

“It has worked flawlessly and [has] had no impact on performance.”

Pete Watts  
Professional Services Consultant

## Innovative iRule Helps Business Processing Services Company Complete New Service Rollout On Time With No Compromises



### Industry:

Business Processing Services

### Challenges:

- Deployment of new applications
- Needed to automate server side communication
- SSL encryption and decryption requirements

### Solution:

iRules on BIG-IP Application Delivery Networking product

### Highlights:

- Improved security and good performance
- Improved application server performance by removing SSL processing
- Low management costs

### Overview

When Microsoft made a change to a key SOAP library, it caused serious problems for IT consultants working on a project for a major business processing services company. The changed security validation procedures caused errors that would force the project to be implemented in another method that would pose several issues for security, performance and reliability.

With the need to maintain high security and adhere to the implementation schedule, a simple iRule script was created and implemented within the BIG-IP Application Delivery Networking product which restructured IP packets to circumvent the bug and allow the project to complete on time with no compromise to performance, security or design.

### Challenge

To have gone from a startup to 3000 people located in 14 countries in just five years is an impressive achievement and makes Xchanging one of the world's leading business processing services company. As a company, Xchanging has embraced IT and developed and deployed many innovative systems to deliver business processing services. High availability, flexibility and watertight security are its three key requirements for IT infrastructure to support its customers which include Deutsche Bank, Citibank, Lloyd's of

London and around 150 brokers and insurers worldwide.

As part of a continual process to improve systems and infrastructure, Xchanging embarked on a project to deploy several new applications aimed at its brokerage customers as well as to automate server side communication from its data centers to external customers using SOAP based messaging.

At the start of the project, Xchanging had selected F5 Networks BIG-IP as its core Application Delivery Networking platform based on both strong performance metrics and a high degree of flexibility to adapt as the infrastructure progressed.

As Pete Watts, professional services consultant with BlueBerry Network Solutions who led the infrastructure part of the project explained, “We had worked with BIG-IP in the past and understood that it offered a high degree of flexibility that was not available with other load balancing type products and it proved its worth later in the project.”

The new brokerage applications use highly encrypted SSL communication between central data centers and remote clients to ensure security. There is a redundant BIG-IP pair providing SSL encryption and decryption ahead of the applications servers.





“HTTPS connections are terminated at the BIG-IP which passes on data to applications servers in a highly secure link within a closed data center area. This solution gives us high security and good performance while removing the need for SSL processing within the application servers which can seriously affect performance and potentially open a security and management issue.”

Watts continues, “About two thirds of the way into the project, Microsoft made a change to its SOAP libraries which made it impossible to terminate SSL on the BIG-IP and forward HTTP through to our SOAP server.”

After approaching Microsoft for a fix to this problem, the only solution would be to massively change the way the infrastructure was implemented which would lead to potential code change support and security issues.

### Solution

Watts decided to investigate the use of iRules on the BIG-IP system. “One of the key factors in choosing the BIG-IP was its flexibility, and after we received no time frame for a fix from Microsoft, we started looking at the possibility of using an iRule to alter the URL data to circumvent the problem.”

Although Watts had never created an iRule before, he has vast experience with other scripting languages in his 10 years in the IT industry. Armed with some example scripts and details of the Microsoft SOAP library restrictions, Watts spent a day creating and testing an iRule that would restructure relevant Data and URL to avoid the error.

This is a basic explanation of what the iRule does. After SSL termination takes place on the BIG-IP system, the script changes HTTP SOAP content and associated values to remove a marker that describes the connecting URL as having been encrypted, and the resulting connection is load balanced over the correct application server.

“Its only a very simple script but it has worked flawlessly and had no impact on performance,” comments Watts, “Without the iRule functionality with BIG-IP, we would have had to redesign our project and potentially make either a compromise in support or security which is not acceptable to us.”

The new batch automation system project is due for completion within the next few weeks, and Watts is satisfied that the infrastructure is ready, “We have completed the infrastructure part of the project as planned and can see other potential applications for the iRule scripting language.”

“Although this is the first time we have used the iRule technology, I suspect it won’t be the last time that we are able use the potential of the language to perform an action that would normally be difficult to achieve.” Watts concludes.

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