Introduction

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This chapter introduces the concepts of Cisco Connected Mobile Experiences (CMX) and CMX Dashboard that is used to manage and configure CMX services.

Connected Mobile Experiences

The Cisco Connected Mobile Experiences (CMX) enable organizations to detect, connect, and engage with end users or the customers while inside their venue:

- Detect: The wireless signal from the customer's mobile device, and the device's characteristics, are detected as the customer approaches your location.

- Connect: After the customer receives notification of available Wi-Fi access and services, that customer can securely connect.

- Engage: Once customers have access, you can engage them with personalized content. Through this two-way communication, you can build a real-time, value-added relationship with your customers.

Following are the benefits of the CMX solution:

- Transition Wi-Fi from an IT cost center to a platform for end-user services.

- Increase customer intimacy by offering personalized, relevant content.

- Generate new revenue through third-party targeted mobile advertising.

- Increase venue effectiveness by using traffic flows to better position products or services, adjust floor layouts to better serve customers, and staff service locations according to traffic and time of day.

The following figure summarizes this process.

Figure 1-1   *Detect, Connect, and Engage*
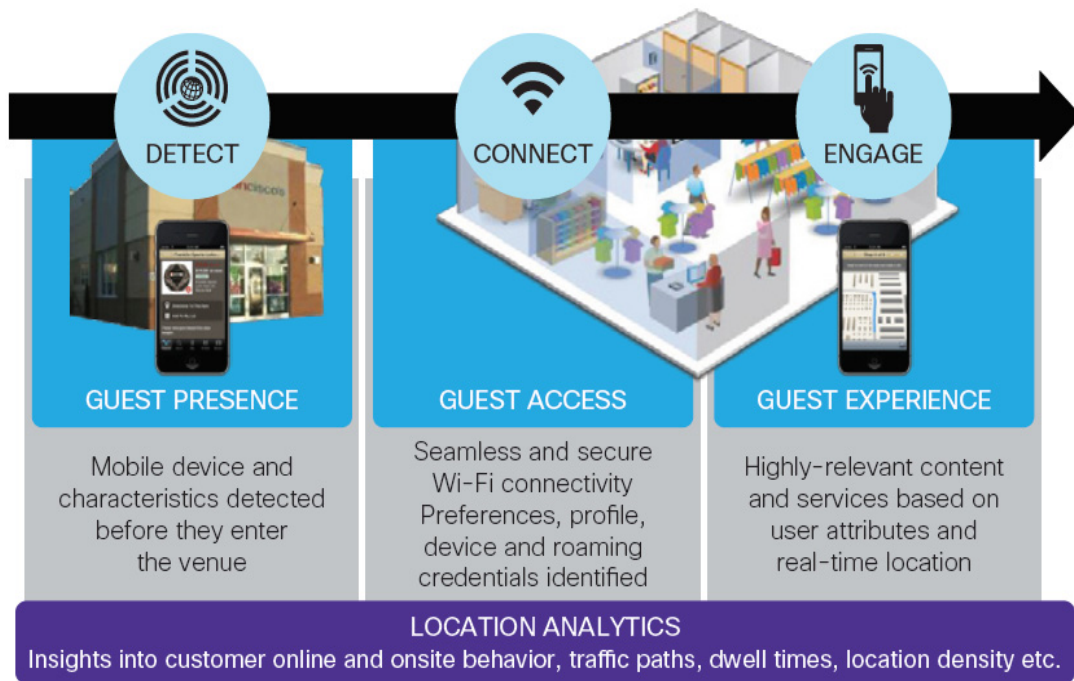
CMX Engage

Engage allows organizations to communicate with users via different media on the mobile device, including:

- App Engage: Location-enabled apps can include features such as indoor maps and navigation and personalized, location-specific notifications. It also includes the Mobility Services API, which enables our ecosystem partners to develop location-based apps.

- Browser Engage: Location and context-enabled browser banner notifications, menu items, and search capabilities.

- Device Engage: Location-enabled service discovery on the device, enabling organizations to communicate with users regardless of app or web capabilities. This capability is available on devices with the Qualcomm Snapdragon chipset.

CMX Browser Engage and CMX Dashboard

Cisco CMX Browser Engage is a new way to transform the in-venue experience through browser engagement. This enables organizations to communicate with opt-in mobile users - shoppers, guests, visitors - through their mobile browser.

CMX Dashboard is the back-end tool designed for administrative users to manage the CMX Browser engage experience. It allows the admin users to configure venue-specific menus, banners, and icons as well as content-aware search.

This guide will describe the use of the CMX Dashboard to configure and manage CMX Browser Engage services.

Cisco Wireless Components

The Cisco Wireless is designed as a wireless solution that increases employee productivity, enhances collaboration, and improves responsiveness to customers. The Cisco Wireless is an unified network. It addresses the security, deployment, management, and control issues facing large-scale enterprises and commercial wireless LAN users.

Following are the components of the unified network:

- Cisco Prime Infrastructure (PI) — combines the wireless functionality of Cisco Prime Network Control System (NCS) and the wired functionality of Cisco Prime LAN Management Solution (LMS).

- Cisco Wireless LAN Controller — enables network administrators to have the visibility and control necessary to effectively and securely manage business-class WLANs and work with the Mobility Services Engine.

- Access Points (AP) — connect wireless devices to wired networks providing ubiquitous network access.

- Mobility Services Engine (MSE) — a set of value-added network services that consolidate intelligence from various points in the network to enable and optimize the delivery of business mobility applications.

Figure 1-2   *Overview of PI- MSE - CMX Dashboard*
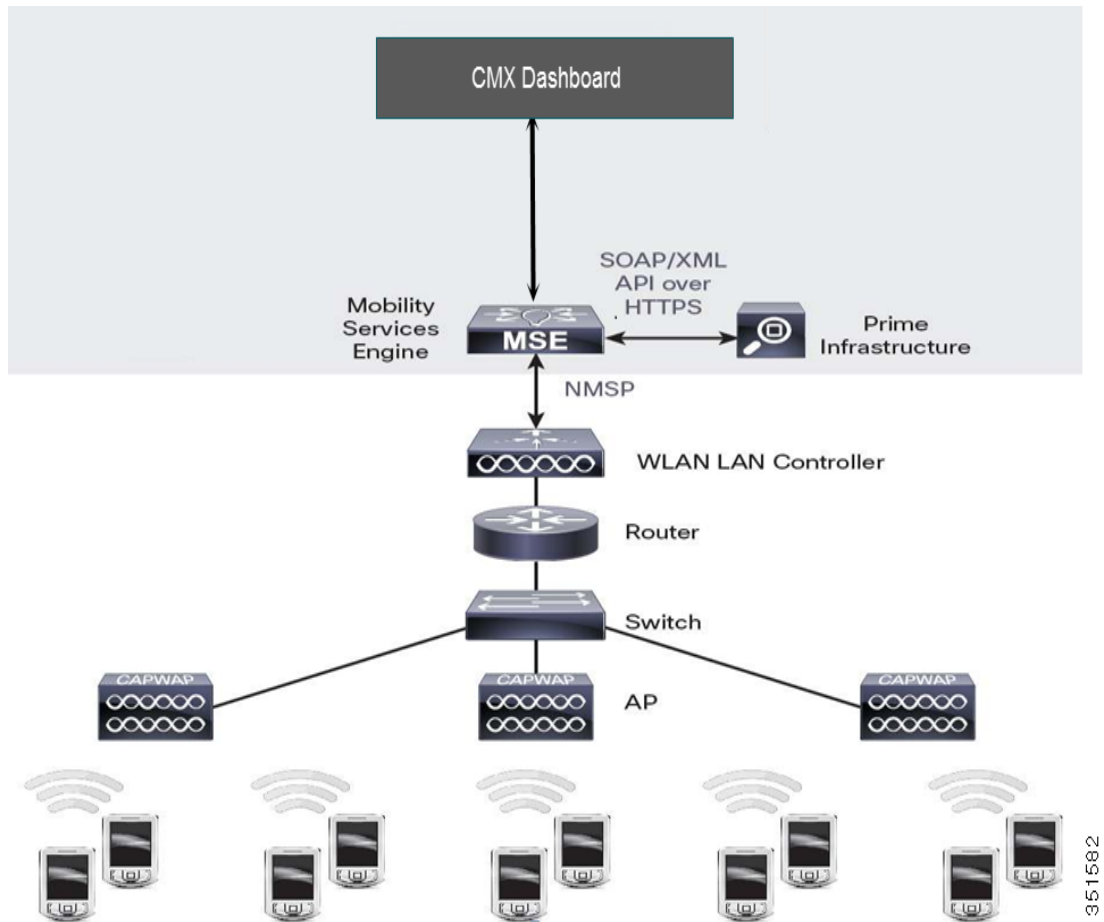
PI - MSE - CMX Dashboard Connection

The admin user has to enable the CMX Browser Engage and Proxy Services on the MSE using PI 1.4.

Note   The domain name and at least one DNS IP address must already be configured on the MSE to enable the service. To have the CMX Dashboard operational, the PI needs to be deployed.

The admin user provides the CMX Browser Engage server information to the Proxy service. The admin user gives the Location MSE information to CMX Browser Engage server.

The admin user clicks Save. All the campus, building, and floor information managed by the Location PI/MSE is sent to CMX Browser Engage server along with the floor images and dimensions.

To access the back-end tool - the CMX Dashboard, use the following details.

The URL is http://<the_MSE_IP_address>:8081/Mario. The default username and password are admin and admin.

CMX Dashboard Workflow

This section lists out the high level configuration steps for the CMX Dashboard in brief and the flow of this document as well.

Following is the workflow for the CMX Dashboard:

Note The following flow of the actions is based on a condition that Admin users have configured the PI, MSE's have been added and the maps have been synced.

Step 1 Log in to the CMX Dashboard and verify that maps are updated in the points of interests menu. This step is covered in detail in the chapters *Points of Interest Management* & *Account Management*.

Step 2 Then create the display banners. The banner can be one of the types: a welcome message, an offer or deal, sponsorship, advertisement. Upload the images to display and add the keywords for the product/ service at the venue and activate the banners. This step is covered in detail in the chapter *Banner Management*.

Step 3 Create a new campaign and add the description and keywords for easy search. This step is covered in detail in the chapter *Campaign Management*.

Step 4 After the creation of the banners and campaigns, as admin user you can customize the appearance of the services tool bar by choosing logos and animation. CMX Dashboard enables to preview the tool bar on mobile devices of different screen size. The steps are covered in detail in the chapters *Service Management* and *Browser Display* & *End User Experience*.

CMX Dashboard Components

The following are the components of the CMX Browser Engage:

Accounts & Roles

Accounts tab allows the admin user to define a set of accounts and users for each account.

For example, in case of a Mall, admin user can go to **Account** > **Create New Account** to make separate accounts for each store.

There are keywords associated with each account which will help locate the stores when the end user searches with these keywords.

The Account information is useful for the easy navigation at the venue.

CMX Dashboard also allows creating and assigning roles such as Account Admin, Marketing Admin, and Super Admin. The admin user can allocate tasks to each role.

For example, admin user can go to **Settings** > **Roles** to assign the tasks such as Campaign Approver, Banner Approver, and Reports amongst others.

Campaigns

Admin user can create campaigns for specific location, and assign the campaigns to offers, deals, sponsorships, advertisements, and welcome messages.

Campaigns Management allows you to choose the banners that are available and ascribe some rules with each banner type.

For example you can go to **Campaigns** > **Create New Campaign** and specify the account, active period and other rules.

Campaigns Management allows manage, edit and delete a specific campaign.

Banners

Banners are the messages that can be displayed on browser of the customer's mobile device.

The messages can be welcome message, offer, deal, sponsorship and advertisement. As an admin user you can set the type of rules and display for a specific banner.

For example, you can go to **Banners** > **Create New Banner** and set up a banner with details such as the text, image, type, and target URL.

You can choose whether the welcome message is displayed all the time user clicks on CMX Browser Engage icon or only the first time we detect that user.

Banners management allows making the banners as active or inactive.

Advantage of the Banners management is that you can choose to provide any offer or deal based on loyalty. If the customer spends more time at a specific Point of Interest, you can device a special offer.

POI management

In Point of Interest (POI) Management, you can see all the campus, building, floor/zone information that is taken from the Location MSE.

If there is any change in the Floor dimensions or map image on PI, you need to manually update that information using '**Update Floor Maps**' feature in POI sub menu.

You can add any additional POI on the floors using the tools available on the floor map.

For example, you can go to **Points of Interest** > **System Campus** > **Floor** > **Add Point of Interest** and set up a POI with specific information such as service categories, keywords, and image.

Appearance

You can set up appearance of banners on customer's mobile device.

To customize the look click **Appearance**.

You can define how you want to display the toolbar and the CMX Browser Engage icon. You can also define the default icon that shows up on the end device.

Following are the important parameters:

- Display - defines whether the CMX Browser Engage toolbar is expanded always or only when the user clicks on the icon.

- Position - defines whether the icon or toolbar should be displayed on the top or bottom.

- Exceptions - display the icon or toolbar on top or bottom as defined in the position, except for the URLS specified here.

- Banner display time - the after which a banner is be refreshed.

- Default Logo - the default logo or icon that is shown on the customer's mobile device

- Animations tab - the way and effect logo is displayed with.

As you set up the basic parameters as mentioned above, you are ready to offer the services.

Services

There are two methods of interaction with the customers at the venue. You can have messages as mentioned the above section.

Other significant way is to offer services - these are the value-added offerings that attract the customers to the venue. CMX Browser Engage as the name suggests takes part in enriching shopping experience and has potential to build the customer satisfaction and loyalty.

CMX Browser Engage offers effective services such as hyper-local search, 'Find me', and deals.

Hyper-local search

This service is helpful to the customers at a venue. There is a search icon pre-loaded on the CMX Browser Engage toolbar that appears on the customer's mobile device.

As Admin user, you can save the database of the stores and deals.

For example, a customer can find stores, sales deals, products and discount coupons using hyper-local search. Customer needs to enter the keyword in the search field and the result will show the location of the Point of Interest available nearby.

Find Me

It is helpful service to get different directions at a venue.

When the customer clicks on the Map icon that is displayed on the CMX Browser Engage toolbar, it shows the floor map along with a blue dot showing the customer's current location.

The customer can search for a specific item all stores and shows them on the map in form of dots.

Then the customer can click on a specific store and look for directions. In order to provide this information, admin needs to setup the floor navigation and plot the stores on the map using the icons.

For example, to search food items, the customer needs to enter food as keyword, and a food outlet is shown.

If some zone is closed for cleaning, refurbishing or other maintenance works and is not available for the customer, you can upload such information for the customers.

Deals

The venue owner or the stores can decide the various deals of different products and send these to the customers.

The admin user needs to update the data on deals. You can have the deals that are specific time bound promotions and sales offers.

The icons that appear above the CMX Browser Engage toolbar denote the deals service. It has the data on all the deals in the venue at the time. If the customer clicks on the icon all the details of that particular deal is displayed.

For example a store wants to offer a discount on the retail price of footwear, they can prepare such deal and corresponding icon appears above the CMX Browser Engage toolbar.

Reports

After setting up the CMX Browser Engage and offering services, as an admin user, you would require the information on the performance of services and messages.

The CMX Dashboard enables you to extract various reports for analysis. With the reports you can study the actual use of services and the customer behavior.

The additional advantage is the possibility to sell the customer data to advertising agencies and consumer goods companies.

For instance, you can click **Reports**, to view the performance of the services and messages for a specific time interval such as hour, day, week or month.

Using the demo feature of the CMX Visitor Connect you can also study the visitor trends.

This guide describes the details of the points discussed above in the following chapters.