



CMX Engage Features and Pre-Requisites

This chapter describes the various features of the CMX Engage. This chapter also describes the CMX Engage icons, and pre-requisites to deploy the CMX Engage.

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CMX Engage Features

The CMX Engage enables you to do the following:

- Automatically detect and engage all smart phone users with or without an app in the Wi-Fi or BLE Beacon network.
- Create captive portals that is to be display to the users who connects to your Wi-Fi.
- Display different captive portals for various set of customers connecting to the same SSID using captive portal rules that has location, time, and user filters.
- Use the engagement rules with location, time, and user filters to engage with the required set of customers and business users through notifications.
- Create tags of customers using the powerful profile rule.
- Provide customer level loyalty programs and offers.
- Introduce immediate offers and programs based on the customer statistics in the premises.
- Send notifications only to a certain category of customers.
- Generate reports to analyze the customer engagement and captive portal usage.
- Create captive portals, proximity rules, and users for specific locations such as building, floor, or zone.
- Connect to multiple wireless networks from the CMX Engage simultaneously.
- Manage existing experience zones.

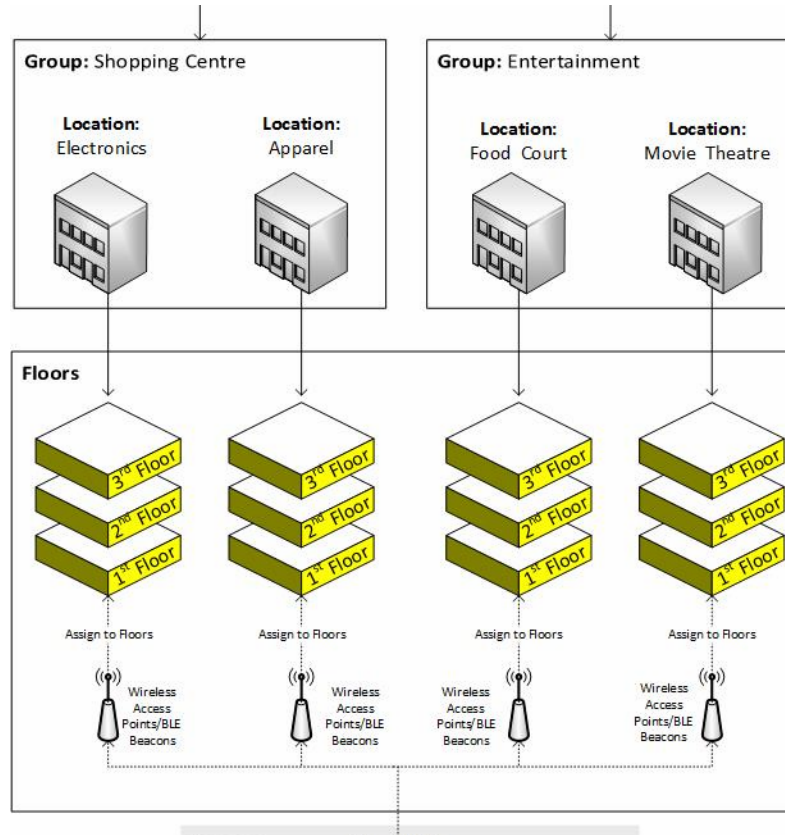
In the ABC shopping mall, to get free Wi-Fi, the customers must connect to an SSID once they enter the mall. ABC wanted to provide a personalized experience to each customer who connects to the Wi-Fi based on their purchase history and visit frequency. After installing the CMX Engage, ABC could collect the Wi-Fi user's details through the captive portals, and utilize this details to send notifications to the customers regarding the offers and services available for them. The customers once connected to the Wi-Fi are taken to a captive portal, where they are provided with an option to register themselves by

filling details such as name, e-mail address, telephone number, and so on. This information captured is stored in the CMX Engage. When customers re-visit the mall, promotional offers are sent to the customers through push notifications, SMS, or e-mail.

The CMX Engage can also be configured to notify business users such as employees regarding customer activities. For example, you can identify and tag repeat customers as platinum members on the CMX Engage dashboard. When a platinum customer enters a restaurant and their device is detected by a wireless access point or BLE beacon, the restaurant representatives would receive alerts on their devices and can provide personalized services to the customer.

Figure 2-1 provides a pictorial representation of how the CMX Engage would be deployed in a location.

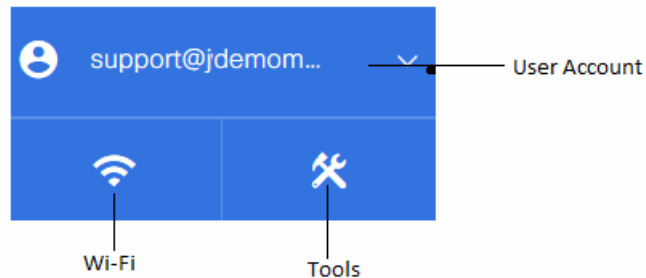
Figure 2-1 CMX Engage Deployment Model



CMX Engage Icons

The CMX Engage icons are shown in [Figure 2-2](#).

Figure 2-2 CMX Engage Icons



- **User Account icon** — Enables you to sign out of the CMX Engage dashboard or change the password to access the CMX Engage account.
- **Tools icon** — Enables you to configure the SMS gateway, BLE Beacons, social apps, and customized apps. You can also add BLE UUIDs for your BLE beacons.
- **Wi-Fi icon**- Enables you to view the wireless network nodes in the location hierarchy.

Pre-Requisites to Deploy the CMX Engage

This section describes the port configurations and bandwidth requirements to deploy the CMX Engage.

- [Ports and IP Addresses, page 2-4](#)
- [Bandwidth Requirements to Deploy CMX Engage, page 2-5](#)

Ports and IP Addresses

The CMX Engage is a cloud-based solution and there is no physical installation involved. However, there are certain instances, where the CMX Engage needs to communicate with the CUWN and vice versa. You can establish this connection through a public IP or VPN. In addition, you may have to white-list certain CMX Engage IP addresses.

The CMX must be publicly accessible (For a default CUWN installation, the ports 80 and 443 must be open) for the following scenarios where the CMX Engage customer to establish connection to the CMX:

- Connecting to the CMX
- Importing location and access points
- Viewing CMX maps
- Publishing Proximity Rules
- Generating Reports

CMX Engage IP Addresses to White-list

To establish connection between the CMX Engage and CUWN, you must white-list certain CMX Engage IP addresses. To view the IP addresses to white-list, in the CMX Engage dashboard, click the Configuration Instructions link in the SSIDs window.


Note

Contact Cisco for establishing a VPN connection.


Note

You don't need to have a publicly resolvable domain name to connect to the CMX Engage.

Certain domains must be white-listed in the customer infrastructure so that the CMX instances deployed with in the customer network must be able to communicate to the CMX Engage analytical and notification servers. To know the domains to be white-listed, in the CMX Engage, click the Configuration Instructions link in the SSIDs window.

Bandwidth Requirements to Deploy CMX Engage

The following table lists the response received for various bandwidth and number of users.

Table 2-1 Bandwidth Responses

Bandwidth	Number of Users	Response in seconds
1 Mbps	1	9.2
	2	10.41
	3	12.18
	4	13.5
	5	16.56
	6	17.84
2 Mbps	1	9.06
	2	9.15
	3	10.48
	4	11.28
	5	12.06
	6	12.34
	7	13.5
	8	15.5
	9	15.7
	10	16.85
	11	17.7

Table 2-1 Bandwidth Responses

Bandwidth	Number of Users	Response in seconds
5 Mbps	5	9.34
	10	11.56
	11	11.92
	12	11.51
	13	12.5
	14	12
	15	13.82
	16	13.18
	17	14.91
	18	16.72
	19	15.96
7 Mbps	20	16.98
	21	17.41
	25	13.93
	30	15.41
	31	15.21
	32	15.64
9 Mbps	33	16.31
	34	18.92
	30	10.56
	35	12.11
	40	14.79
	41	14.7
	42	13.27
	43	13.93
	44	15.68
	45	16.81
46	16.13	
47	19.25	

Table 2-1 Bandwidth Responses

Bandwidth	Number of Users	Response in seconds
11 Mbps	35	9.57
	40	10.07
	50	11.85
	55	13.51
	56	13.96
	57	14.67
	58	15.86
	59	16.36
	60	16.08
	61	17.11

