TRIPLE S MANAGEMENT
DIGITAL INNOVATION

SSS TRIPLE-S
MANAGEMENT

INDUSTRY
INSURANCE / HEALTHCARE

LOCATION
SAN JUAN, PR

KEY CHALLENGES

- Legacy Infrastructure that needed to be updated

- Large amount of physical servers and multiple storages that needed to be consolidated

- Test Environments with the same performance and security as production environment

- New OnBase Data Management deployment

- Provide secure and reliable access to production application to remote users, with optimal end user experience

- Complex systems and multiple hypervisors administration & maintenance

Triple S Management Corporation is the leading managed care and insurance company in Puerto Rico. For more than half a century Triple S has been offering a wide range of products in the segments of health, life, property and contingency. Triple S Management is a public company since 2007 and its trades its shares on the New York Stock Exchange (Fortune Rank 765) under the symbol (GTS). Triple S also is an independent licensee of the Blue Cross Blue Shield Association and have presence in markets such as U.S. Virgin Islands and Costa Rica.

Triple S also is one of the most technologically advance and forward-looking companies in Puerto Rico. Triple S was the first mayor organization in Puerto Rico to virtualized with VMware vSphere ESX 2.5, large portion of its Data Center's operations back in 2004. With the help of their long-time virtualization and datacenter services provider CPCORP, Inc., Triple S has embarked in multiple IT transformative projects, to achieve operational efficiencies, reduce costs and provide outstanding service to its customers.

Challenges

First challenge: Triple S is an organization with multiple subsidiaries that deliver a wide range of quality products, solutions and services. To support all these different operations, Triple S had a large and complex Data Center footprint. Comprised of old legacy equipment, large quantity of physical servers and multiple storage (SAN) solutions. In addition a because past business acquisitions, they had multiple hypervisors from different vendors and version on its virtual infrastructure. Also it had duplicated compute and storage silos for production, development and quality assurance environments, and not all of them with same level of performance.

Second challenge: One of its subsidiaries, needed to deploy a new OnBase Data Management solution. It needed additional storage capacity, high performance, security and redundancy requirements. In addition, they needed to migrate vm's and physical server to the new infrastructure.

Last challenge, the solutions for providing reliable and secure access to the core business applications to their remote users (app Delivery & VDI), was complex to manage, it was a collection of multiples and not integrated solutions (too many vendors) and the performance was not optimal for some very important applications.

Meeting all these challenges also required the unification and simplification of day-2 operations (management, monitoring and maintenance) of the data center.

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SOLUTION

Multi-phased design, deployment and rigorous testing of VMware solutions:

- Virtualization of all physical servers (Consolidation Ratio of 150:19) with vSphere 6.7 Hypervisor

- Provided High Availability to application that used to run in legacy/ obsolete hardware

- Simplified server and storage monitoring and management with vRealize Operations

- Consolidated Tier 1 & 2 storage and in some cases eliminated SAN switches with vSAN Ready Nodes

- Zero Trust with Micro-segmentation of Test, Development and QA environments with NSX and vRNI

The Solution

In the continuous process of improving its business operations and services to the organization's different lines of business (LOB), Triple S identified multiple areas of its IT operations and developed multiple use cases to deploy new technologies to achieve the desired business outcomes. With the help of CPCORP's consultants and technical resources, a multi-phased plan was developed and executed.

Phase 1 - Data Center Modernization & Consolidation

CP Corp designed and implemented a new VMware virtual infrastructure, comprise of new compute nodes running vSphere ESXi 6.7 as part of a new 3-Tier architecture environment. Also deployed a new (HCI) vSAN ready nodes cluster with vSAN Enterprise edition, to host all new vm's workloads and the new OnBase Data Management platform.

Once the virtual infrastructure was in production, Executed all the migrations of all physical and servers to the new ESXi Host's. Also performed the migration of more than hundred (100) Hyper-V VM's to the new vSphere 6.7 cluster. The combination of VMware solution in combination with CPCORP consulting and services, provided Triple S the desire outcome for its virtual infrastructure. It helped reduce maintenance and operational costs. Also provided a more resilient, consolidated and much simpler management infrastructure.

Phase 2 - Virtual Desktop and Application delivery with Horizon 7 & vSAN

Because of Triple S continuous business innovation and requirements, the multiple solutions required to provide reliable and secure access to the many different core business applications to internal and external users, was not scaling and performing to Triple S standards. There where a couple of very important use cases where application performance was critical. In addition and because HIPAA regulation, all communication must be secured, encrypted on-flight and at rest.

Based on those challenges, CPCORP setup a Horizon Proof of Concept (PoC) environment, where Triple S technical enterprise architect and line of business users, could test all the requirements and measure end user experience for all applications use cases. Once the PoC concluded, all the people involved in the evaluation where very impressed with the results. VMware Horizon Enterprise was the solution selected to address all the requirements.

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"With VMware Horizon and vSAN solutions, we were able to greatly improve end user's desktop experience. It enables us to easily and securely provision and deliver business applications to our mobile workforce, while it helped us to dramatically reduce Data Center footprint."

VICTOR RIVERA
ENTERPRISE SOLUTIONS ARCHITECT
TRIPLE S MANAGEMENT

BUSINESS BENEFITS

- Dramatically reduce Data Center footprint. From over 30 42U's Rack's to just 10 42 U's Rack's.

- Simplified IT administration and management, while improving resiliency in the Data Center

- Improved application efficiency, redundancy and eliminated hardware dependencies of those applications

- Simplified virtual infrastructure managing and maintenance

Deployment of the Horizon Enterprise solution was done in highly dense vSAN ready nodes. Four (4) All Flash vSAN nodes per 2U rack unit's configuration. The solution to server more than a thousand (1,000) user, only occupy 10 rack units. This design dramatically saved Triple S rack space (U's) and power consumption in their data center.

VMware Horizon Enterprise provided Triple S the flexibility to deploy its application to users in a variety of forms; VDI and/or App Delivery with instant clone or real-time application delivery and package applications with ThinApp. In addition it provided a simplified single-pane of glass management console thru vCenter Server and vRealize Operation for Horizon.

Phase 3 - NSX Development and QA

Development, Test and Quality Assurance environments for supporting core business applications is a critical part of any IT operation (DevOps). Most organizations struggle with the complexity of maintaining multiple compute and storage silos for production, development and quality assurance environments, and not all of them with same level of performance and/or security. Also the costs associated with maintaining this complex environment is another pain point for customers.

Triple S DevOps Team wanted to streamline the development and test environment by consolidating the amount of compute and storage in their environment. In addition they needed to provide secure access to multiple identical environments for development, QA and UAT purposes. The customer already had the environments created but since they had identical IPs, they had them in VLANs with no routing, thus, to provide access to developers they were giving local console access to the servers through vCenter.

CPCORP proposed VMware NSX Advanced. CP Corp architected, designed and implemented routing, NAT and micro-segmentation for the three environments. With the routing and NAT capabilities developers and business analysts can now securely access all three environments without requiring vCenter Access. The three environment VMs can now access external resource for integration and updates without IP conflicts and or confusion. The micro-segmentation capabilities allowed the security teams to implement zero trust and the flow monitoring provided previously unknown visibility into the environment's vm to vm flows allowing the developers to map their applications dependencies with certainty.

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BUSINESS BENEFITS

- Reduce time to deploy business application to internal and external users, while greatly improving application performance

- Achieved secure and reliable access to production application to remote users, with optimal end user experience

- Reduce hardware maintenance cost with DC consolidation

- NSX NAT and micro-segmentation enable to provide secure access to multiple identical environments for development, QA and UAT purposes

- Micro-segmentation capabilities allowed security teams to implement zero trust and flow monitoring, to provide vm to vm flow visibility

VMWARE FOOTPRINT
- VMware vRealize Suite
- VMware vSAN
- VMware Horizon
- VMware NSX
- VMware vRealize Network Insight

Business Benefits

The outcome of phase 1 in the Data Center consolidation strategy, Triple S was able to dramatically reduce Data Center footprint. From over thirty (30) 42U's Rack's most of them full of physical and legacy equipment, to just ten (10) 42 U's Rack's of new server (ESXi Hosts, vSAN nodes) and new storage systems. Also improved applications efficiencies and redundancy, by eliminated old hardware dependencies. Simplified infrastructure management and reduced maintenance cost in both hardware and hypervisor, by standardizing in VMware vSphere 6.7 with Operations Management and vCenter Server.

In phase 2, with the implementation of VMware Horizon 7, Triple S was able to reduce time to deploy business application to internal and external users, while greatly improving application performance. Also achieved secure and reliable access to production application to remote users, with optimal end user experience. The deployment of vSAN ready nodes, also contribute to the rack space saving in data center .

With the deployment of NSX in phase 3, using micro-segmentation to implement zero trust environment Triple S DevOps Team gain the ability to provide secure access to multiple identical environments to developers and without giving local console access to the servers through vCenter. In addition the security team gained visibility into the environment's vm to vm flows allowing the developers to map their applications dependencies with certainty.

PARTNER

CPCORP, Inc.
Puerto Rico

For more than twenty (20) years, CPCORP has had the privileged of working with the Triple S Team and providing them best of breed solutions and services.