



## Meralco Powers Up a New Model for Customer Service Excellence

### INDUSTRY

Utilities

### LOCATION

The Philippines

### KEY CHALLENGES

- Boost the effectiveness of IT service delivery
- Achieve greater flexibility to support business growth
- Streamline disaster recovery processes

### SOLUTION

Implement VMware virtualization as the foundation of a more effective IT delivery model with automated disaster recovery, infrastructure management and efficient operations

### BUSINESS BENEFITS

- Reduced IT implementation cycle times from months to days
- Improved disaster recovery objectives
- Boosted the management and utilization of IT assets

The Philippine electricity distributor needed to transform its IT function from a cost center to a driver of innovation, operational excellence and cost-effectiveness. Virtualizing its datacenters has enabled Meralco to cut the time needed to deliver applications such as a new pre-paid retail electricity system, automate key infrastructure processes, and ensure business continuity in the event of a major datacenter outage.

Meralco is the largest electricity distributor in the Philippines with a franchise area of 9,337 square kilometers, covering 25 percent of the country's total population.

The company provides power to about 5.4 million residential, commercial and industrial customers in 34 cities and 77 municipalities, including Metro Manila, the provinces of Rizal, Cavite and Bulacan, and parts of the provinces of Pampanga, Batangas, Laguna and Quezon.

Even after operating for more than 100 years, Meralco continues to pursue domestic and international growth through investments and joint ventures. Combined with the continuing rise in consumer and business demand for power, this strategy will drive Meralco's expansion in coming years.

### The Challenge

Needing to adapt to the changing business landscape and find new ways of providing innovative and high-quality service, Meralco had to take a new approach to deploying and managing its core IT systems. The company's legacy IT infrastructure had adequately supported business activities, but it could not deliver the required flexibility and efficiency as operations expanded and market demand increased.

"As in most organizations, the IT function was generally viewed as a cost center within Meralco," said Marthyn Cuan, Meralco Vice President and Chief Information Officer. "We wanted to change this perception by transforming our IT to drive innovation, operational excellence and cost-efficiency."

"However, our traditional approach was to run at least one server for every application," said Cuan. "This meant some servers were not fully utilized. We also found it difficult to scale resources up and down as our computing needs changed."

"It usually took months to purchase, install and configure servers before they could become fully functional," he added.

Meralco also wanted to implement disaster recovery for its critical infrastructure. "It took us up to four hours to fully restore a system or application after a failure," said Cuan. "We realized that in the event of an outage, we could lose as much as an hour of data from our real-time systems."

***“We want to deliver IT services that drive innovation, operational excellence and cost-efficiency in support of Meralco’s overall objective of further improving customer service.”***

Marthyn Cuan  
Vice President and  
Chief Information Officer  
Meralco

The organization’s existing process also included manual steps that increased the risk of human error compromising recovery when a catastrophic outage occurred, while infrastructure management and maintenance tasks were laborious and prevented the IT team from focusing on higher-value work such as business projects.

### The Solution

The need to reduce implementation cycle times prompted Meralco to develop and adopt a new IT service delivery model.

“We believed this model would provide the flexibility we needed to support our growing business,” said Cuan.

After conducting a thorough business and technical evaluation, Meralco decided to adopt a virtualized IT infrastructure to support the new approach.

Meralco’s IT team reviewed options available in the market before developing a plan based on VMware products, including the VMware® vSphere® server virtualization platform. “We acknowledge VMware’s strong industry track record in the area of virtualization,” said Cuan. “Meralco has been a user of VMware since 2008, albeit on a small scale.

“Our evaluation process showed that VMware was the most cost-effective option, as the skill sets required to deploy and run the technology had become mainstream among IT professionals.

“This gave us confidence in the results of our investment.”

Meralco partnered with VMware to develop and implement the virtualized infrastructure. After the customer and vendor completed preliminary project work, VMware deployed new blade servers, connected them to a networked storage system, deployed the virtualized infrastructure and packed up Meralco’s old servers in a single afternoon.

The vendor completed the work without incurring any downtime for users. Meralco’s IT team then added new equipment and virtual machines in an iterative process over the next few months without disrupting the company’s operations.

The parties completed the project in the second half of 2012. “Our IT team worked with VMware to ensure the environment supported our strict regulatory and customer service demands,” said Cuan.

By designing an optimal architecture for the virtualized environment, applying best practices and consulting with Meralco’s technology and business teams, VMware ensured the infrastructure met Meralco’s longer-term business and technical requirements.

For example, VMware used its deep technical knowledge to intelligently size each virtual machine in a highly available cluster, reducing the likelihood of oversubscribing the memory and CPU resources allocated to each machine.

The environment also supports Meralco’s longer-term move to an active-active architecture, where the virtualized infrastructure is effectively stretched across the organization’s datacenters. This delivers efficiency and performance benefits to Meralco while ensuring the organization continues to meet regulatory demands.

Meralco has built on its initial VMware project by deploying VMware vCenter™ Operations Management Suite™ to gain deep visibility of its virtualized infrastructure and take advantage of the product’s automated analytics.

“What interested us most was the ability to go beyond monitoring the health of our virtual machines and their hosts,” said Cuan. “We wanted to improve our capacity planning, risk assessment and overall efficiency.”

On the disaster recovery front, the team implemented VMware vCenter™ Site Recovery Manager™ to automate the movement of workloads between datacenters should problems arise. “We had to consider the critical movement of loads from one server or one chassis to another,” said Cuan.

“If we ever lose our primary site, we want to be able to recover from another datacenter without major business disruption.”

Key applications moved into the new infrastructure during the first phase of the virtualization project included new customer management, asset management, pre-paid solutions and mobile workforce management systems. These now run in 193 virtual machines on about 50 hosts.

***“The flexibility and resilience provided by our virtualized infrastructure means we can be more responsive to business requirements and make more effective use of our IT assets.”***

Marthyn Cuan  
Vice President and  
Chief Information Officer  
Meralco

### VMWARE FOOTPRINT

- VMware vSphere 5.1 with ESXi
- VMware vCenter Server
- VMware vCenter Operations Management Suite
- VMware vCenter Site Recovery Manager

### APPLICATIONS VIRTUALIZED

- Customer records management
- Asset management
- Pre-paid solutions
- Mobile workforce management

### PLATFORM

- Cisco Unified Computing System (UCS) blade servers
- EMC VNX and Symmetrix storage
- Microsoft Windows Server, Red Hat Enterprise Linux

Meralco plans to load another group of applications into the virtualized infrastructure over the next few months. The company recently moved its new email system across to the virtualized infrastructure and planned to do the same with its collaboration software.

Doing this will further reduce its physical server numbers by another 15–20 percent. “Currently, we have virtualized at least 50 percent of our infrastructure and we aim to increase this to 90 percent during the next 18 months,” Cuan said.

### Business Results & Benefits

With phase one of the virtualized infrastructure in place, Meralco’s IT department has changed the way it supports the business, making it a more efficient, streamlined service delivery operation.

The overall resilience and robustness of the company’s IT infrastructure has also improved. Where previously it might have taken up to four hours to recover from an outage, the same process now takes just one hour. Potential data loss has been reduced from up to one hour’s worth to just 15 minutes’ worth.

In addition, where once it would have taken the team between 45 and 60 days to provision a server to support a new business requirement, this can now be completed within two weeks. Meralco anticipates that later in 2014, this time frame will contract to mere days.

With many infrastructure and disaster recovery processes now automated, the potential for human error to hamper or derail critical processes has been reduced and the IT team is now directing most of its energies to delivering higher value projects that benefit Meralco and its customers.

“As we bring forward the development and release of projects, our customers benefit,” said Cuan. “For example, our new Prepaid Retail Electricity System (PRES) is giving our customers more options on how they can be billed and how they can pay, based on their lifestyle.

“This is just one example of how we help improve the standard of service our customers receive,” he added. “At the end of the day, we would like to empower

our customers by providing options that are supported by technological advancements.”

### Future Plans

Building on the success of the virtualization project, Meralco plans to use the new infrastructure to offer technology services more effectively to internal customers. The IT department plans to develop a rate card that lists costs associated with various components such as compute resources and storage.

“We are moving the budgets associated with IT infrastructure to each business line so they have better visibility of the costs associated with the hardware and software that is supporting their operations,” said Cuan. “This will make it much more transparent so they can see how they are using IT resources.”

The IT team is also further exploring the potential of cloud environments that could be built on the virtualized infrastructure. Eventually, Meralco envisages having in place an infrastructure that can be quickly and cost-effectively aligned to changing business requirements.

“The VMware-based virtualized infrastructure we now have in place means we are well positioned to continue to improve our operational efficiency as well as the levels of service we provide to our customers,” said Cuan.

