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Gigabit Wi-Fi: With gear supporting the new 802.11ac standard already entering the market, savvy VARs need to get prepared now.

By Anne Rawland Gabriel

Promising gigabit throughputs, gear that supports Wi-Fi's fifth generation has arrived. Although final approval for the new 802.11ac standard won't occur until early 2014, manufacturers such as Cisco and Netgear are already shipping wireless networking equipment. Plus new mobile devices, such as Samsung's Galaxy S4 and Apple's MacBook Air, also support the standard.

Given the meteoric rise of tablets and smartphones, the intensity of interest in 802.11ac is unsurprising. In fact, ZK Research recently noted that, for many businesses and schools, the wireless LAN is now the primary network.

So how much faster is 802.11ac in reality? That depends on multiple factors, such as proper network design and architecture, notes Marko Rogan, Solution Center engineer at Ingram Micro, who conducted tests in several environments. "File transfers averaged 62.9 percent faster versus 802.11n [2.4GHz]," he says.

More Under the Hood

There's more to love beyond speed. First, 802.11ac exclusively uses the 5-GHz radio

frequency spectrum, rather than the device-jammed 2.4GHz for the current Wi-Fi technology. "If you perform a spectrum analysis at most businesses, you'll find only gridlock at 2.4GHz," says Rogan. "But there are very few devices operating at 5GHz."

Another benefit is improved range. Although 5GHz was previously known for range limitations, Rogan says this appears to be solved. "In our testing, we're seeing ranges comparable to 802.11n [2.4GHz], but with faster speeds."

Only a Matter of Time

Despite the advantages, it's unclear how quickly 802.11ac wireless networking adoption will occur, primarily because new equipment will be required in most cases.

Another hurdle could be the complete overhaul of existing AP maps. "With 5GHz, AP positioning may be different than with 2.4-GHz networks," Rogan says. "VARs will need to conduct customer site surveys to determine whether this is a factor." On the other hand, the increasing reliance on bring-your-own-device and corporate-owned mobile devices could quickly tip the scales. As Rogan points out, surveys suggest more wireless devices than wired will be connecting to networks by 2016. "So wireless is growing, and growing rapidly," he says.



Get Ready

Still, the most important thing solution providers can do right now is to get prepared for gigabit Wi-Fi now. "Consider gaining the latest certifications to ensure the proper expertise is in place," Rogan suggests.

Next it's time to get experience with the new technology. Purchase not-for-resale 802.11ac infrastructure, which is typically available at a substantial discount from the manufacturers. Then begin gathering data, such as what types of walls various APs penetrate. Finally, obtain a professional site survey tool and a spectrum analyzer to ensure APs are mapped correctly and to ferret out the source of any signal degradation.

"It's critical for VARs to invest in both tools," emphasizes Rogan. "Then start practicing with them, in combination with the NFR units, to gather and analyze data to present to customers when they are ready to buy."

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Originally published in the Ingram Micro Channel Advisor, Fall 2012.

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