Deliver Secure and Accelerated Remote Access to Applications

As more mobile and remote workers access applications and data from many different devices and locations, ensuring fast application performance for remote users is a growing concern for IT organizations.

F5 BIG-IP® Edge Gateway™ is an access solution that brings together SSL VPN remote access, security, application acceleration, and availability services for remote users. BIG-IP Edge Gateway drives identity into the network to provide policy-controlled, context-aware, secure remote access to applications at LAN speed. As the industry’s most secure and accelerated access solution, BIG-IP Edge Gateway can help your organization deliver peak performance levels to users accessing the applications and networks that are critical to your business.

**Key benefits**

- **Scale for the growing mobile workforce**
  Support access for more remote users with an advanced gateway at the edge of the network.

- **Streamline access management**
  Get authentication and authorization services on a single, easy-to-manage network device.

- **Provide automatic access anywhere**
  Give users a seamless connection when transitioning between locations.

- **Ensure strong endpoint security**
  Protect your organization and validate user devices with an optional endpoint security inspection service.

- **Accelerate application performance**
  Accelerate traffic to improve the remote user experience and provide access at LAN speeds.
Scalability to Meet Future IT Demands

BIG-IP Edge Gateway is an advanced access gateway at the edge of the network that provides secure remote access for the rapidly growing number of remote and mobile users. With up to 8 Gbps of SSL VPN throughput, BIG-IP Edge Gateway delivers unprecedented performance, supporting up to 600 logins per second and up to 40,000 concurrent SSL-encrypted user sessions on a single appliance. Its unique access and acceleration services, along with caching, compression, and optimization, provide superior scalability to meet current and future IT demands.

Streamlined Access Management

BIG-IP Edge Gateway unifies access services on a single, easy-to-manage, and optimized network device to help you achieve fast implementation and reduce the cost of management across services.

Unified access services

Equipped with network and application access as well as content rewrite for accessing internal applications, BIG-IP Edge Gateway provides secure connectivity to corporate applications from all networks, including remote LAN, internal LAN, and both public and internal wireless. This flexible, high-performance device uses SSL tunneling and optional client technology to provide secure access to any user from any location and any client device.

Access policies

With BIG-IP Edge Gateway, you can design access policies for endpoint security checking, authentication, and authorization to enforce user compliance with company policies. You can define one access profile for all connections coming from any device, or you can create multiple profiles for different access methods, each with their own access policy.
For example, you can create a policy for corporate LAN, VPN, or wireless connections. With policies in place, your network becomes context-aware: understanding who the user is, where the user is accessing the application, and what the current network conditions are at the time of access.

**Advanced Visual Policy Editor**

The advanced, GUI-based Visual Policy Editor (VPE) makes it easy to design and manage granular access control policies on an individual or group basis. With the VPE, you can quickly and efficiently create or edit entire dynamic access policies with a few simple clicks. For example, you can: design endpoint security policy checks to bring devices into compliance with antivirus, firewall, and OS updates; design an authentication server policy integrated with RADIUS; assign resources for access once authorization is complete; or deny access for failure to comply with policy. A geolocation agent provides automatic lookup and logging. This simplifies the configuration process and enables you to customize user access rules according to your organization’s geolocation policy. The VPE simplifies and centralizes policy control to help you manage access more cost-effectively.

**Broad authentication support and AAA server integration**

BIG-IP Edge Gateway integrates with authentication servers using access policies and supports authentication requirements on one easy-to-manage device. Once authentication integrations are completed, BIG-IP Edge Gateway interacts with authentication, authorization, and accounting (AAA) servers containing user information. A broad set of authentication services—including Active Directory, LDAP, RADIUS, and native RSA SecurID—ensures strong enforcement of access policies. For example, Active Directory support gives you access enforcement for lookup and nested directories.
You can manage all access, acceleration, and optimization services from one centralized GUI.

**Machine certificate support**

During a user logon, BIG-IP Edge Gateway can check for a Windows machine certificate and allow or prohibit access based on whether or not there is a valid certificate present. BIG-IP Edge Gateway can use machine certificates as a form of two-factor authentication.

**Out-of-the-box configuration wizards**

BIG-IP Edge Gateway helps reduce administrative costs by making it easy to quickly configure and deploy AAA server integration and authentication. The configuration wizard includes a set of pre-built web application access, network access, and local traffic virtual device wizards. It creates a base set of objects as well as access policy for common deployments while automatically branching to necessary configurations, such as DNS. With step-by-step configuration, context-sensitive help, review, and summary, setting up authentication with AAA servers on BIG-IP Edge Gateway is simple and fast.

**Consolidated access for Oracle**

BIG-IP Edge Gateway integrates with Oracle Access Manager, so you can design access policies and manage policy-based access services for Oracle applications from one location. By consolidating plug-ins and web authentication proxies, this integration can help you reduce CapEx and OpEx.
Improved User Experience and Productivity

BIG-IP Edge Gateway drives a user’s identity into the network to provide context-aware networking that minimizes the time and effort required to gain access to authorized files and applications.

“Always connected” remote access

Some access clients need constant reconnection throughout the day as users move locations or restart applications. The BIG-IP® Edge Client™ solution is a state-of-the-art, integrated client that provides location awareness and zone determination to deliver a remote access solution unlike any other. Cutting-edge roaming, domain detection, and automatic connection create a seamless transition as users move between locations. BIG-IP Edge Client helps ensure continued user productivity whether the user is at home on a wireless network, using an air card in transit, giving a presentation from corporate wireless, in a café on guest wireless, or docked on a LAN connection. BIG-IP Edge Client can automatically detect domains and connect, even after losing a VPN connection, or disconnect when a LAN connection is detected.

Status and reporting

BIG-IP Edge Client provides server and traffic status, and you can select the desired access server to gain optimal performance. Graph reporting shows connection status, routing tables, IP configurations, and more. With BIG-IP Edge Client, the administrator can track the increase in the number of connected users in all roaming environments.

Windows logon credential reuse

When the user first enters credentials as part of the Windows logon process, BIG-IP Edge Client caches them and then automatically tries them in the first attempt to log onto the VPN. This streamlines the user experience to help improve productivity.
Credential caching

BIG-IP Edge Gateway provides credential caching and proxy services for single sign-on (SSO), so users only need to sign in once to access approved sites and applications. As users navigate, sign-on credentials are delivered to web applications, saving valuable time and increasing productivity.

Automatically synchronized Exchange services

BIG-IP Edge Gateway supports the synchronization of email, calendar, and contacts with Microsoft Exchange on mobile devices that use the Microsoft ActiveSync protocol, such as the Apple® iPhone®. By eliminating the need for an extra tier of authentication gateways to accept Outlook Web Access, ActiveSync, and Outlook Anywhere connections, BIG-IP Edge Gateway helps you consolidate infrastructure and keep users productive.

Superior Security

BIG-IP Edge Gateway makes policy-based, context-aware access decisions to ensure that users everywhere—using any device—gain secure access to only the resources they need to stay productive.

Strong endpoint security

BIG-IP Edge Gateway provides a broad layer of endpoint inspection to validate client security postures against corporate policy. Endpoint inspection protects against worms, viruses, and accidental data loss. More than a dozen integrated endpoint inspection checks are preconfigured, including Windows, Macintosh, Linux, antivirus, and firewall checks. Other checking features include: file, process, OS, and registry checks; assignment of dynamic access control lists (ACLs) based on endpoint posture to deliver context-based security; and browser cache cleaning to remove any sensitive data at the end of a user’s session.

Customizable logon pages

You can fully customize an entire logon page to best suit your existing corporate website portals and provide the best user experience. Customizable options range from simple naming of fields from CSS style sheets to HTML coding. You can customize a logon page using the configuration utility or the command line interface to upload custom pages.

Encrypted environment with protected workspace

Using tight encryption, BIG-IP Edge Gateway provides a protected workspace for users who need to switch to a secure environment. In this mode, users cannot write files to locations outside the protected workspace. Temporary folders and all of their contents are deleted at the end of the session to ensure maximum protection of data. You can configure BIG-IP Edge Gateway to automatically switch users of Windows 7 (32-bit), Windows XP, and Windows Vista to a protected workspace.

Dynamic access control

BIG-IP Edge Gateway provides access authentication using ACLs and authorizes users with dynamically applied layer 4 and layer 7 ACLs on a session. Both L4 and L7 ACLs are supported based on endpoint posture as a policy enforcement point. BIG-IP Edge Gateway allows individual and group access to approved applications and networks using dynamic, per-session L7 (HTTP) ACLs. You can use the Visual Policy Editor to quickly and easily create ACLs.
Accelerated Application Performance

With BIG-IP Edge Gateway acceleration and optimization technologies, users experience authorized remote access to applications at LAN speeds.

Optimized downloads

BIG-IP Edge Gateway optimizes performance for downloads and applications by securing against packet loss and using client-side traffic shaping to reduce congestion. Caching, compression, and acceleration enable users to download documents from familiar business applications—such as Microsoft Office SharePoint—at double the speed of traditional VPN solutions.

Asymmetric and symmetric acceleration

BIG-IP Edge Gateway acceleration services cache a high percentage of repetitive and duplicate web application data, reducing bandwidth usage and overall costs. Asymmetric acceleration can improve performance 2x to 5x. With symmetric acceleration deployed at the data center and at a remote location, users can access applications up to 10x faster.

Client-based acceleration

Using BIG-IP Edge Client for client-based acceleration, you can gain greater control of traffic to improve application performance and enable faster communications. Dynamic data compression and client-side cache reduce traffic volumes to minimize the effects of Internet latency and client connection bottlenecks on application performance. Client-side quality of service (QoS) and application traffic shaping for Windows devices reduce latency and dropped packets for remote applications. You can prioritize application traffic so specific applications, such as VoIP, are sent before others.

Faster global access

You can implement global VPN access by integrating BIG-IP® Global Traffic Manager™ with BIG-IP Edge Gateway. Combined access redirection, IP geolocation, acceleration, and optimization services provide users accessing applications globally with up to 8x faster document downloads. This creates a seamless global VPN architecture that delivers secure access to remote users at LAN speed.
WAN optimization

BIG-IP Edge Gateway overcomes network and application issues on the WAN to ensure that users everywhere get the application availability and performance they need to stay productive. Common Internet File System (CIFS) and Messaging Application Programming Interface (MAPI) acceleration, data de-duplication, and superior compression and acceleration capabilities are integrated directly on your BIG-IP Edge Gateway device. The result is document downloads that are up to 8x faster, more effective bandwidth utilization, and mitigated effects of latency for the critical applications your remote users access.

Virtual Architecture

BIG-IP Edge Gateway virtualization capabilities help you reduce the amount of hardware you require, improve operational efficiency, and decrease costs. You can create multiple access virtual servers and support multi-tenancy by defining and managing access policy groups according to your business or organizational needs. By creating multiple virtual servers of BIG-IP Edge Gateway on one device, you can easily scale and customize each remote access service separately. BIG-IP Edge Gateway is ideally suited for enterprises or service providers that require consolidation of multiple customers’ access groups onto one device.
BIG-IP Edge Gateway Architecture

BIG-IP Edge Gateway runs on F5’s unique, purpose-built TMOS® architecture. TMOS is an intelligent, modular, and high-performing platform that delivers insight, flexibility, and control to help you intelligently deliver your web applications.

TMOS delivers:
- SSL offload
- Advanced rate shaping and quality of service
- IP/port filtering
- iRules® scripting language
- iSessions
- Fast cache
- Symmetric adaptive compression
- Resource provisioning
- Route domains (virtualization)
- Geolocation agent in Visual Policy Editor
- Report scheduling
- TCP/IP optimization
- Full proxy
- Key management and failover handling
- VLAN segmentation
- DoS protection
- System-level security protections

BIG-IP Edge Gateway features include:
- Secure accelerated remote access
- Acceleration and optimization services
- Network access management
- Rewrite engine – internal application access
- Granular access policy enforcement
- Advanced Visual Policy Editor
- L4/L7 dynamic access control list (ACL)
- BIG-IP Edge Client: web-based and standalone
- Auto-connect and reconnect
- Windows logon credential reuse
- Location awareness
- Dynamic profiling
- Dynamic data compression
- Client logging for events
- SDK
- Client-side traffic shaping for Windows (QoS)
- Optimized and secure connections with Datagram-TLS
- Protected workspace support and encryption
- Style sheets for customized logon page
- Credential caching and proxying for SSO
- Integration with Oracle Access Manager
- Endpoint security
- Endpoint inspection: Windows, Mac, Linux, antivirus, and firewall checks
- More than a dozen endpoint checks
- Virtual keyboard support
- AAA server authentication
- RADIUS
- LDAP
- Active Directory
- Native RSA SecurID
- Microsoft ActiveSync support
- Health check monitor for RADIUS accounting
- Windows machine certificate support
- External logon page support
- Out-of-the-box configuration wizards
- Application access management for BIG-IP virtual servers
- Network access
- Web application setup
- Scale up to 40,000 concurrent users
- Asymmetric and symmetric network and application acceleration
- Dynamic caching and compression
- Data de-duplication
- CIFS and MAPI acceleration
- Hardware acceleration (SSL and compression)
- Virtual architecture
- Centralized advanced reporting
- Access policy dashboard
- Session logging and reporting summaries
- Splunk integration reporting
- Policy routing
- Export and import of access policies
- Clustered multi-processing
- DNS cache/proxy support
- BIG-IP Edge Gateway and BIG-IP Global Traffic Manager layering
- F5 Enterprise Manager layering
- Group policy support and integration
- Windows Mobile package customization
BIG-IP Edge Gateway Platforms

BIG-IP Edge Gateway is available as a standalone solution on the 8900, 6900, 3900, 3600, and 1600 platforms. For detailed physical specifications, please refer to the BIG-IP System Hardware Datasheet.

<table>
<thead>
<tr>
<th>Platform</th>
<th>8900</th>
<th>6900</th>
<th>3900</th>
<th>3600</th>
<th>1600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Concurrent Users:</td>
<td>5,000</td>
<td>2,500</td>
<td>1,000</td>
<td>500</td>
<td>300</td>
</tr>
<tr>
<td>Maximum Concurrent Users:</td>
<td>40,000</td>
<td>25,000</td>
<td>10,000</td>
<td>5,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Professional Services and Support

F5 is dedicated to helping you get the most from your F5 products. To find out how F5 support services can help you improve your ROI, reduce administrative time and expense, and optimize the performance and reliability of your IT infrastructure, contact consulting@f5.com.

More Information

Browse for these and other resources on F5.com to learn more about BIG-IP Edge Gateway.

Product overview

BIG-IP Edge Gateway

White paper

Unified Access and Optimization with F5 BIG-IP Edge Gateway

Video

BIG-IP Edge Gateway Demo
Consolidate Access with BIG-IP Edge Gateway

Podcast

F5 Customer Interview: CSC and Remote Access