



Interoute Expands Networked Cloud with Infinera Intelligent Transport Network

CUSTOMER

Interoute

CHALLENGE

As part of its growth strategy, Interoute was looking to expand the bandwidth of its pan-European long-haul network to efficiently deliver new cloud-based network services to its customers

Interoute needed an easy-to-operate solution that would enable it to quickly and efficiently provision network services to support unpredictable capacity demands

SOLUTION

Infinera Instant Bandwidth, part of Infinera's Intelligent Transport Network offering, provides same-day deployment of permanent line-side bandwidth in 100G increments enabling Interoute to scale up quickly to meet customer demand

Infinera's Global Customer Service and Technical Support Team assists with network design and commissioning of Interoute's optical network

RESULTS

Interoute can now quickly scale its optical network, enabling it to extend its reach and to accelerate the speed with which network services can be deployed

Interoute increased service velocity, to provide its customers with best-in-class cloud computing, communications and connectivity services

INTERROUTE COMMUNICATIONS LTD. (INTERROUTE) is the owner operator of Europe's largest network and a global cloud services platform, which encompasses over 70,000 route kilometers (km) of fiber, 15 data centers, 17 virtual data centers and 33 colocation centers, with connections to 206 additional partner data centers. Interoute's optical network spans from Europe to North America, the Middle East, Africa and Asia, and serves startups, national and international enterprises, global telecommunication, mobile operators, over-the-top (OTT) and internet giants, system integrators, channel partners and governments. As an industry innovator, Interoute continues to provide digital solutions to an expanding customer base which requires the operator to have the ability to easily and quickly scale bandwidth on its optical network.

Interoute's Service Expansion Strategy

Interoute was born out of a vision to connect the business hubs of Europe with the continent's largest, fastest and most advanced fiber optic network. As owner-operator of a global cloud services platform and one of Europe's largest optical network, today this optical network encompasses over 70,000 km of fiber and is part of an extensive platform connecting over 206 data centers and colocation facilities across Europe with interconnects to North America, Africa and Asia.

Interoute provides connectivity, communications and computing services on its wavelength-division multiplexing (WDM) long-haul optical network. The company serves a diverse market from enterprises and government to telecommunications, OTT

and internet content providers, system integrators and channel partners—all who rely on Interoute to provide fiber-based, high-bandwidth network services.

Interoute's Challenge

Predicting unprecedented growth in bandwidth demand and always looking at ways to exceed customer expectations, Interoute was keen to bring cloud-based network services to market without delay. In addition to scaling network bandwidth, Interoute wanted an easy-to-operate solution that would enable it to quickly and efficiently deliver network services.

At the same time, Interoute was looking at ways to optimize its legacy technologies to reduce complexity, operational costs and unnecessary delays in turning up network services. This in turn gave Interoute an opportunity to quickly scale bandwidth on its optical network while rapidly expanding its cloud-based network services

to meet the demand. Interoute's growing customer base also demanded the network to be easy to operate so that

"Speedy service delivery is key in our industry and we pride ourselves on our ability to exceed market standards. Infinera's solutions have supported us in delivering high capacity services anywhere from 10G to 100G quickly, allowing us to efficiently provision services as the market dictates."

Don McAuley
Vice President, Global Sales
Interoute





Above: Interoute Optical Network and Cloud Services Platform Encompasses 15 Data Centers, 17 Virtual Data Centers, and 33 Colocation Centers, with Connections to over 206 Additional Third-party Data Centers Across Europe

it could access additional services including new computing, communications and connectivity. Interoute's challenges included:

Unrelenting Bandwidth Growth

- Growing demand for high-speed broadband and cloud-based network services drove the need for more bandwidth at the core of Interoute's long-haul optical network

Ease of Use

- Interoute required an easy-to-operate solution, one that would enable it to quickly and efficiently provision cloud-based network services without increasing operational costs
- Interoute demanded end-to-end service delivery capability under one network management system

Rapid Service Delivery

- Interoute expected to quickly deliver new computing, communications and connectivity network services to its wide range of customers
- To maintain a strong market position, Interoute was continuously looking at ways to reduce the time taken to turn up new network services

Infinera Selected for Interoute's Network Expansion

In 2005, Interoute decided to seek an alternative approach to address the challenges the company faced, issuing a request for proposal (RFP) to replace its 10 gigabit per second (10G)-capable long-haul optical network. Interoute selected Infinera to help it scale and increase bandwidth in 100G increments and provide network services to wholesale customers. The

"We are now one of the leading cloud service providers and future proofing the network and in turn the services we provide to customers is integral to maintain this position. Interoute and Infinera have worked together to integrate industry-leading technology for a number of years. The ability to adapt our existing Infinera DTN network to 100 gigabit Ethernet (GbE) next-generation services demonstrates the inherent value of the Infinera architecture."

Paul Montero
EVP, Platform Operations
& Engineering
Interoute



Infinera DTN-X XTC-10
Platform

Infinera Intelligent Transport Network included the Infinera DTN Platform, which enabled Interoute to rapidly grow its optical network with ease and minimum disruption to customers.

In 2012, Interoute anticipated a shift in market expectations from 10G to 100G services which meant it needed to enhance its network with the latest technology, and issued an RFP for a 100G-capable long-haul network. In 2013, Interoute again selected Infinera to solve its scaling requirements for both its new (greenfield) optical network paths and its existing (brownfield) optical network paths. The Intelligent Transport Network included Infinera's DTN-X XTC-10 Platform, along with Infinera's full turnkey services, Just-in-TIM services and spares management services. Infinera's Intelligent Transport Network enabled Interoute to:

Scale Network Bandwidth

- The Infinera DTN-X XTC-10 Platform enables the rapid deployment of 500G long-haul WDM super-channels
- Infinera's unique large-scale photonic integrated circuits

(PICs) enable 500G of long-haul super-channel bandwidth to be deployed from a single line card in the DTN-X XTC-10 Platform

- Infinera Instant Bandwidth enables pre-deployment of hardware bandwidth with pay-as-you-grow on-demand increments of 100G
- The DTN-X XTC-10 is designed to support 12 terabits per second (12T) of non-blocking packet optical transport network (OTN) switching converged with massively scalable WDM transmission

Accelerate Service Innovation

- Infinera Instant Bandwidth provides Interoute with same-day deployment of permanent line-side bandwidth in 100G increments
- Infinera's Just-In-TIM program provides rapid shipment of client-side interfaces with committed delivery of 10 days or less

Simplify Optical Network Operations

- Infinera's full turnkey deployment services combined with the DTN-X enable Interoute to scale bandwidth without scaling network operations staff

- Infinera's Digital Network Administrator (DNA) management system enables end-to-end service delivery
- Infinera's automated control plane provides Interoute with automatic topology discovery, thereby simplifying service provisioning and enabling sub-50 millisecond optical network protection

"We've rapidly expanded to provide cloud-based connectivity and computing network services to a wide range of customers. Infinera Intelligent Transport Networks and services have assisted our initiative by simplifying our optical network operations which in turn has decreased our service delivery timescales, enabling us to provide rapid 100G service rollout."

Meenesh Patel
Vice President Network Services
Products and Procurement
Interoute

- Infinera's spares management services simplify the process of ensuring the availability of critical spare parts across the optical network

Results

The Infinera Intelligent Transport Network and full turnkey, Just-in-TIM and spares management services enabled Interoute to achieve these results:

- Interoute fulfilled its aim to provide cloud-based connectivity, communications and computing network services to its wide range of customers in the shortest time possible
- Interoute's long-haul optical network can now deliver 8T of bandwidth per fiber with up to 500G super-channels that enable rapid delivery of 100G services across its pan-European optical network
- Interoute increased its network bandwidth, enabling the company to rapidly and efficiently deliver 10G to 100G cloud-based network services to wholesale network providers, data centers, enterprises, global telecommunication and mobile operators, OTT and internet content providers, system integrators, channel partners and governments
- Interoute increased service delivery velocity, enabling the company to provide rapid 100G network service delivery while keeping operational costs flat
- Infinera's Intelligent Transport Networks enable Interoute to scale network bandwidth, accelerate service innovation and simplify network operations

For more information on *Infinera Intelligent Transport Networks*, click <https://www.infinera.com/company/contact-us/> to contact us.