

Preface

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This section discusses the objectives, audience, conventions, and organization of the *Cisco CMX Dashboard Configuration Guide* and provides general information about CMX Browser Engage service.

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more up to date than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription.

Objectives

This guide describes the workflow and components of CMX Dashboard and contains corresponding information of the CMX Browser Engage service.

Audience

This publication is intended primarily for users who implement the mobility services using Cisco Unified Wireless Network. The publication is intended for the Marketing and IT staff who use the Cisco CMX Dashboard.

Organization

This chapter describes the contents of each chapter in this document.

Table 1 Organization

Chapter	Title	Description
Chapter 1	Introduction	Introduction of CMX Dashboard
Chapter 2	Prerequisites	Prerequisites of the Configuration guide
Chapter 3	Getting Started	Initial steps for configuration
Chapter 4	Account Management	CMX Dashboard Accounts
Chapter 5	Points of Interest Management	Specific location in CMX Dashboard Configuration
Chapter 6	Navigation Management	Navigation at a venue
Chapter 7	Banner Management	Types of messages
Chapter 8	Campaign Management	CMX Dashboard Banners
Chapter 9	Service Management	Types of services and messages
Chapter 10	Browser Display & End User Experience	The runtime behavior and the appearance of the CMX Dashboard
Chapter 11	CMX Dashboard Reports	Analysis of the use of services
Chapter 12	CMX Dashboard Visitor Management	Access to network for the customers
Appendix A	HTTP and TCP Proxy	HTTP traffic
Appendix B	CMX Cloud Connector	Cloud connector in decentralized CMX Dashboard set up



CMX Visitor Management is a Demo feature that is not supported by Cisco TAC. It is recommended for use in the lab environment and not in production networks. This is turned on by default and requires additional configuration to make it operational.



Please provide your feedback by clicking on "Make a wish" menu in CMX Dashboard, which is available on the top right corner of the page. To disable the feature, remove the "Visitor Connect" operation from the Super Admin role.

Command Syntax Conventions

Table 2 describes the syntax used with the commands in this document.

Table 2 Command Syntax Guide

Convention	Description
boldface	Commands and keywords.
italic	Command input that is supplied by you.
[]	Keywords or arguments that appear within square brackets are optional.
{ x x x }	A choice of keywords (represented by x) appears in braces separated by vertical bars. You must select one.
^ or Ctrl	Represent the key labeled <i>Control</i> . For example, when you read ^D or <i>Ctrl-D</i> , you should hold down the Control key while you press the D key.
screen font	Examples of information displayed on the screen.
boldface screen font	Examples of information that you must enter.
< >	Nonprinting characters, such as passwords, appear in angled brackets.
[]	Default responses to system prompts appear in square brackets.

Command Syntax Conventions



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.

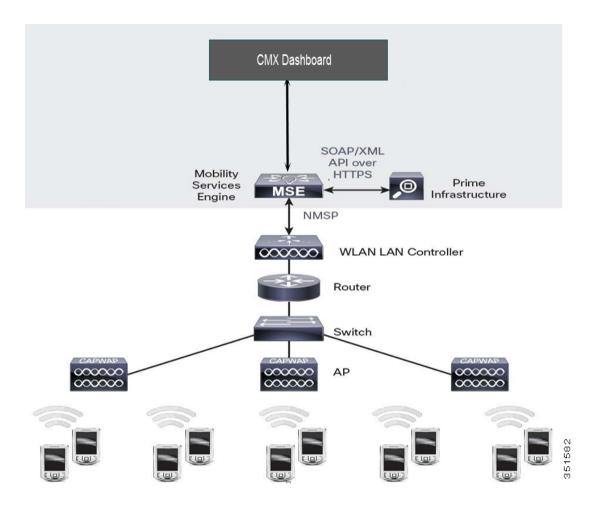


Figure 1-2 Overview of PI- MSE - CMX Dashboard

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.



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:



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.

Reports



Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on the Cisco CMX Dashboard.

The information in this document was created from the devices in a specific lab environment. All devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

This document for Cisco CMX Dashboard depends on the information of Cisco Mobility Services Engine 7.5 and Cisco Prime Infrastructure 1.4 versions.

Conventions

See the Cisco Technical Tips Conventions for more information on document conventions.

Conventions



Getting Started

This chapter describes information on system requirements and starting the Cisco Mobility Services Engine (MSE) on Prime Infrastructure and CMX Dashboard.



For information on set up see Cisco Prime Infrastructure Quick Start Guide.

Adding a Mobility Services Engine to the Prime Infrastructure

You can add MSE using the Add Mobility Services Engine dialog box in the Mobility Service page. In this dialog box, you can add licensing files, tracking parameters, and assign maps to MSE. If you launch the wizard with an existing MSE for configuration, the Add MSE option appears as Edit MSE Details.



To learn more about Cisco Adaptive wIPS features and functionality, go to Cisco.com to watch a multimedia presentation.



The Prime Infrastructure Release 1.4 recognizes and supports MSE 3355 appropriately.

To add a mobility services engine to the Prime Infrastructure, log in to the Prime Infrastructure and complete these steps:



The Services > Mobility Services Engine page is available only in the virtual domain in Release 7.3.101.0

If you have not specified the username and password during the setup process, use the defaults. The default username and password are both *admin*.

- **Step 1** Verify that you can ping the mobility services engine.
- **Step 2** Choose **Services > Mobility Services** to display the Mobility Services page.
- Step 3 From the Select a command drop-down list, choose Add Mobility Services Engine and click Go.

- **Step 4** In the Device Name text box, enter a name for the mobility services engine.
- **Step 5** In the IP Address text box, enter the IP address of the mobility services engine.
- **Step 6** (Optional) In the Contact Name text box, enter the name of the mobility services engine administrator.
- **Step 7** In the User Name and Password text boxes, enter the username and password for the mobility services engine. This refers to the Prime Infrastructure communication username and password created during the setup process.



If you changed the username and password during the automatic installation script, enter those values here. If you did not change the default passwords, we recommend that you rerun the automatic installation script and change the username and password.

- **Step 8** Select the **HTTP** check box to allow communication between the mobility services engine and third-party applications. By default, the Prime Infrastructure uses HTTPs to communicate with the MSE.
- Step 9 Select the **Delete synchronized service assignments** check box if you want to permanently remove all service assignments from the MSE. This option is applicable for network designs, wired switches, controllers and event definitions. The existing location history data is retained, however, you must use manual service assignments to perform any future location calculations.
- **Step 10** Click **Next**. The Prime Infrastructure automatically synchronizes the selected elements with the MSE.
- **Step 11** After the synchronization, the MSE License Summary page appears. You can use the MSE License Summary page to install a license, add a license, remove a license, install an activation license, and install service license. The Select Mobility Service page appears.
- **Step 12** To enable a service on the MSE, select the check box next to the service. Services include Context-Aware Service and wIPS.

Select the CMX Dashboard Service and HTTP Proxy Service to enable the services.

You can choose CAS to track clients, rogues, interferers, wired clients, and tags.

Choose Partner Tag Engine to track tags.

Step 13 Click Save.

After adding a new mobility services engine, you can synchronize network designs (campus, building, and outdoor maps), controllers, switches (Catalyst Series 3000 only), and event groups on the local mobility services engine using the Prime Infrastructure. You can perform this synchronization immediately after adding a new mobility services engine or at a later time. To synchronize the local and the Prime Infrastructure databases, see Synchronizing Mobility Services Engines.

Enabling CMX Dashboard Service on the Mobility Services Engine

To enable CMX Browser Engage and Dashboard, complete these steps:

- **Step 1** Choose **Services > Mobility Services Engine**. The Mobility Services Engines page appears.
- **Step 2** In the Mobility Services page, click the **Device Name** to configure its properties.
- **Step 3** Select the check box next to the CMX Dashboard service.
- Step 4 Click Save.
- **Step 5** Click **Done** to save the settings.

Enabling Proxy Server on the Mobility Services Engine

To enable proxy server, complete these steps:

- **Step 1** Choose **Services > Mobility Services Engine**. The Mobility Services Engines page appears.
- **Step 2** In the Mobility Services page, click the **Device Name** to configure its properties.
- **Step 3** Select the check box next to the Proxy Service.
- Step 4 Click Save.
- **Step 5** Click **Done** to save this settings.

Logging into CMX Dashboard User Interface

To configure the CMX Dashboard and Proxy services, do the following in the Prime Infrastructure:

- Step 1 Choose Mobile Concierge Service > CMX Dashboard Configuration. Choose the Location MSE that the CMX Dashboard MSE gets the maps and location data from. It can be the same MSE or a different MSE.
- Step 2 Choose Mobile Concierge Service > Proxy Configuration. Choose the CMX Dashboard MSE that provides the information of the banners to the end device. The CMX Dashboard MSE is served from this Proxy MSE.

To log into CMX Dashboard user interface through a web browser, complete these steps:

- **Step 1** Type https://mseip/dashboard/ in the web browser.
- **Step 2** Enter the default username as admin.

Step 3 Enter the default password as admin.



Note

To change the default password click **My Account** on the top right corner. Enter and re-enter the new password of choice, and click **Submit**.



Account Management

The CMX Dashboard enables you to create and assign accounts depending on the product or service.

An Account is an entity that owns the content that is published through the CMX Dashboard. The account contains information of all the events including view, number of clicks of the specific messages, and services.

Account Management allows you to define and set up different set of accounts and users. An Account user is entitled to a role with specific functionality permissions for that role.

The CMX Dashboard Administrator can create an account for a store. Customers can locate stores using the keywords associated with each account. Account information is used while plotting the store in the Floor Navigation.

Creating an Account

To create a new account, complete the following steps:

- **Step 1** Choose **Accounts** from the left side bar menu.
- Step 2 Click Create New Account. The Add/Edit Account and Address group boxes appear.
- **Step 3** In the Add/Edit Account group box, do the following:
 - Enter the name of the account in Account Name:* text box.
 - To upload a logo of the account, click Click to upload a Logo. Locate the image file from File Upload dialog box and click Open.
 - In the Account Description* text box, enter the description of the account.
 - Enter the keywords about the account you want to create in the Keyword* text box. These keywords help locate the store easily when a customer searches on the mobile device browser.
- **Step 4** In the Address group box, do the following:
 - Enter the email address of the account in the Email* text box.
 - Enter the URL of the account in the Website URL* text box.
 - In the Phone* text box, enter the phone number of the account.
 - In the text boxes Street Line 1* and Street Line 2* enter the address of the account.
 - In the City* text box, enter the name of the city.
 - In the State* text box, enter the name of the state.

• Enter the area zip code in the Zip Code* text box.

Step 5 Click Submit.

Deleting an Account

To delete a new account, follow these steps:

- Step 1 Choose Accounts from the left side bar menu. Click All to view all the accounts in the CMX Dashboard database. All Accounts group box appears.
- **Step 2** In the Active Accounts group box, select the account you want to delete.
- Step 3 Click Delete.

Making an Account active

To make an active account active, follow these steps:

- Step 1 Choose Accounts from the left side bar menu. Click **Inactive** to view all the accounts in the CMX Dashboard database. Inactive Accounts group box appears.
- **Step 2** In the Inactive Accounts group box, select the account you want to reactivate.
- Step 3 Click Make Active.

Making an Account inactive

To make an active account inactive, follow these steps:

- **Step 1** Choose Accounts from the left side bar menu. Click **Active** to view all the accounts in the CMX Dashboard database. Active Accounts group box appears.
- **Step 2** In the Active Accounts group box, select the account you want to delete.

Click Make Inactive.

Roles, Domain and Server Settings

The CMX Dashboard UI provides the feature to organize roles, domain setup and the server settings.

Roles

To set the roles follow these steps:

- Step 1 From the left side bar menu, select Settings. Click Roles.
- Step 2 Click Create New Role. Select Operations box appears.
- Step 3 Enter the name of the role category in Name: textbox.
- Step 4 Enter the name that you want on display in Display Name:
- Step 5 Choose and change the roles from Available Operations and Existing Operations.
- Step 6 Click **OK**.
- Step 7 To edit a role, click the role in the list that appears when you select Settings and click **Roles**.
- Step 8 Click **Edit**. Change the operations and click **OK**.
- Step 9 To delete a role, click the role in the list that appears when you select Settings and click **Roles**.
- Step 10 Click Delete.
- Step 11 Click **OK** in the Delete Confirmation dialog box.

Domain

To set the domains follow these steps:

- Step 1 From the left side bar menu, select Settings. Click **Domain Setup**.
- Step 2 Click Create New Domain. Add/Edit Domain group box appears.
- Step 3 In Domain Name: enter name of the domain.



Note

You have to set up key-value mapping for the webpage or domain, before adding it to a Point of Interest.

Step 4 In Domain URL: enter the URL of the domain.



Note

Please don't use http://

Step 5 In Key Handlers: enter the keywords.



Note

If more than one key handler, please enter them separated by comma.

- Click Submit. Step 6
- Step 7 To edit or delete a domain, click the domain in the list that appears in Domain Setups group box when you select Settings and click **Domain Setup**.

Step 8 Click OK.

Server Settings

To set up the server parameters follow these steps:

- **Step 1** From the left side bar menu, select Settings. Click **Server Settings**.
- **Step 2** Choose the default or MSE in Location Resolver:
- **Step 3** Enter the time in seconds in Location Resolver Stale Time:
- **Step 4** In Campaign Cache Refresh Frequency: enter the time in hours.
- **Step 5** In Campaign Cache DB sync time: enter the time in seconds.
- **Step 6** In Index refresh time: enter the time in seconds.
- Step 7 In Reports data retention time: enter the number of days you want to retain the data.
- **Step 8** In Default location ID: enter the ID of the location.
- **Step 9** In Banner welcome delay: enter the time period in seconds.
- **Step 10** Choose the collectors of data in BBX Statistic collectors.



Default logo is that of Cisco.

Step 11 Click Save.



Points of Interest Management

A Point of Interest (POI) is a specific location within the venue where a product or a service is available. With the CMX Dashboard user interface you can create various POIs highlighting specific zones.

The maps and location data for the campus, building, or floor are uploaded to the Prime Infrastructure and synchronized with the Location MSE. The CMX Dashboard displays these maps.

You can update the map in the CMX Dashboard by clicking **Update Floor Maps** in **Points of Interest** menu.

As an administrator, you can create zones inside a venue to use location specific messages, offers, and deals.

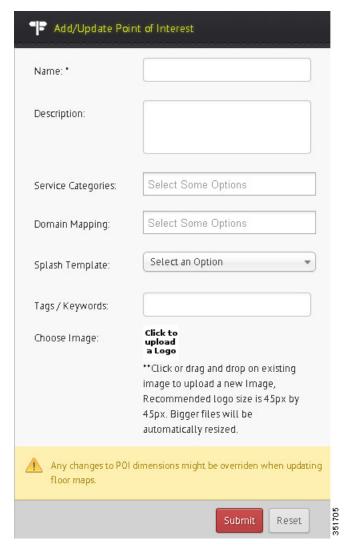
You can mark the specific area on the map that you want to make a point of interest in the CMX Dashboard UI.

Adding Point of Interest

To add or update a Point of Interest, complete the following steps:

- Step 1 From the left sidebar menu, select Points of Interest.
- **Step 2** Click the white triangular icon in the right pane located at the left side of PointOfInterests.
- **Step 3** Click the white triangular icon in the right pane located at the left side of System Campus.
- **Step 4** Click the white triangular icon in the right pane located at the left side of name of the venue.
- **Step 5** In the right pane Add/ Update Point of Interest group box appears.

Figure 5-1 Add/Edit POI



- **Step 6** Enter the name of the POI in the Name:* text box.
- **Step 7** Enter the description of the POI in the Description: text box.
- **Step 8** Select the appropriate service (Map, Deals, or Search) that you want to provide from the Service Categories drop-down list.
- **Step 9** From the Domain Mapping drop-down list, choose the domain mapping.



The banners related to a domain are associated to a campaign and assigned to a Point of Interest.

- **Step 10** Choose the type of splash template from the Splash Template drop-down list.
- **Step 11** Enter the keywords in the Tags/Keywords: text box.
- Step 12 To upload a logo, click Click to upload a Logo and browse to choose an image and click Open.

Step 13 Click Submit.



Note Any changes to POI dimensions may be changed when floor maps are updated.

Step 14 To define a zone go to PointsOfInterests > System Campus > Venue and then to the floor. You can draw & set up a zone on the map of that floor with **Draw Polygon** setting. Double-click on the zone after you finish drawing to close & save it. You can also use the settings like **Drag**, **Edit**, & **Delete Selected** polygon once you select it.

Updating Floor Maps

To update floor maps, complete these steps:

- **Step 1** Create floors and POIs on Mobile Services Engine.
- **Step 2** Log in to the CMX Dashboard User Interface.
- **Step 3** Choose Points of Interest from the left side bar menu.
- Step 4 Click Update Floor Maps in the right pane.
- **Step 5** The Update Confirmation dialog box appears.
- Step 6 Click OK. To cancel, click Close.



If you modify the campus, building, or floor on PI, you have to update them in the CMX Dashboard UI by clicking **Update Floor Maps** to get the modified information.

Deleting Floor Maps

If you remove any data for floors, building, or campus from the PI, is not deleted from the CMX Dashboard. You have to delete the information from the CMX Dashboard UI.

To delete a floor map, complete these steps:

- **Step 1** Choose Points of Interest from the left side bar menu.
- Step 2 Go to System Campus > Venue > Floor.
- Step 3 Click Delete Floor.

Updating Floor Maps

Navigation Management

CMX Dashboard enables you to organize the navigation of the zones of venue per your need. You must configure all the Points of interest, maps, and directions in the CMX Dashboard database. The floor map is based on the data from the Mobility Services Engine. CMX Dashboard also enables you to assign a campaign to a specific zone on a floor.

When customers click on the map logo on his mobile device browser, they view their location and a map of the zone he is situated in. The light blue icon denotes the actual location of the customer. If the customer searches for an item, navigation helps to identify the location of that product or service. When the customer clicks on the logo, the store information, the directions, the buttons to email or call the store appear. Along with that, map guides you to those locations of availability via the shortest route. The CMX Dashboard supports this navigation management.

Creating Navigation Points

To create a navigation point on a floor, complete the following steps:

- **Step 1** Choose **Floor Navigation** from the left side bar menu.
- **Step 2** Click the white triangular icon in the right pane located at the left side of PointOfInterests.
- **Step 3** Click the white triangular icon in the right pane located at the left side of System Campus.
- **Step 4** Click the white triangular icon in the right pane located at the left side of name of the venue.
- **Step 5** Click the name or the number of the floor. A map of that floor appears in the right pane.
- Step 6 Click Start Over. A dialog box to confirm that you want to start floor navigation design appears. Click Yes.
- **Step 7** To place the stores in the floor map, click the **Plot Store** icon at the top panel.



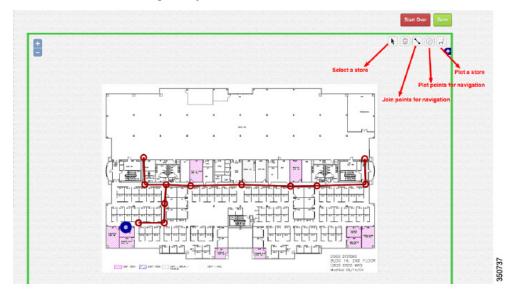
Note

The Account information is used while plotting the store.

- **Step 8** To place the paths, click **Draw Points** icon.
- **Step 9** To connect various locations and the paths on the floor, click **Draw Line** icon.
- Step 10 To add additional information about a specific location, click More Info icon.
- **Step 11** After finishing the allocation of all the locations, paths, and stores on the floor map, Click **Save**.

The following figure shows the creation of navigation points.

Figure 6-1 Creation of navigation points





From the CMX Dashboard user interface (UI), you can access the CMX Analytics UI. With CMX Analytics, you can collate and analyze the information based on location and customer behavior. For more information, see *CMX Analytics Configuration Guide, Release 7.5*.



For the CMX Dashboard navigation, POI specific campaigns to work, the prerequisites are to create floor maps in PI, position access points in PI, and to synchronize maps to a Location MSE. For more information, see *Cisco Connected Mobile Experiences Configuration Guide, Release 7.5.*



Banner Management

Banner Management allows you to create different types of messages to interact with the customers at the stores or venues. You can set the message specific rules and validity rules.

An Admin user or account user with credentials creates messages, previews them and publishes for approval.

You may compose a message in either text with image or as an image. The message dissemination depends on various factors such as the day, date, time, type of user, preferences, and location.

These are the four types of messages or banners.

- 1. Welcome
- 2. Offer or Deal
- 3. Sponsorship
- 4. Advertisement

Welcome

Welcome message is the first message that appears when a guest or customer walks into the venue of an enterprise. The welcome message also appears if the customer moves from one Point of Interest to another.

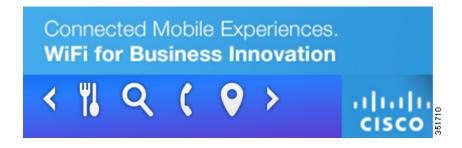
Point of interest is a specific location of sale of a product or service within the venue of an enterprise.

For instance when guest walks in ABC Mall, the welcome message is "Welcome to ABC Mall".

Similarly, when a guest walks into the food court, the message is "Welcome to the International Food Court."

Following figures show the example of a welcome message:

Figure 7-1 Welcome message



You can change the welcome messages depending on the location and the Point of Interest.

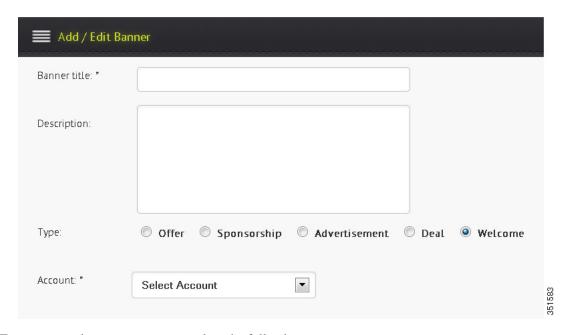
The Welcome Message can be customized depending on a visitor walks into the venue for the first time or the second.

For instance, for a new visitor to the XYZ Mall, the welcome message would be "Welcome to XYZ".

For returning customers, the message would be "Welcome Back to XYZ Mall".

Following figure shows the creation of welcome message.

Figure 7-2 Create welcome message



To create a welcome message, complete the following steps:

- Step 1 Go to Banners and click Create New Banner.
- **Step 2** Enter the message name.
- Step 3 Choose Welcome from the Type of Message menu.



of messages can be repeated.

- **Step 4** Choose the type of account that owns the message from the account list.
- **Step 5** Chose either of the following options of the message display:
 - Text with Logo

For this option, enter the text for the message using a text formatting tool similar to MS Word, where you can select font, size, color, and style.

The CMX Dashboard shows the welcome message only once in the campaign; the other type

- Image
- **Step 6** To upload a picture or image, click **Upload**.



If you want guests to click on the welcome message and get directed to an URL, you need to enter the URL.

- **Step 7** Enter the keywords for hyper-local search.
- Step 8 Click Submit.

Offer or Deal

An offer message is an advertisement for the guests and customers. For instance a store inside a mall can inform about new fall season collections.

A Deal messages is a special type of the offer message. Deal message relate to a specific time bound sales promotion. Using deal as the keyword, a customer can use the hyper-local search to view the deals available.

To create an Offer or Deal message, complete the following steps:

- Step 1 Go to Banners and click Create New Banner.
- **Step 2** Enter the message name.
- **Step 3** Choose **Offer** or **Deal** from the **Type of Message** menu.
- **Step 4** Choose the type of account that owns the message from the account list.
- **Step 5** Chose either of the following types of message display:
 - Text with Logo

For this option, enter the text for the message using a text formatting tool similar to MS Word, where you can select font, size, color, and style.

- Image
- Step 6 To upload a picture or image, click Upload.



If you want guests to click on the Offer and get directed to an URL, you need to enter the URL.

- **Step 7** Enter the keywords for hyper-local search.
- Step 8 Click Submit.

Sponsorship

Sponsorship Messages are advertisements of an external party in a particular section of the venue. The external entity buys a part of the advertisement inventory in the CMX Dashboard and highlights its brands, products, and services through messages.

For example XYZ Corp advertises its product A.

To create a Sponsorship message, complete the following steps:

- Step 1 Go to Banners and click Create New Banner.
- **Step 2** Enter the message name.
- Step 3 Choose Sponsorship from the Type of Message menu.
- **Step 4** Choose the type of account that owns the message from the account list.
- **Step 5** Chose either of the following types of message display:
 - Text with Logo
 - For this option, enter the text for the message using a text formatting tool similar to MS Word, where you can select font, size, color, and style.
 - Image
- **Step 6** To upload a picture or image, click **Upload**.



CMX Dashboard If you want guests to click on the Sponsorship banner and get directed to an URL, you need to enter the URL.

- **Step 7** Enter the keywords for hyper-local search.
- Step 8 Click Submit.

Advertisement

Advertisements are messages from an external party promoting its brands.

To create an Advertisement, complete the following steps:

- Step 1 Go to Banner and click Create New Banner.
- **Step 2** Enter the message name.
- Step 3 Choose Advertisement from the Type of Message menu.
- **Step 4** Choose the type of account that owns the message from the account list.
- **Step 5** Chose either of the following types of message display:
 - Square picture with text
 For this option, enter the text for the message using a text formatting tool similar to MS Word, where you can select font, size, color, and style.
 - Rectangular Image
- Step 6 To upload a picture or image, click Upload.



If you want guests to click on the Advertisement and get directed to an URL, you need to enter the URL.

- **Step 7** Enter the keywords for hyper-local search.
- Step 8 Click Submit.

Difference between the types of messages

The types of messages are - Welcome, Offer, Sponsorship, Advertisement, and Deal. The difference between these messages is based on the rules that the admin user sets up.

Welcome message appears when a guest or customer walks the first time, into the venue. It also appears if the customer moves from one zone to another. It is not repeated.

Deals are the bargains that are given to customers on per-day basis.

Offers are provided on the basis of the frequency of the customer's visit to the venue.

Sponsorship is the message used depending on the venue, for example Google could sponsor free Wi-Fi to all users in a convention center or at educational conference.

Advertisement is more relevant in case of the retail stores. For example a company may advertise a launch of a product at a mall.

Advertisement



Campaign Management

Campaign Management enables enterprises to create and implement various campaigns.

You can create campaigns for specific points of interests, and assign the campaigns to messages such as offers, deals, sponsorships, advertisements, and welcome messages.

You can set triggering rules to specific messages and validity rules for the campaigns.

To create a campaign, you must have an account and a banner.

Web Banner

The web banner is a type of advertising on the CMX Dashboard. When a guest or a customer walks in a store or venue and connects to the wireless network, you can place a web banner in form of a logo or image on the customer's mobile device.

Creating a Campaign

Before creating campaign, you must have an account and banner.

To create a campaign, complete these steps:

- **Step 1** From the left side bar menu, select Campaigns.
- Step 2 Click Create New Campaign, in the right pane.
- **Step 3** In the Campaign Name:* text box, enter the campaign name.
- **Step 4** Select the account from the Account: drop-down list. It is the account that you want to assign this campaign to.



You must create a point of interest to populate in the Points of Interests: list box.

Step 5 Select the point of interest from the Points of Interests: list box. It is the zone where you want to display the campaign.

- **Step 6** Click **Active Period:*** to open a calendar and choose a start date and time along with end date and time. The campaign is on within these time slots.
- **Step 7** To apply any additional rules and policies, click **Add** in the Campaign Rules group box. The Add/Edit Policy Rules window appears.
- **Step 8** Complete the following steps, in the Add/Edit Policy Rules window:
 - Click the **Dates** to open the calendar and choose the start time and end time.
 - Select the day of the week from the Days list. The possible options are: Mon, Tue, Wed, Thu, Fri, Sat, Sun. This is the day of the week when you want to publish this campaign.
 - Click the **Time** to open the calendar and choose Time, Hour, and Minute.
 - · Click Save.
- **Step 9** To assign a welcome message to the campaign, click **Next**. The Welcome Setup tab appears.
- **Step 10** From the Active Welcomes list box, choose the welcome banner.
- Step 11 To assign any offer banner that you have already created to the campaign, click Next.
- **Step 12** Select the active offers from the Active Offers list box.
- Step 13 Click Next to assign any offers to this campaign.
- **Step 14** Select the active sponsorship from the Active Sponsorships list box.
- Step 15 To assign any advertisements that you have created with this campaign, click Next.
- **Step 16** Choose the advertisement from the Active Advertisements list box.
- Step 17 Click Next to assign deals to this campaign
- **Step 18** Select deals from Active Deals list box.
- Step 19 Click Submit.
- Step 20 To publish an active campaign, click Publish Active Campaigns, in the right pane.



By default the newly created campaigns are inactive. You have to make them active before publishing. After activation the banner appears in the Active Banners group box. You must associate a newly created banner to a campaign.

Assigning Banner to a Campaign

To assign various banners like welcome message, offer, sponsorships, advertisements, and deals to a campaign, complete the following steps:

- **Step 1** Select Campaigns from the left side bar menu.
- Step 2 Click to highlight the campaign in the Active Campaigns group box. You can assign various banners to the selected campaign.
- **Step 3** Click **Edit**. The Add/Edit Campaign group box appears.

- Step 4 To assign a welcome message, go to Welcome Setup tab and select the welcome message from the Active Welcomes drop-down list and click Next.
- Step 5 The Offers Setup tab opens. Select banner of the offer from the Active Offer drop-down list and click Next.
- **Step 6** The Sponsorship Setup tab opens. Select the sponsorship from the Active Sponsorship drop-down list and click **Next**.
- Step 7 The Advertisement Setup tab opens. Select the advertisements offer banner from the Active Advertisements drop-down list and click **Next**.
- **Step 8** The Deals Setup tab opens. Select the deals from the Active Deals drop-down list.
- Step 9 Click Submit.

Editing the Existing Banner

To edit the existing banner, complete the following steps:

- **Step 1** Choose Banners from the left side bar menu.
- **Step 2** Click **All** in the right pane to view both the active and inactive banners.
- **Step 3** In the All Banners group box click to highlight the banner that you want to edit.
- Step 4 Click Edit.
- **Step 5** Make the necessary changes in the Add/Edit Banner group box and Setup Content group box.
- **Step 6** Click **Submit** to apply your changes.



Note

To cancel the changes, click Cancel.

Deleting a Banner

To delete a banner, follow these steps:

- **Step 1** Choose Banners from the left side bar menu.
- **Step 2** In the right pane click **ALL** to view both the active and inactive banners.
- **Step 3** Select the banner that you want to delete in the All Banners group box.
- Step 4 Click Delete.
- **Step 5** Confirmation dialog box appears. Click **OK** to delete the banner.



Note

If you don't want to delete the banner, click Close.

Previewing the Existing Banner

To view the existing active or inactive banner, follow these steps:

- **Step 1** Choose Banners from the left side bar menu.
- **Step 2** Click **ALL** in the right pane, to view both the active and inactive banners.
- Step 3 Select the banner in the All Banners group box and click Preview.
- **Step 4** It shows the banner's display when available to the customers on mobile devise.

Searching a banner

To search a banner, follow these steps:

- **Step 1** Choose Banners from the left side bar menu.
- **Step 2** Click **Active** in the right pane to view and search all the active banners.
- **Step 3** Click **Inactive** in the right pane to view and search all the inactive banners.
- **Step 4** Click **All** to search all the active and inactive banners.



Service Management

The CMX Dashboard interacts with the customers at the venue in two ways - services and messages. Services are the value-added offerings that attract the customers to the CMX Dashboard. Services are helpful to engage customers when they enter a venue. Messages help the enterprise in revenue generation. Messages are the ads, offers, and sponsorships.

The first step to create a service for an enterprise is to identify the appropriate service that the CMX Dashboard can offer to the customers.

Currently the CMX Dashboard offers the effective services such as hyper-local search, map, and deals.

The Admin user can configure the hyper-local search and map services in the CMX Dashboard. Admin user can also create additional services specific to a venue.

CMX Dashboard renders a engagement method as an icon on the CMX Dashboard tool bar on the browser on the customer's mobile device.

Hyper-local search

Hyper-local Search is in-built in the CMX Dashboard. The search icon is pre-loaded into the CMX Dashboard and cannot be changed by the user. The customer can enter keywords and the CMX Dashboard provides results that are specific to the venue.

Hyper-local Search service has been pre-configured to appear everywhere in the venue, and is not location-based.

The CMX Dashboard administrator generates the hyper-local search function using the data the users have uploaded in the system. When the admin user creates messages, advertisement, and accounts, the user can search for these services using keywords.

The customer can click one of the results and get the directions to a Point of Interest nearby. The customer can also click the URL link specific to a store for more information.



If the customer clicks close without saving the information, the search results are lost.

Editing Hyper-local Search Appearance

To change the appearance of search icon, follow these steps:

- **Step 1** From the left hand bar menu, select Menu. In the right pane, Menu Categories group box appears.
- **Step 2** Select Search. Click **Edit**. Add/ Edit Service group box appears.
 - In the Service Name:* text box, 'Search' exists by default.
- **Step 3** If you want to change the appearance of search icon on the mobile device browser, choose the display style as either Grid or List.
 - The status of the search is Active, by default.
- Step 4 If you want to change the logo, click the icon in Choose Logo:*
- **Step 5** Locate the image file from File Upload dialog box and click **Open**.
- Step 6 Click Submit.

Map

The maps are in-built in the CMX Dashboard.

The customer can use the maps to

- Find Me/ Locate self
- Locate a store

The CMX Dashboard guides the customer to find a way at the venue and prompts the directions to the point of interest.

The CMX Dashboard administration user must upload the map of the entire venue into CMX Dashboard database.

Editing appearance of map

To change the appearance of map, follow these steps:

- **Step 1** From the left hand menu, select Menu. In the right pane, Menu Categories group box appears.
- **Step 2** Select Map. Click **Edit**. Add/ Edit Service group box appears.
 - In the Service Name:* text box, 'Map' is there by default.
- **Step 3** If you want to change the appearance of map icon on the mobile device browser, choose the display style as either Grid or List.
 - The status of the map is Active, by default.
- Step 4 If you want to change the logo, click the icon in Choose Logo:*
- **Step 5** Locate the image file from File Upload dialog box and click **Open**.

Step 6 Click Submit.

Deals

It is created by system on the basis of the deals that admin user has entered into the system. The deals appear on the CMX Dashboard indicating all the deals in the venue at the time.

Deals icon appears on the mobile device browser of the customer only if there are any deals active at any specific point of interest.

Editing Deals Appearance

To change the appearance of deals, follow these steps:

- **Step 1** From the left hand menu, select Menu. In the right pane, Menu Categories group box appears.
- **Step 2** Select Deals. Click **Edit**. Add/ Edit Service group box appears.

In the Service Name:* text box, 'Deals' is there by default.

Step 3 If you want to change the appearance of deals icon on the mobile device browser, choose the display style as either Grid or List.

The status of the deals is Active, by default.

- Step 4 If you want to change the logo, click the icon in Choose Logo:*
- **Step 5** Locate the image file from File Upload dialog box and click **Open**.
- Step 6 Click Submit.

Deals



Browser Display & End User Experience

CMX Dashboard Administration tool enables the admin user to manage the runtime behavior and the appearance of the CMX Dashboard.

There are configuration specifications that drive the CMX Dashboard behavior and the User Interface.

Browser Display

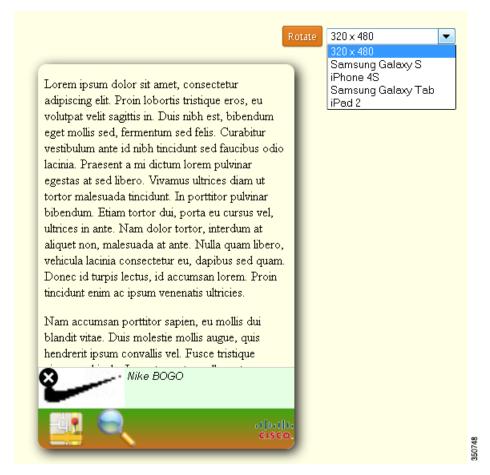
Browser Display enables the admin user to see and manage the appearance of the CMX Dashboard services on mobile devices of the customers at the venue.

The simulator is provided as part of the CMX Dashboard Administration tool to replicate the representation specific to the end-user devices.

Currently, the CMX Dashboard supports the most of the Android & iOS devices including iPhone 4S, Samsung Galaxy S, Samsung Galaxy Tab, iPad 2.

The following is the schematic representation of the mobile browser.

Figure 10-1 Mobile browser



The administrator user can select a device type and simulate the following:

- Runtime behavior
- Appearances of the various settings
- Banner appearance with different colors and logos
- Banner animation

Icons or Images

Following are the various icons for which logos or banners can be used.

- Search
- Deals
- HTML5 Maps

Following are the details of the logo and banner.

Main logo:

In this 7.5 release, CMX Dashboard Admin tool supports uploading the main logo as a square of any size, but is limited to 45x45 pixel to support the display aspects of various mobile devices.

• Banner:

Banner should go across the end-user device in conjunction with the main logo icon. CMX Dashboard Admin tool provides color palette to pick the following

- Background Color start
- Background Color end (can be the same as start if no fading required)
- Service icons are the ones that show up on the banner across and are location aware. Service icon specification are:
- 45x45 pixel for Mobile
- 64x64 pixel for Tablet/Desktop

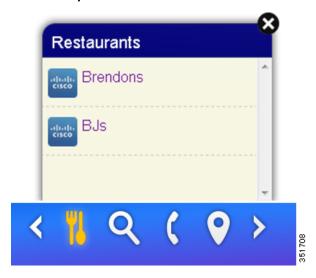
Figure 10-2 Icon example



The service icons can be uploaded while creating/editing individual Services via Administration tool and can be previewed through the simulator tool.

- Service Item icons are the ones that pop-up when user clicks on a Service. Service items
 includes deal items, offer items, map icons, store icons, messages. These icons have with the
 following specifications.
- 60x40 pixel
- 75x50 pixel
- Rolling Messages (Advertisements) Same as Service Item icons.

Figure 10-3 Service icons example



UI templates

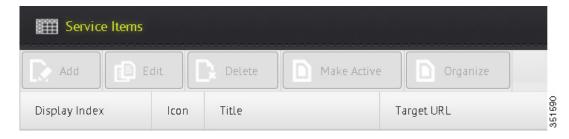
The UI template is a page layout that is designed for the CMX Dashboard UI.

Runtime presentation of Service Items for a specific service should be driven through UI templates and should be configurable via Administration tool.

Currently, the following templates are supported:

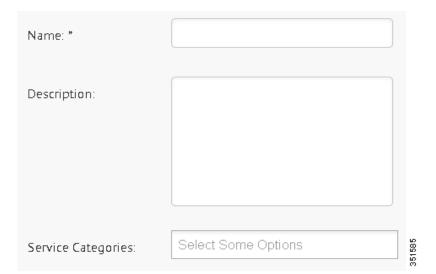
• Table (Item Icon, Item name + description) - Entire row can be clicked if a URL is provided. For instance, the Maps Service has various items that can be shown as a table.

Figure 10-4 Table example



• Grid - It is with icon and name to display. For example, a point of interest has various items (Casino, Restaurants, and Coffee) as a 2 x 3 grid.

Figure 10-5 Grid example



Animation

Animation focuses on gaining and retaining the user attention while browsing live at the venue.

It enables the admin user to define the way logo displays on the mobile device browser.

Setting the Services appearance

To set the appearance of the services, complete the following steps:

From the left side bar menu, select Appearance. Service Bar and Animation tabs appear. Figure 12-2 depicts the settings.

On the Service Bar tab, do the following.

- **Step 1** Choose the type of display of the services as on-demand or always from Display.
- **Step 2** Choose the position of the service bar from Position. You can choose the position at the top of the mobile device browser or at the bottom.
- **Step 3** Enter the URLs of the websites where you do not want the services bar to appear, in the Exceptions: text box.
- Step 4 Choose the background color from Background Color Start and Background Color End.
- **Step 5** Enter the time in (number of seconds) for which the services bar appears on the mobile device browser, in the Banner Display Time text box.

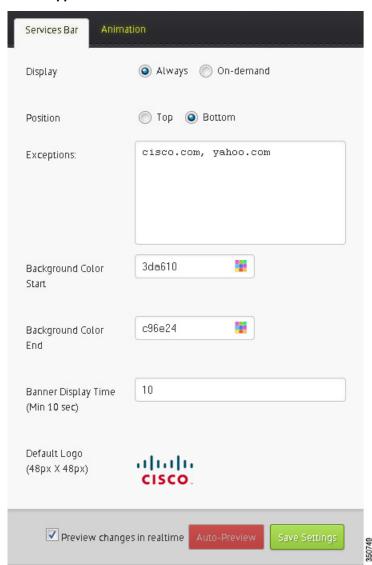


Minimum display time is ten seconds.

The Cisco logo is loaded as the default logo.

- **Step 6** To view the changes in the real time, click **Auto-Preview**. The right pane displays the preview.
- **Step 7** To save and apply the settings, click **Save Settings**.

Figure 10-6 Services appearance

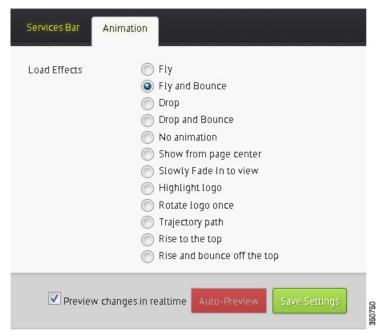


Setting the animation appearance

You can set the way in which the service bar appears on the browser. The CMX Dashboard admin user can choose the type of animation for the service bar.

There are various options such as show from the page center, fly and bounce, rotate the logo once, rise to the top, or no animation amongst others. The following figure shows the different animation options available.

Figure 10-7 Animation options



To set the animation, do the following:

- **Step 1** From the left side bar menu, select Appearance. Service Bar and Animation tabs appear.
- **Step 2** On the animation tab, choose the animation effect for the service bar from Load Effects.
- **Step 3** To preview the changes in the real time, click **Auto-Preview**. The right pane displays the preview.
- **Step 4** To save and apply the load effect settings, click **Save Settings**.

End User Experience

The CMX Dashboard is simple and intuitive to use and provide value-added services to the customers, while the enterprise can explore revenue generation by mobile ads and analytics.

The guest or the customer at the venue is the end user of the CMX Dashboard. Following is the end user experience for instance, at a shopping center with a Wi-Fi network managed by XYZ.

- A customer walks into the enterprise that has a Wi-Fi network.
- The customer starts to avail the internet at the venue on the mobile device.

• On the web page, a XYZ logo appears on the browser at the bottom right corner. This is an indication CMX Dashboard service is available.



The logo of the enterprise would appear on every web page that the customer browses.

- The customer clicks the XYZ logo and opens the CMX Dashboard service bar. There is a toolbar that shows the CMX Dashboard services available at the enterprise.
- The customers can click "hyper-local search" icon, enter a search keyword, and the CMX Dashboard shows the results on top of the CMX Dashboard banner. The guest can click the map logo, enter name of store or keyword, and the CMX Dashboard opens a map that displays the results.

If the enterprise wants to utilize the CMX Dashboard to generate revenue with mobile advertisement, the admin user can set the appearance of the ads.

For instance, the ad is from one of XYZ clients. They have business relationships with the ad agencies who buy ad inventory on XYZ cable television network. These ad agencies would buy the new ad inventory generated by the CMX Dashboard on XYZ Wi-Fi network. There can be a process of integration of the CMX Dashboard with XYZ's ad server.

Make a Wish

The Make a wish link on the top right corner enables you to send the feedback through email.

To access, click **Make a wish**. It directs you to the email id mse-wishlist-external@cisco.com on the MS Outlook.

You can send the response and comments on the CMX Dashboard to this email id.

Browser and Operating System support

The following are the web browsers and the operating systems that the CMX Dashboard supports currently.

Table 10-1 Browser & OS

Browser	Operating Systems
Safari	iOS
Android browser	Android
Chrome	Google Chrome OS
Mozilla Firefox	Windows, OS X, and Linux, with a mobile version for Android



Note

CMX Dashboard is not supported on Windows Internet Explorer on desktop devices and on Windows phones. CMX Dashboard is not supported on Blackberry.



Note

If you access the desktop version of the CMX Dashboard UI on a mobile device, it can be small and unusable.



Note

The CMX Dashboard supports approximately 95% of all websites.

End User Experience



CMX Dashboard Reports

The CMX Dashboard enables the administration user in an enterprise to analyze the use of services and the customer behavior.

The admin user can also study the pattern of sales across the domains in a venue.

For instance, the admin user can view services performance and can analyze the use of hyper-search, map, and deals services.

On the basis of these reports, the enterprise can explore the opportunities to propose more and more customer centric offers. This enables the enterprise to attract and engage more customers at a particular venue.

Reports

The CMX Dashboard supports taking out reports of services for a specific venue. The reports enable the admin user to analyze the performance for a certain period of time.

To access the reports in the CMX Dashboard, follow these steps:

Step 1 From the left side bar menu, select Reports.

The Services, Message, and Domain Metrics tabs appear.

To view the Services Performance and Service Clicks for today, in the Services tab, click Today and then Step 2 click Apply.



Service Performance is a custom service usage report.

- To view the daily Services Performance and Service Clicks, click **Daily** and then click **Apply**.
- To view the monthly Services Performance and Service Clicks, click Monthly and then click Apply.

Following figures show the monthly performance and number of clicks.



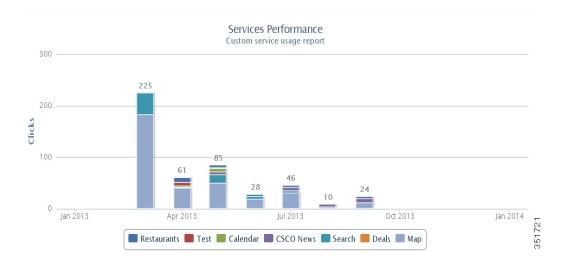
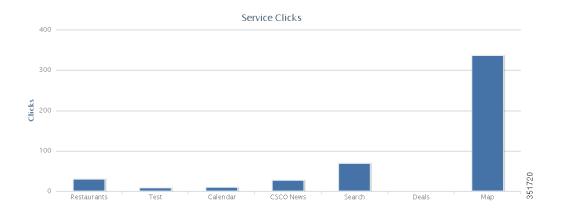


Figure 11-2 Number of service clicks



- To view the report for dates of your choice click Custom. Select those dates in the calendars in **From** and **To**. Click **Apply**.
- Step 3 To view the number of messages for each venue, Click Message.

 Following figure shows the number of messages for a venue.

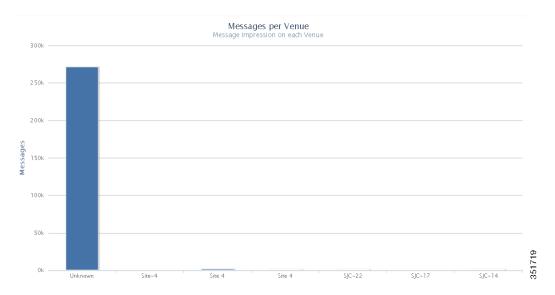


Figure 11-3 Messages per venue

Step 4 To study the domain wise performance, click **Domain Metrics**.

Select the time frame from the **This Hour**, **Today**, **This Week**, and **This Month**.

Summary

The CMX Dashboard has a dashboard that provides a schematic representation & summary of various factors important for analysis such as usage, point of interests, services, domains, device manufactures, and even the operating systems of the customer's mobile devices.

To access the dashboard summary, log in the CMX Dashboard user interface using the credentials.

From the left side bar menu, select Summary.

You can view the venues on the map in Venues. The venues are represented by big dots. You can view the active point of interest, current active campaigns, and total messages served.

To view the information charts for all the venues in the dashboard, click **Summary**. To view the information charts for a specific venue, click the green dot representing that venue on the map.

The usage of CMX Dashboard appears as a graph of impressions versus days. As you scroll down, you can view the top point of interests, top services, and top domains. To analyze the pattern of operating systems customer's mobile devices within a venue, you can view the top operating systems.

Following figures show the top POIs, services, top operating systems, and domains.

Figure 11-4 Top POIs

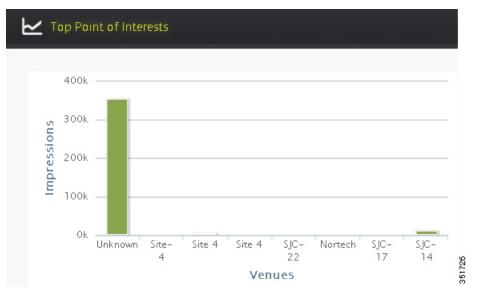


Figure 11-5 Top services

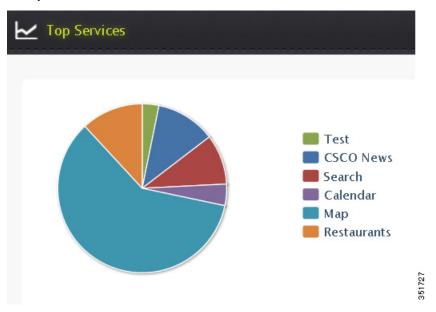
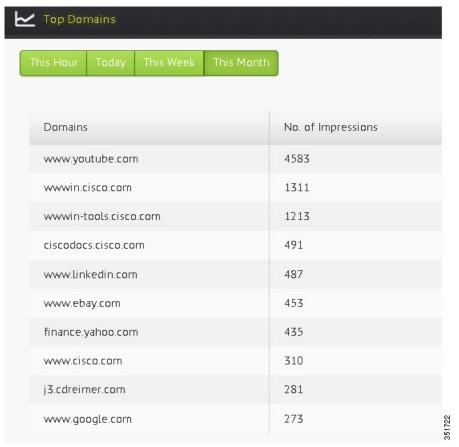


Figure 11-6 Top domains



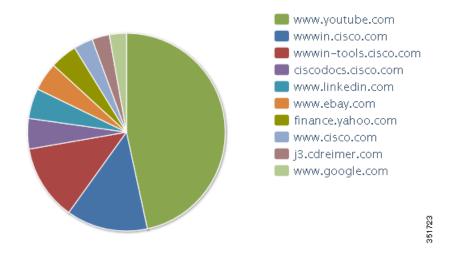
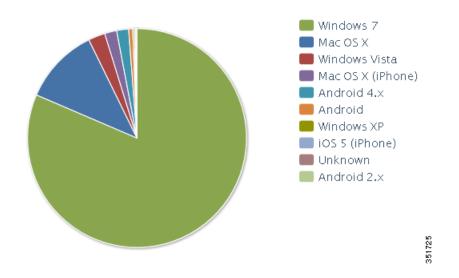


Figure 11-7 Top operating systems





CMX Dashboard Visitor Management

Cisco CMX Dashboard Visitor Management is a guest access solution based on Mobility Services Engine (MSE), Cisco Wireless LAN Controller (WLC) and Lightweight Access points (AP). Visitor Management is an intuitive captive portal for the Wi-Fi needs of the customers. A captive portal is designed to provide best experience for both mobile and laptop users.



CMX Visitor Management is a Demo feature that will not be supported by Cisco TAC. It is recommended for use in the lab environment and not in production networks. This is turned on by default and requires additional configuration to make it operational.



Please provide your feedback by clicking on "Make a wish" menu in CMX Dashboard, which is available on the top right corner of the page. To disable the feature, remove the "Visitor Management" operation from the Super Admin role.

Prerequisite for the Visitor Management

For providing the network access to the customers, you need to configure WLAN on the Cisco Wireless LAN Controller (Cisco WLC). For this you need to set up the Web Passthrough on the layer three security of the WLAN for CMX Visitor Management.

Complete the following steps:

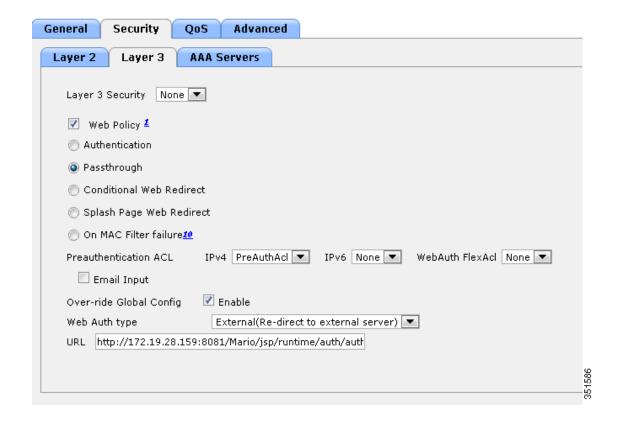
- Step 1 Open the Cisco WLC browser, click WLAN in the menu at the top, and click New on the upper right side.
- **Step 2** Choose WLAN as the Type. Select a profile name and WLAN SSID for web passthrough. You can use web pass for both the Profile Name and WLAN SSID. Please do not configure any security settings for the layer 2.
- **Step 3** Click **Apply** in the upper right corner.
- Step 4 A new WLANs > Edit window appears.
- **Step 5** Check the status box of the WLAN to enable the WLAN. From the Interface menu, select the name of the VLAN interface that you created previously.



Leave the default value for the other parameters on this screen.

Step 6 Select the Security tab. Go to the Layer 3 tab. Following figure shows the configuration.

Figure 12-1 Web passthrough setting



- Step 7 Check the Web Policy check box. Click Passthrough.
- **Step 8** Check the **Enable** check box adjacent to Over-ride Global Config.
- **Step 9** Set the preauthentication ACL.
- Step 10 Choose the web authentication as external from the Web Auth type drop-down list.
- **Step 11** Enter the URL of the splash page in URL.

For example you can enter the URL - http://172.19.28.159:8081/Mario/jsp/runtime/auth/authLoginForm.html

Step 12 Click **Apply** in the upper right corner.

For Visitor Management to work the user has to enable the CMX Dashboard service.

For more information on the web passthrough and WLAN configuration, see *Cisco Wireless LAN Controller Configuration Guide Release 7.4*.

Visitor Management as Captive Portal

Captive portal is a solution aimed at providing access to wireless network to a customer at a venue. The customer needs to register with the information such as name, phone number, and email ID. Customer has to agree to the 'Acceptable Usage Policy'. This is one time registration. Then the wireless network is accessible. The web page on the captive portal is called Splash page.

CMX Dashboard Visitor Management is a captive portal.

Visitor Management is based on web pass-through methodology of providing guest access using Cisco WLC and APs. The admin user of the CMX Dashboard can customize the guest user experience by creating the flow of web pages that you want the user to visit. After that the customer can access the network at the venue.

As a captive portal, you can customize the Visitor Management with different splash pages. You can have customized templates.

Following is the flow of webpages:

- 1. Guest registration
- 2. View, and acceptance of the Acceptable Use Policy
- 3. Advertisement This is optional
- 4. Welcome page with Social Network Authentication to provide a personalized browsing experience

With Visitor Management, you can create different Splash pages for different locations and provide Wi-Fi user experience at a specific venue.

Visitor Management recognizes a new user and a previous user and requests for registration for a new user only.

Visitor Management setting

Following are the three sections of the Visitor Management menu:

- Template Fields
- Social Connectors
- Splash Templates

Template Fields

In Template Fields, you can create a Splash template field. It is basically a type of information of the customer that you want to collect.

For example the fields can be Email, Name, Phone number, and the venue name where the customer has visited.

To create a new splash template field, complete the following steps:

- **Step 1** Go to **Visitor Management > Template Fields** from the left side bar menu.
- Step 2 Click Create New Splash Template Field.
- **Step 3** In Name, enter the name of the field you want to create.
- **Step 4** Select the type of the field from Type. There are two types of fields Text and List.
- **Step 5** If you want to have the data in text, select Text. If you want to have the customer information for specific venue or a building, select List.
- Step 6 Click Submit. If you want to cancel the creation of field, click Cancel.
- Step 7 If you want to edit a template field, go to **Visitor Management > Template Fields**. Select the field from the list in the Splash Template Fields box. Click **Edit**. After the changes, click **Submit**.
- Step 8 If you want to If you want to delete a template field, go to Visitor Management > Template Fields.

 Select the field from the list in the Splash Template Fields box. Click Delete. Click OK on the Delete Confirmation dialog box.

Social Connectors

The Visitor Management enables the venue owner to offer the access to the wireless network to customers using the social networking platforms such as Facebook, Google+, and LinkedIn.

The venue or store owner can provide an option to the customers to log in and access the Wi-Fi network at the venue using the credentials of the social networking sites. The venue owner needs to create an application for the CMX Visitor Management on the company's Facebook or Google+ page. This process generates the application keys and or the ID. The ID and the keys are important while creating a new social connector on the CMX dashboard.



To know how to configure social connector, see http://vimeo.com/59204177 - How to obtain Facebook App Key, http://vimeo.com/59204895 - How to get Google Client ID, and http://vimeo.com/59204949 - How to LinkedIn API Key.

On the CMX Dashboard the admin user can assign an account to a Social Connector.

The customer can provide the following information during the registration process at the venue.

- Website URL for the CMX Visitor Management (http://<NAME>:8080/Mario/jsp/runtime/auth/guestSocialLoginForm.html)
- Javascript API Domains (http://<NAME>)

After the social application is set up, you can generate the API Keys. You can then enter the API keys into Social Connector on the CMX Visitor Management.

You can use the social connector in the Social Authentication tab in the Splash Templates menu.



You can use Facebook, Google+ and LinkedIn sites to create social connectors. The customer can use credentials for any one of these connectors.

Creating Social Connector

Complete the following steps to create a social connector:

- Step 1 Go to Visitor Management > Social Connector from the left side bar menu.
- Step 2 Click Create New Social Connector. Add/Edit Social Connectors group box appears.
- **Step 3** In Connectors Name, enter the name that you want to give to the social connector.
- **Step 4** Choose the type of account from the Select Account drop-down list.
- **Step 5** In Facebook APP ID, enter the ID that you received while creating application for the Facebook site.
- **Step 6** Enter the key that you received while creating application for the Linked site in LinkedIn API Key.
- **Step 7** Enter the Google client ID and key in Google API Client and Google API Key respectively.
- Step 8 Click Submit.

Editing Social Connector

Complete the following steps to edit a social connector:

- Step 1 Go to Visitor Management > Social Connector from the left side bar menu.
- **Step 2** In Social Connectors group box, the list of all the connectors appears.
- **Step 3** Select the connector that you want to edit. Click **Edit**.
- **Step 4** Make the changes in the Add/Edit Social Connectors group box. Click **Submit**.

Deleting Social Connector

Complete the following steps to edit a social connector:

- **Step 1** Go to **Visitor Management > Social Connector** from the left side bar menu.
- **Step 2** In Social Connectors group box, the list of all the connectors appears.
- **Step 3** Select the connector that you want to edit. Click **Delete**.
- **Step 4** Click **OK** in the Delete Confirmation dialog box.

Splash Templates

You can create the template for the splash pages for locations. The splash page shows its name and the names of the social connectors such as Facebook, LinkedIn, and Google+.

To create a splash template complete the following steps:

Go to **Visitor Management > Template Fields** from the left side bar menu.

Click Create New Splash Template.

There are three group boxes:

- Basic Authentication
- Ad Configuration
- Social Authentication
- **Step 1** In Basic Authentication, enter the name of the template in Template Name.
- **Step 2** Choose the type of the background from the Template Background drop-down list.



Note

If you want to set the background of your choice, you can choose Custom from the list. To upload an image that you want to display, click Click to upload an image.

Step 3 Choose the name of the field from the Form Fields drop-down list. These are fields that you created using Template Fields menu. For example, the fields can be Email, Name, Phone number, and the venue name.



Note

If it is a list field you need to add comma separated strings to prepare drop-down list.

- **Step 4** You can set the terms and conditions that you want to display in the Terms and Conditions editor.
- Step 5 In Header enter the information for the customer. For example you can enter 'Welcome to XYZ mall'.
- **Step 6** In Footer, you can enter any disclaimer. For example you can mention 'This is complementary Wi-Fi network, we do not save your data'.
- Step 7 Click Next.
- **Step 8** Enter the script of the advertisement in Ad Script in Ad Configuration box. You have to provide the html code or the iframe source of the video that you want to share as an advertisement in Ad Script.

For example, you can insert a video ad from YouTube. Ad script for such example is - <iframe width="853" height="480" src="//www.youtube.com/embed/uIDx3eUZ-vw" frameborder="0" allowfullscreen></iframe>.

- Step 9 Click Next.
- **Step 10** In Social Authentication box, enter the information that you want to display in Header. For example you can enter 'Congratulations! You are on the Wi-Fi network of XYZ'.
- Step 11 Choose the type of social connector from the Social Connector drop-down list. This is the list of the connectors that you created in **Visitor Management > Social Connectors**.

- **Step 12** Select the corresponding authentication type from Social Auth.
- **Step 13** Enter the information in the footer.
- Step 14 Click Submit.

Assigning a Splash Page Template to a floor

You can assign a specific Splash Page Template to POI or a floor. This enables the venue owner to give 'location aware' network access to the customer.

You can assign a splash template to any map element such as system campus, floors, a building, a single campus, or to a single floor.

Complete the following steps to assign a splash page template to a floor:

- **Step 1** Go to Points of Interest on the left side bar menu of CMX Dashboard.
- **Step 2** Click the white triangular icon in the right pane located at the left side of PointOfInterests.
- **Step 3** Click the white triangular icon in the right pane located at the left side of System Campus.
- **Step 4** Click the white triangular icon in the right pane located at the left side of name of the venue.
- **Step 5** Click **Edit Floor** and from the Splash Template drop-down list choose the type of splash page template you want to assign.
- Step 6 Click Submit.

Feature Information for the Cisco CMX Dashboard Configuration Guide

The following table lists the release history for CMX Dashboard. All the features of CMX Dashboard are new.

Feature Name	Release	Feature Information
Banner Management	7.5	Banner Management allows creation of different types of messages to interact with the customers at the stores or venues. This feature is introduced in this release.
Campaign Management	7.5	Campaign Management enables enterprises to create and implement various campaigns. This feature is introduced in this release.
Points of Interest (POI) Management	7.5	POI Management enables creation of various POIs such as campuses, venues, floors, or zones. This feature is introduced in this release.
Navigation Management	7.5	CMX Dashboard enables organization of the navigation of the zones of venue per need. This feature is introduced in this release.
Account Management	7.5	With Account Management you can create and assign accounts depending on the product or service. This feature is introduced in this release.
CMX Dashboard Reports	7.5	The CMX Dashboard enables the administration user in an enterprise to analyze the use of services and the customer behavior. This feature is introduced in this release.
Visitor Management	7.5	Cisco CMX Dashboard Visitor Management is a guest access solution based on Mobility Services Engine (MSE), Cisco Wireless LAN Controller (WLC) and Lightweight Access points. This feature is introduced in this release. This is a demo feature.
HTTP Proxy	7.5	CMX Dashboard has the HTTP traffic flows to provide value added services and messages to the customer at the venue. This feature is introduced in this release.
Cloud Connector	7.5	The CMX Dashboard Connector intercepts the WAN traffic and inserts a Java response script. This feature is introduced in this release.



HTTP Proxy

Revised: September 20, 2013, OL-29333-01

Currently, CMX Dashboard relies on HTTP traffic flows to provide value added services and messages to the customer at the venue.

One of the main components of the CMX Dashboard is script insertion component.

The router intercepts the HTTP traffic and the CMX Dashboard inserts a script at the end of the HTTP traffic.

The HTTP Proxy is enabled on the Mobility Services Engine.

HTTP Proxy on the MSE terminates all HTTP traffic intercepted using Policy Based Routing (PBR) and acts as a forward proxy by pulling contents on behalf of wireless clients.

HTTP Flow

The following is the flow of HTTP traffic generated from a wireless client and the interactions of the various components.

- 1. Client browser makes HTTP request to the web server. The router intercepts and forwards to the proxy service.
- 2. Proxy terminates the previous connection and opens another to the web server.
- **3.** Proxy inserts a script tag with CMX Dashboard server IP and the client IP.
- 4. Proxy responds with altered HTML payload.
- 5. Client browser intercepts the script tag and sends a request to CMX Dashboard server.
- 6. CMX Dashboard server asks the client location from the Context Aware Service (CAS) server.
- 7. CAS Server responds with the client location.
- **8.** CMX Dashboard serves the advertisement to client browser using location and campaign information.

HTTP Proxy Service

The following are the important functional components of the HTTP Proxy:

- HTTP Proxy Service:
 - It is the proxy service that
 - Receives the redirected end-user HTTP requests,
 - Terminates the TCP stack, and
 - Inserts the Banners in the returning HTTP traffic
- Redirection Router:

The router is in the data path of the end-user's traffic to the Internet. It intercepts and redirects the end-user's HTTP traffic to the MSE HTTP Proxy service.

This redirection takes place by either of the following:

- Policy Based Routing (PBR) It operates at the L2 level addresses.
- L4-Redirect functionality available on higher end routers It operates at the L3 and L4 level addresses. (For example: ASR1000 with ISG functionality).



The Wi-Fi device of the customer must be on different subnet then that of the HTTP Proxy.

Deployment Types

Following are the two types of the MSE deployment:

• MSE Centralized Deployment

In this deployment there is a single MSE package. In this software package the HTTP proxy service is a part of the MSE image.

• MSE Flex Deployment

In this deployment there are two packages - a MSE package and a Cloud connector package. The HTTP proxy is part of the Cloud connector package. This software is deployed on ISR routers with UCS Eseries blades.

Configuration on the MSE

The Mobility Services Engine is a platform for hosting multiple mobility applications.

The simplest deployment model of a CMX Dashboard solution can be a PBR router and a single MSE running both CMX Dashboard sub-services and CAS.

The MSE framework supports starting and stopping the CMX Dashboard services. By default, both the platform and proxy sub-services are started by the framework. For deployment models where the proxy is not running on the MSE, you can disable the proxy sub-service.

You can enable the HTTP proxy service on the MSE with PBR interception on L2 adjacent router then MSE receives the HTTP data traffic. The user may want to separate the management and data traffic.



To setup the Proxy use the Proxy Configuration tab in PI. You can choose a CMX Dashboard MSE IP to communicate the Proxy MSE so the Proxy can insert the script from that CMX Dashboard MSE.

Enabling DNS and Default Domain Name via MSE Console

The HTTP proxy requires the DNS and domain name to be configured in the proxy configuration file. The proxy startup script uses the values from the MSE Linux host. These values can be configured by the MSE setup script.

The command is:

/opt/mse/setup/setup.sh



If not set, the MSE Proxy service takes the default values to the DNS of 8.8.8.8 and default domain name as cisco.com

Configuration on the MSE



CMX Cloud Connector

Revised: September 20, 2013, OL-29333-01

The Cisco Integrated Services Router (ISR G2) is a branch router that transforms service delivery for cloud, multimedia applications, and mobile devices. ISR G2 routers are multiple services or integrated services routers.

You can insert a service module in this router, one such module is UCSE (Unified Computing System E-series) server. The UCSE server is a blade server. It has x86 processor and you can have virtualization environment such as VMware ESXI 5.1. You can install applications and operating systems on it.

You can run virtual machine on the ESXI. The virtual machine is a cloud connector in case of the CMX Dashboard. This connector is called the CMX Dashboard Cloud Connector.

The centralized set-up for the CMX Dashboard has the MSE. In the decentralized set-up for the CMX Dashboard, the MSE and ISR G2 router exchange the data. The ISR G2 router along with the CMX Dashboard Connector interacts with the MSE in the cloud.

The CMX Dashboard Connector intercepts the WAN traffic and inserts a Java response script into the HTTP response and they are converted in the ads and services for the end user.

Prerequisites for the CMX Dashboard Connector

Following are the prerequisites for the CMX Dashboard Connector to operate:

You have ISR G2 router with IOS version - 153-3.M0.2 and any upcoming rebuilds of this release version. For example - 15.3(3)M1 & 15.3(3)M2.



Note

The IOS version with OnePK support is needed.

- You have the UCSE module pre-installed with VMware ESXI 5.1.
- You have installed the UCSE module inside the ISR router.
- You have configured the UCSE parameters such as IP address and networking through Cisco Integrated Management Controller (CIMC) GUI.
- You can access the ESXI on the UCSE module through VMware VSphere client.



ISR G2 Routers that support the CMX Dashboard are series 2911, 2921, 2951, 3925, 3945.

The following is the Hardware Comparison Matrix for the UCS E-Series:

Parameter	UCS-E140S	UCS-E140D(P) / UCS-E160D(P)
Processor	Intel Xeon (Sandy Bridge) E3-1105C (1 GHz)	Intel Xeon (Sandy Bridge) E5-2428L (2 GHz) / E5-2418L (1.8 GHz)
Core	4	4/6
Memory	8 - 16 GB DDR3 1333MHz	8 - 48 GB DDR3 1333MHz
Storage	200 GB- 2 TB (2 HDD) SATA, SAS, SED, SSD	200 GB- 3 TB (3 HDD*)SATA, SAS, SED, SSD
RAID	RAID 0 & RAID 1	RAID 0, RAID 1 & RAID 5*
Network Port	Internal: 2 GE Ports External: 1 GE Port	Internal: 2 GE Ports External: 2 GE Ports PCIE Card: 4 GE or 1 10 GE FCOE

CMX Dashboard Connector

The CMX Dashboard Connector software is provided as a single .ova file. The open virtualization format works on top of the ESXI 5.1.

The .ova file provides a Linux-based runtime environment to host the cloud connectors. The environment uses the Kernel version - 2.6.32.46.cge (Montavista). The environment hosts only the CMX Dashboard Connector. It comes bundled with this connector hosting infrastructure.

The Linux-based connector hosting infrastructure has the following administrative interfaces:

- VGA (Video Graphics Array) console that uses VSphere
- SSH that uses SSH client
- WEB UI that uses Web browser

Initial Setup

The CMX Dashboard .ova file is deployed on top of the ESXI using VMware VSphere Client. You can either point to the hypervisor directly or through vCenter. You can then access the VGA console of the virtual machine.

Complete the following steps:

Step 1 For setting up OnePK on the router use the following commands:

```
Re:
onep
datapath transport gre sender-id 1 interface Vlan1
transport type tcp
```

- **Step 2** Log in the VMware VSphere Client using your credentials. The CMX Dashboard .ova file is deployed and you get access to the VGA console.
- **Step 3** To install the Linux-based connector hosting environment, enter install in boot.
- **Step 4** After a few seconds, initial configuration of the system takes place. You can organize the parameters such as admin users, networking setup, and time zones.
- **Step 5** Set the password for the shell user and management interface user.



You can re-run the setup utility to change configured parameters by issuing 'setup' at the shell. After initial networking setup, you can access the shell through SSH client.

- **Step 6** Go to Configuration tab. Select Networking in the Hardware group box. vSwitch Properties box appears. Select VSwitch.
- **Step 7** Set the MTU at 1700 in the vSwitch properties box.

Web based Management UI

Installation of the .ova file on top of ESXI hypervisor initiates the C3 hosting component. The initial setup has configuration of the hosting environment, Linux networking and Web browser access. After the setup, Management Web UI is accessible from a browser.



Use https (port 443) with the IP address specified during initial setup. Ignore Certificate errors, no publicly recognized certificate is provided.



The supported Google Chrome versions for the Management UI are chrome version 21 to version 28. Other browsers supported are Internet Explorer and Mozilla Firefox.

Through this UI you can manage and configure the following:

- Hosting infrastructure
- CMX Dashboard connector
- HTTP proxy service

CMX Dashboard Connector Configuration

The web UI has the following three tabs:

- Connectors
- HTTP Proxy
- System Info

The About tab displays the Cisco Cloud Connector Management box. The current release information and the host name are displayed.

Connectors

The following figures show the Connetcor Configuration.

Figure B-1 Connector Configuration-1

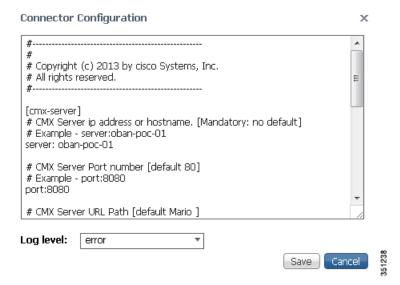
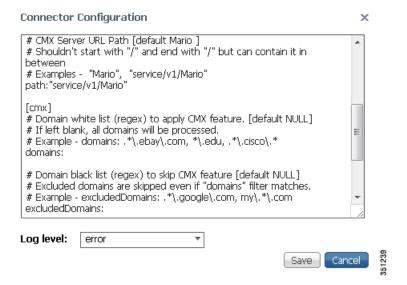


Figure B-2 Connector Configuration-2



Complete the following steps to configure the CMX Dashboard Connector:

- Step 1 Log in to the Management UI through a web browser. Click the Connectors tab. The CMX Dashboard Connector is in deployed state by default.
- **Step 2** Before stating the connector, configure HTTP proxy. See Appendix A- HTTP Proxy.
- **Step 3** To start the CMX Dashboard Connector, click **Start**.
- **Step 4** To configure the CMX Dashboard server, click **Configuration**.
- **Step 5** Enter the server details in CMX server ip address or host name. For example the server can be server:oban-poc-01.
- **Step 6** Enter the port details in CMX server port number.

The path of the URL in CMX server URL path, by default is 'Mario'.



Do not enter the URL path with '/' in the beginning or at the end.

- Step 7 In Domain white list, enter the names of the domains where you want the CMX Dashboard feature to appear. If you do not specify the names of the domains, all the domains are processed. For example, the included domain names can be *\ebay\.com, *\cisco\.com.
- Step 8 In Domain black list, enter the names of the domains where you do not want the CMX Dashboard feature to appear. Excluded domains are avoided even if the 'domains' filter matches. For example, excluded domain names can be *\google\.com, *\my\.com
- **Step 9** In Content Type Filter, enter text or html.
- **Step 10** In URL white list, enter the URLs where you want to the CMX Dashboard feature to appear.
- **Step 11** From the Log level drop-down list, choose level of the log for the CMX Dashboard connector.



You can view and download the logs from the Connectors tab. Click Show Log and then click **Download** in the Connectors logs box.

To check up the C3 hosting component following are the debug commands:

```
isr-3945-zs# show onep datapath
VM Tport State Prt/Eth Misordered packets
1 GRE up
  Local-addr: 192.0.2.1 0x8921 1
  Remote-addr: 198.51.100.1 0x8921 0
isr-3945-zs#
```

HTTP Proxy

To configure the HTTP Proxy and OnePK, click HTTP Proxy.

In the Router OnePK Settings group box complete the following steps:

- **Step 1** Enter the IPv4 address of the VM host.
- **Step 2** Enter the user name and the password of the router.

Proxy filter port is as per the port details you entered in the Connectors tab.

Step 3 In Intercept Interface(s), enter the interface details to intercept the traffic.



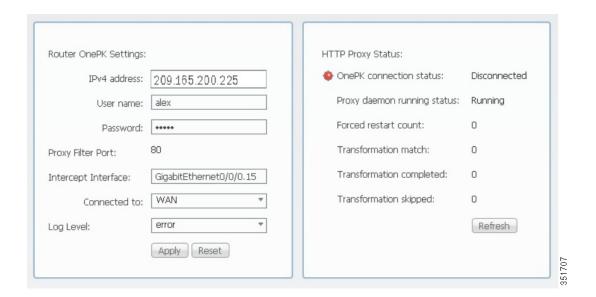
The interface is the gigabit ethernet interface. The traffic is going outward, so this interface is outgoing interface.

- Step 4 To intercept the traffic on the WAN side choose WAN from the Connected to drop-down list. To intercept the traffic on the LAN side choose LAN from the Connected to drop-down list.
- **Step 5** From the Log level drop-down list, choose level of the log. Click **Apply**.



If you want to reorganize the configuration parameters, click **Reset**.

Figure B-3 HTTP Proxy



In the HTTP Proxy Status group box, the status of the OnePK connection changes to connected. The status of the Proxy daemon changes to running.



To reload the settings, click Refresh.

You can view the forced restart count.

You can also view the counts of the transformation match, completed transformation, along with skipped transformation. After the HTTP traffic starts, these counts increase.



The HTTP Proxy information doesn't reload automatically; click **Refresh** to view the up-to-date information.

System Information

To monitor the performance of the entire system and to view the details of system parameters, click the System Info tab.

The VM Host Info pane shows the following details:

- Host name
- Uptime
- System time
- Software version

The host information doesn't reload automatically; click **Refresh Stats** to view the up-to-date information.

The VM CPU & Processes pane shows the following details:

- The Intel processor details
- CPU Utilization
- Processes
- **Step 1** To view the currently running processes, click **Inspect.**

The VM Memory pane shows details of the used and available memory size. The VM Storage pane shows the details of the space used. You can view the destination IP addresses and mask in the VM Ip v4 routing pane.

The VM DNS and NTP settings show the domain, name server, and the NTP server.

- **Step 2** The VM Logs pane shows the current log level for the system. To change the log level, choose the type of the log from the Current log level drop-down list and click **Change**.
- **Step 3** The log names, log size and view options are shown as a table. Click **download**, against the log that you want to download and save.
- **Step 4** In case of performance issues of the system, you can contact Cisco Systems Technical Support with the information of the issue. Click **Generate snapshot file** to generate the issue snapshot. Click **download** to save the file.



To delete the snapshot file of an old issue, click **X**. To reload the list of the snapshot files, click **Refresh List**.

Step 5 If the system crashes, a core file is generated. The core name pane shows the list of the core files. Click download to save the core file.



Note

To delete the core file of an old crash, click **X**. To reload the list of the core files, click **Refresh** List.

The VM Interfaces pane shows the following:

- List of network interfaces
- Data packets received
- Data packets transferred
- **Step 6** To log out of the management UI, click **Log Out**.



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