Virgin Media Business Develops High-capacity Services Based on Infinera Technology

Infinera®

CUSTOMER NAME
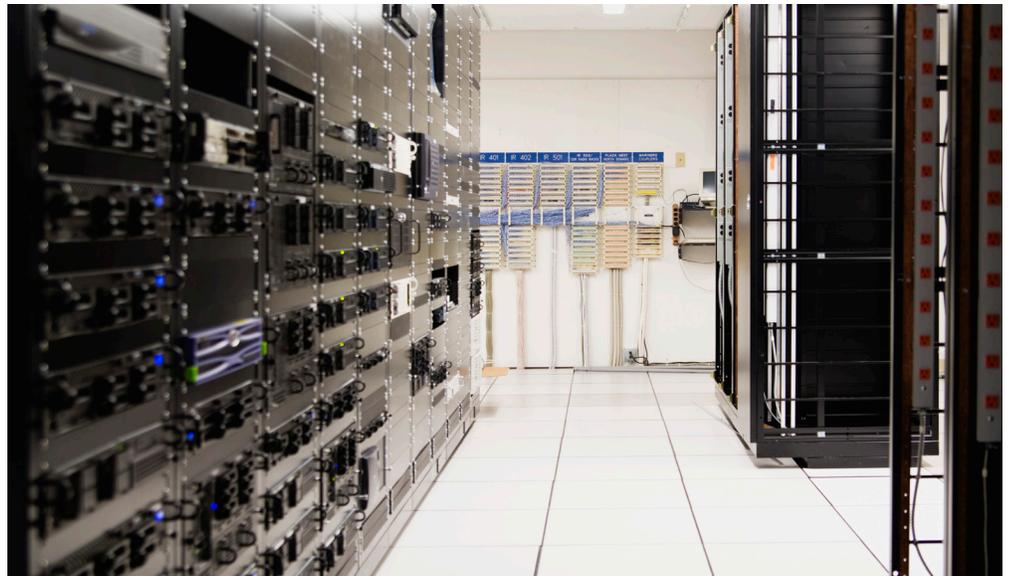VIRGIN MEDIA BUSINESS

CHALLENGE
- Increase capacity and reduce latency
- Support multiple protocol services over long distances
- Maximize the use of its nationwide optical fiber network

SOLUTION
- The Infinera XTM Series deployed in key parts of the Virgin Media Business network to provide protected high-availability bandwidth
- Unprecedented low-latency capabilities provided by the Infinera XTM Series transponders and muxponders
- Multi-service muxponders supporting multiple protocols on a single wavelength
- Consultative support to assist in both product training and market development
- Advanced functionality for next-generation services such as fully integrated ROADM-based optical layer and Layer 1 and Layer 2 Ethernet services

RESULTS
- Multiple applications are supported over a single network
- Wavelength services provide an optimal way forward
- Virgin Media Business gained more HCS clients and increased revenues

Virgin media
BUSINESS

Storage data and data backup are typical examples of applications that require a high-capacity solution.

The Challenge for Virgin Media Business

U.K. telecommunications service provider Virgin Media Business needed to bring the Virgin philosophy to the business telecoms market – to provide innovative, high-quality communications solutions built on exceptional customer service.

The company needed to use its next-generation nationwide fiber optic network asset in order to create dedicated telecoms solutions for its customers and meet a challenging variety of diverse needs.

It also had to meet the needs of customers from many different market sectors, including the financial community and broadcast and media companies, as well as public sector mobile service providers; the common need was for faster speeds and greater bandwidth.

It already had a strong product portfolio that included its market-leading Ethernet services; however, in order to deliver its increasingly popular High Capacity Services (HCS), Virgin Media Business needed a product that would support its customers' increasing need for low-latency connectivity.

The Need for Massive Volumes of Data

Virgin Media Business' HCS is targeted at businesses dealing with high levels of data traffic, so reliability of high-volume communications is paramount. The infrastructure has to operate 24/7, as typically multiple gigabits of information are being moved every second. This is easier to achieve with a dedicated, super-fast, always-on fiber optic network able to cope with massive volumes of data, multi-protocol connectivity, and low-latency transmissions.

"While we have been developing our HCS range, Infinera has been very supportive, for example, sharing its product development roadmaps with us. Using the Intelligent WDM (iWDM®) technology has enabled Virgin Media Business to deliver multiple services down a 10 gigabit pipe."

—Nick Scallan, Head of Data, Virgin Media Business

HCS services have been designed for storage area networking, wide area network (WAN) environments, and other data transmission needs where bandwidth-hungry and time-sensitive information is involved; not just for the financial sector but increasingly for almost any medium-sized to large networked enterprise or other organization.

Examples of High Capacity Services Customers

Examples of customer types that are benefiting from Virgin Media Business' deployment of its High Capacity Services include an insurance company wanting to insource its storage area networking between different offices. Considering various options, the company realized that an optical High Capacity Services solution would meet its ultra-low latency requirements more efficiently than alternative transport technologies.

Another financial company had previously experienced failures in its overnight data backup system. It was discovered that the company was using a non-deterministic network solution while its data backup required a deterministic approach; again, the solution was a High Capacity Services solution from Virgin Media Business.

For Virgin Media Business, connecting storage environments over long distances is a common requirement, and having to extend clients' local area network (LAN) environment across the U.K. at 1 Gb/s or faster is the norm. The notable client benefit is the absence of the extremely high cost of installing and maintaining their own networks, and by choosing Virgin Media Business' HCS, users always have the latest and greatest technology capability.

Enhancing an existing optical network infrastructure to increase capacity with wavelength-division multiplexing (WDM) technology was a major strategic decision for Virgin Media Business, and the decision to work with Infinera for the design and deployment was a major commitment based on return on investment and long-term operational expenditure savings.

"A Solution That Gives Us the Edge"

Virgin Media Business' Dedicated HCS services, National HCS, and optical backhaul services use the Intelligent WDM (iWDM®) proposition; Infinera provides all of Virgin Media Business' customer-facing equipment, including all access and regional solutions. Virgin Media Business has worked with Infinera since 2003. As VMB's demands have grown, the capability and responsiveness of Infinera have grown accordingly.

Nick Scallan further states: "Infinera has enabled us to push the distances further with exceptional scalability. We have a simple proposition of small, medium, and large systems sizes, and it's that differentiation of the large version, which goes up to 40 wavelengths, that has given us the edge that we can take to market. Infinera has enabled Virgin Media Business to differentiate its proposition. It is a solution that gives us the edge."

The solution deployed by Virgin Media Business for its High Capacity Service is the Infinera XTM Series providing its unique iWDM for protected high-availability bandwidth. The solution also includes Infinera multi-service muxponders supporting multiple protocols on a single wavelength.

Advanced functionality is provided for next-generation networks, such as the fully integrated reconfigurable optical add-drop multiplexer (ROADM)-based optical network and Layer 1 and Layer 2 Ethernet services.

iWDM is unique because it allows an increase in Ethernet-based services with a range of packet optical solutions.

Infinera Has Helped to Create a Feeding Frenzy Around HCS

Virgin Media Business' various HCS options are based on wavelength-division multiplexing technology, which enables more capacity by carrying more wavelengths along a fiber. This in turn enables client networks to be both high-powered and multitasking. Their systems run faster and support multiple applications over a single connection.

Nick Scallan commented: "The client networks are also more reliable, so client businesses stay up and running – whatever the traffic conditions. Getting the message to the market that wavelength services is the optimal way forward to provide a better cost of ownership model – the Infinera solutions offer a low-risk way to cope with high capacity, low power, small footprint, and increasingly low-latency services to support requirements such as business continuity and cloud services.

"We're utilizing the Infinera XTM Series range to power HCS: the flexibility of the iWDM system enables multiple services through a 10 gigabit pipe. Working with Infinera and having its support drilling down into our addressable markets with a high level of detail enables us to pinpoint some of the specific advantages that the Infinera system capabilities can offer to support our clients' specific market needs."

"Having Infinera in place to support our sales has been one of the most important developments that we've gone through this year in terms of enabling our sales force. Infinera has been hands-on; we have worked closely with the Infinera team, who have even met with our customers, which has helped create a feeding frenzy around HCS."

—Nick Scallan, Head of Data, Virgin Media Business

Virgin Media Business says that dedicated consultancy input from Infinera has proved to be incredibly valuable. It has helped the company take the message to the market that wavelength services are the optimal way forward to provide a better cost of ownership model.

Summary

This consultancy approach to its customers is at the core of the Infinera philosophy. Understanding the needs of both the enterprise market and having a pedigree in the carrier-class technology space means that Infinera is always ensuring its solutions map to market needs and aid service providers' propositions.

In the case of Virgin Media Business, Infinera went as far as helping to develop an incremental pipeline toward new markets. The opportunity of offering high-speed services with low latency means that Virgin Media Business can continue to support the ongoing changes within enterprise computing, while its customers can focus on low latency when reviewing their networking requirements.

The Infinera XTM Series is deployed in Virgin Media Business' HCS network. Here is the TM-3000 chassis.

With Infinera support, Virgin Media Business gained more than 25 new HCS customers and generated more than £10 million of new business in its first year alone. Furthermore, the company has been able to differentiate its HCS enterprise portfolio from those of alternative providers, offering a solution that has lower equipment latency, power consumption, data center footprint, and ultimately lower costs.

About Virgin Media Business

Virgin Media Business provides internet, data, and telephone services to more than 50,000 U.K. businesses. It also partners with the public sector: with local councils and thousands of schools to improve connectivity in communities and support learning, and with the emergency services to enable them to perform their life-saving skills efficiently.

Virgin Media has the largest gigabit-capable network in the U.K., which currently passes nearly 15 million U.K. premises. Through its Project Lightning programme, Virgin Media is continuing to expand its ultrafast network to more homes and businesses across the U.K. More than 2 million premises have been added to Virgin Media's gigabit-capable network since the project began.

About Infinera

Infinera is a global supplier of innovative networking solutions that enable carriers, cloud operators, governments, and enterprises to scale network bandwidth, accelerate service innovation, and automate network operations. The Infinera end-to-end packet optical portfolio delivers industry-leading economics and performance in long-haul, submarine, data center interconnect, and metro transport applications. To learn more about Infinera, visit www.infinera.com, follow us on Twitter @Infinera and read Infinera's latest blog posts at www.infinera.com/blog.

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