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Patrick McFadin, Director of Systems and Architecture at Hobsons

Education Solution Provider Helps Customers Do More with Less Using F5 Solutions

Hobsons delivers a powerful suite of education-oriented Software as a Service (SaaS)-based applications to colleges and universities, which include web-based course and career planning, recruiting, enrollment, and retention tools. As such, Hobsons’ application delivery infrastructure is mission-critical. The company chose Application Delivery Networking (ADN) devices from F5 Networks®, running the newest version of the TMOS® operating system, BIG-IP® version 10, to support its SaaS infrastructure. With this solution, Hobsons is able to reduce its own costs while providing shared services that help its customers do more with less.

Business Challenges

Hobsons, founded in 1974, provides web-based technologies that help educational institutions promote students’ readiness for college and the workplace, advance their marketing initiatives, recruit students, manage information, and deliver online tools that help increase student retention. Hobsons relies on an SaaS model, and delivering highly available and reliable applications to its customers is the company’s top priority.

“Our application delivery infrastructure is critical,” says Patrick McFadin, Director of Systems and Architecture at Hobsons. The company has to contend with significant increases in web traffic that coincides with student application and enrollment deadlines.

“We have to design our infrastructure to handle the highest peak traffic loads,” says McFadin.

Hobsons also has to support a range of users. For instance, while prospective students are completing online applications, administrators also need access to the same systems to continue recruitment efforts and review applications. “School administrators are busy managing the entire enrollment lifecycle. It’s essential that we support them seamlessly,” says McFadin. “We needed the ability to easily direct different types of traffic to different pools of servers and manage users’ authorization and access to various applications, without our customers having to make modifications or adjustments on their end.”

Overview

Industry

Education

Challenges

- Manage peak traffic loads
- Redirect traffic seamlessly
- Reduce strain on customers’ IT departments

Solutions

- BIG-IP Local Traffic Manager
- BIG-IP Global Traffic Manager

Benefits

- Administrative time savings
- Highly flexible traffic management
- Lower administrative and hardware costs

Solution

Hobsons relied on products from Citrix and F5 Networks® in its data centers. In late 2008, as it neared the end of its lease terms for these devices, the company decided to consolidate to a single vendor for ADN. Hobsons had also wanted to consolidate its data centers, and to achieve this consolidation, it implemented virtualization technology. Hobsons compared the capabilities of Citrix NetScaler with the BIG-IP® system from F5. It quickly discovered that F5's iRules™, a customizable scripting language that gives IT departments complete control over application traffic, and the performance-boosting BIG-IP® WebAccelerator™ solution, would give it the greatest control over its SaaS environment. "WebAccelerator impressed us as a powerful way to improve website performance and bandwidth with very little effort," says McFadin. "And iRules' flexible scripting capabilities were far superior to anything Citrix offered."

In early 2009, Hobsons implemented BIG-IP® Local Traffic Manager™ (LTM) at its four data centers, and BIG-IP® Global Traffic Manager™ (GTM) at two of the data centers. The deployment coincided with the release of BIG-IP version 10 (v10), which enables BIG-IP LTM, BIG-IP WebAccelerator, and BIG-IP® Application Security Manager™ (ASM) modules to run natively on F5's TMOS® plug-in architecture. "We tested BIG-IP v10 and it worked very well," says McFadin. "We displayed the new dashboard interface on a plasma screen in the hallway of our IT department and there was no going back."

Using iRules, Hobsons can easily direct traffic to the appropriate application server pools—whether physical or virtual—and manage the redirection of traffic from the data center that it closed to other locations, as well as from its legacy systems to its newer applications. "With iRules, we were

able to rewrite web service calls to transition customers from our legacy systems to new applications, without asking them to do a thing on their end." To optimize the performance of its applications, Hobsons also uses BIG-IP WebAccelerator features, such as: Intelligent Browsing Referencing, which eliminates the need for web browsers to download repetitive or duplicate data; SSL offload, which migrates CPU-intensive SSL encryption and decryption from the applications servers to the F5 devices; and dynamic caching and compression.

Benefits

With the BIG-IP system, Hobsons has streamlined its data center management, resulting in significant time savings. The flexible management and server offload capabilities that F5 products provide, result in lower costs for Hobsons, and, consequently, a better, more cost-effective SaaS environment for Hobsons' customers.

Administrative time savings

With BIG-IP v10, Hobsons' IT staff is able to manage traffic to its broad suite of applications much more efficiently. "The BIG-IP v10 dashboard helps our administrators access information, statistics, and settings much faster. It can eliminate up to 20 clicks at a time." Additionally, Hobsons can quickly establish and maintain policies, such as authorization and access to resources. "The only way that traffic reaches our servers is through a BIG-IP device," says McFadin. "This adds an inherent layer of security, but it also saves time because no one on our team has to touch each server to modify policies. Administration happens on one BIG-IP device that fronts many servers."

Greater flexibility

McFadin likens iRules technology to a Swiss Army knife in terms of the broad functionality it provides. "iRules can help us

do almost any kind of traffic management—whether it's to route it based on specific criterion, or to monitor and log traffic, or to perform complicated URL redirects," says McFadin. For instance, with iRules, Hobsons can separate web traffic coming from school administrators from traffic generated by students submitting online applications.

Aftab Butt, Systems Architect at Hobsons, adds, "Without the flexibility of the BIG-IP system and iRules, it wouldn't have been possible to migrate users so seamlessly from our old data center to other ones. The new features of BIG-IP v10 made configuration tasks a lot easier and faster, which helped us meet our deadlines."

Significantly lower costs

The BIG-IP system results in server hardware cost savings for Hobsons because it enables the company to offload CPU-intensive tasks from its web and application servers. "The offloading of SSL tasks and browser connections directly translates to roughly a 20 to 30 percent reduction in the number of servers we need to support our application," claims McFadin. "And, the compression capabilities of BIG-IP devices reduce our bandwidth usage by 30 to 50 percent." This bandwidth reduction can result in substantial monetary savings each month for Hobsons during peak load times.

The BIG-IP system also creates a more cost-effective environment for Hobsons' customers. "BIG-IP devices enable us to manage traffic on our end, without asking customers to change anything within their environment. In a challenging economic time, our job is to make as few demands on schools' internal IT departments as possible. We need to help them do more with less. The BIG-IP system helps us do that."

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