

Configuring Hyperlocation

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Enabling Cisco Hyperlocation

The Cisco Hyperlocation solution is a suite of technologies that enables advanced location capabilities through a mix of software and hardware innovations. The Cisco Hyperlocation solution substantially increases the location accuracy of the clients connected to Cisco Spaces. The solution uses the Angle-of-Arrival (AoA) of Wi-Fi signals to determine the location of connected mobile devices.

Cisco Hyperlocation is available on the following access points that have a hyperlocation module and a hyperlocation antenna:

- Cisco Aironet 3700 Series Access Points (Requires hyperlocation antenna)
- Cisco Aironet 4800 Series Access Points

You can deploy Cisco Hyperlocation using the following components:

- Cisco AireOS Wireless Controller or Cisco Catalyst 9800 Series Wireless Controllers
- Cisco Spaces
- Cisco Spaces: Connector

Note Cisco CMX is not requried for Cisco Hyperlocation.

Cisco Spaces uses advanced location algorithms to extract phase differences from the location information collected from the wireless clients. This allows Cisco Spaces to locate associated wireless clients up to a distance of one meter accuracy (with a 50% error distance) in an optimal deployment.

The improved location accuracy provides more granular analytics data compared to RSSI-based location.

Cisco Hyperlocation is available on the following controllers:

- Supported on Cisco AireOS Wireless Controller
- Supported on Cisco Catalyst 9800 Series Wireless Controllers

How to Configure Cisco Hyperlocation

This section describes how to enable Cisco Hyperlocation on your network. The section also shows you how to verify if Cisco Spaces is receiving Hyperlocation packets from client devices.

From every active and associated device, Cisco Spaces receives packets every 10 seconds. This is called packet rate frequency. For standard RSSI, packet frequency depends on device probing. But a typical frequency of the Wi-Fi probe packets is 30 seconds to one minute.

Before you begin

- Ensure that your wireless controller version is compatible with the Cisco Hyperlocation Access Points in your network.
- Ensure that Cisco Spaces supports the wireless controller version. For more information, see Compatibility Matrix.
- If a Cisco CMX and a Cisco Spaces account are both connected to the same wireless controller, ensure that you disable Cisco Hyperlocation on Cisco CMX.

Procedure

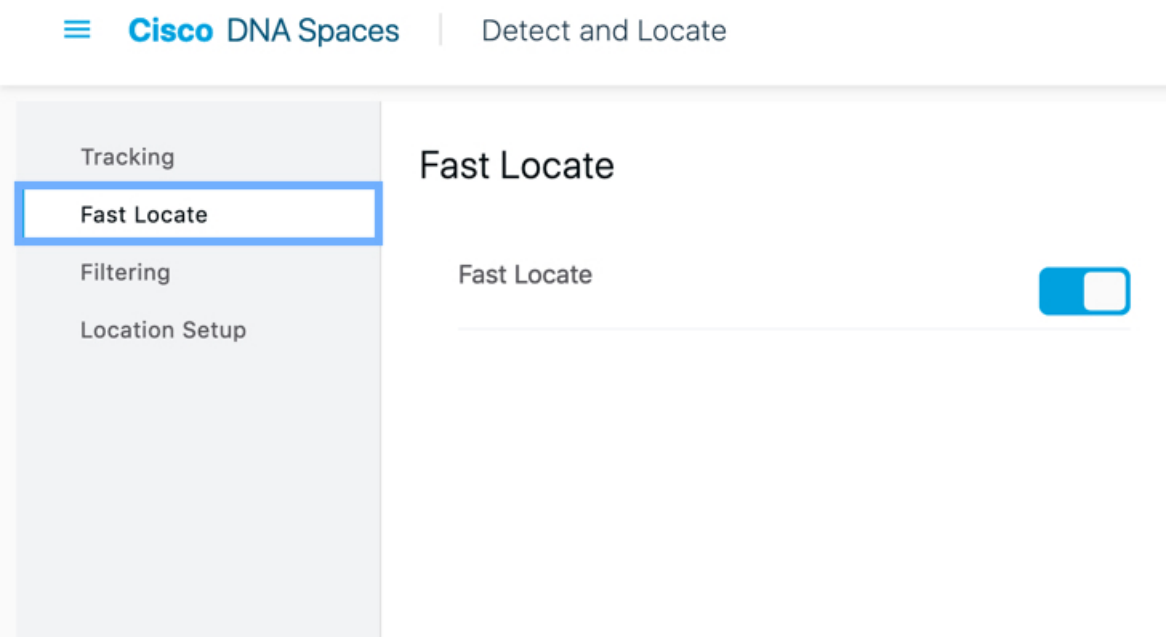
Step 1 Enable Hyperlocation on wireless controller.

For more details about how to enable hyperlocation on a wireless controller, see **Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide**

Step 2 Enable Hyperlocation on Cisco Spaces: Detect and Locate.

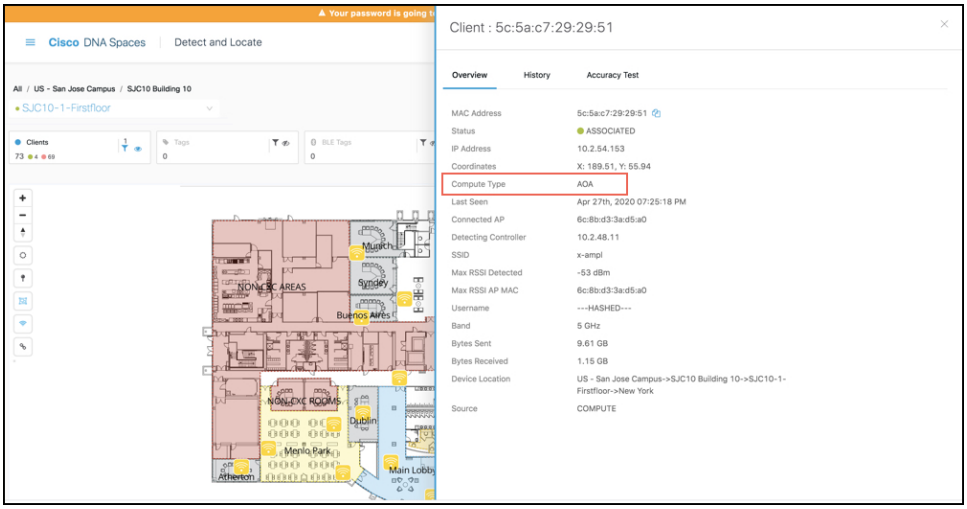
Navigate to Cisco Spaces: Detect and Locate dashboard. On the left-navigation pane, click **Configure** and enable the **Fast Locate** option.

Figure 1: Enabling Hyperlocation on Cisco Spaces: Detect and Locate



Step 3 Verify if Cisco Spaces: Detect and Locate is receiving Angle of Arrival (AoA) packets from client devices.

Navigate to the Cisco Spaces: Detect and Locate dashboard and checking if the **Compute Type** of a client device is AoA or Fusion.



- Angle of Arrival (AoA): AoA uses AoA-phase measurements to triangulate a device location. Several hyperlocation APs that are around the device report these AoA phase measurements. The AoA-compute type can achieve this more precise location of the device only if the device is within the convex hull of these hyperlocation APs.

- Fusion: Fusion combines the results of RSSI-location computation and AoA-location computation. These computations estimate the most-likely location of a device. The **Compute Type** field is Fusion when the location engine detects and concludes that a device is not within the convex-hull of Hyperlocation APs.