Configuring the AP-Manager Interface

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AP-Manager Interface

A controller configured with IPv4 has one or more AP-manager interfaces, which are used for all Layer 3 communications between the controller and lightweight access points after the access points have joined the controller. The AP-manager IP address is used as the tunnel source for CAPWAP packets from the controller to the access point and as the destination for CAPWAP packets from the access point to the controller.

Note A controller configured with IPv6 has only one AP-manager and is applicable on management interface. You cannot remove the AP-manager configured on management interface.

Note The controller does not support jumbo frames. To avoid having the controller transmit CAPWAP packets to the AP that will necessitate fragmentation and reassembly, reduce MTU/MSS on the client side.

A controller configured with IPv6 does not support Dynamic AP-Manager. By default, the management interface acts like an AP-manager interface. Link Aggregation (LAG) is used for IPv6 AP load balancing.

This section contains the following subsections:

Restrictions for Configuring AP Manager Interface

- For IPv4—The MAC address of the management interface and the AP-manager interface is the same as the base LAG MAC address.
- An AP-manager interface is not required to be configured. The management interface acts like an AP-manager interface by default, and the access points can join on this interface.

- If link aggregation (LAG) is enabled, there can be only one AP-manager interface. But when LAG is disabled, one or more AP-manager interfaces can be created, generally one per physical port.
  - When LAG is enabled—Supports only one AP Manager, which can either be on the management or dynamic interface with AP management.
  - When LAG is disabled—Supports one AP Manager per port. The Dynamic Interface tied to a VLAN can act as an AP Manager (when enabled).

Note When you enable LAG, all the ports would lose their AP Manager status and the AP management reverts back onto the Management interface.

- Port redundancy for the AP-manager interface is not supported. You cannot map the AP-manager interface to a backup port.
- It is not possible to have APs and a non-AP-manager interface on the same VLAN. If they are in the same VLAN, the controller will move the traffic up on the incorrect VLAN as the controller gets the CAPWAP discovery on the non-AP-manager interface.

Configuring the AP-Manager Interface (GUI)

Step 1 Choose **Controller > Interfaces** to open the **Interfaces** page.

Step 2 Click AP-Manager Interface.

The **Interface > Edit** page is displayed.

Note For IPv6 only—A controller configured with IPv6 address does not support Dynamic AP-Manager. By default, the management interface acts like an AP-manager interface.

Step 3 Set the AP-Manager Interface parameters:

Note For Cisco 5508 WLCs, you are not required to configure an AP-manager interface. The management interface acts like an AP-manager interface by default.

- Physical port assignment
- VLAN identifier

Note Enter 0 for an untagged VLAN or a nonzero value for a tagged VLAN. We recommend using tagged VLANs for the AP-manager interface.

Note The gig/wired subinterface is numbered with VLAN number and dot11 subinterface is numbered with the WLAN ID. The first configured WLAN becomes dot11 0.1 & dot11 1.1 and second WLAN ID subinterface becomes dot11 0.2 & dot11 1.2 onwards. This dot11 sub interface number cannot be mapped with a VLAN ID because multiple WLANs can be assigned with a same VLAN number. We cannot have duplicate subinterface created in the system. The native subinterface configuration in wired interface is the AP native VLAN configuration, if VLAN support is enabled in FlexConnect mode or else the native interface is always gig prime interface in AP (Local / Flex with no VLAN support).

- Fixed IP address, IP netmask, and default gateway

- Primary and secondary DHCP servers
- Access control list (ACL) name, if required

Step 4 Click **Save Configuration** to save your changes.

Step 5 If you made any changes to the management or virtual interface, reboot the controller so that your changes take effect.

Configuring the AP Manager Interface (CLI)

Before you begin

For Cisco 5508 WLCs, you are not required to configure an AP-manager interface. The management interface acts like an AP-manager interface by default.

A controller configured with IPv6 address does not support Dynamic AP-Manager. The management interface acts like an AP-manager interface by default.

Step 1 Enter the **show interface summary** command to view the current interfaces.

Step 2 Enter the **show interface detailed** *interface-name* command to view the current AP-manager interface settings.

Step 3 Enter the **config wlan disable** *wlan-id* command to disable each WLAN that uses the AP-manager interface for distribution system communication.

Step 4 Enter these commands to define the AP-manager interface:

- **config interface address management** *ip-addr ip-netmask gateway*
- **config interface vlan management** {*vlan-id* | *0*}

  Note Enter *0* for an untagged VLAN or a nonzero value for a tagged VLAN. We recommend using tagged VLANs for the AP-manager interface.

- **config interface port management** *physical-ds-port-number*
- **config interface dhcp management** *ip-address-of-primary-dhcp-server* [*ip-address-of-secondary-dhcp-server*]
- **config interface acl management** *access-control-list-name*

Step 5 Enter the **save config** command to save your changes.

Step 6 Enter the **show interface detailed** *interface-name* command to verify that your changes have been saved.

Configuration Example: Configuring AP-Manager on a Cisco 5500 Series Controller

For a Cisco 5508 WLC, we recommend that you have eight dynamic AP-manager interfaces and associate them to the eight Gigabit ports of the controller when LAG is not used. If you are using the management

interface, which acts like an AP-manager interface by default, you must create only seven more dynamic AP-manager interfaces and associate them to the remaining seven Gigabit ports.

Note For IPv6 only—A controller configured with IPv6 address does not support Dynamic AP-Manager. By default, the management interface acts like an AP-manager interface. Use LAG for IPv6 AP load balancing.

Figure 1: Dynamic Interface Example with Dynamic AP Management

This figure shows a dynamic interface that is enabled as a dynamic AP-manager interface and associated to port number 2.

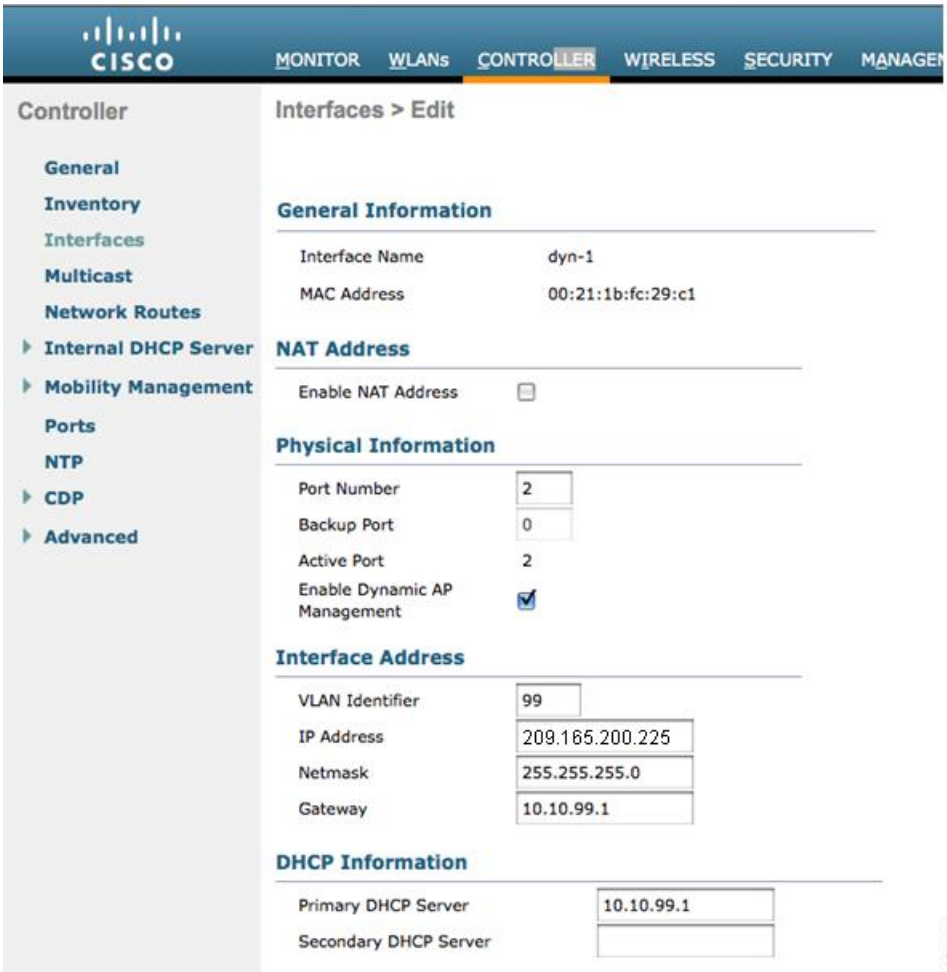
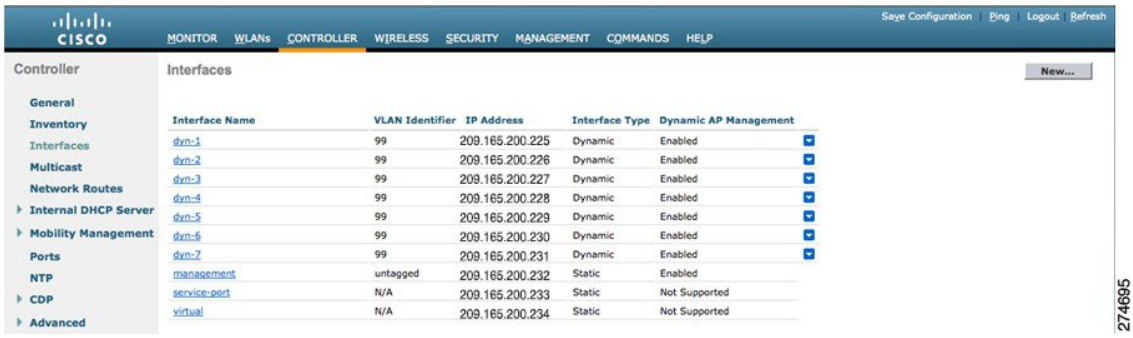


Figure 2: Cisco 5508 WLC Interface Configuration Example

This figure shows a Cisco 5508 WLC with LAG disabled, the management interface used as one dynamic AP-manager interface, and seven additional dynamic AP-manager interfaces, each mapped to a different Gigabit port.


Save Configuration | Ping | Logout | Refresh
MONITOR WLANs CONTROLLER WIRELESS SECURITY MANAGEMENT COMMANDS HELP
Controller
General
Inventory
Interfaces
Multicast
Network Routes
Internal DHCP Server
Mobility Management
Ports
NTP
CDP
Advanced
Interfaces
New...
Interface Name VLAN Identifier IP Address Interface Type Dynamic AP Management
dyn-1 99 209.165.200.225 Dynamic Enabled
dyn-2 99 209.165.200.226 Dynamic Enabled
dyn-3 99 209.165.200.227 Dynamic Enabled
dyn-4 99 209.165.200.228 Dynamic Enabled
dyn-5 99 209.165.200.229 Dynamic Enabled
dyn-6 99 209.165.200.230 Dynamic Enabled
dyn-7 99 209.165.200.231 Dynamic Enabled
management untagged 209.165.200.232 Static Enabled
service-port N/A 209.165.200.233 Static Not Supported
virtual N/A 209.165.200.234 Static Not Supported
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