

# PTT Pro Location Area Service

Workforce Connect



**ZEBRA**

## Customer Administrator Guide

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# About this Guide

This guide describes the responsibilities of the Zebra administrator to create and configure a customer for the Workforce Connect Location Area Service (LAS).



**NOTE:** The screens and windows pictured in this guide are samples and can differ from actual screens.

## Chapter Descriptions

Topics covered in this guide are as follows:

- [About this Guide](#) provides an explanation of document conventions and related documentation.
- [Getting Started](#) provides information about accessing and logging in to WFC Location Area Service.
- [Location Area Service Configuration](#) provides information about administering and configuring WFC Location Area Service.
- [WFC Location Area Service REST API](#) provides information about updating information in WFC Location Area Service.

## Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window, and screen names
  - Dropdown list and list box names
  - Checkbox and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen
- Bullets (•) indicate:
  - Action items
  - List of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

## Related Documents

For the latest version of this guide and all guides, go to [zebra.com/support](https://zebra.com/support)

- Workforce Connect PTT Pro for Android User Guide describes the usage and features of PTT Pro for Android.
- Workforce Connect PTT Pro for iOS User Guide describes the usage and features of PTT Pro for iOS.
- Workforce Connect PTT Pro Management Portal describes the administration features of the PTT Pro Management portal.
- Workforce Connect PTT Pro for Android Configuration Guide describes the JSON parameters for the advanced configuration of PTT Pro for Android.
- Workforce Connect PTT Pro Programmer Guide describes the intents used to configure PTT Pro for Android using the API.
- Workforce Connect PTT Pro Installation Guide describes the installation procedures for PTT Pro for Android, PTT Pro for iOS, and PTT Lite.
- Zebra WFC Central Installation and Configuration Guide describes the use of Zebra WFC Central to support Bluetooth devices for PTT Pro for Android and WFC Voice.

## Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: [zebra.com/support](https://zebra.com/support).

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number

Zebra responds to calls by email, telephone, or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

## Revision History

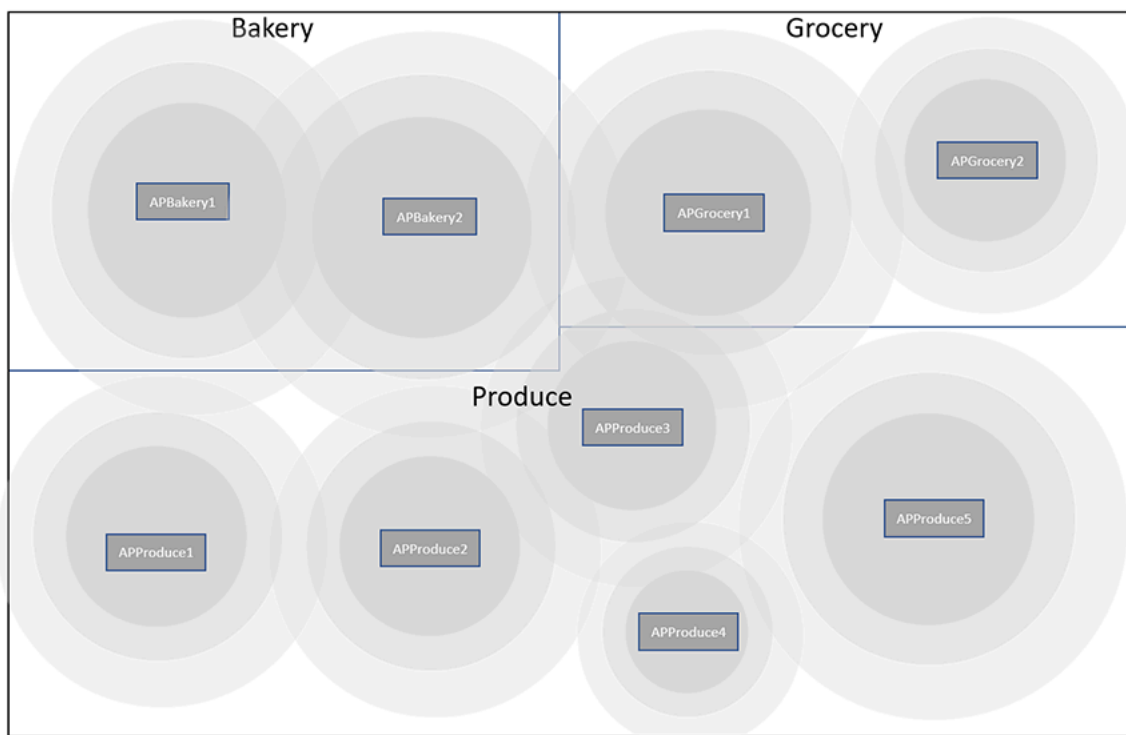
Change	Date	Description
MN-004028-01	August 2021	Not released.
MN-004028-02	September 2021	First version.
MN-004028-03EN	March 2023	Updated with steps to use LAS portal. Added information regarding showlasinfo parameter.

# Getting Started

This guide is intended for customer administrators configuring the Location Area Service (LAS).

LAS provides the capability to assign friendly names to wireless Access Points (APs). As a user moves throughout a facility, the APs continually report the user's location using the friendly name assigned to the AP. On a device, the location is listed under the contact's name.

**Figure 1** Location Area Service for a Store



The LAS portal allows an administrator to view the access point information, including the BSSID, the friendly name, and the site name. An administrator can also use the LAS portal to import AP information, which is more convenient than using the API.

When LAS is configured correctly, the location information represents the user association to an Access Point. Depending on the user's connection to the access point, the association of a user to an AP might not be the nearest AP.

## Configuration Overview

Configure the PTT Pro clients and then upload the AP information to the LAS server. Collect the information below to configure the clients and upload the AP information.

**Table 1** Configuration Information

Prerequisites Data	Description
Swagger URL	Required to access the Swagger page. Zebra will provide the Swagger URL.
Portal URL	Required to access the portal and manage LAS data. Zebra will provide the portal URL.
URL for PTT Pro Configuration	Required to configure PTT Pro. The URL is specified in the <code>wfclassServerURL</code> JSON parameter. Zebra will provide the client URL.
Customer ID	Required to configure PTT Pro. Zebra will provide the customer ID.
API Key (token)	It required to configure PTT Pro and use the API. Zebra will provide the API key (token).

# Location Area Service Configuration

Configure the PTT Pro clients with the JSON parameters. After you configure the clients, use the LAS portal to import a CSV file with the BSSID information of the access points. Optionally, you can configure the PTT Pro clients to show location data only when a Drop Detect event occurs.

## Configure the PTT Pro Client

The PTT Pro client is configured using the JSON parameters described below. Refer to the [Workforce Connect PTT Pro for Android Configuration Guide](#) for information about configuring PTT Pro with JSON parameters.

In addition to the JSON configuration, the PTT Pro client must meet the following requirements:

- PTT Pro version 3.2.10087 or later
- Device location services must be enabled

**Table 2** JSON Parameters for LAS

Parameter	Description	Type	Default Value	Configurable Values
wfclasShowServerConfig	Displays the LAS server URL and API token in the PTT Pro client.	Boolean	N/A	true false
wfclasServerURL	URL to the LAS server.	String	N/A	Valid URL
wfclasServerToken	API token used by the PTT Pro client to authenticate with the LAS server	String	N/A	Unique alphanumeric string.
wfclasSiteID	Site or department ID. This number is specified in the PTT Pro server.	Integer	N/A	N/A
wfclasCustomerID	Customer ID is created by the LAS server when the customer account is created.	String	N/A	N/A



**NOTE:** When LAS is used with WFC Profile Client, the Site ID and Customer ID are not required in the JSON file.



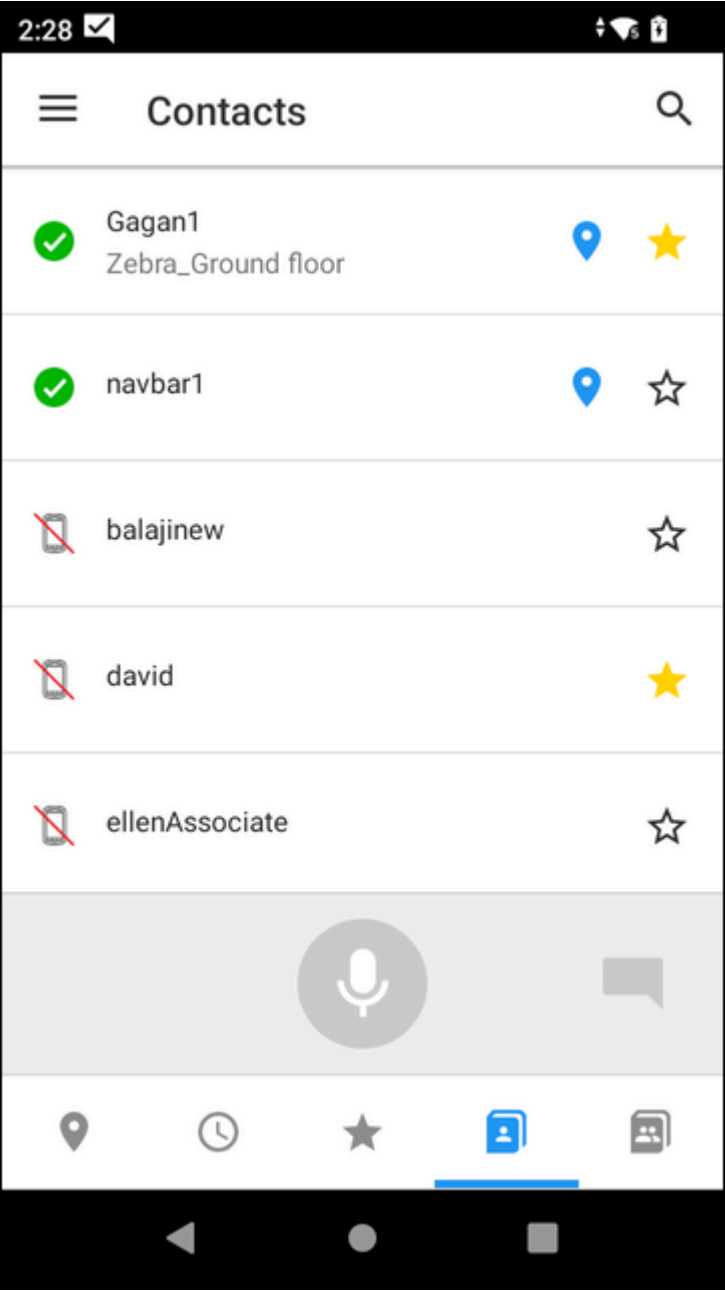
### Example LAS Configuration

```
{
  "wfclasShowServerConfig":true,
  "wfclasServerURL":"https://prod1-essentials.pttpro.zebra.com:9443/apname/v1, "
  "wfclasServerToken":"insert_your_token", "
  "wfclasSiteID":"insert_your_site", "
  "wfclasCustomerID":"insert_your_customer_id"
}
```

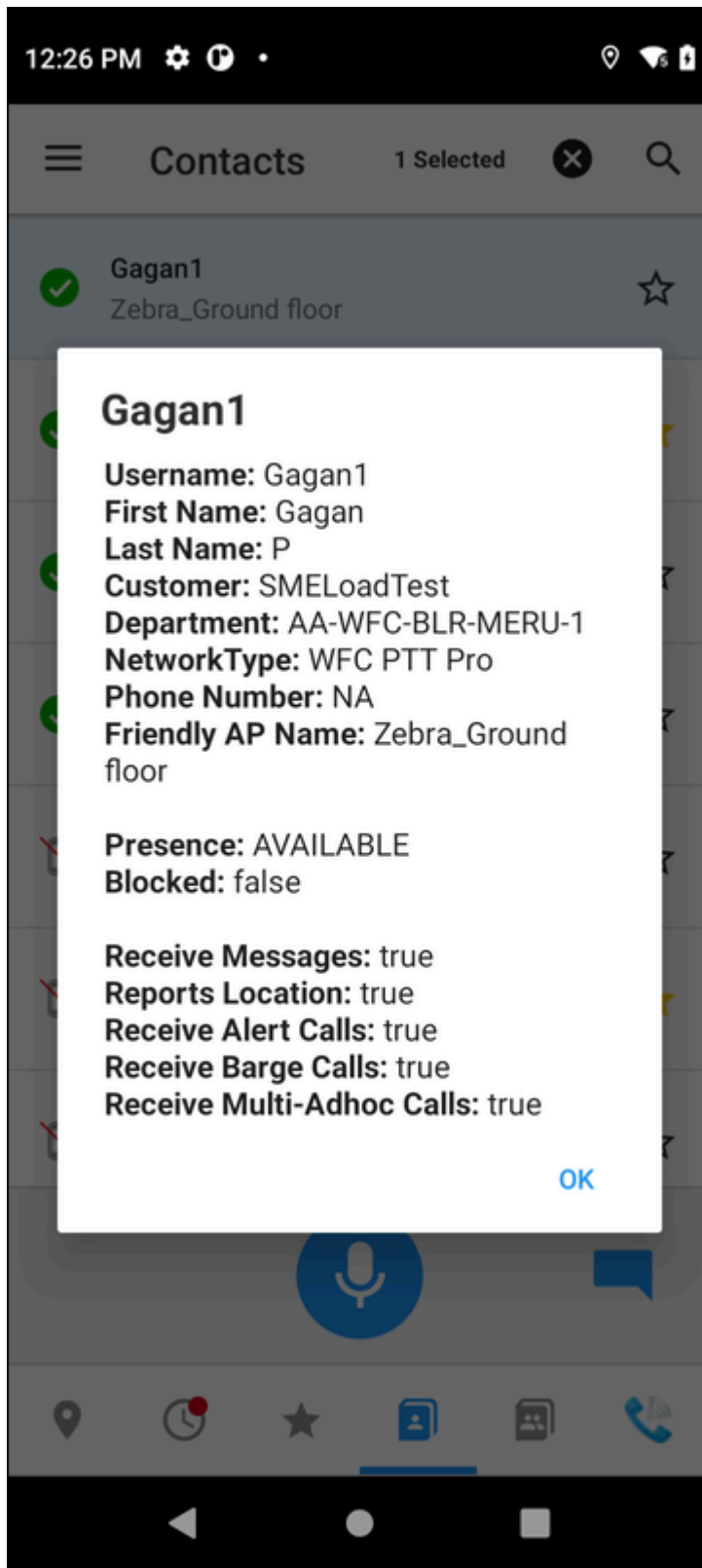
Sample PTT Pro Client Screenshots

The following screenshots display how location-related information appears in the PTT Pro client.

Figure 2 Contact Screen with LAS Location



**Figure 3** Contact Information with LAS Location

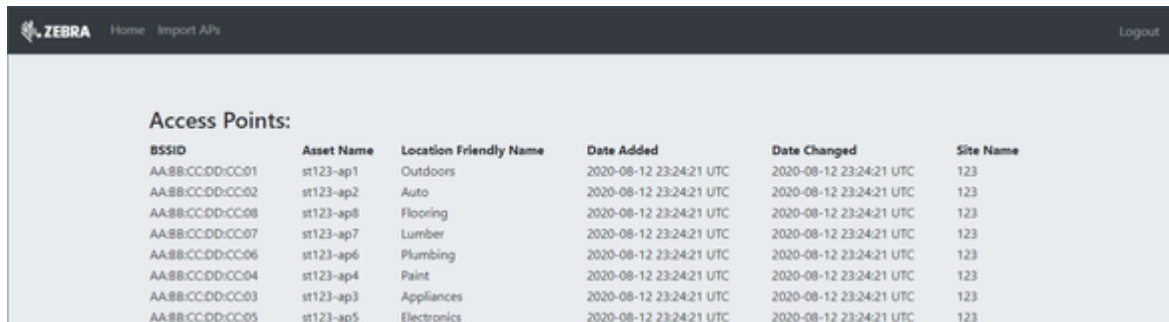


## Configure the LAS Server

for setting up and modifying the LAS database: the LAS portal and the LAS APIs. This section describes doing a bulk upload of AP information using the LAS Portal. This is the simplest method of loading and viewing LAS information.

Use the username and password to log into the LAS portal.

**Figure 4** LAS Portal Home Screen



The screenshot shows the Zebra LAS Portal Home Screen. At the top, there is a navigation bar with the Zebra logo, 'Home', 'Import APs', and a 'Logout' link. Below the navigation bar, the main content area is titled 'Access Points:'. It displays a table with the following columns: BSSID, Asset Name, Location Friendly Name, Date Added, Date Changed, and Site Name. The table contains 10 rows of data, each representing an access point configuration.

BSSID	Asset Name	Location Friendly Name	Date Added	Date Changed	Site Name
AA:BB:CC:DD:CC:01	st123-ap1	Outdoors	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:02	st123-ap2	Auto	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:08	st123-ap8	Flooring	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:07	st123-ap7	Lumber	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:06	st123-ap6	Plumbing	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:04	st123-ap4	Paint	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:03	st123-ap3	Appliances	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123
AA:BB:CC:DD:CC:05	st123-ap5	Electronics	2020-08-12 23:24:21 UTC	2020-08-12 23:24:21 UTC	123

The LAS portal displays the information from the CSV file.

### **BSSID**

MAC address of the access point.

### **Asset Name**

Name or description of the access point. You can specify the information to display in the portal. For example, the model and version of the access point.

### **Location Friendly Name**

The location name displayed in the PTT Pro client.

### **Date Added**

The date when the record was added to the LAS server.

### **Date Changed**

The date when the record was updated.

### **Site Name**

The site name or identifier.

## Using the Portal to Import LAS Data

Use the LAS portal to import the CSV file with the LAS data. After you import the file, you can view the configuration in the portal and verify that the location appears in the PTT Pro client.

1. Create the CSV file to import into the LAS server.

See [CSV file](#) for a description of the file format.

2. Log in to the LAS portal.

3. Select **Import APs** to open the **Import CSV File** screen.

4. Select **Choose File** to upload a file from your computer.
5. (Optional) Check the **Reset?** checkbox to remove all LAS data before importing the new CSV file.
6. Select **Upload**.
7. Select **Home** to view the imported data.



## LAS Import File Format

The import file is a CSV file that specifies the BSSID of the access points and the friendly name associated with each BSSID.



**NOTE:** The CSV file format must not be in UTF-8.

**Table 3** CSV File Fields

Fields	Description
SiteName	<p>Name of the site or store. The access points are defined for each store.</p> <p> <b>NOTE:</b> If a new upload of the CSV file does not specify the SiteName, the site is removed from the LAS server.</p> <p> <b>NOTE:</b> When LAS is used with the Profile Client, the LAS SiteName must match with the SiteID configured in the Profile Client.</p>
BSSID	A 12-digit hexadecimal MAC address with the character pairs separated by colons.
AssetName	Name you can use to describe the access point. This information is displayed in the portal, not the PTT Pro client. It allows 64 alpha-numeric characters, spaces, and special characters.
LocationFriendlyName	The friendly name is displayed in PTT Pro. The name can include 32 alpha-numeric characters, spaces, and special characters.

### Sample CSV File

SiteName	BSSID	AssetName	LocationFriendlyName
1202	00:00:00:00:00:01	Cisco	Grocery

SiteName	BSSID	AssetName	LocationFriendlyName
1202	00:00:00:00:00:01	Cisco	Bakery
2032	00:00:00:CF:08:B2	Cisco	Shoes
2032	00:00:00:CF:08:F6	Cisco	Auto
2032	00:00:00:CF:09:33	Cisco	Pharmacy

## Display Location Area Service Information for Drop Detect

Location Area Service (LAS) displays the location of a contact in different PTT Pro screens. An administrator can use the `showlasinfo` parameter to only show the location of a contact when a Drop Detect alert is sent.

Requires PTT Pro 3.3.10203 or later.

**Table 4** showlasinfo Parameters

Parameter	Description	Type	Default Value	Configurable Values
showlasinfo	<p>Set to zero (0) to display the LAS location for a contact when a Drop Detect alert is triggered. When set to one (1), the LAS location for a contact displays in the following areas:</p> <ul style="list-style-type: none"> <li>• Contacts</li> <li>• Contact Search</li> <li>• Favorites</li> <li>• Favorite Search</li> <li>• Contact Information in an Alert dialog</li> <li>• Drop Detect message</li> </ul> <p>If the <code>showlasinfo</code> parameter is not present in the device configuration, the LAS location is not displayed.</p>	Integer	NA	<ul style="list-style-type: none"> <li>• 0 - Show LAS location for Drop Detect.</li> <li>• 1 - Show LAS information in Contact screens.</li> </ul>

# Location Area Service REST API

Use the LAS REST API to manage sites, APs, and users. The API can be accessed using tools such as curl, Postman, or the Swagger interface.

The WFC LAS Swagger API provides three specifications:

## **Tenant**

Used by the Zebra administrator to manage customers on the multi-tenant LAS server. This specification is visible but not available to customers.

## **API**

Used by the customer to manage access points and AP users.

- Sites are locations that may be different stores, hospitals, or other entities that have different AP and AP user information. Sites are created when the APs are added.
- Access Points, or APs, are Wi-Fi devices that AP Users connect to and use for communication. The API allows adding, deleting, and displaying APs. APs are uniquely defined by BSSID and may also be identified through an asset name. APs are associated with a location-related name which can be displayed to users.
- AP Users are the users/devices that connect to the APs. The specification allows adding, deleting, and retrieving AP users.

## **Portal**

Currently unused.

## Authenticate for the API

Use of the API requires the customer ID and API key for authentication. Using the Swagger page, you can enter the API key and Customer ID and use the APIs.

When using methods in the API, the following headers must be included:

- The API-Key header must be populated with the customer API Key. Zebra provides the API key.
- The Customer ID header must be populated with the customer ID. Zebra provides the customer ID.

When using Swagger, click the green **Authorize** button to open the **Available Authorizations** screen.

**Figure 5** Swagger API Authentication Screen

The image shows a Swagger API authentication window titled "Available authorizations" with a close button (X) in the top right corner. It contains two authorization entries:

- apiKey (apiKey)**:
  - Name: API-Key
  - In: header
  - Value: [text input field]
  - Buttons: [Authorize] [Close]
- customerId (apiKey)**:
  - Name: customerId
  - In: header
  - Value: [text input field]
  - Buttons: [Authorize] [Close]

Enter the API key in the **apiKey** field and the Customer ID in the **customerId** field.

## Customer APIs

The Access Point Controller and the AP User Controller provide methods for managing LAS data. See [Parameters](#) for a description of the API parameters.

### Access Point Controller

The Access Point controller provides methods to add, delete, and retrieve access points.

#### Get All Access Points

Retrieves a list of access points.

#### Create New Access Point Entry

Adds an access point to the LAS database.

#### Get Access Point by BSSID

Retrieves access point data for the specified BSSID.

#### Delete Access Point by BSSID

Removes the access point specified by the BSSID.

#### Export Access Point Entries

Exports access points to a CSV file with the same format as the import CSV file, with the addition of the Date Added and Date Modified columns.

#### Import Static Access Point Tables from CSV File

Uploads a CSV file of AP data. See [CSV file](#) for the format of the CSV file.



**Get All Sites**

Returns all sites.

**AP User Controller**

The AP User controller provides methods to associate PTT Pro users with access points, delete the associates, and retrieves access point user information.

**Create New Access Point User**

Creates or updates the association between a user, a site, and a BSSID.

**Get All Users Info for the Access Point BSSID**

Returns the user and AP information for all users associated with a specific BSSID and site ID.

**Get All Users Info for the List of User IDs**

Returns the user and AP information for the users identified by a list of User IDs and site ID.

**Get User Info for the Access Point by User ID**

Provides user and AP information for the user identified by user ID and site ID.

**Delete User**

Remove the user identified by the site ID and user ID from LAS.

## Parameters

The Access Point controller and the AP User controller use the following parameters.

**Table 5** API Swagger Specification Parameters

Parameters	Description
siteld	Name of the site. All the Access Points are defined for each site.
bssid	Physical address of the access point.
name	System defined name if any.
ap_created_name	Location Friendly name for the access point. PTT Pro client displays this name when the client is associated with access point. Usually, it is the department name in the store.
userId	User associated with access point.

## Using curl to Add an Access Point

The following example adds an AP using Curl.

```
curl -X POST "https://<LAS-URL>:9443/apname/v1/api/ ap"
-H "accept: */*"
-H "API-Key: key0"
-H "customerId: 0"
-H "Content-Type: application/json" -d "{ \"ap_created_name\":
  \"Plumbing\", \"bssid\": \"B8-8A-60-61-8E-E7\", \"name\":
  \"ap-name\", \"siteId\": \"store1\"}"
```

