



Satisfying Skyrocketing Demand: LOLC Builds a Software-Defined Datacenter

INDUSTRY Technology

LOCATION Sri Lanka

KEY CHALLENGES

- Satisfy demands for improved IT services from LOLC Group companies
- Dynamically provision IT services for external customers
- Optimize IT infrastructure spending and introduce cost accounting

SOLUTION

Transform the existing virtualized infrastructure to a Software-Defined Datacenter, enabling LOLC Technologies to operate as a 'cloud services provider.'

BUSINESS BENEFITS

- Guaranteed high quality service levels to LOLC Group users
- Helped the business achieve strong growth
- Generated new revenue streams by offering applications, disaster recovery and backup as a service to external businesses
- Reduced DR times for key applications from three hours to one hour

LOLC Technologies is using the VMware vCloud Suite to implement a cloud platform that enables its businesses to diversify into new markets. The Sri Lankan organization is also establishing IT services on demand to non-LOLC customers.

As the Sri Lankan economy has gained momentum in recent years, Lanka ORIX Leasing Company (LOLC) has consolidated its position as a conglomerate with interests in financial services, agriculture and plantations, leisure, renewable energy, construction, manufacturing and trading, overseas investments and information technology.

LOLC has played a vital role in Sri Lanka's development since starting operations in 1980 by providing leasing services to entrepreneurs, individuals and businesses alike.

As the organization thrived and became LOLC Group, it established companies specializing in financial services such as factoring, savings, deposits, Islamic financing, micro-financing, life insurance and other insurance types.

LOLC Group also started expanding into other markets, including fleet management, information technology and vehicle-related options such as mechanical repairs and preventive maintenance.

In 2005, LOLC established Lanka ORIX Information Technology (LOIT)—now known as LOLC Technologies—as a wholly-owned service provider to boost IT support for its businesses and provide services to external customers.

The Challenge

Stabilization of the country's political environment in 2009 significantly boosted business confidence. This

opened up the opportunity for the company's management to tailor products and services for specific industries such as agriculture, construction, hospitality and renewable energy.

As LOLC Group expanded, LOLC Technologies faced a critical challenge; how could it support growing internal demands and provide new services to external companies?

To do so, the IT team had to find a more dynamic, flexible and cost-effective way of provisioning and managing IT. "We had a range of businesses with different workflows, processing and corporate requirements, and we needed to support them all efficiently," said Conrad Dias, Chief Executive Officer, LOLC Technologies and Group Chief Information Officer, LOLC Group.

"We also needed to meet our corporate objective of cost-effectively expanding our service capabilities to customers beyond internal LOLC businesses."

“Engaging VMware has enabled us to cater to the skyrocketing demands of our fast-growing group of companies while supporting the delivery of products and services to new customers.”

Conrad Dias
Chief Executive Officer
LOLC Technologies
Group Chief Information Officer
LOLC Group

VMWARE FOOTPRINT

- VMware vCloud Suite Enterprise
- VMware vCloud Director
- VMware vCloud Networking and Security
- VMware vCenter Site Recovery Manager
- vCenter Operations Management Suite

In 2009, LOLC Technologies engaged VMware partner KBSL Information Technologies (KBSL) to help virtualize its core business applications using VMware products. KBSL undertook several proofs-of-concept to develop the project and completed the work successfully.

In 2011, LOLC Technologies decided to take its datacenter capabilities to a new level and again turned to KBSL for assistance. “LOLC has always led technology adoption in Sri Lanka,” said Kaushala Lankadhikara, Head of Engineering, KBSL. “Our extensive experience with heterogeneous systems and technologies, deep understanding of the customer’s requirements and the dedication of our team made us the ideal partner to make this project work.”

Despite pressure from other vendors, LOLC Technologies and KBSL decided that VMware’s track record and roadmap provided the best alignment with the needs of the emerging business model. “We decided to move towards a Software-Defined Datacenter—where all services, including compute, storage, networking, security and availability are delivered as software—as a foundation for a cloud-based environment,” said Dias.

LOLC Technologies wanted LOLC Group business units to be able to provision resources using self-service functionality rather than making direct requests to the IT department. The technology division also wanted to closely track the resources each business was consuming, and cross-charge for them accordingly. Finally, LOLC Technologies did not want to restrict LOLC Group’s fast-growing businesses by confining them to the internal pool of IT resources; it also wanted to give them “cloud burst” access to public cloud resources.

Concurrently, LOLC Technologies needed to enhance its disaster recovery capabilities, as its existing third-party tools could not meet the organization’s stringent recovery requirements. In addition, with so many businesses sharing its infrastructure, LOLC Technologies needed to segregate and secure a range of environments. This meant it needed to implement processes to manage the compliance, security and IT governance issues inherent in a multi-tenant environment.

The Solution

Working with KBSL, LOLC Technologies deployed a range of VMware technologies, including VMware vSphere™ 5.1 Enterprise Plus, VMware vCenter Site Recovery Manager™ and VMware vCenter Server™. The organization is deploying VMware vCloud Director™ to leverage its capability to pool resources and deliver service catalogs to internal and external businesses.

KBSL developed, designed, managed and implemented the LOLC Technologies environment over four and a half months, with teams of engineers with bachelor or masters’ qualifications and certifications in products from VMware, NetApp and IBM. To transfer its knowledge to the LOLC Technologies team, KBSL offered standard instructor-led administrator training on VMware and NetApp products and enabled LOLC Technologies engineers to work alongside its own experts to gain on-the-job experience.

LOLC Technologies’ production datacenter now runs five physical hosts while the secondary datacenter operates with three hosts. An active-active configuration ensures a single optimized environment operates across both datacenters. The hosts run about 90 virtual machines delivering a range of applications to LOLC Group companies, including Microsoft Exchange Server email, Microsoft Active Directory, Microsoft SharePoint portal, Oracle E-Business Suite and business-specific banking, insurance and financial services applications.

Business Results & Benefits

Deploying VMware solutions has enabled LOLC Technologies to support LOLC Group’s expansion with a robust, flexible platform that fulfills both present and future service requirements. The infrastructure serves 3,000 users across LOLC Group, starting from just 500 in 2009.

“We are deploying a cloud platform so we can provision servers quickly for each and every one of our companies, charge them separately and manage their infrastructure with a high degree of excellence,” said Dhamithra Jayasuriya, Head of Data Centre, LOLC Technologies. “We want the companies to focus on doing business rather than worrying about their IT infrastructure needs.”

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APPLICATIONS VIRTUALIZED

- Oracle Application Server 10g, Oracle Database 10g and 11g, Oracle E-Business Suite R12
- Microsoft Active Directory, Microsoft Internet Information Services, Microsoft Exchange Server 2010, Microsoft Share Point 2010, Microsoft Windows Terminal Server 2008, Microsoft Internet Security and Acceleration Server 2006, Microsoft Windows Software Update Service
- Symantec Endpoint Protection, e-commerce related services, domain controller

PLATFORM

- VMware vSphere 5.1 on five IBM BladeCenter HX5 blade servers. At the disaster recovery site, VMware vSphere 5.1 on two IBM System x3850 M2 servers
- Two NetApp FAS3240 storage devices
- Guest operating systems: Microsoft Windows Server 2003, Microsoft Windows Server 2008, Red Hat Linux AS 4, Oracle Enterprise Linux 5, Sun Solaris 10

He cited the example of LOLC Insurance, which was established in 2011 to provide insurance services to individuals, micro-businesses and small to medium businesses. "Our model allows the company to concentrate on building itself up while we focus on provisioning the servers and services it needs to do so," said Jayasuriya. The insurance business is now the seventh largest motor insurance underwriter in Sri Lanka.

"Our new IT service delivery model has been crucial in allowing us to meet our current goals, and the objectives we have in the future. We are very aggressive about making decisions and acquiring businesses and VMware's dependability, flexibility and scalability have played a key role in enabling that approach," said Dias.

The VMware infrastructure has allowed LOLC Technologies to boost server resource utilization and provision new virtual servers quickly to meet demand from both LOLC Group businesses and external clients. "We have deployed a cloud-based service for one of our external customers and are looking to expand further into providing software, disaster recovery and backup as a service to businesses in general," said Dias.

LOLC Group is talking to a range of vendors about offering their software products to customers on an 'as a service' basis. The company currently offers specialized applications for lending, savings and deposits to the non-banking financial services sector on a hosted basis, and plans to develop applications to support businesses in other industries. Internally, LOLC Technologies is refining its chargeback model and analysing how to implement self-service capabilities for LOLC Group businesses.

"At the moment, we charge our companies based on the number of users and the services we are providing them," Jayasuriya said. "We are planning to charge them precisely for their actual resource usage and give LOLC a clearer view of IT infrastructure costs and resource consumption."

LOLC Technologies is also working on extending the resources available to LOLC Group businesses by adopting a hybrid cloud model. Cloud-bursting will

complement the internal private cloud, adding new service options and relieving the resource pressure during peak demand cycles.

Moving to a private cloud has drawn praise from business users, who are welcoming the lower investment in technology. "They can start a new IT service without concern for capital costs and deliver solutions to market quickly to seize opportunities and meet customer needs," said Jayasuriya.

LOLC Technologies is also implementing VMware vCloud Networking and Security to strengthen its multi-tenant cloud. "We need to segregate our infrastructure as companies require different security settings; external customers require confidence, transparency and isolation of resources from the internal operation which is on the same cloud," added Jayasuriya.

With VMware vCenter Operations Management™, the LOLC Technologies team now has the visibility into its infrastructure to proactively detect systems under stress before they become an issue for end-users. The organization has turned to VMware vCenter Site Recovery Manager™ for disaster recovery. "The latest enhancements to the product, and its improved reliability and maturity, made it an ideal replacement for the third-party tools that were failing to meet our needs," said Jayasuriya.

In monthly disaster recovery drills and audits, mean time to recovery has been significantly reduced and disaster recovery can be carried out at any time. "Recovering our business-critical applications took only one hour, compared to three to four hours using our previous tools," said Jayasuriya. "We can also undertake disaster recovery testing without obstructing production workloads, meaning we don't have to schedule downtime."

"VMware has worked with us as a genuine partner to restructure the way we provide services to both LOLC and non-LOLC businesses," said Dias. "Not only have they provided deep technical support and insight, but they have grasped what we are trying to achieve as an organization."

