PRODUCT SHEET

NetWorks Comms Route Analyzer



Exceptional service delivery relies on resilient and diverse optical infrastructure in both distribution and transmission (backbone) telecommunications networks. Today's customers typically expect service level agreements (SLA) that include 99.99% scheduled uptime.

Such high availability requires diverse and alternate paths between network nodes to enable rerouting when a fault occurs on the main path. Another consideration when minimizing risk is to also minimize or eliminate single points of failure (SPOFs) on diverse routes whenever possible. Having diverse routes with no SPOF is especially important on backbone networks due to the greater customer impact if an incident disrupts circuits.

Octave NetWorks Comms | Route Analyzer (formerly HxGN NetWorks Comms | Route Analyzer) allows telecommunications companies to explore which options work best for customers, while offering the best diversity, at the lowest cost, all while avoiding SPOFs. It is part of the NetWorks Comms suite – an advanced telecommunications GIS that provides location-based information and tools for the complete lifecycle of civil infrastructure and fiber network management.

Route Analyzer provides tools for network designers, analysts and engineers to:

- **Optimize network investments:** Identify diverse paths between network nodes, allowing the visualization of the shortest, most cost-effective path
- **Ensure SLA-defined availability levels:** Pinpoint alternate paths while minimizing or eliminating SPOFs
- **Analyze existing and planned infrastructure, as defined by users:** Find potential alternate routes along existing cables with free fibers, or with new cable along existing underground or aerial infrastructure
- **Specify buffer zones around main routes:** Where possible, avoid building diverse routes within the buffer (any route within the buffer has a high chance of being a SPOF)



The primary path, diverse path and SPOFs are displayed in NetWorks Comms | Route Analyzer.

Features

- **Route finder:** Automatically generate paths between two points of the network to show ideal connections
- **Diverse paths generator:** Generate diverse paths to avoid primary paths between the same locations with closest acceptance buffer zone
- **SPOF finder:** Detect SPOFs between primary and diverse paths when overlapping in a set buffer and display them on a map
- **Intuitive settings panel:** Define calculation method and shortest or most cost-effective routes; define costs for each feature, e.g., cable, dock, inner dock path or wire; use existing infrastructure (trenches, fiber ducts and more) as defined by user
- **Algorithm-based decision-making:** Choose routes based on weighted variables, e.g., importance of cost, buffer zone exclusion, etc.

Explore Octave NetWorks

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

©2026 Octave Intelligence plc and/or its subsidiaries and affiliates. All rights reserved.