



Migration to vFabric Cloud Application Platform Drives High Availability, Portals Resiliency and Simplified Applications Management for the Cloud

Business Transformation through IT Transformation

Summary

As VMware grew rapidly, the number of customer-facing applications became larger, and the IT architecture to manage them became more complex. Impacting the customer experience were the downtimes required for routine maintenance on the company's ERP systems. By extension, maintenance on these systems disrupted service of up to 30 customer-facing applications, impacting VMware customers. Further, the company's journey to Cloud computing was reaching a critical impasse: VMware was ready to move toward Platform as a Service (PaaS).

The Journey

"Our customer-facing portals were so hard-wired into our back-end business systems that customers experienced downtime whenever we performed maintenance," said Thirumalesh Reddy, Director of Applications Architecture and Tech Labs. "Our customer portals were vulnerable to any disruption in the back-end systems. We implemented vFabric platform architecture involving tc Server and Hyperic to improve the resiliency of our portals, thereby ensuring higher availability for customers."

With routine maintenance taking as long as nine hours for some applications, VMware knew it needed to decouple the customer experience from the back-end of the enterprise. To attain the desired levels of customer satisfaction, VMware IT used vFabric Cloud Application Platform architecture to help reduce the number of applications from 24 to 14, improving operational efficiencies and making the customer experience independent from back-end ERP. The results include increased agility and reliability, reduced deployment downtimes, improved scalability and reduced footprint.

VMware used Hyperic for proactive monitoring, diagnostics and management, vCloud Director for application workload provisioning and Gemfire for performance optimization. Gemfire has optimized JVM heap usage on tc Servers using caching and provided tc session failover. The project took about nine months with 10 to 15 IT people.

"Downtimes have been reduced 80 percent," said Reddy. The vFabric platform, including Spring LDAP, has improved security, while Gemfire was used to improve many key performance metrics. Now, downtimes that used to take eight to nine hours have been slashed to as little as 45 minutes, noted Reddy.

"We executed a complete revamp of the entire customer-facing portal environment, implementing a new technology stack, using modern technologies that offer us the scalability and availability that we — and our customers — need for the Cloud," said Reddy.

Capital expenditures have been reduced through smaller footprint; application server clusters have been reduced by 71 percent. The number of virtual machines (VMs) deployed as application servers has been reduced by 66 percent.

"VMware has taken its enterprise further along the PaaS migration path and realized many operational improvements as a result. Enterprise custom Java applications are expensive and complex to build, deploy, scale and manage," Reddy noted.

vFabric Cloud Application Platform facilitates rapid, simplified deployment of applications without the cost and complexity of buying and managing the underlying hardware and software and provisioning hosting capabilities. This model delivers all the facilities required to support the complete life cycle of building and delivering web applications and services available on the Internet.

The End Result

Implementing the vFabric platform has reduced operational costs by 15 percent and hardware costs by 30 percent. Downtime support requests have dropped 25 percent while overall software deployment and maintenance costs have been slashed up to 40 percent. Using all VMware tools developed on open source technologies, VMware has been able to optimize enterprise performance and reduce the customer business interruption. Availability is improved through fault-tolerant caching and fault-tolerant server application architecture.

“The Cloud computing era is driving new operational and cost efficiencies while redefining the role of IT,” said Reddy. “We can focus on improving the customer experience and delivering what is needed for the business.”