DataOne Asia builds its CloudSecure computing platform with Cisco Data Center and Virtualization solutions

How DataOne leveraged the benefits of the Cisco Unified Computing System (UCS), Cisco Nexus Series Switches and Cisco Adaptive Security Appliance to improve efficiency and increase business growth at lower price point.

EXECUTIVE SUMMARY

Customer Name: DataOne Asia (Philippines) Inc.

Industry: Independent provider of managed technology services to enterprises.

Location: Quezon, Philippines.

Challenge
- The inability of its existing data center infrastructure to meet growing demands of its customers.
- Deliver maximum uptime, high throughput, and rapid deployment of cloud applications in order to meet their customers ever evolving demands.
- Consolidate and simplify its network to maximize service flexibility and minimize administrative efforts.

Solution
Cisco Data Center and Virtualization solutions including Cisco Unified Computing System, Cisco Nexus 5000 and 2000 Series Switches, and Cisco ASA 5585-X Adaptive Security Appliance.

Results
- Dynamic scalability, in order to deliver on-demand computing.
- Increased network performance while reducing physical footprint due to Unified Fabric.
- Primed for expansion of applications and services to capture more market share.

Challenge

DataOne Asia (Philippines) Inc is the leading independent provider of managed technology services to enterprises in the Philippines. Since its inception in 2002, DataOne has offered data center outsourcing, managed infrastructure, operations management, including hosting, managing and maintaining customers' applications such as SAP, Exchange, SharePoint, and Dynamics.

DataOne's core business as a provider of technology services is built upon its high-end Tier3 data center located in Quezon City. As the customer base grew, the company needed to ensure their infrastructure was able to satisfy changing business dynamics to capture new customers looking for fully hosted cloud applications.

DataOne's CEO, Cyril Rocke, decided to embrace the trend toward Cloud Computing, and to create a whole new portfolio of services, ranging from computing on-demand business applications and unified communications, under the branding "CloudSecure."

In order to achieve these goals, DataOne had to address three core challenges. First, it needed to upgrade its existing network performance. DataOne was running on infrastructure that was rapidly nearing the limits of its capacity. "We were running on a 1 Gb Ethernet backbone, so we needed to upgrade our switching capacity to deliver higher throughput, enable rapid deployment and at the same time, maintain the high availability of our network infrastructure, in order to remain

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> " Our new virtualized infrastructure means that storage, computing and network resources can be brought online when we need it. It allows us to become more agile with the capabilities we offer our customers."

Cyril Rocke, CEO, DataOne

competitive," said Alex Fernando, Chief Technical Officer, DataOne. "Our existing infrastructure supports more than 10,000 users across all our solution offerings," he added.

Next, the company needed to improve infrastructure scalability. "In order to build a globally competitive cloud computing platform, we knew we needed to transform into a fully virtualized infrastructure, one that would allow us to rapidly deploy new services and go-to-market quickly. It would allow us to offer Infrastructure-as-a-Service (IaaS) to our clients in a self-service manner. Moreover, the new architecture will give us the opportunity to expand our offering beyond the infrastructure. We can now venture into Software-as-a-Service (SaaS),"said Mr. Fernando.

Finally, the company needed to optimize and consolidate their infrastructure. "Over the years, we have built a wide portfolio of offerings spread out over multiple servers and storage infrastructure. That also meant that the fiber channel and IP cabling were becoming extremely complex to manage. We wanted to consolidate and simplify our network – so instead of having multiple networks for fiber channel and IP, we wanted a unified platform that would allow us to maximize service flexibility and at the same time, improve the overall performance of our systems," he added.

Solution

As a technology partner for more than a decade, DataOne consulted with Cisco on how it could achieve this highly virtualized data center infrastructure. "Cisco was very much present during the planning, design, and architecture phase. They assisted us in drilling down the specifics when it came to making a decision on which solutions were most cost-efficient for our planned deployment," explained Mr. Fernando.

DataOne recognized that they could achieve their goals with Cisco's Data Centre solutions in order to deliver a highly versatile infrastructure cloud service to meet the requirements of today's market. DataOne decided to use the Cisco Unified Computing System for their virtualization infrastructure together with the Cisco Nexus Unified Fabric switching platform. The Cisco Nexus switches would provide the modularity needed for their data center environment, and effectively allow for infrastructure scalability, operational continuity and flexibility. Cisco Unified Computing System essentially unifies network, compute, storage access, and virtualization into a single, cohesive system. "We were impressed with the Cisco UCS and how it worked seamlessly with the Cisco Nexus switching platform to create a truly integrated data center," said Mr. Fernando.

"The main advantage of the Cisco Unified Computing System for DataOne was its ease of growth, because it combined networking, compute, storage access, and virtualization, all within a single entity," explained Mr. Fernando. "The Cisco Unified Computing System in combination with high-density Cisco Nexus Switches will give us the flexibility and scalability to rapidly meet our customers' needs," he added.

DataOne took one month to move the network backbone to Cisco Nexus 5596 series switches, completing the process in July 2011, six months since starting the evaluation process. "We had the option to simply upgrade the capacity of our

> " DataOne is one of the first providers in the country to use the Fiber Channel over Ethernet (FCoE) protocol. Coupled with the reliability and flexibility provided by the Cisco Unified Computing System, we expect our business to save time and money with the reduced physical I/O connections, as well as being easy to use and manage the infrastructure."

Alex Fernando, Chief Technical Officer, DataOne

Cisco Catalyst 6500 series switches, but we decided to move on to the Cisco Nexus platform in preparation for our cloud services," explained Aileen Martinez, Datacenter Operations Manager, DataOne.

Cisco has served our needs well for more than a decade. The decision to continue with the Cisco infrastructure made a lot of sense for DataOne as we already had highly skilled Cisco trained experts in-house," she added.

"We also incorporated Cisco's Adaptive Security Appliance (ASA) to boost our security features," explained Ms. Martinez, "Organizations looking to adopt cloud services always place security as a top concern. By deploying Cisco ASA, we now can effectively offer our customers a stronger layer of security," she said.

Results

By November 2011, DataOne entered into the final stages of testing for the Cisco Unified Computing System. "We have completed the installation of the UCS servers, and running through the various virtualization features. Our VMware setup will be migrated over very soon and we're eager to deploy our applications as soon as possible," said Mr. Fernando.

DataOne is now in the driver's seat to deliver on-demand computing whenever it is faced with rising market demand. This will allow it to meet its goal of increasing its customer base without incurring hefty infrastructure investments or requiring extensive IT support. "Moving to 10GE has given us a tenfold increase in network performance, so congestion issues are no longer a problem," said Mr. Fernando.

With the Cisco UCS and the Nexus platform, DataOne can offer fast deployment of new services and offerings to capture more market share. "Our new virtualized infrastructure means that storage, computing and network resources can be brought online when we need it. It allows us to become more agile with the capabilities we offer our customers," said Mr. Cyril Rocke, CEO, DataOne. Coupled with the Cisco ASA, DataOne now has real-time reputation technology to defend their upcoming cloud services against a wide range of threats, including worms, application-layer attacks, operating system-level attacks, rootkits, spyware, peer-to-peer file sharing, and instant messaging for both IPv6 and IPv4 networks.

PRODUCT LIST

Data Center

· Cisco Data Center and Virtualization solutions including Cisco Unified Computing System
· Cisco Nexus 5000 and 2000 Series Switches
· Cisco ASA 5585-X Adaptive Security Appliance

The consolidation of infrastructure has also helped the company streamline their equipment footprint. "We managed to cut down the physical assets required throughout the data center into a converged infrastructure. This is significant when you consider that – across all our application workloads – we need hundreds of cables and ports, and administration time to configure them all. The Cisco Nexus platform and Cisco UCS allows us to create a unified fabric where the server and storage traffic use a common Ethernet infrastructure," said Mr. Fernando.

The Cisco Unified Fabric, being a foundational pillar of DataOne's infrastructure, offers the best of LAN and SAN worlds, allowing them to bring all network locations into a single, highly virtualized environment. This allows resources to be efficiently accessed and effectively utilized regardless of size or scope. "DataOne is one of the first providers in the country to use Fiber Channel over Ethernet (FCoE) in our storage network. Coupled with the application deployment benefits from Cisco UCS, we expect to enjoy tremendous savings in physical I/O connections per server alone," said Mr. Fernando.

Next Steps

As a result of this new infrastructure, DataOne is now ready and equipped to tackle the current and future demands of its clients. "The flexibility in service deployment means that we're ready for an exponential growth for our new CloudSecure service. Once we start rolling out our computing on-demand, and business application services from the cloud, we expect a lot of volume coming into this network," concluded Mr. Rocke.

For More Information

For more information on DataOne, visit www.data1asia.com
For more information on Cisco Unified Computing System, visit www.cisco.com/go/ucs
For more information on Cisco Nexus Switching, visit www.cisco.com/go/nexus

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