



HTTP Proxy

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).

**Note**

The Wi-Fi device of the customer must be on different subnet than 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 E-series 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.

**Note**

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
```

**Note**

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
