



DHCP and NAT Functionality on Root Access Point

- [Information About DHCP and NAT Functionality on Root AP \(RAP\), on page 1](#)
- [Configuring DHCP Server on Root Access Point \(RAP\), on page 2](#)
- [Verifying DHCP Server for Root AP Configuration, on page 2](#)

Information About DHCP and NAT Functionality on Root AP (RAP)



Note This feature is applicable for Cisco Aironet 1542 series outdoor access points only.

The access points associated to a mesh network can play one of the two roles:

- Root Access Point (RAP) - An access point can be a root access point for multiple mesh networks.
- Mesh Access Point (MAP) - An access point can be a mesh access point for only one single mesh network at a time.

DHCP and NAT Functionality on Root AP - IPv4 Scenario

This feature enables the controller to send a TLV to RAP when a new RAP joins the controller.

The following covers the workflow:

- Controller pushes TLV to RAP for enabling DHCP and NAT functionality.
- Client associates to an SSID.
- RAP executes DHCP functionality to assign private IPv4 address to the client.
- RAP executes NAT functionality to get the private IPv4 address of the client and allow access to the network.

Configuring DHCP Server on Root Access Point (RAP)

Procedure

| | Command or Action | Purpose |
|---------------|--|---|
| Step 1 | configure terminal Example: Device# configure terminal | Enters global configuration mode. |
| Step 2 | ap profile <i>ap-profile-name</i> Example: Device(config)# ap profile ap-profile-name | Configures an AP Profile. |
| Step 3 | dhcp-server Example: Device(config-ap-profile)# dhcp-server | Configures DHCP server on the root access point. |
| Step 4 | end Example: Device(config-ap-profile)# end | Saves the configuration and exits configuration mode and returns to privileged EXEC mode. |

Verifying DHCP Server for Root AP Configuration

To verify the DHCP server for root AP configuration, use the following command:

```
Device# show ap config general
Cisco AP Name   : AP4C77.6DF2.D588
=====
<SNIP>
Dhcp Server                               : Enabled
```