

Deploying 802.11n for Bandwidth-Intensive Applications

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 Challenges of a Bandwidth-Intensive Environment

A broad set of horizontal and vertical businesses rely on bandwidth-intensive applications. These applications require more throughput and bandwidth than commonly used applications such as e-mail and word processing. In the healthcare industry, for example, digital imaging files are transported across the wireless network so that doctors can receive important diagnostic information about patients immediately. Similarly, in an engineering environment, large CAD files are frequently shared over a wireless network as engineers collaborate on designs. These types of applications perform more effectively over networks with more bandwidth and throughput than today's average wireless networks can offer.

With these types of bandwidth-intensive applications, businesses have specific concerns to address, including:

- **Delivery of critical information in a timely manner.** With applications such as those found in healthcare environments, time-sensitive information must reach doctors, nurses, and other hospital personnel quickly and reliably.
- **Ability to send and receive large files without affecting network performance.** In environments like engineering labs where large files are sent on a regular basis, organizations want to ensure that these files don't slow network performance.
- **Maintaining employee productivity.** In all environments where bandwidth-intensive applications are common, it is critical that these applications run smoothly over the wireless network so that personnel have continuous access to the information they need and can remain productive.

Meeting the Challenges of Bandwidth-Intensive Environments with 802.11n and the Cisco Unified Wireless Network

802.11n is ideal for addressing the concerns of businesses that use bandwidth-intensive applications. With its five-fold increase in performance over the current generation of wireless networks, 802.11n can provide more bandwidth for each user. From the client perspective, this means that roughly every user who could obtain 1 Mbps with 802.11g, can now receive 5 Mbps with 802.11n.

With a Cisco® Unified Wireless Network, businesses can deploy an 802.11n-ready solution today that delivers the modularity and flexibility necessary to accommodate 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 using bandwidth-intensive applications. These environments which include hospitals and engineering labs can leverage the performance gains of 802.11n now 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 these bandwidth-intensive environments need today, while protecting their investments for the future.



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