# Blume Visibility Flight Status API Integration Guide

## Contents

# 1. Blume Visibility Flight Status API Integration Guide (Push)

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 Shipment Flight Status API. The purpose of this API is for the user to track shipments in Visibility.

## 1.1. Milestone RESTful API

The document contains the following sections

| | |
|---|---|
| Introduction *(on page 4)*<br><br>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)*<br><br>The Shipment Flight Status API provides users with an electronic data exchange method for tracking shipments in the Blume Visibility platform. This section also provides the API guidelines that will need to be followed. |
| Milestones *(on page 7)*<br><br>The Shipment Flight Status API enables users to track a shipment through a series of events. 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)*<br><br>This section provides a list of common error codes that appear with the documentation. |

## 1.2. Where to Start

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

# 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 Shipment Flight Status API. The purpose of this API is for the user to track shipments 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 Flight Status API into a new or existing system. This document will serve the reader as the sole source of information for the Flight Status API. Any additional documents referenced in this implementation guide will serve only as context and are not required readings to properly implement these APIs.

# 3. API Overview

The Flight Status API provides users with an electronic data exchange method for tracking shipments 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://api.blumesolutions.com/visibility/FlightStatus

## 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.

## 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

# 4. Flight Status API

The Shipment Flight Status API enables users to track a shipment through a series of events. 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. Shipments can be tracked using a container ID and a reference number.

## 4.1. Post Shipment Flight Status 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 |
|---|---|---|---|---|---|
| Post Shipment Flight Status Details | https://api.blumesolutions.com/visibility/FlightStatus | Post | Post Shipment Flight Status detail via AirwayBill Number. | | Post shipment flight status details for provided Airway Bill Number. |

### 4.1.1. Sample Request to Post Shipment Fligt Status Details


```
{
"type" : "flight status",
"id" : "b3e80b85-c8a6-45e5-bbde-c3020a5b6421",
"messageHeader" : {
"addressing" : {
"senderAddresses" : [ {
"type" : "PIMA",
"address" : "USCAIR08SVA"
} ],
"finalRecipientAddresses" : [ {
"type" : "PIMA",
"address" : "REUAGT87GLSEHDQ/FRA21"
} ]
},
"creationDate" : "2018-09-29T11:47:00",
"edifactData" : {
"messageReference" : "MSGREF",
"interchangeControlReference" : "ICREF"
}
},
"airWaybillNumber" : "065-34274192",
"originAndDestination" : {
"origin" : "HKG",
"destination" : "RUH"
},
"quantity" : {
"shipmentDescriptionCode" : "TOTAL_CONSIGNMENT",
"numberOfPieces" : 7,
"weight" : {
"amount" : 1855,
"unit" : "KILOGRAM"
}
},
"totalNumberOfPieces" : 7,
"events" : [ {
"type" : "delivered",
"numberOfPieces" : 7,
"weight" : {
"amount" : 1855,
"unit" : "KILOGRAM"
},
"timeOfEvent" : "2018-09-29T14:47:00",
"timeOfEventTimePartQuality" : "SUPPLIED",
"airportOfDelivery" : "RUH",
"deliveryToName" : "HUAWEI TECH INVESTMENT SAUDI"
} ]
}
```

# 5. Error Codes

**Table 1. 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 |