Rating API

User Manual

Rating API Manual

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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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The information and materials provided in this documentation are for informational purposes only and are provided "as is" without any warranties, expressed or implied. TForce Freight makes no representations or warranties regarding the accuracy, completeness, or suitability of the information contained herein. TForce Freight disclaims any liability for any errors or omissions in the documentation.

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.

Rating API Rules

The TForce Freight Rating API gives client applications a way to determine the rates available for a ground freight shipment. To use this service, an application sends TForce Freight details about the shipment such as its origin, destination, and contents as well as the specific TForce Freight service desired.

Business Processes and Rules

- TForce Freight expects schema as defined in the request structure i.e., no spelling or structural deviations. Elements that are not defined in the data request will result in request being rejected.
- Only users that plan to ship packages manifested, tendered, and delivered by TForce Freight can use the API.
- Any customers/developers abusing or data mining the API will have their access revoked.
- To access API documentation, users must be have a registered TForce Freight profile and be logged in.
- To access testing and production sites, users must have OAuth Credentials and be enrolled as an API End User. For more details, see our website to help you get started.

Rating Ground Freight Rules

- The Rating API cannot be used to access rates or data from proprietary rate basing systems or licensed products that are not the property of TForce Freight. The Rating Ground Freight API may not be used by brokers or resellers of transportation services.
- Ground Freight does not offer void, label recovery, or return services.
- Ground Freight does not offer Paperless Invoice.
- Users must be registered with a user ID and password for TFF API portal in order to see Negotiated Rates. For additional information, refer to the TFF API portal instructions for negotiated rates guide in the Developer Kit.
- All shipping and billing locations must be included in the Ground Freight registration.
- Requests for utilizing the Rating API with data from proprietary rate basing systems or licensed products that are not the property of TFI International Inc. can only be considered after approval from the owning authority. Upon application for access to the Rating API, TForce Freight will request approval from the owning authority prior to completing the application request.
- The Rating API may only be used by brokers or resellers of transportation services with a current and active TForce Freight agreement/partnership. The Shipping and Pickup APIs are the products of TForce Freight and are available to all customers.

Negotiated Rates

To view negotiated rates for Ground Freight rates please contact your Account Executive.

Users must be registered with a user ID and password for the Developer Portal and have an approved TForce Freight Account Number to see Negotiated Rates.

TForce Freight Density Rates

TForce Freight Rates, Density Based Rating (DBR), provide a new rating method based on dimensional weight for the TForce Freight Less Than Truckload (LTL) and UPS® Ground with Freight Pricing* (GFP) customers who ship using the Shipping API – Ground.

> **Note:** *TForce Freight is an authorized reseller of UPS® Ground with Freight Pricing but is not authorized to resell any other services offered by United Parcel Service, Inc. or its affiliates.

Introduction

Welcome to the TForce Freight Rating API Manual. This comprehensive guide is designed to assist developers use the TForce Freight Rating API to access and calculate shipping rates. 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 rating services.

About the TForce Freight Rating API

The TForce Freight Rating API offers a powerful set of endpoints that allow you to retrieve detailed shipping rates based on various parameters such as shipment size, weight, and destination. By integrating our API into your applications, you can provide your users with precise and real-time shipping rate calculations.

Who Should Read This Manual

This manual is intended for developers, software engineers, and technical teams who are responsible for integrating the TForce Freight Rating 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 rating capabilities.

Manual Organization

To help you navigate this manual, we've outlined the following sections that cover different aspects of the TForce Freight Rating API:

- Notices: Important legal and disclaimer information.
- Introduction: An overview of the manual's purpose and organization.
- Getting Started with the TForce Freight Rating API: Guidelines on accessing the API, including authentication, base URLs, and versioning.
- Rating API Endpoints: A detailed exploration of the available rating endpoints, their specific functions, and guidelines for effective utilization.
- Request and Response Format: Information about the structure of API requests and responses, including headers, URL formats, and data formats.
- Integration and Testing Guidelines: Recommendations for testing your integration, including a testing environment, sample data, and rate limiting considerations.
- Appendix: Additional resources, including error codes, enumerations, and additional reference materials.

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 Rating API

TForce Freight APIs allow for seamless third-party integrations, enabling TForce Freight customers to enroll their accounts with your application and access/update their account information.

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 Tracking 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 more detailed and technical guides on integrating with the TForce Freight API, visit the TForce Freight Developer Portal and see our resource pages.

Additional references:

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

Rating API Endpoints

The TForce Freight Rating API offers endpoints for calculating shipping rates based on various parameters like service options, shipment details, and commodities. This section provides an overview of the main endpoints available for use.

This overview highlights the key rating endpoints offered by the TForce Freight Rating API. Each endpoint serves a specific purpose, providing different ways to calculate and retrieve rate information. Detailed information on utilizing these endpoints can be found throughout this manual.

OpenAPI Metadata

GET **/openapi**

Description:
This endpoint provides the OpenAPI metadata for the TForce Freight Rating API, detailing the available endpoints, request and response formats, and other crucial API information.

Request Details

Get Rate

POST **/getRate**

Description:
This endpoint allows for retrieving shipping rates based on detailed request parameters. These include service codes, pickup dates, shipping locations (ship from, ship to, and payer), service options, and commodities details.

Request Body Description:
The request must include detailed information such as requestOptions (like service code, pickup date, etc.), ship from, ship to, payment, service options, and commodities. Each part has specific required fields like addresses, billing codes, and packaging types.

Request Details

Volume Rating

POST **/volumeRating**

Description:
The Volume Rating endpoint is designed for obtaining shipping rates for large-volume or less-than-truckload (LTL) freight shipments. It caters to scenarios where the shipment size is substantial and requires special handling or rate calculation.

Request Body Description:
The request must encompass details such as requestOptions (like service code and pickup date), shipFrom and shipTo addresses, serviceOptions, and commodity details (linear feet, weight, etc.). This endpoint is particularly relevant for larger shipments where the total volume and weight significantly influence the rate estimation.

Request Details

Making a Request

This section focuses on the specifics of making a request to the TForce Freight Rating API, including required headers, parameters, and the format of the request body.

Base URL

The following URL allows you to access the TForce Freight Rating API Endpoints:

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

Headers

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

Header Name	Description	Req?	Example Value
Authorization	Used for passing the OAuth2.0 access token.	REQ (for authenticated endpoints)	Bearer [Access-Token]
Cache-Control	Directive for caching mechanism.	OPT	no-cache
Accept	Acceptable content type for responses.	OPT	application/json
Content-Type	The media type of the body of the request (used with POST, PUT and PATCH).	REQ (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 `/getRate` Endpoint

This endpoint allows for retrieving shipping rates based on various parameters.

Request Body Properties

The request body must include detailed information such as requestOptions (service code, pickup date, etc.), shipFrom, shipTo, payment, serviceOptions, and commodities.

Property Name	Type	Req?	Description	Example Value
requestOptions	Object	OPT	Container for request option information.	{ }
requestOptions.serviceCode	String	REQ	The service code associated with the shipment. See appendix.	'308'
requestOptions.pickupDate	String	REQ	Date of the Pickup in YYYY-MM-DD format.	'2024-03-29'
requestOptions.type	String	REQ	Rating Call Type. Possible values : `L`	'L'
requestOptions.densityEligible	Boolean	OPT	Indicates whether the rate request is eligible for density-based pricing.	false
requestOptions.timeInTransit	Boolean	OPT	Indicates if Time in Transit information is requested and will be returned.	true
requestOptions.quoteNumber	Boolean	OPT	Indicates if a Quote Number will be returned for this LTL Freight Rate quote request.	true
requestOptions.customerContext	String	OPT	Contextual information provided by the customer for the request.	'REF123456'
shipFrom	Object	REQ	Origin information container.	{ }
shipFrom.address	Object	REQ	Origin location information container.	{ }
shipFrom.address.city	String	OPT	Shipper's city.	Richmond
shipFrom.address.stateProvinceCode	String	OPT	Shipper’s state or province code.	VA
shipFrom.address.postalCode	String	REQ	Shipper’s postal code.	23224
shipFrom.address.country	String	REQ	Shipper’s country code. See appendix.	US
shipFrom.isResidential	Boolean	OPT	Indicates that the shipment requires a residential pickup.	false

Property Name	Type	Req?	Description	Example Value
shipTo	Object	REQ	Destination information container.	{ }
shipTo.address	Object	REQ	Destination location information container.	{ }
shipTo.address.city	String	OPT	Destination (consignee's) city.	"Richmond"
shipTo.address.stateProvinceCode	String	OPT	Destination (consignee's) state or province code.	"VA"
shipTo.address.postalCode	String	REQ	Destination (consignee's) postal code.	"23224"
shipTo.address.country	String	REQ	Destination (consignee's) country code. See appendix.	"US"
shipTo.isResidential	Boolean	OPT	Indicates that the shipment requires a residential delivery.	false
payment	Object	REQ	Container for information about the payment.	{ }
payment.payer	Object	REQ	Container for information about the payer.	{ }
payment.payer.address	Object	REQ	Container for information about the payer's location.	{ }
payment.payer.address.city	String	OPT	Payer's city.	Richmond
payment.payer.address.stateProvince Code	String	OPT	Payer's state or province code.	VA
payment.payer.address.postalCode	String	REQ	Payer's postal code.	23224
payment.payer.address.country	String	REQ	Payer's country code. See appendix.	US
payment.billingCode	String	REQ	Shipment Billing code. See appendix.	30
serviceOptions	Object	OPT	Service options for the shipment.	{ }
serviceOptions.pickup	Array of Strings	OPT	Shipment Pick up service options. See appendix.	['INPU', 'LIFO']
serviceOptions.delivery	Array of Strings	OPT	Shipment delivery service options. See appendix.	['INDE', 'LIFD']

Property Name	Type	Req?	Description	Example Value
serviceOptions.shipment	Object	OPT	Includes properties for freezableProtection, extremeLength, adjustedHeight, sortAndSegregate, and excessValue.	{ }
serviceOptions.shipment.freezableProtection	Boolean	OPT	Indicates whether freezable protection is required	true
serviceOptions.shipment.extremeLength	Object	OPT	Container indicating the shipment contains an item of extreme length.	{ }
serviceOptions.shipment.extremeLength.value	String	REQ	Indicates the shipment contains an item of extreme length. Dimensional length of the article(s) given in feet.	'15'
serviceOptions.shipment.extremeLength.unit	String	REQ	Unit of measurement for extreme length, default is FEET.	'FEET'
serviceOptions.shipment.adjustedHeight	Object	OPT	Adjusted height container.	{ }
serviceOptions.shipment.adjustedHeight.value	String	REQ	Adjusted height value	'10'
serviceOptions.shipment.adjustedHeight.unit	String	REQ	Unit of measurement for the adjusted height	'IN'
serviceOptions.shipment.sortAndSegregate	Object	OPT	Information on units for sorting/segregation.	{ }
serviceOptions.shipment.sortAndSegregate.quantity	Number	REQ	Quantity of units to be sorted/segregated	5
serviceOptions.shipment.excessValue	Object	OPT	Information container for excess value information.	{ }
serviceOptions.shipment.excessValue.value	String	REQ	Excess value amount	'1000'
serviceOptions.shipment.excessValue.currency	String	REQ	Excess value amount currency type. Valid value: USD - United States Dollar	'USD'

Property Name	Type	Req?	Description	Example Value
commodities	Array of Objects	REQ	List of commodities information for the shipment. Must have at least 1 item and can have up to 100.	[{ }]
commodities[].class	String	OPT	Freight Classification	'100'
commodities[].nmfc	Object	OPT	Container for NMFC information.	{ }
commodities[].nmfc.prime	String	OPT	National Motor Freight Classification Commodity prime code. Consists of 6 digits representing the NMFC prime Code	'123456'
commodities[].nmfc.sub	String	OPT	National Motor Freight Classification Commodity sub code. Consists of 2 digits representing the NMFC sub Code	'01'
commodities[].pieces	Integer	REQ	Number of pieces of the commodity in the handling unit	1
commodities[].weight	Object	REQ	Container for the weight of the commodity.	{ }
commodities[].weight.weight	Number	REQ	The value for the line item weight associated with the shipment	200
commodities[].weight.weightUnit	String	REQ	Commodity Weight Unit Of Measurement. Accepts 'LBS' for pounds.	'LBS'
commodities[].packagingType	String	REQ	TForce Freight packaging type associated with the shipment. See the appendix.	'BAG'
commodities[].dangerousGoods	Boolean	OPT	Indicates that the commodity is of type dangerous goods	true
commodities[].dimensions.length	Number	OPT	The length of the line item used to determine dimensional weight. Max value: 324 inches.	10

Property Name	Type	Req?	Description	Example Value
commodities[].dimensions.width	Number	OPT	The width of the line item used to determine dimensional weight. Max value: 96 inches.	15
commodities[].dimensions.height	Number	OPT	The height of the line item used to determine dimensional weight. Max value: 102 inches.	20
commodities[].dimensions.unit	String	CON	The code associated with the unit of measure for the line item	'inches'
handlingUnits	Array of Objects	REQ	List of handling unit information for the shipment.	[ ]
handlingUnits[].pieces	Integer	REQ	Handling Unit Quantity for Density based rating	1
handlingUnits[].weight	Object	REQ	Container for the weight of the handling unit.	{ }
handlingUnits[].weight.weight	Number	REQ	Handling unit weight value for the shipment	250
handlingUnits[].weight.weightUnit	String	REQ	Unit of Measurement for the Handling unit weight. Accepts 'LBS' for pounds.	'LBS'
handlingUnits[].packagingType	String	REQ	Packaging Types for the Handling Unit. See the appendix.	'PLT'
handlingUnits[].dangerousGoods	Boolean	OPT	Indicates that the commodity in the handling unit is of type dangerous goods.	true
handlingUnits[].dimensions	Object	REQ	Container for the dimensions of the handling unit.	{ }
handlingUnits[].dimensions.length	Number	REQ	The length of the line item in the handling unit used to determine dimensional weight. Maximum 324 inches.	40
handlingUnits[].dimensions.width	Number	REQ	The width of the line item in the handling unit used to determine dimensional weight. Maximum 96 inches.	48
handlingUnits[].dimensions.height	Number	REQ	The height of the line item in the handling unit used to determine dimensional weight. Maximum 102 inches.	60
handlingUnits[].dimensions.unit	String	CON	Unit of measurement for the dimensions of the handling unit. Accepts 'IN' for inches.	'IN'

Property Name	Type	Req?	Description	Example Value
ShipmentTotalWeight	Object	OPT	Container for the total weight of the shipment.	{ }
ShipmentTotalWeight.weight	Number	OPT	Total weight of the shipment.	500
ShipmentTotalWeight.weightUnit	String	OPT	Unit of measurement for total shipment weight. Accepts 'LBS' for pounds.	'LBS'
HandlingUnitWeight	Object	OPT	Container for the weight of the handling unit.	{ }
HandlingUnitWeight.weight	Number	OPT	Weight of the handling unit.	250
HandlingUnitWeight.weightUnit	String	OPT	Unit of measurement for the handling unit weight. Accepts 'LBS' for pounds.	'LBS'

Details for `/volumeRating` Endpoint

This endpoint allows for retrieving shipping rates on large volumes.

Request Body Properties

The request body must include detailed information such as requestOptions (service code, pickup date, etc.), shipFrom, shipTo, payment, serviceOptions, and commodities.

Property Name	Type	Req?	Description	Example Value
requestOptions.serviceCode	String	REQ	The code for the TForce Freight Service associated with the shipment. For Volume Rating, only code `308` is allowed.	'308'
requestOptions.pickupDate	Date	REQ	Date of the Pickup in YYYY-MM-DD format.	'2023-08-28'
requestOptions.type	String	REQ	Rating Call Type. Possible Values in V1 - L	'L'
requestOptions.timeInTransit	Boolean	OPT	Indicates if Time in Transit information is requested and will be returned.	true
requestOptions.quoteNumber	Boolean	OPT	Indicates if a Quote Number will be returned for this LTL Freight Rate quote request.	true
requestOptions.customerContext	String	OPT	Contextual information provided by the customer for the request.	'REF123456'
shipFrom.address.city	String	OPT	Shipper's city.	Richmond
shipFrom.address.stateProvinceCode	String	OPT	Shipper’s state or province code.	VA
shipFrom.address.postalCode	String	REQ	Shipper’s postal code.	23224
shipFrom.address.country	String	REQ	Shipper’s country code.	US
shipFrom.isResidential	Boolean	OPT	Indicates that the shipment requires a residential pickup.	false
shipTo.address.city	String	OPT	Consignee's city.	"Richmond"
shipTo.address.stateProvinceCode	String	OPT	Consignee’s state or province code.	"VA"
shipTo.address.postalCode	String	REQ	Consignee’s postal code.	"23224"
shipTo.address.country	String	REQ	Consignee's country code. See appendix.	"US"
shipTo.isResidential	Boolean	OPT	Indicates that the shipment requires a residential delivery.	false

Property Name	Type	Req?	Description	Example Value
serviceOptions.pickup	Array of Strings	OPT	Shipment Pick up service options. See appendix.	['INPU', 'LIFO']
serviceOptions.delivery	Array of Strings	OPT	Shipment Pick up service options. See appendix.	['INDE', 'LIFD']
serviceOptions.shipment	Object	OPT	Includes properties for freezableProtection, extremeLength, adjustedHeight, sortAndSegregate, and excessValue.	{}
serviceOptions.shipment.freezableProtection	Boolean	OPT	Indicates whether freezable protection is required	true
serviceOptions.shipment.extremeLength.value	String	CON	Indicates the shipment contains an item of extreme length. Dimensional length of the article(s) given in feet.	'15'
serviceOptions.shipment.extremeLength.unit	String	CON	Unit of measurement for extreme length, default is FEET.	'FEET'
serviceOptions.shipment.sortAndSegregate.quantity	Number	CON	Quantity of units to be sorted/segregated	5
serviceOptions.shipment.excessValue.value	String	CON	Excess value amount	'1000'
serviceOptions.shipment.excessValue.currency	String	CON	Excess value amount currency type. Valid value: USD - United States Dollar	'USD'
commodity[]	Array of Objects	OPT	Details of the commodities included in the shipment	[{...}]
commodity[].linearfeet	String	REQ	Linear Feet of the commodity for volume calculation	'44'
commodity[].pieces	Integer	OPT	Number of pieces of the commodity in the handling unit	3

Property Name	Type	Req?	Description	Example Value
commodity[].weight	Object	REQ	Weight of the commodity	{ "weight": 10000, "weightUnit": "LBS" }
commodity[].weight.weight	Number	REQ	Weight value of the commodity	10000
commodity[].weight.weightUnit	String	REQ	Weight unit of the commodity	'LBS'
commodity[].packagingType	String	OPT	TForce Freight packaging type associated with the shipment. See the appendix.	'BAG'
ShipmentTotalWeight.weight	Number	OPT	Total weight of the shipment.	500
ShipmentTotalWeight.weightUnit	String	OPT	Unit of measurement for total shipment weight. Accepts 'LBS' for pounds.	'LBS'
HandlingUnitWeight.weight	Number	OPT	Weight of the handling unit.	250
HandlingUnitWeight.weightUnit	String	OPT	Unit of measurement for the handling unit weight. Accepts 'LBS' for pounds.	'LBS'

Details for `/openapi` Endpoint

This endpoint provides the OpenAPI metadata for the Rating API and 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.

Rating API Response Structure and Codes

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

Rating Response Body Properties

These tables summarize and describe the different response body properties you may encounter.

Understanding These Tables

These tables represent 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:
`{ "summary": { "responseStatus": { "code": "OK" } } }`
	In the response, the
	`code`
	is nested within
	`responseStatus`
	which itself is nested within
	`summary`
	Hence, the dot notation
	`summary.responseStatus.code`

Rating Response Properties

The response properties are the same for both `GetRate` and `VolumeRating` endpoints

Property	Type	Description
summary	object	Summary of the rating operation result.
summary.responseStatus	object	Object containing the response status.
summary.responseStatus.code	string	The response code indicating the result of the rating operation.
summary.responseStatus.message	string	The descriptive message corresponding to the response code.
summary.transactionReference	object	Object containing the transaction reference details.
summary.transactionReference.transactionId	string	The unique identifier for the rating transaction.
summary.classDensityIndicatior	string	Indicates the conversion code of the rates.

Property	Type	Description
summary.quoteNumber	string	The Quote Number returned in the response associated to the specific LTL Freight Rate returned in the response.
summary.minimumChargesApplied	boolean	The presence of the tag indicates the rate returned has a minimum charge applied to it.
summary.customerContext	string	The Customer Context Information which will be echoed during response.
summary.isRegisteredUser	boolean	Indicated whether the user is registered or not.
summary.publishedRates	boolean	Indicates when the published rates are returned.
detail	array	An array of details for each item in the rate request. All applicable services will be returned for each call.
detail[].detailStatus	object	Object containing the status details for the individual rate.
detail[].detailStatus.code	string	The code indicating the status of the rate detail.
detail[].detailStatus.message	string	The message describing the detail status code.
detail[].alerts[]	array	An array of rate items, each containing a code, description, value, and unit.
detail[].alerts[].code	string	The code for the specific rate type.
detail[].alerts[].message	string	A text description of the rate type.
detail[].service	object	Object containing information about the service associated with the shipment.
detail[].service.code	string	The code representing the specific TForce Freight Service for the shipment.
detail[].service.description	string	A description of the TForce Freight Service related to the service code.
detail[].rate	array	An array of rate items, each containing a code, description, value, and unit.
detail[].rate[].code	string	The code for the specific rate type.
detail[].rate[].description	string	A text description of the rate type.
detail[].rate[].value	number	The numeric value of the rate.
detail[].rate[].unit	string	The unit of measure for the rate, typically currency.
detail[].commodities	array	An array of commodities included in the rate detail.
detail[].commodities[].description	string	Description of the commodity.

Property	Type	Description
detail[].commodities[].weight	object	Object containing weight details of the commodity.
detail[].commodities[].weight.weight	string	The actual weight of the commodity.
detail[].commodities[].weight.adjustedWeight	string	The adjusted weight of the commodity, if applicable.
detail[].commodities[].weight.weightUnit	string	The unit of weight measurement.
detail[].shipmentCharges	object	Object containing the total charges for the shipment.
detail[].shipmentCharges.total	object	Object containing the total value and currency of the shipment charges.
detail[].shipmentCharges.total.value	string	The total charge value for the shipment.
detail[].shipmentCharges.total.currency	string	The currency code for the total shipment charges.
detail[].shipmentWeights	object	Object containing information about the shipment weights.
detail[].shipmentWeights.billable	object	Object containing the billable weight of the shipment.
detail[].shipmentWeights.billable.value	string	The billable weight value for the shipment.
detail[].shipmentWeights.billable.unit	string	The unit of measurement for the billable weight (e.g., LBS).
detail[].serviceCenter	object	Object containing service center details.
detail[].serviceCenter.origin.code	string	Code for the origin service center.
detail[].serviceCenter.origin.name	string	Full name of the origin service center.
detail[].serviceCenter.destination.code	string	Code for the destination service center.
detail[].serviceCenter.destination.name	string	Full name of the destination service center.
detail[].ratedAs[].class	string	Freight Classification.
detail[].ratedAs[].weight	string	Weight value for the class.
detail[].timeInTransit	object	Object containing the time in transit for the shipment.
detail[].timeInTransit.value	string	The value representing the time in transit for the shipment.
detail[].timeInTransit.unit	string	The unit of measurement for the time in transit (e.g., DAY).

Formatting and Common Element Constraints

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

Data Types

The Rating API utilizes various data types, including:

- **String:** Used for textual data such as city names, state/province 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 options such as 'densityEligible' and 'timeInTransit'.
- **Array:** A collection of elements, often used for lists like 'pickup' and 'delivery' service options.
- **Object:** Represents complex data structures, like 'shipFrom', 'shipTo', and 'commodities'.

Value Constraints

Certain elements have specific constraints. For example:

- **Service Code:** Must be one of the specified enumeration values (e.g., '308', '309', '334').
- **Billing Code:** Should match one of the predefined codes (e.g., '10', '30', '40').

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.

- **Date Format:** Dates must be in the 'YYYY-MM-DD' format. Example: `"2023-08-28"`
- **Weight Unit:** Must be a valid unit (e.g., 'LBS' for pounds).
- **Dimensional Units:** Length, width, and height units must be consistent and valid (e.g., 'inches', 'feet').
- **NMFC Codes:** National Motor Freight Classification codes must follow the specified format.

Specific Restraints

For a deeper understanding of constraints, refer to the specific request or response body properties.

> **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 Rating API.

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 Rating RESTful API requests to:

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

Production Environment

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

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

Using Negotiated Rates in CIE

The negotiated rates returned do not reflect the contractual rate. Typically the Negotiated Rates in CIE will differ from your actual rates.

Additionally, the shipper eligibility for negotiated rates is not fully verified in the Customer Integration Environment.

Appendix

Frequently Asked Questions (FAQ)

Category	Question	Answer
Rating	How can I view my TForce Freight (TFF) negotiated rates?	To view your TFF negotiated rates, the postal code must match the payer and the postal code of the set-up account.
Fuel Surcharge	Is the Fuel Surcharge listed as a separate line item in the response for TFF Rating API?	Yes, the fuel surcharge is listed as a separate line item within the response.
TForce Freight Shipping	What are the supported TForce Freight countries and territories?	TForce Freight country or territory origins include US, CA & MX. Service for other territories is available by contacting Customer Service.
Maximum Shipment Weight	What is the maximum shipment weight for TForce Freight LTL?	The maximum weight for TForce Freight LTL is 19,999 lbs. Shipments 20,000 lbs. or over are considered a Truckload (TL) movement.
Rating	Is Pallet Rating supported for TForce Freight?	Pallet rating is not supported for online rating with TForce Freight.
Rating	Does the API rate offshore shipments for TForce Freight?	No, please contact Customer Service for offshore rating.
Rating	Are there any rate structures that are not allowable for TForce Freight?	No.
Rating	Is 3rd Party or Freight Collect available through the TForce Freight Rating or Shipping APIs?	Yes, but only for the customer that is paying the invoice. Others can create a Bill of Lading.
Rating	What rates can be returned using the TForce Freight rating API?	Published rates based on the TForce Freight 560 tariff or a contract rate negotiated with TForce Freight.
Rating	Can I choose the rate I want returned in the rate request for TForce Freight?	No, the API supports a single rate type based on your setup with TForce Freight.
Time in Transit	Is Time in Transit available through the TForce Freight Rating or Shipping APIs?	Yes, Time in Transit is available and does not include Weekends or Holidays.
Maximum Linear Feet	What is the maximum Linear feet allowed for TForce Freight LTL Ground Freight?	The maximum dimensional length is 26 feet, subject to change based on business rules.

Category	Question	Answer
GF (LTL) Rating	How can I add locations to a contract with TForce Freight?	Contact our Freight sales representative to add accounts and locations to the negotiated rates.
General	Is phone support provided for TForce Freight Developer APIs?	Support will be provided via email at groundfreightapisupport@tforcefreight.com.

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.

Response Status Codes

Code	Description
PRT	Partial return.
OK	Successful operation
NFO	Rate not found.

Service Codes

Service Code	Description
308	TForce Freight LTL (US/US, US/ CA)
309	TForce Freight LTL - Guaranteed
334	TForce Freight LTL - Guaranteed A.M.
349	TForce Standard LTL (US/MX)

Rate Codes

Code	Description	Example Value	Unit
DSCNT	Discount	0	USD
DSCNT_RATE	Discount Rate	0	USD
INDE	INSIDE_DL	169.0	USD
INPU	INSIDE_PU	169.0	USD
RESP	RESIDENTIAL_PU	207.0	USD
RESD	RESIDENTIAL_DL	207.0	USD
LIFD	LIFT_GATE_DL	175.0	USD
LIFO	LIFT_GATE_PU	175.0	USD
FUS_FEE	Fuel Surcharge Fee	249.45	USD
LND_GROSS	LND_GROSS	588.32	USD
AFTR_DSCNT	AFTR_DSCNT	588.32	USD

Pickup Codes

Code	Description
WHPU	Warehouse Pickup
INPU	Inside Pickup
RESP	Residential Pickup
LIFO	Liftgate Pickup
LAPU	Limited Access Pickup
TRPU	Tradeshow Pickup

Delivery Codes

Code	Description
NTFN	Notification Before Delivery
WHDL	Warehouse Delivery
INDE	Inside Delivery
RESD	Residential Delivery
LADL	Liftgate Delivery
LIFD	Limited Access Delivery
TRDS	Tradeshow Delivery

Packaging Type Codes

Handling Package Codes

Handling Package Type Code	Description
CY	Cylinder
CAR	Carrier
LOO	Loose
PAL	Pail
OTH	Other
PLT	Pallet
SKD	Skid
TOT	Totes

Commodity Package Codes

Commodity Package Type Code	Description
BAG	Bag
BAL	Bale
BAR	Barrel
BDL	Bundle
BIN	Bin
BOX	Box
BSK	Basket
BUN	Bunch
CAB	Cabinet
CAN	Can
CAR	Carrier
CAS	Case
CBY	Carboy
CON	Container
CRT	Crate
CSK	Cask

Commodity Package Type Code	Description
CTN	Carton
CYL	Cylinder
DRM	Drum
LOO	Loose
OTH	Other
PAL	Pail
PCS	Pieces
PKG	Package
PLN	Pipe Line
PLT	Pallet
RCK	Rack
REL	Reel
ROL	Roll
SKD	Skid
SPL	Spool

Billing Codes

Billing Code	Description
10	Prepaid
30	Bill to Third Party
40	Freight Collect

Call Type Codes

Type Code	Description
L	LTL only

Country Codes

Country	Abbreviation
Canada	CA
Mexico	MX
United States of America	US

Canadian Province and Territory Codes

Province/Territory	Abbreviation	Province/Territory	Abbreviation
Alberta	AB	Nunavut	NU
British Columbia	BC	Ontario	ON
Manitoba	MB	Prince Edward Island	PE
New Brunswick	NB	Quebec	QC
Newfoundland and Labrador	NL	Saskatchewan	SK
Northwest Territories	NT	Yukon	YT
Nova Scotia	NS		

US State Codes

State	Abbreviation	State	Abbreviation
Alabama	AL	Montana	MT
Alaska	AK	Nebraska	NE
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Colorado	CO	New Mexico	NM
Connecticut	CT	New York	NY
Delaware	DE	North Carolina	NC
Florida	FL	North Dakota	ND
Georgia	GA	Ohio	OH
Hawaii	HI	Oklahoma	OK
Idaho	ID	Oregon	OR
Illinois	IL	Pennsylvania	PA
Indiana	IN	Rhode Island	RI
Iowa	IA	South Carolina	SC
Kansas	KS	South Dakota	SD
Kentucky	KY	Tennessee	TN
Louisiana	LA	Texas	TX
Maine	ME	Utah	UT
Maryland	MD	Vermont	VT
Massachusetts	MA	Virginia	VA
Michigan	MI	Washington	WA
Minnesota	MN	West Virginia	WV
Mississippi	MS	Wisconsin	WI
Missouri	MO	Wyoming	WY