



MICROSOFT .NET

F5 Networks - The Network Platform for Delivering Microsoft .NET

Executive Summary

One of today's most important emerging technologies are Web services. Web services allow different applications to dynamically interact with each other, connecting systems that would otherwise require extensive development efforts. F5 Networks and Microsoft® provide a solution that can communicate with and influence the behavior of the underlying network, resulting in a secure, highly available, scalable environment with little need for manual intervention.

All of F5 Networks' IP Application Switches and networking products are now .NET® enabled. Now, applications and services using Visual Studio® 2005 and the .NET Framework can communicate with and influence the behavior of the underlying network in a variety of functions; from a local and global load balancing and traffic management perspective, to a content delivery and fulfillment infrastructure, or both. .NET services and applications can also extract critical network information in order to adjust their behavior via Web services.

The result is an integrated Web application, service, and network environment that is highly available, scalable, performs optimally, and is secure - what F5 refers to as the application aware network. This integrated architecture allows the network to be dynamically tuned based upon Web applications, services, and customer needs.

Challenges

A key element missing from this scenario is consideration of the network itself on which the applications and services are running. Organizations must overcome the challenges that the network presents within the comprehensive .NET architecture, to ensure that Web services and applications are running properly, that they are available, and secure. Enterprises are looking for ways to let the network determine how best to direct IP application traffic to the resource or application best suited to fulfill that request based on a variety of content, business, or performance criteria.

Solution

F5 Networks is the first and only networking company to offer complete interface support for Microsoft .NET, making F5 a key partner for building, developing, and deploying Web services based on Microsoft .NET technologies. F5 Networks made the design decision to expose these methods to external sources via an open API, called iControl®. The methods to invoke these functions are accomplished using SOAP/XML as specified in the F5 iControl SDK.

The result is that nearly anything that can be done from an F5 Network device can now be accomplished programmatically through iControl, using the methods specified in the iControl SDK. They can be bound to nearly any language or development environment.

For example, the following simple procedure shows to develop iControl services applications with Microsoft Visual Studio 2005:

1. Developer creates a web reference to any F5 appliance/switch from Visual Studio.NET.
2. WSDL file is returned to Visual Studio.NET providing a description of the available Web services.
3. Visual Studio.NET compiles native bindings to reference the available Web services.
4. Developer builds application and compiles it for deployment.
5. .NET applications take advantage of high availability, performance, and security by working in concert with F5's networking products.

(Note that Steps 1-3 are only necessary during initial configuration).

For more information on iControl and the Microsoft.NET platform, visit <http://devcentral.f5.com/>

About Microsoft .NET

.NET can be generally described as the Web Services strategy and platform for Microsoft. A .NET implementation is a deployment of any combination of server products, typically deployed with some form of customization using Microsoft's integrated development tool, Visual Studio .NET, effectively creating a .NET framework. Microsoft is at the forefront of working with the standardization of XML and SOAP, and fully understands that the applications of the future will be built utilizing these methods to enable true integration across the Web.