eero Pro 6 Coverage Evaluation

Tuesday 14th December 2021

Introduction

In order to demonstrate the increase in coverage provided by multiple eeros (compared with a single eero), the following tests were carried out.

A test house was selected and a single **eero Pro 6** placed in the hallway. This eero was connected to TalkTalk Fibre 550 FTTP service. The tests house is a medium sized detached house built in the 1920s.

Two test devices were selected – an **iPhone 13 Pro** running iOS 15.2 and a **Samsung S21 Ultra** running Android 12 (Google Play system update: 1 September 2021, Android security patch level: 1 December 2021)

eero was running eeroOS 6.6.1

Test description

To evaluate the coverage provided by eero, the two test devices were set up to display the RSSI (Received Signal Strength Indicator – measured in dBm) from the eero Wi-Fi network. This has advantages over speed tests, due to the house having many devices attached to the eero network and having neighbouring Wi-Fi networks. RSSI provides an accurate record of the received signal strength, irrespective of activity on the network and activity on neighbouring Wi-Fi systems.

Nine locations were chosen for the tests:

- Hallway
- Living room
- Dining room
- Kitchen
- Back garden
- Main bedroom
- Bathroom
- Office
- Guest bedroom

For the first tests, the eero Wi-Fi network consisted of one eero Pro 6 in the hallway and for the second tests, two eero Pro 6 nodes were added – one in the office and one in the main bedroom.

Results #1 – iPhone 13 Pro, single eero Pro 6

room	BSSID	Wi-Fi channel	RSSI (dBm)
Hallway	56:28	128	-42
Living room	56:28	128	-60
Dining room	56:28	128	-61
Kitchen	56:28	128	-72
Back garden	56:27	6	-70
Main bedroom	56:28	128	-73
Bathroom	56:28	128	-53
Office	56:28	128	-69
Guest bedroom	58:28	128	-81

Results #2 – Samsung S21 Ultra, single eero Pro 6

room	BSSID	Wi-Fi channel	RSSI (dBm)
Hallway	56:28	128	-45
Living room	56:28	128	-62
Dining room	56:28	128	-61
Kitchen	56:28	128	-72
Back garden	56:28	128	-85
Main bedroom	56:28	128	-68
Bathroom	56:28	128	-46
Office	56:28	128	-72
Guest bedroom	56:28	128	-81

Results #3 – iPhone13 Pro, three eero Pro 6s

room	BSSID	Wi-Fi channel	RSSI (dBm)
Hallway	56:28	128	-45
Living room	56:28	128	-62
Dining room	56:28	128	-67
Kitchen	56:28	128	-74
Back garden	F0:28	128	-69
Main bedroom	A1:68	128	-37
Bathroom	56:28	128	-53
Office	F0:28	128	-36
Guest bedroom	F0:28	128	-64

Results #2 – Samsung S21 Ultra, three eero Pro 6s

room	BSSID	Wi-Fi channel	RSSI (dBm)
Hallway	56:28	128	-38
Living room	56:28	128	-59
Dining room	56:28	128	-58
Kitchen	56:28	128	-71
Back garden	F0:28	128	-66
Main bedroom	A1:68	128	-39
Bathroom	56:28	128	-52
Office	F0:28	128	-37
Guest bedroom	F0:28	128	-60

Results Analysis

In four of the nine test locations (back garden, main bedroom, office and guest bedroom), the test devices showed substantially increased RSSI from one eero Pro 6 to three eero Pro 6 nodes. This can be explained by the change in BSSID which occurs when the test device changes from one eero node to another.

Summary

These tests demonstrate conclusively that multiple eeros provide greater coverage than a single eero.

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