Reset the CAPWAP Configuration on IOS and ClickOS APs

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Introduction

This document describes how to manually set or reset static configuration information on Cisco IOS® and ClickOS Access Points (APs).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Basic knowledge of the configuration of CAPWAP APs and Cisco Wireless LAN Controllers (WLC)
- Basic knowledge of Control And Provisioning of Wireless Access Points protocol

Components Used

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

- Cisco 5520 WLC that runs firmware release 8.8.111.0
- Cisco AIR-CAP3702I-E-K9 Series AP
- Cisco AIR-AP4800-E-K9 Series AP
- Cisco 9800-CL that runs firmware release 17.6.3

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, ensure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Manually Configure the AP

In a new installation, when an AP is unable to find a WLC through the discovery algorithms, you can statically configure the information necessary in order to join a controller via the console port and the AP Command Line Interface (CLI). Refer to Lightweight AP (LAP) Registration to a Wireless LAN Controller (WLC) for more information on the WLC discovery algorithms and the LAP registration process.

In order to manually configure static information on an AP through the AP CLI interface, you can use these EXEC mode CLI commands:

- For Cisco IOS-based APs:

<#root>

AP#

capwap ap ip address <IP address> <subnet mask>

AP#

capwap ap ip default-gateway <IP-address>

AP#

capwap ap primary-base <WLC-sysname> <IP-address>

AP#

capwap ap secondary-base <WLC-sysname> <IP-address>

(optional)
AP#capwap

ap hostname <name>

(optional)

- For ClickOS-based APs:

<#root>

AP#

capwap ap ip <IP-address> <subnet mask> <default-gateway> [<dns1-ip-address> <dns2-ip-address> <domain>]

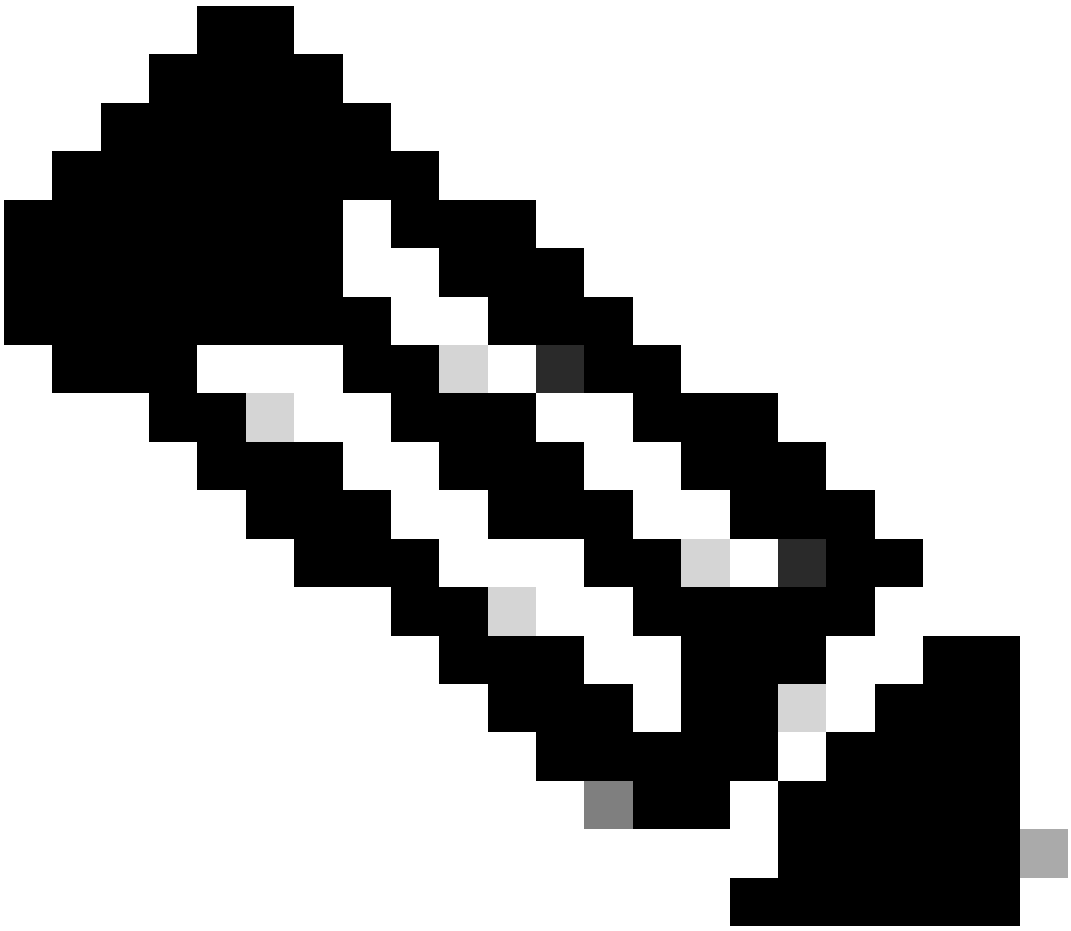
AP#

capwap ap primary-base <WLC-sys-name> <IP-address>

AP#

capwap ap hostname <name>

```
(optional)
```



Note: You must issue these commands while in enable mode. The default enable password is Cisco. The static information configured with the CLI commands is used by the AP in order to join a controller. After the AP joins the controller, the user can configure new settings on the LAP via the controller.

Reset the Lightweight Configuration on the AP

When you move your AP to a different location in your network and the AP cannot join the previous WLC, or if you want to manually reconfigure the AP in order to join another WLC, you must enter the new controller information in order to allow your AP to associate with a different controller.

Reset AP through the AireOS or Catalyst WLC

In addition to the previous methods, you can also reset the configuration of the LAP from the WLC. When the LAP is registered to the controller, you can use these commands from the controller in order to reset the

configuration on the LAP:

- Use the clear ap config <ap-name> keep-ip-config command in order to clear all of the AP configurations to default, except for the AP static IP configuration.
- Use the clear ap config <ap-name> command in order to clear all of the AP configurations to default, which includes the AP static IP configuration.

Reset AP through CLI

In order to use this method, log in to the AP console mode in privilege exec mode:

- For Cisco IOS-based APs:

```
AP#clear capwap ap ?
    all-config <-- if you need to reset AP to factory default (this command causes system)
    controller <-- if you need to clear static configuration for WLC IP address (this command may cause
    dot1x  <-- if you need to reset dot1x credentials for AP authentication
    hostname <-- if you need to reset AP host name config
    ip <-- if you need to remove static IP configuration on AP. (this command may cause termination ses
```

- For ClickOS-based APs:

```
AP#capwap ap erase ?
  all <-- Erase all AP config (this commands causes AP to reboot)
  static-ip  <-- Erase static IP/DNS config (this command causes termination session to WLC and new DTL
```

Reset AP with the Reset Button

In order to use this method, you must have physical access to the AP. The process is the same for both Cisco IOS and ClickOS APs.

1. Disconnect power from AP.
2. Press and hold the **Mode button** on AP and provide power to AP.
3. Keep holding the mode button for 20 seconds or more.

- On Cisco IOS-based APs:

```
IOS Bootloader - Starting system.
flash is writable
Tide XL MB - 40MB of flash
...
button pressed for 22 seconds
```

- On ClickOS-based APs:

```
AP#Button is pressed. Configuration reset activated..
Keep the button pressed for > 20 seconds for full reset

Wait for the button to be released ....
Button pressed for 22 seconds
```

How to Disable the Reset Button on the AP Registered to the Controller

In order to disable the reset button on the AP registered to the controller, use this CLI command:

<#root>

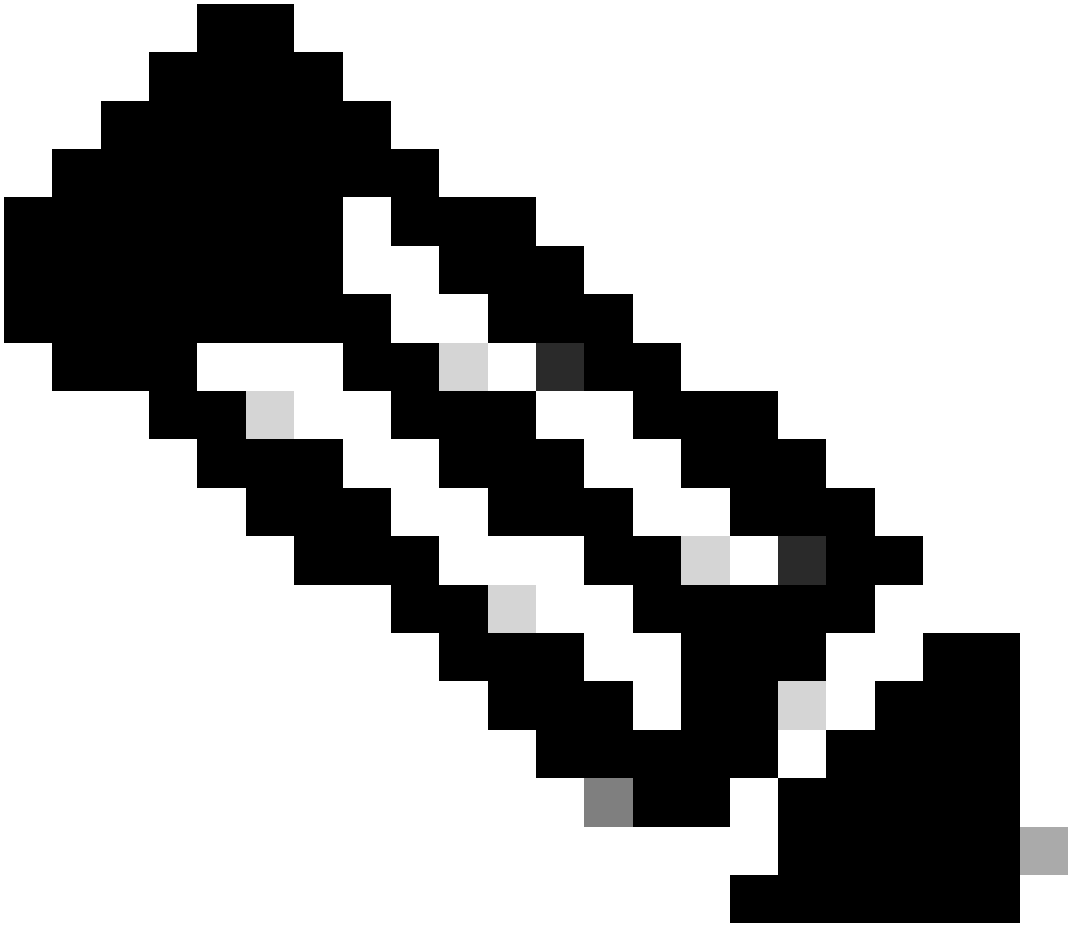
```
(Cisco Controller) >
```

config ap rst-button disable <AP NAME>

Troubleshooting

You can use this **debug** command on a LAP with a console port in order to troubleshoot problems related to IP address assignment:

- On Cisco IOS-based APs:
  - debug ip udp
- On ClickOS-based APs:
  - debug dhcp events
  - debug dhcp errors
  - debug dhcp packets



Note: If the AP has no console port, it is necessary to take a wired sniffer trace of the port that the LAP is plugged into to see what packets are received by and transmitted to the LAP.

You can use these debug commands in order to monitor the discovery process through the WLC CLI:

- On Cisco IOS and ClickOS-based APs:
  - **debug capwap client events**
  - debug capwap client errors
  - debug capwap client detail