Extreme™
Customer-Driven Networking

ExtremeLocation User Guide

9036010

Published January 2019

Copyright © 2018 Extreme Networks, Inc. All rights reserved.

Legal Notice

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see:
www.extremenetworks.com/company/legal/trademarks

Software Licensing

Some software files have been licensed under certain open source or third-party licenses. End-user license agreements and open source declarations can be found at:
www.extremenetworks.com/support/policies/software-licensing

Support

For product support, phone the Global Technical Assistance Center (GTAC) at 1-800-998-2408 (toll-free in U.S. and Canada) or +1-408-579-2826. For the support phone number in other countries, visit: http://www.extremenetworks.com/support/contact/

For product documentation online, visit: https://www.extremenetworks.com/documentation/

Table of Contents

Preface **5**
- Conventions 5
- Providing Feedback to Us 6
- Getting Help 6
- Extreme Networks Documentation 7

Chapter 1: Product Overview **8**
- Architecture 9
- Presence 9
- Zone Tracking 9
- Position Tracking 10
- Device and Associate Classification and Tracking 10
- Crowding Event Notification and Analysis 10
- Import Location Based Services from AirDefense Service Platform 10
- WiNG Integration With ExtremeLocation 10
- Scheduling Reports 11
- Bluetooth Locationing 11

Chapter 2: Log In to ExtremeLocation **13**
- Log In to ExtremeLocation 13
- Sign Up for ExtremeLocation 14
- Log In for the First Time 16
- Forgot Password 18
- AP License 19
- App Visit License 21

Chapter 3: Dashboard **24**
- Load the Dashboard 24
- Create a Dashboard 31
- Set a Default Dashboard 35
- Manage Your Dashboards 36
- Delete the Dashboard 37
- Dashboard Widgets 39
- Scheduled Reports 50

Chapter 4: Sites View **60**
- Sites - Main Screen 60
- Common Tools 67
- Add a Site 68
- Add a Floor 78
- Client View 92
- Heatmap View 96
- Crowding View 99

Chapter 5: Categories **102**
- Create a Category 103
- Editing a Category 109

Chapter 6: Access Points **111**
- Access Point Status 111

Access Point Virtual Beacons....112

Chapter 7: Beacons....135
Edit Beacon Information....136

Chapter 8: Payloads....140
View a Payload....141
Create a Payload....146
Delete a Payload....150

Chapter 9: Experiences....152
View an Experience....153
Create or Edit an Experience....161
Delete an Experience....176

Chapter 10: Journey....178
View a Journey....179
Create or Edit a Journey....184
Delete a Journey....197

Chapter 11: User Apps....199
Add Apps....199
Edit Apps....202

Chapter 12: Devices....203
Devices - Site Live Data....203
Devices - Site Historical Data....205

Chapter 13: Settings....209
User Management....209
System Settings....216
Licenses....228
Crowding Configuration....232

Appendix A: Configure ExtremeWireless Access Points....234
Configuring ExtremeWireless WiNG Access Points....234
Configuring ExtremeWireless Access Points....272
Configuring AirDefense Sensor Support....279

Preface

This section discusses the conventions used in this guide, ways to provide feedback, additional help, and other Extreme Networks publications.

Conventions

This section discusses the conventions used in this guide.

Text Conventions

The following tables list text conventions that are used throughout this guide.

Table 1: Notice Icons

Icon	Notice Type	Alerts you to...
	General Notice	Helpful tips and notices for using the product.
	Note	Important features or instructions.
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.
New!	New Content	Displayed next to new content. This is searchable text within the PDF.

Table 2: Text Conventions

Convention	Description
`Screen displays`	This typeface indicates command syntax, or represents information as it appears on the screen.
The words **enter** and **type**	When you see the word “enter” in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says “type.”
[Key] names	Key names are written with brackets, such as **[Return]** or **[Esc]**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **[Ctrl]**+**[Alt]**+**[Del]**
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.

Terminology

When features, functionality, or operation is specific to a switch family, such as ExtremeSwitching, the family name is used. Explanations about features and operations that are the same across all product families simply refer to the product as the switch.

Providing Feedback to Us

Quality is our first concern at Extreme Networks, and we have made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, so we want to hear from you! We welcome all feedback but especially want to know about:

- Content errors or confusing or conflicting information.
- Ideas for improvements to our documentation so you can find the information you need faster.
- Broken links or usability issues.

If you would like to provide feedback to the Extreme Networks Information Development team, you can do so in two ways:

- Use our short online feedback form at https://www.extremenetworks.com/documentation-feedback/.
- Email us at documentation@extremenetworks.com.

Please provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

- GTAC (Global Technical Assistance Center) for Immediate Support
  - Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact
  - Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- Extreme Portal — Search the GTAC knowledge base, manage support cases and service contracts, download software, and obtain product licensing, training, and certifications.
- The Hub — A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)

- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Extreme Networks Documentation

To find Extreme Networks product guides, visit our documentation pages at:

Current Product Documentation	www.extremenetworks.com/documentation/
Archived Documentation (for earlier versions and legacy products)	www.extremenetworks.com/support/documentation-archives/
Release Notes	www.extremenetworks.com/support/release-notes

Open Source Declarations

Some software files have been licensed under certain open source licenses. More information is available at: www.extremenetworks.com/support/policies/open-source-declaration/.

1 Product Overview

Architecture
Presence
Zone Tracking
Position Tracking
Device and Associate Classification and Tracking
Crowding Event Notification and Analysis
Import Location Based Services from AirDefense Service Platform
WiNG Integration With ExtremeLocation
Scheduling Reports
Bluetooth Locationing

ExtremeLocation is a massively scalable, enterprise grade, resilient, cloud-based location and analytics solutions from Extreme Networks. With real-time location and analytics, you can engage with your customers providing personalized experience for guests and visitors. ExtremeLocation can also be used to monitor your work flows and assets to improve your overall operation and efficiency.

ExtremeLocation provides enterprises powerful location services which can scale to thousands of branch sites and 100,000 access points.

ExtremeLocation offers a range of accurate and granular location accuracy to address your deployment scenarios and includes:

- real-time and historical location analysis
- new and repeat visitor tracking
- engagement time monitoring
- site or zone specific intelligence
- assets and employee tracking
- bluetooth based locationing and tracking of visitors

This product:

- Is enterprise grade, resilient and cloud based.
- Is massively scalable supporting thousands of sites and a large number of access points.
- Is quick to deploy and easy to manage.
- Provides enterprise quality location and analytics and includes BT/BLE beacon based accurate locationing.
- Provides unlimited customizable dashboards for data analysis and site monitoring.
- Lets you drill down to floor level at a site to monitor assets, visitors and associates.
- Provides reports to help you proactively plan or troubleshoot issues.

Some of its main features are:

- Presence
- Zone Tracking
- Position Tracking
- Device and Associate Classification and Tracking
- Crowding Event Notification and Analytics
- Import Location Data from AirDefense Service Platform
- Import WiNG Site Hierarchy
- Scheduling Reports
- Admin and Guest Account Management
- Bluetooth Locationing

Architecture

ExtremeLocation supports multi-site multi-ap deployments providing support to thousands of sites and one hundred thousand access points. Hosted on the cloud, it provides a resilient, always available service to meet your location and analytics needs. Cloud enabled APs are must be manually configured to connect to ExtremeLocation's service when deployed for the first time.

Presence

The Presence feature enables you to react quickly to a visitor or customer to your site or venue. You could use this feature to provide a customized welcome message to the customer, as soon as they arrive, to enhance their site visit experience. Enhance the quality of engagement with the visitor by pushing coupons, offers, advertisement, and other real-time notifications to the visitor's devices.

The Presence feature provides a large amount of visit data and trends that you can use to proactively enhance customer experience and to reactively tweak your service offerings to increase your profits.

Presence does not require you to upload floor plans and does not require real-time location service calibration.

Zone Tracking

The Zone Tracking feature enables you to detect devices, visitors, and associates within a zone. A zone is an area covered by an AP or sensor. You could use the feature to track movement of visitors and associates from one zone to another, locate and track movement of assets, view which zones are popular or unpopular, and track (live and historical) how much time a visitor or associate spends in the zone.

The Zone Tracking feature provides a large amount of visit data and trends that you can use to proactively enhance the customer experience and to reactively tweak your product placements to increase visitor engagement.

The Zone Tracking feature requires you to upload a floor map of the area of interest and then create zones that meet your requirements.

Position Tracking

The Position Tracking feature enables you to accurately place a device or an associate or a visitor within five (5) to ten (10) meters of their actual location on the floor map.

This feature uses RSSI information from several APs and sensors to locate the client devices and draws it on the floor map. It also requires a RTLS calibration survey to be performed to collect RF data to improve accuracy.

Extreme Networks ExtremeLocation also provides an Android App to enable you to perform site survey using a tablet. The Android App offers zone calibration.

Device and Associate Classification and Tracking

ExtremeLocation can auto classify devices as *Visitor*, *Associate* or *Asset* based on user defined rules. Separating devices as Associates, Assets, and Visitors enhances accurate visitor analysis. It also improves asset tracking and monitoring of associate activity.

Crowding Event Notification and Analysis

ExtremeLocation now supports display of crowding events in real-time. Real-time crowding events can either be configured globally or by category. This in turn generates real-time event notification and analytics. A configuration for the number of visitors per associate ratio (threshold) in a category will override the global configuration. However, events remain active based on a global timeout setting.

Active events for a category are viewed in the floor plan by zone so that you can identify which categories need immediate associate attention.

A detail widget can be configured in the dashboard to view the historical data over time to help you determine where more associates should be deployed.

Import Location Based Services from AirDefense Service Platform

ExtremeLocation now supports migrating location based services like Proximity Awareness and Analytics services directly from Extreme AirDefense to ExtremeLocation as it provides enhanced location based services as well as and superior scalability performance. Once migrated, ExtremeLocation becomes the default location service provider for your sites.

Calibration and configuration data exported from AirDefense is imported into ExtremeLocation using scripts provided for this purpose. These scripts can be downloaded from within the ExtremeLocation user interface. A detailed "How To" document, *Migrating Location Based Services from ADSP to ExtremeLocation* is available and can be downloaded from the *Extreme Networks Documentation Site*.

WiNG Integration With ExtremeLocation

WiNG ExtremeLocation Integration

With this release of ExtremeLocation, you can seamlessly integrate WiNG with ExtremeLocation. Once integrated, you can view all WiNG sites and WiNG adopted devices in real time from within the

ExtremeLocation user interface. Changes made to a site or site settings, geo-location information for a site is immediately propagated to ExtremeLocation. For adopted access points, changes to the radio mode and hostname will be reflected in ExtremeLocation.

This enables WiNG customers, who want to use ExtremeLocation to provide enhanced locationing services, an easy pathway to synchronize their WiNG site hierarchy directly into ExtremeLocation without any manual intervention. Here ExtremeLocation acts as a down-stream location service to WiNG. Any changes made to WiNG is automatically propagated to ExtremeLocation, however, changes made to ExtremeLocation is not updated back to WiNG.

Once the WiNG site hierarchy is synchronized with ExtremeLocation, you can configure ExtremeLocation as the location service provider for all the sites (RF Domains) managed by WiNG.

This replaces the process of manually uploading the MAC addresses of your Access Points to ExtremeLocation before you can use them for the locationing service.

ExtremeLocation Tenant Account Number Linking in WiNG

It is now possible to configure the ExtremeLocation Tenant Account Number in your WiNG RF Domain policy and your WiNG controller. When an access point comes online, it is placed in the common pool of access points by default. This access point is now available for any Tenant to claim and use by uploading the access point's MAC address using the `.csv` import method. When the Tenant Account Number is provided, access points are assigned to the tenant with the Tenant Account Number and can only be used across any of the sites managed by this tenant. This ensures that your assets cannot inadvertently be deployed on sites that belong to other ExtremeLocation accounts.

When the Tenant Account Number is provided in the WiNG controller configuration, it links the controller with the tenant. Any modification made to WiNG sites managed by this wireless controller, such as adding new access points or sites, is tagged by the Tenant Account Number automatically.

Scheduling Reports

ExtremeLocation now supports export of the dashboard as reports. Reports can be exported as a `PDF` file.

ExtremeLocation's report scheduling interface enables you to create periodic reports that are emailed automatically. Schedules can be set daily, weekly, or monthly.

Bluetooth Locationing

ExtremeLocation now supports accurate locationing of visitor devices within your sites. Use this locationing information to analyze product placement, visitor movement, and for other analytics.

Locationing also provides a set of features and configuration options to enable you to deliver multimedia payloads. You can use these features to conduct campaigns, provide location based product promotions or coupons, and other activities that enhance user experience within your sites.

User experience could consist of targeted product promotions using payloads that deliver multimedia content such as pictures and video. Payloads can also be external websites, texts, alerts, and HTML pages. Link a Payload to an Experience to control how the payload is delivered. Payload delivery can be

based on user location or user action. Link multiple experiences to create a Journey and then provide a special payload at the end of a Journey to delight your customers.

2 Log In to ExtremeLocation

Log In to ExtremeLocation
Sign Up for ExtremeLocation
Log In for the First Time
Forgot Password
AP License
App Visit License

ExtremeLocation is a subscription based service and requires you to have a valid and in-force account to access it. This topic discusses the following:

- Log in - Describes how to log in to ExtremeLocation.
- Sign up - Describes the sign up process to create an account for use with ExtremeLocation.
- Log in for the first time - Discusses the tasks and other requirements when logging in to ExtremeLocation for the first time.
- Forgot password - Discusses how to reset a lost/forgotten password.
- Contact us - Provides contact information for reaching Extreme Networks Global Technical Assistance Center (GTAC).

Log In to ExtremeLocation

Use the ExtremeLocation Log In screen to log in to your account. If you do not have an account, use this screen to sign up for a new account. You can also use this screen to reset forgotten password.

Access to ExtremeLocation is only available on subscription to the service. On subscribing to the service, you will be asked to create the account to log into ExtremeLocation dashboard. To sign up, select the **Sign Up** link on the Log In screen. For more information see Sign Up for ExtremeLocation on page 14.

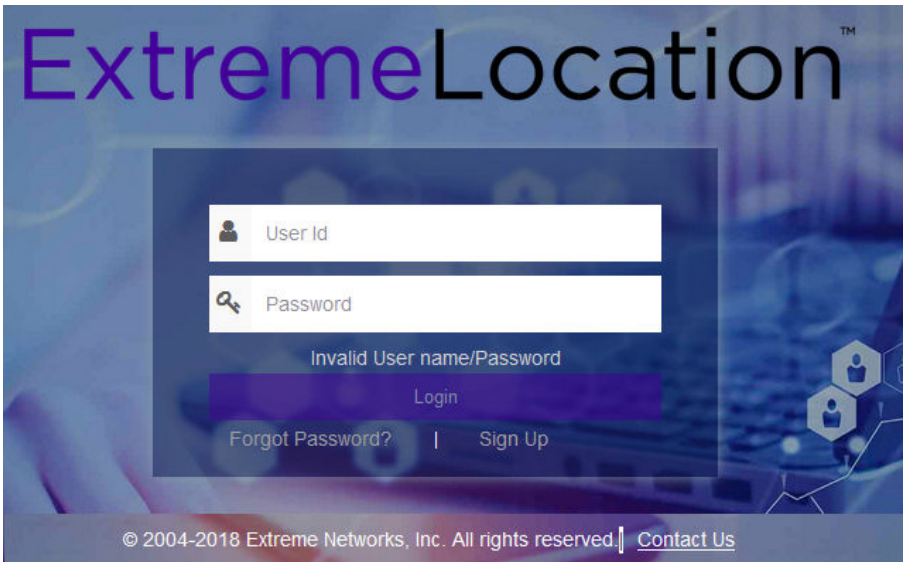


Figure 1: ExtremeLocation Login Screen

To log in into ExtremeLocation:

1 Provide the user name in the **User Id** field (typically the email ID that you registered with).
2 Provide the password for the user name in the **Password** field.
3 Select the **Login** button to login to the ExtremeLocation user interface.

Sign Up for ExtremeLocation

ExtremeLocation is a subscription based service. You must have a valid user account with ExtremeLocation to use it.

To sign up for the ExtremeLocation service:

1 Click on the **Sign up** link below the **Login** button.

The Sign Up screen loads.

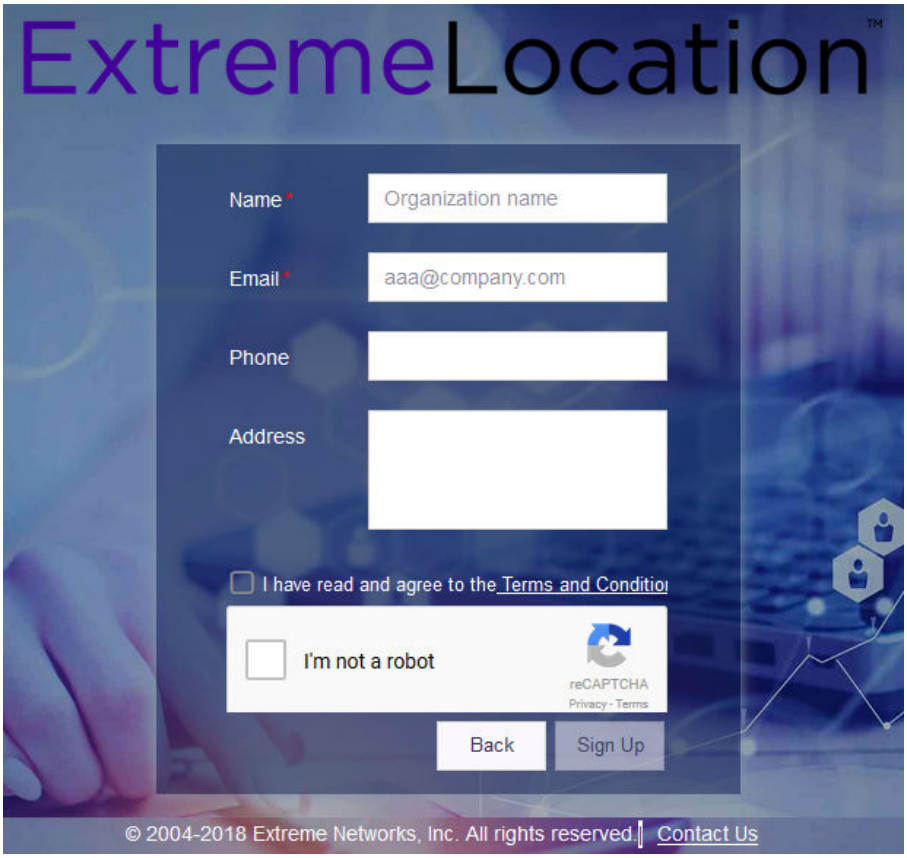


Figure 2: Sign Up Window

2 Enter a valid name for this account in the **Name** field. This is a mandatory field.

3 Enter a valid email id in the **Email ID** field. This email ID will serve as the log in user name for this account with ExtremeLocation. This is a mandatory field.

Note

Ensure that you have access to this email ID at all times as this email ID will be used by us to communicate with you regarding your ExtremeLocation account.

4 Optional: Enter a valid phone number in the **Phone** field.

5 Optional: Enter a valid address for communication in the **Address** field.

6 Select **Terms and Conditions** link to open the terms of service for ExtremeLocation. This is a PDF file that opens in a separate tab or window of your browser.

Important

Please read and understand the Terms and Conditions for the ExtremeLocation service.

7 Select **I have read and agree to the Terms and Conditions** option to indicate your consent to the Terms and Conditions.

Important
You cannot use the ExtremeLocation service or create your ExtremeLocation account without accepting these Terms and Conditions.

8 Select the **I'm not a robot** option and follow the instructions displayed. User registration cannot proceed without passing this check.
The **Sign Up** button is enabled once you have completed this step successfully.

9 Select the **Sign Up** button to complete the process.
Your account is set up with ExtremeLocation and the system sends emails to the ID specified in the **Email ID** field. These e-emails contain the following information:
- Your ExtremeLocation Account Number
- A link to activate the newly created account.
- An auto-generated password for use when logging in to ExtremeLocation for the first time. You will be forced to change this password during your first log in.

10 Should you need to exit without registering for an account, select **Back** button anytime during the registration process.
You are taken back to the ExtremeLocation Login screen.

On successful registration with ExtremeLocation, use the account activation link (sent to your registered email ID) to activate your account. Try to log in into your account from the ExtremeLocation log in screen using the registered email ID and the password sent to you by email. For further information, see Log In for the First Time on page 16.

Log In for the First Time

You should have the user account and password to successfully log in to your ExtremeLocation account. You should also have activated your ExtremeLocation account using the link provided in the activation mail. This mail would have been sent to your registered email address at the time when your ExtremeLocation account was created.

When logging to ExtremeLocation for the first time, ensure that you have the following information for reference:
- Your Username and Password
- Your ExtremeLocation Account Number
- A valid License Key for this account

This information is required for logging in, changing the default password, and adding the licenses.

If you do not have any of the above information, please check the email account used to register for the account with ExtremeLocation. At the time of registration, you would have received emails from ExtremeLocation containing your account number, activation link and a temporary password for logging on for the first time. Please retain these mails for reference.

For help with account log in or other issues, please contact Extreme Support. Extreme Networks Support can be contacted through our support website located at Extreme Networks Support.

Use the ExtremeLocation log in screen to log in to your account. This screen is also used to sign up for a new account as well as to retrieve or reset missing/forgotten password.

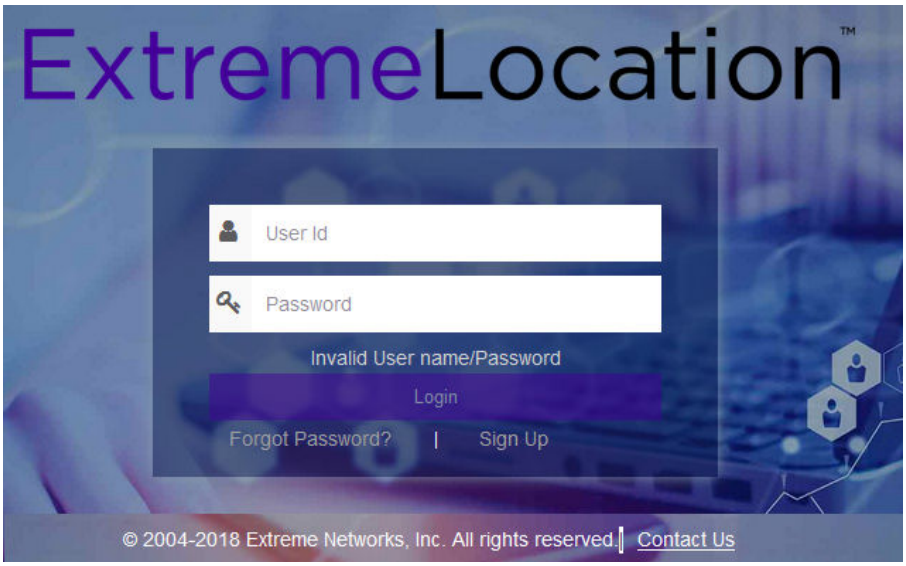


Figure 3: ExtremeLocation Log In Screen

To successfully log in, you should have the credentials that were sent to you at the time you signed up with ExtremeLocation. Your **User Id** will be the email ID that you registered with.

To log in to ExtremeLocation:

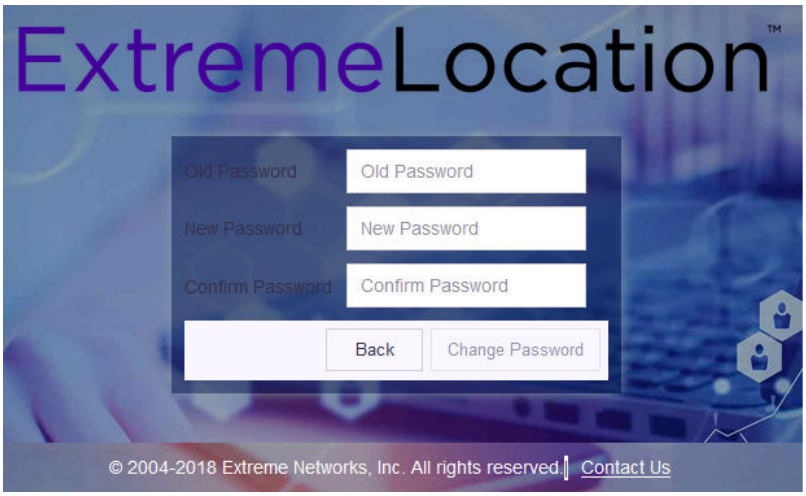
1 Provide the user name in the **User Id** field (typically the email ID that you registered with).

2 Provide the password for the user name in the **Password** field.

3 Select the **Login** button to login to the ExtremeLocation user interface.

Since this is the first time you log in to your account, you will be forced to change your password.

The Change Password dialog displays.



4 Enter the old password into the **Old Password** field.

5 Enter the new password into the **New Password** field.

6 Enter the new password into the **Confirm Password** field to confirm it.

An error message is displayed if the passwords entered into the **New Password** and **Confirm Password** fields are not the same.

7 Select **Change Password** to save your changed password. Select **Back** at any time to exit without changing your password.

The ExtremeLocation Dashboard displays. You have successfully logged in to your account.

Since this is the first log in, no licenses are available for this account. The following message is displayed:

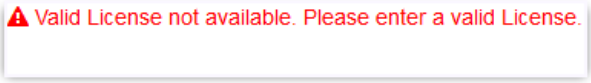


Figure 4: No License Message

For more information on adding licenses, see AP License on page 19. To add App Visit licenses, see #unique_26

Forgot Password

The Forgot Password dialog facilitates resetting your account's password. When you use this link, the password of your account is reset and a new password is sent to the email ID that is registered for this ExtremeLocation account. Use this password to regain access to your ExtremeLocation account.

When you receive your password from ExtremeLocation, log in using your email ID and the new password. On successful log in, you will be forced to change your password.

To reset your ExtremeLocation account's password:

1 From ExtremeLocation's Login screen, select the **Forgot password?** link.

The following dialog displays:

Figure 5: Forgot Password Dialog

2 Enter your ExtremeLocation account's email ID in the **Enter User ID** field.

This is the email ID that you use to log in to ExtremeLocation. If you enter a wrong or nonexistent email ID, an appropriate message is displayed.

3 Select **Submit**

Should you want to exit this process, select **Back**.

The password for the account is reset and a system generated password is sent to the email ID associated with this ExtremeLocation account. You are redirected back to ExtremeLocation Login page.

4 Provide the user name in the **User Id** field (typically the email ID that you registered with).

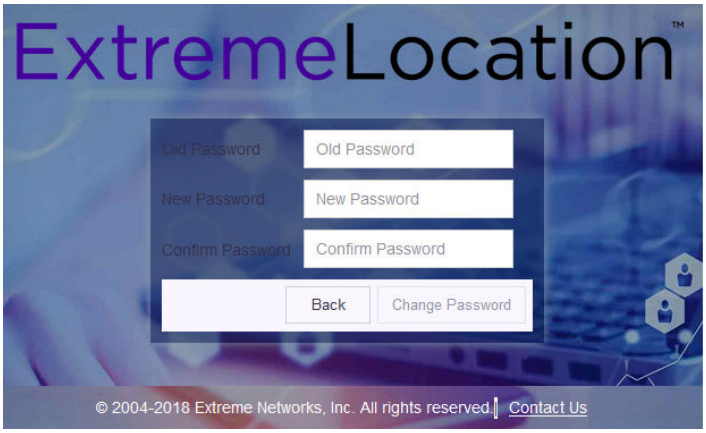
5 Provide the password for the user name in the **Password** field.

Use the password that was sent to your registered email ID.

6 Select the **Login** button to login to the ExtremeLocation user interface.

Since the system generated password was used to log in, you will be forced to change your log in password.

The Change Password dialog displays.



7 Enter the old password into the **Old Password** field.

8 Enter the new password into the **New Password** field.

9 Enter the new password into the **Confirm Password** field to confirm it.

An error message is displayed if the passwords entered into the **New Password** and **Confirm Password** fields are not the same.

10 Select **Change Password** to save your changed password. Select **Back** at any time to exit without changing your password.

The ExtremeLocation Dashboard displays. You have successfully reset and changed your password.

AP License

AP Licenses are required for you to use ExtremeLocation locationing services. For more information on how to get ExtremeLocation licenses, see the *Quick Start Guide*. This document can be downloaded from the Extreme Networks Documentation Site.

To add or apply AP license:

1 Select **Settings** from the main menu.

2 Select **License** from the sub menu.

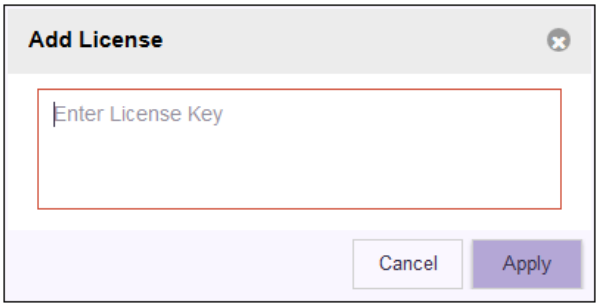
The License Details pane displays.

This dialog displays the following information:

Total	Displays the total number of available licenses for this account. For a new account - without any licenses - this value is zero.
Used	Displays the number of licenses in use out of those available as shown in the **Total** field. For a new account, this value is zero.
Expiry Date	Displays the date on which the license expires. For accounts with multiple licenses, this date is the date on which the last license expires. For a new account this field displays `N/A`.
License Key	Displays the license key string.
No. of Access Points	Displays the number of access points that can be deployed in the ExtremeLocation account.
Import Date	Displays the date on which the license was imported into this account.
Expiry Date	Displays the expiry date for this license. Locationing will not work for this ExtremeLocation account after this date unless the license is renewed.

3 Select .

The **Add License** dialog displays. Use this dialog to add licenses to this ExtremeLocation account.



Complete the following information:

Enter License Key	Paste the license key in this space. Ensure that you do not inadvertently paste any non-printable characters in this space.

4 Select **Apply** to apply the license key.

If the license is valid for this account, the license is added to the list of licenses available for this account.

The table displays a list of all licenses (valid and expired) for this account.

License Key	Displays the complete license key as provided by ExtremeLocation support.
No. of Access Points	Displays the number of Access Points that can be used using this license.
Import Date	Displays the date on which the license was added to this account.
Expiry Date	Displays the date that the license will expire.

If the license is valid, it is added to this table.

5 Optional: At any point, select the **Cancel** button to exit without adding licenses.

App Visit License

Use the App Visit screen to add licenses for enabling support for BLE locationing. App Visit license are purchased in bulk and are consumed when a visitor engages with your site. ExtremeLocation provides two types of App Visit licenses that are consumed based on the length of time the visitor engages with your site. These licenses are:

- Short Visit License - A short visit license is consumed when the user is seen in your site for a short duration, typically ten (10) minutes ore less.
- Long Visit License - A long duration license is consumed when the user is seen in your site for a duration longer than ten (10) minutes.

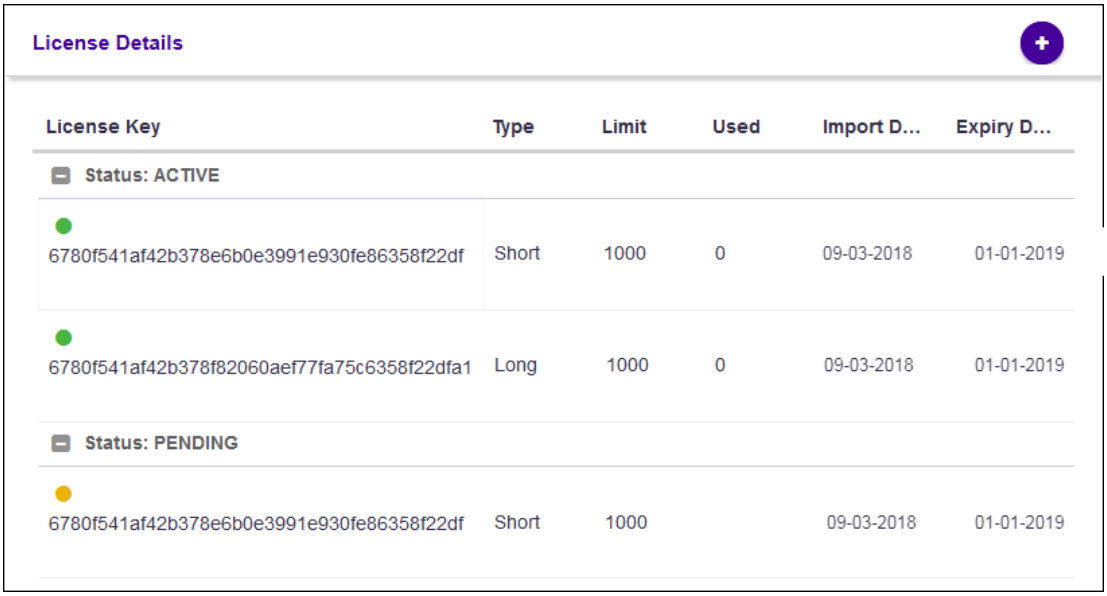
For more information on how to purchase the App Visit licenses, contact ExtremeLocation customer support. For more information see Getting Help on page 6

To add App Visit licenses to your account:

1 Select **Settings** from the main menu.

2 Select **App Visit** from the **License** sub menu.

The License Details pane for App Visit licenses opens.



Licenses in this screen are classified as **Active** and **Pending**. All active licenses - short visit and long visit licenses - are displayed within this heading. At any time there can only be one short visit license and one long visit license active.

The **Pending** heading lists all the short visit and long visit licenses that are added to this account but are yet to be activated. Licenses under this heading are applied sequentially according to the dates when they were imported to this account. A license in the pending state becomes active once an active license is completely consumed.

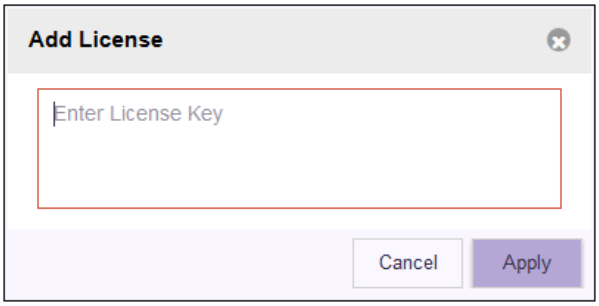
App Visit Licenses are considered consumed based on settings for each of your site. For more information on how App Visit Licenses are consumed, see the topic Add a Site on page 68.

This screen displays the following information:

License Key	Displays the license key string. This field also indicates the current status of the license. A green dot indicates that the license is in use. An yellow dot indicates that the license has been added but is in pending state.
Type	Displays the type of license. License can be either short visit or long visit license. A short visit license is consumed when a device visits the site for a duration less than a specific time limit (default ten (10) minutes). A long visit license is consumed when a device visits the site for a duration longer than the specified time limit.
Limit	Displays the license's visit limit. Each license has a set number of visits that are supported by the license. When a device consumes a license, that is, when a device visits a site for the specified time duration, the **Used** counter is increased by one. When the **Used** value reaches the **Limit** value, the license becomes inactive and ExtremeLocation stops providing locationing service for those category of devices. You must add a license of the same type to continue using ExtremeLocation service.
Used	Displays the number of licenses used till now. When this value reaches the value in the **Limit** column, the license becomes inactive and service is stopped. You must add a license of the same type to continue using ExtremeLocation service.
Import Date	Displays the date on which the license was imported into this account.
Expiry Date	Displays the expiry date for this license. Unused licenses cannot be used after the license expires. Unused licenses cannot be carried over on renewal.

3 Select icon to add new App Licenses.

The Add License dialog displays. Use this dialog to add licenses to this ExtremeLocation account.



Complete the following information:

Enter License Key	Paste the license key in this space. Ensure that you do not inadvertently paste any non-printable characters in this space.

4 Select **Apply** to apply the license key.

If the license is valid for this account, the license is added to the list of licenses available for this account.

The table updates to display the list of all licenses (active and pending) for this account. If there are active licenses, your newly added license can be found under the **Pending** section of the table.

5 Optional: At any point, select the **Cancel** button to exit without adding licenses.

3 Dashboard

Load the Dashboard
Create a Dashboard
Set a Default Dashboard
Manage Your Dashboards
Delete the Dashboard
Dashboard Widgets
Scheduled Reports

Use the fully customizable ExtremeLocation Dashboard to display data for the sites managed by your ExtremeLocation account. ExtremeLocation provides a large number of widgets for you to use in the dashboard to filter to the data that is of interest for your site and your requirement. You can create any number of custom Dashboards to meet your requirements.

You can filter the data displayed on the dashboard by location or site group and further on the time duration of interest. These options, location and time, can be applied independent of each other. You can filter the data displayed on the dashboard based on the location or time or both.

This topic discusses the following:

- Load Dashboard - Describes the process to load a dashboard.
- Create Dashboard - Describes the process of creating a dashboard and adding widgets to it.
- Set a default Dashboard - Describes the process of setting up a dashboard as a default dashboard.
- Manage Dashboard - Describes the process of modifying your dashboard by adding to or removing widgets from it.
- Delete Dashboard - Describes the process of deleting an existing dashboard.
- Dashboard Widgets - Provides a brief description of all widgets that can be used in a dashboard.
- Scheduled Report - Describes the process of creating reports that run periodically.

Load the Dashboard

To display the ExtremeLocation dashboard:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

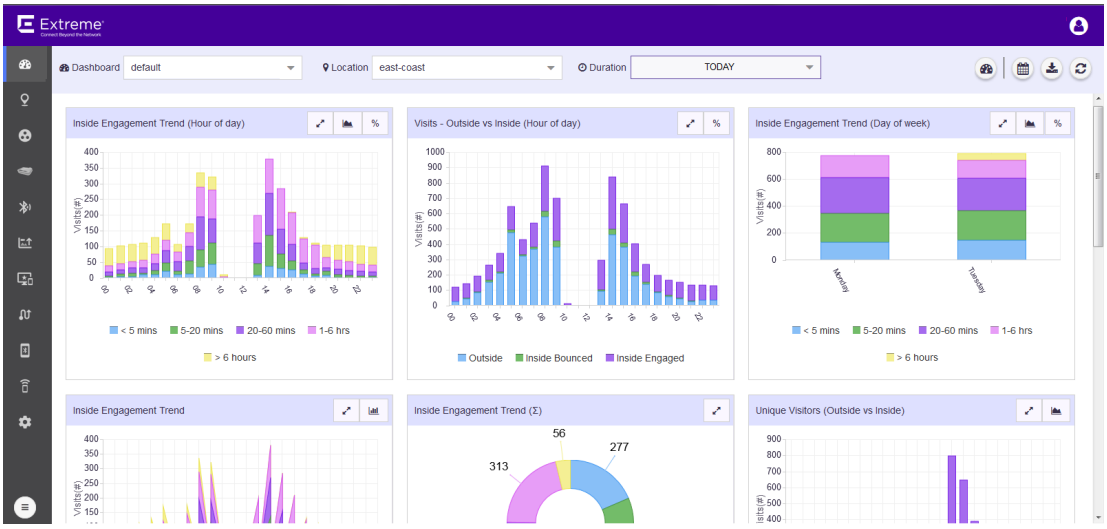


Figure 6: The Dashboard Screen

2 To select a different dashboard, use the **Dashboard** drop-down list.

The selected dashboard opens and displays the configured data.

3 To manually refresh the data on the screen, select the button from tool bar.

4 Select the button from tool bar.

The button expands to display a drop-down list.

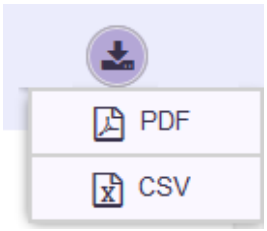


Figure 7: Dashboard Download Options

5 Select the **PDF** button to save the current state of the dashboard as a Portable Document Format (PDF) file. Select the **CSV** button to save the current state of the dashboard as a Comma Separated Value (CSV) file.

6 Use the **Location** drop-down list to select a site and to display the data for the selected site when multiple sites are available under this ExtremeLocation account.

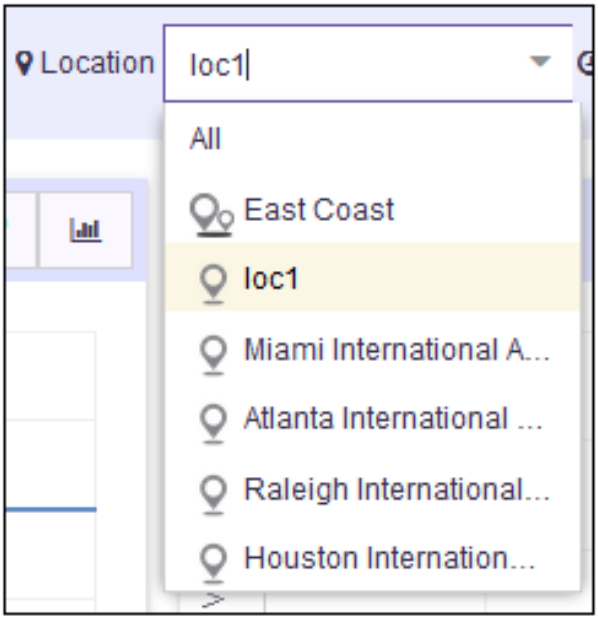


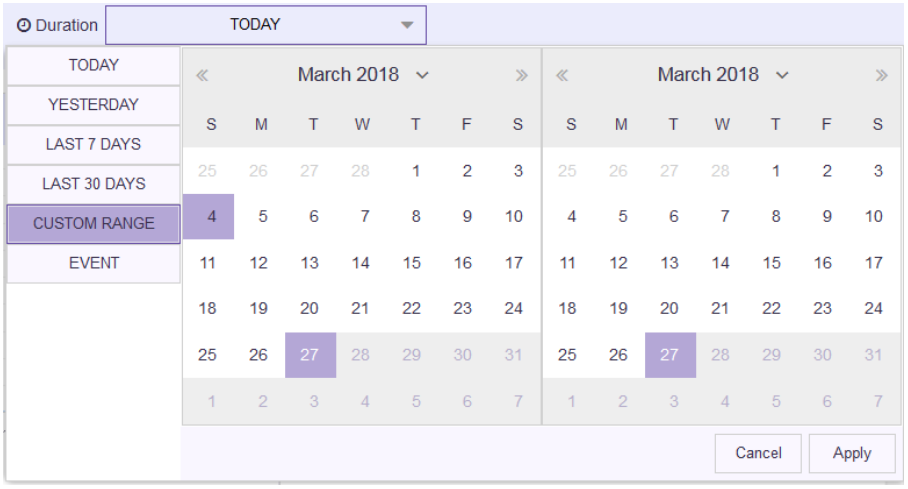
Figure 8: Location Drop-Down List

The dashboard refreshes to display data for the selected site or a group of sites.

7 Use the **Duration** drop-down list to select a time duration to display data for.

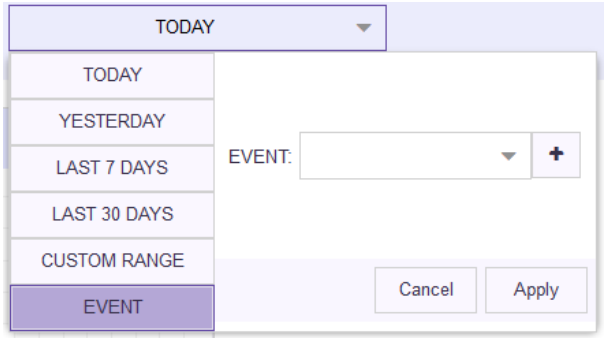
The drop-down provides a set of pre-configured durations for filtering data. The available pre-configured durations are:

- Today - Displays the data for the current date. Excludes data for all other dates.
- Yesterday - Displays the data for the day before the current date. Excludes data for all other dates including data for the current date.
- Last 7 Days - Displays the data for the last 7 days prior to the current date. Includes data for the current date. Excludes data for all other dates.
- Last 30 Days - Displays the data for the last 30 days prior to the current date. Includes data for the current date. Excludes data for all other dates.
- Custom Range - Displays the data for a user selected date range.



Select the start date and end date for the custom range from the displayed calendar and select **Apply**.

- - Displays the data for user created "Event" such as a sale or a conference. An Event is a user created date range that is identified with an unique name.



Use the drop-down to select the event of interest and select **Apply**.

See Create an Event on page 27 to know about creating an event.

8 Periodically select the button from tool bar to refresh the data displayed on the current dashboard.

Create an Event

Events are date ranges that you create to easily filter data of interest during a particular duration. For example, you could create an event for filtering data during the Christmas sale period or you could create an event for a convention being held at your venue.

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

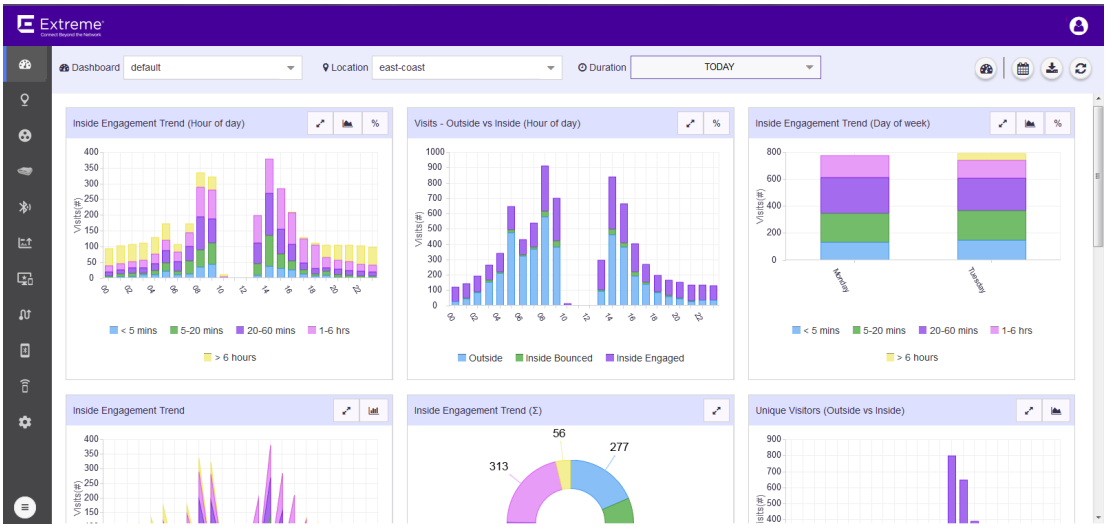


Figure 9: The Dashboard Screen

2 Use the **Duration** drop-down list to select a time duration to filter the data. From the drop-down list, select *Event*.

The **Event** dialog appears.

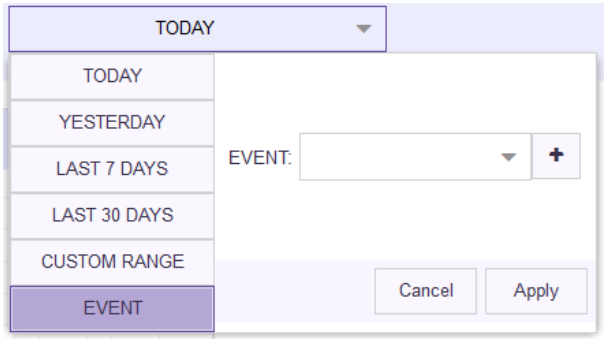
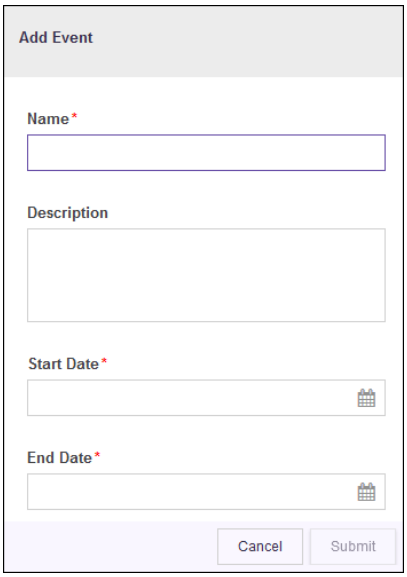


Figure 10: Event Dialog

3 Select the + button to the right of the **Event** drop-down list.

The following dialog appears.



Name	Provide a name for the Event. This value is used when selecting this event for filtering data. This is a mandatory field.
Description	Provide a brief description about the event.
Start Date	Use the calendar control next to this field to select a start date for this event.
End Date	Use the calendar control next to this field to select the end date for this event.

4 Select **Submit** to save this new event.

At any time, select **Cancel** to exit without creating a new event.

Download Dashboard

You can download any of your ExtremeLocation dashboards in `PDF` or `CSV` format.

To do so:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

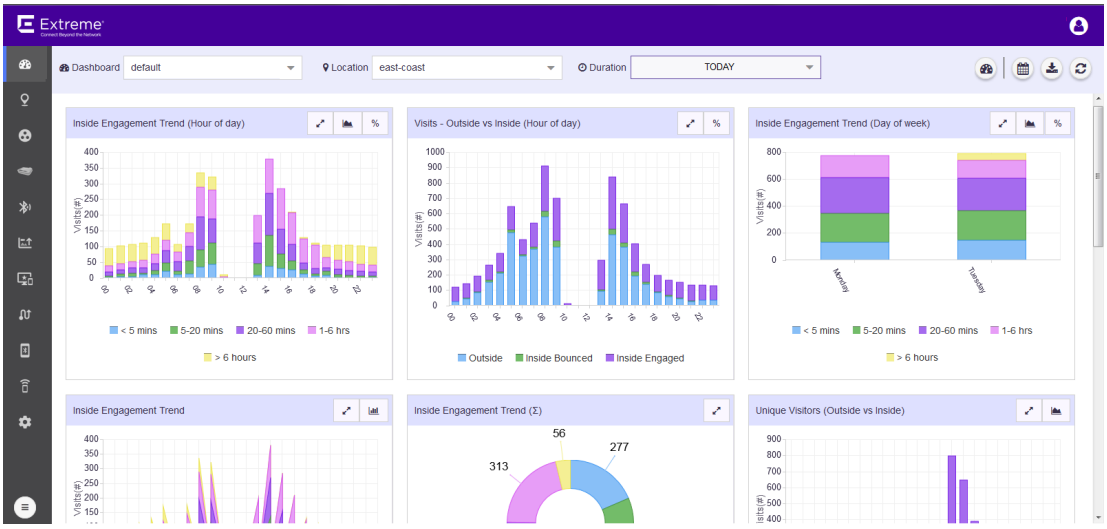


Figure 11: The Dashboard Screen

2 Select the **Dashboard** drop-down list to expand and display the list of available dashboards for this ExtremeLocation account.

3 From the list of available dashboards, select a dashboard.

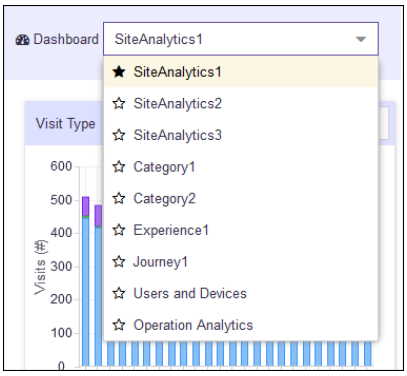


Figure 12: Dashboard List

The selected dashboard displays immediately.

4 Select the button from tool bar.

The menu expands to display the following options:

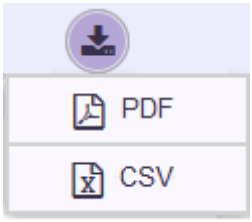


Figure 13: Dashboard Download Options

5 Select one of the available options to download your dashboard to your local machine.

Create a Dashboard

To create a new ExtremeLocation dashboard:

1 Select **Dashboard** from the main menu.

The dashboard marked as favorite automatically loads.

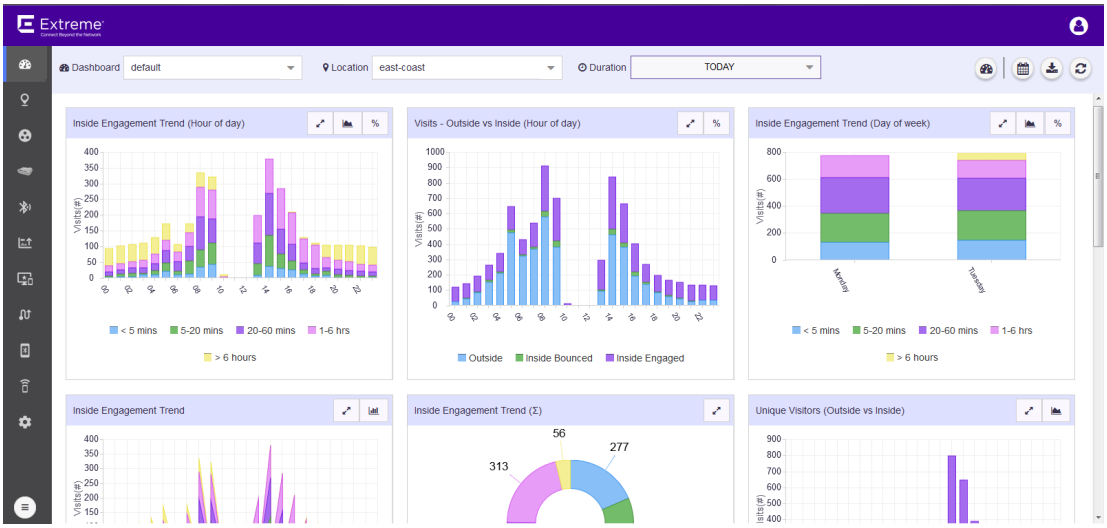


Figure 14: The Dashboard Screen

If no dashboard exists, the following is displayed on the dashboard screen.

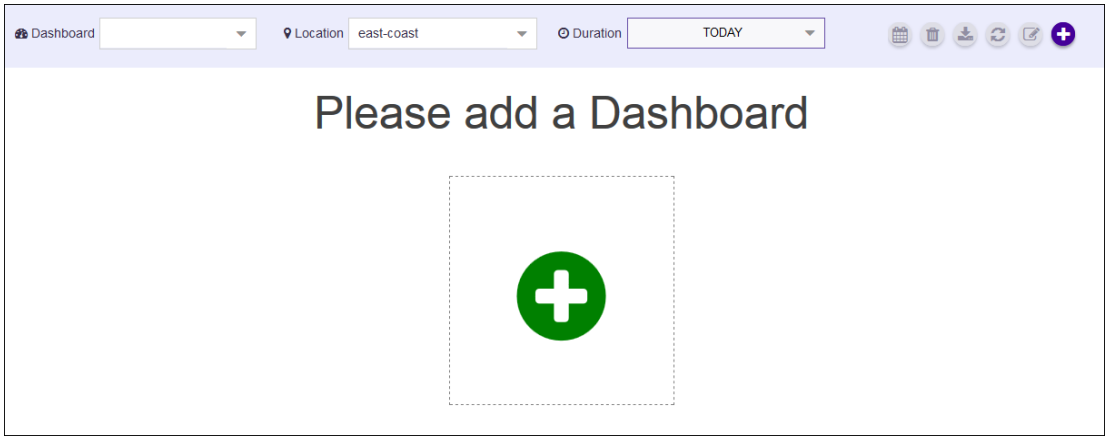


Figure 15: The Dashboard Screen When No Dashboard is Available

2 When no dashboard exists, click the big green circle in the middle of the screen to create a new dashboard.

3 If dashboards are available for this account, select the button from tool bar.

The button expands to display a drop-down list.

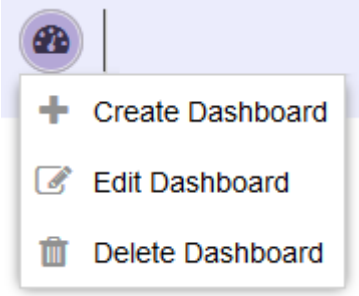


Figure 16: Manage Dashboard Options

4 Select **Create Dashboard** from the drop-down list.

The following New Dashboard screen displays.

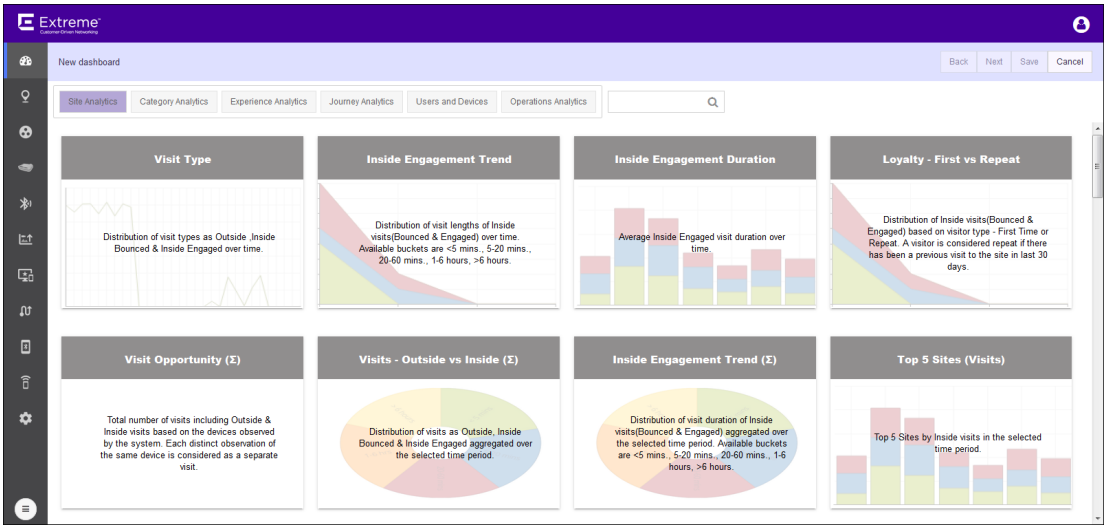


Figure 17: New Dashboard Screen

5 Select one of the available widget categories.

Widgets on the New Dashboard screen are classified into:

- Site Analytics - Use the widgets in this category to display site analytics data.
- Category Analytics - Use the widgets in this category to display category/zonal analytics data.
- Experience Analytics - Use the widgets in this category to display experience analytics data.
- Journey Analytics - Use the widgets in this category to display journey analytics data.
- Users and Devices - Use the widgets in this category to display analytics about users and their devices.
- Operation Analytics - Use the widgets in this category to view operation analytics data.

Figure 18: Widget Categories

Use the **Search** text box to drill down to the widgets of interest.

6 Click the widget to select it. You can select multiple widgets to add to the dashboard at a time.

A green check mark appears on the top right of the selected widget.

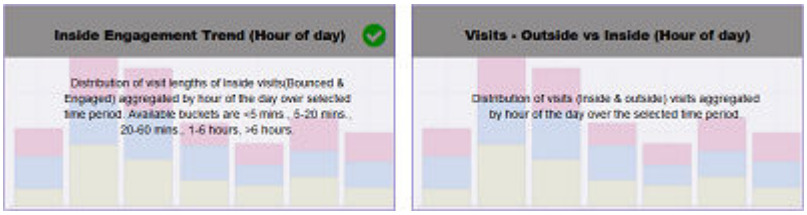


Figure 19: A Selected and an Unselected Widget

Note

Each ExtremeLocation dashboard can contain a maximum of 12 widgets. The dashboard can contain widgets from the different widget categories.

7 Select **Next** located to the top right, above the New Dashboard screen.

The following screen displays:

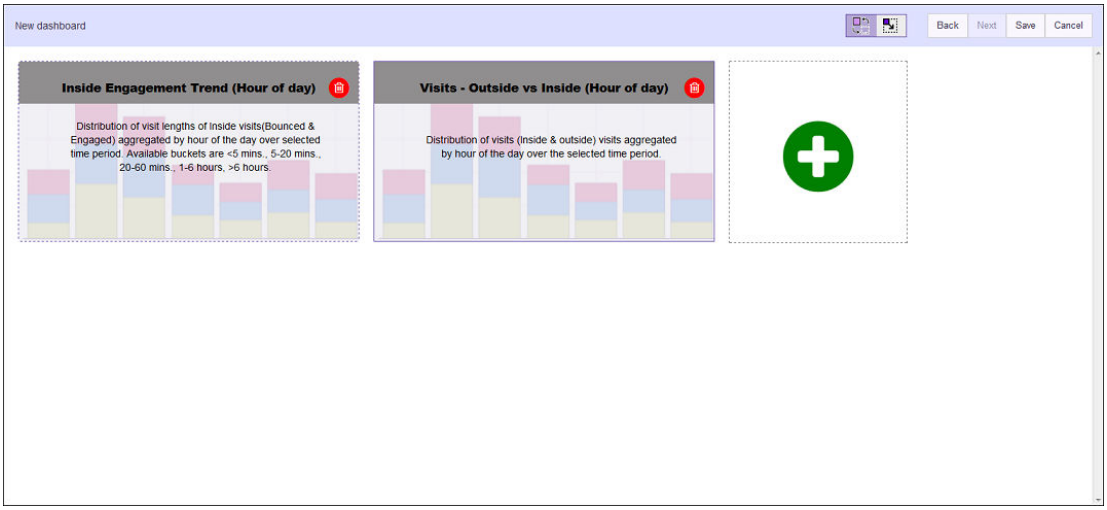


Figure 20: New Dashboard screen - Widget Placement and Sizing

To remove a widget already placed on the dashboard, use the icon located to the top right of each widget. Selecting this icon immediately removes the widget from the dashboard.

8 Use the buttons to rearrange or re-size the selected widgets on the new dashboard.

To rearrange the widgets, select the icon. This is the default selection. Select a widget and drag it to the desired location on the dashboard. The other widgets on the dashboard are automatically rearranged to accommodate the moved or re-sized widget. To re-size a widget, select the icon. A small triangle appears in the bottom right of each widget. Click and drag this triangle to re-size the widget.

9 Select **Save** to save the final dashboard layout.

At any time use **Back** to navigate to the previous screen. Similarly, use **Cancel** to exit without creating the dashboard.

A small window appears.

Figure 21: Name the New Dashboard

10 Provide a name for this dashboard and select **Save**.

The dashboard is saved and displays the configured data.

Set a Default Dashboard

Default dashboard is a user selected dashboard that is displayed when **Dashboard** is selected from the main menu. There can be only one default dashboard for an ExtremeLocation account.

1 Select the **Dashboard** drop-down list to display a list of available dashboards.

A default dashboard is indicated by a darkened star symbol to the left of its name.

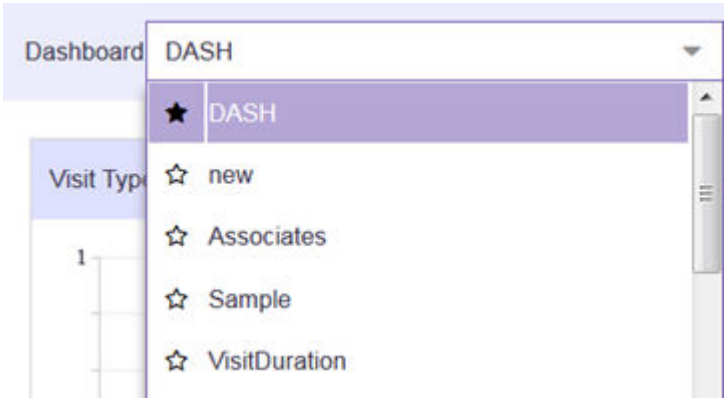


Figure 22: Default Dashboard

2 Select the star symbol for the dashboard to be set as the new default dashboard.

The selected star is darkened.

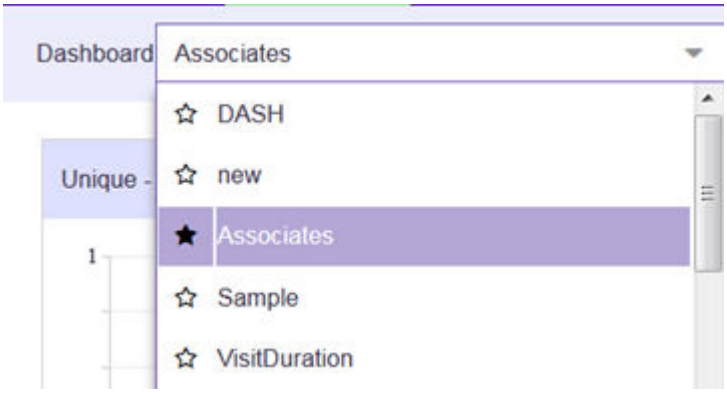


Figure 23: New Default Dashboard

From the next time the Dashboard screen is loaded, this dashboard is loaded by default.

Manage Your Dashboards

Use the tools provided in the Dashboard screen to edit any dashboard in your ExtremeLocation account.

To edit an existing dashboard:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

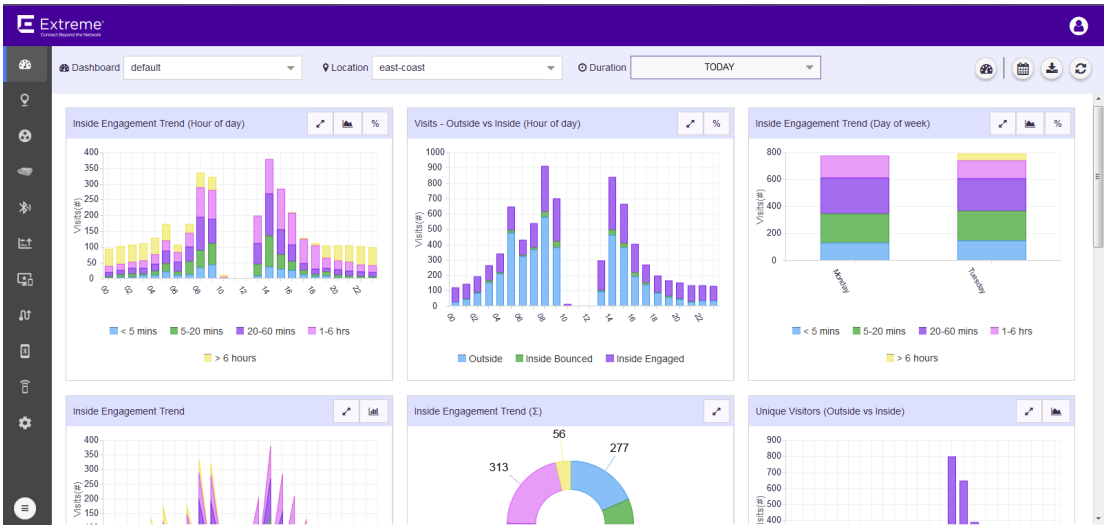


Figure 24: The Dashboard Screen

2 Select the **Dashboard** drop-down list to expand and display the list of available dashboards for this ExtremeLocation account.

3 From the list of available dashboards, select a dashboard.

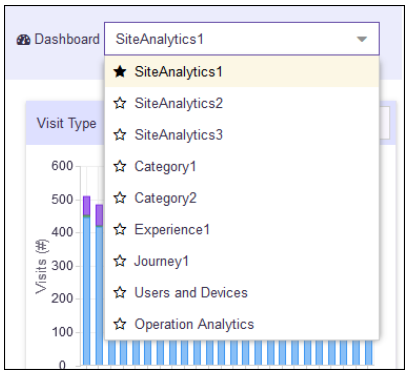


Figure 25: Dashboard List

4 From the drop-down list, select the dashboard that you want to edit.

5 Select the button from tool bar.

The button expands to display a drop-down list.

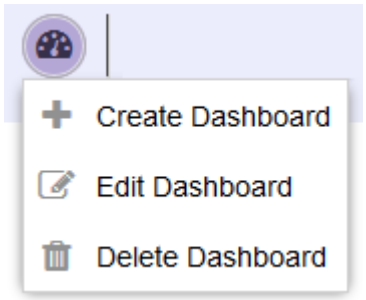


Figure 26: Manage Dashboard Options

6 Select **Edit Dashboard** from the drop-down list.

The selected dashboard is loaded in the edit mode. Use the options to edit your dashboard.

7 After editing the dashboard, select **Save** to the top right of the dashboard to save the changes made to this dashboard.

Delete the Dashboard

To delete an existing dashboard:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

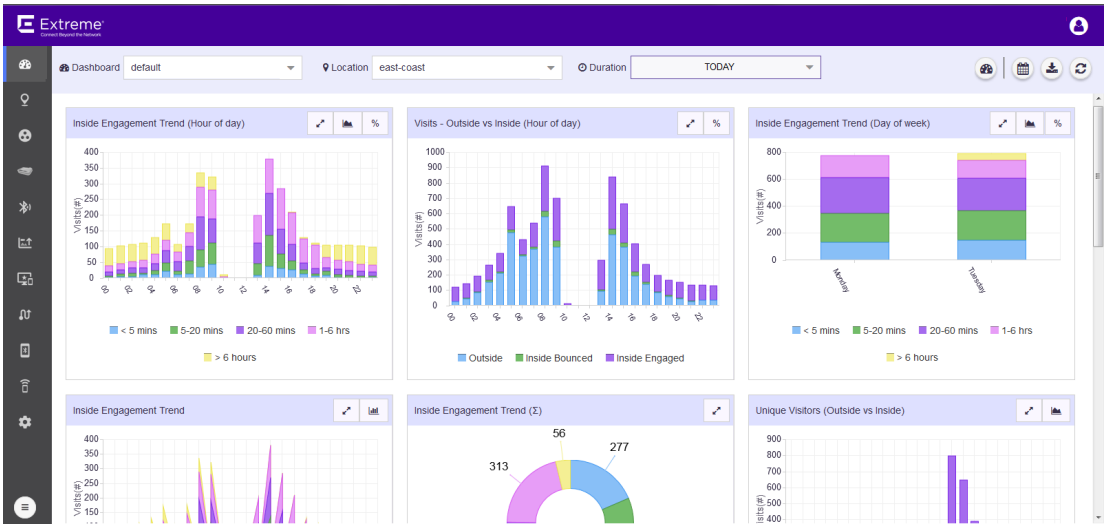


Figure 27: The Dashboard Screen

2 Select the **Dashboard** drop-down list to expand and display the list of available dashboards for this ExtremeLocation account.

3 From the list of available dashboards, select a dashboard.

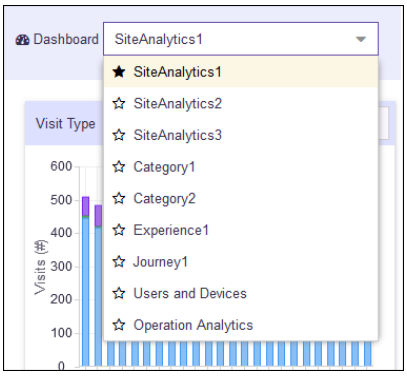


Figure 28: Dashboard List

4 Select the button from tool bar.

The button expands to display a drop-down list.

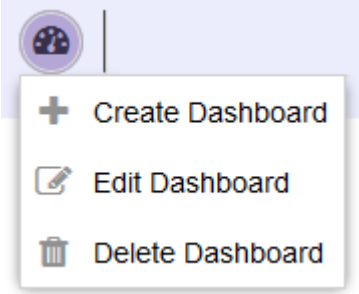


Figure 29: Manage Dashboard Options

5 Select **Delete Dashboard** from the drop-down list.

A confirmation dialog appears.

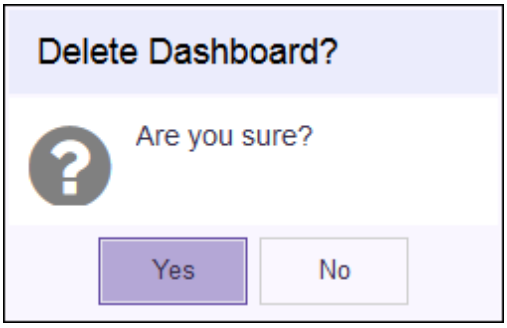


Figure 30: Delete Confirmation Dialog

6 Select **Yes** to delete the dashboard. Select **No** to exit this screen without deleting the selected dashboard.

If **Yes** is selected, the dashboard is immediately deleted.

Dashboard Widgets

Widgets are used to display the data of interest from a site's locationing data on the dashboard . Widgets on the New Dashboard screen are classified into:

- Site Analytics - These widgets display site analytics data.
- Category Analytics - These widgets display category analytics data.
- Experience Analytics - These widgets display experience analytics data.
- Journey Analytics - These widgets display journey analytics data.
- Users and Devices - The widgets under this category display analytics about users and their devices.
- Operation Analytics - These widgets display the operational status for this ExtremeLocation account.

Figure 31: The Widget Categories

Use the **Search** text box to drill down to the widgets of interest.

Site Analytics Widgets

Use the Site Analytics widgets to display various site analytics data on to the dashboard.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available:

Widget	Description
Visit Type	This widget displays the device visit types distribution classified as **Outside**, **Inside Bounced** or **Inside Engaged** on a bar chart over time.
Inside Engagement Trend	This widget displays the distribution of devices classified as *Inside* a site further classified as **Bounced** or **Engaged** visitors. Data is displayed for each of these visit types for these time ranges: • <5 minutes (devices in site less than 5 minutes) • 5-20 minutes • 20-60 minutes • 1-6 hours • >6 hours
Inside Engagement Duration	This widget displays the average engagement duration for *Inside Engaged* visitors. Engagement duration is the time the user is engaged (stays) inside the site.
Loyalty - First vs Repeat	This widget displays the distribution of total visits classified into first time visits and repeat visits. A visitor is considered a repeat visitor if it was seen in the site in the last thirty (30) days.
Visit Opportunity	This widget displays the total number of *Outside* and *Inside* visits identified by ExtremeLocation based on the devices identified by it. Each observation of the same device is counted as a separate visit.
Visit - Outside vs Inside	This widget displays the distribution of visits based on visit types. Visit types can be one of *Outside*, *Inside Bounced* or *Inside Engaged*.

Widget	Description
Inside Engagement Trend (aggregated)	This widget displays the aggregated distribution of *Inside* visitors on visit duration. Inside visitors are further classified as **Inside Bounced** and **Inside Engaged** depending on the time duration the visitor spends in the site. Data is displayed for each of these visit types for these time ranges: • <5 minutes (devices in site less than 5 minutes) • 5-20 minutes • 20-60 minutes • 1-6 hours • >6 hours
Top 5 Sites (Visit)	This widget displays the top five sites sorted by the total number of inside visits observed across all of the sites. This is a good metric for venue owners to identify top-performing venues that get more footfalls compared to all other sites.
Bottom 5 Sites (Visit)	This widget displays the bottom five sites sorted by the total number of inside visits observed across all of the sites. This is a good metric for venue owners to identify poorly performing venues which have low footfalls compared to all other sites.
Top 5 Sites (Visit Duration)	This widget displays the top five sites sorted by the time the visitor is engaged (spends) in the site. This is a good metric for venue owners to identify top-performing venues that get visitors to spend more time there when compared with all other sites.
Bottom 5 Sites (Visit Duration)	This widget displays the bottom five sites sorted by the time the visitor is engaged (spends) in the site. This is a good metric for venue owners to identify poorly performing venues that visitors do not spend time in when compared with all other sites.
Visits - Outside vs Inside (Day of Week)	This widget displays a chart of the total of all visits to all the sites managed by this ExtremeLocation account classified into *Outside*, *Inside Bounced*, and *Inside Engaged* visits. This data is then displayed for each day of the week.
Visits - Outside vs Inside (Hour of Day)	This widget displays a chart of the total of all visits to all the sites managed by this ExtremeLocation account classified into *Outside*, *Inside Bounced*, and *Inside Engaged* visits. This data is then displayed for each hour of the day.
Inside Engagement Trend (Hour of Day)	This widget displays a chart of the total of all visits lengths of all visitors classified as *Inside* consisting of *Inside Bounced* and *Inside Engaged* visitors for all the sites. This data is then displayed for each hour of the day classified by visit duration. Data is displayed for these time ranges: • <5 minutes (devices in site less than 5 minutes) • 5-20 minutes • 20-60 minutes • 1-6 hours • >6 hours
Inside Engagement Trend (Day of Week)	This widget displays a chart of the total of all visits lengths of all visitors classified as *Inside* consisting of *Inside Bounced* and *Inside Engaged* visitors for all the sites managed by this ExtremeLocation account. This data is then displayed for day of the week classified by visit duration.

Widget	Description
Unique Visitors (Outside vs Inside)	This widget displays a chart of the total unique visits to the site further classified into *Inside Bounced*, *Inside Engaged*, and *Outside* visit types by time duration. Select the labels at the bottom of this widget to hide/view the data of interest.
Unique - Inside Engaged vs Associates vs Assets	This widget displays a chart of the unique visits to the site by *Inside Engaged* visitors, *Associates*, and *Assets* by time duration. Select the labels at the bottom of this widget to hide/view the data of interest.
Visits - Inside Engaged vs Associates vs Assets	This widget displays a chart of the total visits to the site classified by *Inside Engaged* visitors, *Associates*, and *Assets* by time duration. Select the labels at the bottom of this widget to hide/view the data of interest.
Visits - Inside Engaged vs Associates vs Assets - Totals	This widget displays a chart of the all visits to a site classified by *Inside Engaged* visitors, *Associates*, and `Assets`.

App User Widgets

Use the following Site Analytics widgets to display analytics related to App visits to the site. The following widgets are available:

Field	Description
Visit Opportunity (Σ) - App Users	This widget displays a total of App Visits, Inside and Outside where: • App Users - A visitor to the site. Uses an App to access the ExtremeLocation service. • Outside - where a visitor is detected near a beacon for a very brief interval of time and which cannot be considered a visit. Usually happens when a device is detected passing near a beacon or beacons and does not remain within its range for a long period of time. • Inside Bounced - where a visitor device is detected near a beacon that is more than the duration configured for a *`Outside`* visitor. However, the time that the device is detected is less than the duration required to consider this device an engaged visitor. • Inside Engaged - where a visitor device is detected near a beacon for a long duration that indicates that the visitor is engaged within the zone where the beacon is located.
Inside Engaged (Σ) - App Users	This widget displays a total of all Inside Engaged app users in your site.
Inside Bounced (Σ) - App Users	This widget displays a total of all Inside Bounced app users in your site.
Outside (Σ) - App Users	This widget displays a total of all Outside Visitors detected by ExtremeLocation at your site.
Mean Time Between Visits (Σ) - App Users	This widget displays the average time (in Days) between two consecutive visits by the same app user to your site.
Visit Duration (Σ) - App Users	This widget displays the average time (in minutes) that app users have spent at a site. This value is an average of the visit durations across all sites managed by this ExtremeLocation account.
App User Visits by Site	This widget displays the number of unique visits to the sites managed by your ExtremeLocation account. This graph lists the sites and the number of unique visitors to the site.

Field	Description
Visit Duration (Σ) - App Users	This widget displays the average time (in minutes) that app users have spent at a site. This value is an average of the time durations across all sites managed by this ExtremeLocation account. This value is displayed for the duration set in the **Duration** field.
App User Visits (Hour of Day)	This widget displays the total app user visits observed by ExtremeLocation for the duration set in the **Duration** field. This data is displayed on the graph for each hour of the day.
App User Visits (Day of Week)	This widget displays the total app user visits observed by ExtremeLocation for the duration set in the **Duration** field. This data is displayed on the graph for each day of the week.
Visit Type - App Users	This widget displays the totals of different visit types classified by their types over time duration as set in the **Duration** field.
Inside Engagement Duration - App User	This widget displays the average visit duration for engaged app user mapped over time as observed by ExtremeLocation at your site. This data is displayed for the time duration as set in the **Duration** field.
App User Loyalty - First vs Repeat	This widget displays the distribution of app user visits as *First Time Visitors* or *Repeat Visitors* for the duration selected in the **Duration** field.
Visits - Outside vs Inside (App Users) (Σ)	This widget displays the distribution of app visits as *`Outside`*, *`Inside Bounce`*, or *`Inside Engaged`* over a selected period of time as set in the **Duration** field.
Top 5 Sites (App User Visits)	This widget displays the top 5 sites by app visits over a selected period of time as observed by ExtremeLocation.
Bottom 5 Sites (App User Visits)	This widget displays the bottom 5 sites by app visits over a selected period of time as observed by ExtremeLocation.
Top 5 Sites (App User Visit Duration)	This widget displays the top 5 sites by app visit duration over a selected period of time as observed by ExtremeLocation. This graph is displayed for the duration set in the **Duration** field.
Bottom 5 Sites (App User Visit Duration)	This widget displays the bottom 5 sites by app visit duration over a selected period of time as observed by ExtremeLocation. This graph is displayed for the duration set in the **Duration** field.
App User Visits - Outside vs Inside (Day of week)	This widget displays the duration of app visits aggregated by day of the week. This graph is displayed for the duration set in the **Duration** field.
App User Visits - Outside vs Inside (Hour of day)	This widget displays the distribution of app visits aggregated by hour of the day over a selected period of time.
App User Visits (Outside vs Inside)	This widget displays the app user visits classified as *`Inside Engaged`*, *`Inside Bounced`*, or *`Outside`* over time.

Category Analytics Widgets

Use the Category Analytics Widgets to display various category analysis data on to the dashboard. Category analytics are generated based on the category values assigned to regions or access points on

the floor plan for a given site. For example, when ExtremeLocation is deployed in a retail environment, you could set your categories as *Electronics*, *Cosmetics*, *Baby Care*, etc.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available

Widget	Description
Category Visits - Inside Visitors vs Associates vs Assets	This widget displays summary of visitors to a user selected category. The visits are classified as *Inside Visitors*, *Associates* and *Assets* and displayed for the duration specified in the **Duration** drop-down.
Category Visits (Visitors)	This widget displays the distribution of category visits by visitors over time. Select a category (legend) below the graph to show or hide the graph for the selected category.
Top 5 Categories (by Visits)	This widget displays the top five categories by number of visits to the category area.
Category Visits (Associates)	This widget displays the distribution of category visits by associates over time. Select a category (legend) below the graph to show or hide the graph for the selected category.
Bottom 5 Categories (by Visits)	This widget displays the bottom five categories by number of visits to the category area.
Category Visits (Assets)	This widget displays the distribution of category visits by tracked assets over time. Select a category (legend) below the graph to show or hide the graph for the selected category.
Top 5 Categories (by Visit Duration)	This widget displays the top five categories by visit duration to the category area.
Category (Visit Duration - Visitors)	This widget displays the distribution of category visits by visitors and the time duration (in minutes) spent by these visitors in that category. Select a category (legend) below the graph to show or hide the graph for the selected category.
Bottom 5 Categories (by Visit Duration)	This widget displays the bottom five categories by length of visits (in minutes) to the category area.
Category - Unique Visitors	This widget displays the distribution of unique visitors to a category/zone over time. Select a category (legend) below the graph to show or hide the graph for the selected category. This widget does not include repeat visitors to the category.
Category (Visit Duration - Asset)	This widget displays a graph of visit durations by assets over time.

Widget	Description
Category (Visit Duration - Associates)	This widget displays a graph of visit durations by associates over time.
Category - Unique Assets	This widget displays a graph of the number of unique assets in each category arranged in descending order over time.
Category - Unique Associates	This widget displays a graph of the number of unique associates in each category arranged in descending order over time.
Category Visit Duration - Inside Visitors vs Associates vs Assets	This widget displays a graph of the distribution of visit durations for *Inside Visitors*, *Associates*, and *Assets*. Use the category drop-down to select a category to display data for.
Category Crowding	This widget displays a graph of the distribution of crowding events over time. It shows where crowding has occurred and which categories have had more events in comparison to other categories.Use the historical data to determine where more associates should be deployed.
Category Path Analysis	This widget displays a multi-dimentional view representing the movement of visitors from one category to another. The following data is displayed: • comparison of visitor flow across categories • absolute number of visitor movements across categories • direction of visitor flow across categories

App User Widgets Widgets

Use the following App User Category Analytics widgets to display App User analytics related to categories. The following widgets are available:

Field	Description
Total Visits (All Categories - BLE)	This widget displays the sum of all app visits of all categories.
Category Visits by Weekday (BLE)	This widget displays the sum of app visits of a selected category aggregated by day of the week.
Category Visits by Hour (BLE)	This widget displays the sum of app visits to a selected category aggregated by hour of the day.
Avg. Dwell Time by Minutes (Category - BLE)	This widget displays the distribution of average dwell time of app visits by minutes for a selected category.
Avg. Dwell Time by Category (BLE)	This widget displays the average dwell time of app visits (in minutes) for all categories.
Visits Trend (Category - BLE)	This widget displays the distribution of app visits for a selected category.
Unique App Users by Category (BLE)	This widget displays the unique app visits of all categories as managed by this ExtremeLocation account.
Category App Users (BLE)	This widget displays the duration of app visits to a category over time.
Top 5 Categories (By Visits) (BLE)	This widget displays the top 5 categories by app visits for a selected period of time.
Bottom 5 Categories (By Visits) (BLE)	This widget displays the bottom 5 categories by app visits for a selected period of time.
Top 5 Categories (By Visit Duration) (BLE)	This widget displays the top 5 categories by app visit duration for a selected period of time.

Field	Description
Bottom 5 Categories (By Visit Duration) (BLE)	This widget displays the bottom 5 categories by app visit duration for a selected period of time.
Category Visit Duration (App Users) (BLE)	This widget displays the app visit duration by category over time.
Category Crowding (BLE)	This widget displays the distribution of app crowding events for categories over time. This widget displays those categories where crowding events have occurred as well as those categories where more such crowding events have occurred when compared to other categories.

Experience Analytics Widgets

i

Use the Experience Analytics Widgets to display various analytics related to Experiences.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available:

Field	Description
Experience Response Rate (%)	This widget displays the responses (in %) received for the number of experiences delivered. This graph is displayed for each of the experiences configured for this site.
Total Experience Delivered	This widget displays the total of delivered experiences for this site. This total is the sum of all the delivered experiences.
Total Experience Delivered by App	This widget displays the total of all experiences delivered classified by all registered Apps for this site.
Experience Delivered	This widget displays a graph of the number of times each experience has been delivered for all the experiences created for this site.
Experiences Delivered Over Time	This widget displays the graph of *Unique Visitors* and *Experiences* delivered over time.
Experiences Delivered by Site	This widget displays the graph of the number of experiences delivered per site for this ExtremeLocation account.
Experiences Delivered by Category	This widget displays the graph of number of times experiences have been delivered per Category for the Site.

Journey Analytics Widgets

Use the Journey Analytics Widgets to display various analytics data for the journeys configured in the ExtremeLocation account. Journeys are a customizable set of steps that the visitor must complete to receive the payload specially crafted for the journey. Use a journey to create and manage a campaign on a per site basis.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available:

Field	Description
Journeys Started	This widget displays the total number of journeys that have been started at your site.
Journeys Completed	This widget displays the number of times the journeys that were started have been successfully complete.
Journeys Delivered	This widget displays the number of times the payload configured for the various journeys have been delivered to visitors who successfully completed all the steps in these journeys.
Journeys Blocked	This widget displays the number of times the journeys have been blocked.
No. of Completed Journeys	This widget displays a graph of the number of journeys that were started, completed, and succeeded. This graph is displayed for all the journeys configured for this site.
Avg. Minutes to Complete Journey	This widget displays the average time it takes to complete a journey. This graph is displayed for all the journeys configured for this site.
No. of Journeys Delivered	This widget displays the number of times the payload for each journey has been delivered to visitors to this site. This graph is displayed for all the journeys configured for this site.

Users and Devices Analytics Widgets

Use the Users and Device Analytics Widgets to display analytics about users and their devices.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available

Field	Description
Total Number of Users	This widget displays the total number of app users per App configured in your site.
App Downloads by OS Version	This widget displays the totals of apps downloaded classified by the Operating System (OS) for which the app was downloaded.
New Users Over Time	This widget displays a graph of new users who have downloaded the configured apps for your ExtremeLocation account.
User with Proximity On	This widget displays a graph of the number of users who have enabled proximity services on their device. This data is displayed for the different types of proximity services and the number of users who have enabled that proximity service.
Total Users	This widget displays the total number of App Users observed in your site by ExtremeLocation.
App Downloads On Site	This widget displays the count of the number of times the Apps configured for your ExtremeLocation account have been downloaded.This information is displayed per site.
App Downloads on Site (Over Time)	This widget displays a graph of the number of times each App configured for your site was downloaded over time. This information is displayed for the duration set in the **Duration** field.

Operations Analytics Widgets

Use the Operation Analytics Widgets to display physical operational parameters such as remaining battery for beacons and other such parameters.

Note

You can use the widget's labels to filter the data being displayed. Click on a label to include or exclude its data in the widget. When the data for the label is excluded, the label is displayed in a lighter color.

Use the **Location** drop-down list to change the site for which the data is displayed. By default, the last site selected in the previous session is selected.

Use the **Duration** button to change the duration of the data that is displayed for all the widgets on this dashboard. By default, data for the previous day (yesterday) is displayed.

Use the icon to expand the widget to fill the current view window. Use the same button to restore the widget to its previous size and location.

The following widgets are available:

Field	Description
Number of Beacons with No Activity	This widget displays the number of inactive beacons.
Beacon Battery % Remaining	This widget displays the number of beacons that have the following battery power (charge) (in %) remaining. The beacons are classified in the following power ranges (in %): • 70% - 100% • 30% - 69% • 0% - 29%
Beacon Network Details	This widget displays details about the beacons found in your ExtremeLocation managed sites. The following information is displayed: **Name** — Displays the name of the beacon if assigned. If not assigned, displays the MAC address of the beacon. **Last Seen** — Displays the time stamp when the beacon was last seen by ExtremeLocation. **Days Active** — Displays the number of days this beacon has been active. **Battery** — Displays the remaining power (as a percentage) for each beacon. **Tx-Power** — Displays the configured transmission power for the bacon. The higher the value, the longer the distance the beacon can transmit. **Firmware Version** — Displays the Firmware Version supported by the beacon.
Beacon - No Activity Alerts	This widget provides a list of all non-active beacons.
Beacon Low Battery Alerts	This widget displays a list of all active beacons that have less than 20% battery charge left.

Scheduled Reports

ExtremeLocation supports export of the current dashboard in PDF format. You can also create dashboards that displays data of interest and configure periodic data export which is mailed to specified email accounts. Dashboard reports can be scheduled to run daily, weekly, or monthly.

List Scheduled Reports

To list the reports scheduled for execution:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

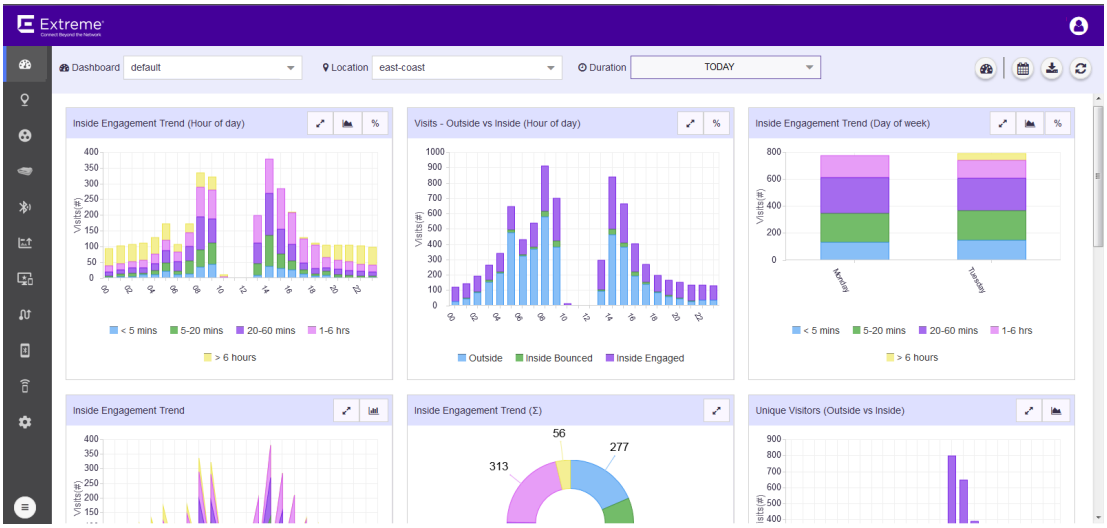


Figure 32: The Dashboard Screen

2 Select the button from tool bar.

The Scheduled Reports screen displays.

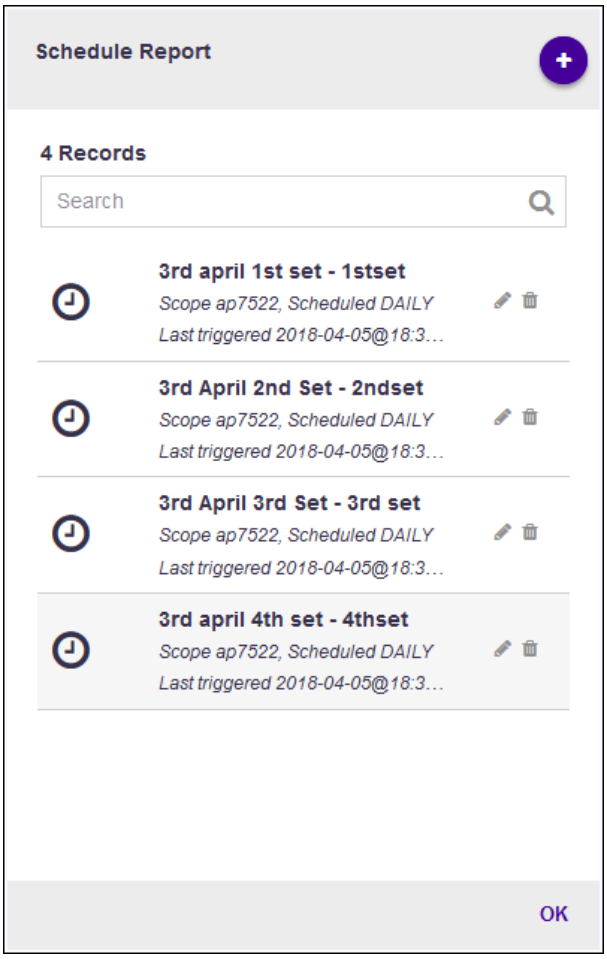


Figure 33: Manage Dashboard Options

3 Hover over a scheduled report to view details about that scheduled report.

Note
ExtremeLocation tries to display all details about the scheduled report within the main Schedule Reports window. ExtremeLocation displays the details on hover when the screen resolution/width is not enough to display the complete details in the main window.

4 Select the **OK** button to exit Scheduled Reports screen.

Create a Scheduled Report

To create a scheduled report:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

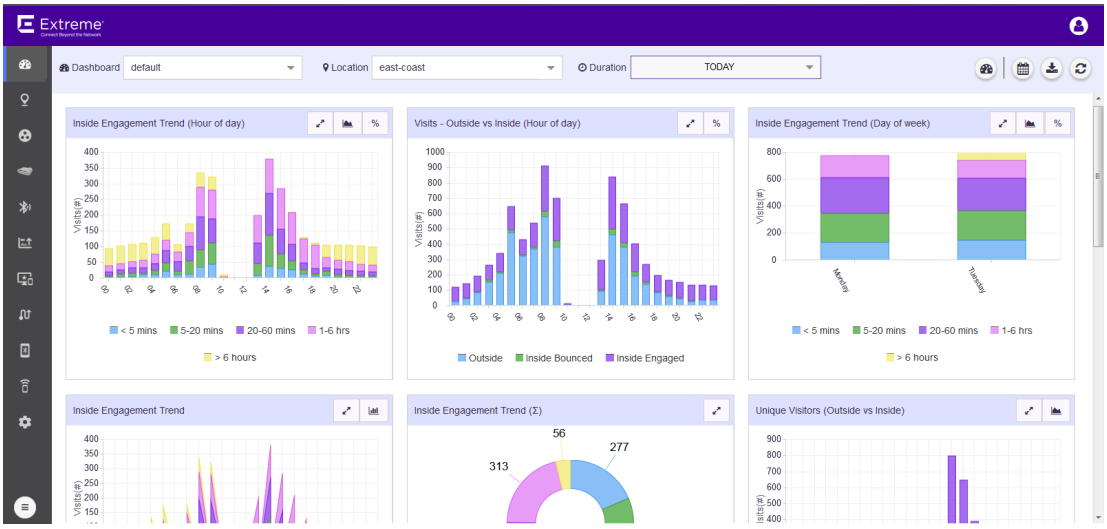


Figure 34: The Dashboard Screen

2 Select the button from tool bar.

The Scheduled Reports screen displays.

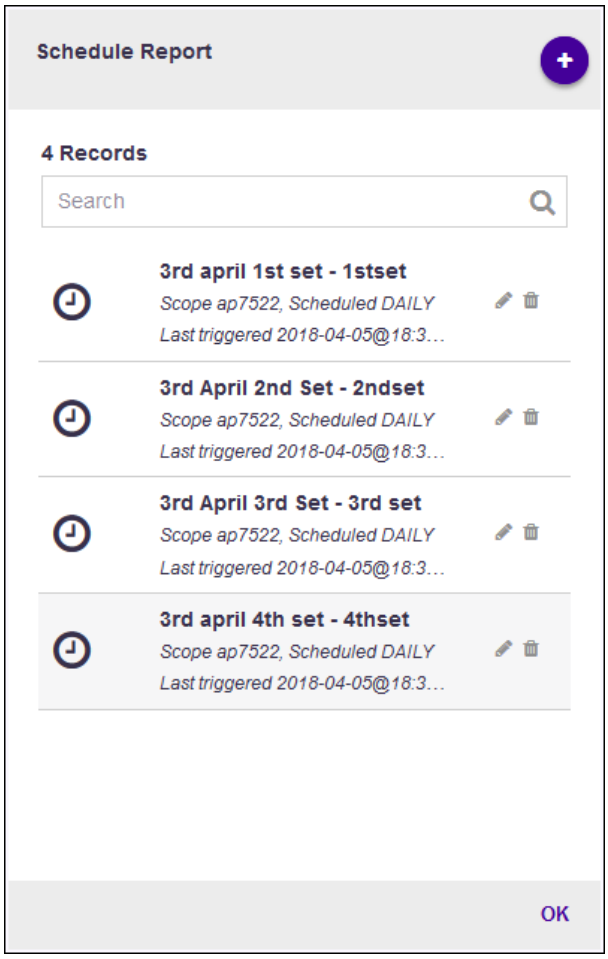


Figure 35: Manage Dashboard Options

3 Select the + located to the top right of the Schedule Reports screen.

The Create Schedule Report window displays.

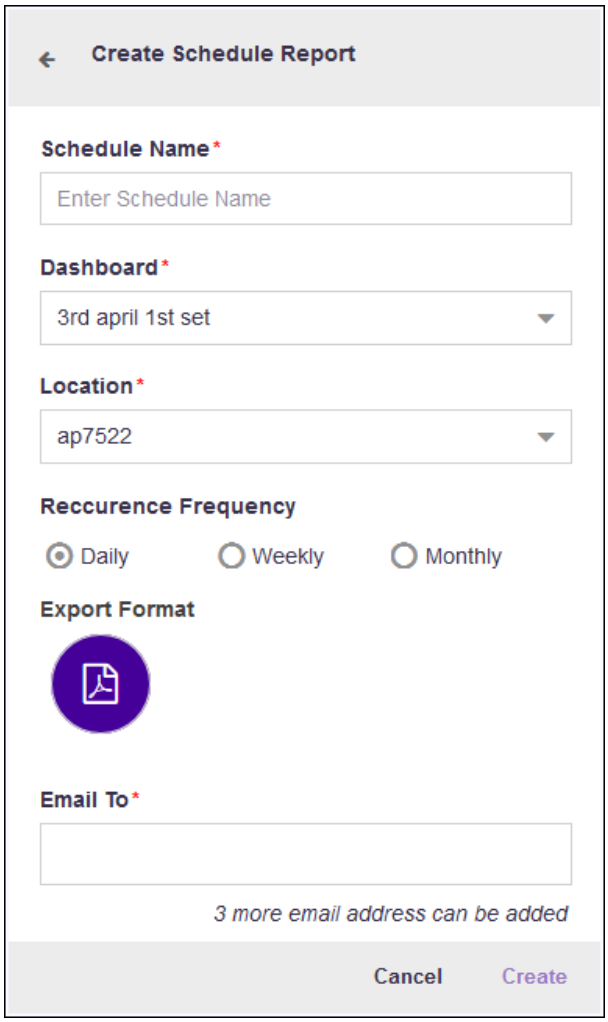


Figure 36: Create Schedule Report Window

4 Provide the following information to create a new scheduled report:

Field	Description
Schedule Name	Provide a meaningful name for this scheduled report.
Dashboard	From the drop down list, select the dashboard to create this report from.
Location	From the drop down list, select the location for which this report is to be generated. To select all the locations, select `All` from the drop down list.
Recurrence Format	Select the report generation frequency from one of: • Daily - The report is generated once a day. • Weekly - The report is generated once a week. • Monthly - The report is generated once a month.
Export Format	Export to `PDF` is only supported at present for scheduled reports.
Email To	Provide up to 3 distinct email addresses to send this scheduled report to when it is generated.

5 Select **Create** to create this scheduled report.

At any point, select **Cancel** to exit without creating a scheduled report.

6 Select the **OK** button to exit Scheduled Reports screen.

Edit a Scheduled Report

To edit a scheduled report:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

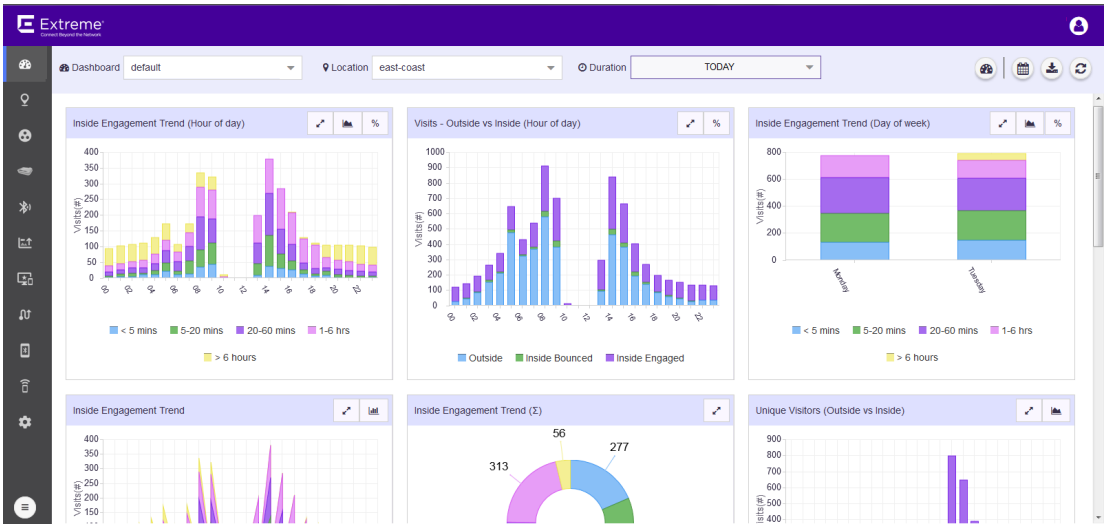


Figure 37: The Dashboard Screen

2 Select the button from tool bar.

The Scheduled Reports screen displays.

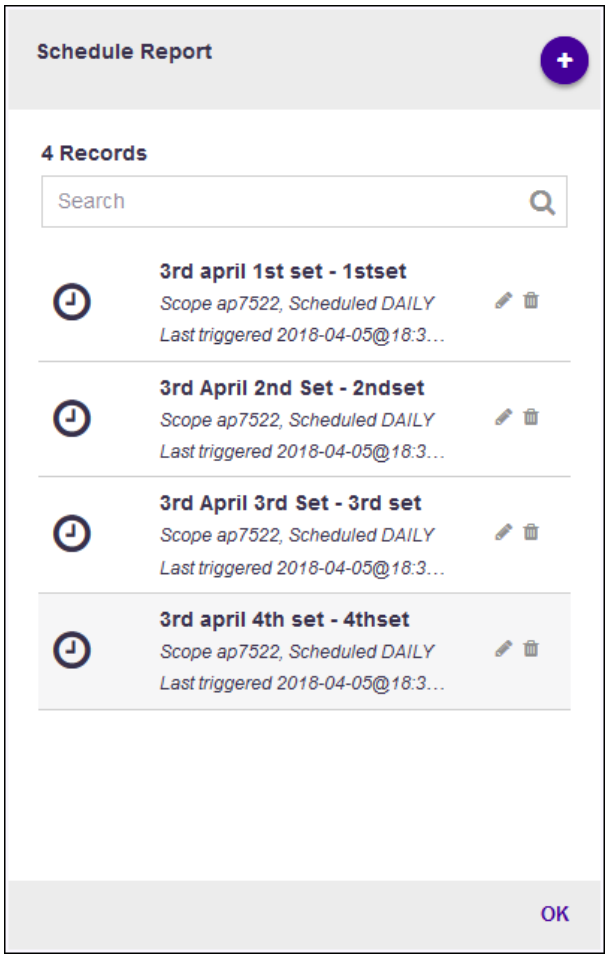


Figure 38: Manage Dashboard Options

3 Select the icon from the toolbar that is available next to each scheduled report in the list. The Update Schedule Report screen displays.

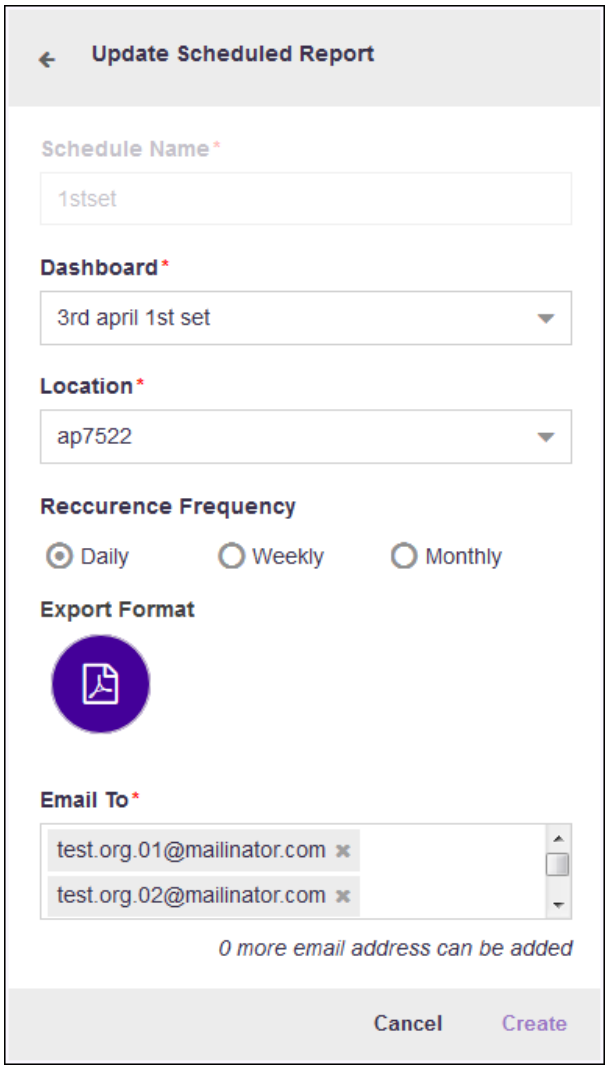


Figure 39: Update Schedule Report Window

4 Refer to the following while editing your scheduled report:

Field	Description
Schedule Name	This field cannot be modified.
Dashboard	From the drop down list, select the dashboard to change to for this scheduled report.
Location	From the drop down list, select the location for which this report is to be generated. To select all the locations, select `All` from the drop down list.
Recurrence Format	Select the report generation frequency from one of: • Daily - The report is generated once a day. • Weekly - The report is generated once a week. • Monthly - The report is generated once a month.

Field	Description
Export Format	Export to PDF is only supported at present for scheduled reports.
Email To	Provide up to 3 distinct email addresses to send this scheduled report to when it is generated.

5 Select **Create** to save edits made to this scheduled report.

At any point, select **Cancel** to exit without editing this scheduled report.

6 Select the **OK** button to exit Scheduled Reports screen.

Delete a Scheduled Report

To edit a scheduled report:

1 Select **Dashboard** from the main menu.

The dashboard marked as default automatically loads.

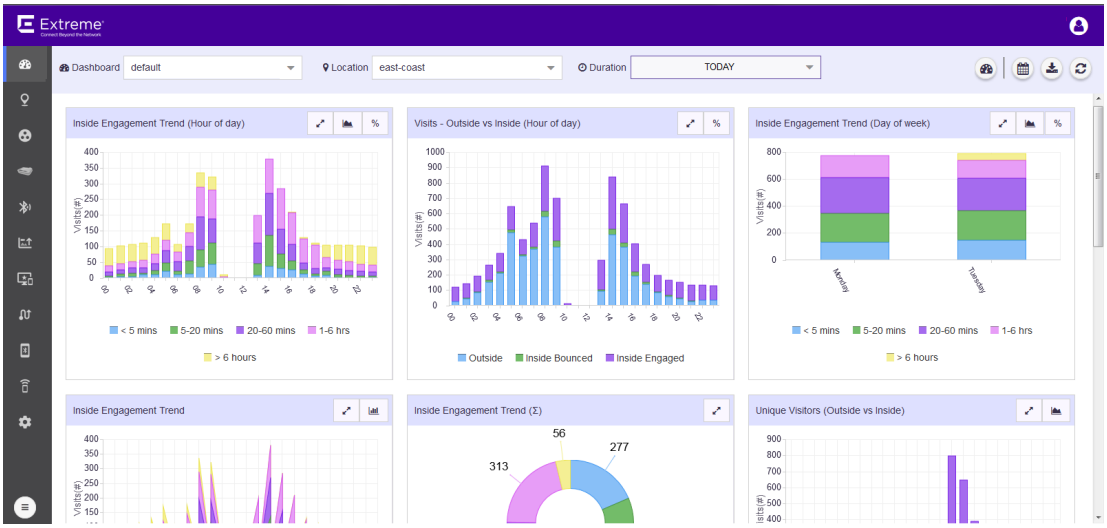


Figure 40: The Dashboard Screen

2 Select the button from tool bar.

The Scheduled Reports screen displays.

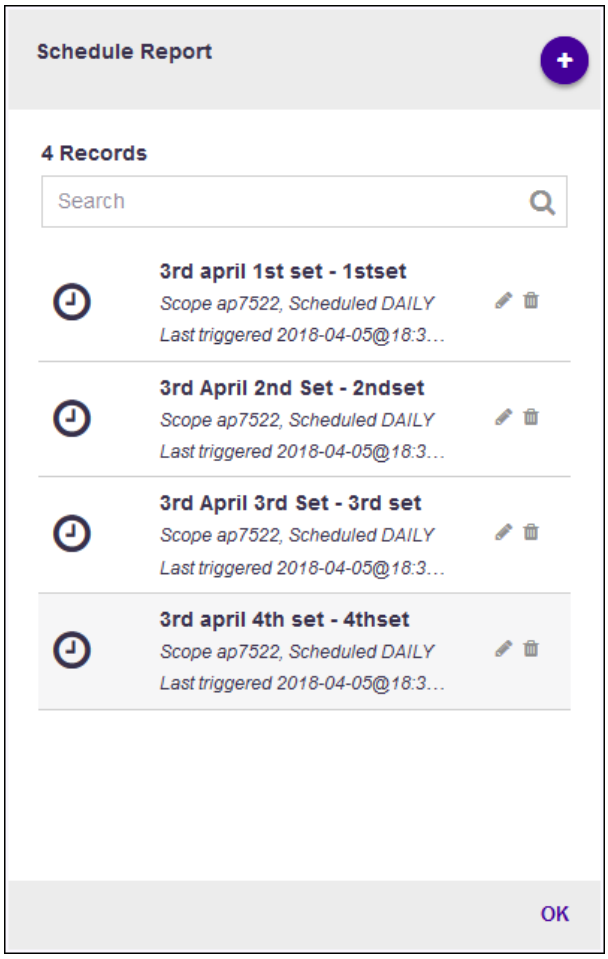


Figure 41: Manage Dashboard Options

3 Select the icon from the toolbar that is available next to each scheduled report in the list. The Delete Schedule window displays.

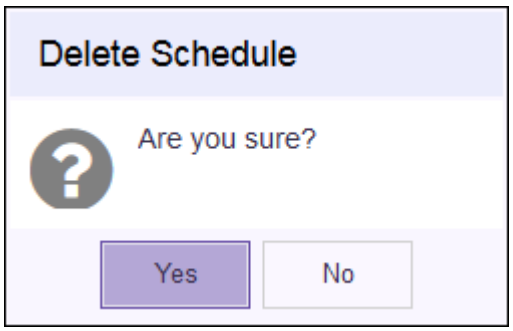


Figure 42: Delete Schedule Window

4 Select **Yes** to delete this scheduled report.

Select **No** to exit without deleting this scheduled report.

5 Select the **OK** button to exit Scheduled Reports screen.

4 Sites View

Sites - Main Screen
Common Tools
Add a Site
Add a Floor
Client View
Heatmap View
Crowding View

Sites are locations that are monitored using the ExtremeLocation system. A site is a physical area such as a store, hotel or a hospital or a venue such as a shopping mall or airport for which you capture locationing data. A typical site is made up of one or more floors which are further divided into logical areas or categories. Categories or zones are used to logically separate the floor for ease of locationing and visitor tracking.

The ExtremeLocation account configuration such as creating and managing sites, creating and managing categories and other activities are performed through the Sites screen. The following activities can be performed:

- Create a Site.
- Create a Site Group.
- Allocate licenses to a Site.
- Allocate access points to a Site.
- Place access Point on a floor map in a Site.
- Allocate beacons to a Site.
- Place beacons on a floor map in a Site.
- Create Regions/Zones for a Site.
- View the Heatmap for each floor on the Site.
- View crowding events by region on a floor.

Sites - Main Screen

The main window of ExtremeLocation's Sites screen displays a view of all the sites configured for this ExtremeLocation account. The view is zoomed in so that you can view all the configured sites at the same time.

To view the ExtremeLocation Sites screen:

1 Select **Sites** from the main menu.

The Sites screen displays.

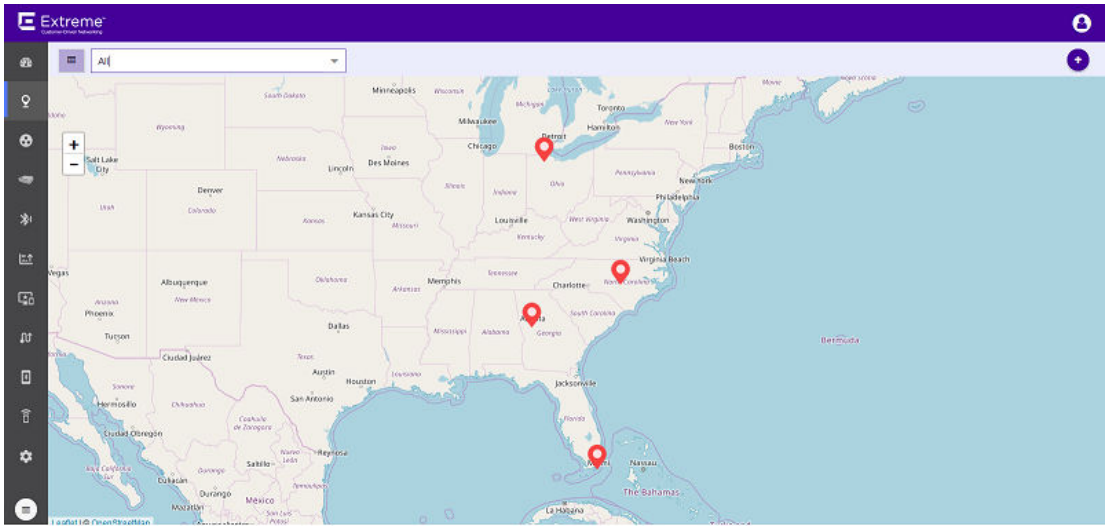


Figure 43: Sites Screen

The screen displays a map of all configured sites for this ExtremeLocation account. Each configured site is marked with a colored marker. The color of the marker indicates if the site is seeing an increase or decrease in visits. A marker in RED indicates a drop in visits while a marker in GREEN indicates an increase in the number of visits.

The size of the icon indicates any increase or decrease in total visits to the site compared to the day before. The icon size changes for every 20 percent(%) change in the number of visits to the site as compared to the previous day.

Select a site's marker to display a dialog with the latest statistics for the selected site.

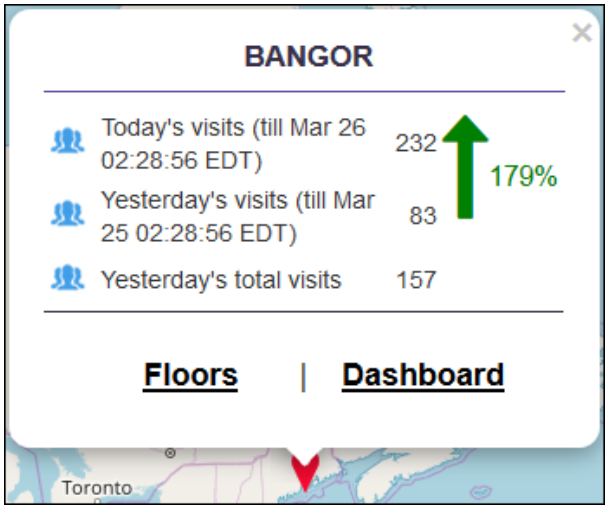


Figure 44: Site Information

Use the **Floors** link to directly view the default floor map for this site. Similarly, use the **Dashboard** link to view the default dashboard for this site.

The Site Information dialog displays the following site trends:

Today's Visits	Displays the total number of visits to the site till the time displayed in this field. This information is for today.
Yesterday's Visits	Displays the total number of visits to the site yesterday till the time displayed in this field. This time is the same time as considered for displaying **Today's Visit** data.
Yesterday's Total Visits	Displays the total number of visits to the site for the whole day yesterday.
Trend	The trend icon is an arrow displayed next to the data that gives a visual indication of the visit trends. A GREEN upward pointing arrow indicates an increase in visits. A RED downward pointing arrow indicates a decrease in visits. The percentage (%) change in value is also displayed in the appropriate color.

2 Use the drop-down list on the top left of the Sites screen to view a list of sites managed by this ExtremeLocation account and select a Site or Site Group from the list.

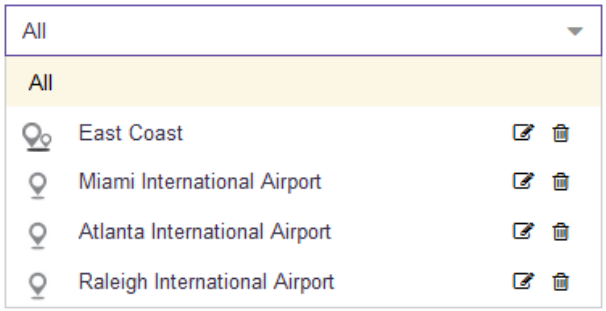


Figure 45: Sites and Site Groups

The drop-down list displays a list of the configured Site Groups followed by the list of individual sites for this ExtremeLocation account. The icon indicates a Site Group and the icon a Site.

When a Site Group is selected, the Sites screen zooms to an appropriate zoom level to show all the sites in the group at the same time.

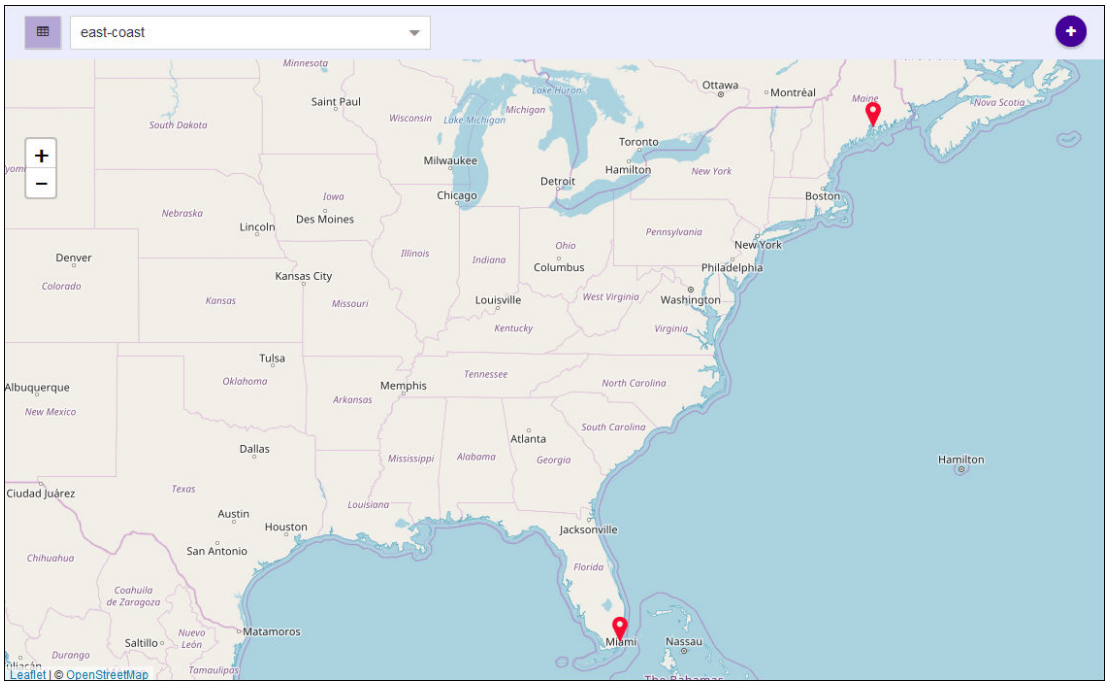


Figure 46: Site Group view

When a Site is selected, the Sites screen shows the icon for the selected site and hides all other sites in this ExtremeLocation account.

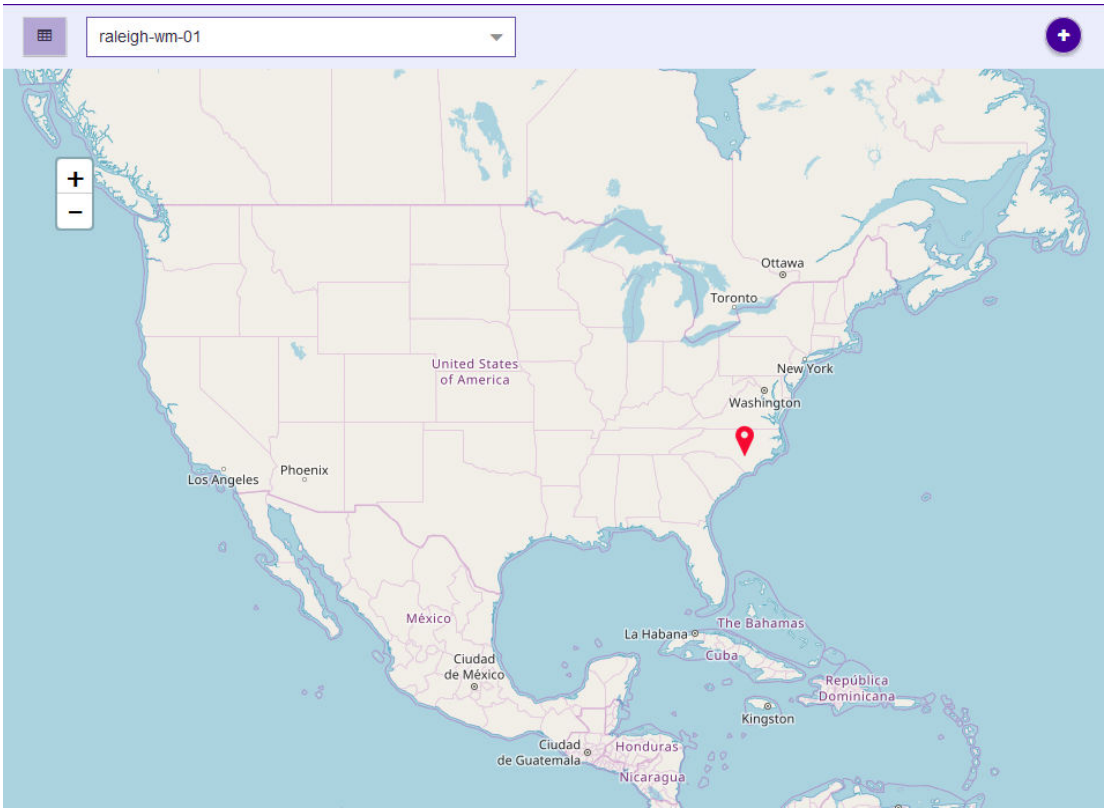


Figure 47: Site view

3 Use the + − to the left of the screen to manually zoom in or out in the ExtremeLocation Sites screen.

4 Select the site of interest.

The Site Information dialog opens.

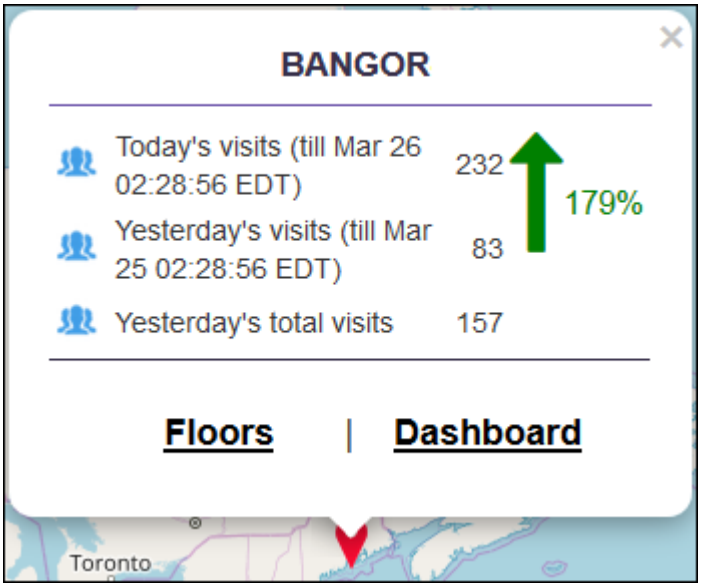


Figure 48: Site Information

From the dialog, select one of the following links:

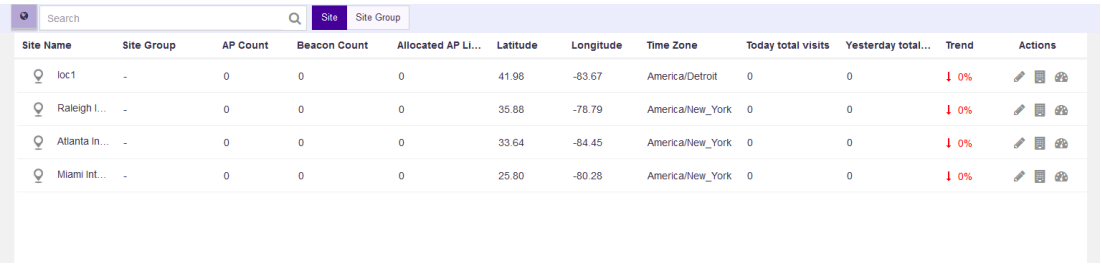
- Floors - Displays the floor maps for this site. See Client View on page 92.
- Dashboard - Displays the default dashboard for this site. See Dashboard on page 24.

Sites - Main Screen - Grid View

Use the button to launch the Sites Grid View screen. This button is located to the left of the **Sites** drop-down list at the top left of the **Sites** screen.

The Sites Grid View displays a list of all sites configured for the ExtremeLocation account as a list. This is provided as a ease of use feature. You can edit the site, launch its floor maps screen, and view its dashboard from this screen

To return to the map view, select the icon.



The following details are displayed for each site in this list:

Field	Description
Site Name	Displays the name of the site.
Site Group	If this site is a part of a **Site Group**, then this field displays the name of the Site Group.
AP Count	Displays the number of Access Points assigned to this site.
Beacon Count	Displays the number of BT/BLE beacons assigned to this site.
Allocated AP Licenses	Displays the number of AP Licenses allocated to this site.
Latitude	Displays the location (latitude) of this site
Longitude	Displays the location (longitude) of this site
Time Zone	Displays the time zone in which this site is located. This is a calculated value based on the latitude and longitude of the site.
Today Total Visits	Displays the total visits to this sites today. This value is calculated from 00:00 hours.
Yesterday Total Visits	Displays the total visits to this sites yesterday. This value is calculated for the time 00:00 hrs - 23:59 hours.
Trend	Displays the trend for this site. When the number of visits have gone up with respect to the previous corresponding period, a green upward facing arrow is displayed. When the number of visits have gone down with respect to the previous corresponding period, a red downward facing arrow is displayed. The field also displays a numerical percentage (%) value of the swing in visits.
Actions	Displays a set of icons that indicate the actions that can be performed on the site. The following actions are available: • Edit - Selecting the icon launches the **Site Edit** dialog where you can edit the site's details. • Floor Map - Selecting the icon launches the **Floor Map** screen from where you can manage your floors for this site. • Dashboard - Selecting the icon launches the **Dashboard** screen which displays the default dashboard with the information relevant to this site.

Site Groups

The Site Groups Grid View screen display a list of Site Groups configured for this ExtremeLocation account. Use **Site Groups** to group similar sites and use the Site Group to manage all these sites as a single unit.

Use the **Site Group** button to view the list. The following information is displayed:

Field	Description
Site Group Name	Displays the name of the Site Group.
Parent Site Group	Displays the name of the Site Group that is the parent of this Site Group. Use this field to create a hierarchy of Site Groups for your ExtremeLocation account.

Field	Description
Children Site Groups	Displays the names of the site groups that consider this Site Group as their parent. This establishes a hierarchy of Site Groups within your ExtremeLocation managed network.
Sites	Displays the names of the sites that make up this Site Group.
Actions	Displays a set of icons that indicate the actions that can be performed on the site. The following actions are available: • Dashboard - Selecting the icon launches the **Dashboard** screen which displays the default dashboard with the information relevant to this Site Group.

Common Tools

The Floor Map view provides a set of tools to setup and manage a floor on a site.

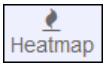
The following tools are available in the Floor Map view:

Select this icon to go back to the **Maps** screen.

This area displays the current site's name.

Use the **Floor** drop-down to select the floor on the site. Use the icon to add a new floor.

Select this icon to display the Client View. Use this to view client activity and other related data.

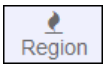


Select this icon to display a heat map for this floor. Use the heat map of activities on the floor.

Select this icon to display the crowding events. Use this view to manage crowding events on this floor that need immediate attention.

Select this icon to display the access point view. Use this view to manage access points, regions, and categories for this floor.

Select this icon to display the Beacon View that displays the beacons associated with this floor.



Select this icon to display the Regions view from where you can manage your regions.

Use the **Regions** switch to show or hide the region boxes on the floor map.

Use the **Opacity** slider to set the opacity of the Floor Map.

The **Lock** icon is available in the **AP** and **Beacon** screens and locks the Access Points and Beacons from being accidentally moved. When an Access Point or a Beacon is moved, you will lose its calibration data. By default, the Access Points and Beacons are locked.

Use this icon to manually refresh the data being displayed.

Add a Site

Sites are locations that are monitored using the ExtremeLocation system. A site is a physical area such as a store, hotel or a hospital or a venue such as a shopping mall or airport for which you capture locationing data. A typical site is made up of one or more floors which are further divided into logical areas or categories. Categories or zones are used to logically separate the floor for ease of locationing and visitor tracking.

For each floor in a site, you must upload a floor map if you want to use the zone or position tracking feature. You need not upload a floor map if you want to use the presence feature only. Use the floor map to accurately mark the locations of the access points installed on the floor. The access points gather the location data for all visitors to the floor and this information is used along with the mapped zones or categories to accurately track visits and visitors to the floor and to each zone on the floor.

To create a new Site:

1 Select **Maps** from the main menu.

The Maps screen appears.

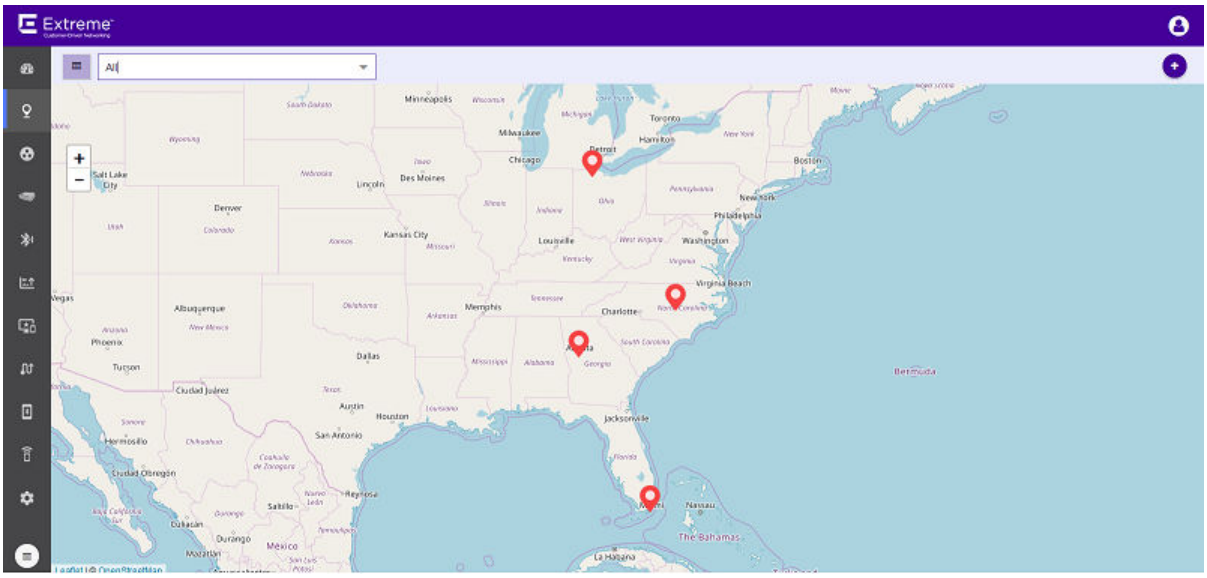


Figure 49: Maps Screen

2 Use icon located to the right side of the screen to add a new site to this ExtremeLocation account.

The icon displays a menu containing options to add a new Site or a new Site Group. From the menu, select **Create Site**.

The following dialog displays.

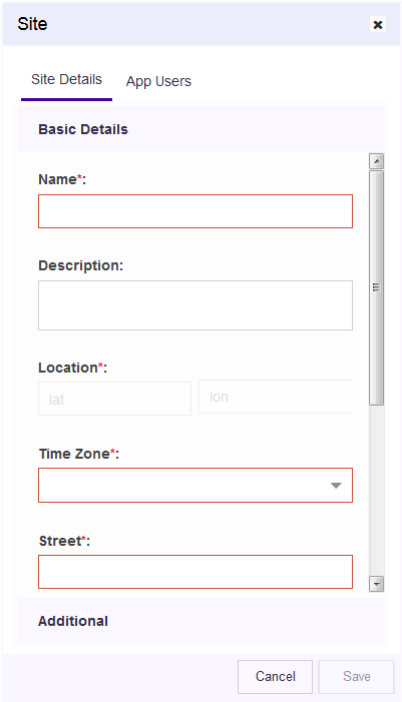


Figure 50: New Site Dialog

3 Use the blinking site placement icon, , located at the center of the Maps screen to accurately place the site on the displayed map.

Drag the site placement icon to a location nearest to the actual location on the map. Use the map's zoom control and drag feature to place the icon at the site's exact geo-location on the map.

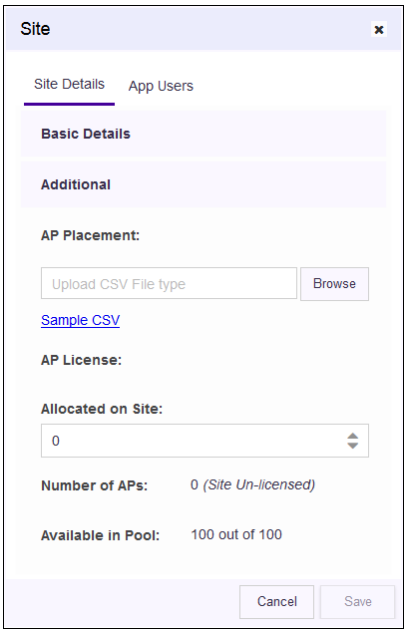
The exact location coordinates (latitude and longitude) and the time zone for the location are populated in the dialog.

4 Provide the following information for creating the new site.

Name	Provide a name for this site. The site's name should be descriptive such that identifying the site among similar sites becomes easier. This is a mandatory field.
Description	Provide a brief description about the site. The information in this field should describe the site in more detail than the name.
Location - lat	Displays the exact latitude of the location of the blue site placement icon. This field is automatically populated with the exact latitude of the location under the blue site icon. This field is updated automatically when you move the blue site placement icon to a new location.

Location - lon	Displays the exact longitude of the location of the blue site placement icon. This field is automatically populated with the exact longitude of the location under the blue icon. This field is updated automatically when you move the blue site placement icon to a new location.
Time Zone	Use this field to set the time zone for the location. When a site is located using the site placement icon, this field is automatically populated with the correct time zone for the location. You can also use the drop-down list to select the correct time zone for this location. This is a mandatory field.
Street	Use this field to provide a street address for the site. This is a mandatory field.
City	Use this field to provide the name of the City where the site is located. This is a mandatory field.
State	Use this field to provide the name of the State where this site is located. This is a mandatory field.
Postal Code	Use this field to provide the country specific Postal Code for the location where the site is located. This is a mandatory field.
Country	Use this field to provide the Country where this site is located. This is a mandatory field.
Map to Site Group	Use the drop-down list and select the Site Group to assign this to this site. Site groups are a logical grouping of sites that share some similar characteristics. Assigning a Site Group is not mandatory. For more information on Site Group, see Add a Site Group on page 74.

5 Select the **Additional** label to expand it.



The AP Placement control assigns access points to the site using their MAC addresses.

Use the **Upload CSV File type** control to upload a list of Access Points to be assigned to this site. The list of assigned access points must be placed in a Comma Separated Value (CSV) file before uploading to the site.

Note

When adding MAC addresses of ExtremeWireless access points with two LAN ports, add the MAC address of the LAN port marked as 'Lan 1'. The following ExtremeWireless access points have two LAN ports.

- AP3917
- AP3935
- AP3965

Selecting the **Sample CSV** link downloads a `.csv` file that can be used as a template for the file containing the list of access point MAC Addresses to be assigned to this site. Use the **Browse** button to navigate to the `.csv` file on the local PC.

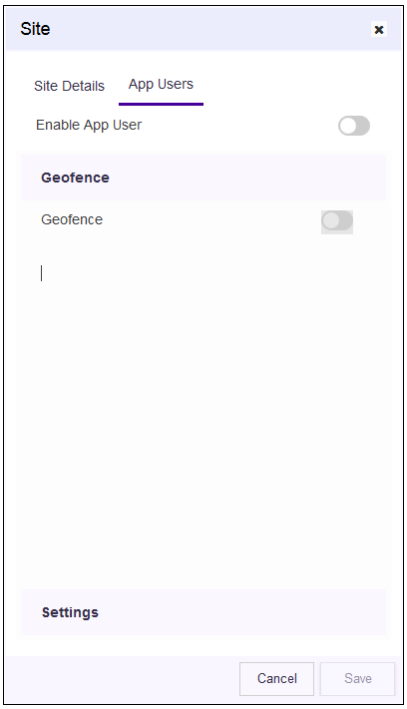
Use the **Allocated on Site** spinner to allocate licenses to this site. You cannot allocate more licenses than those available for use. The number of licenses is displayed in the **Available in Pool** field.

The **Number of APs** field displays the number of access points assigned to this site. The **Available in Pool** field displays the number of licenses available for assignment across all the sites for this ExtremeLocation account.

When a license is assigned to the site, it reduces the total number of licenses available for use for this ExtremeLocation account. The number of licenses that can be allocated to this site cannot exceed the total number of licenses available with this ExtremeLocation account.

Each access point added to the site consumes one license and is reflected in the used field.

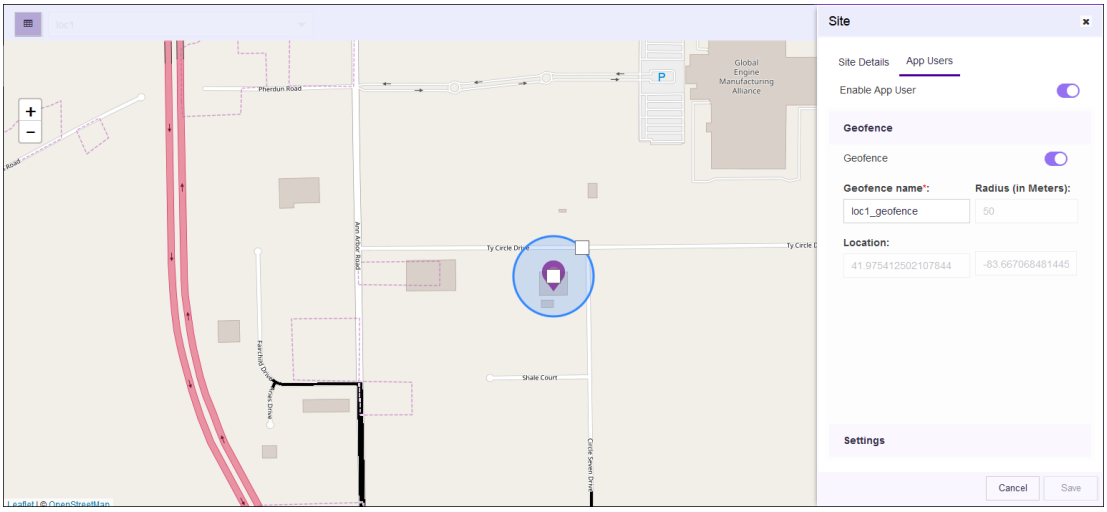
6 Select the **App Users** tab to expand it.



By default, App Users are not enabled for any site. You must use the **Enable App Users** switch to enable. When enabled, the controls under the **Geofence** and **Settings** headings are enabled.

7 To configure the Geofence for this site, select the **Geofence** switch to activate it.

The Geofence screen displays where you can configure its parameters.



Use the Geofence around your site to run analytics on nearby devices and to find new engagement opportunities. Only one Geofence can be configured for your site.

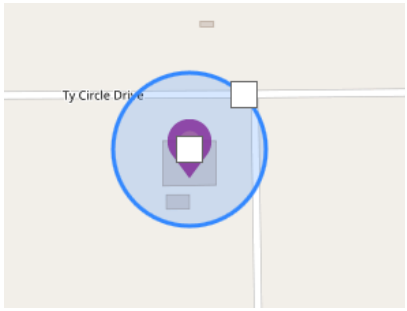
The following parameters can be configured:

Geofence Name

Provide a meaningful name for this Geofence. This Geofence is specific to this site and this information is not available for other sites manged by this ExtremeLocation account.

Radius (in Meters)

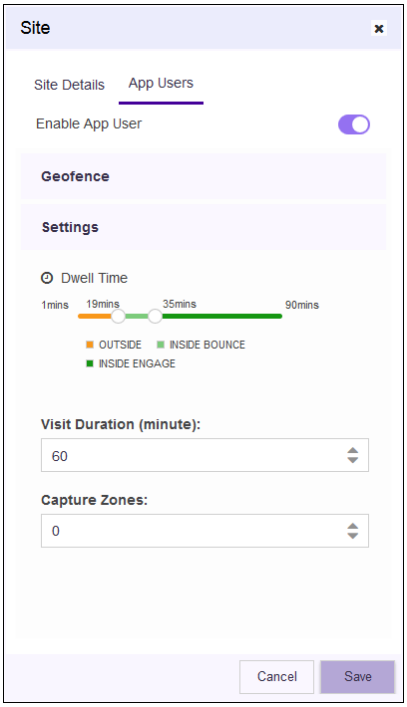
Use the map area to configure the Geofence radius.



Use the square in the center of the site to move the Geofence's origin. If the origin of the Geofence is changed, it is dynamically reflected in the **Location** fields.

Use the square on the blue circle to increase or decrease the size of the Geofence. The value in the **Radius (in Meters)** field dynamically changes to show the current radius.

8 Select the **Settings** heading to expand it.



Configure the following settings:

Dwell Time

You can now configure the Dwell Time for each site. The **Dwell Time** slider has two knobs that control the *Outside*, *Inside Bounce* and *Inside Engage* durations. Use these knobs to set the appropriate durations for these visit types.

Visit Duration (minutes)	Use the spinner to set the Visit Duration in minutes the user must spend within a site before an App license is considered consumed. This value along with the value configured in the **Capture Zones** field are considered before an App license is considered consumed. For example, if the **Visit Duration** value is five (5) and the **Capture Zones** value is two (2), then an App license is considered consumed only when the visitor has spent five minutes in the site and has already visited two categories.
Capture Zones	Use the spinner to set the number of zones an App User device must visit before considering an App license is consumed. This value along with the value configured in the **Visit Duration** field are considered before an App license is considered consumed. For example, if the **Visit Duration** value is five (5) and the **Capture Zones** value is two (2), then an App license is considered consumed only when the visitor has spent five minutes in the site and has already visited two categories.

9 Select the **Save** button to save and create the new site.

At any point of time, select the **Cancel** button to exit without creating the site.

The new site is created with the information provided in this dialog. The site becomes available for use immediately.

10 Use the Maps view to locate your new site and select it.

The site's information is displayed as a pop-up dialog.

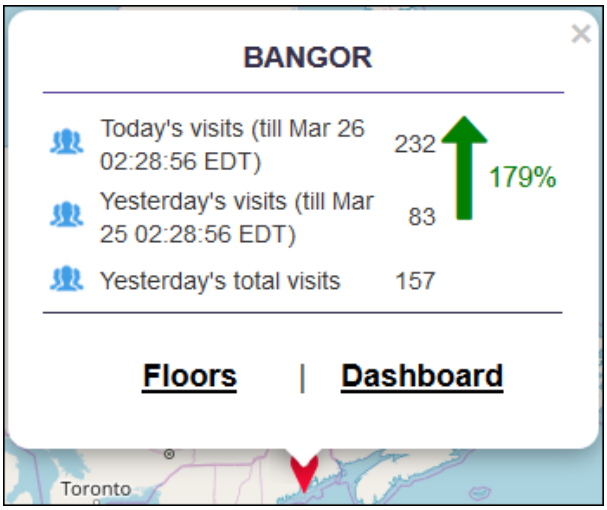


Figure 51: Site Information Pop-up

The next step is to add a floor to the site. To add a new floor, see Add a Floor on page 78.

Add a Site Group

Use Site Groups to logically group similar sites as a single unit for ease of use when viewing or comparing the performance of this logical grouping of sites with other similar logical groupings.

For example, if you want to compare the performance of one group of sites, say, those on the eastern part, with, say, those on the western part, it is easy to create two groups "East Coast" and "West Coast" with the individual sites grouped under them. You can then use these site groups to compare performances between the these sites.

1 Select **Maps** from the main menu.

The Maps screen appears.

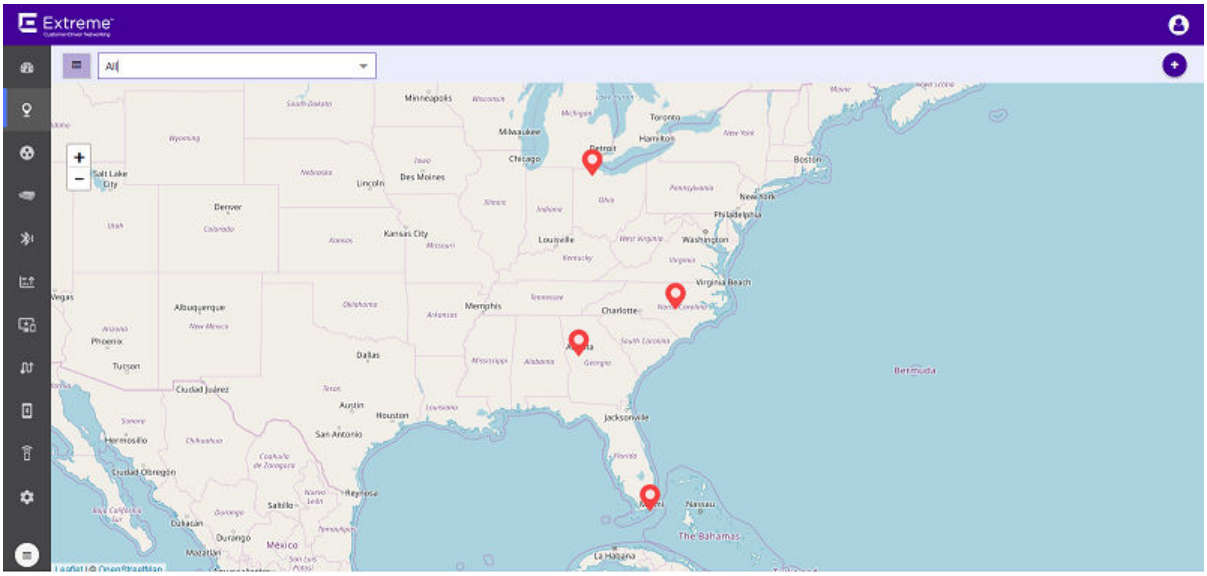


Figure 52: Maps Screen

2 Use icon located to the right side of the screen to add a new site to this ExtremeLocation account.

The icon displays a menu containing options to add a new Site or a new Site Group. From the menu, select **Create Site Group**.

The following dialog displays.

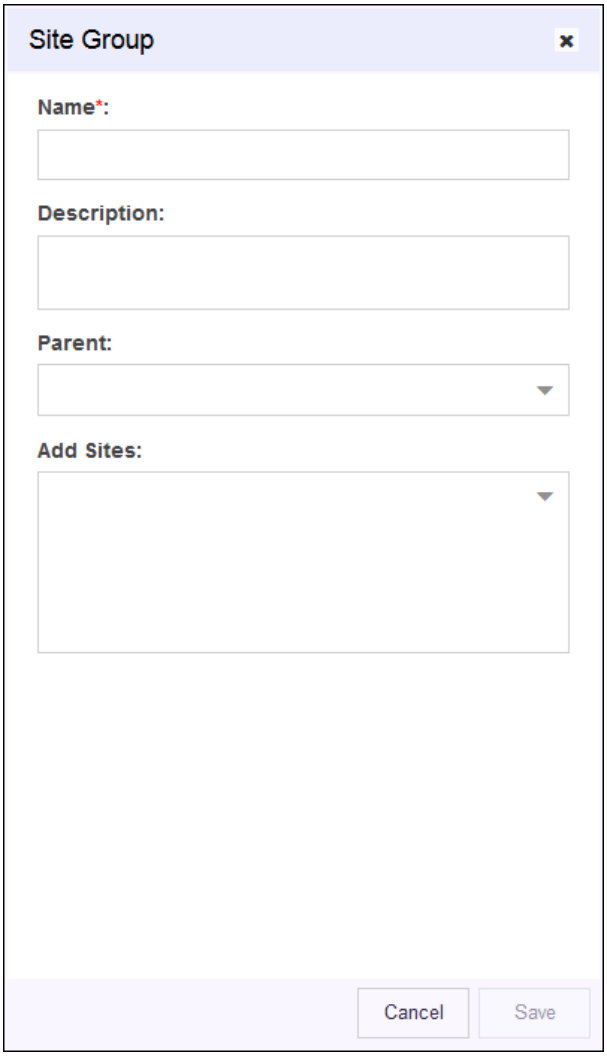


Figure 53: New Site Group Dialog

3 Provide the following information to create the new site group.

Name	Provide a name for this site group. The site group's name should be descriptive such that the name identifies the basic criteria on which the sites are grouped. For example, the name can be "East Coast" for all sites in the east coast or could be "Single Floor" for all sites that have only one floor. This is a mandatory field.
Description	Provide a brief description about the site group. The information in this field should describe the site group in more detail than its name.
Parent	Use this drop-down list to select a parent site group for this site group. Use this field to establish a hierarchy of site groups.
Add Sites	Use this drop-down list to add sites to this site group.

4 Select the **Save** button to save and create the new site.

At any point of time, select the **Cancel** button to exit without creating the site group.

The new site group is created with the information provided in this dialog. The site group becomes available for use immediately.

Delete a Site or Site Group

To delete an existing site or site group from your ExtremeLocation account:

1 Select **Maps** from the main menu.

The Maps screen appears.

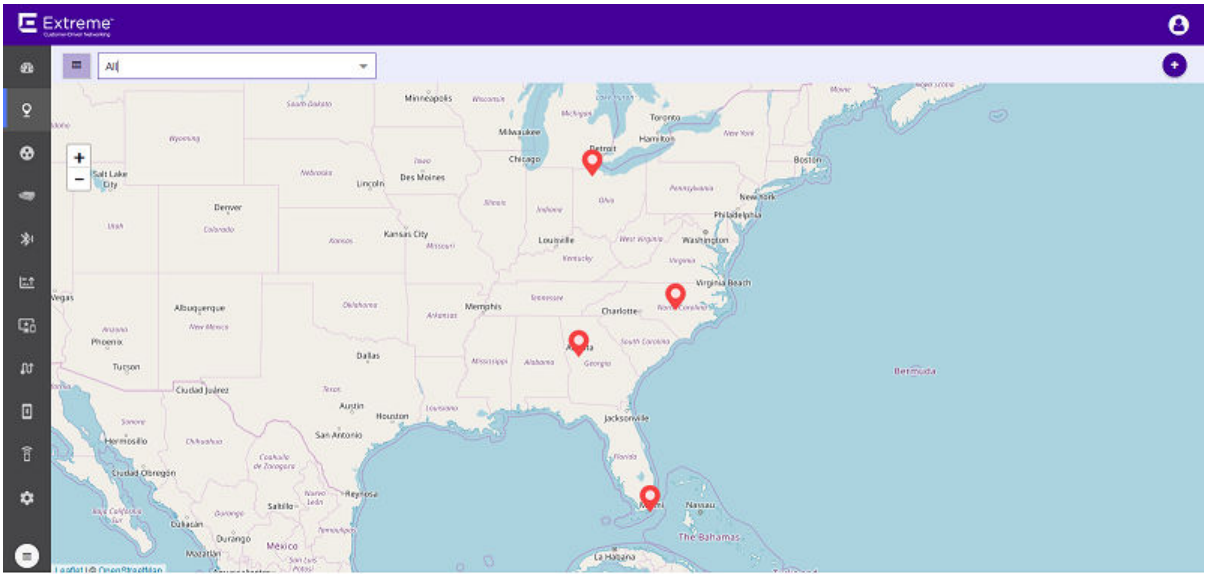


Figure 54: Maps Screen

2 Select the **Sites** drop-down list to expand it.

The **Sites** drop-down list expands to display the sites and site groups configured for this ExtremeLocation account.

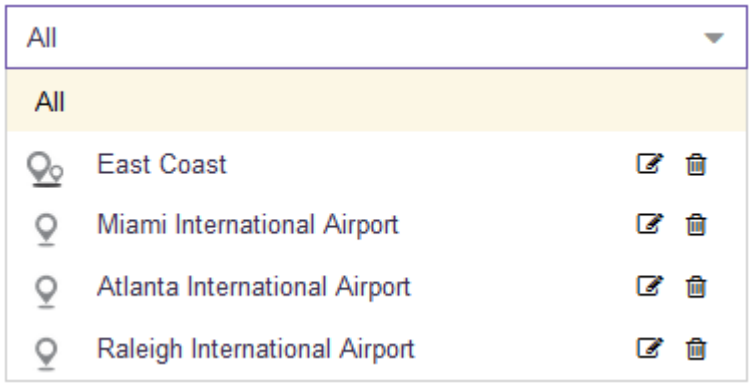


Figure 55: Sites List

3 Select the icon next to the name of the site or the site group that you want to delete.

A confirmation dialog displays.

Figure 56: Delete Site dialog

4 Select **Yes** to delete the site or the site group. Select **No** to exit without deleting the site or site group.

When **Yes** is selected, the site or the site group is immediately deleted.

Note
When a site group is deleted, the sites that were grouped under the site group are not deleted.

Add a Floor

A Floor is a physical division on the site. A site must have one floor and can have multiple floors. Optionally, you can assign each floor on the site a floor map. Floor map is not required if you only require presence information. Floor map is required for zone and position tracking. This information is then used by ExtremeLocation to provide locationing and other services.

1 Select the **Floors** link on the pop-up.

The Maps screen displays a floor that is already configured for this site.

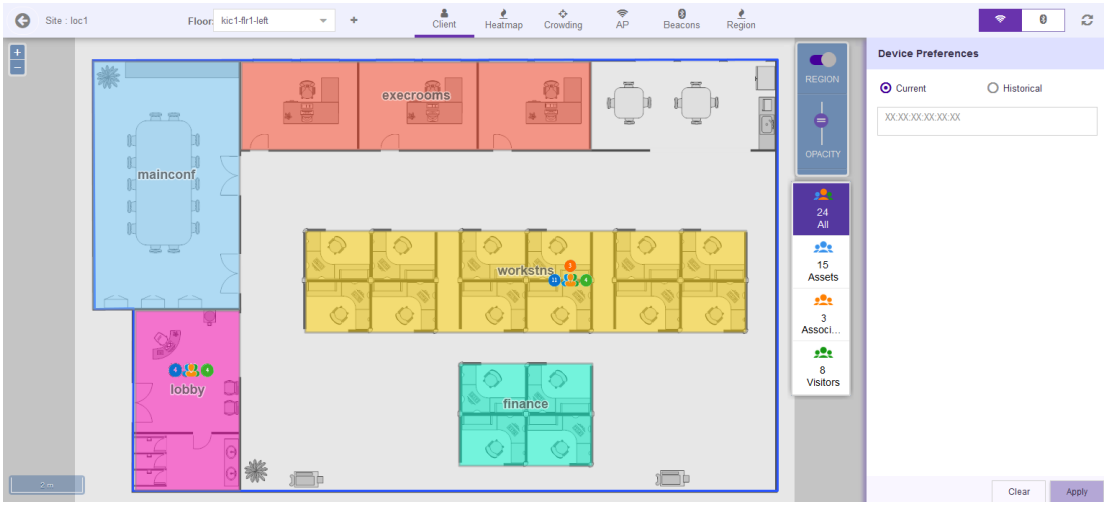
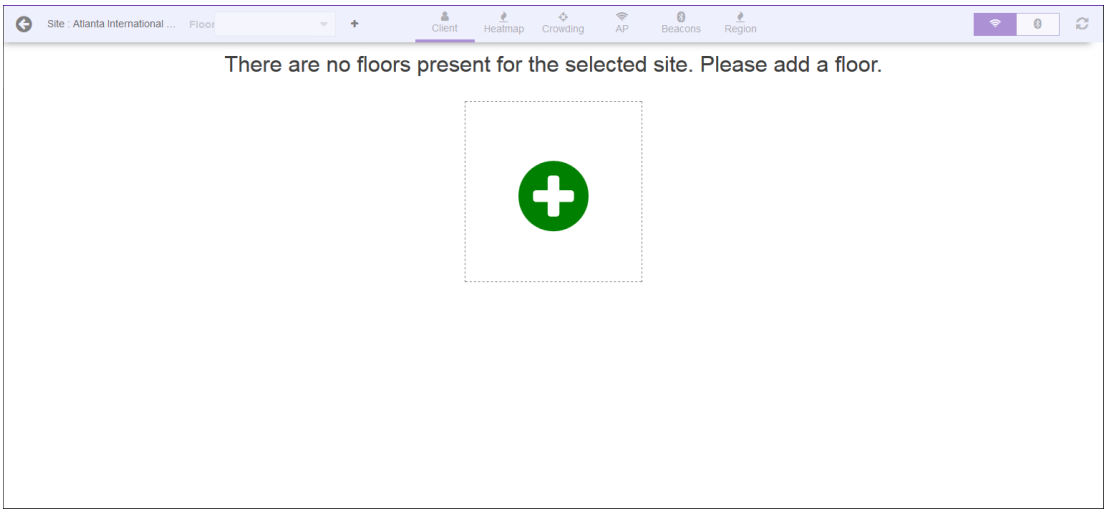


Figure 57: Floor Map

If no floors are configured, the Maps screen displays the following.

Figure 58: No Floors Configured



2 When the site has floors, use the + icon located to the left of the **Floors** drop-down list to add a new floor.

Figure 59: Add Floors Button

If the site has no floors, use the above + icon to add a floor or you can use the big green circle on the screen to add the new floor.

The Add Floor dialog displays.

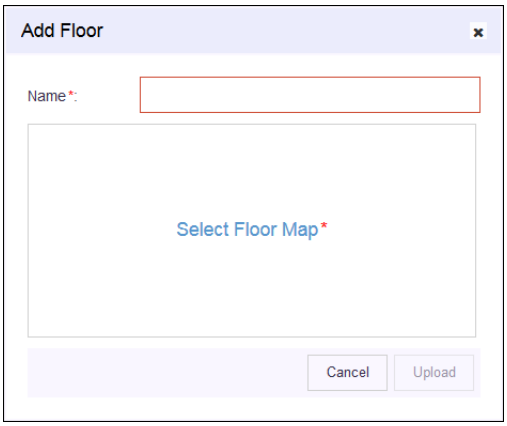


Figure 60: Add Floor Dialog

3 Use the **Name** field to provide a name for this floor. The floor's name should be descriptive such that identifying the floor among other floors in the site becomes easier. This is a mandatory field.

4 Select the **Select Floor Map** label to add a floor map to be associated with this floor. You cannot add a floor without adding its floor map. This is a mandatory action.

The Operating System's File Open dialog displays. Use this dialog to navigate to the image file containing the floor's map and add it. A thumbnail of the floor map is added to the dialog.

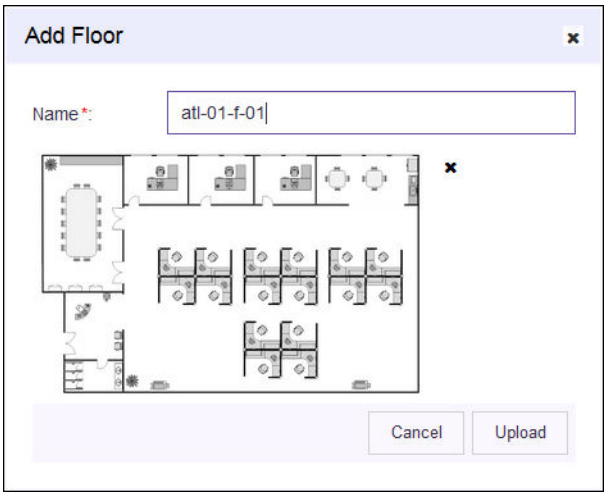


Figure 61: Floor Map Loaded

You can use the small 'x' located next to the thumbnail image to remove the floor map image from this dialog.

5 Select the **Upload** button to upload the floor map and create the new floor.

At any point of time, select the **Cancel** button to exit without creating the floor.

The new floor is created with the information provided in this dialog. The floor reloads and the following screen displays.

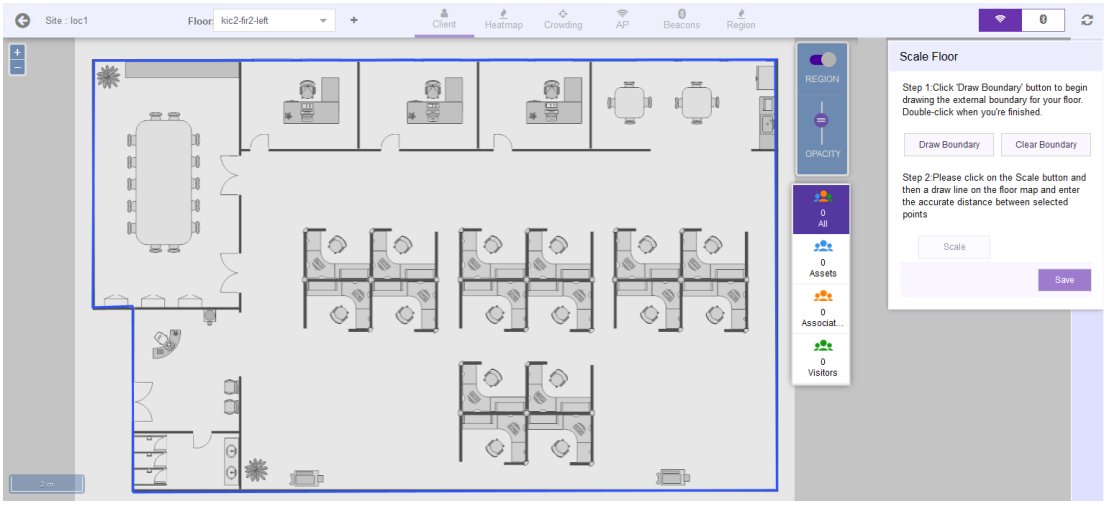


Figure 62: Scale Image Screen

6 In the Scale Floor dialog, select **Draw Boundary**. (The area within the boundary is used to determine device location.) To anchor the beginning of the boundary line, click a corner of the outside boundary. Click each corner to anchor the line. The drawing line zigzags across the image as you anchor each corner. When you reach the last corner (which is also your starting point), double-click the last corner to disable the pen tool.

The entire outside boundary is drawn and the **Scale** button is enabled.

Note
If you make a mistake, select **Clear Boundary** to remove the entire boundary and start over.

7 Select **Scale**. Choose two points on the floor map for which you know the actual physical distance. Click on the first point and drag your pointer to the other point.

Note
Proper scaling is fundamental to the accuracy of the location data for this site. Verify that the scaling information is as accurate as possible.

A line is drawn on the map between the two points.

8 Enter the physical distance value in the Scale Floor dialog.

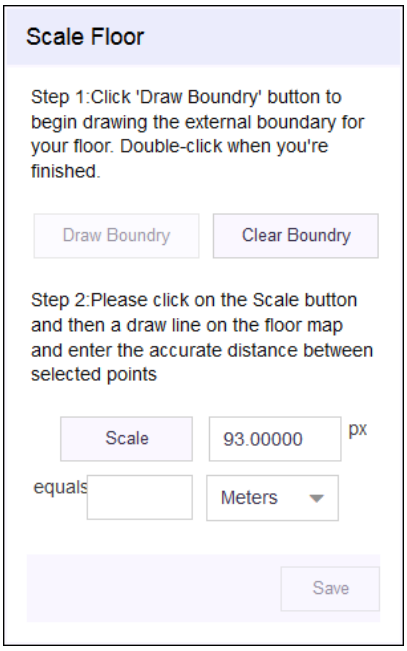


Figure 63: Add Scaling

9 Select the **Save** button.

The dialog briefly displays the scaling factor. The scaling factor is also displayed at the bottom left of the Floors screen.

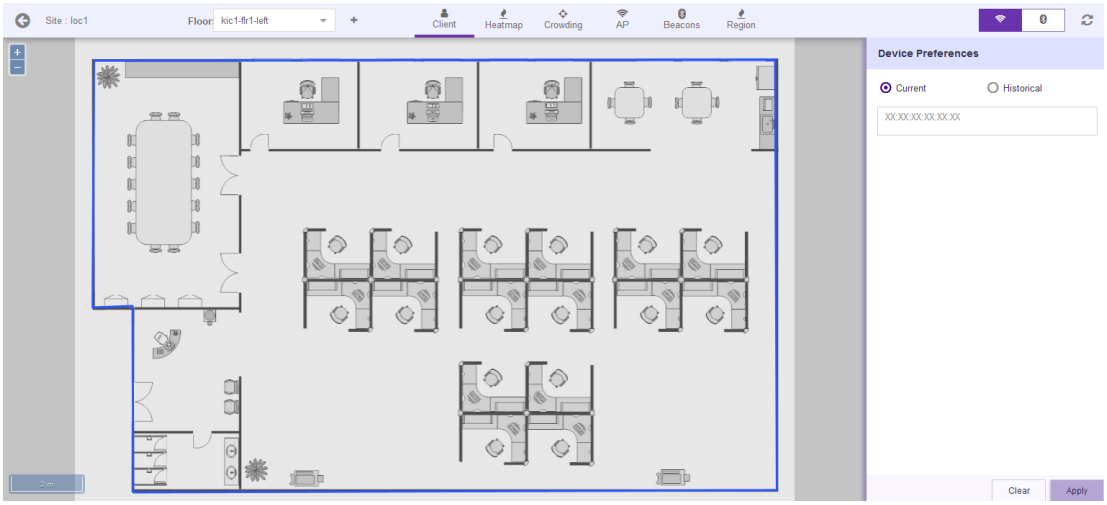


Figure 64: New Floor

Maps - Delete a Floor

To delete an existing floor from a site:

1 Select **Maps** from the main menu.

The Maps screen displays.

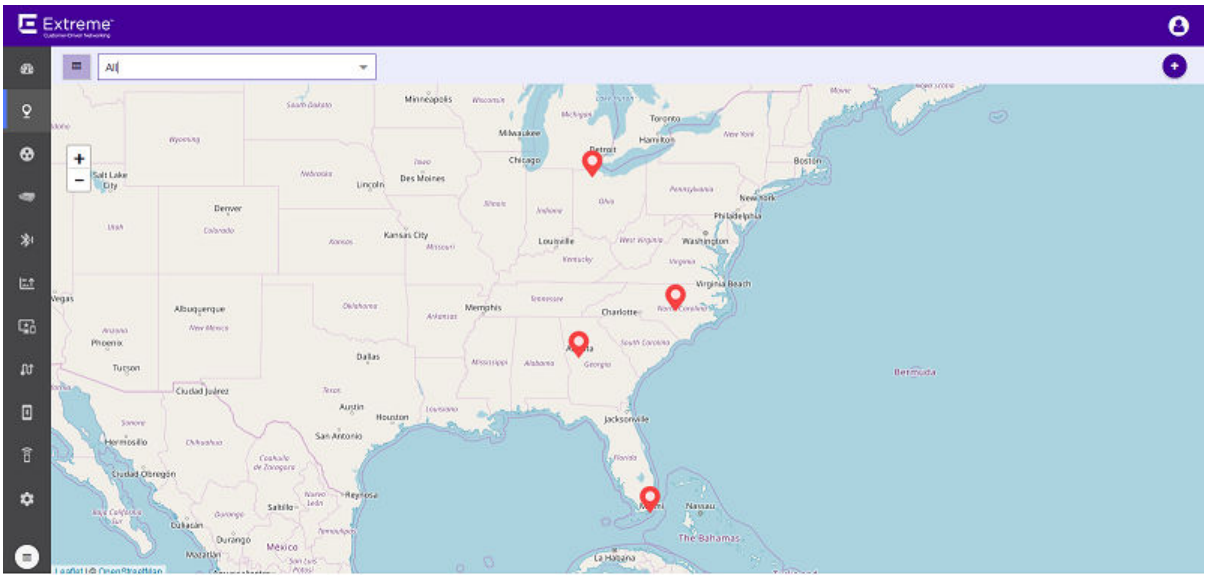


Figure 65: Maps Screen

2 Use the Map view to locate your site and select it.

The site's information is displayed in a small dialog.

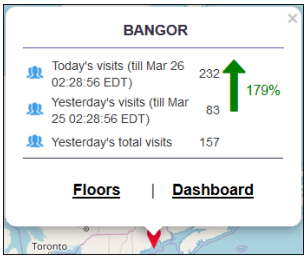


Figure 66: Site Information Dialog

3 Select the **Floors** link on the pop-up.

The Maps screen displays any floor that is already configured for this site.

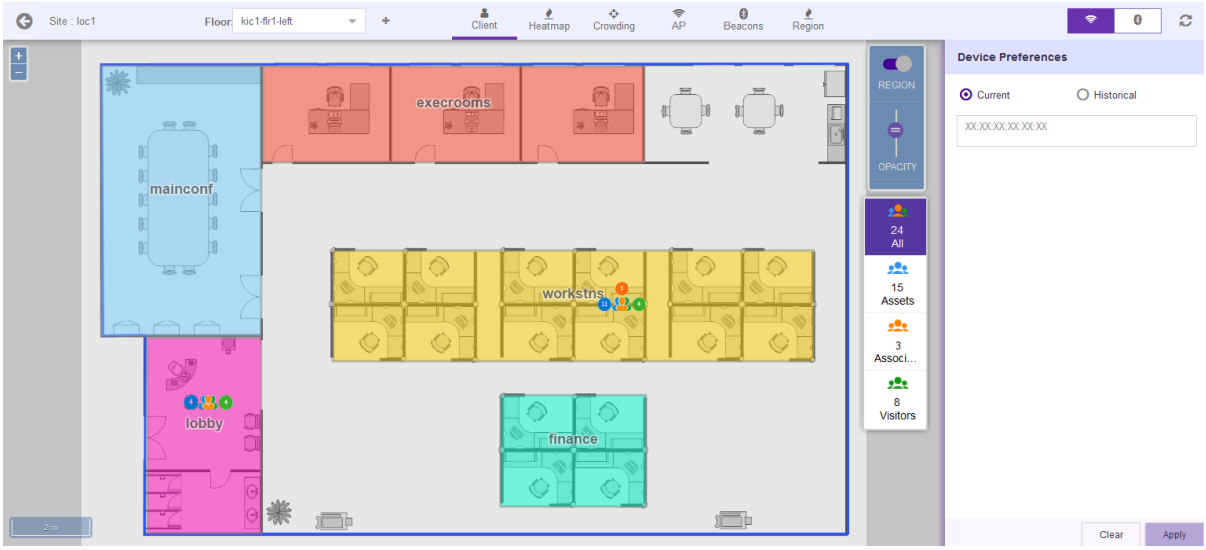


Figure 67: Floor Map

4 Select the **Floors** drop-down to expand it.

The list expands to display the available floors for this site.

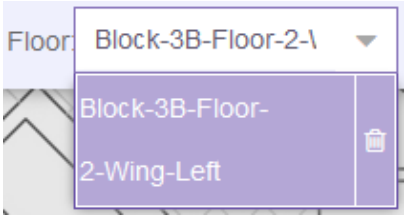


Figure 68: Floor List

5 Select the icon next to the floor name that you want to delete.

A confirmation dialog appears.

6 Select **Yes** to delete the floor. Select **No** to exit without deleting the floor.

When **Yes** is selected, the floor is immediately deleted.

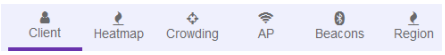
Place Access Points

Access points provide the infrastructure for ExtremeLocation service. ExtremeLocation uses the access point's radio's sensor capability to provide the locationing and tracking services within its service area. Access points must be placed on a site's floor for viewing the visits and heat map for the floor.

Before any access point can be placed on the site's floor, it must be added to your site. You can add access points when creating the site. You can also add the access points to the site by editing the site's information. For more information on how to add or edit a site, see Add a Site on page 68.

To place an access point to the floor:

1 Select

icon from the 

toolbar.

The following screen displays.

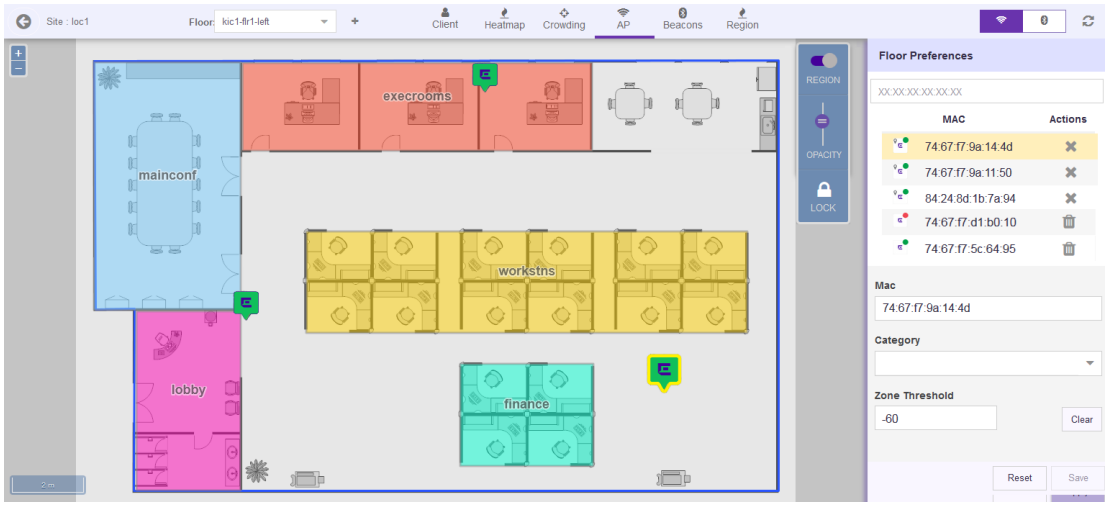


Figure 69: Maps Screen - Add Access Point

By default, the **Floor Preferences** area displays the **Access Points** assigned to this site.

2 Select the icon to unlock the floor map.

You cannot place new access points without unlocking the floor map. By default, the floor map is locked to prevent accidental relocation of placed access points. This icon then changes to indicating that the floor map is unlocked.

3 From the list of access points, select an unplaced access point and drag it to its location on the floor map.

An unplaced access point can be identified by the icon and will also have a Trash icon alongside it. Use the Trash icon to remove this access point from the list. Trashed access points will be available for re-deployment across all the sites for this ExtremeLocation account.

An access point placed on the floor map is identified by the icon and will have a small 'x' icon alongside it. Use the 'x' icon to remove the access point. This access point can then be re-deployed to an another floor of this site.

Caution
When re-deploying an access point, please note that all previous analytics data will be lost and cannot be recovered.

You can also select and drag an access point to a re-locate it to a different location on the floor.

Note
When an access point is placed on a floor map and is unable to contact the ExtremeLocation server, its icon changes to .

For more information on the various states that an access point can be in, see Access Point Status Icons in Map View on page 90

By default, a placed access point is in a locked state and cannot be moved accidentally. To move an access point, you must first unlock the screen using the icon. Please note that when you move a placed access point, you will lose all calibration data associated with the access point. This data cannot be retrieved.

4 If required, adjust the **Zone Threshold** value to meet the requirements of your deployment.

5 Select **Save** to apply the changes made to the access point screen.

At any point, use **Reset** to reset the values in these fields to their previous values.

Place Beacons

Beacons provide the infrastructure for ExtremeLocation's micro-locationing service. Use these BLE beacons to track visitors to your site and to provide targeted services to these visitors. Beacons must be added to a site's floor for micro-locationing and visitor engagements.

Before beacons can be used in your site, they must be provisioned before being added to your site. Beacons are added to your ExtremeLocation account using the ExtremeLocation Beacons App. This app is only available on the Apple™ App Store. For more information on this topic, see *ExtremeLocation*

Beacon Onboarding Guide. This guide can be downloaded from the Extreme Networks Documentation Site.

Once you have added the beacons to your ExtremeLocation account, you can then place the beacons to the floor by editing the site's floor. For more information on how to add or edit a site, see Add a Site on page 68.

To add beacons to the floor:

1 Select Beacons icon from the Client Heatmap Crowding AP Beacons Region toolbar.

The following screen displays.

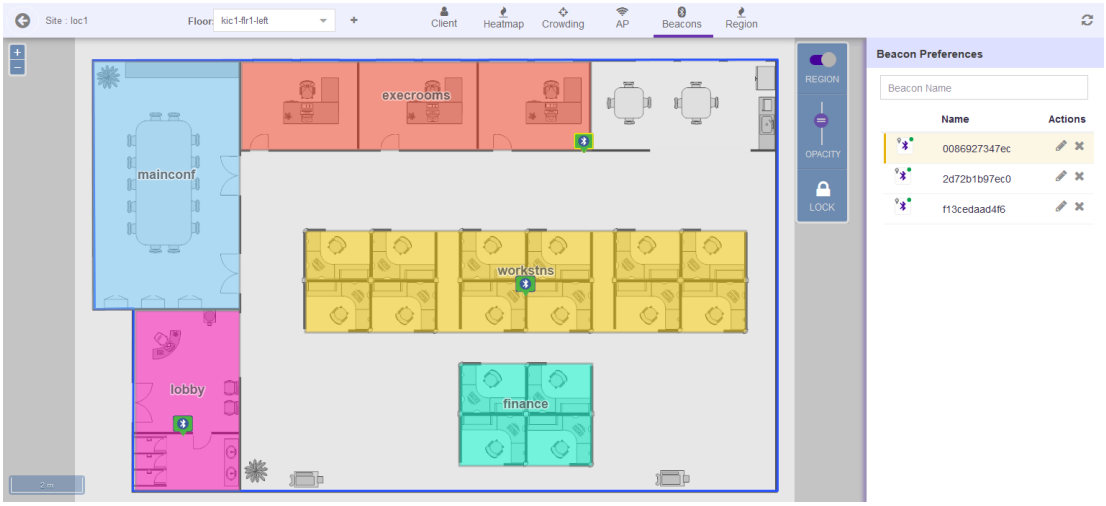


Figure 70: Beacons Screen

By default, the **Beacon Preferences** area displays the beacons assigned to this site. The list also displays the beacons that have not been assigned to any site in this ExtremeLocation account.

2 Select the LOCK icon to unlock the floor map.

You cannot place new Beacons without unlocking the floor map. By default, the floor map is locked to prevent accidental relocation of placed beacons. This icon then changes to LOCK indicating that the floor map is unlocked.

3 From the list of beacons, select an unplaced beacon and drag it to its location on the floor map.

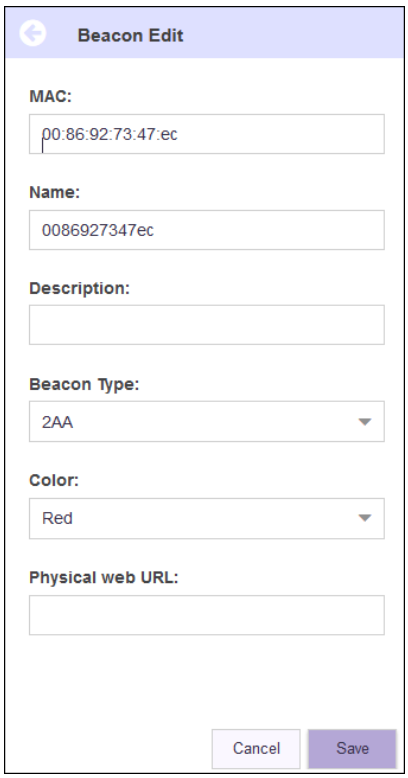
An unplaced beacon can be identified by the icon and will also have a icon alongside it. Use the icon to remove this beacon from the list. Trashed beacons will be available for re-deployment across all the sites for this ExtremeLocation account.

A beacon placed on the floor map is identified by the icon and will have a small 'x' icon alongside it. Use the 'x' icon to remove the beacon. This beacon can then be re-deployed to an another floor of this site.

You can also select and drag a beacon to relocate it to a different location on the floor.

By default, a placed beacon is in a locked state and cannot be moved accidentally. To move a beacon, you must first unlock the screen using the LOCK icon.

4 Use the pencil icon to edit the beacon's details.
The **Beacon Edit** dialog displays.



Provide the following information for the beacon:

MAC	This field cannot be modified and displays the MAC address of the beacon.
Name	Provide a name for this beacon.
Description	Provide a description for this beacon. Descriptions should provide more information about the beacon and its use.
Beacon Type	Use the drop-down list to select the correct beacon type of this beacon.
Color	Use the drop-down list to select the correct color of this beacon.
Physical web URL	Use this field to provide a URL that can be used to directly access this beacon's user interface.

5 Select **Save** to apply the changes made to the **Beacon Edit** screen.
At any point, use **Cancel** to reset the values in these fields to their previous values.

Add a Region

Regions are locations on map that identify an area on a floor. For example, in a shop, the cosmetics aisle can be marked with the region 'Cosmetics'. Similarly, in an office, the area where the Accounts team is located can be marked with the region 'Accounts'. This segregation of the floor into logical regions enable you to get an idea of the visits in that particular region of the floor.

To create a region:

1 Select the Region icon from the Client Heatmap Crowding AP Beacons Region toolbar.

The following screen displays.

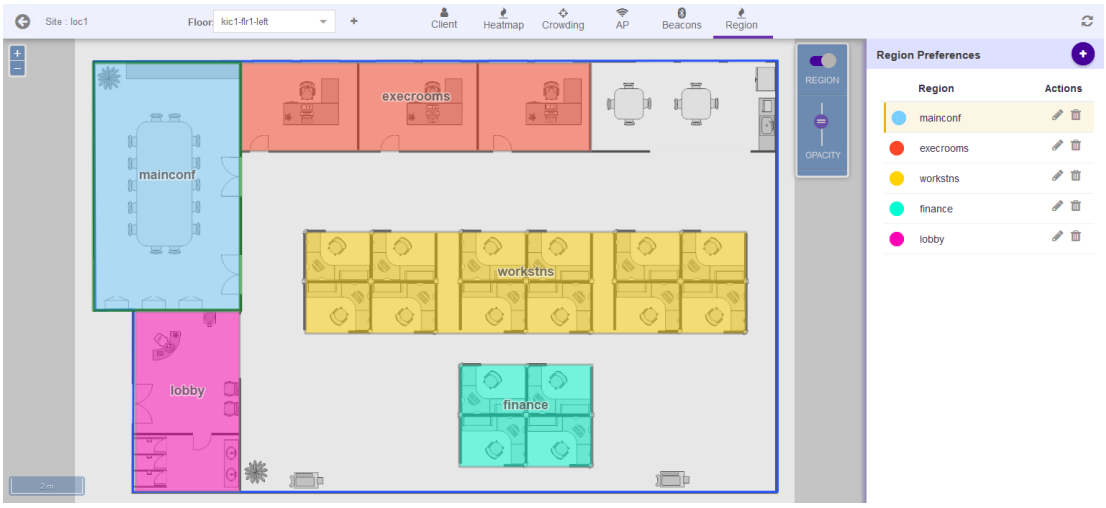
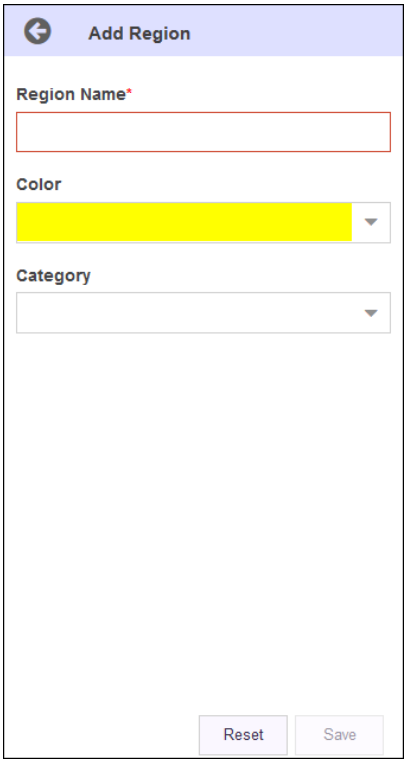


Figure 71: Regions Screen

By default, the Region Preferences area displays the regions created for this site.

2 Select the + icon to add a new region.

The following dialog display.



3 Use the **Region Name** field to provide a name for this region. The name should be such that you can identify this region among similar ones. This is a mandatory field.

4 Use the **Color** drop-down control to select a unique color for this region.

Selecting an unique color enables you to quickly identify a region in a floor with multiple regions. The following dialog appears.

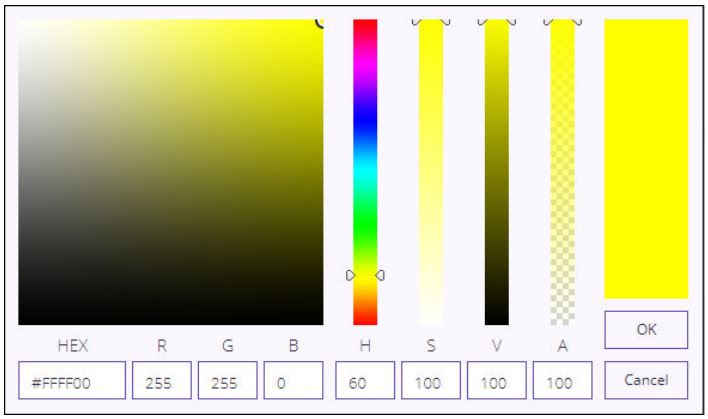


Figure 72: Region Color Picker

Set the HEX, RGB, or the HSVA parameters to define your color. In this dialog, setting any value changes the values in the other fields to reflect the same color in their respective notations.

Attention
The "ALPHA" channel is not used when defining a region's color.

Select **OK** to set the selected color as the region's color. At any time, select **Cancel** to exit without setting the color.

The selected color is set as the region's color.

5 Select the region's **Category** using the drop-down list. When set, this category value has precedence over the category set on the access points that are placed in this region.

6 Draw a rectangular area on the floor map to mark the region.

A region is created and placed on the floor map.

7 Select **Save** to save the new region.

At any time select **Reset** to exit without creating a new region.

Delete Region

To delete a region:

1 Select the

icon from the

toolbar.

The following screen displays.

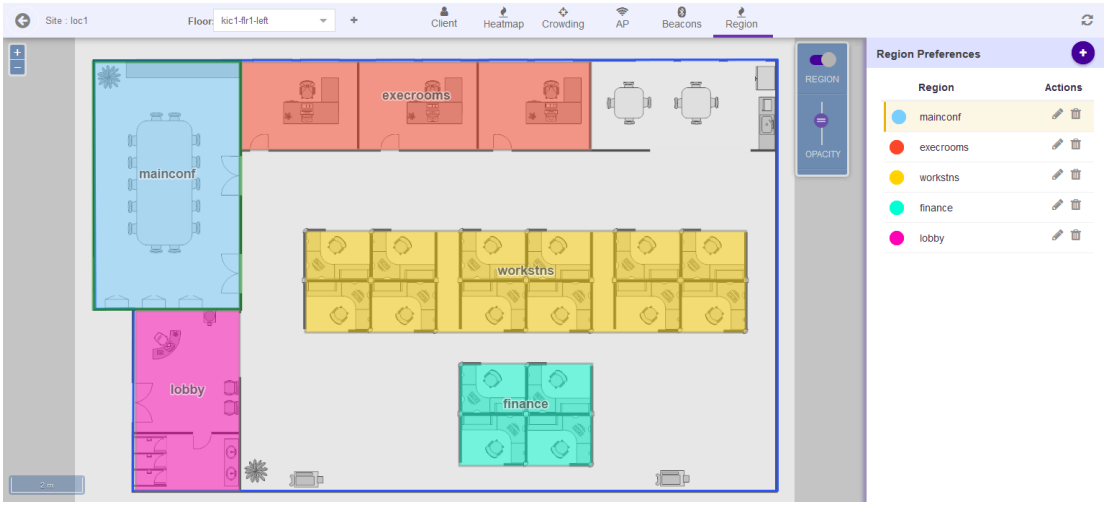


Figure 73: Regions Screen

By default, the Region Preferences area displays the regions created for this site.

2 From the Region Preferences dialog, select the Region to delete. Then, select the icon to delete the selected region.

A confirmation dialog appears.

3 Select **Yes** to delete the region. Select **No** to exit without deleting the region.

When **Yes** is selected, the region is immediately deleted and is removed from the **Regions** area.

Access Point Status Icons in Map View

ExtremeLocation can display the live status of the access points added to an user account. Generally, access points can be in the following states:

placed / unplaced	These states indicate the placement status of the access point with respect to the floor map. The access point is considered placed when its icon is seen on the floor map. Otherwise the access point is considered unplaced.
active / inactive	The access point is considered active if it can be seen by the ExtremeLocation system and ExtremeLocation can communicate with the access point. Otherwise the access point is considered inactive.
selected / not-selected	When the access point's icon is selected by clicking on the icon, it is considered as selected. Otherwise it is considered not-selected.

The access point can be in any combination of the above three (3) general states.

Refer to the following table to understand the different states an access point can be in.

	placed active access point
	placed inactive access point
	placed active selected access point
	placed inactive selected access point
	unplaced active access point
	unplaced inactive access point

Beacon Status Icons in Map View

ExtremeLocation can display the live status of beacons added to an user account. Generally, beacons can be in the following states:

placed / unplaced	These states indicate the placement status of the beacon with respect to the floor map. The beacon is considered placed when its icon is seen on the floor map. Otherwise the beacon is considered unplaced.
active / inactive	The beacon is considered active if it can be seen by the ExtremeLocation system and ExtremeLocation can communicate with the beacon. Otherwise the beacon is considered inactive.
selected / not-selected	When the beacon's icon is selected by clicking on the icon, it is considered as selected. Otherwise it is considered not-selected.

The beacon can be in any combination of the above three (3) general states.

Refer to the following table to understand the different states an beacon can be in.

	placed active beacon
	placed inactive beacon
	placed active selected beacon
	placed inactive selected beacon

	unplaced active beacon
	unplaced inactive beacon

Client View

The Client View screen displays a map of all clients visible for the floor. Use this screen and its controls to filter and view the different client types (Assets, Associates, and Visitor) for this floor on a site.

To view client details:

1 Refer to topic Common Tools on page 67 for information on the common tools available for use in the Maps screens.

2 Select the **Floors** link to display the Floor View.

3 Use The icon located to the top right of the screen to switch between viewing the different kinds of devices.

The following device types can be viewed:

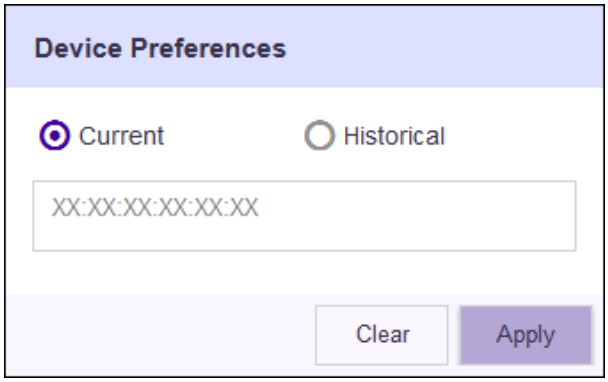
- Visitors - These devices are classified as Assets, Associates, and Visitors. Select the icon to view these devices.
- App Users - The devices use apps to interact with ExtremeLocation service. Select the icon to view app user devices.
- BSS Devices - These devices, within your monitored environment, broadcast BSS (Basic Service Set) identifiers that indicate that they offer WiFi connection to any device that may want to connect to it. BSSs with a managed environment can be authorized or unauthorized. Unauthorized BSSs are a security risk for the environment they are found in and need to be monitored for and the devices tracked. Select the icon to view these devices.

The screen immediately refreshes to display the appropriate details.

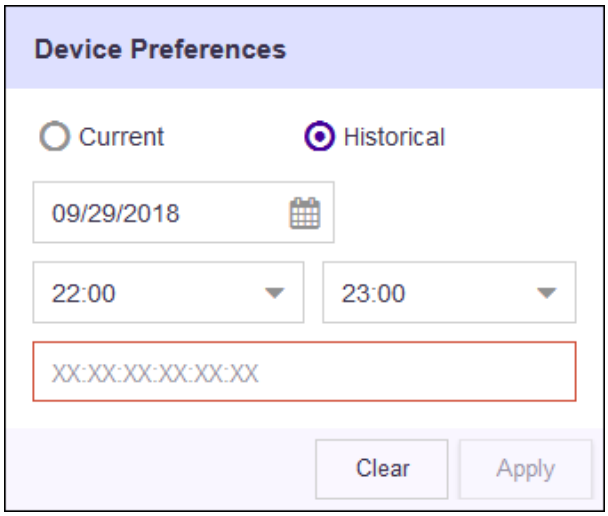
4 From the **Device Preferences** area, use the **Device Locate** area to locate a specific device.

Set the following values:

Current	Select this option to find and display current information about a particular device using its MAC address.



Locate - Historical — Select this option to find and display information about a particular device's visit history by providing its MAC address, the date of interest, and the time range of interest.



5 Use the **Device Classification** toolbar at the right of the map view to select the device types to display.

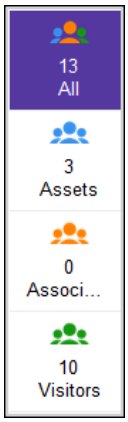


Figure 74: Device Classification Toolbar

By default, the Floors view displays all the devices seen on the floor. The **Device Classification** toolbar enables you to quickly filter to the devices category you are interested in.

Asset	Select this option to show only the devices marked or classified as Assets.
Associates	Select this option to show only the devices marked or classified as Associates.
Visitors	Select this option to show only the devices marked or classified as Visitors.
All	Select this option to show all the devices.

The screen refreshes to display the data for the selected device classification.

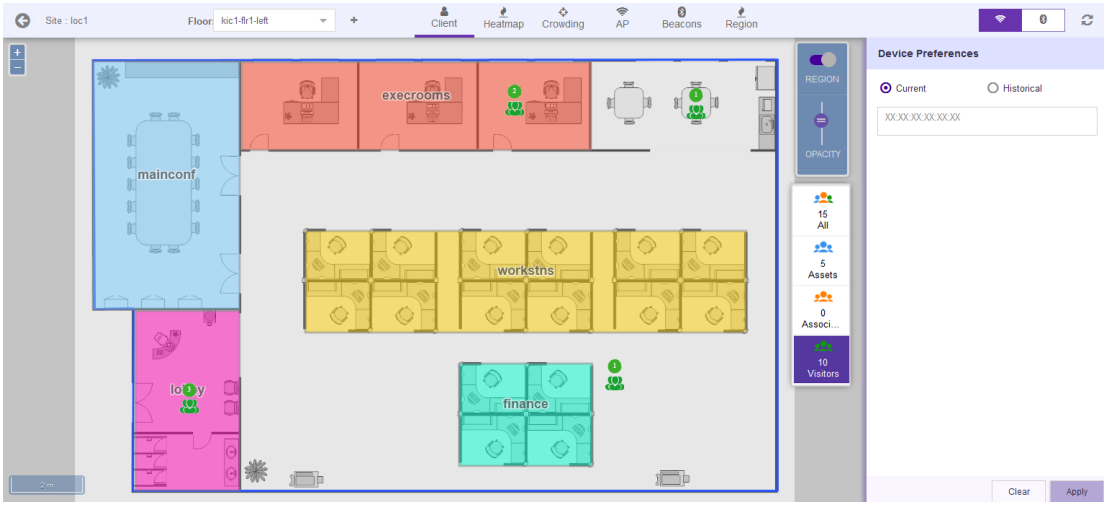
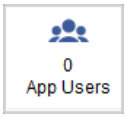
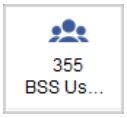


Figure 75: Client View - Visitors Only

For the App Users screen, the toolbar displays the total number of users for the selected floor.



Similarly for the BSS screen, the toolbar displays the number of BSS devices seen on the selected floor.



6 Select **Current** from the user interface and provide the MAC address of the device of interest in the text box. Select **Apply** to fetch the data for the device.

The screen refreshes to display data for the selected MAC address, with the specified device marked on the floor map.

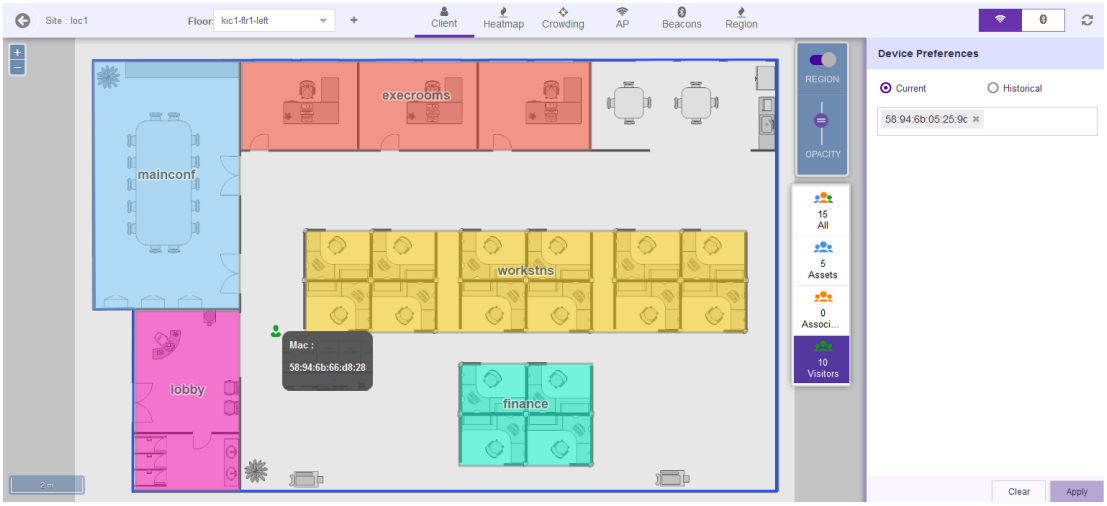


Figure 76: Locate Device Using MAC Address

At any time, select **Clear** to clear the search results.

7 Select **Historical** from the user interface to display historical data for a device. Once done, select **Apply** to fetch the data for the device.

Provide the following additional parameters:

Date	Use the calendar control to select the date to fetch the data for.
Time From	Use the drop-down list to select the hour from which data should be fetched for the date specified in **Date** field. You can edit the minutes for this field by typing the value.
Time Till	Use the drop-down list to select the hour till which data should be fetched for the date specified in **Date** field. You can edit the minutes for this field by typing the value.
MAC Address	Enter the MAC Address of the device of interest.

The screen refreshes to display data for the selected MAC address, with the specified device marked on the floor map.

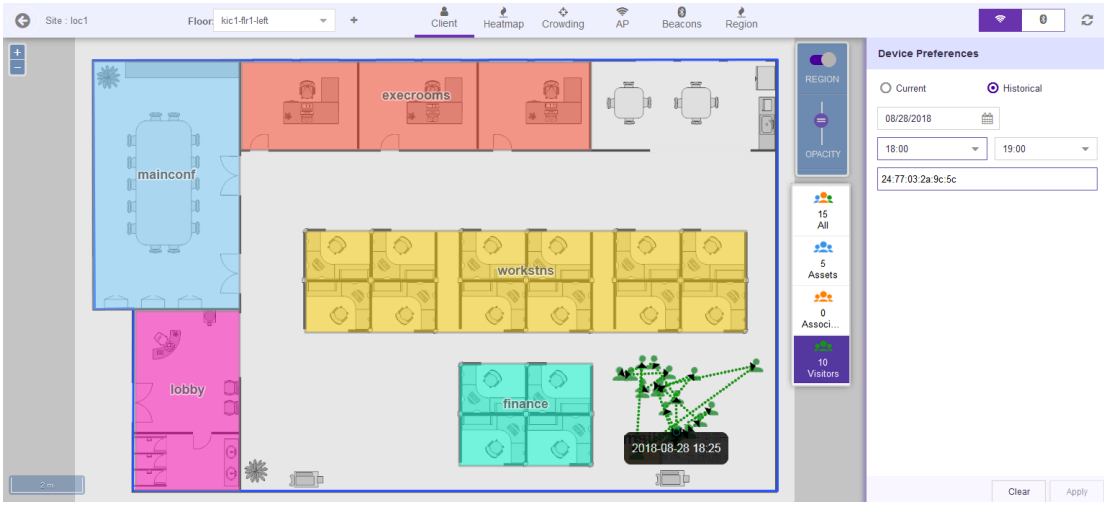


Figure 77: Historical Device Data Using MAC Address

At any time, select **Clear** to clear the search results.

Heatmap View

The Heat Map view displays a visual representation of device activity on the floor using color gradation indicating areas with heavy activity to areas of low or no activity.

To view the heat map:

1 Select **Maps** from the main menu.

The Maps screen displays.

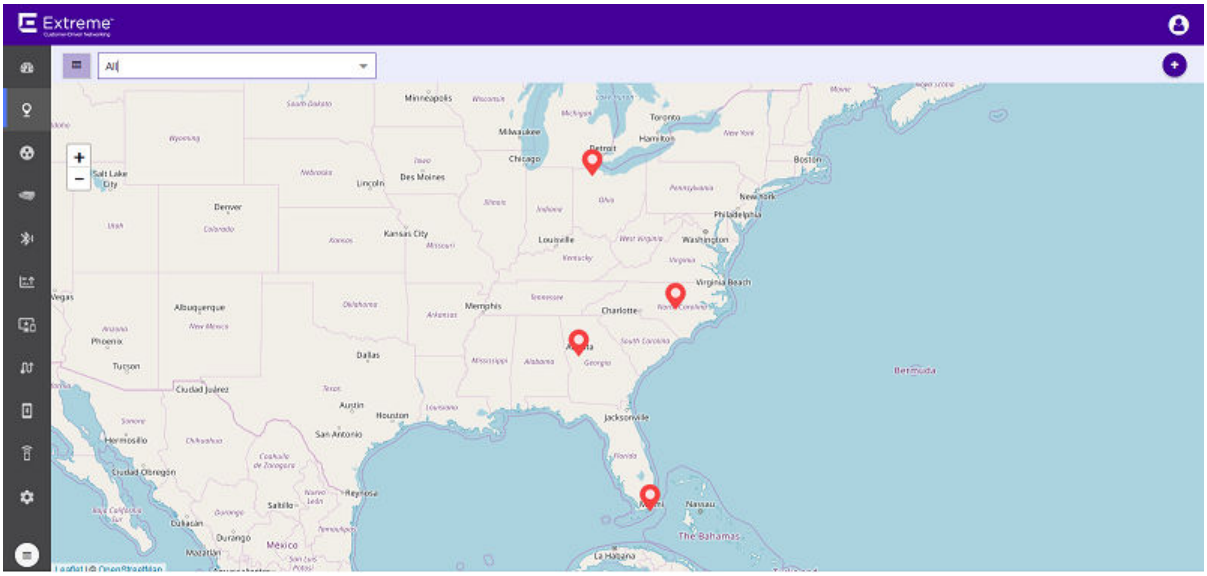


Figure 78: Maps Screen

2 Use the **Map** view to locate your site and select it.

The site's information is displayed in a small dialog.

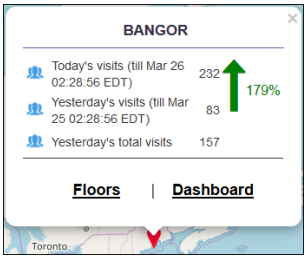


Figure 79: Site Information Dialog

3 Select the **Floors** link on the dialog.

The **Maps** screen displays the first floor for this site.

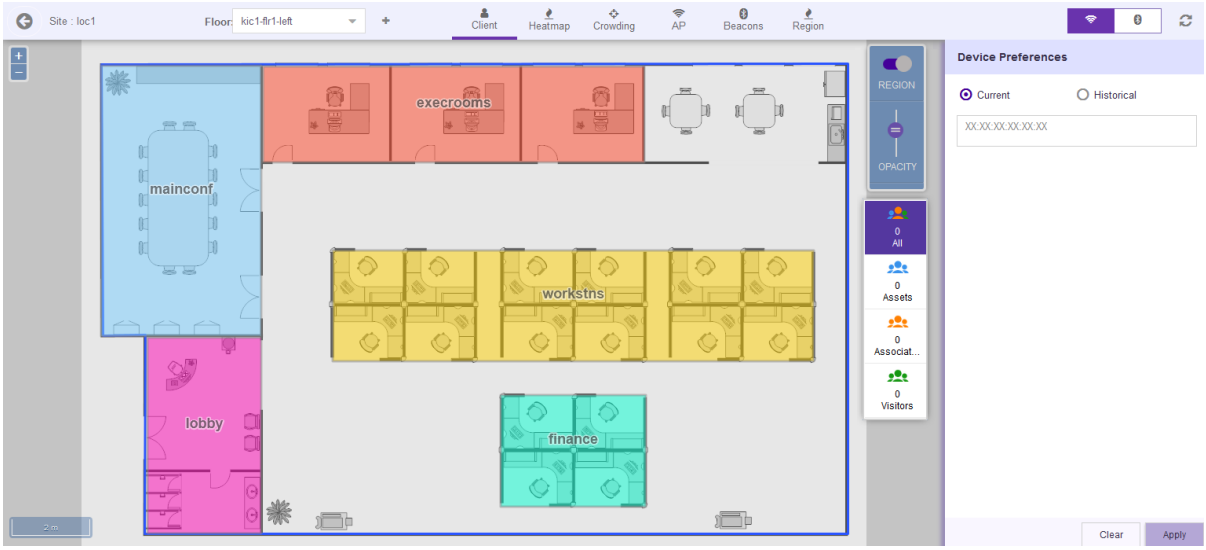


Figure 80: Floor Map

4 Select Heatmap from the Client Heatmap Crowding AP Beacons Region toolbar.

The following heat map screen displays.

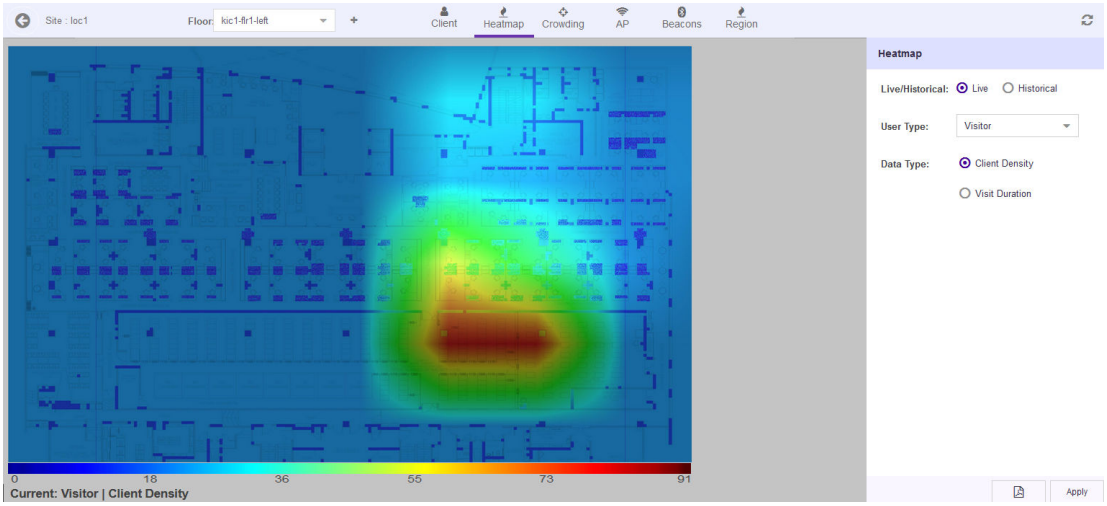


Figure 81: Maps Screen - Heatmap

By default the **Heatmap** area displays live Client Density heatmap for visitors. The heatmap is color graded ranging from the color BLUE to the color RED where the color BLUE indicates no visitors and the color RED indicates maximum density of visitors.

5 From the **Heatmap** area, select the criteria to display the heatmap data.

Configure the following top level parameters to view the heatmaps:

Live	Select this option to display the live heatmap on the screen. Use the **Device Type** and **Data Type** fields to fetch the required data for the heatmap.
Historical	Select this option to display the historical heatmap on the screen. Use the **Date**, **Device Type** and **Data Type** fields to fetch the required data for the heatmap.

6 Select **Live** option to display the live data on the heatmap.

The Heatmap screen displays the **Visitors** > **Client Density** data by default.

Configure these additional parameters to customize the data to display on this screen:

User Type	Lists the user type to show on the heatmap. Select the appropriate user type from the drop-down list.
Data Type	Select the appropriate option to one of the two available data types.
Client Density	Select this option to view client density data for the selected **Device Type**.
Visit Duration	Select this option to view visit duration data for the selected **Device Type**.

7 Select **Historical** option to display historical data on the heatmap.

The Heatmap screen displays the **Visitors** > **Client Density** data by default for the previous day. Previous day is one day before today.

Configure these additional parameters to customize the data to display on this screen:

Date	Use the calendar control to set the date for which to display historical data.

Note
Historical data is available for one eighty days (180) days before today.

User Type Lists the user type to show on the heatmap. Select the appropriate user type from the drop-down list.

Data Type Set the data type value to one of the two available options.

- **Client Density** Select this option to view client density data for the selected **Device Type**.
- **Visit Duration** Select this option to view visit duration data for the selected **Device Type**.

8 Select **Apply** to fetch the data for the defined criteria.

Use the button to export the heatmap as a *Portable Document Format* (PDF) file.

The **Heatmap** screen displays hourly maps for this floor from 00:00 hours till 23:59 hours for the selected day. This will be repeated till you exit the screen or change the parameters and select **Apply** again.

Crowding View

The **Crowding View** screen shows a visualization of crowding events by region on a floor plan.

Crowding events occur when the ratio of number of visitors to number of associates in a category or a zone exceeds the minimum threshold value configured for that category or globally at the site level.

Note

Global crowding configuration is set from the **Settings** > **Crowding** screen. This setting is overridden by the crowding setting at the Category level.

Note

The Crowding event is cleared when:

- the ratio between the number of visitors to the number of associates goes below the configured setting.
- the number of visitors to the category goes below the configured threshold as the visitors move away from the category.

When the time specified in the **Event Time Out** field under the **Settings** > **Crowding** screen elapses, the presence of this event is again polled for. If the event is cleared, then this alert is removed from the floor map.

For BLE only deployments, the event is cleared when the number of visitors to that specific category goes down as the visitors move away.

To access the Crowding View:

1 Select **Maps** from the main menu.

The Maps screen displays.

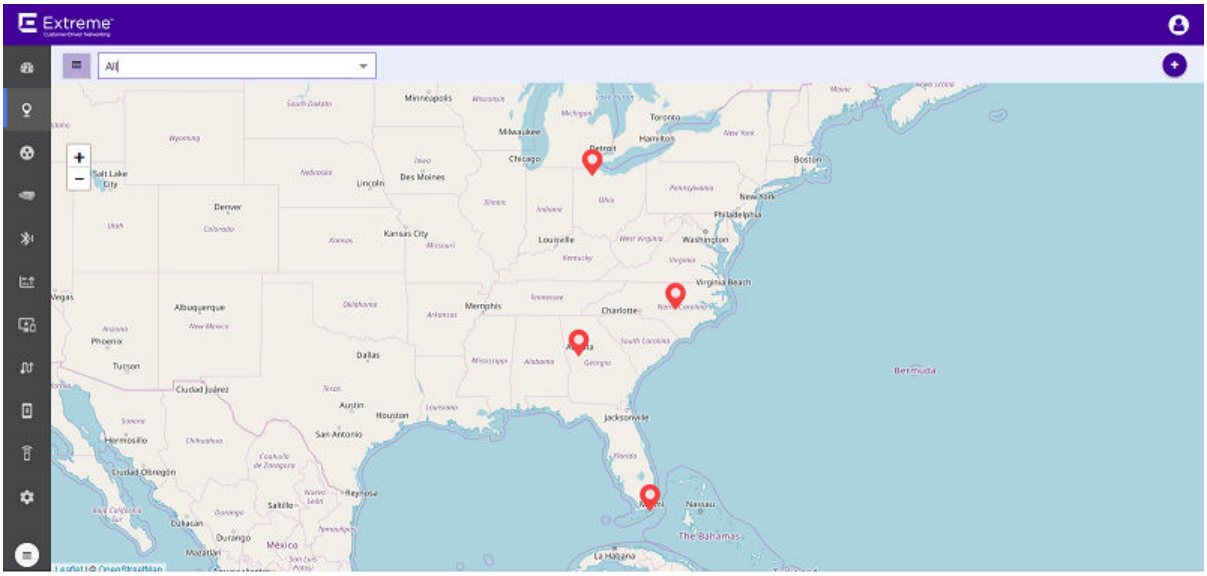


Figure 82: Maps Screen

2 Use the Map view to locate your site and select it.

The site's information is displayed in a small dialog.

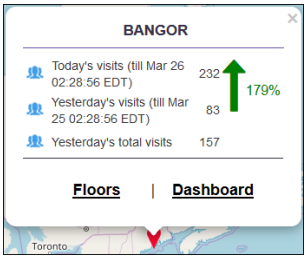


Figure 83: Site Information Dialog

3 Select the **Floors** link on the dialog.

The Maps screen displays the first floor for this site.

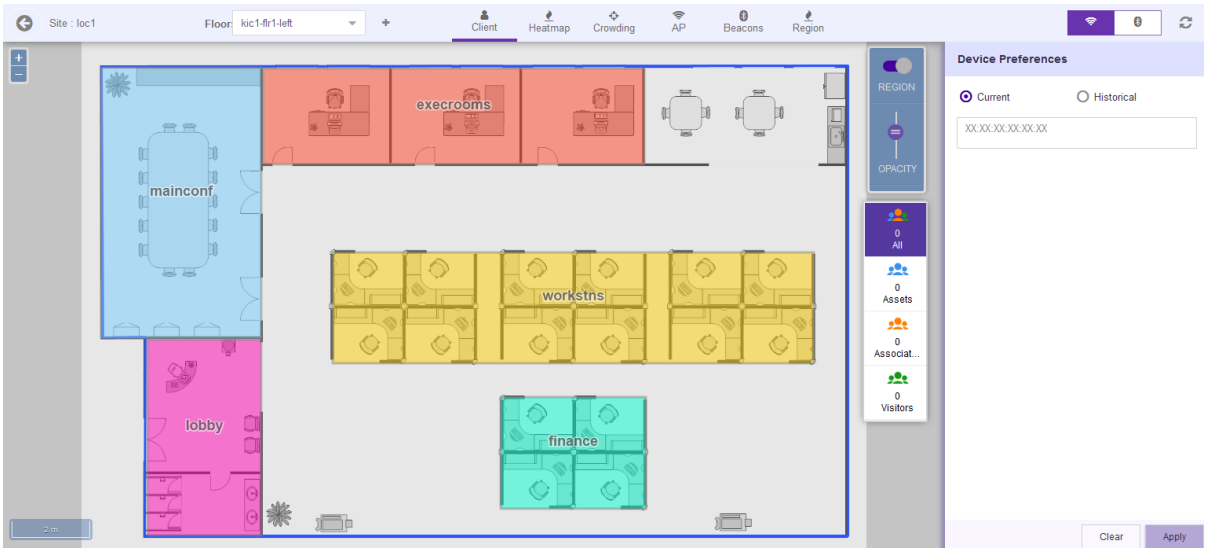
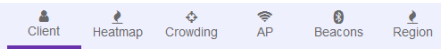


Figure 84: Floor Map

4 Select from the  toolbar.

The Crowding Events screen displays.

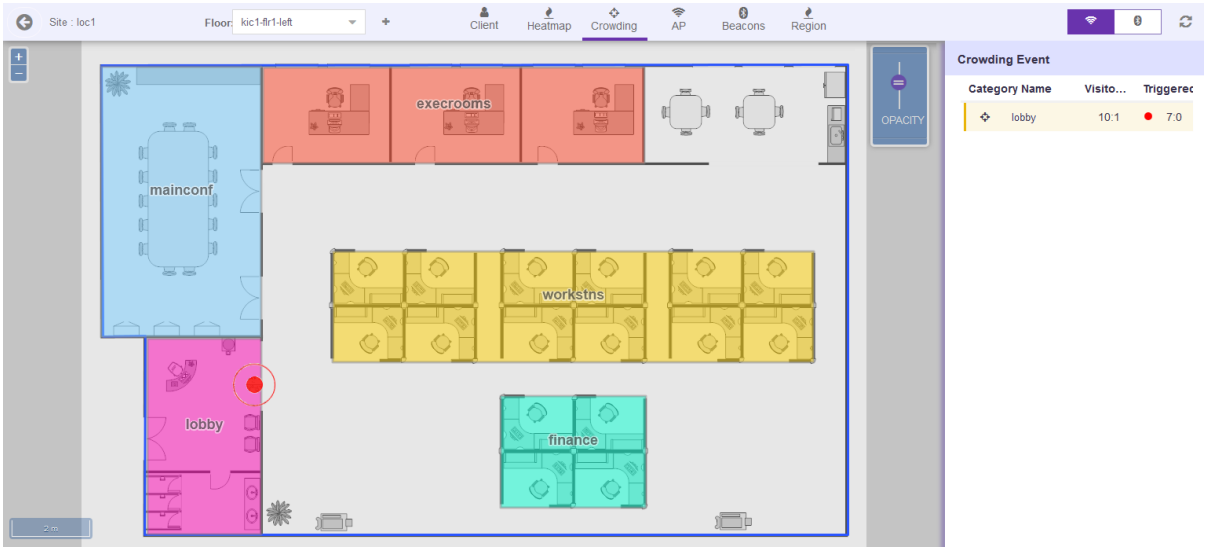


Figure 85: Crowding Events on Floor

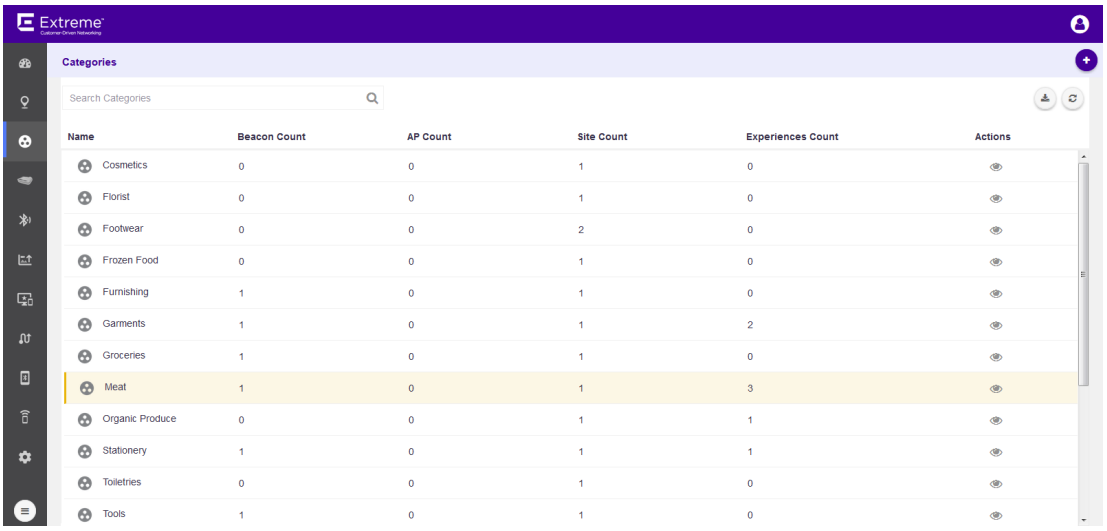
5 Use The icon located to the top right of the screen to switch between viewing crowding events for visitors (classified as Assets, Associates, and Visitors) and App Users. Select icon to select crowding events for visitors and use the icon to select crowding events for App Users.

The screen immediately refreshes to display the appropriate details.

5 Categories

Create a Category
Editing a Category

In ExtremeLocation, a Category is defined as a logical region on a floor on which you can run analytics and user engagement activities. Use the icon to view the **Category** screen.



The **Category** screen displays the following information:

Field	Description
Name	Displays the name of the category.
Beacon Count	Displays the number of beacons to which this category is assigned.
AP Count	Displays the number of Access Points to which this category is assigned.
Site Count	Displays the number of sites that have used this category.
Experiences Count	Displays the number of Experiences that have been created for this category.
Actions	Lists the actions that can be performed on this category entry. Select the icon to view this Category's details.

Use the icon to add a new Category. Periodically use the button to refresh this screen manually.

Use the icon to download the categories listed in this screen in a *.csv* file.

Note

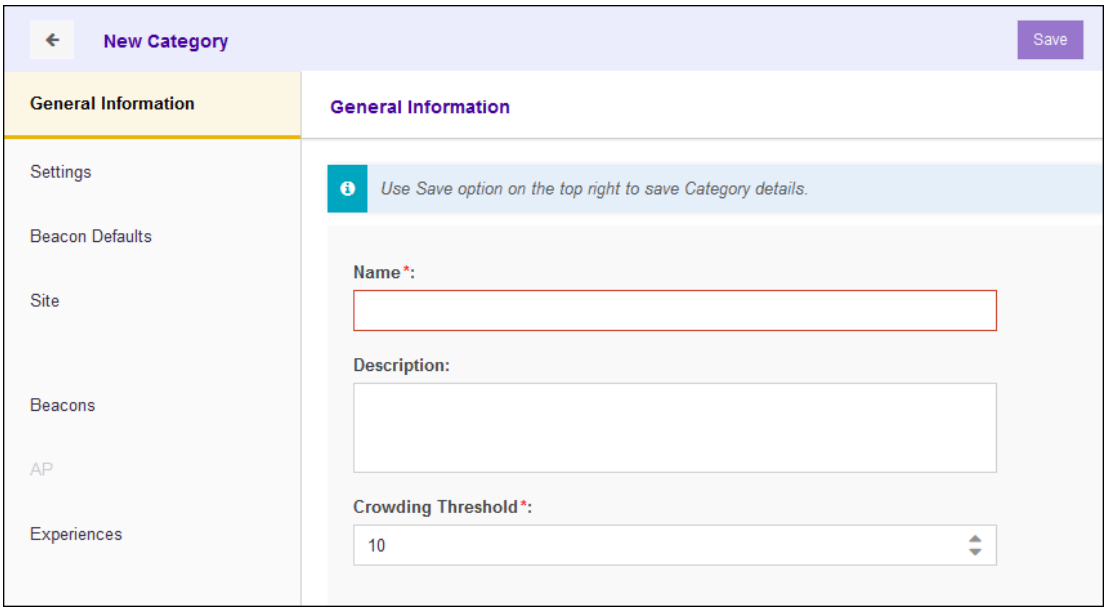
You can add a beacon to this category through the *ExtremeLocation Beacons* App. This app is only available on Apple™ App Store. For more information on how to add beacons to your category, see *ExtremeLocation Beacon Onboarding Guide*. This guide can be downloaded from the Extreme Networks Documentation Site.

Create a Category

To create a new category:

1 Use the icon to add a new category.

A new Category is created and the following screen displays.



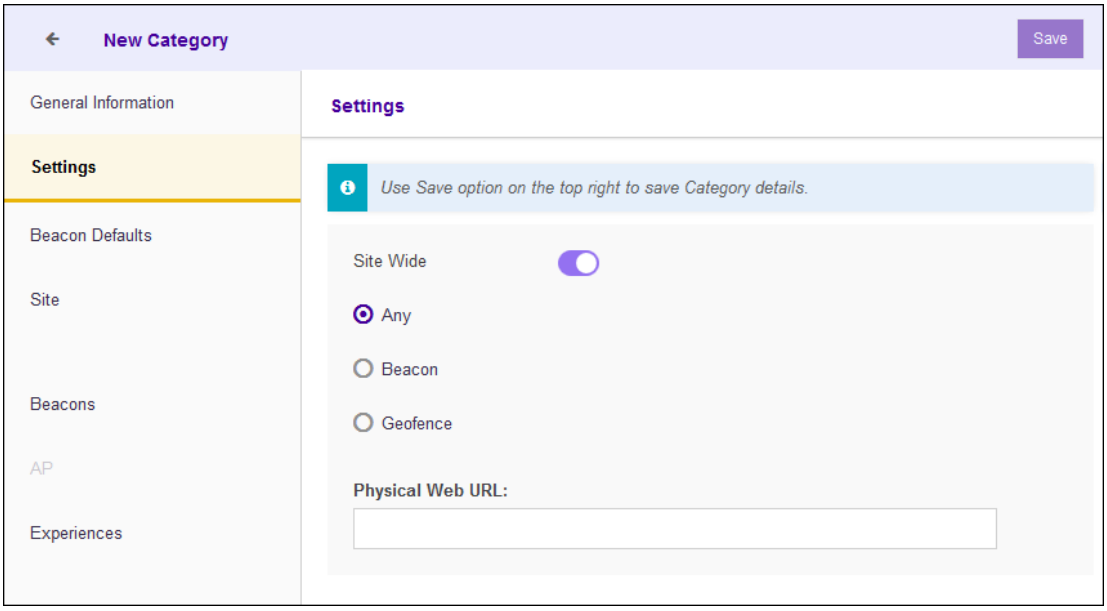
Enter the following information for the new Category:

Field	Description
Name	Enter a name for this category. The name should be such that it identifies the category among other similar ones.
Description	Enter a brief description about this category. Use this space to provide more information about this category.
Crowding Threshold	Use this spinner to set the crowding threshold for this category. When this threshold exceeds, a crowding event is generated for this category. A crowding event is generated when the ratio of the number of visitors to the number of associates assigned to this category exceeds this threshold.

2 Select the **Save** button to save the changes made to the General Information screen. At any time, select the **Cancel** button to exit without creating the Category.

3 Select the **Settings** menu item.

The Settings screen displays.



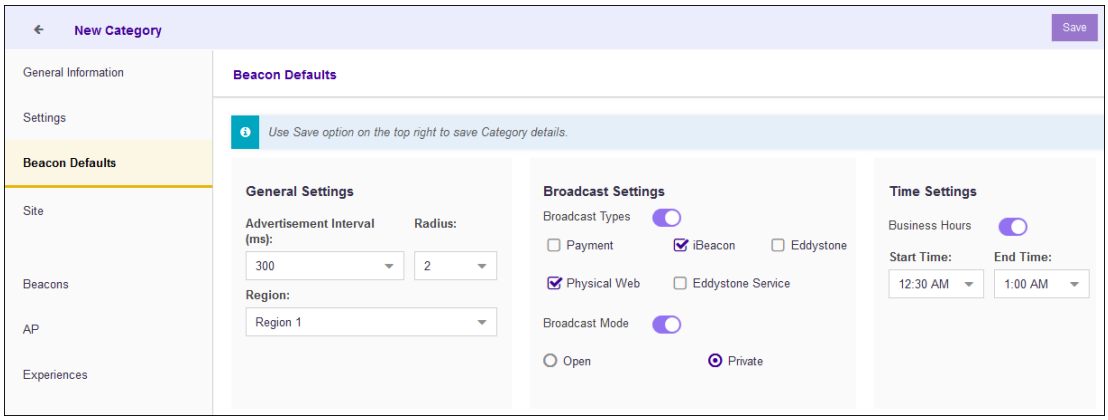
Select the icon to update the Category's settings. Configure the following:

Field	Description
Site Wide	Select this switch to enable the Category to be marked as *`Sitewide`*. When marked as *Site Wide*, any Experience that is attached to this category is triggered when a user's device sees any beacon at the site or if the device is within the Geofence boundary set for this site. Use the following values to control when the experience is triggered. • All - When this option is selected, the Experience will be triggered if the visitor device sees a beacon or is inside the Geofence for the site. • Beacon - When this option is selected, the Experience is only triggered when the visitor device sees a beacon assigned to this site. • Geofence - When this option is selected, the Experience is only triggered when the visitor device is within the marked Geofence boundaries of this site.
Physical Web URL	Use this field to configure a Web URL. Any beacon associated with this Category that is broadcasting with the *`Physical Web`* mode will re-direct the visitor to this external Web URL when it enters this Category.

4 Select the **Save** button to save the changes made to the Settings screen.

5 Select the **Beacon Defaults** menu item

The Beacon Default screen displays.



Select the icon to update this Category's **Beacon Defaults** configuration. Configure the following:

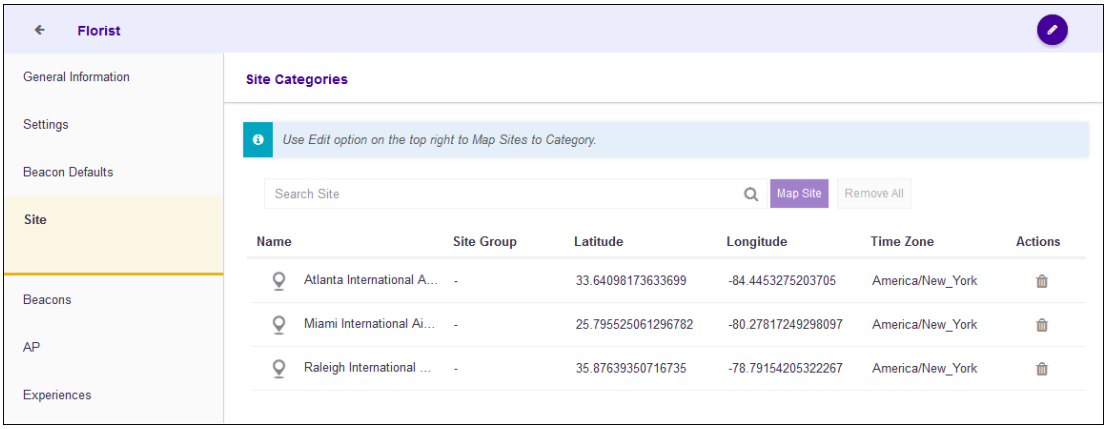
Field	Description
Advertisement Interval (ms)	Set the duration in milliseconds between two consecutive beacon broadcasts.
Radius	This value configures the strength of the beacon's broadcast. Use the spinner to set the strength in the range 1-8 where 8 is the strongest signal with maximum broadcast range.
Region	The ExtremeLocation solutions configures twelve (12) unique regions for identifying beacons. Each beacon must be assigned one of these twelve regions. This unique value is used to facilitate the identification of a beacon within multiple Categories that are next to each other. Use the drop-down list to select an appropriate region for the category.
Beacon Types	Use this switch to configure the beacon's broadcast types. Select the broadcast types from the following options: • Payment - Select this option to indicate that this broadcast will be of this type. When selected, the **Broadcast Mode** will automatically be set to *Private*. • iBeacon - iBeacon is Apple™ proprietary beacon format. Select this option to indicate the beacon broadcasts in the iBeacon format. • Eddystone - Eddystone is Google™ proprietary beacon format. Select this option to indicate the beacon broadcasts in the Eddystone format. • Physical Web - Select this option to indicate that the user is to be redirected to a configured Web URL when the beacon is heard by the visitor device. • Eddystone Service - Eddystone Service is Google™ proprietary beacon format. Select this option to indicate the beacon broadcasts in the Eddystone format.
Broadcast Mode	ExtremeLocation supports two broadcast formats. When this value is set to *Open*, the beacon broadcasts do not rotate the unique identifiers used while broadcasting. When set to *Private*, the unique identifiers for the beacons rotate periodically.

Field	Description
Business Hours	Use this switch to set conditions where the beacons broadcast only during specific times during the day. Use this option to conserve and extend the beacon's battery life. When not enabled, the beacons broadcast continually.
Start Time	Use the drop-down list to select the time when the beacon starts broadcasting in the calendar day.
End Time	Use the drop-down list to select the time when the beacon stops broadcasting in the calendar day. You can select hours in increments of 30 minutes.

6 Select the **Save** button to save the changes made to the Beacon Defaults screen.

7 Select the **Site** menu item.

The Site Categories screen displays.



The following information is displayed:

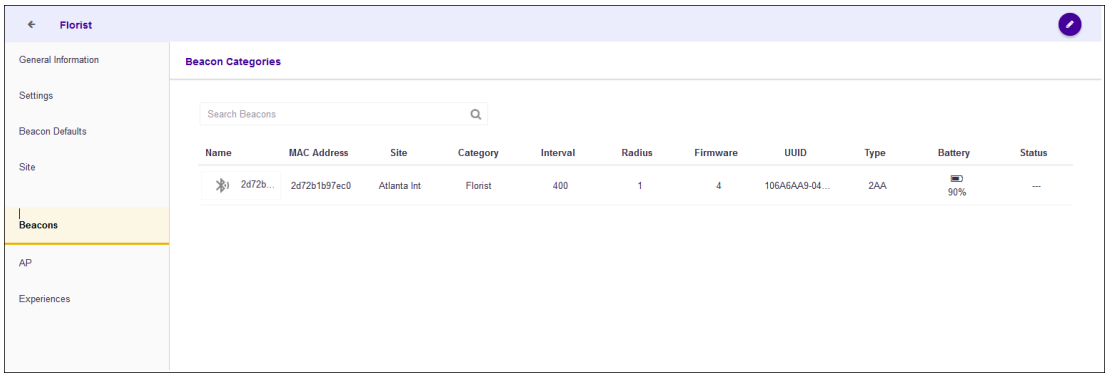
Field	Description
Name	Displays the name of the site attached to this category.
Site Group	If the site is associated with a site group, then that site group name or names are listed in this field.
Latitude	Displays the latitude of the physical location of this site.
Longitude	Displays the longitude of the physical location of this site.
Time Zone	Displays the local time zone at this site.
Actions	Lists the actions that can be performed on this site. Use the icon to delete this site's association with this category. The site itself is not deleted.

Select the icon to update this Category's associations with Sites. Use the **Map Site** button to map sites to this category.

8 Select the **Save** button to save the changes made to the Sites screen.

9 Select the **Beacons** menu item.

The Beacon Categories screen displays.



The following information is displayed:

Field	Description
Name	Displays the name assigned to this beacon.
MAC Address	Displays the MAC address of this beacon.
Site	Displays the name of the site where this beacon is deployed
Category	Displays the name of the category to which this beacon is associated.
Interval	Displays the configured beacon broadcast interval for this beacon.
Radius	Displays the Radius value for this beacon. This indicates the broadcast strength of the beacon.
Firmware	Displays the Firmware version supported by the beacon.
UUID	Displays the unique UUID assigned to this beacon.
Type	Displays the type of beacon.
Battery	Displays the remaining battery life of this beacon.
Status	Displays the status of the beacon.

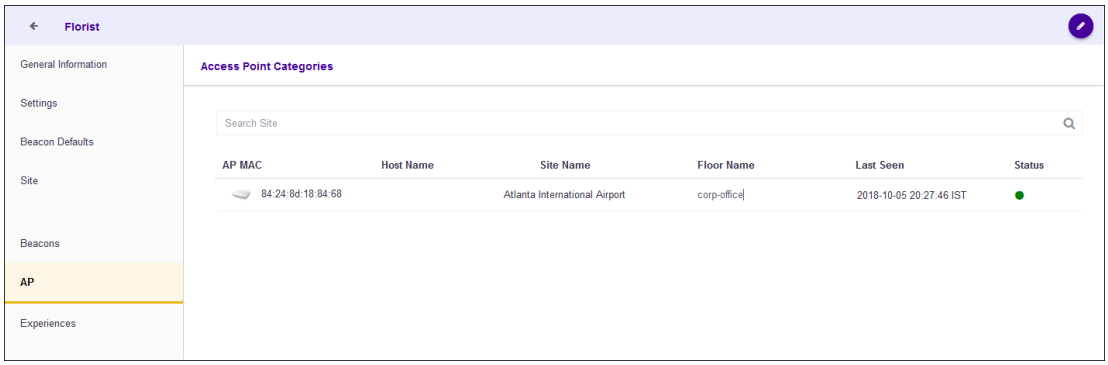
Note

You cannot add or modify beacons using this screen.

To know more about adding or modifying beacons, see the topic Beacons on page 135.

10 Select the **AP** menu item.

The **Access Point Categories** screen displays.



The following information is displayed.

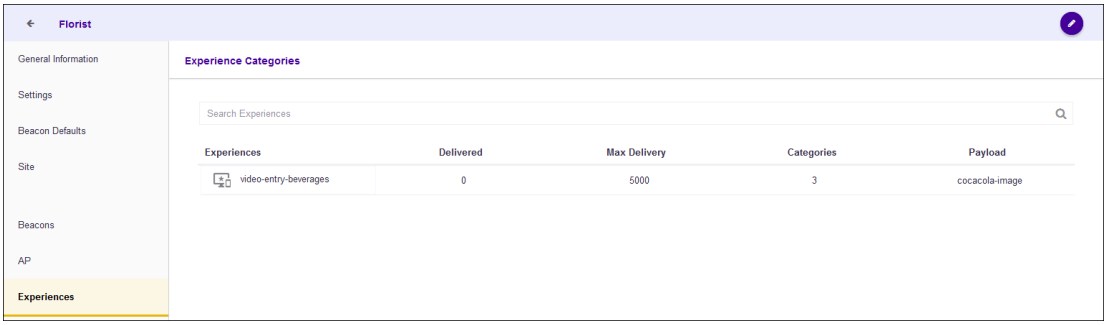
Field	Description
AP MAC	Displays the MAC address of this Access Point.
Host Name	Displays the host name assigned to this Access Point. If the host name is not assigned, shows a blank entry.
Site Name	Displays the name of the site where this Access Point is deployed.
Floor Name	Displays the name of the floor where this Access Point is deployed.
Last Seen	Displays the timestamp when this Access Point was last seen by ExtremeLocation system.
Status	This field provides a visual indication about the Access Point. A Green dot indicates that the Access Point is active.

Note

You cannot add or modify Access Points using this screen.

11 Select the **Experiences** menu item.

The **Experience Categories** screen displays.



The following information is displayed.

Field	Description
Experiences	Displays the name of the Experience assigned to this Category.
Delivered	Displays the number of times this Experience has been delivered when assigned to this Category
Max Delivery	Displays the maximum number of times that this Experience can be delivered by this Category. Once this number of Experiences have been delivered by this Category, this Category stops delivering the Experience.

Field	Description
Categories	Displays the number of Categories that have been assigned this Experience.
Payload	Displays the name of the Payload assigned to this Experience.

Note

You cannot add or modify Experiences using this screen.

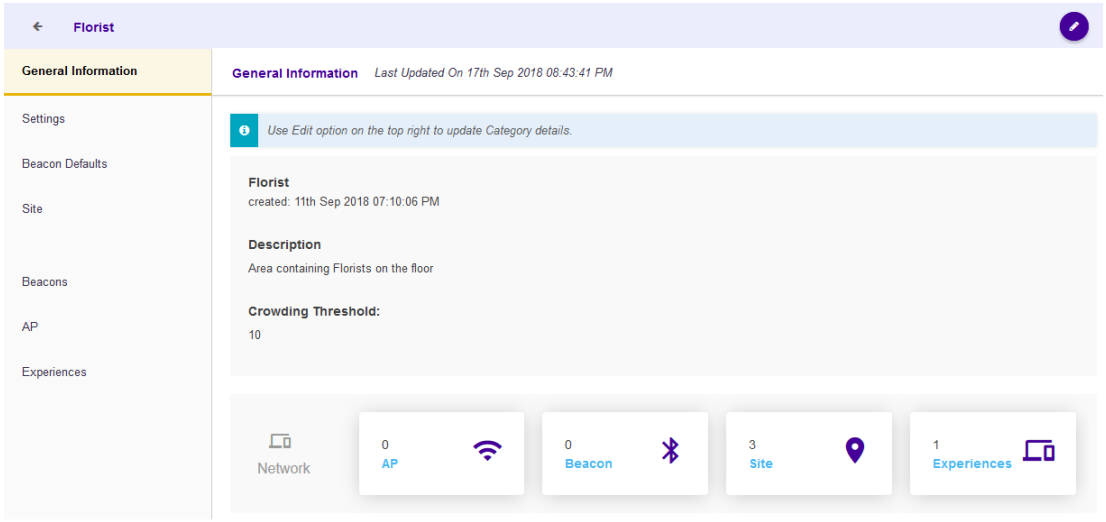
To know about adding or modifying Experiences, see the topic Experiences on page 152.

Editing a Category

To edit a Category:

1. Select the icon to view the **Category** screen.

   The Category's **General Information** screen displays.



2 Select the icon to edit this Category.

The **General Information** screen reloads.

Note

For a Category, you can modify the following parameters:

- General Information
- Settings
- Beacon Defaults
- Site

You cannot modify the following parameters. They can only be modified from their respective screens.

- Beacons
- AP
- Experiences

For more information on to editing these parameters, see the topic Create a Category on page 103

6 Access Points

Access Point Status
Access Point Virtual Beacons

The **Access Points** screen displays a list of all access points used or available for use with in the ExtremeLocation account. Access point information can be filtered based on search criteria to display only those access points of interest.

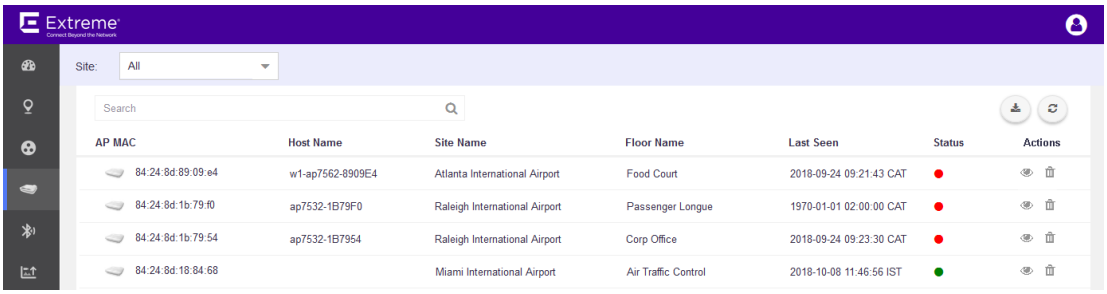
By default, this screen displays live status for access points in the selected site or for all sites configured for this ExtremeLocation account.

You can use the **Access Points** screen to configure any access point that has bluetooth radio as a BLE beacon. For more information see Access Point Virtual Beacons on page 112

Access Point Status

The **Access Points** screen displays live status for all access point deployed in the selected site. By default the status of all access points (deployed or yet to be deployed) for all the sites managed by this ExtremeLocation account is displayed.

1 Select the icon from the menu on the left.
The **Access Points** screen displays.



2 Select a site from the **Site** drop-down list.
The screen refreshes to display the access point status for the selected site.

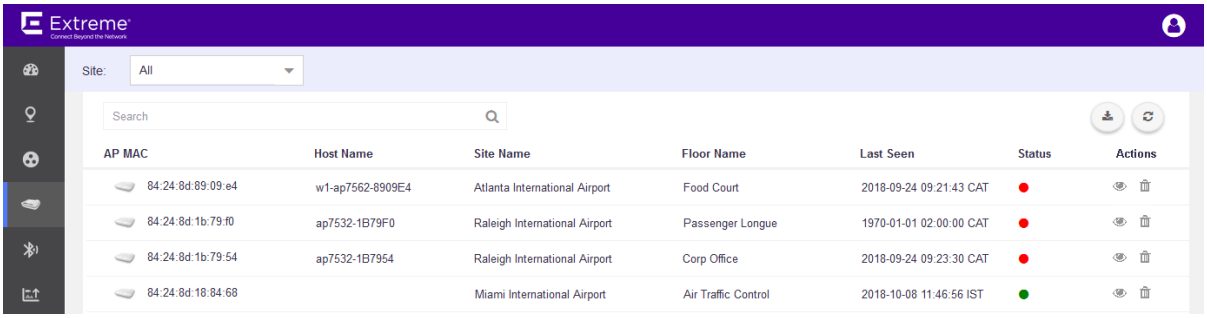


Figure 86: Access Point Status for a Site

3 Review the data displayed on this screen to look for access points of interest.

AP MAC	This field displays the access point's MAC address.
Host Name	This field displays the host name.
Site Name	This field displays the site where the access point is deployed.
Floor Name	This field displays the floor in which the access point is deployed.
Last Seen	This field displays the time this access point was last seen.
Status	This field displays the current status of the access point. A red dot indicates that the access point is offline.
Actions	Use the icons in this column to perform specific actions on the selected access point. You can modify the access point's beacon configuration or remove its association with the selected site.

4 Use the **Search** field to filter to data of interest. Enter a search string in this field.

Search terms are not case sensitive.

The displayed data is automatically sorted based on the search string.

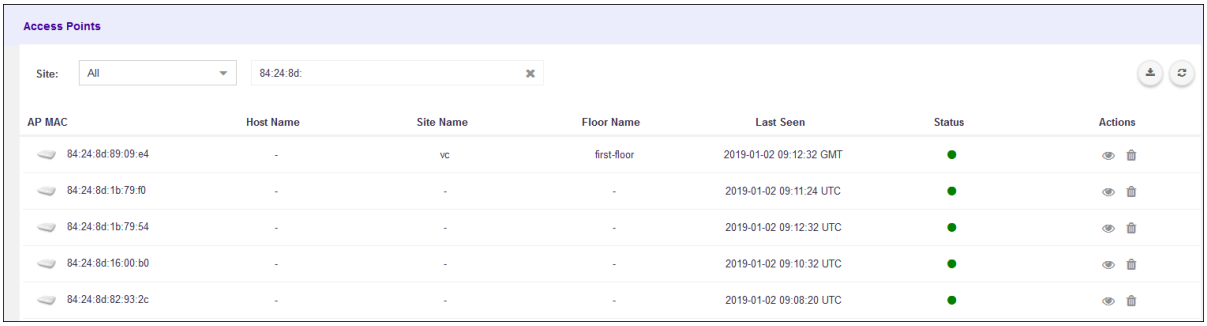


Figure 87: Search Function

5 Occasionally use button to refresh data.

The data in this screen does not refresh automatically. The screen has to be manually refreshed to view the latest data.

6 Use the button to download the list of access points to your local PC as a `.csv` (comma separated value) file.

Access Point Virtual Beacons

Use the Virtual Beacon Provisioning feature to configure access points that have Bluetooth radio to work as BLE beacons. These beacons can then be configured and used as regular BLE beacons for locationing.

The following Extreme Wireless WiNG access points support being deployed as BLE beacons:

- AP8432
- AP8533
- AP7612
- AP7632
- AP7662

- AP7602
- AP7622

The following Extreme Wireless Identify access points support being deployed as BLE beacons:

- AP3912
- AP3915
- AP3916
- AP3917

Refer to the following topics to know more about configuring the different access points.

- Extreme Networks WiNG Access Points
- Extreme Networks Access Points

Configure WiNG Access Points as BLE Beacons

Important

To configure an access point as a BLE beacon, you must have access to the selected access point's CLI or GUI interface. You need a few configuration values that are specific to the access point being configured. These values are only available through the access point's user interface and are required to complete the configuration of the WiNG access point as a BLE beacon using the ExtremeLocation web interface.

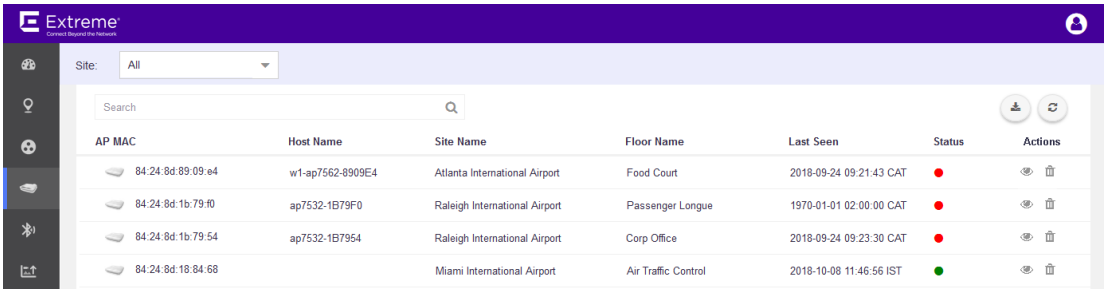
Use the Virtual Beacon Provisioning feature to configure access points that have bluetooth radio to work as BLE beacons. These beacons can then be configured and used as regular BLE beacons used for locationing.

The following Extreme Wireless WiNG access points support being deployed as BLE beacons:

- AP8432
- AP8533
- AP7612
- AP7632
- AP7662
- AP7602
- AP7622

1 Select the icon from the menu on the left.

The **Access Points** screen displays.



2 Select a site from the **Site** drop-down list.

The screen refreshes to display the access point status for the selected site.

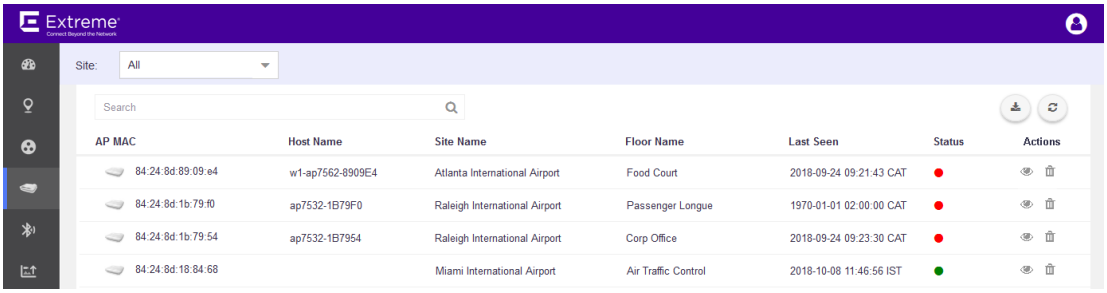
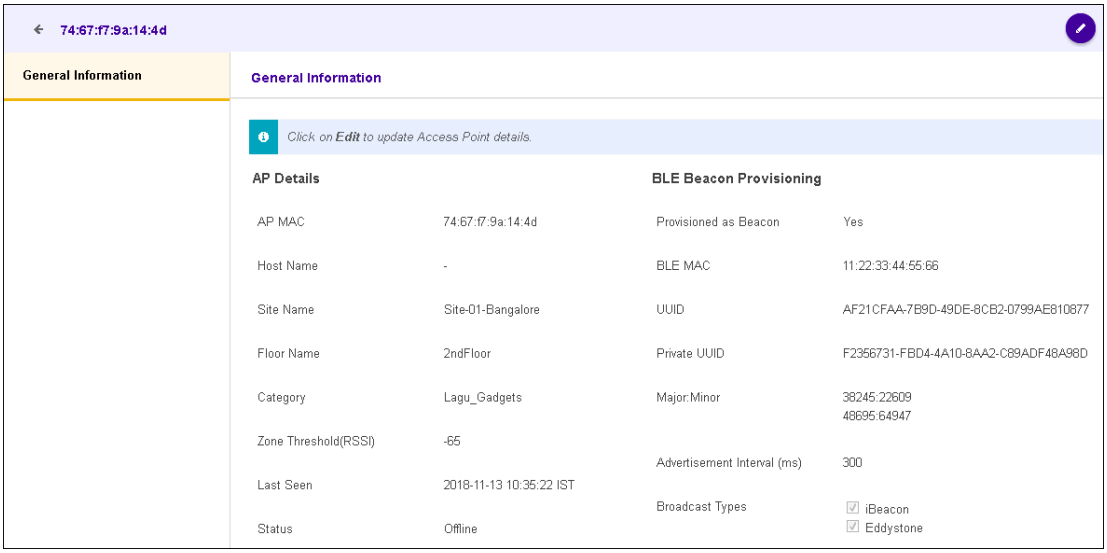


Figure 88: Access Point Status for a Site

3 Select the access point of interest and then select the icon from the **Actions** column.

The **General Information** screen for the selected access point loads.

The following screen is displayed for an access point that is already provisioned as a BLE beacon.



The **AP Details** field displays the following information.

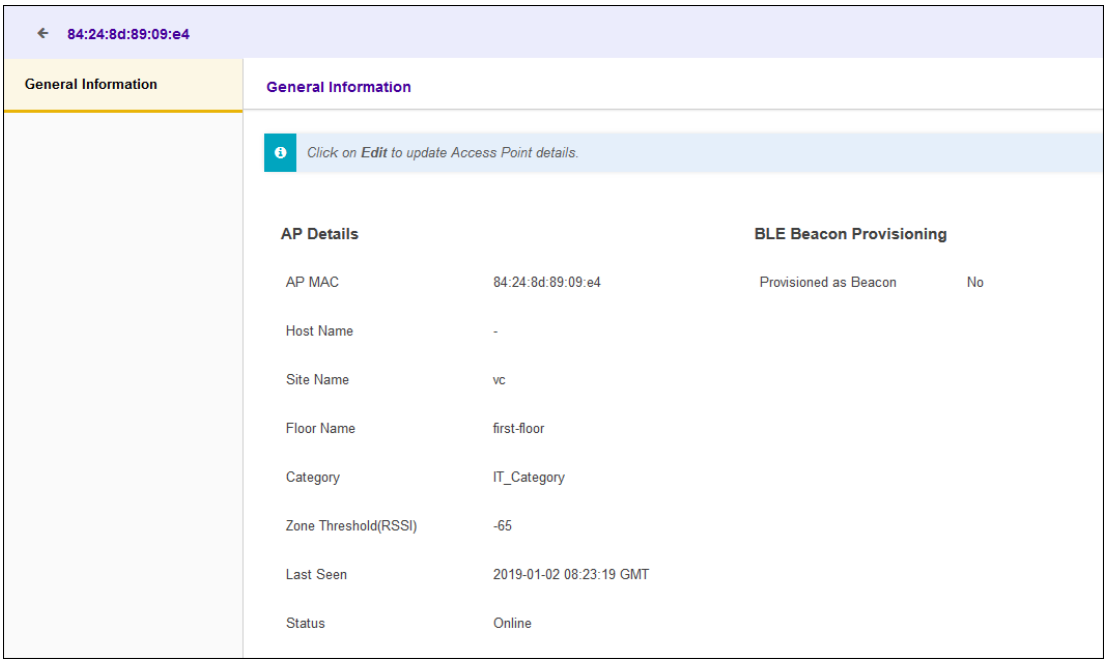
AP MAC	This field displays the access point's MAC address.
Host Name	This field displays the host name.
Site Name	This field displays the site where the access point is deployed.
Floor Name	This field displays the floor in which the access point is deployed.
Category	This field displays the category to which this access point is assigned.
Zone Threshold (RSSI)	This field displays the zone threshold value configured for this access point. This the value in dBm above which a device is classified into the category selected in the **Category** field.
Last Seen	This field displays the time this access point was last seen.

Status	This field displays the current status of the access point. A red dot indicates that the access point is offline.

When *BLE Beacon Provisioning* is enabled, the **BLE Beacon Provisioning** field displays the following information:

Provisioned as Beacon	This field indicates if this access point is provisioned as a beacon. The value *Yes* indicates that the access point is provisioned as a beacon. The value *No* indicates that the access point is yet to be provisioned as a virtual beacon.
BLE MAC	This field displays the MAC address assigned to this beacon. This is the hardware MAC address of the bluetooth radio on the access point.
UUID	UUID is an value associated with this BLE beacon. A beacon can be assigned to one UUID only. This is configured at the time of beacon provisioning and cannot be changed. This value is used internally by the ExtremeLocation system.
Private UUID	Private UUID is an unique value associated with this BLE beacon. A beacon can be assigned to one private UUID only. This is configured at the time of beacon provisioning and cannot be changed. This value is used internally by the ExtremeLocation system.
Major:Minor	This value pair is used to uniquely identify this beacon. This value is used internally by the ExtremeLocation system.
Advertisement Interval	This field displays the time duration in milliseconds between two consecutive beacon broadcast.
Broadcast Types	This field displays broadcast types supported by virtual beacons.

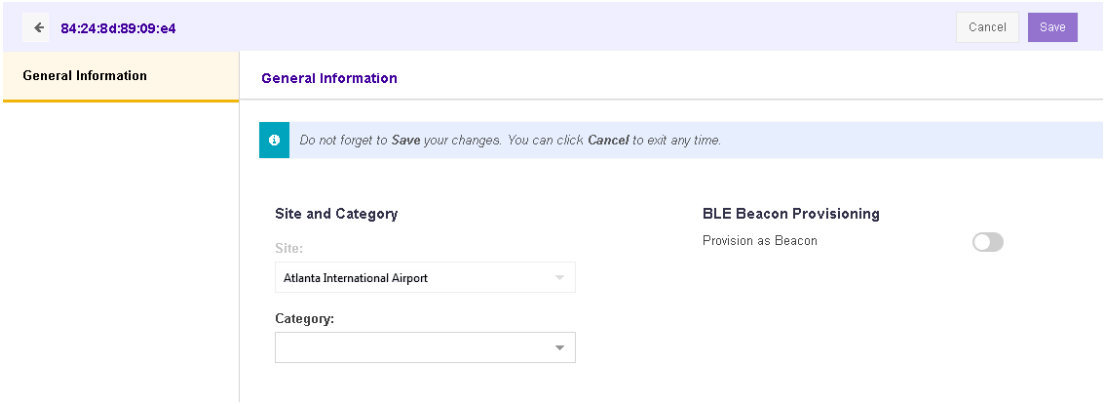
The following screen is displayed for an access point that is yet to be provisioned as a BLE beacon.



4 Select the icon located at the top right of the screen. You can only edit a beacon that is not provisioned as a BLE Beacon. The following steps are for an access point that is not provisioned.

Note
Once an access point is provisioned as a BLE Beacon, it cannot be edited.

The following screen displays:



Review the following **Site and Category** fields.

Field	Description
Site	This is a display only field. This field display a unique site identifier for this site and access point.
Category	From the drop-down list select the category to be assigned to this virtual beacon. You cannot proceed with configuring this access point as a BLE beacon without setting this value.

Review the following **Beacon Provisioning** fields.

Field	Description
Provision as Beacon	Enable this switch to switch on the Virtual Beacon feature. More options are available once this field is selected.
BLE MAC	Use this field to configure the MAC address to be assigned to this virtual beacon.
UUID	UUID is an unique value associated with this BLE beacon. A beacon can be assigned to one UUID only. From the drop-down list, select the appropriate UUID for this virtual beacon. This value is used internally by the ExtremeLocation system.

Field	Description
Advertisement Interval	Use the drop-down list to select the time duration in milliseconds between two consecutive beacon broadcast.
Broadcast Types	Use the option controls to select the broadcast type for this virtual beacon. The following beacon types are available. • iBeacon - iBeacon is Apple ™ proprietary beacon format. Select this option to indicate the beacon broadcasts in the iBeacon format. This is the default beacon type and cannot be modified. • Eddystone - Eddystone is Google™ proprietary beacon format. Select this option to indicate the beacon also broadcasts in the Eddystone format. This is an optional beacon format.

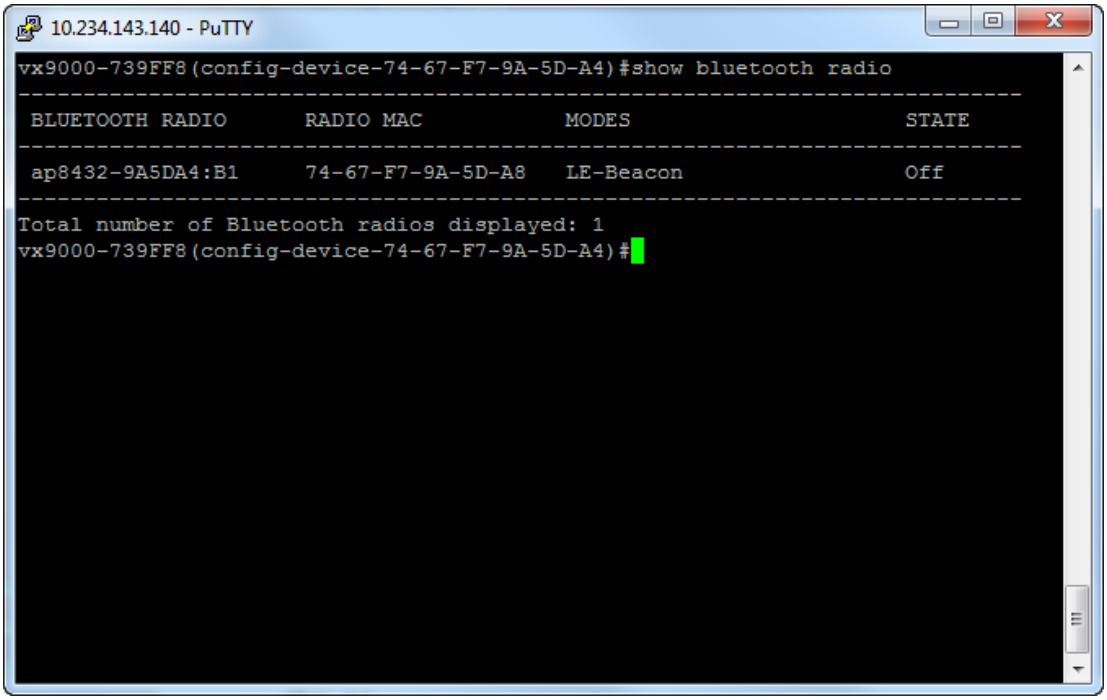
5 Copy the access point's BLE radio MAC address from either its CLI or GUI interface. Paste this value into the **BLE MAC** field.

Connect to the access point's user interface and retrieve the MAC address of its BLE radio.

Using the CLI

Navigate to the access point' device context and execute the following command:

```
show bluetooth radio
```



Copy the MAC address under the *RADIO MAC* field and paste it into the **BLE MAC** field in the ExtremeLocation **General Information** screen.

Warning

Please ensure that you are copying the BLE MAC address from the correct access point. This feature will not work when you copy the BLE MAC address from a different access point.

Using the GUI

Select **Statistics** > **<Your Access Point>** > **Bluetooth** menu items. The **Bluetooth Radio Statistics** screen displays.

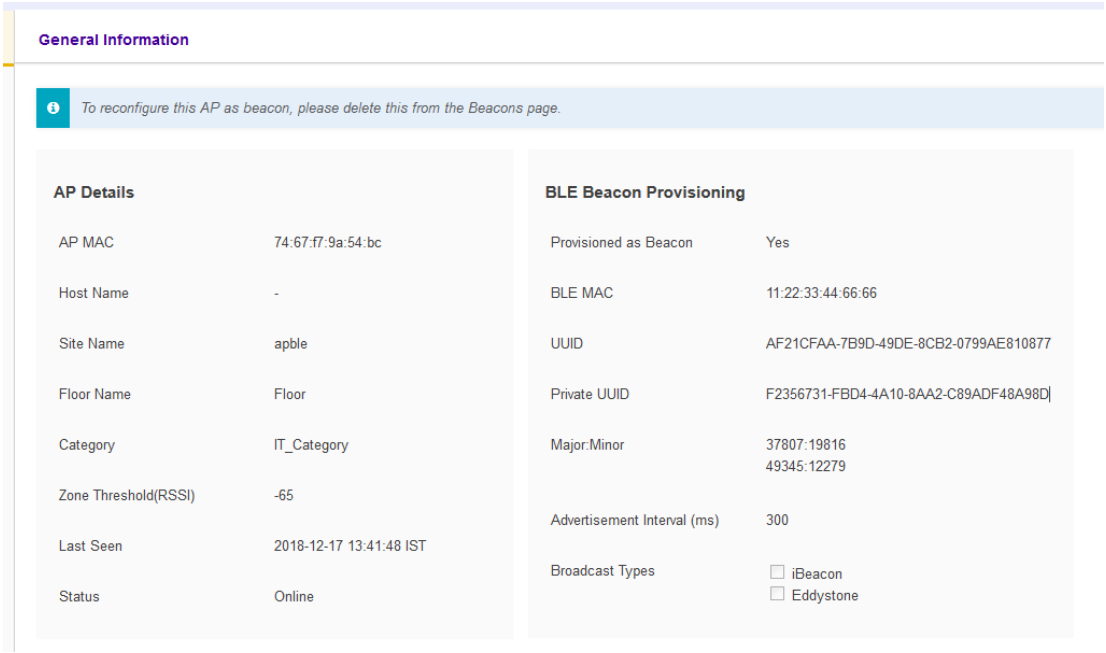
Bluetooth Radio Statistics

Name	bluetooth1
Alias	ap8432-9A5DA4:B1
Radio State	Off
Off Reason	shutdown in cfg
Radio MAC	74-67-F7-9A-5D-A8
Hostname	ap8432-9A5DA4
Device MAC	74-67-F7-9A-5D-A4
AP Location	default
Radio Mode	LE-Beacon
Beacon Period	1,000
Beacon Type	iBeacon
Last Error	

Copy the MAC address for the *RADIO MAC* field and paste it into the **BLE MAC** field in the ExtremeLocation **General Information** screen.

6 Select the **Save** button to save the Virtual Beacon configuration.

The **General Information** screen refreshes to display more BLE information.



For more information on these fields refer to the earlier steps in this topic.

Make a note of the values for the following fields. These values are required for the next step in the configuration.

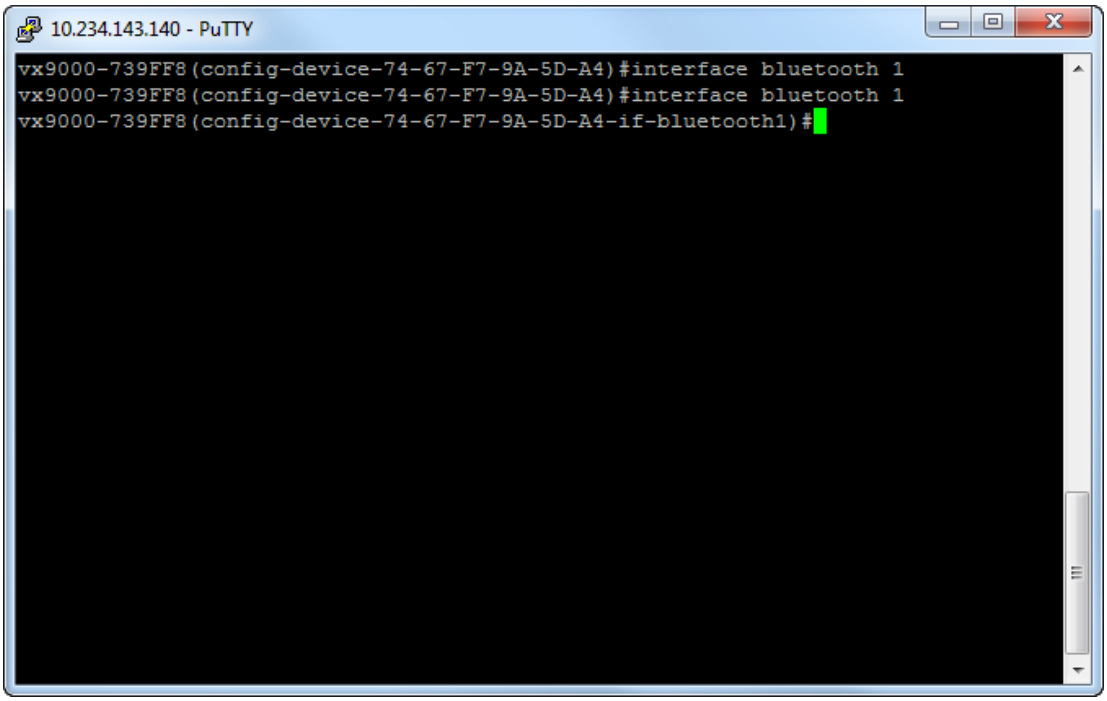
- **Private UUID**
- **Major**
- **Minor**

7 Copy the **Private UUID** value to the access point using its CLI or GUI.

Login to the access point's CLI and navigate to its *Device* context. Issue the following command to load the access point's bluetooth radio configuration menu.

```
interface bluetooth 1
```

The bluetooth interface context loads.



Note
To view more information about the bluetooth radio's state, issue the `show context` command from within the *`interface bluetooth`* context.

To configure the UUID value:

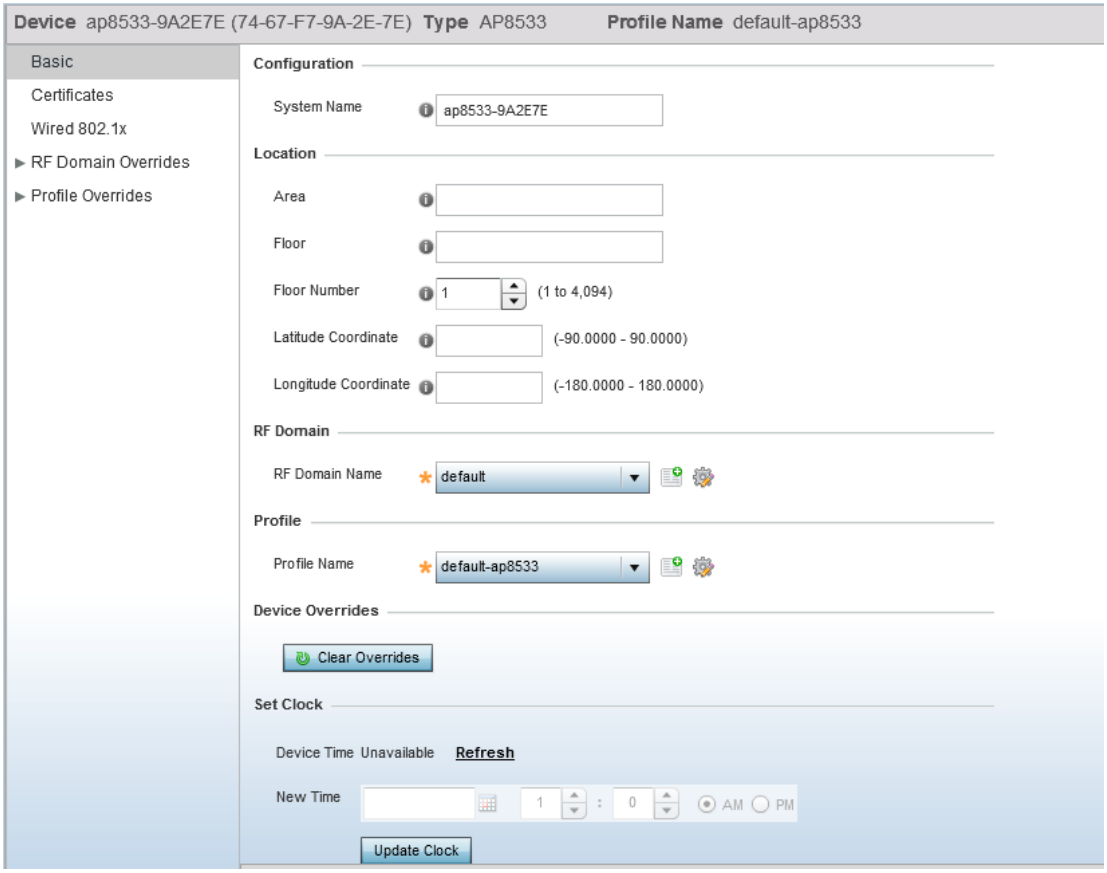
Using the CLI:

Issue the following command:

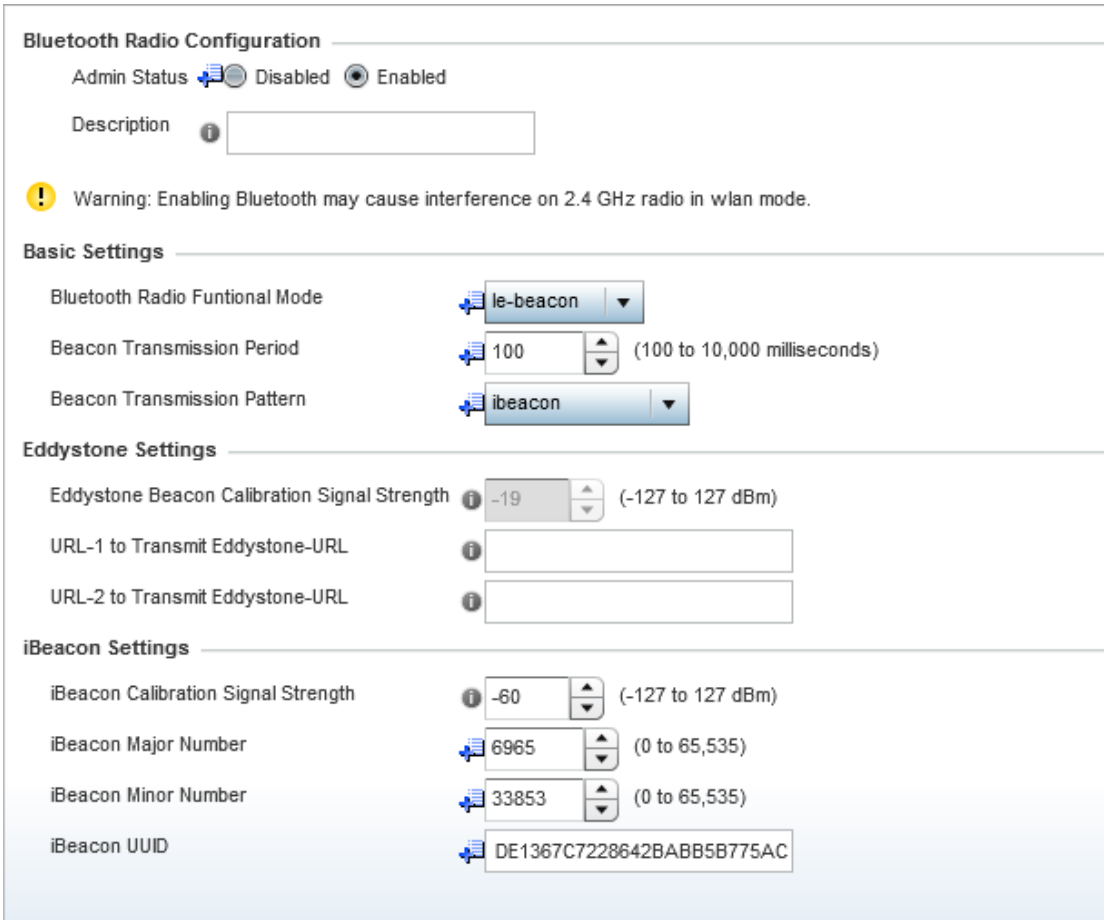
```
ibeacon uuid <UUID copied from ExtremeLocation user interface>
```

Using the GUI:

Select **Configuration** > **Devices** from the tabs on the top of the screen. Then, from the **Devices** tree (located to the bottom right of the screen), select the **AP** tab. From within the **AP** tab, select the RF-Domain where the access point is located and then select the correct access point. The selected access point's **Basic Configuration** screen loads.



Select **Profile Overrides** > **Interfaces** to expand these items. Select **Bluetooth**. The **Bluetooth Configuration** screen loads.



Paste the UUID value copied from the ExtremeLocation user interface into the **iBeacon UUID** field.

8 Copy the **Major** and **Minor** values to the access point using its CLI or GUI.

On the ExtremeLocation web interface, the access point's **General Information** screen displays two (2) *`Major:Minor`* key value pairs. You can choose to use any one of the two values displayed. However, you must ensure that you use the values from the same pair.

Using the CLI

To configure the Major and Minor values, issue the following command:

```
ibeacon major <Major value copied from ExtremeLocation user interface>

ibeacon minor <Minor value copied from ExtremeLocation user interface>
```

Using the GUI

Paste the *`Major`* value copied from the ExtremeLocation user interface into the **iBeacon Major Number** field. Similarly, paste the *`Minor`* value copied from the ExtremeLocation user interface into the **iBeacon Minor Number** field.

9 Save the changes made to the access point's configuration.

Using the CLI

Issue the following command:

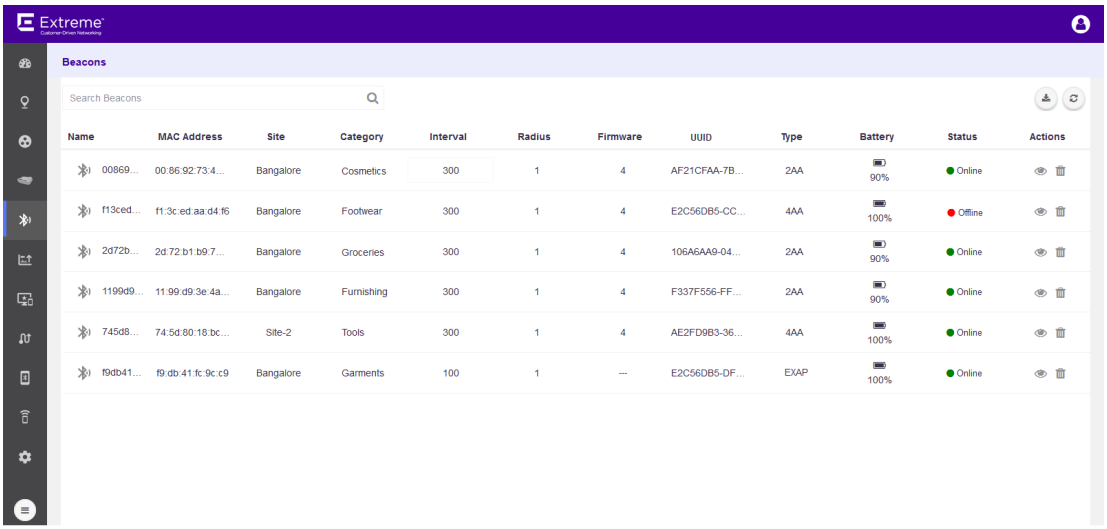
```
commit write memory
```

Using the GUI

Select the **OK** button located to the bottom right of the screen and then select the **Exit** button located next to it. To commit the changes made to the screen, select the **Commit and Save** button located to the top right of the user interface.

10 Verify if the Virtual Beacon has been added to your list of beacons. In the ExtremeLocation web interface, select the icon.

The **Beacons** screen loads.



Verify if your virtual beacon is added to this list. You can identify a virtual beacon by searching for the term *EXAP* under the **Type** column.

Configure Extreme Wireless Access Points as BLE Beacons

Important

To configure an access point as a BLE beacon, you must have access to the selected access point's CLI or GUI interface. You need a few configuration values that are specific to the access point being configured. These values are only available through the access point's user interface and are required to complete the configuration of the Extreme Networks wireless access point as a BLE beacon using the ExtremeLocation web interface.

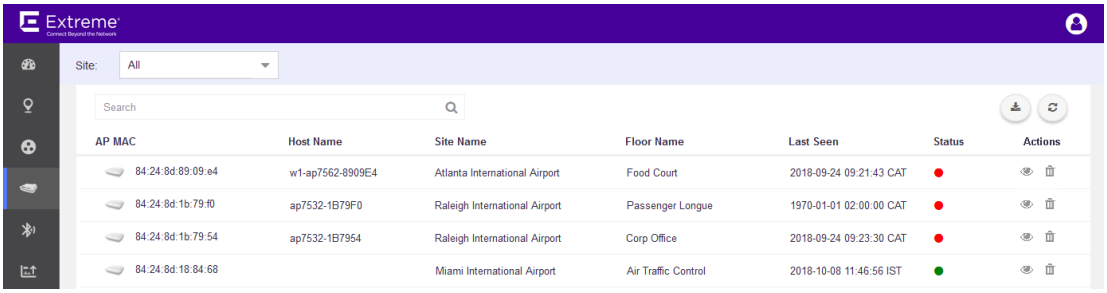
Use the Virtual Beacon Provisioning feature to configure access points that have bluetooth radio to work as BLE beacons. These beacons can then be configured and used as regular BLE beacons used for locationing.

The following Extreme Wireless Identify access points support being deployed as BLE beacons:

- AP3912
- AP3915
- AP3916
- AP3917

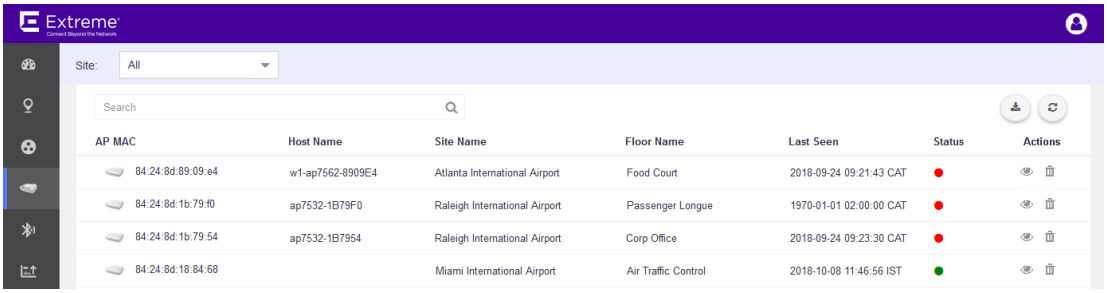
1 Select the icon from the menu on the left.

The **Access Points** screen displays.



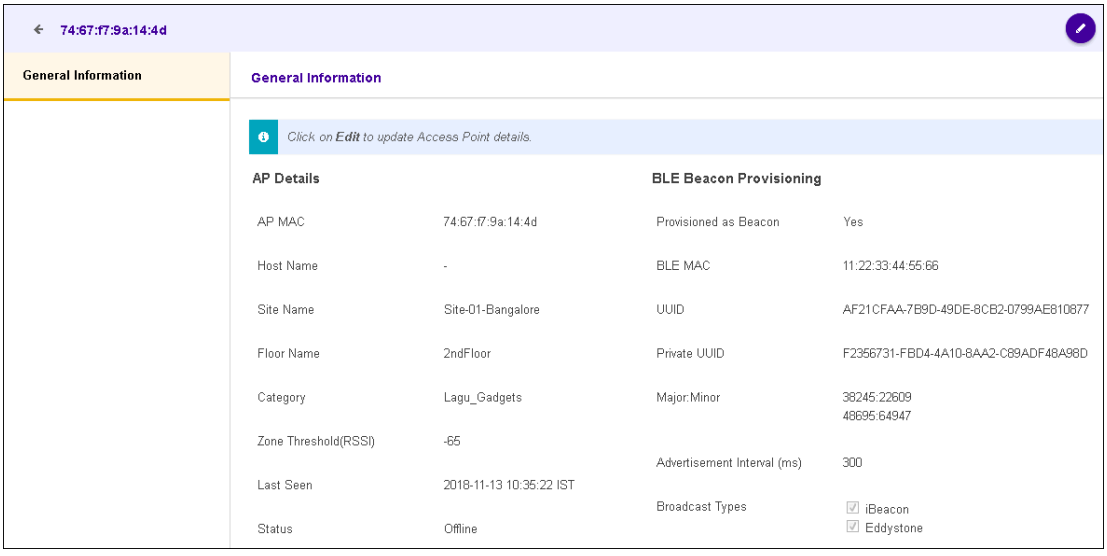
2 Select a site from the **Site** drop-down list.

The screen refreshes to display the access point status for the selected site.



3 Select the access point of interest and then select the icon from the **Actions** column.

The **General Information** screen for the selected access point loads.



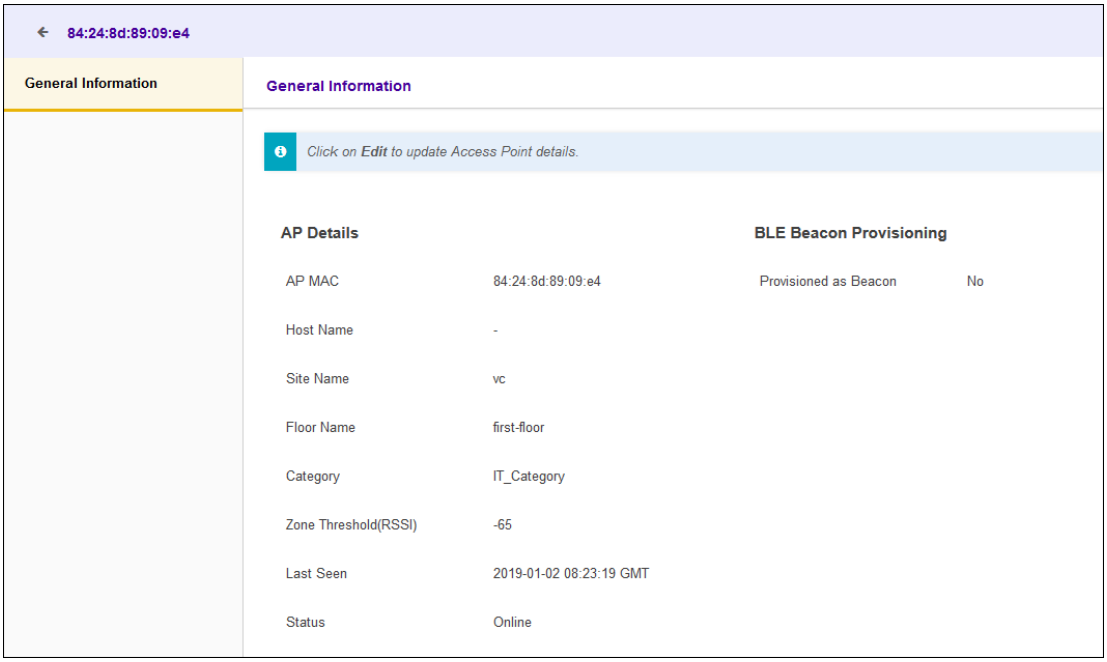
The **AP Details** field displays the following information.

AP MAC	This field displays the access point's MAC address.
Host Name	This field displays the host name.
Site Name	This field displays the site where the access point is deployed.
Floor Name	This field displays the floor in which the access point is deployed.
Category	This field displays the category to which this access point is assigned.
Zone Threshold (RSSI)	This field displays the zone threshold value configured for this access point. This the value in dBm above which a device is classified into the category selected in the **Category** field.
Last Seen	This field displays the time this access point was last seen.
Status	This field displays the current status of the access point. A red dot indicates that the access point is offline.

When *BLE Beacon Provisioning* is enabled, the **BLE Beacon Provisioning** field displays the following information:

Provisioned as Beacon	This field indicates if this access point is provisioned as a beacon. The value *Yes* indicates that the access point is provisioned as a beacon. The value *No* indicates that the access point is yet to be provisioned as a virtual beacon.
BLE MAC	This field displays the MAC address assigned to this beacon. This is the hardware MAC address of the bluetooth radio on the access point.
UUID	UUID is an value associated with this BLE beacon. A beacon can be assigned to one UUID only. This is configured at the time of beacon provisioning and cannot be changed. This value is used internally by the ExtremeLocation system.
Private UUID	Private UUID is an unique value associated with this BLE beacon. A beacon can be assigned to one private UUID only. This is configured at the time of beacon provisioning and cannot be changed. This value is used internally by the ExtremeLocation system.
Major:Minor	This value pair is used to uniquely identify this beacon. This value is used internally by the ExtremeLocation system.
Advertisement Interval	This field displays the time duration in milliseconds between two consecutive beacon broadcast.
Broadcast Types	This field displays broadcast types supported by virtual beacons.

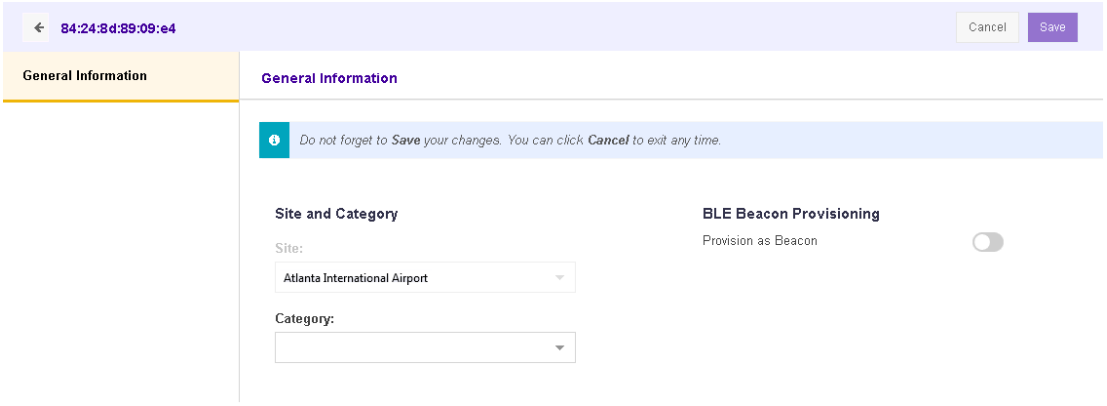
The following screen is displayed for an access point that is yet to be provisioned as a BLE beacon.



4 Select the icon located at the top right of the screen. You can only edit a beacon that is not provisioned as a BLE Beacon. The following steps are for an access point that is not provisioned.

Note
Once an access point is provisioned as a BLE Beacon, it cannot be edited.

The following screen displays:



Review the following **Site and Category** fields.

Field	Description
Site	This is a display only field. This field display a unique site identifier for this site and access point.
Category	From the drop-down list select the category to be assigned to this virtual beacon. You cannot proceed with configuring this access point as a BLE beacon without setting this value.

Review the following **Beacon Provisioning** fields.

Field	Description
Provision as Beacon	Enable this switch to switch on the Virtual Beacon feature. More options are available once this field is selected.
BLE MAC	Use this field to configure the MAC address to be assigned to this virtual beacon.
UUID	UUID is an unique value associated with this BLE beacon. A beacon can be assigned to one UUID only. From the drop-down list, select the appropriate UUID for this virtual beacon. This value is used internally by the ExtremeLocation system.
Advertisement Interval	Use the drop-down list to select the time duration in milliseconds between two consecutive beacon broadcast.
Broadcast Types	Use the option controls to select the broadcast type for this virtual beacon. The following beacon types are available. • iBeacon - iBeacon is Apple ™ proprietary beacon format. Select this option to indicate the beacon broadcasts in the iBeacon format. This is the default beacon type and cannot be modified. • Eddystone - Eddystone is Google™ proprietary beacon format. Select this option to indicate the beacon also broadcasts in the Eddystone format. This is an optional beacon format.

5 Note the Extreme Networks Wireless Identify access point's bluetooth radio MAC address.

Important

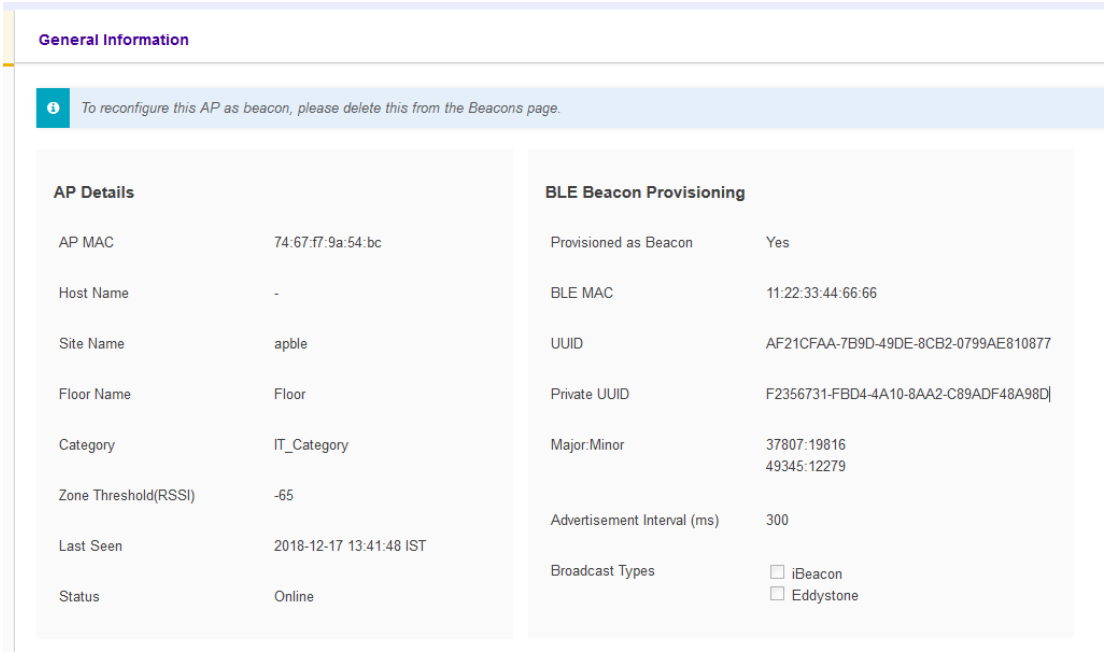
Extreme Networks Wireless Identify access point does not have any interface to retrieve the MAC address of its bluetooth radio. This MAC address can only be found at the back of the access point being configured. To complete this configuration, you should have physical access to the access point being configured.

The MAC address of the bluetooth radio can be found next to the **IoT** label as show in the above image. Make a note of this MAC address for use in the next step.

6 Enter the bluetooth radio MAC address into the **BLE MAC** field in the ExtremeLocation **General Information** screen.

7 Select the **Save** button to save the Virtual Beacon configuration.

The **General Information** screen refreshes to display more BLE information.



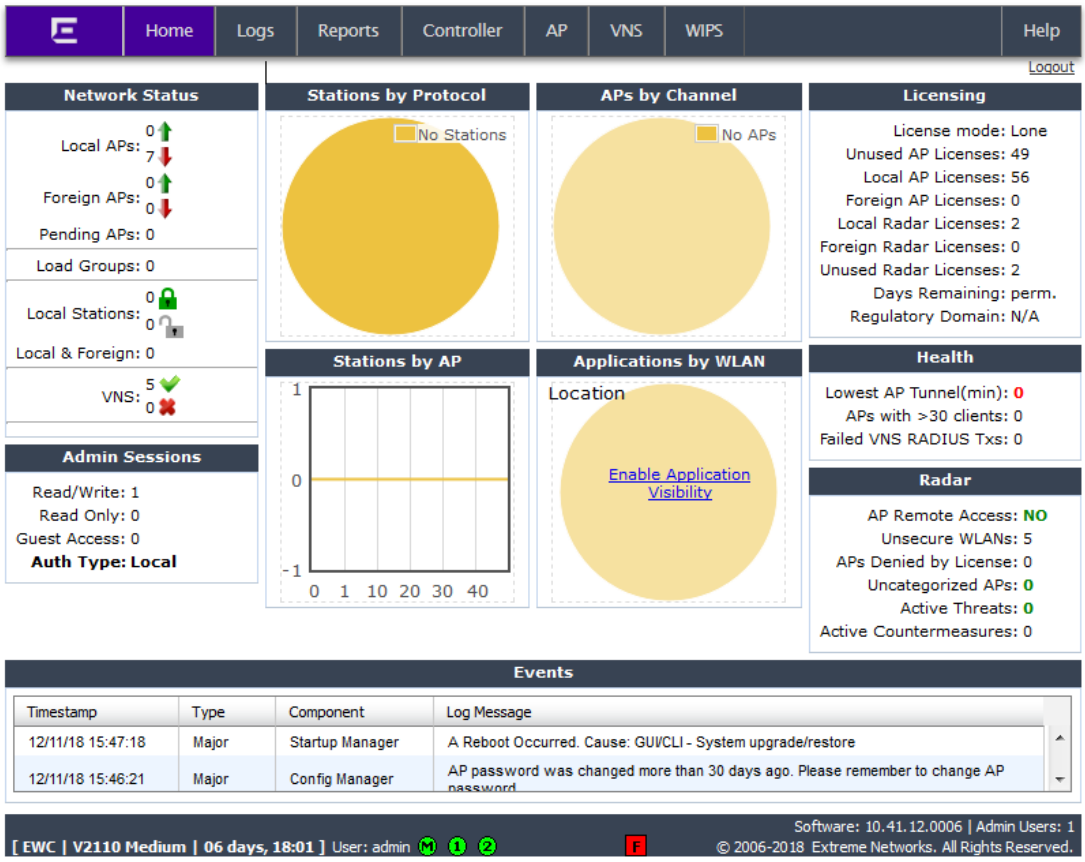
For more information on these fields refer to the earlier steps in this topic.

Make a note of the values for the following fields. These values are required for the next step in the configuration.

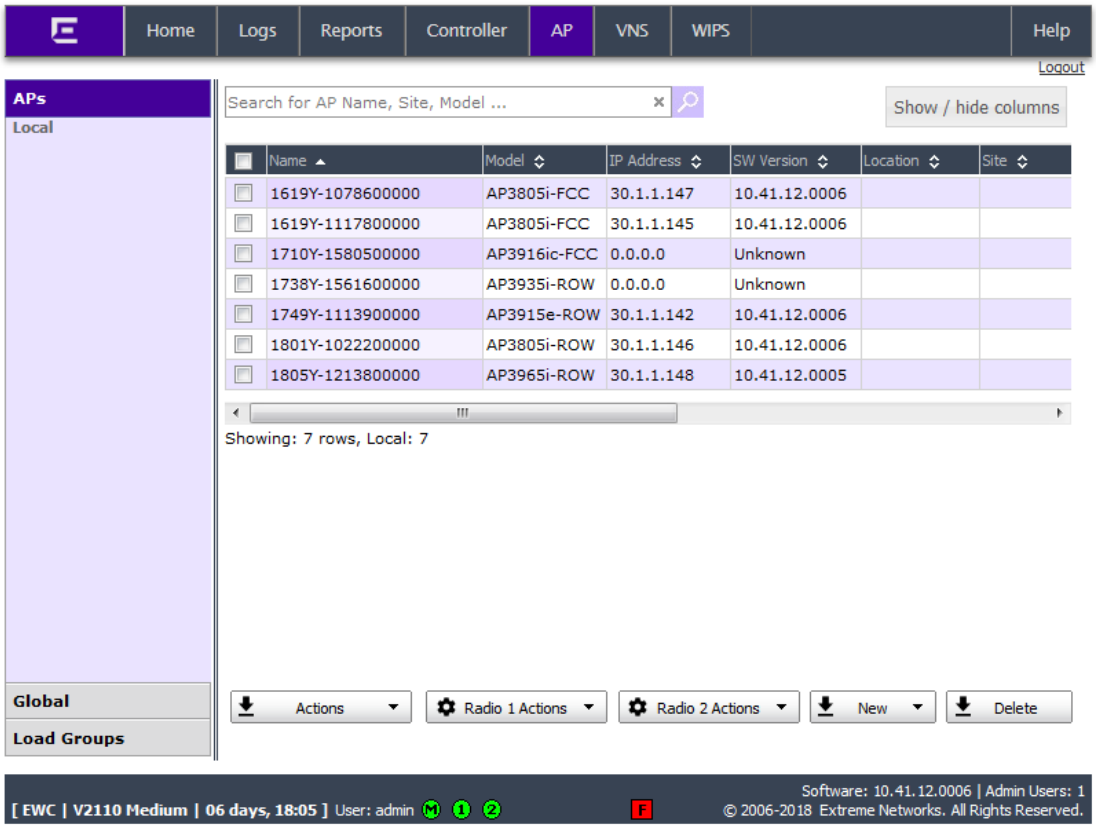
- **Private UUID**
- **Major**
- **Minor**
- **Advertisement Interval**

8 Copy the **Private UUID** value to the access point using its GUI.

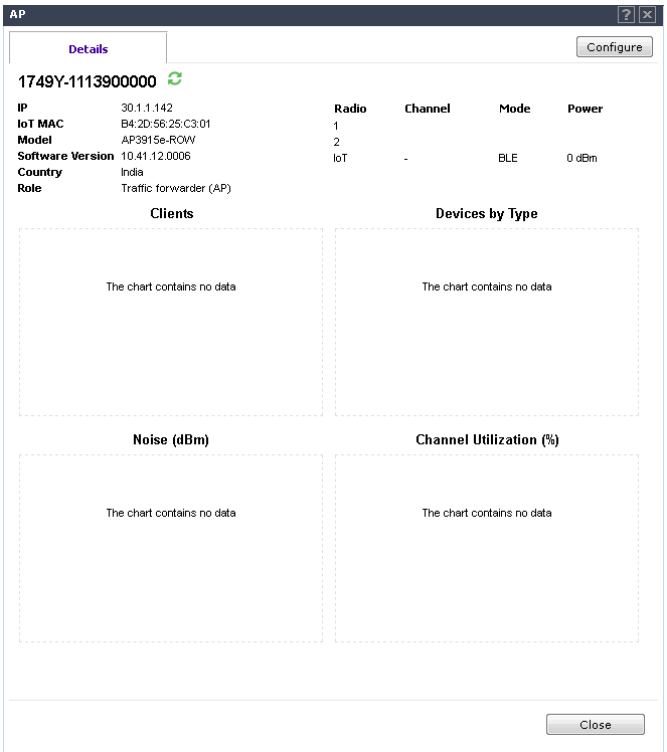
Login to the controller to which the target access point is adopted.



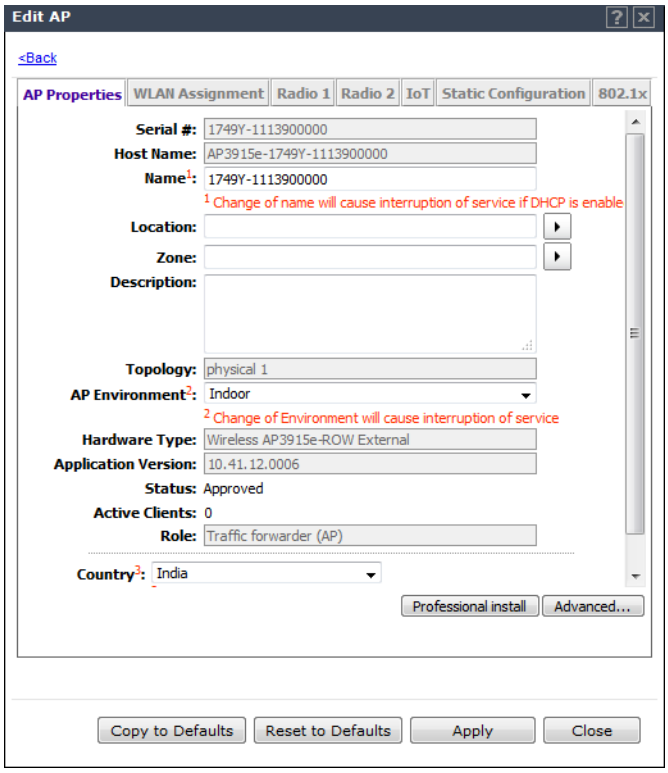
From the main screen, select the **AP** tab.



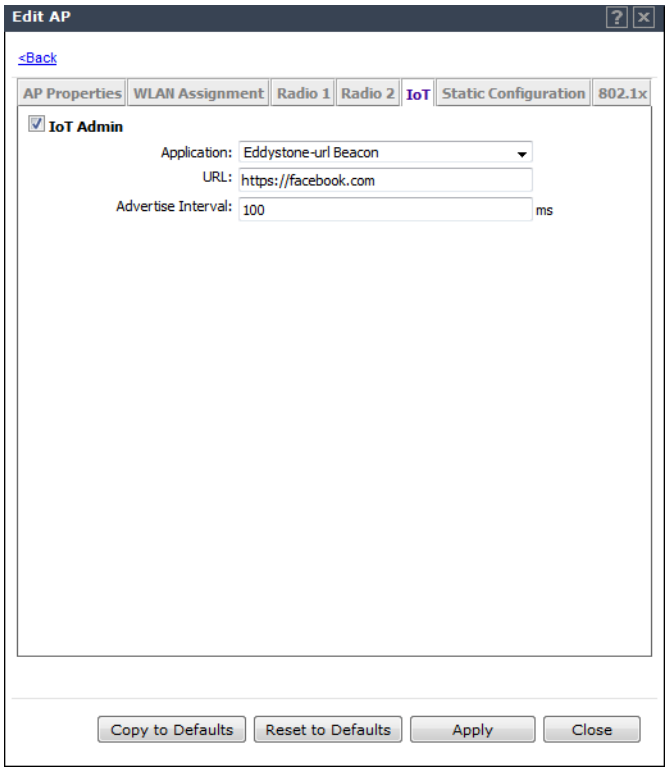
Select the access point to load its details screen.



Select the **Configure** button. The Edit AP screen loads.

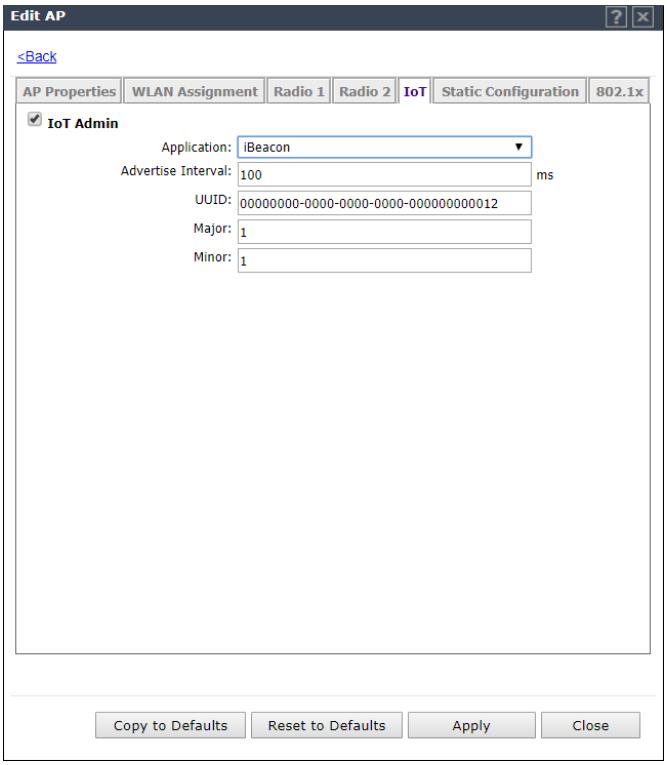


Select the **IoT** tab. The IoT configuration screen displays.



If the **Application** field is not set to *iBeacon*, select the value from the drop-down list.

The Edit AP screen refreshes to display the following:



Modify the following fields in this dialog.

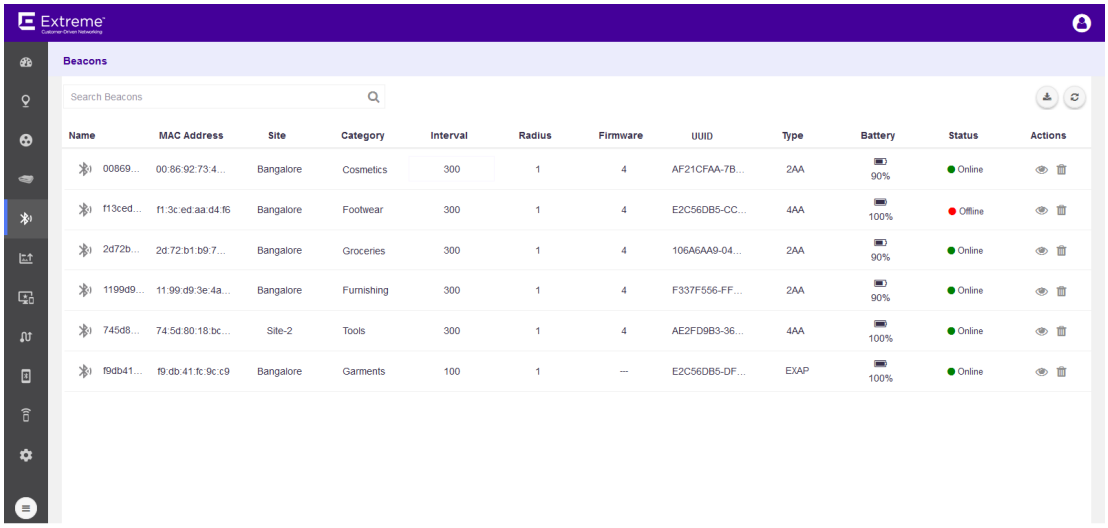
Field	Description
Advertisement Interval	Paste the **Advertisement Interval** value copied from the ExtremeLocation interface into this field.
UUID	Paste the **Private UUID** value copied from the ExtremeLocation interface into this field.
Major	Paste the Major part of the **Major:Minor** key value pair into this field.
Minor	Paste the Minor part of the **Major:Minor** key value pair into this field.

9 Select the **Apply** button to save the changes made to this dialog.

10 Select the **Close** button to close this dialog.

11 Verify if the Virtual Beacon has been added to your list of beacons. In the ExtremeLocation web interface, select the icon.

The **Beacons** screen loads.



Verify if your virtual beacon is added to this list. You can identify a virtual beacon by searching for the term *EXAP* under the **Type** column.

Delete the Virtual Beacon

Deleting a Virtual Beacon involves two steps. You must delete the virtual beacon from the Beacons screen in the ExtremeLocation web interface and then disable the bluetooth radio on the access point using its user interface (CLI or GUI).

To delete a virtual beacon from the Beacons screen, select the beacon from the list and then select the icon for the beacon. You will be prompted to confirm the deletion. On confirmation, the virtual beacon is removed from the list of available beacons.

You must then navigate to the access point's user interface (using either the GUI or the CLI) and disable the bluetooth radio. If you do not do this step, the bluetooth radio will continue beaconing till the radio is turned off or reconfigured.

7 Beacons

Edit Beacon Information

ExtremeLocation uses Bluetooth Low Energy (BLE) beacons to provide locationing services to all the sites managed by your ExtremeLocation account. Use these BLE beacons to provide location based services like targetted advertisements, offers/coupons, surveys to enhance the user's experience of your offerings. BLE beacons provide accurate locationing of about 1-3 meters (3-9 feet).

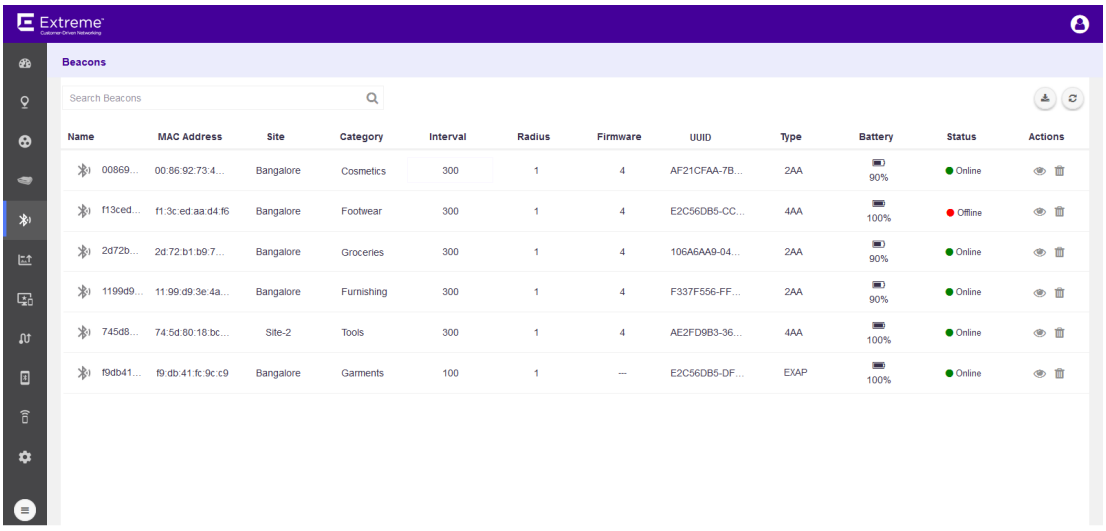
You can now provide a customized experience to each and every one of the visitors to your site by providing personalized and targetted offers and information using the location information provided by the BLE beacons installed in your sites. For example, you could:

- trigger a payload consisting an audio or video describing a product when a customer is located near the product
- trigger a payload consisting an offer/discount when a customer is located near the target product
- track your customers around the site to understand how people move through your site and use this analytics for better product placement
- create location based experiences for your customers who have visited certain product categories to guide them in making appropriate choices

The following beacons types are supported:

- 2 AA - These beacons use 2 AA size batteries.
- 4 AA - These beacons use 4 AA size batteries.
- USB - These beacons are powered through USB.

Use the icon to load the **Beacons** screen.



The **Beacons** screen displays the following information for each BLE beacon associated with this ExtremeLocation account.

Field	Description
Name	Displays the name of the BLE beacon. By default, the MAC address assigned to the BLE Beacon is used as its name. You can edit this information to provide a meaningful name for this beacon.
MAC Address	Displays the MAC Address assigned to this BLE Beacon.
Site	Displays the name of the site at which this beacon is deployed.
Category	Displays the name of the category that is assigned to this beacon. This value is configured at the time the beacon is added to the ExtremeLocation system and cannot be modified.
Interval	Displays the broadcasting interval. This value is configured at the time the beacon is added to the ExtremeLocation system and cannot be modified.
Radius	Displays the BLE beacon's broadcasting range value. This value is between 1-8 where 1 is the lowest setting. The higher this value, the higher the broadcast strength of the beacon. When adding a new beacon to this ExtremeLocation account, a default value of 2 is used.
Firmware	Displays the software firmware version in use.
UUID	Identifies the unique **UUID** value associated with this BLE beacon. A beacon can be assigned to one UUID only. This is configured at the time of beacon provisioning and cannot be changed.
Type	Displays the type of BLE beacon. ExtremeLocation beacons are available in 2 battery, 4 battery, and USB powered versions. This column indicates the beacon type.
Battery	This column displays an icon indicating the remaining battery life (in percentage).
Status	This column indicates the status of this BLE beacon. Beacons can either be active or inactive.
Actions	Use the icons in this column to perform specific actions on the selected beacon. You can edit the beacon's information or remove the beacon association with this ExtremeLocation account.

Periodically use the button to refresh this screen manually.

Use the icon to download details of the BLE beacons listed in this screen to a *.csv* file.

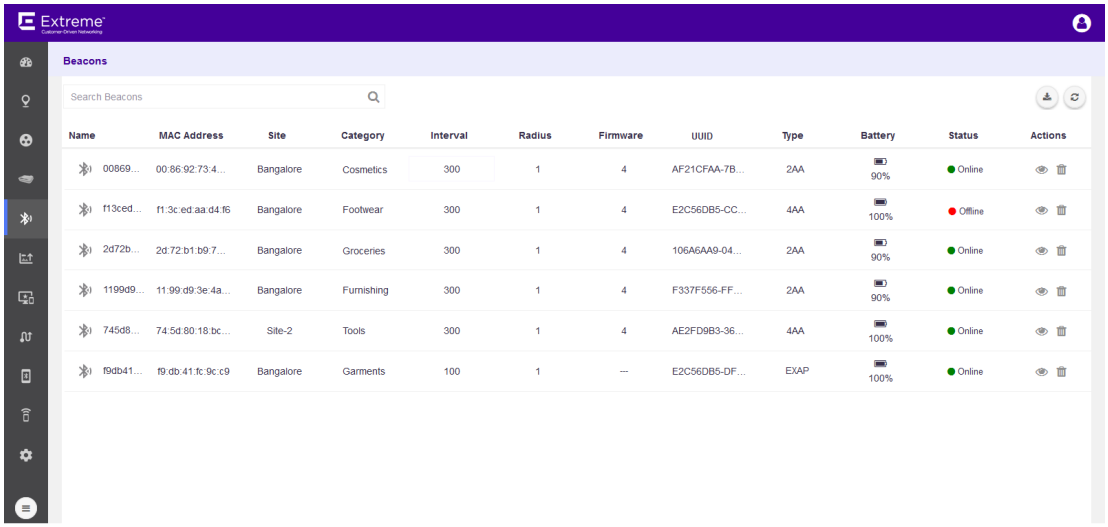
Edit Beacon Information

ExtremeLocation BLE beacons must be provisioned before they can be deployed at a site. Beacons are provisioned using the *ExtremeLocation Beacons App*. For more information on provisioning beacons, refer *ExtremeLocation Beacon Onboarding Guide*. This guide can be downloaded from Extreme Networks Documentation Site.

Once provisioned and deployed, you can only modify a few parameters for the provisioned beacon.

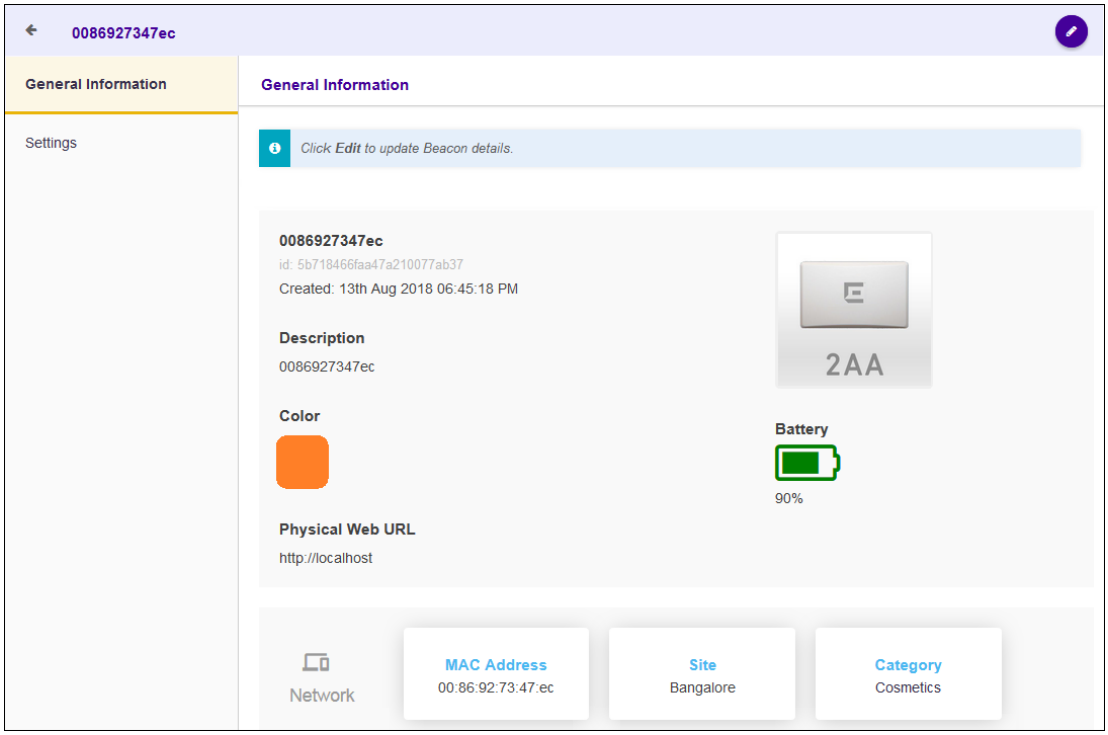
To modify a BLE beacon's information:

1 Use the icon to load the **Beacons** screen.



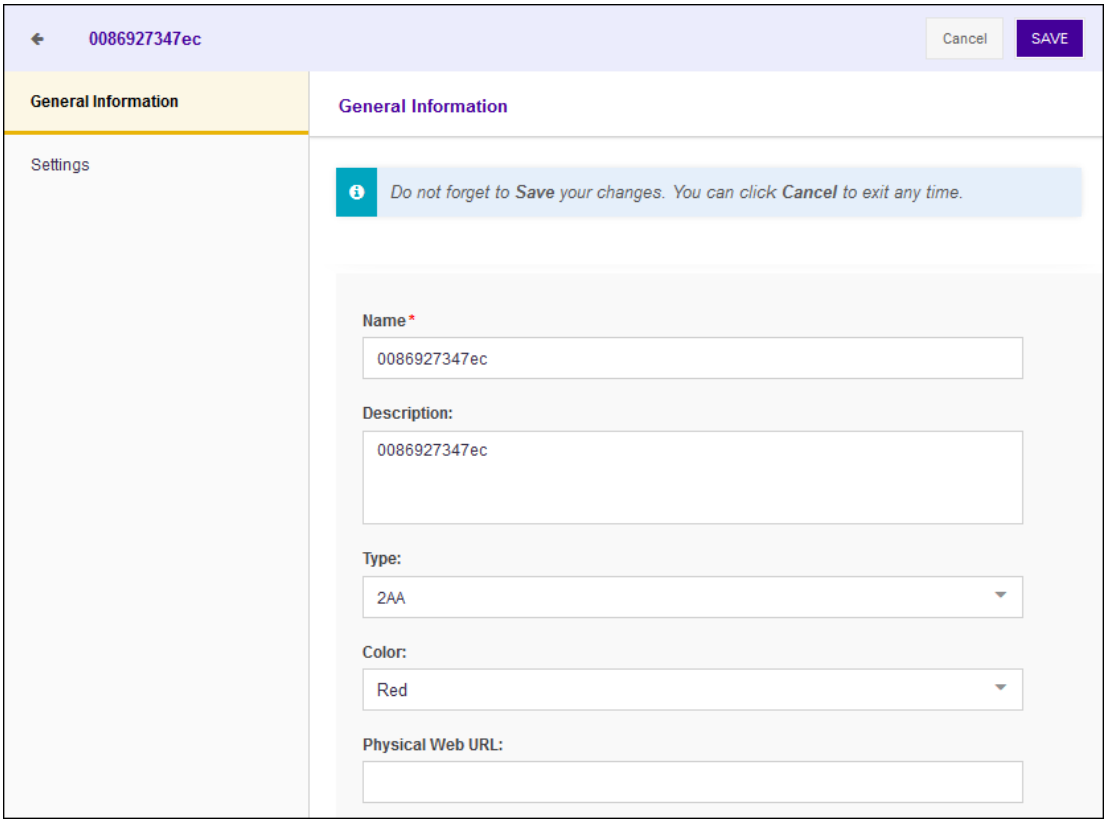
2 Select the icon under the **Actions** column to view the selected beacon's information.

The BLE Beacon's General Information screen loads.



3 Select the icon located to the top right of the screen.

The General Information screen loads.



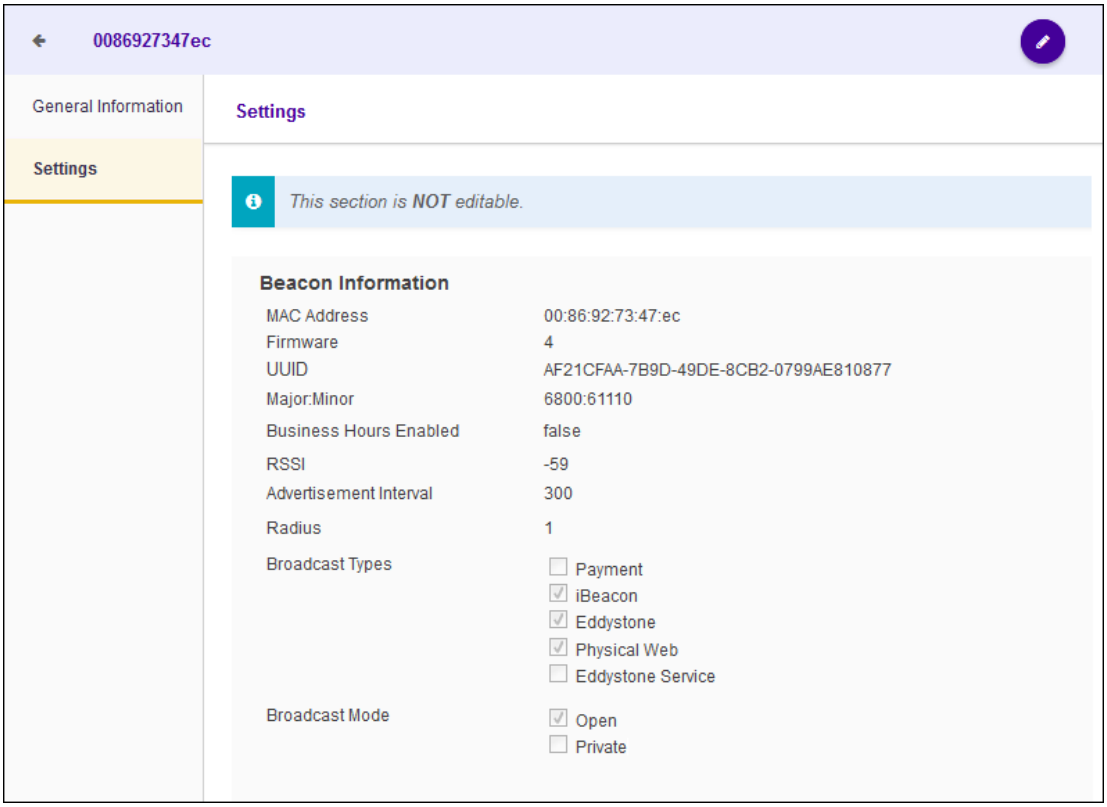
The following information can be modified for a BLE beacon:

Field	Description
Name	Enter a meaningful name for this beacon. The name could be such that it identifies this beacon uniquely among other similar beacons.
Description	Provide a detailed description about this beacon. Use this field to provide enough information to indicate this beacon's use.
Type	Use the drop-down list to select the beacon type. The following beacon types are available: • EXAP—Use this value to indicate that this device is an Access Point that is also a Bluetooth sensor. • 2AA — Use this value to indicate that this beacon is a model powered by 2 AA type batteries. • 4AA—Use this value to indicate that this beacon is a model powered by 4 AA type batteries. • USB—Use this value to indicate that this beacon is a USB powered model.
Color	Use this drop-down list to indicate the color of this BLE beacon. ExtremeLocation provides a limited list of colors that you can choose from.
Physical Web URL	Use this field to provide the URL to access this BLE beacon's user interface if it is available.

4 Select the **Save** button located to the top right of the screen to save the changes made to this screen.
At any time, select the **Cancel** button to exit without saving changes made to this screen.

5 Select the **Settings** menu item.

The Settings screen displays.



Note

There are no user modifiable values in the Settings screen.

8 Payloads

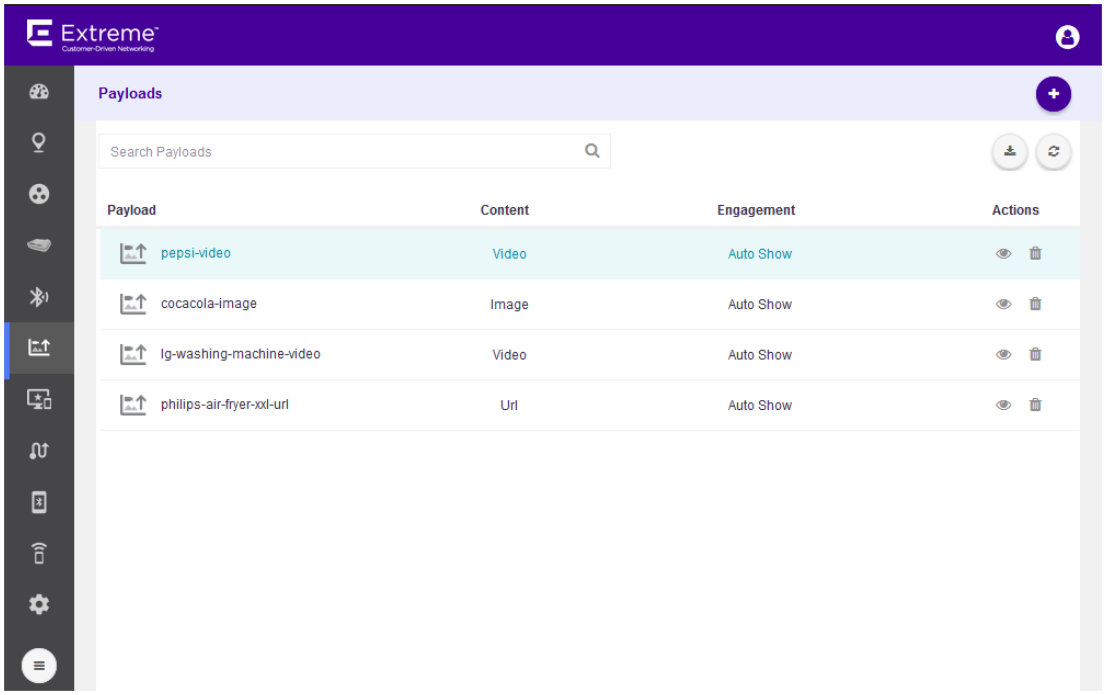
View a Payload
Create a Payload
Delete a Payload

A Payload contains an action that is performed when required. When combined with an Experience, the Payload is delivered to a visitor when a set of conditions defined in the Experience are satisfied. For example, a video is played when a visitor enters a particular aisle or a coupon is pushed to the visitor when the visitor has different sections of the same product category. In the above examples, the payloads are the video that is played or the coupon that is pushed.

A Payload are of the following types:

- Passive - A Passive payload is an event without an action. Use this option for tracking events that happen and to collect data for analytics and for tracking movements.
- Video - A Video payload delivers a video to the visitor when triggered.
- Image - An Image payload delivers a simple image to the visitor when triggered.
- Alert - An Alert payload displays an alert to the visitor when triggered. No more action is performed when this payload is triggered.
- URL - Use this payload type to trigger other pages within the app or to re-direct the visitor to an external web page.
- HTML - Use this payload to deliver a HTML5 formatted content to the visitor's mobile application.
- Custom - The Custom payload enables you to customize the message to be delivered to the visitor. Use this payload type to deliver content that does not fit into any other category listed here.
- Demo - Use the Demo payload type to indicate that the payload is for demonstration purposes only.

Payloads are managed from the **Payloads** screen. Use the icon to launch the **Payload** screen.



The **Payload** screen displays the following information:

Field	Description
Payload	Displays the name of this payload.
Content	Displays the type of content for this payload.
Engagement	Displays how the payload is presented to the visitor. Can be one of *`Auto Show`*, *`Passive`*, and *`Prompt`*.
Actions	Use the icons in this column to perform specific actions on the selected payload. You can edit the payload's information or remove the payload.

Periodically use the button to refresh this screen manually.

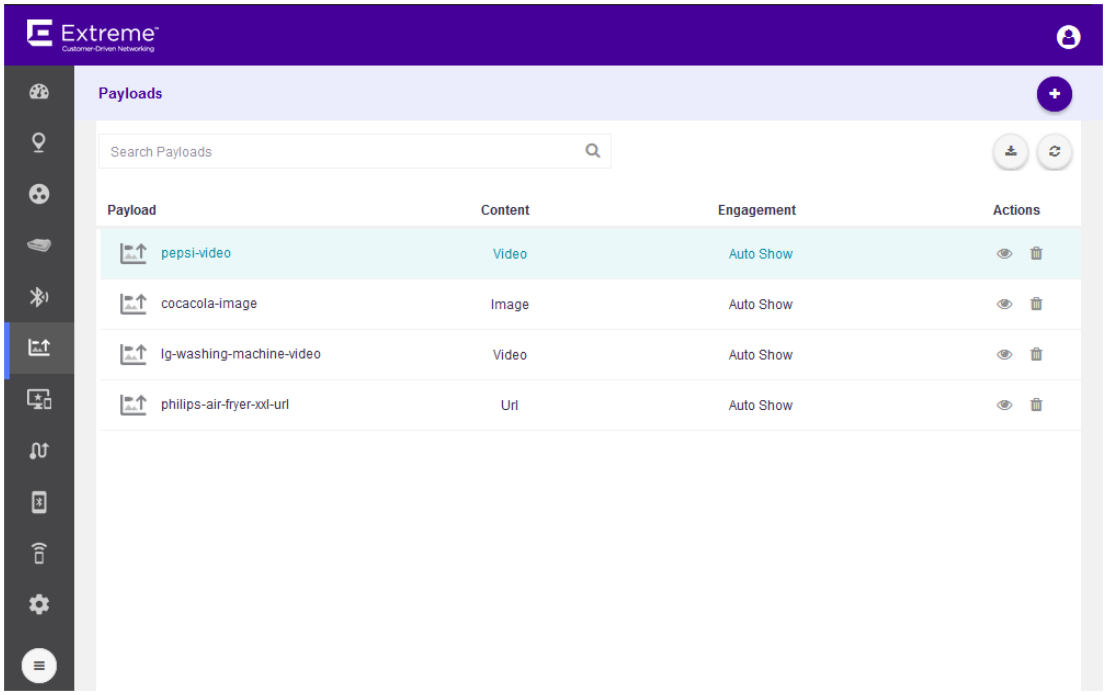
Use the to download the payloads listed in this screen in a *.csv* file to your PC.

View a Payload

To view a Payload's details:

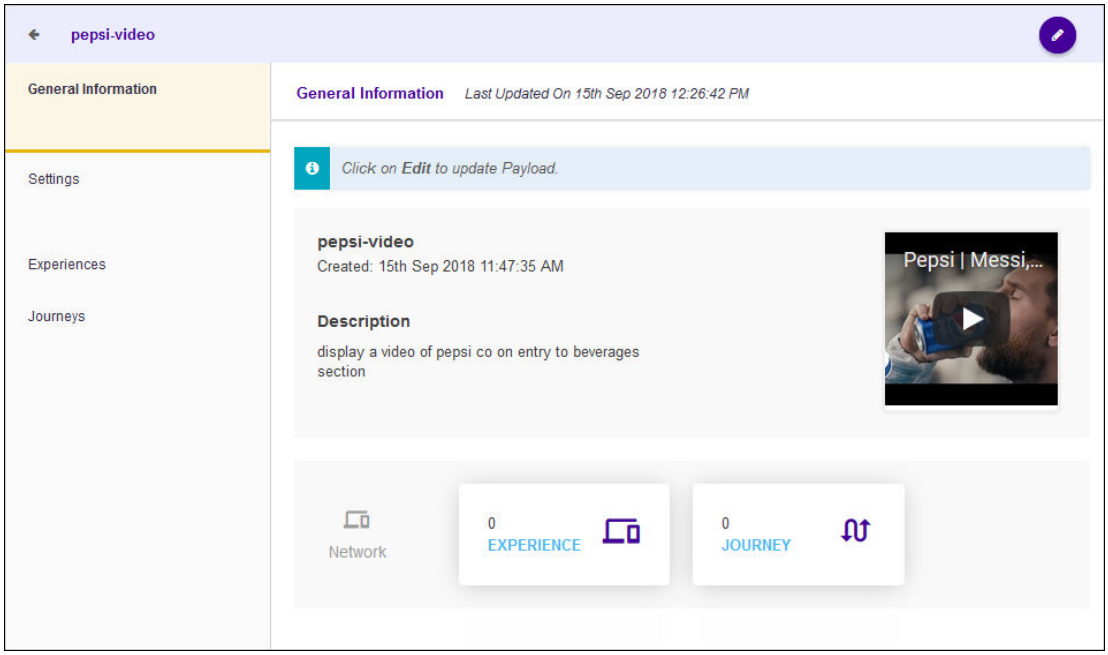
1 Use the icon to load the **Payloads** screen.

The **Payload** screen displays.



2 Select the icon under the **Actions** column to view the selected Payload's information.

The Payload's General Information screen loads.

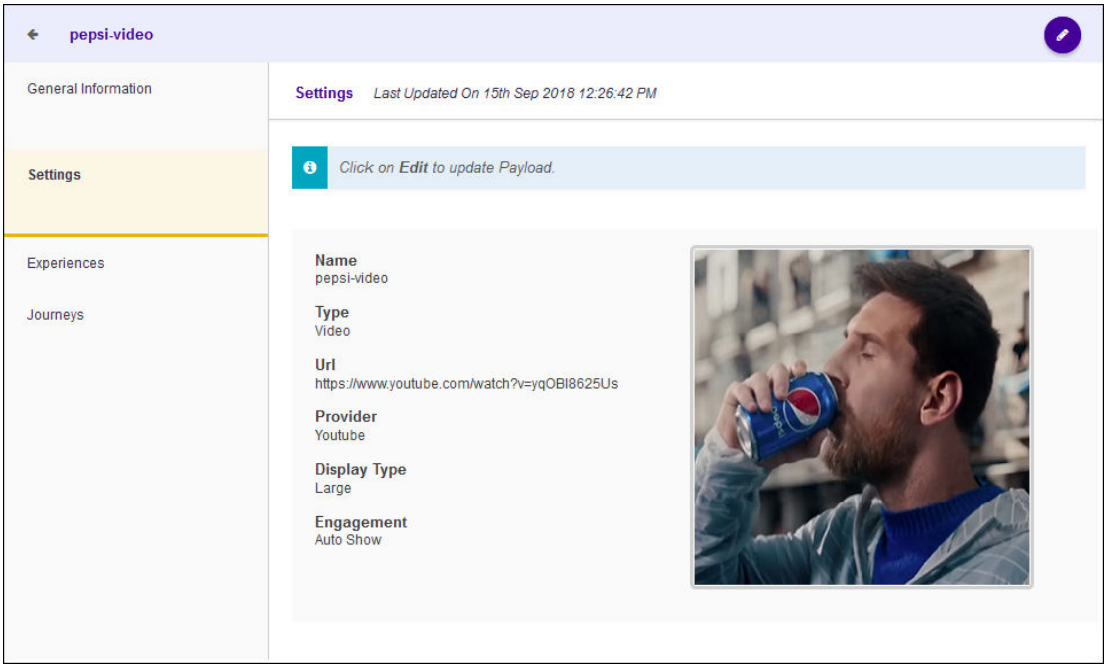


The following information is displayed:

Field	Description
Name	Displays the name assigned to this Payload. This field also displays the date when this Payload's entry was created and added to this ExtremeLocation account.
Description	Displays a user entered description about this Payload. Use the description to provide enough information to indicate this Payload's use.
Network	The **Network** field is disabled.
Experience	Displays the number of Experiences that use this Payload.
Journey	Displays the number of Journeys that use this Payload.

3 Select the **Settings** menu item.

The Settings screen displays.



The following information is displayed for this Payload.

Field	Description
Name	Displays the name given to this Payload.
Type	Displays the type of Payload. • Passive • Video • Image • Alert • URL • HTML • Custom • Demo Note: Depending on the Payload's type, other fields are displayed on this screen.
Engagement	Displays the engagement type and other related information for this Payload.

The following fields are displayed for Payload type *Video*:

URL Displays the URL for the video on the remote site.

Provider Displays the provider for this video. Provider can be one of *Youtube*, *Vimeo*, or *Custom*

Display Type Displays the display size of the video on the client device. Can be one of *Large*, *Small*, or *Full Screen*.

The following field is displayed for the Payload types *Image* and *URL*:

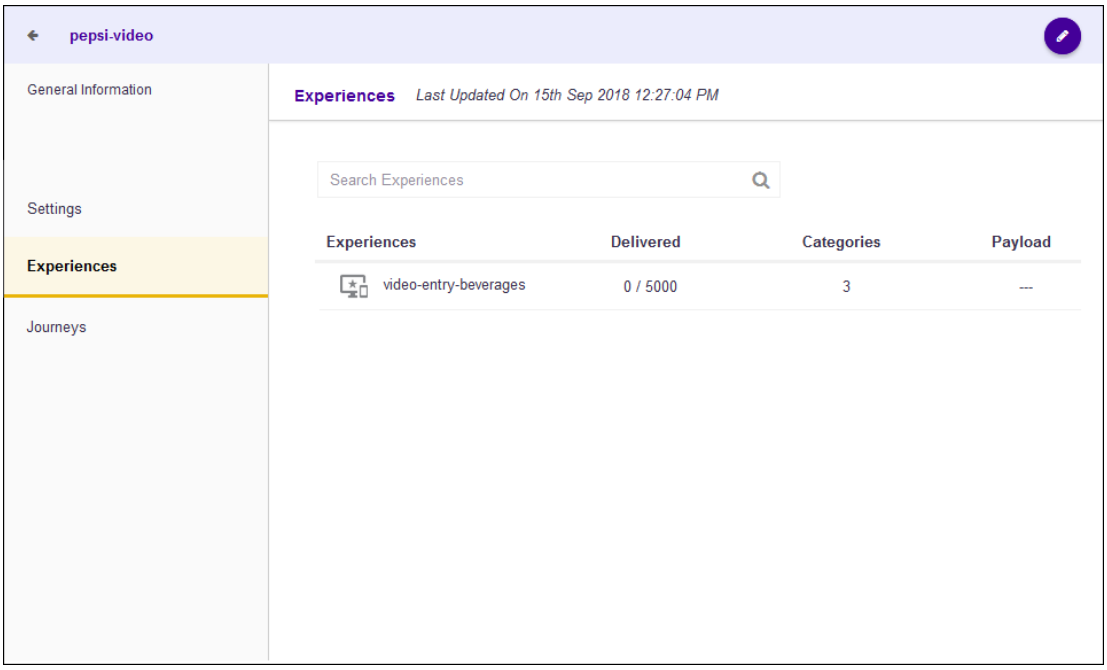
URL Displays the full URL of the payload.

The following field is displayed for Payload types *Alert*, *HTML*, *Custom*, and *Demo*:

Text Displays the content of the Payload to be displayed to the visitor.

4 Select the **Experiences** menu item.

The **Experiences** screen displays.



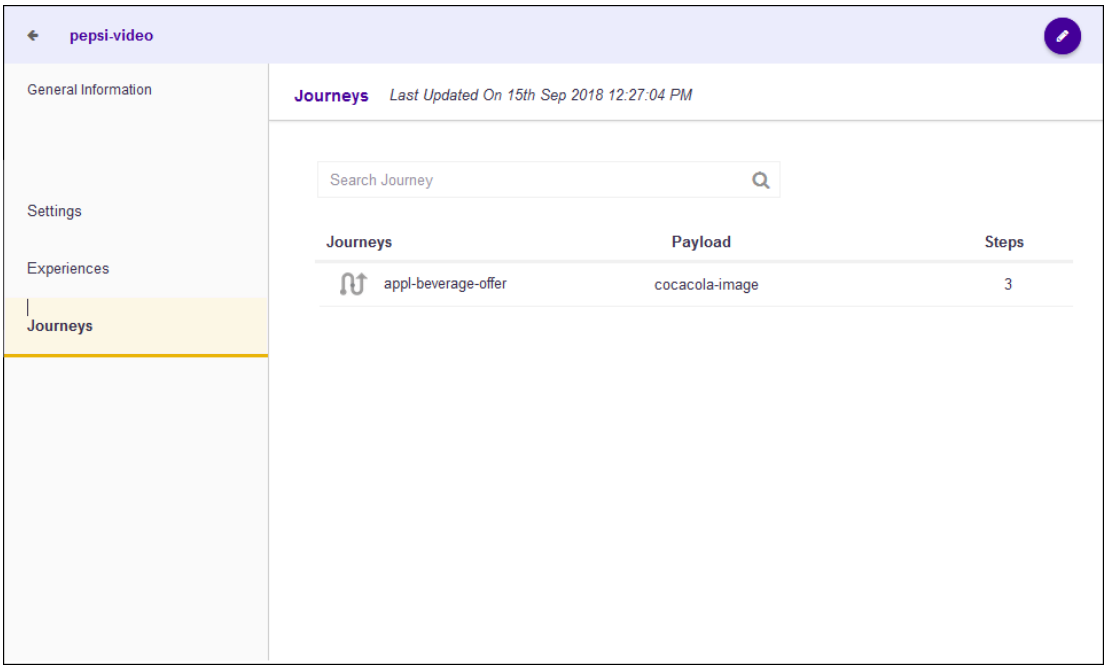
Note
You cannot add or modify an Experience through this screen. For more information, see Experiences

This screen displays a list of all Experiences that use this payload. The following information is displayed.

Field	Description
Experiences	Displays the name of the Experience using this payload.
Delivered	Displays the number of times this Experience was delivered. It also displays the maximum number of times the Experience can be delivered.
Categories	Displays the number of Categories that the Experience is delivered in.

5 Select the **Journeys** menu item.

The Journeys screen displays.



Note
You cannot add or modify a Journey through this screen. For more information, see Journeys

This screen displays a list of all journeys that display this payload at the end of the journey. The following information is displayed.

Field	Description
Journeys	Displays the name of the Journey.
Payload	Displays the name of this payload that is delivered at the completion of the Journey.
Steps	Displays the number of steps that makes up the Journey.

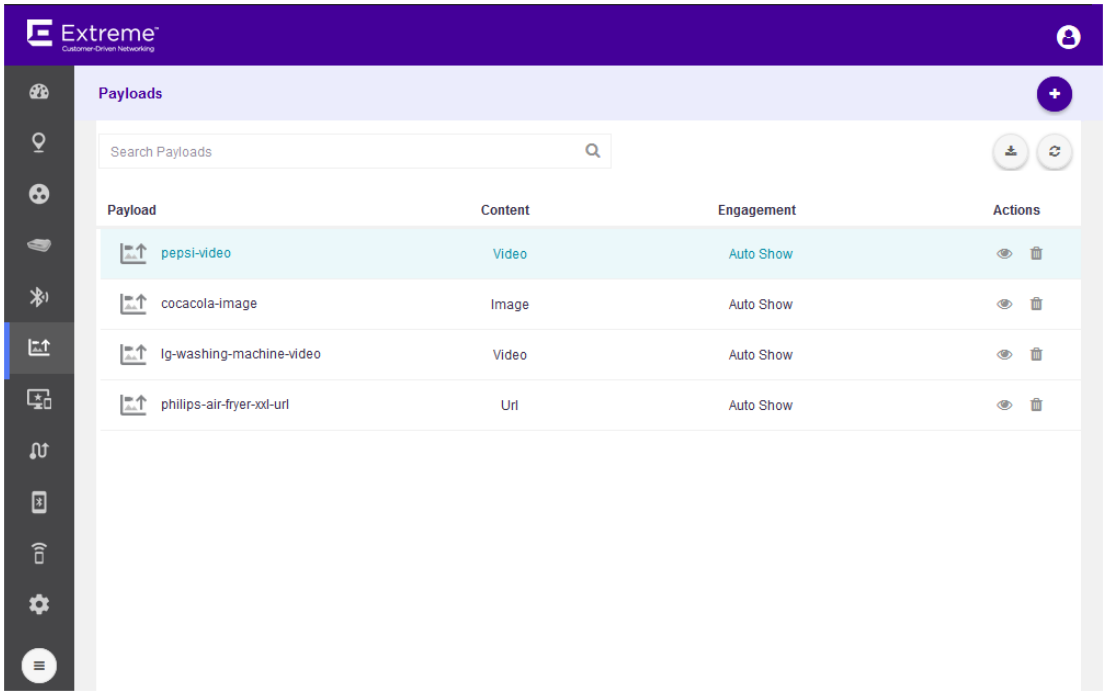
6 Select the icon to go back to the **Payload** screen.

Create a Payload

To create a new Payload:

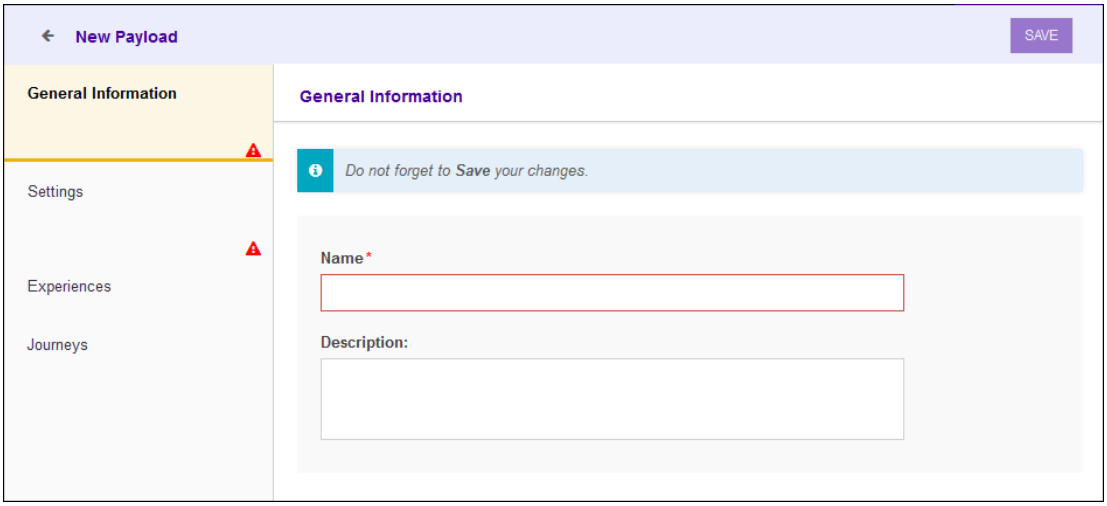
1 Use the icon to load the **Payloads** screen.

The **Payload** screen displays.



2 Select the icon located to the top right of this screen.

The following **New Payload** screen loads.



For a new payload, provide the following information that identifies this payload.

Name	Provide a name for this payload. Payload name cannot be longer than 32 characters.
Description	Provide a description for this payload. The description should be such that you can easily identify the purpose of this payload and its contents.

3 Select the **Settings** menu item to configure the payload's settings.

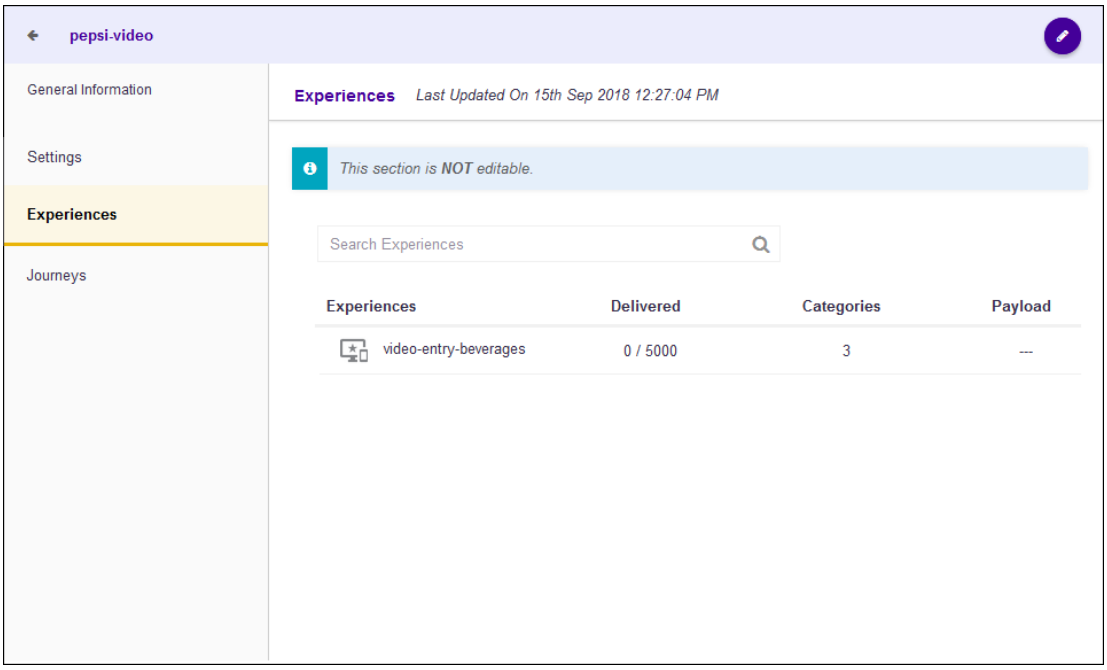
The following fields have to be configured for a payload:

Field	Description
Content Type	This field configures the type of the payload. The following payload types are available: • Passive — A Passive payload is an event without an action. Use this option for tracking events that happen and to collect data for analytics and for tracking movements. • Video — A Video payload delivers a video to the visitor when triggered. • Image — An Image payload delivers a simple image to the visitor when triggered. • Alert — An Alert payload displays an alert to the visitor when triggered. No more action is performed when this payload is triggered. • URL — Use this payload type to trigger other pages within the app or to re-direct the visitor to an external web page. • HTML — Use this payload to deliver a HTML5 formatted content to the visitor's mobile application. • Custom — The Custom payload enables you to customize the message to be delivered to the visitor. Use this payload type to deliver content that does not fit into any other category listed here. • Demo — Use the Demo payload type to indicate that the payload is for demonstration purposes only. Note: Depending on the **Content Type** you will be required to set more configuration parameters. These parameters can be different for different content types.
Engagement Type	The **Engagement Type** field configures when the payload is delivered to the visitor. The following types are available: • Passive — Use this type to indicate that the user engagement type is passive and no action need be taken on this payload. Use this option when you want to track the payload trigger event for analysis and other activities. This is the only option available when *Passive* is the selected **Content Type**. • Auto Show — Use this type to indicate that the payload must be delivered automatically when the conditions are met. There is no user interaction involved when *Auto Show* option is selected. This option is not available for the *Passive* and *Demo* **Content Types**. • Prompt — Use this type to indicate that the payload must be delivered only after the user agrees to receive the payload. When selected, a prompt is displayed to the user before the payload is delivered.

4 Select the **Save** button located to the top right of the screen to save the changes made to this payload.

5 Select the **Experiences** menu item.

The Experiences screen displays.



Note

You cannot add or modify an experience through this screen.

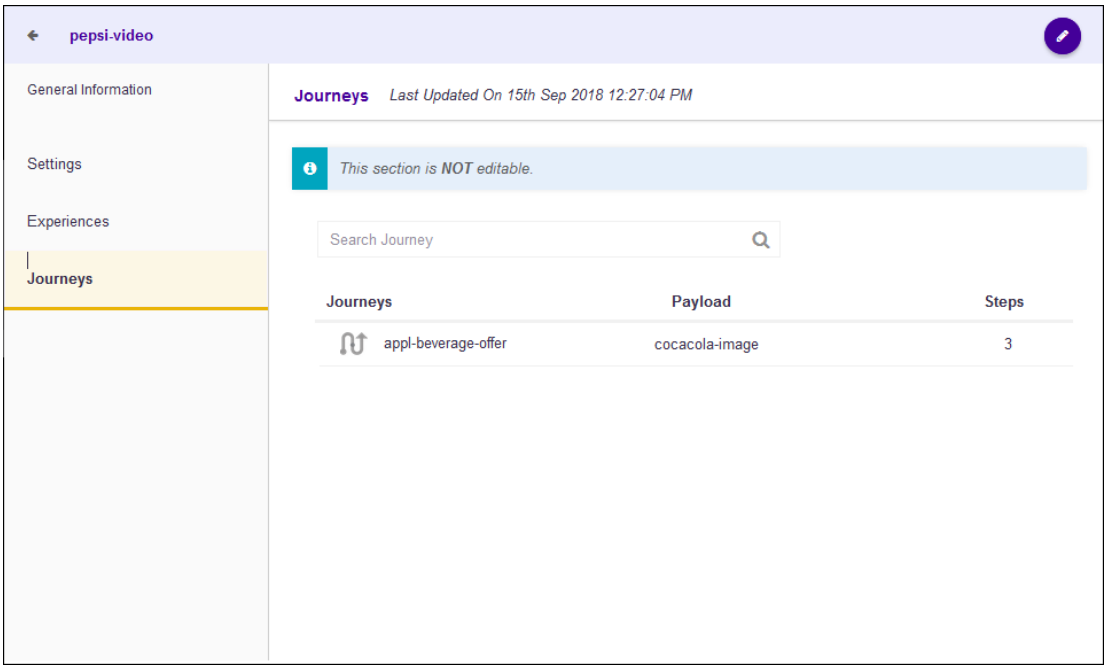
For more information, see Experiences

This screen displays a list of all experiences that use this payload. The following information is displayed.

Field	Description
Experiences	Displays the name of the experience using this payload.
Delivered	Displays the number of times this experience was delivered. It also displays the maximum number of times the experience can be delivered.
Categories	Displays the number of Categories that the experience is delivered in.

6 Select the **Journeys** menu item.

The Journeys screen displays.



Note

You cannot add or modify a journey through this screen.

For more information, see Journeys

This screen displays a list of all journeys that display this payload at the end of the journey. The following information is displayed.

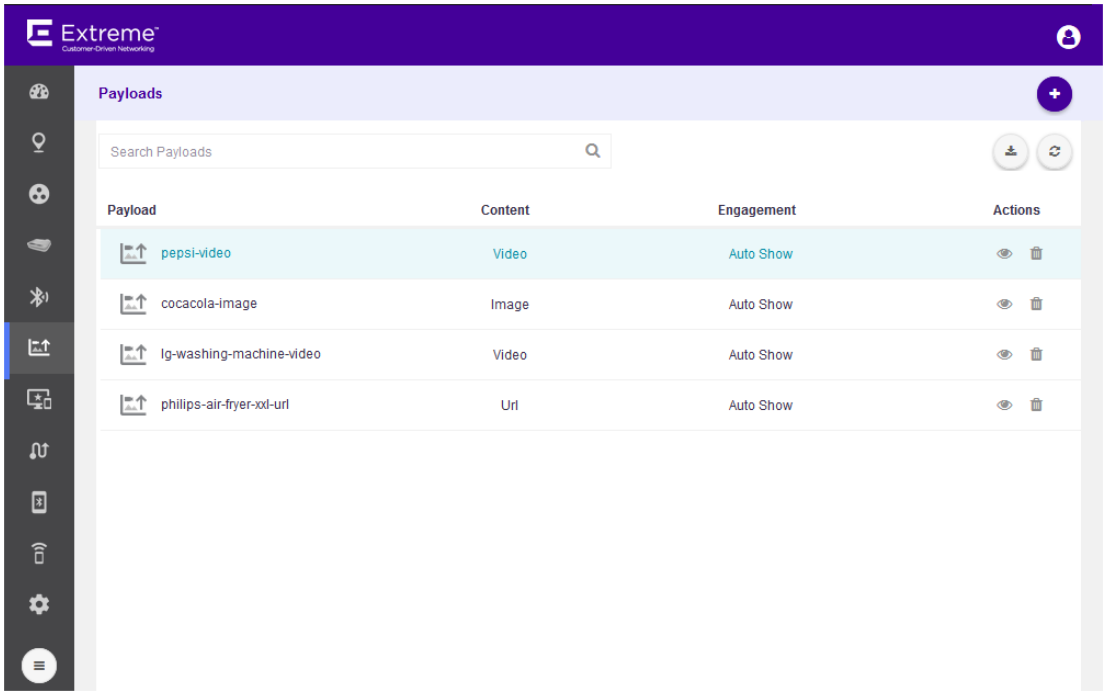
Field	Description
Journeys	Displays the name of the journey.
Payload	Displays the name of this payload that is delivered at the completion of the journey.
Steps	Displays the number of steps that makes up the journey.

Delete a Payload

To delete a payload:

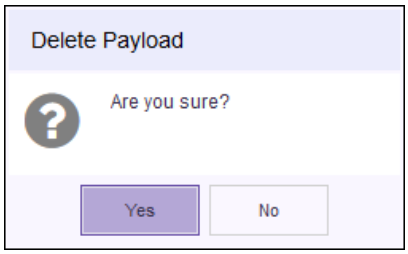
1. Use the icon to load the **Payloads** screen.

   The **Payload** screen displays.



2 Select the Payload to delete from the list of payloads and then select the button located under the **Actions** column.

A confirmation dialog displays.



3 Select the **Yes** button to delete the payload.

To exit without deleting the selected payload, select **No**.

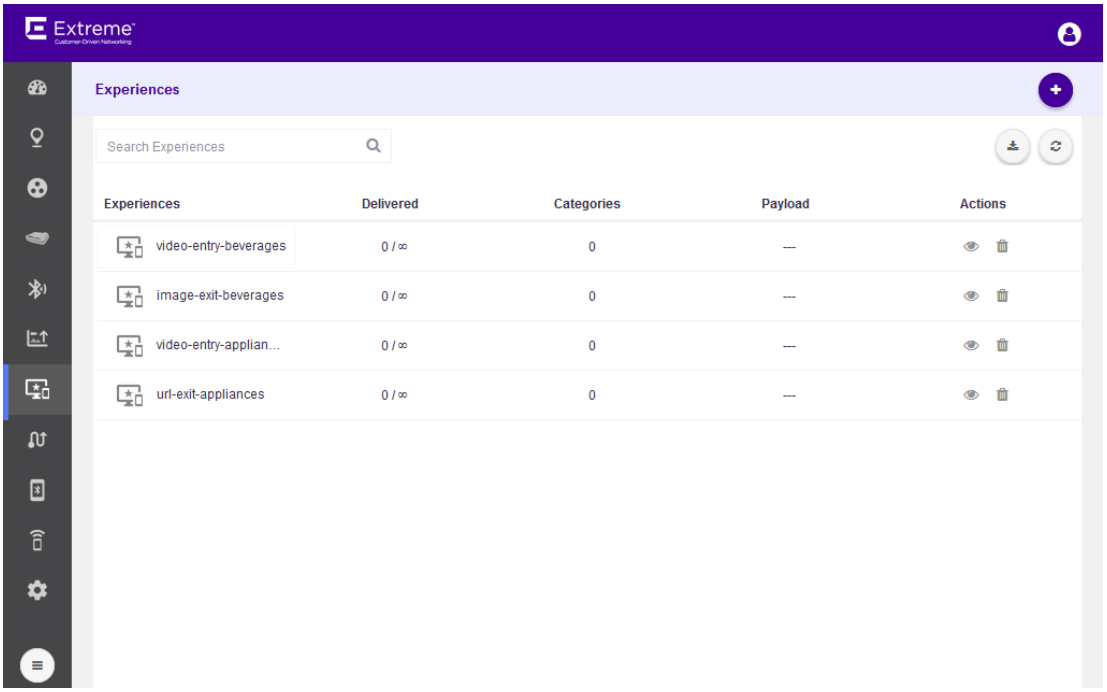
9 Experiences

View an Experience
Create or Edit an Experience
Delete an Experience

An Experience is a set of rules that define when and what content is delivered to the end user. The experience usually consists of the following components:

- The number of times the experience is delivered and its configuration.
- The payload that is delivered for this experience.
- The configuration that controls when the experience is triggered and which applications to use when it is triggered.
- The configuration that sets the *Categories* that use this experience.
- The configuration that sets the schedule when this experience is considered active.
- The journeys that use this experience to provide user experiences.

Experiences are managed from **Experience** screen. Use the icon to launch the **Experience** screen.



The **Experience** screen displays the following information for each experience configured for this ExtremeLocation account.

Field	Description
Experiences	Displays the name configured for this experience.
Delivered	This column displays two values. The first value is the count of the number of times this experience was delivered. The second value is the maximum number of experiences that can be delivered. When this value is reached, the experience is no longer delivered.
Categories	Displays a list of categories to which this experience has been allocated.
Payload	Displays the name of the payload that is delivered for this experience.
Action	Use the icons in this column to perform specific actions on the selected experience. You can edit the experience's information or remove it.

Periodically use the icon to refresh this screen manually.

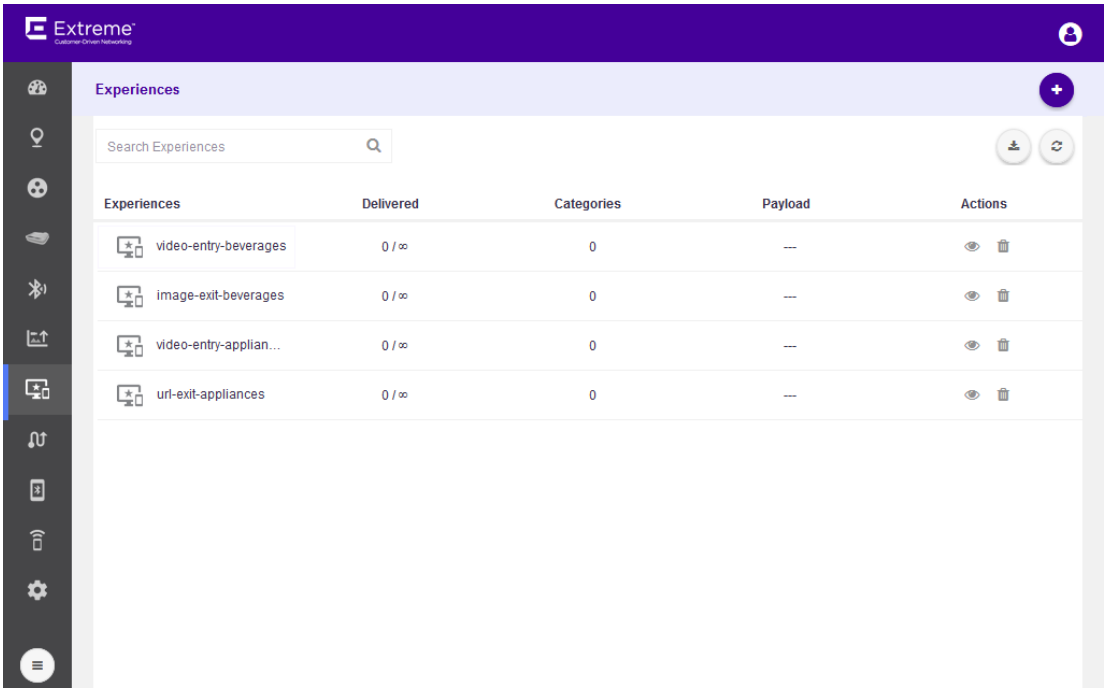
Use the icon to download the experiences listed in this screen as a *.csv* file.

View an Experience

To view an experience's details:

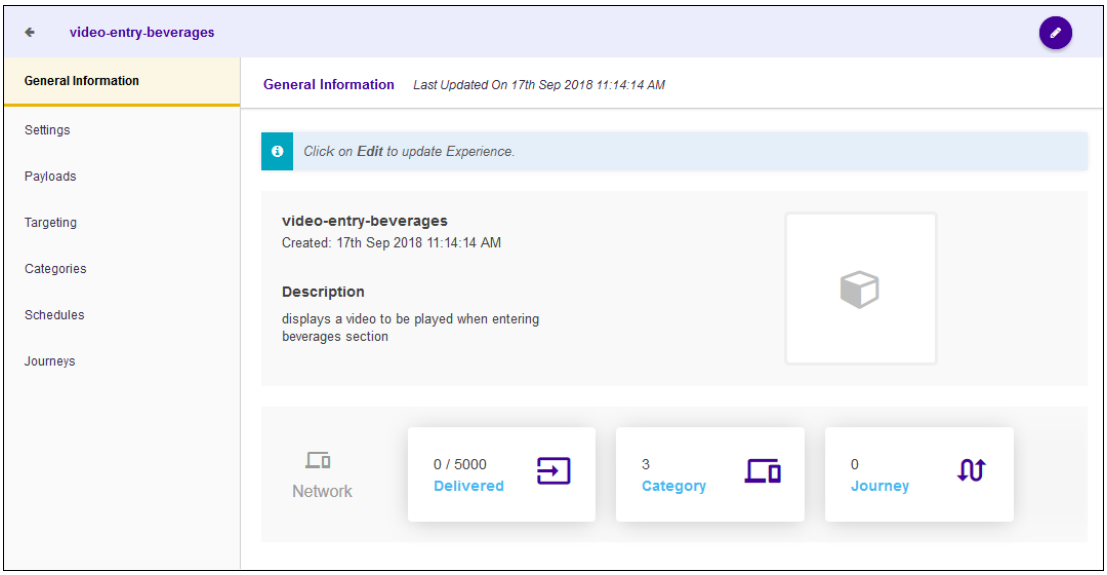
1. Use the icon to load the **Experiences** screen.

   The **Experiences** screen loads.



2. Select the under the **Actions** column to view the selected experience's information.

   The experience's **General Information** screen loads.

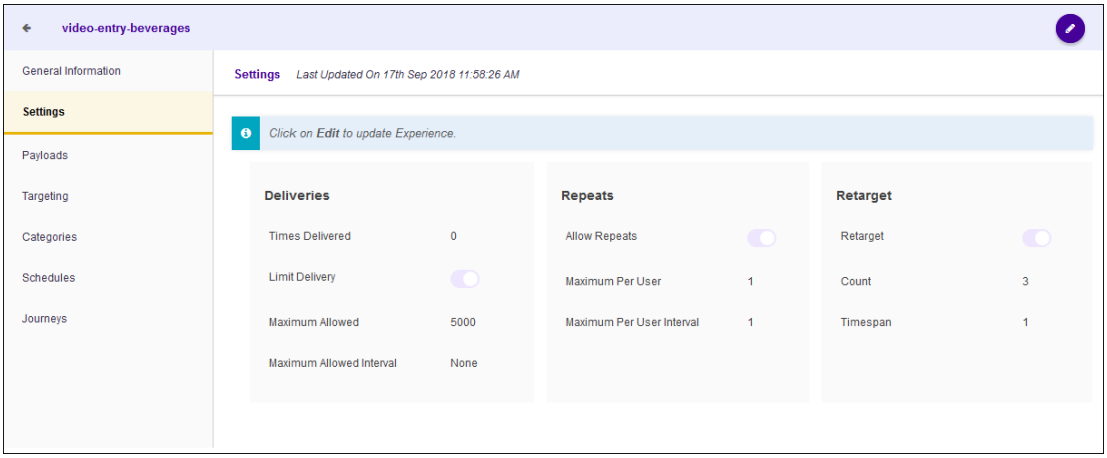


The following information is displayed:

Field	
Name	Displays the name assigned to this experience. The field also displays the date when this experience's entry was created and added to this ExtremeLocation account.
Description	Displays a user entered description for this experience. Use the description to provide enough information to indicate this experience's use.
Network	The **Network** field is disabled.
Delivered	This field displays two values. The first value is the number of times this experience was delivered. The second value is the maximum number of experiences that can be delivered. When this value is reached, the experience is no longer delivered.
Category	Displays the total number of Categories to which this experience has been allocated
Journey	Displays the total number of journeys to which this experience has been allocated

3 Select the **Settings** menu item.

The **Settings** screen loads.



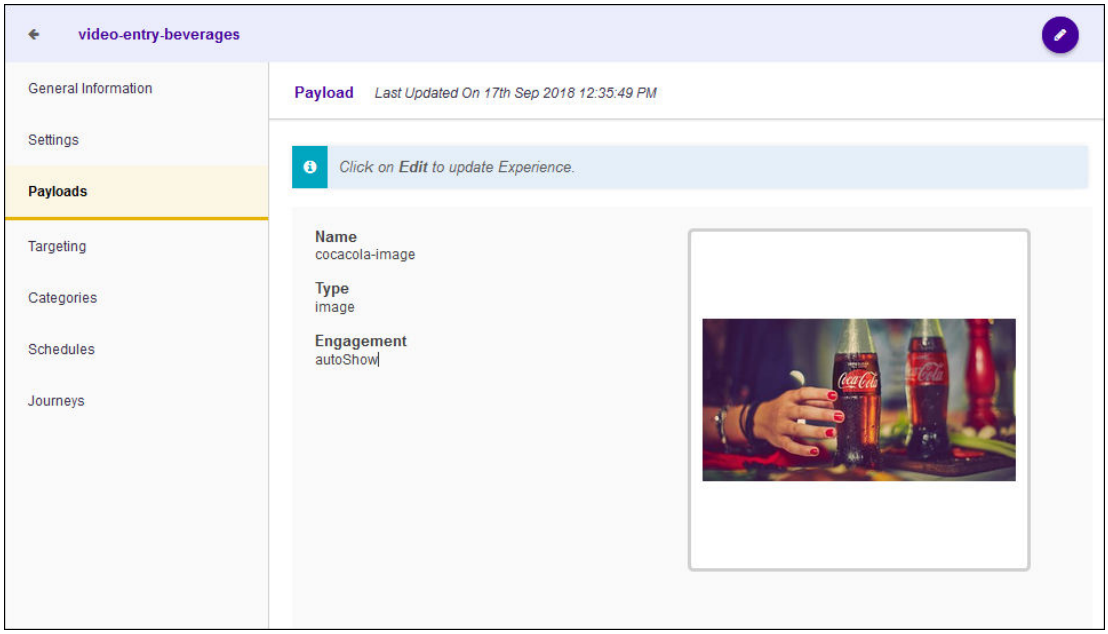
The following information is displayed for this experience.

Field	Description	
Deliverables	This field displays the following information:	
	Times Delivered	This value is a count of the number of times this experience was delivered to visitors.
	Limit Delivery	This switch indicates if the experience is restricted in the number of times it can be delivered. When set to *On*, the experience is delivered the configured number of times and then the experience is no longer delivered. When this switch is *Off* there is no limit on the number of times this experience is delivered.
	Maximum Allowed	Displays the maximum number of times this experience will be delivered. This field is only displayed when the **Limit Delivery** switch is On.
	Max. Allowed Interval	Displays the duration of time within which the experience must be delivered. This value can be one of *None*, *Hour*, *Day*, *Week*, or *Month*. When the selected value is *None* no time limit is set. Once the value set in **Maximum Allowed** is reached, no more experiences are delivered.
Repeat	This field displays the following information:	
	Allow Repeats	The **Allow Repeats** field controls how many times a payload is delivered to a visitor. By default this field is set to 'off' indicating that the payload is delivered only once. When this field is set to 'on', it controls the number of times the payload is delivered to the visitor and the time interval between two consecutive experiences received by the same visitor.
	Maximum Per User	This value controls the maximum number of times the payload can be delivered to the same visitor. The default value is 1. When this field is set to 0, it indicates that there is no limit on the number of times this payload is delivered to the visitor.
	Per User Interval	This value controls the time interval in minutes that is required to elapse before the same payload can be delivered again to the same visitor. The default value is 1. When this field is set to 0, it indicates that there are no constraints on the time interval between the delivery of two payloads to the same visitor.
Retarget	This field displays the following information:	
	Retarget	When selected, the **Retarget** field controls the maximum number of experiences that must be trigger before the payload is delivered to the visitor. It also controls the time interval in minutes within which (the value specified in) **Count** number of experiences must be triggered.
	Count	This value controls the number of times an experience must be triggered before the payload is delivered to the end user. The default value is 0 (zero).

Field	Description
Timespan	This value controls the time in minutes within which (the value specified in) **Count** number of experiences must be triggered. The default value is 0 (zero).

4 Select the **Payload** menu item.

The Payloads screen loads.

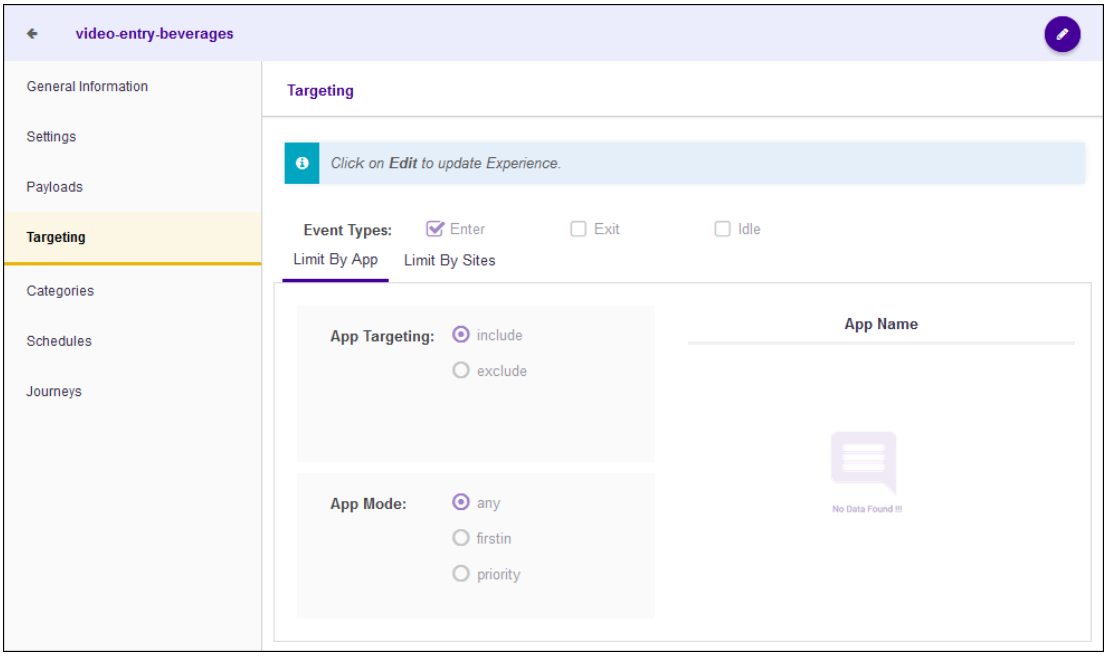


The following information is displayed for this experience.

Field	Description
Name	Displays the name of the Payload associated with this experience.
Type	This field display the type of the payload.
Engagement	This field indicates how the payload is presented to the visitor. When set to `Passive`, no user interaction takes place for this Payload.

5 Select the **Targeting** menu item.

The Targeting screen loads.

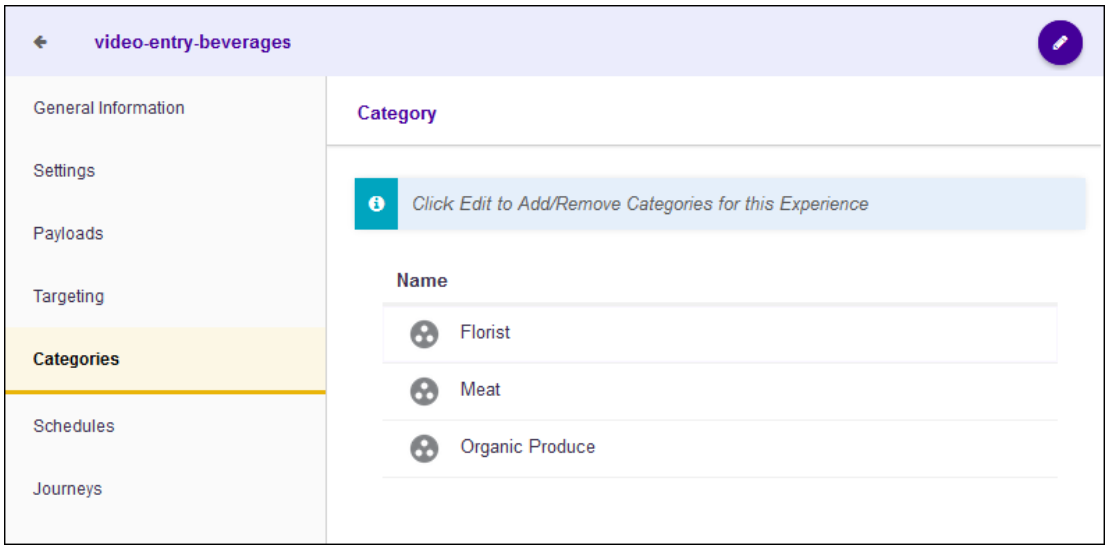


The following information is displayed for this experience.

Field	Description
Event Types	This field displays the event types that can trigger this experience. Triggers can be one of • Entry — When a visitor or an application enters a site or a category. • Exit — When a visitor or an application exits a site or a category. • Idle — When a visitor or an application is idle.
Limit by App	The **Limit by App** field displays the following information: App Targeting — The *Include* variable lists the Apps that are included when targeting. The *Exclude* variable lists the Apps that are excluded when targeting. App Mode — This **App Mode** field indicates how the payload is triggered and how many times it can be triggered. • any - This option indicates that any app listed in the apps list can trigger payload delivery. It also indicates that the payload can be delivered multiple number of times. • firstin - This option indicates that of the multiple apps in the list, the payload can be delivered only once and is only delivered by the app that triggers it first. The payload is not delivered again even if the other apps in the list trigger payload delivery. App Name — Lists the Apps that are configured for this experience.
Limit by Sites	The **Limit by Sites** field displays the following information: Site Targeting — The *Include* variable lists the sites that are included when targeting. The *Exclude* variable lists the sites that are excluded when targeting. Site Name — Lists the sites that are configured for this experience.

6 Select the **Categories** menu item.

The Categories screen loads. This screen displays a list of all categories that are associated with this experience.

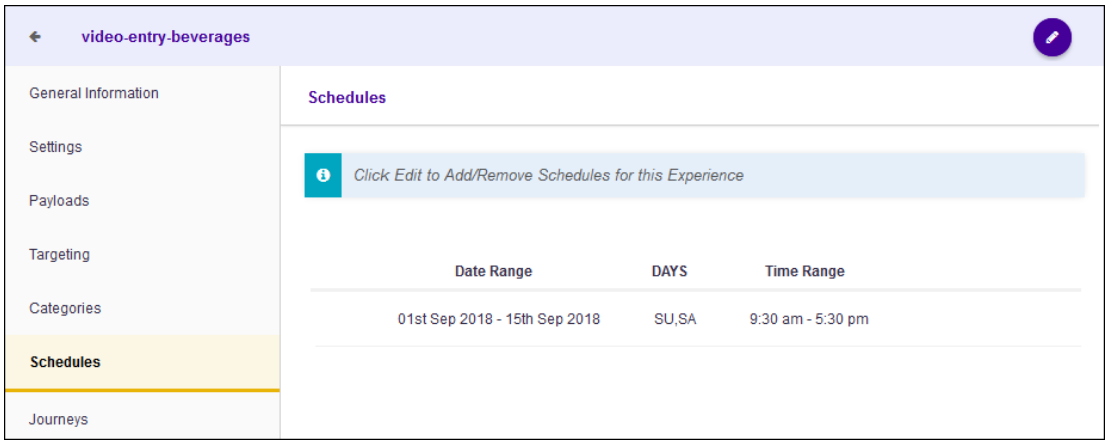


The following information is displayed for this experience.

Field	Description
Name	Displays the name of the category that is assigned to this site.

7 Select the **Schedules** menu item.

The Schedules screen loads.

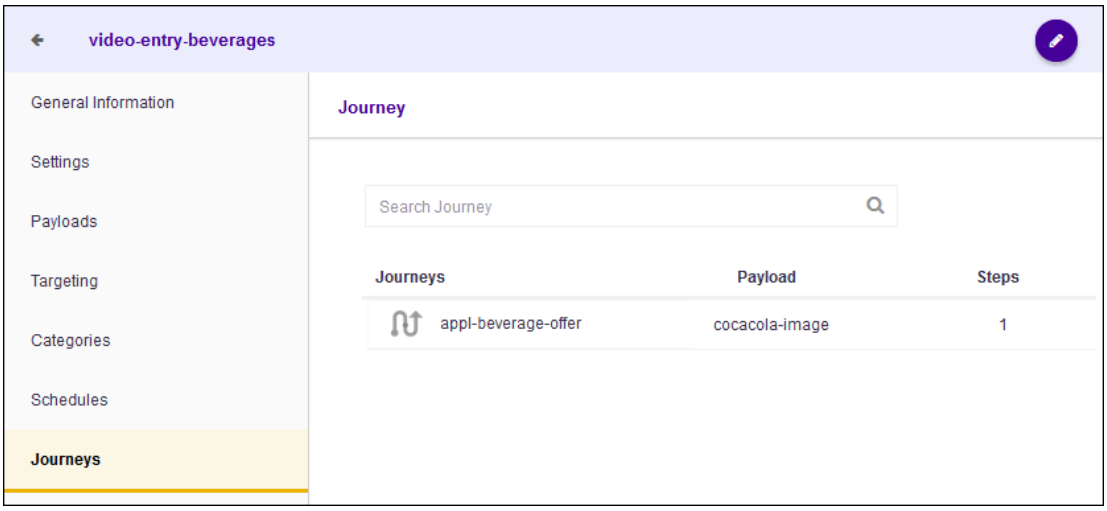


The following information is displayed for this experience.

Field	Description
Date Range	Displays the date range when this experience is scheduled to run.
Days	Displays the days of the week when this experience is scheduled to run.
Time Range	Displays the time range during with this experience is considered active.

8 Select the **Journeys** menu item.

The Journeys screen loads. This screen displays a list of all journeys that are associated with this experience.



The following information is displayed for this experience.

Journey	Displays the journeys that use this experience.
Payload	Displays the name of the Payload that the journey delivers to the user.
Step	Displays the number of steps that are configured in the journey.

Create or Edit an Experience

An Experience is used to deliver a payload when a set of conditions are satisfied. Use an experience to enhance the user's experience when visiting your site by providing targeted multimedia advertisements or coupons or other such information that are only active and valid in particular regions of your site.

An experience consists of various configuration options that control its following components. Each of these components can be modified independently of other configuration parameters. The experience's configuration parameters are broadly classified as:

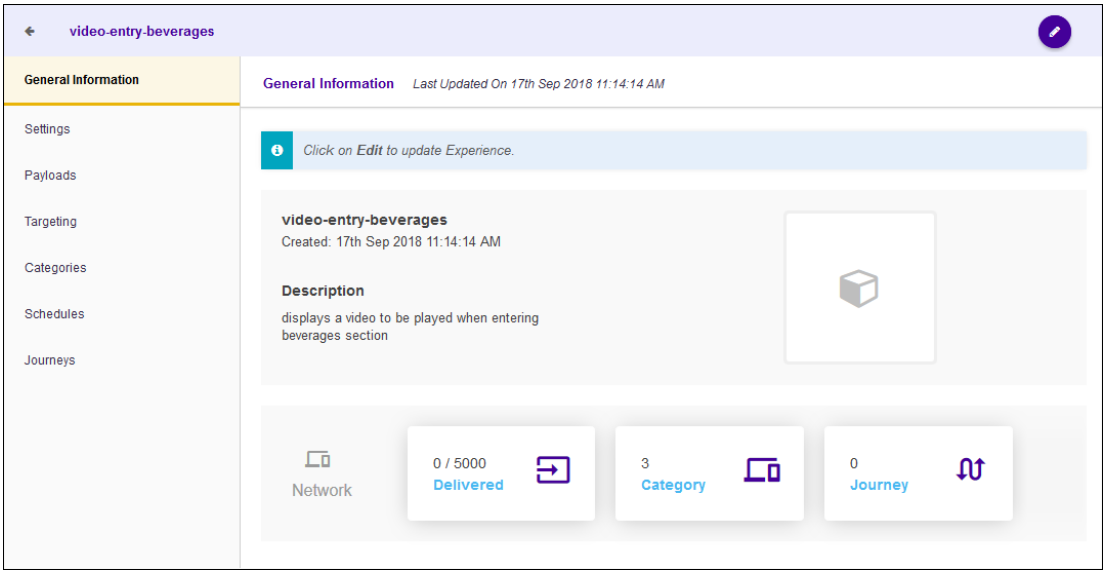
- General Information — Configurations under this heading define the experience's name and description.
- Settings — Configurations under this heading define how many times the experience is delivered to the visitors.
- Payloads — Configuration under this heading define what is delivered to the visitors by this experience.
- Targeting — Configurations under this heading define the limits for this experience. Configurations under this heading controls whether the experience can be triggered through an App on the visitor's device or when the visitor visits a site. It also defines when the experience is triggered.
- Categories — Configurations under this heading define the Categories where this experience is used.
- Schedules — Configurations under this heading define the actual time duration and date range when this experience can be triggered. You can also configure particular days of the week when this experience can be triggered.
- Journeys — This is a view only configuration. To associate this experience with a journey, use the journey configuration screens.

The same screen is used to create or edit experiences. When a new experience is created, each configuration screen is populated with default values and you must edit each configuration screen individually.

When editing an existing experience, each configuration screen is populated with the its current values and you can modify each configuration screen individually.

Create or Edit General Information

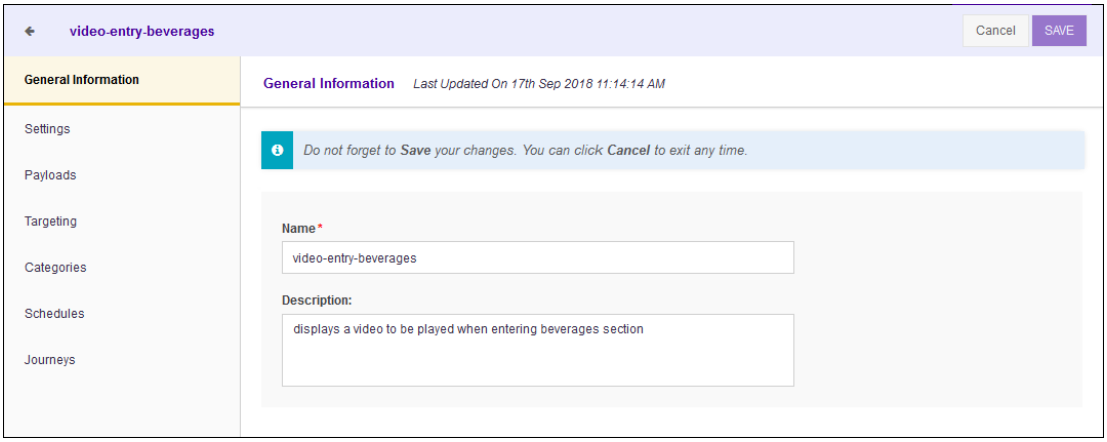
The General Information screen displays an overview about this experience. This is the default screen displayed when you select the icon in the main Experiences screen.



To edit the experience's **General Information**:

1 Select the icon located to the top right of this screen.

The following screen displays:



Note

For an existing experience, the fields in this screen display the existing values. For a new experience, these fields are left blank.

Provide the following information:

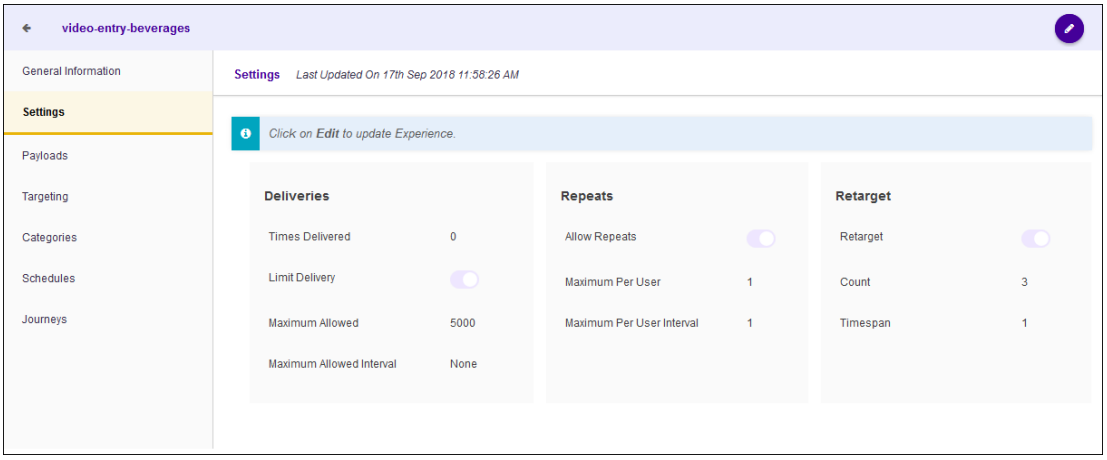
Field	Description
Name	Provide a name for this experience. The name should be such that it identifies this experience uniquely among other experiences.
Description	Provide a detailed description for this experience. A detailed description could contain information such as the purpose of the experience, the payload it delivers, and other information that identifies the experience.

2 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Settings

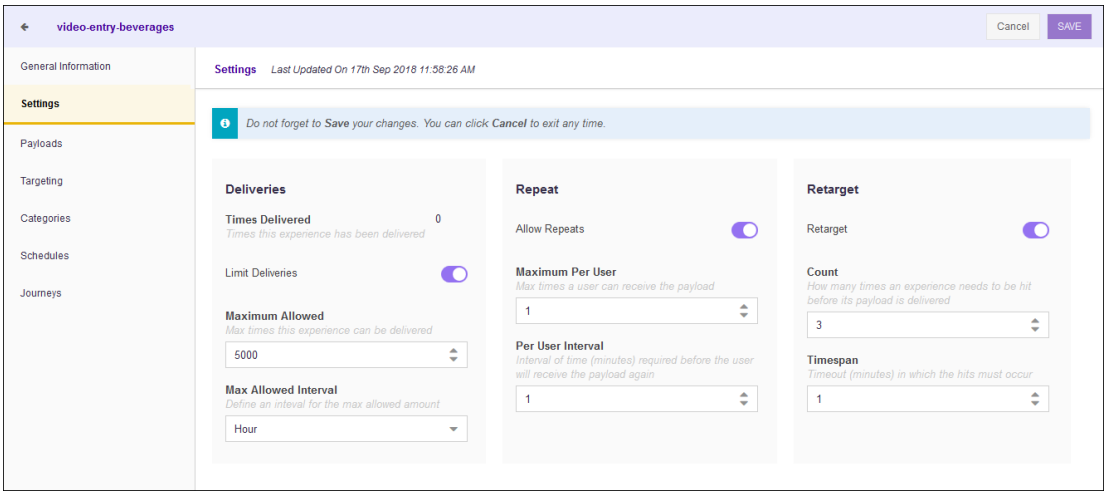
The **Settings** screen displays the configuration for delivery of this experience. This screen lists the number of times that this experience was delivered and also shows the configuration on how this experience is delivered to a single user.



To edit the experience's **Settings**:

1 Select the icon located to the top right of this screen.

The following screen displays:



Note

For an existing experience, the fields in this screen display the existing values. For a new experience, these fields are left blank.

2 Provide the following information for the **Deliveries** field:

Field	Description
Times Delivered	Displays the number of times this experience was delivered.
Limit Deliveries	Use this toggle button to enable or disable the number of times this experience is delivered. When set to *Off* there is no limit on the number of times this experience is delivered.
Maximum Allowed	Use the spinner to set the number of times this experience is to be delivered. When this value is exceeded, delivery of this experience is stopped. Depending on the configuration of the **Max Allowed Interval** field, delivery of this experience may be restarted.
Max Allowed Interval	Use this drop-down list to configure a time duration within which the experience is to be delivered. For example, if the value for this field is set to *Hour* and the value for the **Maximum Allowed** field is set to *5000*, then, a maximum of 5000 experiences can be delivered per hour. If, within an hour, all 5000 experiences are delivered, then no more experiences are delivered for the reminder of the hour. This counter is reset at the end of each hour.

3 Provide the following information for the **Repeat** field:

Field	Description
Allow Repeats	The **Allow Repeats** field controls how many times a payload is delivered to a visitor. By default this field is set to 'off' indicating that the payload is delivered only once. When this field is set 'on', you can control the number of times the payload is delivered to the visitor and the time interval between two consecutive payloads received by the same visitor.
Maximum Per User	Use the spinner to set this value. This value controls the maximum number of times the payload can be delivered to the same visitor. The default value is one (1). Set this field to zero (0) to indicate that there is no limit on the number of times the same payload is delivered to the visitor.
Per User Interval	Use the spinner to set this value. This value controls the time interval in minutes that is required to elapse before the same payload can be delivered to the same visitor. The default value is one (1). Set this field to zero (0) to indicate that there are no constraints on the time interval between the delivery of two of the same payload to the same visitor. For example, if the **Per User Interval** value is set at *2* and the **Maximum Per User** value is set at *3*, then the user will receive a maximum of three (3) payloads every two (2) minutes.

4 Provide the following information for the **Retarget** field.

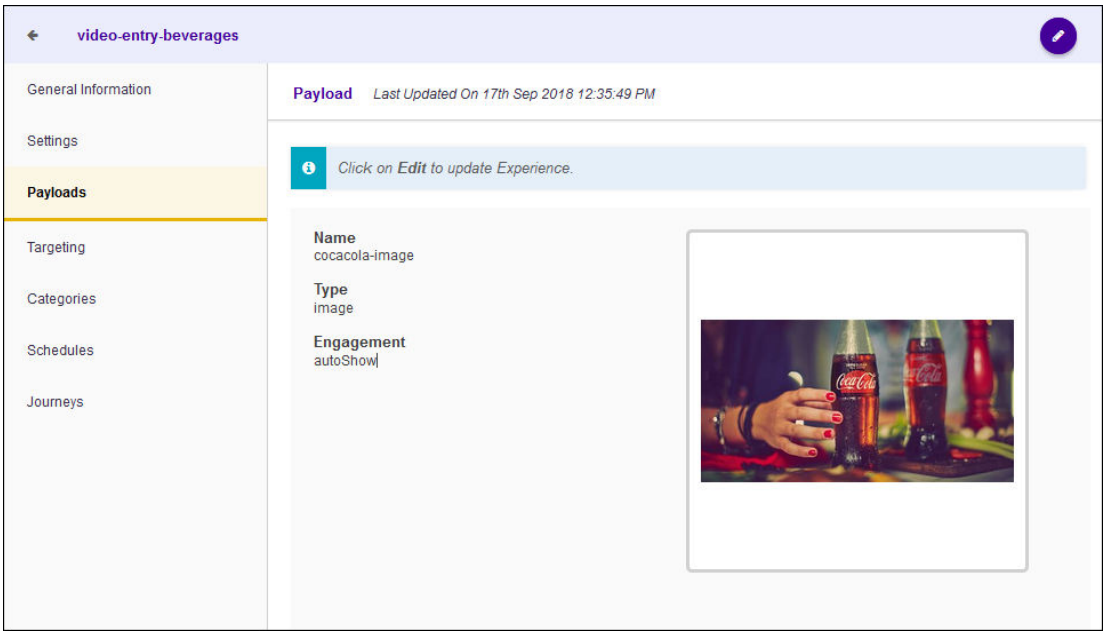
Field	Description
Retarget	Use this toggle button to enable or disable how the payload is delivered.
Count	Use the spinner to set the number of times an experience need to be hit before its payload is delivered to the user.
Timespan	Use the spinner to set the time duration in minutes within which the number of hits configured in the **Count** field is reached. For example, if the **Count** value is set to *3* and the **Timespan** value is set to *2*, then the payload configured for this experience is only delivered if the experience is hit three (3) times within two (2) minutes.

5 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Payloads

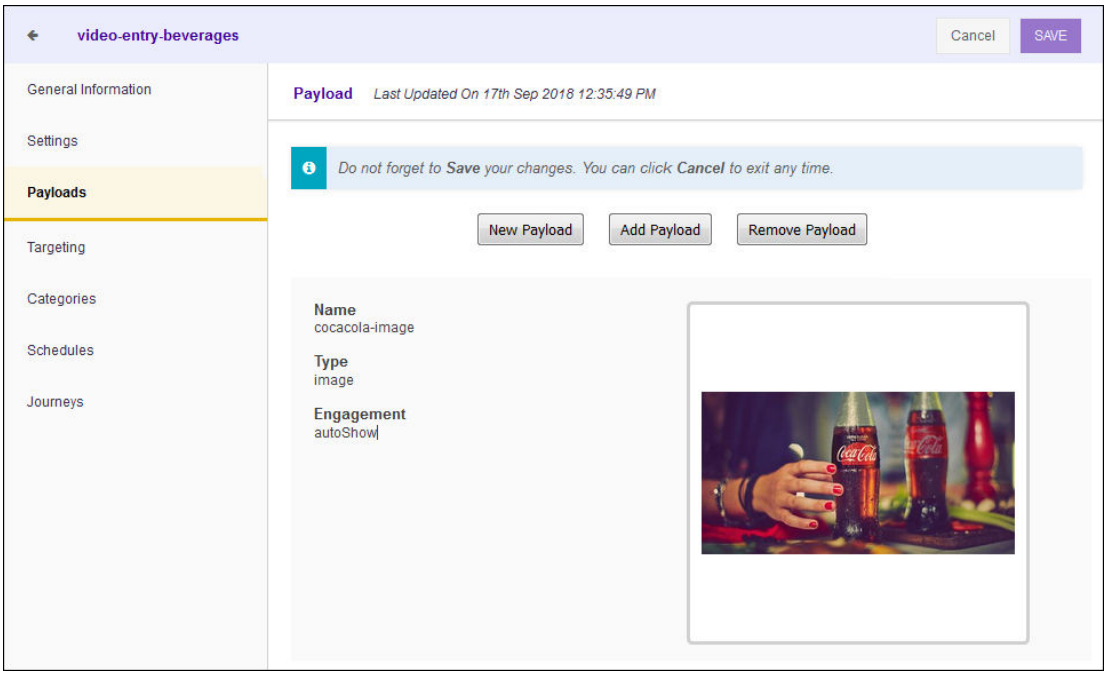
The Payload screen displays the payload configured for this experience. This screen lists the name, the payload type, and how the payload will be delivered to the end user.



To edit the experience's payload settings:

1 Select the icon located to the top right of the screen.

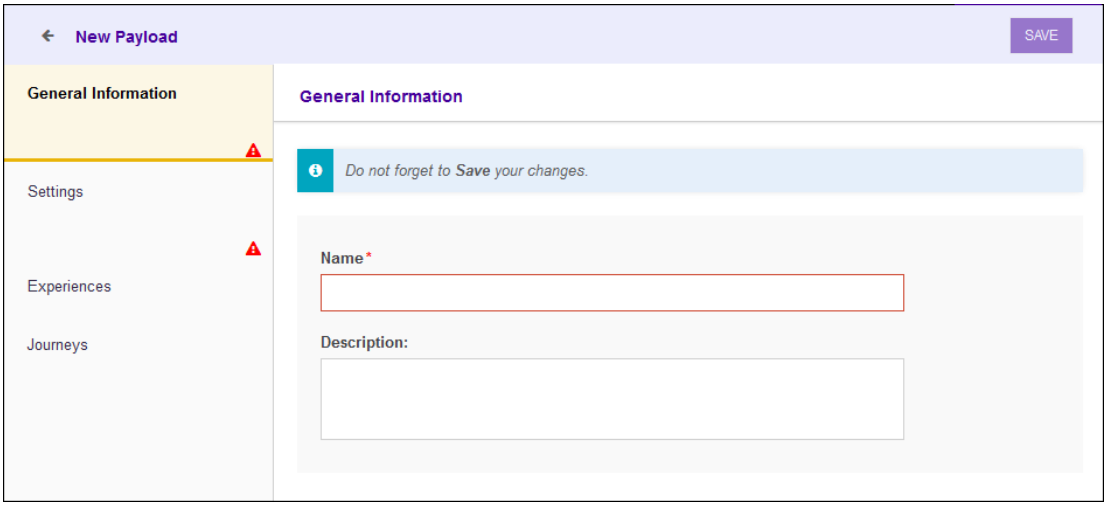
The following screen displays:



2 Select the **New Payload** button to create a new payload to add to this experience.

> **Note**
> The new payload will replace an existing payload if it is already configured for this experience.

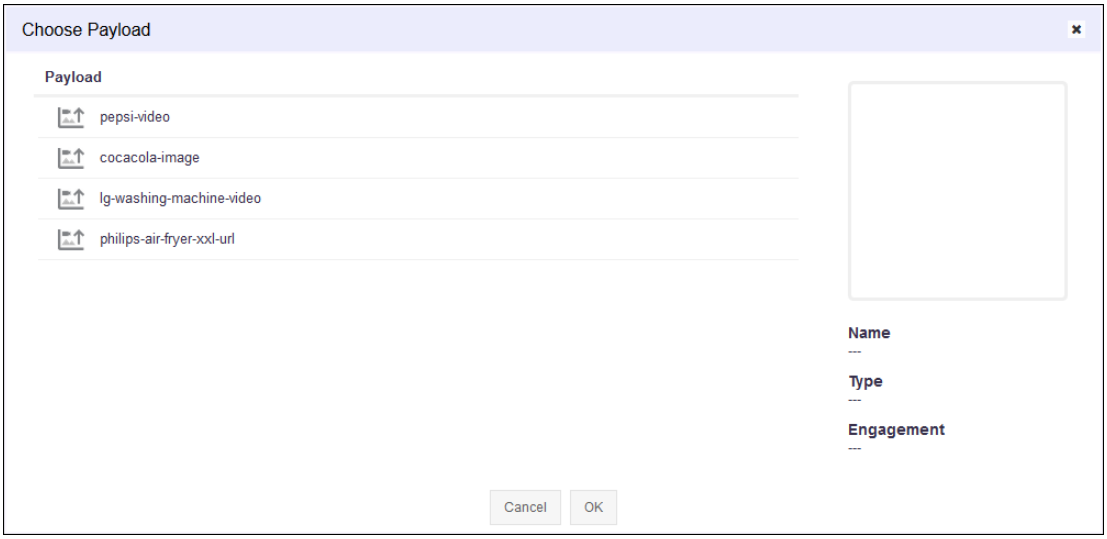
The New Payload screen displays.



For more information on payloads and on how to create a new payload, see the topic Payloads on page 140.

3 Use the **Add Payload** button to select an existing payload.

The Choose Payload screen displays.



4 Select the payload from the list to highlight it.

5 Select **OK** button to confirm your selection.

At any time use the **Cancel** button to exit without saving changes made to this screen.

6 Select the **Remove Payload** button to immediately remove the payload from this experience.

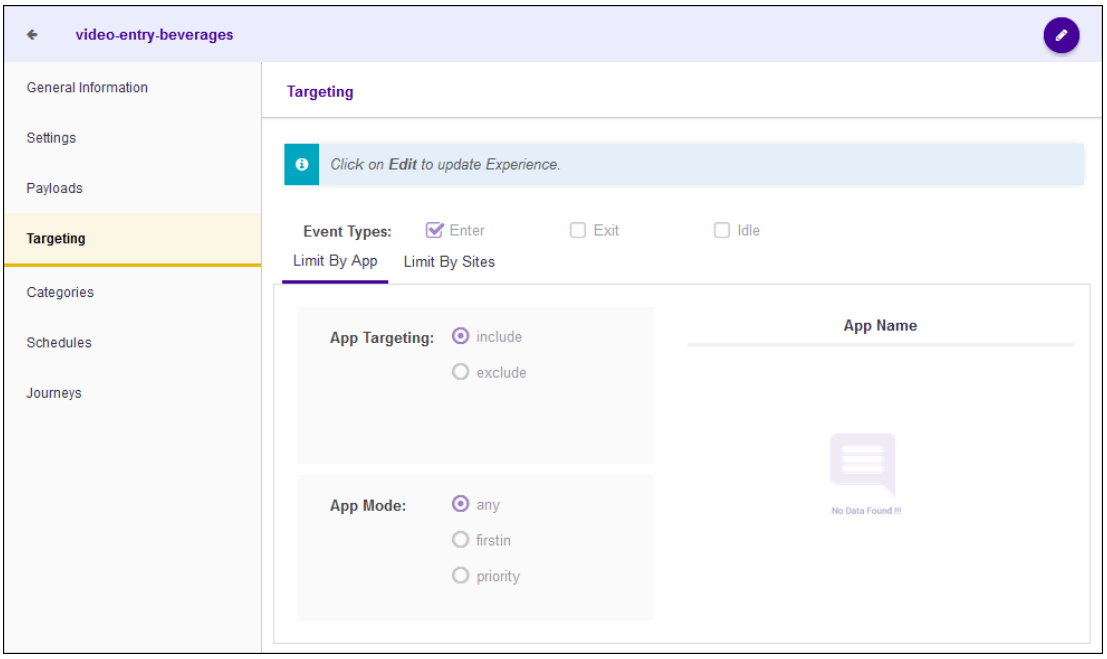
> **Note**
> No warning is given when a payload is removed from this experience.

7 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Targeting

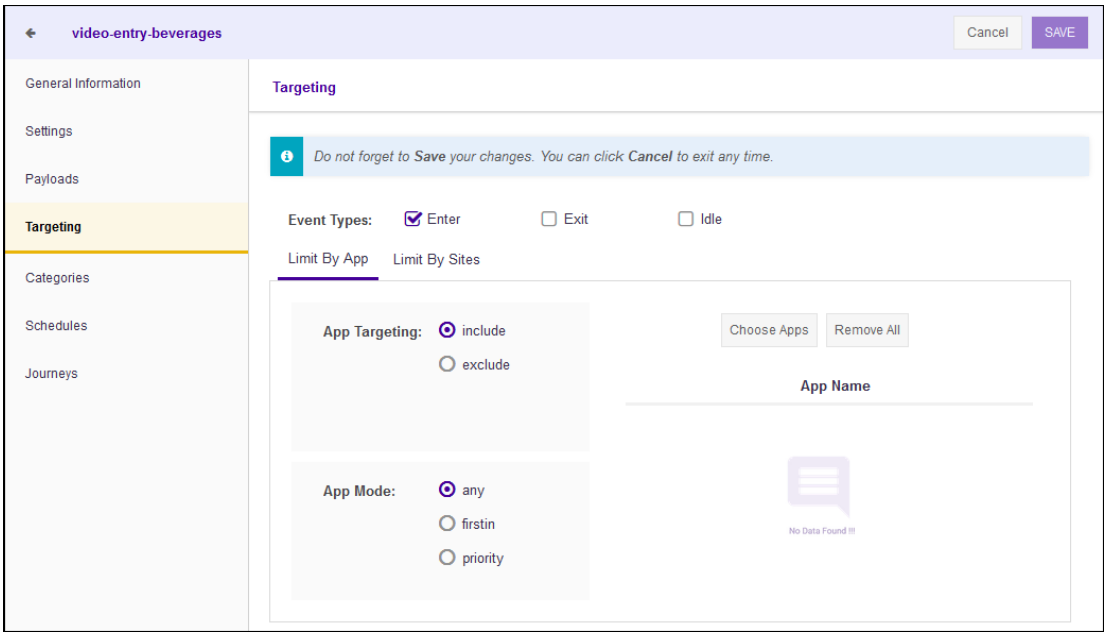
The **Targeting** screen displays the configuration for where the experience is delivered. It provides configuration for setting up the apps and sites where this experience is allowed or not allowed.



To edit the experience's **Targeting** settings:

1 Select the icon located to the top right of the screen.

The following screen displays:



Note

For an existing experience, the fields in this screen display the existing values. For a new experience, these fields are set to their default values.

2 Provide the following information for the **Event Type** field:

Field	Description
Event Type	This field defines the event types that must occur for the experience to trigger. You can choose one or more of these values. • Enter — Select this option to indicate that the experience is triggered for the *`Enter`* event. • Exit — Select this option to indicate that the experience is triggered for the *`Exit`* event. • Idle — Select this option to indicate that the experience is triggered for the *`Idle`* event.

3 Provide the following information for the **Limit By App** field:

Field	Description
App Targeting	Select *include* to indicate that the listed app can trigger this experience. Select *exclude* to indicate that the listed app cannot trigger this experience
App Mode	Select the **App Mode** value from *any* or *firstin*. • Any - Select this option to indicate that any app can trigger this payload. The payload can also be triggered multiple times depending on then number of apps listed. • firstin - Select this option to indicate that the payload will only be triggered once even if multiple apps are listed to trigger this payload. Once the payload has been triggered, it is not served again even if multiple apps have triggered the same payload. For example, assume that apps 'A', 'B', and 'C' are registered. The payload can only be triggered once. This can happen if it is triggered by any one of the apps. Once the payload is delivered, it is not delivered again even if other listed apps trigger the payload delivery.
Choose Apps	Use the **Choose Apps** button to add apps to this experience.
Remove All	Use the **Remove All** button to remove all apps mapped to this experience

4 Provide the following information for the **Limit by Sites** field:

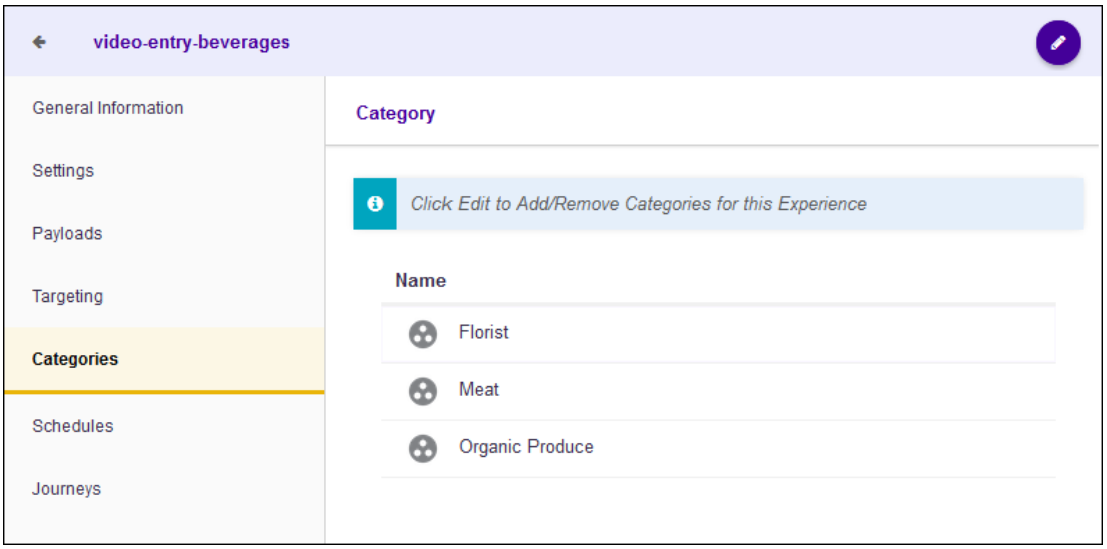
Field	Description
Site Targeting	Select *include* to indicate that the listed Site can trigger this experience. Select *exclude* to indicate that the listed Site cannot trigger this experience
Choose Sites	Use the **Choose Sites** button to add Sites to this experience.
Remove All	Use the **Remove All** button to remove all Sites mapped to this experience

5 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Categories

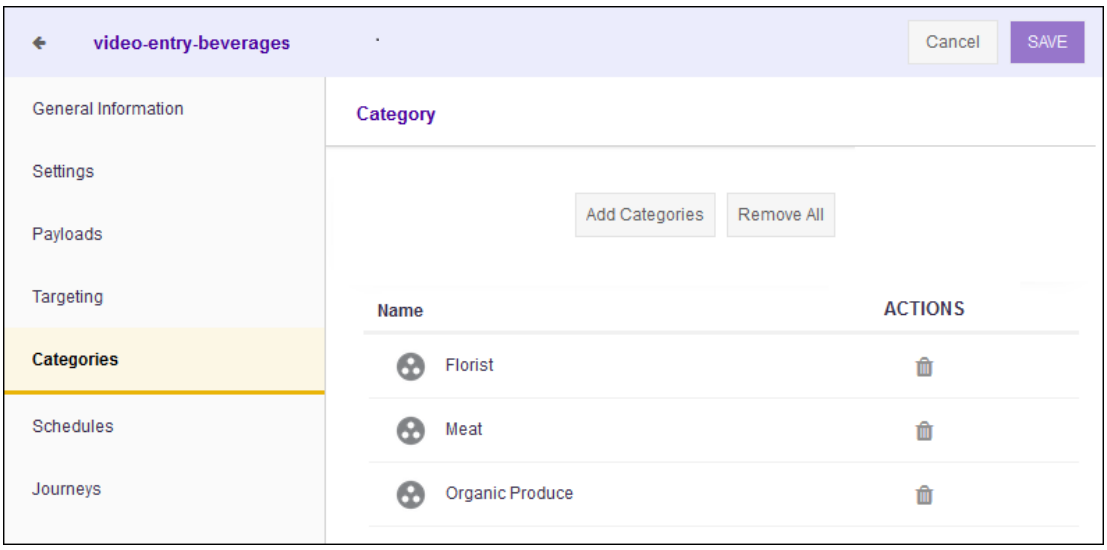
The Categories screen displays the list of categories that can trigger this experience.



To edit this experience's **Category** settings:

1 Select the icon located to the top right of the screen.

The following screen displays:



2 Select the **Add Categories** button to add more categories to this list.

3 Select the **Remove All** button to remove all configured categories from this experience.

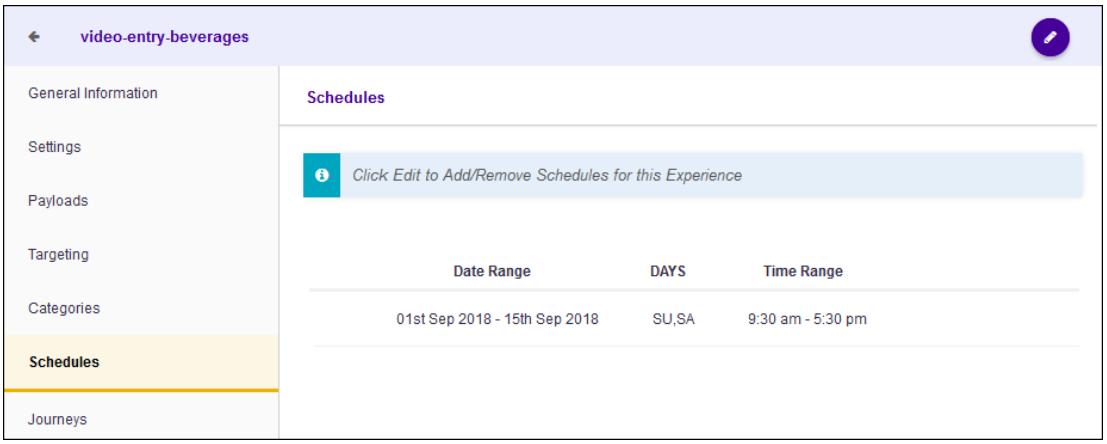
4 To remove a single category from this experience, select the icon under the **Actions** column for the category.

5 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Schedules

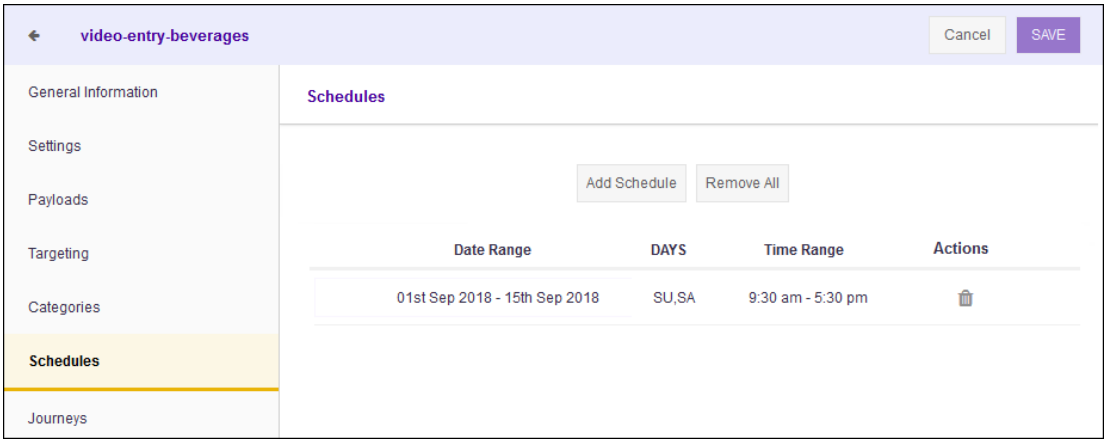
The **Schedules** screen displays the schedules associated with this experience. The screen lists the date range, the days of the week, and the time range when this experience is configured to run.



To edit the experience's **Schedule** settings:

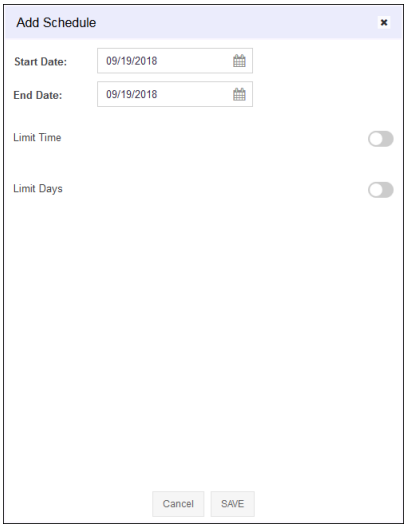
1. Select the icon located to the top right of the screen.

   The following screen displays:



2 Select the **Add Schedule** button to add a schedule to this experience.

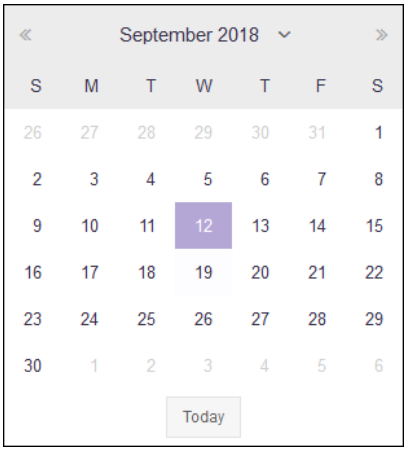
The Add Schedule screen displays.



Use the Schedules screen to configure the schedule. A schedule is a set of configurations consisting of a date range, a set of controls to restrict the time, and the days of week when this schedule can be run.

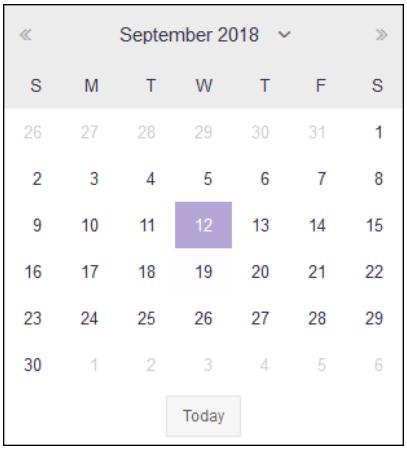
3 Select the icon inside the **Start Date** control.

A **Calendar** displays from where you can select the correct **Start Date** for this schedule.



4 Select the icon inside the **End Date** control.

A **Calendar** displays from where you can select the correct **End Date** for this schedule.



5 Select the **Limit Time** switch to enable setting the time range when this schedule is considered active.

The **Start Time** and **End Time** controls are enabled.

6 Use the **Start Time** drop-down menu to select the schedule's start time. Start time can be configured with an accuracy of nearest half-hour.

For example, you cannot configure the start or end time to be 10:15 am. You must configure it to the nearest half-hour, either 10:00 am or 10.30 am.

7 Use the **End Time** drop-down menu to select the schedule's end time. End time can be configured with an accuracy of nearest half-hour.

For example, you cannot configure the start or end time to be 10:15 am. You must configure it to the nearest half-hour, either 10:00 am or 10.30 am.

8 Select the **Limit Days** switch to enable setting the days of the week when this schedule is considered active.

The **Days of Week** controls are enabled.

Select the appropriate days when this schedule is to be executed.

9 Select the **SAVE** button to save the schedule.

Select the **Cancel** button to exit without saving the changes made to this schedule.

10 From the main screen, select the **Remove All** button to remove all configured schedules for this experience.

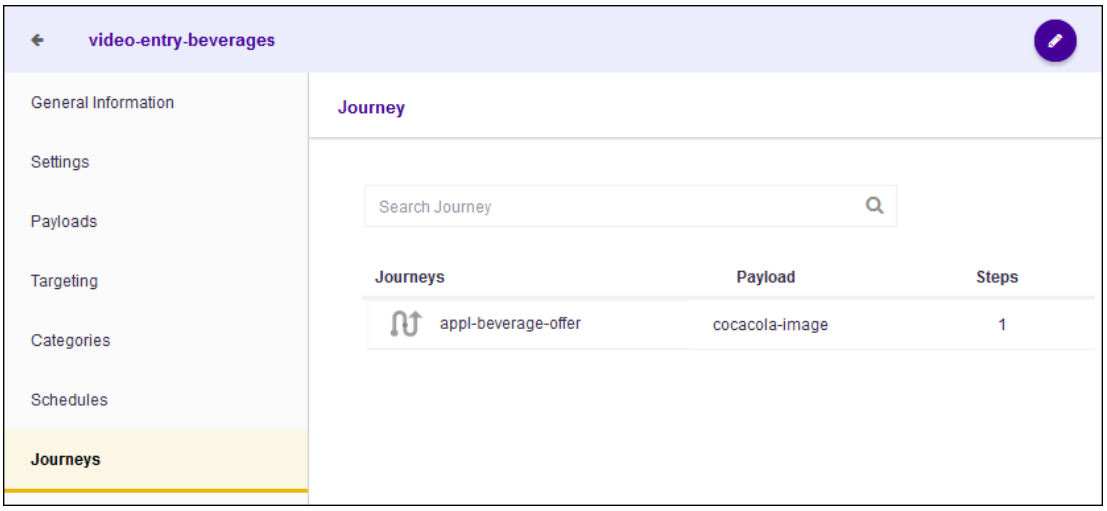
11 To remove a single schedule from this experience, select the icon under the **Actions** column for the schedule.

12 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

View Journeys

The **Journeys** screen displays a list of all journeys that use this experience. This screen lists the name of the journey, the payload that is delivered through the journey and the number of steps in the journey.



Note

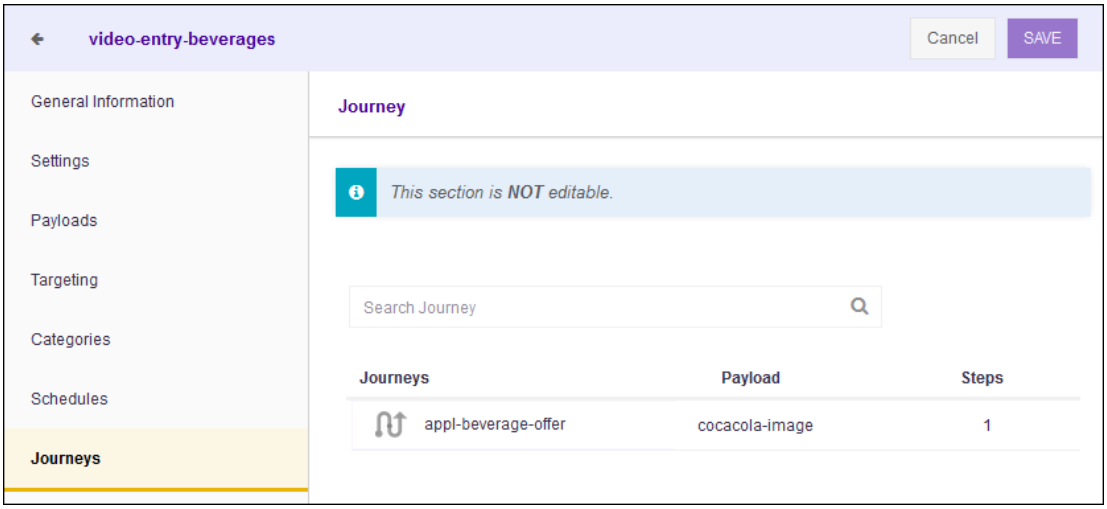
This screen is read only and its field cannot be edited.

You cannot associate this experience with journeys through this screen. To associate an experience with a journey, use the Journeys screen.

To view the journeys associated with this experience:

Select the **Edit** button located to the top right of the screen.

The following screen displays:



Note

This screen is read only and its field cannot be edited.

The **Journey** screen displays the following fields:

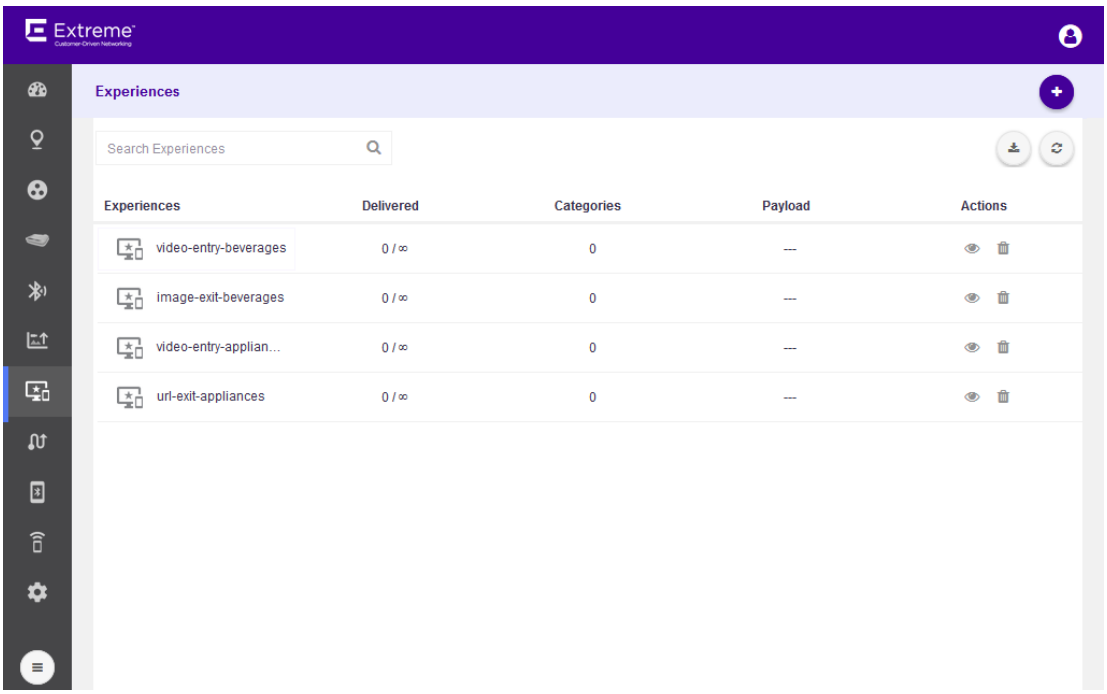
Field	Description
Journeys	Displays the name of the journey that has configured this experience as a part of the journey.
Payload	Displays the name of the payload that is delivered at the end of the journey.
Steps	Displays the number of steps that make up the journey.

Delete an Experience

To delete a payload:

1. Use the icon to load the **Experiences** screen.

   The **Experiences** screen loads.



2. Select the experience to delete from the list and then select the button located under the **Actions** column.

   A confirmation dialog displays.

3 Select the **Yes** button to delete the experience.

To exit without deleting the selected experience, select**No**.

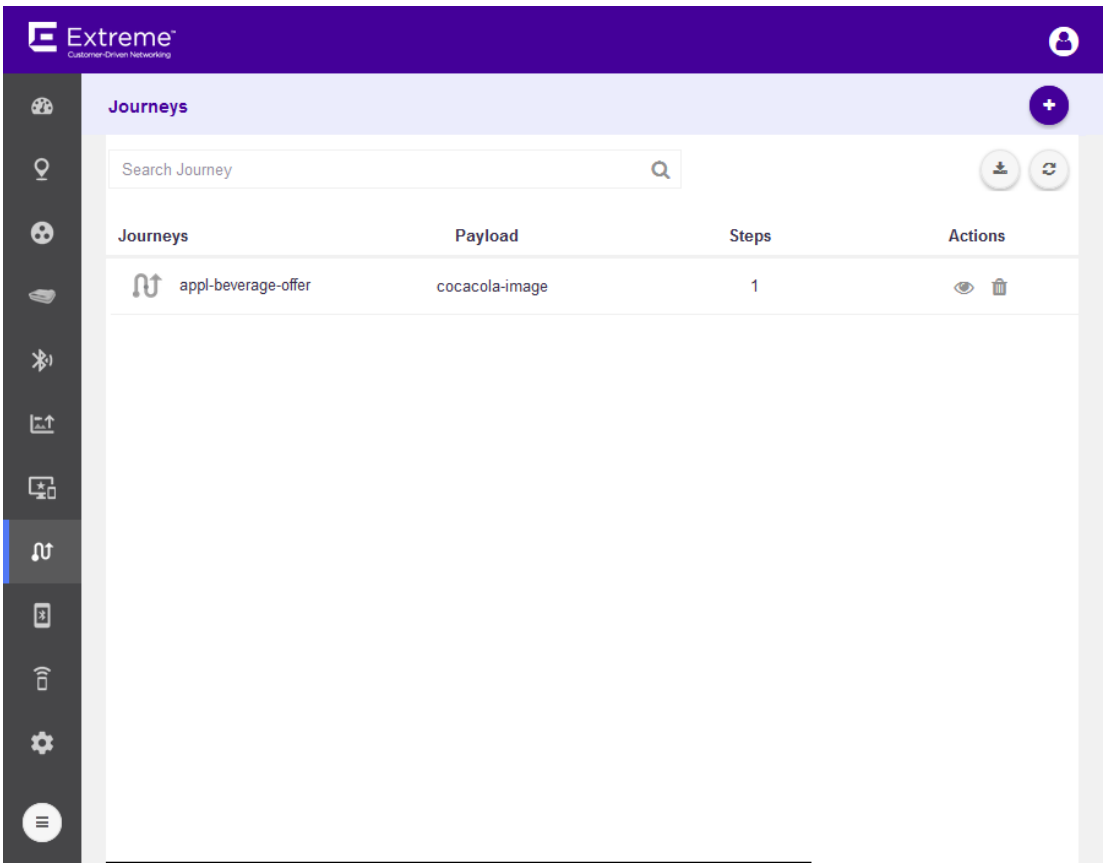
10 Journey

View a Journey
Create or Edit a Journey
Delete a Journey

A journey is a set of steps that the visitor completes to receive a tailor made payload. Journeys provide you a way to create and manage campaigns that combine more than one experience into a single package. A journey usually consists of the following components:

- The number of times the journey is delivered and its configuration.
- The Payload configuration
- The configurations that controls where the journey is available.
- The configurations that controls the rules that make this journey.
- The configuration that sets the schedule when this journey is considered active.

Journeys are managed from the **Journeys** screen. Use the icon to launch the **Journey** screen.



The **Journey** screen displays the following information for each journey configured for this ExtremeLocation account.

Field	Description
Journeys	Displays the name configured for this journey.
Payload	Displays the name of the payload that is delivered for this journey.
Steps	Displays the number of steps that make this journey.
Action	Use the icons in this column to perform specific actions on the selected journey. You can edit the journey's information or remove it.

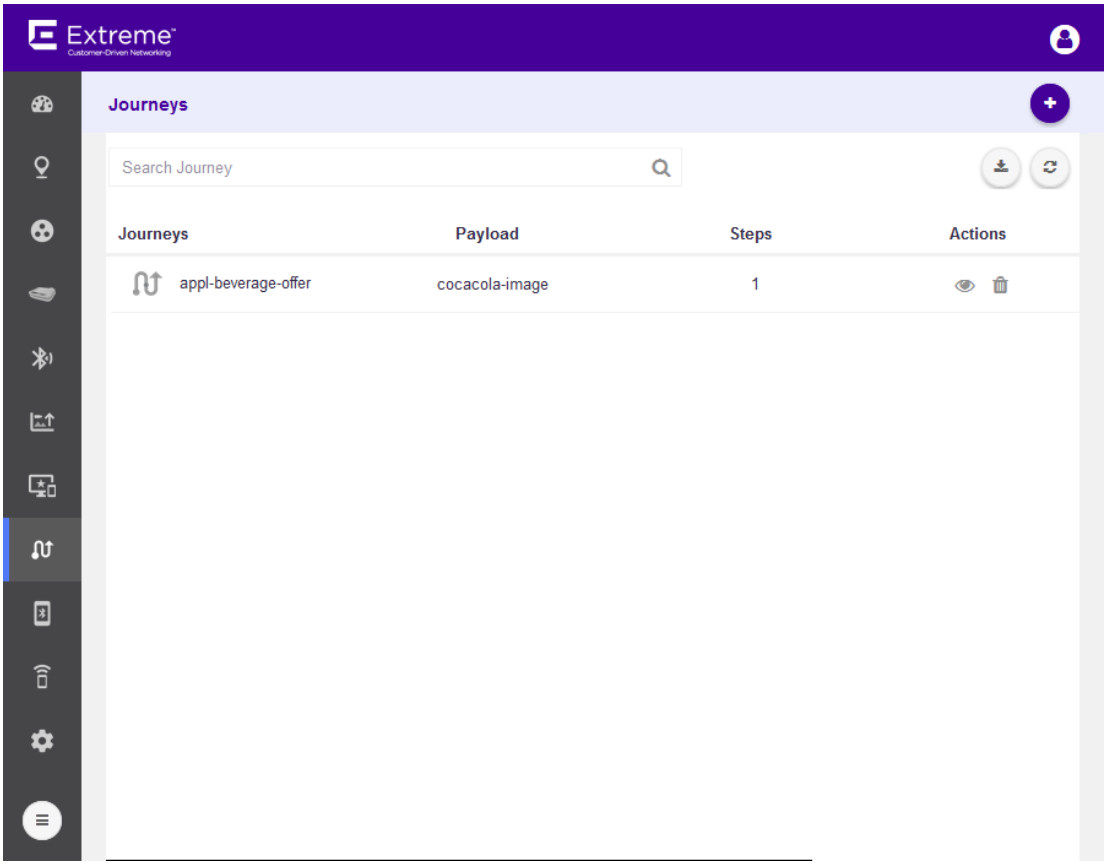
Periodically use the icon to refresh this screen manually.

Use the icon to download the journeys listed in this screen as a *.csv* file.

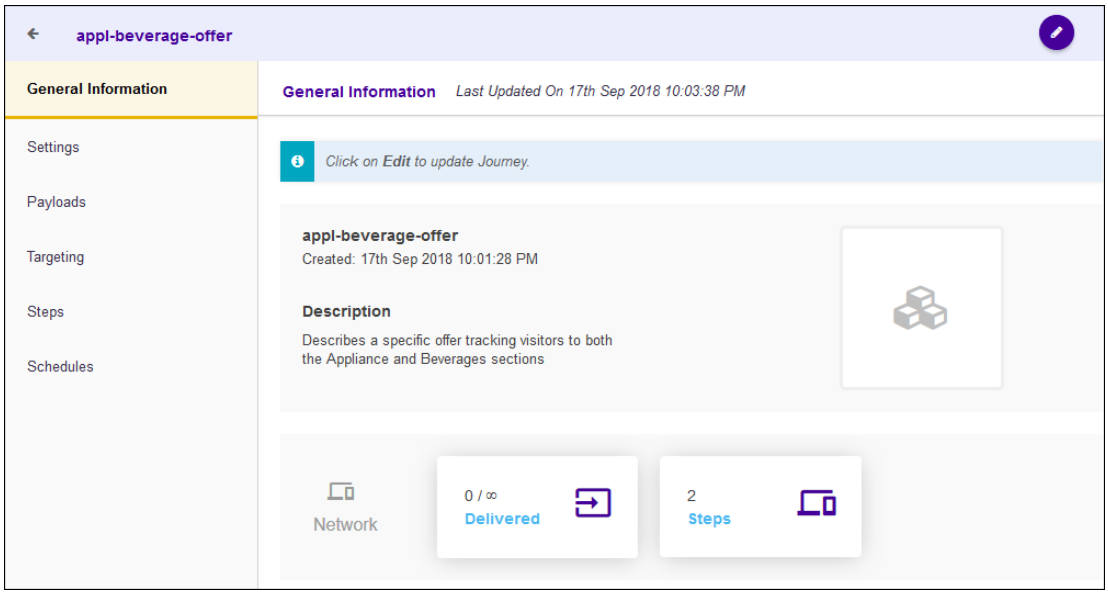
View a Journey

To view a journey's details:

1. Use the icon to load the **Journeys** screen.
   The **Journeys** screen loads.



2. Select the icon under the **Actions** column to view the selected journey's information.
   The journey's **General Information** screen loads.

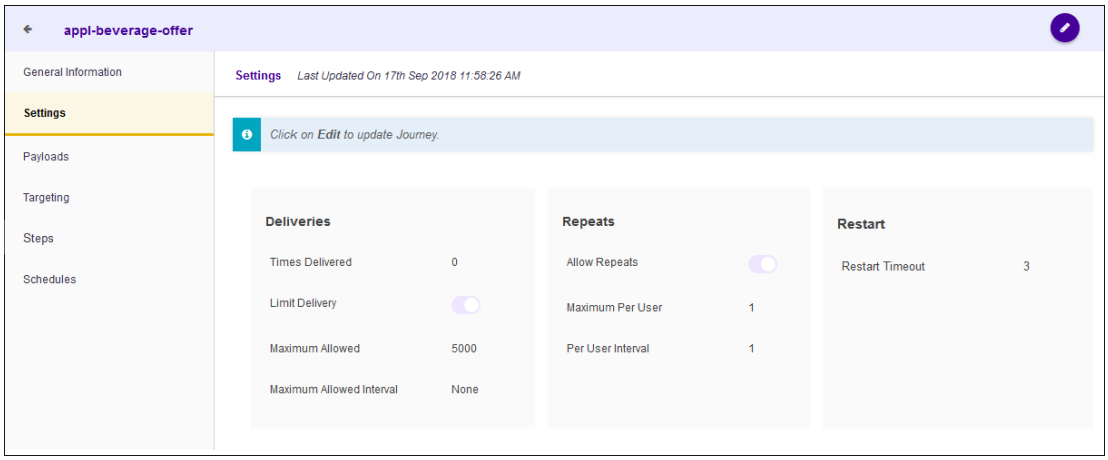


The following information is displayed:

Field	Description
Name	Displays the name assigned to this journey. This field also displays the date when this journey's entry was created and added to this ExtremeLocation account.
Description	Displays a user entered description for this journey. Use the description field to provide enough information to indicate this journey's use.
Network	The **Network** field is disabled.
Delivered	This field displays two values. The first value is the count of the number of times this journey was delivered. The second value is the maximum number of journeys that can be delivered. When this value is reached, the journey is no longer delivered.
Steps	Displays the number of steps that make up this journey.

3 Select the **Settings** menu item.

The Settings screen loads.

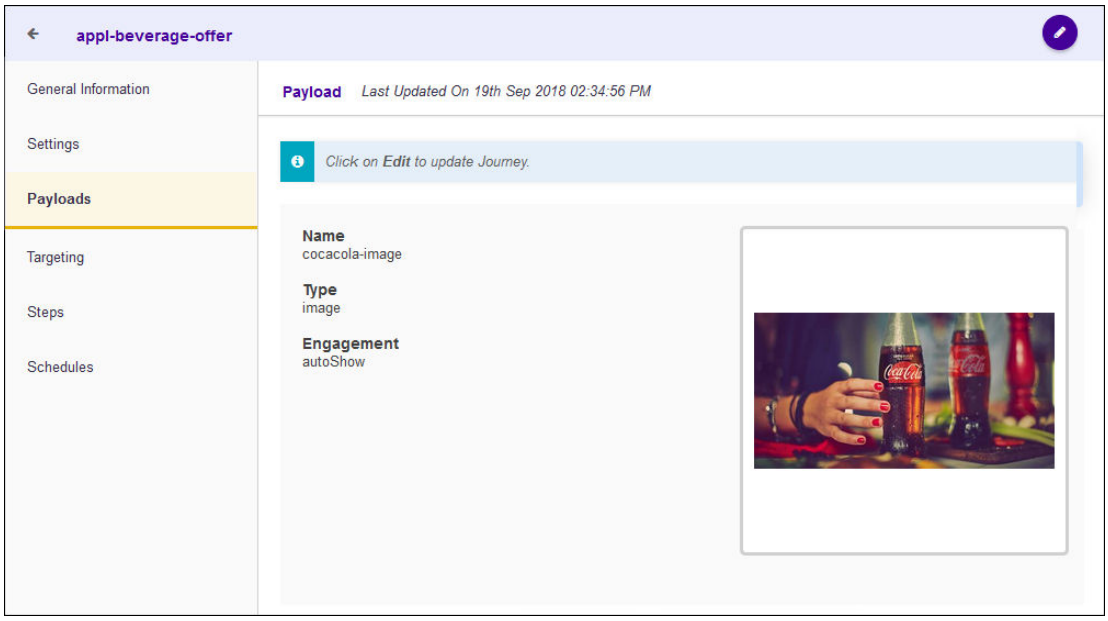


The following information is displayed for this journey:

Field	Description	
Deliveries	This field displays the following information:	
	Times Delivered	This value is a count of the number of times this journey was delivered to visitors.
	Limit Delivery	This switch indicates if the journey is restricted in the number of times it can be delivered. When set to *On*, the journey is delivered the configured number of times and then it is no longer delivered
	Maximum Allowed	Displays the maximum number of times this journey will be delivered. This field is only displayed when the **Limit Delivery** switch is *On*.
	Max. Allowed Interval	Displays the duration of time within which the journey must be delivered. This value can be one of *None*, *Hour*, *Day*, *Week*, or *Month*. When the selected value is *None* no time limit is set. Once the value set in **Maximum Allowed** is reached, no more journeys are delivered.
Repeat	This field displays the following information:	
	Allow Repeats	The **Allow Repeats** field controls how many times a payload is delivered to a visitor. By default this field is set to 'off' indicating that the payload is delivered only once. When this field is set to 'on', it controls the number of times the payload is delivered to the visitor and the time interval between two consecutive journeys received by the same visitor.
	Maximum Per User	This value controls the maximum number of times the journey's payload can be delivered to the same visitor. The default value is one (1). When this field is set to zero (0), it indicates that there is no limit on the number of times this payload is delivered to the visitor.
	Per User Interval	This value controls the time interval in minutes that is required to elapse before the same payload can be delivered again to the same visitor. The default value is one (1). When this field is set to zero (0), it indicates that there are no constraints on the time interval between the delivery of two payloads to the same visitor.
Restart	This field displays the following information:	
	Restart Timeout	When selected, the **Restart** field controls the time within which the journey must be completed by the visitor. If this time is exceeded, the visitor must restart the journey.

4 Select the **Payload** menu item.

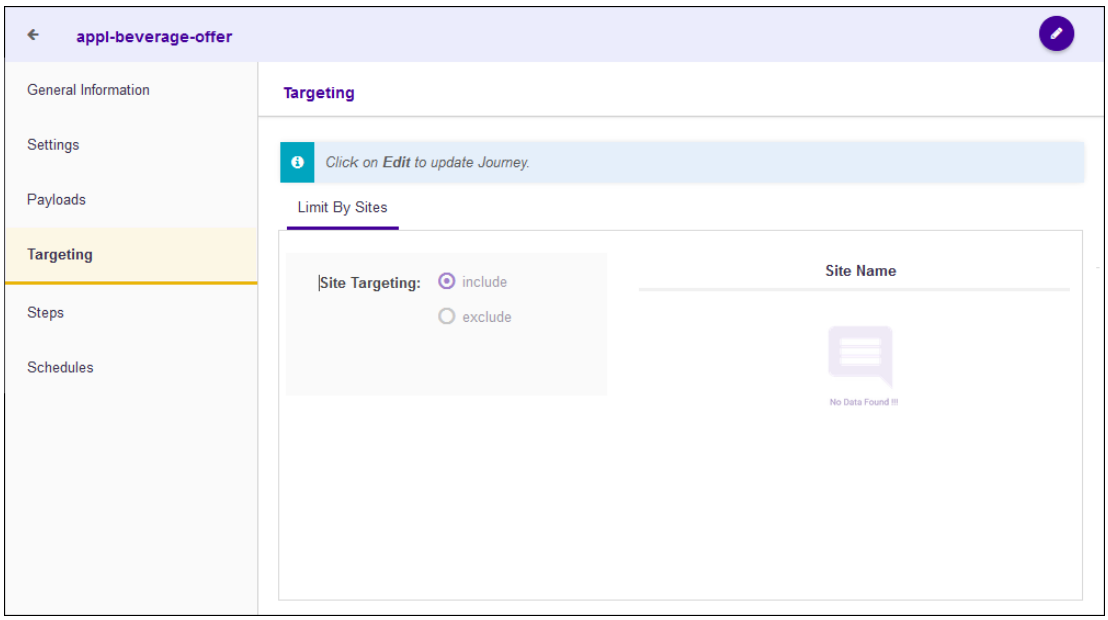
The Payload screen loads.



Field	Description
Name	Displays the name of the payload associated with this journey.
Type	This field display the type of the payload.
Engagement	This field indicates how the payload is presented to the visitor. When set to `Passive`, no user interaction takes place for this payload.

5 Select the **Targeting** menu item.

The **Targeting** screen loads.

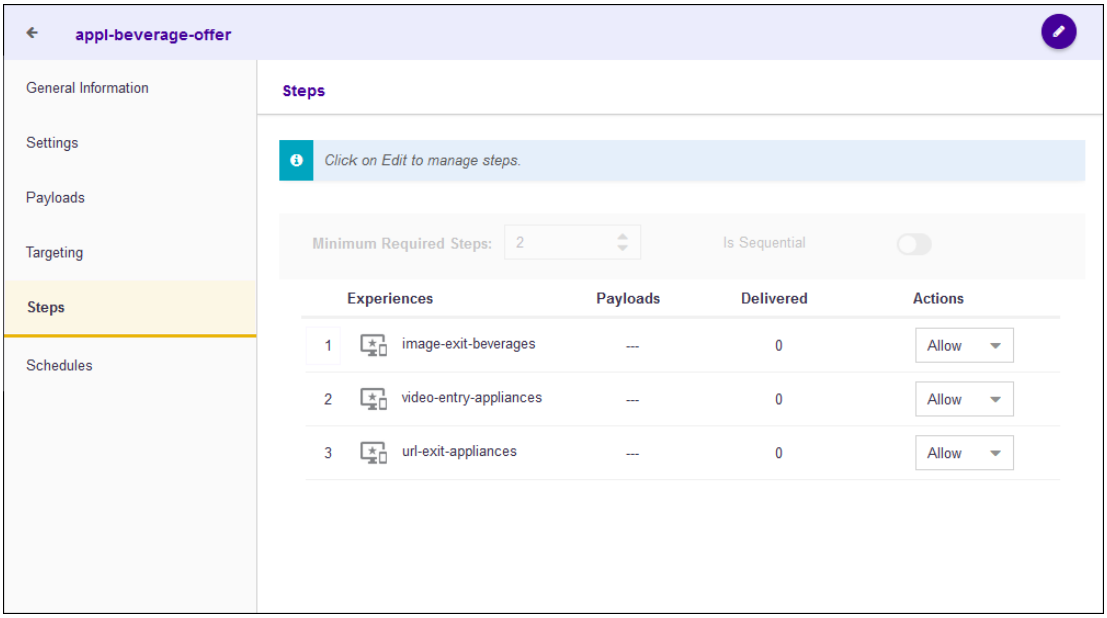


The following information is displayed for this journey.

Field	Description
Limit by Sites	The **Limit by Sites** field displays the following information: **Site Targeting** The *Include* variable lists the sites that are included when targeting. The *Exclude* variable lists the sites that are excluded when targeting. **Site Name** Lists the sites that are configured for this journey.

6 Select the **Steps** menu item.

The Steps screen load.

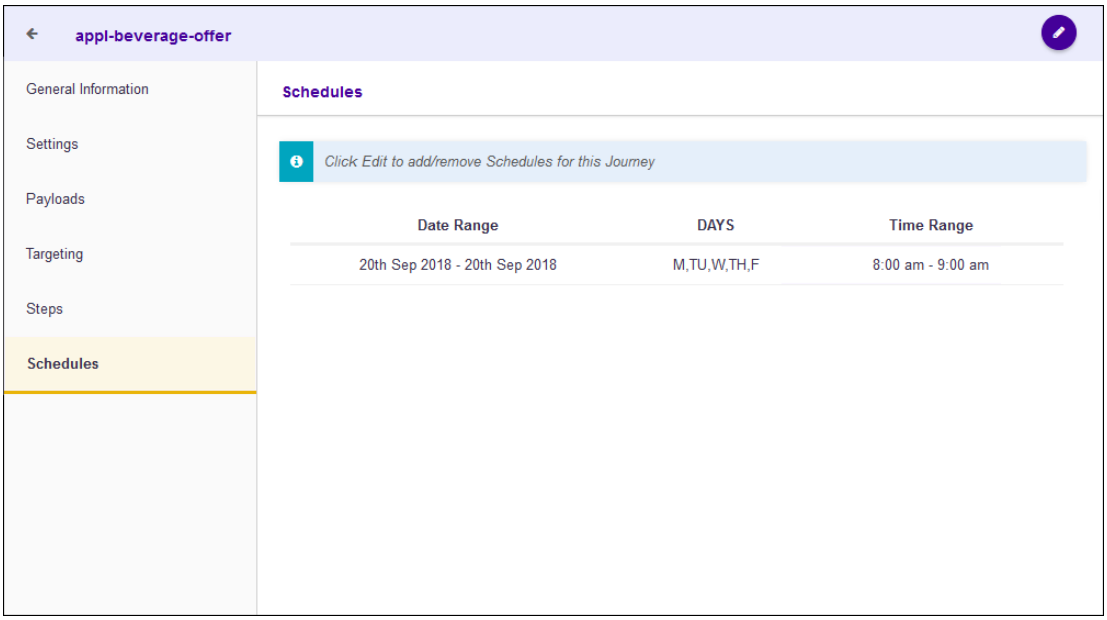


The following information is displayed for this journey.

Field	Description
Minimum Required Steps	This field displays the minimum number of steps that a visitor has to complete for the journey's payload to be delivered. For example, if the journey is configured with seven (7) steps and this value is four (4) then the user must complete four (4) steps before the journey's payload is delivered.
Is Sequential	This switch indicates that the journey's steps must be completed in sequence for the journey's payload to be delivered. If the **Minimum Required Steps** value is configured, then the minimum number of steps must be executed in sequence for the journey's payload to be delivered.
Experiences	Displays the name of the configured experience
Payloads	Displays the name of the payload configured for the experience.
Delivered	Displays the number of times this experience was delivered to visitors.
Actions	Displays this experience's action value. When set to *Block*, the experience is not considered for completing this journey.

7 Select the **Schedules** menu item.

The Schedules screen loads.



The following information is displayed for this journey.

Field	Description
Date Range	Displays the date range when this journey is scheduled to run.
Days	Displays the days of the week when this journey is scheduled to run.
Time Range	Displays the time range during with this journey is considered active.

Create or Edit a Journey

A journey consists of a set of steps that must be executed, either in sequence or out of sequence, for the configured Payload to be delivered. You use a journey to create a campaign or to enhance the end user experience when visiting your site.

A journey consists of various components and their configuration options. Each component can be modified independently of other components. These components can be broadly classified into:

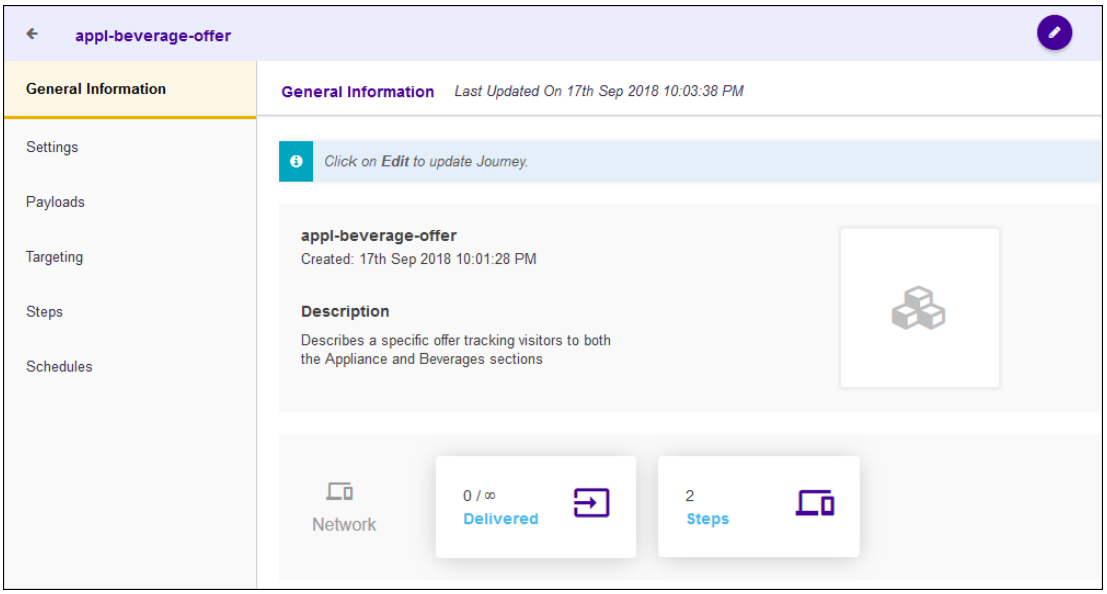
- General Information — Configurations under this heading define the journey's name and description.
- Settings — Configurations under this heading defines how many times the journey is delivered to end users and other similar settings.
- Payload — Configurations under this heading define what is delivered to the user by this journey.
- Targeting — Configuration under this heading define the limits of this journey and when it can be triggered.
- Steps — Configuration under this heading define the Experiences that must be triggered, either in sequence or out of sequence, for this journey to deliver its payload.
- Schedules — Configurations under this heading define the actual time duration and date range when the journey can be triggered. You can also configure particular days of the week when the journey is triggered.

The same screen is used to create or edit a journey. When a new journey is created, each configuration screen is populated with default values and you must edit each configuration screen individually.

When editing an existing journey, each configuration screen is populated with the journey's existing values and you can modify each configuration screen individually.

Create or Edit General Information

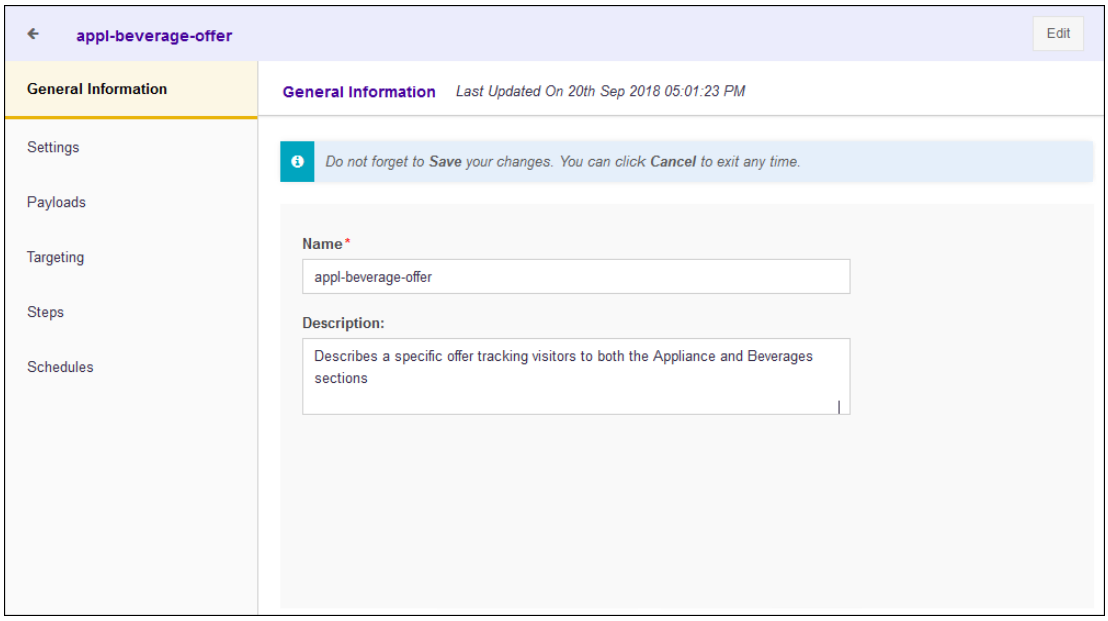
The General Information screen displays an overview about this journey. This is the default screen displayed when you select the icon in the main Journey screen.



To edit the journey's General Information:

1 Select the icon located to the top right of this screen.

The following screen displays:



Note

For an existing journey, the fields in this screen display the existing values. For a new journey, these fields are left blank.

Provide the following information:

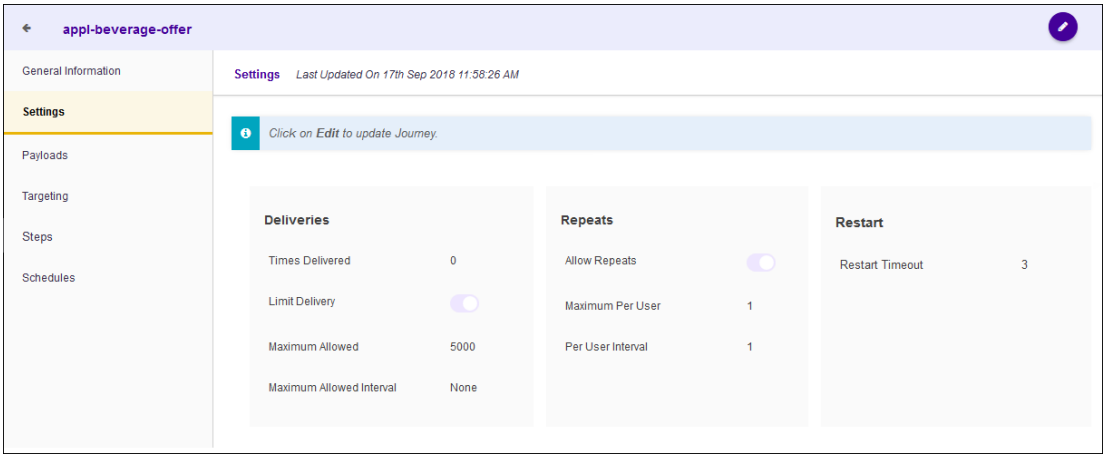
Field	Description
Name	Provide a name for this journey. The name should be such that it identifies this journey uniquely among other journeys.
Description	Provide a detailed description for this journey. A detailed description could contain information such as the purpose of the journey, the Payload it delivers, and other information that identifies the journey.

2 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Settings

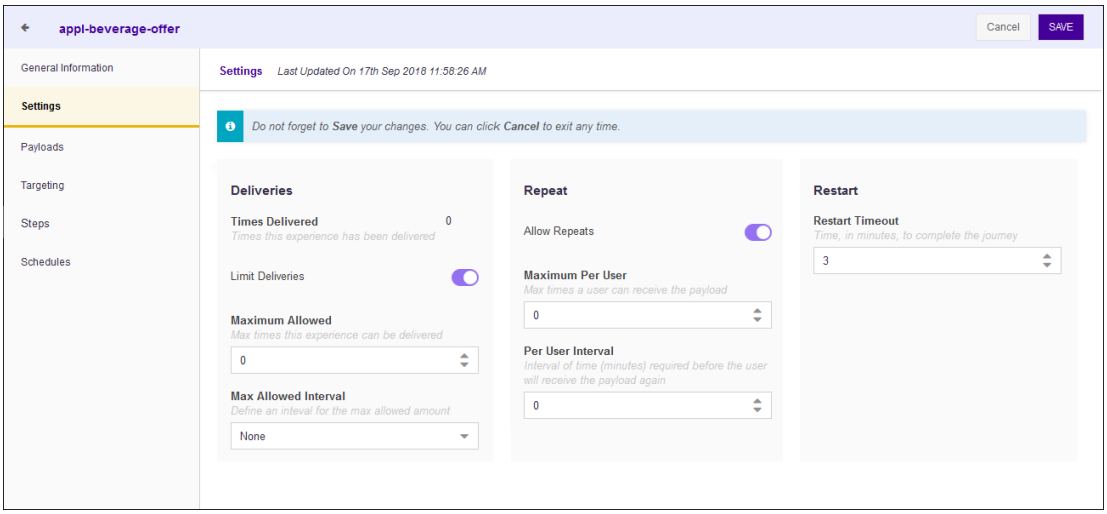
The **Settings** screen displays the configuration for delivery of this journey. This screen lists the number of times that this journey was delivered and also shows how this journey is delivered to a single user.



To edit the journey's **Settings**:

1 Select the icon located to the top right of this screen.

The following screen displays:



Note

For a existing journey, the fields in this screen display the existing values. For a new journey, these fields are left blank.

2 Provide the following information for the **Deliveries** field:

Field	Description
Times Delivered	Displays the number of times this journey was delivered.
Limit Deliveries	Use this toggle button to enable or disable the number of times this journey is delivered. When set to *Off* there is no limit on the number of times this journey is delivered.

Field	Description
Maximum Allowed	Use the spinner to set the number of times this journey is to be delivered. When this value is exceeded, delivery of this journey is stopped. Depending on the configuration of the **Max Allowed Interval** field, delivery of this journey may be restarted.
Max Allowed Interval	Use this drop-down list to configure a time duration within which the journey is to be delivered. For example, if the value for this field is set to *Hour* and the value for the **Maximum Allowed** field is set to *5000*, then, a maximum of 5000 journeys can be delivered per hour. If, within an hour, all 5000 journeys are delivered, then no more journeys are delivered for the reminder of the hour. This counter is reset at the end of each hour.

3 Provide the following information for the **Repeat** field:

Field	Description
Allow Repeats	The **Allow Repeats** field controls how many times a payload is delivered to a visitor. By default this field is set to 'off' indicating that the payload is delivered only once. When this field is set 'on', you can control the number of times the payload is delivered to the visitor and the time interval between two consecutive payloads received by the same visitor.
Maximum Per User	Use the spinner to set this value. This value controls the maximum number of times the payload can be delivered to the same visitor. The default value is one (1). Set this field to zero (0) to indicate that there is no limit on the number of times the same payload is delivered to the visitor.
Per User Interval	Use the spinner to set this value. This value controls the time interval in minutes that is required to elapse before the same payload can be delivered to the same visitor. The default value is one (1). Set this field to zero (0) to indicate that there are no constraints on the time interval between the delivery of two of the same payload to the same visitor. For example, if the **Per User Interval** value is set at *2* and the **Maximum Per User** value is set at *3* , then the user will receive a maximum of three (3) payloads every two (2) minutes.

4 Provide the following information for the **Restart** field.

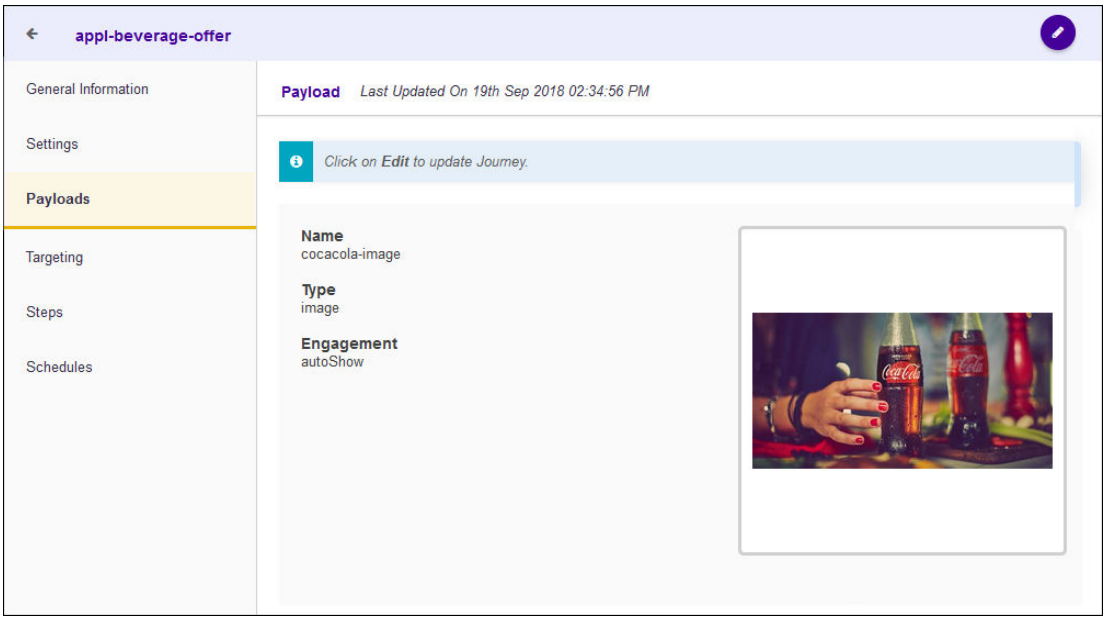
Field	Description
Restart Timeout	Use the spinner to set the time within which the journey has to be completed. If this time expires and the journey's steps are not completed, then the journey is considered invalid.

5 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Payloads

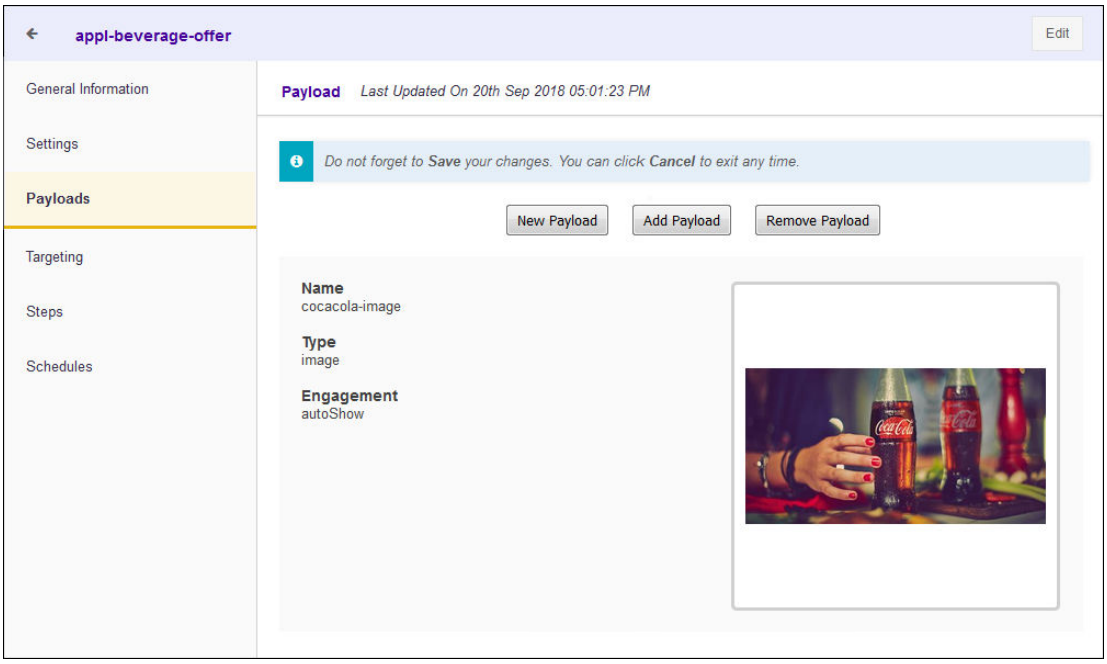
The Payload screen displays the payload configured for this journey. This screen lists the name, the payload type, and how the payload will be delivered to the end user.



To edit the journey's **Payload** settings:

1 Select the icon located to the top right of the screen.

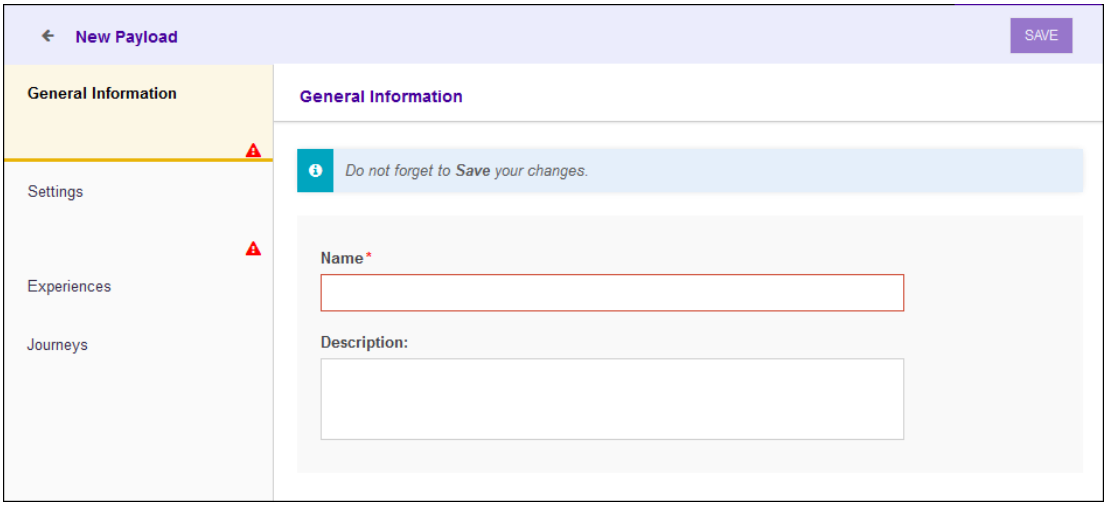
The following screen displays:



2 Select the **New Payload** button to create a new payload to add to this journey.

> **Note**
> The new payload will replace the existing payload if it is already configured for this journey.

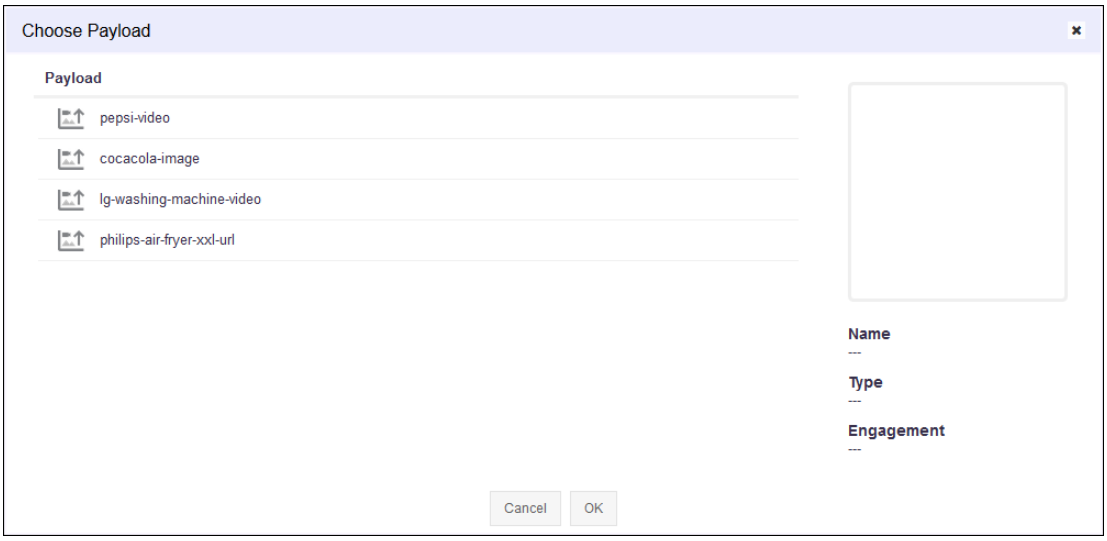
The New Payload screen displays.



For more information on creating a new payload, see Create or Edit Payload.

3 Use the **Choose Payload** button to select an existing payload.

The Choose Payload screen displays.



4 Select the payload from the list to highlight it.

5 Select **OK** button to confirm your selection.

At any time use the **Cancel** button to exit without saving changes made to this screen.

6 Select the **Remove Payload** button to immediately remove the payload from this journey.

Note

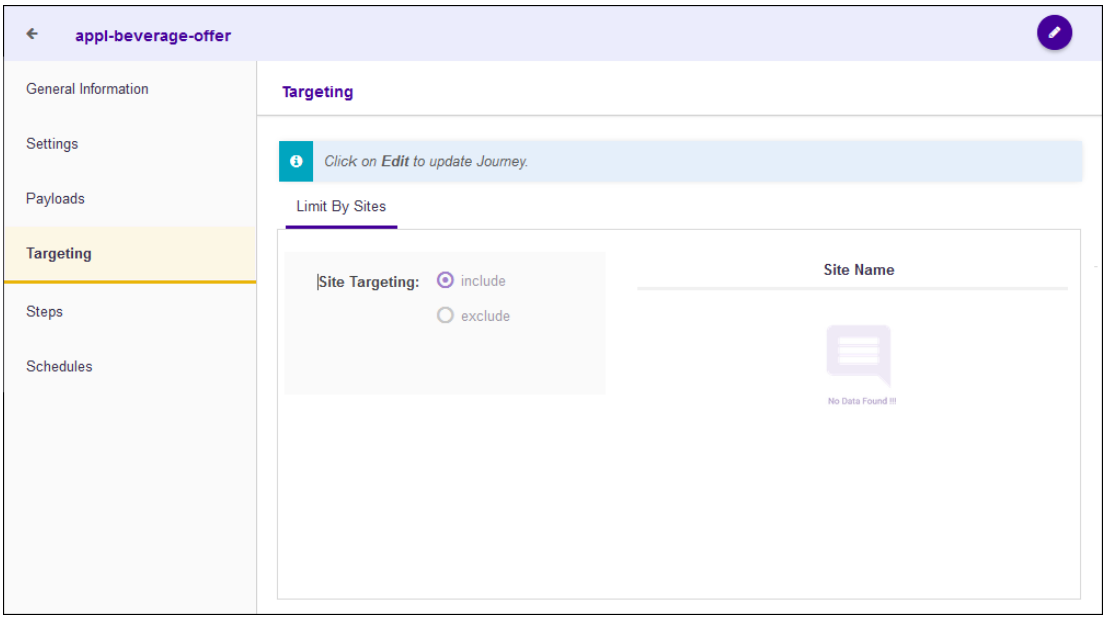
No warning is given when a payload is removed from this journey.

7 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Targeting

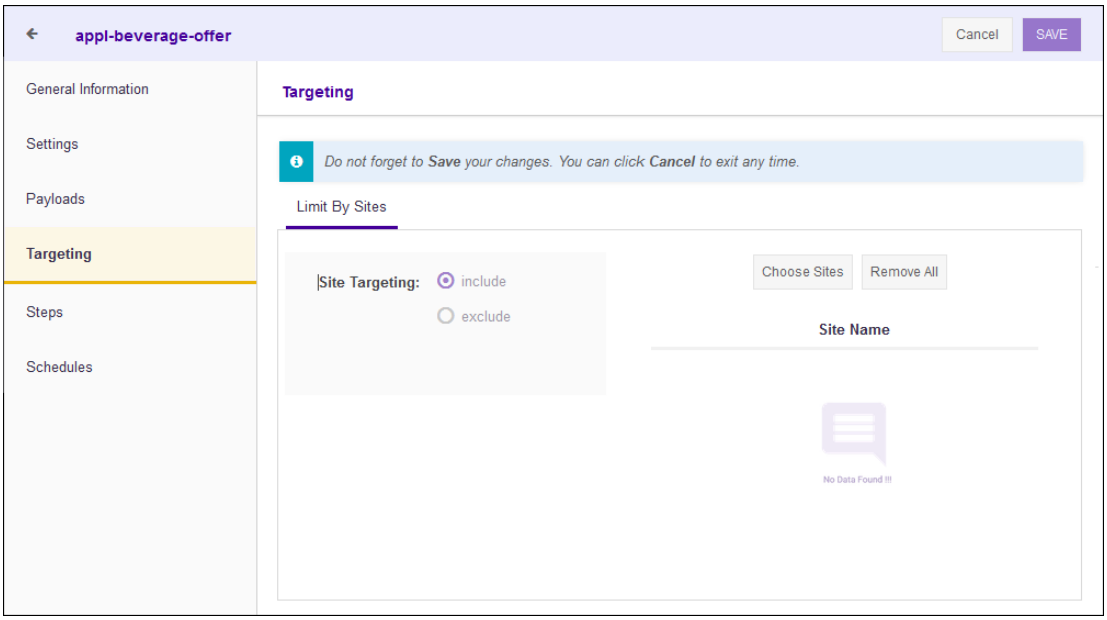
The **Targeting** screen displays the configuration for where the journey is delivered. It provides configuration for setting up the sites where this journey is allowed or not allowed.



To edit the journey's **Targeting** settings:

1 Select the icon located to the top right of the screen.

The following screen displays:



Note

For an existing journey, the fields in this screen display the existing values. For a new journey, these fields are set to their default values.

2 Provide the following information for the **Limit by Sites** field:

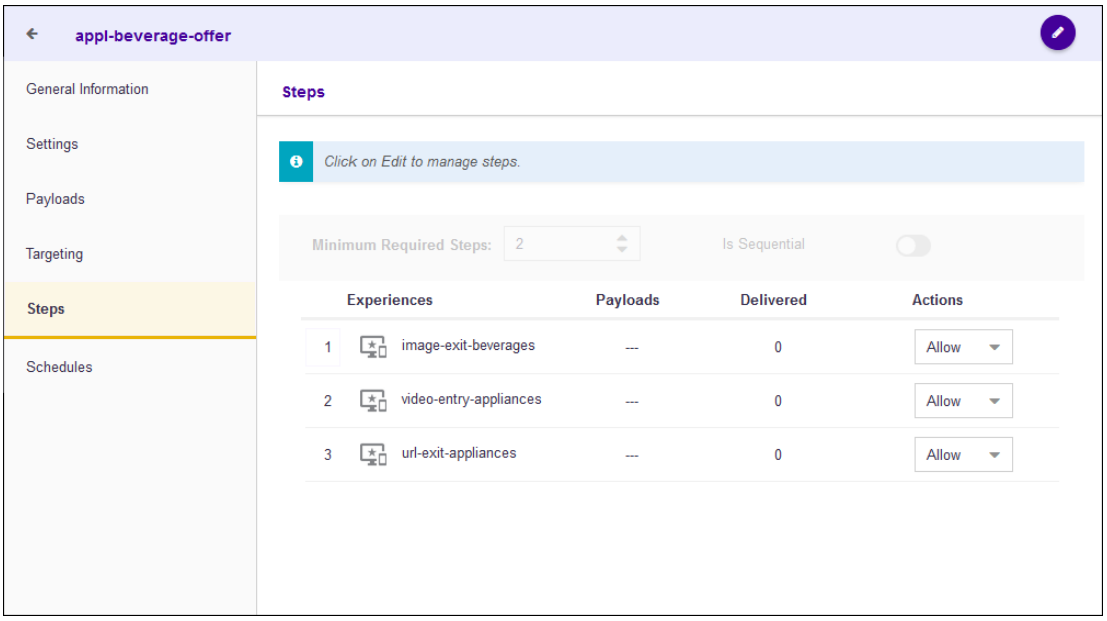
Field	Description
Site Targeting	Select *include* to indicate that the listed sites can trigger this journey. Select *exclude* to indicate that the listed sites cannot trigger this journey.
Choose Sites	Use the **Choose sites** button to add sites to this journey.
Remove All	Use the **Remove All** button to remove all sites mapped to this journey.

3 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

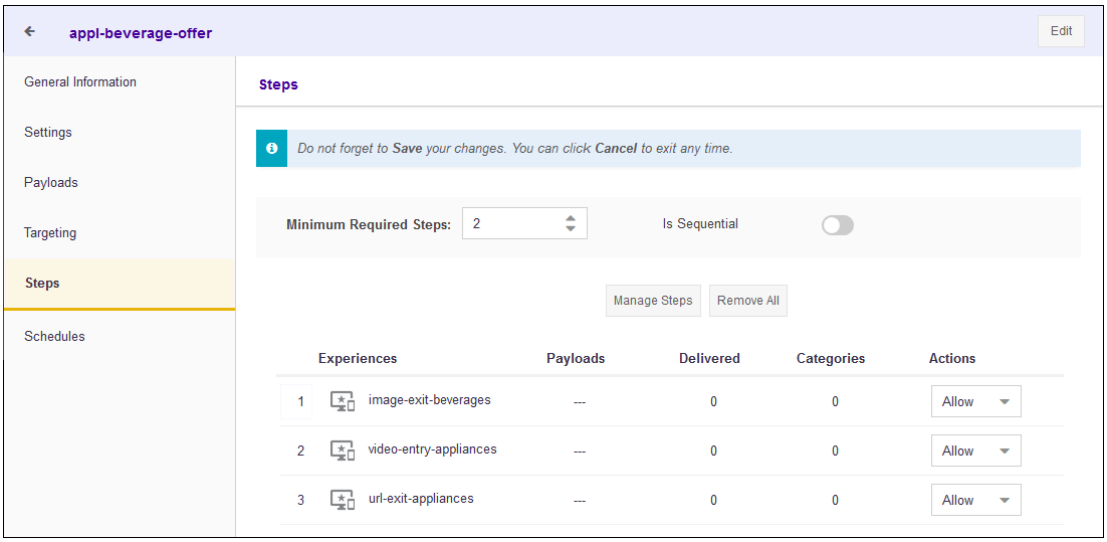
Create or Edit Steps

The **Steps** screen displays the configuration of the steps that make this journey. A step is an experience that must be successfully completed for the journey's payload to be delivered to the user.



To edit the journey's **Steps** settings:

1 Select the icon located to the top right of the screen.
The following screen displays:



Note

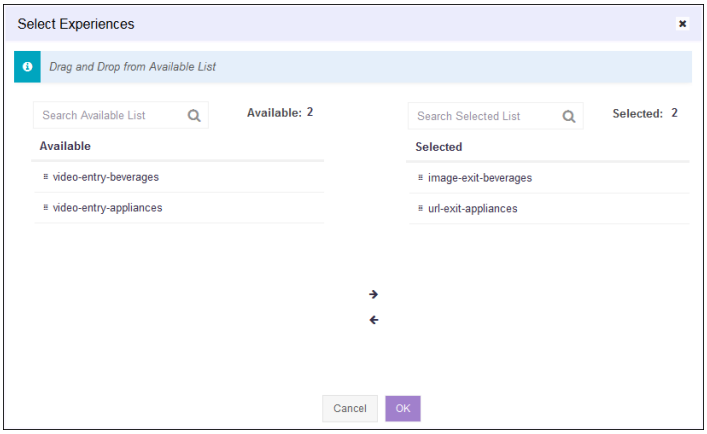
For an existing journey, the fields in this screen display the existing values. For a new journey, these fields are left blank.

2 Use the spinner to set the **Minimum Required Steps** field value. When set, a journey's payload is only delivered when these number of steps are completed. When the **Is Sequential** is also set, then these steps must be completed in sequence.

3 Set the **Is Sequential** switch to indicate that the journey's payload is only delivered if the number of steps set in the **Minimum Required Steps** field are performed in the proper sequence as set in the list below.

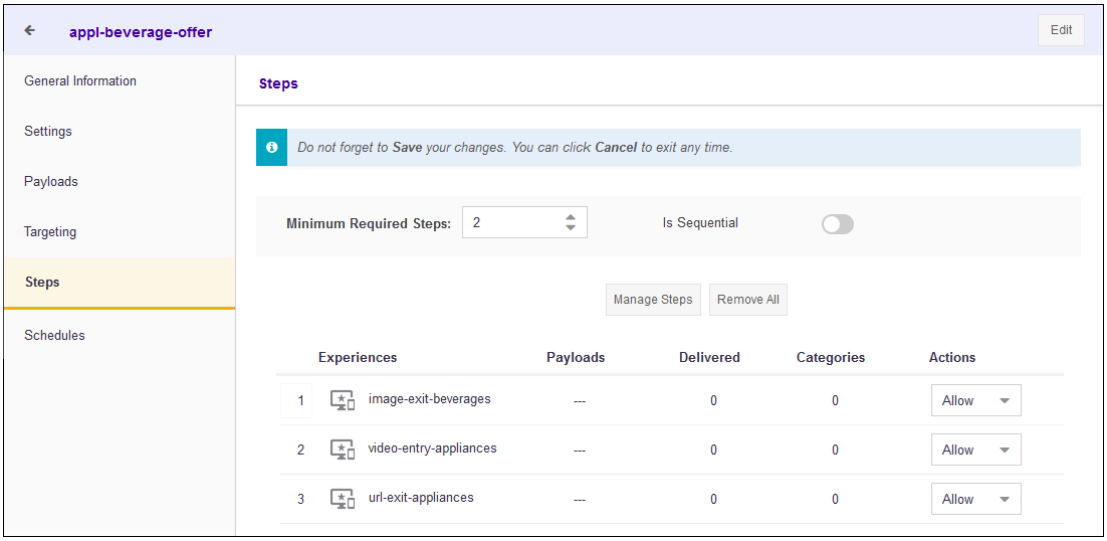
4 Select the **Manage Steps** button to add or remove steps.

The **Select Experiences** screen displays.



Use the → and the ← buttons to move the experiences from the **Available** list to the **Selected** list. Once done, select the **OK** button to save the experiences in the **Selected** list.

You can use this screen to add or remove experiences from this journey.



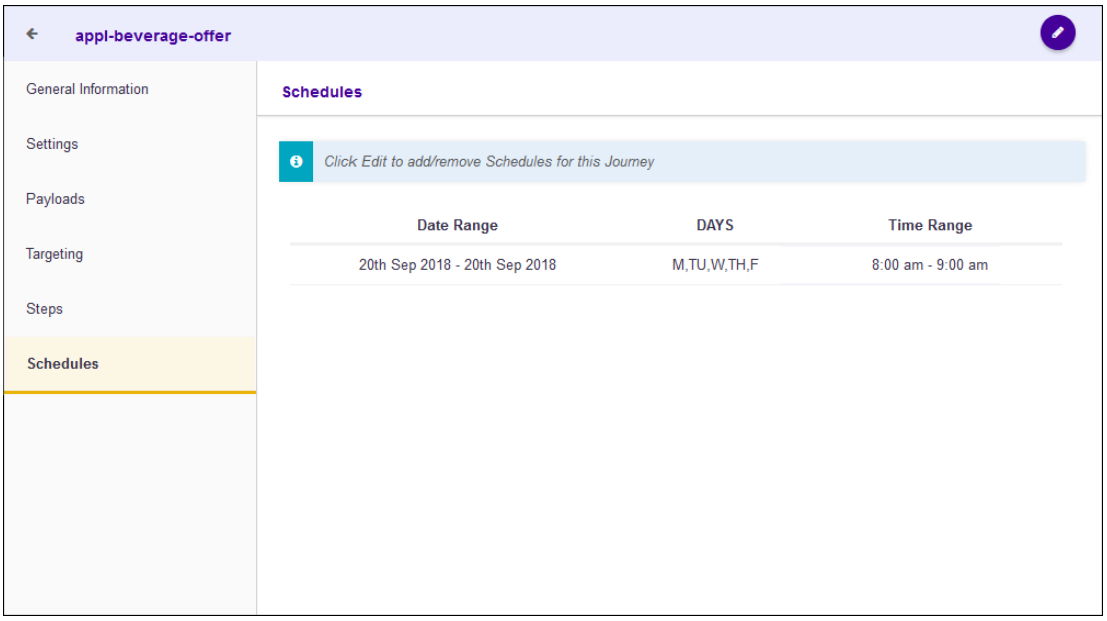
5 Use the **Remove All** button to remove all the steps from this journey.

6 Select the **SAVE** button to the top right of this screen to save changes.

Select the **Cancel** button to exit without saving the changes made to this screen.

Create or Edit Schedules

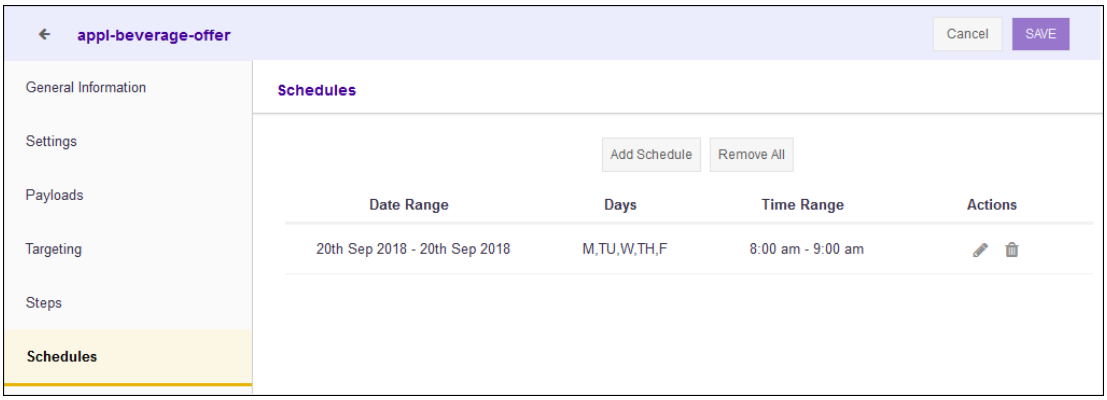
The **Schedules** screen displays the schedules associated with this journey. The screen lists the date range, the days of the week, and the time range when this journey is configured to run.



To edit the journey's **Schedule** settings:

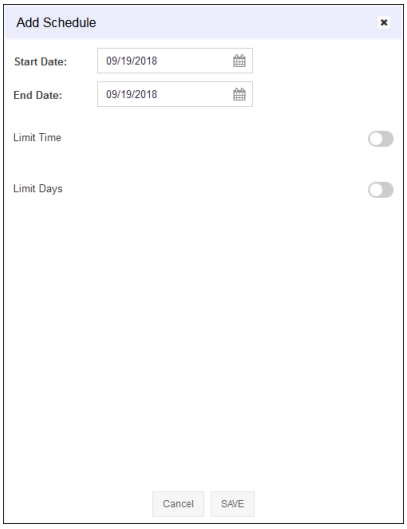
1 Select the icon located to the top right of the screen.

The following screen displays:



2 Select the **Add Schedule** button to add a schedule to this journey.

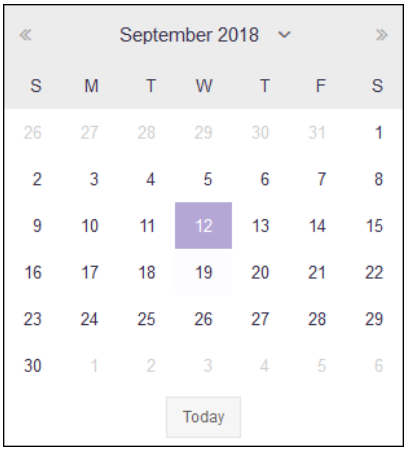
The Add Schedule screen displays.



Use the Schedules screen to configure the schedule. A schedule is a set of configurations consisting of a date range, a set of controls to restrict the time, and the days of week when this schedule can be run.

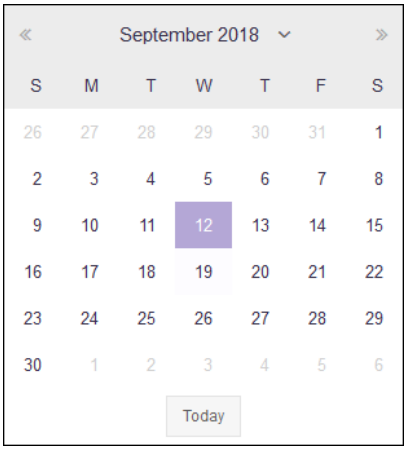
3 Select the icon inside the **Start Date** control.

A **Calendar** displays from where you can select the correct **Start Date** for this schedule.



4 Select the icon inside the **End Date** control.

A **Calendar** displays from where you can select the correct **End Date** for this schedule.



5 Select the **Limit Time** switch to enable setting the time range when this schedule is considered active.

The **Start Time** and **End Time** controls are enabled.

6 Use the **Start Time** drop-down menu to select the schedule's start time. Start time can be configured with an accuracy of nearest half-hour.

For example, you cannot configure the start or end time to be 10:15 am. You must configure it to the nearest half-hour, either 10:00 am or 10.30 am.

7 Use the **End Time** drop-down menu to select the schedule's end time. End time can be configured with an accuracy of nearest half-hour.

For example, you cannot configure the start or end time to be 10:15 am. You must configure it to the nearest half-hour, either 10:00 am or 10.30 am.

8 Select the **Limit Days** switch to enable setting the days of the week when this schedule is considered active.

The **Days of Week** controls are enabled.

Select the appropriate days when this schedule is to be executed.

9 Select the **SAVE** button to save the schedule.

Select the **Cancel** button to exit without saving the changes made to this schedule.

10 From the main screen, select the **Remove All** button to remove all configured schedules for this journey.

11 To remove a single schedule from this journey, select the icon under the **Actions** column for the schedule.

12 Select the **SAVE** button to the top right of this screen to save changes.

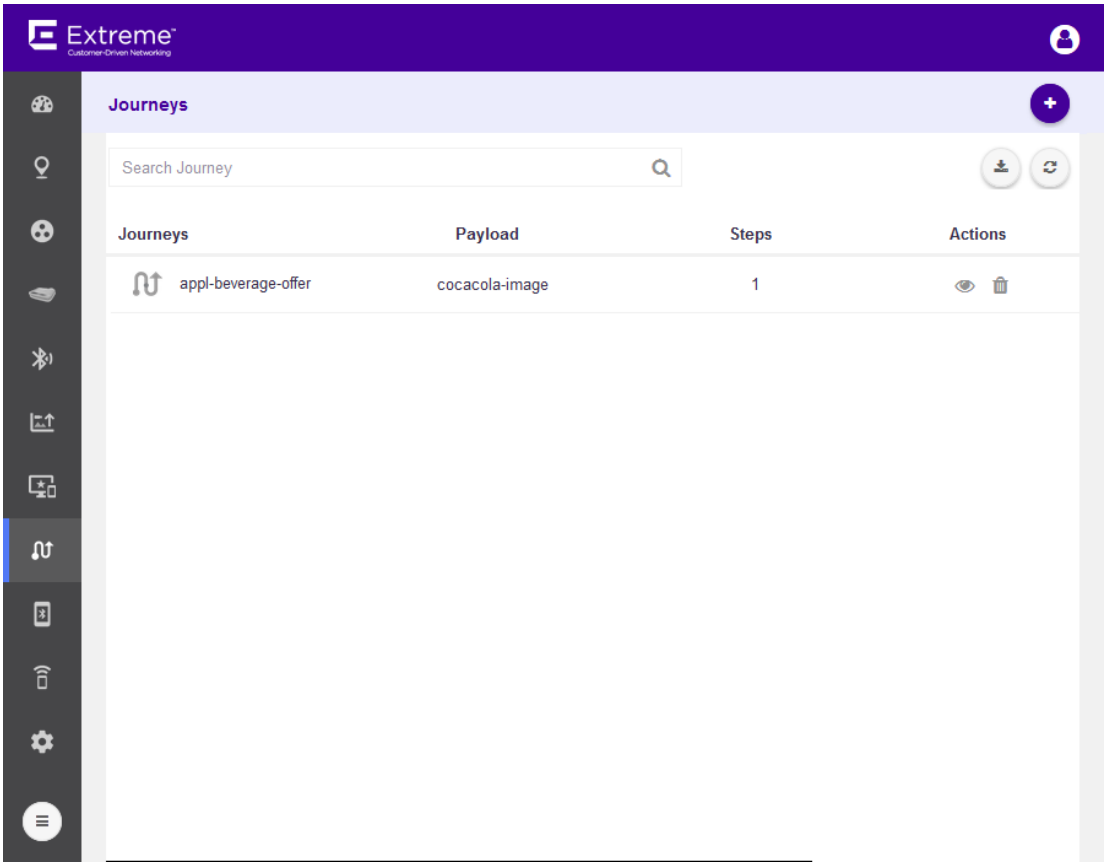
Select the **Cancel** button to exit without saving the changes made to this screen.

Delete a Journey

To delete a journey:

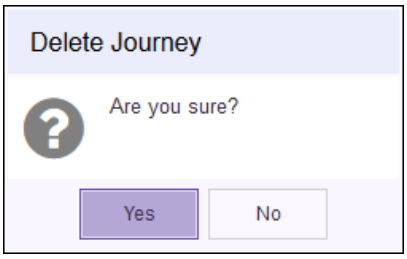
1 Use the icon to load the Journeys screen.

The Journeys screen loads.



2 Select the journey to highlight it in the list and then select the button located under the **Actions** column.

A confirmation dialog displays.



3 Select the **Yes** button to delete the journey.

To exit without deleting the selected journey, select**No**.

11 User Apps

Add Apps
Edit Apps

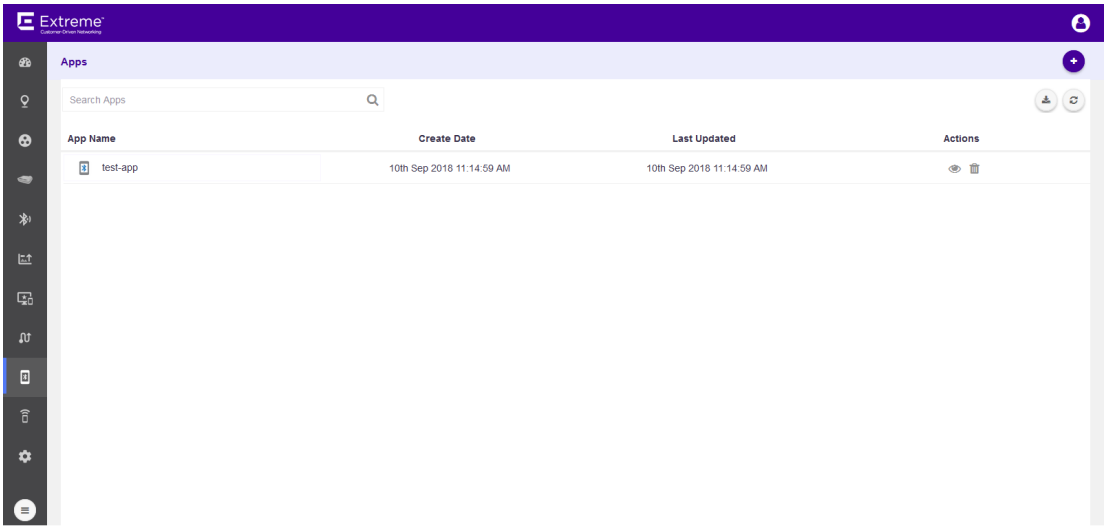
ExtremeLocation provides a set of APIs (Application Programming Interface) that enable you to fetch data from its server. Use your custom applications to fetch data using the provided APIs. However, you would require to have individual API keys for each application that you use to access ExtremeLocation data. Use the Apps screen to add and manage the API keys for your individual apps.

Add Apps

To enable your applications access to ExtremeLocation's APIs to fetch data, it must be registered with ExtremeLocation. ExtremeLocation provides an unique key for each application that needs access to its APIs. Use these steps to register your Apps and to receive the API key for use when fetching data from ExtremeLocation.

1 Select icon to load the Apps screen.

The Apps loads and displays a list of all Apps registered for this ExtremeLocation account.

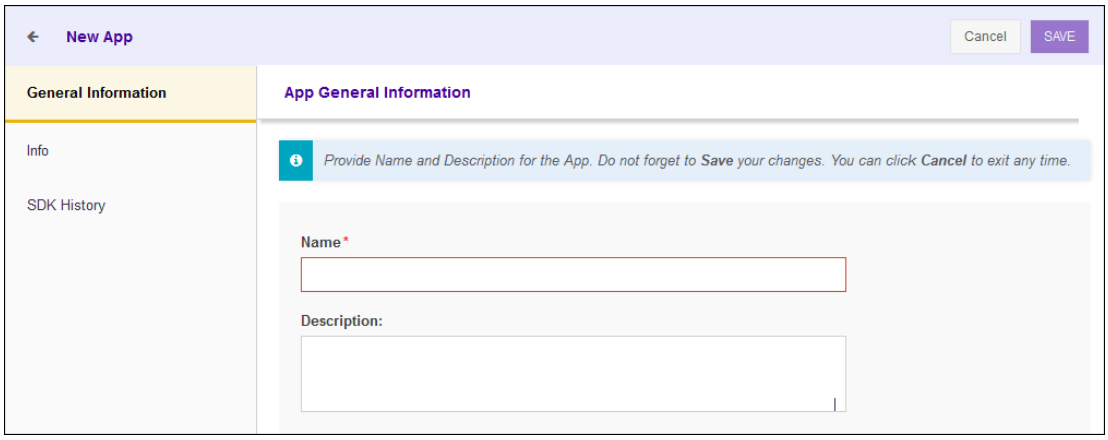


2 Review the following information on the Apps screen.

App Name	Displays the name of the App registered for use with ExtremeLocation .
Create Date	Displays the date on which this entry was created on the ExtremeLocation system.
Last Updated	Displays the date on which this entry was last updated.
Actions	Use the icon to view details for this App entry. To delete this App entry, use the icon.

3 Select the icon located to the top right of the screen.

The App General Information screen displays.

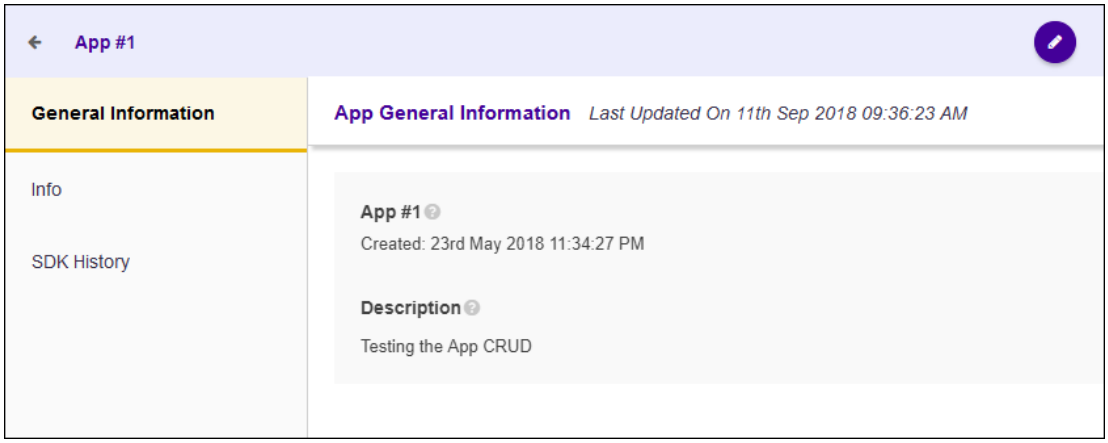


Provide the following information:

Name	Provide a name that uniquely identifies this App.
Description	Provide a detailed description of this App.

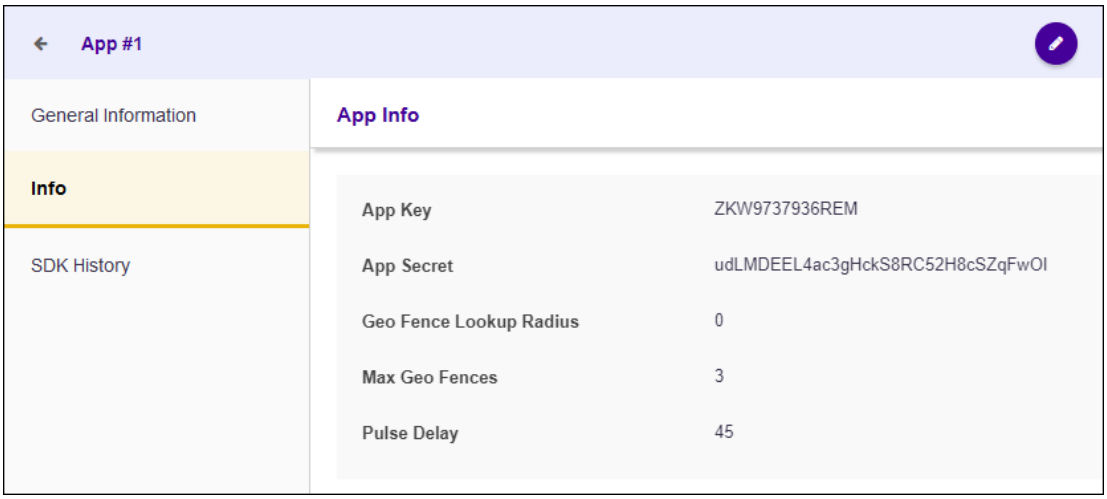
4 Select the **Save** button located to the top right of the screen.

An entry is created for this App. The General Information tab for this App displays the name of this App and the date this App's entry was created in the ExtremeLocation system. This screen also displays the description as entered while creating this entry.



5 Select the **Info** menu item.

The App Info screen loads.

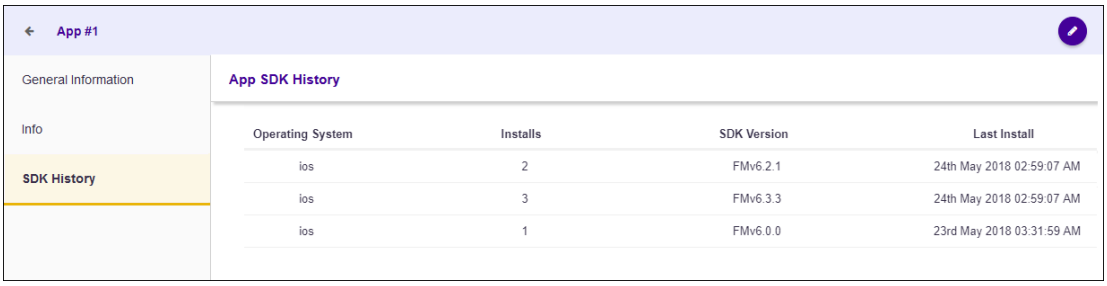


The App Info screen displays the following information:

App Key	Displays the unique App Key assigned to this App. This key along with its secret must be used for each query made to the ExtremeLocation system.
App Secret	Displays the secret key associated with the **App Key**. This secret along with its App Key must be used for each query made to the ExtremeLocation system.
Geo Fence Lookup Radius	Displays the Geofence radius for this App. The App will take a configured action once it is within this area.
Max Geo Fences	Displays the maximum number of Geo Fences this application can scan. This value is three(3) and cannot be modified.
Pulse Delay	Displays the idle time between polls to the server by the App. The App polls the server to check if there is any action to be taken for this user. This value is set at 45 seconds and cannot be modified.

6 Select **SDK History** menu item.

The SDK History screen loads.



The App Info screen displays the following information:

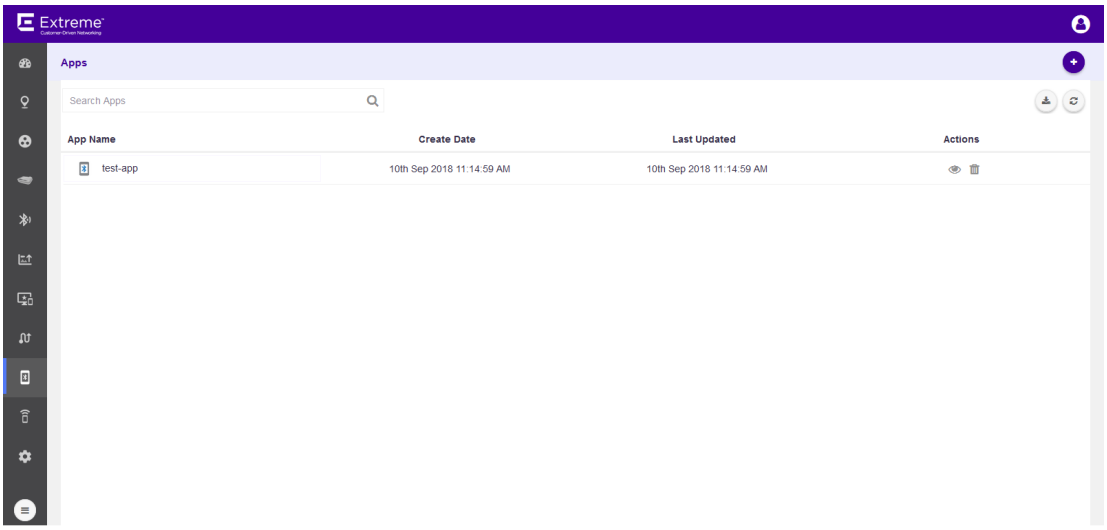
Operating System	Displays the operating system of the App.
Installs	Displays the number of times this App was installed on devices.
SDK Version	Displays the ExtremeLocation SDK version in use within the App. ExtremeLocation can release, based on requirements, different versions of its SDK. This field displays the version that is in use within the App.
Last Install	Displays the timestamp for the last installation of this App.

Edit Apps

To edit an App:

1 Select icon to load the **Apps** screen.

The **Apps** loads and displays a list of all Apps registered for this ExtremeLocation account.



2 Review the following information on the **Apps** screen.

App Name	Displays the name of the App registered for use with ExtremeLocation .
Create Date	Displays the date on which this entry was created on the ExtremeLocation system.
Last Updated	Displays the date on which this entry was last updated.
Actions	Use the icon to view details for this App entry. To delete this App entry, use the icon.

3 Select the **Edit** button located to the top right of the screen.

The **App General Information** displays the fields that can be edited. Only the **Name** and **Description** of the App can be edited.

4 Select **SAVE** button to save any changes made to this screen.

At anytime, select **Cancel** to exit without saving the changes made to this screen.

12 Devices

Devices - Site Live Data
Devices - Site Historical Data

The Devices screen displays a log of all devices seen in a selected site. Information can be filtered based on search criteria to display the data of interest.

Note
You cannot view App Visitor devices from this screen.

The available options are:

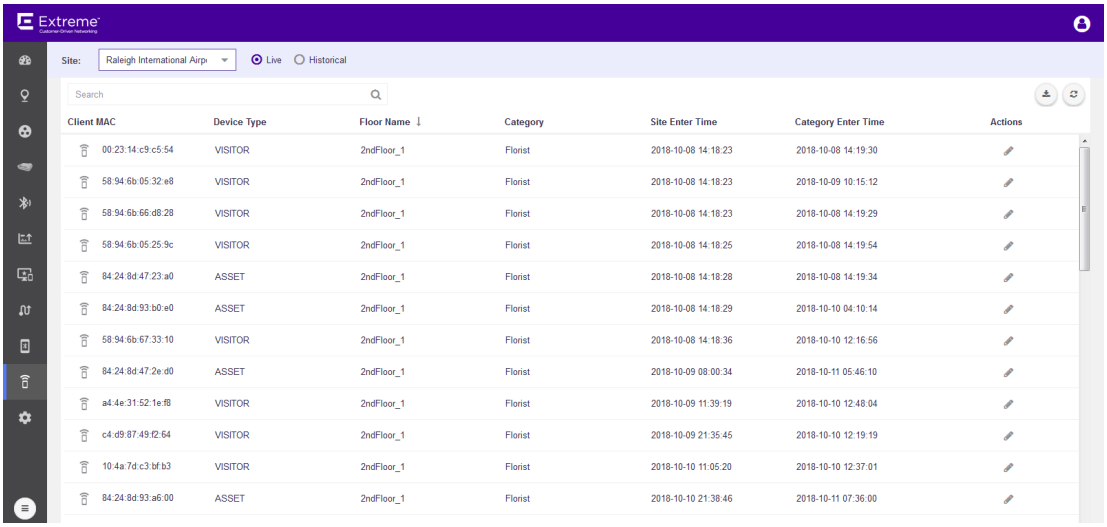
- Live Data - Displays live location data for devices identified in the selected site.
- Historical Data - Displays the location data for visitor devices for a user selected period and information type.

Devices - Site Live Data

This screen displays the live data for all devices identified in the selected site.

1 Select icon to load the Devices screen.

The Devices loads and displays a list of all devices for the default site.



2 Select a site from the **Site** drop-down list.

The screen refreshes to display a list of all devices identified in this site.

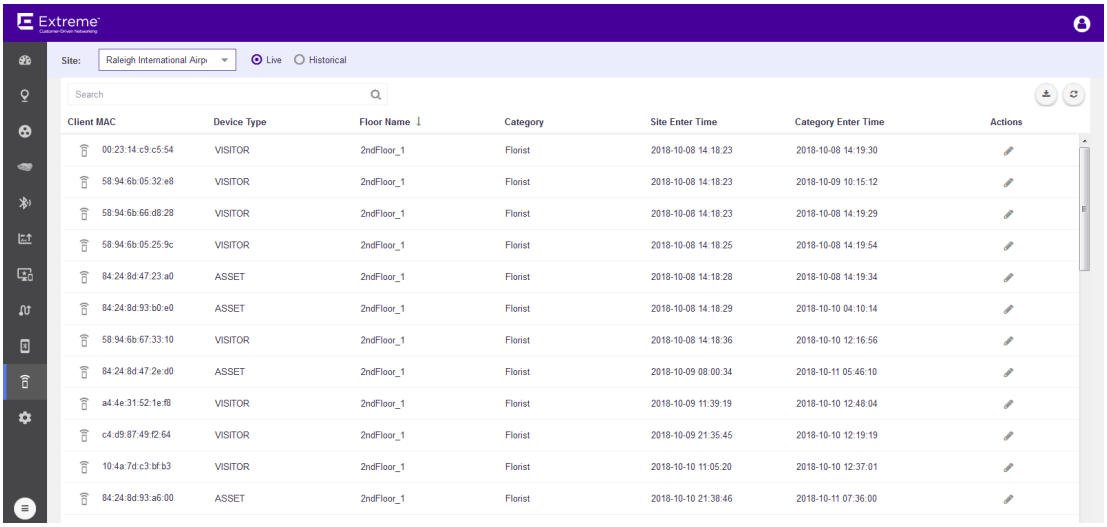


Figure 89: Live Devices List for a Site

3 If the **Live** option is not selected, select it. **Live** is the default option for this screen.

4 Review the data displayed on this screen to look for devices and activities of interest.

Client MAC	This field displays the client device's MAC address.
Device Type	This field displays the device type. This is the classification of the identified device. Devices can be classified as one of `Visitor`, `Asset`, or `Associate`.
Floor Name	This field displays the floor on which the device was identified.
Category	This field displays the area where this device was identified or seen. A category is a user defined part of a site that logically divides the site based on the usage of the area. For example, "Warehouse", "Lobby", "Canteen" or similar.
Site Enter Time	This field displays the time the identified device was first seen and identified on this site.
Category Enter Time	This field displays the time the identified device was first seen in a category.

5 Use the **Search** field to filter to the data of interest. Enter a search string in this field.

Search terms are not case sensitive.

The displayed data is automatically sorted based on the search string.

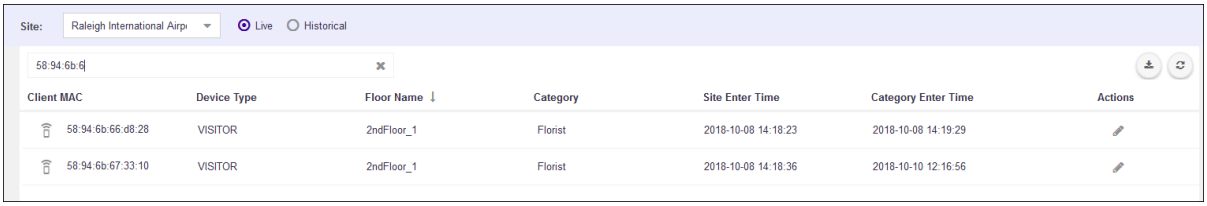


Figure 90: Search Function

6 Use the in the **Actions** column to edit the device's automatic device type classification.

The Update Device Type window displays

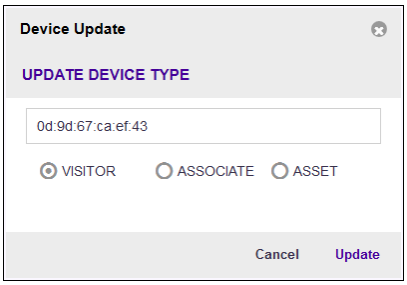


Figure 91: Update Device Type screen

Select the appropriate **Device Type** using the available options in this screen.

Once done, select the **Update** button to update the device's device type classification. At any time, select the **Cancel** button to exit without modifying the automatic device type classification.

7 Occasionally use button to refresh data.

The data in this screen does not refresh automatically. The screen has to be manually refreshed to view the latest data.

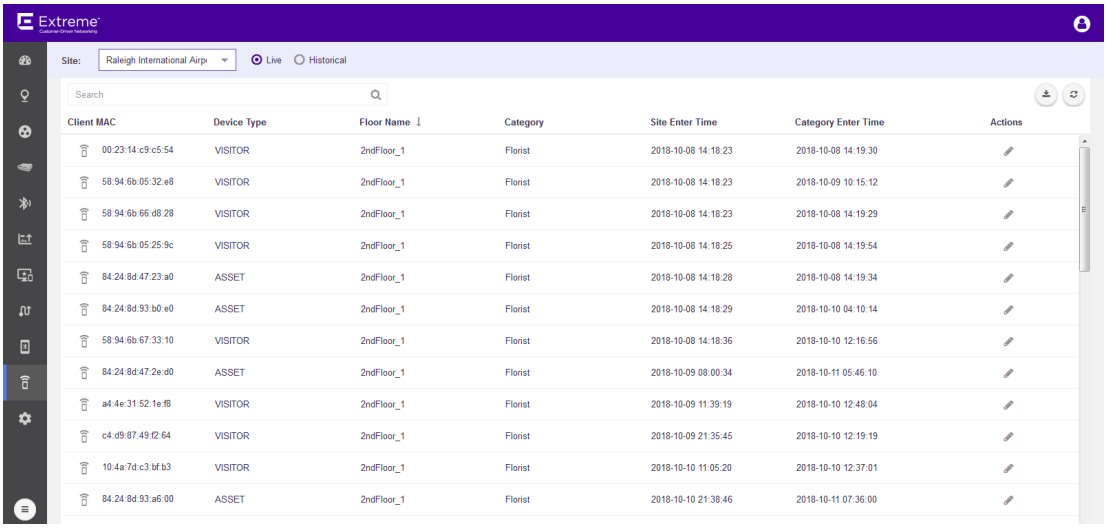
8 Use the button to download the list of devices to your local PC as a `.csv` (comma separated value) file.

Devices - Site Historical Data

This screen displays the historical devices data from the selected site. You can use the **Search** field to filter data or devices of interest to you.

1 Select icon to load the Devices screen.

The Devices loads and displays a list of all devices for the default site.



2 Select a site from the **Site** drop-down list.

The screen refreshes to display a list of all devices identified in this site.

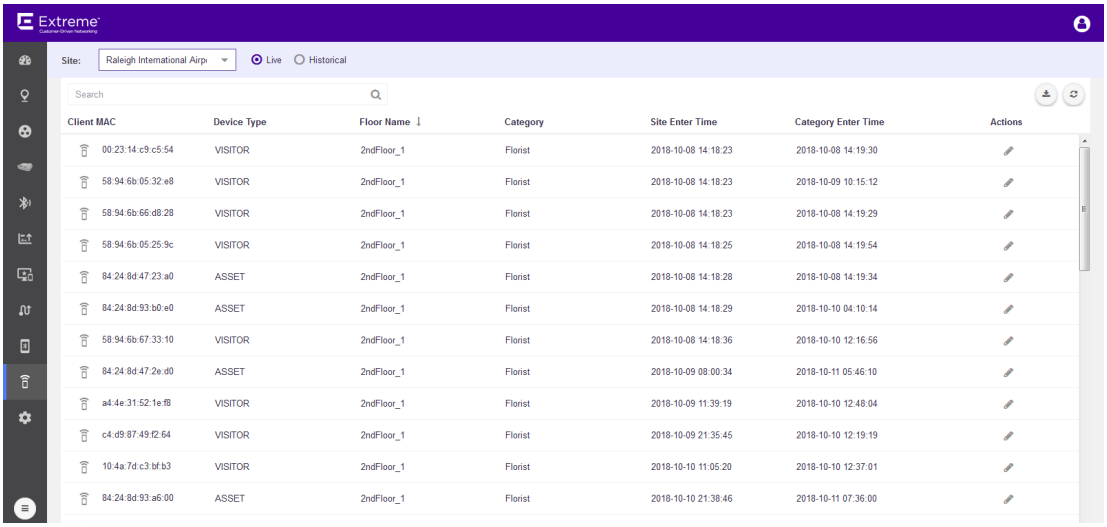


Figure 92: Devices Data for a Site

3 If the **Historical** option is not selected, select it.

The user interface changes to display more fields to refine the historical data.

Figure 93: Historical Data Filter Fields

4 Use the calendar control to set the **Date** to filter historical data. The default value for this field is one day less than the current date. You can display data for the last thirty (30) days from today.

5 Use the **By** drop-down list to classify by either `Site Visit` or `Category Visit`.

The screen refreshes to show the data classified as follows:

- Site Visit - Displays the data for all the devices monitored at the site.
- Category Visit - Displays the data for all devices monitored at the site and shows the category last visited by each device.

6 Select `Site Visit` from the **By** drop-down list.

Review the data displayed on this screen to look for devices and activities of interest.

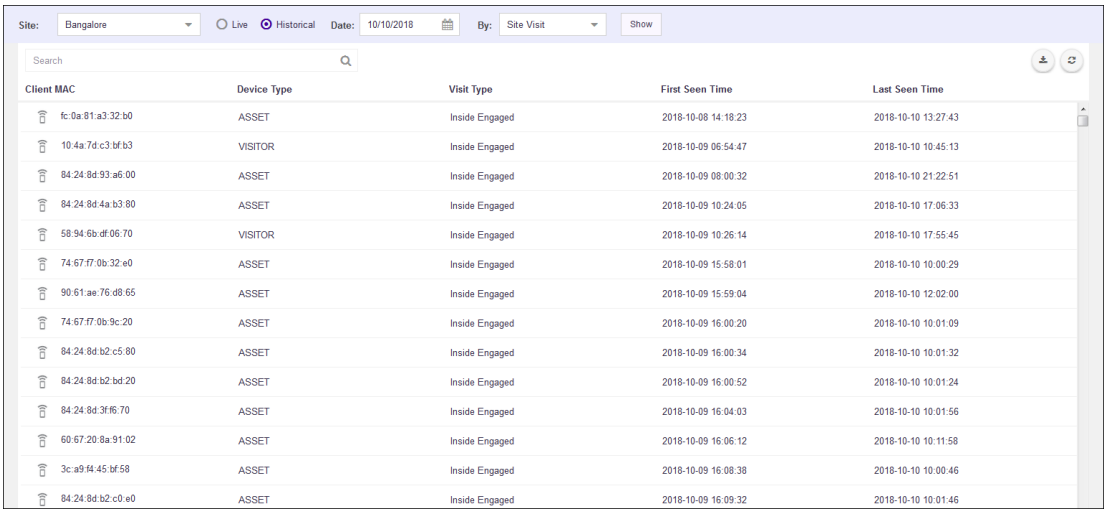
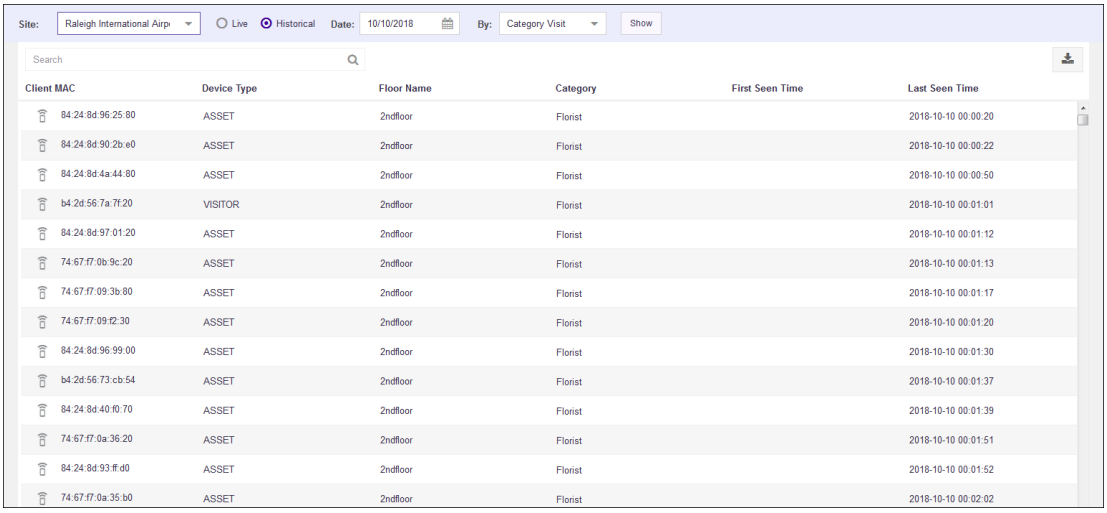


Figure 94: Site Visit Data

Client MAC	This field displays the client device's MAC address.
Device Type	This field displays the device type. This is the classification of the identified device. Devices can be classified as one of `Visitor`, `Asset`, or `Associate`.
Visit Type	This field displays the device's visit type classification.
First Seen Time	This field displays the exact time when the device was first seen in the site or in a specific category.
Last Seen Time	This field displays the exact time when the device was last seen in the site or in a specific category.

7 Select `Category Visit` from the **By** drop-down list.

Review the data displayed on this screen to look for devices and activities of interest.



Client MAC	This field displays the client device's MAC address.
Device Type	This field displays the device type. This is the classification of the identified device. Devices can be classified as one of `Visitor`, `Asset`, or `Associate`.

Floor Name	This field displays the floor on which the device was identified.
Category	This field displays the area where this device was identified or seen. A category is a user defined part of a site that logically divides the site based on the usage of the area. For example, "Warehouse", "Lobby", "Canteen" or similar.
First Seen Time	This field displays the exact time when the device was first seen in the site or in a specific category.
Last Seen Time	This field displays the exact time when the device was last seen in the site or in a specific category.

8 Use the **Search** field to filter to the data of interest. Enter a search string in this field.

Search terms are not case sensitive.

The displayed data is automatically sorted based on the search string.

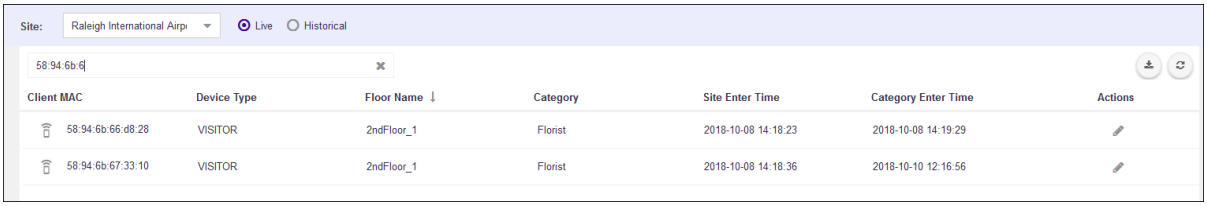


Figure 95: Search Function

13 Settings

User Management
System Settings
Licenses
Crowding Configuration

The Settings menu sets global preferences and configuration parameters for this ExtremeLocation account. The following global settings can be managed:

- User Management - Manages users for this ExtremeLocation account. ExtremeLocation supports multiple users for a single account. Manage all your users from this screen. See User Management on page 209.
- System Settings - Manages the various system settings for this ExtremeLocation account.
  - Device Classification - Sets the parameters for device classification at the site level. See Device Classification Settings on page 217.
  - Thresholds - Sets the various thresholds for data capture for analysis. See Device Classification Thresholds on page 221.
  - Subscriber Settings - Sets the configuration for sending data capture logs to a remote server. See Subscribe Settings on page 224.
  - API Keys - Sets and manages the API Keys for this ExtremeLocation account. See API Keys on page 226.
- License - Manages licenses associated with this ExtremeLocation account. Manage Sensor and Bluetooth/BLE licenses through the screens under this menu. See the topics AP License on page 19 and App Visit License on page 21.
- Crowding - Manages the global settings for Crowding Alert feature. See Crowding Configuration on page 232.

User Management

User accounts are supported for Admin (Administrator) and Guest roles.

- Admin Role
  - Supports a maximum of 10 users.
  - Has read/write access and can perform any operation on the ExtremeLocation account.
  - Can create, update, delete, and view Admin and Guest user accounts.
  - Can control access to sites and site groups for guest users.
- Guest Role
  - Supports read only operations.
  - Use to provide users view only access to site statistics.
  - Site and Site Group access is managed by any account with Admin role.

New user accounts go through an onboarding process similar to a new ExtremeLocation account. The email address for the new user account must be verified and the user must change the password at the first login.

To create or manage user accounts, select **Settings** > **User Management**. See Create and Manage User Accounts on page 210 for more details.

Create and Manage User Accounts

Administrator privileges are required to create and manage user accounts.

To create or manage a user account:

1 Select **Settings** > **User Management**. (By default, the User Management screen should display when you first select **Settings**.)

The User and Configuration Management pane opens and displays the list of user accounts.

2 To create a new account, select the icon.

The Create User dialog opens.

Note
To edit an existing user, select the pencil icon for that account under the Actions column and edit the settings in the Update Profile dialog. To delete an account, select the trash icon for that account in the Actions column.

3 Edit the fields.

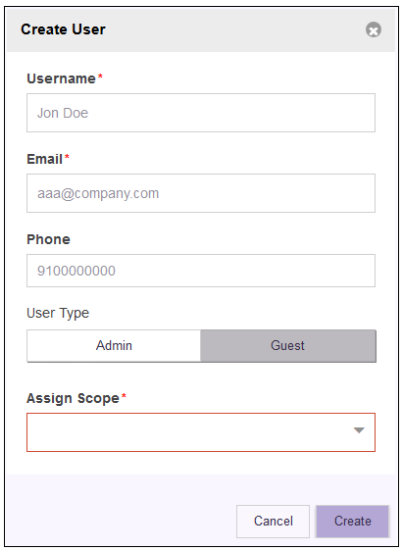


Figure 96: Create User Dialog

User Name	(Required) Enter the user name.
Email	(Required) Enter a unique email address for the user. The account registration information will be emailed to them automatically using this value after the account is created.
Phone	(Optional) Enter a contact phone number.

User Type	(Required) Select the account privileges to be assigned to this account: **Admin** or **Guest**. • Admin - An Admin account will have extensive privileges to manage the system. See User Management on page 209. • Guest - A Guest account is a restricted account. Restrict the account's scope of activity using the **Assign Scope** drop-down list.
Assign Scope	Field is only available for `Guest` user accounts. Use this drop-down list to select the sites or site groups where this guest user account is permitted access. You can select multiple sites or site groups when creating or modifying this user account.

4 Select **Create**.

The account is created and added to the list of accounts.

User Account

Menus under the **User Account** item (located in the top right of the screen) enables a user to manage their own ExtremeLocation profile and password.

Note
To create a user account, see Create and Manage User Accounts on page 210.

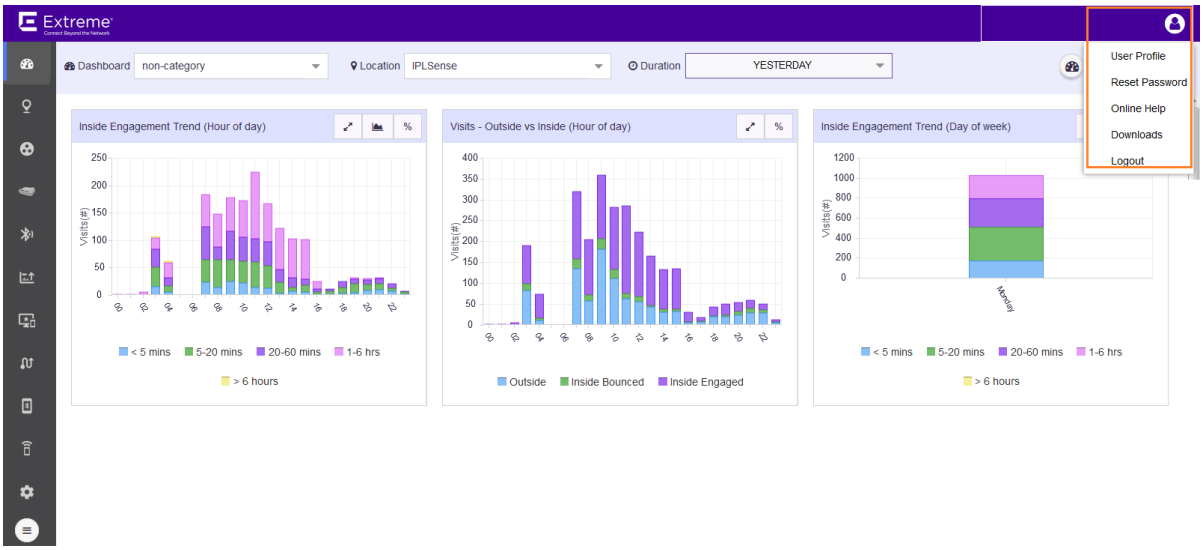


Figure 97: User Account Menu

The following activities can be performed:

- User Profile - Use this menu item to manage your current (logged in) ExtremeLocation account. For managing your account information, see Your User Profile on page 212.
- Reset Password - Use this menu item to reset or change your account's password. For more information see Reset Password on page 213.
- Online Help - Use this menu item to view the online help included with ExtremeLocation.

- **Downloads** - Use this menu item to download extra scripts and utilities for use with ExtremeLocation. For information on the various options, see Downloads on page 215.
- **Logout** - Use this menu item to logout of ExtremeLocation.

Note
Licenses are managed under **Settings**. For further information, see Licenses on page 228.

Your User Profile

As an administrator or guest user, you can modify your ExtremeLocation account details:

1 Select the **User Account** icon on the top right of the screen.

A drop-down menu displays.

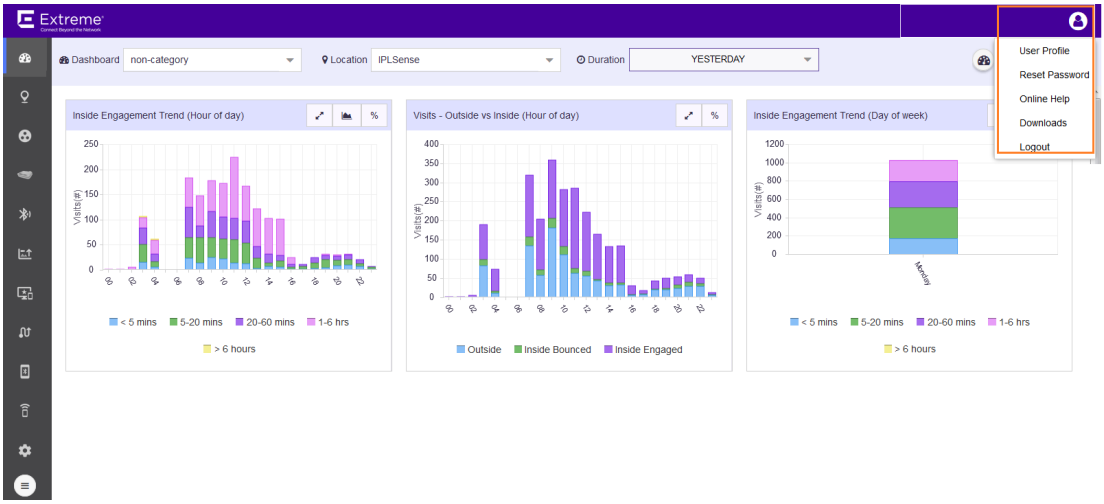


Figure 98: User Profile Menu

2 Select **User Profile**.

The User Profile dialog displays.

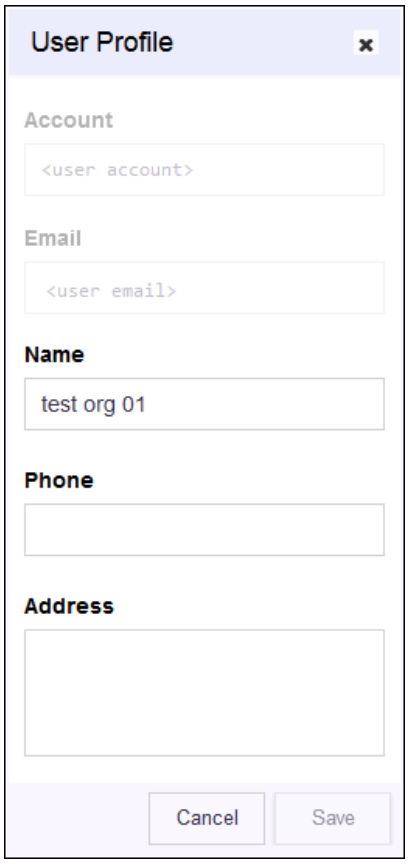


Figure 99: User Profile Dialog

This dialog displays the following information:

Account	Displays the account number. This field cannot be modified.
Email	Displays the registered email address for this account. This field cannot be modified.
Name	Displays the name provided at the time of account registration.
Phone	Displays the contact phone number provided at the time of account registration. This field is blank if no information is available.
Address	Displays the contact address provided at the time of account registration. This field is blank if no information is available.

3 If required, update the **Name**, **Phone** and/or **Address** fields. Once done, select **Save** to save the changes.

To exit without saving the changes, select **Cancel** at any time.

The modified information is updated.

4 Select the small **X** button to the right of the title bar to close the dialog.

The dialog closes and the ExtremeLocation dashboard displays.

Reset Password

To change the password for your ExtremeLocation account:

1 Select the **User Profile** icon on the top right of the screen.

A drop-down menu displays.

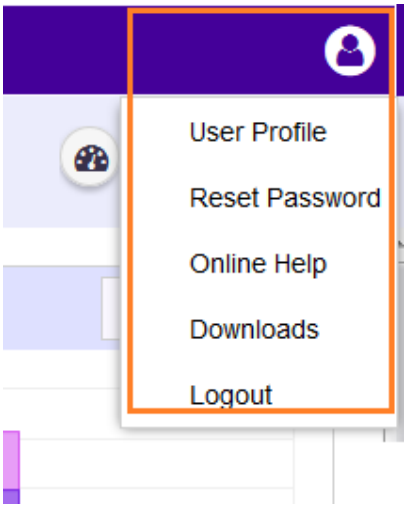


Figure 100: User Profile Menu

2 Select **Reset Password**.

The Reset Password dialog displays.

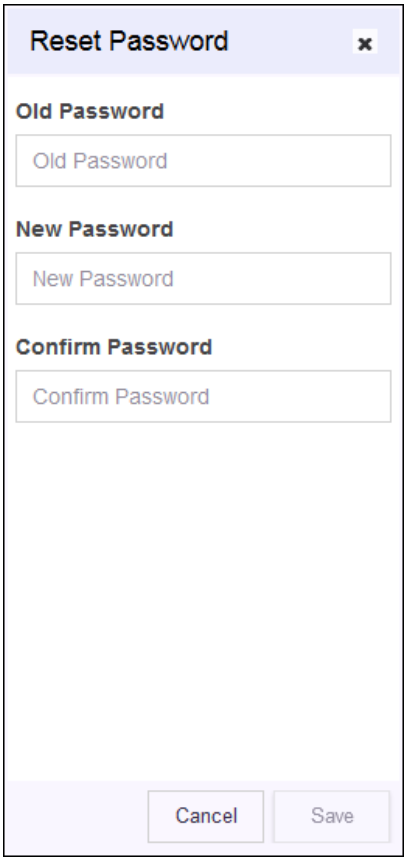


Figure 101: Reset Password Dialog

This dialog displays the following fields:

Old Password	Enter the current password for this account in this field.
New Password	Enter the new password for this account here.
Confirm Password	Re-enter the password entered in the **New Password** field here.

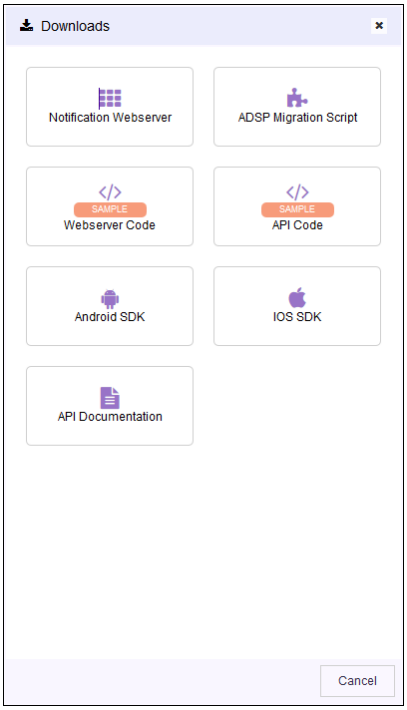
3 Select **Change Password** to save the changed password for this account.
To exit without changing the existing password, select the **Cancel** at any time.

The new password is updated to this account and can be used from the next log in.

4 Select the small **X** button to the right of the title bar to close the dialog.
The dialog closes and the ExtremeLocation dashboard displays.

Downloads

Select the **User Profile** icon on the top right and then select the **Downloads** menu item. The Downloads dialog displays.



The Downloads option provides the following:

- Notification WebServer - This option downloads a compressed file containing a copy of the Apache Tomcat Webserver. This server can be used for testing the sample API Webserver.
- Sample Webserver Code - This option downloads sample web server code as a compilable Eclipse project.
- Sample API Code - This option downloads sample API codes as a compilable Eclipse project.
- ADSP Migration Script - This option downloads a script that migrates AirDefense location data into ExtremeLocation.
- API Documentation - This option displays a web page describing the APIs available for use with ExtremeLocation.

- iOS SDK - This option downloads the iOS SDK files required for integrating your Apple™ iOS Apps with ExtremeLocation.
- Android SDK - This option downloads the Android SDK files required for integrating your Android Apps with ExtremeLocation.

For more information on ExtremeLocation APIs and on how to deploy the sample webserver application, refer to *ExtremeLocation API Reference Guide*. This guide can be downloaded from *Extreme Networks Documentation Site*.

For more information on ExtremeLocation ADSP Migration script, refer to *ExtremeLocation Migrating Location Based Services from ADSP to ExtremeLocation* guide. This file can be downloaded from *Extreme Networks Documentation Site* site.

Log Out of ExtremeLocation

To log out of ExtremeLocation:

1 Select the **User Profile** icon on the top right of the screen.

A drop-down menu displays.

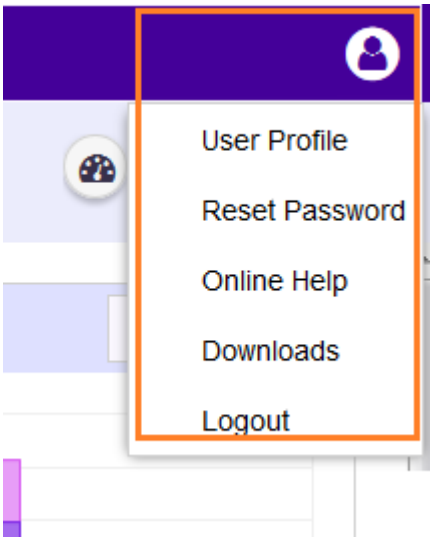


Figure 102: User Profile Menu

2 Select **Logout**.

You will immediately be logged out of ExtremeLocation Dashboard and the ExtremeLocation Login Screen appears.

System Settings

The **System Settings** menu item contains a collection of important settings that you use to configure the performance of the ExtremeLocation system for this account. This menu has the following configuration options:

- Device Classification - The Device Classification screen sets the different parameters for automatic and manual device classification. Device classification is used in location and device analysis. See Device Classification topic to know about configuring device classification parameters.
- Threshold - The Threshold screen sets the different thresholds for *Presence*, *Zone*, and *Age Out* settings. See Threshold topic to know about configuring the different thresholds.
- Subscriber Settings - The Subscriber Setting screen sets the information required for ExtremeLocation to push events and notifications to remote server for analysis. See Subscriber Settings topic to know about configuring a remote server.
- API Keys - Sets and manages the API Keys for this ExtremeLocation account. See API Keys to know more about configuring API Keys.

Device Classification Settings

Device Classification Types

- Assets: Devices such as access points, POS, that are considered as an organization's assets are classified under this device classification.
- Associates: Devices such bar-code scanners, RFID readers, mobile phones that an associate carries on person and uses to perform specific task or tasks related to the Associate's job function are classified as `Associates`.
- Visitor: This is the default classification applied to any device that is seen at the site for the first time. Generally, this classification applies to any device that is carried by any customer or vendor visiting the site. Depending on other conditions, a device is re-classified to one of the other types from this classification.
- Associate Personal Device: This is a special classification reserved for those device that an `Associate` carries for personal use and which are different from those devices that is used for carrying out official tasks. You can choose to ignore devices that are classified in this type from being included in any analytics.

Note
Device classification is not applicable to App User devices.

To set the parameters for device classification:

1 Select **Settings** > **System Settings** > **Device Classification**.

The Device Classification and Management window opens. This window displays the device classification rules configured for this ExtremeLocation account.

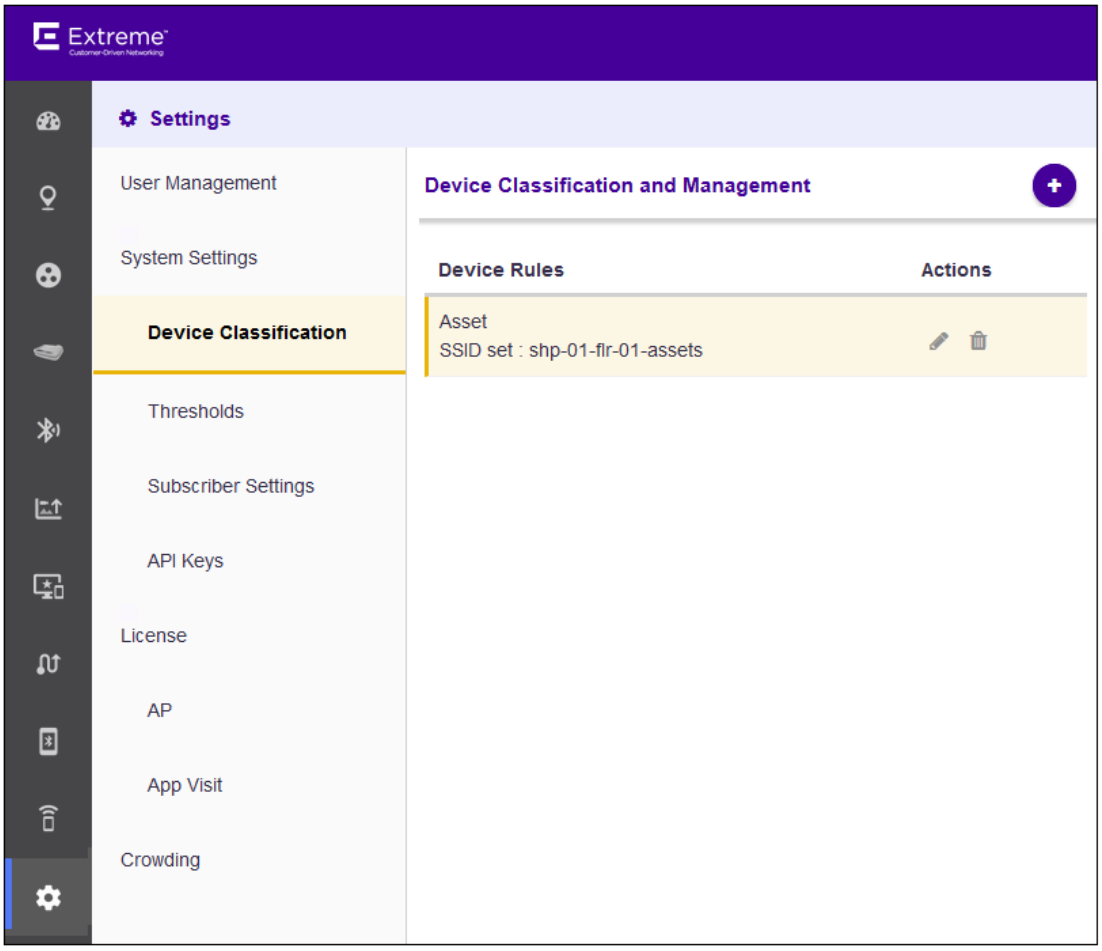
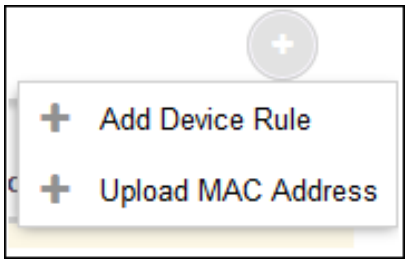


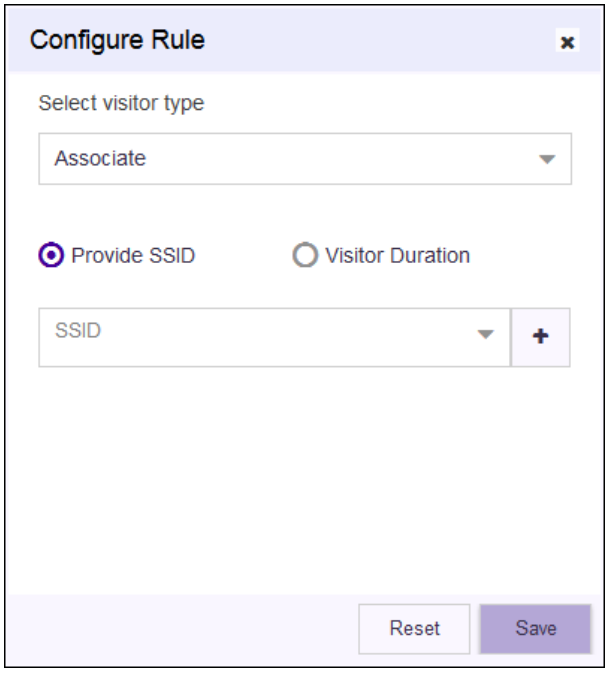
Figure 103: Device Classification and Management window

2 Select the + icon. The following menu displays.



3 Select the **Add Device Rule** menu item to add a new **Device Classification and Management** rule.

The Configure Rule screen displays.



4 Configure the following to create a device classification rule:

Select Visitor type Use the drop-down list to select the appropriate visitor type. The following options are available:

- Asset
- Associate
- Associate Personal Devices

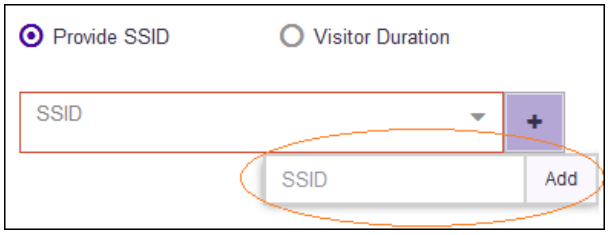
Note
You can create one rule per visitor type. Once a rule for a visitor type is created, it is no longer available as a selection in this drop-down list.

Provide SSID Devices are classified based on the SSID that the device associates itself to at the site.

Visitor Duration Devices are classified based on the duration the device remains at the site.

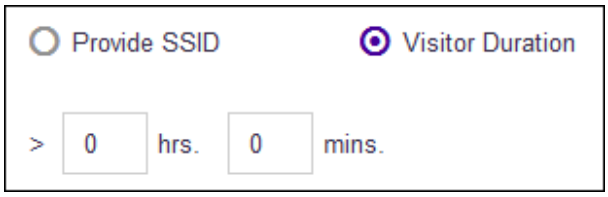
5 Select **Provide SSID** to classify devices based on the SSID that the device associates itself to at the site.

When classifying devices using SSIDs, you must manually provide the SSID that is used for the classification. Use the + button to add SSIDs manually. The following field appears when you select the button.



Enter a valid SSID into the **SSID** field and select **Add** to add the entered SSID to the list. Then, select the appropriate SSID from the **SSID** drop-down list to create your classification rule.

6 Select **Visitor Duration** to add a rule that classifies a visitor based on the length of time the visitor stays in the site.

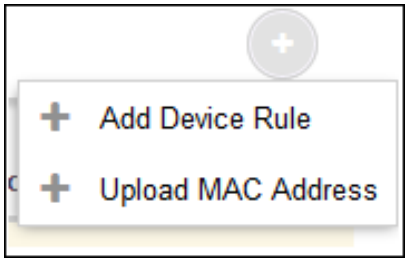


Use the fields to set the minimum duration in hours and minutes the visitor needs to spend inside the site for it to be classified automatically.

7 Select **Save** to save the changes made to the **Device Classification** parameters.

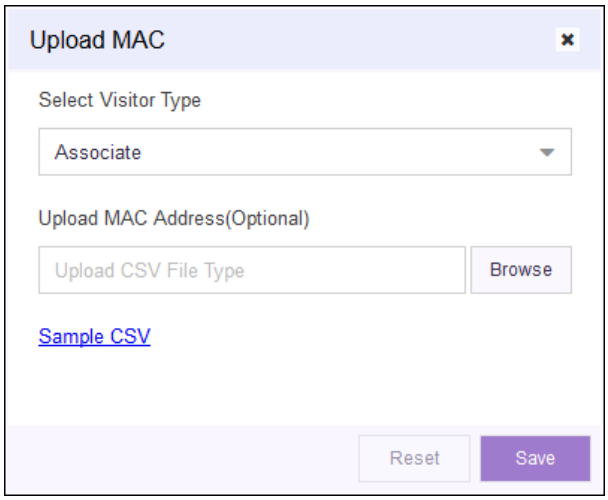
At any time, select the **Reset** button to revert the changes made to the device classification parameters.

8 Select the icon. The following menu displays.



9 Select **Upload MAC Address** menu item to add a list of device MAC addresses.

The Upload MAC screen displays.



10 Use the **Select Visitor Type** drop-down list to select the visitor type for the devices in this list.

11 Use the **Browse** button to search for and upload a *Comma Separated Value* file to the ExtremeLocation account.

Use the **Sample CSV** link to download a sample file to base your manual device classification data CSV file.

12 Select **Save** to save the changes made to the **Device Classification** parameters.

At any time, select the **Reset** button to revert the changes made to the device classification parameters.

Device Classification Thresholds

Use the fields in this window to classify visitors to the site, set thresholds for device categorization based on zones, and set the different age outs for devices seen at the site.

To configure the different thresholds:

1 Select **Settings** > **System Settings** > **Thresholds**.

The Threshold Configuration and Management window opens.

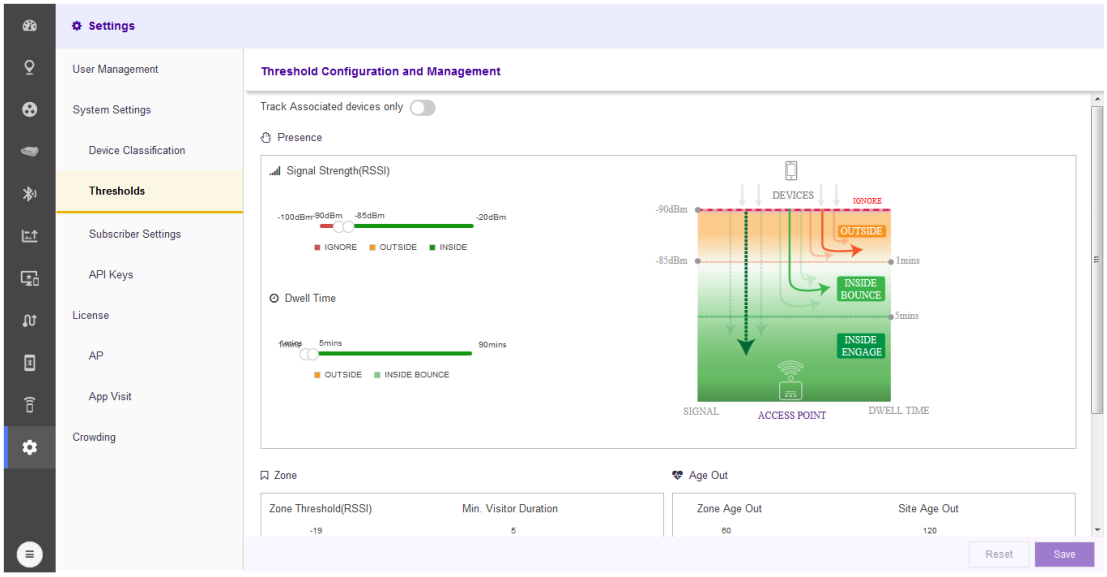


Figure 104: Threshold Configuration and Management window

2 Select the **Track Associated devices only** switch control to track associated devices only. All other devices are ignored.

3 Set the following **Presence** values:

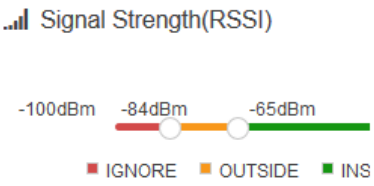


Figure 105: Signal Strength (RSSI) slider

Use the **Signal Strength** slider to set the values for device classification as one of *Ignored Devices*, *Outside Devices*, and *Inside Devices*.

- A device is ignored if the signal strength (RSSI) of the device is below the signal strength value set by the first slider knob. This is indicated by the orange portion of the **Signal Strength (RSSI)** slider. These devices will not be tracked for analysis.
- A device is considered as *Inside* if the signal strength (RSSI) of the device is above the signal strength value set by the second slider knob. This is indicated by the green portion of the **Signal Strength (RSSI)** slider.
- A device with a signal strength reading between the two knobs of the **Signal Strength (RSSI)** slider is considered as *Outside*. This is indicated by the orange portion of the **Signal Strength (RSSI)** slider.

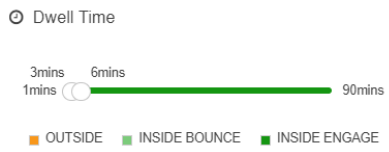


Figure 106: Dwell Time slider

Use the **Dwell Time** slider to set the values for device classification as one of *Outside*, *Inside Bounce*, or *Inside Engaged*.

- A device is classified as *Outside* if the device is seen in the site for a duration that is less the duration set by the first slider knob. This threshold is indicated by the red portion of the **Dwell Time** slider.
- A device is classified as *Inside Engaged* if the device is seen in the site for a duration greater than the duration set by the second slider knob. This threshold is indicated by the dark green portion of the **Dwell Time** slider.
- A device that is seen at the site for a duration between the times indicated by the two knobs of the **Dwell Time** slider is considered as *Inside Bounced*. This duration is indicated by the light green portion of the **Dwell Time** slider.

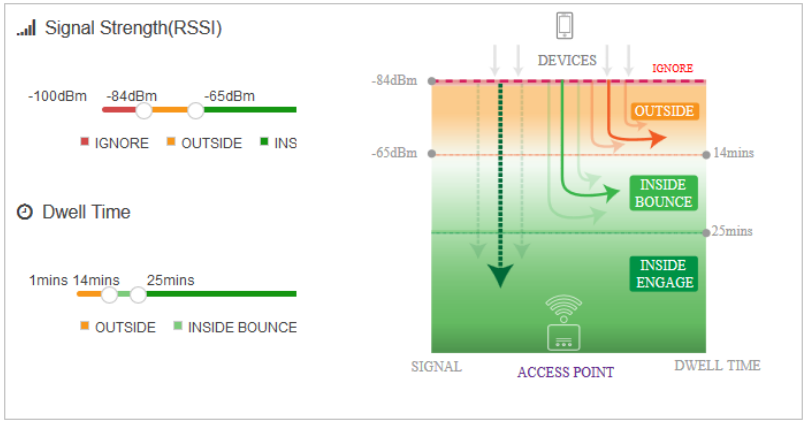


Figure 107: Presence Configuration Graph

Use the graph located to the right of the **Signal Strength (RSSI)** and **Dwell Time** sliders to get a visual representation of the values used for device classification.

4 Set the following **Zone** classification values.

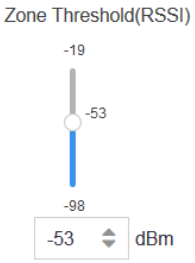


Figure 108: Zone Threshold (RSSI) slider

Use the **Zone Threshold (RSSI)** slider to set the threshold RSSI value above which a device is classified into a category.

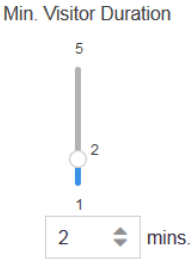


Figure 109: Min. Visitor Duration slider

Use the **Min. Visitor Duration** slider to set the duration in minutes. A device is classified into a category only if it is observed for a duration that is longer than the value set by this slider.

5 Set the following **Age Out** timeout values.

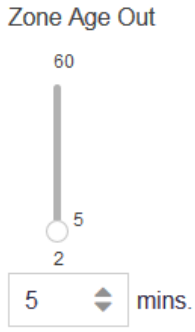


Figure 110: Zone Age Out slider

Use the **Zone Age Out** slider to set the zone or category age out value. This slider sets the time (in minutes), after which, if a visitor's location information is not received from the ExtremeLocation service, the visitor is considered to have left the category or region.

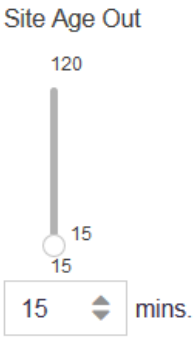


Figure 111: Site Age Out slider

Use the **Site Age Out** slider to set the age out value. This slider sets the time (in minutes), after which, if a visitor has not been seen by any sensor in a site, the visitor is considered to have left the site.

6 Select **Save** to save the changes made to the **Threshold** parameters.

At any time, select the **Reset** button to revert the changes made to the threshold parameters.

Subscribe Settings

When an event is generated for any site in your ExtremeLocation account, it is sent to your remote web server in real-time. Filters, if any, are applied to the events before being transmitted. Filters are used to control the event types to be passed to your web server.

Use the Subscriber Settings window to configure the information required for ExtremeLocation to connect to your server. Also use this screen to filter the event types of interest for your deployment.

At your end, a web server or service must be configured to receive the data. This web server can then pass on the received data to third party application data processors for further action or it can store the data locally.

To configure ExtremeLocation to connect to your remote web server:

1 Select **Settings** > **System Settings** > **Subscriber Settings**.

The Subscriber Configuration and Management window opens.

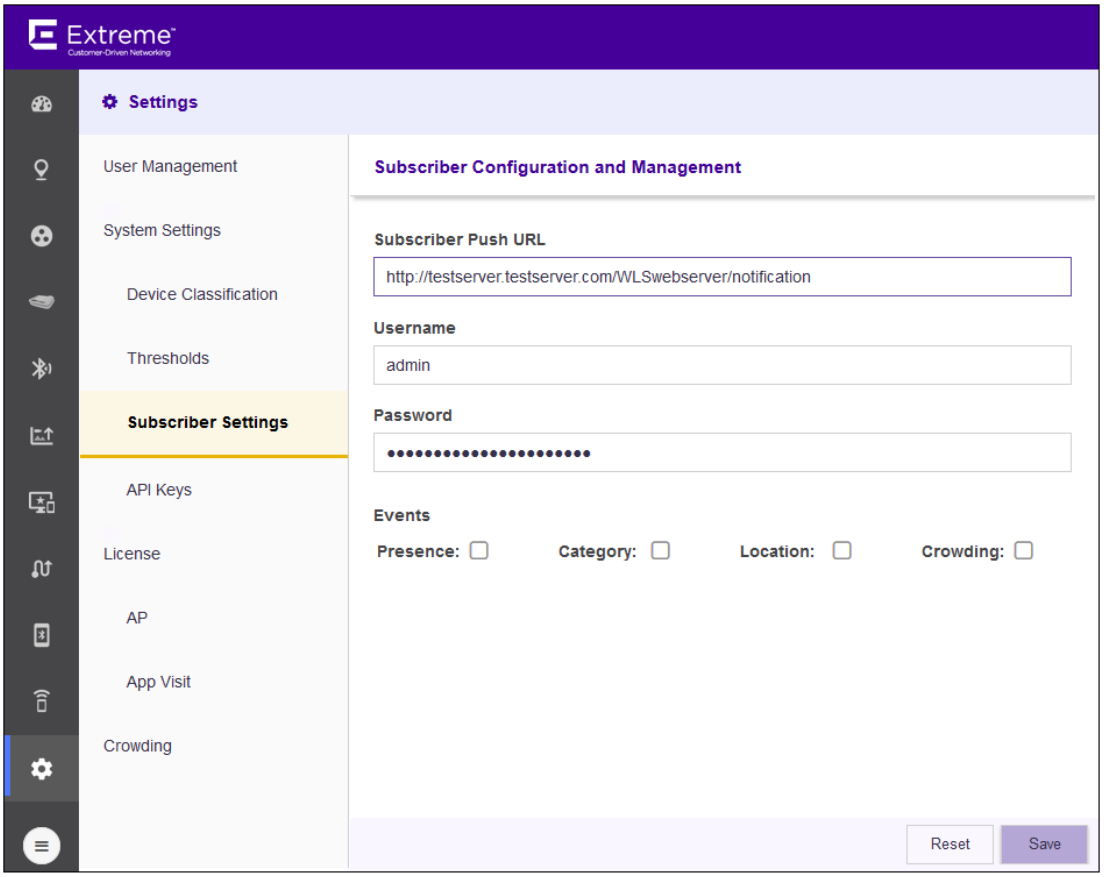


Figure 112: Subscriber Classification and Management window

2 Provide the following to configure the Subscriber Settings:

Subscriber Push URL Configure the remote web server where all events types selected in the **Events** field is transferred to in real-time.

> **Note**
> The web server must listen on one of the standard ports, 443 (https) or 80 (http). ExtremeLocation does not support web servers listening on ports other than these two ports.

Username Set the user name valid for accessing the remote web server.

Password Set the password for the above user name.

Events Select the events that will be pushed to the remote web server in real-time.

- Presence - All events of the type **Presence** will be included when events are pushed to the remote server. A presence event is generated when a device enters or exists a site or is in the vicinity of a site.
- Category - All events of the type **Category** will be included when events are pushed to the remote server. A category event is generated when a client device enters or exits a category.

- Location - All events of the type **Location** will be included when events are pushed to the remote server. A location event is generated when there is a change in position of a client device or if RSSI value of the device is above a specified duration.
- Crowding - All events of the type **Crowding** will be included when events are pushed to the remote server. A crowding event is generated when the ratio of number of visitor device to the number of associate devices exceeds a configured threshold.

3 Select **Save** to save the changes made to the **Subscriber Settings** parameters.

At any time, select the **Reset** button to revert the changes made to the subscriber settings parameters.

API Keys

Queries from your ExtremeLocation account to the ExtremeLocation server using APIs now require a Key - that uniquely identifies your account - be passed as a parameter in each API call.

Your ExtremeLocation account is allocated an unique key. For existing accounts, this key must be generated before you can continue to use the ExtremeLocation APIs to interact with the ExtremeLocation servers.

New ExtremeLocation accounts are created with unique API keys.

The API screen also displays the last five (5) expired APIs that were generated for your ExtremeLocation account. However, at any point of time, the latest API Key is the only valid key for querying the ExtremeLocation server. The other keys are considered expired and cannot be used. These expired keys are provided for reference.

To view and manage API Keys for your ExtremeLocation account:

1 Select **Settings** > **System Settings** > **API Keys**.

The API Key Generation window opens.

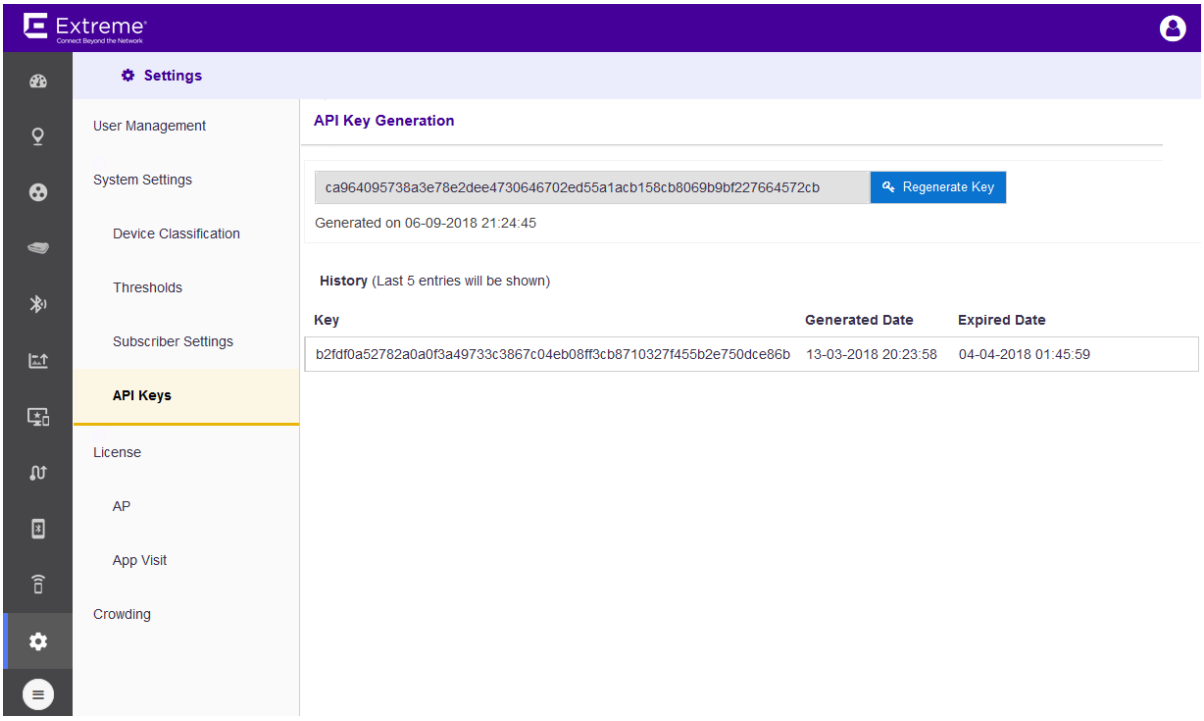


Figure 113: API Key Generation window

2 Select the **Regenerate Key** button to regenerate your API Key.

Figure 114: Regenerated Keys

You can regenerate your API key any number of times. However, only the last key is active for use with ExtremeLocation.

You must regenerate your API key when you feel your existing key has been compromised. Use the new API key to enhance security for your ExtremeLocation account and prevent unauthorized access to its data.

Your new API key immediately replaces your existing key. Your old key is immediately considered inactive and is added to the list of keys in the **History** area.

Licenses

This topic discusses the licenses available for use with ExtremeLocation. There are two licenses available:

- AP License - Use this option to add AP licenses to this ExtremeLocation account. For more information, see AP License.
- App Visit License - Use this option to add App Visit License to this ExtremeLocation account. For more information, see App Visit License.

AP License

AP Licenses are required for you to use ExtremeLocation locationing services. For more information on how to get ExtremeLocation licenses, see the *Quick Start Guide*. This document can be downloaded from the Extreme Networks Documentation Site.

To add or apply AP license:

1 Select **Settings** from the main menu.
2 Select **License** from the sub menu.

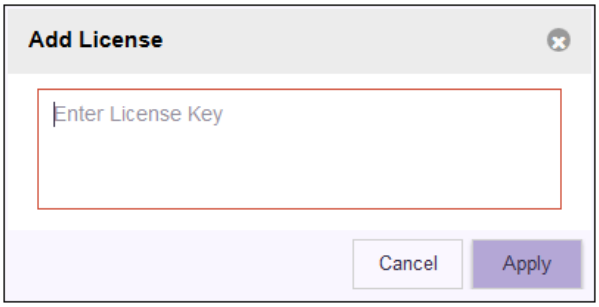
The License Details pane displays.

This dialog displays the following information:

Total	Displays the total number of available licenses for this account. For a new account - without any licenses - this value is zero.
Used	Displays the number of licenses in use out of those available as shown in the **Total** field. For a new account, this value is zero.
Expiry Date	Displays the date on which the license expires. For accounts with multiple licenses, this date is the date on which the last license expires. For a new account this field displays `N/A`.
License Key	Displays the license key string.
No. of Access Points	Displays the number of access points that can be deployed in the ExtremeLocation account.
Import Date	Displays the date on which the license was imported into this account.
Expiry Date	Displays the expiry date for this license. Locationing will not work for this ExtremeLocation account after this date unless the license is renewed.

3 Select .

The **Add License** dialog displays. Use this dialog to add licenses to this ExtremeLocation account.



Complete the following information:

Enter License Key	Paste the license key in this space. Ensure that you do not inadvertently paste any non-printable characters in this space.

4 Select **Apply** to apply the license key.

If the license is valid for this account, the license is added to the list of licenses available for this account.

The table displays a list of all licenses (valid and expired) for this account.

License Key	Displays the complete license key as provided by ExtremeLocation support.
No. of Access Points	Displays the number of Access Points that can be used using this license.
Import Date	Displays the date on which the license was added to this account.
Expiry Date	Displays the date that the license will expire.

If the license is valid, it is added to this table.

5 Optional: At any point, select the **Cancel** button to exit without adding licenses.

App Visit License

Use the App Visit screen to add licenses for enabling support for BLE locationing. App Visit license are purchased in bulk and are consumed when a visitor engages with your site. ExtremeLocation provides two types of App Visit licenses that are consumed based on the length of time the visitor engages with your site. These licenses are:

- Short Visit License - A short visit license is consumed when the user is seen in your site for a short duration, typically ten (10) minutes ore less.
- Long Visit License - A long duration license is consumed when the user is seen in your site for a duration longer than ten (10) minutes.

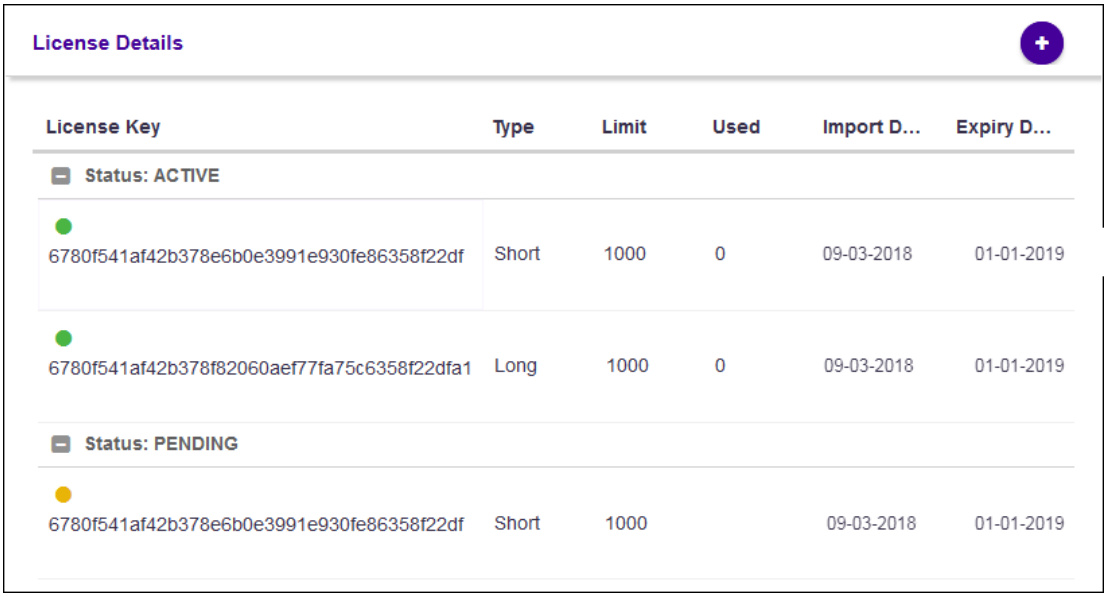
For more information on how to purchase the App Visit licenses, contact ExtremeLocation customer support. For more information see Getting Help on page 6

To add App Visit licenses to your account:

1 Select **Settings** from the main menu.

2 Select **App Visit** from the **License** sub menu.

The License Details pane for App Visit licenses opens.



Licenses in this screen are classified as **Active** and **Pending**. All active licenses - short visit and long visit licenses - are displayed within this heading. At any time there can only be one short visit license and one long visit license active.

The **Pending** heading lists all the short visit and long visit licenses that are added to this account but are yet to be activated. Licenses under this heading are applied sequentially according to the dates when they were imported to this account. A license in the pending state becomes active once an active license is completely consumed.

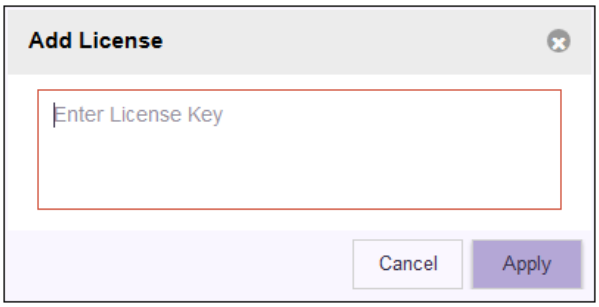
App Visit Licenses are considered consumed based on settings for each of your site. For more information on how App Visit Licenses are consumed, see the topic Add a Site on page 68.

This screen displays the following information:

License Key	Displays the license key string. This field also indicates the current status of the license. A green dot indicates that the license is in use. An yellow dot indicates that the license has been added but is in pending state.
Type	Displays the type of license. License can be either short visit or long visit license. A short visit license is consumed when a device visits the site for a duration less than a specific time limit (default ten (10) minutes). A long visit license is consumed when a device visits the site for a duration longer than the specified time limit.
Limit	Displays the license's visit limit. Each license has a set number of visits that are supported by the license. When a device consumes a license, that is, when a device visits a site for the specified time duration, the **Used** counter is increased by one. When the **Used** value reaches the **Limit** value, the license becomes inactive and ExtremeLocation stops providing locationing service for those category of devices. You must add a license of the same type to continue using ExtremeLocation service.
Used	Displays the number of licenses used till now. When this value reaches the value in the **Limit** column, the license becomes inactive and service is stopped. You must add a license of the same type to continue using ExtremeLocation service.
Import Date	Displays the date on which the license was imported into this account.
Expiry Date	Displays the expiry date for this license. Unused licenses cannot be used after the license expires. Unused licenses cannot be carried over on renewal.

3 Select icon to add new App Licenses.

The Add License dialog displays. Use this dialog to add licenses to this ExtremeLocation account.



Complete the following information:

Enter License Key	Paste the license key in this space. Ensure that you do not inadvertently paste any non-printable characters in this space.

4 Select **Apply** to apply the license key.

If the license is valid for this account, the license is added to the list of licenses available for this account.

The table updates to display the list of all licenses (active and pending) for this account. If there are active licenses, your newly added license can be found under the **Pending** section of the table.

5 Optional: At any point, select the **Cancel** button to exit without adding licenses.

Crowding Configuration

Crowding events occur when the ratio of number of visitors to number of associates in a category or a zone exceeds the minimum threshold value configured for that category or globally at the site level.

Note

Global crowding configuration is set from the **Settings** > **Crowding** screen. This setting is overridden by the crowding setting at the Category level.

Note

The Crowding event is cleared when:

- the ratio between the number of visitors to the number of associates goes below the configured setting.
- the number of visitors to the category goes below the configured threshold as the visitors move away from the category.

When the time specified in the **Event Time Out** field under the **Settings** > **Crowding** screen elapses, the presence of this event is again polled for. If the event is cleared, then this alert is removed from the floor map.

For BLE only deployments, the event is cleared when the number of visitors to that specific category goes down as the visitors move away.

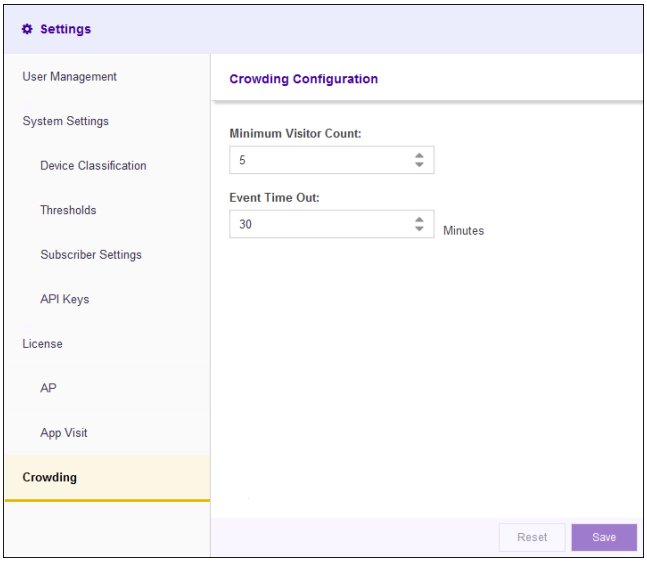
Use the Crowding screen to configure the parameters the define a crowding event and when the crowding event is cleared from the floor map. This setting is applicable to all the sites managed by this ExtremeLocation account.

To configure Crowding parameters:

1 Select **Settings** from the main menu.

2 Select **Crowding** from the sub menu.

The Crowding Configuration screen displays.



3 Configure the following:

Minimum Visitor Count	Set the minimum number of visitors to associate per zone that will trigger a global real-time crowding event.
Event Timeout	Set the number of minutes that will transpire between events being triggered for that region. Default value is 30 minutes.

Note

If there are no associates in a category, an event is triggered when the Minimum Visitor Count is exceeded. If there are associates in the category, then the Threshold is used to trigger the events.

4 Select **Save** to save the changes made to the Crowding Configuration screen.

A Configure ExtremeWireless Access Points

Configuring ExtremeWireless WiNG Access Points
Configuring ExtremeWireless Access Points
Configuring AirDefense Sensor Support

ExtremeWireless WiNG Access Points

The following ExtremeWireless WiNG access points are supported by ExtremeLocation.

- AP7522
- AP7532
- AP7562
- AP7602
- AP7622
- AP7612
- AP7632
- AP7662
- AP8432
- AP8533

For more information on using ExtremeWireless WiNG access points at your ExtremeLocation site, see Configuring ExtremeWireless WiNG Access Points on page 234.

ExtremeWireless Access Points

The following ExtremeWireless access points are supported by ExtremeLocation.

- ExtremeWireless AP3912
- ExtremeWireless AP3915
- ExtremeWireless AP3916
- ExtremeWireless AP3917
- ExtremeWireless AP3935
- ExtremeWireless AP3965

For more information on using ExtremeWireless access points at your ExtremeLocation site, see Configuring ExtremeWireless Access Points on page 272

Configuring ExtremeWireless WiNG Access Points

An ExtremeWireless WiNG access point can be used with ExtremeLocation in two (2) modes. In the "Radio Share" mode, the access point acts as a sensor when off channel scan is done.

In the "Dedicated Sensor" mode, the access point radios are configured to be dedicated sensors. The radios do not support providing services to wireless clients and are dedicated to the purpose of gathering information about wireless clients and their activities.

To Deploy ExtremeWireless WiNG access points in Radio Share Mode

The following configurations must be performed to deploy ExtremeWireless Access Points in the Radio Share mode.

1 Enable the access point radios to work in the radio share mode. See Radio Share Configuration on page 236.
2 Configure the RF Domain Policy to point to the ExtremeLocation server. See RF Domain Configuration on page 244

To Deploy ExtremeWireless WiNG access points in Dedicated Sensor Mode

The following configurations must be performed to deploy ExtremeWireless Access Points in the Dedicated Sensor mode.

1 Enable the access point radios to become dedicated sensors. See Standalone Sensor Configuration on page 239.
2 Configure the RF Domain Policy to point to the ExtremeLocation server. See RF Domain Configuration on page 244
3 Configure the Sensor Policy to select the channels for scanning and other parameters. See Sensor Policy Configuration on page 249.
4 Link the Sensor Policy to the RF Domain for the configuration to be assigned to all access points in that domain. See RF Domain - Sensor Policy Configuration on page 252

Basic Access Point Configuration

If you have existing ExtremeWireless WiNG access points, you can either configure them to share their radios or configure them as dedicated sensors.

To deploy ExtremeWireless WiNG access points with shared radio usage, see Radio Share Configuration on page 236.

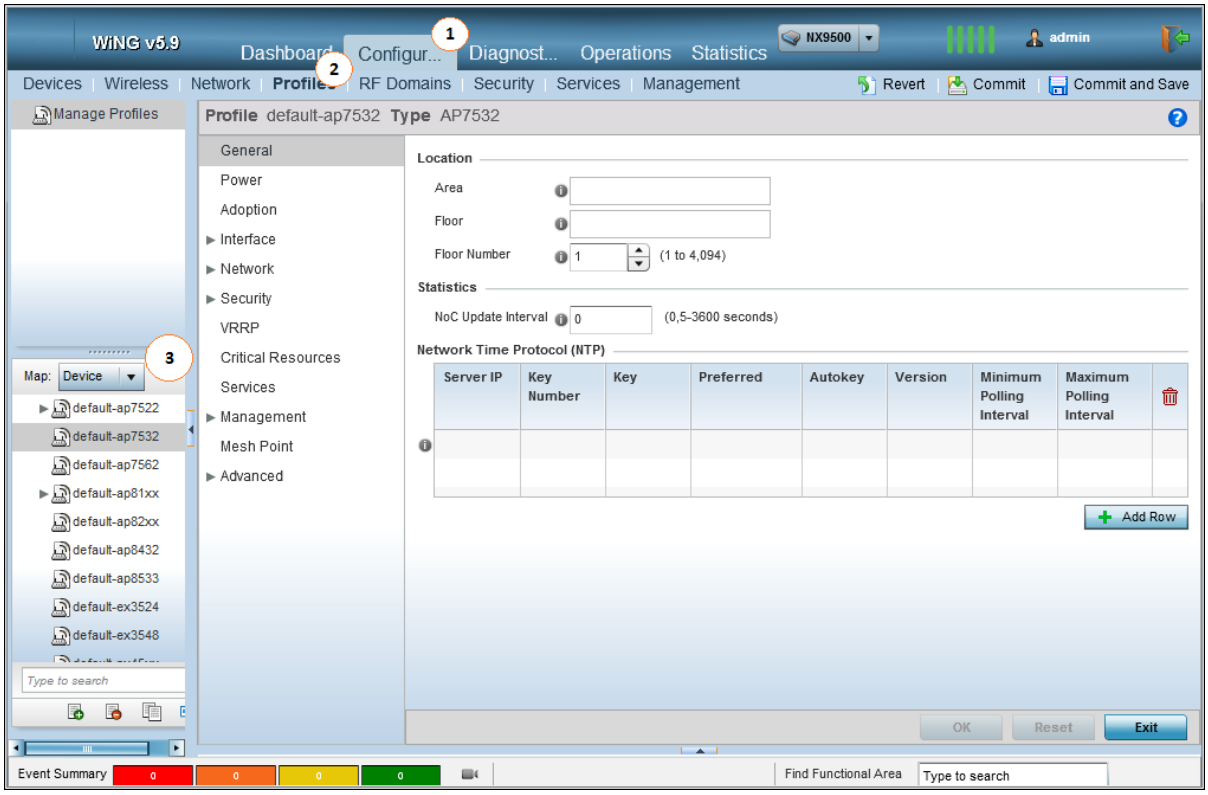
To deploy ExtremeWireless WiNG access points as standalone sensors, see Standalone Sensor Configuration on page 239.

ExtremeWireless WiNG access points can also be deployed in an environment where ExtremeLocation co-exists with AirDefense Service Platform. In such deployments, (where the WiNG access point acts as a dedicated sensor or in the radio share mode) the access point's configuration information is pushed to it from AirDefense Service Platform and not from any WiNG controller the access point is adopted to. To deploy ExtremeWireless WiNG access points in a mixed ExtremeLocation and AirDefense deployment, see Mixed ExtremeLocation and ADSP Installation on page 242.

Radio Share Configuration

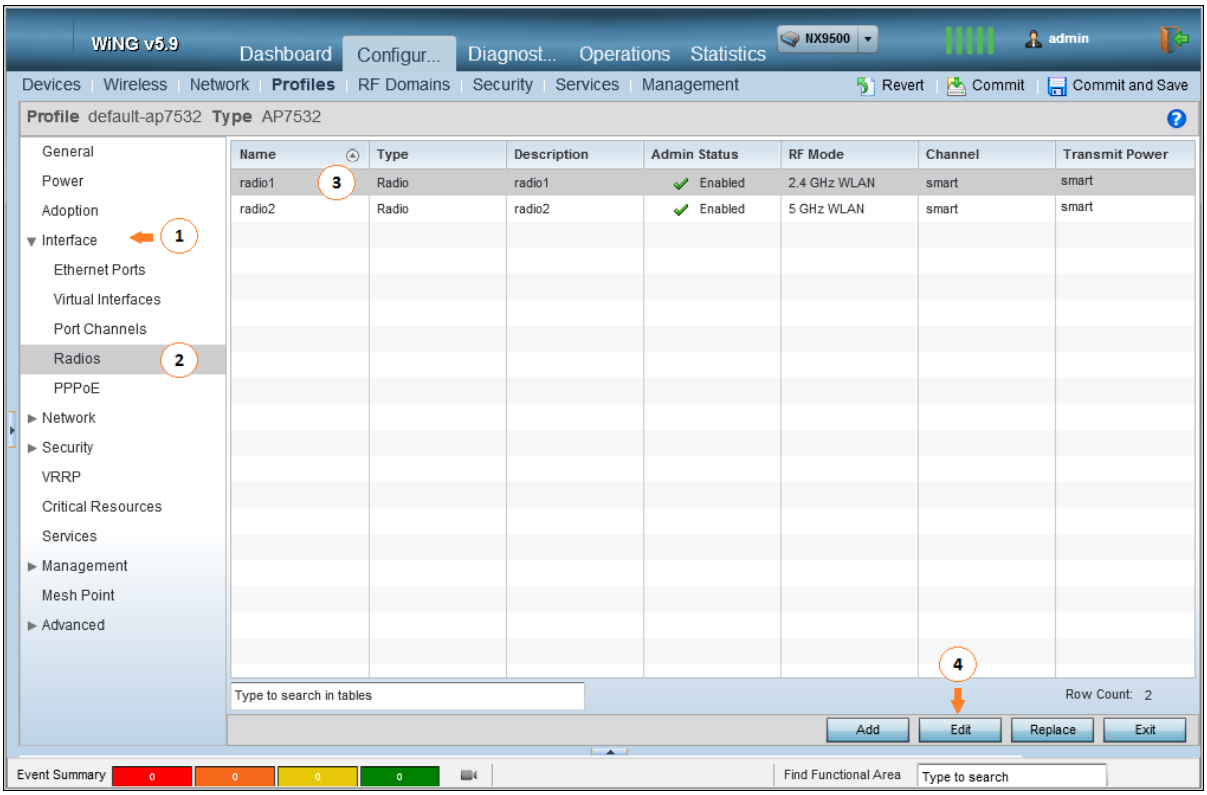
When set to the "Radio Share" mode, the access point radio acts as a sensor when off channel scan is done. To configure the access point radio in the "Radio Share" mode:

1 Select **Configuration** > **Profiles** > **<your AP's profile>**

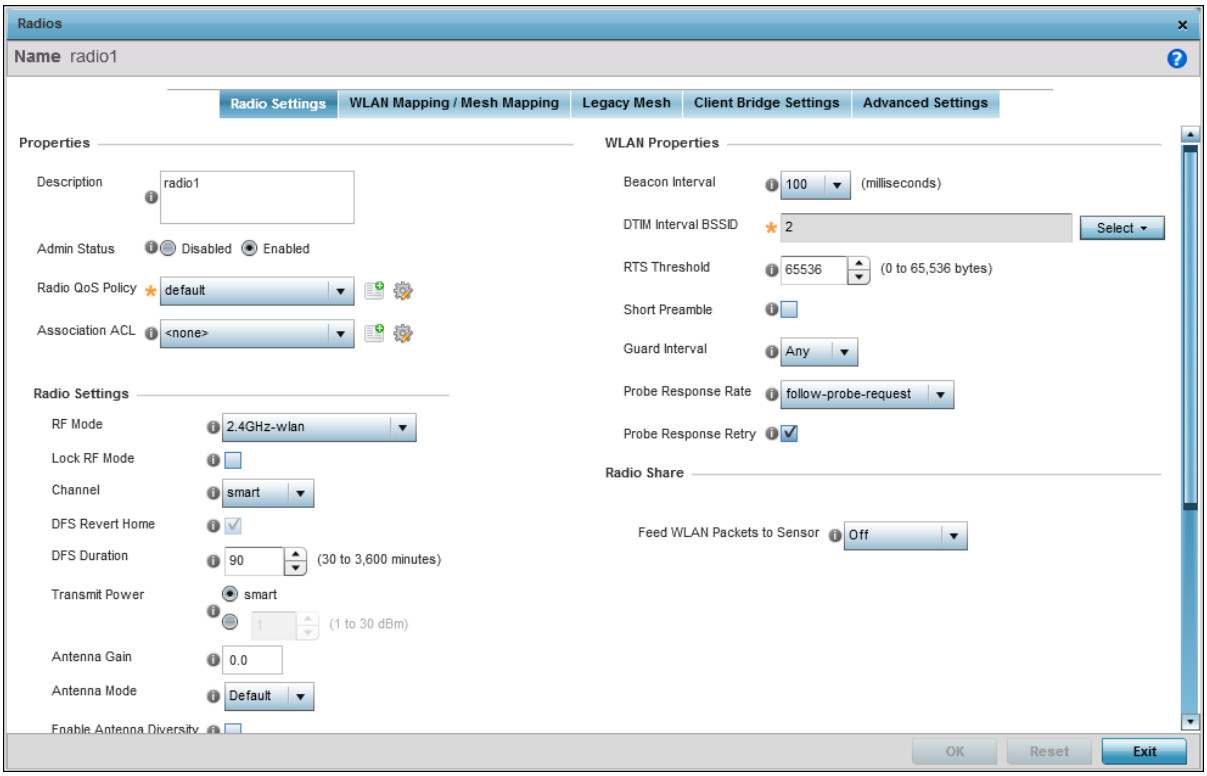


Your access point type's profile loads.

2 Select **Interface** > **Radios** > **<the radio to configure>** and then select the **Edit** button.

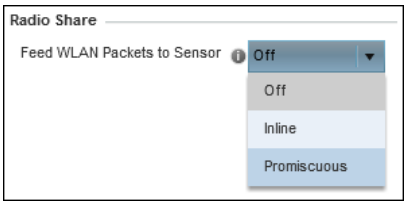


The selected radio's configuration window loads.



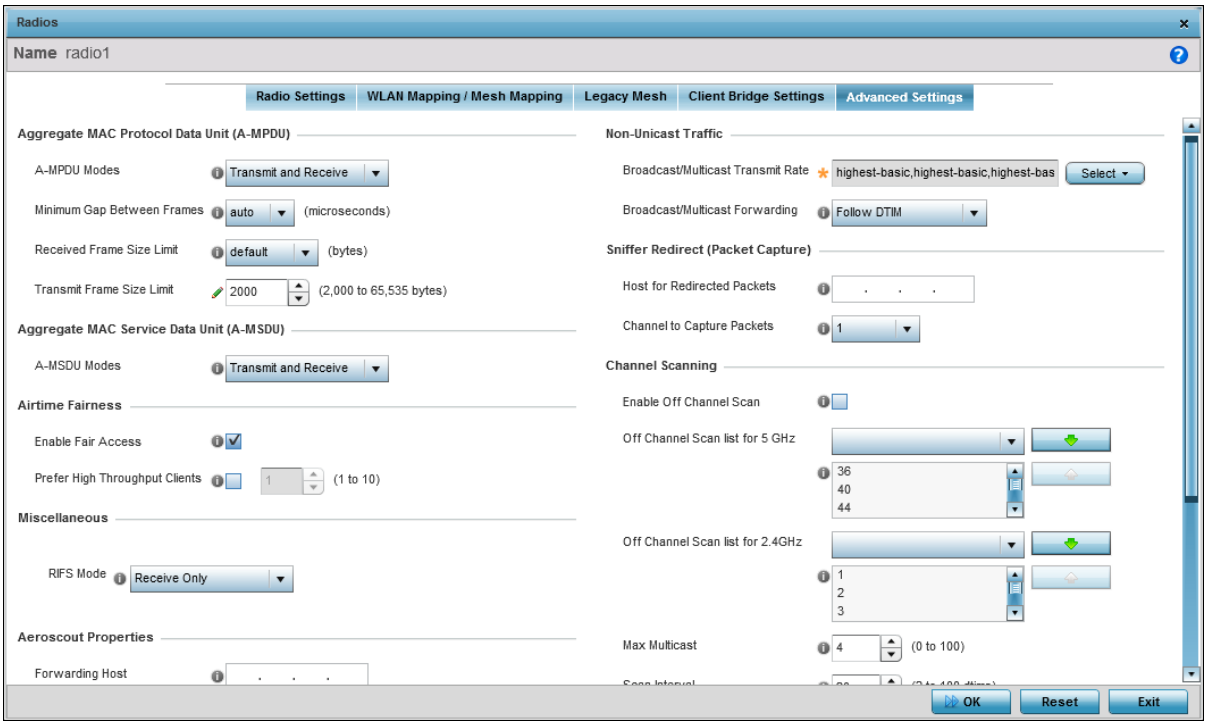
3 Select **Radio Settings** if not selected.

4 From the **Radio Share** > **Feed WLAN Packets to Sensor** control, select the `Promiscuous` option.

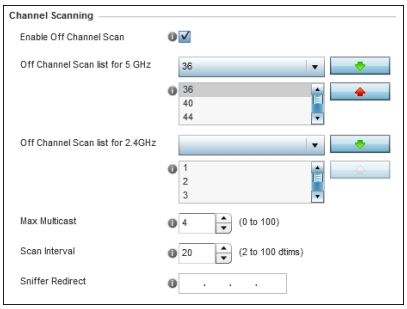


Note
Radio Share mode has to be enabled individually for each radio band (2.4 GHz and 5.0 GHz.)

5 By default, a radio in the Radio Share mode acts as sensor during off channel scans. To enable off-channel scan, select the **Advanced Settings** tab.



6 Optional: From the **Channel Scanning** control, select the **Enable Off Channel Scan** option.



7 Review the other parameters for this configuration and modify them if required.

8 Select the **OK** button and then select the **Exit** button to save changes made to the radio configuration.

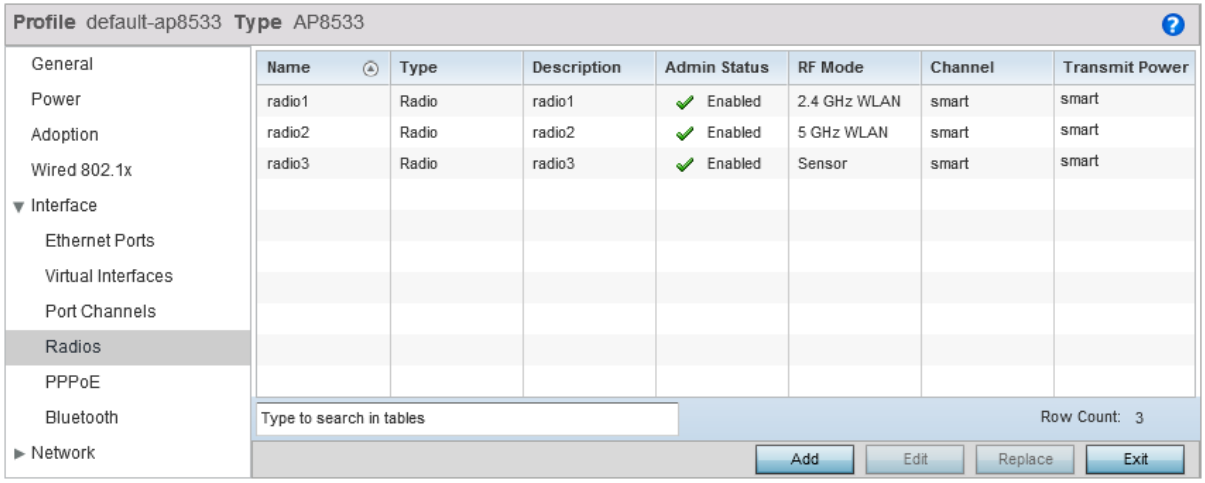
9 From the top right corner of the screen select the **Commit and Save** button to commit and save changes to the profile.

Standalone Sensor Configuration

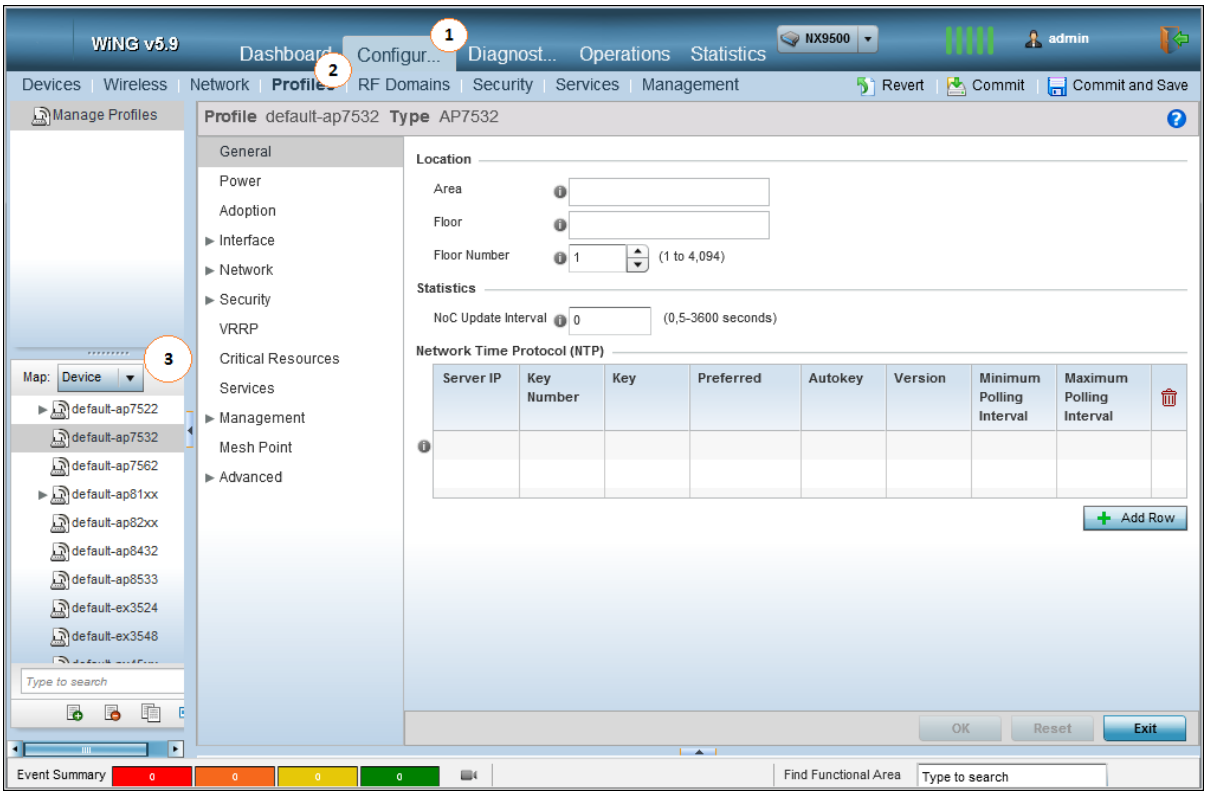
When set to the "Sensor" mode, the access point radio is dedicated to the task of gathering locationing information for the area in which it is deployed. While in the Sensor mode, the access point does not transmit or receive data traffic.

Note

A tri-radio access point such as the AP8533 does not need further configuration changes as one of the three radios is configured as a full-time dedicated sensor radio.

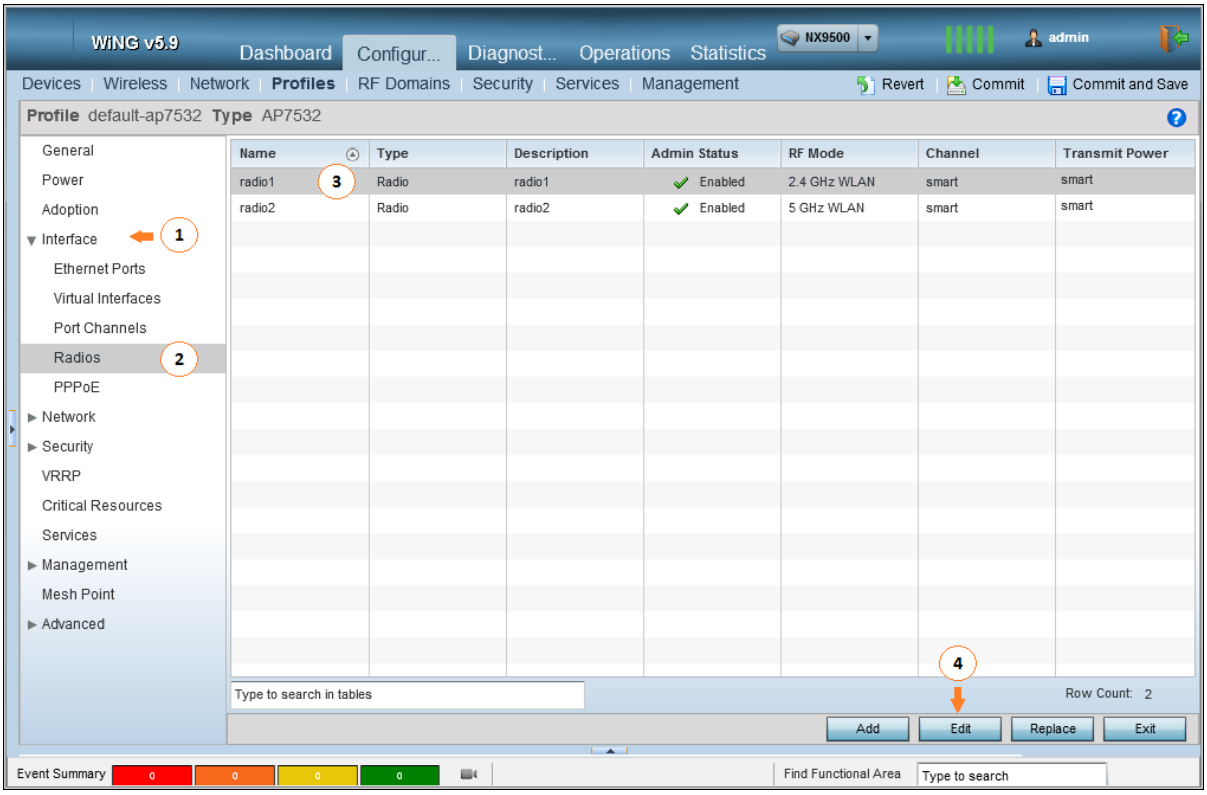


1 Select **Configuration** > **Profiles** > **<your AP's profile>**

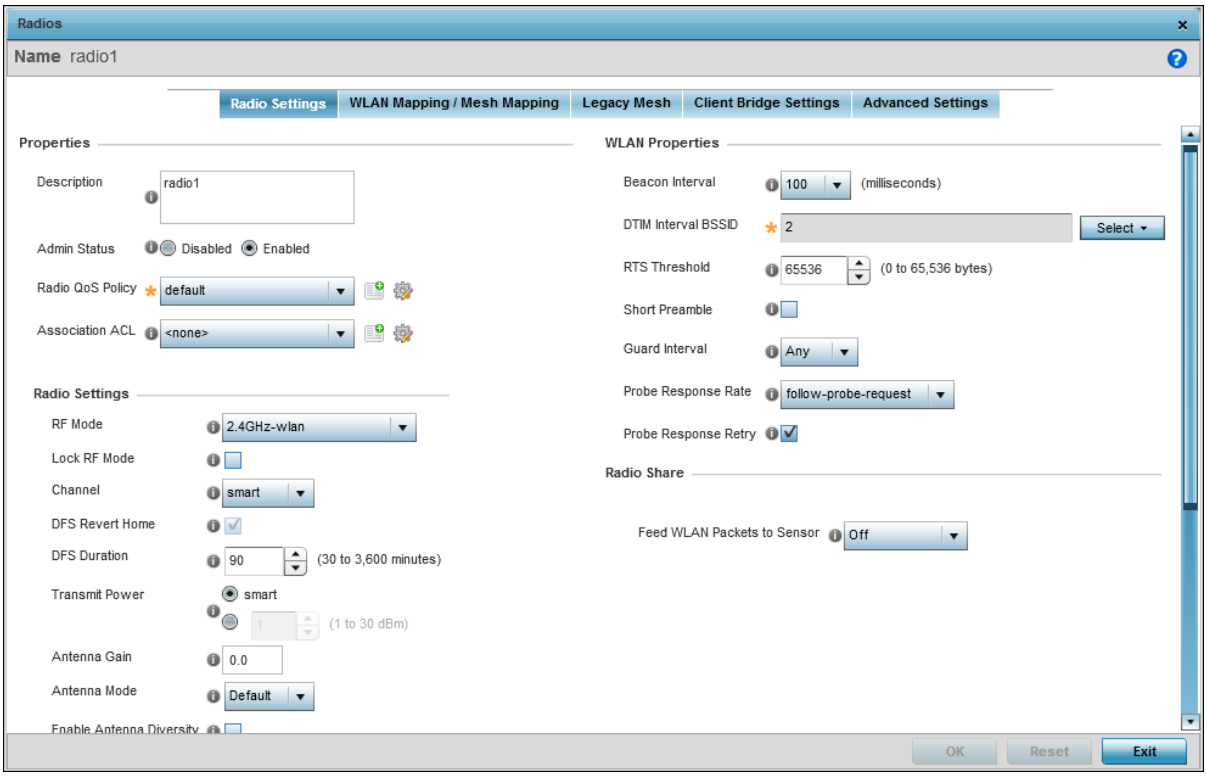


Your access point type's profile loads.

2 Select **Interface** > **Radios** > **<the radio to configure>** and then select the **Edit** button.

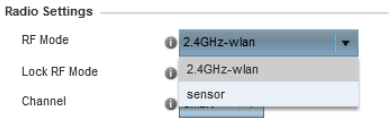


The selected radio's configuration window loads.



3 Select **Radio Settings** if not selected.

4 From the **Radio Settings** > **RF Mode** control, select the `sensor` option.



Note

On certain APs such as AP7522, AP7532, and AP7562 RF Mode has to be set to `sensor` on both the radio band (2.4 GHz and 5.0 GHz.) for the access point to work as a dedicated sensor.

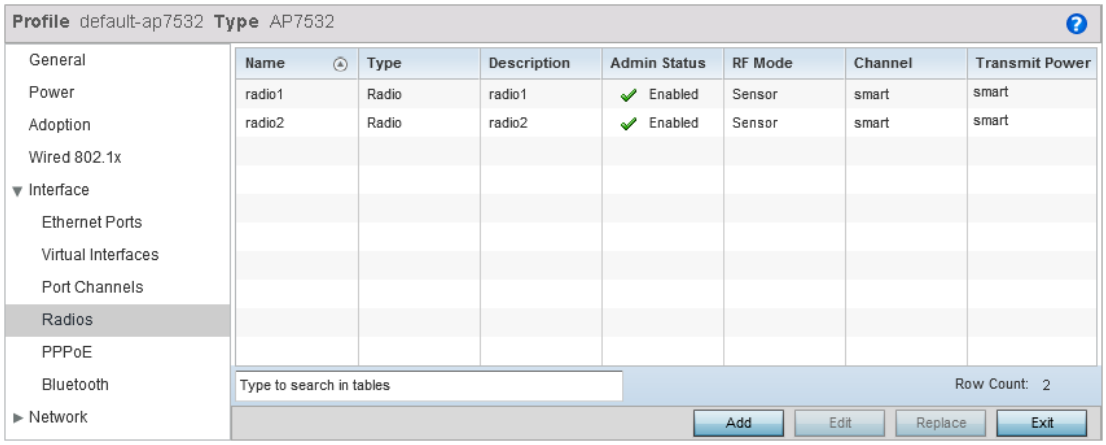
Note

On AP8432, only one radio can be set as a sensor.

5 Select the **OK** button and then select the **Exit** button to save changes made to the radio configuration.

6 From the top right corner of the screen select the **Commit and Save** button to commit and save changes to the profile.

The selected radio's operation mode changes to *`Sensor`*.



Mixed ExtremeLocation and ADSP Installation

For deployments where ExtremeLocation is to be installed alongside an existing Extreme AirDefense (AirDefense) installation, additional configurations must be performed for those access points that are intended to act as AirDefense Sensors.

The configuration for the access points that act as AirDefense sensors is pushed directly from AirDefense. Configuration changes received from the controller to which the access point is adopted to is overridden by the configuration changes pushed by AirDefense.

ADSP Server Configuration on WiNG Controllers

The configuration settings required to enable access points to send sensor data to a remote AirDefense server is set in the WiNG controller's RF Domain Policy. Use the **Sensor** page in the RF Domain configuration on the Wireless Controller.

To know more about configuring the RF Domain, see the following documents:

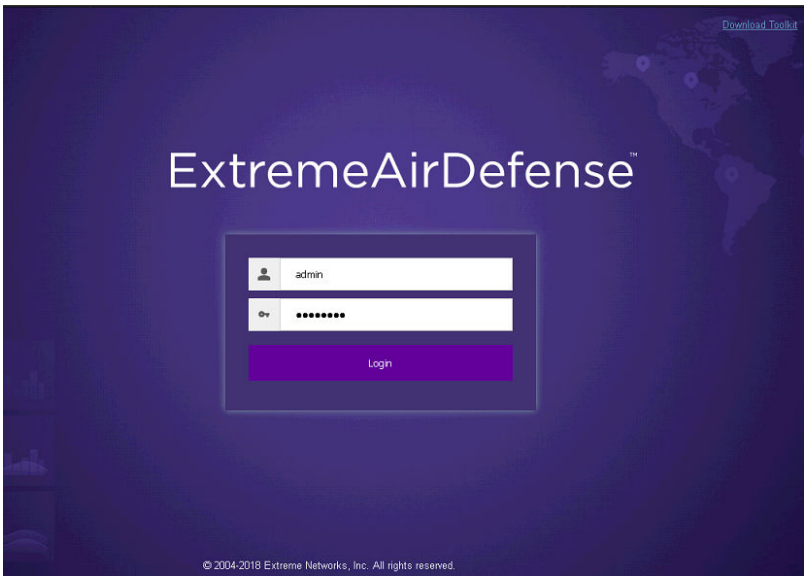
- The latest ExtremeWireless WiNG Wireless Controller and Service Platform System Reference Guide located at www.extremenetworks.com/documentation/.
- The latest Extreme AirDefense User Guide located at www.extremenetworks.com/documentation/.

Configuring ADSP Sensor Operation

These configuration steps are performed on your AirDefense server.

Use the Sensor Operation screen to configure the settings that AirDefense sends to the sensors registered with it. Some of the parameters that can be configured are Scan Settings, Scan Modes, Scan Weight, and other parameters.

1 Login in to the AirDefense Server from its login screen.

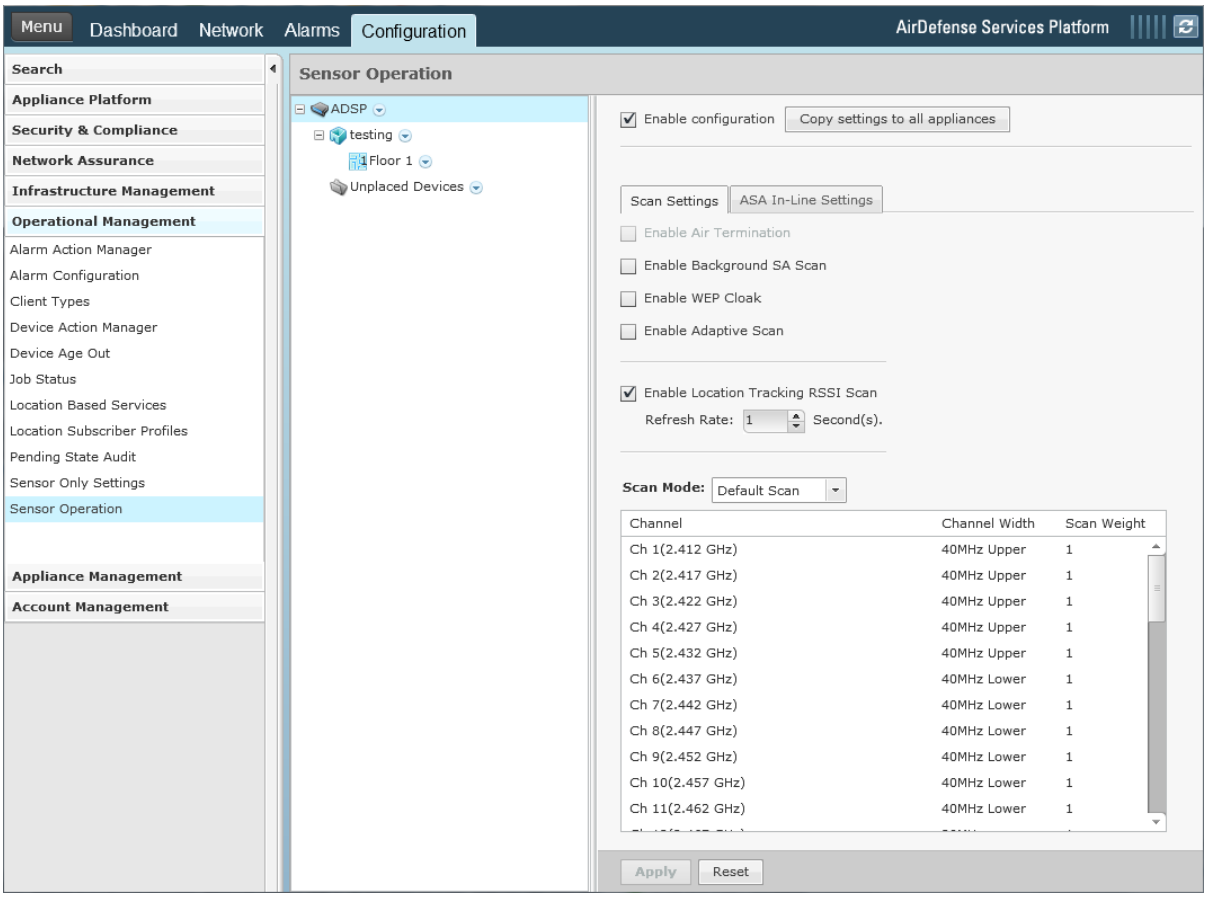


Provide a valid login user name its password to access the AirDefense user interface.

2 Select the **Configuration** menu from the toolbar on the top of the screen.

3 Select the **Operational Management** item from the menu on the left of the screen to expand it.

4 Select the **Sensor Operation** item from the **Operational Management** sub menu.
The Sensor Operation screen displays.



5 From the Sensor Operation screen, select the **ADSP** item if it is not selected by default.
The Sensor Operation screen changes to display the configuration parameters for the AirDefense system.

6 Select one of the following **Scan Mode** options.

Default Scan	Select this option to use the default values. When selected, a set of pre-configured channels for 2.4 GHz and 5.0 GHz bands are scanned.
Custom Scan	Select this option to get fine grained control on the channels to be scanned in the 2.4 GHz and 5.0 GHz spectrum.
Channel Lock	Select this option to lock the channel scan to a single channel in either the 2.4 GHz or 5.0 GHz spectrum.

7 Select **Save** to save changes made to the AirDefense Sensor Operations parameters.

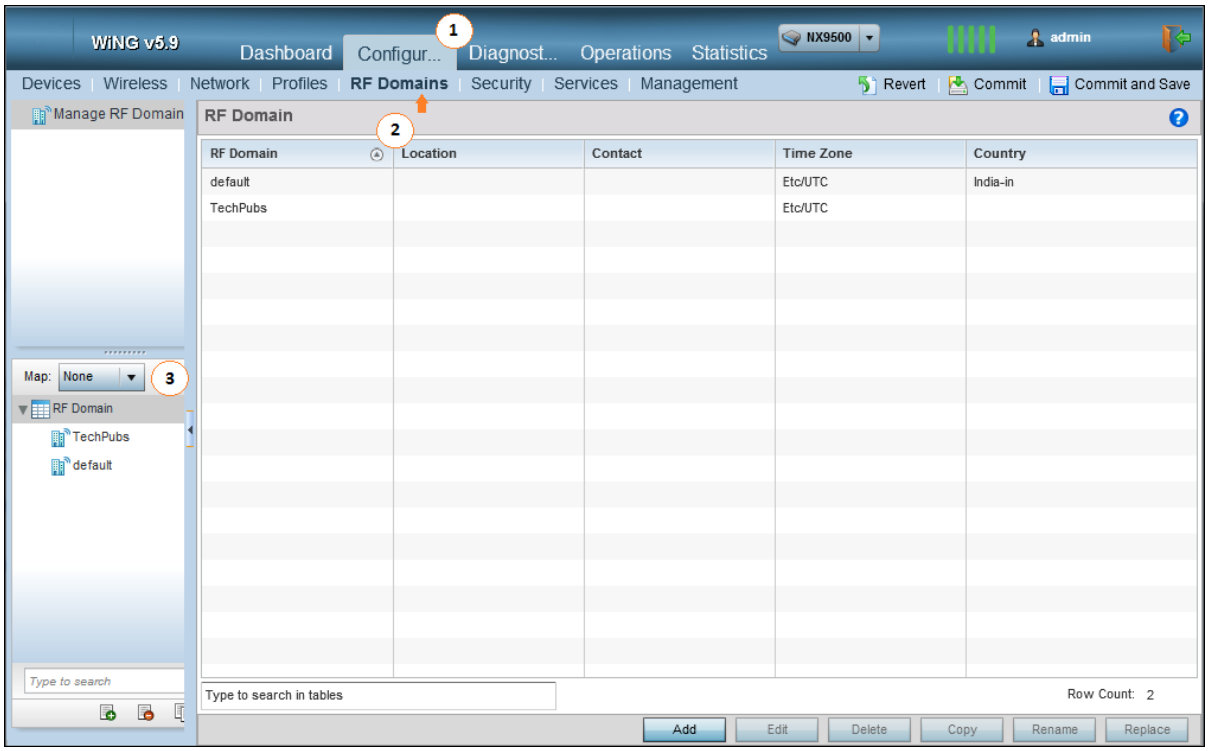
RF Domain Configuration

For ExtremeLocation to work, the RF Domain policy's sensor configuration must point to an existing Sensor policy or to a newly created Sensor Policy.

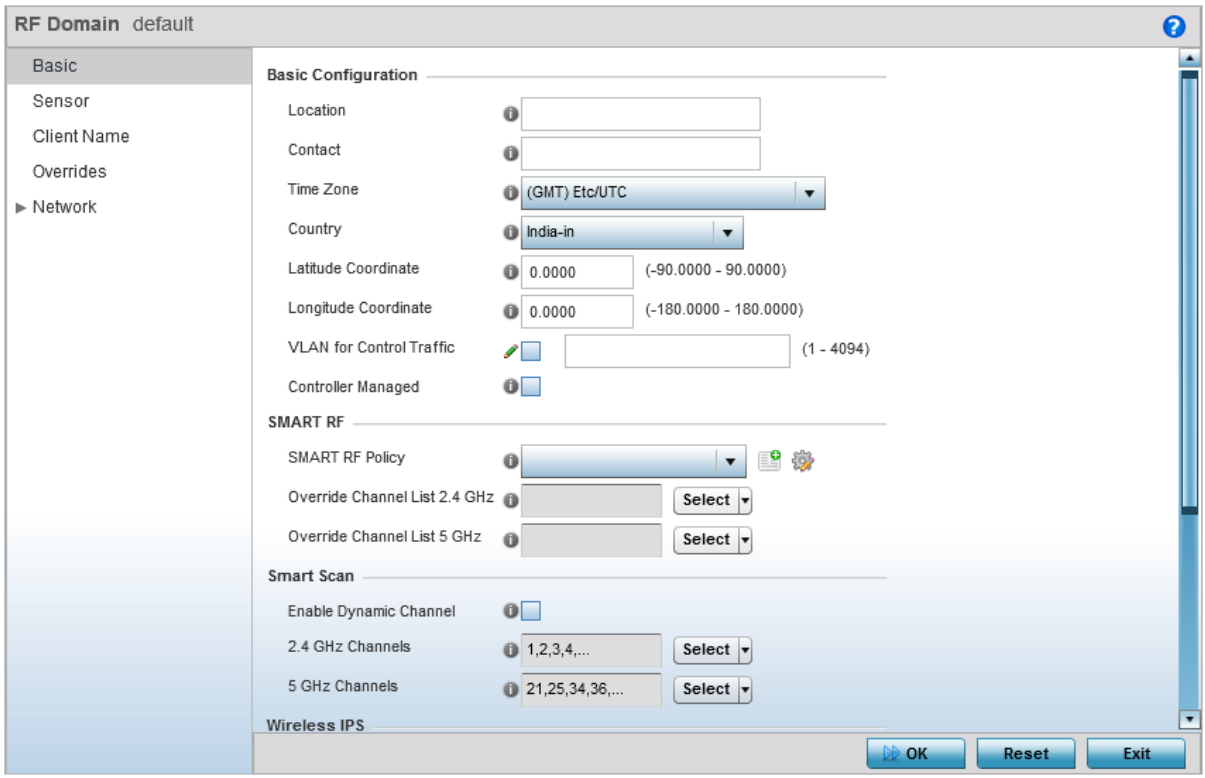
See Sensor Policy Configuration on page 249 for more information on creating a Sensor policy.

To set the RF Domain's Sensor configuration:

1 Select **Configuration** > **RF Domains** > **<The correct RF Domain>**.

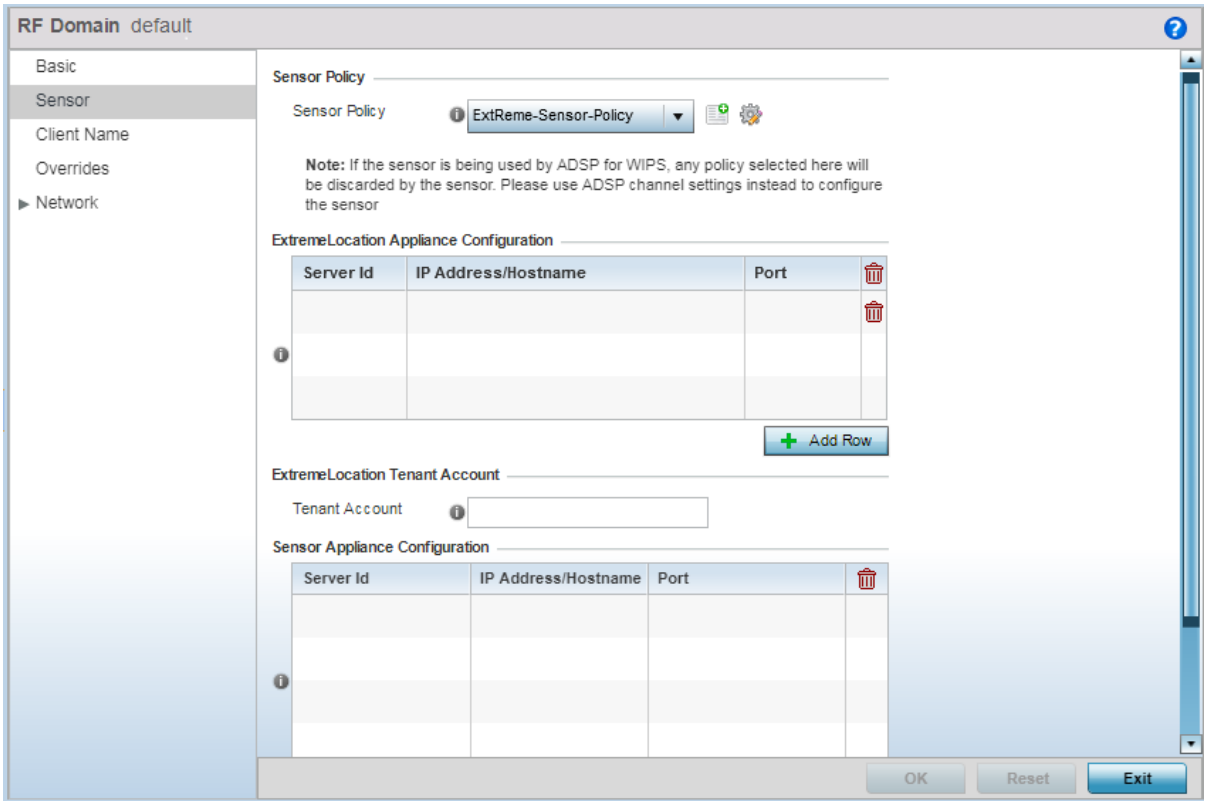


The RF Domain screen displays.



2 Select **Sensor** from the menu on the left.

The Sensor screen displays.



3 Select **+ Add Row** from within the **Location Tracking System** list.

This adds a new row in the **Location Tracking System** table. Only one row can be configured for this table.

Provide the following information:

Server Id — Use the spinner control to assign a numeric ID for the ExtremeLocation server. The default ID value is 1.

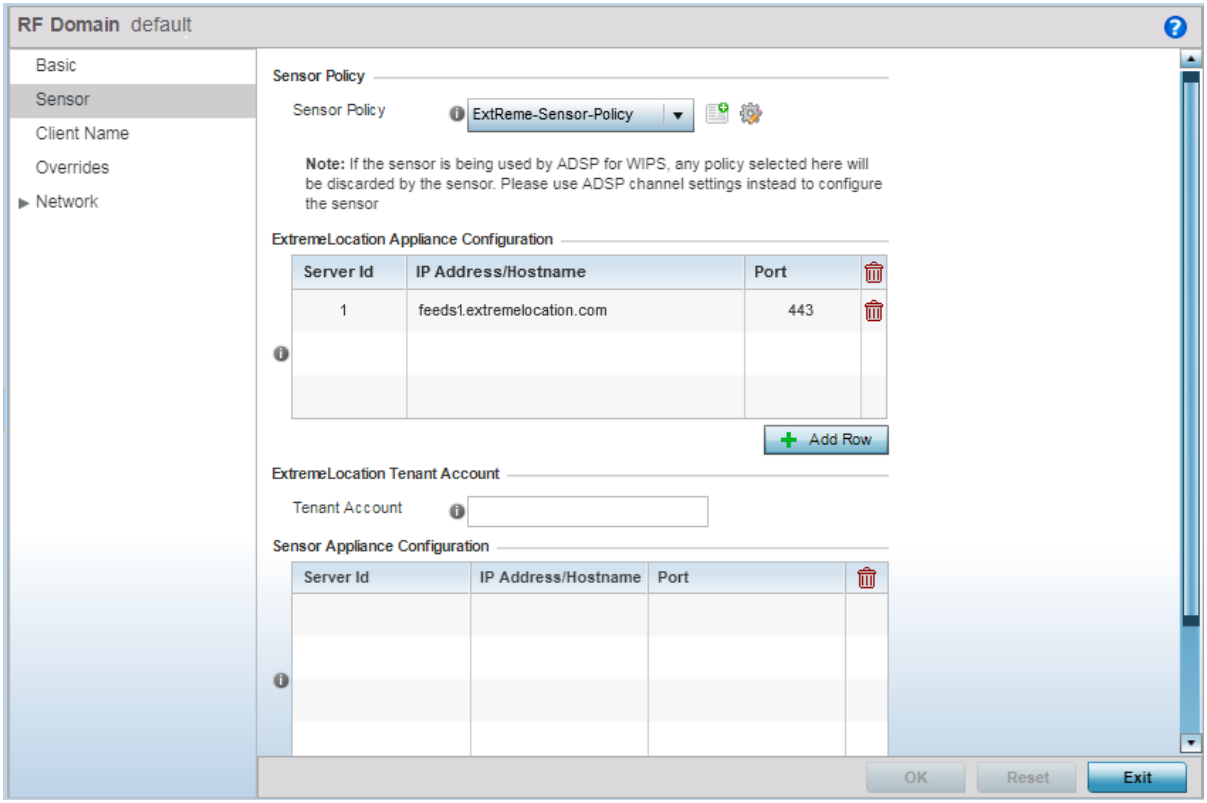
IP Address/ Hostname — Provide the host name of the ExtremeLocation server. Host name cannot exceed 64 characters or contain an underscore.

The value to be configured is:

- feeds1.extremelocation.com

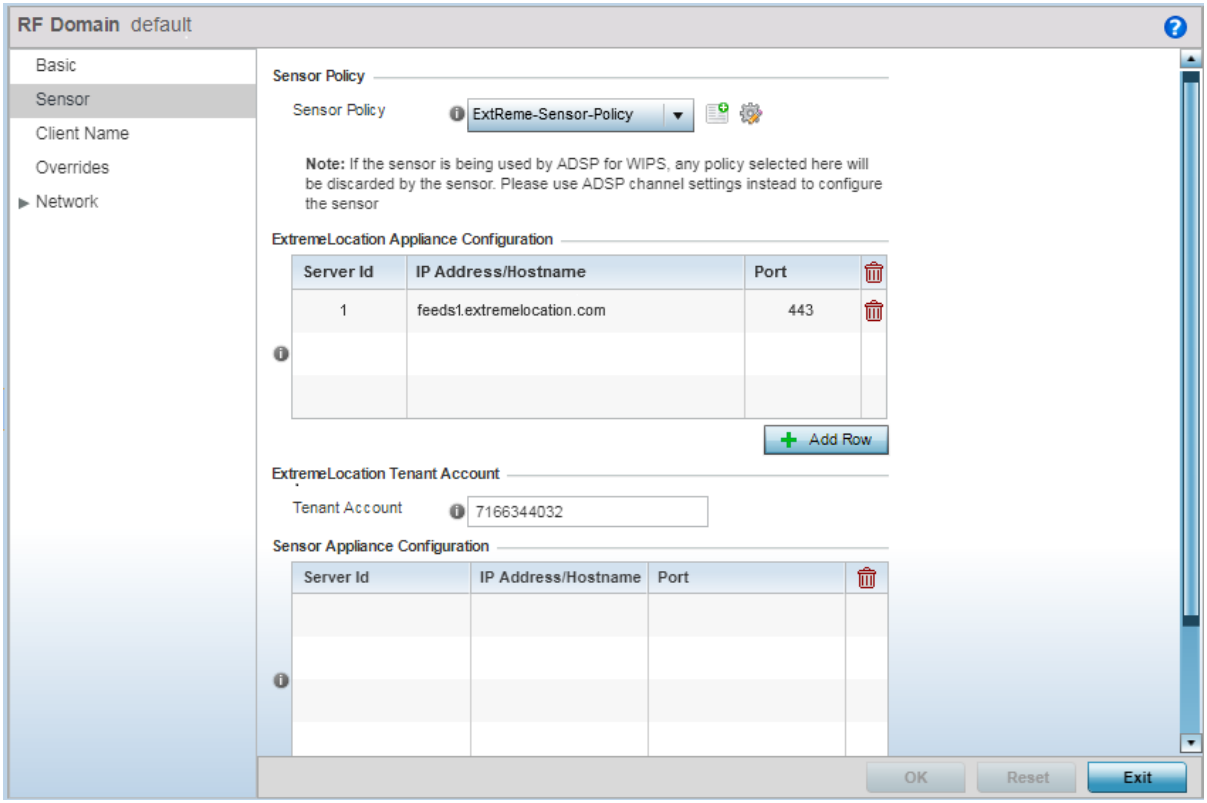
> **Note**
>
> Please use this value as is. Note that there is no prefix such as `http://` for this URL.
>
> This field must not contain the IP address of the above server. Due to load balancing, the IP address might change periodically.

Port — Use the spinner control to specify the port of the ExtremeLocation server. The default port is 443.



4 In the ExtremeLocation web user interface, locate your tenant account number. This number is located next to the icon at the top right of your screen.

5 Specify your ExtremeLocation Tenant Account Number in the **Tenant Account** field .



6 Select **OK** to save the changes to the RF Domain Sensor configuration, or select **Reset** to revert to the last saved configuration.

7 Select **Basic** from the RF Domain menu on the left.

The RF Domain basic configuration screen appears.

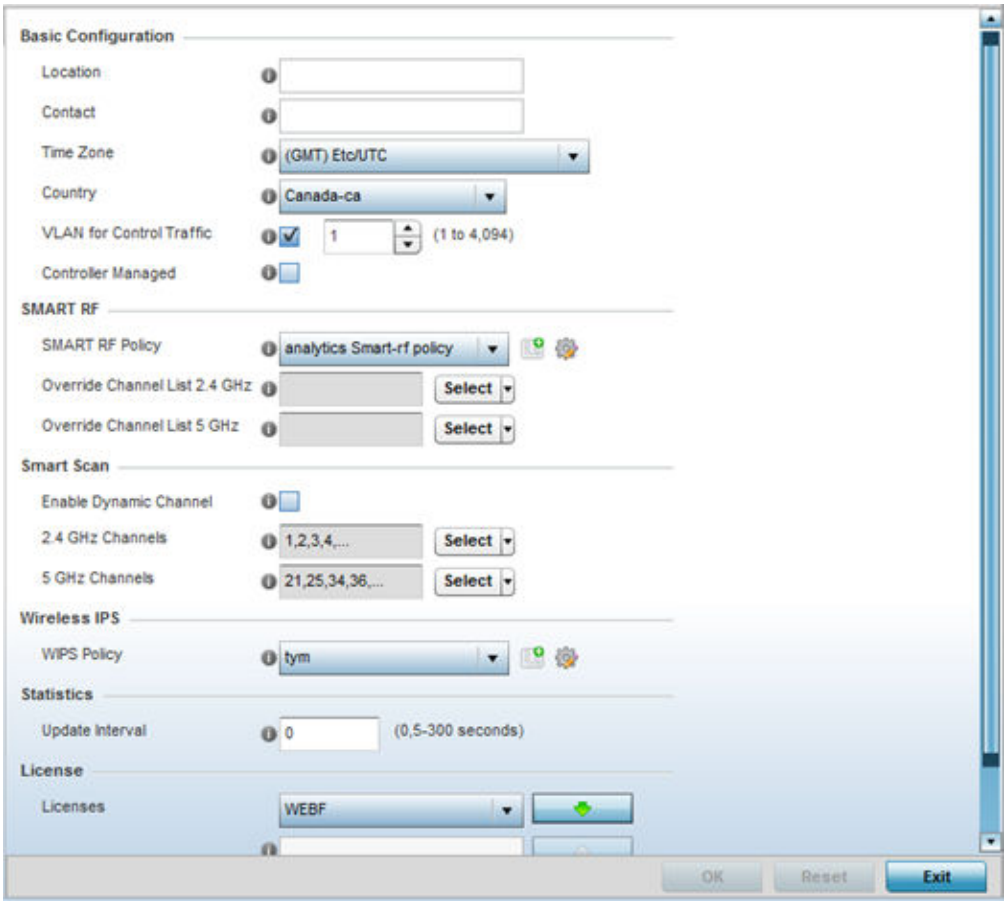


Figure 115: RF Domain Basic Configuration Screen

8 Select the **Country** drop-down to expand it and select the country of operation for this access point.

9 Select **OK** to save the changes to the RF Domain Basic configuration, or select **Reset** to revert to the last saved configuration.

10 Select **Exit** to exit the RF Domain configuration screen.

11 From the top right corner of the screen select the **Commit and Save** button to commit and save changes to the RF Domain.

Sensor Policy Configuration

The access point radio can function as a sensor and upload information to a dedicated ExtremeLocation server (external to the access point). When an access point radio functions as a sensor, it is, in the sensor mode, able to scan across all legal channels within the 2.4 and 5.0 GHz bands. The access point works in conjunction with the ExtremeLocation server to provide locationing service.

1 Select **Configuration** > **Wireless** > **Sensor Policy** from the access point user interface.

The sensor policy screen appears.

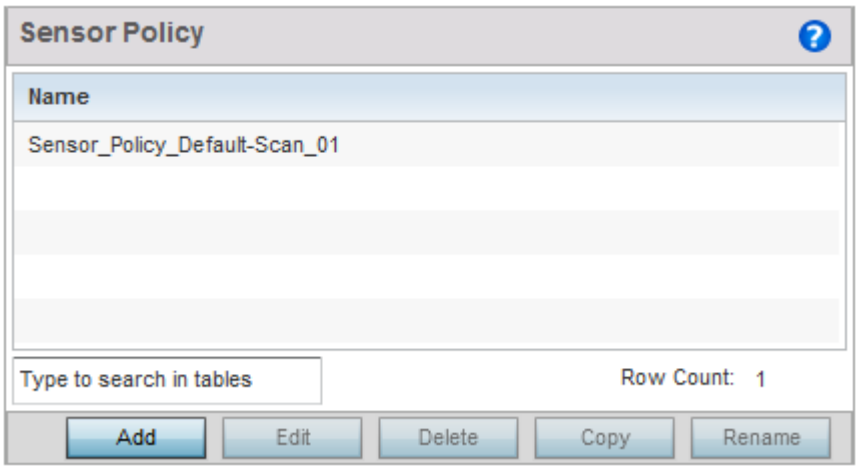


Figure 116: Wireless Sensor Policy Screen

2 Select **Add** to define a new sensor policy.

The following screen appears.

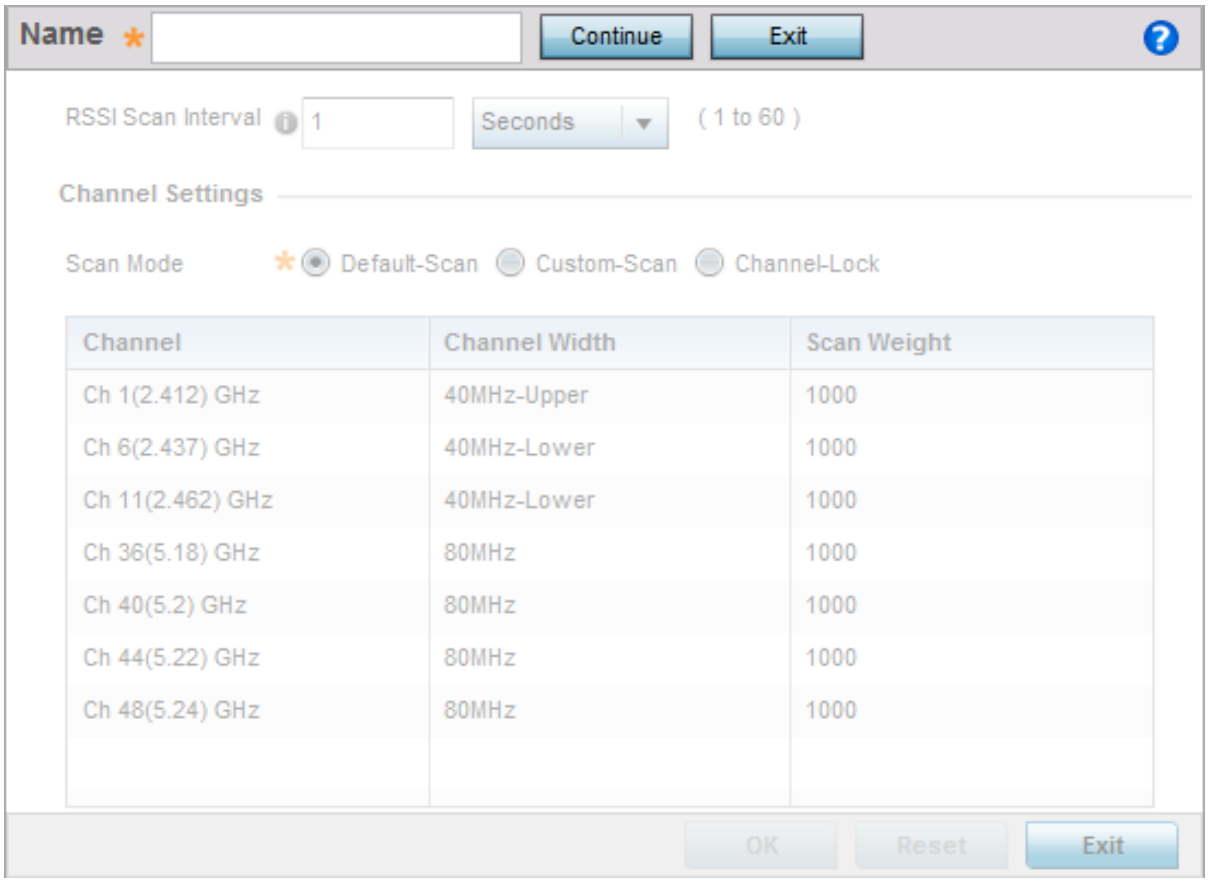


Figure 117: Add new Sensor Policy Screen

3 Provide a name in the **Name** field.

Sensor policy name cannot exceed 32 characters and cannot contain space.

4 Select **Continue** to create the Sensor policy.

5 Select **Exit** to exit this screen without creating a new sensor policy.

The Sensor Policy addition screen displays with the **Scan Mode** set to `Default-Scan`. The user configurable parameters on this screen differ with the selected **Scan Mode**.

6 Set the **RSSI Scan Interval** value in the range of 1 to 60 seconds. The default value is set to 10 seconds.

It is recommended that the **RSSI Scan Interval** be set to these following values depending on your deployment requirements.

- For Presence Detection - Set this value to 60 seconds or 1 minute
- For Zone Tracking - Set this value to 10 seconds
- For Positioning & Sensor Calibration - Set this value to 1 second

7 Select the **Scan Mode** setting appropriate to your requirement.

Note

Scan Mode should be set to determine the channel list for dedicated sensors. It is recommended that the Channel List should be limited to the operating channels of the deployment. For the 5.0GHz band, it is recommended that the DFS channels not be included in Channel Scan list. Client devices are prohibited from actively probing on these DFS channels.

The values you can select depends on whether you have selected *`Default-Scan`*, *`Custom-scan`*, or *`Channel-Lock`* as the **Scan Mode**:

Channel	With *`Default-Scan`* selected: The list of available scan channels is fixed and defaulted in a spread pattern of 1, 6, 11, 36, 40, 44 and 48. You cannot change this channel pattern. With *`Custom-Scan`* selected: A list of unique channels in the 2.4, 4.9, 5 and 6 GHz band can be collectively or individually enabled for customized channel scans and RSSI reporting. With *`Channel-Lock`* selected: The Channel, Channel Width, and Scan Weight fields are replaced by a Lock Frequency drop-down menu. Use this menu to lock the RSSI scan to one specific channel.
Channel Width	With *`Default-Scan`* selected: Each channel¿s width is fixed and defaulted to either 40MHz-Upper (Ch 1), 40MHz-Lower (Ch 6 and CH 11) or 80MHz (CH 36, CH 40, CH 44 and CH 48). With *`Custom-Scan`* selected: You can define the width for each selected channel. Note that many channels have their width fixed at 20MHz. 802.11a radios support 20 and 40 MHz channel widths. With *`Channel-Lock`* selected: You cannot adjust the width between adjacent channels, because only one channel is locked.
Scan Weight	With *`Default-Scan`* selected: Each default channel¿s scan is of equal duration (1000) within the defined RSSI scan interval. No one channel receives scan priority within the defined RSSI scan interval.

	With *Custom-Scan* selected: Each selected channel can have its weight prioritized in respect to the amount of time a scan is permitted within the defined RSSI scan interval. With *Channel-Lock* selected: With one channel locked for an RSSI scan, you cannot adjust scan weights for other, unlocked channels.

8 Select **OK** to save the changes to the Sensor Policy configuration, or select **Reset** to revert to the last saved configuration.

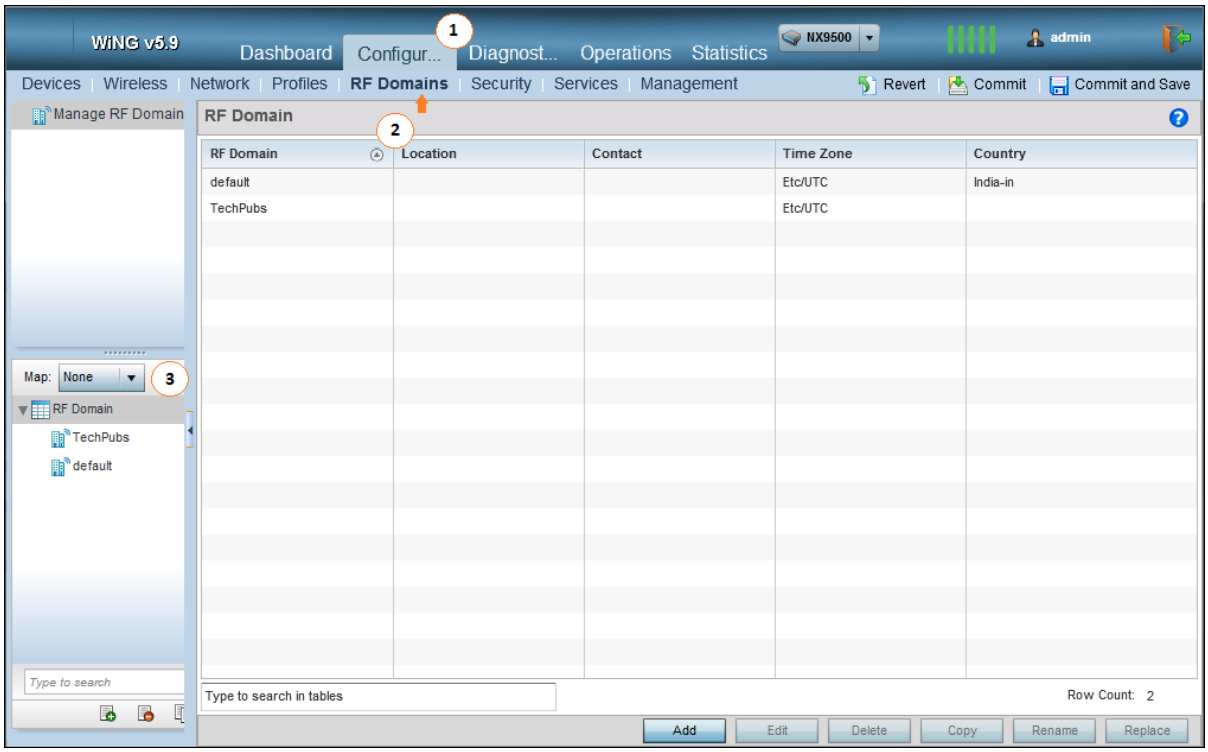
9 From the top right corner of the screen select the **Commit and Save** button to commit and save changes to the Sensor Policy.

RF Domain - Sensor Policy Configuration

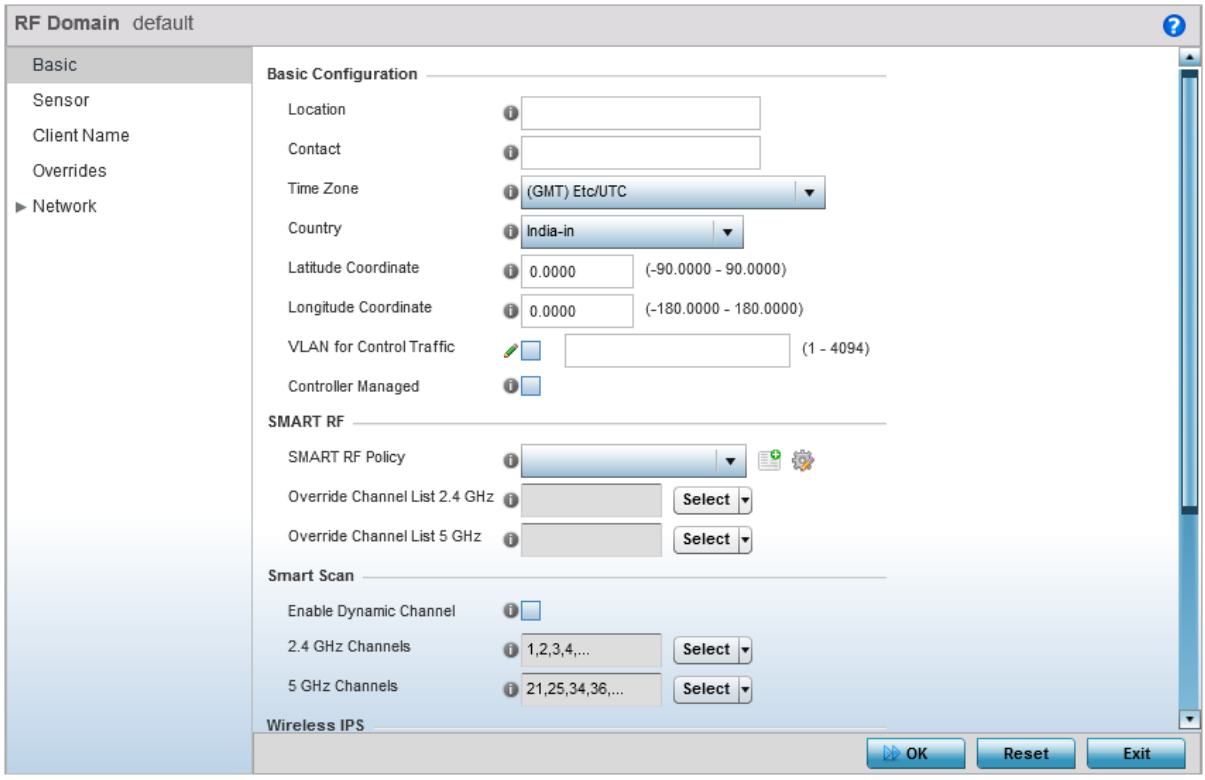
For ExtremeLocation to work, the RF Domain policy must have a Sensor Policy applied to it. See Sensor Policy Configuration on page 249 for more information on creating a Sensor policy.

To set the RF Domain's Sensor Policy configuration:

1 Select **Configuration** > **RF Domains** > **<The correct RF Domain>**.

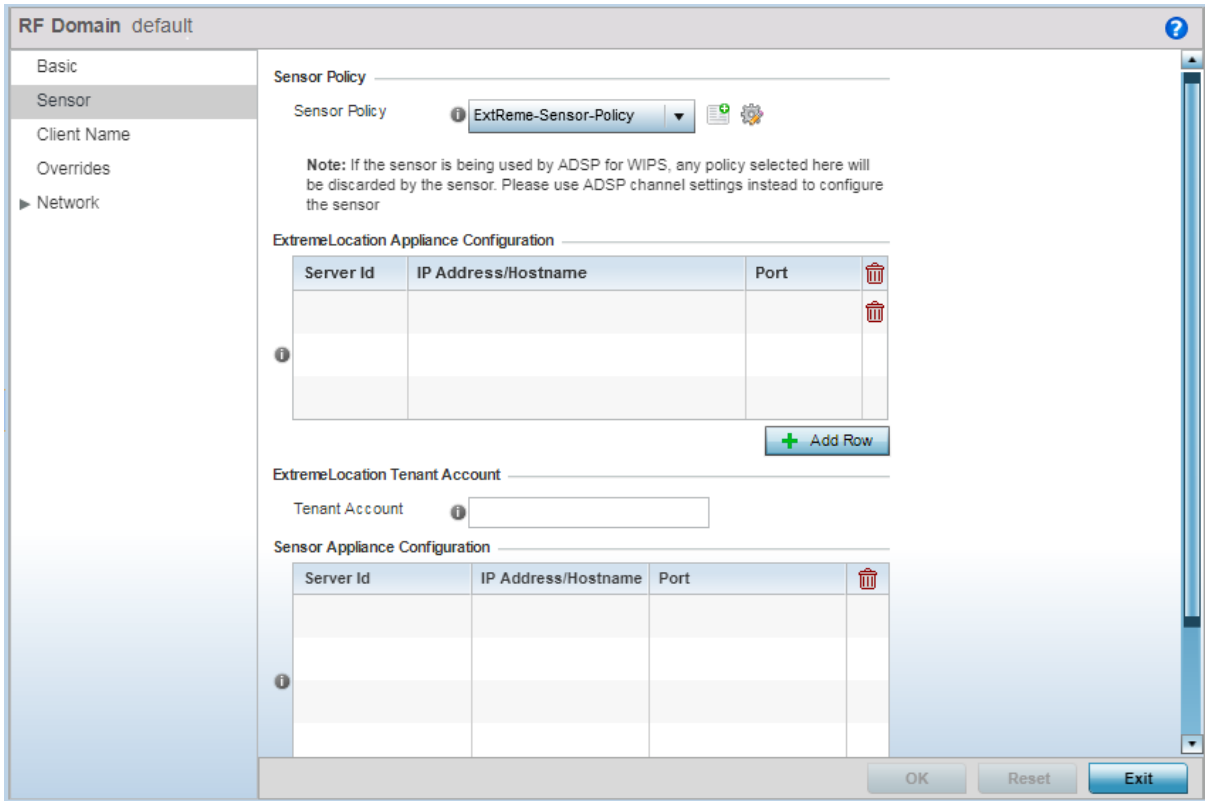


The RF Domain screen displays.

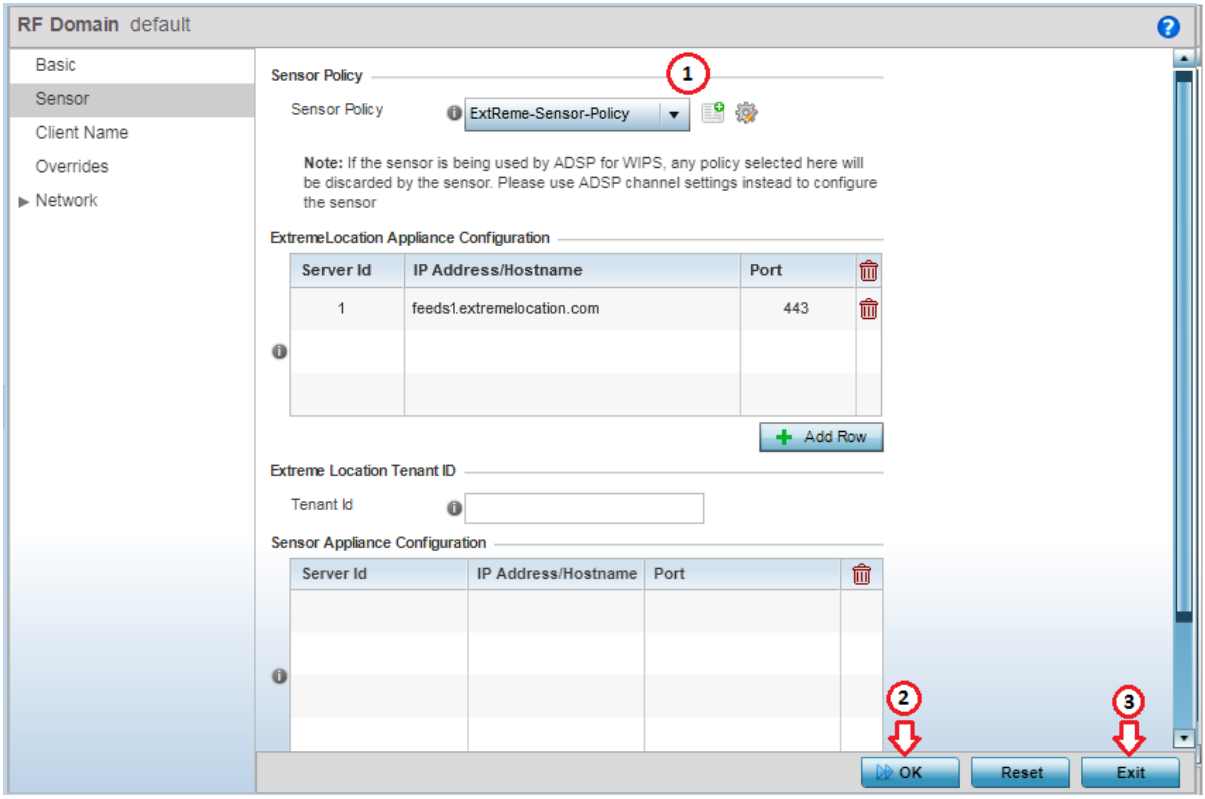


2 Select **Sensor** from the menu on the left.

The Sensor screen displays.



3 From the **Sensor Policy** field, select the appropriate sensor policy.



4 Select **OK** to save the changes to the RF Domain Sensor configuration, or select **Reset** to revert to the last saved configuration.

5 Select **Exit** to exit the RF Domain configuration screen.

6 From the top right corner of the screen select the **Commit and Save** button to commit and save changes to the RF Domain.

Extreme Location and WiNG Integration

WiNG ExtremeLocation Integration

With this release of ExtremeLocation, you can seamlessly integrate WiNG with ExtremeLocation. Once integrated, you can view all WiNG sites and WiNG adopted devices in real time from within the ExtremeLocation user interface. Changes made to a site or site settings, geo-location information for a site is immediately propagated to ExtremeLocation. For adopted access points, changes to the radio mode and hostname will be reflected in ExtremeLocation.

This enables WiNG customers, who want to use ExtremeLocation to provide enhanced locationing services, an easy pathway to synchronize their WiNG site hierarchy directly into ExtremeLocation without any manual intervention. Here ExtremeLocation acts as a down-stream location service to WiNG. Any changes made to WiNG is automatically propagated to ExtremeLocation, however, changes made to ExtremeLocation is not updated back to WiNG.

Once the WiNG site hierarchy is synchronized with ExtremeLocation, you can configure ExtremeLocation as the location service provider for all the sites (RF Domains) managed by WiNG.

This replaces the process of manually uploading the MAC addresses of your Access Points to ExtremeLocation before you can use them for the locationing service.

The latest WiNG software version provides specific CLI only commands that enable you to quickly integrate WiNG and ExtremeLocation. On executing these commands on your WiNG controller RF Domain context, WiNG site hierarchy is synchronized with ExtremeLocation.

ExtremeLocation Tenant Account Number Linking in WiNG

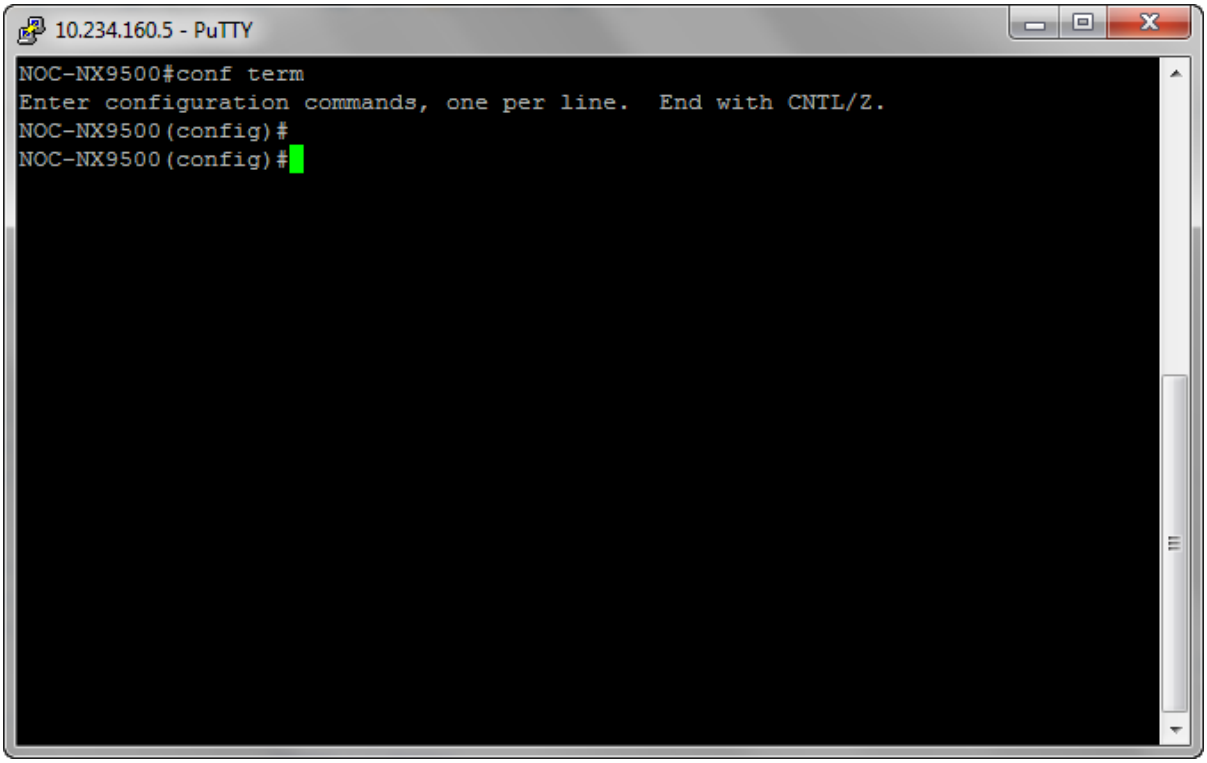
It is now possible to configure the ExtremeLocation Tenant Account Number in your WiNG RF Domain policy and your WiNG controller. When an access point comes online, it is placed in the common pool of access points by default. This access point is now available for any Tenant to claim and use by uploading the access point's MAC address using the `.csv` import method. When the Tenant Account Number is provided, access points are assigned to the tenant with the Tenant Account Number and can only be used across any of the sites managed by this tenant. This ensures that your assets cannot inadvertently be deployed on sites that belong to other ExtremeLocation accounts.

When the Tenant Account Number is provided in the WiNG controller configuration, it links the controller with the tenant. Any modification made to WiNG sites managed by this wireless controller, such as adding new access points or sites, is tagged by the Tenant Account Number automatically.

WiNG Integration with ExtremeLocation

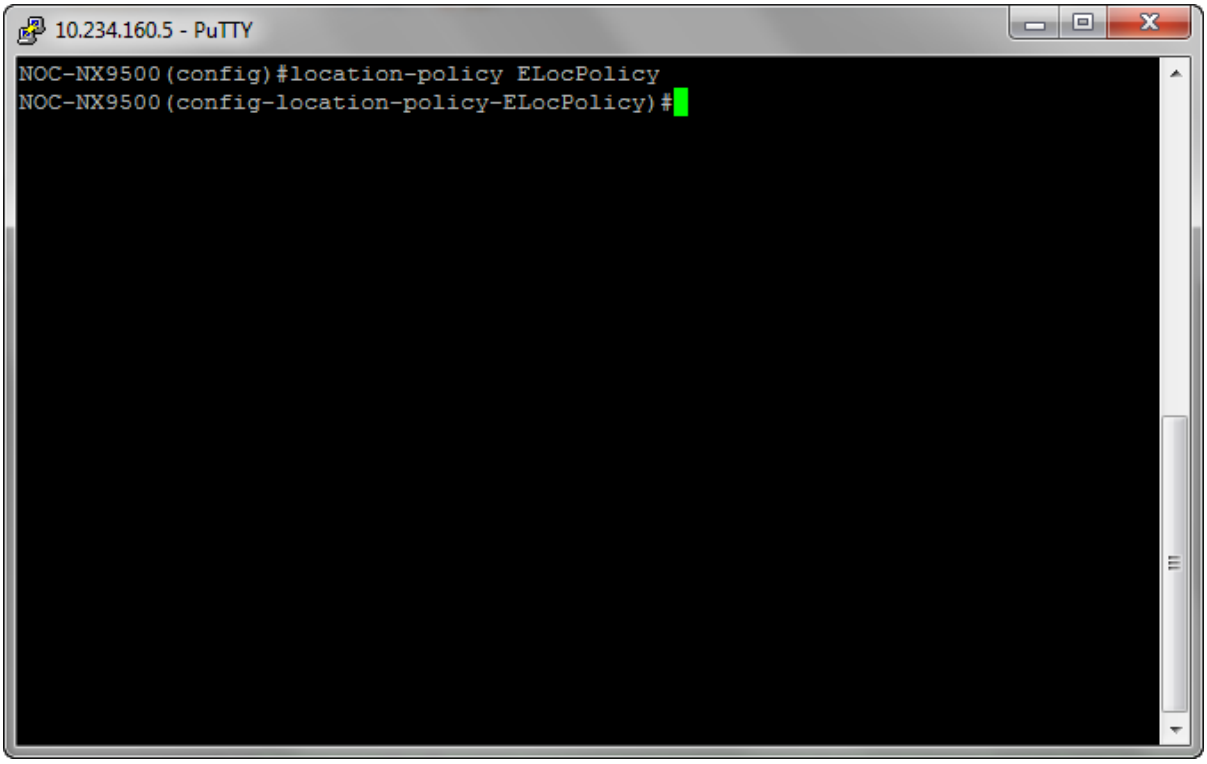
To view all WiNG's sites and WiNG adopted devices from within ExtremeLocation:

1 Login to the CLI interface on your WiNG Controller using the `admin` credentials. Then navigate to its configuration context using `en` command followed by the `conf term` command.



2 Create a new *Location Policy* and provide it a valid name using the `location-policy <policy-name>` command.

A new `location-policy` is created and you are taken into its context.



3 From within the `location-policy` context, configure the ExtremeLocation server using the following command:

```
server-host 1 ip manage.extremelocation.com port 443
```

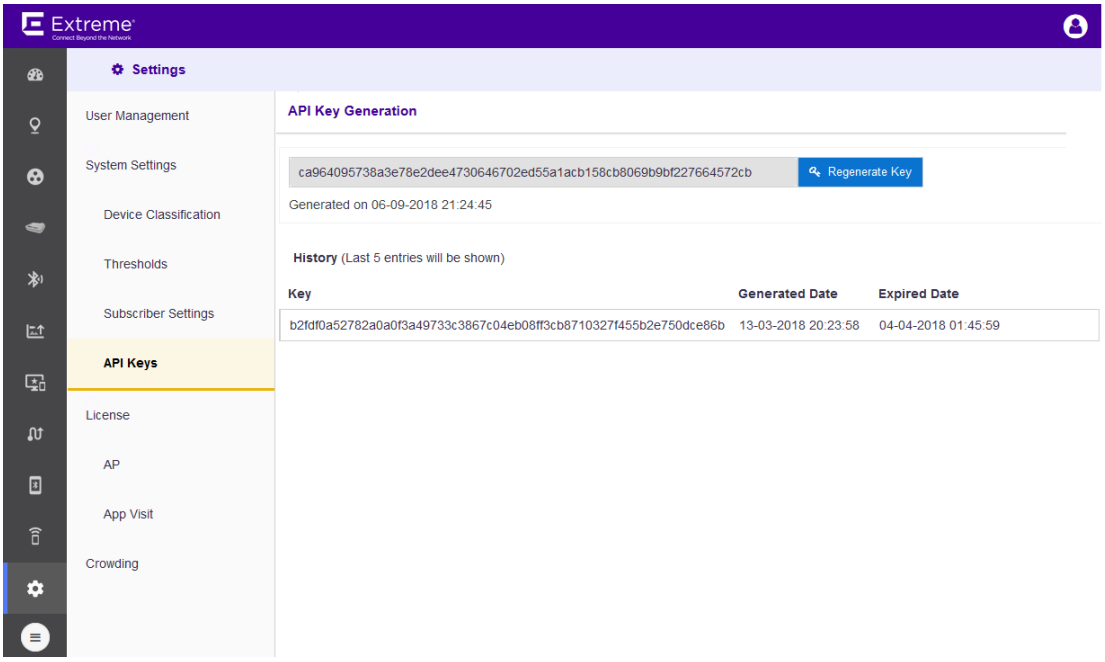
4 Configure the `Location Key` using the following command. Here, *Location Key* is the *API Key* available from within the ExtremeLocation user interface.

`location-key <API Key>`

API Key for your ExtremeLocation account can be retrieved from within the ExtremeLocation web user interface.

Login to your account and then navigate using the **Settings** > **System Settings** > **API Keys** menu items to display the **API Key Generation** screen.

Copy the API Key in the gray text box (next to the **Regenerate Key** button) and paste it into this command.



5 Enable this `location-policy` using the following command:

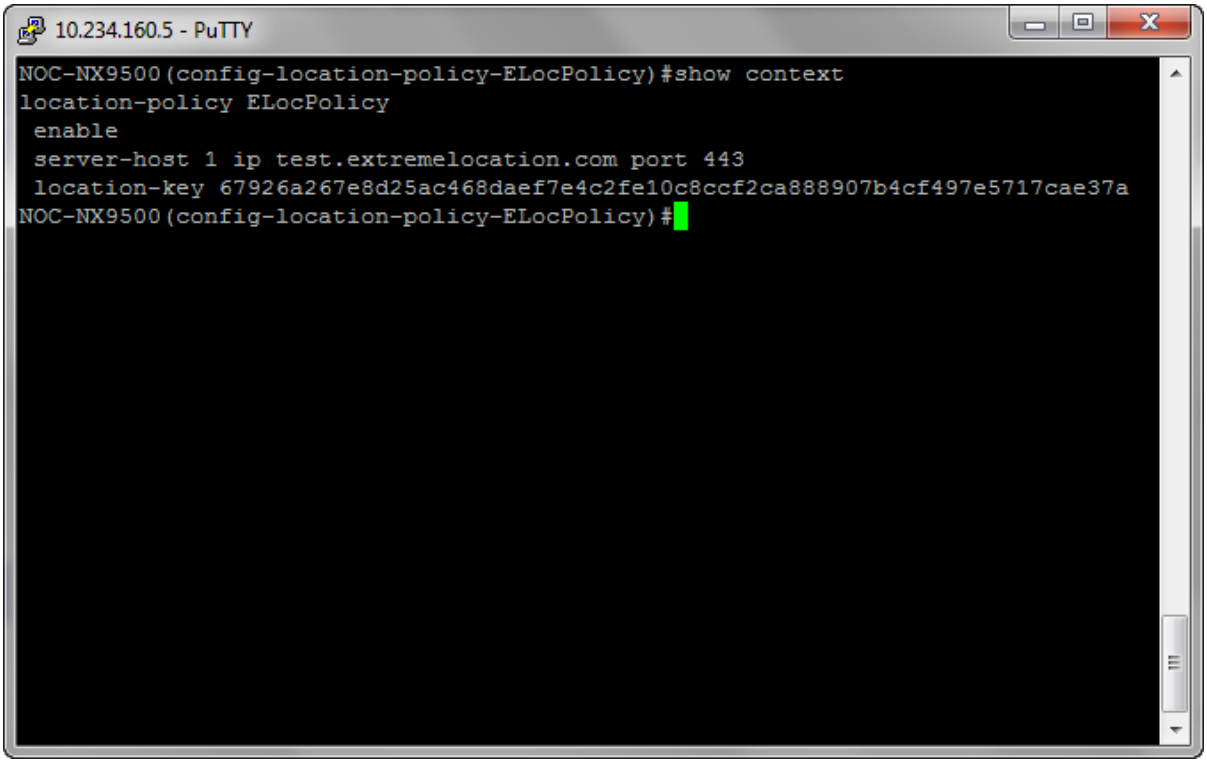
`enable`

The location-policy is now ready for use. You cannot use the `location-policy` without enabling it.

6 Verify the location-policy configuration with the following command:

`show context`

The current configuration for the `location-policy` is displayed.



If required, make appropriate changes to this configuration.

7 Commit the changes made to this `location-policy` by using the following command:

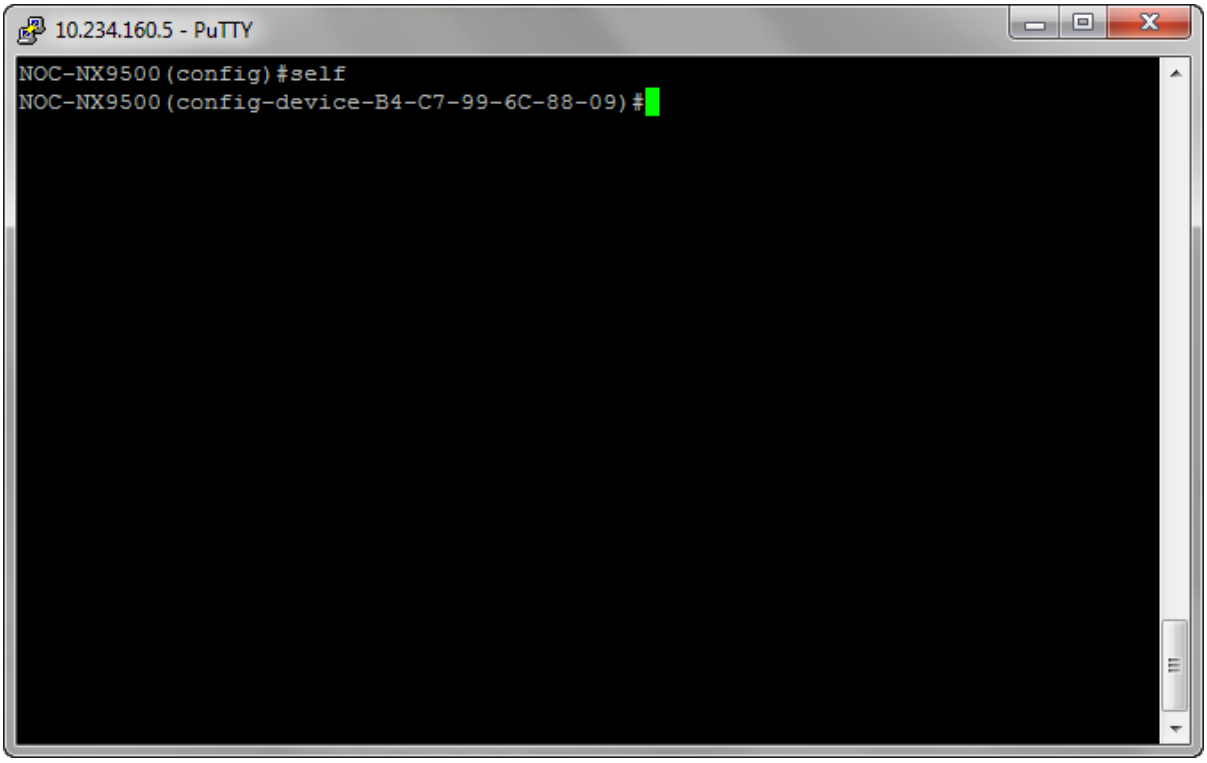
`commit write memory`

The `location-policy` is saved.

8 Exit out of the `location-policy` context by using `exit` command.

9 Navigate to the WiNG controller's configuration context using the `self` command.

The context changes to the WiNG Controller's configuration context.



10 To use the `location-policy`, it has to be applied to this WiNG Controller. To do so, use the command:

`use location-policy <your location-policy name>`

11 Commit the changes made to this WiNG Controller context by using the following command:

`commit write memory`

The `location-policy` is applied to the WiNG Controller and is now available for use.

The WiNG Controller will now be able to communicate with the ExtremeLocation server and update its site and site hierarchy to the ExtremeLocation server. It uses the provided API Key to identify the correct ExtremeLocation account and updates the site and site hierarchy to the linked account.

Linking ExtremeLocation Tenant Account Number with WiNG

ExtremeLocation Tenant Account Number Linking in WiNG

It is now possible to configure the ExtremeLocation Tenant Account Number in your WiNG RF Domain policy and your WiNG controller. When an access point comes online, it is placed in the common pool of access points by default. This access point is now available for any Tenant to claim and use by uploading the access point's MAC address using the `.csv` import method. When the Tenant Account Number is provided, access points are assigned to the tenant with the Tenant Account Number and can only be used across any of the sites managed by this tenant. This ensures that your assets cannot inadvertently be deployed on sites that belong to other ExtremeLocation accounts.

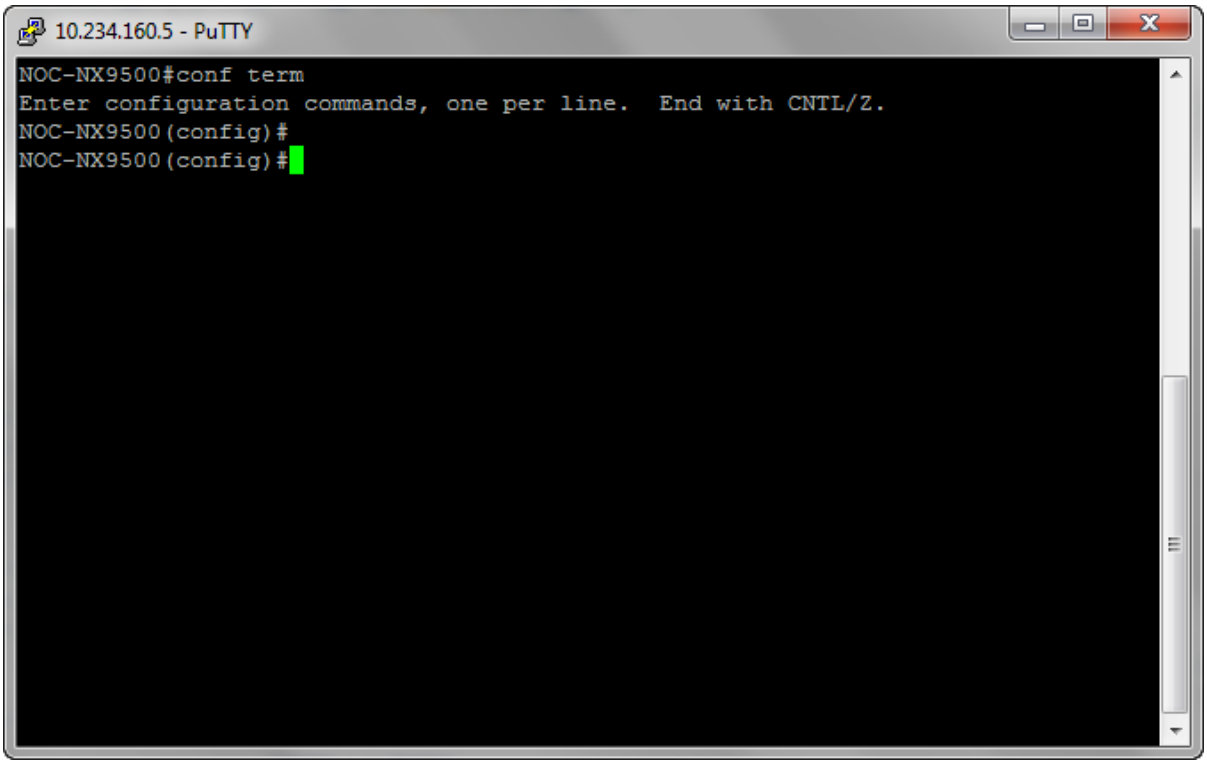
When the Tenant Account Number is provided in the WiNG controller configuration, it links the controller with the tenant. Any modification made to WiNG sites managed by this wireless controller, such as adding new access points or sites, is tagged by the Tenant Account Number automatically.

Linking your ExtremeLocation Tenant Account Number with WiNG can be done from both the WiNG CLI and the WiNG User Interface. Extreme Networks recommends that you link your ExtremeLocation Tenant Account Number with WiNG for ease of use and increased security of your deployments.

ExtremeLocation Tenant Account Number Integration

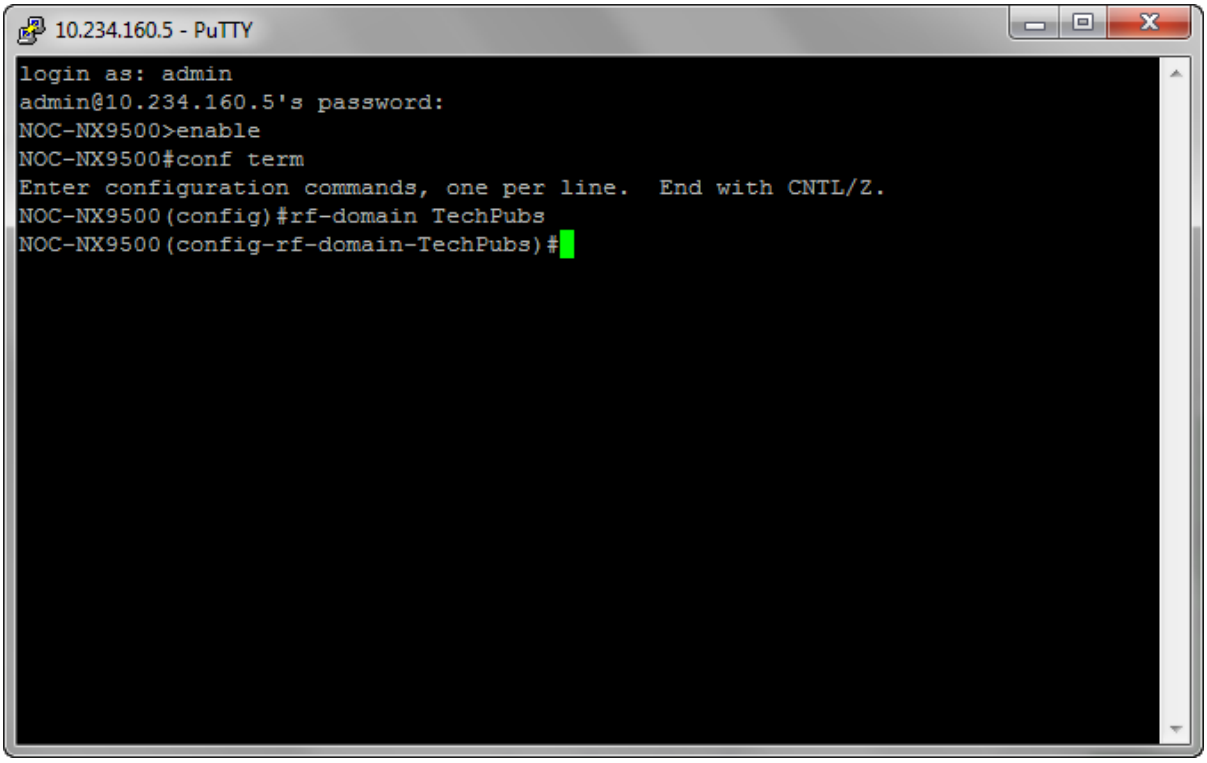
To link your tenant account number to WiNG using the WiNG CLI:

1 Login to the CLI interface on your WiNG Controller using the `admin` credentials. Then navigate to its configuration context using `en` command followed by the `conf term` command.



2 Enter the RF Domain context using the command `rf-domain <your RF Domain>`.

You are taken to the RF Domain's context.



3 In ExtremeLocation locate your tenant account number. This number is located next to the at the top right of your screen.

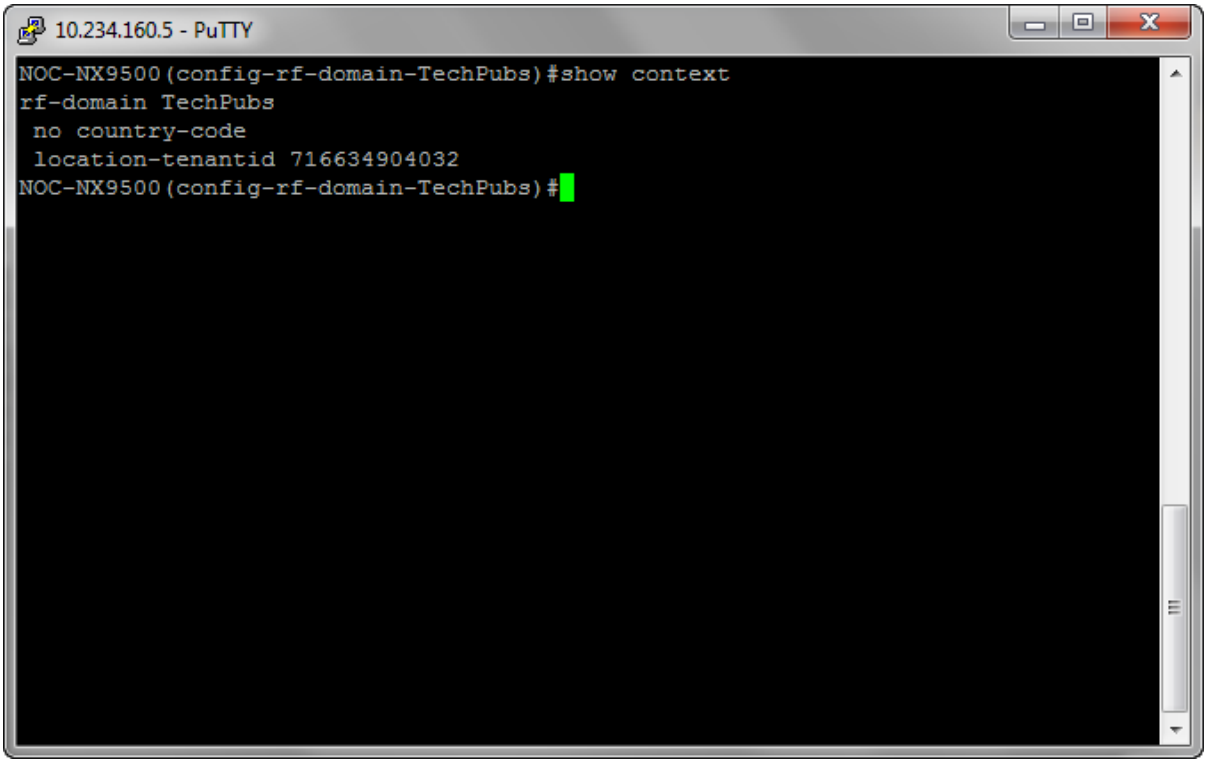
4 From within the `rf-domain` context, execute the following command and pass the tenant account number as a parameter to this command.

`location-tenantid <your tenant account number>`

5 Verify the location-tenantid configuration with the following command:

```
show context
```

The current configuration for the `rf-domain` is displayed.



If required, make appropriate changes to this configuration.

6 Commit the changes made to this `rf-domain` by using the following command:

```
commit write memory
```

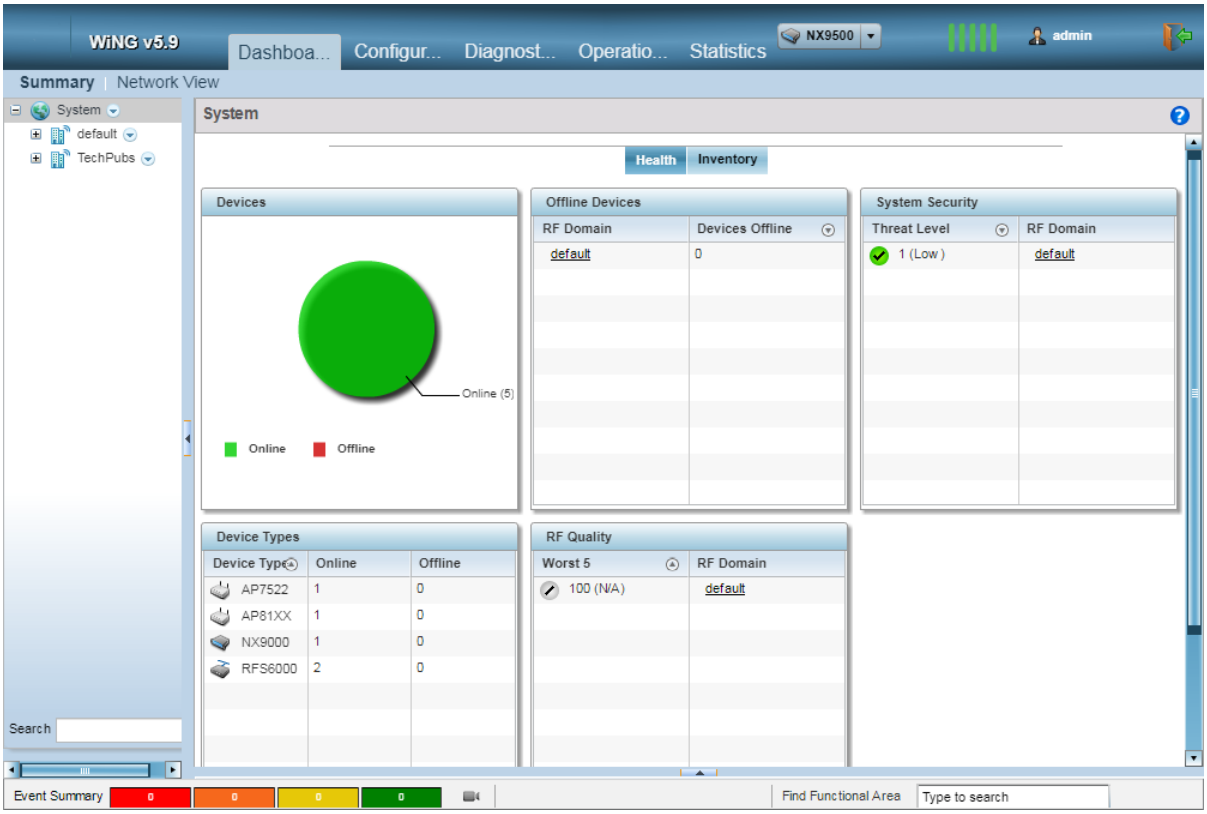
The `rf-domain` is saved.

ExtremeLocation Tenant Account Number Integration Using WiNG GUI

To link your tenant account number to WiNG using the WiNG GUI:

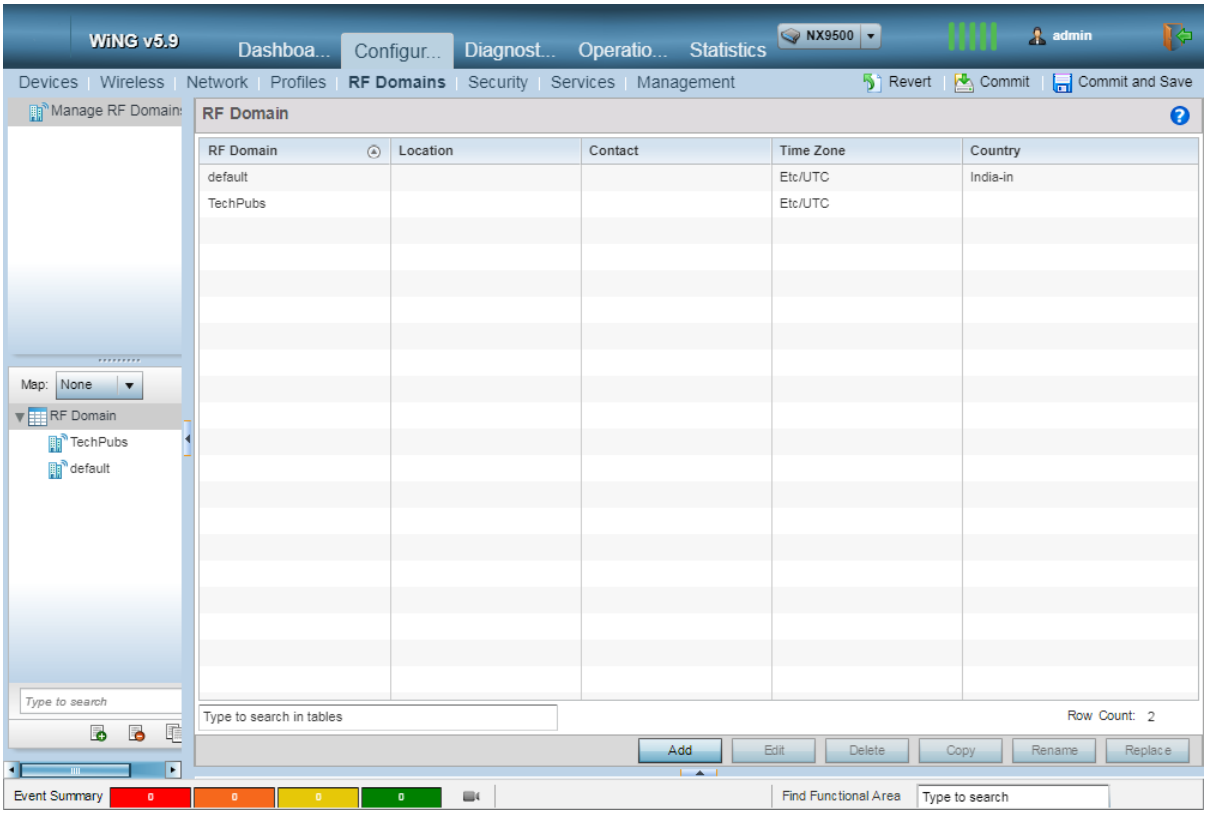
1 Login to your WiNG Controller.

On successful login, the Dashboard screen appears.



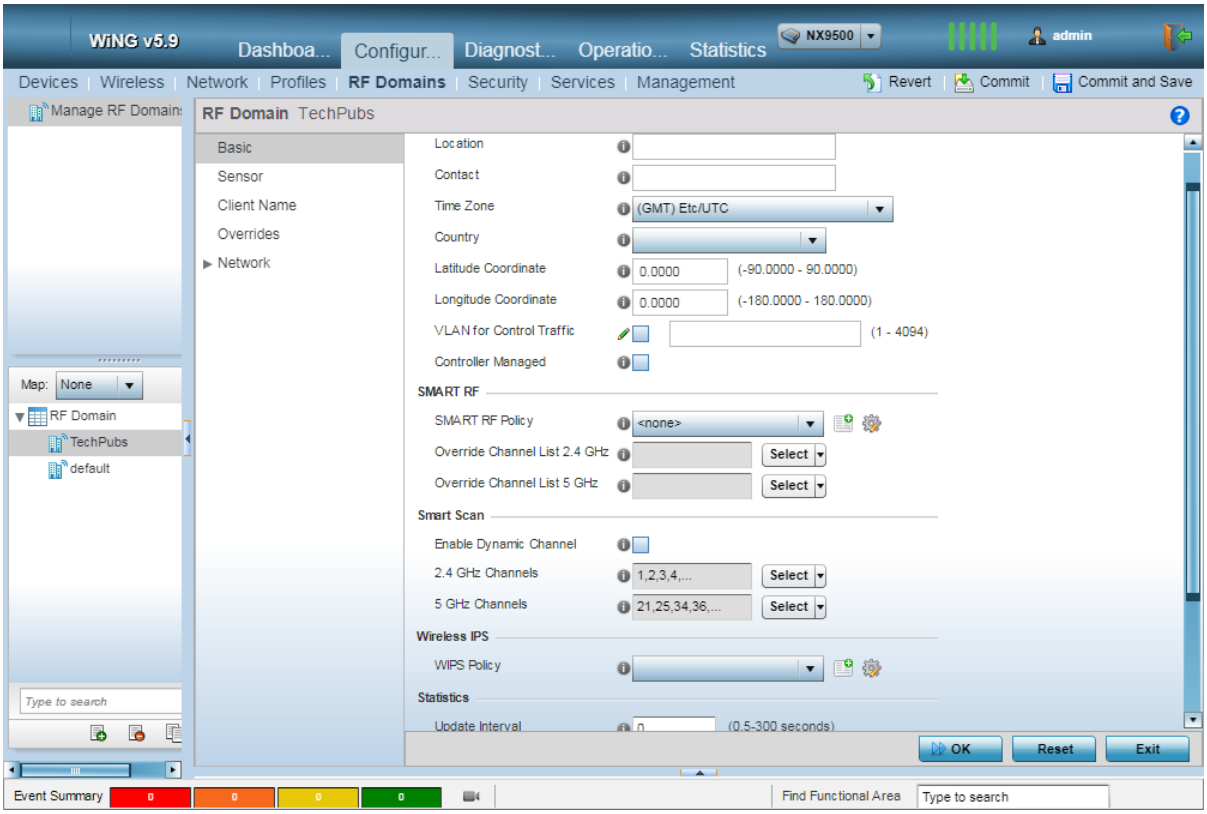
2 Select **Configuration** > **RF Domains**.

The RF Domains screen appears.



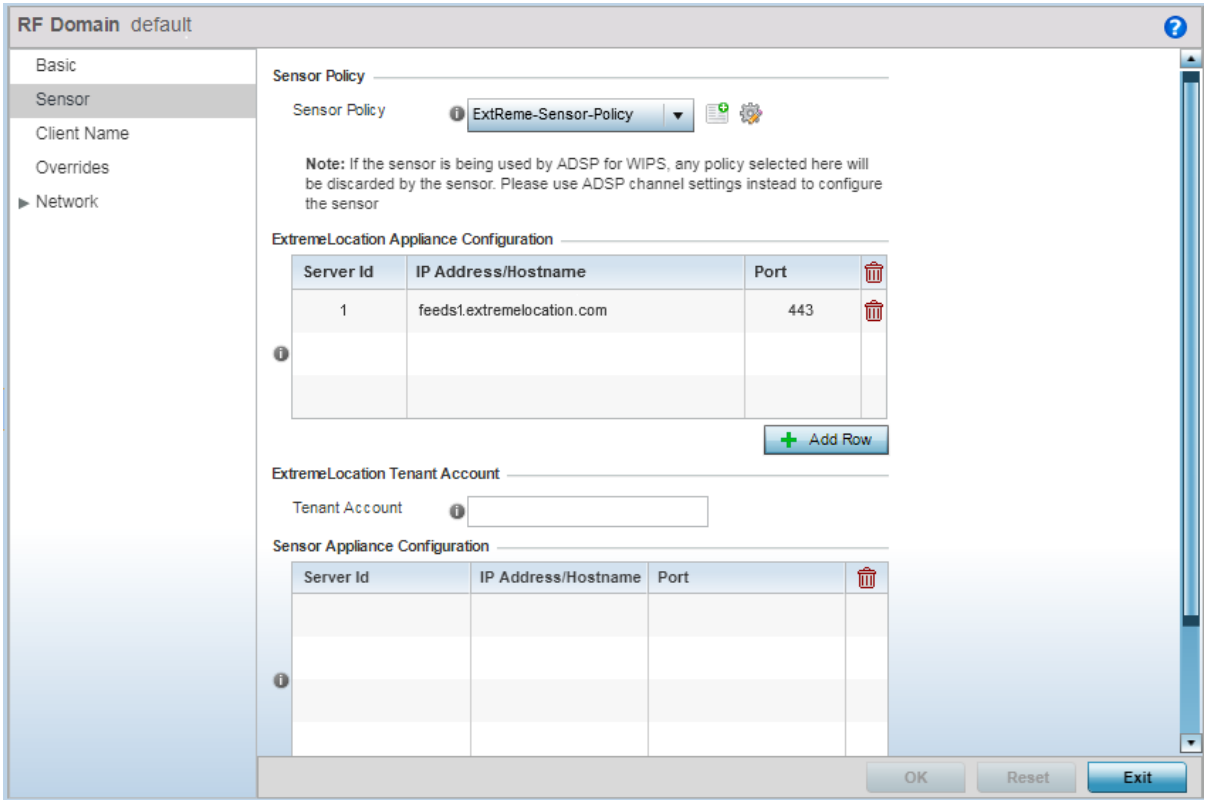
3 From the **RF Domain** list, select the RF Domain to edit and then select the **Edit** button.

The selected RF Domain policy is loaded and the following screen appears.



4 From the navigation menu on the left, select **Sensor** menu item.

The Sensor screen appears.



5 In the ExtremeLocation web user interface, locate your tenant account number. This number is located next to the icon at the top right of your screen.

6 In the WiNG GUI paste the *`Tenant Account Number`* value into the **ExtremeLocation Tenant Account** field's **Tenant Account** field.

7 From the top right, select the **Commit and Save** button to save changes made to this RF Domain Policy.

Linking ExtremeLocation Tenant Account Number with WiNG Controller

ExtremeLocation Tenant Account Number Linking in WiNG

It is now possible to configure the ExtremeLocation Tenant Account Number in your WiNG RF Domain policy and your WiNG controller. When an access point comes online, it is placed in the common pool of access points by default. This access point is now available for any Tenant to claim and use by uploading the access point's MAC address using the `.csv` import method. When the Tenant Account Number is provided, access points are assigned to the tenant with the Tenant Account Number and can only be used across any of the sites managed by this tenant. This ensures that your assets cannot inadvertently be deployed on sites that belong to other ExtremeLocation accounts.

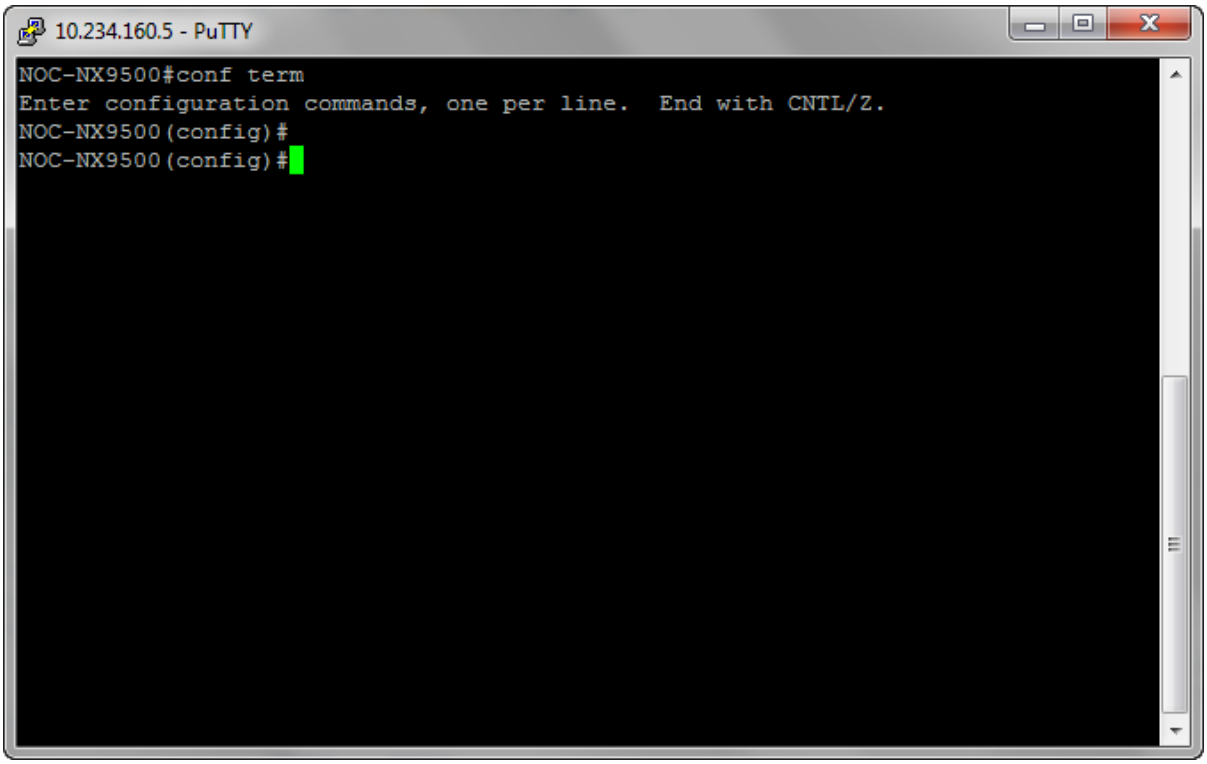
When the Tenant Account Number is provided in the WiNG controller configuration, it links the controller with the tenant. Any modification made to WiNG sites managed by this wireless controller, such as adding new access points or sites, is tagged by the Tenant Account Number automatically.

Linking your ExtremeLocation Tenant Account Number with WiNG controller can be done from the WiNG CLI only. Extreme Networks recommends that you link your ExtremeLocation Tenant Account Number with WiNG Controller for ease of use and increased security of your deployments.

ExtremeLocation Tenant Account Number Integration With WiNG Controllers

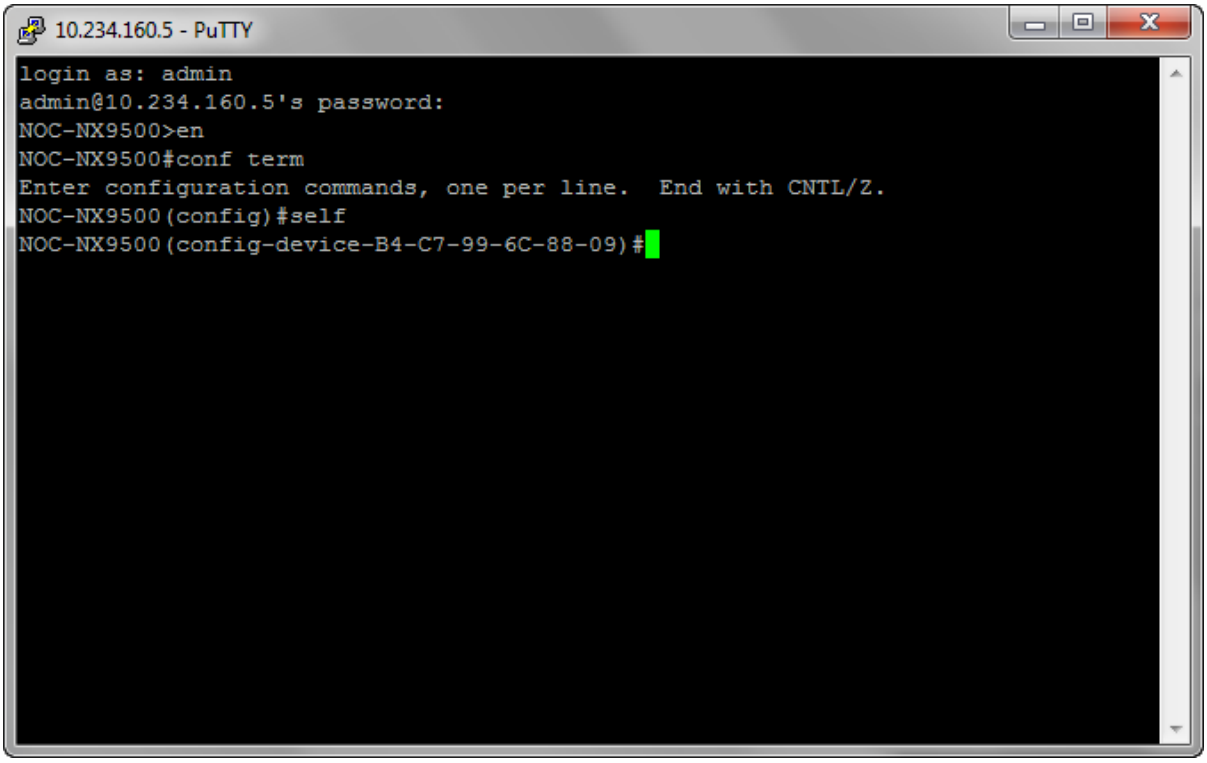
To link your tenant account number to a WiNG controller using the WiNG CLI:

1 Login to the CLI interface on your WiNG controller using the `admin` credentials. Then navigate to its configuration context using `en` command followed by the `conf term` command.



2 Enter the WiNG controller's context using the `self` command.

You are taken to the WiNG controller's context.



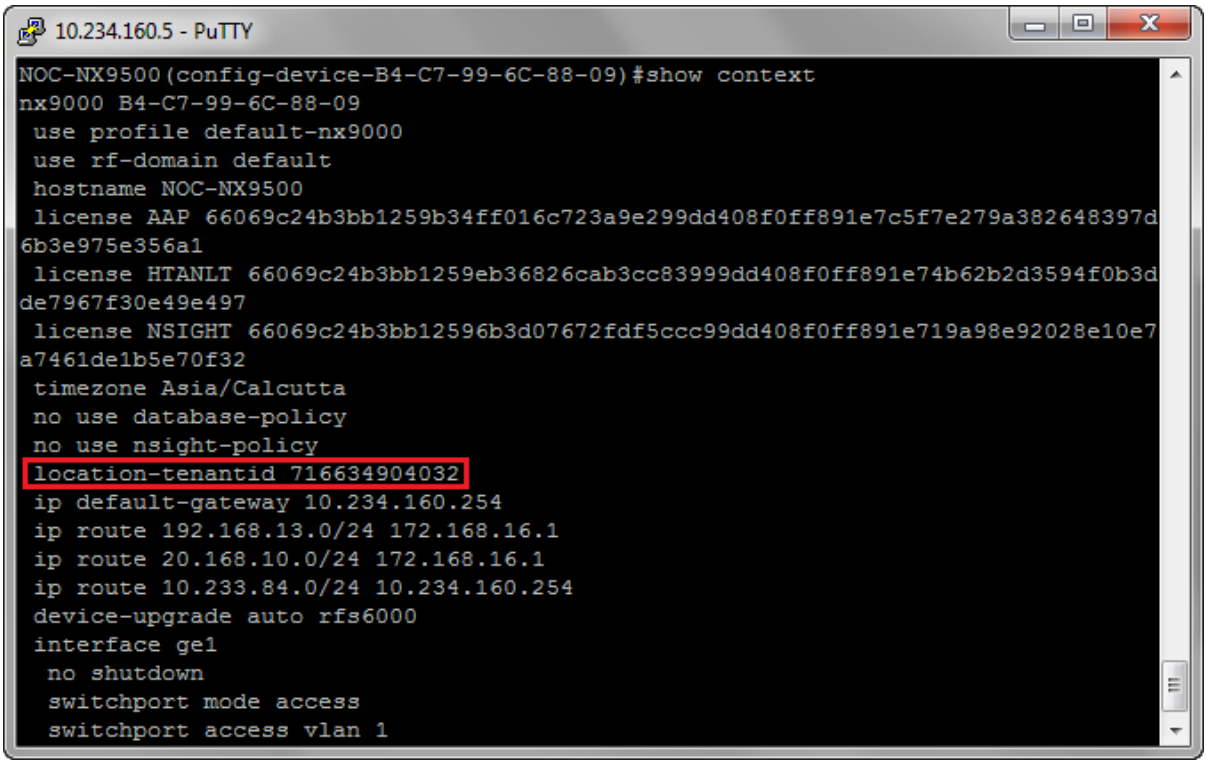
3 From within the `self` context, execute the following command:

`location-tenantid <your tenant id>`

4 Verify the location-tenantid configuration with the following command:

```
show context
```

The current configuration for the WiNG controller is displayed.



If required, make appropriate changes to this configuration.

5 Commit the changes made to this WiNG controller by using the following command:

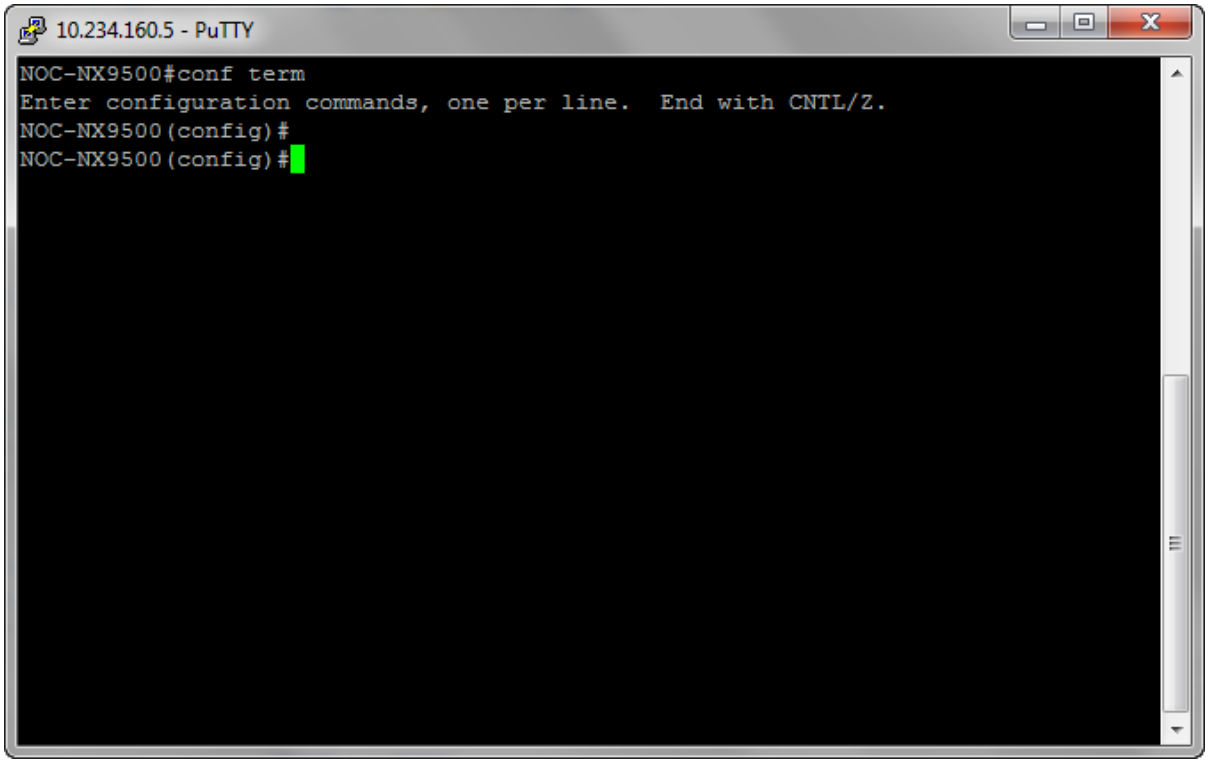
```
commit write memory
```

The configuration changes made to this WiNG controller is saved.

ExtremeLocation Tenant Account Number Integration With WiNG Controllers - Removing Tenant Account Number

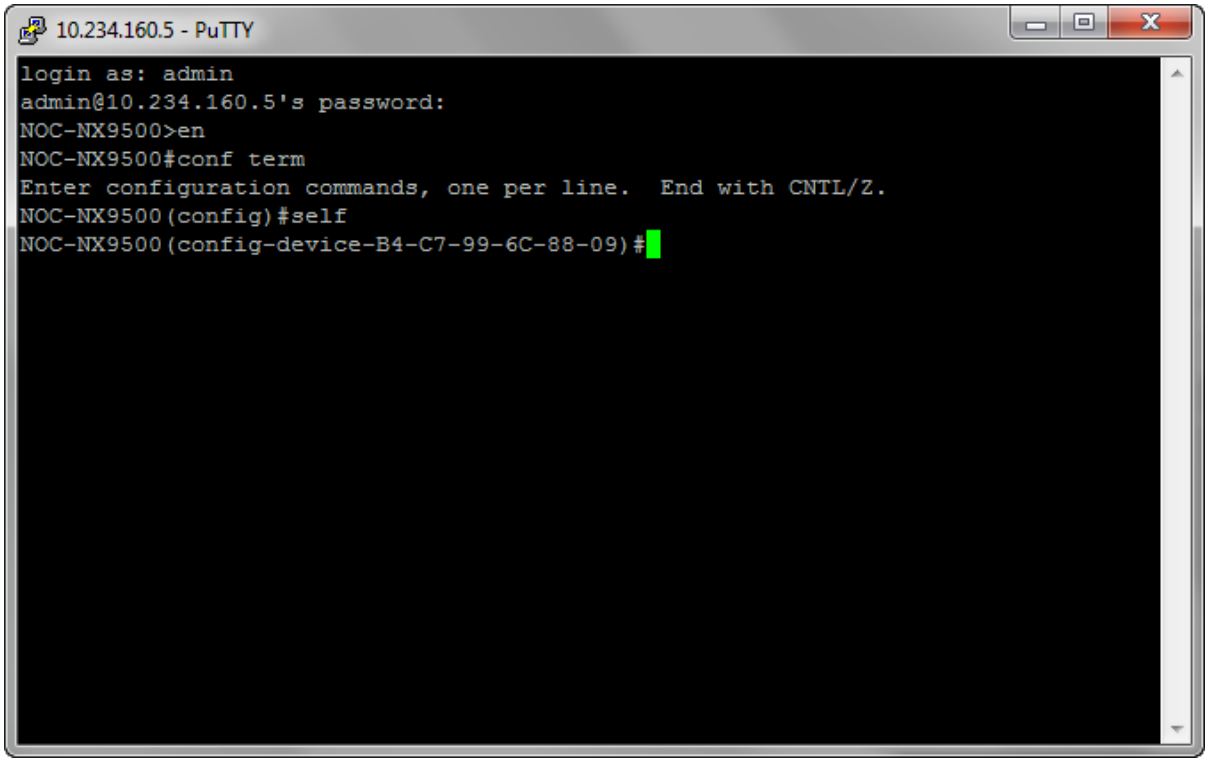
To remove the linked tenant account number to your WiNG controller using the WiNG CLI:

1 Login to the CLI interface on your WiNG controller using the `admin` credentials. Then navigate to its configuration context using `en` command followed by the `conf term` command.



2 Enter the WiNG controller's context using the `self` command.

You are taken to the WiNG controller's context.



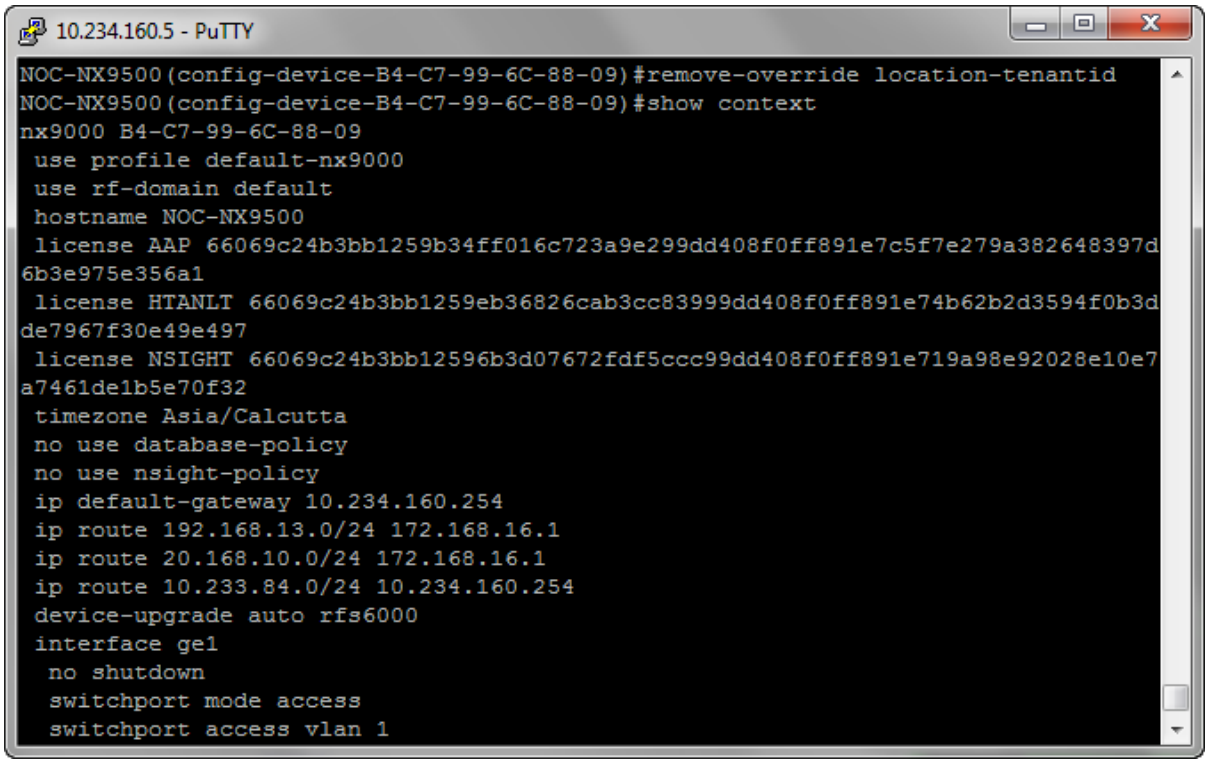
3 From within the `self` context, execute the following command:

```
remove-override location-tenantid
```

4 Verify the location-tenantid configuration has been removed from the WiNG controller with the following command:

```
show context
```

The current configuration for the WiNG controller is displayed.



If required, make appropriate changes to this configuration.

5 Commit the changes made to this WiNG controller by using the following command:

```
commit write memory
```

The configuration changes made to this WiNG controller is saved.

Configuring ExtremeWireless Access Points

ExtremeWireless access points are a range of 802.11ac Wave 2 and 802.11abgn indoor and outdoor access points that deliver enterprise-grade performance and security for areas ranging from small service areas such as residence halls, patient rooms, or conference rooms to large and very large areas such as warehouses, manufacturing plants, parks, or stadiums.

The following ExtremeWireless access point models are supported:

- ExtremeWireless AP3912
- ExtremeWireless AP3915
- ExtremeWireless AP3916
- ExtremeWireless AP3917

- ExtremeWireless AP3935
- ExtremeWireless AP3965

Note
Both indoor and outdoor access point models are supported.

Note
For the following ExtremeWireless access points that have 2 LAN ports, use the port labeled "LAN 1" to connect to the controller.

- AP3917
- AP3935
- AP3965

This chapter describes these steps to configure access points for use with ExtremeLocation:

- Enabling support for ExtremeLocation on ExtremeWireless Controllers. See Enabling support for ExtremeLocation on ExtremeWireless Controllers on page 273.
- Enabling support for ExtremeWireless access points in a mixed ExtremeLocation and Extreme AirDefense deployment. See Configuring AirDefense Sensor Support on page 277.

Enabling support for ExtremeLocation on ExtremeWireless Controllers

To enable support for ExtremeLocation on ExtremeWireless controllers:

1 Navigate to the login page of the ExtremeWireless Controller and login using your credentials.

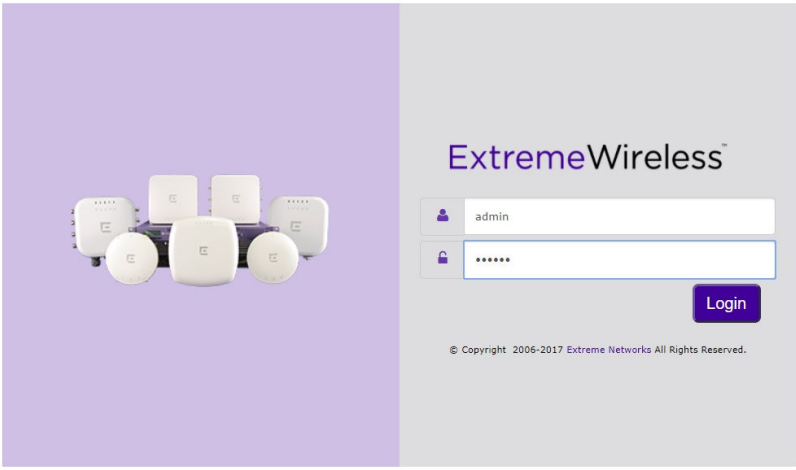
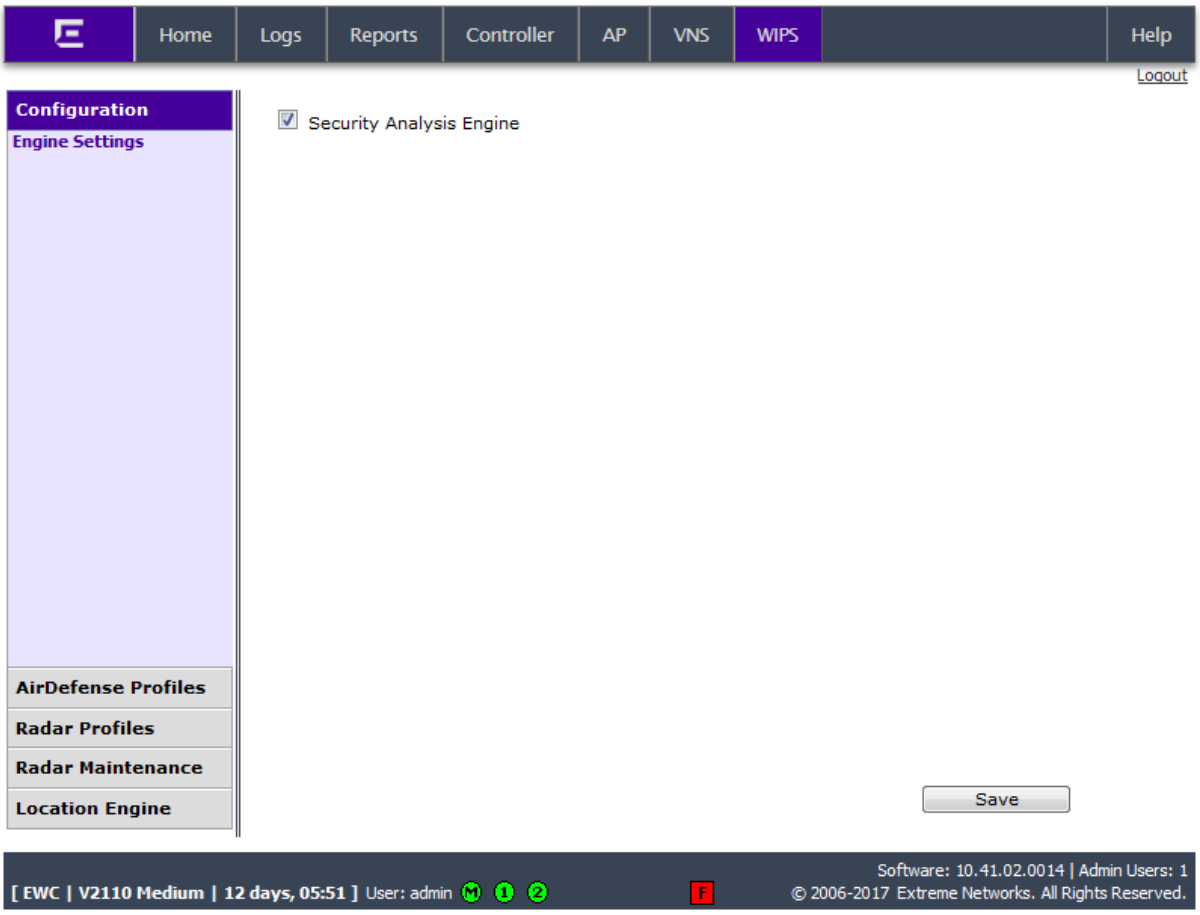


Figure 118: ExtremeWireless Controller Login Screen

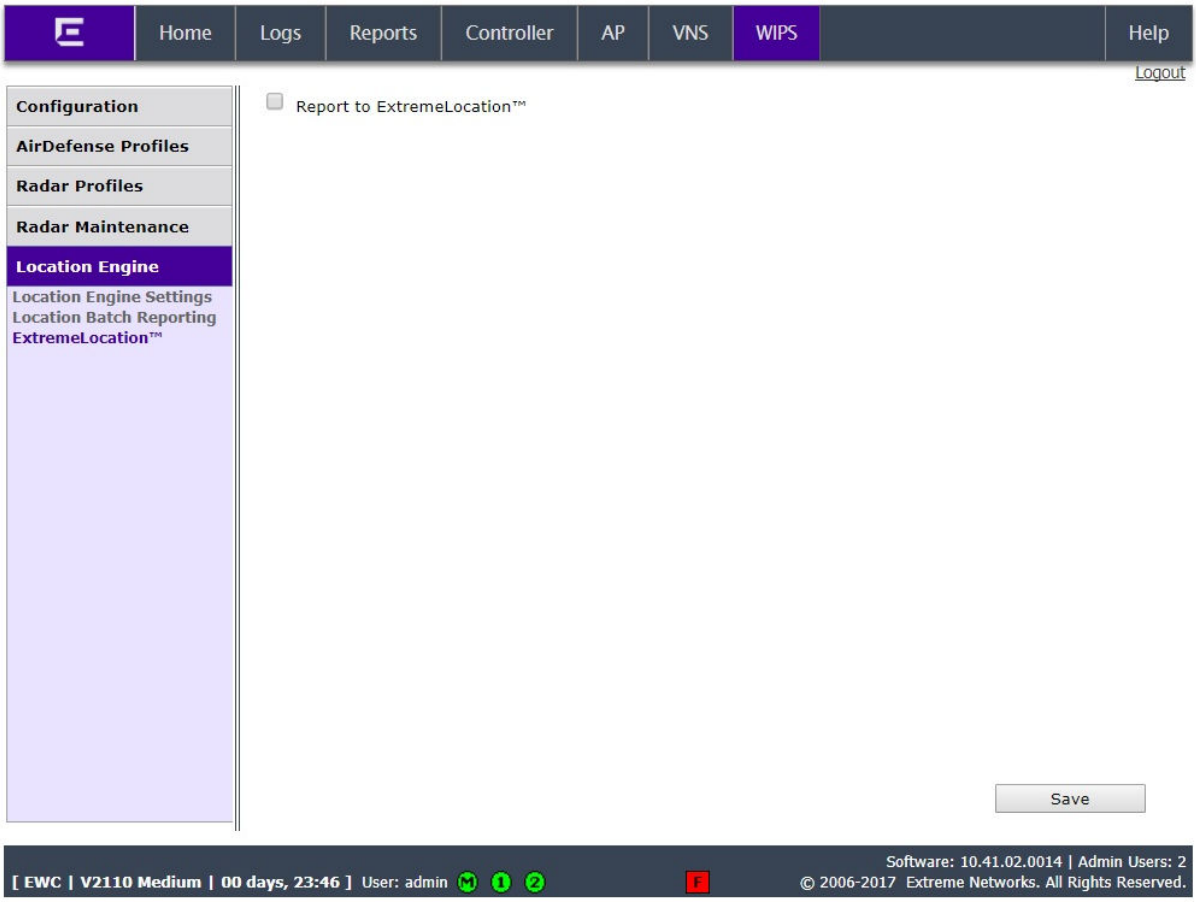
2 From the menu on the top, select the **WIPS** menu item.

The WIPS Configuration screen appears.



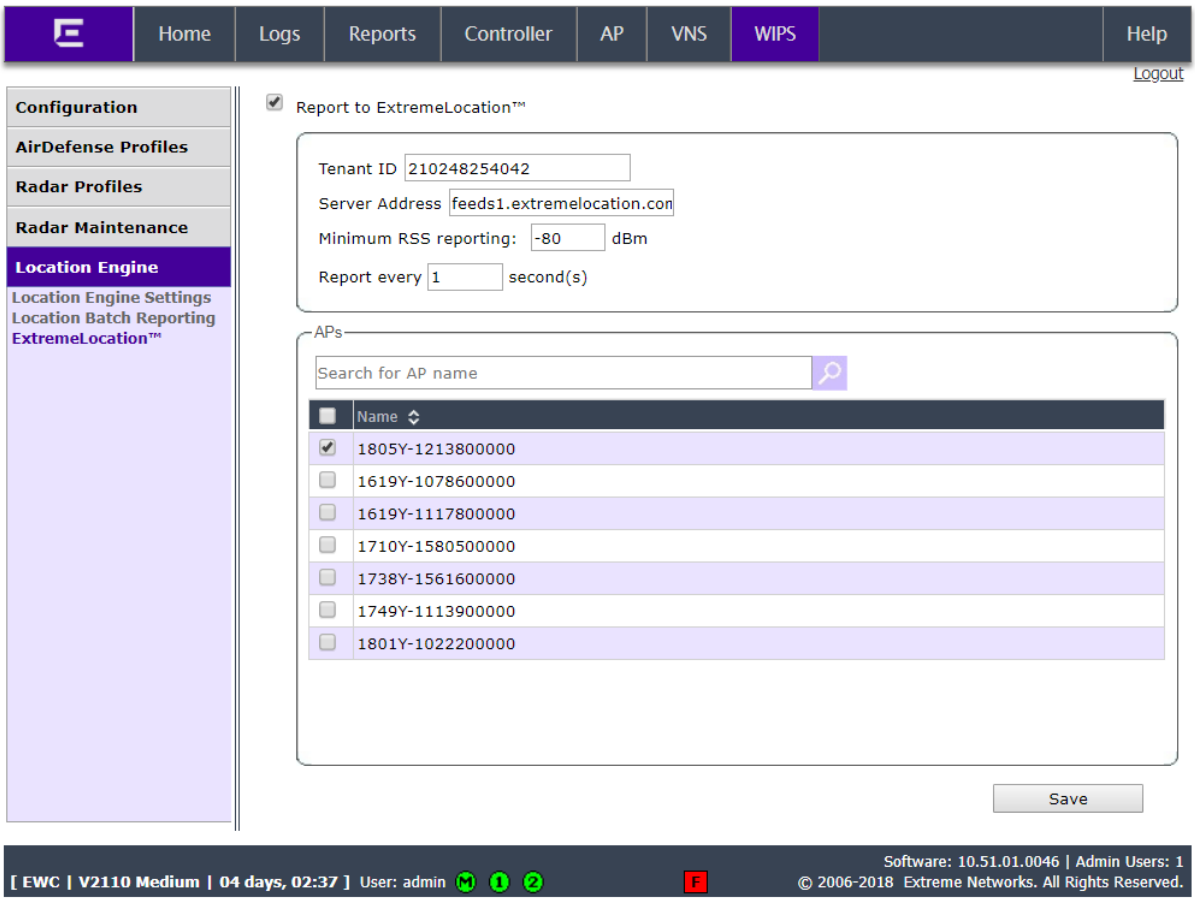
3 Select the option **Location Engine** > **ExtremeLocation**

The following screen displays.



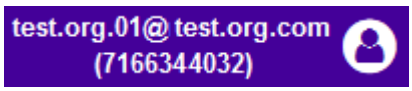
4 Select the **Report to ExtremeLocation** option to enable configuring the parameters for sending location data to the remote ExtremeLocation servers.

The following screen displays:



5 Specify your ExtremeLocation Tenant Account Number in the **Tenant ID** field.

Your ExtremeLocation tenant account number can be found when you login to your account using the ExtremeLocation web interface. This number is located next to the icon at the top right of the screen.



6 Set the **Server Address** of the ExtremeLocation server.

The following is the URL for the ExtremeLocation server.

- feeds1.extremelocation.com

7 Set the **Minimum RSS Reporting** value. This is the RSS value below which location information is not sent to the ExtremeLocation server.

8 Set the **Report every second(s)** field to set the reporting interval in seconds. This is the time period (in seconds) after which the location data is sent to the remote ExtremeLocation server.

9 from the **AP** field, select the access points to which the ExtremeLocation configuration will be pushed when this configuration is saved.

10 Select **Save** to save the changes to the Wireless Controller configuration.

For further configuration of ExtremeWireless access points to enable them to work with ExtremeLocation, refer to the latest ExtremeWireless Users Guide located at www.extremenetworks.com/documentation/.

Configuring AirDefense Sensor Support

Use the configuration described in this section to configure ExtremeWireless access points to act as AirDefense Sensors when using Extreme AirDefense alongside ExtremeLocation in a mixed deployment.

AirDefense assigns individual licenses to sensors that are allowed to send data to AirDefense for analysis. ExtremeWireless access points managed by ExtremeWireless Controllers must be configured so that they are visible to an AirDefense server to push configurations to these access points.

The following configurations must be performed:

- Configure the ExtremeWireless Controller by creating an AirDefense profile and assign the access points that will act as sensors for AirDefense.
- Configure the AirDefense server to push AirDefense configuration to these access points.

Creating ADSP Profile on an Extreme Networks Controller

For an access point that is managed by an ExtremeWireless controller to act as a sensor for AirDefense, it must be made visible to the AirDefense server for it (the AirDefense server) to push configuration to the access points. This is done by creating an AirDefense profile and assigning access points to it. These access points will then receive configuration updates from AirDefense and also act as AirDefense sensors.

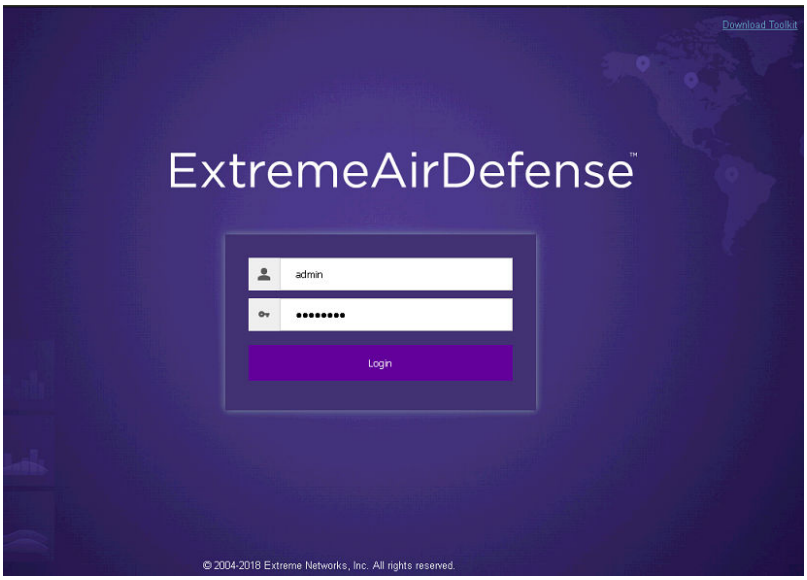
To learn how to create an AirDefense profile, refer to the latest ExtremeWireless Users Guide located at www.extremenetworks.com/documentation/.

Configuring ADSP Sensor Operation

These configuration steps are performed on your AirDefense server.

Use the Sensor Operation screen to configure the settings that AirDefense sends to the sensors registered with it. Some of the parameters that can be configured are Scan Settings, Scan Modes, Scan Weight, and other parameters.

1 Login in to the AirDefense Server from its login screen.



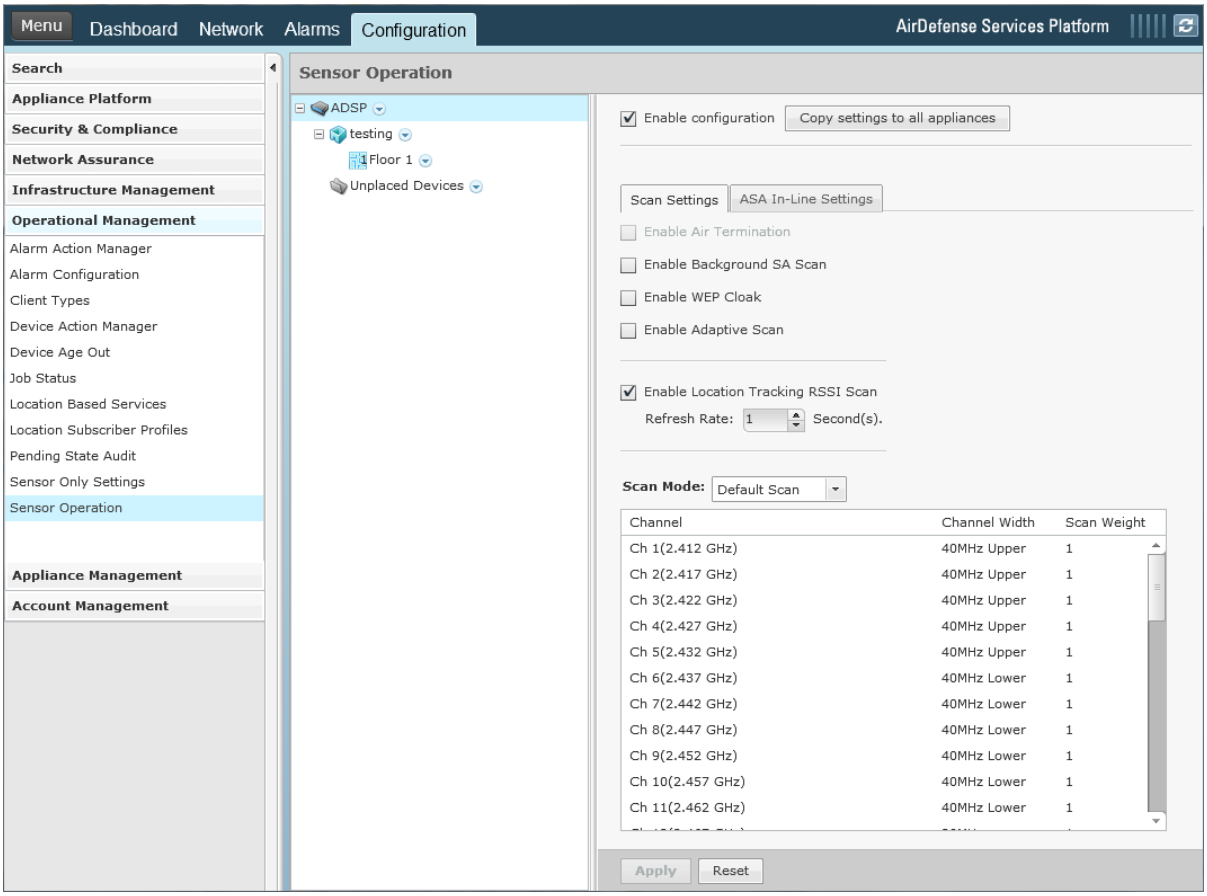
Provide a valid login user name its password to access the AirDefense user interface.

2 Select the **Configuration** menu from the toolbar on the top of the screen.

3 Select the **Operational Management** item from the menu on the left of the screen to expand it.

4 Select the **Sensor Operation** item from the **Operational Management** sub menu.

The Sensor Operation screen displays.



5 From the Sensor Operation screen, select the **ADSP** item if it is not selected by default.

The Sensor Operation screen changes to display the configuration parameters for the AirDefense system.

6 Select one of the following **Scan Mode** options.

Default Scan	Select this option to use the default values. When selected, a set of pre-configured channels for 2.4 GHz and 5.0 GHz bands are scanned.
Custom Scan	Select this option to get fine grained control on the channels to be scanned in the 2.4 GHz and 5.0 GHz spectrum.
Channel Lock	Select this option to lock the channel scan to a single channel in either the 2.4 GHz or 5.0 GHz spectrum.

7 Select **Save** to save changes made to the AirDefense Sensor Operations parameters.

Configuring AirDefense Sensor Support

Use the configuration described in this section to configure ExtremeWireless access points to act as AirDefense Sensors when using Extreme AirDefense alongside ExtremeLocation in a mixed deployment.

AirDefense assigns individual licenses to sensors that are allowed to send data to AirDefense for analysis. ExtremeWireless access points managed by ExtremeWireless Controllers must be configured so that they are visible to an AirDefense server to push configurations to these access points.

The following configurations must be performed:

- Configure the ExtremeWireless Controller by creating an AirDefense profile and assign the access points that will act as sensors for AirDefense.
- Configure the AirDefense server to push AirDefense configuration to these access points.

Creating ADSP Profile on an Extreme Networks Controller

For an access point that is managed by an ExtremeWireless controller to act as a sensor for AirDefense, it must be made visible to the AirDefense server for it (the AirDefense server) to push configuration to the access points. This is done by creating an AirDefense profile and assigning access points to it. These access points will then receive configuration updates from AirDefense and also act as AirDefense sensors.

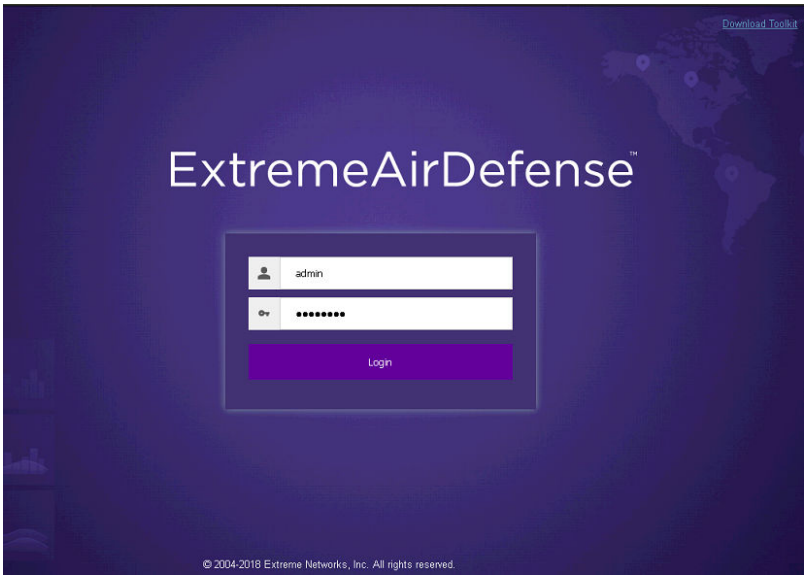
To learn how to create an AirDefense profile, refer to the latest ExtremeWireless Users Guide located at www.extremenetworks.com/documentation/.

Configuring ADSP Sensor Operation

These configuration steps are performed on your AirDefense server.

Use the Sensor Operation screen to configure the settings that AirDefense sends to the sensors registered with it. Some of the parameters that can be configured are Scan Settings, Scan Modes, Scan Weight, and other parameters.

1 Login in to the AirDefense Server from its login screen.



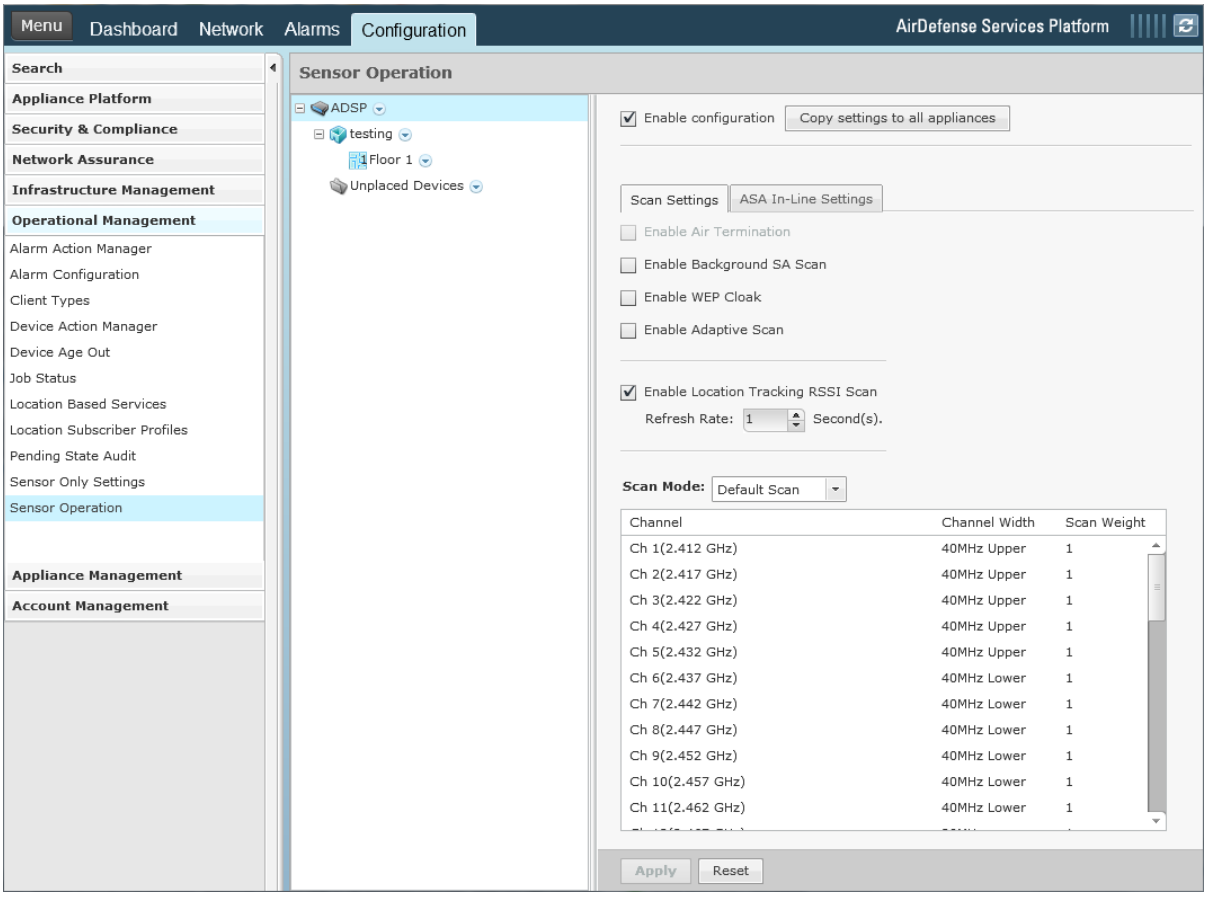
Provide a valid login user name its password to access the AirDefense user interface.

2 Select the **Configuration** menu from the toolbar on the top of the screen.

3 Select the **Operational Management** item from the menu on the left of the screen to expand it.

4 Select the **Sensor Operation** item from the **Operational Management** sub menu.

The Sensor Operation screen displays.



5 From the Sensor Operation screen, select the **ADSP** item if it is not selected by default.

The Sensor Operation screen changes to display the configuration parameters for the AirDefense system.

6 Select one of the following **Scan Mode** options.

Default Scan	Select this option to use the default values. When selected, a set of pre-configured channels for 2.4 GHz and 5.0 GHz bands are scanned.
Custom Scan	Select this option to get fine grained control on the channels to be scanned in the 2.4 GHz and 5.0 GHz spectrum.
Channel Lock	Select this option to lock the channel scan to a single channel in either the 2.4 GHz or 5.0 GHz spectrum.

7 Select **Save** to save changes made to the AirDefense Sensor Operations parameters.