

# ALLEGRO NETWORKS USES MX SERIES ROUTERS TO OFFER AUTOMATED SELF-SERVICE TO ITS UK-BASED CARRIER CUSTOMERS

## Summary

**Company:** Allegro Networks

**Industry:** Telecommunications

**Challenges:**

- To build a reliable, high-performance, and open standards-based MPLS network across the UK
- To enable fully automated customer configured services through a Web portal with no operator intervention and SDN-like, near real-time service provisioning

**Selection Criteria:** Allegro Networks was looking for a standards-based, high-performance MPLS platform that would provide reliability at scale, with headroom for future expansion, and a programmable API to facilitate easy integration into its OSS systems.

**Network Solution:**

- MX960 3D Universal Edge Router
- MX80 3D Universal Edge Router

**Results:**

- Allegro's services are now available in 30 data centers and 4 Internet exchange points across the UK.
- Service provisioning is entirely automated, and Allegro's customers benefit from a retail-like service experience.
- End-to-end service delivery is typically achieved in approximately 100 seconds, versus weeks or longer for traditional, nonautomated service provisioning processes.

Allegro Networks, a privately owned company with its headquarters in Manchester, England, is a new generation wholesale carrier that brings the convenience, speed, and price transparency of an online retail experience to its service provider customers.

Allegro Networks provides transit, private and public peering services across the UK, with a footprint that includes 30 major data centers and 4 Internet exchanges. Its customers include international carriers looking to extend their services into the UK, and smaller UK-based service providers who need a larger network footprint.

Typically, carriers have operated with separate organizational silos between functions such as sales, service delivery, operations, and billing, making service provisioning a drawn-out process that typically takes weeks or longer to complete. Allegro has integrated these independent activities into a single automated process that is presented to its customers via a unique and secure customer portal. Allegro's Snap Platform portal provides Allegro's customers with granular visibility and control over their services, and includes a self-service feature that lets customers turn up services in the same way that they turn up new virtual machines or storage using cloud computing services.

## Challenge

Allegro Networks needed a new IP/MPLS network across the UK that could deliver pseudowire services to connect customers' networks to data centers, exchange points, and peering services such as the London Internet eXchange (LINX), London Network Access Point (LONAP), and IX Leeds.

It also needed a network with open and programmable interfaces into all of the network elements involved in service delivery, so that customers could order and configure services directly, without operator intervention, through an API or portal.

**“When we moved from the proof-of-concept phase to a live production network, the Juniper equipment worked exactly as we’d been assured it would.”**

- Andy Davidson,  
Chief Technology Officer, Allegro Networks

## Selection Criteria

Allegro Networks was looking for a high-performance, reliable, and scalable MPLS network platform that could deliver on its vision for user configured services. This meant choosing an equipment vendor that was rigorous about implementing open standards and offering an API.

As Andy Davidson, CTO at Allegro Networks, explains, “Attention to open standards is really important to us. Our customers are committed to open standards, so as we provide an extension to their services, we need to ensure we have complete compatibility.



“Juniper also has really good programmatic interfaces, as they expose their own API, allowing us to configure their switches directly from our own operations support systems (OSS), and via our API, allow customers to effectively configure their own services. This is really quite transformative—our customers treat Allegro’s network as an extension of their own network. In effect, we have realized an implementation of SDN by using a software-defined OSS. This is an application of SDN that solves a very real problem today.”

**“Our platform has enabled Allegro’s customers to win new business that they wouldn’t have been able to win before. Now they have a transparent and consistent view of pricing, and they know they can order services for immediate delivery, reducing their time-to-revenue.**

- Andy Davidson,  
Chief Technology Officer, Allegro Networks

## Solution

Allegro built its network using Juniper Networks® MX Series 3D Universal Edge Routers, connected using the existing fiber-optic infrastructure and transmission systems. The MX Series portfolio consists of a family of carrier-grade platforms that range from 20 Gbps through 80 Tbps, with a consistent OS, management system, and service feature set implemented across the product line. This consistency allows Juniper customers to select the optimal platforms for their requirements, without compromising on features.

Allegro Networks chose a range of MX Series platforms, from the MX960 3D Universal Edge Router to the MX80 3D Universal Edge Router, to cost-effectively address varying port density and throughput requirements at different locations. The MX Series platforms combined provider and provider edge functions in each system, and were configured to create a flat network. Network services are delivered using transparent pseudowire Ethernet, with fast failover mechanisms implemented to rapidly route traffic around any potential fiber failures.

Allegro worked closely with Juniper’s local partner, Imtech ICT, to provide support services and to develop a proof-of-concept in its lab prior to full implementation.

## Results

Allegro Networks has successfully launched its Snap Platform portal and its portfolio of software provisioned services, with coverage in 30 data centers and 4 Internet exchange points across the UK.

Service provisioning is entirely automated, and many of its carrier customers are already connected “on-net,” enabling them to immediately turn on new services at the click of a button, with end-to-end service provisioning achieved in speeds of around 100 seconds.

“Up until now, a service provider would have to negotiate with multiple gatekeeper functions within wholesale providers, initially with sales agents to get a competitive tariff and then operations staff to arrange service delivery. Our platform has enabled Allegro’s customers to win new business that they wouldn’t have been able to win before. Now they have a transparent and consistent view of pricing, and they know they can order services for immediate delivery, reducing their time-to-revenue. We’ve turned wholesale telecom procurement into a retail-like experience,” Davidson says.

Unusual for the industry, Allegro Networks also allows its customers to transfer terminated services to different physical locations under the same contract, all controlled using the same provisioning portal.

Despite its complexity, the project went very smoothly. In part, Davidson puts this down to the discipline required to implement such a software-driven process, which in turn has driven consistent policy and procedures to be enforced across the network. It was also helped by the predictable behavior of the Juniper equipment. “When we moved from the proof-of-concept phase to a live production network, the Juniper equipment worked exactly as we’d been assured it would,” Davidson says.

## Next Steps and Lessons Learned

Following the success of the UK rollout, Allegro plans to expand its network internationally, interconnecting all of the major data centers in Western Europe. It will offer the same unique self-service experience to its international customers as it does in the UK, as well as allowing its UK customers to extend their reach into mainland Europe and beyond.

## For More Information

To find out more about Juniper Networks products and solutions, please visit [www.juniper.net](http://www.juniper.net).

## About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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