



# Address Resolution Protocol Proxy

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- [Address resolution protocol, on page 1](#)
- [Address resolution protocol proxy, on page 1](#)

## Address resolution protocol

A address resolution protocol is a network protocol that

- maps IP network addresses to hardware (MAC) addresses used by data link protocols
- enables devices in a local network to discover the physical address associated with an IP address, and
- facilitates communication by resolving addresses required for packet delivery on the network.

The Address Resolution Protocol (ARP) is used by the Internet Protocol (IP) [RFC826], specifically in IPv4 networks. When a wireless client sends an ARP request for an IP address of interest, the controller performs a search for that address in its database. If an entry is found in the controller database, then the ARP is converted to unicast and forwarded to that particular client. If there is no entry in the controller's database, the ARP request is flooded out to the VLAN wired ports.

## Address resolution protocol proxy

A proxy ARP operation is a wireless controller feature that

- responds to ARP request packets on destined for wireless clients
- minimizes broadcast traffic by limiting ARP requests to appropriate clients, and
- is applicable only in central switching mode for wireless client destinations.

ARP Proxy enables the controller to respond to ARP request packets destined for wireless clients. During broadcast suppression, the controller checks if proxy is enabled for the destined wireless clients. If proxy is enabled, the controller drops the ARP request packet and generates a response to the source so that the packet appears to come from the wireless client. This helps in limiting the traffic to the wireless clients.

If ARP Proxy is not enabled, the broadcast ARP request is converted into a unicast ARP request with the MAC address of the target client and forwarded only to that client.



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**Note** A device will not proxy the ARP request if the destination address does not belong to a wireless client.

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## Configure address resolution protocol proxy (CLI)

Enable ARP proxying for client devices on a WLAN by updating the relevant policy profile settings using commands.

### Procedure

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**Step 1** Enter the global configuration mode.

**Example:**

```
Device# configure terminal
```

**Step 2** Configure a WLAN policy profile and enter the wireless policy configuration mode.

**Example:**

```
Device(config)# wireless profile policy policy-profile-name
```

**Step 3** Enable ARP proxy.

**Example:**

```
Device(config-wireless-policy)# ipv4 arp-proxy
```

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