



CheckFreePay[®]

Locator API Implementation Guide

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Revision History

Date	Version	Description
04/13/2022	0.1	Created the document.
04/29/2022	0.2	Incorporated technical feedback from SMEs.
05/10/2022	1.0	Incorporated technical feedback from SMEs and created final version.

About This Guide

CheckFreePay provides payment solutions for consumers who prefer to pay their bills in person. Finding a location to pay your bills in person is now even easier using our new, interactive Payment Center Locator map. The CheckFreePay Payment Center Locator and Locator Widget each provide real-time aggregated payment center search and mapping functionality in a mobile-responsive and ADA accessible user interface.

With the Locator map, you can search for the closest payment location using a street address, city, state, or ZIP Code. Locator also has the following filters to help you narrow your search:

- Location Types
- Ways to Pay
- Currently Open Locations

The Locator API is intended to provide a means of integrating that same payment center search functionality and resulting location data for third-party developers to power applications, mobile apps, custom website GUIs, kiosk systems, and the like with CheckFreePay payment center data.

Audience

This guide is intended for use by clients and internal Fiserv support personnel assisting with the implementation of the Locator API. The level of detail is designed to serve the needs of technical and business users. High-level details are provided in the appropriate business context. Technical details are provided so that developers have all the information needed to interface with the Locator API.

Note: Wave2 is a trusted partner who is maintaining locators for Fiserv products, including CheckFreePay, MoneyPass®, and Accel®.

Scope

This guide provides API specifications and describes the API integration process for the Locator.

For information on implementing the Locator widget, refer to the *CheckFreePay Widget Guide*. You can also reach out to your Fiserv Account Manager for additional information.

Client Engagement Process

The following steps describe the client engagement process with Fiserv to implement the Locator API:

1. Client initiates request with CheckFreePay directly, asking for a CheckFreePay Locator API Key.
2. CheckFreePay initiates a request to Wave2 to receive the API Key.
3. CheckFreePay sends the client the Locator API Key, including AccountSid and AuthToken. The client is also provided any assigned authentication values, instructions, and API specifications, such as links to Postman Online API documentation and PDF Specification Document.
4. The supplied authentication values and API endpoints are intended for use in the DEV, TEST, and PROD environments.

Locator API Services Overview

Locator API calls are made using REST (Representational State Transfer) protocol and basic HTTP authentication. Requests are made by supplying the appropriate query parameters to API endpoint URLs, with the results returned in JSON format.

Integration Procedures

Software systems interacting with the Locator API will make authenticated GET requests to API Web Service Endpoints. These requests are intended to be made on the server side using HTTPS encrypted requests to protect the data and authentication keys from exposure on the client side. Details about available endpoints and their requests and responses follow.

Online Documentation and Testing Tools

Additional documentation, endpoint details, sample requests and responses, POSTMAN test request links, and complete sample implementations in PHP, cURL, jQuery, Ruby, Python, Node, and Go can be found in our online documentation using the following links:

- <https://wave2locator.com/checkfreepay>
- <https://documenter.getpostman.com/view/6751742/UVsEXA8T>

Web Services

The Locator API provides two endpoints to extend locator functionality and data to third-party, authenticated systems:

- GetBillerList
- GetLocationList

Request Guidelines

Use the following guidelines for the request parameters.

Authentication

All Locator API service requests must include two authentication parameters – “AccountSid” and “AuthToken” – which will be issued during the API account setup process.

Placeholders

Requests to all Locator API web services **require a placeholder for each request parameter to be provided**. If there is no value available for a parameter, the empty placeholder for that parameter will still need to be included with a blank value supplied. Failure to include values or placeholders for all parameters will result in an error.

Content-Type Header

All Locator API service requests need to set the Content-Type header to “application/json” to successfully make a request and receive a valid response.

GetBillerList

The GetBillerList API endpoint supports GET requests and returns a list of Billers and Biller IDs.

Request Parameters

Parameter	Req	Data Type	Description
AccountSid	Req	string	Use AccountSid value provided during account creation.
AuthToken	Req	string	Use AuthToken value provided during account creation.

Example GetBillerList GET Request

GET request to
`https://locationapi.wave2.io/api/checkfreepay/getbillerlist?AccountSid=XXXX&AuthToken=XXXX`

Response Data

The JSON data returned contains a very simple JSON data object with two variables for each result: Id and Name.

Parameter	Data Type	Description
Id	numeric string	Numeric string value that contains the identifier of that biller for use with other requests
Name	text string	Text string value that contains the descriptive name of that biller for display purposes

Example (Partial) GetBillerList Response

```
[
{
  "Id": 8427,
  "Name": "1st Bank Sea Isle City Checking"
}, {
  "Id": 8429,
  "Name": "1st Bank Sea Isle City Loans"
}, {
  "Id": 7317,
  "Name": "1st Bergen FCU"
}, {
  "Id": 684,
  "Name": "1st Financial Bank USA"
}, ...
...
]
```


GetLocationList

The GetLocationList API endpoint takes a slightly more complex set of input parameters than GetBillerList; however, it returns detailed data for all matching locations that match the request criteria and satisfy the location search. It performs a search within a specified radius of the provided center-of-search location, which is provided as a latitude, longitude coordinate pair in decimal notation. It applies any requested filters to the search, and then returns a JSON object containing the resulting matching locations.

Note: Only Biller Approved Locations will be returned.

Search Distance

The search distance or radius applied to API searches is controlled by CheckFreePay behind the scenes and uses the same master settings as the Locator. The API will first search for any matching locations within 50 miles of the provided center-of-search latitude and longitude. If no results are found in that initial search radius, it will expand the search distance to 100 miles and try again.

Request Parameters

Parameter	Req	Data Type	Description
AccountSid	Req	string	Use AccountSid string value provided by Admin Portal.
AuthToken	Req	string	Use AuthToken string value provided by Admin Portal.
BillerId	Req	string	Use the official numeric string value of Biller ID.
ZipCode	Cond	string	Five-digit numeric string value for ZIP Code Note: Required if Latitude and Longitude are not provided.
Latitude	Cond	integer	Integer string value providing the latitude coordinate value of the center-of-search in decimal notation (for example, 39.957395498). Note: Required if ZipCode is not provided.
Longitude	Cond	integer	Integer string value providing the longitude coordinate value of the center-of-search in decimal notation (for example, -92.7339534598). Note: Required if ZipCode is not provided.
Filters	Req	string	Comma separated list of search filter codes to apply to this search. Valid values: BC = Barcode – Will include locations that support a barcode payment experience. AN = Account Number – Will include locations that support an account number payment experience. Important Note: Filter inputs use AND logic, meaning that if the filter value is “BC,AN” the result will include locations that support both Barcode AND Account Number. If the filter value is blank, all possible locations are returned.

Example GetLocationList Request

```
GET to
https://locationapi.wave2.io/api/checkfreepay/getlocationlist?AccountSid=XXXX&AuthToken=XXXX&
BillerId=14&Latitude=40.695790&Longitude=-
73.578099&ZipCode=&Filters=BC,AN,PL&IsBillerApproved=0
```

Response Data

The resulting JSON data that is returned follows the GeoJSON standard data format for providing geographic location data in JSON format. It contains a “FeatureCollection” object that provides information about the total result set and a nested series of objects for all matching results.

The Feature Collection provides a “ResultCount” value giving the total number of matching results found, along with a “Center” object which contains the Latitude and Longitude coordinates of the center of the total result set. The Feature Collection object then contains a nested JSON object called a “**Features**” object that is essentially an array of “**Feature**” objects, each containing one result location and giving all the details of each individual payment center location returned for the request.

The following table contains a list of the possible data objects for each location result.

Data Object	Nested Object	Description
Geometry		Object containing the Coordinates object which contains the location coordinates for this payment center using format [Longitude, Latitude] in decimal notation
Properties		Object containing all the nested JSON descriptor objects associated with this location
	LocationId	Unique identifier assigned to this location
	TerminalId	Terminal ID assigned to this location
	LocationName	Descriptive text name of this location
	Address	Street address of this location
	City	City of this location
	State	State abbreviation of this location
	Postalcode	Five-digit ZIP Code of this location
	Phone	Phone number of this location
	MonOpen	Opening time for Mondays
	MonClose	Closing time for Mondays
	TueOpen	Opening time for Tuesdays
	TueClose	Closing time for Tuesdays
	WedOpen	Opening time for Wednesdays
	WedClose	Closing time for Wednesdays
	ThuOpen	Opening time for Thursdays
	ThuClose	Closing time for Thursdays
	FriOpen	Opening time for Fridays
	FriClose	Closing time for Fridays
	SatOpen	Opening time for Saturdays
	SatClose	Closing time for Saturdays

Data Object	Nested Object	Description
	SunOpen	Opening time for Sundays
	SunClose	Closing time for Sundays
	MapIcon	URL for map marker image for this location
	Services	Object containing several sub-objects describing services at this location. Valid values: PaymentExperience – Comma separated list of text strings describing the payment experiences available at this location. Either Account Number, Barcode, or both LocationType – Text string specifying either “Partner” or “Agent” location type IsBillerApproved – Boolean value to indicate if this is a Biller Approved location
	Distance	Distance from this location to center of search in miles
	DistanceKms	Distance from this location to center of search in kilometers
TimeZoneFeature		Object that contains nested JSON objects related to timezone for this location
	TimeZoneLabel	Descriptive text to indicate the timezone of this location
	UTCOffset	Numeric value showing the offset from UTC time in milliseconds for this location
	DayLightSavings	Y/N value to indicate if daylight savings time is in effect for this location

Example (Partial) FindLocations Response

```
{
  "Type": "FeatureCollection",
  "ResultCount": "48",
  "Center": {
    "Longitude": "-73.578099",
    "Latitude": "40.695790",
  },
  "Features": [{
    "Type": "Feature",
    "Geometry": {
      "Type": "Point",
      "Coordinates": [-73.5640828, 40.6919417]
    },
    "Properties": {
      "LocationId": 122605364,
      "TerminalId": "TX1234",
      "LocationName": "7 Eleven",
      "Address": "1555 JERUSALEM AVE",
      "City": "Merrick",
      "State": "NY",
      "Postalcode": "11566",
      "Country": "US",
      "Phone": "(516) 292-1564",
      "MonOpen": "9:00 AM",
      "MonClose": "5:00 PM",
      "TueOpen": "Closed",
      "TueClose": "Closed",
      "WedOpen": "9:00 AM",
      "WedClose": "5:00 PM",
      "ThuOpen": "10:00 AM",
      "ThuClose": "6:30 PM",
      "FriOpen": "Closed",
      "FriClose": "Closed",
      "SatOpen": "Closed",
      "SatClose": "Closed",
      "SunOpen": "Closed",
      "SunClose": "Closed",
      "Services": "{\"PaymentExperience\":\"Barcode\",
        \"LocationType\":\"Partner\",
        \"IsBillerApproved\":false}",
      "Latitude": 40.6919417,
      "Longitude": -73.5640828,
      "Distance": "0.782564",
      "DistanceKms": "1.25942",
    },
    "LocationFeatures": {
      "LocationType": "CheckFreePay Payment Center"
    },
    "TimeZoneFeature": {
      "TimeZoneLabel": "Eastern",
      "UTCOffset": "-18000",
      "DaylightSavings": "Y"
    }
  },
    ...additional Feature objects...
  ]
}
```

Error Messages

There are a variety of possible HTTP Status Codes and Error Responses that could be returned from the Locator API. These are returned in a restricted XML response that contains only the locations container element and a status sub-element. For example:

Example Error Message Response

```
<?xml version="1.0" encoding="utf-8"?>
<locations>
  <status>Error Message Will Appear Here</status>
</locations>
```

Status Values / Error Messages

Below are the two most likely error conditions. Most error messages are self-explanatory.

Error Message	Description
Invalid Username/Password or Access Is Restricted	Request had bad or missing authentication (AccountSid/UserToken) values.
Value cannot be null	Request had missing search parameters. All request parameters require at least placeholders even if they contain no information.

API Integration and Migration

Perform the following steps to integrate and migrate your API to the new Wave2 API:

1. CheckFreePay provides the current API client with new API specification documents and a timeline, instructing them to transition their software from using the older XML API to the new Wave2 REST + JSON API.
2. CheckFreePay requests an API Key from Wave2 for the client. The API Key provides the client-specific authentication details needed to access the Wave2 APIs.
3. The client develops and tests their software using the new APIs and the provided authentication.
4. CheckFreePay confirms that the client has successfully transitioned to the new APIs. CheckFreePay disables access to the old APIs.

Locator API Support

For support for the Locator, please send an email to support@wave2.io and be sure to include any details about your issue. Please also mention that you are working with the CheckFreePay APIs. This will create a trouble ticket with the Wave2 Support Team. Please be sure to whitelist @wave2.io emails so the response is not blocked by your email client.