



Zebra Technologies Masters a Massive Merger with a Hybrid Cloud Using VMware NSX and vRealize Suite

When Zebra Technologies bought Motorola Solutions' Enterprise business in 2014, it also acquired 700 new applications and a massive daily hosting bill. To handle the influx, the company transformed its internal data center facilities to create a VMware-based private cloud. It extended that environment with the VMware vCloud® Air™ Dedicated Cloud service and chose VMware vRealize® Suite to manage the resulting hybrid private-public cloud secured by VMware NSX®. This tightly integrated environment delivered the flexibility needed to quickly migrate the Motorola workloads, retire the legacy hosting expense, and launch on-demand infrastructure as a service (IaaS).

Zebra Technologies builds logistical solutions that identify, track, and manage critical assets, people, and transactions. The company's end-to-end solutions combine mobile computers, scanners, specialty printers, radio-frequency identification (RFID) labeling, software, and services to give physical things a digital voice and to provide companies with unprecedented visibility into their business. Headquartered in Lincolnshire, Illinois, Zebra operates in 81 countries and employs a workforce of more than 7,000.

The Challenge

When Zebra acquired Motorola Solutions' Enterprise business, the \$3.45 billion transaction nearly quadrupled the size of the company overnight. Along with Motorola's mobile computing and advanced data capture products, the merger also included more than 700 business applications. Under the transition services agreement, Zebra agreed to pay a punishing daily hosting charge until it vacated Motorola data centers.

This posed a tremendous challenge for the Zebra IT group, a lean organization in both personnel and facilities. The team had already been seeking a larger location for the production workloads in its North American data center, but the acquisition instantly multiplied Zebra's IT requirements by a factor that was obviously large, if not immediately quantifiable.

INDUSTRY

Logistics

LOCATION

Lincolnshire, Illinois

KEY CHALLENGES

- Quickly migrate 700 legacy applications
- Retire significant hosting charges
- Leverage hybrid cloud for on-demand infrastructure-as-a-service

SOLUTION

Launch a unified hybrid cloud based on a combination of VMware vCloud Air, VMware vSphere, and the VMware vRealize Suite cloud management platform

BUSINESS BENEFITS

- Better support growth and innovation by being more responsive to the business
- Quickly reduced legacy hosting expenses
- Provide Hassle-free ability to move workloads between private and public clouds

“You need to have all these pieces: the Software-Defined Data Center, the public cloud service, the automation, the security, the operational visibility, and the financial transparency. VMware has sewn it all into a single software solution.”

- Scott Myers,
Cloud Architect,
Zebra Technologies

VMWARE FOOTPRINT

- VMware vRealize Suite Enterprise Edition
 - VMware vRealize Automation™ Enterprise Edition
 - VMware vRealize Operations™ Advanced Edition
 - VMware vRealize Business™ Enterprise Edition
- VMware vCloud Air Dedicated Cloud
- VMware vSphere Enterprise Plus Edition™
- VMware NSX
- VMware Site Recovery Manager™
- VMware Professional Services

APPLICATIONS VIRTUALIZED

Hundreds of custom engineering applications and development environments

PLATFORM

- HP servers
- EMC ViPR storage

“From day one, everyone wanted to know about the Motorola applications,” says Kelly Jones, a cloud consultant to Zebra’s CIO. “What do they look like? How big are they? What are the workloads? And we had no idea. All we knew was that we had a ‘do or die’ directive to get out of the Motorola environments fast, and that bringing all these things onboard was going to require maximum flexibility.”

To integrate the Motorola applications, Zebra needed internal hosting capabilities that were both larger and far more flexible than its existing environment: It needed a private cloud. But it also needed public cloud facilities as a staging environment during the internal data center upgrades and as an instantly elastic resource for future development and expansion. Furthermore, Zebra wanted to manage those private and public clouds as an integrated, hybrid environment and a platform for self-serve IaaS delivery.

The Solution

Zebra elected to build on the successful virtualization of its server environment on the VMware vSphere® platform by automating its entire IT environment to deliver Infrastructure as a Service (IaaS). Beginning in June 2015, the company expanded its existing data center facilities, refreshed the existing hardware platforms, and virtualized the remaining physical infrastructure to create a private cloud. It added new virtualization technologies, including the VMware NSX solution for security, network abstraction, multi-tenancy and micro-segmentation; and EMC ViPR for storage virtualization. The company then extended this internal environment with public cloud facilities, primarily on the vCloud Air platform but including the Amazon Web Services (AWS) and Microsoft Azure clouds.

Zebra’s goal was to build a hybrid cloud environment with enough flexibility and elasticity to quickly accommodate the new Motorola applications. Workloads needed to move back and forth between private and public VMware-based facilities seamlessly, as dictated by the business integration. This extended IT environment could then provide the consolidated company with self-serve IaaS, with automated platform provisioning securely to the user’s cloud of choice.

But to integrate these diverse facilities, Zebra needed a unified cloud management platform with security it could rely on. The only realistic choice was vRealize Suite and VMware NSX. “We knew we had to have something that worked natively with VMware,” says Scott Myers, Zebra’s cloud architect. “Our on-premises cloud is vSphere and our main off-premises cloud is vCloud Air, but we also want to manage both AWS and Azure. The only organization that had that ability, or even had it on their road map in a reasonable time frame, was VMware.”

In less than a year, Zebra has moved or decommissioned most of the Motorola applications and reduced the daily hosting fees by more than 98 percent. More than 1,600 servers now run in Zebra’s public cloud environments hosting a mix of production, development, and backup workloads that represent more than 45 percent of the company’s overall IT environment.

Business Benefits

By launching its hybrid cloud on a VMware product and service stack, Zebra gained new capabilities and realized significant business benefits, beginning with the hassle-free ability to move workloads between its public and private clouds, saving the IT team time. “It’s easy to move a virtual machine,” Jones says, “but you can spend the next hour and a half getting the network guys to change the VLAN, change the rules, or punch holes in firewalls. VMware NSX with vRealize Automation automates all of that.”

VMware NSX and vRealize Automation Enterprise Edition lets Zebra enable self-serve provisioning of complete platforms to any cloud in its hybrid environment. “Everything you need for that environment will be spun up, accurately and automatically, on either on-premises or off-premises facilities, including AWS and Azure,” says Myers.

Once Zebra provisions those facilities, VMware vRealize Operations Advanced Edition streamlines life-cycle monitoring and management, regardless of which cloud platform the workload is running in. Each group in the infrastructure management team has its own customized dashboard. "The app teams, the OS team, the network team, they each have their version," Jones says. "The more people see, the more they like it."

In addition, Zebra has gained precise cost accounting for IT utilization. "VMware vRealize Business Enterprise gives us the ability to show management where every dollar went, where they overspent, and what they saved to the last jot and tittle," says Myers. "When our finance people saw what it would do, they were like kids in a toy store."

As Myers explains, for an enterprise to use the cloud effectively requires a comprehensive solution: "You need to have all these pieces: the Software-Defined Data Center, the public cloud, the automation, the security, the operational visibility, and the financial transparency. VMware has sewn it all into a single software solution."

Looking Ahead

Zebra recently released its first version of self-serve, on-demand IaaS. "Our users can go to the Zebra store, click on a server, and select a cloud platform," Jones says. "An automated approval and provisioning process will spin up the server into our on-premises or off-premises clouds—we don't care which—and start metering and billing. We're extending that automation to include the Amazon AWS and Microsoft Azure clouds. That's where we're headed, and we're actually getting there."

