

Cisco Spaces Prerequisites

This chapter describes the system requirements for Cisco Spaces, the bandwidth requirements to deploy Cisco Spaces, and ports and IP addresses for Cisco Spaces.

This chapter contains the following sections:

- System Requirements, on page 1
- Bandwidth Requirements to Deploy Cisco Spaces, on page 2
- Accessible Ports and IP Addresses, on page 2
- Cisco Spaces IP Addresses, on page 3
- Cisco Smart Licensing, on page 4
- Cisco Spaces Compatibility Matrix, on page 5

System Requirements

The system requirements for Cisco Spaces is described in the following table:

Table 1: System Requirements

Item	System Requirements
Operating System	• Microsoft Windows XP or a later version • macOS X 10.6 or a later version
Browser	Windows OS • Firefox Version 30 or a later version • Chrome Version 34 or a later version • Safari Version 5.1.7 or a later version macOS • Firefox Version 30 or a later version • Chrome Version 34 or a later version • Safari Version 5.1.7 or a later version

Item	System Requirements
Cisco AireOS Wireless Controller	8.3 or a later version **Note** 8.3 is End-of-Life (EOL). We recommend that you migrate to one of the recommended releases as per the *Guidelines for Cisco Wireless Software Release Product Bulletin* at: https://www.cisco.com/c/en/us/products/collateral/wireless/wireless-controllers/bulletin-c25-738147.html
Cisco Connected Mobile Experiences (CMX) - this is required only for Cisco AireOS/Catalyst Controllers used with Cisco CMX.	10.6 or a later version
Cisco Spaces: Connector (Only applicable for Cisco AireOS/Catalyst Controllers)	• vCPU: 2/4/8 • RAM: 4/8/16 GB • Hard Disk: 60 GB

Bandwidth Requirements to Deploy Cisco Spaces

The following table shows the internet bandwidth requirements for Cisco Spaces: Connector and Cisco Wireless Controller Direct Connect to send location updates.

Table 2: Bandwidth Requirements

Test Data	Type	Required Bandwidth
5000 APs 60000 clients	Cisco Wireless Controller Direct Connect	250 Kbps
5000 APs 60000 clients	Cisco Spaces: Connector	4 Mbps

Accessible Ports and IP Addresses

Cisco Spaces is a cloud-based solution, and there is no physical installation involved. So, there is no need to open any port to deploy Cisco Spaces for cloud-based wireless networks such as Cisco Meraki.

For some networks such as Cisco AireOS or Cisco Catalyst that are not cloud-based, you must open the required ports to establish a connection between your wireless network and. You can establish this connection through a public IP or VPN. In addition, some Cisco Spaces IP addresses must be allowed in the customer infrastructure. For more information on the IP addresses to be allowed, refer to the Cisco Spaces IP Addresses, on page 3.

Note For a default Cisco Unified Wireless Network installation, port 443 must be open to be publicly accessible.

Cisco CMX must be publicly accessible in the following scenarios where Cisco Spaces has to establish a connection with Cisco CMX:

- Connect to Cisco CMX
- Import location and access points
- View Cisco CMX maps
- View Cisco Spaces reports

Cisco Spaces IP Addresses

To establish a connection between Cisco Spaces and a Cisco AireOS or a Cisco Catalyst 9800 Series Wireless Controller, you must allow some Cisco Spaces IP addresses in your network infrastructure.

To view the IP addresses that should be allowed, in the Cisco Spaces dashboard, choose **Captive Portal** > **SSIDs** > **Configure Manually** link.

To establish a VPN connection, contact Cisco Spaces support team.

Note A publicly resolvable domain name is not required to connect to Cisco Spaces.

Certain domain names must also be allowed in a customer's infrastructure for the Cisco CMX instances that are deployed in a customer's network to be able to communicate with the Cisco Spaces analytical and notification servers. To know the domain names that should be allowed in the Cisco Spaces dashboard, in the **SSIDs** window, click **Configure Manually** link.

Approved IP addresses

As we transition or migrate the Cisco Spaces domain, ensure that the newly provided IP addresses are added to your approved IP address list. This will allow uninterrupted access to Cisco Spaces services for all systems, users, and services associated with these IPs.

Cisco Spaces Connector Type	Additional			Existing		
	Domain	IPv4	IPv6	Domain	IPv4	IPv6
Connect via CMX Tethering	cmx.ciscospaces.io	75.2.50.127	[illegible]	cmx.dnaspaces.io	52.20.144.155	-
	cmx.ciscospaces.io	99.83.199.229	[illegible]	cmx.dnaspaces.io	34.231.154.95	-
Connect via Spaces Connector	connector.ciscospaces.io	75.2.50.127	[illegible]	connector.dnaspaces.io	34.231.154.95	[illegible]
	connector.ciscospaces.io	99.83.199.229	[illegible]	connector.dnaspaces.io	52.20.144.155	[illegible]

Cisco Spaces Connector Type	Additional			Existing		
	Domain	IPv4	IPv6	Domain	IPv4	IPv6
Connect AireOS Controller/Catalyst 9800 Wireless Controller Directly	data.ciscospaces.io	52.1.37.236	-	data.dnaspaces.io	34.231.154.95	-
	-	-	-	-	52.20.144.155	-
Partner Firehose	partners.ciscospaces.io	75.2.96.93	[illegible]	partners.dnaspaces.io	44.199.137.87	-
	partners.ciscospaces.io	99.83.155.204	[illegible]	partners.dnaspaces.io	3.90.124.39	-
Captive portal	splash.ciscospaces.io	15.197.234.109	[illegible]	splash.dnaspaces.io	52.55.235.39	-
	splash.ciscospaces.io	3.33.232.255	[illegible]	splash.dnaspaces.io	34.235.248.212	-
Smart Workspaces Webex Integration - Webex Setup for analytics via Webex login	workspaces.ciscospaces.io	dsm16f[illegible]	-	workspaces.dnaspaces.io	34.206.36.139	-
	kiosk.ciscospaces.io	dsm16f[illegible]	-	signage.dnaspaces.io	34.206.36.139	-
	webex.ciscospaces.io	-	-	webex.dnaspaces.io	52.45.218.46	-
	webex.ciscospaces.io	-	-	webex.dnaspaces.io	54.165.127.208	-
Connect Via Meraki Integration	location.ciscospaces.io	75.2.25.96	[illegible]	location.dnaspaces.io	52.20.144.155	-
	location.ciscospaces.io	99.83.245.239	[illegible]	location.dnaspaces.io	34.231.154.95	-
Meraki Camera with Cisco Spaces	mqtt.ciscospaces.io	13.248.186.114	[illegible]	mqtt.dnaspaces.io	52.87.123.75	-
	mqtt.ciscospaces.io	76.223.47.253	[illegible]	mqtt.dnaspaces.io	-	-

Cisco Smart Licensing

Cisco Smart Licensing is a flexible software licensing deployment and management model that simplifies the way you activate and manage licenses across your organization. Cisco Smart Licensing simplifies the way you purchase, deploy, organize, and optimize Cisco software licenses.

The benefits of Cisco Smart Licensing include:

- **Easy Activation**: Smart Licensing establishes a pool of software licenses that can be used across your company; no more entering Product Activation Keys.
- **Unified Management**: Cisco provides a complete view into all of your Cisco products and services licensing under this program in an easy-to-use portal, so you always know what you have and what you are using.
- **License Flexibility**: Your software is not node-locked to your hardware, so you can easily use and move licenses as needed.

For detailed information about Cisco Smart Licensing, refer to Cisco Software Licensing Guide.

For more information about enabling Cisco Smart License in Cisco Spaces, refer to Activate Smart License.

Cisco Spaces Compatibility Matrix

Table 3: Compatibility Matrix

Application	Cisco AireOS Controller	Cisco Catalyst 9800 Series Wireless Controller	Cisco Embedded Wireless Controller	Cisco Prime Infrastructure/Cisco Catalyst Center
Cisco Spaces (with Detect and Locate, Captive Portal, Engagements, Location Personas, Behavior Metrics)	• Cisco Wireless Controller Native Cloud Connector - 8.3 or a later version (except 8.3.102 for Presence) **Note** 8.3 is End-of-Life (EOL). We recommend that you migrate to one of the recommended releases as per the *Guidelines for Cisco Wireless Software Release Product Bulletin* at: https://www.cisco.com/c/en/us/products/collateral/wireless/wireless-controllers/bulletin-c25-738147.html • Cisco Spaces: Connector - 8.0.119 or a later version.	16.10 or a later version	16.11.1s or a later version	3.0 or a later version for maps **Note** Cisco Prime support is not there for maps on Cisco Embedded Wireless Controller.

Note 3375 Appliance is not supported.

Compatibility Matrix for Location Service

For detailed information about Location Service compatibility matrix, refer to Compatibility Matrix for Location Service.

Compatibility Matrix for Cisco Spaces: IoT Service (Wireless)

For detailed information about Cisco Spaces: IoT Service (Wireless) compatibility matrix, refer to, Compatibility Matrix for IoT Service (Wireless).