

Deploying 802.11n for Environments with Mixed Client Devices

Overview

With the 802.11n draft 2.0 standard now available, businesses are examining the potential benefits this next-generation wireless technology can bring to their networks. While 802.11n delivers general performance improvements in the areas of throughput, link reliability, and predictability, the right wireless infrastructure is crucial to an organization's ability to take advantage of all that 802.11n has to offer.

While 802.11n can benefit a variety of businesses, some environments are particularly well-suited to take advantage of the standard's throughput and reliability advancements.

The Challenge of Environments with Mixed Client Devices

One environment where 802.11n can make a significant impact is in organizations that serve a range of heterogeneous client devices. . Mixed client device environments include organizations that offer guest access, such as hotels, convention centers and airports, or university campuses, where students are accessing the network with an assortment of laptops, PDAs, and other devices. These organizations don't control the clients on the network, but want to provision an infrastructure that is optimized for all of these clients.

With a variety of client devices accessing the network, primary concerns include:

- **Backward and forward compatibility.** With such a mix of devices on the network, organizations must offer compatibility with both existing 802.11a/b/g clients, as well as emerging 802.11n-based devices.
- **Consistent performance for all clients.** Organizations want to ensure that every device can simply and securely connect to the network in a consistent way, with adequate bandwidth to support application requirements.
- **Competitive advantage.** Many organizations use their wireless network to provide guest services for non-employees and believe that the availability and performance of their networks help drive competitive advantage. By deploying a network that supports both existing 802.11a/b/g and emerging 802.11n devices, these organizations can differentiate themselves as technology leaders.

Meeting the Challenges of Mixed Client Devices with 802.11n and the Cisco Unified Wireless Network

802.11n offers up to five times the performance of existing networks and is beneficial for organizations that want to ensure that all clients on the network—regardless of type—are guaranteed the bandwidth and throughput they need. With the advances of 802.11n, users can expect a significant leap in performance and bandwidth on a per-client basis. In addition, 802.11n offers the interoperability required to serve a mix of existing 802.11a/b/g clients, as well as future, 802.11n-based devices. Organizations can show technology leadership by embracing the move to next-generation wireless solutions.

With a Cisco® Unified Wireless Network, businesses can deploy an 802.11n-ready solution today that delivers the modularity and flexibility necessary to accommodate future, emerging technologies. The Cisco Unified Wireless Network includes the Cisco Aironet® 1250 Series Access Point, the only commercially available access point that is part of the Wi-Fi Alliance's test bed to certify compliance with the 802.11n draft 2.0 standard. Cisco has also conducted interoperability testing between its wireless infrastructure and Intel clients to ensure optimal performance in an 802.11n wireless network, further protecting the infrastructure investments of organizations and "future-proofing" their wireless networks.

Summary

802.11n offers numerous benefits for the next generation of wireless networks, particularly for environments that offer guest access or must otherwise accommodate a variety of heterogeneous client devices. These environments—which include university campuses, hotels, convention centers and airports—can take advantage of the performance and compatibility advantages of 802.11n by deploying Cisco's next-generation wireless technology based on the 802.11n draft 2.0 standard. The Cisco Unified Wireless Network is modular and flexible and delivers the infrastructure that these multiclient environments need today, while protecting their investments for the future.



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