DNA Spaces with CMX On Prem Configuration Example

Contents

Introduction

This document describes how to configure Cisco DNA Spaces with Cisco Connected Mobile Experience (CMX) On-Prem.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Command Line Interface (CLI) or Graphical User Interface (GUI) access to the AireOS wireless controllers
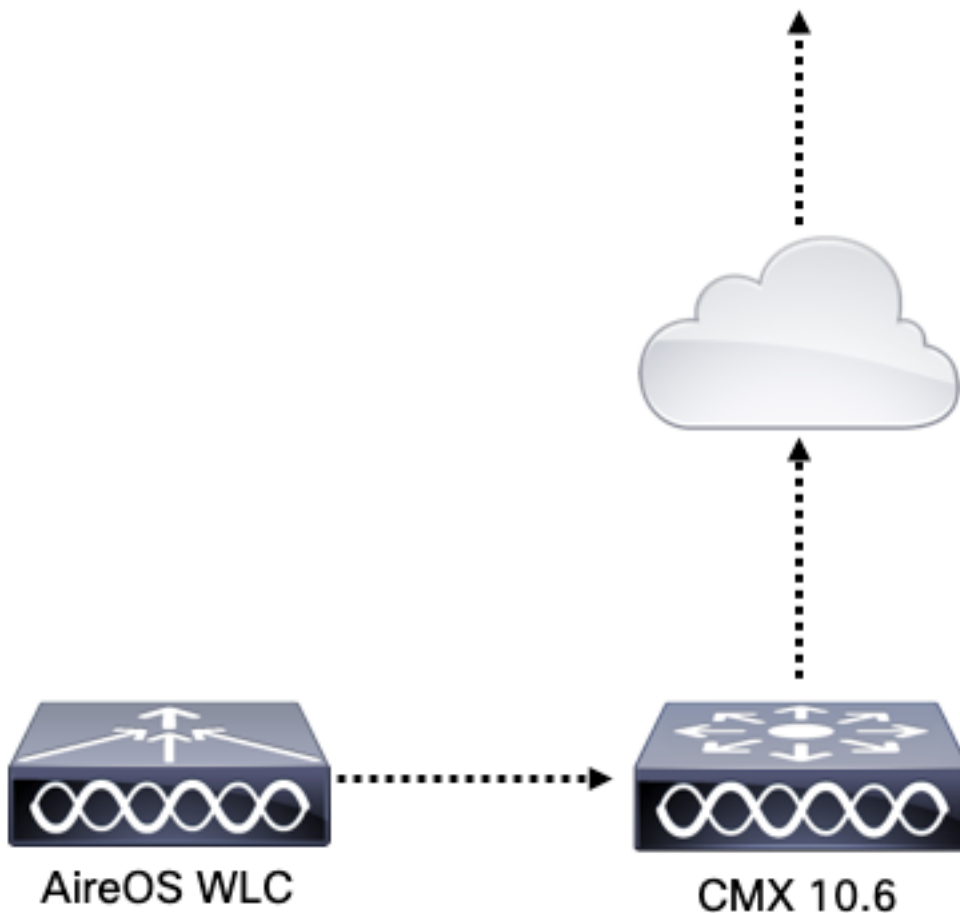- Cisco DNA Spaces
- Cisco CMX

Components Used

The information in this document is based on these software and hardware versions:

- 5520 Wireless LAN Controller (WLC) version 8.8.120.0
- Cisco CMX 10.6.1-47

Configure

Network Diagram

Configurations

To connect CMX to Cisco DNA Spaces, CMX must be able to reach Cisco DNA Spaces cloud over HTTPS.

Outbound Proxy Setup

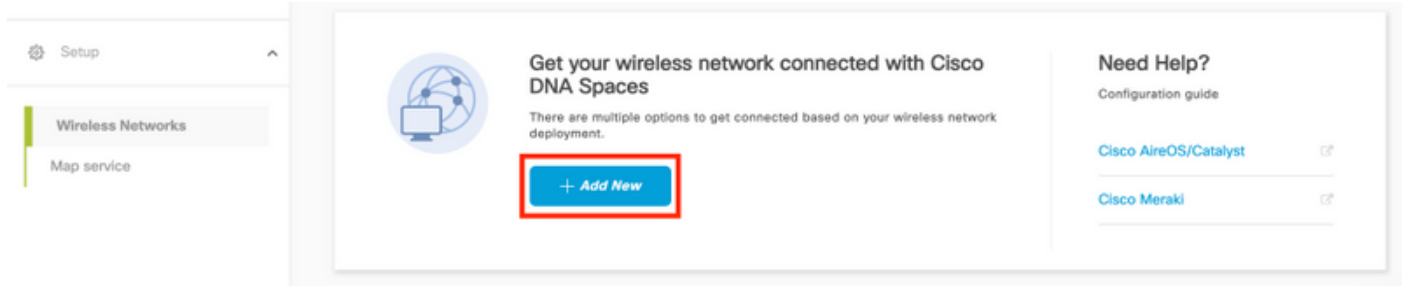This configuration is required if CMX is behind a proxy.

Step 1. Connect to the CMX CLI and run the following commands:

```
[cmxadmin@CMX-andressi ~]$ cmxos sysproxy http_proxy http://<proxy-server-address>:80/
[cmxadmin@CMX-andressi ~]$ cmxos sysproxy https_proxy https://<proxy-server-address>:443/
[cmxadmin@CMX-andressi ~]$ cmxos sysproxy no_proxy 127.0.0.1,localhost
[cmxadmin@CMX-andressi ~]$ cmxctl stop -a
[cmxadmin@CMX-andressi ~]$ cmxctl agent start
[cmxadmin@CMX-andressi ~]$ cmxctl start
```

Generate the Token on Cisco DNA Spaces

Step 1. Generate the token on DNA spaces.

Log in to Cisco DNA spaces and navigate to **Setup > Wireless Setup > Add New**

Step 2. Select **Cisco AireOS/Catayst**:

Step 3. Choose **Via CMX On-Prem,** then select the version of CMX.

Step 4. Click on **Customize Setup**

Great!

Based on your inputs, we have customized setup to help you connect your wireless network to Cisco DNA Spaces using CMX On-Prem Tethering

Prerequisites for CMX On-Prem Tethering

1 You must have WLC version 8.0 and above.

2 You must have CMX 10.6 and above.

Customize Setup

Step 5. Click on **Create New Token.**

Connect via CMX Tethering   ✕ | ⌃

Tethering is an easy way to get your wireless network connected to Cisco DNA Spaces

1 **Upgrade your CMX to Version 10.6 or above**   Need Help?

You must have CMX 10.6 and above to establish a connection   Access the below links to view detailed help.

2 **Configure Token in CMX**

You will need a token to configure in CMX dashboard. You need to connect to https://<your cmx IP> from a browser to configure the token.   **View Configuration Steps** ⌐

                                                                    Frequently Asked Questions ⌐

No CMX Tokens Configured yet   **Create New Token**
                                      View Tokens

3 **Add CMX into Location Hierarchy**

Once CMX connected to Cisco DNA Spaces, you can add them into the location hierarchy.

0   Campus(s) imported to   **Add CMX**
    location hierarchy   **View Location Hierarchy**

Step 6. Enter the name and description for the Token and click **Save.**

Step 7. In the new "**Customize Setup**" page**,** under the section **Configure Token in CMX,** click on **View Tokens.** Hover the mouse on the recently created token and click on the **key icon:**

CMX Tethering Tokens   ✕

Cisco CMX   ➕ Add New CMX

Name	Description	Last Heard	First Heard	Actions
CMX-Andressi	Token for Andressi's CMX		Jul 2, 2019, 3:51:05 PM	🔑 ✏	🗑

First | Previous **1** Next | Last   (1 - 1 of 1) : 1 pages

Step 8. Enter your Cisco DNA Spaces credentials to view and copy the token that appears in the following screen.

Configure the Token on CMX

Step 1. Log in to Cisco CMX, navigate to **Manage > Cloud Apps.** Click on **Enable**, paste the Token and click **Save.**

Add CMX to the Location Hierarchy Cisco DNA Spaces

Step 1. Navigate to **Setup > Wireless Networks** on DNA spaces and click on **Add CMX:**

Step 2. Choose the location where you want to import CMX and click **Next.** If this is the first time you are importing a CMX, you may see the default location i.e. your Cisco DNA Spaces account Name.

Add CMX to Location Hierarchy ✕

Where do you want to import CMX?

Choose a location that you want to import.

≡Q Search Locations

AndresSilva ⦿

Note: Cisco DNA Spaces will not allow you to add two CMX nodes with the same access point.

Step 3. Configure the **Display Name,** and select the Campus, Building and Floors that you want to add from CMX to the Location Hierarchy. Then, Click on **Import.**

Add CMX to Location Hierarchy ✕

DISPLAY NAME

Display name

Choose the Sites you want to import

Campus	Building	Floor
☑ All	☑ All	☑ All
☑ Cisco Mexico	☑ MXC10	☑ 14th floor

Cisco DNA Spaces organizes the Location Hierarchy based on the sites selected and it includes the APs associated to each site.

Step 4. Configure the timezone per-Campus/Building/Floor based on the location. Navigate to **Location Hierarchy** on Cisco DNA Spaces. Hover the mouse on the Campus, Building or Floor required, and click on **Location Info.** Enter the values and click **Update.**

Note: The timezone defined affects the Cisco DNA Spaces rules and reports.

Verify

To confirm that the Outbound Proxy is configured on CMX run this command:

```
[cmxadmin@CMX-andressi ~]$ cmxos sysproxy show
```
To confirm that CMX is communicating with Cisco DNA Spaces navigate to **Manage > Cloud Apps** on CMX and see the statistics of the northbound notification:

Name	Description	Links	Actions
Cisco DNA Spaces	Cisco DNA Spaces is Cisco's new location platform. Tethering to Cisco DNA Spaces will send updates related to the deployment including information such as the maps and AP placement as well as the ongoing location updates. The destination of these updates will be to Cisco DNA Spaces cloud.	Login	Disable Update Map Status
Cisco Operational Insights	Cisco Operational Insights is a cloud based solution to manage assets within a location. Using various input signals, this solution allows you to operationalize and benefit from better understanding of assets within an environment.	Login	Enable
Cisco Beacon Management	Cisco Beacon Management is a comprehensive resource for detecting and monitoring Bluetooth Low Energy (BLE) Beacons, as well as managing CCX BLE Devices within your network.	Login	Enable

Notifications

Name	Notification Receiver	Total Sent	Acknowledged Count	Unacknowledged Count	Success Percent	Failure Percent	Latency(in ms)	Actions
DNASpaces-all	https://cmx.dnaspaces.io:443/api/v1/cmx/notifications/locationUpdate	9	9	0	100.00%	0.00%	548	Reset

To confirm that the Location Hierarchy is configured as it is on CMX, navigate to **Location Hierarchy** on DNA Spaces and click on the CMX name:
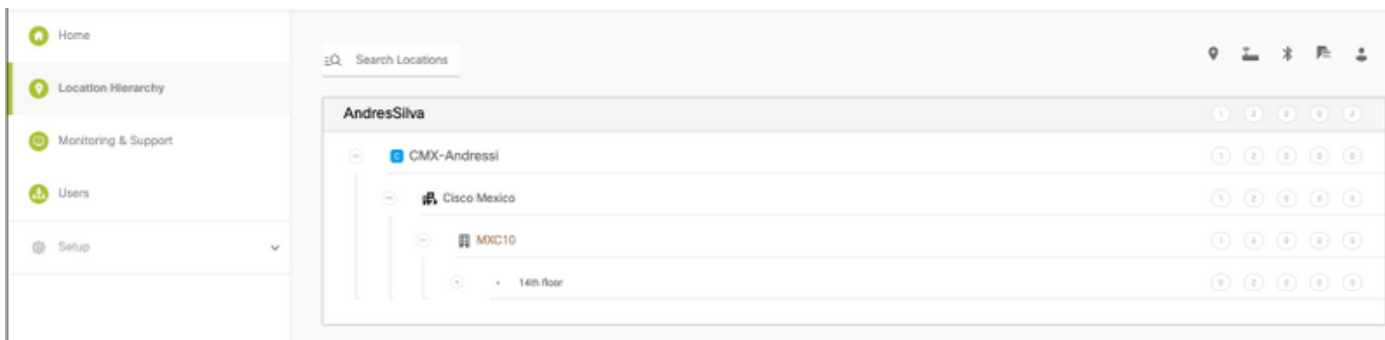
Troubleshoot

There is currently no specific troubleshooting information available for this configuration.