

## COLT and Cisco collaboration generates high-speed and market-shaping international Ethernet service

### Executive Summary

#### CUSTOMER NAME

- COLT

#### INDUSTRY

- Service Provider

#### CHALLENGE

- To identify new revenue sources while reducing capex and opex
- To leverage COLT's pan-European infrastructure in order to extend its Ethernet service portfolio
- To provide enterprise customers with innovative and well targeted solutions to their business needs

#### SOLUTION

- A Switched Ethernet VPN service, based on the Cisco ONS 15454 SDH Multiservice Provisioning Platform, offers customers high-speed any-to-any connections with high levels of flexibility and reliability

#### BUSINESS VALUE

- The new service is designed as a 'pay as you grow' infrastructure to reduce capex
- With a superb strategic as well as technological fit, the service has given COLT a 12 to 18-month market lead
- The service opens up new capabilities, such as real time data back-up and on-demand applications, to COLT's enterprise customers

When COLT identified strong customer demand for a high-speed, any-to-any Ethernet service that would operate throughout Europe, a close collaboration with Cisco helped it not only to build this innovative service, but also to develop a business case that would give COLT a rapid return on investment and an 18-month market lead.

#### CHALLENGE

COLT Telecom Group plc (COLT) is a leading European provider of business communications services. Founded in 1992, it offers data, voice and managed services to over 22,000 customers throughout the public and private sectors. COLT is financially stable, recording cash and liquid reserves of £371.8 million at the end of 2004 and, in the same year, a turnover of £1,214 million.

Like all service providers, COLT is constantly seeking to identify new revenue sources and to develop services that will differentiate it from its competitors. A key business driver for both COLT and its customers is the ongoing need to reduce capital expenditure (capex) and operating expenditure (opex).

The company believes Ethernet technology is a powerful enabler for making customers' networks simpler and more cost effective to run, while opening up new capabilities such as on-demand applications, enterprise data back-up and consolidation of multiple networks.

"We believe we're number one in the provision of wide area Ethernet services in Europe and we want to maintain that lead through innovation," says Luke Broome, Director of Data Products, COLT.



Prepared by Cisco Systems, Inc.

## SOLUTION

Through regular workshops with its customers, COLT had already identified a demand for a high-speed Ethernet service that would offer large companies flexible and secure any-to-any connectivity. At a meeting between COLT and Cisco Systems' Internet Business Solutions Group (IBSG) in summer 2003, Cisco proposed its Advanced Technology ONS 15454 SDH Multiservice Provisioning Platform as the ideal system on which COLT could deliver this type of service throughout Europe.

The proposed service had several obvious merits. Firstly, it fitted well with COLT's strategic objectives by extending its portfolio of sophisticated Ethernet services.

Secondly, it would allow COLT to leverage its existing pan-European fibre infrastructure – an integrated 20,000-kilometre network that connects over 10,000 buildings in 32 major cities in 13 countries, with a further 65 points of presence across Europe. Maximising this virtually unique asset would give COLT a valuable differentiator, while at the same time reducing the capex and opex associated with the new service, as demonstrated to COLT by a cross-functional team from Cisco's IBSG, Advanced Technology Group and Optical Business Unit.

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Luke Broome, Director of Data Products, COLT

Thirdly, the design of the Cisco ONS 15454 SDH Multiservice Provisioning Platform integrated several aspects of data networking and telecommunications such as IP, Ethernet switching and transmission, optical technology, and traditional SDH services. This made it extremely interesting to COLT, as Neil McRae, Director of Network Architecture, explains: “Having engineered the ONS 15454 to be incredibly flexible, Cisco is also committed to enhancing the device with new cards and technology. This means that we are greatly reducing our risk in deploying it, compared with some of the other devices available on the market.”

Finally, the Cisco platform also offered some interesting opportunities for innovation, including a built-in ‘burstable’ bandwidth capability that is almost impossible to provide on a circuit-switched solution.

### Strong business case

Once COLT's Board had approved the proposition, the company set about developing the service in earnest. The entire process – from defining features and customer benefits, to building a business case and positioning the new service within COLT's existing portfolio – took the form of close collaboration between COLT and Cisco.

The technical community at COLT undertook due diligence work on the Cisco platform, working with Cisco's Optical Technology team in a series of laboratory sessions in the UK, Italy and the USA. Cisco's Optical group also produced detailed return on investment (ROI) calculations based on the ONS 15454. These not only demonstrated a strong business case for the proposed investment, but

also met COLT's internal requirement to achieve ROI very quickly – in this case, within 14 months.

“COLT and Cisco shared a common vision to develop an innovative service,” Neil McRae explains. “This led to a less formal, more intimate working relationship than we would typically have with a vendor, and it generated a degree of commitment that allowed us to get through a lot of work, very quickly and aggressively, that would normally take much longer.”

At the same time, commercial workshops were taking place between COLT and Cisco's IBSG – initially to share market research data and establish the exact nature of the demand for this type of service. The results of this exercise confirmed COLT's own findings: that there was strong demand for a high-performance service offering speeds of 100Mbps to 5Gbps with the ability to increase bandwidth according to business need.

**“CISCO HAS WORKED WITH US ON A NUMBER OF DIFFERENT ACCOUNTS, PROVIDING INPUT DIRECTLY TO CUSTOMERS ON HOW THEY CAN USE THE SERVICE AND EXPLOIT CISCO'S TECHNOLOGY. THAT'S BEEN QUITE A POWERFUL ASPECT OF OUR COLLABORATION”**

Luke Broome, Director of Data Products, COLT

According to Luke Broome, the opportunity to exchange information and experience with a trusted partner was extremely helpful: “The workshops allowed us to really focus in on the specific business problems that this service would solve for our customers, and what parts of Cisco's technology we could harness in order to deliver those benefits.”

### **Dynamic exchange of information**

The content of the joint workshops became ever more detailed as the project advanced, covering the business case, pricing, and elements of the service wrap such as billing, appropriate Quality of Service levels and additional service options. IBSG also introduced COLT to sales and marketing specialists in Cisco's vertical sectors group. For example, members of Cisco's financial services and IBSG teams shared information with COLT on issues such as the effect of regulation on customers' approach to data storage, network security and business continuity. This helped the service provider to refine its offer and ensure that it was very precisely tailored to the needs of target sectors, and closely aligned with Cisco's own 'Business Ready Data Centre' messaging to the same target audience.

Business continuity is one application that COLT has identified as particularly important to financial services. In order to comply with regulatory requirements and maintain customers' confidence, companies in this sector increasingly need high bandwidth between their disaster recovery sites and other locations – but not all the time. In the event of a disaster, the new service allows companies to cut over to the high bandwidth on these links immediately without even having to contact COLT.

The new COLT Switched Ethernet VPN service interconnects multiple sites and provides any-to-any connectivity over a virtual private network across Europe. Offering burstable speeds of 300 and 600Mbps to 1Gbps, the service is ideally suited to connecting large offices and data centres.

Positioned as a natural evolution of its integrated portfolio of Ethernet solutions, COLT's new service is designed for larger enterprise customers with a European footprint in sectors such as financial services, the media, professional services and energy.

### **BUSINESS VALUE**

In developing this service, COLT has gained a significant lead of 12 to 18 months over its competitors. It has also strengthened its reputation for innovation, by introducing the first European switched Ethernet service and being first to deploy Cisco's Resilient Packet Ring technology across Europe (thereby providing customers' networks with extra resilience).

The service was designed to minimise capex since the majority of costs are linked to Customer Premises Equipment at the edge of the network that is only added when new customers come on board.

"Although we decided to deploy some network components in the core as part of the service build, we didn't need to make a big investment – it really is 'pay as you grow'," Neil McRae confirms. "Our industry is operating under serious capital constraints at the moment and Cisco has been one of the first vendors to understand this issue and to try to help carriers overcome it."

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Neil McRae, Director of Network Architecture, COLT

The Switched Ethernet VPN service has given COLT a unique ability to deliver almost unlimited, but affordable, bandwidth on demand, providing its customers with improved performance, flexibility and cost efficiencies in their networks. It has been a resounding success from a strategic and marketing perspective, supporting the company's vision of helping customers use Ethernet to solve problems that could not be solved before.

The collaboration between Cisco and COLT has extended beyond the development of the service to ongoing marketing activities, with the partners running joint seminars for customers in Germany – COLT's biggest market – and working together on sales opportunities throughout Europe. "Cisco has worked with us on a number of different accounts, providing input directly to customers on how they can use the service and exploit Cisco's technology," Luke Broome explains. "That's been quite a powerful aspect of our collaboration."

Initially available in the UK, France and Germany, the service was later rolled out to all 13 European markets served by COLT. At the same time, the service provider immediately started working on new features and capabilities to enhance the offer, such as a more extensive choice of speeds and connection options, as part of its broader development roadmap.

So successful was this project that, shortly after the launch of its new service, COLT began working with Cisco's IBSG to define a collaboration framework for the future. Meanwhile, this is how Luke Broome summarises the first fruits of their partnership: "There has been great team work between both organisations to explore the market potential for the proposition, to construct

a business plan, and to build and launch an innovative service that will offer major benefits to customers in terms of how they design and operate their networks within Europe.”

### **TECHNOLOGY BLUEPRINT**

The Cisco ONS 15454 SDH Multiservice Provisioning Platform provides multiple network elements in a single platform, combining advanced SDH (Synchronous Digital Hierarchy) transport with DWDM (dense wavelength-division multiplexing) and multiservice interfaces.

Designed to offer enterprises and service providers higher bandwidths and greater reliability at reduced cost, the Cisco ONS 15454 supports all legacy TDM (time division multiplexing) interfaces such as E1, E3 and DS3 as well as data solutions with STM1 (Synchronous Transport Module level 1) to STM64 optical transport bit rates. It is simple to engineer and provides a flexible platform on which to aggregate and transport a wide range of services, including voice, data and video applications.

The COLT Switched Ethernet VPN service also harnesses Cisco Resilient Packet Ring (RPR) technology, which simplifies networks as well as increasing the reliability and scalability of high-bandwidth IP services over an optical infrastructure. RPR is an industry standard, recently approved by the Institute of Electrical and Electronic Engineers (IEEE) that helps service providers protect infrastructure investment by enabling them to carry converged voice, data and video traffic over existing SDH or SONET (Synchronous Optical Network) fibre rings.

Deploying an Ethernet service that connects multiple sites in a highly resilient way normally involves building a very complex spanning tree system that is expensive to create and maintain. Cisco's solution allowed COLT simply to build a Resilient Packet Ring and overlay its service onto that ring. In the event of an outage, the service automatically switches to the other side of the ring without the customer even being aware of the fault. This ensures that COLT can offer its customers the high levels of availability that they expect, without incurring high levels of capex and opex.

## MORE INFORMATION

Cisco Systems [www.cisco.com/global/EMEA/realbroadband](http://www.cisco.com/global/EMEA/realbroadband)

Cisco Internet Business Solutions Group [www.cisco.com/go/isbg](http://www.cisco.com/go/isbg)

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