



Gatehouse
Maritime

Service Descriptions and Throttling

For OceanIO® Services

Service Descriptions and Throttling

In relation to the use of the OceanIO® Services.

1 Service Descriptions

Container Tracking includes the following features:

1. Track any given container in a given time interval from Port of Loading (POL) to Port of Discharge (POD).
2. Initiate tracking based on container ID, B/L (optional), or booking number (optional).
3. DCSA compliant event API. Supported equipment events: GTIN, LOAD, DISC, GTOT. Supported transport events: ARRI, DEPA.
4. Port information such as name, latitude/longitude, time zone on all event types available.
5. Predictions on Arrival (ARRI) and Departure (DEPA).
6. Predictions on Discharge (DISC) and Gate Out Laden (GTOT LADEN).
7. Delivered as a REST API* with pull (get) and push (webhook) support.
* Fair usage limit: 300 transport ID API requests per month and max 5% transports without SCAC.

Transport Tracking includes the following features:

1. Transport Tracking is an optional add-on feature to the Container Tracking service. As a result, all available features from the standard Container Tracking service are implicitly available when initiating a Transport Track.
2. In addition, Transport Tracking provides Vessel routes for all vessels the container is loaded on between POL and POD for major carriers. Combination of historic, current, and predicted/future positions.
3. Estimated and actual arrival/departure times to all port calls between POL and POD.
4. Delivered as a REST API*.
*Fair usage limit: 3,000 track ID API requests per calendar month.

Container Snapshot includes the following features:

1. Provides a single status update on of any given Container transport.
2. Initiate the snapshot based on either container ID, B/L or booking number.
3. Depending on when the snapshot is requested the service provides the following in a DCSA compliant format:
 - a. GTIN, LOAD, DEPA, ARRI, DISC, GTOT
 - b. Predictions on ARRI, DEPA, DISC, GTOT LADEN
4. Port information such as name, latitude/longitude, time zone on all event types is available.
5. Delivered as a REST API with pull (get) support.

Vessel Tracking Basic includes the following features:

1. Provides any vessel with latest/current position.
 - a. Fair usage limit: 3,000 API requests per unique Vessel identifier per calendar month.
2. Provides any vessel with historic positions.
 - a. Usage of the historic endpoints are charged per posted (POST) historic position request.
3. Delivered as a REST API.

Vessel Tracking Advanced includes the following features:

1. Container vessel route between POL and POD for all major carriers. Combination of historic, current, and predicted/future positions.
2. Estimated arrival times to all port calls between POL and POD.
3. Calculated ETA to next port on route.
4. Delivered as a REST API*.
*Fair usage limit: 3,000 track ID API requests per calendar month.

Port Intelligence includes the following features:

1. Statistics delivered as 4 duration metrics (average, median, min., max.) for both anchorage and berthing for a given container port.
2. Statistics delivered as 4 duration metrics (average, median, min., max.) for both import and export dwell.
3. Statistics delivered as 4 duration metrics (average, median, min., max.) for containers transported between 2 ports.
4. Vessel information (IMO#, name, arrival date) for container vessels currently at anchor and at berth for a given port.
5. Definition of user individual port congestion threshold.
6. Exception notifications on the above-mentioned congestion threshold.
7. Delivered as a REST API.
8. Usage rate: When port intelligence APIs are called as using lists, charges will apply per port or port pair.

Schedules includes the following features:

1. Schedule for a container vessel (IMO number)*.
 2. Provides a list of vessel schedules for multiple carriers between origin (lo-code) and destination (lo-code)*.
 3. Predicted schedule, future port calls with ETA for a given vessel (IMO)*.
 4. Notification when a given vessel schedule changes over 30 days – port call is omitted/added, timing changes.
 5. Delivered as a REST API
- * For all major carriers as described in the API documentation.

Route includes the following features:

1. Provides an expected route (positions) to a target port from a latitude and a longitude*.
 2. Provides an expected route (positions) from a given vessel IMO to a target port*.
- * Calculated with draught 15 meters.

Next Port

1. Provides a predicted next port probability for a Vessel IMO including ETA.
2. Provides a predicted vessel IMO list probability including ETA for which vessels are having the requested port as their next port call.
3. Delivered as a REST API.

Trade Lane Analytics

1. Trade Lane Analytics provides journey statistics for the selected Origin and Destination port pair with filtering options on both Time and Carrier.
2. The statistics contains the number of Omits for both Origin and Destination
3. The statistics contains the number of Delays for both Origin and Destination
4. The statistics contains shipper and carrier caused Rolls in percentage.
5. Delivered as a REST API

2. Maximum five percent SCAC rule for Container Tracking

If the amount of container transports without SCAC exceed 5% of the total amount of transports during a month, all container transports without SCAC will be charged twice.

Example: *The total amount of container transports is 200 and the amount of these container transports without SCAC is 140, the charge will be calculated as follows: (200 * price per Container Track) + (140 * price per Container Track) = 340 container tracks used.*

Transports created with "FAILOVER_TO_NO_SCAC" and an erroneous SCAC are charged as transports without SCAC and will accumulate in the max. 5% rule.

3. Fair usage detailed description

Fair usage limits are set to ensure and encourage correct use of the platform. In other words, a normal use of the platform will not trigger reaching the fair usage limit. If the fair usage limit is passed for a specific Service, a customer will be charged extra for the use of the Service corresponding to the amount of the fair usage limit passed.

Container Tracking's fair usage limit (300 requests per transport-IDs) is not calculated when the preferred tracking option Webhook (push) is used and neither if normal pull option "GET /events" is used.

In case of webhook use, the platform is configured to timeout after 6 seconds and as default the OceanIO platform will post 5 events/second.

The fair usage applies for the use of (all versions):

- GET /equipments/{equipment_reference}/events, or
- GET /transport/bill_of_lading_number/{bill_of_lading}/events, or
- GET /transports/carrier_booking_reference/{carrier_booking_reference}/events.

Vessel Track Basic fair usage limit is 3,000 API latest/current position requests per unique Vessel identifier per calendar month. Vessel Track Basic historic position are charged per historic request.

Vessel Track Advanced fair usage limit is 3,000 track ID API requests (GET /tracks/{id}) per month.

Port Intelligence does not have any fair usage limits and pricing is calculated as 10 API calls equals 1 price item.

In case a fair usage limit is reached charges will be applied twice. Example: In case a Vessel Track Advanced track ID is requested more than 3.000 times per month 2 Vessel Track Advanced are charged.

4. Throttling

To protect the services from being overwhelmed with unnecessary requests we implemented a fair throttling limit. We recommend that Client-side handles traffic shaping in order to follow the throttle limits defined in this Service Description. Different throttle limits are defined for both Demo and Production environment. An unsuccessful API request counts similar as a successful request in terms of throttling.

The following throttle settings are defined on the API gateway:

- **Rate limit**
 - Refers to the rate at which tokens are added to the Token bucket. This value indicates the average number of requests per second over an extended period.
- **Burst**
 - The capacity of the Token bucket. The limit refers to the number of requests the API can absorb concurrently.
- **Quota**
 - Refers to the total number of requests you can perform in each period. The limit resets at UTC 00:00:00 on the first day of the month.

Throttling is configured as follows for both Demo and Production environment:

| Generic limitation | Demo | Production | Demo after Production account has been created |
|---------------------|-----------------|------------------|--|
| Rate Limit | 20/sec | 20/sec | 3/sec |
| Burst Limit | 20/sec | 20/sec | 3/sec |
| Monthly Quota Limit | 1.000.000/month | 10.000.000/month | 1.000/month |

Besides the above-mentioned general throttling limits, the following applies for these specific endpoints:

| Service (Endpoint) | Verb | Rate limit | Burst limit |
|---|------|------------|-------------|
| Create new Vessel Track (/track) | POST | 1/sec | 1/sec |
| Create new Container Track (/transport) | POST | 15/sec | 10/sec |