BIG-IP Edge Gateway
DATASHEET

Deliver Secure and Fast Remote Access to Anyone from Any Device

As the mobile workforce grows, users require access to corporate resources from different types of networks and an increasing variety of devices. Ensuring secure and fast application performance for remote users is a key challenge.

F5 BIG-IP® Edge Gateway™ is an accelerated remote access solution that brings together SSL VPN, security, application acceleration, and availability services. It combines the capabilities of BIG-IP® Access Policy Manager,™ BIG-IP® WebAccelerator,™ and BIG-IP® WAN Optimization Manager™ to give you a complete, unified solution. With industry-leading security and acceleration, BIG-IP Edge Gateway can help you deliver peak performance levels to users accessing applications located anywhere, regardless of the user's location or device.

Key benefits

Improve user productivity
Give users a seamless connection when transitioning between locations.

Ensure strong endpoint security
Protect your organization and validate users' devices with an optional endpoint inspection service.

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

Accelerate application performance
Accelerate traffic to improve the remote user experience and provide access at LAN speeds.

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

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 enables BIG-IP Edge Gateway to provide location awareness and zone determination and delivers a remote access solution unlike any other. Cutting-edge roaming, domain detection, and automatic re-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.

Broad device support

BIG-IP Edge Gateway leverages the access management capabilities of BIG-IP APM to support a wide range of mobile devices. A layer 7 web application, BIG-IP Edge Portal, is available for all iOS and Android devices. True SSL VPN is available through BIG-IP Edge Client on Mac, iPhone, iPad, Windows, and Samsung Android devices.

BIG-IP Edge Client uses cutting edge roaming, domain detection, and automatic connection to deliver a seamless transition between locations.
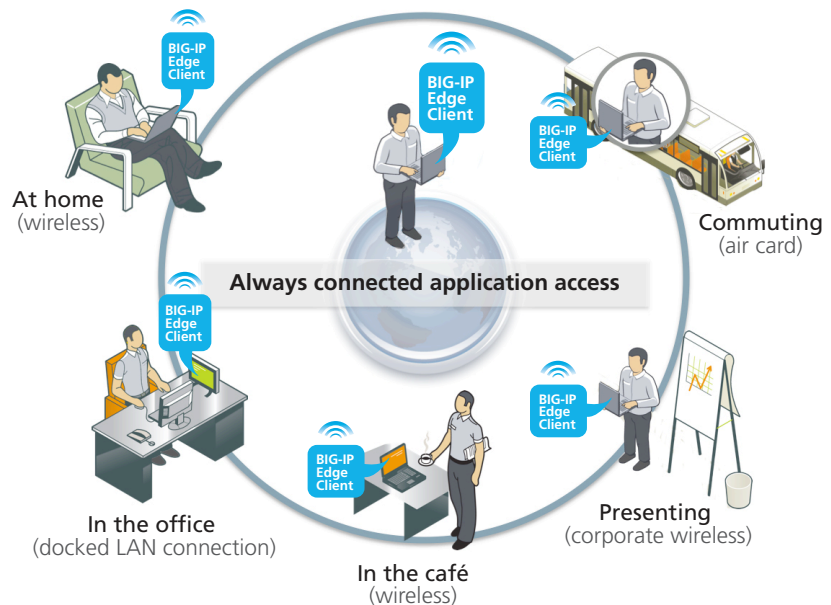

Hosted virtual desktop

BIG-IP Edge Gateway access control includes native support for Microsoft Remote Desktop Protocol, a web proxy and portal support for Citrix XenApp and XenDesktop, and full network access for VMware View. The highly scalable, high performance application delivery

capabilities of BIG-IP Edge Gateway provide simplified access and control to users in hosted virtual desktop environments.

Status and reporting

Leveraging the reporting functionalities of BIG-IP Edge Client, you can see server and traffic status and select the desired access server to gain optimal performance. Graph reporting shows connection status, routing tables, IP configurations, and more. The administrator can track the increase in the number of connected users in all roaming environments. BIG-IP Edge Gateway can also generate customized, granular reporting for intelligent analysis and troubleshooting. Examples include detailed session reports by: access failures; users; resources accessed; group usage; and geolocation.

Custom reports provide granular data and statistics for intelligent analysis.
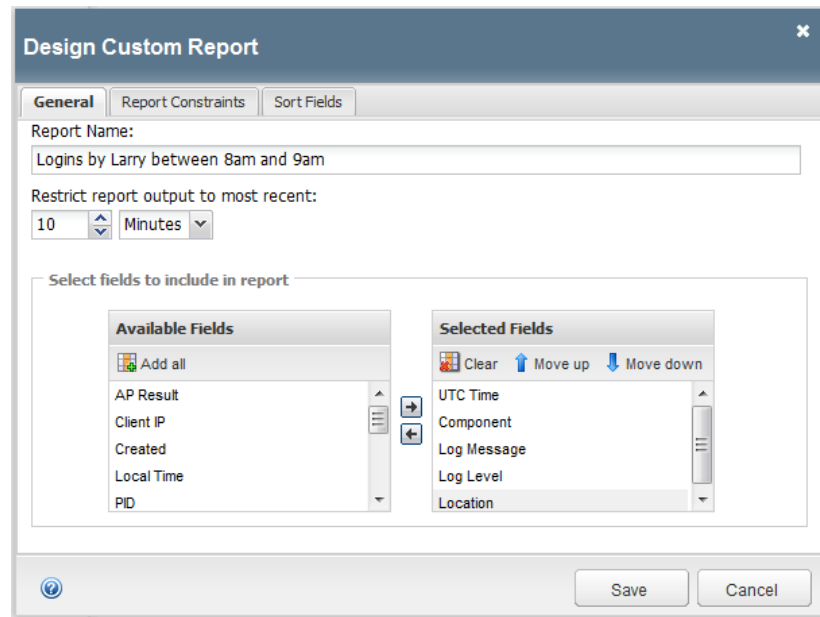
Windows logon credential reuse

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 eliminates the need to enter VPN login credentials and 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 access control 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 Microsoft® 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 uses a browser-based inspection engine to examine the security posture of a device and determine whether it is part of the corporate domain. Then, based on the results, BIG-IP Edge Gateway assigns dynamic access control lists (ACLs) to deliver context-based security. More than a dozen integrated endpoint inspection checks are preconfigured, including OS, antivirus software, firewall, file, process, and registry, as well as the device's MAC address, CPU ID, and HDD ID. You can map hardware attributes to user role to allow more decision points for policies. A browser cache cleaner automatically removes any sensitive data at the end of a user's session.

Dynamic webtops

The dynamic webtop is an optionally displayed list of web-based applications available to a user after authentication. The webtop is customizable based on a user identity and only shows resources for which the user is authorized.

Application tunnels

If an endpoint doesn't comply with the security posture policy, an application tunnel can provide access a particular application without the security risk of opening a full network access tunnel. For example, mobile users can simply click their Microsoft Outlook client to get secure access to email no matter where they are in the world. Application tunnels are completely WAN optimized so application connections benefit from adaptive compression, acceleration, and TCP optimization to efficiently deliver content to users.

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 Microsoft® 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 caches 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.

BIG-IP Edge Gateway combines asymmetric, symmetric, and client-based acceleration to deliver fast and secure access to applications and networks.
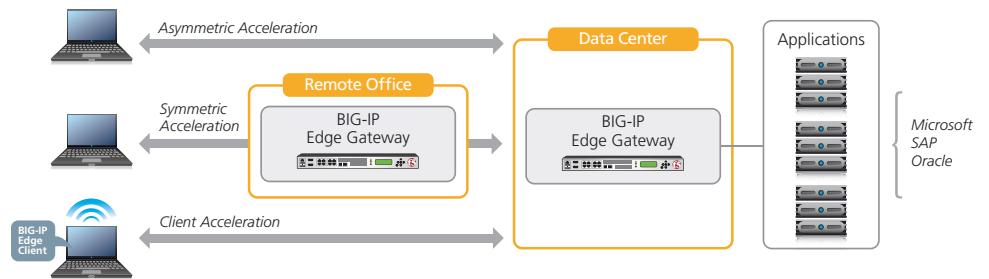
Client-based acceleration

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.

Site-to-site encryption and acceleration

With site-to-site IPsec, all IP (not just TCP) traffic between data centers is encrypted and sent over one tunnel to simplify security and routing. BIG-IP Edge Gateway also supports

acceleration over the IPsec site-to-site tunnel, giving you the flexibility to replicate data between data centers over the public Internet instead of the expensive WAN. This can also be used in for disaster recovery when the WAN is damaged.

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 deduplication, 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.

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, application tunnel, and portal access for 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.

Single sign-on support

BIG-IP Edge Gateway supports single-sign on (SSO) across multiple domains and Kerberos ticketing. This enables additional types of authentication, such as federal CAC and PIV cards, as well as the use of Active Directory authentication for all applications. Once users have authenticated via one of the supported end-user authentication schemes, they are automatically signed on to back-end applications and services that are part of a Kerberos realm.
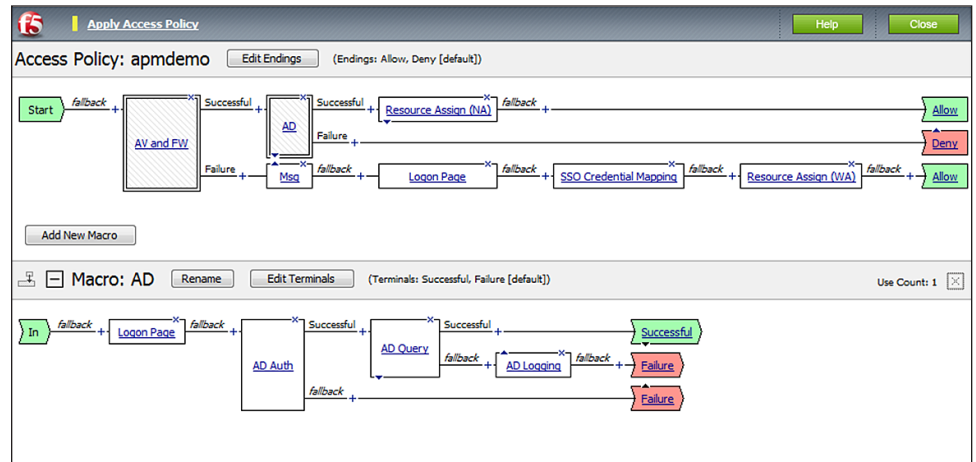
Access policies

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.

The advanced Visual Policy Editor make it easy to create access policies.

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.

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.

Scalability to Meet Future IT Demands

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 60,000 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.

BIG-IP Edge Gateway unifies access services on a single, easy-to-manage, and optimized network device.
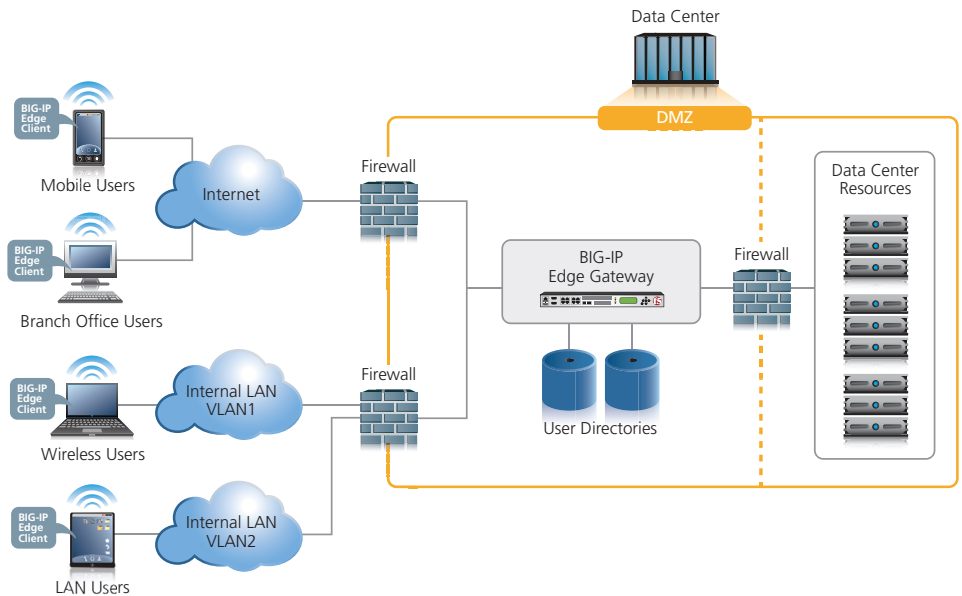
Virtual Architecture

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 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 Global Traffic Manager layering
· F5 Enterprise Manager™ layering

BIG-IP Edge Gateway features include:

· Secure accelerated remote access
· Acceleration and optimization services
· Network access management
· Portal access to internal applications
· Granular access policy enforcement
· Advanced Visual Policy Editor
· L4/L7 dynamic access control list (ACL)
· Export and import of access policies
· 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

· Style sheets for customized logon page
· Credential caching and proxying for SSO
· Kerberos support for single sign-on
· Integration with Oracle Access Manager
· Virtual desktop support for Citrix and Microsoft remote desktop
· SSL VPN encryption for remote access
· Split SSL within a secured connection
· Site-to-site encryption via IPsec
· Application tunnels
· Dynamic webtops based on user identity, context, and group membership
· Endpoint security
· Endpoint inspection: Windows, Mac, Linux, antivirus, and firewall checks
· More than a dozen endpoint checks
· Virtual keyboard support
· Protected workspace
· AAA server authentication
· N-Factor authentication
· Microsoft ActiveSync and Outlook Anywhere support
· Health check monitor for RADIUS accounting
· Windows machine certificate support
· External logon page support
· Out-of-the-box configuration wizards
· Scale up to 60,000 concurrent users
· Asymmetric and symmetric network and application acceleration
· Intelligent caching and compression
· Data deduplication
· CIFS and MAPI acceleration
· Hardware acceleration (DTLS)
· Client-based acceleration
· Site-to-site acceleration over IPsec tunnel
· Virtual instances
· Centralized advanced reporting with Splunk
· Windows Mobile package customization

BIG-IP Edge Gateway Platforms

BIG IP Edge Gateway is available as a standalone solution on the 11000, 8900 (FIPS), 6900 (FIPS), 3900, 3600, and 1600 platforms. For detailed physical specifications, please refer to the BIG-IP System Hardware Datasheet.

11000 Series

8900 Series

6900 Series

3900 Series

3600 Series

1600 Series

Platform	11000	8900	6900	3900	3600	1600
Base Concurrent Users:	10,000	5,000	2,500	1,000	500	300
Maximum Concurrent Users:	60,000	40,000	25,000	10,000	5,000	1,000

F5 Services

F5 Services offers world-class support, training, and consulting to help you get the most from your F5 investment. Whether it's providing fast answers to questions, training internal teams, or handling entire implementations from design to deployment, F5 Services can help you achieve IT agility. For more information about F5 Services, contact consulting@f5.com or visit f5.com/services.

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