IPv6 Support on Flex and Mesh

- IPv6 support on FlexConnect + mesh deployment, on page 1

IPv6 support on FlexConnect + mesh deployment

A FlexConnect and mesh deployment is a wireless network configuration that

- enables IPv6 as the primary backhaul transport for service provider
- supports IPv6 clients connecting via WLANs on the Cisco Catalyst 9800 series wireless controller and Cisco Embedded Wireless controller on Catalyst APs, and
- forwards IPv6 client traffic efficiently to the network core.

Configure IPv6 support for FlexConnect + Mesh (CLI)

Follow these steps to enable IPv6 routing and multicast features for FlexConnect and Mesh on a controller using commands.

Procedure

Step 1 Enter the global configuration mode.

Example:

```
Device# configure terminal
```

Step 2 Create an interface and enter the interface configuration mode.

Example:

```
Device(config)#interface vlan vlan-interface-number
```

Step 3 Disable the interface configuration.

Example:

```
Device(config-if)#shutdown
```

Step 4 (Optional) Enable IPv6 on the interface.

Example:

```
Device(config-if)#ipv6 enable
```

Step 5 Configure IPv6 address on the interface using the IPv6 prefix option.

Example:

```
Device(config-if)#ipv6 address X:X:X:X::X/<0-128>
```

Step 6 Enable the IPv6 address.

Example:

```
Device(config-if)#no shutdown
```

Step 7 Enable the PIM dense-mode operation.

Example:

```
Device(config-if)#no shutdown
```

Step 8 Return to the privileged EXEC mode.

Example:

```
Device(config-if)#end
```

Step 9 Verify your entries and check the gateway connectivity.

Example:

```
Device# show ipv6 interface brief
Device# ping ipv6 destination-address or hostname
```

Configure preferred IP address as IPv6 (GUI)

Set the preferred IP address mode to IPv6 for APs joining the controller using the GUI.

Procedure

Step 1 Choose **Configuration** > **Tags & Profiles** > **AP Join**.

Step 2 Click the AP Join Profile Name. The **Edit AP Join Profile** window is displayed.

Step 3 Choose **CAPWAP** > **Advanced**.

Step 4 Select **IPV6** from the **Preferred Mode** drop-down list.

Step 5 Click **Update & Apply to Device**.

Configure preferred IP address as IPv6 (CLI)

Set the AP to use IPv6 as its preferred IP address when joining the controller using commands.

Procedure

	Command or Action	Purpose
Step 1	Enter the global configuration mode. **Example:** `Device# configure terminal`	
Step 2	Enter the AP profile configuration mode. **Example:** `Device(config)# ap profile default-ap-profile`	
Step 3	Use IPv6 to join the controller . **Example:** `Device(config-ap-profile)# preferred-mode ipv6`	
Step 4	Exit the configuration mode and return to the privileged EXEC mode. **Example:** `Device(config-ap-profile)# end`	

Verify IPv6 on FlexConnect + Mesh

To verify the IPv6 configuration on the controller , use this **show** command:

```
Device# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet2       unassigned      YES unset  up                    up
GigabitEthernet0       unassigned      YES NVRAM  administratively down down
Capwap1                unassigned      YES unset  up                    up
Capwap2                unassigned      YES unset  up                    up
Vlan1                  unassigned      YES NVRAM  administratively down down
Vlan89                 9.10.89.90      YES NVRAM  up                    up
Ewlc-9.10.89.90#show running-config interface vlan 89
Building configuration...
Current configuration : 120 bytes
!
interface Vlan89
 ip address 9.10.89.90 255.255.255.0
 ip helper-address 9.1.0.100
 no mop enabled
 no mop sysid
end
```