



# IPv6 Support

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## Overview

From UIW Release 17.15.1, APs support IPv6 addresses. By default, the IPv6 service is disabled on the AP. You can enable and configure the IPv6 address on the AP using either the CLI or GUI.

## IPv6 Address Types

You can configure the AP with the following IPv6 address types:

- Link-Local
- Unique-Local
- Global Unicast

### Link-Local

Link-local addresses are used within the scope of a single link and cannot be routed. These addresses refer specifically, to a particular physical link and are used for addresses on a single link for purposes such as automatic address configuration and the neighbor discovery protocol. Link-local addresses can be used to reach the neighboring nodes attached to the same link.

### Unique-Local

Unique local addresses can be routed within a private organization, but not through the public internet. It is not expected to be routable on the global Internet. However, it is routable inside a limited area, such as a site, and it may route between a limited set of sites.

### Global Unicast

A global unicast address is a routable address in the IPv6 Internet, similar to the public IPv4 address space.

## IPv6 Limitations on the AP

- The IPv6 support is limited only to host functionality.
- The Fluidity Layer 3 network does not support IPv6.

## Enable or Disable IPv6 using CLI

By default, IPv6 support is disabled on the AP. When IPv6 is enabled, a link-local address is automatically assigned to the AP.

Use this command to enable or disable the IPv6 address on the AP.

```
Device#configure ipv6 {enable | disable}
```

## Enable or Disable IPv6 RA Autoconfig using CLI

Use this command to enable or disable the IPv6 RA Autoconfig on the AP.

```
Device#configure ipv6 enable autoconfig-ra {enable | disable}
```



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**Note**

- Enable: Enables the autoconfiguration from router advertisement.
  - Disable: Disables the autoconfiguration from router advertisement.
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## Configure Static IPv6 Address with eui-64, Gateway, and DNS Server Address

Use this command to configure the static IPv6 address with eui-64, gateway, and DNS server address on the AP.

```
Device#configure ap address ipv6 static fc00::4236:5aff:xxxx:168/64 eui-64 fc00::1
2001:4860:4860::xxxx 2001:4860:4860::xxxx
```

## Verify Static IPv6 Address with eui-64, Gateway, and DNS Server Address

To verify the static IPv6 address with eui-64, gateway, and DNS server address on the AP, use the following **show** command:

```
Device#show ipv6
IPv6: Enabled
Router Advertisement auto-configuration: Disabled
Static IPv6 config:
Address: fc00::4236:5aff:xxxx:168/64
Gateway: fc00::1
DNS1: 2001:4860:4860::xxxx
DNS2: 2001:4860:4860::xxxx
Currently assigned addresses:
fc00::4236:5aff:xxxx:168/64 global
fe80::4236:5aff:xxxx:168/64 link
```

## Configure Static IPv6 Address without eui-64, Gateway, and DNS Server Address

Use this command to configure the static IPv6 address without eui-64, gateway, and DNS server address on the AP.

```
Device#configure ap address ipv6 static fc00::1234:5678:xxxx:def/64 fc00::1
2001:4860:4860::xxxx 2001:4860:4860::xxxx
```

## Verify Static IPv6 Address without eui-64, Gateway, and DNS Server Address

To verify the static IPv6 address without eui-64, gateway, and DNS server address on the AP, use the following **show** command:

```
Device#show ipv6
IPv6: Enabled
Router Advertisement auto-configuration: Disabled
Static IPv6 config:
Address: fc00::1234:5678:xxxx:def/64
```

```

Gateway: fc00::1
DNS1: 2001:4860:4860::xxxx
DNS2: 2001:4860:4860::xxxx
Currently assigned addresses:
fc00::1234:5678:xxxx:def/64 global
fe80::4236:5aff:xxxx:168/64 link

```

## Configure Static IPv6 Address with eui-64

Use this command to configure the static IPv6 address with eui-64 on the AP.

```
Device#configure ap address ipv6 static fc00::4236:5aff:xxxx:168/64 eui-64
```

## Verify Static IPv6 Address with eui-64

To verify the static IPv6 address with eui-64 on the AP, use the following **show** command:

```

Device#show ipv6
IPv6: Enabled
Router Advertisement auto-configuration: Disabled
Static IPv6 config:
Address: fc00::4236:5aff:xxxx:168/64
Currently assigned addresses:
fc00::4236:5aff:xxxx:168/64 global
fe80::4236:5aff:xxxx:168/64 link

```

## Configure Static IPv6 Address without eui-64

Use this command to configure the static IPv6 address without eui-64 on the AP.

```
Device#configure ap address ipv6 static fc00::1234:5678:xxxx:def
```

## Verify Static IPv6 Address without eui-64

To verify the static IPv6 address without eui-64 on the AP, use the following **show** command:

```

Device#show ipv6
IPv6: Enabled
Router Advertisement auto-configuration: Disabled
Static IPv6 config:
Address: fc00::1234:5678:xxxx:def/128
Currently assigned addresses:
fc00::1234:5678:xxxx:def/128 global
fe80::4236:5aff:xxxx:168/64 link

```

## Clear the IPv6 Gateway and DNS Servers Configuration

Use this command to clear the IPv6 gateway and DNS servers addresses configuration on the AP.

```
Device#configure ap address ipv6 static fc00::1234:5678:xxxx:def/64 :: :: ::
```

# Verify the Cleared IPv6 Gateway and DNS Servers Configuration

To verify the cleared IPv6 gateway and DNS server addresses configuration on the AP, use the following **show** command:

```
Device#show ipv6
IPv6: Enabled
Router Advertisement auto-configuration: Disabled
Static IPv6 config:
Address: fc00::1234:5678:xxxx:def/64
Currently assigned addresses:
fc00::1234:5678:xxxx:def/64 global
fe80::4236:5aff:xxxx:168/64 link
```



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**Note** While adapting services to work with IPv6, such as TFTP, you must consider that link-local IP addresses might require network interface specifications.

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## Enable and Configure Static IPv6 using GUI

### Procedure

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- Step 1** Launch the computer's web browser and enter the URL to open the configurator login page.
  - Step 2** Enter the username and password in the respective fields.
  - Step 3** Click **Login**.  
Once you successfully log into the GUI, the URWB configurator displays.
  - Step 4** In the **GENERAL SETTINGS**, click **general mode** to open the **General Mode** window.

The screenshot shows the Cisco URWB IW9167EH Configurator interface. The top header includes the Cisco logo and the text "ULTRA RELIABLE WIRELESS BACKHAUL". The main title is "Cisco URWB IW9167EH Configurator" with the IP address "5.21.201.156 - MESH POINT MODE".

On the left sidebar, there are sections for "IOTOD IW" (Offline) and "IW-MONITOR" (Disabled). Below these are various configuration categories: GENERAL SETTINGS, NETWORK CONTROL, ADVANCED SETTINGS, and MANAGEMENT SETTINGS, each with a list of sub-options.

The main content area is titled "GENERAL MODE" and contains the following settings:

- General Mode:** A section with a sub-header "General Mode" and a note: "Select MESH POINT mode if you are attaching an IP edge device (i.e. network camera, encoder, etc.) to this Cisco Catalyst IW9167E Heavy Duty Access Point or if you are using this unit as a relay point in the mesh network."
  - Mode:  mesh point,  mesh end,  gateway
  - Radio-off:
- LAN Parameters:** A section with several input fields:
  - Local IP: 10.115.11.129
  - Local Netmask: 255.255.255.0
  - Default Gateway: 10.115.11.1
  - Local Dns 1: 8.8.8.8
  - Local Dns 2: 4.4.4.4
  - Enable IPv6:
  - RA Autoconfig:
  - Local IPv6: [empty field]
  - Use EUI-64:
  - Default Gateway IPv6: [empty field]
  - Local Dns 1 IPv6: [empty field]
  - Local Dns 2 IPv6: [empty field]

At the bottom of the main content area, there are two buttons: "Reset" and "Save".

At the very bottom of the page, there is a copyright notice: "© 2024 Cisco and/or its affiliates. All rights reserved."

**Note**

In the GUI, the term "local" refers to the IPv4 or IPv6 addresses that are set up statically. Specifically, the **Local IPv6** accepts all type of IPv6 address, which allows for the static configuration of the device's IPv6 address.

**Step 5** Check the **Enable IPv6** check box. The system automatically enables the **RA Autoconfig**.

**Step 6** Enter IPv6 address in the **Local IPv6** field.

**Step 7** (Optional) Check the **Use EUI-64** check box.

**Note**

IPv6 addresses differ with and without the eui-64 option.

**Step 8** (Optional) Enter the gateway IP address in the **Default Gateway IPv6** field.

**Step 9** (Optional) Enter the DNS server 1 IP address in the **Local Dns 1 IPv6** field.

**Step 10** (Optional) Enter the DNS server 2 IP address in the **Local Dns 2 IPv6** field.

**Step 11** Click **Save**.

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## Verify Static IPv6 using GUI

### Procedure

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**Step 1** In the **MANAGEMENT SETTINGS**, click **status**.

**Step 2** On the **STATUS** page, in the **DEVICE SETTINGS** section, you can view the IPv6 details.

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