

Is Wi-Fi 6 the Promised Land?

Ian Tearle | Arista

CWNE #347

@ITearley

A long time ago (well to be truthful 1997) in a galaxy far, far away.... (ok Australia isn't a galaxy)

Episode Wi-Fi 6

The story so far...

Man made Wi-Fi, Wi-Fi became faster and faster & was taken to the dark side by the speeds and interference issues associated with this, with great speeds anger can be caused such as CCI etc.

But it became more relied on children old people, hospitals every where, the number of devices increased hugely, the amount of resource and airtime became limited

Wi-Fi 5 was supposed to bring us hope (think Kylo Ren) but it turned to the dark side as the clients and devices did not like or support the new features such as MU-Mimo.

What Makes a Device Wi-Fi 6 Certifiable?

WiFi 6 Features	Benefits
8 Spatial Streams	Increased capacity, higher efficiency / larger MU-MIMO groups
Target Wait Time (TWT)	Increased battery life for clients (e.g. IoT clients)
UL / DL OFDMA	Higher efficiency / switch-like / more deterministic per client performance UL and DL
UL / DL MU-MIMO	Increased capacity, higher efficiency
UL Scheduling	Higher efficiency, more deterministic performance UL
BSS Coloring	Spatial reuse (of spectrum), higher efficiency, increased capacity
1024-QAM	Higher data rates, increased capacity (at very high SNR...)
Longer Guard Interval	Better resiliency in outdoor environments
Long OFDM Symbols	Increase in speeds for clients at edge of cell
2.4 GHz and 5 GHz Use	Gives new life to 2.4 GHz spectrum
Preamble Puncture	More efficient use of available spectrum in real-time
MU-RTS	More efficient RTS/CTS protection process (mitigates hidden node problem)

Certi fiable or Compatible (Sounds Similar)



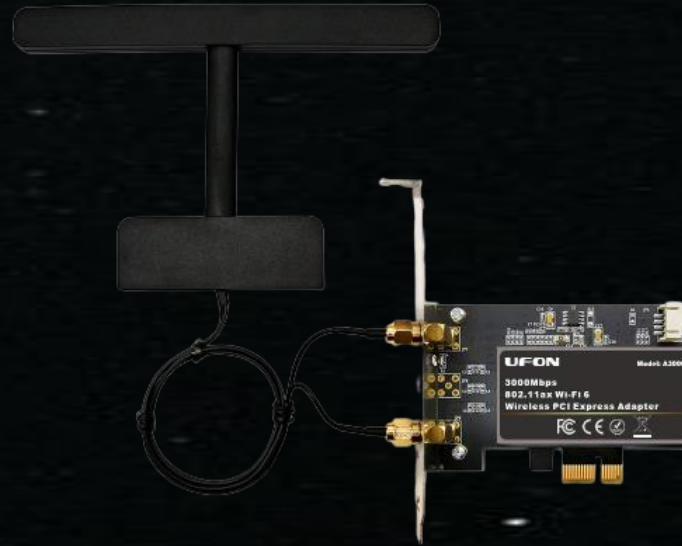
Clients to Connect & Fight the Dark Side



iPhone 11



Galaxy S10



Intel Wi-Fi 6 AX200



Conclusion

1. Wi-Fi 6 clients are being built and shipped
2. Make sure your access points are **certifiable**
3. Not all clients are going to be created equal
4. I honestly believe that Wi-Fi 6 will be massive, but you will need at least 30% of clients on the network to support Wi-Fi 6 before you see any major gain & benefits for legacy clients