have access to.

Terminology

Reservations

A *Reservation* is what ties everything in this plugin together. The *Reservation* stores what date and time you are setting aside for your event, how many are attending, and any *Locations* or *Resources* that you're reserving for those times.

Locations

When we reserve things for an event we tend to reserve two types of things: rooms and objects. In this plugin, we represent that with *Locations* and *Resources*. A *Location* is a room, along with anything inside that room that cannot be moved, such as wall/ceiling mounted projectors or whiteboards. Since Rock already uses *Locations* to reflect your organization's physical room structure for check-in, we use *Locations* as well. That way you won't need to enter your room data into Rock a second time.

Resources

Unlike a *Location*, a *Resource* is something that can typically be moved from room to room. Tables or chairs are good examples of *Resources*. They also have a concept of quantity, so if you have 150 chairs, you can choose to reserve only 40 of them for an event. Unlike *Locations*, *Resources* are not already in Rock, so you'll need to add them before you can start reserving them. There is also a way to designate a resource as "Attached" but we'll cover that later in this guide.

Pages

Room Management - Main Page

This is the hub page of the plugin, located under Intranet | Office Information | Room Management. It provides you with an overview of the current reservations, as well as links to pages where you can manage and search through them. Much like the calendar on Rock's external website, this calendar is a highly customizable Lava block. You can dictate whether the small calendar is shown, what filters are displayed and how, what day the week starts on, and even customize how the reservations are displayed using your own Lava Templates.

The screenshot displays the Room Management interface. On the left, there is a sidebar with navigation icons and a main content area. The main content area includes a calendar for May 2017, a filter section for Campuses (Main Campus) and Ministries (Children's, Global Outreach, Local Outreach, Men's, Students, Women's), and a table of reservations. The table has columns for Name, Event Time, Reservation Time, Locations, Resources, Setup, Status, and Edit. The first reservation is for 'Awana' on Tuesday, May 30, 2017, with a reservation time of 04:50p - 06:15p, located in 'the Garage', and resources including 'Childrens for Children's Portable Projector'. The second reservation is for 'RX2016 Practice' on Tuesday, May 30, 2017, with a reservation time of 07:50p - 09:15p, located in 'Kittens Room' and 'Bobcats Room', and resources including 'Van 14(1)'. The third reservation is for 'Global Leadership Summit' on Wednesday, May 31, 2017, with a reservation time of 11:40a - 04:50p, located in 'Bldg 1', and resources including 'Van 14(1)'. The interface also includes a 'Print' button and a 'Hello Alisha' user profile.

Name	Event Time	Reservation Time	Locations	Resources	Setup	Status	Edit
Awana	05:00p - 06:00p	04:50p - 06:15p	the Garage	Childrens for Children's Portable Projector		33%	
RX2016 Practice	08:00p - 09:00p	07:50p - 09:15p	Kittens Room Bobcats Room			Approved	
Global Leadership Summit	12:10p - 04:10p	11:40a - 04:50p	Bldg 1	Van 14(1)		Approved	

For now, let's take a closer look at the registrations when they're displayed using the default lava:

Tuesday, May 30, 2017								
1	2	3	4	5	6	7	8	9
Name	Event Time	Reservation Time	Locations	Resources	Setup	Status	Edit	
Awana	05:00p - 06:00p	04:50p - 06:15p	the Garage ✓	Children's Portable Projector(1)		Changes Needed		
RX2016 Practice	08:00p - 09:00p	07:50p - 09:15p	- Kittens Room ✓ - Bobcats Room ✓			Approved		

1. **Name:** The event's name.
2. **Event Time:** The time the event will happen.
3. **Reservation Time:** The time that the locations and resources are to be reserved. It includes both the event time and setup/cleanup times.
4. **Locations:** The locations the reservation will use. Approved items are shown with a checkmark.
5. **Resources:** Any resources that will be used, with the quantity reserved in parenthesis. Approved items are shown with a checkmark.
6. **Setup:** If a reservation has a setup diagram/photo, a thumbnail will appear here.
7. **Status:** The approval status of the request. Unapproved reservations appear in warning-yellow.
8. **Edit:** Click here to edit the reservation.
9. **Approval Indicator:** This is a visual indicator of how close the reservation is to being fully approved. When you hover or click on the indicator it will show you which group needs to approve each location or resource. The group name is a link to the group for quick access in case you want to fire off an email from Rock.

Reservation Detail Page

This page is where you can add, edit, and approve reservations. When you hit Save, the block will churn through the locations and resources you've requested and alert you to any that are already booked for the times you've requested.

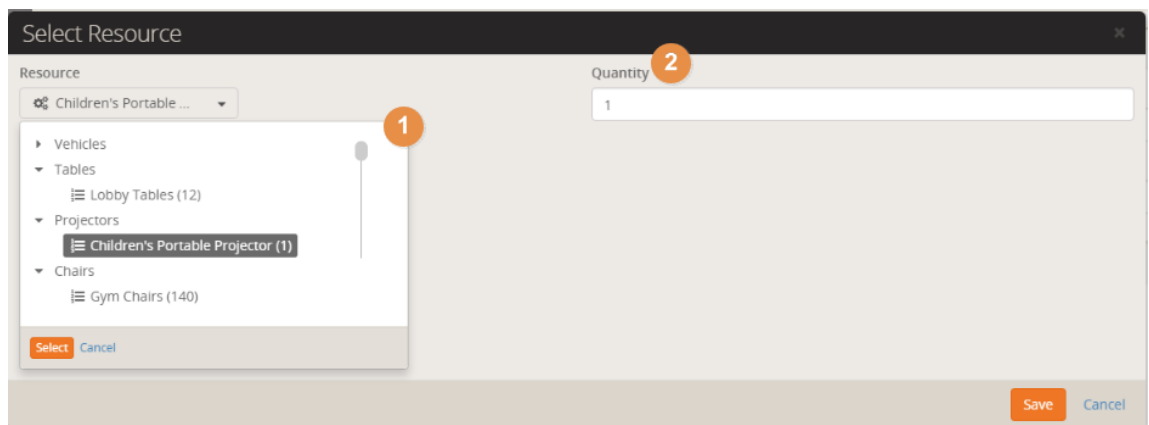
The screenshot shows the 'Reservation Detail' page for an event named 'Awana'. The page is divided into several sections with numbered callouts (1-15) indicating key fields and features:

- 1. Event Name:** A text field containing 'Awana'.
- 2. Schedule:** A button labeled 'Edit Schedule' and a text field showing 'Once at 5/30/2017 5:00 PM'.
- 3. How many minutes to set up?:** A text field containing '10'.
- 4. How many minutes to clean up?:** A text field containing '15'.
- 5. Campus:** A dropdown menu showing 'Main Campus'.
- 6. Ministry:** A dropdown menu.
- 7. Event Contact:** A dropdown menu showing a person icon.
- 8. Administrative Contact:** A dropdown menu showing 'Ted Decker'.
- 9. Event Contact Phone:** A text field.
- Administrative Contact Phone:** A text field containing '(623) 555-2444'.
- Event Contact Email:** A text field.
- Administrative Contact Email:** A text field containing 'ted@rocksolidchurchdemo.cc'.
- 10. Locations:** A table with columns 'Location' and 'Approved?'. It shows 'the Garage' with 'Approved' status and edit/delete buttons.
- 11. Resources:** A table with columns 'Resource', 'Quantity', and 'Approved?'. It shows 'Children's Portable Projector' with a quantity of '1' and a 'Denied' status, with 'Approve' and 'Deny' buttons.
- 12. Notes:** A large text area for notes.
- 13. Number Attending:** A text field containing '100'.
- 14. Setup Photo:** A button with a document icon and an 'Upload' label.
- 15. Children's Portable Projector:** A section with two dropdown menus: 'Have you been trained on this equipment?' (set to 'No') and 'Will need audio playback?' (set to 'No').

At the bottom, there are 'Save' and 'Cancel' buttons. A 'Changes Needed' button is also visible in the top right of the main content area.

1. **Event Name:** The name of the event that you are reserving locations / resources for.
2. **Schedule:** The event's schedule. Whenever this or the setup / cleanup times are changed, the Location and Resource pickers are set to grey out any locations or resources that are unavailable for those times.

3. **Set up Time:** The amount of time in minutes it will take to physically set up for the event.
4. **Clean up Time:** The amount of time in minutes it will take to tear down the event.
5. **Campus:** The campus that the reservation is associated with.
6. **Ministry:** The ministry that is reserving the locations / resources. You can add to or edit the list of ministries shown here in the Admin Tools.
7. **Event Contact:** Details about who will be on site during the event.
8. **Administrative Contact:** Details on who should be contacted if there are questions about this event.
9. **Status:** The status of the event. By default, this is set to 'Approved' unless the location or room has an approval group or if a final approval group is setup (See Security/Approvals for details).
10. **Locations:** Here you can select the locations you want to reserve for your event. Any locations already reserved for the time slot you have selected will be greyed out.
11. **Resources:** Here you can select the resources and quantities of those resources that are reserved for the event. When you choose to add or edit a resource, this modal will appear:



- a. **Resource:** Any available resource will have the quantity available shown in parenthesis and any reserved resources will be greyed out.
- b. **Quantity:** The amount of that resource you want to reserve.
12. **Number Attending:** The number of people you expect to attend this event.
13. **Setup Photo:** An optional photo/image showing the room setup for the event.
14. **Notes:** Any additional notes go here.
15. **Additional Questions:** If any resources or locations being reserved have additional questions configured, they will be displayed here.

Search Reservations Page

This page allows you to perform more advanced searches for the reservation you need than the main page allows for. You can search by time, name, ministry, resources or locations used, and even by creator. Once you find the reservation you're looking for, simply click on the row and you'll be directed to the detail page for that reservation.

The screenshot shows the 'Search Reservations' page. The top header includes a search bar and a user profile 'Hello Alisha'. The main content area is titled 'Search Reservations' and contains a 'Reservation List' section. This section has 'Filter Options' with dropdowns for 'Reservation Name', 'Ministry', 'Status', 'Start Date', 'End Date', 'Created By', 'Resources', and 'Locations'. An 'Apply Filter' button is below the filters. The 'Reservation List' table displays the following data:

Reservation Name	Event Time	Reservation Time	Locations	Resources
Awana	8/30/2016 5:00 PM - 6:00 PM	8/30/2016 4:50 PM - 6:15 PM	the Garage	Children's Portable Projector
RX2106	8/30/2016 8:00 PM - 9:00 PM	8/30/2016 7:30 PM - 9:45 PM	Kittens Room, Bobcats Room, Outpost Room	Lobby Tables
Global Leadership Summit	8/31/2016 12:10 PM - 4:10 PM	8/31/2016 11:25 AM - 4:40 PM	Main Campus	Van 14

Available Resources Page

On this page you can search for resources and locations that are available during your event time. Once you've found the resource or location that you need, simply click it and you'll be directed to the New Reservation page with that resource or location already entered in.

Available Resources

Home / Room Management / Available Resources

Filter Options

Start Date: 08/30/2016

End Date: 09/01/2016

Search For: Resources (1)

Resource Category: [Dropdown]

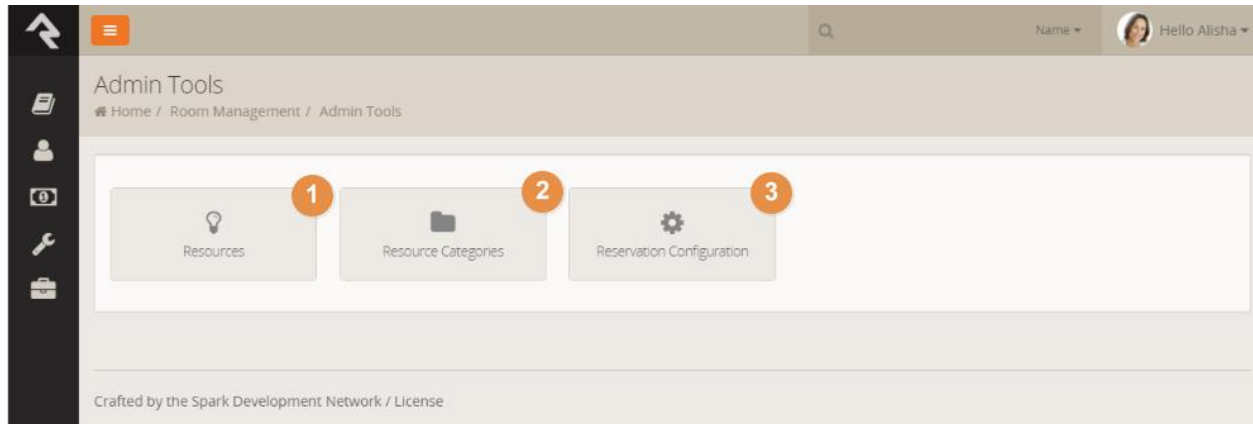
Apply Filter

Resource	Availability (2)
Baptism Tub	1 Available
Children's Portable Projector	Awana 8/30/2016 4:50 PM - 6:15 PM
Gym Chairs	140 Available
Lobby Tables	2 Available
Van 14	Global Leadership Summit 8/21/2016 11:05 AM - 4:40 PM

1. **Search For:** Here you can switch between searching for Resources and searching for locations.
2. **Availability:** This will display whether the Resource / Location is available, and how many are available in the case of Resources. If the item is reserved, this will display the reservation that has booked it.

Admin Tools

Here is where you can edit how the Room Management system is set up.



1. **Resources:** Here you can add and edit Resources to Rock.
2. **Resource Categories:** If you want to add, edit, or remove the categories used to sort resources, do so here.
3. **Reservation Configuration:** Here you can edit how reservations are set up.

Resource Detail

This is the page where you'll be adding or editing resources.

The screenshot shows the 'Resource Detail' page for a 'Children's Portable Projector'. The page has a sidebar on the left with icons for navigation. The main content area is divided into two sections. The top section is a form for adding or editing the resource, and the bottom section is a table for 'Reservation Questions'.

Resource Detail Form:

- Name *** (1): Children's Portable Projector
- Category *** (2): Projectors
- Approval Group** (3): Childrens
- Quantity *** (4): 1
- Campus** (5): Main Campus
- Attached Location** (6): Bobcats Room
- Note** (7): (Empty text area)

Buttons: Save, Cancel, Delete

Reservation Questions (8):

	Question	Field Type	
≡	Have you been trained on this equipment.	Boolean	✖
≡	Will need audio playback?	Boolean	✖

50 500 5,000 2 Reservation Questions

1. **Name:** The name of the resource.
2. **Category:** The category the resource falls under.
3. **Approval Group:** If this resource requires its own approval, add the group in charge of that here.
4. **Quantity:** The number of that resource that you have (e.g. '150 Gym Chairs).
5. **Campus:** If this resource is on a particular campus, specify the campus here.
6. **Attached Location:** If the resource is tied to a particular location, and can't be moved from that location, specify that here.
7. **Notes:** Any additional notes on the resource go here.
8. **Reservation Questions:** Any additional questions you want answered when someone reserves this resource can be added here. You can specify what field type you would like the answer to be. Be sure to specify 'Required' if you want them to be required questions.

Reservation Configuration

Here you can fine-tune all the back-end settings for your reservations.

The screenshot displays the 'Reservation Configuration' page within a web application. The interface includes a sidebar with navigation icons, a top header with a search bar and user profile, and a main content area. The main content area is divided into two sections: 'Ministries' and 'Workflow Triggers'. The 'Ministries' section contains a table with six rows: Children's, Global Outreach, Local Outreach, Men's, Students, and Women's. Each row has edit and delete icons. The 'Workflow Triggers' section contains a table with two rows: 'Room Reservation Approval Notification' triggered by 'Reservation Created' and 'State Changed'. Each row has edit and delete icons. At the bottom of the main content area are 'Save' and 'Cancel' buttons. A footer at the bottom of the page reads 'Crafted by the Spark Development Network / License'.

Reservation Configuration

Home / Room Management / Admin Tools / Reservation Configuration

Ministries

Ministries	
Children's	
Global Outreach	
Local Outreach	
Men's	
Students	
Women's	

Workflow Triggers

Workflow Type	Trigger	
Room Reservation Approval Notification	Reservation Created	
Room Reservation Approval Notification	State Changed	

Save Cancel

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1. **Ministries:** Here you can edit the list of ministries you can choose from when creating a reservation. Oftentimes organizations use different ministry structures for different tasks, so here we allow you to customize the ministry list for reservations.
2. **Workflow Triggers:** If you want any workflows to fire off when events happen on a reservation, such as one being created or a status on one being changed, add them here. Room Management is shipped with 'Reservation Created' and 'State Changed' triggers tied to the *Room Reservation Approval Notification* workflow. These are used as part of the out-of-the-box approval flow.

Location Detail

This is the Core Rock Location Detail page. On this page, we've added some new features:

The screenshot shows the 'Named Locations' interface. On the left is a sidebar with a navigation menu including 'Main Campus' and 'Bldg 1' with a list of rooms: 'Bears Room', 'Bobcats Room', 'Bunnies Room', 'Kittens Room', 'Outpost Room' (highlighted), 'Puppies Room', 'the Garage', and 'the Warehouse'. The main content area is titled 'Outpost Room' and contains a placeholder image, 'Parent Location Bldg 1', 'Location Attributes', and 'Approval Group Ushers' with a red circle containing the number 1. Below this is a 'Reservation Questions' section with a red circle containing the number 2. It features a table with one row: 'Which staff member will be present?' with 'Person' as the field type. At the bottom of the table are input fields for '50', '500', and '5,000', and a note '1 Reservation Question'. The top of the page includes a header with a search bar, a user profile 'Hello Alisha', and a breadcrumb trail 'Home / Check-in / Named Locations'.

Question	Field Type	
Which staff member will be present?	Person	

50 500 5,000 1 Reservation Question

1. **Approval Group:** If this location requires its own approval, add the group in charge of that here.
2. **Reservation Questions:** Any additional questions you want answered when someone reserves this location can be added here. You can specify what field type you would like the answer to be. Be sure to specify 'Required' if you want them to be required questions.

Approval System

You should understand few more administrative details before you unleash your users on the new system. Namely, how the reservation *approval* system works.

Approval Groups

Besides the basic security access used to grant your users to see the Resource Reservation system, three or four other groups control the approval process for reservations: Locations, Resources, Final Approval Group and Super Admin Group.

Item	Description
Location (optional)	Each location can have a particular group responsible for controlling the approval of reservations using the location. This is configured via the new Approval Group setting on the <i>Location Detail</i> page.
Resource (optional)	Each resource can have a particular group responsible for controlling the approval of reservations using the resource. This can be configured via the Approval Group setting on the <i>Resource Detail</i> page.
Final Approval Group (optional)	If your organization always wants a particular group to perform the final approval of all reservations, the Final Approval Group setting on the <i>New Reservation</i> page controls this feature.
Super Admin Group	This setting on the <i>New Reservation</i> page controls the super-admin group that can force approve / deny status on reservations, such as a facilities team.

Note: If a Final Approval Group is not set up, then Reservations without locations or resources that require special approval will be automatically approved as long as they do not conflict with existing reservations.

We recommend using the least restrictive settings, such as only putting Approval Groups on those locations and resources that absolutely must be approved by a person or group of people. However, we believe these configuration options give you the ability to set up more a more extensive approval system.

Approval States

A reservation has five states that it can have during its life cycle:

- **Unapproved:** This is the default state of a reservation upon creation. Upon creation, Rock will search for any locations or resources that require special approval, and notify the configured approval groups. If no special approval is necessary, or if all items requiring it have been approved, the reservation moves to the Pending Review state. If any locations or resources that require special approval are denied, the reservation moves to the Changes Needed state. From this point on, any resources or locations booked by the reservation will be marked as 'in use' for that time period.
- **Pending Review:** At this point, the reservation is waiting for final approval by the configured group. If they approve it, the reservation moves into the Approved state. If they decide the reservation is unrealistic and deny it, it moves into the Denied state. If they merely deny one or more resources or locations, then it moves into the Changes Needed state.
Note: If no Final Approval Group is configured, then the reservation will automatically move to the Approved state.
- **Changes Needed:** A reservation ends up in this state if individual resources or locations have been denied. After removing or changing them, the user can then resubmit the reservation, which will then return to the Unapproved state.
- **Approved:** This is the state a reservation will have once it's been approved.
- **Denied:** A reservation that is denied will be hidden from the hub page, and any resources or locations booked by it will be marked as available for that time frame.

Configured Workflows

Configured workflows also play a huge part in the approval process. By default, Room Management is shipped with 'Reservation Created' and 'State Changed' triggers tied to the Room Reservation Approval Notification workflow. This workflow simply notifies relevant parties that the reservation requires their attention. If you wish to extend or build on the approval system, you can do so by expanding on these.

Caution!

If you want to make changes to these workflows, we recommend you make a copy of these stock workflows and make your changes there. When finished, simply add your new workflow triggers (under Room Management | Admin Tools | Reservation Configuration) and remove the ones that came shipped with the plugin. Otherwise, you could have problems with a future plugin update that needs to modify the stock workflows.

System Jobs

Fire Workflow From Reservation In Date Range

Included in the plugin is a system job that will fire off a workflow for each reservation in a date range (of a given approval state). By setting the date range equal to the job's schedule, this job can be used as a notification service for upcoming reservations. For example, the plugin comes included with one such job called "Reservation Reminder" that runs once a day and fires the Room Reservation Reminder Notification workflow for each reservation that begins that day.

Note: By default, grabbing reservations within a date range will also return reservations that began previously, but extend into that date range. If you only want to return reservations that begin in the date range, be sure to check the 'Include only reservations that start in date range' button.

Workflow Types

Room Reservation Approval Notification

This is a simple workflow tied to the approval process. Based on the state of the reservation, the workflow will either notify the *Final Approval Group* that a reservation requires their approval, or notify the requestor that their reservation has been approved, denied, or requires changes.

Room Reservation Reminder Notification

This workflow is fired from the 'Fire Workflow From Reservation In Date Range' (Reservation Reminder) job described above, and sends an email to the Event Contact that a reservation they are in charge of is occurring that day.

Data Filters

Included in the plugin is a data filter that will filter reservations based off of their approval state and a date range. You can use this to build custom Data Views and Reports for your own needs.

Note: By default, grabbing reservations within a date range will also return reservations that began previously, but extend into that date range. If you only want to return reservations that begin in the date range, be sure to check the 'Include only reservations that start in date range' button.

You are all set! Now you are ready to start using the Room & Resource Reservation Plugin. Just remember to do the things recommended in the next section, Initial Setup.

Initial Setup

Once you have a good idea of how the system works, these are the things you should begin adjusting to meet your needs.

Under Admin Tools...

1. Edit the Resource Categories and add any you think are missing
2. Edit the Reservation Configuration and add the ministries that work for your organization.
3. Edit the Resource List and add all the resources for each campus. Do not make it too noisy; just add the ones that make sense from a reservation perspective.
 - a. Remember to set an *Approval Group* for the resource if a special team needs to approve it before it can be reserved.
 - b. Remember to set the *Attached Location* if the resource is a permanent, unmovable item.

On the main page...

4. Change the Block Properties to suit your needs. There are options for showing additional filters such as a campus filter, ministry filter, etc.

On the New Reservation (Details) page...

5. Edit the block's properties and set a Final Approval Group but only if your organization operates this way. You can also set the Super Admin Group if you want a particular team (such as your facilities team) to be able to force approve/deny reservations. See the *Approval Groups* section under Administration for details about these two settings.

Under Rock's General Settings | Named Locations...

6. Edit your organizations rooms and set an *Approval Group* if a special team is required to approve the rooms use before it can be reserved.

Under Rock's General Settings | Global Attributes...

7. Edit the *Default Enabled Lava Commands* and make sure that **Execute** is checked. This is needed for the Room Reservation Reminder Notification. **If you don't enable this, you will see a lava error in the schedule line of the email notice.**

Note: If you really object to this, then you will need to remove the "{% execute... %} ... {% endexecute %}" section from Body of the email in the Workflow's Send Email action. However you will lose the Event Duration value in the email.

Reporting Bugs

If you run into a bug that you would like to report, please do so on the CentralAZ Issues page:
<https://github.com/CentralAZ/Rock-CentralAZ/issues>

Simply prefix your issue with “[RR]” for Resource Reservation.

Developer Appendixes

API Calls

[~/api/Reservations/GetReservationOccurrences](#)

This is an API call to get individual occurrences of Reservations, returned in the form of ReservationOccurrences. It includes the following optional parameters:

- **DateTime? startDateTime**
 - Filters occurrences that occur during or after the specified date
 - Defaults to current datetime
- **DateTime? endDateTime**
 - Filters occurrences that occur during or before the specified date
 - Defaults to current datetime plus one month
- **String reservationIds**
 - Filters occurrences by reservation
 - Should be a list of integers separated by commas
 - Defaults to null
- **String locationIds**
 - Filters occurrences by location
 - Should be a list of integers separated by commas
 - Defaults to null
- **String resourceIds**
 - Filters occurrences by resource
 - Should be a list of integers separated by commas
 - Defaults to null
- **String approvalStates**
 - Filters occurrences by approval state
 - Should be a list of strings separated by commas
 - Defaults to 'Approved'

The API call will return a list of ReservationOccurrences, a class specifically created for this API call that contains the following properties:

- Int ReservationId
- ReservationApprovalState ApprovalState
- String ReservationName
- List<ReservationLocation> ReservationLocations
- List<ReservationResource> ReservationResources
- DateTime ReservationStartDateTime
- DateTime ReservationEndDateTime
- DateTime EventStartDateTime
- DateTime EventEndDateTime
- Int? SetupPhotoId
- String Note
- Int? NumberAttending

Model Map

