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Service Selection: RacePoint Blueprint Programming Guide

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Overview

This document provides an overview of the Services Window and service path management functions in RacePoint Blueprint, including but not limited to the following:

- The Services Window,
- Realized and Unrealized Services View,
- Service Paths,
- Limiting Service Paths and Service Variants.

Services View

The Services View presents an organized view of all services available within the current configuration, as well as customization options for realized services. The Service View window will automatically display when services are generated for the configuration, or can be opened at any time by selecting **View Services** from the main RacePoint Blueprint menu bar.
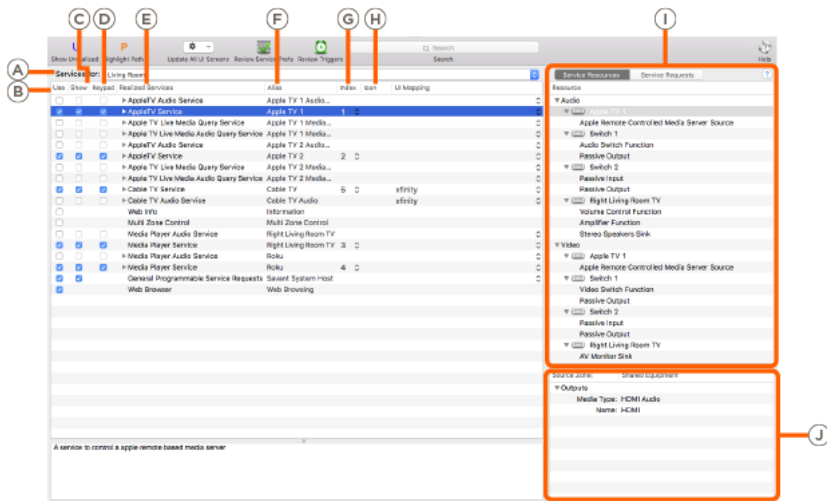
The following is a list of options available within this window.

A. **Services For:** Use this drop-down menu to view a configured zone's realized services.

B. **Use**: If checked, the service is enabled. If un-checked, the service will not generate a control screen within the User Interface (Savant Pro App, TrueControl II, Pro Remote, In-wall Touch Panel, etc., - any supported interface).

C. **Show:** If checked, there will be a button on the User Interface for that service. If unchecked, there will not be a button on the User Interface. The only way the service can be activated without this checked is through a custom workflow and a custom button.

D. **Keypad:** If checked, this service is able to be controlled via any keypad in the zone. However, keypad control of these services is limited to on/off, and the number of buttons is limited by the number of buttons on the

keypad.

E. **Realized Services:** This column defines the name of each service that has the appropriate resources to be generated and populate in the user interface. Services that do not have the necessary resources are known as Non-Realized Services and will not populate in this view.

F. **Alias:** Double-click this field to edit the name of the service. The text entered here defines the way the service is represented in the user interface. **NOTE:** For specifics on aliasing for discreet services, refer to the Savant App Preferences - Service Ordering and Aliasing article.

G. **Index:** (Echo Keypad Only) This column determines the order of the services on the keypad for use by the next service button and previous service button. Index numbering allows the user to assign more than 11 services to the keypad.

H. **Icon:** Dragging and dropping a custom image into this column will replace the default icon associated with this service in TrueControl 2. Custom icons can be seen in the Service Selector Screen. **NOTE:** Not all themes use the **Icon** column.

I. **Service Resources and Service Requests Pane:** In the Service Resources View, this provides the specific Service Path of the Highlighted Service. In the Service Requests View, this provides a list of all actions available with the currently highlighted Service. **NOTE:** The Service Resources Tab must be selected.

J. **Input/Output Pane:** This pane displays the exact inputs and outputs used on any highlighted device in the currently selected service path.

Service Window Taskbar Options

This window also provides tools to review and identify **realized** and **unrealized** services:

A. **Show Unrealized:** Displays a list of all services in which a source is present, but the requisite conditions to be realized have not been met. **NOTE:** In this view, the Input/Output Pane will provide a hint as to what could be causing the highlighted service to not be realized.

B. **Highlight Path**: Highlights the exact Service Path used by this service in the Layout Window.

C. **Update All UI Screens:** Updates the TrueControl 2 user interface to reflect any changes to services.

D. **Review Service Preferences:** Opens the Service Preferences Table.

E. **Review Triggers:** Opens the Trigger Programming view.

F. **Service Search Field:** Use this field to search for specific services.

G. **Help:** Contextual help for this window.

Service Resources and Requests Frame

This frame has two distinct modes, each with a different function:

Service Requests View

This view provides a list of service requests available within the currently highlighted service. Double-clicking any one of these service requests will open an Automator window displaying the service request's individual actions in detail, as executed by the workflow.

Service Resources View

The Service Resources View displays the exact service path of any highlighted service, including all devices, inputs, and outputs.
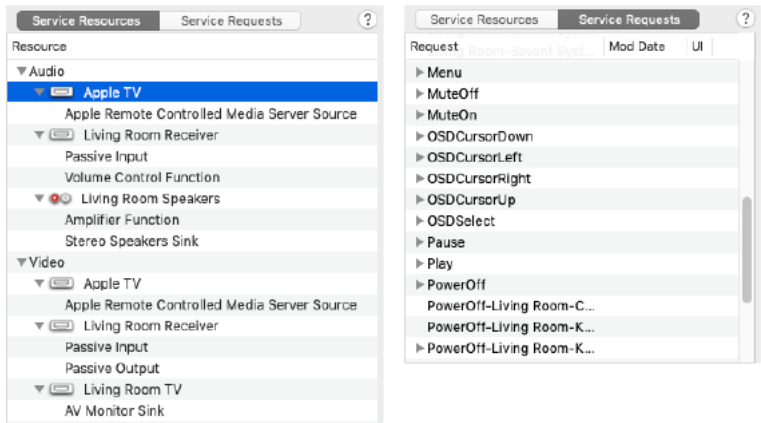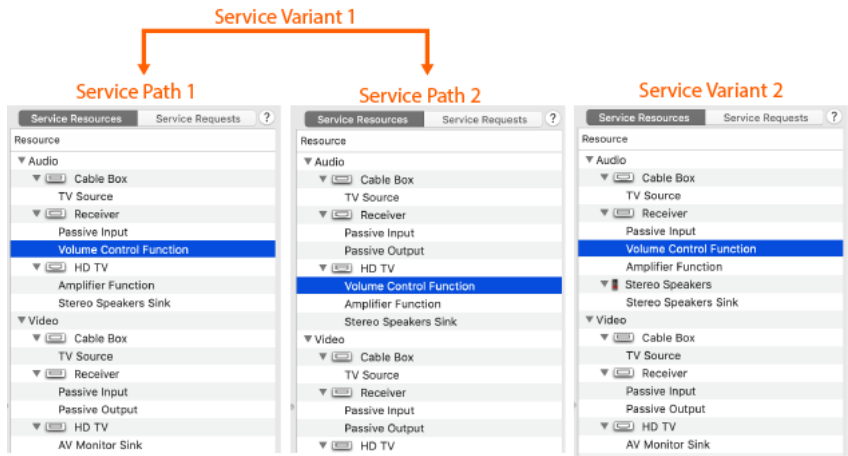
Service Paths

A **Service Path** is an ordered list of inputs, devices, and outputs between one source and one endpoint. This is listed in order from the source, through any switching devices, to the endpoint. Multiple Service Paths that share the same source, but have different endpoints are referred to as **Service Variants**. To review the specific inputs and outputs used by a device, select its name in the Service Resources Window.

Multiple Service Paths and Variants Generation

Multiple Service Paths are generated when more than one device along one service path possesses the same requisite resources for the service to be generated. Multiple Service Variants are generated when there is more than one pathway between the source and sink:

Example:

In the image above, **Service Path 1** uses the Volume Control Resource on the receiver. **Service Path 2** takes advantage of the Volume Control resource on the HD TV. Both service paths will achieve the same goal: powering on all devices and switching inputs if the physical connections are correctly made. However, in regards to volume, **Service Path 1** will prompt the Host to issue volume control commands to the **receiver** while **Service Path 2** will have any volume control commands issued to the **display**.

Comparing Service Paths

Though service paths can be compared by selecting each one individually and reviewing the service resources pane, Savant recommends comparing service paths via the **Service Path Comparison Window.**
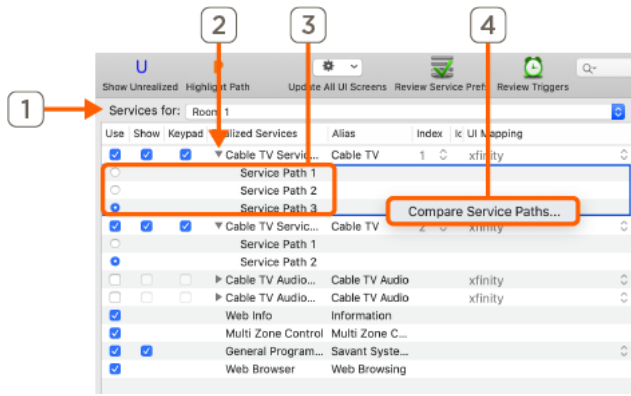
1. Navigate to the Service View window and choose the room desired.
2. Select the disclosure triangle next to the service.
3. Shift-click all desired service paths.
4. Right-click on the highlighted service paths and click **compare service paths**.
5. Select the radial marker next to the desired service path to enable that path.
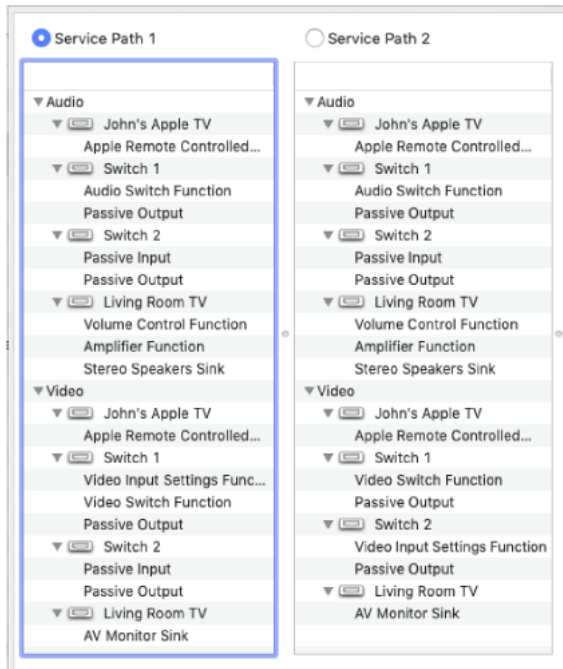
NOTE: The Service Path Comparison Window does not display specific input or output ports on devices within the service path. Individual inputs and outputs can be seen in the **input/output pane** in the default Service View window view by highlighting a device in the Service Resources pane.

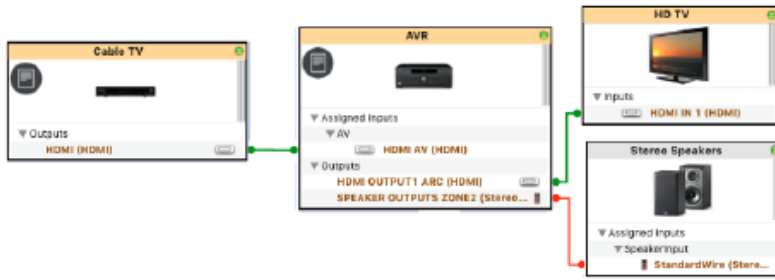## Limiting Services, Service Paths, and Service Variants:

In large deployments, as the number of endpoints and services increases, so too do the number of Service Variants and Service Paths generated. For each source that is connected to a switching device, service paths and service variants will be generated in all zones that have the requisite resources. The subsections below outline some potential strategies for limiting excess service generation in RacePoint Blueprint, making for less work or potential for confusion or error when choosing the service paths and variants to be used in the user interface.

## Disabling Resources on Devices

Services and their associated service paths are generated based on the order and availability of resources. Disabling resources is the first way to limit the number of service paths generated. This also effects which devices along the service path control individual aspects of the service.

Example 1: Eliminating Service Paths and Service Variants Generated by Duplicate Resources

In the configuration below, a cable box is passing both audio and video through a receiver via HDMI. The receiver then distributes both to the Stereo Speakers and HD TV respectively. The cable box, receiver, and HD TV all possess the Volume Control resource required to generate the Cable TV Service. By default, all components' Volume Control Resources are enabled.

Leaving all of them enabled will generate (2) separate Service Paths and (2) Service Variants. The following describes the recommended process for reducing the number of Service Variants and Service Paths by limiting duplicate resources.
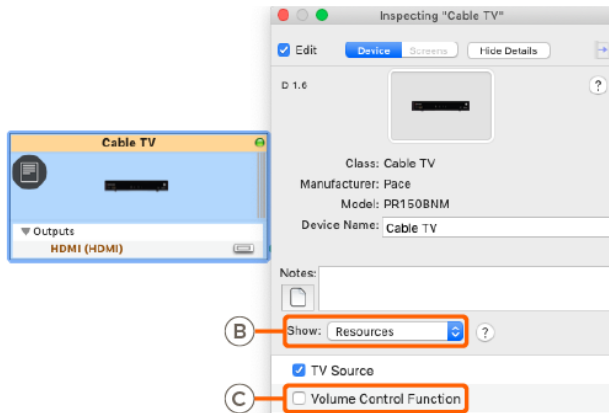

1. Confirm the device that will handle volume control. In this example, volume control on the receiver is optimal.
2. Disable the Volume Control resource on the Cable Box (or other applicable devices that will not be used for volume control in other configurations):
   A. Highlight the Cable box and inspect it (**Command + I** or double-click).
   B. Using the drop-down menu, navigate to **Show: Resources**.
   C. Disable the **Volume Control Function** resource.

3. Repeat this process for the HD TV.
4. Generate Services.

In the resulting services window, navigate to the user zone. The disclosure triangle no longer populates to the left of the service, as there is now only a single Service Path.

Example 2: Preventing Multiple Service Variants for Grouped Outputs
Depicted below, a PAV-SIPA50SM outputs audio to four different speakers. By default, this will generate a separate Service Variant for each one of the speakers. However, in this example, assume that the user wishes to output audio to all four speakers at once.
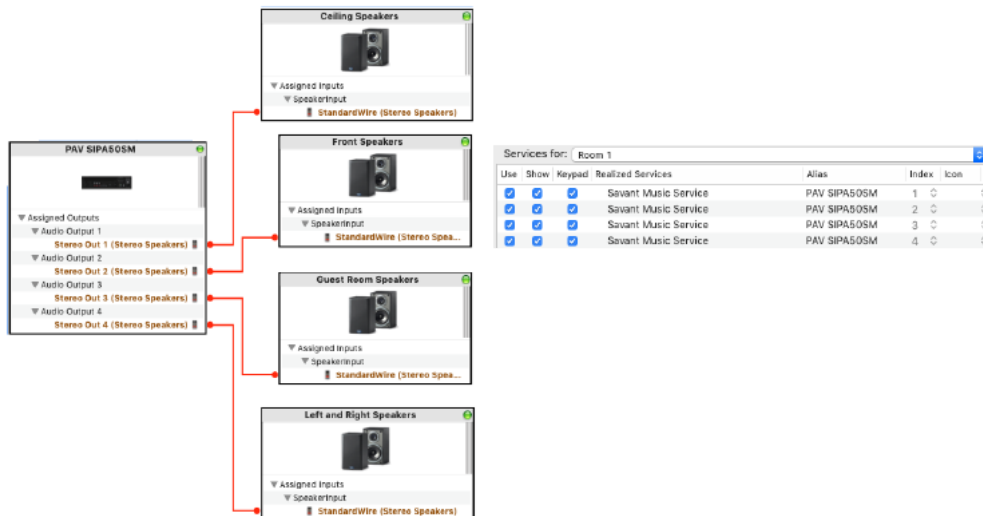

Without any further adjustments, the above configuration generates 4 different Service Variants. To configure the Savant Media Server to output audio to all four speakers at once, follow the steps below:

1. Group all target outputs together.
    A. Highlight the PAV-SIPA50SM and inspect it (**Command + I**).
    B. Using the dropdown menu, navigate to **Show: Assigned I/Os**
    C. Drag all desired speakers to the same Logical Output. In this example, Logical Output 1 is used. For more information on this, review the **Support for Multiple Audio Outputs Active Simultaneously in a Zone: Application Note**
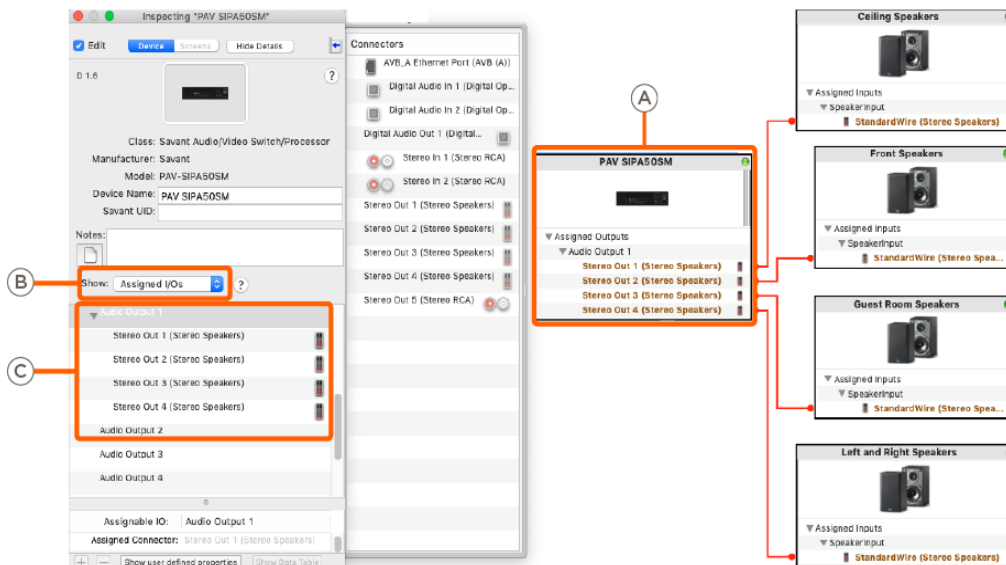
2. Disable the Speaker Sink Resource on all but one of the Stereo Speakers.
    A. Inspect one of the four speakers.
    B. Under **Show: Resources**, disable the Stereo Speakers Sink Resource.
    C. Repeat this process for two other speakers, leaving one speaker with the resource enabled.
    D. Generate Services.
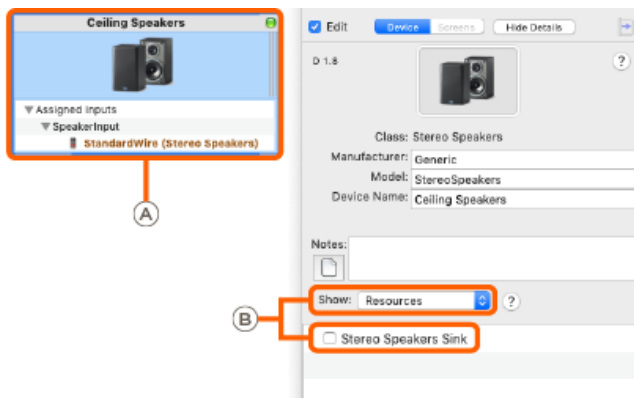
Grouping the outputs on the the PAV-SIPA50SM causes the same audio to be distributed on all four outputs at once. Disabling the resources on the undesired outputs will prevent unnecessary service variants from populating; both in the Service View window and the user interface.

HELPFUL INFORMATION: Alternatively, grouping the outputs at the source and populating Blueprint with only a **single configured speaker profile** will achieve the same result. However, Savant recommends the method outlined above, where all speakers are added to the configuration and resources are disabled on all but one, as this maintains a convenient visual and organizational representation of all speakers, despite 3 of them not generating a service path.

Disabling Enabled Services in Specific Zones

For every available combination of resources that can generate a realized service, a service path is created. This will cause a high number of excess services to be generated for configurations that have multiple input-switching devices along the same path, devices with multiple grouped outputs, or configurations with a large number of devices. The following example describes how to restrict which zones realized services populate in.

### Example: Preventing Realized Services from Generating in Specific Zones

In the configuration below, John's Apple TV will generate a realized service in both John's Room and the Kid's Room (Kid's TV.) Assume that the user does not want John's Apple TV service to be available in the Kid's Room.
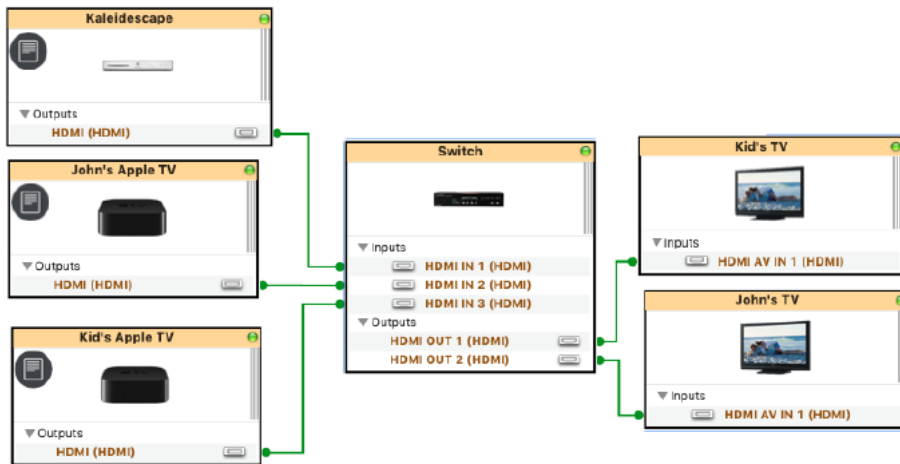
NOTE: The example configuration in the image above has been simplified to show both endpoints with a minimal number of other devices. Assume that the Kid's TV and John's TV are each in their own zones; Kid's Room and John's Room respectively.

Deselecting **Enabled in Zone** for the source in undesired zones will prevent the service from being realized in those zones, but leave all of the necessary resources available to generate the service in all other valid zones. Follow the steps below to deselect those zones where a service is not needed at the source component:

1. Inspect the source component; in this example, John's Apple TV (**Command + I**).
2. Select **Enabled in Zones** from the **Show:** dropdown menu.
3. Uncheck the checkbox next to the zone(s) where the source should not generate a service; in this example, Kid's Room.
4. Generate Services.
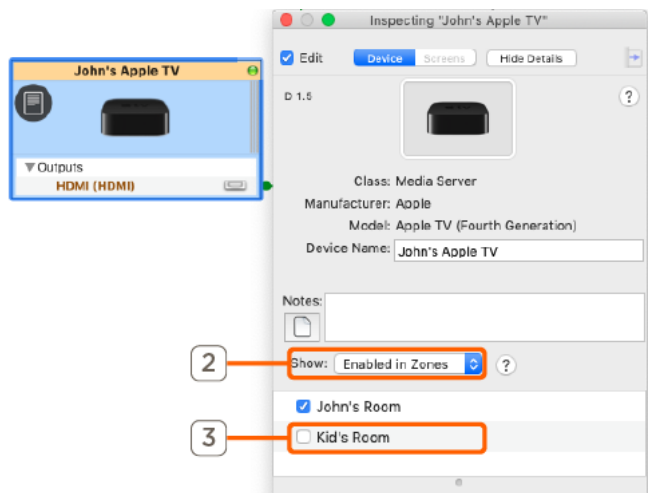
When the Services window appears, select John's Room from the Services for... menu. Notice that John's AppleTV only populates in the John's Room zone.

HELPFUL INFO: Savant recommends this process also be done at the endpoints. Disabling all zones except for the user zone the endpoint resides in will reduce the number of services Blueprint generates, thus reducing the amount of time required for uploading a configuration on larger sites.

Allowed I/O Paths

Profiles for many devices that have multiple inputs and outputs, such as Savant chassis, A/V matrix switchers, and audio switchers, may also be able to take advantage of **Allowed I/O Paths**. This option allows the user to select a given output on the switching device, and then deselect specific inputs for that output, preventing any service paths using the unchecked inputs from routing through the output.

Unlike the disabling of resources, or deslecting Enabled in Zones, disabling I/O paths will prevent **any** device on the de-selected input from generating a service path through the applicable output, even if the connection is broken and remade, or the source device connecting to the input is changed. Thus, it is best practice to manage all modification to Allowed I/O Paths after inputs and outputs have been fully confirmed, and connections have been made both physically and within Blueprint.

## Example: Limiting Unwanted Input Switching

In this example, four sources pass audio and video through an SSP-0600 to another SSP-0600 which distributes to three endpoints. The user will not be using John's Apple TV and John's Cable TV at the same time. They do, however, want to be able to switch between John's Cable and John's Apple TV without interrupting Cable TV 1 and Cable TV 2 being output to other zones.
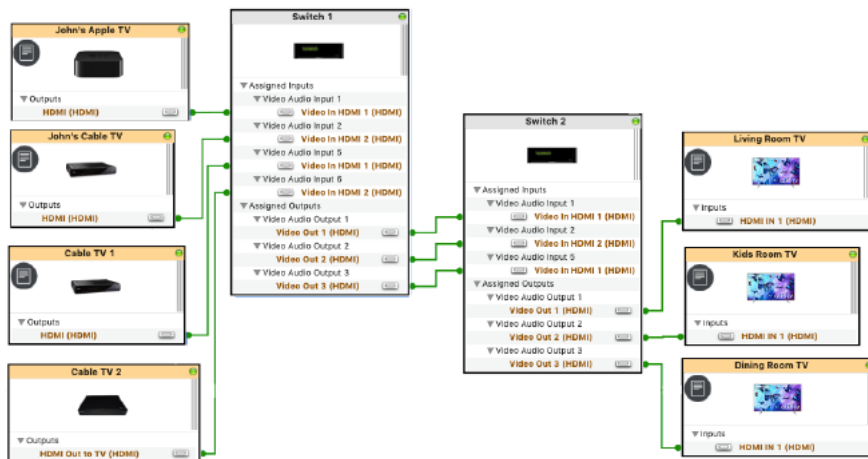
When there are only three services active at once, there will be no issue. This is because Switcher 1 can route all three sources through into Switcher 2. When the fourth service activates, the host will send a command to deactivate a service and use that service path. This is deceptively simple as there will never be four sources active at the same time with only three endpoints. However the input switching between the third service and the fourth service being active may cause unwanted input switching (such as a different room losing video.) In this scenario, it is best to limit the outputs that can be used by each input by finding two inputs that the user is unlikely to activate at the same time.
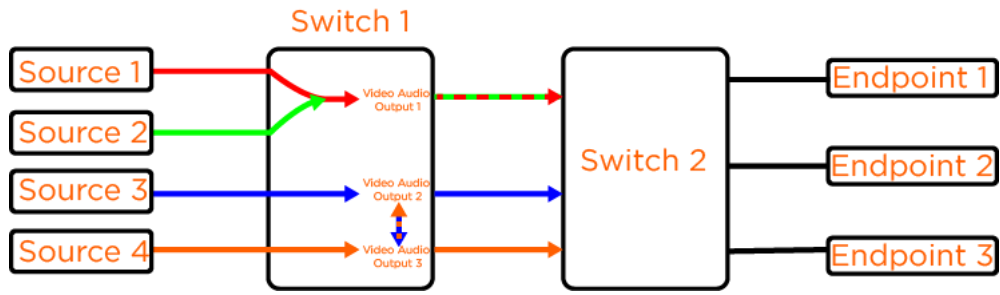
1. Inspect Switch 1 (**Command + I**).
2. Using the dropdown menu, navigate to **Show: Allowed I/O Paths.**
3. Find the logical output desired. Use **Video Audio Output 1**.
   NOTE: To make navigating the list easier, use the disclosure triangle to hide all unwanted inputs.
4. Disable **Video Audio Input 3 and 4**. This will prevent the sources connected to the logical assigned Input 3 and 4 (Cable TV 1 and Cable TV 2) from ever being routed through Video Audio Output 1.
   NOTE: Depending on the type of service and input, different logical inputs and outputs may be used. Since HDMI is being used in this scenario and transmits both video and audio, **Video Audio Inputs** are used.
5. Scroll down to Video Audio Output 2 and 3 and **uncheck Video Audio Input 1 and 2**.

   This will prevent Cable TV 1 and Cable TV 2 services from using Service Paths that route through Video Audio Output 3.
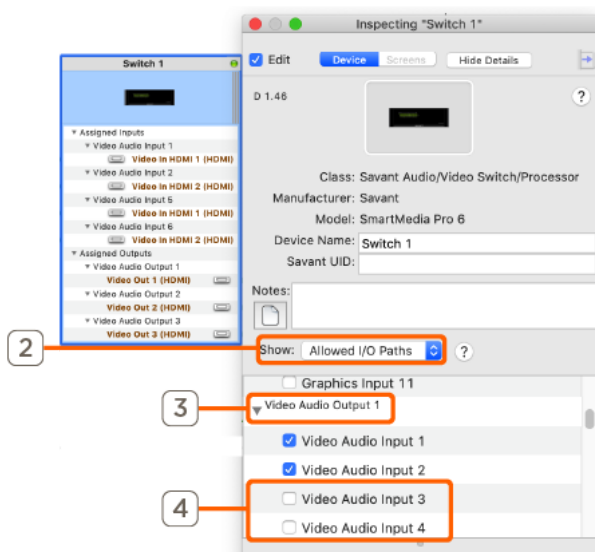
When configured as described above, functionality will be as follows:

- John's Cable TV and John's Apple TV share the same Video Audio Output (1). When either service is activated, the other will be deactivated and there will be no interruption of Cable TV 1 and 2.
- Cable TV 1 and Cable TV 2 can freely use HDMI Output 2 and 3 without interrupting John's Cable TV.
- All sources can still be output to any endpoint.