



# NAVIGATING THE NEED FOR HIGHLY AVAILABLE, SECURE APPLICATION INFRASTRUCTURE

---

Edge Computing Plus Edge Networking  
Connects and Protects Applications Across  
Hundreds or Thousands of Locations





## Bridging the Gap Between InfoSec and the C-Suite

Today's distributed retail enterprises use point of sale, third-party loyalty programs, IoT sensor monitoring, artificial intelligence (AI), and other on-premises devices and applications to perform a variety of processes, including loss prevention, inventory management, and in-store commerce. These edge technologies enable companies to better serve their customers by delivering convenience and value. However, these systems can be a lot to manage, especially considering that organizations must also adhere to the payment card industry data security standard (PCI DSS) and provide optimal uptime for all applications.

Legacy IT solutions were primarily designed to cater to organizations equipped with substantial IT teams with specialized skills, made to manage complex infrastructures in centralized data centers. However, in today's distributed retail enterprise landscape, there's a growing demand for streamlined solutions that can effectively address the needs of remote locations without heavy reliance on on-site IT expertise. distributed retail enterprises require solutions that can deliver needed IT functionality without distracting from the core business.

Distributed retail enterprises need management system features that provide security, reliability, affordability, and the capacity to deliver frictionless service to their customers. Further, they want scalability to enable seamless expansion as their organizations grow. And, they must be able to control the network and edge compute configurations for tens, hundreds or thousands of sites at once while allowing flexibility for individual sites and dealer groups.

The answer to these challenges is a combination of edge computing and edge networking, which offers cloudlike technology and simplicity, efficiency, and flexibility – even across hundreds or thousands of locations. Scale Computing and Mako Networks partner to deliver edge computing and edge networking designed for distributed retail enterprises, including restaurants, convenience and fuel retail, hospitality providers, medical practices, and other types of retail establishments. In this guide, we explore how this solution works and how distributed retail enterprises benefit.

### Readers will learn:

- The challenges of deploying edge computing in distributed retail enterprises.
- How edge computing and edge networking address and solve those challenges.
- How edge computing and edge networking secure the environment and ensure PCI DSS compliance.
- The features of edge computing and edge networking that help distributed retail enterprises the most.
- How the benefits of edge computing and edge networking translate to customer satisfaction and loyalty.
- How customer care is at the heart of the Scale Computing and Mako Networks partnership.



# Challenges Resolved by Edge Computing and Edge Networking

To best serve their customers and other stakeholders, distributed retail enterprises must succeed at the store level. But small problems can add up to major issues. For example, customers may become dissatisfied or even defect when slow networks prevent employees from running their credit cards or, worse, when outdated security leads to their data being compromised. In a recent McKinsey survey, 40% of respondents reported they pulled their business from a company after learning that the company did not protect its customers' data. Concurrently, employees who rely on technology to do their jobs may become frustrated when customers are unhappy, when they can't use needed systems to perform their roles or when they lack the knowledge to resolve technology issues.

Edge computing and edge networking make it easy for distributed retail enterprises to reliably deploy and manage small networks at scale, anywhere in the world. According to Simon Gamble, president and CRO at Mako Networks, "If you send everything into the cloud and the network goes out, you can't access it, and those systems, or certain parts of them, are useless. The addition of edge technologies (networking and compute) enables a mix of wired and wireless internet connections that delivers continuous operation and enough compute power to perform intensive tasks."

This combination of networking and compute resources provides redundancy so if one hard drive, node, or internet connection goes out, another takes its place. As a result, both employees and customers get a seamless experience, making service interruptions a nonissue. Intuitive graphical interfaces and built-in regulatory compliance features contribute to ease of use for both store operators and corporate-level IT professionals who manage the technology at hundreds or even thousands of locations.





## A Simplified Solution

The Scale Computing and Mako Networks solution consists of robust, cloud-managed networking devices that serve as an underlay for edge computing. The combination of these two technologies plus a deep customer care focus offers an “easy button” for distributed retail enterprise operators. Any issues that arise require only a call to the help desk with a description of the problem. Managed service providers also benefit from this ease of use because they spend less time training, supporting, and maintaining the technology while ensuring adherence to service level agreements (SLAs).

# Features and Benefits

The edge computing and edge networking solution is supported by the following features.



**PCI compliance.** The importance of secure payment processing cannot be overstated. Mako Networks is the only edge networking technology that has PCI DSS certification against the underlying technology, rather than a service overlay. Deploying PCI-compliant networks at scale is made simple with Mako's edge networking technology.

*Customers can comply with regulatory requirements without expending extra effort.*



**Role-based access control.** The edge computing and edge networking solution provides least-privilege access, otherwise known as the Zero Trust approach. Only employees who need sensitive information to do their jobs have access to it. According to Microsoft, "Deploying a Zero Trust model can help minimize the impact of an external or insider breach. It enhances your organization's ability to detect and respond to threats in real time and reduces the blast zone of attacks by restricting lateral movement."

*This approach eliminates one of the biggest security risks, helping to protect proprietary corporate information as well as customer data. Additionally, role-based access control means users throughout the enterprise (not just a few IT professionals at the head office) can derive value.*



**Reduced on-premises infrastructure.** Store footprints are shrinking. According to a recent Forbes article, "Smaller store locations means lower rents, fewer employees, and less inventory-on-hand – overall it means lower overhead." More devices not only take up more space but also create more opportunities for systems to fail. So, Scale Computing and Mako Networks strive to limit the number of devices at each location. Gamble explained, "It's all about reducing complexity and delivering elegant, seamless, well-operating solutions that reduce on-premise infrastructure but not usability."

*Limited infrastructure offers store operators simplicity, efficiency, and cost-effectiveness.*



**Convergence of multiple point solutions.** The edge computing plus edge networking solution allows customers to combine multiple applications into a single platform. According to Dave Demlow, Vice President of Product Strategy at Scale Computing, “This approach makes the solution more cost-effective as opposed to additional boxes for each additional application. It enables customers to consolidate and manage one platform and provide critical redundancy.”

*All applications can be consolidated into one managed system, providing IT professionals and store managers with efficient operation.*



**Automated deployment and updates.** The edge computing plus edge networking solution delivers automated updates of both networking and applications with the supporting software stack, including the hypervisor, operating system, and container runtime. This approach supports system simplicity, reducing customer involvement in complex processes and freeing them to perform mission-critical tasks. Gamble explained, “We strive to make our network something that doesn’t get in the way of our customers running their business.”

*Reducing the inconvenience of a traditional network helps distributed retail enterprise operators be more efficient at running their stores.*



**Autonomous operation, monitoring, and self-healing.** The edge computing plus edge networking solution is designed to run without the need for regular manual intervention. The monitoring component alerts operators, and many problems can be resolved automatically.

*The automated system allows distributed enterprises to deploy the solution quickly and upgrade easily.*



**High availability.** The redundant nature of edge computing and edge networking ensures store operators will always have access to the resources they need to serve customers and perform needed tasks. Mike O’Neil, director of solutions architects at Scale Computing, stated, “High availability is built into the model. It is supported by the edge component of the solution, which gives users the most efficient access possible, and by the use of on-premise equipment that has the capacity to recover on its own.”

*Both employees and customers get ease of use and high efficiency with a system that offers consistent operation.*



**Scalability.** The edge computing plus edge networking solution is easily scalable to grow as the needs of distributed retail enterprises change. So, it can work for a local group of 10 medical offices or a collection of a thousand retail locations.

*Enterprises get a high degree of flexibility when they use technology that can suit various configurations and change over time.*



**Central management dashboard.** Many distributed enterprises don’t have large IT teams. Gamble said, “The edge computing and edge networking solution addresses this challenge by providing a simple environment that can be operated by small departments or even professionals with no formal IT training.” Unlike solutions designed for large teams of IT professionals, a role-aware system shows only what’s relevant and approved for each user.

*Store managers and corporate system operators can easily manage systems with at-a-glance reporting.*



**Support.** Mako Networks and Scale Computing’s technologies empower support teams to deliver first-class service and resolve issues on the first call. Support teams are staffed with well-trained professionals who know customer industries and environments. And, the technology gives these professionals visibility and control to run scans, troubleshoot, and get systems up and running fast.

*Knowing efficient help desk professionals have their back gives IT teams peace of mind and the ability to focus on tasks that make their business successful.*





## Summary

Performing some computing at the edge, closer to where data is generated, gives distributed retail enterprises options for providing better services to their customers. But, managing those processes can be burdensome, especially with solutions that were not purpose-built for the distributed enterprise at the edge. Edge computing and edge networking offer a streamlined approach that provides all the features distributed retail enterprises need and all the benefits they want at a cost they can afford. Scale Computing and Mako Networks partner to offer edge computing and edge networking management with strong customer support to back them up. This combination of services gives growing companies all the tools needed to easily and seamlessly take full advantage of today's edge technologies.



Scale Computing is a leader in edge computing, virtualization, and hyperconverged solutions. Using patented HyperCore™ technology, Scale Computing Platform automatically identifies, mitigates, and corrects infrastructure problems in real-time, enabling applications to achieve maximum uptime, even when local IT resources and staff are scarce. Edge Computing is the fastest-growing area of IT infrastructure, and industry analysts have named Scale Computing an outperformer and leader in the space, including being named the #1 edge computing vendor by CRN. Scale Computing's products are sold by thousands of value-added resellers, integrators, and service providers worldwide. When ease-of-use, high availability, and TCO matter, Scale Computing Platform is the ideal infrastructure platform. Read what our customers have to say on Gartner Peer Insights, G2, and TrustRadius.

[Learn more](#)



Founded in 2000, Mako Networks develops technology to deliver simple, secure, PCI-certified networks to distributed enterprises, such as gas stations, convenience stores, retail chains, quick-serve restaurants, health clinics, and more. Mako Network's innovative edge security solution is deployed in 22 countries by some of the largest multi-location companies in the world. The All-in-One Mako System provides effortless nonstop secure networking using proprietary cloud-managed plug-and-play devices that offer speed to deployment and instant scale with no onsite IT required. The Mako System also supports a range of in-demand services, such as SASE, SD-WAN, Cellular Failover, Next-Gen Firewall, Cloud VPN, Wi-Fi, and Voice services. The Mako System is sold as a combination of hardware and managed services or as an "as a service" subscription from Mako Networks or its authorized partners. Mako Networks is a global organization based in the United States with offices in the United Kingdom, Australia and New Zealand. For more information, visit [makonetworks.com](http://makonetworks.com).

[Learn more](#)

# studio / ID

## BY INDUSTRY DIVE

studioID is Industry Dive's global content studio offering brands an ROI rich tool kit: Deep industry expertise, first-party audience insights, an editorial approach to brand storytelling, and targeted distribution capabilities. Our trusted in-house content marketers help brands power insights-fueled content programs that nurture prospects and customers from discovery through to purchase, connecting brand to demand.

[LEARN MORE](#)