



# DHCP and NAT Functionality on Root Access Point

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## DHCP and NAT functionality on root AP (RAP)

DHCP and NAT functionality is a wireless network feature that

- assigns private IPv4 addresses to client devices using DHCP
- translates these private addresses to public addresses for network access with NAT, and
- enables root APs (RAPs) to provide seamless connectivity for clients in a mesh network.

The APs associated with a mesh network can play one of the two roles:

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



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**Note** This feature is applicable for Cisco Aironet 1542 series outdoor APs.

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## Configure DHCP server on root AP (CLI)

Configure a DHCP server on the root AP.

### Procedure

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- Step 1** Enter global configuration mode.

**Example:**

```
Device# configure terminal
```

**Step 2** Configure an AP profile.

**Example:**

```
Device(config)# ap profile ap-profile-name
```

**Step 3** Configure the DHCP server on the root AP.

**Example:**

```
Device(config-ap-profile)# dhcp-server
```

**Step 4** **end**

**Example:**

```
Device(config-ap-profile)# end
```

The system saves the configuration, exits configuration mode, and returns to privileged **EXEC** mode.

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The root AP is now configured as a DHCP server and assigns IP addresses to associated clients.

## Verify DHCP server for root AP configuration

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

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