Infoblox

BloxOne® DDI for the Retail Industry

Vertical Industry: Retail

Digital Possibilities Present Technological Challenges

A main challenge in this fast-changing environment is that the possibilities presented by the IoT are requiring retailers to fundamentally alter their approach to IT infrastructure. Want to deliver a personalized coupon to a VIP customer in real time as they walk into you store? You'll need sophisticated CRM data to identify that customer, and onsite beacon devices to connect with and deliver the discount offer. Want to offer powerful mobile apps that feature your entire catalog of SKUs, support in-app purchasing, and present options for in-store pickup or home delivery? You're likely going to need a state-of-the-art multicloud, virtualized IT environment to support those kinds of capabilities. And to connect it all together, you'll need robust networking.

Transitioning from Brick & Mortar to Ecommerce to Digital

For many retailers, incorporating advanced digital offerings into their online and brick & mortar operations represents a quantum leap forward. Occupying a generally low-margin business sector, retail operations typically run lean. Fifteen or twenty years ago the core IT systems in place at a large grocery or cheap-chic chain store location would typically consist of POS, inventory tracking, cybersecurity, and MPLS VPN networking to connect stores to the headquarter data center. Since all network interactions depend on network services including DNS, DHCP and IPAM – collectively known as DDI – retailers also would have typically hosted this DDI capability through on-site server devices. Backend applications for loyalty programs, CRM, etc. would likely all be hosted and managed in the data center, with little if any interaction at the store level.

Retailers – both in their back office operations, and their customerfacing digital services – need to modernize and upgrade their networking infrastructure for the IoT age. A good example of a retailer navigating this transition is an Infoblox customer that had embraced online retail years ago.

The Internet of Things and digital transformation are massively disrupting the retail industry. Already we're seeing the widespread setup of digital touchpoints to support and enhance the shopping experience. Indeed, consumers increasingly want and expect to have the online shopping experience within the store itself, and retailers are working to make it possible. This is manifesting through in-store apps that allow retailers to showcase their products, smart shopping carts that help customers navigate through a store based on their digital shopping lists, and "smart mirrors" that enable shoppers to virtually try on clothes through the magic of augmented reality. These examples just pertain the customer experience. Retailers are also embracing IoT devices and technologies like RFID to track inventory, optimize the supply chain, monitor perishable goods for freshness, and automate many other operational tasks and processes.

Over time it had built out many applications supporting ecommerce, customer intelligence and inventory tracking, hosting these apps in its headquarters data center. Over time, this aspect of its operations came to represent a sizable percentage of overall sales revenue. Critically, these apps and the rich data associated with them – customer purchase histories, brand preferences, in-store vs. online shopping frequency – became central not just to the retailer's ecommerce strategy, but its in-store digital strategies as well. And that's how moving to the cloud became a necessity.

Progressing Toward Cloud Networking

As with most organizations relying heavily on IT and data to drive its business, the retailer had begun moving some of its application processing loads to cloud infrastructure in recent years. It eventually transitioned to a hybrid cloud architecture where core applications would run, potentially, in both its datacenter / private cloud instance and an AWS Cloud presence, with future plans to deploy to Azure and Google CS as well. This multi-cloud architecture would enable the retailer to take full advantage of the most up-to-date, highly virtualized processing environments available – the goal being to flexibly run any workload within the environment best suiting its needs at the time.

As the retailer began deploying in-store digital services, such as personalized discounts via its mobile apps, customer data from its cloud systems needed to be made available to its more than 1,800 stores nationwide. One aspect of its legacy networking infrastructure, however, was impeding this free flow of data. The retailer was still relying on distributed Microsoft servers for DDI management. Because the servers were designed for on-site administration, they couldn't be centrally managed. Nor could they integrate with VMware, AWS, or Red Hat tools the retailer planned to use for configuration management, application deployment, intraservice orchestration, and provisioning. What the retailer needed was a simple, flexible and reliable DDI solution designed not just for the unique network requirements of remote retail locations, but one that would fully support the future of retail. That solution was BloxOne DDI.

"The IoT will be particularly disruptive to the retail industry. Already, we're seeing retailers experimenting with ways to use intelligent, connected devices to offer new services, reshape experiences and enter new markets by creating digital ecosystems."

Accenture
The Internet of Things: Revolutionizing the Retail Industry

BloxOne DDI – The Future of Retail in the Cloud

BloxOne is transformative: it's built on the principle that cloud applications require cloud-managed DDI. It is the industry's first solution that enables retail organizations to centrally manage DDI from the cloud across hundreds to thousands of remote sites with unprecedented cost efficiency. BloxOne DDI offers flexible deployment options too: it is available through subscription for virtual machines or on-premises commodity devices, delivering significant savings through lower hardware costs.

Some retailers have tried to get around the limitations of on-site network management by siting DDI systems back at the HQ data center. The problem with this approach, however, is that with traditional hub and spoke network configuration, traffic from stores and branch locations has to be backhauled to that data center. With DNS resolution now happening remotely, basic online services are completely reliant on your WAN link to that HQ data center. If a retailer loses that link, its POS system and any IoT services will go down as well, and the affected location would be effectively out of business.

BloxOne: Ensure Optimum Performance of In-Store Systems

BloxOne DDI is cloud-managed, but it resolves DNS locally and so is not dependent on a WAN link to HQ. Even if a store lost connectivity to the main data center, BloxOne DDI is locally survivable and so online services including POS systems and in-store virtual applications would remain up and running. In fact, with BloxOne DDI, your in-store digital systems will benefit in several ways, while your customers will consistently enjoy shopping outings that offer the best of both online and in-store experiences.

- Increased reliability and performance of cloud-reliant applications.

- Continuous uptime for all cloud applications and networked devices, even if your WAN connection to headquarters goes down.

- Optimized shopper experiences, with geo-local capabilities enabling customers to comparison shop among local stores to find discounts or specific items.

BloxOne: Simplifies Networking Management for Administrators

BloxOne centralizes and automates core network services and cloud workload management, meaning network administrators can manage more users in less time and do so more cost effectively. Server-based DDI solutions such as Windows Server and BIND require constant updates and patches. Rolling these out to multiple locations is cumbersome and time consuming.

The cloud-managed BloxOne DDI solution eliminates those obstacles. It combines large-scale automation for provisioning, configuration and policy control with inherently better performance and reliability. From the IT management point of view, BloxOne delivers positive returns on a variety of levels:

- Eliminates support calls from stores afflicted by down-time events or latency issues.

- Frees up network operations and staff resources.

- Advances your multicloud, IoT and digital transformation efforts.

Why Infoblox

Retailers all over the world have relied on Infoblox technologies to power, optimize and secure their networks for many years. As digital, mobile and disruptive business models continue to reshape the traditional retail sector, incumbents and innovators alike are now looking to Infoblox for the advanced SD-WAN, cloud-native DDI and security solutions they need to compete and succeed in the tumultuous new business environment. Uniquely, Infoblox provides solutions to the critical networking challenges facing retailers today.