

How an AP connects to a switch



AI Overview

An Access Point (AP) connects to a switch using an Ethernet cable, which provides both data and often power, and the switch port can be configured as an access or trunk port depending on VLAN requirements.

Physical Connection An AP physically connects to a switch via an Ethernet cable. In enterprise setups, this connection often uses Power over Ethernet (PoE), allowing the AP to receive both power and network connectivity through a single cable. Alternatively, APs can use a separate power adapter, though this is less common in professional deployments.

Switch Port Configuration

- Access Port:** Carries traffic for a single VLAN. This is typically used when the AP serves clients from one VLAN, such as a corporate employee network.
- Trunk Port:** Carries traffic for multiple VLANs simultaneously using 802.1Q tagging. This is used when an AP broadcasts multiple SSIDs mapped to different VLANs, such as separating guest and employee networks.

For most controller-based APs in local mode, connecting to an access port is sufficient, while autonomous APs that handle multiple VLANs may require a trunk port.

Interaction with Wireless LAN Controllers (WLC)

In lightweight AP deployments, the AP does not manage itself. Instead, it connects to a Wireless LAN Controller (WLC) via the switch. The AP establishes a CAPWAP tunnel to the WLC, which includes:

- Control Tunnel:** For management and configuration
- Data Tunnel:** For user traffic

The WLC can be connected to the network backbone or core switch, while the AP forwards traffic through the switch to the WLC.

VLAN and SSID Mapping

Each AP can broadcast multiple SSIDs, which are mapped to VLANs. The switch port configuration ensures that traffic from each SSID is correctly tagged and forwarded to the appropriate VLAN. For single-SSID APs, a simple access port is sufficient, while multi-SSID APs may require trunk ports to carry multiple VLANs.

Verification

After connecting the AP to the switch and configuring VLANs and SSIDs, verify connectivity by connecting a wireless client to the AP and ensuring it r...

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The AP connects physically using an Ethernet cable to a switch port in the wired network. This connection provides data and often power (via PoE – Power over Ethernet).

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Cisco Wireless Architecture and AP Modes

The trunk mode port connects to the core switch and access layer switches in the above image to transport data between VLANs. Each autonomous AP is allocated a fixed IP address for

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In a CAPWAP environment, a lightweight access point discovers a switch by using CAPWAP discovery mechanisms and then sends a CAPWAP join request to the switch. The switch sends a CAPWAP

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In this short video, I explain how a wireless access point (AP) connects to a network switch and what configuration is required on the switch port.

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Screen mirroring and projecting to your PC or wireless display

On the PC you're projecting to, launch the Connect app by entering "Connect app" in the search box on the taskbar, and selecting Connect in the list of results. On the device you're projecting from, go to

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What the difference when APs are connected to a Access port or a

Just have a minor confusion today, what is the major difference when we have APs connected to the Access port of the Switch or when we have Trunk port connected to AP.

Access Points and Wireless LAN Controllers Explained

Just as a HUB or switch connects multiple devices in a wired LAN, an access point connects various wireless devices in a wireless network. It can

How LAN Connectivity Works: Access Point to Switch

Ever wondered how your LAN network stays connected wirelessly? ☐☐ In this video, I'll show you how an Access Point (AP) connects to a network

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