

# BIG-IP Global Traffic Manager

PRODUCT OVERVIEW



“Every customer application we support goes through BIG-IP. It has become an absolutely critical part of our entire infrastructure.”

Joel Chaplin, Vice President of Operations and CIO, Varolii

## Scale and Protect DNS Infrastructure and Optimize Global App Delivery

### Key benefits

- Scale up DNS to 20 million RPS with a fully loaded chassis
- Protect your DNS infrastructure from attacks and malicious domains
- Improve global application performance, directing traffic based on business needs
- Gain adaptable DNS for customized responses
- Deploy flexibly and scale as you grow
- Manage your complex, distributed DNS and app network simply and efficiently

Scaling and securing every environment helps protect your business from site outages and improves DNS and application performance. Securing DNS infrastructures from the latest distributed denial-of-service (DDoS) attacks, and protecting DNS query responses from cache poisoning, helps keep your business online and viable. But to fully achieve these goals, you need an efficient way to monitor DNS infrastructure and application health and scale on demand to meet exact requirements.

F5® BIG-IP® Global Traffic Manager™ (GTM) distributes DNS and user application requests based on business policies, data center and cloud service conditions, user location, and application performance. BIG-IP GTM delivers F5’s high-performance DNS Services with visibility, reporting, and analysis; scales and secures DNS responses geographically to survive DDoS attacks; delivers a complete, real-time DNSSEC solution; and ensures global application high availability in all hybrid environments.

## Scale and protect DNS infrastructure

With F5 DNS Express® replicated in many locations, BIG-IP GTM delivers high-speed authoritative DNS query responses and offloads DNS with On-Demand Scaling up to 20 million responses per second (RPS) with a fully loaded chassis, enabling DNS DDoS attack mitigation. By providing protection against DNS-based attacks, BIG-IP GTM adds an extra layer of security and availability for your applications. BIG-IP GTM includes IP Anycast integration, enabling multiple devices to receive queries using the same IP address. You can also mitigate DNS threats by blocking access to malicious IP domains. These solutions ensure application availability and enable DNS firewall services.

BIG-IP GTM includes DNSSEC, which protects against cache poisoning and spoofing attacks. With simple deployment, it enables real-time signing and validation, centralized management of DNSSEC keys, and signing for static zones.

## Fast responses ensure availability

Enable DNS caching on BIG-IP GTM and reduce latency exponentially by responding immediately to client requests. BIG-IP GTM resolves DNS queries as well, without requiring the use of an upstream DNS resolver. Resolving also improves availability by forwarding zones in the DNS cache to a name server or by following root hints.

BIG-IP GTM ensures that users are always connected to a site where the application is available. In addition to performing comprehensive health checking of the entire infrastructure, BIG-IP GTM minimizes downtime and improves the user experience by determining health at the application layer for every user.

Using the F5 iRules® scripting language, administrators customize the distribution of global traffic to route users based on business and app requirements and design adaptable and customized DNS traffic.

## Improve application performance

BIG-IP GTM uses a range of load balancing methods and intelligent monitoring for each specific app and user, sending traffic to a site that will give the best experience. Traffic is routed according to business policies and current network and user conditions. BIG-IP GTM includes an accurate, granular geolocation database, giving you control of traffic distribution based on user location. By providing persistence for stateful apps, BIG-IP GTM helps eliminate broken sessions and corrupted data.

## Simplify management and deploy flexibly

BIG-IP GTM Virtual Edition (VE) provides flexible global app and DNS delivery in hypervisor and cloud environments. The web-based UI gives you easy DNS configuration with centralized menus, advanced logging, statistics, and reporting.

## BIG-IP GTM features

### DNS delivery services

- High-speed DNS query response with DNS Express replicated in many locations
- DNS and GSLB On-Demand Scaling to exact requirements
- Scale authoritative DNS 2x with rapid response
- DNS caching, resolving, and cache forwarding
- Single IP address for multiple devices with IP Anycast integration
- Flexible deployments in virtual environments
- DNS IPv6 to IPv4 translation/IPv6 support
- Secure DNS with DNS firewall services
- High performance DNSSEC signing and validation, and centralized key management
- Complex DNS threat mitigation, blocking access to malicious domains
- DNSSEC signing for static zones
- Protocol validation for all queries
- Automatic site-to-site app failover
- One-click manual app failover
- Intelligent data center load balancing

- Geographic distribution

- Global persistence

### Comprehensive monitors

- Internet and device performance
- Application-specific
- Composite QoS
- DNS health

### Simplified management

- Centralized DNS menus
- Distributed application management
- Configuration synchronization
- DNS zone file management
- iRules scripting language using QoS metrics
- DNS customization with DNS iRules
- iControl API for easy third-party integration
- High-speed logging for DNS, syslog, and GSLB decision log
- Enhanced DNS detailed stats
- Advanced DNS reporting and analytics

## Learn more

For more information about BIG-IP GTM, visit [f5.com](https://www.f5.com) to find these resources.

### Datasheet

[BIG-IP Global Traffic Manager](#)

### Articles and white papers

[DNS Reimagined Keeps Your Business Online](#)

[F5 Synthesis: DNS Shrugged](#)

[The Dynamic DNS Infrastructure](#)

[Cloud Balancing: The Evolution of GSLB](#)

[Distributing Applications for Disaster Planning and Availability](#)

### Case studies

[SaaS Provider RelayHealth Delivers Innovative Healthcare Applications with F5 Solutions](#)

[Cloud-Based Automation SaaS Provider Ensures High Uptime and Resiliency for Critical Customer Apps](#)

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