Intelligent Traffic Management with the BIG-IP Platform

Service providers are struggling with the explosion of data traffic resulting from increased mobile usage, resource-intensive applications, and device proliferation. At the same time, they are deploying new network technologies and services to stay competitive and satisfy customers. F5 delivers solutions that enable service providers to intelligently manage data traffic, conserve network resources, and quickly deliver more profitable services.

Increased Data Traffic Across Your Network

The surge in data traffic creates several challenges for service providers: an inability to scale effectively, stagnant profits, and poor network performance. Service providers struggle to scale network infrastructures to meet capacity demands and to prevent service outages and sluggish performance. The infrastructure costs required to support this ever-increasing traffic also leads to reduced operating margins and profits. Despite service providers' best efforts, customers still experience poor performance because of the strained network, leaving them unsatisfied. As customers increasingly use smartphones and tablets, and as they continue to access resource-intensive cloud-based applications, the challenges will only intensify.

In addition, networks are rapidly evolving into all-IP environments. Service providers are deploying new network technologies such as 4G LTE that introduce innovative components and different traffic patterns into the service architecture. Service providers are also deploying specialized value-added service (VAS) platforms that optimize mobile video traffic, personalize service plans, and deliver rich messaging services. This constant evolution— new services interfaces, policies, and customization—introduces more complexity to traffic management. You need a fresh, strategic approach to overcome these challenges.

F5 Solution

The F5® BIG-IP® platform offers intelligent traffic management solutions that help you solve challenges resulting from traffic growth and complex network evolutions. These solutions include:

- Sophisticated, subscriber- and context-aware traffic management with session-based data inspection in real time—providing critical traffic visibility, control, and analytics based on parameters such as subscriber profile, device or content type, location, and network conditions.

- The ability to route targeted content to VAS platforms or to content sources based on subscriber or contextual data.

- Support across heterogeneous systems for balancing traffic loads, monitoring system health, and steering traffic based on availability to improve service reliability under the most demanding conditions.

Key features

- **Sophisticated Traffic Steering**— Enables value-added services (VAS) platform optimization

- **Rich IP Support**—NEBS-compliant platform includes full proxy architecture and rich IP capabilities to read, modify, prioritize, and filter IP traffic

- **Multi-Platform Support**—Supports load balancing, monitoring network and systems health, and steering traffic to improve service reliability in the most demanding conditions

- **HTTP Header Enrichment**—Provides subscriber profile and network data for monetization

- **TCP Optimization**—Improves service performance in congested network conditions
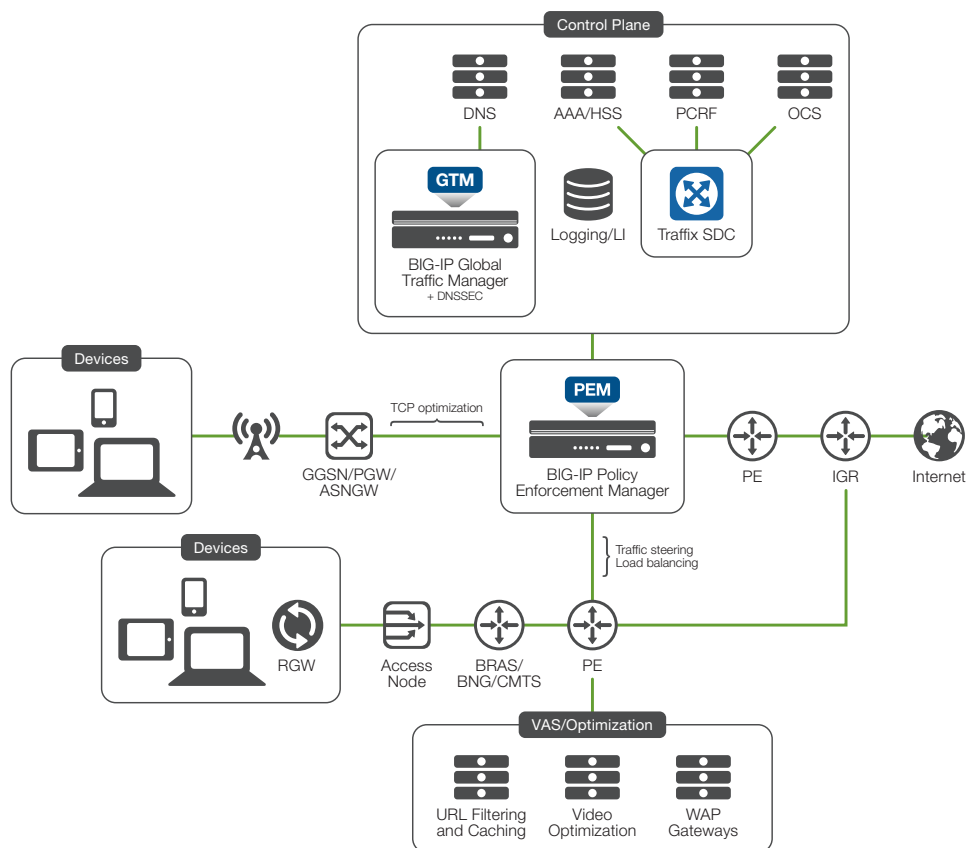
Key benefits

- **Unmatched Scalability**—Scales to handle millions of subscribers

- **Unified Platform**—Consolidates traffic management, carrier-grade NAT, and security functions in a single platform

- **Granular Policy Control**—Customizable scripting language, iRules over traffic policies and steering

- **Reduced Costs**—Lower deployment and operational costs

- A full proxy architecture and any-service-on-any-blade IP capabilities to read and modify all traffic in any direction, prioritize critical traffic during bursts, and filter out unwanted traffic.
- HTTP header enrichment to provide intelligence to content providers and other third-party providers.

The BIG-IP platform helps you scale capacity and offer superior end-to-end performance. A unique TCP optimization methodology, F5 TCP Express,™ improves application performance. You can customize configuration with the F5 iRules® scripting language, which enables rapid policy creation and automation, and with F5 iApps® templates, which help CSPs provision, analyze, and control application services across the network.

F5 simplifies the network architecture and provides the flexibility you need to manage network resources efficiently and cost-effectively, deploy new services quickly, and manage changes more gracefully—all in a solution that delivers the highest carrier-grade performance and reliability.

Learn more

For more information about F5 service provider solutions, please see the following resources or use the search function on f5.com.

Web pages

BIG-IP Product Family

iRules

Datasheets

BIG-IP Local Traffic Manager for Service Providers

BIG-IP Policy Enforcement Manager

Solution profile

Optimize and Monetize the Network with BIG-IP Policy Enforcement Manager

Intelligently manage data traffic, conserve network resources, and deliver more profitable services with F5 solutions.

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