



High-Scale Mobile Infrastructure Protection

The F5® S/Gi firewall solution helps communications service providers (CSPs) protect both their infrastructure and their subscribers from attacks, minimizing service interruptions, increasing network uptime, and reducing costs. Leveraging the F5 intelligent services framework allows you to further consolidate with other network and security functions, including carrier-grade NAT (CGNAT)—opening a clear path for 3G to 4G and IPv4 to IPv6 migration. The result of this consolidation is the simplification of your network architecture.

Mobile Infrastructure Protection

Your subscribers demand that your network remain available and reliable. Increasingly, though, the security of your network is being threatened by attacks that cause outages and congestion. These attacks vary from port scans that cause congestion of the radio access network to distributed denial-of-service (DDoS) floods, but the result is the same—an unavailable network and unhappy subscribers.

Legacy firewall solutions deployed at the perimeter lack the scale and performance to keep up with subscriber session growth. As a result, you may have had to increase the number of firewall systems servicing your network, resulting in higher costs and a more complex infrastructure. Meanwhile, you must also plan for two major technology migrations—3G to 4G/LTE and IPv4 to IPv6—which means deploying even more firewall systems to handle the additional load, or implementing dedicated service blades to handle the IPv4 to IPv6 transition.

Network Segmentation and Service Enforcement

In addition to defending the network perimeter, you need to segment your mobile network. All CSPs must differentiate between subscribers and the mobility infrastructure itself—assigning different subnets to each class of device. Such service enforcement enables you to provide differentiated levels of network access to different devices, but can create even more complexity in your network.

The F5 S/Gi Firewall Solution

The F5 S/Gi firewall solution cuts through this complexity with its unsurpassed scale and performance. Delivering more than half a billion sessions, more than half a terabit per second of throughput, and millions of connections-per-second on a single, integrated system, the F5 S/Gi firewall allows you to service more subscribers with fewer devices, reducing both your capital and operational costs.

Key features

- **Scalability and Performance**—Built on the market's highest-performing application delivery firewall
- **Highest Security**— Full-proxy stateful firewall that delivers Layer 4–7 granular control of all connections, while providing comprehensive protection against DDoS attacks
- **Reliability**—Resilient platforms, high availability, and session sync ensure uptime, continuity, and an enhanced subscriber experience
- **Manageability and Consolidation**— Central management with BIG-IQ Security, plus the ability to add functions such as CGNAT, traffic management, and other network and security functions

Key benefits

- **Simplify Your Network**—Combine security, CGNAT, traffic management, and more on a single platform
- **Lower Costs**—Support more subscribers with fewer devices—up to a 10x savings in rack space versus legacy firewalls
- **Get Greater Security at Scale**—Ensure availability of your network, even in the face of high-scale attacks
- **Gain More Flexibility**—Run S/Gi firewalls on physical or virtual platforms; define new protocol and security functions with F5 iRules®
- **Stay One Step Ahead**—Scales to handle hundreds of millions of connections and hundreds of Gbps

The foundation of the S/Gi firewall is BIG-IP® Advanced Firewall Manager™ (AFM), a hardened, full-proxy firewall that protects against sophisticated, high-scale DDoS attacks. To help you manage a network of S/Gi firewalls, F5 BIG-IQ™ Security combines superior firewall policy management, reporting capabilities, monitoring, and searchable traffic logs. BIG-IP® Policy Enforcement Manager™ (PEM) provides insight into network traffic and subscriber behavior, while BIG-IP® Carrier-Grade NAT (CGNAT) makes it easy to manage IPv4 address exhaustion and migrate successfully to IPv6.

Scale and performance: BIG-IP AFM scales to up to 576 million concurrent connections, 640 Gbps of throughput, and 8 million connections per second on a single, integrated system.

DDoS protection: The F5 S/Gi firewall provides advanced security with a stateful proxy architecture, protecting not only protocols (such as UDP, TCP, SIP, DNS, HTTP, and SSL), but also your mobile network.








Increased operational efficiency: The F5 S/Gi firewall solution can also combine with BIG-IP CGNAT for consolidated network security and IPv4 to IPv6 address management, while BIG-IQ Security allows you to scale firewall infrastructure—without increasing management time.

Deploy new services with insight: BIG-IP PEM gives you visibility and insight into traffic, delivering greater subscriber awareness and comprehensive analytics.

Extensible security and dynamic threat mitigation: The F5 iRules scripting language provides a flexible way to enforce protocol functions and scan payloads to create a zero-day dynamic security context to react to DDoS threats and vulnerabilities.



One Platform

 Network Firewall	 Traffic Detection	 Carrier-Grade NAT	 DDoS Mitigation	 DNS Security	 Local Traffic Management	 Global Traffic Management
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The F5 S/Gi firewall solution delivers the intelligence, flexibility, and scalability you need to secure your mobile network.

Learn more

For more information about the F5 S/Gi firewall solution, please see the following resources or use the search function on f5.com.

Web pages

- [Security for Service Providers](#)
- [Application Delivery Firewall](#)
- [BIG-IP Advanced Firewall Manager](#)
- [BIG-IP Local Traffic Manager](#)
- [BIG-IP Carrier-Grade NAT](#)
- [BIG-IQ Security](#)
- [BIG-IP Policy Enforcement Manager](#)

Datasheet

- [BIG-IP Advanced Firewall Manager](#)

White paper

- [Enabling Policy in the New Mobile Architecture](#)

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