

# Configure AP1810W LAN Port Mapping

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## Introduction

This document describes how to configure VLAN-to-Ethernet port mappings on the local external wired LAN ports of the AP1810W and provides sample configurations for bridging the traffic locally at the Access Point (AP) as well as central switching on the Wireless LAN Controller (WLC).

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Basic knowledge of trunking and switchport configuration to support APs and the WLC with the use of trunks.
- Basic knowledge of the use of dynamic interfaces and the Remote LAN feature (RLAN) on Unified Wireless LAN Controllers.
- Refer to [Cisco AP1810W Datasheet](#) for detailed product information and [Cisco 1810W Deployment Guide](#) for other deployment topic information.

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco Unified Wireless LAN Controller capable of supporting code version 8.2.130.0\*
- Cisco AP1810W Wireless Access Point

**\*It is highly recommended to install [TAC recommended AireOS](#) when using AP1810W**

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

# Background Information

The Cisco AP1810W dual-band access point is the next generation AP and succeeds the AP702W. It combines 802.11n/ac wireless capabilities with external Gigabit Ethernet ports in a small form-factor in order to provide a wireless and wired solution in areas such as dormitory and hotel rooms or anywhere wireless and local wired connectivity options are useful. The 1810W provides three LAN ports, one of which also provides Power-over-Ethernet (PoE) capability.

## Configure

### Notes:

- The procedure to implement LAN port mappings on the AP1810W is different than the AP702w. This procedure is only valid for the AP1810W and should not be confused with the AP702w.
- Local bridging of traffic for devices connected to the LAN ports of the AP1810W does not support Local Mode. If the AP181W is configured in Local Mode, the LAN Port data will be centrally switched at the WLC based on the RLAN-to-Egress Interface mapping. Local bridging of LAN port data at the AP is supported if the AP is in FlexConnect Mode, and the RLAN is configured with Local Switching. See Cisco bug ID [CSCva56348](#)- AP1810W Support Local switching of LAN Port in Local Mode.

The Port-to-VLAN mapping configuration on the 1810W first requires the configuration of RLANs on the WLC. The RLAN entry on the WLC will be used to create a logical definition which will be applied to the Ethernet ports on the AP. Each LAN port can be mapped individually, to the same or unique RLANs. Traffic for devices connected to the LAN ports on the AP1810W can be bridged locally at the APs Ethernet port, or centrally switched on the WLC - the control of which will be handled on the RLAN configuration. All LAN port traffic for Local Mode AP1810Ws will centrally switch at the WLC.

As a reminder, ensure the trunk configuration on the AP switchport is correct, and the proper VLANs are defined and allowed. Also verify the FlexConnect VLAN support and VLAN mapping information for the Flexconnect APs is correct prior to configuration. If VLAN support and the Native VLAN configuration on the AP is not correct, it might result in improper handling of the client data.

## Map an RLAN to the AP LAN Ports

In order to map an RLAN to the AP LAN ports, complete these steps:

1. Create an RLAN entry on the WLC.
2. Choose whether client traffic on the RLAN will switch centrally at WLC or be bridged locally on the AP's Ethernet port.
3. If the traffic of the given LAN port to which the RLAN will map should switch locally at the AP, enable FlexConnect Local Switching on the RLAN and supply the VLAN ID.
4. Create an AP Group.
5. Add the 1810W to the AP Group.
6. Add RLAN(s) being mapped to the AP Group.
7. Configure the RLAN-to-LAN port mapping on the AP Group.

**Note:** If FlexConnect Local Switching is enabled on the RLAN, but the AP is in Local Mode, LAN port data will centrally switch on the WLC to the dynamic interface on which the RLAN is mapped.

## WLC Example for Local Switching of LAN Port Data on AP Ethernet Port

Complete these steps:

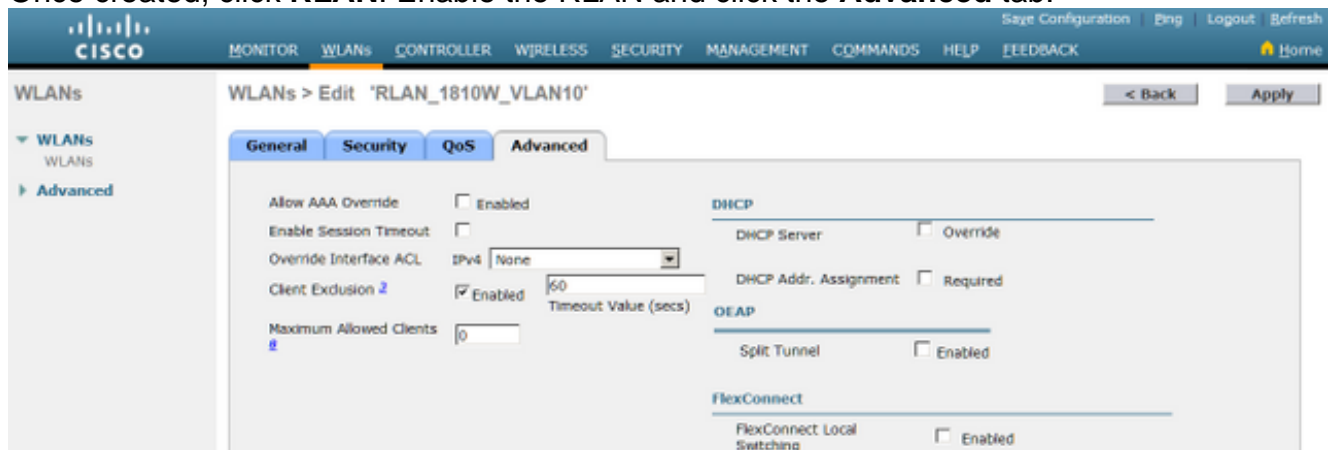
1. Create a RLAN on the WLC. Click **Apply**.



The screenshot shows the Cisco WLC configuration interface for creating a new RLAN. The page title is "WLANs > New". The "Type" is set to "Remote LAN", the "Profile Name" is "RLAN\_1810W\_VLAN10", and the "ID" is "7". There are "Back" and "Apply" buttons at the top right.

**Note:** MAC filtering is enabled by default when a new RLAN is created. Be sure to disable if not used.

2. Once created, click **RLAN**. Enable the RLAN and click the **Advanced** tab.



The screenshot shows the Cisco WLC configuration interface for editing an existing RLAN. The page title is "WLANs > Edit 'RLAN\_1810W\_VLAN10'". The "Advanced" tab is selected. The "FlexConnect Local Switching" checkbox is checked. There are "Back" and "Apply" buttons at the top right.

3. Check the **FlexConnect Local Switching** checkbox. In the VLAN Id field enter the VLAN ID to which this RLAN will map LAN Port data locally at the AP. Click **Apply** in order to save changes.

WLANs > Edit 'RLAN\_1810W\_VLAN10'

< Back Apply

**General** Security QoS **Advanced**

Allow AAA Override  Enabled

Enable Session Timeout

Override Interface ACL IPv4

Client Exclusion  Enabled  Timeout Value (secs)

Maximum Allowed Clients

**DHCP**

DHCP Server  Override

DHCP Addr. Assignment  Required

**OEAP**

Split Tunnel  Enabled

**FlexConnect**

FlexConnect Local Switching  Enabled

VLAN Id

**Note:** If FlexConnect Local Switching is enabled on the RLAN, but the AP is in Local Mode, LAN port data will centrally switch on the WLC to the dynamic interface on which the RLAN is mapped. **Note:** If Local Switching is enabled on the RLAN, the LAN port data will always be mapped to the VLAN ID supplied on the Advanced tab. If AP-Specific Flexconnect VLAN Support mapping is configured on the AP, or at Flexconnect Group level, the VLAN ID configured on the **RLAN will always take precedence**. However - if AAA Override is enabled on the RLAN and RADIUS sends a specific VLAN mapping, that value will take precedence over the RLAN's VLAN ID value.

4. Create an AP Group and add the RLAN to the group under the WLANs tab. Click **Add** once the proper RLAN is added.

**CISCO** MONITOR **WLANs** CONTROLLER WIRELESS SECURITY MANAGEMENT COMMANDS HELP FEEDBACK

WLANs

WLANs

Advanced AP Groups

Ap Groups > Edit 'APGroup\_1810W\_LAN1\_V10'

**General** **WLANs** RF Profile APs 802.11u Location Ports/Module

Add New

Add New

WLAN SSID

Interface /Interface Group(G)

SNMP NAC State  Enabled

Add Cancel

WLAN ID	WLAN SSID(2)(6)	Interface/Interface Group(G)	SNMP NAC State

**Note:** AP level configuration of the RLAN-Port mapping is not currently supported. However, the GUI does have a section to enable/disable the ports at AP level. Any changes there will override the Group level, and *should be left at defaults*.

5. Click the **Ports/Module** tab of the AP group.

WLANs

- WLANs
- Advanced
  - AP Groups

Ap Groups > Edit 'APGroup\_1810W\_LAN1\_V10'

General | **WLANs** | RF Profile | APs | 802.11u | Location | Ports/Module

Apply

**LAN Ports**

LAN (4/5)	ENABLE	POE	RLAN
LAN1 <sup>Z</sup>	<input type="checkbox"/>	<input type="checkbox"/>	None
LAN2	<input type="checkbox"/>		None
LAN3	<input type="checkbox"/>		None

**External module 3G/4G**

LAN	ENABLE	RLAN
Module	<input type="checkbox"/>	None

6. Map the desired LAN port(s) to the RLAN and click **Apply**.

WLANs

- WLANs
- Advanced
  - AP Groups

Ap Groups > Edit 'APGroup\_1810W\_LAN1\_V10'

General | **WLANs** | RF Profile | APs | 802.11u | Location | Ports/Module

Apply

**LAN Ports**

LAN (4/5)	ENABLE	POE	RLAN
LAN1 <sup>Z</sup>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	RLAN_1810
LAN2	<input type="checkbox"/>		None
LAN3	<input type="checkbox"/>		None

**External module 3G/4G**

LAN	ENABLE	RLAN
Module	<input type="checkbox"/>	None

**Notes:**

- For LAN port 1, PoE is supported and can be enabled or disabled. For any device that needs PoE (for example, I Phone), use LAN1 and enable PoE on the AP Group.
- See Cisco bug ID [CSCva90690](#) - 1810W LAN Port allows unauthenticated device traffic in local switching (Fixed in 8.2.130.0 and higher)

## Verify

In order to verify if local switching works, enter the **show mac address-table dynamic** command to check the MAC address table on the AP's switch and verify the connected client MAC address

is learned on the proper port and VLAN.

If LAN port client data traffic is centrally switched when local switching is enabled on the RLAN, verify the FlexConnect VLAN support and VLAN mapping configurations are correct on the AP.

## **Troubleshoot**

There is currently no specific troubleshooting information available for this configuration.