Save Time, Fuel, and Money

By optimizing your voyages with integrated decision support

The Weather Optimized Routing API saves you money through predicted performance optimization — without compromising safety.

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

With the DTN Weather Optimized Routing API, you'll receive a recommended route that is easily ingested by any application. This can help you improve safety and situational awareness, increase the accuracy of your ETAs, better anticipate delays, and reduce operational and logistical costs. It also delivers key metadata for each route, allowing your team to easily compare different options. The API's versatility provides the flexibility to generate solutions via an endless combination of routing options.

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With the Weather Optimized Routing API you can...

- Create safe and reliable routes on demand.
- Improve ETA accuracy based on a fixed speed, flexible speed, or fixed ETA.
- 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
- Editing a vessel's fuel/speed curve

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

Optimize routes your way

The Weather Optimized Routing API supports three routing types:

- **Single speed:** select a set speed through the voyage to support charter party agreements.
- **Flexible speed:** choose the best speed, based on a provided range, with the returned speed optimized to reach a destination with a flexible ETA.
- **Fixed ETA:** uses a variable speed, which optimizes the voyage to avoid weather threats, but helps the vessel reach your destination at the specified time.

Optimize routes by:
- **Time:** find the fastest way to your destination.
- **Fuel:** use the least amount to reach the destination, reducing impacts.
- **Cost:** discover the lowest cost considering ECA fuels, daily hire, and more.

Improve vessel performance
Create plans based on anticipated vessel performance that account for the effects of weather conditions on the voyage.

How we help

The Weather Optimized 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 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. The DTN Weather Optimized Routing API unlocks intelligent, flexible, and actionable insights, safely empowering informed decisions.

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