



# HCA Tech Note 707

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## Integrating Amazon Ring Devices with HCA via Hubitat Cloud

A common integration of a Ring Device with HCA is having a Ring Doorbell or Ring Camera motion detection event cause HCA to turn on lights or run a more complicated HCA program. This integration previously could be implemented using the HCA Cloud. With the HCA Cloud going away a replacement integration between HCA and the Hubitat Cloud has been implemented as described in **HCA Tech Notes 703** and **702**. After you install the HCA Hubitat integration as described in **HCA Tech Notes 703** and **702**, the following Tech Note will describe how to enable HCA to respond to Ring Doorbell and Ring Camera motion events.

**NOTE:** The steps in this tech note for Ring Doorbell and Cameras can also enable HCA to respond to events generated by a Ring Home Security System, such as when the Ring Security System is armed and disarmed or there is an alarm triggered event. This Tech Note also allows interesting integration of an Alexa Echo device with HCA, such as when an Echo Device hears glass breaking or a smoke alarm or a spoken phrase you can have HCA respond by controlling specific HCA Devices or executing HCA Programs.

## Terminology

When this note says “HCA Devices” that phrase also includes HCA Programs that you want to start, programs that operate as a device, or HCA Groups. It’s just too much text to say “device, program, or group” each time. This document may refer to “Friendly names”. These are the names given to HCA devices, programs, and groups that you speak to a voice assistant or that you want to control in response to Ring Events.

This note sometimes summarizes a series of instructions where you need to touch successive screens of your mobile device. When the Note says *do* “A -> B -> C ->...”, this means:

You must **Touch** “A” on your mobile screen, then in the next screen that appears you must **touch** “B”, then in the next screen that appears you must **touch** “C”, and so on...

## Getting Ready

1. Follow the instructions in **HCA Tech Note 703** to integrate HCA with the Hubitat Elevation Hub.  
**IMPORTANT:** Even if you don't want to use voice to control HCA Devices, you still must successfully complete the HCA to Hubitat integration described in **HCA Tech Note 703**.
2. If you don't have it already, go to the Apple App Store or Google Play Store App on your mobile device and install the Amazon “Alexa” app, and using the Alexa App, sign up for an Alexa Account if you don't already have one. Note that you DO NOT need to have an Amazon Echo device to install and use the Alexa App, they are related, but not the same thing.

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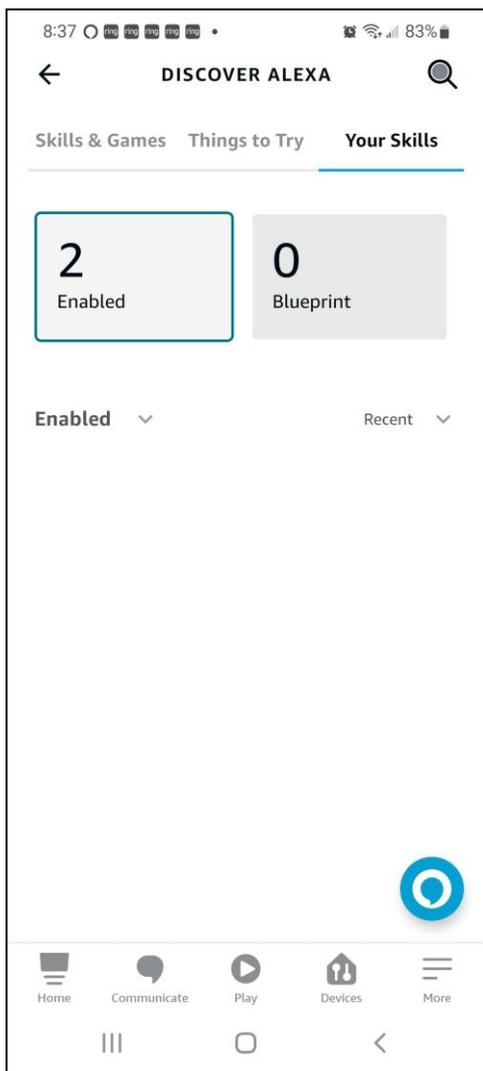


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## Step 1: In the Alexa App, Install the “Ring” and “Hubitat” Skills

After you have completed the “Getting Ready” steps earlier in this Tech Note, Open and sign into the Alexa app on your mobile device. In the Alexa app, in the lower right of the screen, touch “More” -> “Skills & Games” -> “Your Skills”...

You should see a screen that looks much like the following image:



At the top Right of the screen, click the magnifying glass icon  to search for Skills, then type in “Ring”. Install the **Ring** skill, you’ll be prompted to sign in with your Ring account name and password to authorize Alexa Cloud to receive

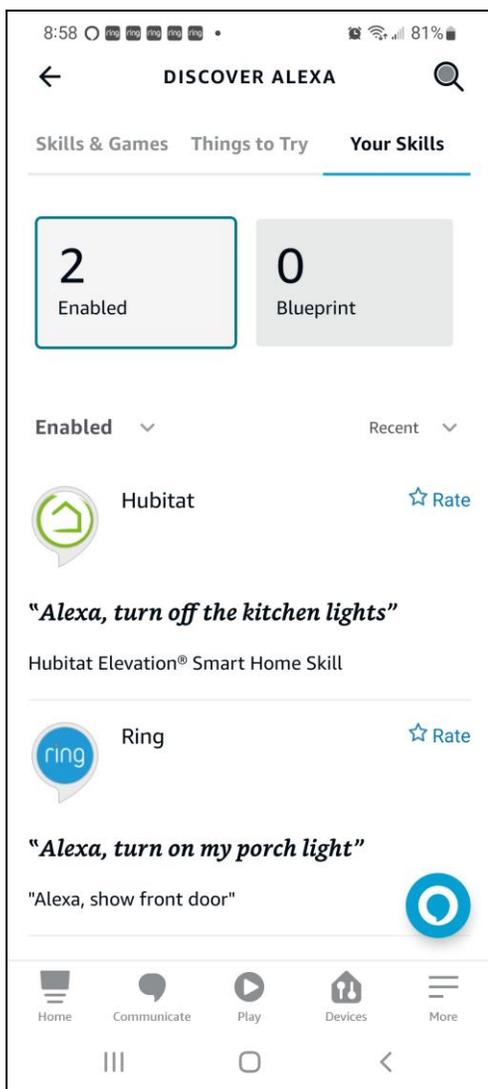
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events from your Ring Doorbells, Cameras, Echo Devices and Alarm Systems. Then repeat this step to install the **Hubitat** skill. You'll be prompted to sign in to your Hubitat account with your name and password to authorize Alexa cloud to access your Hubitat Account through the Hubitat cloud. Installing the **Hubitat** Skill in the Alexa App allows the Alexa App to control the HCA Devices that Hubitat knows about. After completing these steps your Alexa app should look something like the following image:

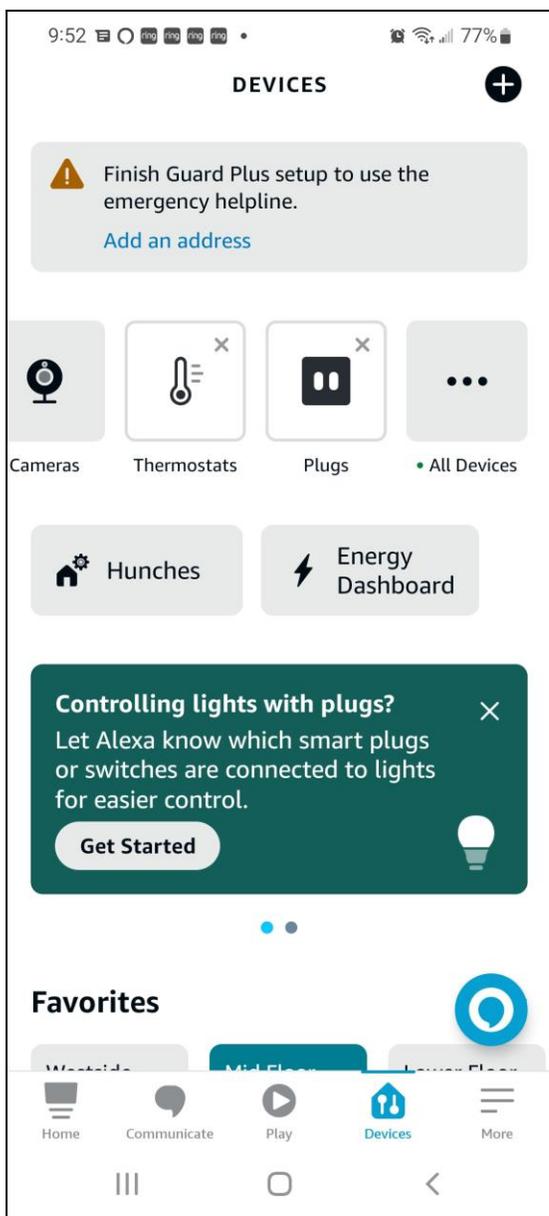




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## Step 2: Confirm you can use the Alexa app to control an HCA Device

Open the Alexa app on your mobile device. In the Alexa app, in the lower right of the screen, touch “Devices”. In the screen that appears, swipe the row of square icons near the top of the screen to the left. After you swipe left, your screen should look like the following image:



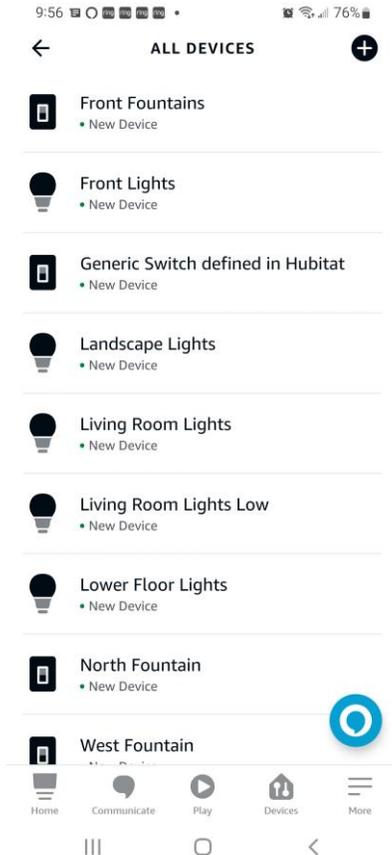


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Touch the “All Devices” square icon. **All Devices** You should see a screen like the image below that lists all the devices that the Alexa app knows about. The list will include at a minimum the Ring Devices at your house and the “Friendly Name” HCA devices that are connected to Hubitat (It’s not magic: HCA “Friendly Name” devices are listed in the Alexa App because you previously connected HCA to Hubitat and then you added the Hubitat Skill to the Alexa app).

Touch one of your HCA Devices in the list and confirm that HCA turns the HCA device ON/OFF, or that the HCA runs the HCA program you touched.





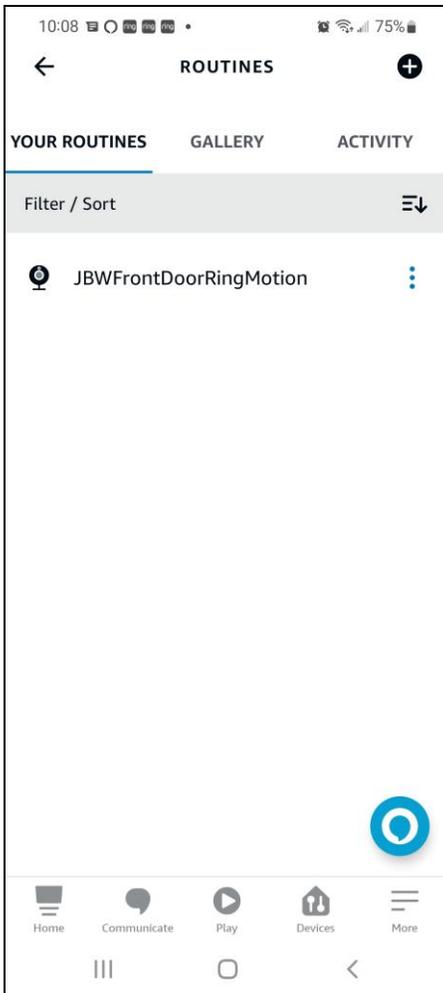
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## Step 3: Create an Alexa app “Routine” to have HCA respond to a Ring Event

“Routines” in the Alexa App are like “Programs” in HCA, but simpler. In this example we’ll create an Alexa Routine that is triggered by motion at a specified Ring Camera and then runs a specified HCA Program to respond to the Ring motion event.

Open the Alexa app on your mobile device. In the Alexa app, in the lower right of the screen, touch “More” -> “Routines”... ZX

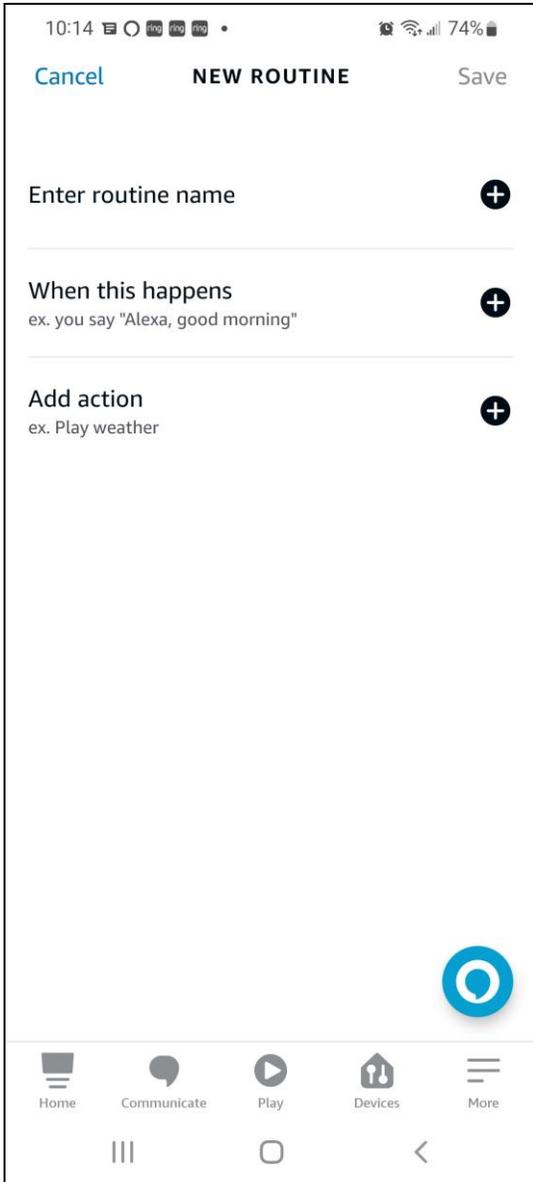
You should see a screen that looks like the following image, but your screen may list fewer or more Routines:





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At the top right of the screen touch the “+” icon to start creating a new Alexa Routine. As shown in the following image, there are three parts defining every Alexa Routine. The Routine Name, the Triggering event (“When this Happens”), and the Action (In our example here, the Routine Action will run an HCA program). To setup the new Routine perform the following steps:

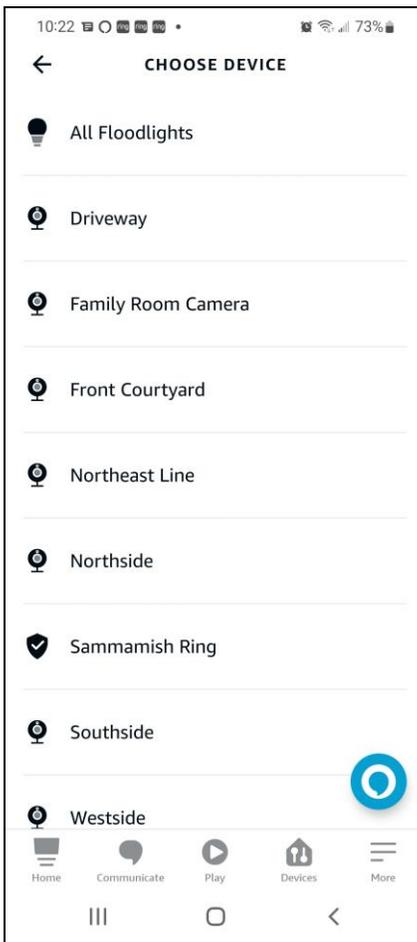




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**Routine's Name:** Enter any descriptive name for your Routine. In this example I typed in "JBWFrontDoorRingMotion" as the name of the Routine. (I like to put my initials at the Start of the name to make clear which Routines I wrote verses built in features of the programming environment.)

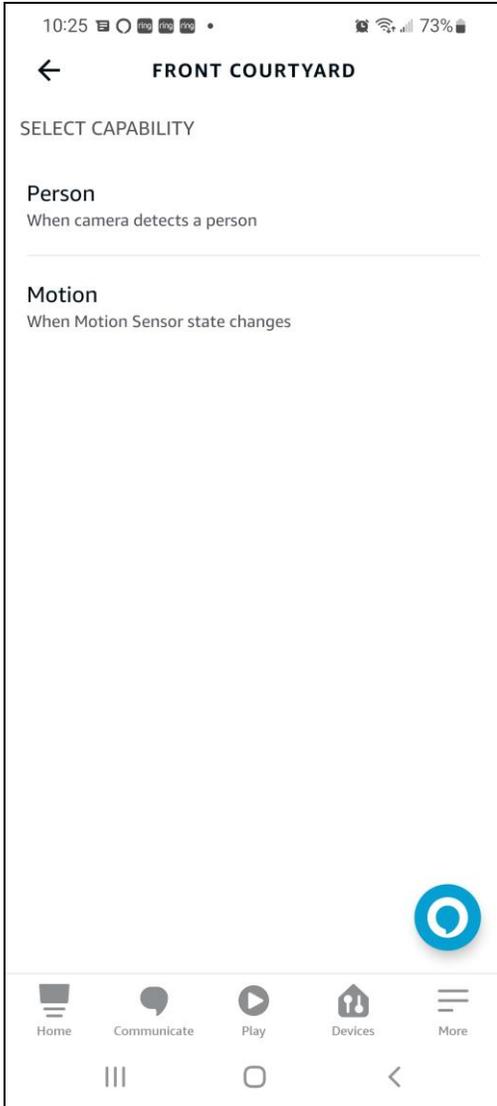
**Routine's Trigger:** Click the "+" to the right of "When this happens" -> "Smart Home". You should see a screen like the image below that lists some of the devices that Alexa knows about that could trigger this Routine, including your Ring Doorbell and/or Cameras.



Touch the name of the Ring Doorbell or Camera that you want to trigger the Alexa Routine, in this example I'll touch the "Front Courtyard" Ring camera and the following screen is displayed:



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Touch “Person – When the camera detects a person”, then touch “Person Detected”, then at the top of the screen touch “Next”. You return to a previous screen to finish defining the Routine....

**Routine’s Action:** Touch the “+” icon to the right of “Add action” -> “Smart Home” -> “...All Devices”.

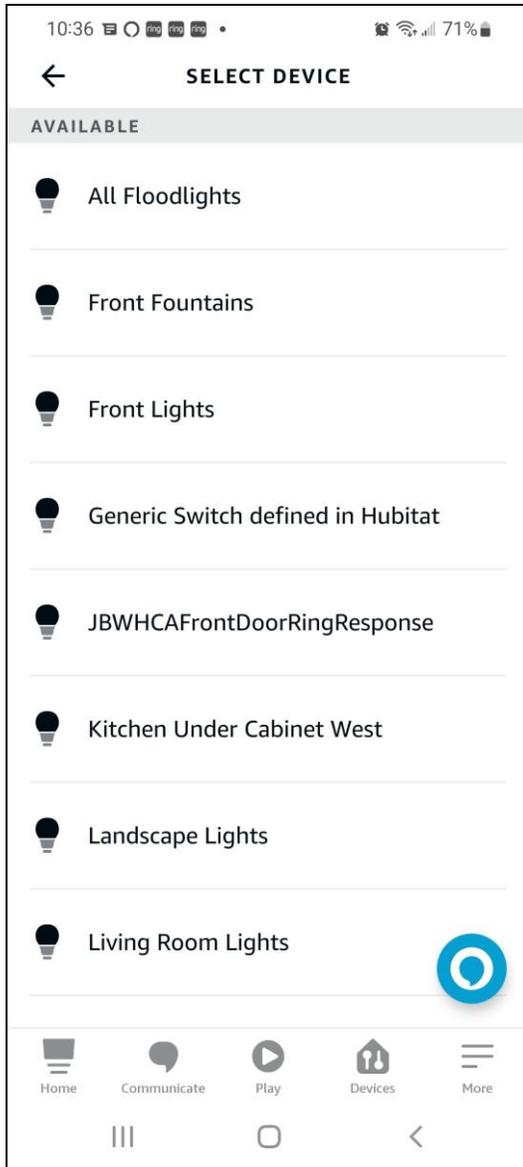
You should see a screen like in the image below listing all the Devices that Alexa knows about, including the name of the “Friendly Name” HCA device or HCA program that you want to switch or start:

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In this example I have an HCA Program with the “Friendly Name” *JBWHCAFrontDoorRingResponse* that I want to run when this Alexa Routine is triggered by motion at my “FrontCourtyard” Ring Camera, so I touch *JBWHCAFrontDoorRingResponse* , then “ON”, then in the upper right corner of the screen that appears. Then I press “Next”.

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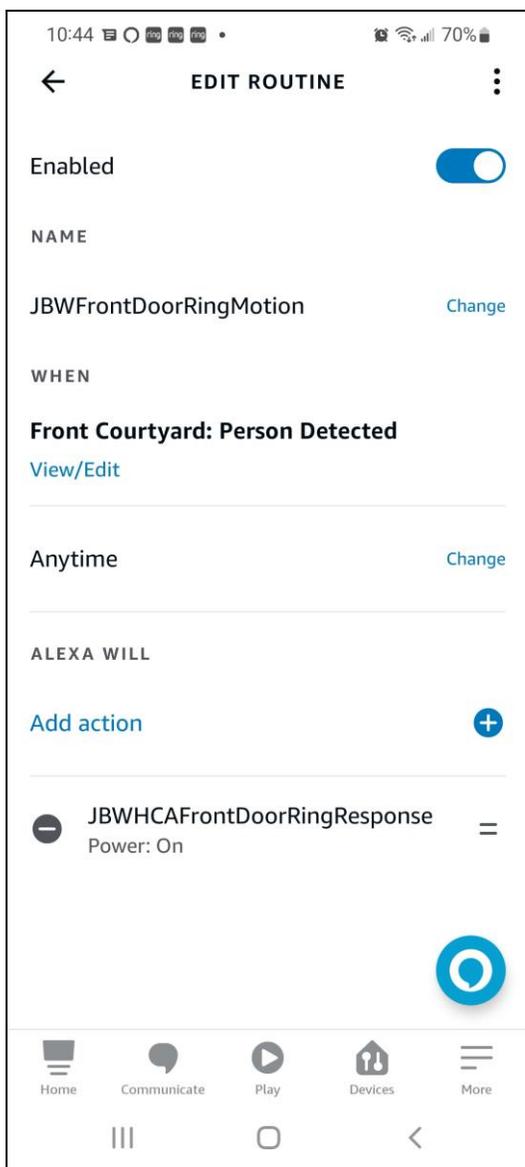
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The Alexa Routine is now complete with a Name, a Trigger, and an Action. So at the upper right of the screen, I MUST press “Save” to save the Routine.

When in the Alexa App I touch “More” -> “Routines” I can see the Routine I just created, and if I touch the name of my Routine the screen looks like the following image, where I can see my Routine’s Name, Trigger and Action:





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**NOTE:** Strangely, you can change the Name of an existing Alexa App Routine, but you can't change the Trigger or Action. If you want to change an existing Routine's Trigger or Action, you must delete the Routine and start over.

Alexa Routines run on the Alexa cloud, so the Alexa App doesn't have to be running for the Routine to be triggered and executed.

## Architecture of this Cloud Integration – A “Pipeline of Cloud Services”

HCA now relies on the Hubitat Cloud for HCA's Cloud connections. As described in **Tech Notes 702, 703 and 716** the HCA Hubitat App “HCA App” and “HCA Drivers” and “HCA State Connector” for Hubitat do the work to expose the HCA “Friendly Name” Devices in the Hubitat Device Name Space and Hubitat programming environment. This integration of HCA with Hubitat means that the Built-In Hubitat App called “Amazon Echo Skill” can accept voice commands from an Amazon Echo Device to switch an HCA “Friendly Name” Device.

But at the time of the writing of this Tech Note there is no Built-In Hubitat “Ring” App to enable Hubitat to receive Ring Camera and Doorbell events from the Ring Cloud, and thus no way to use Hubitat to control HCA “Friendly Name” Devices based on Ring Cloud Events. So, the solution in this Tech Note relies on inserting the Alexa Cloud as an intermediary Cloud to receive Ring Camera Events from the Ring Cloud and then an Alexa Cloud Routine can use the Hubitat Cloud to control “Friendly Name” HCA devices exposed by the Hubitat Cloud. An Alexa Cloud Routine provides the connection between a specific Ring Device Event and a specific HCA Response. This is all executed in the Alexa and Hubitat Clouds. The Alexa and Hubitat Apps don't need to be running.

The Ring Camera/Doorbell response by HCA described in this Tech Note can be conceptually illustrated as follows:

**Ring Camera/Doorbell/Alarm System - Device Event -> Ring Cloud -> Alexa Cloud -> Alexa Routine to connect a Ring Device Event to an HCA “Friendly Name” -> Hubitat Cloud -> Hubitat HCA Driver -> HCA** (Last transmission is on HCA's Local Network. Not the cloud.)

In fact, the solution described in this Tech Note is just a specific case of a more general set of possible “Cloud Pipelines” that could Integrate HCA with other 3<sup>rd</sup> Party Devices and their associated Cloud based Systems. This can be conceptually illustrated as follows:

**3<sup>rd</sup> Party Device – Event> -> “3<sup>rd</sup> Party Cloud A” -> “Cloud B” -> < Programming to connect a 3<sup>rd</sup> Party Device Event to HCA “Friendly Name” - Executed in “Cloud B”> -> “Cloud C” -> (and so on through multiple clouds...) -> Hubitat Cloud -> Hubitat HCA Driver -> HCA** (Last transmission is on HCA's Local Network not the cloud.)

In summary, any Cloud that can “Cloud Pipeline” through one or more intermediate cloud interfaces to get to the Hubitat Cloud can switch HCA Friendly Name Devices or Run HCA Friendly Name Programs. Which cloud(s) in such a

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Cloud Pipeline do the connection of the 3<sup>rd</sup> Party Event to an HCA “Friendly Name” is interesting. In the case described in this Tech Note the “Alexa Routine” does this. In this case the Alexa Cloud is the *intermediating* Cloud that connects the Ring Cloud to the Hubitat Cloud.

The final connection in all such Cloud Pipelines is always:

**“Last Cloud X” -> Hubitat Cloud -> Hubitat HCA Driver -> HCA** (Last transmission is on HCA’s Local Network. Not the cloud).

##end##