



Telekom Malaysia: Delivering Next Generation IT

INDUSTRY

Telecommunications

LOCATION

Malaysia

Key Challenges

Meet demands of mission-critical services and growth in new markets by centralizing IT infrastructure to better manage IT systems with fewer resources, reduce costs, improve agility in machine provisioning and scalability, increase reliability and disaster recovery capabilities.

SOLUTION

Transition to a unified computing platform implemented on VMware's vCloud Suite to deliver improved effectiveness, efficiency and elasticity.

BENEFITS

- Deliver on CTIO's vision
- Significantly reduce capital and operational expenditure
- IT effort transitioned to innovation, planning and strategy
- Achieve 90 percent faster machine provisioning
- State-of-the-art unified computing platform
- IT up-skilling
- Increased credibility with stakeholders

TM deploys VMware's vCloud Suite to standardize on a unified computing platform to meet its complex requirements while creating a future-proof IT environment that is effective, efficient, and elastic. TM's cloud initiative demonstrates thought leadership and delivers proven business results to stakeholders.

Telekom Malaysia Berhad (TM) is Malaysia's leading integrated information and communications group, offering a comprehensive range of communication services and solutions in broadband, data and fixed lines. With over 2.2 million broadband customers, TM has secured the position of the country's top broadband provider.

Challenges

TM's technology division, driven by its Chief Technology and Information Officer (CTIO), has a vision of creating a telecommunications network and IT infrastructure for the next generation; a vision code-named 'E³' - effective, efficient, and elastic. This vision forms the crux of TM's adoption of technology to stay at the forefront of its business.

As the telecommunications infrastructure landscape evolved, TM moved from a copper-based service to a fiber-based service to deliver its innovative broadband service called UniFi, to a new market with extremely high service expectations. With this move, new challenges emerged as most of its IT resources were re-deployed to product development resulting in insufficient resources to manage the existing IT operations.

Concurrent with these developments and in line with its E³ vision, TM transitioned a significant number of IT personnel from operations to strategy and development roles. The Company now faced the challenge of how to manage its IT systems optimally with fewer resources, reduce costs and improve agility in IT systems provisioning and scalability, increase reliability and deliver robust disaster recovery capabilities.

Another challenge emerged as TM faced the imminent risk of its legacy applications discontinuing support on the existing hardware platform which underpinned its critical business systems. As a result, these systems which have been in operation for the last 25 years would have to be migrated.

Solution

To address the demands of TM's rapidly growing business, TM adopted a private cloud strategy. It chose VMware to support it in developing, designing, and implementing the unified computing platform in a 3-year transformational project called iGrid.

"We needed to work with the right partner, who possessed the right expertise and intimate knowledge of TM. Having these elements would help us to build a solution that is robust, stable, and effective, while ensuring our design and platform align with our E³ vision," says Nizam Arshad, Vice President, Group IT, TM. "After a detailed evaluation process, we concluded that VMware fulfilled our requirements."

To start the project, VMware completed an on-site assessment of the existing environment, from which it designed the blueprint of a single, unified private cloud platform built on vCloud Suite.

VMware Solution:

- vCloud Suite Enterprise comprising:
 - vCenter Operations
 - vCenter Configuration Manager
 - vCloud Networking and Security
 - vCloud Automation Center
 - vCenter Site Recovery Manager
- VMware Mission Critical Support

Hardware Vendors

- NetApp, Dell, Cisco

Solution Integrator

- CTC

TM implemented the vCloud Suite comprising:

- vCenter Operations - a management tool to improve cohesive visibility and capacity management across data centers, replacing previous stand-alone management systems.
- vCenter Configuration Manager - a tool for operational and security compliance for virtual infrastructure.
- vCloud Networking & Security - a virtual appliance for virtual firewalls and load balancing.
- vCloud Automation Center - a self-service automation portal to automate machine provisioning.
- vCenter Site Recovery Manager - a tool to automate virtual application disaster recovery.

VMware collaborated with CTC, the solution integrator for the project, to build and deploy the cloud infrastructure. With their support, TM successfully migrated multiple mission-critical applications, such as its inventory system from the legacy platform to the cloud-based universal, unified platform.

In addition, VMware's Professional Services provided the technical expertise and best practices for the cloud infrastructure build. To ensure that operations transitioned seamlessly, TM procured VMware's Mission Critical Support for priority access to senior level engineers and proactive account management to keep its virtual infrastructure operational 24x7.

Benefits

TM's private cloud strategy to standardize on a single, unified platform to fulfill its complex requirements and simplify its IT environment while increasing manageability, efficiency, and agility has shown significant benefits to the organization.

Deliver on CTIO's E³ vision

VMware helped TM create a future-proof IT environment that is effective, efficient and elastic.

"VMware gave us the infrastructure that allows us to use just the right amount of resources that we need to be effective. We now have the building blocks and capabilities to be efficient," says Nizam. "We are able to respond to the business demands faster and accelerate our product time-to-market."

Significantly reduced capital and operational expenditure

By having a lower total cost of ownership and reducing capital expenditure related to hardware and infrastructure, TM's entire virtual environment (compute, storage and network) is expected to reduce IT expenditure by 30 percent. At the same time, virtualizing with VMware has improved productivity and enabled TM to optimize the number of IT personnel needed to manage the environment.

90 percent faster machine provisioning

With the new self-service portal by the vCloud Automation Center, TM users are able to request for IT infrastructure resources effortlessly. System provisioning time is significantly shortened from three to six months to less than one week resulting in improved efficiency and productivity.

"In case of any component failure, or if we run out of resources, or if the application speed is unacceptable, we can provision additional virtual machines on the fly and increase performance within days," Shamsul Anuar Yahaya, General Manager, IT Strategy & Governance, TM explains.

“Sustainable” technology-agnostic platform

By implementing its private cloud and standardizing its IT environment on the x86 platform, TM has reduced its dependency on proprietary hardware platforms.

IT knowledge transfer to ensure ongoing system optimization

With TM’s mission critical systems now running on the cloud, it was crucial that TM’s IT personnel are capable of managing the new cloud infrastructure. VMware provided training and certification to ensure TM’s IT personnel could achieve and sustain optimum system performance to get the most out of the cloud infrastructure.

Increased credibility with shareholders and customers

By demonstrating thought leadership and delivering proven business results, TM’s private cloud initiative has positively impacted how the Malaysian public views the TM brand.

“Because we have embraced the private cloud technology and delivered positive results in terms of productivity and cost savings, it makes our proposition more credible and compelling for our stakeholders,” concluded Shamsul.

Future Plans

TM plans to migrate its ERP system to its Private Cloud within two years; followed by its Operations Support System within three years, allowing the Company to eliminate dependency on legacy systems. At that point, TM will have fully automated all of its servers, network and storage, onto a single, unified platform – within a federated cloud and active-active data center environment.

These are the key steps leading to the concurrent usage of resources from both its data centers, further increasing the return-on-investment (ROI) from the Company’s data center investment. Ultimately, TM is poised to deliver the next generation data center way before 2020.

