



**TalkTalk**  
For Everyone

**TALKTALK EMBRACES AUTOMATION  
TO ENSURE HIGH-QUALITY,  
AFFORDABLE SERVICES**

**Summary**

**Company:**

TalkTalk

**Industry:**

Telecommunications

**Business Challenges:**

*Develop a more proactive network service delivery strategy to boost operational efficiency and deliver reliable, cost-effective subscriber services.*

**Technology Solution:**

- NorthStar Controller
- MX960 5G Universal Routing Platform

**Business Results:**

- Increases network performance and availability, contributing to a high-quality customer experience
- Limits operational spend, helping TalkTalk maintain competitive pricing
- Moves from a reactive operational model to a predictive operational model, enabling greater resource utilisation

TalkTalk is one of the leading telecom providers in the UK, providing broadband, voice, television, and mobile packages to more than four million customers. TalkTalk’s award-winning consumer offerings include unlimited broadband usage and fixed-price guarantees, ensuring that subscribers enjoy Internet services without the risk of unexpected bills. TalkTalk is also the leading provider of wholesale broadband services in the UK and is a major supplier of business voice and broadband services, both directly and through its partner network.

In the fiercely competitive UK voice and broadband market, TalkTalk aims to deliver the highest value services possible to challenge more established rival providers. The company’s strategy is to offer consumers and business customers core connectivity packages that are simple, affordable, and reliable. To achieve this, TalkTalk constantly looks for new ways to drive operational efficiency and reduce costs, enabling the company to fund better deals for its customers.

“To deliver on our promise of high-quality service, it is vital that we have a robust, efficient network in place,” explains Phil Haslam, chief networks officer at TalkTalk. “Customer expectations are always rising; subscribers increasingly want to add more devices to the network and enjoy more innovative services. We must stay ahead of this demand, and ensure sufficient bandwidth is available so that subscribers can still enjoy access to a congestion-free network.”

*“With NorthStar Controller, we believe we will deliver an even better user experience to our end customers. By routing traffic over the lowest latency paths available, the solution will help maintain high performance and availability within the network, giving us more headroom to add subscribers and devices without impacting quality of service.”*

- Phil Haslam, chief networks officer, TalkTalk

To maintain high service levels, TalkTalk previously analysed recent performance data from each of its 3000 exchange points across the UK in order to identify degradation that could lead to an outage. In the event of packet loss, latency, or service failure within the network, the company would receive an alert and its

engineers could take action. However, always keen to adopt the most advanced network management strategies, TalkTalk wanted to gain more real-time insights into the network.

Phil Haslam continues: “We realised that we were reacting to emerging network issues rather than being a step ahead of problems. We could test and assess the previous week’s data from each exchange and every network asset and identify root causes to problems, but we could not always avoid outages in real time. To safeguard the quality of the user experience, we aimed to pioneer a more proactive approach.”

## Technology Solution

To develop smarter monitoring processes, TalkTalk decided to deploy Juniper Networks® NorthStar Controller to manage traffic across its core network.

“Juniper is a major strategic partner for TalkTalk and its technology is integral to our operations,” Haslam says. “We trust Juniper to deliver the most advanced software-defined networking tools, and we have used its next-generation solutions for many years with excellent results. The NorthStar Controller deployment is the latest stage of our partnership.”

TalkTalk’s latest deployment of Juniper technology focused on the entry points for subscribers at the edge of the network. The company uses the Juniper Networks MX960 5G Universal Routing Platform in 60 of its exchange points across the UK, allowing TalkTalk’s four million subscribers to access the network and enjoy TV, broadband, and voice services. TalkTalk has also used the MX960 routers to create an MPLS layer across the network to enable the smooth movement of traffic from the edge to the core.

NorthStar Controller will enable TalkTalk’s network engineers to utilise streaming telemetry to monitor the flow of data within the network and the performance of individual exchanges. Rather than collecting data from network links and analysing potential service degradation, streaming telemetry will give TalkTalk a real-time view of network status and events, allowing them to automatically initiate actions to prevent any impact on service quality.

TalkTalk will initially deploy NorthStar Controller across the core network, allowing the solution to understand and monitor traffic and make recommendations to the Network Operations Centre about more efficient paths. Network engineers will then evaluate the findings and reroute data traffic to avoid service degradation or latency. In the next phase, TalkTalk intends to use the NorthStar Controller’s automation capabilities, allowing it to take links out of service and reroute traffic onto low-latency paths whenever it identifies a part of the network that has reached a certain performance degradation threshold.

To complete a smooth implementation, TalkTalk’s in-house technicians will work closely with onsite Juniper engineers. “The level of support that we receive from Juniper has been great,” Phil Haslam says. “Whenever we roll out new functionality or need to find a solution to a specific issue, we can go straight to its technical team and they will have an answer for us. They are also keen to integrate our feedback into their software delivery life cycle processes to achieve right first-time deployments and continuous quality improvement.”

*“By optimising traffic flow and reducing downtime with the NorthStar Controller, we hope to curb our spend on fixing and repairing routes; in turn, this will have a positive impact on the cost of transporting each gigabit of data, so we can maintain our highly competitive customer deals.”*

- Phil Haslam, chief networks officer, TalkTalk

## Business Results

When NorthStar Controller is fully operational, TalkTalk expects to manage data flows more efficiently than ever before, enabling it to optimize traffic paths across its network. The Juniper technology is designed to ensure that data travels on fast-path routes and help the service provider to identify and route high-priority traffic onto the most effective paths so that it reaches its destination as quickly as possible.

As Phil Haslam explains, “With NorthStar Controller, we believe we will deliver an even better user experience to our end customers. By routing traffic over the lowest latency paths available, the solution will help maintain high performance and availability within the network, giving us more headroom to add subscribers and devices without impacting quality of service for anyone. And in the event of interruptions to service, we can respond faster to find alternate routes and get things up and running again.”

TalkTalk also continues to enjoy significant benefits thanks to its use of MX960 routers. The company now combines third-party software with the Juniper platforms to perform Domain Name System (DNS) caching at the network edge rather than in the core, reducing the overall volume of traffic crossing the TalkTalk network. With this innovative approach, whenever subscribers trying to access a website need to perform a DNS lookup, they enjoy sub-three-millisecond response times.

The latest Juniper deployment will also enable TalkTalk to control its network management costs, supporting its goal of offering excellent value-for-money. “Operational excellence underpins our ability to offer the great-value services that distinguish us from our market rivals, Phil Haslam says. “By optimising traffic flow and reducing downtime with NorthStar Controller, we hope to curb our spend on fixing and repairing routes; in turn, this will have a positive impact on the cost of transporting each gigabit of data, so we can maintain our highly competitive customer deals even as traffic levels rise.”

By taking advantage of the automation capabilities of NorthStar Controller, TalkTalk will cut the time that network engineers spend tackling faults and redirecting traffic. Instead, they will be able to focus on value-added tasks such as planning how to grow the network to keep pace with future demand and new technologies.

“We are hugely excited about the NorthStar Controller deployment, and we are confident this latest Juniper deployment will be just as successful as the others,” concludes Haslam. “Embracing automation will enable us to manage network traffic more proactively and cost-efficiently, ensuring we deliver first-class services that strengthen our position as one of the best-value providers in the UK.”

## For More Information

To find out more about Juniper Networks products and solutions, please visit <http://www.juniper.net>.

## About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

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