



## Configuring IPv6 Mobility

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### Pre-requisites for IPv6 Mobility

The mobility and its related infrastructure must be configured and ready for use.

### Information About IPv6 Mobility

Mobility, or roaming, is a wireless LAN client's ability to maintain its association seamlessly from one access point to another securely and with as little latency as possible. This section explains how mobility works when switches are included in a wireless network.

When a wireless client associates and authenticates to an access point, the access point's switch places an entry for that client in its client database. This entry includes the client's MAC and IP addresses, security context and associations, quality of service (QoS) contexts, the WLAN, and the associated access point. The switch uses this information to forward frames and manage traffic to and from the wireless client.

When the wireless client moves its association from one access point to another, the switch simply updates the client database with the newly associated access point. If necessary, new security context and associations are established as well. The process becomes more complicated, however, when a client roams from an access point joined to one switch to an access point joined to a different switch. It also varies based on whether the switches are operating on the same subnet.

## Inter Controller Roaming

When the client associates to an access point joined to a new switch, the new switch exchanges mobility messages with the original switch, and the client database entry is moved to the new switch if sticky anchoring is disabled.

### Related Topics

[Monitoring IPv6 Mobility, on page 2](#)

## Intra Subnet Roaming with Sticky Anchoring, and Inter Subnet Roaming

Inter-subnet roaming is similar to inter-controller roaming in that the switch exchange mobility messages on the client roam. However, instead of moving the client database entry to the new switch, the original switch marks the client with an "Anchor" entry in its own client database. The database entry is copied to the new switch client database and marked with a "Foreign" entry in the new switch. The roam remains transparent to the wireless client, and the client maintains its original IP address.

In inter-subnet roaming, WLANs on both anchor and foreign switch need to have the same network access privileges and no source-based routing or source-based firewalls in place. Otherwise, the clients may have network connectivity issues after the handoff.

For more information on configuring mobility see, the Cisco 5700 Wireless LAN Controller Mobility Configuration Guide, Cisco IOS XE, Release 3.2SE.

### Related Topics

[Monitoring IPv6 Mobility, on page 2](#)

## How to Configure IPv6 Mobility

## Monitoring IPv6 Mobility

This chapter displays the mobility related IPv6 configuration. To see the mobility related configurations refer to the Cisco 5700 Wireless LAN Controller Mobility Configuration Guide, Cisco IOS XE 3.2SE.

### SUMMARY STEPS

1. `show ipv6 neighbors binding mac C0C1.C06B.C4E2`

### DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>show ipv6 neighbors binding mac C0C1.C06B.C4E2</code>  <b>Example:</b> <code>Switch# show ipv6 neighbors binding mac C0C1.C06B.C4E2</code>	Displays the IPv6 related mobility configurations.

```

Switch# show ipv6 neighbors binding mac C0C1.C06B.C4E2
Binding Table has 45 entries, 37 dynamic (limit 100)
Codes: L - Local, S - Static, ND - Neighbor Discovery, DH - DHCP, PKT - Other Packet, API
- API created
Preflevel flags (prlvl):
0001:MAC and LLA match      0002:Orig trunk           0004:Orig access
0008:Orig trusted trunk    0010:Orig trusted access  0020:DHCP assigned
0040:Cga authenticated     0080:Cert authenticated  0100:Statically assigned

IPv6 address      Link-Layer addr Interface vlan prlvl age
state  Time left
L FE80:20:25::16  2037.064C.BA71 V125      25 0100 3137mn
REACHABLE
L FE80:20:24::16  2037.064C.BA41 V124      24 0100 3137mn
REACHABLE
L FE80:20:23::16  2037.064C.BA44 V123      23 0100 3137mn
REACHABLE
ND FE80:20:23::13  2037.0653.6BC4 Tel1/0/1   23 0005 85s
REACHABLE 223 s try 0
ND FE80:20:22::17  2037.064D.06F6 Tel1/0/1   22 0005 3mn
REACHABLE 92 s try 0
L FE80:20:22::16  2037.064C.BA76 V122      22 0100 3137mn
REACHABLE
ND FE80:20:22::13  2037.0653.6BF6 Tel1/0/1   22 0005 165s
REACHABLE 136 s try 0
ND FE80:20:22::12  2037.064C.94F6 Tel1/0/1   22 0005 23s
REACHABLE 281 s try 0
ND FE80:20:22::2   0022.550E.8FC3 Tel1/0/1   22 0005 18s
REACHABLE 295 s try 0
ND FE80:20:21::17  2037.064D.06E8 Tel1/0/1   21 0005 4mn
REACHABLE 60 s try 0
L FE80:20:21::16  2037.064C.BA68 V121      21 0100 3137mn
REACHABLE
ND FE80:20:21::13  2037.0653.6BE8 Tel1/0/1   21 0005 57s
REACHABLE 252 s try 0
ND FE80:20:21::12  2037.064C.94E8 Tel1/0/1   21 0005 4s
REACHABLE 297 s
ND FE80:20:21::2   0022.550E.8FC2 Tel1/0/1   21 0005 2s
REACHABLE 307 s try 0
ND FE80::F866:8BE0:12E4:39CF C0C1.C06B.C4E2 Ca4         21 0005 3mn
REACHABLE 89 s try 0
ND FE80::6D0A:DB33:D69E:91C7 0050.B606.A6CE Tel1/0/1   22 0005 135s
REACHABLE 171 s try 0
ND FE80::985:8189:9937:BB05 8CA9.8295.09CC Ca0         21 0005 15s
REACHABLE 287 s
ND FE80::20:24:13  2037.0653.6BC1 Tel1/0/1   24 0005 155s
REACHABLE 145 s try 0
L 2001:20:23::16  2037.064C.BA44 V123      23 0100 3137mn
REACHABLE
DH 2001:20:22:0:C96C:AF29:5DDC:2689 0050.B606.A6CE Tel1/0/1   22 0024 19s
REACHABLE 286 s try 0(16574)
DH 2001:20:22:0:A46B:90B2:F0DB:F952 0050.B606.A6CE Tel1/0/1   22 0024 2339mn
STALE 32401 s
DH 2001:20:22:0:7DFD:14EC:B1E4:1172 0050.B606.A6CE Tel1/0/1   22 0024 2339mn
STALE 24394 s
DH 2001:20:22:0:7CB3:D6DD:FD6A:50F 0050.B606.A6CE Tel1/0/1   22 0024 2333mn
STALE 29195 s
DH 2001:20:22:0:6D32:AF24:FDE1:2504 0050.B606.A6CE Tel1/0/1   22 0024 509mn
STALE 118821 s
DH 2001:20:22:0:5106:5AD:FE98:A2F0 0050.B606.A6CE Tel1/0/1   22 0024 2328mn
STALE 31362 s
ND 2001:20:22::201:13 0050.B606.A6CE Tel1/0/1   22 0005 49s
REACHABLE 264 s try 0
L 2001:20:22::16  2037.064C.BA76 V122      22 0100 3137mn
REACHABLE
ND 2001:20:22::13  2037.0653.6BF6 Tel1/0/1   22 0005 175s
REACHABLE 131 s try 0
ND 2001:20:22::2   0022.550E.8FC3 Tel1/0/1   22 0005 28s

```

```

REACHABLE 274 s try 0
ND 2001:20:21:0:F866:8BE0:12E4:39CF C0C1.C06B.C4E2 Ca4 21 0005 4mn
REACHABLE 21 s try 0
ND 2001:20:21:0:C085:9D4C:4521:B777 0021.CC73.AA17 Te1/0/1 21 0005 11s
REACHABLE 290 s try 0
ND 2001:20:21:0:6233:4BFF:FE1A:744C 6033.4B1A.744C Ca4 21 0005 3mn
REACHABLE 108 s try 0
ND 2001:20:21:0:447E:745D:2F48:1C68 8CA9.8295.09CC Ca0 21 0005 34s
REACHABLE 276 s
ND 2001:20:21:0:3920:DDE8:B29:AD51 C0C1.C06B.C4E2 Ca4 21 0005 3mn
REACHABLE 87 s try 0
ND 2001:20:21:0:1016:A333:FAD5:6E66 0021.CC73.AA17 Te1/0/1 21 0005 4mn
REACHABLE 18 s try 0
ND 2001:20:21:0:C42:E317:BA9B:EB17 6033.4B1A.744C Ca4 21 0005 4mn
REACHABLE 61 s try 0
ND 2001:20:21:0:985:8189:9937:BB05 8CA9.8295.09CC Ca0 21 0005 135s
REACHABLE 173 s try 0
ND 2001:20:21::201:20 0021.CC73.AA17 Te1/0/1 21 0005 4mn
REACHABLE 43 s try 0
ND 2001:20:21::17 2037.064D.06E8 Te1/0/1 21 0005 4mn
REACHABLE 50 s try 0
L 2001:20:21::16 2037.064C.BA68 V121 21 0100 3137mn
REACHABLE
ND 2001:20:21::13 2037.0653.6BE8 Te1/0/1 21 0005 67s
REACHABLE 237 s try 0
ND 2001:20:21::12 2037.064C.94E8 Te1/0/1 21 0005 5mn
REACHABLE 512 ms try 0
ND 2001:20:21::2 0022.550E.8FC2 Te1/0/1 21 0005 12s
REACHABLE 294 s try 0

```

**Related Topics**

[Inter Controller Roaming](#), on page 2

[Intra Subnet Roaming with Sticky Anchoring](#), and [Inter Subnet Roaming](#), on page 2

## Additional References

**Related Documents**

Related Topic	Document Title
IPv6 command reference	<i>IPv6 Command Reference (Catalyst 3650 Switches)</i>
Mobility configurations	<i>Mobility Configuration Guide, Cisco IOS XE Release 3SE (Catalyst 3650 Switches)</i>

**Error Message Decoder**

Description	Link
To help you research and resolve system error messages in this release, use the Error Message Decoder tool.	<a href="https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi">https://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi</a>

**MIBs**

MIB	MIBs Link
All supported MIBs for this release.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: <a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a>

**Technical Assistance**

Description	Link
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	<a href="http://www.cisco.com/support">http://www.cisco.com/support</a>

## Feature Information for IPv6 Mobility

This table lists the features in this module and provides links to specific configuration information:

Feature	Release	Modification
IPv6 Mobility Functionality	Cisco IOS XE 3.3SE	This feature was introduced.

