



Save time, fuel, & money

by optimizing your voyages with integrated decision support

Our Vessel Routing API saves you money through performance optimization — without compromising safety.

The weather influences an estimated 80% of vessel performance calculations. This can result in significant changes to the estimated times of arrival (ETAs), a poor understanding of potential delays, and an increase in voyage operating costs.

Our Vessel Routing API provides a recommended, weather-optimized route that any application can easily ingest for greater ease of use. With it, you can improve your safety and situational awareness, increase the accuracy of your ETAs, better anticipate likely delays, and reduce operational and logistical costs. Powered by advanced AI, it also delivers key metadata for each route, so your team can quickly and easily compare various options. The API's versatility provides the flexibility needed to generate solutions via an endless combination of routing options.

With Vessel Routing API, you can...

- Get safe, navigable routes on-demand.
- Improve the accuracy of your ETAs.
- Optimize routes by time, fuel, or cost.
- Compare available routes with a multitude of options, restrictions, and weather configurations.
- Deliver data through your applications via secure, efficient, and reliable infrastructure.

Maintain safety throughout

Choose from up to 30+ safety parameters to set your thresholds for a specific route. Based on your preference, the algorithm will either warn if the threshold is exceeded or help you avoid the threshold entirely.

Additional customization includes:

- Inserting custom waypoints
- Defining area restrictions
- Selecting precision-vessel profiles
- Uploading proprietary vessel profiles and editing a vessel's fuel/speed curve

With these options, our Vessel Routing API provides you with maximum flexibility for the many use cases and challenges your team faces when planning voyages.

Optimize routes your way

Our powerful Vessel Routing API supports these navigable routing types:

- **Fixed speed:** an instructed speed where you select your set speed through the voyage to support charter party agreement.
- **Flexible speed:** a recommended speed where you choose the best speed based on a provided range, with the return speed optimized to reach a destination with a flexible ETA.

- **Variable ETA:** uses a variable speed to optimize the voyage and avoid weather threats while helping the vessel reach its destination at the specified time.
- **Variable speed endpoint:** arrive as closely as possible before your target ETA with a route calculation that provides a recommended variable speed along a weather-optimized route.
- **Smart voyage restrictions:** ensure you adhere to local, national, and global maritime regulations, as well as vessel, cargo, and gross tonnage restrictions. Our automatic voyage optimization also helps you avoid passages and canals not suited to specific vessels while respecting maritime fairways and traffic separation schemes.

Optimize routes by:

- **Time:** find the fastest way to your destination.
- **Emissions & fuel:** ensure the least amounts to reach the destination, reducing impacts.
- **Cost:** discover the lowest cost considering ECA fuels, daily hire, and more.

Improve vessel performance

The solution's weather optimized routing helps increase vessel performance by maximizing favorable currents and winds.

How we help

Our Vessel Routing API allows application builders to innovate beyond traditional use cases. It offers simple integration into client applications, with minimal requirements, using our scalable, secure, and reliable infrastructure.



Enable better decisions across multiple roles:

- Charters can analyze all route options before and during voyages — and see real ETA calculations that include weather resistance and avoidance data.
- Owners can minimize idle vessel time, maximize performance, adapt routes to reduce greenhouse gas emissions and carbon dioxide, optimize fuel consumption, and advise captains on ideal speeds.
- Ports can see actual ETAs for inbound vessels and benchmark arrival times with better estimates to avoid congestion and maximize port logistics.
- Commodity traders can model the cost of changing vessel speeds and ports on market prices and see how storm systems affect commodity supply and prices in specific regions.

The DTN Advantage

We help strengthen your confidence in route optimization by integrating our data into your systems. Your team will anticipate the impacts of weather on vessel performance, which will improve ETA accuracy, help control costs, and prevent excessive fuel consumption. Our Vessel Routing API unlocks intelligent, flexible, and actionable insights, safely empowering informed decisions.