



# To Hub or Not To Hub

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Hubs, Home Automation  
and The IoT...

What You Should Know

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# I Started Out Against Hubs

They just seemed like an unnecessary cost and complication as part of home automation setup. But, just as broadband internet needed WiFi routers to help permeate internet access through our households, so, too, do I now see hubs as a critical component to delivering IoT's potential in the home. Why are hubs critical to take full advantage of a smart home? Let me start by explaining what a hub is.

A hub is a device that facilitates communication between individual devices by serving as a common connection point for devices in a network. Hubs we most often use in our everyday life are WiFi routers, cell phones (just think of how many wearables, headphones and accessories communicate back and forth between our mobile devices), and cellular communication towers.

Great. There are already hubs around us. So, then, why do we need to use yet another hub for home automation? The short answer is that as home automation continues to be a bigger part of our everyday lives, we want those devices to use a communication method that fits the unique need of the devices and technology running home automation systems.

## Why Do We Need Another Hub in Our Lives?

WiFi routers are the first thought many turn to as an option for a home automation hub because they

are already in the vast majority of homes and thus carry upfront cost savings. However, WiFi routers carry significant direct and indirect costs for home automation systems. From a direct cost standpoint, once you start adding more than a couple WiFi-based devices, many routers have performance issues. The cost of buying a new router that can handle all of the home automation devices, plus the connected TVs, video game systems, tablets, computers, cell phones, and other connected devices that are now part of our everyday lives typically far outweigh the cost of a dedicated home automation hub.



From an indirect standpoint, WiFi is designed for delivering large amounts of data rather quickly, but it's not always the most reliable (Cisco estimates that 43 percent of U.S. households have experienced an internet outage at least once a month) or secure (all it takes is a quick Google search to see the dangers of whatever

is the most recent WiFi hack) communication method. This is fine for data streams where the occasional data packet drop is inconsequential (pixelating Netflix, for example, doesn't bug us much), but when home access or occupancy based HVAC control is reliant on the chosen communication method, you don't want to have a communication breakdown.

There are a few hubs that use protocols designed for other applications, like Bluetooth, or proprietary frequencies, like Insteon or Lutron. These options have some benefits, but there are always concerns about the cost, long-term viability, and



interoperability of proprietary technologies. Security can also be a concern when using technologies for purposes outside of their original design intent (for example, recently revealed Bluetooth vulnerabilities).

Home automation-specific hubs, such as PointCentral's, are designed to use modern home automation-specific communication protocols, like Zwave or ZigBee. These communication technologies allow hubs to balance security (Zwave uses the same 256-bit encryption as major banks) with performance (home automation protocols utilize mesh technology to bounce messages off the nearest device and daisy chain communication back to a hub versus having to have enough power to communicate directly back to the hub through dead spots and interference).

## Factors to Consider When Buying a Hub

At one level, choosing a hub is about the method that different devices use to communicate to one another and to the internet. But choosing a hub is also about the communication enhancements (i.e. apps, dashboards, and voice assistants that help facilitate interaction with the devices in the home) and the home automation provider. At the end of the day, the hub is the embodiment of the greater home automation platform that is being purchased. A good platform has a lot going on but should still be easy to use and designed to leverage economies of scale to deliver a better experience than one individual or enterprise could deliver on its own. Consider the following factors when choosing a home automation platform:

**1. Cost:** Not just the upfront costs, but the recurring fees as well. While you may think you can find a solution that doesn't require recurring fees, ask yourself how the vendor will provide updates without a revenue stream to fund software/app updates along with system enhancements and continual security improvements.

**2. Security:** Nothing is completely hack-proof, but some options provide more robust hardware and software security than others. How does the hub you are considering keep communications secure within the network (between devices and the hub, and between apps and the hub/devices)? What about from the hub to the cloud? How is the cloud designed and tested for data security?

**3. Management Dashboards and End User App Experience:** Different users require different things. If you are deploying home automation in a B2B or B2B2C scenario — like PointCentral's for short- and long-term property managers and their tenants — does the system offer a dashboard tailored to business needs or is it simply a DIY hub designed for an individual homeowner? Also, for business applications, does the home automation system integrate with other systems — like property management systems — to help simplify work for staff? From an end user (or B2C), standpoint what apps and integrations are available to allow users to interact with all their devices and services via their computer, phone, tablet, wearable, and voice?

**4. Reliability:** Will the vendor be here a year from now to continue providing updates and support? Do they have customer references (for business applications) or positive, unbiased customer reviews (for consumer hubs)?

**5. Installation:** Does your potential home automation vendor provide adequate hardware and



system training? Do they offer certified national installation partners in case you want to supplement or replace internal resources?

**6. Analytics:** How is the system helping turn the data from the hardware devices into intelligence that helps improve operations? Does it have the scale to accurately test and refine algorithms to deliver accurate information? Do they have a policy to ensure customer data will not be sold without consent?

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Market experts predict strong growth for hubs and the IoT. Gartner projects 20.4 billion connected devices will be in use by 2020, up from 8.4 billion in 2017. NPD recently reported that there was a 50% increase in home automation adoption by US households between 2016 and 2017, jumping up to 15% of US households.

In the midst of all this growth, one thing will be certain — home automation (and the technologies that power it) will continue to evolve. In order to maximize your investment, make sure you choose a hub and a home automation provider that will be a long-term partner and not a short-term vendor.

PointCentral, headquartered in Portland, Oregon, and a subsidiary of Alarm.com, designs, manufactures and markets enterprise-grade Smart Home solutions for the vacation rental, residential, and multi-family property management markets. PointCentral solutions provide customers in these markets with the ability to monitor and control smart home technology across all properties in their inventory over a best-in-class secure and reliable network – reducing risk, improving security, controlling assets, reducing energy costs and improving guest/tenant satisfaction.



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