VMWARE CASE STUDY

INDUSTRY

Technology

LOCATION

Pune, India

KEY CHALLENGES

- Advance outdated IT systems to support company growth
- Streamline processes to improve customer service
- Supply a flexible , cost-effective secure way to manage data and IT requirements
- Reduce reliance on physical servers

SOLUTION

- A VCE-based Private Cloud
- A Horizon Suite End User initiative.

BUSINESS BENEFITS

- Greater agility, scalability, and accessibility with robust security
- Reduced operational costs
- Application migration completed in less than two months with minimal disruption
- 100% of applications are active in the Private Cloud, simplifying administration and application roll-outs, and improving provisioning processes
- Energy requirements, and costs, reduced by 60%; server footprint reduced by 75%
- Valuable office space has been freed up, reducing capital costs
- Simple and effective disaster recovery processes; no application downtime, high availability and no data loss
- Flexible and secure virtual desktops, tied to users not machines

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KPIT Cummins

Infrastructure for the new way of working

KPIT CUMMINS' PRIVATE CLOUD

KPIT Cummins (BSE: 532400, NSE: KPIT) is a leading product engineering and IT consulting partner to global manufacturing, automotive and energy & utilities corporations. KPIT is a pioneer in developing technology solutions that make products & processes more efficient, and has filed over 43 patents in the areas of automotive and high performance computing. Headquartered in India, it has 8300+ employees in 31 locations across 16 countries, and it reported US$410 million in annual revenue for FY13.

THE CHALLENGE

Since 2011, KPIT has been growing at a rate of more than 40% per annum. The exponential increase in operations had placed considerable stress on the company's lifeline – the overall IT infrastructure.

Previously, KPIT refreshed its datacenter infrastructure every three to four years, but due to their recent stellar growth rate, it became untenable to continually renew the physical infrastructure. "We doubled the organization in size during the last two years. At this speed, you cannot anticipate what kind of computing and applications will be required," said Mandar Marulkar, Head of IT infrastructure, KPIT, India.

Customer satisfaction levels were suffering as demands weren't being met. "When our customers require additional machines and additional hardware, the lead time between getting the systems from our suppliers and delivering to our customers is greatly affected. It is important that we were able to reduce the lead time to a minimum," explained Shrikant Kulkarni, Chief Information Officer, KPIT, India.

In order to support the anticipated growth rate, KPIT decided to redesign its internal infrastructure. From management's perspective, besides meeting the requirements of its business, the new IT environment should also achieve these five outcomes:

- a shorter procurement process that provides better customer service
- greater flexibility, so the IT infrastructure can expand and evolve with growing operational demands, while minimising disruptions to the client and its staff
- consolidation and centralisation of datacenters without compromising security
- optimization of physical office space even as staff headcount grows
- more efficient energy consumption

"We have many challenges in terms of meeting the needs of the business. When we try to tackle them with our existing physical IT infrastructure, they usually prove unresolvable," said Kulkarni.

Marulkar added: "So as we started to look at refreshing our infrastructure four years ago, we thought, why not virtualization?"

THE SOLUTION

VMware suggested a Private Cloud architecture that provides resilience and the capacity to deliver wide-ranging support for KPIT's various business objectives through virtualization.

"When we looked at our infrastructure road map, we wanted a partner with the vision to take our datacenter to the next level. We discovered that VMware is able to allow the migration of all production applications into the cloud infrastructure. Secondly, looking at desktop virtualization, we found that VMware has various options available, which gives us the maximum advantage in terms of integration and utilization," Marulkar explained.

"We found that VCE met almost all our expectations as compared to others and most importantly, the top management of VCE, VMware, CISCO as well as EMC, met with us personally and provided assurance. I am happy to say that we received excellent support." Shrikant Kulkarni

Shrikant Kulkarni,
Chief Information Officer,
KPIT, India.

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Head of IT infrastructure,
KPIT, India

APPLICATIONS VIRTUALIZED

- Microsoft Exchange 2010
- Microsoft Lync
- Service desk
- SAP Applications
- General business and development applications

VMWARE FOOTPRINT

- vSphere ESXi
- vCloud Director
- vCenter Site Recovery Manager
- vCenter Capacity IQ
- vCenter Operations Manager
- VMware vCenter Heartbeat
- VMware vShield Security Solution
- VMware Horizon View
- VMware Horizon Thinapp

PLATFORM

- Vblock™ (Cisco UCS and EMC VNX)

PARTNER

- VCE

Another key factor in selecting VMware was its strategic alliances, such as VCE. KPIT chose the Vblock solution and migrated all SAP modules, large-scale Oracle database CRM, unified communications, Exchange 2010, and many advanced applications into the private cloud.

The Private Cloud infrastructure, based on VCE's Vblock platform, integrates the converged server, network platform, and enterprise storage. Housed under the Vblock umbrella, the CISCO Unified Computing System offers highly scalable computability with a robust networking backbone.

All of KPIT's Cisco UCS servers were configured to take advantage of VMware virtualization to create a highly scalable, elastic cloud infrastructure. vCloud Director is used extensively to provide easy management of the cloud. KPIT also implemented vCenter Operations Manager, simplifying the management of virtual machines. vCenter Capacity IQ ensures that resources are allocated as efficiently as possible while vCenter Heartbeat ensures that their core vCenter servers are always up and available at main and alternative locations too.

Security was also of paramount importance. VMware vShield Security Solution suite has helped them implement the level of security required,without investment in any new networking and security hardware.

The entire migration for all the applications took less than two months – an extraordinary achievement. VMware provided service, training and support, particularly during this implementation stage, to ensure that everything went smoothly and quickly.

"Cloud should be the roadmap for every organization whether it is infrastructure as a service or platform as a service or software as a service." said Mandar Marulkar

END USER FLEXIBILITY

Simultaneously, a thorough proof-of-concept was conducted to evaluate the viability of Virtual Desktop Infrastructure (VDI). Several vendors' offerings were tested on a variety of hardware configurations. Since most desktop users were power users, any solution needed to be robust, and to provide high performance for critical applications. Also key was moving critical and sensitive data from users' machines to the datacenter in order to implement stronger security policies through the organization. KPIT's team also believed that the move to VDI would allow them to implement a new, flexible workspace paradigm, allowing for optimal use of physical space at their offices.

While VMware Horizon View power's their Virtual Desktop Solution, VMware Site Recovery Manager ensures the availability of this VDI solution by enabling and automating the disaster recovery (DR) of this entire solution.

END USER FLEXIBILITY

Flexibility

Administration tasks such as asset accounting, new systems enablement, authentication process, and upgrading decisions used to be extremely difficult and time-consuming.

Now, with a fully realised Private Cloud infrastructure, software license compliance is much more manageable and KPIT can now quickly upgrade operating systems and deploy applications on a large scale.

KPIT's team has also gained a great deal of efficiency in the provisioning and deployment of new servers. Migration from physical to virtual environment was quick and easy, often only taking 3-4 hours. Provisioning new servers for applications is now only a matter of minutes, providing unparalleled service delivery.

"We have offices in 13 locations outside India; in the US and Europe, China, Singapore and Japan. We also have onsite development centres. In India, we have development centres in various locations including Pune, Bangalore, Noida, Mumbai. Now, all corporate applications and services are centralized. Everything is running from our Pune facility, on the Vblock architecture with VMware..

"We have 100% production applications running on this private cloud, 100%. All business critical applications, everything is running on the cloud infrastructure." said Marulkar.

Sandeep Gandhi, Senior Program Manager and Chief Architect for Enterprise Architecture at KPIT Cummins who designed their private cloud.

Disaster Recovery

Any disaster situation can have a tremendous business impact. The migration of applications – physical applications, corporate applications and 1,200 virtual desktops – to the Private Cloud opened the opportunity to implement a robust Disaster Recovery processes. KPIT set up another cloud, the Disaster Recovery Cloud, using the VMware Site Recovery Manager along with EMC storage replication technologies. The Disaster Recovery Cloud provides immediate, secure back-up so there is no application downtime, no data loss, and no need for human intervention.

Remote Security and Support

By implementing VMware's View virtual desktop solution, KPIT not only reduced its hardware requirements but also gave users the flexibility to work from anywhere using any devices of their choice, without compromising security.

"This is the biggest advantage, because nowadays for any organization, the median age is less than 27. The younger generation of executives who join IT organizations use a lot of new gadgets. If you push them to use the traditional desktops, you create cultural friction. It's like I can do so many things from my gadget but the office environment hinders my productivity," said Marulkar.

The Private Cloud infrastructure has enabled KPIT to formulate Bring Your Own Device policies (BYOD) for staff that frequently travel or work from home, streamlining Human Resource operations and attracting talented staff. This has also led to optimization its office infrastructure. When employees are working from home or travelling, their seats in the office become available for someone else to occupy. With office space at a premium, this has resulted in significant cost savings.

The partnership with VMware has been highly beneficial. VMware's technology, knowhow and support have completely transformed KPIT's IT infrastructure, giving it more capacity to scale new business heights.

Faheem Kolhar, Senior Program Manager Cient Services, the head of the VDI sums up the relationship ..

"I love VMware simply for three major reasons; one, their roadmap, they sense the pulse of the customer, the IT industry. They know what is the trend which is going on and how the IT administration can be simplified further, so their product is in line with those kind of things. Also they are flexible enough to talk to across platforms, they consolidate under one umbrella. Third one, excellent support."
Faheem Kolhar

Faheem Kolhar,
Senior Program Manager
Client Services
KPIT, India.

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