Extreme Extended Edge: Improving Operations and Lowering Costs for Retail and Transportation and Logistics

As retail and transportation and logistics organizations embrace digital transformation, they are investing in strategic and impactful technologies to drive better business outcomes. These solutions are enhancing the in-store customer experience, but are also opening up innovative ways to improve operations and deliver greater value back to the business. Retail and T and L businesses with large physical environments like department stores, warehouses, or distribution centers can see significant savings, specifically on their electrical costs – both on the cost of cabling and the labor to install it - by implementing purpose-built IT networking solutions.

Extreme Networks' Extended Edge Solution, delivered with its edge switching portfolio, enables retailers with a power fabric solution to leverage their IT network infrastructure more effectively and more efficiently power large-scale business environments.

Digital Transformation Driving Change in the Industry

Retailers and Transportation and Logistics is experiencing a digital shift. As brands look to enhance the in-store experience and augment their back-of-house operations, more and more connected devices, users, and (IoT) "things" are in retail and T and L environments today.

Traditional retail staff and in-store associates are becoming digitally empowered with hand-held inventory devices and applications to help them restock, manage inventory, change pricing, better support in-store shoppers, and more.

This is the same for supporting staff in warehouses and distribution centers, who rely on devices and applications to ensure the inventory management, shipping, and supply chain work flows are effectively managed. The retail user is more connected than ever, as they rely on their mobile devices as part of the in-store shopping experience, as well as using brand 'loyalty' apps to access additional services and exclusive promotions.

To support and enable the increased (and increasing) volume of users, devices, and applications in retail and T and L environments, businesses need better coverage, higher capacity, and more bandwidth. However, this poses complications from a connectivity and electrical standpoint.

Challenges Achieving Network Efficiency

As previously cited, to support the general upkeep of the business and advance innovative digital initiatives, retailers and T and L business require significant technology investments for their properties, especially to those environments with large physical footprints.

These investments include deploying a comprehensive network infrastructure solution across their stores, warehouses, and distribution centers. The upfront costs and maintenance of these networks can be heavily taxing on the business' budget. Not to mention, they come with complex physical cabling environments consisting of copper and fiber-optic cabling deployed over time. This cabling is required both for network connectivity as well

as to power their networked devices, including switches and wireless APs. Furthermore, these network devices and related electronics must often be enclosed in specialized units (or IDFs) to ensure their protection from harsh environmental conditions – which is a common risk for warehouses or distribution centers.

Because of this model, retailers and transportation and logistics organizations are incurring a multitude of costs; the lost of deploying a complex infrastructure to support both their network and power needs, the cost to house networking and power devices in specialty mounting/housing enclosures, as well as the general cost of managing and updating all the various network and electrical solution components.

Achieving Efficiency and Saving Cost with the Extended Edge

Extreme's Extended Edge solution removes the complexity and the costs of these deployments, employing a power fabric infrastructure with a simpler, economic model. The solution meets the unique technology requirements of these environments and enables their organizations with robust infrastructure, to support the increased connectivity needs of retail and T and L industries today.

This deployment model allows retailers to remove:

- Complex cabling that builds up over time
- Expensive IDF electronics closet(s)
- Specialty mounting and network cabinets
- Local IDF electricity requirements

This is accomplished with Extreme's edge switching products, including the ExtremeSwitching X465 series PoE switches along with Extreme's V300 Series edge devices.

Extreme Cascaded PoE Solution

The X465 Series switch can be deployed in the environment's main MDF and then deliver PoE power to the V300 Series, a hardened edge device. The V300 does not require specialty enclosures to remain cool or to avoid damage from hazardous conditions or weather. Retail and Transportation and Logistics businesses can also then remove the need for local power and the enclosures, since the X465 Series switch is providing all power to the V300 switches. as well as connected edge devices. Last, since the V300s are centrally managed by the X465 switch, the solution allows businesses to minimize the operational cost in their IDFs, as well as the cost of labor to initially configure the edge switches and upgrade them over time.
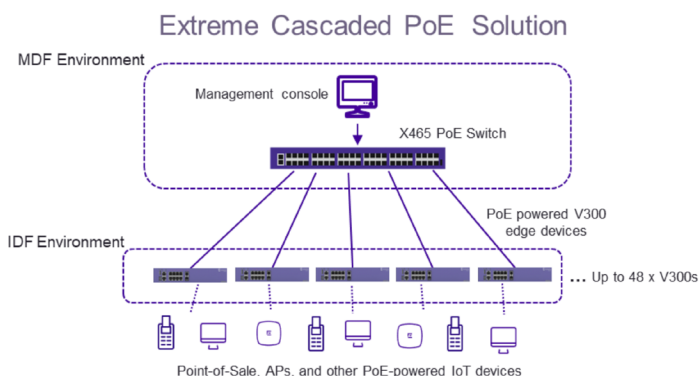
Taking the average size of a large retail stores, 300 feet by 350 feet wide, the reconfigured deployment model would typically save 50% on deployment costs alone. These cost savings are consistent even when scaled to larger environments and introduce further POE needs.

Making the Smart Store (or Warehouse) Smarter

With Extreme's X465 Series and V300 PoE switching model, retailers are provided with:

1. Robust Port Based Security
2. Highly Scalable Policy Control
3. Lower Infrastructure Costs
4. Lower Operational Costs
5. Reduced Time to Service
6. DC Power Delivering over the Network

V300 edge switches also provide zero-touch provisioning and are automatically discovered and configured when connected to the X465 switch. This streamlines network configuration even more, saving on valuable installation time and resources. To recap, Extreme's Extended Edge solution transforms traditional business models for retail and transportation and logistics, by preparing them for the demanding network requirements in the industry today with a flexible, economical solution. Organizations can now reduce the number of necessary IDFs and cables, optimize the overall cabling infrastructure, use fewer resources to deploy and/or maintain the network, subsidize the need for skilled labor for complex deployments, and save significantly on deployment costs.

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