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Simplify Management in an Application-Centric World

F5® BIG-IQ® Centralized Management provides a central point of control for F5 physical and virtual devices and for the solutions that run on them. It simplifies management, helps ensure compliance, and gives you the tools you need to deliver your applications securely and effectively.

BIG-IQ manages policies, licenses, SSL certificates, images, and configurations for F5 devices and for the following F5 modules:

- BIG-IP® Local Traffic Manager™ (LTM)
- BIG-IP® Application Security Manager™ (ASM)
- BIG-IP® Advanced Firewall Manager™ (AFM)
- BIG-IP® Access Policy Manager® (APM)
- F5 Secure Web Gateway Services
- BIG-IP® DNS
- F5 WebSafe™ and F5 MobileSafe® (monitoring and updates)

BIG-IQ supports BIG-IP, the F5 VIPRION® platform, and the BIG-IP iSeries hardware platforms—as well as BIG-IP virtual editions (VEs) and the new BIG-IP Per-App VE solutions—whether they are running locally or in the cloud. BIG-IQ is ideal for organizations that require central management of F5 devices and modules, license management of BIG-IP VEs, or central reporting and alerting on application availability, performance, and security.

Application-Centric Management with F5 BIG-IP Cloud Edition

BIG-IQ is now a key component of F5 BIG-IP Cloud Edition™. This new solution provides DevOps and application teams with self-service management of F5 application services, along with per-app manageability and analytics. With BIG-IP Cloud Edition, application teams can use these self-service tools to deploy application services quickly and easily—in both private and public cloud environments. BIG-IP Cloud Edition delivers industry-leading, intelligent traffic management (BIG-IP LTM) and F5 Advanced WAF services, and includes BIG-IP Per-App VEs and BIG-IQ 6.0.

BIG-IP Cloud Edition delivers application-centric management tools that allow you to:

- Create a catalog of application templates that you can use to quickly and easily roll out new applications or replicate existing ones.
- Empower application teams with self-service capabilities through fine-grained Roles-Based Access Control (RBAC).
- Track the health, security, and performance of applications through application-specific dashboards and analytics.
- Automate application deployments with programmatic management of application services.
- Automatically scale up or scale down application services as business needs change (only in VMware vCenter with ESXi and AWS-based environments).

Manage in the Cloud

BIG-IQ saves you time and money by providing a single point of management for all your BIG-IP devices—whether they are on premises, or in a private or public cloud. BIG-IQ can manage any physical or virtual BIG-IP device so long as it can establish layer 3 connectivity for management by UI or through the APIs.

BIG-IQ supports BIG-IP products in both private and public clouds, helping you ensure consistent networking and security policies no matter where your applications reside. BIG-IQ can run on AWS and on Microsoft Azure¹ and in most private cloud architectures. Consult an F5 representative about support for Microsoft Azure, Google Cloud Platform, and other public cloud systems.

Fine-Grained Management with Roles-Based Access Control

BIG-IQ 5.4 and above supports fine-grained RBAC, allowing security and application teams to manage their own applications without depending on network administrators. Use the predefined roles found in BIG-IQ or create your own to manage who can see, edit, and deploy dashboards and policies for application delivery and security. Roles can be associated with local users and groups, or users and groups from remote RADIUS or LDAP servers.

Central Analytics, Logs, Dashboards, and Auditing

BIG-IQ is a single solution for analyzing the health, performance, and security of your F5 application services. It provides detailed analytics, logging, and auditing your F5 devices and the applications they support. Analytics are collected using BIG-IQ's Data Collection Devices. Data Collection Device licenses are available free of charge.

Dashboards can show overall analytics, or they can provide application- and role-specific views of the health and performance of your applications.

¹Auto-scaling not supported in Microsoft Azure.

Device management—key uses

- Inventory and track up to 600 devices and device health.
- Manage licensing of up to 5,000 devices.
- Back up, restore, and upgrade BIG-IP device images and configurations.
- View F5 iHealth reports for BIG-IP devices.
- Evaluate and deploy full or partial configurations on all modules except BIG-IP APM.
- Deploy, renew, or change SSL certificates. Receive timely alerts.
- Create and manage device and configuration templates.

Manage BIG-IP Devices

Use BIG-IQ to manage physical and virtual BIG-IP devices, including administration workflows such as discovery and inventory, F5 TMOS® operating system upgrades, configuration file and license management, and monitoring.

BIG-IQ offers both an innovative, workflow-based user interface for customers looking for an out-of-the-box central management solution, and a comprehensive set of RESTful APIs for those who want to integrate Application Delivery Controller (ADC) management into other network management solutions.

Device management with BIG-IQ saves time and money by simplifying the often complex task of configuring and updating ADCs. Just as important, BIG-IQ increases IT agility, allowing the network to adapt automatically by seamlessly integrating deployment, configuration, and licensing of BIG-IP VEs.

Advantages of BIG-IP device management

- Device discovery and monitoring: Discover, track, and monitor BIG-IP devices—whether physical or virtual—including key metrics such as CPU/memory, disk usage, and high availability status.
- Centralized software upgrades: Centrally manage BIG-IP upgrades (from TMOS versions 10.2.0 and above) by uploading TMOS releases into BIG-IQ and directing the upgrade process for managed BIG-IP devices from one place.
- License management: Centrally manage BIG-IP VE licenses, granting and revoking licenses as business needs change. Gain the flexibility to license devices only as needed, maximizing the return on your BIG-IP investment. Assign different license pools to different applications or tenants for more flexible provisioning. As of version 5.4, BIG-IQ supports license management in OpenStack-based environments.
- Utility and subscription license usage reporting: Enable subscription and utility licensing of BIG-IP and Per-App VE devices by generating and delivering reports of device usage over time.
- Configuration, backup, and restore: Use BIG-IQ as a central repository of BIG-IP configuration files (UCS). Back up and restore system information on demand or as a scheduled process.
- BIG-IP device cluster support: Monitor high availability (HA) and clusters for BIG-IP devices.
- Template management: Create and manage configuration and device templates.
- Password management: Update passwords on individual or groups of BIG-IP devices.
- Evaluate and deploy all or a subset of configuration changes: These include changes that have been staged, allowing for more control over what changes are deployed at what time (includes all modules except BIG-IP APM).
- SSL management: Deploy, renew, or change SSL certificates and certificate revocation lists (CRLs). Receive timely alerts before certificates expire.
- Fine-grained RBAC: Allows administrators to define roles and assign fine-grained control over configuration objects and tasks to those roles.
- Remote script management: Deploy and execute scripts on remote BIG-IP devices.

BIG-IP APM and Secure Web Gateway Services management—key uses

- Understand and control access security (VPN, SSO, federation) access policies with the Visual Policy Editor.
- Stage and push policies to selected BIG-IP APM devices.
- Achieve centralized, secure access management anytime, from anywhere.
- Ensure access policy compliance across the enterprise.
- Push out policy updates and revisions from a central location.
- Gain extensive reporting on your SSL VPN, VDI, users, web access application usage, and Secure Web Gateway Services activity.

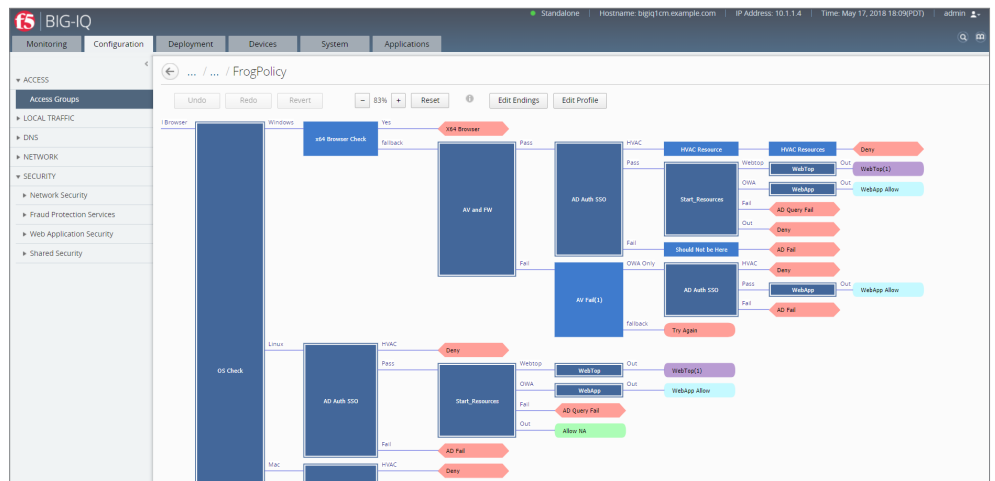
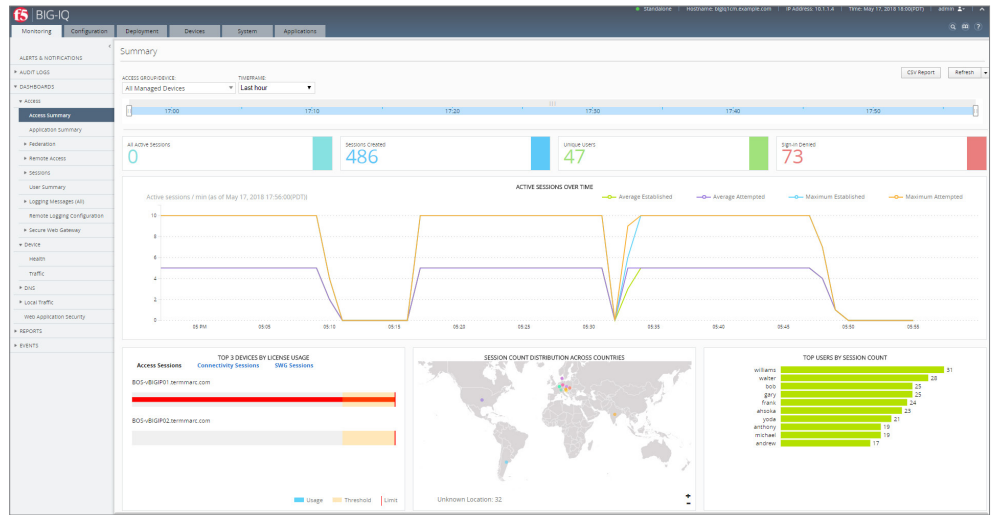
Manage BIG-IP APM and Secure Web Gateway Services

BIG-IQ offers central management of BIG-IP Access Policy Manager (APM) and F5 Secure Web Gateway Services devices. BIG-IP APM is a 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.

Some organizations face the challenge of efficiently managing multiple BIG-IP APM devices. BIG-IQ handles up to 100 BIG-IP APM and Secure Web Gateway Services appliances, enabling you to view and manage devices and policies from a “single pane of glass.”

Advantages with BIG-IP APM and Secure Web Gateway Services

- Import and edit policies. Push out policy updates and revisions from a central location.
- View and edit policies with the BIG-IP APM Visual Policy Editor (VPE).
- Configure and deploy VPN policies consistently from BIG-IQ across your geographically distributed BIG-IP APM devices.
- Edit location-specific objects (LSOs).
- Utilize web and cloud (federated) applications usage monitoring dashboards and drilldown views.
- Troubleshoot authentication failures and denied sessions using the new troubleshooting dashboards.
- Track remote access environment usage and review granular consumption details for each virtual desktop infrastructure (VDI) application (VMware and Citrix VDI).
- Search for individual users to view all activity or kill sessions directly from BIG-IQ across all BIG-IP devices.
- View reports on any combination of discovered BIG-IP devices, access groups, and clusters.
- View graphs for typical areas of concern and interest, such as logins across cross-geographical comparisons and Secure Web Gateway Services usage.



BIG-IQ provides flexible dashboards and the powerful Visual Policy Editor to help manage network access policies and events.

Security management—key uses

Web application security with BIG-IP ASM and Advanced WAF

- Ensure consistent security policies wherever applications reside.
- Share, edit, monitor, and evaluate configurations, profiles, and policies.
- Manage and distribute signatures.
- Export policies.
- Get central security reports and alerts.
- Use Central Policy Builder to create and distribute policies to BIG-IP devices (requires use of TMOS 13.1).
- Correlate security events across BIG-IP devices.
- Centrally manage Advanced WAF services.

Network security with BIG-IP AFM

- Discover and monitor devices and firewalls.
- Manage shared objects (address lists, port lists, rule lists, policies, and schedules).
- Manage L3–4 firewall policies.
- View firewall audit logs.
- Deploy configurations from snapshots and preview differences between snapshots.
- Enable multi-user editing through a locking mechanism.
- Get security reports and alerts.
- Complete IP Intelligence Services configuration management.

Manage F5 Security Solutions

BIG-IQ provides policy deployment, administration, and management organizations securing their applications and their networks with BIG-IP Application Security Manager (ASM), F5 Advanced WAF, and BIG-IP Advanced Firewall Manager (AFM).

Advantages of security administration

- Reduce operational costs and administrative time and manage security policies across multiple BIG-IP devices.
- View and compare policies and push changes to multiple security devices from a centralized location.
- Monitor the effectiveness of security policies. See which firewall policies are triggered most often and how they're affected by changes in network traffic.
- Create security reports for individual or groups of devices.
- Consolidate and centralize distributed denial-of-service (DDoS) control.
- Centrally manage security policies, logging, and alerts.
- Correlate security events across BIG-IP devices.
- View centralized web fraud protection dashboard for WebSafe and MobileSafe.

BIG-IQ utilizes roles-based access control (RBAC) to delegate operational tasks, minimizing management errors, and reduce downtime. It also helps you easily manage a reliable, effective security posture across deployments, whether your applications are hosted on premises or in the cloud. BIG-IQ simplifies the verification of existing firewall policies, the auditing of any policy changes, and the tracking of policy deployment to specific firewalls. It also consolidates L3–4 DDoS profiles, DDoS device-level configurations, profile vector enhancements, and white lists for controlling DDoS response. In addition, it centrally manages logging profiles for all objects.

Advantages of reporting

Reporting for BIG-IP AFM includes network firewall, DDoS, and F5 IP Intelligence Services reports from individual or groups of BIG-IP devices. BIG-IQ also creates firewall rule reports. Reporting for BIG-IP ASM includes:

- Applications: Get information about requests based on application services templates (F5 iApps®), virtual servers, security policies, attack types, violations, URLs, client IP addresses, IP address intelligence (reputation), client countries, severities, response codes, request types, methods, protocols, viruses detected, usernames, and session identification numbers.
- Anomalies: Access graphs, charts, and statistical information about anomaly attacks, such as brute force attacks and web scraping attacks. Use these charts to evaluate traffic to web applications and security policy vulnerabilities.
- DDoS: View charts and reports that show information about DDoS attacks and mitigations in place on the system.

BIG-IP LTM management— key uses

- See the configuration of all your BIG-IP LTM devices.
- Manage key load balancing attributes such as VIPs, pools, members, profiles, and nodes.
- Create, view, edit, and apply iRules.
- Monitor state and availability for BIG-IP LTM objects.
- Provide application owners with self-service control (enable, disable, force offline) of virtual servers and pool members.

Manage BIG-IP LTM

BIG-IQ Centralized Management increases your productivity and allows you to deliver applications more effectively. It also serves as a unified management solution for BIG-IP Local Traffic Manager (LTM) modules.

BIG-IQ handles many ADC functions including configuration management, health monitoring, certificate management, and large-scale configuration templating.

Advantages of BIG-IP LTM

- Import and view devices and their health as well as the state and availability of all BIG-IP LTM objects.
- Evaluate, stage, and deploy partial and complete configurations.
- Create a catalog of application templates to allow customers to rapidly deploy similar applications.
- Create configuration snapshots.
- Create, discover, edit, remove, and import SSL traffic certificates.
- View and alert on expiration of SSL traffic certificates.
- Create, discover, edit, remove, or clone virtual servers.
- Create, discover, edit, and remove F5 iRules® (F5's scripting language), nodes, pools, secure network address translation (SNAT) pools, and pool members.
- Copy any monitor and most profiles from a source BIG-IP LTM and deploy to other BIG-IP LTM modules managed by BIG-IQ. Evaluate, stage, and deploy partial and complete configurations.
- Get statistics monitoring for BIG-IP LTM objects (virtual server, pools, pool members, nodes, iRules).
- View and search for relationships between BIG-IP LTM objects.

DNS Management

For the first time, BIG-IQ offers BIG-IP DNS centralized management including the ability to create, retrieve, update, and delete all global server load balancing (GSLB) objects; tools to deploy and rollback GSLB policies; and the ability to manage DNS listener and profile configurations.

Advantages of DNS visibility

- View and manage configuration and policies on DNS devices.
- Add BIG-IP DNS and BIG-IP LTM devices to existing sync groups.
- Analyze F5 iQuery® connection information to help identify DNS sync-group issues.
- View high-level statistics across your DNS infrastructure showing status of DNS sync groups and devices.
- View both real-time and historical DNS statistics.

Analytics and dashboards— key uses

- Use dashboards to quickly track the health and performance of your BIG-IP devices.
- Quickly identify virtual servers or pools with performance issues.
- Track the performance of your DNS infrastructure.

Advanced Analytics and Visibility

BIG-IQ provides extensive visibility into the health and performance of your applications and the BIG-IP devices they rely on. It starts where the F5 Application Visibility and Reporting (AVR) module leaves off, collecting and aggregating statistics from your BIG-IP devices—both locally and in the cloud.

With BIG-IQ, it's easy to identify and troubleshoot application performance and delivery issues. It provides flexible dashboards showing key metrics in security, network access, and BIG-IP health and performance.

BIG-IQ collects and aggregates detailed metrics such as transactions per second, server and client latency, request and response throughput, and sessions. You can view metrics for virtual servers, pool members, and—in the case of BIG-IP APM monitoring—URLs, applications, locations, and additional statistics about application traffic running through the BIG-IP system. It also uses the data collected to produce easy-to-use dashboards and reports.



BIG-IQ Centralized Management provides flexible dashboards showing key performance metrics.

Categories of data collected for dashboards include:

- Device health and performance metrics
- Application health and performance
- Local traffic (virtual server and pool traffic as well as iRules metrics)
- DNS traffic and performance
- Security events
- Application-specific views based on RBAC

Data Collection Devices

BIG-IQ provisions Data Collection Devices to manage and store alerts or events from one or more BIG-IP systems. Speak to your F5 sales representative for more information about obtaining and provisioning Data Collection Devices. BIG-IQ Data Collection Devices are specialized builds of BIG-IQ Centralized Management and match BIG-IQ system requirements. Data Collection Devices using BIG-IQ are available free of charge, ask your F5 sales representative for details.

**BIG-IQ Centralized Management 6.0 virtual edition—
system requirements**

- Processor: 4/8 CPU cores
- Memory: 16/32 GB RAM
- Network adapters: 2-3 network interfaces
- Disk space: 250 GB hard drive

BIG-IQ Centralized Management 7000 Platform

BIG-IQ Centralized Management is available as a virtual edition or on an enterprise-grade appliance. Providing single-vendor accountability and consistent F5 hardware for managing your F5 devices in non-virtualized environments, the BIG-IQ 7000 platform provides the quality and reliability of purpose-built F5 hardware platforms.

| | |
|--|---|
| Intelligent traffic processing: | L7 requests per second: 800K L4 connections per second: 390K L4 HTTP requests per second: 3.5M Throughput: 40 Gbps/20 Gbps L4/L7 |
| Software architecture: | 64-bit TMOS |
| On-demand upgradable: | Yes |
| Processor: | 1 quad core Intel Xeon processor (total 8 processing cores) |
| Memory: | 32 GB |
| Hard drive: | Two 1 TB (RAID 1) |
| Gigabit Ethernet CU ports: | 4 |
| Gigabit fiber ports (SFP): | Optional SFP |
| 10 gigabit fiber ports (SFP+): | 8 SR or LR (sold separately, 2 SR included) |
| 40 gigabit fiber ports (QSFP+): | N/A |
| Power supply: | Two 400W included (80 Plus Gold Efficiency), DC optional |
| Typical consumption: | 205W (dual supply, 110V input) |
| Input voltage: | 90–240 VAC, 50/60hz |
| Typical heat output: | 700 BTU/hour (dual supply, 110V input) |
| Dimensions: | 3.45" (8.76 cm) H x 17.3" (43.94 cm) W x 21.4" (54.36 cm) D 2U industry standard rack-mount chassis |
| Weight: | 40 lbs. (18.14 kg) (dual power supply) |
| Operating temperature: | 32° to 104° F (0° to 40° C) |
| Operational relative humidity: | 10 to 90% @ 40° C |
| Safety agency approval: | ANSI/UL 60950-1-2011 CSA 60950-1-07, including Amendment 1:2011 Low Voltage Directive 2006/95/EC CB Scheme, EN 60950-1:2006+A11:2009+A1:2010 +A12:2011, IEC 60950-1:2005, A1:2009 |
| Certifications/susceptibility standards: | EN 300 386 V1.5.1 (2010-10); EN 55022:2010; EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-3-3:2008; EN 55024:2010; EN 55022:2010; EN 61000-3-3:2008; EN 55024:2010; USA FCC Class A |

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.

More Information

To learn more about BIG-IQ Centralized Management, visit f5.com to find these and other resources. You can also join the discussion about the management and orchestration of F5 solutions on DevCentral™.

Web pages

[BIG-IQ Centralized Management](#)

[DevCentral—BIG-IQ Centralized Management](#)

[BIG-IQ Centralized Management Wiki](#)

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