TREND MICRO ACCELERATES PUBLIC CLOUD MIGRATION WITH VMWARE CLOUD ON AWS ENABLING SECURE IT TRANSFORMATION

INDUSTRY
TECHNOLOGY

LOCATION
IRVING, TEXAS (AND GLOBAL HEADQUARTERS TOKYO, JAPAN)

KEY CHALLENGES
- Address time-consuming migration of on-premises workloads to public cloud
- Complex management of infrastructure across clouds and datacenter
- Scale and optimize environment to support new business opportunities and exponentially growing number of threats processed

SOLUTION
To complement its existing VMware vSphere-based private cloud, secured with VMware NSX® Data Center, Trend Micro is leveraging VMware Cloud™ on AWS to easily and quickly migrate workloads to its public cloud with on-demand expansion and no impact to application uptime.

Trend Micro protects 500,000+ companies with its Smart Protection Network that processes hundreds of terabytes of data every day to produce critical global threat intelligence to protect over 250 million unique endpoints world-wide. The company's infrastructure leverages Hadoop for its reputation feedback system, which is flagging 95% of threats as previously unknown amongst the hundreds of thousands processed daily.

Since this business-critical system drives over 50 products and services marketed by Trend Micro, data center stability is crucial. For years, its VMware vSphere® private cloud has delivered the performance and reliability the company expects. New business opportunities, on top of exponential growth of its existing core operations, led the organization to explore ways that its infrastructure could better support the company's dynamic growth.

Organization Overview

Trend Micro Incorporated (TYO: 4704; TSE: 4704), a global leader in cybersecurity solutions, helps to make the world safe for exchanging digital information. Its innovative solutions for consumers, businesses, and governments provide layered security for data centers, cloud environments, networks, and endpoints. With nearly 6,000 employees in over 50 countries, the company recorded US $1. 3 billion in sales in 2017.

The Challenge

Trend Micro's products work together to seamlessly share threat intelligence and provide a connected threat defense with centralized visibility and control, enabling better, faster protection for its customers. Its robust threat detection network, which sets the company apart from its competitors, has been growing exponentially, so the company needed to ensure its IT infrastructure could scale to support both core product growth and new business opportunities.

As with many companies, Trend Micro also had some workloads in the public cloud with Amazon Web Services. However, with its vSphere private cloud siloed from its public cloud environment, management of the infrastructure as a whole was more complex than desired.

Further, moving workloads to the public cloud environment was extremely time consuming. "Re-architecting applications can take months, even a year or more. You have to go back and make sure you understand the intricacies of the application and all its dependencies. That's not easy to do," says Zack Milem, Cloud Solutions Architect for Trend Micro.

BUSINESS BENEFITS

- Accelerate migration of workloads to public cloud, saving months of time and reducing OpEx
- Faster, more flexible business innovation cycles promoted by infrastructure that scales on demand
- No need to sacrifice existing personnel and technical skills in order to move to cloud

"We have an amazing team with cloud backgrounds, but transforming existing enterprise apps into cloud-native equivalents is extremely difficult. Even for our private cloud apps, migrating them to public cloud presented risks if they were not carefully re-platformed and re-tested. VMware Cloud on AWS coupled with Trend Micro Deep Security smooths that out, saving us months of time and thousands of man hours."

ZACK MILEM,
CLOUD SOLUTIONS ARCHITECT
TREND MICRO

The Solution

Trend Micro already enjoyed the reliability and ease of management of its vSphere-based private cloud. The company uses VMware NSX Data Center for micro-segmentation, for example, to keep systems with sensitive, internal-only employee data for Human Resources separate from customer-facing initiatives that developers are working on to optimize Trend Micro's threat detection offerings.

The IT staff is well versed in VMware solutions and it helps that a majority of the customers Trend Micro serves are also using VMware in their data centers, making it easy for Trend Micro to clearly understand its customers' environments when it comes to network defense and hybrid cloud security. For products that it markets to clients, Trend Micro Deep Security integrates with NSX for powerful virtual patching against vulnerabilities, advanced malware protection, integrity monitoring and more, with security protections applied automatically.

With the introduction of VMware Cloud on AWS, the Trend Micro team is elated to have a familiar VMware control pane for its public cloud environment. "It's a huge win to be able to log in and do a VMware VMotion® so seamlessly to the public cloud. It looks like just another data center. It's a big benefit to have a unified view of our environment with both VMware and Trend Micro's Deep Security hybrid cloud solution," says Milem.

The IT team is leveraging VMware Cloud on AWS to quickly migrate workloads to its public cloud with on-demand expansion and no impact to application uptime. For new projects in incubation, for example, VMware Cloud on AWS provides an optimal temporary solution that scales up and back down as a new project is tested. For its core business, with threat intelligence data load demands that are constantly growing and also have unwieldly peaks, the dynamic scaling of VMware Cloud on AWS eliminates capacity issues.

With VMware Hybrid Cloud Extension, Trend Micro gains application landscape mobility and datacenter extension capabilities between any vSphere version. Hybrid Cloud Extension includes vMotion®, Bulk Migration, High Throughput Network Extension, WAN optimization, Traffic Engineering, Load Balancing, Automated VPN with Strong Encryption (Suite B), and Secured Datacenter Interconnectivity with built-in hybrid abstraction and hybrid interconnects. As a result, Trend Micro resources can be moved to the cloud without retrofitting the source infrastructure, eliminating the need for complex migration assessments and mitigating associated application risk.

Trend Micro uses vRealize Automation across its worldwide data centers and its VMware Cloud on AWS environment. The company has developed automation tools in-house that are based on VMware vRealize® Automation™ and integrate with an API for NSX and load balancing. Blueprints created by the IT team leverage Puppet and PowerCLI to allow teams in Asia, EMEA, and the Americas to easily provision VMs on-premises or in the cloud.

In addition to integrating with vSphere with VMware vCenter management, VMware Cloud on AWS also includes VMware vSAN™ in an all-flash configuration for efficient compression, along with NSX to tie security policies to applications. "The security orchestration is very powerful and integrates well with solutions that Trend Micro is wrapping around it all, bolstering the protection we can deliver for clients," says Manish Patel, Senior Director of Strategic Alliances for Trend Micro.

VMWARE FOOTPRINT

• VMware Cloud on AWS

  • VMware Hybrid Cloud Extension

  • VMware NSX

  • VMware vCenter

  • VMware vSAN

  • VMware vSphere

• VMware NSX Data Center 6.3.1

• VMware vRealize Automation 7.3

• VMware vSphere 6.5 Enterprise

APPLICATIONS VIRTUALIZED

Microsoft SQL Server 2012/2016
MySQL 5.6/5.7

PLATFORM

• Dell PowerEdge R630

• NetApp FAS8040 and FAS8080

Business Results & Benefits

For businesses like Trend Micro, with 30 years' worth of existing enterprise applications being evaluated for migration to the cloud, VMware Cloud on AWS is a game changer. With VMware Hybrid Cloud Extension, now part of the VMware Cloud on AWS solution, Trend Micro can leverage bi-directional, large-scale migration of apps between its on-premises environment and the cloud, with infrastructure hybridity that eliminates the need for re-tooling across different versions of vSphere, both on-premises and in the cloud.

The benefits include OpEx savings driven by faster development and test cycles. "We have an amazing team with cloud backgrounds, but transforming existing apps into cloud-native equivalents is extremely difficult. Even for our private cloud apps, migrating them to public cloud presented risks if they were not carefully re-platformed and re-tested. VMware Cloud on AWS smooths that out, saving us months of time and thousands of man hours," says Milem.

The VMware Cloud on AWS environment delivers the functionality and security that Trend Micro values in VMware's Software-Defined Data Center solutions, coupled with flexible access to AWS services. With the familiar VMware vCenter™ console unifying views of both its public and private cloud environments and unified security management with Deep Security across all environments and many platforms, the IT team's management burden is reduced significantly. NSX security protections can be automatically applied and when resource demand bursts occur, elastic capacity is available on demand.

"We really value the consistent user experience we can provide with vRealize Automation and NSX extending from our on-premises vSphere environment to our VMware Cloud on AWS environment," says Milem. "We have two different NSX VPNs going. One for the management plane and one for the actual workload plane. Everything is running fully hybrid with transparency between our 3 primary data centers--plus our cloud environment, keeping interconnectivity between everything for maximum agility and control by our IT team."

With the VMware Cloud on AWS, Trend Micro development teams can get the IT infrastructure resources they need quickly, without being bogged down by a time-consuming procurement process. The streamlined approach helps cultivate innovation. "Of course we get hardware cost savings, but for Trend Micro, the bigger value is in the opportunity created. With the torrent of threat data we have coming in, if we can analyze it, and do so in a very timely fashion, we can stay ahead of the curve," says Patel.

Looking Ahead

As the team looks to the future, they foresee risk mitigation and compliance regulations demanding increasing levels of IT security and automation. "As we see our customers increasingly migrating to public cloud, our security solution naturally has evolved to extend from the data center to the cloud as well. VMware Cloud on AWS makes that journey more graceful, both for our company and our clients," Patel says.

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