

F5 provides bridge to future with IMS readiness

Help for service providers seeking to offer new services

WITH THE EMERGENCE of the next-generation network, providers will be differentiated by new and unique services—not by network access to those services. A key driver of this new model is the IP Multimedia Subsystem (IMS), which separates services from the access networks used to receive them.

IMS is a new way to deliver multimedia regardless of device or provider—whether it be a fixed-line telco, a cellular carrier, or a converged service provider (SP). IMS standards are still evolving, however, creating interoperability, scalability, and security challenges.

SPs need to start deploying innovative services on existing networks, while also readying themselves for the migration to a new model. The F5 BIG-IP Local Traffic Manager (LTM) can help service providers make this transition because it supports the underlying protocols of IMS—Session Initiation Protocol (SIP), Real Time Streaming Protocol (RTSP), and Stream Control Transmission Protocol (SCTP)—as well as the many other TCP/IP protocols used in IP networks.

Take this example: One of F5's customers, a mobile carrier, was initiating its first IMS service on its network, Caller ID Blocking (*67). During the pilot rollout, there was an issue with the Call Session Control Function (CSCF) equip-



ment. The carrier felt the problem was with the CSCF equipment, but the CSCF vendor claimed the issue was with the carrier's implementation of the *67 service. Ultimately, the problem stemmed from differences in how the two vendors implemented the IMS and SIP standards.

Because IMS implementations are so new, not all providers implement them in the same way. However, waiting until the standards are ironed out means losing competitive ground.

The carrier already had BIG-IP deployed and was able to leverage the full-proxy TMOS architecture. BIG-IP LTM acts as a translator to fix internetworking problems among varieties of IMS equipment at the TCP and UDP level. BIG-IP LTM has iRules triggers designed for SIP and RTSP, enabling IMS traffic to be inspected and transformed at the connection level. As a result, the iRules scripting language gave the carrier the ability to customize how they inspected their inbound traffic.

In addition to interoperability challenges, IMS applications need to scale up while maintaining high availability and quality of service. BIG-IP LTM can load-balance equipment such as application

servers, CSCF, media gateways, signaling gateways, session border controllers, video streaming servers, and more. Built-in health monitoring for SIP and RTSP helps BIG-IP LTM ensure multimedia applications are always available.

IMS architecture is more susceptible to attack and interference than fixed-line telcos. BIG-IP LTM has specific denial-of-service attack protection and provides many of the functions of a Topology Hiding Internetworking Gateway. And as a full-proxy implementation, it also eliminates many protocol-based attack vectors by providing protocol sanitization.

Until the challenges facing IMS are resolved, few, if any, SPs will be able to simply activate a complete IMS infrastructure. All SPs will need to examine legacy services. With the increased capability to handle the IMS protocols, the BIG-IP family of Application Delivery Networking solutions is poised to help with this transition. *

This article was taken from "Building the Next Generation Network Bridge" by KJ Salchow Jr., manager of product management at F5 Networks. To read more, visit www.f5world.com.

Additional resources

Visit www.f5world.com for more information on IMS, including:

- The podcast: "Defining IMS"
- The white paper: "IMS Ready, and Raring to Go!"
- The white paper: "Introduction to the IP Multimedia Subsystem (IMS): IMS Basic Concepts and Terminology"