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Scott Engel, Director of IT Infrastructure, Transplace

Shipping Logistics Provider Transplace Boosts SaaS Application Performance with F5 Solutions

Transplace is a leading, non-asset based, third-party logistics provider for companies of all sizes, including Fortune 500 customers from retail, consumer packaged goods, forest and paper products, automotive, chemical, and electronics industries. The company redesigned its IT infrastructure for higher efficiency and to provide a better customer experience. The redesign included virtualization technology from VMware. To realize the full benefits of its virtualized environment, the company used BIG-IP® Application Delivery Networking devices from F5. As a result, Transplace has boosted the performance and availability of its enterprise applications, including its signature, revenue-generating logistics application.

Business Challenges

Lower costs, better service, greater inventory velocity, and higher capital utilization are the hallmarks of Transplace. The company relies on a number of mission-critical enterprise applications to provide customers with global supply chain excellence. These include Microsoft Exchange Server-based email, Microsoft Office SharePoint Server 2007 communication and collaboration environments, Microsoft-based business intelligence tools, and most importantly, Transplace’s Transportation Management Services (TMS) platform.

The TMS system helps customers achieve the best match of freight with transportation services to minimize waste and lower shipping costs. Based on a Software as a Service (SaaS) approach, the system is available to customers as a web-based application. The company’s transportation logistics teams also use the TMS application to achieve the most efficient solution for customers who choose a more customized, managed service package.

Scott Engel, Director of IT Infrastructure at Transplace, says, “TMS is vital to our business.

Overview

Industry

Shipping and Logistics

Challenges

- Provide higher availability for mission-critical business applications
- Load balance and route traffic among servers and application pools in a virtualized environment
- Improve the customer experience

Solution

- BIG-IP Local Traffic Manager
- BIG-IP WebAccelerator
- iRules

Benefits

- Increased flexibility
- Easier administration
- Reduced data center footprint
- Improved application performance
- Higher availability
- Better customer experience

It's our revenue-generating application. Without it, we cannot operate." More than 15,000 users access the system daily.

Transplace used to rely on a UNIX-based infrastructure and a software-based approach to ensure application performance, including plug-ins for the BEA WebLogic application server (now owned by Oracle). Due to the complexity of the TMS system, managing traffic to the application was a significant challenge.

"TMS includes many layers. There is the main security pool for user authentication and authorization, and the main application pool. In addition, there are many other pools depending on whether a user is accessing a boundary application, a subset of TMS, or specific features or functionality," explains Engel. "We tried to achieve redundancy and boost availability, but the tools we had didn't provide us with the flexibility or performance we needed."

Solution

In 2006, Transplace migrated to a Microsoft-based server operating environment with virtualization technology from VMware. "Our goals were to reduce our data center footprint, cut costs, and ensure availability," says Engel. "Now, we're approximately 95 percent virtualized."

To manage traffic to TMS and to the company's other virtualized enterprise applications such as its Exchange Server, Office SharePoint Server 2007, and Microsoft business intelligence tools, Transplace implemented BIG-IP® Local Traffic Manager™ (LTM).

BIG-IP LTM ensures availability for applications running on the company's VMware ESX virtual machines, such as TMS, by providing intelligent and automated load balancing and health monitoring capabilities. And, by offloading CPU-intensive tasks such as secure sockets layer (SSL) transactions, and caching and compression, BIG-IP LTM reduces the load on the physical servers,

"We rely heavily on BIG-IP devices to provide a high level of service to internal and external users."

Scott Engel, Director of IT Infrastructure

thereby increasing performance. To realize these benefits in a VMware environment, customers can use the guide for **Deploying F5 Automated Network Provisioning for VMware Infrastructure**.

Transplace uses BIG-IP® WebAccelerator™, an advanced web application delivery solution available as an add-on module for BIG-IP LTM, which optimizes performance of virtualized web applications for remote desktops accessing a VMware ESX device over a wide area network. Transplace also uses F5 iRules™ technology—a customizable scripting language that gives IT departments complete and granular control over application traffic—to route TMS user requests to specific application pools or URLs.

Engle explains, "It's much more complicated than managing traffic to six or seven web servers. We have approximately 25 different application pools, each of which are used for a different piece of TMS. Our iRules are URL-based, and help us route traffic through the system."

F5 Professional Services helped Transplace optimize the implementation of its BIG-IP solutions. "Due to the complexity of our environment, the implementation was fairly complicated," Engel said. "F5 Professional Services helped us through the challenges."

The company uses a pair of BIG-IP LTM devices at its primary data center in Dallas, Texas, where its production application environment is located. It also uses a BIG-IP LTM device at its Lowell, Arkansas data center for the company's development, test, and user acceptance environment.

Benefits

With its redesigned infrastructure, which includes Application Delivery Networking devices from F5, Transplace ensures high availability and top performance for its business-critical enterprise applications. This helps to improve the customer experience, and also helps the company realize the full benefits of its virtualized environment.

Higher flexibility, easier administration

From a management perspective, Engel says, "F5 products have made my life easier. That's why we opted to use them—for the overall flexibility and full feature set they provide, and the ease of administration. Other solutions were more cumbersome. It's easy to deploy new applications on BIG-IP solutions without making major changes to the environment."

Additionally, because the F5 devices offload CPU-intensive tasks such as SSL encryption, Transplace was able to use fewer servers to support TMS, thereby reducing its data center footprint.

3x faster page loads, high availability

Transplace uses BIG-IP LTM with WebAccelerator to intelligently route user traffic to application pools in the TMS environment and to offload CPU-intensive SSL encryption. The solution helps the company optimize the performance of virtualized web applications—ubiquitous in the Transplace environment. Now, server performance is improved, and page load times are 3x faster when the caching and compression features are used.

Since migrating to its current infrastructure and implementing BIG-IP solutions, the company has not experienced a single outage of the TMS system. "With F5 solutions, we have increased TMS availability significantly," says Engel. "Without the F5 products, many of our applications would be problematic. We rely heavily on BIG-IP devices to provide a high level of service to internal and external users."

Other Transplace resources, including email, business intelligence, and communication and collaboration applications, also perform better with the BIG-IP devices. Engel says,

Better customer experience

Faster page load times and high availability result in a better experience for Transplace customers. With VMware, Transplace created a virtualized environment that has achieved server consolidation and improved application performance. And using BIG-IP solutions, the company even further increased its performance gains.

“We’re always looking for ways to improve the customer experience,” says Engel. “F5 has played a very big role in that. We don’t have performance issues since migrating to BIG-IP products. We’re able to provide the level of service that customers deserve.”

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