

A Global Automotive Manufacturer's Shift from Legacy Switching to Scalable Multisite Connectivity

Overview

The Indian subsidiary of a global automotive group manages manufacturing and distribution for six vehicle brands. Headquartered in Pune, the organization operates across manufacturing and corporate locations, requiring reliable connectivity to support its varied business activities.

Ageing switching infrastructure and limited backbone capacity made it increasingly difficult to accommodate growing data demands. The organization sought to move from legacy switching to a scalable network architecture across its Pune plant, Chhatrapati Sambhajnagar plant, and Mumbai office.

Black Box designed and delivered the upgrade using Extreme Networks switching platforms and Fabric technology. Drawing on its established customer relationship and understanding of the existing environment, Black Box combined backbone capacity expansion with structured migration planning to support the transition while minimizing disruption and creating a foundation for future business growth.

Challenges

Ageing Brocade Ethernet switches and a traditional network architecture created challenges as data volumes and application requirements increased. The existing 1 Gbps backbone between Core and Distribution layers needed greater capacity to support the organization's growing connectivity requirements.

Network provisioning, troubleshooting, and maintenance were complex, increasing the effort required to administer the environment. Limited scalability made future expansion more difficult, while resiliency and service availability remained concerns for business operations.

The customer needed a common approach across two manufacturing plants and a corporate office. Replacing infrastructure across these locations required structured migration planning to minimize disruption, alongside an architecture that could further simplify service changes and accommodate future growth.

AT A GLANCE

CHALLENGES

- Ageing switches constrained evolving business network requirements
- Limited capacity constrained support for growing data demands
- Complex provisioning complicated network troubleshooting and maintenance
- Resiliency concerns required attention across multiple business locations

SOLUTIONS

- Replaced legacy Brocade switches with Extreme
- Deployed fabric technology across three locations
- Upgraded backbone connectivity to 100 Gbps
- Planned migration around continuity requirements

RESULTS

- Three locations migrated to modern Extreme switching platforms
- Backbone connectivity upgraded from the previous 1 Gbps
- 10 Gbps, 25 Gbps, and 100 Gbps links established
- Fabric architecture provides a scalable network foundation

BENEFITS

- Higher backbone capacity supports growing traffic
- Fabric architecture simplifies network service provisioning
- Distributed routing supports flexible network design
- Scalable infrastructure accommodates future business requirements



Solutions

Black Box migrated legacy Brocade Ethernet switches to Extreme Networks 7520 and 5520 platforms across the Pune plant, Chhatrapati Sambhajnagar plant, and Mumbai office. The solution addressed switching replacement and the architecture needed to support changing network requirements.

Extreme Networks Fabric technology provided the basis for simpler connectivity, scalable expansion, and improved resiliency. The design incorporated distributed routing closer to the network edge where required, supporting flexible network data movement and reducing dependence on traditional network configurations.

Core to Distribution backbone links were upgraded from 1 Gbps to 10 Gbps, 25 Gbps, and 100 Gbps. Black Box combined its knowledge of the existing environment with structured migration planning, designing the transition to minimize business disruption while introducing the switching and fabric infrastructure.

Results

The upgrade established modern switching infrastructure across three locations, replacing legacy Brocade platforms with Extreme Networks 7520 and 5520 switches. A common fabric architecture now provides the foundation for network operations across manufacturing and office environments.

Core to Distribution connectivity increased from 1 Gbps to links operating at 10 Gbps, 25 Gbps, and 100 Gbps. These upgrades provide substantially greater backbone capacity to accommodate growing data volumes and application requirements.

The project established a scalable architecture with simpler provisioning and network changes. Fabric technology supports resiliency and more flexible expansion, giving the customer a network foundation aligned with ongoing business needs and future infrastructure development across its Indian operations.

Why Black Box?

Black Box combined network design expertise with knowledge of the customer's manufacturing and office environments. Its relationship helped align the solution with operational needs across three locations.

Extreme Networks platform expertise and structured migration planning supported the transition from legacy switching to scalable connectivity while addressing the customer's business continuity requirements.