Blume Visibility Geo Location API Integration Guide (Pull)

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1. Blume Visibility Geo Location RESTful API Integration Guide (Pull)

The latest version is: **v1.0**

This document outlines the Application Programming Interfaces (APIs) connected to the Blume Visibility™ system, known here into as "Visibility". The API in this document is the Geo Location API. The purpose of this API is for the user to track the latest event locations in Visibility.

1.1. Milestone RESTful API

The document contains the following sections

Introduction *(on page 4)* The primary audience for this document includes internal developers and partner developers who will integrate Visibility with their systems. Additionally, the supply chain manager may refer to this document for integration context. A basic understanding of APIs, Hyper Text Transfer Protocol (HTTP), and Representational State Transfer (REST) may be required to understand the concepts described in this document.	Documentation *(on page 5)* The Geo Location API provides users with an electronic data exchange method for tracking latest event locations in the Blume Visibility platform. This section also provides the API guidelines that will need to be followed.
Milestones *(on page 7)* The Geo Location API enables users to track the latest event related to the shipment. An Event is something that changes the state of a shipment. We differentiate between three types of event dates; planned, estimated, and actual event dates. Planned dates are assessed automated based on historic system data. Estimated and actual dates are provided by different sources like carriers or other third parties.	Error Codes *(on page 9)* This section provides a list of common error codes that appear with the documentation.

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1.2. Where to Start

We strongly recommend you start with the Introduction *(on page 4)* to learn the structure of the Geo Location RESTful API.

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2. Introduction

This document outlines the Application Programming Interfaces (APIs) connected to the Blume Visibility™ system, known hereinto as “Visibility”. The API in this document is the Geo Location API. The purpose of this API is for the user to track the latest event locations in Visibility.

The primary audience for this document includes internal developers and partner developers who will integrate Visibility with their systems. Additionally, the supply chain manager may refer to this document for integration context. A basic understanding of APIs, Hyper Text Transfer Protocol (HTTP), and Representational State Transfer (REST) may be required to understand the concepts described in this document.

2.1. Purpose of this Document

This API Integration Guide will aid the reader in implementing the Geo Location API into a new or existing system. This document will serve the reader as the sole source of information for the Geo Location API. Any additional documents referenced in this implementation guide will serve only as context and are not required readings to properly implement these APIs.

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3. API Overview

The Geo Location API provides users with an electronic data exchange method for tracking latest event locations in the Blume Visibility system.

3.1. Authentication

An API key will be provided by Blume Global. The API key will be passed as the 'apikey' header.

3.2. Domains

To be whitelisted during implementation.

https://services.blumesolutions.com/visibility/v1/bv/getLatestEventLocation?shipmentnumber=<>&originatorcode=<>

3.3. API Guidelines

The following are the API Guidelines:

- All requests must include base URL.
- Each request must be called with one of the HTTP verbs – GET, POST, PUT, PATCH.
- User must substitute valid values for mandatory and optional fields as and when required.
- All the request and request parameters are case sensitive.
- Data is returned in JSON format.
- API attempts to conform to the design principles of Representational State Transfer (REST) and relevant W3C HTTP/1.1 standards.
- Only use UTF-8 characters encoding. Parameter values should be converted to UTF-8 and URL encoded according to W3C standards.

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3.4. Rate Limit

- All requests are subject to a rate limit.
- Rate limiting restricts the number of times user can request resources from the API within a certain time window.
- The default rate limit is 2000 requests per hour.
- If request exceed than defined rate limit, then HTTP "429 Too Many Requests" response will persist until the next hour begins

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4. Geo Location API

The Geo Location API enables users to track the latest event related to the shipment. An Event is something that changes the state of a shipment. We differentiate between three types of event dates; planned, estimated, and actual event dates. Planned dates are assessed automated based on historic system data. Estimated and actual dates are provided by different sources like carriers or other third parties. Events are defined by the event name. The event names apply to the different locations/stops of the respective shipment. Only the events mapped with the user's organization will be available. The latest events can be tracked using a shipment number and originator code.

Table 1. Required Attributes

Request Parameter	Description
shipmentnumber	Provide the Shipment Number
originatorcode	Provide the Originator Code

4.1. Get Geo Location Details

Description of each field has been provided in the following table along with the APIs' expect or return, complete or partial shipment milestone details.

Service Name	URL	Type	Description	Input	Output
Get Geo Location Details	https://services.blumesolutions.com/visibility/v1/bv/getLatestEventLocation?shipmentnumber=<>&originatorcode=<>	GET	Get Geo Location detail via the shipment number and originator code.	Search Criteria	Get the geo location details for provided shipment number and originator code.

4.1.1. Sample Response to Get Geo Location Details


```
{
"city": "string",
"country": "string",
"countryLong": "string",
"latitude": 0,
"locationName": "string",
"locationUUID": "string",
```


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```
    "longitude": 0,
    "state": "string"
 "eventddtm": "MM-dd-yyyy HH:mm"
}
```

4.2. Field Description

Attribute Names pertaining to date and time for example "eventddtm" is represented as "MM-dd-yyyy HH:mm".

The field descriptions for the attributes listed in the JSON code block are provided below:

Table 2. Geo Location API

Attribute Name	Type	Max Length	Description
locationUUID	string	100	Unique Identification Code for a Location
locationName	string	200	Location Name of Shipment
city	string	50	City of shipment party
state	string	20	State name of shipment party
country	string	20	Country Name of shipment party
latitude	decimal	20,5	Latitude coordinates of location
longitude	decimal	20,5	Longitude coordinates of location
eventddtm	datetime		Date and time when the event is reported

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5. Error Codes

Table 3. Error Codes

HTTP	Error Code	Error Description
400	invalid_request	The request is missing a required parameter, includes an unsupported parameter value, repeats a parameter, includes multiple credentials, utilizes more than one mechanism for authenticating the client, or is otherwise malformed.
400	unsupported_grant_type	The authorization grant type is not supported by the authorization server.
401	Unauthorized	Client authentication failed because the client is unknown, no client authentication was included, or an unsupported authentication method was used.
403	insufficient_scope	The request requires higher privileges than provided by the access token.
404	resource_not_found	Resource Not Found
404	shipment_not_found	The shipment specified in the query parameters does not exist in Blume's system.
405	method_not_allowed	Method Not Allowed
429	too_many_requests	The client has exceeded the maximum number of requests for the period.
500	internal_server_Error	Internal Server Error

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