TALK

Bad Wi-Fi? Are you SURE it's a wireless problem? Here's how to find out

Keith Parsons · WLAN Pros channel · 2020-09-10

A series of questions you can ask to work out whether a Wi-Fi problem is really a wireless problem and not a wired one.

Short answer

Many times it is not. In this talk, Keith Parsons explains that Wi-Fi gets blamed for problems further along the network because it is the access layer, the part people connect through. If a device has an IP address, even a self-assigned one after DHCP (the step that hands out addresses) failed, the wireless steps before it already worked. He also compares throughput, the amount of data that gets through each second, on the wireless side with throughput on the wired side: when the wireless is faster, the slowdown is in the wired internet connection.

Key points

- Many Wi-Fi complaints are not Wi-Fi problems; because Wi-Fi is the access layer, it gets blamed for everything behind it.
- Joining a network is a series of steps: 802.11 association and authentication, security, then DHCP (the step that hands out an IP address). Each step proves the ones before it worked.
- If the device has an IP address, or even a self-assigned address after DHCP failed, the wireless steps already succeeded.
- The MCS (modulation and coding scheme) the device is using is a better health check than RSSI or SNR alone; on a Mac, hold Option and click the Wi-Fi icon to see it.
- Good SNR with a poor MCS points to congestion somewhere.

Chapters

1. 00:04 Wired or wireless?
2. 01:00 How a device joins
3. 02:01 Through the AP to the wired side
4. 03:10 Does it have an IP address?
5. 05:00 Check the MCS
6. 08:01 RSSI and SNR versus MCS

Watch on YouTube (https://www.youtube.com/watch?v=1G4qihqHZJ0). More conference talks: wlan-talks.net (index by Victor Gatuna).

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