



## Cisco Umbrella WLAN (OpenDNS)

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## Cisco Umbrella WLAN (OpenDNS)

The Cisco Umbrella WLAN (OpenDNS) provides a cloud-delivered network security service at the Domain Name System (DNS) level, with automatic detection of both known and emergent threats.

This feature allows you to block sites that host malware, bot networks, and phishing before they actually become malicious.

Cisco Umbrella WLAN provides:

- Policy configuration per user group at a single point.
- Policy configuration per network, group, user, device, or IP address.

The following is policy priority order:

1. Local policy
2. AP group
3. WLAN

- Visual security activity dashboard in real time with aggregated reports.
- Schedule and send reports through email.
- Support up to 60 content categories, with a provision to add custom allowed list and blocked list entries.

This feature does not work in the following scenarios:

- If an application or host use an IP address directly, instead of using DNS to query domain names.
- If a client is connected to a web proxy and does not send a DNS query to resolve the server address.



**Note** For more information about integrating this feature, see the *Cisco Umbrella WLAN Integration Guide* at [https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/8-4/b\\_cisco\\_umbrella\\_wlan\\_integration\\_guide.html](https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/8-4/b_cisco_umbrella_wlan_integration_guide.html)

## Configuring Cisco Umbrella WLAN (GUI)

### Before you begin

- You should have an account with Cisco Umbrella.
- You should have an API token from Cisco Umbrella.

### Procedure

**Step 1** Choose **Security > OpenDNS > General**.

The **OpenDNS General Configuration** window is displayed.

**Step 2** Check the **OpenDNS Global Status** check box to enable OpenDNS configuration.

**Step 3** In the **OpenDns-ApiToken** field, enter the API-token obtained from the OpenDNS Server account.

**Step 4** In the **Profile Name** field, enter the profile name that is to be used in the OpenDNS configuration.

**Step 5** Click **Add**.

**Step 6** Map the profile to the corresponding WLAN or AP group.

- a) To map the profile to a WLAN, choose **WLAN > WLAN ID > Advanced**, and from the **OpenDNS Profile**, select the desired profile.

**Note** An administrator can configure OpenDNS in a WLAN in the following modes under the WLAN advanced tab:

- **DHCP Proxy for DNS override** - This is the interface-level configuration, which forms part of the DHCP process to propagate OpenDNS IP address to all WLANs associated to the interface.
- **OpenDNS Mode Force (default)** - This mode is enforced per WLAN, which blocks intentional client activity after client is associated to a WLAN.
- **OpenDNS Mode Ignore (default)** - The Cisco WLC honors the DNS server used by the client, which could be OpenDNS server or enterprise/external DNS.

- b) To map the profile to an AP group, choose **WLANs > Advanced > AP Groups**, select the corresponding AP group, click the **WLAN** tab, and mouse over the blue button and select **OpenDNS Profile**.

To view OpenDNS mapping, choose **Security > OpenDNS > General** and click the **Profile Mapped Summary** hyperlink.

**Note** Each Cisco Umbrella profile will have a unique OpenDNS-Identity generated on the controller (in the format *WLC name \_profile name*). This will be pushed to the associated Cisco Umbrella account in the cloud.

**Step 7** Click **Apply**.

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#### What to do next

1. From Cisco Umbrella Dashboard, verify that your Cisco WLC shows up under **Device Name**, along with their identities
2. Create classification rules for the user roles, for example, rules for employees and nonemployees.
3. Configure policies on the Cisco Umbrella server.

## Configuring Cisco Umbrella WLAN (CLI)

This section describes the procedure to configure Cisco Umbrella for a wireless LAN (WLAN) or an access point (AP) group in a WLAN.

#### Before you begin

- You should have an account with Cisco Umbrella.
- You should have an API token from Cisco Umbrella.

#### Procedure

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**Step 1** `config network dns serverip server-ip`

**Example:**

```
(Cisco Controller) > config network dns serverip 208.67.222.222
```

Configures the DNS server IP address of the network.

**Step 2** `config.opendns enable`

**Example:**

```
(Cisco Controller) > config.opendns enable
```

Enables the Cisco Umbrella global configuration.

**Step 3** `config.opendns api-token api-token`

**Example:**

```
(Cisco Controller) > config.opendns api-token  
D72996C18DC334FB2E3AA46148D600A4001E5997
```

Registers the Cisco Umbrella API token on the network.

**Step 4** `config.opendns profile create profilename`

**Example:**

```
(Cisco Controller) > config.opendns.profile.create.profile1
```

Creates an Cisco Umbrella profile that can be applied over a WLAN.

**Step 5 config wlan.opendns-profile wlan-id profile-name enable****Example:**

```
(Cisco Controller) > config wlan.opendns-profile.wlan1.profile1.enable
```

Applies the Cisco Umbrella profile to a WLAN.

**Step 6 config wlan.apgroup.opendns-profile wlan-id site-name profile-name enable****Example:**

```
(Cisco Controller) > config wlan.apgroup.opendns-profile.wlan1.apgrp1.profile1
```

(Optional) Applies the Cisco Umbrella profile to an AP group with the WLAN.

**Step 7 config.policy.policy-name create****Example:**

```
(Cisco Controller) > config.policy.ipad.create
```

Creates a policy name.

In Cisco WLC, policy is generic term that specifies a rule and the associated action when that rule criteria is met for given client.

You can create policy and have rule on that by saying if the rolename from AAA server comes as *employee* take an action to apply Cisco Umbrella profile associated to that policy. Cisco Umbrella profile is applied to the client if the WLAN of that client is mapped for this policy.

**Step 8 config.policy.policy-name.action.opendns-profile-name enable****Example:**

```
(Cisco Controller) > config.policy.ipad.action.opendns-profile-name.enable
```

Attaches the policy name to the Cisco Umbrella profile.

**What to do next**

Configure policies in `opendns.com`.

- Configure granular policies to block sites based on the category of each profile (profiles are listed as identities).
- Add allowed list and blocked list rules for each profile.

## Configuring Local Policies for Cisco Umbrella (GUI)

When mapped to local policy, the Cisco Umbrella allows for a granular differentiated user browsing experience based on dynamic evaluation of attributes (user role, device type, and so on).

Use this procedure to configure user role based local policy and tie the corresponding Cisco Umbrella profile to it. This procedure also provides information about how to map a local policy to a WLAN.

### Procedure

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- Step 1** Choose **Security > Local Policies > New**.
- This opens the new policy creation page.
- In the **Policy Name** field, enter the local policy name.
  - Click **Apply**.
- Step 2** From the policies listed under **Policy List**, choose a **Policy Name** to configure the Cisco Umbrella profile.
- From the **Match Criteria** sub-section, enter the Match Role String.
  - From the **Action** sub-section, select the required option from the OpenDNS Profile drop-down list.
  - Click **Apply**.
- Step 3** Choose **WLAN > WLAN ID > Policy Mapping**.
- In the **Priority Index** field, enter the priority index number.
  - From the **Local Policy** drop-down list, choose a value.
  - Click **Add**.
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### What to do next

Verify whether the policies you created are working, by connecting a client to the WLAN.

