Documents API

User Manual

Documents API Manual

Table of Contents

Notices

This section contains important legal and regulatory information that governs the use of TForce Freight APIs. By accessing or using the API, you agree to comply with the terms outlined in this section. Please take a moment to review the following notices before proceeding.

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Your use of this TForce Freight API is subject to the TForce Freight Terms of Use, which can be accessed on our official website. By using the API, you acknowledge that you have read, understood, and agreed to abide by the Terms of Use.

API Usage Policies

Please note that the use of this TForce Freight API is subject to specific usage policies, which may include rate limits, acceptable use guidelines, and data usage restrictions. These policies are designed to ensure fair and responsible use of the API and to maintain the quality of service for all users. Be sure to review and adhere to these policies to avoid any disruptions to your API access.

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Privacy Policies

Your privacy is important to us. TForce Freight's privacy practices are outlined in our Privacy Policy, which can be accessed [here](#) on our official website. The Privacy Policy describes how we collect, use, disclose, and safeguard your personal information in connection with the use of our services, including this API.

Attribution Requirements

If you are a third-party developer using this API to provide services to your clients, you may need to adhere to certain attribution requirements as specified by TForce Freight.

Contact Information

For inquiries related to this API, its usage, or any other matter, please contact our support team at groundfreightapisupport@forcefreight.com.

Documents API Rules

The TForce Freight Documents API facilitates clients in accessing and managing the documents associated with their shipments. The following sections discuss the rules governing access and use of this API.

Business Processes and Rules

- TForce Freight APIs require you to follow the request structures defined in this manual. The API enforces strict adherence to these definitions.
- Use of undefined elements will result in unsuccessful request operations.
- API access is restricted to customers (and their authorized agents) shipping packages manifested, tendered, and delivered by TForce Freight. Access is further restricted to the performance of legitimate shipping activities and operations.
- Abusing or data mining TForce Freight APIs will result in revocation of API access.
- Documentation access requires a registered TForce Freight profile.
- You will only be able to view documents to which your approved account has permissions to view.
- In both production and CIE environments, developers need to be enrolled with TForce Freight and receive OAuth Credentials. For more details, see our website to help you [get started](#).

Additional Rules

- The API is available to brokers or resellers of transportation services possessing a current and active TForce Freight agreement/partnership.
- LTL Freight origins include the US, CA, & MX, with specific rates for non-contiguous US regions obtainable through TForce Freight Customer Service.

> **Important:** By accessing and using this API, users confirm their understanding of these terms and agree to use the API in a manner consistent with its intended purposes. Non-compliance with these rules will result in immediate revocation of API access. TForce Freight reserves the right to monitor API usage to ensure compliance with these terms. Please please contact our support team at groundfreightapisupport@forcefreight.com to address any concerns or questions regarding API usage or to seek clarification on these rules.

Introduction

Welcome to the TForce Freight Documents API Manual. This comprehensive guide is designed to assist developers use the TForce Freight Documents API for accessing and managing shipment-related documentation. Whether you are building applications to enhance customer experience or streamline internal operations, this manual will provide you with the knowledge to seamlessly integrate with TForce Freight's document handling capabilities.

About the TForce Freight Documents API

The TForce Freight Documents API provides a robust suite of endpoints enabling the retrieval and management of shipping documents such as bills of lading, invoices, and delivery receipts. Integrate our API into your systems to offer your users instant access to critical documents, ensuring an informed and updated shipment process.

Who Should Read This Manual

This manual is intended for developers, software engineers, and technical teams who are responsible for integrating the TForce Freight Documents API into their applications. Whether you are new to APIs or an experienced developer, this guide will provide you with the necessary information to get started and make the most out of TForce Freight's document management services.

Manual Organization

The manual is structured into sections to guide you through the various facets of the TForce Freight Documents API:

- Notices: Important legal and disclaimer information.
- Introduction: An overview of the manual's purpose and organization.
- Getting Started with the TForce Freight Documents API: Guidelines on accessing the API, including authentication, base URLs, and versioning.
- Documents API Endpoints: Comprehensive coverage of the available documents endpoints, their functionalities, and usage instructions.
- Request and Response Format: Specifications for the API requests and responses, including headers, URL patterns, and data encoding.
- Integration and Testing Reference Information: Recommendations for testing your integration, including a testing environment, sample PRO numbers, and rate limiting considerations.
- Appendix: Additional resources, including error codes and document types.

Prerequisites

Before you proceed, it's recommended that you have a basic understanding of HTTP, API concepts, and a programming language you intend to use for API integration. Additionally, you should have an active TForce Freight developer account and the necessary credential approval to access the API endpoints.

Please reach out to the TForce Freight API support team if you have any questions or need assistance during the integration process.

Getting Started with Documents API

TForce Freight APIs offer streamlined integration options, enabling customers of TForce Freight to link their accounts with your application for direct access and management of their shipping documents.

Key Steps to Begin

The following is a high level overview of the client registration and authorization process:

1. **User Onboarding**: Users can sign up for a new TForce Freight account or log into an existing one. Once enrolled, they'll grant consent for your application to access their TForce Freight account data. This process is managed by the TForce Freight Customer Identity and Access Management (CIAM) platform.
2. **Configuring Your Application**: Visit your developer portal profile to configure your application settings:
    - Set up your application's display information (e.g., logo, display name, home page URL).
    - Provide a webhook URL for receiving events from the TForce Freight API.
    - Manage your OAuth client secrets for secure exchanges.
3. **Handling Webhook Events**: Upon user consent, an event (UserOnboardedEvent) will be dispatched to your configured webhook. This event contains essential information about the onboarded user, which you can use to make further requests to the TForce Freight Documents API.
4. **Token Management**: Use the provided JSON Web Token (JWT) from the UserOnboardedEvent to retrieve access and refresh tokens from the TForce Freight CIAM platform. These tokens are essential for accessing user data through the API.
5. **Accessing the API**: With a valid token, you can then access the TForce Freight API to retrieve or update the onboarded user's data.
6. **Recovering Access Rights**: If tokens expire, users will need to reaffirm their consent. To streamline this process, consider implementing a mechanism to refresh tokens before they expire.

Helpful Resources

For a more detailed and technical guide on integrating with the TForce Freight API, visit the Third Party Integration Guide.
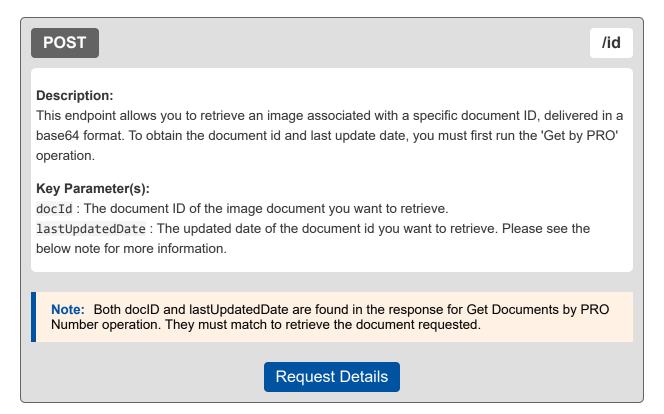
Additional references:

- Microsoft identity platform and OAuth 2.0 On-Behalf-Of flow
- Overview of the Microsoft Authentication Library (MSAL)
- CloudEvents

Documents API Endpoints

The TForce Freight Documents API provides endpoints to access image documents associated with shipments. This includes retrieving documents by their document ID or by the PRO number, with options for different formats. This section provides an overview of the main document-related endpoints available for use.

This overview provides a glimpse of the endpoints offered by the TForce Freight Documents API. Each endpoint serves a specific purpose and provides different ways to access and retrieve document data. As you explore this API manual, you'll find more in-depth information on how to utilize these endpoints effectively.

Get Document by Document ID (Base64 Format)

POST   **/id**

Description:

This endpoint allows you to retrieve an image associated with a specific document ID, delivered in a base64 format. To obtain the document id and last update date, you must first run the 'Get by PRO' operation.

Key Parameter(s):

`docId` : The document ID of the image document you want to retrieve.

`lastUpdatedDate` : The updated date of the document id you want to retrieve. Please see the below note for more information.

Note: Both docID and lastUpdatedDate are found in the response for Get Documents by PRO Number operation. They must match to retrieve the document requested.

Request Details

Get Documents by PRO Number (Base64 Format)

POST   **/pro**

Description:
This endpoint allows you to retrieve documents associated with a PRO number, delivered in a base64 format.

Request Body Description:
Includes properties like `pro` (the PRO number) and `documentCategories` (an array of image categories to retrieve).

Request Details

OpenAPI Metadata

GET   **/openapi**

Description:
This endpoint provides the OpenAPI metadata for the TForce Freight Documents API, allowing you to access a structured description of the available endpoints, request and response formats, and other essential API details.

Request Details

Making a Request

This section will focus on the specifics of making a request, including any required headers, parameters, and request body formats.

Base URL

The following URLs allow you to access TForce Freight Documents API Endpoints

Production	`https://api.tforcefreight.com/documents`

Headers

Below is a table of the headers supported and required by the API:

Header Name	Description	Requirement	Example Value
Authorization	Used for passing the OAuth2.0 access token.	Required (for authenticated endpoints)	Bearer [Access-Token]
Cache-Control	Directive for caching mechanism.	Optional	no-cache
Accept	Type of content that is acceptable for the response.	Optional	application/json
Content-Type	The media type of the body of the request (used with POST, PUT and PATCH).	Required for requests with a body	application/json

Query Parameters

Below is a table of the query parameters supported by the API:

Parameter Name	Description	Req?	Example Value
api-version	Specifies the version of the API to use. • 'v*' (e.g., v1) for live production • 'cie-v*' (e.g., cie-v1) for customer integration environment matching the production version • 'cie-vNext' for testing upcoming versions Please visit the APIs page for available versions.	REQ	v1, cie-v1, cie-vNext

> **Note:** It is critical to understand the way versioning is handled through query parameters. Review the section on testing environments for an example of the version query parameter in use.

Details for `/pro` endpoint

This endpoint retrieves documents associated with a PRO number in base64 format.

Headers

When sending a JSON request body, most clients will automatically set **Content-Type:** application/json.

Request Body

Property Name	Type	Description	Example Value
pro	String	9 digit PRO number.	"885728922"
documentCategories	Array of Strings	Categories of documents to retrieve. See the appendix for more details.	["BOL"]
returnDocumentIdsOnly	Boolean	True returns only document ids and false returns document stream.	false
returnLatestDocuments	Boolean	True returns only latest versions of a document and false returns all versions.	true
clientCache	Array	It will only bring back the document if newer than lastUpdatedDate.Please see below clientCache note for more details.	clientCache[].lastUpdatedDate

> **Note:** To obtain a valid document ID, run the 'Get by PRO' operation for your shipment. The 'Get by PRO' operation will return the IDs associated with your shipment, which can be used to run the 'Get by ID' operation.

> **Note:** About ClientCache, If you put lastUpdatedDate in request, equals to or higher than the returned lastUpdatedDate, it will return data as null and status as "Not-Modified", otherwise it is going to return the data if it is lesser than lastUpdatedDate.

Details for `/id` endpoint

This endpoint retrieves an image by its document ID in base64 format.

Headers

When sending a JSON request body, most clients will automatically set **Content-Type:** application/json.

Request Body

Property Name	Type	Description	Example Value
docId	String	The unique identifier for the document	123456789
lastUpdatedDate	String	The Last updated date for the documentID	2022-02-23T08:11:44-05:00

Details for `/openapi` endpoint

This endpoint does not require a request body, specific headers, or parameters.

API Throttling

TForce Freight APIs implement throttling mechanisms to ensure equitable distribution of resources among all users and to safeguard the system's stability and reliability. This section clarifies the different throttling policies in place.

> **Note:** Customer Integration Environment (CIE) endpoints and Production endpoints maintain separate throttling counters. Reaching a limit in one environment won't impact your request allowance in the other.

Rate Limiting

Our system implements rate limiting when a large volume of requests is received in a short time frame. This limiting helps balance server load and maintain consistent performance even during traffic spikes.

- Renewal Time: 60 seconds.

High request volumes may result in a 429 error response. This indicates that there's a temporary hold on requests to ensure optimal experience for all users. The rate limit resets after 60 seconds.

Quota Limiting

Different from rate limiting, quota limiting controls the number of requests an individual user can send over an extended period. Quota limiting ensures no single user overwhelms the system. Each user has a generous request allowance for this time frame.

- Renewal Time: 300 seconds.

Crossing the quota limit threshold will trigger a 403 error response for the user who exceeded the limit. This error is exclusive to the user who has exceeded their quota, and normal access is restored after 300 seconds.

Summary of Throttle Limits

The following table summarizes the different throttling limits.

Throttle Type	Error Code	Renewal Time	User Affected
Rate Limit	429	60 seconds	All users
Quota Limit	403	300 seconds	Requesting user only

Recommendations

The following recommendations will help you manage your API requests to minimize throttling.

- Continuously monitor your API usage.
- If you receive a 429 or 403 response, consider implementing a method like exponential back-off for your requests. Wait for the specified renewal time before sending another batch of requests.
- Review the HTTP header of our responses. It can offer insights about your current usage relative to potential limits.

Response Structure and Codes

The following section details the various codes and responses you may receive from the Documents API.

Documents Response Body Properties

This table summarizes and describes the different response body properties you may encounter.

Understanding this table

This table represents nested JSON structures using dots to denote parent structures.

For example, consider the following field from our table:
 	
`summary.responseStatus.code`
 	
This corresponds to the nested structure in the JSON response:
 	
<pre>{
 "summary": {
    "responseStatus": {
      "code": "IMG_000204",
      "message": "The combination of PRO and
 Categorie(s) would result in a large data set
 that cannot be returned in single requeset.
 If other images are required, please resend
 request by adding the provided image ids by
using the 'clientCacheState' parameter."
    },
    "transactionReference": {
      "transactionId": "d9734ed8-16d7-407f-8cc
a-da55bc8a0b07"
    }
  },
  "detail": [
  {
   "detailStatus": {
     "code": "1",
     "message": "Success",
     "documentStatus": "Active"
   },
   "documentType": {
    "name": "BOL",
    "description": "Bill of Lading"
   },
   "id": "548489",
   "documentSize": 92016,
   "updateDate": "2022-02-23T08:11:44-05:00",
   "category": "BOL"
  }
  ]
}</pre>
	In the response, the
	
	code
	
	is nested within
	
	responseStatus
	
	which itself is nested within
	
	summary
	
	Hence, the dot notation
	
	summary.responseStatus.code

Property	Type	Description
id	string	Unique identifier of the document.
documentSize	integer	Size of the document in bytes.
updateDate	date-time	Date and time when the document was last updated.
category	string	Category of the document. Possible values: BILL_OF_LADING, CLAIMS, DELIVERY_RECEIPT, INVOICE, WEIGHT_CERTIFICATE
type.name	string	Name of the document type.
type.description	string	Description of the document type.
data	string (byte)	Base64-encoded string of the document's data.

Property	Type	Description
status.type	string	Overall status of the request. Possible values: Success, Warning, Error
status.infos[]	array	Array containing additional information or warnings.
status.infos[].code	string	Code related to the specific information or warning.
status.infos[].message	string	Message related to the specific information or warning.
imagesData[]	array	Array of image data objects.
imagesData[].id	string	Unique identifier of the document.
imagesData[].documentSize	integer	Size of the document in bytes.
imagesData[].updateDate	date-time	Date and time when the document was last updated.
imagesData[].category	string	Category of the document.
imagesData[].type.name	string	Name of the document type.
imagesData[].type.description	string	Description of the document type.
imagesData[].data	string (byte)	Base64-encoded string of the document's data.

Formatting and Common Element Constraints

Understanding the constraints on data elements is crucial when integrating with the TForce Freight Shipping API. This section outlines common element constraints specific to this API.

Data Types

The Shipping API utilizes various data types, including:

- **String:** Used for textual data such as names, email addresses, codes, and other descriptive information.
- **Integer:** Represents numeric values without decimals, used for properties like pieces and weight.
- **Boolean:** Indicates true/false values, used for flags such as 'pomIndicator'.
- **Array:** A collection of elements, often used for lists like 'service options' and 'email notifications'.
- **Object:** Represents complex data structures, like 'shipFrom', 'shipTo', and 'commodities'.

Value Constraints

Certain elements have specific constraints. For example:

- **Service Options:** Must be one of the predefined enumeration values (e.g., 'INPU', 'LIFO').

Review the appendix and property tables for additional enumerations.

Length and Format Constraints

Some string values have specific formats or patterns they must adhere to.

PRO number	Must be a 9-digit number. Pattern: `^\d{9}$`

> **Note:** Adhering to these constraints is essential for successful API requests. Ensure that your requests conform to these guidelines for effective integration with the TForce Freight Shipping API.

Property details

The following section details constraints for each property.

Details for `/pro` requests

```
{
```
`    "pro": "",`	**Req:** Yes
	Characters: =9
	Format: [PRO](#)
`    "documentCategories": [""],`	**Req:** Yes
	Enum: [Appendix](#)
	Items Allowed: ≥1
`    "returnDocumentIdsOnly": ,`	**Req:** Opt
	Enum: [Boolean](#)
`    "returnLatestDocuments": ,`	**Req:** Opt
	Enum: [Boolean](#)
```
}
```

Application Integration and Testing

TForce Freight's integration environment is available 24/7 for your application testing.

> **Note:** All API URLs are case-sensitive.

Integration Testing

For integration testing, please point your Documents RESTful API requests to:

CIE	`/documents/[endpoint]?api-version=cie-v1`

Production Environment

Upon the conclusion of testing, redirect your Documents RESTful API to the following production URL:

Production	`/documents/[endpoint]?api-version=v1`

PRO Numbers for Testing in CIE

Below is a table with PRO numbers specifically intended for use within the CIE. It offers a breakdown of the results developers can anticipate when initiating a Documents RESTful API query.

If any PRO number not listed for CIE testing is used, the API will return an error response.

Value	Description
885728922	Supports all document types

Appendix

HTTP Response Codes

These are some of the HTTP status codes that the API may return in response to your requests:

Status Code	Description	Additional Info
200	OK	The request was successful and returned the expected data.
400	Bad Request	The server could not understand the request due to invalid syntax. Check your request body or parameters.
401	Unauthorized	The user is not authenticated. Ensure that your API key or authentication token is valid.
403	Forbidden	When the user's request quota is exceeded. The response will include a `Retry-After` header indicating the recommended retry interval in seconds. This typically affects the requesting user only.
404	Not Found	The server could not find the requested endpoint or resource. Ensure your URL is correct.
429	Too Many Requests	The call rate for the API has been exceeded. The response will include a `Retry-After` header indicating the recommended retry interval in seconds. This affects all users.

Document Error Codes

Code	Description
IMG_000100	Invalid Request
IMG_000101	Unsupported output file format('application/pdf' is only available now)\
IMG_000102	'DocumentCategories' is required.
IMG_000201	Enrollment is required.
IMG_000202	Internal server error! Please try again later.
IMG_000203	Unable to return all requested images. For more information please check the status of each item.
IMG_000204	The combination of PRO & Categories resulted in a large data set that we can't return all at once. If other images are required Please resend request by adding the provided image ids `<id:reqestTime>` by using the 'clientCacheState' parameter.
IMG_000205	PRO Number is required.
IMG_000206	PRO Number is invalid.
IMG_000404	Unable to retrieve the requested document.
IMG_000405	Could not find any document with this ID under provided PRO Number and requested criteria.
IMG_000406	Could not find any document with this ID under provided PRO Number and requested criteria.
IMG_000407	Could not find any document for provided PRO Number.

Document Category Codes

The following tables serve as a reference for document types and their associated codes used within our shipping and handling systems. They provide a comprehensive guide to identifying documents based on their codes and descriptions.

Categories	Description
BOL	Bill of Lading
CLM	Claims
DR	Delivery Receipt
INVC	Invoice
WGHT	Weight Certificate

Document Type Value Definitions

Document Type	Document Category	Description
BOL	BOL	Bill Of Lading
CCDL	CLM	Cargo Claims Declination Letter
CBOL	BOL	Corrected Bill Of Lading
CMC	WGHT	Cube Measurement Certificate
CUSX	WGHT	Customer Exception Sheet
CUSD	BOL	Customs Document
DR	DR	Delivery Receipt
FREE	BOL	Free Astray
INSP	WGHT	Inspection Report
LOA	BOL	Letter Of Authority
RECN	BOL	Letter Of Reconsignment
OVHD	BOL	On Hand Notice

Type Value	OnBase Description
OSD	OS&D Report
OTH	Other
PACK	Packing Slip
PALT	Pallet Return
REWE	Reweigh Ticket
THFT	Theft Report
WRC	Weighing And Research Certificate

Handling Base64 Encoded Documents Appendix

The Documents API provides documents as Base64 encoded images. By using Base64 encoding, binary data like images can be encoded as text. This format is commonly used for transferring image data in web applications. The following sections provide a few examples of how you can process this data to retrieve your decoded document:

Displaying the Document

To display a Base64 encoded document, you can set it directly into an `<img>` tag's `src` attribute using the Data URL scheme:

```
<img src="data:image/jpeg;base64,/9j/4AAQSkZJR..."/>
```

Replace the `/9j/4AAQSkZJR...` with your actual Base64 data. The browser will decode and render the document automatically.

Saving the Document

If you want to save the document image to a file, you can:

1. Use a server-side language (like PHP, Node.js) to decode the Base64 string and write it to a file.
2. Use JavaScript's `atob()` function to decode the data and save it using the File API if you're working in a browser environment.

Handling Base64 Images Summary

Base64 encoded images offer a flexible way to work with image data in web applications, allowing for easy storage, transmission, and manipulation without needing to use binary file streams directly.

> **Note:** The handling methods for Base64 encoded images described herein are provided for informational purposes only. TForce Freight does not endorse any specific method of image data decoding. You are responsible for adhering to best practices and complying with relevant regulations when manipulating or storing image data. TForce Freight accepts no responsibility for any damages, data loss, or security breaches that may occur from use of these methods.

Page 19

Response Data

The below is the sample response with data.

Sample Response

```
{
    "summary": {
        "responseStatus": {
            "code": "1",
            "message": "Success"
        },
        "transactionReference": {
            "transactionId": "d84d46e3-342f-4794-a64e-1a0f3ef2e1b0"
        }
    },
    detail": [{
        "detailStatus": {
            "code": "1",
            "message": "Success",
            "documentStatus": "Active"
        },
        "documentType": {
            "name": "OSD",
            "description": "OS&D"
        },
            "id": "493315",
            "documentSize": 17400,
            "updateDate": "2018-11-16T15:01:04-05:00",
            "category": "CLM",
            "data": "JVBERi0xLjYNJeLjz9MNCjcgMCBvYmoNPDwvTGluZWFyaXplZCAxL0wgMTc0MDA
vTyA5L0UgMTMyOTAvTiAxL1QgMTcxMTEvSCBbIDQzNSAxMzJdPj4NZW5kb2JqDSAgICAgICAgICAgICAg
ICAgICAgDQoxMiAwIG9iag08PC9EZWNvZGVQYXJtczw8L0NvbHVtbnMgMy9QcmVkaWN0b3IgMTI"
    }
}
```