Polish Cable Operator Secures Market Leadership Position

Customer Case Study

Cisco IP Next-Generation Networking helps Vectra improve reliability and profitability, and enhance customer experience

EXECUTIVE SUMMARY

Customer Name: Vectra Group

Industry: Telecommunications

Location: Poland

Number of Employees: 2000

Challenge

- Lower operating expenses for leased lines and leased capacity
- Decrease infrastructure overheads and total cost of ownership
- Improve service delivery and speed to market
- Adapting core network to provide business services

Solution

- Cisco IP Next-Generation Network Architecture, based on ONS 15454 Multiservice Transport Platform with nLight™ technology for greater agility and programmability

Results

- Increased efficiency and capacity of network with smaller operating cost
- Lower cost per connection for single location, improving service profitability, even for locations with under 3000 customers
- Time to provision new services cut from three months to one or less
- Core network downtime reduced from two hours a month to zero

Challenge

Within Poland, Vectra Group is the second largest telecommunication cable operator. It covers near 200 cities across the country serving analog TV subscribers, 530,000 digital TV viewers, 433,000 fixed internet and 28,000 mobile internet clients, and 160,000 fixed telephone users.

Vectra digital television is one of the most attractive on the market for its number and diversity of programs, but it nevertheless has to compete fiercely for customers. TV and telecommunications customers in Poland can choose from a growing range of providers and can easily switch if they are unhappy with a service.

The propensity to switch operators became an increasing challenge for Vectra because the business had always delivered service entirely over leased lines that belonged to third parties. This wholesale arrangement had helped the company grow rapidly but, by 2011, Vectra was being held back by bandwidth constraints.

The fact that the network belonged to third parties also made it more difficult to maintain and troubleshoot, and meant Vectra faced a growing operating expenses (OpEx) bill for line rental. “To keep pace with growing demand from Internet subscribers, we decided to create a wholly-owned IP backbone,” says Marcin Zwierzchowski, head of the Telecommunication Department at Vectra. “Cost was another factor, as we wanted to convert our transmission and connection charges from OpEx to CapEx.”

Solution

As Vectra started researching the network infrastructure market, one of its existing providers came forward with a proposal to offer a leasehold national backbone. The two companies entered into an agreement giving Vectra a 20-year lease on a 2200km fiber optic network with one of the highest service level standards in the country.

Vectra used the acquisition to support a national dense wavelength-division multiplexing (DWDM) network that was deployed in three phases of around 700km each. For its DWDM technology, Vectra surveyed the offerings from a range of leading vendors over a three-month period before eventually settling on the Cisco® ONS 15454 Multiservice Optical Transport Platform (MSTP).

VECTRA DAJEMY WIĘCEJ

CISCO

"Cisco technology is very advanced and feature-rich but simple to use, which helps with maintenance. Also, this was a 100Gbps-ready system. Finally, it had one of the best TCOs, and our systems integrator recommended it."

Marcin Zwierzchowski
Head of Telecommunication Department
Vectra

Vectra Headquarters in Gydnia

"The Cisco offer was the best in several respects," says Zwierzchowski. "We were keen on minimizing OpEx, and that included maintenance, since we only have a limited number of engineers dedicated to the network. Cisco technology is very advanced and feature-rich but simple to use, which helps with maintenance. Also, this was a 100Gbps-ready system. Finally, it had one of the best TCOs, and our systems integrator recommended it."

Klonex, a Cisco Premier Certified Partner, designed and implemented the solution for Vectra. The network forms a nationwide ring, connecting nearly 30 cities around Poland, including Warsaw, Katowice, Wroclaw, Poznan, Radom, Bydgoszcz, Torun, and Gdynia.

The 100Gbps network is based on Cisco nLight™ coherent optical technology, providing the capability to transmit 100Gbps wavelengths over fully uncompensated links with up to 3000km optical spans. This innovation significantly simplifies the engineering and deployment task for national network operators such as Vectra.

The MSTP complements a number of Cisco technologies used elsewhere by Vectra, including Cisco ASR 9000 Series Aggregation Services Routers and Cisco 7600 Series Routers in the access network. On customers' premises, Vectra employs Cisco ASR 9000 Series Aggregation Services Routers and Cisco 7600 Series Routers in the IP core and aggregation network, along with Cisco uBR10k Cable Modem Termination Systems.

Results

The optical network is operating on multiple wavelengths at 10Gbps,but can be easily scaled to 100Gbps when required, meaning Vectra can improve its network capacity while minimizing capital expenditure. The Cisco solution can support forty-two 100Gbps wavelengths in a single bay, nearly three times the density of competing solutions.

This advantage allows Vectra to deploy new capacity much more quickly than before. For example, upgrading a 2Gbps line to 10Gbps would previously have taken about three months compared to one month now.

The new network is also significantly reducing the company's operating costs while providing the capacity to meet increased customer demand for voice, data, and telephony services. Vectra is now delivering about 50 TV channels in high definition and can further differentiate itself by offering up to 320Mbps connectivity to customers as standard.

Additionally, it is able to use the easily-managed extra bandwidth to deliver new services and reach new markets. Vectra began offering video-on-demand to residential users in 2013 and has a growing portfolio of business-to-business offerings, including lucrative backhaul services for mobile operators, SIP trunks, and corporate networks.

Furthermore, thanks to reduced cost of ownership provided by the Cisco MSTP, Vectra can afford to offer services to smaller customer clusters. Before it would not have made economic sense to target communities of fewer than around 3000 subscribers, but now Vectra can make a business case to deliver digital services to groups of as few as 1000, greatly expanding its potential customer base.

The company's competitive positioning has improved because Vectra is able to deliver a better service than before over one of the fastest networks in the Polish market. Zwierzchowski says: "Subscribers have not experienced a single failure with the new network. This is important, since degradation of services has a huge effect on churn."

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Marcin Zwierzchowski
Head of Telecommunication Department
Vectra

Finally, these benefits and improvements are being achieved with barely any effect on the workload of the Vectra technical team. "The fact that they always work fine makes it really hard to measure how easy these systems are to fix," says Zwierzchowski. "The process is pretty much fully automated, so maintaining the system is very easy for our engineers and the staff in the network operations center."

Next Steps

Vectra is looking to extend its Cisco MSTP to 40 additional cities in Poland. The network is initially operating on multiple wavelengths at 10Gbps, but has been engineered to scale to 100Gbps when such capacity becomes required in the future. "This evolution is easy because of the core capacity in the network," Zwierzchowski concludes.

Following the success of this project Vectra purchased an additional 3300km of optical fiber and plans to extend its DWDM network based on the Cisco ONS 15454 solution.

For More Information

To learn more about the Cisco architectures and solutions featured in this case study go to:

www.cisco.com/go/ipngn

www.cisco.com/go/optical

Product List

Optical Networking

- Cisco ONS 15454 Multiservice Transport Platform

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Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
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