



Discover How a Global Digital Technology Provider Built a Scalable, AI-Driven Wired Network

Overview

For a global digital technology and transformation provider, its wired network infrastructure was struggling to keep pace with growing operational demands. The environment was complex to manage, offered limited visibility, and lacked the scalability needed for future expansion. By partnering with Black Box, the organization implemented an AI-driven, centralized switching solution that simplified management, enhanced monitoring, and optimized performance across campus and data center environments. As a result, network operations became more efficient, issues were resolved faster, and the organization was positioned for seamless future growth and wireless integration.

Challenges

This organization found its wired network infrastructure struggling to keep pace. The existing architecture was complex to manage, offered limited visibility, and created operational delays and inefficiencies. The team needed a solution that could deliver a fully wired network with advanced security features to protect against internal and external threats, while also supporting future mobility initiatives with cloud-ready, high-performance access and distribution/core-layer devices.

AT A GLANCE

CHALLENGES

- High operational complexity and rising costs across the wired network
- Limited visibility impacting monitoring and troubleshooting
- Legacy infrastructure unable to scale with business growth
- Need for secure, high-performance wired access across campus and data center environments

SOLUTIONS

- AI-driven wired switching architecture for campus and data center access
- High-capacity switching with support for 10GbE, 25GbE, and 100GbE
- Virtual Chassis design enabling simplified, centralized management
- Advanced analytics and monitoring for actionable network insights
- Compact, energy-efficient switches optimized for performance and sustainability

RESULTS

- Streamlined network operations with reduced administrative overhead
- Enhanced visibility and faster issue resolution through AI-driven insights
- High-speed, resilient infrastructure supporting current and future demands
- Lower power consumption and cooling requirements

BENEFITS

- Scalable, future-ready wired network foundation
- Improved operational efficiency and cost optimization
- Consistent performance across campus and data center environments
- Architecture aligned with cloud scalability and wireless expansion



Solutions

To address its network challenges, the technology leader partnered with Black Box to implement an AI-driven wired switching solution powered by Juniper technology. Serving as a single point of contact, Black Box deployed a centralized architecture that simplified configuration and management through Virtual Chassis capabilities. Centralized analytics provided actionable insights, enabling proactive monitoring and faster resolution of network issues, while creating a scalable and future-ready foundation for the organization's operations.

Results

The impact was immediate. Network management became simpler and more efficient, visibility improved across the infrastructure, and high-speed connectivity was delivered consistently. Compact, energy-efficient switching platforms reduced power and cooling demands, while the scalable design ensured the network was ready for future expansion and seamless integration with Juniper Mist wireless solutions. The organization now benefits from a streamlined, high-performing, and future-ready network that supports both operational efficiency and long-term growth.

Why Black Box?

This organization's network transformation highlights why Black Box is a trusted partner in IT infrastructure modernization. Black Box addressed more than technical requirements by delivering a scalable, centralized, and secure switching solution. With deep expertise, strong technology partnerships, and a consultative approach, Black Box enabled the organization to simplify management, gain operational insights, and prepare for future growth and wireless integration. Global enterprises continue to rely on Black Box to optimize performance and drive confident, technology-led transformation.

Black Box is a global leader in digital infrastructure solutions, delivering network and system integration, managed services, and technology products to Fortune 100 and top global enterprises. With a presence across the United States, Europe, India, Asia Pacific, the Middle East, and Latin America, Black Box serves businesses across financial services, technology, healthcare, retail, public services, and manufacturing.