Cisco 802.11ac Wave 2 Access Points

Next-generation wireless for the mobile enterprise

Customers pay for purchases with their smartphones. Schoolchildren read textbooks on tablets. Wireless video cameras monitor security. Employees no longer bother to plug in Ethernet cables.

Wireless usage is accelerating with the growth of more clients and with more bandwidth-demanding applications it is apparent that your network is going to require a high performing infrastructure to keep up.

How can you keep pace with this surge in Wi-Fi traffic?

Cisco can help. Our 802.11ac Wave 2 access points support the very latest Wi-Fi standard technology. Transmitting data at speeds beyond 1 Gbps, they provide the performance and functionality you need to support mobility for your customers and employees into the future.

Benefits

- **Prepare for an increasingly wireless future** as IoT, video, and mobile apps take to the airwaves
- **Deliver better customer service and employee experiences** with faster wireless connections
- **Be ready to serve Wave 2 client devices** with superior performance
- **Protect your investment** with access points that can accommodate growth while continuing to work with existing equipment

802.11ac, ratified by the IEEE in December 2013, delivers significant increases in peak throughput for consumers, enterprises, and service providers alike. Cisco and a number of other vendors worked with the IEEE in creating the 802.11ac amendment and continued that collaboration with the Wi-Fi Alliance in the definition of the Alliance's 802.11ac interoperability and certification process.

Performance boosts, end to end

One key part of Wave 2 802.11ac technology that helps keep your organization ahead of the capacity crunch is Multi-User MIMO (MU-MIMO). MU-MIMO allows an access point to transmit to multiple clients at the same time, instead of sending data to a single client at a time. These parallel transmissions improve RF efficiency when client devices also support 802.11ac Wave 2.

With MU-MIMO in use, each client device gets the amount of airtime it's supposed to have based on the technology supported – 802.11ac Wave 2, Wave 1, 802.11n, or an older version of the standard. So the limitation of one lower-speed client no longer slows overall downlink throughput for others.

Cisco goes beyond the 802.11ac Wave 2 standard with innovations and features accessible via these wireless devices, so your organization can optimize the user experience and beef up network security and scale for a mobile-first world. Cisco DNA assists you in managing the health of your network by providing a 360-degree contextual view of the user, applications, and the overall network itself.

Cisco DNA Center is a complete software-based network automation and assurance solution. Cisco DNA Center provides a way to deploy wireless networks with simplified configuration and image management through:

- Visibility
- Management
- Automation

Now high-density networks, with a rich set of features and best practices, can be enabled with the click of a button. Deploy your network faster and run smarter with reduced risk, Cisco DNA Center unlocks your network's full potential by interfacing with IT and business apps and integrating across IT operations and technical domains. Your network is now run with maximum performance, reliability, security and open interfaces.

Cisco DNA Assurance supplies you with the knowledge that your infrastructure is performing up to its capacity. If an issue arises, Cisco DNA Assurance allows you:

- To get to the right place (240+ events trigger dynamic packet capture)
- At the right time (go back to up to 14 days to view the actual problem)
- With the right action (guided remediation based on 9000 different Cisco Technical Assistance Center wireless cases).

Cisco DNA covers both your wired and wireless networks.

Cisco® Software-Defined Access (SD-Access) continues the consolidation of wired and wireless into one network as it makes use of just one policy throughout the entirety of your network, increasing business agility and scale. This simplified operation realizes that it's not just mobile devices connecting to the network, but IoT devices as well, and makes provisions that separate IoT devices from your mission- critical data.

With Wave 2's extra wireless capacity and spectrum efficiency, you want to be sure that wireless traffic doesn't face a bottleneck when it hits your wired LAN infrastructure. So Cisco offers the end- to-end infrastructure support and services you need to avoid network traffic jams.

- Cisco Catalyst® Multigigabit switches support 1-Gbps, 2.5-Gbps, 5-Gbps, and 10-Gbps speeds on existing Gigabit Ethernet cabling to accommodate your increasing Wi-Fi traffic over time and future higher-speed access point connections.
- Our latest wireless LAN controllers support up to 10 times the throughput of earlier Cisco WLAN controllers.
- Cisco 802.11ac Wave 2 access points secure the network while predicting and responding to issues and threats faster. Wireless is the first line of defense, so protect your access, assets, and airwaves.

Next steps

To learn more about Cisco 802.11ac Wave 2 solutions, visit the following links:

- All Cisco wireless products and services: https://www.cisco.com/go/wireless
- Cisco 802.11ac Wave 2 access points:
  - https://www.cisco.com/go/ap4800
  - https://www.cisco.com/go/ap3800
  - https://www.cisco.com/go/ap2800
  - https://www.cisco.com/go/ap1850
  - https://www.cisco.com/go/ap1830
  - https://www.cisco.com/go/ap1815
  - https://www.cisco.com/go/ap1560
  - https://www.cisco.com/go/ap1540
- Cisco Aironet® Active Sensor: https://www.cisco.com/c/en/us/products/wireless/aironet-active-sensor/index.html
- Cisco WLAN controllers: https://www.cisco.com/c/en/us/products/wireless/wireless-lan-controller/index.html
- 802.11ac technology: https://www.cisco.com/go/80211ac

With the assurance built into Cisco 802.11ac Wave 2 access points, you get the guarantee that the infrastructure is doing what you intended it to do. From isolating and replicating issues to providing the resolution, you can be sure that your access points are working for you.

Updating your network

Updating your wireless network is easier than you think. Not only will you be getting a faster wireless network packed with next-generation features, but you will also delve into deeper analytics and simplify your network management.

To learn more about the advantages of updating, please click here: https://www.cisco.com/c/m/en_us/solutions/enterprise-networks/infrastructure-upgrade-guide.html.

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