

Work Log: 12/03/18 Honeywell T6 Pro Thermostats

"The primary function of the design engineer is to make things difficult for the fabricator and impossible for the serviceman."

1 Overview

There are 5 Honeywell T6 Pro Thermostats in the Office, which have been installed to replace Google Nest devices. However, they are unable to connect to the wifi. The Nest devices did not have such an issue.

2 Details

What was tried:

- Changing Wifi settings from 2.4GHz and 5Ghz to 2.4GHz only (this was recommended by Honeywell docs, as the thermostats work on 2.4GHz only). I verified the wifi was on 2.4GHz only by restarting all APs, and checking with Wifi Analyzer. No effect.
- Changing wifi settings to use WPA1 and WPA2 (in case this was a device without WPA2 support). Previously wifi was set to WPA2 only. No effect.
- Read through all documentation for the Pro T6 thermostats to see if any other settings were required. Nothing of note was found. Documentation is lean. This is my biggest complaint.

- Attempted to connect T6 to wifi by using Lyric (now honeywell home) app with iphone. Failed to complete.
- Disabled a setting in the menus called WAC, which is a setting which automatically transfers credentials from an iphone to the T6 thermostat. At this point, I was required to change to the thermostats wifi access point, type in the password for the wifi manually into the Lyric app, where the wifi showed connected and the thermostat even said Success, indicating completion, however the app failed its side of the registration. This got me further, and I saw on the app that it said the Device had done a Geofencing, and had just come back online. However, it was not listed in the devices of the lyric app... Still no luck.
- At this point, I called support, whom after 30-40 minutes of holding, I was directed by a tech of Resideo to use a phone's wifi hotspot, which should work in this situation (whenever the techs have seen this happen before, this has worked). During the holding time I worked on the network doc for the server rack. He also mentioned that if the device failed to configure like this, that *it was necessary to call up Resideo to delete the device from their servers, as once it is 'half configured' it can't fully be configured.* Wow...
- I attempted to use a 2nd phone outside of the iphone as the mobile hotspot, and to configure wifi on the Lyric aka Honeywell Home app. WAC was enabled. I was able to get about as far as I did with the WAC. The device was able to see wifi, and I could see it connected to my phone... The thermostat even said "Success" and returned to the temperature screen, however the Honeywell Home app did not complete, and gave a failed error (finalizing registration was the last message it tried to complete - often multiple times).
- I tried once or twice more, but was unsuccessful. At this point, I contacted support again, and while waiting on hold for 30-40 minutes worked with another office on their tech issues. Finally,

support recommended I try some of the other thermostats in the office, and also recommended a factory reset. ¹

- I tried on a downstairs thermostat, factory resetting it to new settings and again tried the Access point method. No further progress was made.
- Pretty much the only thing I didn't try, was to factory reset, disable WAC, and then use the Phone's access point. I also didn't try contractor mode (requires answering an email to complete the app install). I did not try a newer Android phone (my phone is too old / doesn't have Google apps). Overall, the only way to connect to the main wifi was to disable WAC. Connecting to a phone hotspot always worked. Poor Antenna?

Based on this, I have come to the conclusion that these IoT devices, or wifi connected smart things, whatever they may be called, are young technologies and not mature enough to be used without bugs. The Nests, which were from a startup bought by Google, show that this kind of embedded device, with online capability, is new ground, and the space is open for startups to innovate. However, that was 2011, and the big players are now rushing to catch up with their own smart thermostats, cameras, light switches, etc... This means some care must be made with buying the smart devices. Some may be more mature than others.

As for what I think the problem is, it's hard to say, but possibly wifi interference in this business location is causing these home devices to be unable to find the wifi. Or, it's simply faulty hardware. Possibly the iphones (two were tried overall) were unsupported, somehow. That's not acceptable in my view.

I'm not impressed with the Honeywell T6 Pro devices, and the performance here shows it's simply not ready yet.

¹(done by holding down the menu button, and then in the window that appears - a service menu - clicking the reset option, then the factory option. Note that this is different from the reset option of the normal menu which doesn't have a factory reset capability... You MUST hold menu down for a few seconds.

3 End of Year Retrospective

Early IoT attempts. They can't all be winners. It's deceiving to see a large brand name on something like this, and think there is anything more than a small group of engineers behind it. I think when I called into their support I was probably talking to the engineers.