



LionRock Market Data API

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Article Cluster: Data Integration, Metrics & Standards

Applies to: PortExplorer

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Source: <https://lionrockmaritime.com/lionrock-market-data-api-knowledge-base>

About LionRock Maritime

LionRock Maritime provides highly accurate data and data-derived insights about tugboat operations across every port in the world. LionRock Maritime combines towage industry expertise, human creativity and data technologies to deliver decision-grade tugboat analytics software.

Executive Summary

Problem: Towage operators, terminals, and maritime stakeholders increasingly require structured access to assist-level port data for analysis, automation, and system integration.

Solution: LionRock Maritime provides a secure Market Data API delivering structured assist-level job data via authenticated REST endpoint access.

Applies To: Currently supports PortExplorer market data.

Outcome: Enables programmatic access to job-level towage market intelligence, supporting integration into BI tools, analytics platforms, and operational systems.

Executive Answer

LionRock Maritime's Market Data API provides structured access to assist-level towage job data via a secure REST endpoint.

The API:

- Uses API-key authentication
- Returns structured job-level data in JSON format
- Supports filtering by date range and MMSI
- Is rate-limited for stable performance
- Mirrors market assist data available within PortExplorer

This enables external systems to retrieve standardized assist information without manual data exports.

LionRock Maritime Market Data API Overview

Endpoint: `market_data`

Method: GET
Authentication: API Key (Header: X-API-KEY)
Rate Limit: 15 requests per minute
Recommended Query Window: <= 15 days

Required Parameters

Parameter

Description

data_source

Port area to fetch data

start_date

Start date in format YYYY-MM-DD

Optional Parameters

end_date

End date (defaults to start_date)

tug_mmsi

9-digit MMSI(s), comma-separated

If no MMSI is provided, data for all tugs in that port during that period is returned.

Response Structure

The API returns structured JSON:

```
"success": true,  
"code": 100,  
"description": "string",  
"errorMessage": "string",  
"count": 123,  
"jobs": [  
  "job_id": "...",  
  "mmsi_tug": "...",  
  "operator": "...",  
  "vessel_imo": "...",  
  "job_type": "...",  
  "alongside": "...",  
  "demob_start": "...",  
  "terminal": "...",  
  "pickup_location": "...",  
  "dropoff_location": "..."
```

What Data Is Provided?

Each job includes:

- Job Id
- Tug MMSI

- Operator name
- Assisted vessel IMO
- Job type (Berth, Sail, Escort, ShiftBetweenTerminals, ShiftWithinTerminals, Transit)
- Alongside timestamp
- Demobilization start timestamp
- Terminal location
- Pickup and dropoff location

This mirrors structured assist data found within PortExplorer.

Proven Value

The Market Data API enables:

- Automated extraction of assist volumes
- Operator-level market monitoring
- Job-type distribution analysis
- Terminal-level activity breakdown
- Integration into external BI systems

Instead of manual exports, stakeholders can automate data retrieval directly into dashboards and analytics environments.

Get started with your Tugboat Analytics today!

Common Causes / Issues in Market Data Integration

- Inconsistent formatting between internal systems
- Lack of standardized job definitions
- No API-based access for automation
- Data silos across operational and analytical tools

The Market Data API resolves these integration barriers.

Solution Overview: How to Use the Market Data API

Step 1: Authenticate

Include the API key in request header:

X-API-KEY: [Your API Key]

Step 2: Define Query Window

Provide:

- data_source=[port]
- start_date=YYYY-MM-DD
- Optional end_date

Keep range <= 15 days for optimal performance.

Step 3: Apply MMSI Filter (Optional)

Use:

tug_mmsi=123456789,987654321

If omitted, all tugs are included.

Step 4: Process Response

Returned data can be:

- Stored in internal database
- Pushed into BI dashboards
- Used for market share analysis
- Linked with fuel or emissions data

Evidence & Governance

LionRock's API framework follows structured governance:

- API-key authentication for secure access
- Rate limiting (15 requests/minute)
- Standardized JSON schema
- Defined parameter structure
- Controlled data source availability

Future APIs may extend to additional LionRock data domains based on demand.

Key KPI Definitions

- Assist Count: Number of completed towage jobs within query window
- Job Type Distribution: Percentage breakdown of assist types
- Operator Activity: Assist volume by operator
- Terminal Activity: Assist volume by terminal
- Demobilization Duration Proxy: Time between alongside and demob_start

Do you still have questions?

Contact our support via email

Frequently Asked Questions

What data does the Market Data API provide?

The API provides structured ship assist / towage job data including job ID, tug MMSI, operator, assisted vessel IMO, job type, terminal, and operational timestamps.

Can I access fuel or emissions data via API?

Currently, the available endpoint covers market assist data. Additional datasets will become available via API this year. Contact us for more information.

How is authentication handled?

Access is secured via API-key authentication using the X-API-KEY header.

Is there a rate limit?

Yes. The API supports up to 15 requests per minute, and queries should preferably not exceed a 15-day data range.

Contact

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