BIG-IP Access Policy Manager

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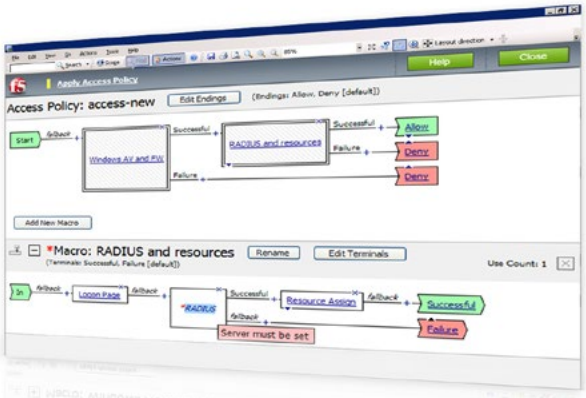
What's Inside



Achieve Unified Access Control and Scale Cost-Effectively

Today, business resources, such as applications and data, are accessed inside and outside the traditional business perimeter. Local and remote employees, partners, and customers often access applications without context or security. A central policy control point delivers access based on context and is critical to managing a scalable, secure, and dynamic environment.

F5 BIG-IP® Access Policy Manager® (APM) is a flexible, high-performance access and security solution that provides unified global access to your applications, network, and cloud. BIG-IP APM converges and consolidates remote, mobile, LAN, and web access—as well as wireless connectivity within a single management interface. It also enables simple, easy-to-manage, context-aware access policies. As a result, BIG-IP APM helps you free up valuable IT resources while you cost-effectively secure and scale access.

Key benefits

Provide unified global access

Consolidate remote, mobile, LAN, and web access—as well as wireless connectivity in one interface.

Consolidate and simplify

Replace web access proxy tiers and integrate with OAM, XenApp, and Exchange to reduce infrastructure and management costs.

Centralize access control

Enable a simplified, central point of control to manage access to applications and websites through the creation and enforcement of context-aware policies.

Ensure superior access and security

Protect against data loss, virus infection, malware attack, and rogue device access with comprehensive endpoint posture and security checks.

Secure web access

Control user access to potentially dangerous websites and web applications, and secure against complex web threats using market-leading Raytheon|Websense technology.

Achieve flexibility and scalability

Support users easily, quickly, and cost-effectively.

ICSA labs CERTIFIED SSL VPN

ICSA labs CERTIFIED FIREWALL - CORPORATE

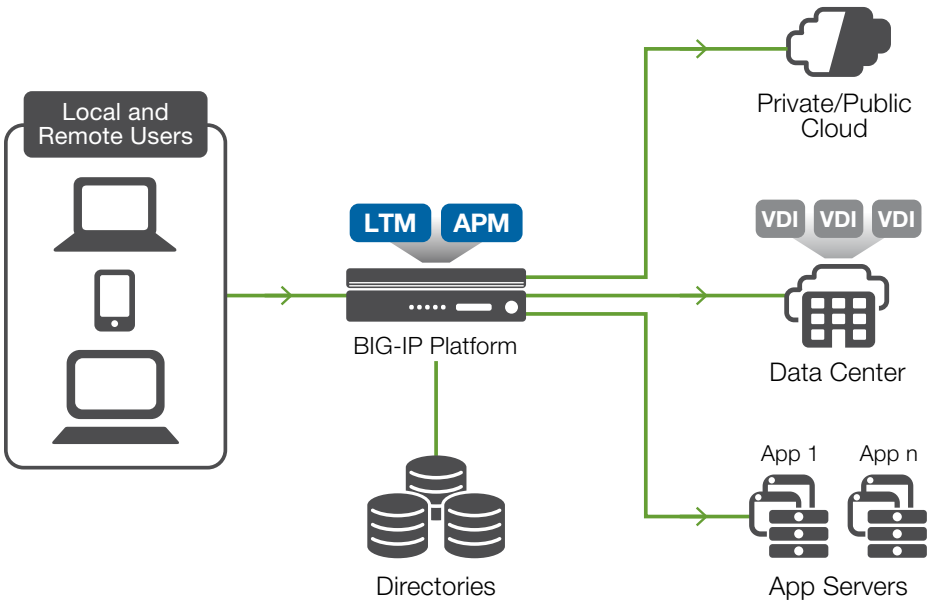
Unified Global Access

As your workforce grows and becomes more mobile, users need access to corporate resources wherever those resources may be located, from any device, and often over unsecured networks. Ensuring they have fast, secure access to applications, networks, and the cloud continues to be a challenge for many organizations.

One solution for all access

BIG-IP APM is positioned between your applications and your users, delivering a strategic access control point. BIG-IP APM protects your public-facing applications by providing granular, policy-based, context-aware access to external users while consolidating your access infrastructure. It provides secure remote and mobile access to corporate resources from all networks and devices.

BIG-IP APM puts IT back in control of secure application, network, and cloud access. It converges and consolidates access within a single management interface. It also enables and simplifies the creation of granular, context-aware access policies that are easy to manage.



BIG-IP APM consolidates and manages all access to applications, networks, and clouds.

"Always connected" remote access

BIG-IP APM can be used with an optional client to enable secure remote and mobile access to applications wherever they reside, as well as networks and clouds. The integrated BIG-IP® Edge Client® provides location awareness and zone determination to deliver secure, persistent, policy-based access.

BIG-IP Edge Client helps ensure continued productivity whether a user is at home on a wireless network, using an air card in transit, giving a presentation over corporate wireless, in a café on guest wireless, or docked on a LAN connection. BIG-IP Edge Client can automatically detect domains and reconnect even after losing a VPN connection, or it can automatically disconnect when a LAN connection is detected. It also recognizes when an

RSA SecurID software token is installed on a user's Windows or Mac device, prompting the user for an RSA PIN number and seamlessly authenticating that user.

BIG-IP APM extends managed access for remote and mobile users to support a wide range of mobile devices. The BIG-IP® Edge Portal™ application facilitates secure remote access to enterprise web applications and is available for all Apple iOS and Google Android devices. Full SSL VPN is available for Apple Mac, iPhone, and iPad devices; Microsoft Windows and Windows Phone devices; Linux platforms; and Google Android devices. The new F5 Access app is also available, empowering enterprises to deliver secure remote access via BIG-IP APM's SSL VPN capabilities for Google Chrome OS, and popular corporate and BYOD devices such as Chromebooks.

In addition, BIG-IP APM simplifies mobile access authentication, enabling remote access (VPN) authentication and authorization from Microsoft Windows, Apple Mac OS, Apple iOS, Google Android devices, and Google Chromebooks—via Security Assertion Markup Language (SAML). By supporting SAML-based authentication for devices running Windows, Mac OS, iOS, Android, and Chrome OS, BIG-IP APM limits user "password fatigue." It also enhances the mobile and desktop user experience as well as user productivity—while increasing overall security.

When deployed with leading mobile device management (MDM) and enterprise mobility management (EMM) offerings, BIG-IP APM is able to augment mobile and remote access gateway support—increasing access scalability, consolidating access gateways, and decreasing access infrastructure for the enterprises deploying those solutions. BIG-IP APM also enables per-app VPN access from mobile devices used in a bring-your-own device (BYOD) scenario, and managed by AirWatch by VMware—without any user intervention necessary. And as part of Google's Android for Work Initiative, BIG-IP APM supports per-app VPN for mobile devices running Google Android 5.0 Lollipop.

Enhanced connectivity to IPv6 networks

As the Internet continues its evolution from IPv4 to IPv6, to ensure business continuity and future growth, organizations must expand their networking capabilities to support the coexistence of IPv4 and IPv6. BIG-IP APM fully supports IPv6 while continuing to support IPv4, delivering a true global access experience.

Consolidated Infrastructure and Simplified Management

By integrating enterprise-wide and cost-effective application access management with centralized application delivery directly on BIG-IP® Local Traffic Manager™ (LTM), BIG-IP APM greatly simplifies identity and access management (IAM) implementation, as well as authentication, authorization, and accounting (AAA) services.

Single sign-on

BIG-IP APM supports single sign-on (SSO) across multiple domains and Kerberos ticketing, enabling additional types of authentication, such as U.S. Federal Government Common Access Cards (CACs) and the use of Active Directory authentication for all applications. Users are automatically signed on to back-end applications and services that are part of a Kerberos realm. This provides a seamless authentication flow after a user has been authenticated through a supported user authentication scheme. BIG-IP APM also delivers smart card support with credential providers, supporting SSO for users with devices running Windows 7 and above, enabling them to connect their devices to the network before signing in.

SAML 2.0 further extends BIG-IP APM SSO options by supporting connections initiated by both identity providers (IdPs) and service providers (SPs). This functionality extends SSO capabilities to cloud-based applications outside the corporate data center and also allows for identity federation across an organization's F5 BIG-IP® platforms. BIG-IP APM thus minimizes user time spent logging into multiple applications and enables a unified user portal for cloud, web, virtual desktop infrastructure (VDI), and client/server applications. It also empowers administrators to centrally disable a user's access to all identity-enabled applications, regardless of where they reside, saving time and boosting administrator productivity.

BIG-IP APM secures the transport of SAML messages by supporting SAML artifact binding. This reduces the flow of SAML messages through browsers, addressing certain browser restrictions, while extending SSO support to automatically submitted forms not supporting JavaScript. As a result, users save time and enjoy an enhanced experience.

BIG-IP APM also extends SSO via SAML to client-based applications and other browserless environments—including desktop applications and server code in web apps—and streamlines user workflow by supporting SAML Enhanced Client or Proxy (ECP) profiles. Through its support of SAML ECP profiles, BIG-IP APM simplifies access to client-based apps, such as Microsoft Office 365. This improves the user's experience, while increasing application usability and user productivity.

BIG-IP APM supports and simplifies identity federation for applications with multi-valued attributes. These are applications that provide more than one database value, such as WebEx.

Automatically synchronized Exchange services

BIG-IP APM 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 (OWA), ActiveSync, and Outlook Anywhere connections, BIG-IP APM helps you consolidate infrastructure and maintain user productivity. When migrating to Exchange 2010, BIG-IP APM works with Active Directory to facilitate seamless mailbox migration over time. When migration is complete, BIG-IP APM provides managed access to Exchange with single URL access, regardless of the user, device, or network.

Consolidated AAA infrastructure

Other authentication solutions use application coding, separate web server agents, or specialized proxies, which can present significant management, cost, and scalability issues. With AAA control directly on the BIG-IP system, BIG-IP APM enables you to apply customized access policies across many applications and gain centralized visibility of your authorization environment. You can consolidate your AAA infrastructure, eliminate redundant tiers, and simplify management to reduce capital and operating expenses.

Consolidated access for Oracle

BIG-IP APM integrates with Oracle Access Manager (OAM), 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.

Simplified access for virtual application environments

BIG-IP APM acts as a gateway for virtual application environments, supporting Citrix, VMware, and Microsoft desktop and application virtualization infrastructure. Using BIG-IP APM, administrators gain dynamic control over the delivery and security components of enterprise virtualization solutions and benefit from unified access, security, and policy management. For instance, in a typical Citrix XenApp or XenDesktop implementation, an administrator may replace Citrix authentication management, Secure Ticket Authority (STA), NetScaler, and XenApp Services sites (required for Citrix sourced enterprise deployment) with BIG-IP APM.

BIG-IP APM supports the latest versions of VMware Horizon, ensuring maximum performance, availability, and scalability of VMware End User Computing (EUC) implementations. BIG-IP APM also supports Citrix XenApp and XenDesktop simultaneously, as well as Citrix StoreFront—further consolidating support for the Citrix desktop and application virtualization infrastructure. In addition, BIG-IP APM provides a single, scalable access control solution that includes both remote and LAN access policy and control with no configuration changes required to back-end servers. The solution can also be extended to other applications to achieve a simplified, low cost, highly scalable enterprise infrastructure.

Enterprises can now use single sign-on (SSO) from smartcards with BIG-IP APM and VMware View Connection Server, enabling gateway consolidation for VMware EUC deployments. BIG-IP APM supports two-factor authentication via RSA SecureID and RADIUS through the native client for VMware EUC deployments. On-demand validation is available for mobile clients (such as iOS and Android), as well as zero clients.

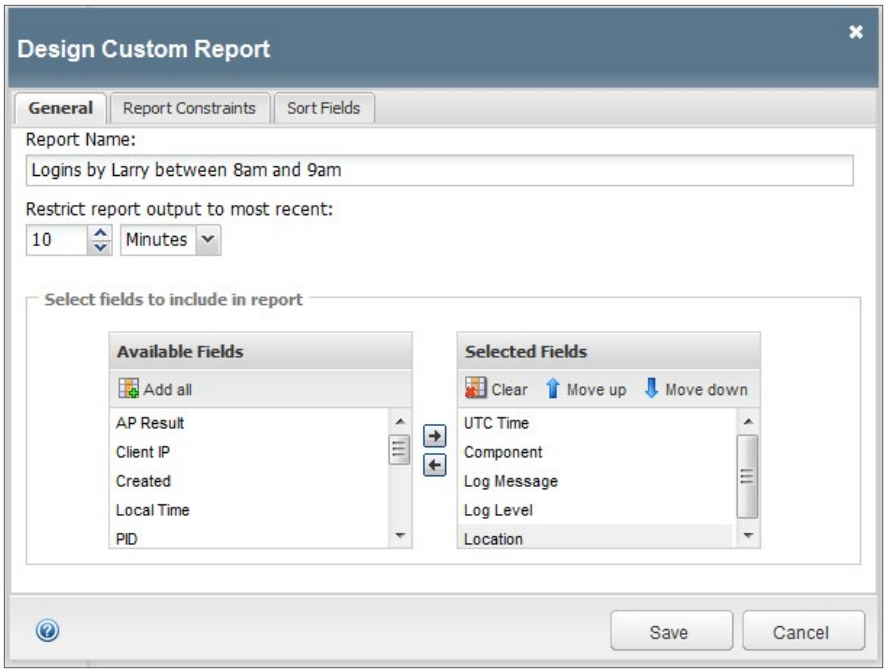
BIG-IP APM also delivers data loss protection by controlling USB redirection and client-drive mapping for VMware Horizon desktops. Context-based policies in BIG-IP APM can control the use of USB devices by certain users and devices, mitigating data loss through USB ports for managed accounts and on managed devices.

Advanced reporting

An in-depth view of logs and events provides access policy session details. With reports from technology alliance partner Splunk—a large-scale, high-speed indexing and search solution—BIG-IP APM helps you gain visibility into application access and traffic trends, aggregate data for long-term forensics, accelerate incident responses, and identify unanticipated problems before users experience them.

BIG-IP APM is capable of providing customized reports with granular data and statistics for intelligent reporting and analysis. Examples include detailed session reports by:

- Access failures
- Users
- Resources accessed
- Group usage
- IP geolocation



Custom reports provide granular data and statistics for intelligent analysis.

Out-of-the-box configuration wizards

BIG-IP APM helps reduce administrative costs by making it easy to quickly configure and deploy authentication and authorization services. The configuration wizard includes a set of pre-built application access and local traffic virtual device wizards. It creates a base set of objects as well as an access policy for common deployments, and it automatically creates branches in the configuration to support necessary configuration objects. With step-by-step configuration, context-sensitive help, review, and summary, setting up authentication and authorization services on BIG-IP APM is simple and fast.

Real-time access health data

The access policy dashboard on the BIG-IP system gives you a fast overview of access health. You can view the default template of active sessions, network access throughput, new sessions, and network access connections, or create customized views using the dashboard windows chooser. By dragging and dropping the desired statistics onto the window pane, you gain a real-time understanding of access health.

Dynamic and Centralized Access Control

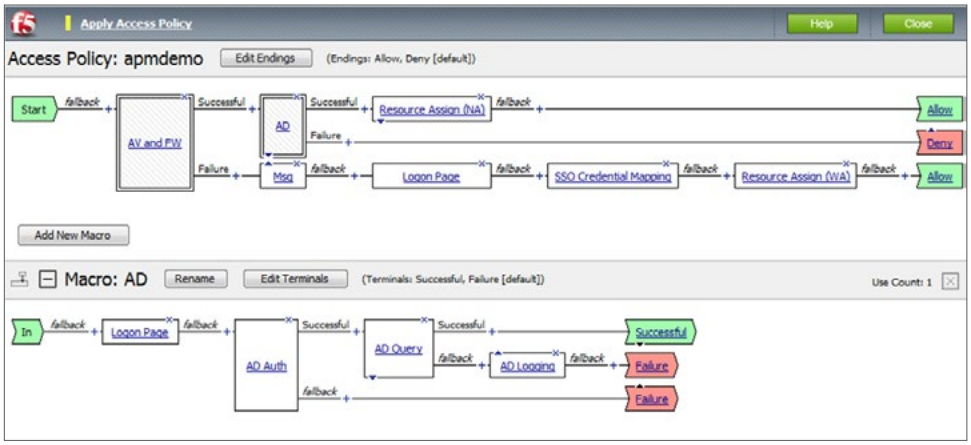
By enabling context-aware, policy-based access decisions, BIG-IP APM strengthens corporate compliance with security standards—and industry and government regulations—while ensuring that users can stay productive with appropriate application access.

Advanced Visual Policy Editor

The advanced, GUI-based Visual Policy Editor (VPE) makes it fast and simple 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 just

a few clicks. For example, you can 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 can also define additional rules per URL path to, for example, enable a policy to restrict application, network, and cloud access based on IP address—or on specific day, time of day, or identity-based attributes. By centralizing and simplifying the creation and management of contextual policies, the VPE helps you control access more cost-effectively.



The advanced Visual Policy Editor makes it easy to create, modify, and manage granular, context-aware access policies.

Dynamic access control

BIG-IP APM provides access authentication using access control lists (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 APM 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.

Access policies

BIG-IP APM lets you design access policies for authentication and authorization, as well as optional endpoint security checking, to enforce user compliance with corporate policies and industry regulations. You can define one access profile for all connections coming from any device, or you can create multiple profiles for different access methods from varying devices, each with their own access policy. For example, you can create a policy for application access authentication or dynamic ACL connections. With policies in place, your network becomes context-aware: It understands who the user is, how and when the user is attempting application access, where the user is attempting to access the application from, and what the current network conditions are at the time access is requested.

Context-based authorization

BIG-IP APM drives identity into the network, creating a simplified, central point of control over user access. When tens of thousands of users access an application, BIG-IP APM offloads SSL encryption processing, provides authentication and authorization services, and optionally creates a single secure SSL connection to the application server. Context-based authorization delivers complete, secure, policy-based control over users' application, network, and cloud navigation.

Superior Security

By making context-aware, policy-based access decisions, BIG-IP APM strengthens corporate compliance with security standards, corporate controls, and industry and government regulations. This ensures that users stay productive with appropriate application, network, and cloud access.

VPN technologies

BIG-IP APM with BIG-IP Edge Client delivers secure, identity- and context-driven SSL VPN remote access for mobile and remote workers. For remote connections, it offers a Datagram Transport Layer Security (DTLS) mode, which secures and tunnels applications that are delay sensitive. For traffic between branch offices or data centers, IPsec encryption is enabled. By using VPN technologies in the BIG-IP APM unified access solution, organizations gain end-to-end security across their entire global infrastructure and beyond.

Strong endpoint security

BIG-IP APM can deliver an inspection engine through a web browser or through BIG-IP Edge Client to examine the security posture of an endpoint device and determine whether the device is part of the corporate domain. Then, based on the results, it can assign dynamic ACLs to deliver context-aware security.

BIG-IP APM includes more than a dozen preconfigured, integrated endpoint inspection checks, including OS type, antivirus software, firewall, file, process, registry value validation and comparison (Windows only), as well as device MAC address, CPU ID, and HDD ID. For mobile devices running Apple iOS or Google Android, the endpoint inspection engine checks the mobile device UDID and if the mobile device has been jailbroken or rooted.

When deployed in conjunction with market-leading mobile device management and enterprise mobility management solutions—including those from AirWatch by VMware and MaaS360 by Fiberlink (an IBM company)—BIG-IP APM, through the BIG-IP Edge Client, can leverage the device security and integrity checks performed by the MDM or EMM solution. It can then assign context-aware policies based on the device's security state, and through those policies enable, modify, or disable application, network, and cloud access from a user's device. Administrators can map hardware attributes to a user's role to allow additional decision points for access control. A browser cache cleaner automatically removes any sensitive data at the end of a user's session.

Dynamic webtops

The dynamic webtop displays a list of web-based and virtualized applications available to a user after authentication. The content of the webtop is dynamic, showing only those resources the user is authorized to access. The webtop is customizable based on a user's identity, context, and group membership. Webtops can be set up with SAML-enabled SSO to deliver a seamless user experience.

Application tunnels

If an endpoint doesn't comply with your defined security posture policy, an application tunnel can provide access to a particular application without the security risk of opening a full network access tunnel. For example, users can simply click their Microsoft Outlook clients to get secure access to their email, no matter where they are in the world. Application tunnels are also WAN optimized to efficiently deliver content to users.

Secure access with Java patching

Typically, a user opens a Java applet such as IBM terminal emulator, and it will open up network connections on arbitrary ports, which may be blocked by firewalls and might use SSL to secure the traffic. This makes the applet unusable by remote employees. With Java rewrite, BIG-IP APM transforms or "patches" server Java applets in real time so that clients that execute the applets will connect back through BIG-IP APM using SSL over an authenticated BIG-IP APM session. BIG-IP APM rewrites once and stores patched Java in RAM cache, so there is no need to rewrite every time.

Comprehensive application access and security

With the efficient, multi-faceted BIG-IP platform, you can add application security without sacrificing access performance. BIG-IP APM and BIG-IP® Application Security Manager™ (ASM), F5's agile, scalable web application firewall, run together on the BIG-IP LTM appliance to protect applications from attack while providing flexible, layered, and granular access control. Attacks are filtered immediately to ensure application availability and security and an optimum user experience. This integrated solution helps you ensure compliance with local and regional regulations, including PCI DSS, so you can minimize non-compliance fine payouts and protect your organization from data loss. And since there is no need to introduce a new appliance to the network, you save costs with an all-in-one solution.

Secure Web Gateway Services

It's vital to ensure corporate compliance for Internet use and appropriate, secure web access by authorized users—whether they are onsite or remote, and whether they are conducting company business using corporate-issued or personal computing and mobile devices. It is just as critical, though, to protect against web-borne malware, targeted attacks, and other insidious dangers lurking on the web. You can achieve all of these goals with F5 Secure Web Gateway Services.

Secure Web Gateway Services has two licensing options available: a URL filtering service and a secure web gateway service. Each is available as a one-year or three-year subscription. The URL filtering service from F5 controls access to websites or web applications based on the categories and risks associated with the intended URLs. The secure web gateway service includes the URL filtering capability, but it also detects and blocks malware or malicious scripts hosted inside public web pages by scanning return HTTP/HTTPS traffic.

URL filtering

URL filtering helps to ensure compliance with industry and government regulations, as well as with corporate-acceptable Internet use policies. Using the extensive Raytheon|Websense database, URL filtering in Secure Web Gateway Services controls access to websites and hundreds of web-based applications, protocols, and videos. Secure Web Gateway Services also blocks search results based on your applicable security policy, preventing the display of

offensive search results or images. URL filtering is customizable, and it helps reduce and mitigate corporate exposure to web-based threats and data leakage.

Enterprises today have to block access to certain websites based on content filtering. BIG-IP APM provides flexibility for enterprises to allow, block, or "confirm and continue" access for certain users to the Internet, specific websites, and web applications. This helps enterprises stay productive, while ensuring IT policy compliance and maintaining control over Internet and web application access.

URL categorization database

Secure Web Gateway Services leverages the powerful Raytheon|Websense URL categorization engine and database that is constantly classifying tens of millions of URLs across the Internet and the web. URL categorization applies real-time classification information against known web pages, as well as assessing new web pages and URLs. It uses advanced machine learning, quickly assessing web pages based on content; this minimizes false positives and improves URL classification. URL categorization is contextually aware, using multiple characteristics to assess and determine web page and URL reputation.

If you purchase a BIG-IP APM license, you may either modify the included URL categories by adding more URLs, or by automatically assigning URLs to categories based on pattern matching. You may also develop custom, user-defined URL categories, and enforce access to those custom categories in URL filters on your outbound web traffic through forward proxy—similar to how Secure Web Gateway Services addresses web access control.

Neither a URL filtering nor secure web gateway service subscription license is required to create custom URL categories to enforce outbound web traffic access control. Reporting and logging for this functionality works in a manner similar to reporting and logging in Secure Web Gateway Services. For malware scanning and full-scale URL filtering, however, you will need a full secure web gateway service license, along with BIG-IP APM.

Web security

Secure Web Gateway Services also detects and blocks malware or malicious scripts within web pages by scanning return HTTP/HTTPS traffic. This is accomplished via the robust malware engine from Raytheon|Websense, which contains over 10,000 web malware analytics, and a collection of sophisticated signature and heuristic detection engines that identify and eradicate general and specialized threats.

Secure Web Gateway Services incorporates powerful analytics that, when combined, conduct content-based and contextual evaluations for more effective detection of advanced persistent threats (APTs). It uses the content and contextual data gathered from web pages, combined with information from its web malware analytics, to make informed decisions and detect patterns that indicate the presence of APTs and other complex attacks that may evade other, standalone analytics.

Additionally, when a remote user accesses the web through a per-app VPN tunnel in BIG-IP APM, the user's web access also should be regulated, with enforced authentication, URL filtering, and malware scanning based on the same applied security policy as if the user had attempted any other web access. Secure Web Gateway Services accomplishes this, ensuring comprehensive, coordinated web security, regardless of user access.

Real-time threat intelligence

Leveraging the Raytheon|Websense cloud-based threat intelligence infrastructure to deliver constant, up-to-date security information, Secure Web Gateway Services enables the detection of threats within web and social networking content. It sorts through all manner of web and social media content—including web pages, documents, executable files, mobile apps, and more—analyzing and processing billions of content requests daily.

Using the information culled from this data, Secure Web Gateway Services identifies and locates complex online threat trends. It can assess whether or not a popular website has been hijacked; monitor viral sites and content; and use news and social media topics to uncover more popular websites, viral sites, and content to assess. It takes advantage of big data analysis, mobile app permissions and profiles, and cloud sandbox data to predict and identify new, fast-emerging online threats. Secure Web Gateway Services synchronizes with the Raytheon|Websense cloud-based threat intelligence on a user-configurable schedule.

User identification

F5 Secure Web Gateway Services keeps track of the mapping between user identity and network addresses while enabling transparent user-based security policies through the F5 User Identity Agent. The F5 User Identity Agent runs on a Windows-based server and pulls information from Active Directory domain controllers. It enables Secure Web Gateway Services to fully track a user's web activity by user identity or group membership. Secure Web Gateway Services also bypasses or blocks SSL websites (based on inspection) for privacy and compliance purposes—enabling flexible control for access to SSL-encrypted websites.

Graphical security reporting and comprehensive logging

The graphical user interface within Secure Web Gateway Services allows system administrators to view and export various security analytics reports. These reports empower administrators with total visibility of outbound and inbound web traffic, Internet use, and policy enforcement. Secure Web Gateway Services logs users' Internet activities in forensic detail, including timestamps, source/destination IP address, user name, URLs, blocking status, and more. Logs may be published through the F5 log publisher to well-known security information and event management (SIEM) solutions, including solutions from ArcSight and Splunk. Logs from Secure Web Gateway Services also may be automatically uploaded to a Splunk cloud-based logging service and processed with a specially designed and implemented Splunk application, enabling the generation of analytic reports.

Flexible deployment options

Secure Web Gateway Services can be flexibly deployed through explicit proxy and transparent proxy modes. In explicit proxy, a BIG-IP APM device running Secure Web Gateway Services can be installed anywhere in a network using a single switch port connection, requiring no disruption or network wiring changes. All that is necessary is to configure the client browsers to point to a forward proxy server. In transparent proxy, Secure Web Gateway Services can be deployed directly in the path of traffic or inline—as the next hop after the gateway with the forward proxy configured to intercept all HTTP and HTTPS traffic transparently. This reduces the need for any changes to the browser.

Flexibility, High Performance, and Scalability

BIG-IP APM delivers flexible application, cloud, and network access and performance. It keeps your users productive and enables your organization to scale quickly and cost-effectively.

Flexible deployment

BIG-IP APM can be deployed in three different ways to meet a variety of access needs. It may be deployed as an add-on module for BIG-IP LTM to protect public-facing applications; it can be delivered as a standalone appliance; and it can run on a BIG-IP LTM Virtual Edition to deliver flexible application access in virtualized environments.

Desktop and application virtualization

Virtual desktop deployments have to scale to meet the needs of thousands of users and hundreds of connections per second. BIG-IP APM includes native support for Microsoft Remote Desktop Protocol (RDP), native secure web proxy support for Citrix XenApp and XenDesktop, and security proxy access for VMware Horizon. In addition, BIG-IP APM can pass a Java-based applet that acts as a Java RDP client and executes in the client's browser. The Java RDP client is a quick virtual desktop infrastructure (VDI) option as requirements dictate and is a secure remote access solution for Apple Mac and Linux users. The highly scalable, high-performance capabilities of BIG-IP APM provide simplified access and control to users in hosted virtual desktop environments.

In addition, BIG-IP APM integrates the Microsoft RDP protocol, enabling Microsoft RDP access without the need to install client-side components or run Java. BIG-IP APM enables Microsoft RDP to be available and used on new platforms, such as Apple iOS and Google Android devices. It also enables native RDP clients on non-Windows platforms such as Apple Mac OS and Linux, where previously only a Java-based client was supported. With this capability, F5 continues to deliver simplified, broad VDI support.

High availability for AAA servers

By delivering seamless user access to web applications in a highly available and heterogeneous environment, BIG-IP APM improves business continuity and saves your organization from revenue loss that can result from decreased user productivity. BIG-IP APM integrates with AAA servers—including Active Directory, LDAP, RADIUS, and Native RSA SecurID—and delivers high availability through the intelligent traffic management capabilities of BIG-IP LTM.

Credential caching

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

Unprecedented performance and scale

BIG-IP APM access offers SSL offload at network speeds and supports up to 3,000 logins per second. For organizations with an ever-growing base of web application users, BIG-IP APM scales quickly and cost-effectively.

BIG-IP APM use is based on two types of user sessions: access sessions and concurrent connection use (CCU) sessions. Access sessions apply to authentication sessions, VDI, and similar situations. CCU is applicable for network access, such as full VPN access, application tunnels, or web access. The BIG IP platform and the F5 VIPRION® platform, which support BIG IP APM, are able to handle exponentially more access sessions than CCU sessions in use cases such as authentication, SAML, SSO, Secure Web Gateway Services, and forward proxy. This means that if you intend to use BIG-IP APM for authentication, VDI, and the like, the number of sessions supported on a VIPRION platform can be up to 2 million sessions, and a BIG-IP platform can support up to 500,000 sessions.

Virtual Clustered Multiprocessing

BIG-IP APM is available on a chassis platform and on the BIG-IP 5200v, 7200v, and 10200v appliances, and it supports the F5 Virtual Clustered Multiprocessing™ (vCMP) environment. The vCMP hypervisor provides the ability to run multiple instances of BIG-IP APM. This allows for multi-tenancy and effective separation. With vCMP, network administrators can virtualize while achieving a higher level of redundancy and control.

BIG-IP APM Architecture

Whether running as a BIG-IP platform module or on a VIPRION chassis blade, BIG-IP APM is based on the intelligent, modular F5 TMOS® operating system. TMOS delivers insight, flexibility, and control to help you better enable application, network, and cloud access.

TMOS delivers:

SSL offload
Caching
Compression
TCP/IP optimization
Advanced rate shaping and quality of service
F5 IPv6 Gateway™
IP/port filtering
F5 iRules® scripting language
VLAN support through a built-in switch
Resource provisioning
Route domains (virtualization)
Remote authentication
Report scheduling
Full proxy
Key management and failover handling
SSL termination and re-encryption to web servers
VLAN segmentation
Denial of Service (DoS) protection
System-level security protections
BIG-IP APM and BIG-IP ASM layering
F5 Enterprise Manager support

BIG-IP APM features include:

Portal access, app tunnel, and network access
IPv6 ready
Granular access policy enforcement
Advanced Visual Policy Editor (VPE)
IP geolocation agent (in Visual Policy Editor)
AAA server authentication and high availability
DTLS mode for delivering and securing applications
Microsoft ActiveSync and Outlook Anywhere support with client-side NTLM
Simplified access management for Citrix XenApp and XenDesktop, and support for Citrix StoreFront
Native client support for Microsoft RDP client and Java RDP client
PCoIP and Blast proxy support for VMware Horizon, including support for Linux Desktops
SSO from smart cards for VMware Horizon deployments
Local client drive and USB redirection support for VMware Horizon
Seamless Microsoft Exchange mailbox migration
L7 access control list (ACL)
Protected workspace support and encryption
Credential caching and proxy for SSO
Java patching (rewrite) for secure access
Flexible deployment in virtual VMware environments
Integration with Oracle Access Manager (OAM)
SSO with support for Kerberos, credential caching, and SAML 2.0
Support for SAML-based authentication using BIG-IP Edge Client for Android and BIG-IP Edge Client for iOS 8.1
SAML-artifact binding support
SAML ECP profile support, for applications such as Office 365
Simplified identity federation for applications with multi-valued attributes, such as WebEx
Context-based authorization with dynamic L4/L7 ACLs
Windows machine certificate support
Windows Credential Manager integration
External logon page support
Access control support to BIG-IP LTM virtual server
Out-of-the-box configuration wizards
Scale up to 2 million concurrent access sessions
Policy routing
Export and import of access policies
Configurable timeouts
Health check monitor for RADIUS accounting
Landing URI variable support
DNS cache/proxy support
SSL VPN remote access
Always connected access (with BIG-IP Edge Client)
Broad client platform support: Supports several client platforms (See F5 BIG-IP APM Client Compatibility Matrices for each BIG-IP release)
Browser support: Supports several browsers (See F5 BIG-IP APM Client Compatibility Matrices for each BIG-IP release)
Site-to-site IPsec encryption
Application tunnels
Dynamic webtops based on user identity
Protected workspace
Web filtering, URL categorization, real-time web malware detection and protection, and cloud-based detection of new and emerging advanced threats with F5 Secure Web Gateway Services
Authentication methods: form, certificate, Kerberos SSO, SecurID, basic, RSA token, smart card, N-factor
Endpoint inspection: More than a dozen endpoint posture and security checks
Virtual keyboard support
Style sheets for customized logon page
Windows Mobile package customization
Centralized advanced reporting with Splunk
Virtual Clustered Multiprocessing (vCMP)

F5 BIG-IP Platforms

F5 Software-Defined Application Services™ are delivered via both hardware and software to flexibly support your specific environments—physical, virtualized, or cloud.

Hardware includes BIG-IP appliances or the VIPRION modular chassis and blade system designed specifically for application delivery, security, and high performance. VIPRION uses ScaleN technologies to provide on-demand linear scalability by enabling you to add blades without reconfiguration. BIG-IP® virtual edition (VE) software runs on commodity servers and provides agility and fast deployment of services in cloud environments. See the BIG-IP System Hardware, VIPRION, and Virtual Edition datasheets for details. For information about specific module support for each platform, see the latest release notes on AskF5. For the full list of supported hypervisors, refer to the VE Supported Hypervisors Matrix.

BIG-IP Appliance

VIPRION Chassis

BIG-IP Virtual Edition

F5 Global Services

F5 Global 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 Global Services can help ensure your applications are always secure, fast, and reliable. For more information about F5 Global Services, contact consulting@f5.com or visit f5.com/support.

Simplified Licensing

Meeting your applications' needs in a dynamic environment has never been easier. F5's Good, Better, Best provides you with the flexibility to provision advanced modules on-demand, at the best value.

- Decide what solutions are right for your application's environment with F5's reference architectures.
- Provision the modules needed to run your applications with F5's Good, Better, Best offerings.
- Implement complete application flexibility with the ability to deploy your modules on a virtual or physical platform.

(Note: F5 Good, Better, Best does not include F5 Secure Web Gateway Services.)

More Information

To learn more about BIG-IP APM, visit f5.com to find these and other resources.

Product overview

BIG-IP Access Policy Manager

Case study

Security Company Keeps Systems Protected and Apps Accessible

Video

Web Application Access Management for BIG-IP LTM

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Solutions for
an application world.