

DynamicOps® CASE STUDY

Leading Software and Technology Services Company Adopts Private Cloud Strategies

DynamicOps Helps Software And Services Giant Manage Virtual Infrastructure

To support rapid growth, both organically and by acquisition, one of the world's leading company adopted an ambitious virtualization and consolidation program in 2006. Swift adaptation to markets and trends is crucial to their success, resulting in a highly dynamic and diverse virtual environment. Since 2009, there has been increasing demand from the business for a service-oriented architecture with self-service deployment and automated lifecycle management. The company sought to reduce time to deploy new virtual machines (VMs) without sacrificing the ability to support diversity. At the same time, it was recognized that for operational reasons, a degree of control must be applied, with policies for governance and accountability. In the present financial climate, cost transparency is also necessary. The company turned to DynamicOps as probably the only company with a mature product capable of managing a dynamic and heterogeneous environment.

Software Market Leader Pioneers Virtualization

With more than 20,000 employees and 25,000 customers in 70 countries, one of the world's leading software and technology services companies provides software and processing solutions for financial services, higher education and the public sector, as well as disaster recovery services, managed IT services, information availability consulting services and business continuity management software. With annual revenues exceeding \$5 billion, they are ranked 380 on the Fortune 500 and is the largest privately held business software and IT services company. The Financial Systems business accounts for over half of all their revenue. Its software revenue places it in the top 20 software companies

Business Objectives:

- Improve business agility
- Reduce time to deploy new compute resources without sacrificing platform diversity.
- Maintain governance and accountability
- Reduce Opex and Capex costs

Solution:

- DynamicOps Cloud Automation Center Automated IT service delivery for planning, deployment, and ongoing management of compute resources
- Integration with existing backup, archival and chargeback technologies

Results:

- Established flexible, automated, self-service IT resource improved service delivery from 4 days to hours
- Archived inactive VMs to less expensive storage (\$5-10/GB vs. \$0.50/GB)
- Eliminated VM sprawl and over-provisioning
- Protected previous IT investments with multi-vendor solution requirements

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Senior Engineer for Storage and Virtualization

worldwide, with revenues comparable to VMware and Salesforce.com.

In 2006, the company adopted a virtual IT strategy as part of its program of metropolitan office consolidation to gain efficiencies, reduce costs, and improve business flexibility. The consolidation program included aggressive retirement of old, inefficient hardware in favor of virtualization on highly available and scalable systems. The company wanted to reduce the number of physical servers, application duplication, and the time necessary to provide new IT resources to business users. Another important goal was to separate business units from hardware lifecycles to improve their ability to access resources quickly or temporarily in order to react to market conditions faster. Through this program, they reduced the overall footprint of internal IT: power consumption and cooling by around 80%, rack space by over 90%, and host count by more than 80%.

Virtualization Management Solution Needed

Shortly after the virtualization program was established, the company tried self-service provisioning. However, there were no tools that provided the governance and control to meet their requirements. The company needed a comprehensive and proven solution to enable and manage the process of creating, tracking, and decommissioning virtual machines (VM) in a planned and structured way.

The IT team developed a precise list of criteria for virtualization management. The list included:

- Automated IT service delivery for planning, deployment, and ongoing management of VMs
- IT governance to set resource processes, policies, and access controls
- Cross-platform management for IT investment protection
- Cost allocation to business units and users

Their “wish list” for a virtualization management solution was comprehensive and each factor was important in improving business agility, maintaining control over a virtual infrastructure, and reducing costs. The company evaluated

numerous virtualization management products to find one that could deliver on its needs. They ran proof of concept (POC) feasibility studies, conducted trials, and carried out pilot programs.

The company’s plans for DynamicOps are ambitious and include integration with Symantec NetBackup, Quest’s Active Roles Server and Foglight products, and eventually self-service business continuity and disaster recovery management, potentially also leveraging the recovery environment for performance tests in slack time. The ability of the DynamicOps software to work with other products through scripting and event-driven code is a critical success factor.

DynamicOps Provides Comprehensive Solution

DynamicOps offered the product that most closely met the company’s stringent criteria, and the only single product with its breadth and depth of features. DynamicOps software performed best in testing, and worked in their environment quite well.

“We could not find another solution that had the depth, capabilities, or cost-effectiveness of DynamicOps,” explained Senior Engineer for Storage and Virtualization, Engineering and Architecture.

One of the company’s unique challenges centered on platform-independent provisioning and management. Their environment was multi-vendor, with Microsoft Windows, various Linux flavors, Sun Solaris (including SPARC), and products from Dell, EMC, VMware, and Citrix. Current development plans include Microsoft HyperV, Xen and RedHat KVM. All of the platforms had to be managed together, using a single, consistent management framework.

“Providing management in a multi-vendor environment is a great strength of DynamicOps,” said Senior Engineer for Storage and Virtualization. “DynamicOps can manage our expansive environment, including working with our backup software, which gives us a seamless way to manage the entire process.”

He also noted that DynamicOps plays an important role in cost reduction.

“One way that DynamicOps has provided important flexibility and cost savings to our company, is by letting us move from online storage to nearline storage, which really reduces our storage costs significantly,” Senior Engineer for Storage and Virtualization remarked. Automated workflows for nearline storage of inactive VMs allow use of secondary storage at \$0.50/GB instead of scarce primary storage at \$5–\$10/GB. DynamicOps and EMC Data Domain together deliver significant operational and cost benefits, and add valuable flexibility to an infrastructure that is always, by design, running close to full capacity.

Virtualization Program Includes Servers, Desktops, And Private Cloud

At the time the company began virtualizing its infrastructure, the company was also updating servers and migrating to more modern hardware, so it was important to be able to manage upgraded applications and systems as the changes were occurring.

In addition to managing the virtualization program for servers, they were already looking ahead to virtualizing desktops and wanted to be sure that whatever solution they chose, would work equally well for servers and desktops. The initial server deployment under DynamicOps was 1300 VMs. In six months, this had grown to 1,600 and there was still suppressed demand. As it moves forward with desktop virtualization, they expect to gain the benefits of DynamicOps in that area also. Desktop virtualization at the company is an important program; recent trials for customer training have proven extremely popular and the business continuity and standardization benefits are clear.

IT Cost Allocation Capability Pinpoints Business Costs

Chargeback to business units has been an important issue for them. Business units want to match spending to revenue streams in a dynamic market (one business unit released 60 new products in 2009 alone). Chargeback must allow for predictability, cost control, and effective budgeting. Chargeback tools are still immature, even with the impressive growth of cloud computing in recent years. They are working with DynamicOps to deliver a transparent chargeback

system which offers straightforward choices while accurately attributing and reflecting diverse infrastructure costs. Implementing a cost model shared with the company’s Infinity SaaS platform is a first step to integrating with external clouds, seen as the next stage in their virtual evolution.

While there is still some discussion about the “true” cost of a VM, there can be large expenses associated with over provisioning. In a recent study, DynamicOps pointed out that a company with five percent of their VMs created without proper business justification and another five percent of their VMs over provisioned could be spending up to \$150,000 more than necessary. The company decided early on to move to a full chargeback system as one way to reduce VM sprawl and keep costs under control, and deployed the capabilities of DynamicOps to institute the program.

ROI From Self-Service Provisioning

One of the keys to their return on investment for DynamicOps is the self-service capability that the software offers. Where they previously had IT staff handling VM provisioning, DynamicOps became the means to redeploy those IT staff into other projects and reduce overhead costs.

In addition, business units wanted VMs available faster, so there was added interest in the self-service capability of the DynamicOps software, which can significantly reduce provisioning time to make IT resources available to users and groups that need to move quickly on new projects. Business managers can put a dollar value on developer time lost to delays in provisioning, but even this is small compared with the primary drivers of time to market and speed of response.

The DynamicOps self-service feature has reduced provisioning time for the company from an average of four days to just hours. This delivers a big benefit to business groups, providing them with a high level of flexibility that they didn’t have before, and without the requirement of staff overhead time to manage the process.

DynamicOps Governance Provides Flexibility, Control

With much of the virtual infrastructure serving

their development teams ... developers, production support, and internal IT ... using the governance functions of DynamicOps has been quite important. DynamicOps provides a high level of operational control and flexibility because it establishes policies to provide rapid response with IT resources, yet limits resource overconsumption, and enforces process workflows and user access controls.

By using DynamicOps software to manage governance, they know that the virtual infrastructure will be used in the most efficient and cost-effective ways and the company can be confident that users are fully resourced at critical times. The company determined that DynamicOps provided all of the management capabilities to help reduce over provisioning and institute a program of VM reclamation, which both contribute to cost efficiencies.

DynamicOps Helps with Unique Needs

As the company moved through the POC phase and into full production deployment, it identified some unique needs in its virtualization program and IT environment. Some of these issues revolved around VM retirement, storage, testing, and data recovery. DynamicOps worked with the team to customize the software to meet these special circumstances.

“One of the things that struck us about DynamicOps is their willingness to partner, to analyze and quantify the benefit of feature requests and to deliver them rapidly. Current developments with the VRM software will improve this still further, and we’re excited by the potential to allow the customer community to share libraries of code for specific niche applications”, said Senior Engineer for Storage and Virtualization.

Even without customization, the DynamicOps software provides a high degree of flexibility for the company to set the parameters of how it wants to manage its virtualized infrastructure. For a company with quickly changing resource opportunities and needs, a large workforce dedicated to solving their own customers’ needs quickly and efficiently, DynamicOps provided a solution that allows them to get the best return on investment from virtualization program.

Today, the company is adopting cloud methodologies as a way of securing and extending the business benefits. **“Finally, the tools are catching up with our aspirations!”**

About DynamicOps

DynamicOps’ Operations Virtualization™ platform helps enterprises respond to market dynamics faster, easier and more economically than ever before. IT organizations can rapidly evolve existing infrastructure into on-demand private and public cloud services in just days. Customers imprint their own way of doing business on the cloud by leveraging existing, cross-organizational processes while having the freedom to easily interchange technologies, creating a best-of-breed, multi-vendor solution. The DynamicOps Cloud Automation Center unifies the management ecosystem providing end-to-end governance, self-service capabilities and an orderly extension to the public cloud. Using DynamicOps Cloud Development Kit™, enterprise IT is furthered empowered to create next-generation cloud services. DynamicOps is privately held and based in Burlington, MA.
www.dynamicops.com.