



## Defining the Engagement Rule to Send Notifications

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The CMX Engage functions as a WiFi Beacon that identifies the customers in a CMX Engage enabled premises and sends notifications to the customers and business users, based on the engagement rule defined.

This chapter describes how to create the engagement rules that enable you to send notifications to the customers when they are near your business premises. A customer can be a user who has purchased from your business premises earlier, a potential buyer, or a visitor. You can also configure engagement rules to send notifications to your business users such as employees or to an API end point. For example, you can configure an engagement rule that informs your customer care representative when a privileged customer enters the premises so that the customer care representative can provide value added services to the customer.

You can configure to send the notification based on the customers connectivity to your WiFi or closeness to a BLE Beacon.



**Note**

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An engagement rule is applied for all the SSIDs or BLE Beacons defined for the locations specified in the rule.

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- [Defining the Engagement Rule, page 5-1](#)
- [Engagement URL, page 5-18](#)
- [Notification Criteria, page 5-18](#)
- [Notification Types, page 5-19](#)
- [Notification Frequency, page 5-20](#)
- [Downloading CMX Engage SDK, page 5-20](#)
- [Engagement Rule Report, page 5-21](#)

## Defining the Engagement Rule

To create an engagement rule, perform the following steps:

1. [Configuring the CMX to Send Notifications, page 5-2](#)
2. [Accessing the CMX Engage, page 5-3](#)
3. [Defining the Location Hierarchy, page 5-3](#)

4. [Configuring the Apps, page 5-4](#)
5. [Configuring the BLE Beacons, page 5-4](#)
6. [Creating Tags, page 5-6](#)
7. [Adding Customers to the CMX Engage Through Portals, page 5-6](#)
8. [Creating an Engagement Rule, page 5-6](#)

## Configuring the CMX to Send Notifications

To enable the CMX Engage to send notifications, you must do certain configurations in the CMX.



**Note** The CMX Engage supports CMX 8.0 or later.

If the CMX Engage cloud can communicate to your CMX instance, you can do this configurations automatically from the CMX Engage dashboard. In the CMX Engage dashboard, when you click a location in the location hierarchy for which the notification configurations are not done, a dialog box appears asking whether to configure the network. Click **Yes** to update the CMX with the notification configurations.

If the CMX Engage cloud cannot communicate with your CMX instance, then you have to manually configure the CMX for notifications. If you are manually configuring the CMX for notifications, the configurations required for various CMX versions are as follows:

- [Configuring CMX 8.0 for Notifications, page 5-2](#)
- [Configuring CMX 10.0 or later for Notifications, page 5-3](#)

### Configuring CMX 8.0 for Notifications

To configure the CMX 8.0 for notifications, perform the following steps:

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- Step 1** Log in to CMX admin UI.
  - Step 2** Click the Configuration icon on the top right of the home page.
  - Step 3** Choose **Context Aware Service > Notification > Subscriptions**.  
The Notification Subscription page appears.
  - Step 4** Click **Add Subscription**.
  - Step 5** Enter the subscription name.
  - Step 6** Choose the subscription type as **Event Driven** from the drop-down list.
  - Step 7** Choose the data format as **JSON** from the drop-down list.
  - Step 8** Choose **HTTP** from the receiver transport drop-down list, and enter the following details:
    - a. **URL**- nnotifications/MSE/<customerIdentifier>.
    - b. Select the HTTPS check box if you want to use HTTPS protocol for secure access to the destination system.
  - Step 9** Enter the receiver host address as **livenotification.wifi-mx.com**.
  - Step 10** If you have selected the HTTPS check box, enter **443** as the port number of the receiver host. If HTTPS is not enabled, enter **80** as the port number.

- Step 11** Ensure that the Scramble MAC addresses check box is not selected.
- Step 12** Choose the notification trigger as **Presence Events** from the drop-down list, and click **Add**.
- Step 13** Click **Save**.



**Note** For customerIdentifier, contact the CMX Engage support team.

## Configuring CMX 10.0 or later for Notifications

To configure the CMX 10.0 or later for notifications, perform the following steps:

- Step 1** Log in to Cisco CMX using the login credentials for your CMX account.
- Step 2** Choose **Manage> Notifications**.
- Step 3** Click **New Notification**.
- Step 4** In the CREATE NEW NOTIFICATION window, perform the following steps:
- In the Name text field, enter a name for the notification.
  - From the Type drop-down list, choose **Location Update**.
  - From the DeviceType drop-down list, choose **All**.
  - From the Hierarchy drop-down list, choose **All Locations**.
  - From the Receiver drop-down list, choose **https**, and in the text field enter the following details:
    - Host address:** livenotification.wifi-mx.com
    - Port No:** 443
    - URL:** notifications/MSE/<customerIdentifier>
- Step 5** Ensure that MAC Scrambling is set to **OFF** and the message format is **JSON**.
- Step 6** Click **Create**.



**Note** For customerIdentifier, contact the CMX Engage support team.

## Accessing the CMX Engage

The procedure to access the CMX Engage is described in the [“Accessing the CMX Engage”](#) section on page 3-2.

## Defining the Location Hierarchy

The procedure to define the location hierarchy for the CMX Engage is described in the [“Defining the Location Hierarchy”](#) section on page 3-2.

## Configuring the Apps

For push notification, you must configure the apps through which you want to send the push notifications.


**Note**

You have to configure the apps only if you want to send the push notifications.

To add an app to the CMX Engage, perform the following steps:

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- Step 1** In the CMX Engage dashboard, click the Tools icon that appears in the left pane.
- Step 2** In the window that appears, click the **Notification Channels** tab.
- Step 3** Click **Add Apps**.
- Step 4** In the Apps screen that appears, enter the following details:
- a. In the APP NAME field, enter the name of the app.
  - b. Select the IOS check box if the app is available for the IOS devices.
  - c. In the APP ID text field, enter the ID for the IOS app.
  - d. In the UPLOAD APNS P12 area, upload the APNS P12 for the app.  
You can use the Select File button to upload the file.
  - e. In the UPLOAD APNS CERTIFICATE area, upload the APNS certificate for the app.  
You can use the Select File button to upload the file.
  - f. In the APNS CERTIFICATE PASSWORD TEXT FIELD, enter the password for the APNS certificate.
  - g. Select the ANDROID check box if the app is available for the android devices.
  - h. In the APP ID text field, enter the ID for the android app.
  - i. In the API KEY text field, enter the API key for the android app.
  - j. Click **Save**.
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## Configuring the BLE Beacons

To enable the BLE beacon notifications, you must add the BLE UUIDS and BLE Beacon to the CMX Engage.


**Note**

You have to configure the BLE Beacons only if you want to send the notifications based on proximity to a BLE beacon.

To configure a BLE beacon in the CMX Engage, perform the following steps:

- [Adding a BLE UUID, page 5-5](#)
- [Adding a BLE Beacon, page 5-5](#)

## Adding a BLE UUID

To add a BLE UUID to the CMX Engage, perform the following steps:

- 
- Step 1** In the CMX Engage dashboard, click the **Tools** icon that appears in the left pane.
  - Step 2** In the window that appears, click the **BLE UUIDs** tab.
  - Step 3** In the BLE UUIDs text field, enter the UUID for the BLE.
  - Step 4** Click **Confirm**.
- 



**Note** Due to device restrictions, you can configure only 15 UUIDs in the CMX Engage.

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## Adding a BLE Beacon

The CMX Engage enables you to add the BLE Beacon to a building, floor, or zone.



**Note** For the same UUID, you can define more than one BLE Beacon with different major and minor numbers.

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To add a BLE Beacon to a building, floor, or zone, perform the following steps:

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- Step 1** In the CMX Engage dashboard, choose **Manage Locations**.  
The Location window appears.
  - Step 2** Click the building, floor, or zone to which you want to add the BLE Beacon.
  - Step 3** On the BLE Beacons tab, click **Add BLE Beacon**.
  - Step 4** In the Add BLE Beacon window that appears, perform the following steps:
    - a. From the BLE Beacon UUID drop-down list, choose the BLE Beacon UUID.  
For more information on adding the Beacon UUID to the CMX Engage, see the [“Adding a BLE UUID”](#) section on page 5-5.
    - b. In the BLE Beacon Name text field, enter the name of the BLE Beacon.
    - c. In the Manufacturer text field, enter the name of the Beacon manufacturer.
    - d. From the Major Version drop-down list, choose the major version value for the BLE beacon.
    - e. From the Minor Version drop-down list, choose the major version value for the BLE beacon.
    - f. Click the **Advanced** link to configure additional details of the beacon, if required.
    - g. From the Max RSSI selection list, choose the maximum received signal strength indication for the BLE beacon.
    - h. From the Min RSSI selection list, choose the minimum received signal strength indication for the BLE beacon.
    - i. From the Latitude selection list, choose the latitude at which the BLE Beacon resides in the global map.

- j. From the Longitude selection list, choose the longitude at which the BLE beacon resides in the global map.
  - k. From the X Coordinates selection list, choose the X coordinate for the BLE beacon in the floor.
  - l. From the Y Coordinates selection list, choose the Y coordinate for the BLE beacon in the floor.
  - m. Click **Add**.
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## Creating Tags

The procedure to define tags is defined in the [“Creating Tags or Including or Excluding the Customers from an Existing Tag Using a Profile Rule”](#) section on page 6-1.

**Note**

This step is required only if you want to use the tag filter in your engagement rule.

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## Adding Customers to the CMX Engage Through Portals

You can capture the details of the customers such as name, e-mail, phone number, and so on to the CMX Engage through the data capture form. When creating a captive portal, you can configure the Data Capture Module in the portal. During customer acquisition (when the customer connects to your SSID and tries to access the internet), this data capture form is displayed to the customer for capturing the customer details. You can configure the Data Capture module for the authentication types, “SMS with password verification” and “Email”.

For more information on creating a portal, see the [“Creating the Portals”](#) section on page 4-5.

## Creating an Engagement Rule

The Engagement Rule refers to the conditions based on which the notifications are sent to the target users. You can create the engagement rule for your customers and business users such as employees or API endpoints.

You can set the frequency at which the notification is to send. You can also define the criteria that must match to send the notification. You can configure to send the notification to a single user or a group of users in multiple locations.

For customers, you can send the notifications through SMS, e-mail, BLE Beacon, or app. For business users, you can send the notifications through SMS, e-mail, or to an external API. For customers, you can configure to send the notifications based on the proximity of the customer to a BLE beacon or connectivity of the customer to an SSID. For business users, you can configure to send the notifications based on the connectivity of the customer to an SSID. You can configure more than one notification type for an engagement rule, so that the user gets notification in more than one format. This increases the probability of notifications to be noticed by the user.

- [Creating an Engagement Rule for a Consumer, page 5-7](#)
- [Creating an Engagement Rule for a Business User, page 5-12](#)

## Creating an Engagement Rule for a Consumer

You can send the notifications to the customer through SMS, e-mail, BLE Beacon, or app.

To define an engagement rule to send notifications to the customers, perform the following steps:

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- Step 1** In the CMX Engage dashboard, choose **Proximity Rules > Engagement Rule**.
- Step 2** Click **Create a New Rule**.
- Step 3** In the Rule Name text field, enter a name for the engagement rule.
- Step 4** In the Sense area, from the “When a user is on drop-down list, choose whether you want to send notifications based on the user’s connectivity to the Wi-Fi or proximity to the BLE Beacon.
- a. If you choose “WiFi”, an additional field appears where you can choose any of the following:
    - Entering Location- The notification is sent, when a customer connected to the Wi-Fi enters the location.
    - Exiting Location- The notification is sent, when a customer connected to the Wi-Fi leaves the location.
    - Present at location- The notification is sent when the customer is connected to the Wi-Fi and present at the location for a specified duration or at a particular time. If you choose this option, additional fields appear where you can mention the duration or time that needs to meet to send the notifications.
  - b. If you choose “Beacon”, an additional field appears where you can choose any of the following:
    - Beacon Enter-The notification is sent when the customer enters the beacon premises.
    - Beacon Exit-The notification is sent when the customer leaves the beacon premises.
    - Present at location- The notification is sent when the customer is present at the location for a specified duration or at a particular time. If you choose this option, additional fields appear where you can mention the duration or time that needs to meet to send the notifications.



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**Note** If you choose “Beacon”, the notification is sent only if the customer’s bluetooth is ON.

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**Note** If you choose “Sense” as “Beacon”, you can send the notification only as BLE notification. If you choose “Sense” as WiFi”, you cannot send BLE notification.

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- Step 5** In the Locations area, specify the locations for which you want to send the notifications.
- You can configure to send notifications for the entire location hierarchy or single or multiple locations such as group, building, floor, or zone. For more information on creating the location hierarchy, see the [“Defining the Location Hierarchy” section on page 3-2](#).

You can also filter the locations for which the notification is to send based on the metadata defined for the selected location or its parent or child locations. For more information on configuring the metadata for the locations, see the [“Defining Metadata for a location” section on page 3-7](#). You can either send the notifications for the locations with a particular metadata or exclude the locations with a particular metadata.

To specify the locations for which you want to send the notifications, perform the following steps:

- a. Click the **Add Locations** button.

- b. In the Choose Location window that appears, select the locations for which you want to send the notifications.
- c. Click **OK**.

In the selected locations, to send notifications only for the locations with a particular location metadata, perform the following steps

- a. Select the **Filter by Metadata** check box.
- b. In the Filter area, click the **Add Metadata** button.  
The Choose Location Metadata window appears.
- c. From the drop-down list, choose the metadata variable, and choose the value for the variable in the adjacent field.
- d. Click **OK**.

To exclude to send notifications for the locations with a particular metadata, perform the following steps:

- a. Select the **Filter by Metadata** check box.
- b. In the Exclude area, click the **Add Metadata** button.  
The Choose Location Metadata window appears.
- c. From the drop-down list, choose the metadata variable, and choose the value for the variable in the adjacent field.
- d. Click **OK**.

**Step 6** In the IDENTIFY area, specify the type of customers for whom you want to send the notifications.



**Note**

You can filter the customers for whom you want to send the notifications based on whether the customer is an opted in or not opted in user, the tags the customers belong to, the number of visits made by the customer, and the status of app in the customer's device. You can apply all these filters or any of them based on your requirement.

To specify the customers for whom the notification is to send, perform the following steps:

- a. If you want to filter the customers by the Opt In Status, select the Filter by OptIn Status check box, and from the Only for drop-down list, choose whether you want to send the notifications for opted in users or not opted in users.



**Note** For more information on opted in users, see the [“Opted In Users”](#) section on page 6-7.

- b. If you want to filter the customers based on tags, select the **Filter by Tags** check box.



**Note** For more information on creating tags, see the [“Creating Tags or Including or Excluding the Customers from an Existing Tag Using a Profile Rule”](#) section on page 6-1.



**Note** You can filter the tags in two different ways. Either you can specify the tags for which the notifications are to send or you can specify the tags for which the notifications must not be sent. You can choose the best filtering method based on your requirement. For example, if you want to send the notifications for all tags except for one tag, it is easy to opt the exclude option, and mention that particular tag for which you don't want to send the notifications.



- To include the tags so that the notification is sent only to the customers in the selected tags, use the **Add Tags** button for “Include”.
- To not send the notifications to the customers in the tags that are excluded, use the **Add Tags** button for “Exclude”.

For more information on using the tag filter, see the [“Filtering by Tag” section on page 6-5](#).

- c. If you want to filter the customers based on the number of visits made by the customer in the selected locations, select the **Filter by Previous Visits** check box.

Click the **Add Locations** button. In the Choose location window, select the locations of which the customer visit needs to consider for filtering. In the following fields, mention the number of visits and duration required to send notifications. For more information on the visits and duration you can configure, see the [“Notification Criteria” section on page 5-18](#)

- d. If you want to filter the customers based on the customer’s app status, select the **Filter by App Status** check box. From the “Filter by the users who” drop-down list, choose the status of the app users for whom you want to send the notifications.

**Step 7** In the Schedule area, specify the period for which you want to apply the rule.

- a. Select the Set a time range for the rule check box, and in the fields that appear, specify the time range for which you want to apply the engagement rule.
- b. Select the Set a date range for the rule check box, and in the fields that appear, specify the start date and end date for the period for which you want to apply the engagement rule.
- c. If you want to apply the engagement rule only on particular days, select the Filter by days of the week check box, and from the list of days that appears, click the days on which you want to send the notifications.

**Step 8** In the Actions area, perform the following steps:

- a. From the **Notify** drop-down list, choose **Notify Consumer**, and from the adjacent drop-down list choose any of the following:
  - Only Once- The notification is sent only once to a customer.
  - Once In- The notification is sent more than once to a customer based on the notification frequency specified. In the additional fields that appear when you choose this option, specify the notification frequency. For more information on the notification frequency, see the [“Notification Frequency” section on page 5-20](#).



**Note**

You can send the BLE notification only if you choose sense as “Beacon”. You can send the notification as push notification, SMS, or e-mail, if you choose the sense as “WiFi”.



**Note**

To display the variables such as first name, last name, mobile number, and so on in the notification message, you must configure the data capture module in the portal. For more information on configuring the data capture module in the portal, see the [“Adding a Data Capture Form to a Portal” section on page 7-12](#).

- b. If you want to send the notification to the customers through an app as push notifications, select the Via App Push Notification check box. From the App drop-down list, choose the app through which the notification is to send. For more information on configuring the app, see the [“Configuring the Apps” section on page 5-4](#). The message content that is sent to the customer is displayed in the following text box. You can enhance the message content using the smart links. By default, the first

name and last name of the customer are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering “\$” in the text box. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).

- c. If you want to send the notification as a BLE notification, select the BLE Notification check box. The message content that is sent to the customer is displayed in the following text box. You can edit the message content using the smart links. By default, the first name and last name of the customer are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering “\$” in the text box. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).

**Note**

To send BLE beacon notifications or push notifications, you must integrate the BLE Beacon or the app from which you want to send the notifications with the CMX Engage SDK. For more information on how to download and integrate the CMX Engage SDK, see the [“Downloading CMX Engage SDK” section on page 5-20](#). The SDK icon appears in the Tools option only if you have an CMX Engage SDK license.

- d. If you want to send the notification through SMS, select the Via SMS check box. From the SMS Gateway drop-down list, choose the SMS gateway through which you want to send the SMS notification. You can use the **Demo Gateway** provided by Cisco, which is chargeable. You can add the SMS Gateways to the CMX Engage using the ADD SMS Gateway button. The message content that is sent to the customer is displayed in the following text box. You can enhance the message content using smart links. By default, the first name and last name of the customer, and engagement URL are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering “\$” in the text box. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).

In the Link field, enter the engagement URL that must appear in the notification. For more information on creating the engagement URL, see the [“Engagement URL” section on page 5-18](#). You can enhance your URL using the smart link option. To view the parameters that you can add in the smart link, enter “\$” in the Link field or click the Add Variable drop-down list adjacent to the Link field. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).

- e. If you want to send the notification through e-mail, select the Via Email check box. In the From Name, specify the name from which the customer receives the e-mail, in the From Email field, specify the e-mail ID from which the customer receives the e-mail, and in the Subject field, enter the subject for the notification e-mail. The message content that is sent to the customer is displayed in the following text box. You can enhance the message content using the smart links. By default, the first name and last name of the customer, and engagement URL are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering “\$” in the text box. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).

In the Link field, enter the engagement URL that must appear in the notification. For more information on creating the engagement URL, see the [“Engagement URL” section on page 5-18](#). You can enhance your URL using the smart link option. To view the variables that you can add in the smart link, enter “\$” in the Link field or click the Add Variable drop-down list adjacent to the Link field. For more information on creating a smart link, see the [“Smart Link” section on page 7-45](#).



**Note** The variable “\$firstName” is to display the first name of the customer, “\$lastName” is to display the last name of the customer, “\$email” is to display the e-mail address of the customer, “\$mobile” is to display the mobile number of the customer”, “URL” is to display the engagement URL, “gender” is to display the gender of the customer”, and “locationName” is to display the location from which the message is sent. The business tags and location metadata defined are also available for selection.



**Note** If you opt for app notification, the SMS and e-mail notifications are not sent even if they are configured. In any case if the app notification fails, the SMS or e-mail notifications are sent, if configured.



**Note** The summary of the rule is shown on the right side of the page.

**Step 9** Click **Save and Publish**.

The rule gets published and listed in the Engagement Rules page.



**Note** If you do not want to publish the rule now, you can click the Save button. You can publish the rule at any time later by clicking the Save and Publish button. Also, you can publish the rule by clicking the Make Rule Live icon at the far right of the rule in the Engagement Rules page.

## Example

The retail store ABC has outlets across Europe. As part of its summer sale, ABC has decided to provide some offers to its customers. The offer is only for the customers visiting the ABC outlets at location A and floor 1 at location B. All the customers who had visited any outlet of ABC at least 5 times in the current year are eligible for the offer. ABC wants to send notifications regarding the offers to the customers who had visited any of its outlets minimum 5 times during the current year. The notifications need to send when the customer enters location A or Floor 1 of location B with connected to the WiFi. The notification is to send only on weekends as the offer is only for weekends. The notifications are to send only for a fortnight for opted in users. ABC wants to send the notifications during each visit through its app, A1.

To meet the preceding scenario, perform the following steps:

- Step 1** Integrate the app, **A1**, with the CMX Engage SDK. For more information on integrating the app with SDK refer [“Downloading CMX Engage SDK” section on page 5-20](#).
- Step 2** Create a site page with the details of the promotion offers. For creating sites for push notifications, you must contact the CMX Engage support team.
- Step 3** Log in to CMX Engage.
- Step 4** Create the location hierarchy with all the locations of ABC.
- Step 5** Configure the app, **A1**, in the CMX Engage. For more information on adding the app, see [“Configuring the Apps” section on page 5-4](#).
- Step 6** In the CMX Engage dashboard, choose **Proximity Rules > Engagement Rule**.

- Step 7** Click **Create a new rule**.
- Step 8** In the RULE NAME field, enter a name for the engagement rule.
- Step 9** From the “When a user is on drop-down list, choose **Wi-Fi**, and from the drop-down list that appears, choose **Entering Location**.
- Step 10** In the Locations area, click the **Add Locations** button for choosing the location, and select location A, and Floor 1 of location B.
- Step 11** In the IDENTIFY area, do the following:
- Select the Filter by OptIn Status check box, and from the Only for drop-down list, choose **Opted In users**.
  - Select the **Filter by Previous Visits** check box, and click the **Add Locations** button. Select the customer name (root name) check box to consider the visit to all of the locations of ABC.
  - From the following drop-down lists, choose **Atleast, 5 Times in This Year**.
- Step 12** In the Schedule area, do the following:
- Select the Set a date range for the rule check box, and specify the date range for the fortnight for which you want to provide the offer. Set the time also, if required.
  - Select the Filter by days of the week check box, and click **sat** and **sun**.
- Step 13** In the Actions area, do the following:
- From the Notify drop-down list, choose **Notify Consumer**.
  - From the adjacent three drop-down lists, choose **Once in, 1**, and **Visits**, respectively.
  - Select the Via App Push Notification check box, and from the following drop-down list, choose **A1**. If required, edit the message in the following text box.
  - Select the Via SMS check box, and enter the URL created in step 2. If required, edit the content in the following text box.




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**Note** This configuration is to send the notification even if the app notification fails. In addition, the customers who are not an app user, get the notification through SMS.

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- Step 14** Click **Save and Publish**.  
The rule gets published.
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## Creating an Engagement Rule for a Business User

You can send the notifications to the business users such as employees through SMS, or e-mail. You can also send notifications to an external API.

To define an engagement rule to send notifications to the business users or an external API, perform the following steps:

- 
- Step 1** In the CMX Engage dashboard, choose **Proximity Rules > Engagement Rule**.
- Step 2** Click **Create a New Rule**.
- Step 3** In the Rule Name text field, enter a name for the engagement rule.

- Step 4** In the Sense area, from the “When a user is on” drop-down list, choose “WiFi” to send notifications to the business user based on the user’s connectivity to the Wi-Fi”.
- a. If you choose “WiFi”, an additional field appears where you can choose any of the following:
    - Entering Location- The notification is sent to the business user, when a customer connected to the Wi-Fi enters the location.
    - Exiting Location- The notification is sent to the business user, when a customer connected to the Wi-Fi leaves the location.
    - Present at location- The notification is sent to the business user, when the customer is connected to the Wi-Fi and present at the location for a specified duration or at a particular time. If you choose this option, additional fields appear where you can mention the duration or time that needs to meet to send the notifications.



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**Note** For business users, you must not choose the sense as “Beacon”.

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- Step 5** In the Locations area, specify the locations for which you want to send the notifications.
- You can configure to send notifications for the entire customer name or a single or multiple locations such as campus, building, floor, group, or zone. For more information on creating a location, see the [“Defining the Location Hierarchy” section on page 3-2](#).
- You can also filter the locations for which the notification is to send based on the metadata defined for the selected location or its parent or child locations. For more information on configuring the metadata for the locations, see the [“Defining Metadata for a location” section on page 3-7](#). You can either send the notifications for the locations with a particular metadata or exclude the locations with a particular metadata.
- To specify the locations for the rule, perform the following steps:
- a. Click the **Add Locations** button.
  - b. In the Choose Location window that appears, select the locations for which you want to apply the engagement rule.
  - c. Click **OK**.
- To send notifications for the locations with a particular metadata, perform the following steps:
- a. Select the **Filter by Metadata** check box.
  - b. In the Filter area, click the **Add Metadata** button.  
The Choose Location Metadata window appears.
  - c. From the drop-down list, choose the metadata variable, and choose the value for the variable in the adjacent field.
  - d. Click **OK**.
- To exclude to send notifications for the locations with a particular metadata, perform the following steps:
- a. Select the **Filter by** check box.
  - b. In the Filter area, click the **Add Metadata** button.  
The Choose Location Metadata window appears.
  - c. From the drop-down list, choose the metadata variable, and choose the value for the variable in the adjacent field.
  - d. Click **OK**.

**Step 6** In the IDENTIFY area, specify the type of customers for whom you want to send the notifications to the business users.

**Note**

You can filter the customers for whom you want to send the notifications to the business users based on whether the customer is an opted in or not opted in user, the tags the customers belong to, the number of visits made by the customer, and the status of app in the customer's device. You can apply all these filters or any of them based on your requirement.

To specify the customers for whom the notification is to send to the business user, perform the following steps:

- a. If you want to filter the customers by the Opt In Status, select the Filter by OptIn Status check box, and from the Only for drop-down list, choose whether you want to send the notifications for opted in users or not opted in users.

**Note**

For more information on opted in users, see the [“Opted In Users” section on page 6-7](#).

- b. If you want to filter the customers based on tags, select the **Filter by Tags** check box.

**Note**

You can filter the tags in two different ways. Either you can specify the tags for which the notifications are to send or you can specify the tags for which the notifications must not be sent. You can choose the best filtering method based on your requirement. For example, if you want to send the notifications to the business users for all tags except for one tag, it is easy to opt the exclude option, and mention that particular tag for which you do not want to send the notifications.

- To include the tags so that the notification is sent to the business users for the customers in the selected tags, use the **Add Tags** button for “Include”.
- To not send the notifications to the business users for the customers in the excluded tags, use the **Add Tags** button for “Exclude”.

For more information on using the tag filter, see the [“Filtering by Tag” section on page 6-5](#).

- c. If you want to filter the customers based on the number of visits made by the customer in the selected locations, select the **Filter by Previous Visits** check box.

Click the **Add Locations** button. In the Choose location window, select the locations of which the customer visit needs to consider for filtering. In the following fields, mention the number of visits and duration required to send notifications. For more information on the visits and duration you can configure, see the [“Notification Criteria” section on page 5-18](#).

- d. If you want to filter the customers based on the customers app status, select the **Filter by App Status** check box. From the “Filter by the users who” drop-down list, choose the status of the app users for whom you want to send the notifications.

**Step 7** In the Schedule area, specify the period for which you want to apply the engagement rule.

- a. Select the Set a time range for the rule check box, and in the fields that appear specify the time range for which you want to apply the engagement rule.
- b. Select the Set a date range for the rule check box, and in the fields that appear specify the start date and end date for the period for which you want to apply the engagement rule.

- c. If you want to apply the rule only on particular days, select the Filter by days of the week check box, and from the list of days that appears, click the days on which you want to apply the engagement rule.

**Step 8** In the Actions area, perform the following steps:

- a. From the **Notify** drop-down list, choose **Notify Business User**, and from the adjacent drop-down list choose any of the following:
  - Only Once- The notification is sent only once to a business user.
  - Once In- The notification is sent more than once to a business user based on the notification frequency specified. In the additional fields that appear when you choose this option, specify the notification frequency. For more information on the notification frequency, see the [“Notification Frequency” section on page 5-20](#).



**Note**

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To display the variables such as first name, last name, mobile number, and so on in the notification message, you must configure the data capture module in the portal. For more information on configuring the data capture module in the portal, see the [“Adding a Data Capture Form to a Portal” section on page 7-12](#).

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- b. If you want to send the notification through SMS, select the Via SMS check box. From the SMS Gateway drop-down list, choose the SMS gateway through which you want to send the SMS notification. You can use the **Demo Gateway** provided by Cisco, which is chargeable. You can add the SMS Gateways to the CMX Engage using the ADD SMS Gateway button. In the To field that appears, enter the mobile number of the business user to whom you want to send the notifications. In the Link field, enter the engagement URL that must appear in the notification. For more information on configuring the engagement URL, see [“Engagement URL” section on page 5-18](#). You can enhance your URL using the smart link option. Enter "\$" or click the adjacent Add Variable drop-down list to view the variables that you can add. For more information on smart link, see the [“Smart Link” section on page 7-45](#).

The message content that is sent to the business users is displayed in the following text box. You can enhance the message using the smart links. By default, the first name and last name of the customer, and the engagement URL are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering "\$" in the text box. For more information on smart link, see the [“Smart Link” section on page 7-45](#).

- c. If you want to send the notification through e-mail, select the Via Email check box. In the From field, specify the From e-mail ID that must appear in the e-mail, in the “To” text field, enter the e-mail ID of the business user to whom you want to send the notification, and in the Subject field, enter a subject for the notification e-mail. In the Link field, enter the engagement URL that must appear in the notification. For more information on configuring the engagement URL, see the [“Engagement URL” section on page 5-18](#). You can enhance your URL using the smart link option. In the Link field, enter "\$" in the to view the variables that you can add in the smart link or click the adjacent Add Variable drop-down list. For more information on smart link, see the [“Smart Link” section on page 7-45](#).

The message content that is sent to the business user is displayed in the following text box. You can enhance the message using the smart links. By default, the first name and last name of the customer, and the engagement URL are added as variables. You can add more smart link variables using the Add Variable drop-down list or by entering "\$" in the text box. For more information on smart link, see the [“Smart Link” section on page 7-45](#).

- d. If you want to send the notification to an external API, select the Trigger API check box.

- In the URI text field, enter the URI for the API. You can include additional details of the customers in the notification message using the smart links. Click the Add Variable drop-down list or “\$” in the text box to view the variables. For more information on smart link, see the [“Smart Link” section on page 7-45](#).
- From the Method drop-down list, choose the method for triggering API.



**Note** You can add the customer details in the notification message, by adding the smart link variables in the API URI or in the method parameters.

- **Get-** To send notification to the API using the get method. If you choose this method, additional fields appear where you can mention the request parameters, to include additional details such as first name, last name, mobile number, and so on of the customer in the notification. You can add the request parameter keys defined in your API and mention the values for them using smart links. The value can be a hard-coded value or a variable. You can add a smart link variable using the adjacent Add Variable drop-down list or by entering “\$” in the value field. For more information on smart link, see the [“Smart Link” section on page 7-45](#). You can add more “get parameters” using the **add** button.
- **Post Form-** To send notification to the API using the post form method. If you choose this method, additional fields appear where you can mention the form parameters, to include additional details such as first name, last name, mobile number, and so on of the customer in the notification. You can add the form parameter keys defined in your API and mention the values for them. The value can be a hard-coded value or a variable. You can add a variable as a form parameter variable using the adjacent Add Variable drop-down list or by entering “\$” in the value field. For more information on smart link, see the [“Smart Link” section on page 7-45](#). You can add more “form parameters” using the **add** button.
- **Post Json-** To send notification to the API using the post json method. If you choose this method, a text box appears where you can mention the json data that is to send as notification message to the API. You can mention the json values for various json fields defined in your API. The value can be a hard-coded value or a variable. You can add a variable as a json value using the adjacent Add Variable drop-down list or by entering “\$” in the text box. For more information on smart link, see the [“Smart Link” section on page 7-45](#).
- **Post Body-** To send notification to the API using the post body method. If you choose this method, an additional field appears where you can mention the content that must be included in the notification sent to the API.



**Note** Only those smart link variables that you have configured to capture using the Data Capture module in the portal are included in the notifications.



**Note** The summary of the rule is shown in the right side of the page.

**Step 9** Click **Save and Publish**.

The rule gets published and listed in the Engagement Rules page.



**Note**

If you do not want to publish the rule now, you can click the Save button. You can publish the rule at any time later by clicking the Save and Publish button. Also, you can publish the rule by clicking the Make Rule Live icon at the far right of the rule in the Engagement Rules page.

## Example

ABC is a hotel group with hotels around the globe. ABC has many privilege customers, mainly business people, who use its hotels. As part of its 25th anniversary, ABC wants to provide some special gifts to its platinum loyalty members who visits its first hotel at location A. ABC considers all the customers who had visited its hotels at location A or location C minimum 10 times in the last 2 years as platinum loyalty members. ABC wants its customer care representative to directly go and meet the customer, and gift the customers. ABC wants to send notifications to its customer care representative regarding the arrival of the platinum loyalty members through SMS. The notifications need to send for the opted in users when the customer enters the location. The notifications are to send only for the current month. ABC wants to send the notifications only once for a customer.

To meet the preceding scenario, perform the following steps:

ABC is a hotel group with hotels around the globe. ABC has many privilege customers, mainly business people, who use its hotels. As part of its 25th anniversary, ABC wants to provide some special gifts to its platinum loyalty members who visits its first hotel at location A. ABC considers all the customers who had visited its hotels at location A or location C minimum 10 times in the last 2 years as platinum loyalty members. ABC wants its customer care representative to directly go and meet the customer, and gift the customers. ABC wants to send notifications to its customer care representative regarding the arrival of the platinum loyalty members through E-mail. The notifications need to send for the opted in users when the customer enters the location A. The notifications are to send only for the current month. ABC wants to send the notifications only once for a customer.

To meet the preceding scenario, perform the following steps:

- Step 1** Log in to CMX Engage.
- Step 2** Create the location hierarchy with all the locations of ABC.
- Step 3** Create a tag for the platinum loyalty members, **Platinum**, using the Profile Rule. The rule must be to filter the customers visited the location A or location C at least 10 times in last 2 years. For more information on creating the tag for this condition, see the example in the [“Creating Tags or Including or Excluding the Customers from an Existing Tag Using a Profile Rule”](#) section on page 6-1.
- Step 4** In the CMX Engage dashboard, choose **Proximity Rules > Engagement Rule**.
- Step 5** Click **Create a new rule**.
- Step 6** In the RULE NAME field, enter a name for the engagement rule.
- Step 7** From the “When a user is on” drop-down list, choose **WiFi**, and from the drop-down list that appears, choose **Entering Location**.
- Step 8** In the Locations area, click the **Add Locations** button, and select location A, the location where ABC wants to provide the gifts to the customers.
- Step 9** In the IDENTIFY area, do the following:
  - a. Select the Filter by OptIn Status check box, and from the Only for drop-down list, choose **Opted In Users**.

- b. Select the **Filter by Tags** check box, and click the **Add Tags** button for Filter.
- c. In the Choose Tags window, click the Include radio button for **Platinum1**, created at step 3, and click **Done**.

**Step 10** In the Schedule area, do the following:

- a. Select the Set a date range for the rule check box, and specify the start date and end date of the current month for which ABC want to provide the offer.

**Step 11** In the Actions area, do the following:

- a. From the Notify drop-down list, choose **Notify Business User**.
- b. From the adjacent drop-down list, choose **Only Once**.
- c. Select the Via Email check box. In the From field, specify the From e-mail ID that must appear in the e-mail, in the “To” text field, enter the e-mail ID of the business user to whom you want to send the notification, and in the Subject field, enter a subject for the notification e-mail. If required, in the Link field, provide a URL for the site that the customer care representative can view to decide on the service to deliver to the customer.

**Step 12** Click **Save and Publish**.

The engagement rule is published.

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Now, when an opted in platinum loyalty member enters the premises of location A, a notification is sent to the customer care representative of location A.

## Engagement URL

The Engagement URL refers to the URL that is provided in the push and SMS notification messages that are sent to the users. The users can click this URL to view a site page that is relevant to the notification. For example, you can provide a site page with more information on the discounts and offers available to the customer.

You can create this site page using any other site development application. To use the engagement URL for a push notification, you must contact the CMX Engage support team.

## Notification Criteria

You can define various criteria based on which the notifications are to send.

- Atleast ..Times— The rule is applied when the number of customer visits meets the number specified.
  - Last 7 days—The rule is applied if the number of customer visits in the last 7 days meets the number specified.
  - Last 15 days—The rule is applied if the number of customer visits in the last 15 days meets the number specified.
  - Last 30 days— The rule is applied if the number of customer visits in the last 30 days meets the number specified.
  - Last 90 days— The rule is applied if the number of customer visits in the last 90 days meets the number specified.

- This Week— The rule is applied if the number of customer visits in the current week meets the number specified.
- This Month— The rule is applied if the number of customer visits in the current month meets the number specified.
- This Year—The rule is applied if the number of customer visits in the current year meets the number specified.
- Date Range— The rule is applied if the number of customer visits during a particular period meets the number specified. If you choose this option, additional fields appear where you can mention the start date and end date for the period.
- Between, ..Times— The rule is applied when the number of customer visits comes within the number range specified.
  - Last 7 days—The rule is applied if the number of customer visits in the last 7 days comes with in the number range specified.
  - Last 15 days—The rule is applied if the number of customer visits in the last 15 days comes with in the number range specified.
  - Last 30 days— The rule is applied if the number of customer visits in the last 30 days comes with in the number range specified.
  - Last 90 days— The rule is applied if the number of customer visits in the last 90 days comes with in the number range specified.
  - This Week— The rule is applied if the number of customer visits in the current week comes with in the number range specified.
  - This Month— The rule is applied if the number of customer visits in the current month comes with in the number range specified.
  - This Year— The rule is applied if number of customer visits in the current year comes with in the number range specified.
  - Date Range— The rule is applied if the number of customer visits during a particular period comes with in the number range specified. If you choose this option, additional fields appear where you can mention the start date and end date for the period.

## Notification Types

The CMX Engage enables you to send the notifications in the following formats:

- SMS—To send the notification as an SMS.
- Push Notification— To send the notification as a push message from an app. If you choose this option, the SMS or e-mail notification for this rule is not sent even configured. However, if there is any failure in sending the push notification, the CMX Engage uses the other configured notification types for sending the notification. To use this option, you need to configure the app. For more information on configuring the app, see the [“Configuring the Apps” section on page 5-4](#).
- BLE Notification— To send the notification as BLE notification. You can use this notification method only if the “Sense” is selected as “BLE Beacon”.
- Email— To send the notification as an e-mail. For business users, you can define the e-mail address to which you want the sent the notification.

- API Notifications—To send an API notification to an external application. The CMX Engage enables you to send the notification to a third party application.

## Notification Frequency

The frequency at which you want to send the notification for an engagement rule. You can configure the engagement rule for the following notification frequencies:

- Only Once—To send the notification only once to a user.
- Once in— To send the notification once in the interval specified.
  - Visits—To send the notification when the number of customer visits meet the number specified.
  - Hours— To send the notification once in the number of hours specified.
  - Days — To send the notification once in the number of days specified.
  - Weeks— To send the notification once in the number of weeks specified.
  - Months— To send the notification once in the number of months specified.

## Downloading CMX Engage SDK

To avail certain features in the CMX Engage, you must integrate your app with CMX Engage SDK. You can download this app from the CMX Engage dashboard, and integrate it with your app. You can also download the Help documentation that describes how to integrate the SDK with your app.

The SDK option is available in the CMX Engage dashboard only if you have the SDK license.

The SDK app integration is required in the following cases:

- To use BLE Beacons and Apps in the Engagement Rule to send notifications.

To download the CMX Engage SDK, perform the following steps:

- 
- Step 1** In the CMX Engage dashboard, click the **Tools** icon in the left pane.
  - Step 2** Click the SDK tab.  
The SDK window contains the SDK for both iOS and android apps.
  - Step 3** Click the download option for the type of app for which you want the SDK.
  - Step 4** Save the SDK on your system.
  - Step 5** Integrate it with the app based on instructions provided in the Help documentation.
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### Note

You can access the SDK credentials by clicking the Copy SDK Credentials button.

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### Note

You can download the Help documentation for iOS or android app by clicking the Help button for the respective app.

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# Engagement Rule Report

The CMX Engage allows you to view the report that is specific to each engagement rule. This report displays the details of the rule activity and the user engagement for a specific rule.

To view the Engagement Rule report for an engagement rule, perform the following steps:

- 
- Step 1** In the CMX Engage dashboard, click **Proximity Rules > Engagement Rule**.  
The engagement rules defined get listed.
- Step 2** Click the engagement rule for which you want to view the Engagement Rule report.  
The Engagement Rule Report for that rule appears.
- Step 3** In the Filter area, choose the period for which you want to view the report.  
The report is filtered for the specified period.  
The Engagement Rule report has the following sections.
- [Rule Activity, page 5-21](#)
  - [User Insight, page 5-21](#)

## Rule Activity

This section displays the details of notifications sent based on the particular engagement rule.

- **Daily Engagements**-Displays the ratio "the number of notifications sent" to "the unique customers to whom the notifications are sent", on each day based on the particular engagement rule. Each bar in the graph represents the hour of the day at which the notifications are sent. There can be 24 bars for each day, representing every hour of the day.
- **Engagements by Location**- This section displays the total number of notifications sent for each of the targeted locations.
- **Engagement by Time of Day**-This bar graph displays the number of notifications sent to the customers during various timings in a day. This helps you to identify at what time the customers filtered for the rule are present in your business premises, and target them accordingly.
- **Notification Channels**- This bar graph represents the ratio of the notification types such as SMS, e-mail, app notification, and so on through which the notifications are sent to the customers for the particular rule.

## User Insight

This section show the details of the customers who were targeted by the particular rule.

- **User Profile**- This section displays the total number of customers to whom the notifications are sent for the particular engagement rule.

The pie chat in this section displays the ratio of the tagged customers to the not tagged customers among the targeted customers. Tagged customers are those customers who are included in any of the tag created in the CMX Engage. Also, the percentage of the targeted customers in each tag is shown using pie charts.

This section also displays the ratio of male to female customers among the customers targeted based on the rule.

- **Dwell Time Distribution-** This bar graph displays the duration of each visit in the targeted locations. The duration of visits that fall within various dwell time ranges are shown. For example, the count for >8 hrs represents the number of visits that spent greater than 8 hours in the targeted locations.
- **Repeat User Engagement-** This bar graph displays the number of times the notifications are sent to various customers filtered for the rule. The number of customers that falls within various repeat user ranges are shown in this section.
- **Users by Visit Count-** This bar graph displays the number of visits made by each target customer on the targeted locations. Also, the number of customers that falls within various visit ranges are shown.