



Cisco Mobility Express with Cisco CMX Cloud

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Cisco CMX Cloud

Cisco® Connected Mobile Experiences Cloud (Cisco CMX Cloud) is a simple and scalable offering which enables delivery of wireless guest access and in-venue analytics, integrating seamlessly with Cisco wireless infrastructure.

This cloud-delivered Software-as-a-Service (SaaS) offering is quick to deploy and intuitive to use. It is based on CMX 10.x code and is compatible with Cisco Mobility Express Release 8.3. It offers the following services:

- **Connect for Guest Access**—Providing an easy-to-use guest-access solution for visitors through a custom portal using various authentication methods including social, self-registration, and Short Message Service (SMS).
- **Presence Analytics**—Detecting all Wi-Fi devices (the “devices”) in the venue and providing analytics on their presence, including dwell times, new vs. repeat visitors, and peak time.

Cisco CMX Cloud Solution Compatibility Matrix

- Cisco Mobility Express running AireOS Release 8.3
- All Cisco Mobility Express supported Access Points

Minimum requirements for CMX Cloud deployment

Below are the minimum requirements for CMX Cloud deployment:

- 1 Verify Cisco CMX Cloud Solution Compatibility Matrix above.
 - 2 Recommended browser is Chrome 45 or later
 - 3 Signup to <https://cmxcisco.com> for 60 day trial or go to Cisco Commerce Workspace (CCW) and purchase license for your choice of CMX Cloud service. Refer to CMX Cloud Ordering information.
- After sign-up, start using Connect or Connect and Presence Analytics.

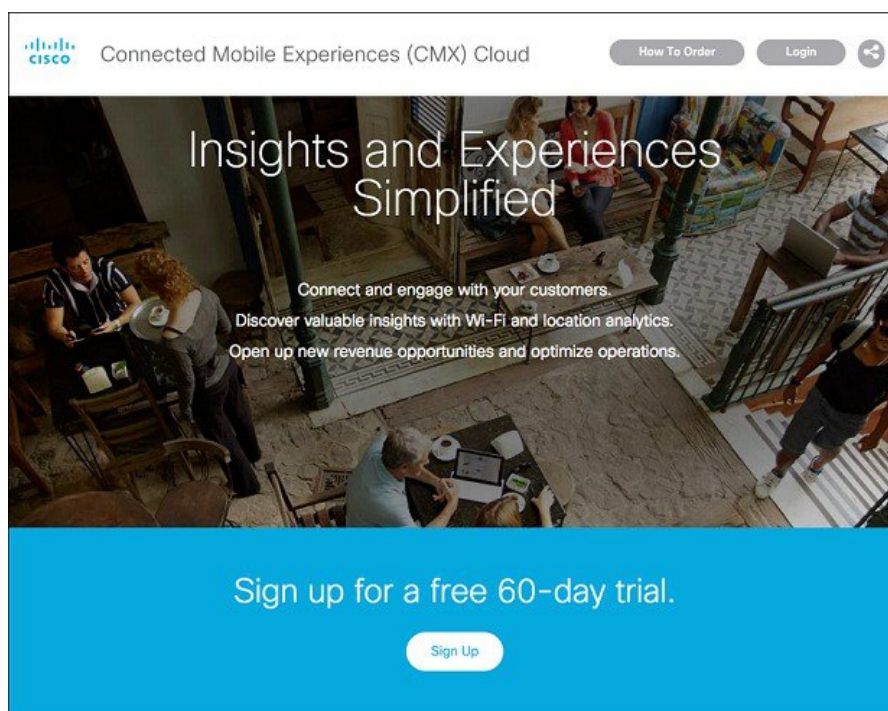
CMX Cloud Trial Sign-Up and Sign-In

Sign-Up

To sign-up for a trial account, perform the following steps:

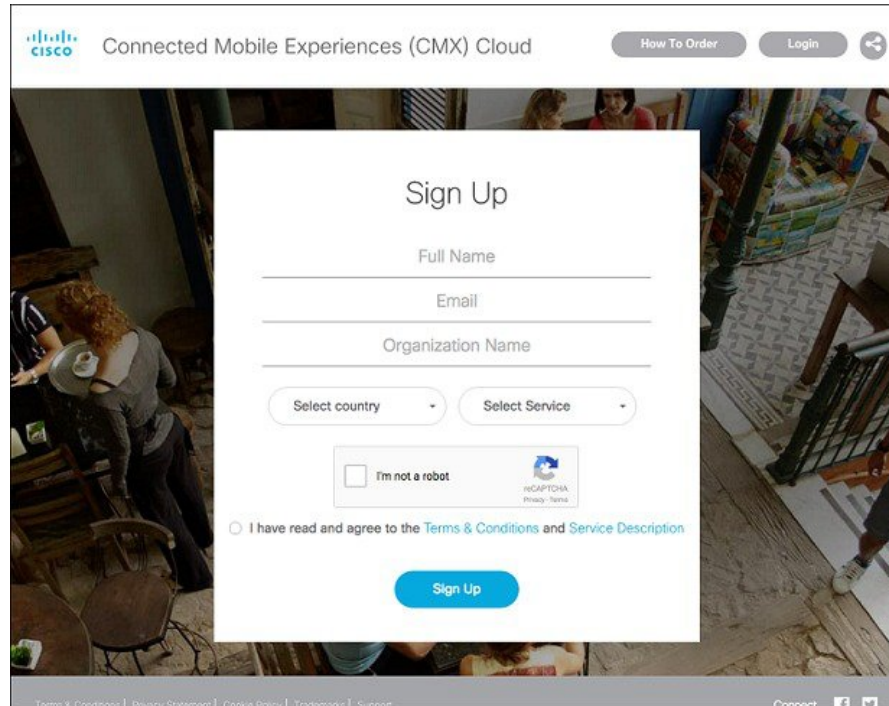
Procedure

- Step 1** Browse to <https://cmxcisco.com> and sign-up for a 60-Day trial.



- Step 2** Enter the following details:
- 1 Full Name
 - 2 E-mail address

- 3 Organization name
- 4 Select Country
- 5 Select Service (Connect or Connect with Presence Analytics) from drop down list
- 6 Check “I have read and agree to the Terms and Conditions”
- 7 Click Sign Up



The screenshot shows the Cisco CMX Cloud website with a 'Sign Up' modal form overlaid. The form includes the following fields and elements:

- Header: Cisco logo and 'Connected Mobile Experiences (CMX) Cloud' text.
- Navigation: 'How To Order' and 'Login' buttons.
- Form Fields: 'Full Name', 'Email', and 'Organization Name' text input fields.
- Dropdowns: 'Select country' and 'Select Service' dropdown menus.
- Verification: A checkbox for 'I'm not a robot' with a CAPTCHA icon and 'Privacy - Terms' link.
- Agreement: A radio button for 'I have read and agree to the Terms & Conditions and Service Description'.
- Action: A blue 'Sign Up' button.
- Footer: 'Terms & Conditions', 'Privacy Statement', 'Cookie Policy', 'Trademarks', and 'Support' links, along with a 'Connect' button and social media icons.

After your account is created and Site is provisioned, an email will be sent to you with the following:

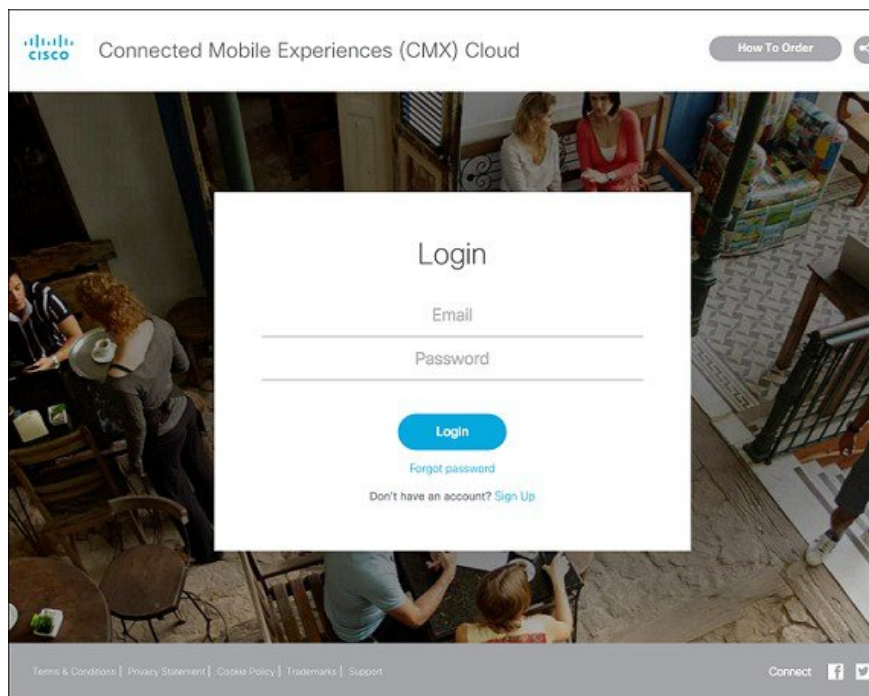
- 1 Account Login Password
- 2 Site URL
- 3 Token

Sign In

To sign-in, perform the following steps:

Procedure

- Step 1** Browse to <https://cmxcisco.com>
- Step 2** Click Login on the top right and enter the email address which was used to create the account and password.
- Step 3** Click Login to get redirected to you CMX Cloud site.



Configuring Cisco Mobility Express to send data to CMX Cloud for Presence Analytics

Enabling CMX Cloud Service on Master Access Point

After CMX Cloud Account is created and CMX Site provisioned, next step is to configure and enable the CMX Cloud Service on Master Access Point so that it can send data to the CMX Cloud.

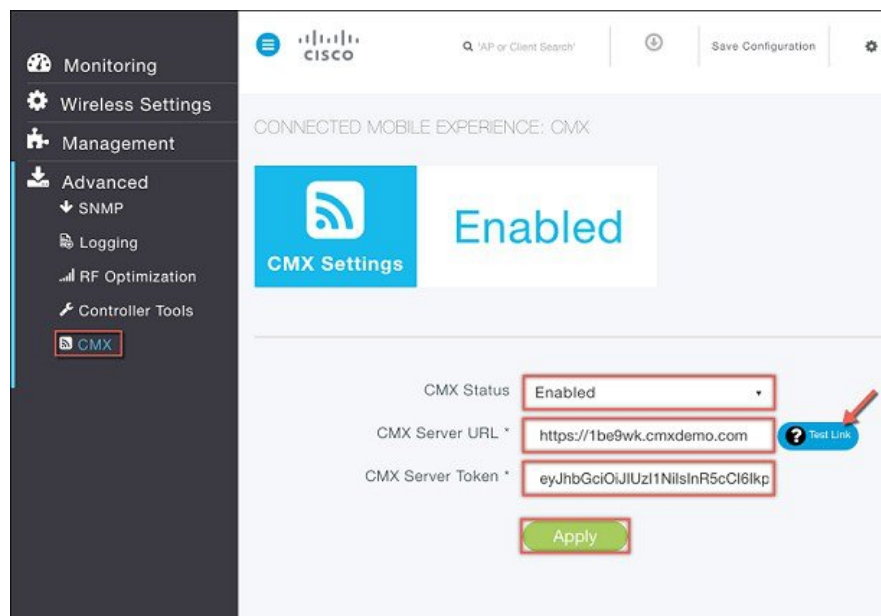


Note Master Access Point should be able to talk to the CMX Cloud.

To configure, perform the following steps:

Procedure

- Step 1** On Cisco Mobility Express WebUI, navigate to **Advanced > CMX**.
- Step 2** On Cisco Mobility Express WebUI, navigate to **Advanced > CMX**.
- Step 3** Enter the **CMX Server URL** (Site URL).
- Step 4** Enter the **CMX Server Token**.
- Step 5** Click **Apply**.
- Tip** Click the **Test Link** button to verify connectivity from Master AP to CMX Cloud Site using the configured information.



Collecting Base MAC Address of Access Points to add them to the Site in CMX Cloud

In AireOS release 8.3, Access Points, which are part of the Cisco Mobility Express deployment, are not discovered automatically in the CMX Cloud when the CMX Cloud Service is started on the Master Access Point. Access Points have to be manually added to the site in CMX Cloud. To obtain the Base MAC address, execute the following command in the Controller CLI.

```
(Cisco Controller) >show ap join stats summary all
```

```
Number of APs..... 3
```

| Base Mac | AP EthernetMac | AP Name | IP Address | Status |
|-------------------|-------------------|------------------|---------------|--------|
| 38:ed:18:ca:8b:00 | 38:ed:18:ca:09:28 | AP38ED.18CA.0928 | 172.20.229.60 | Joined |
| 38:ed:18:cb:60:60 | 38:ed:18:ca:3d:10 | AP38ED.18CA.3D10 | 172.20.229.21 | Joined |

38:ed:18:cd:31:80

38:ed:18:cc:32:c0

AP38ED.18CC.32C0

172.20.229.61

Joined

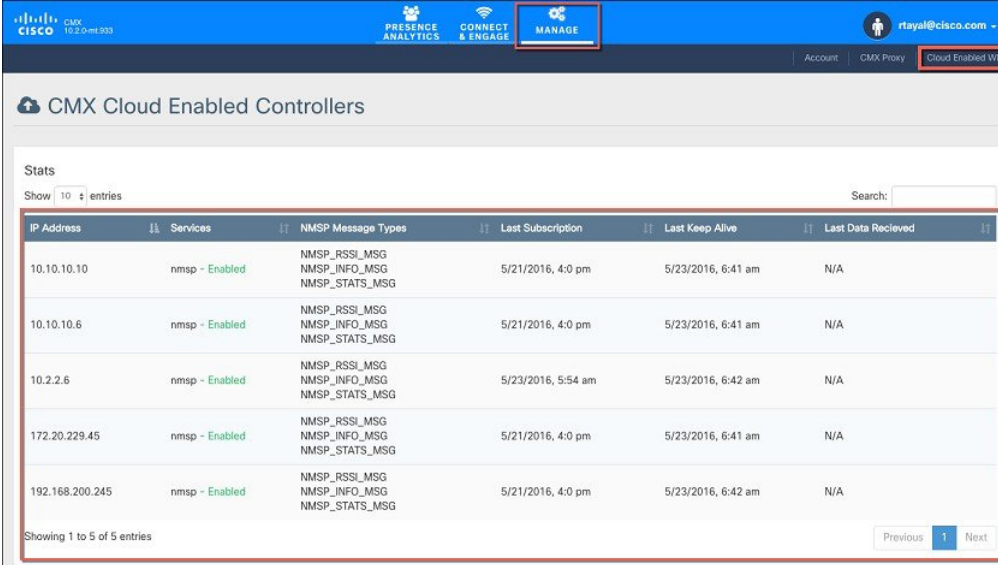
Creating a Site and Adding Access Points to Site in CMX Cloud for Presence Analytics

To create a site and add Access Points to the site in CMX Cloud for Presence Analytics, perform the following steps:

Procedure

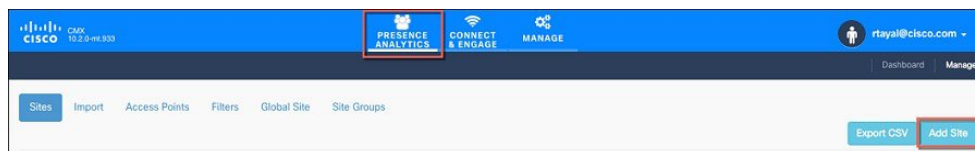
Step 1 Login to CMX Cloud account at <https://cmisco.com/>

Step 2 Navigate to **Manage > Cloud Enabled WLC** and verify that the IP address of the WLC shows on the list.



| IP Address | Services | NMSP Message Types | Last Subscription | Last Keep Alive | Last Data Received |
|-----------------|-----------------|--|--------------------|--------------------|--------------------|
| 10.10.10.10 | nmosp - Enabled | NMSP_RSSI_MSG NMSP_INFO_MSG NMSP_STATS_MSG | 5/21/2016, 4:0 pm | 5/23/2016, 6:41 am | N/A |
| 10.10.10.6 | nmosp - Enabled | NMSP_RSSI_MSG NMSP_INFO_MSG NMSP_STATS_MSG | 5/21/2016, 4:0 pm | 5/23/2016, 6:41 am | N/A |
| 10.2.2.6 | nmosp - Enabled | NMSP_RSSI_MSG NMSP_INFO_MSG NMSP_STATS_MSG | 5/23/2016, 5:54 am | 5/23/2016, 6:42 am | N/A |
| 172.20.229.45 | nmosp - Enabled | NMSP_RSSI_MSG NMSP_INFO_MSG NMSP_STATS_MSG | 5/21/2016, 4:0 pm | 5/23/2016, 6:41 am | N/A |
| 192.168.200.245 | nmosp - Enabled | NMSP_RSSI_MSG NMSP_INFO_MSG NMSP_STATS_MSG | 5/21/2016, 4:0 pm | 5/23/2016, 6:42 am | N/A |

Step 3 Navigate to **PRESENCE ANALYTICS > Manage**. Click **Add Site** to create a Site and add Access points to the Site.



Step 4 In the New Site window, enter the following details:

- 1 Site Name
- 2 Site Address
- 3 Timezone from the drop down list

- 4 Signal Strength Threshold for Ignore, Passerby, and Visitors
- 5 Minimum Dwell Time for Visitor

NEW SITE

Name
Enter site name

Address
Site Address

Timezone
(GMT -07:00) America/Phoenix

Signal Strength Threshold

-95 dBm -65 dBm

~ 326ft/ 99m ~ 35ft/ 11m

| | |
|----------|-----------------------------|
| Ignore | ≤ -95 dBm or lower |
| Passerby | Between -95 dBm and -65 dBm |
| Visitor | ≥ -65 dBm or higher |

Minimum Dwell Time For Visitor (minutes)
5

Save **Cancel**

- Step 5** Click **Save** to create the Site.
The site gets created.
- Step 6** Click Site Name and then click the Details link next to the AP Count as shown in the Site window.

TME DMZ
✕

Name

Address

Timezone

Signal Strength Threshold

-95 dBm

~ 326ft/ 99m

-65 dBm

~ 35ft/ 11m

Ignore -95 dBm or lower

Passerby Between -95 dBm and -65 dBm

Visitor -65 dBm or higher

Minimum Dwell Time For Visitor (minutes)

AP count: 2 [Details](#)

[Delete Site](#)

Step 7 The window will expand and **Add new AP** field will be displayed. Enter the Base MAC Address of the Access point and click **Add**. When finished with adding Base MAC of AP to the sites, click on the **Save**.

Minimum Dwell Time For Visitor (minutes)

AP count: 2 [Details](#)

Add new AP

Enter AP MAC address

[Add](#)

| MAC address | Name | Delete |
|-------------------|------|--------|
| dc:ce:c1:2d:63:40 | - | ✕ |
| 38:ed:18:cd:1f:a0 | - | ✕ |

[Delete Site](#)

Understanding Data on the CMX Cloud for Presence Analytics Dashboard

After the Sites have been created and Access Points have been added to the sites, data will begin to appear on the Presence Analytics dashboard. To understand the Data represented on this dashboard, please visit the following site:

