



Product Overview




Note Cisco DNA Spaces is now Cisco Spaces. We are in the process of updating our documentation with the new name. This includes updating GUIs and the corresponding procedures, screenshots, and URLs. For the duration of this activity, you might see occurrences of both Cisco DNA Spaces and Cisco Spaces. We take this opportunity to thank you for your continued support.

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Introduction to Cisco Spaces: Detect and Locate

Cisco Spaces: Detect and Locate enables you to view the current and historic location of Wi-Fi devices in your deployment.

Using Cisco Spaces: Detect and Locate, you can view the fixed physical layout of the buildings in your network and the Wi-Fi access points (APs) deployed in the building. You can see other fixed components such as GPS markers and Exclusion or Inclusion Zone for location calculation. Cisco Spaces: Detect and Locate also allows you to see the dynamic nature of the Wi-Fi devices in your network. You can view the calculated location of the following devices:

- Associated Wi-Fi devices: Represented by a green dot . Includes information about the device from the Cisco AireOS Wireless Controller such as IP address and Manufacturer (when available). The history of when these devices were seen is also maintained.
- Active RFID Wi-Fi Tags: This information is displayed to help troubleshoot applications that use the Tag data.
- Rogue Access Points: These are APs that the controller detected and labeled as Rogue. The AP MAC address is displayed along with the estimated location.
- Rogue Clients: These are Wi-Fi clients that the controller has detected and labeled as Rogue. The client MAC address is displayed along with the estimated location.
- Unassociated Wi-Fi devices: The location of these types of devices and their number is calculated on a best-effort basis and displayed.



Note These devices can change their MAC address and do not have a valid location history as long as they are not associated with the network.



Warning Web GL browser functionality is necessary to render maps on Cisco Spaces: Detect and Locate, and is enabled by default. Do not manually disable the Web GL functionality on your browser as this will prevent maps from rendering accurately.

Figure 1: Detect and Locate dashboard

Cisco Spaces is a location platform which tracks only active devices. Active devices are those devices that send a Wi-Fi probe packet at a periodic frequency of five minutes or less, and these probes are used to calculate location of the devices. How often devices send probes is device-driven, and hence not deterministic.

You cannot compare the Cisco Spaces client counts (both associated and probing) with the counts on the controller as there are fundamental differences in the design of both these Cisco components. Both the controller and Cisco DNA Center consider associated devices as active. Associated devices are devices that are merely associated to the network. And since Cisco DNA Center depends on Cisco Spaces for device locations, Cisco DNA Center displays such devices that are merely associated as un-positioned devices.

Tethering of a Cisco CMX device to Cisco Spaces is a design that should be used to help a customer transition to Cisco Spaces. This allows a customer an initial view of how devices are displayed on Cisco Spaces. Here too, you cannot compare the device counts on Cisco CMX and Cisco Spaces. For tethered devices, accuracy troubleshooting must be performed on Cisco CMX.

The controller does not require an active device to be constantly probing. While Cisco Spaces requires a periodic probe frequency of five minutes or less. Hence, client devices that are shown active on the controller can be missing on Cisco Spaces. We call these as non-locatable devices.

Following is the list of possible reasons that devices could be indicated as missing on Cisco Spaces.

- Device is reported by an AP that has not been placed on map. If most of APs connected to the controller are not added to map, then devices reported by these APs will be missing.
- Associated clients probe less to save battery power and this has a direct impact on locating them accurately. Associated clients do not send probes when they enter an ultra-power reserve mode (sleeping mode and screen blanked out). This behavior prevents Cisco Spaces from locating a device. When the user unlocks the home screen or start streaming content, the device is active again and starts sending probes to the wireless network. Cisco Spaces thus unable to locate such inactive or sleeping devices.
- Cisco Spaces expects Wi-Fi devices to send regular Wi-Fi probe packet updates to ensure that the device status is active. However, some devices are considered active by the controller even though they are not sending Wi-Fi probes, and such devices are considered as non-locatable devices

For more information about the open source used in Cisco Spaces: Detect and Locate, see:

<https://www.cisco.com/c/en/us/about/legal/open-source-documentation-responsive.html>.

Licensing

Cisco Spaces: Detect and Locate is included in the Cisco Spaces ACT license

