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Simplify Management in an Application-Centric World

F5® BIG-IQ® Centralized Management is F5's management and orchestration platform. It provides a central point of control for F5 physical and virtual devices and the solutions that run on them. BIG-IQ is available both as a virtual edition and running on an F5 appliance. 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 only)

BIG-IQ supports BIG-IP, VIPRION®, and the new F5 iSeries hardware platforms—as well as BIG-IP virtual editions (VEs), whether they are running locally or in the cloud.* It 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.

*BIG-IQ Centralized Management works with BIG-IP 11.5.0 HF7 and above. Support for BIG-IP modules varies depending on the BIG-IP level. See support.f5.com/csp/article/K34133507 for details.

Manage in the Cloud

BIG-IQ Centralized Management saves you time and money by providing a single point of management of 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 deployed locally can manage BIG-IP devices in public clouds such as Amazon AWS and Microsoft Azure, as well as those in private clouds. The BIG-IQ virtual edition is available in some public cloud marketplaces. Contact a F5 sales representative for details.

Gain Common Workflows and Role-Based Access Control

All BIG-IQ Centralized Management components follow a common workflow and a common interface. After BIG-IP devices or virtual editions are added to the system, a BIG-IP instance is selected as a source for configuration. Objects being edited on BIG-IQ are locked to prevent simultaneous edits by different users, and detailed change logs for each object can be viewed and evaluated prior to deployment. Deployments can then be scheduled or pushed out on demand.

Changes to your BIG-IP devices and their configurations are tracked and can be easily rolled back. To ensure rapid configuration roll-back, BIG-IQ maintains configuration snapshots, removing the need to re-edit the configuration by hand or restore from a known “good backup” file.

BIG-IQ supports role-based access control (RBAC) with well-defined roles for viewing, editing, and deploying policies and configurations. Roles can be associated with local users and groups or users and groups from remote RADIUS or LDAP servers.

Central Logging, Reporting, and Auditing

BIG-IQ Centralized Management is a single solution for logging, reporting on, and auditing your F5 devices. Logs can be collected by BIG-IQ’s Data Collection Devices (formerly called “Logging Nodes”).

Data Collection Devices collect statistics and/or events from BIG-IP devices, and create dashboards and reports to track the health of your application services. Speak to your F5 sales representative for details.

Device management—key uses

- Inventory and track devices and device health.
- Manage licensing of up to 5,000 devices.
- Back up, restore, and upgrade BIG-IP device images and configurations.
- View 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 before certificates expire.

Manage BIG-IP Devices

Use BIG-IQ Centralized Management 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 local or in the cloud—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 Centralized Management and directing the upgrade process for managed BIG-IP devices from one place.
- Run and view upgrade advisor reports before upgrading BIG-IP devices.
- Run pre-and post-upgrade checks on BIG-IP devices to identify upgrade issues.
- 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.
- Manage and license cloud-based BIG-IP devices from a local or cloud-based BIG-IQ product.
- Automate licensing with API integration with IT orchestration tools such as Ansible.
- Utility license usage reporting: Enable utility licensing of BIG-IP devices by generating and delivering reports of device use over time.
- Configuration, backup, and restore: Use BIG-IQ as a central repository of BIG-IP configuration files (UCS). Backup 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.
- BIG-IP iHealth® integration: View and search through individual or aggregated iHealth reports from your BIG-IP devices.
- Get an enterprise-wide view of the heuristics impact on devices, the ability to see all devices that have raised a particular alert, and the ability to categorize the alerts based on the analysis for their environment.
- 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 (new function): Deploy, renew, or change SSL certificates. Receive timely alerts before certificates expire.

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.

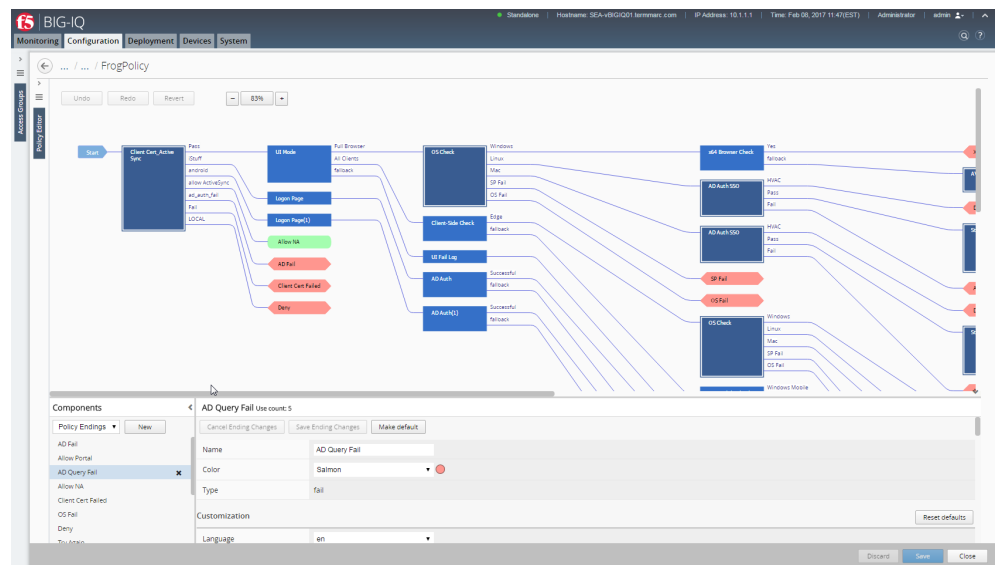
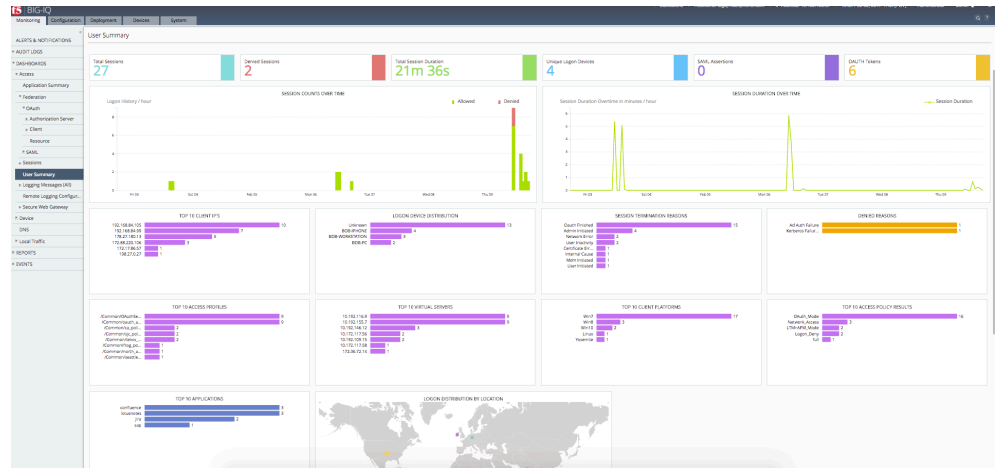
Manage BIG-IP APM and Secure Web Gateway Services

BIG-IQ Centralized Management offers central management of BIG-IP Access Policy Manager 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).
- Edit location-specific objects (LSOs).
- Utilize web and cloud (federated) applications usage monitoring dashboards and drill-down views.
- Troubleshoot authentication failures and denied sessions using the new troubleshooting dashboards.
- Track remote access (VMware and Citrix VDI) environment usage and review granular consumption details for each VDI application.
- 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

- 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.

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.

Manage F5 Security Solutions

BIG-IQ Centralized Management provides policy deployment, administration, and management for mid-sized and large organizations securing their applications and their networks with BIG-IP Application Security Manager and BIG-IP Advanced Firewall Manager. It offers a single-pane-of-glass view into security policies across up to 200 BIG-IP instances.

Advantages of security administration

- Reduces operational costs and administrative time and allows you to manage security policies across multiple BIG-IP devices.
- Enables you to view and compare policies and push changes to multiple security devices from a centralized location.
- Allows you to monitor the effectiveness of security policies. See which firewall policies are triggered the most and how they're affected by changes in network traffic.
- Creates security reports for individual or groups of devices.
- Consolidates and centralizes DDoS control.
- Provides a centralized web fraud protection dashboard for WebSafe and MobileSafe.

BIG-IQ utilizes RBAC to delegate operational tasks, minimizing management errors and 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 manages logging profiles centrally for all objects.

Advantages of reporting

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

Reporting for BIG-IP ASM includes:

- **Application:** 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.

BIG-IP DNS visibility—key uses

- Track and manage devices running BIG-IP DNS.
- Back up and restore devices.
- Troubleshoot DNS sync group health.
- View DNS statistics and status.
- Centrally configure BIG-IP DNS security services.

Manage BIG-IP LTM

BIG-IP 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 modules.

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

Advantages with 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 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, SNAT pools, and pool members.
- Create, discover, edit, and remove key BIG-IP LTM profiles including Server SSL, Client SSL, Universal Persistence, Cookie Persistence, Source address affinity, and HTTP. Provide name-based association for all other profiles on the target device.
- Create, discover, edit, and remove BIG-IP LTM monitors including HTTP and HTTPS. Provide name-based association for all other monitor types on the target device.
- 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 Visibility

BIG-IP Centralized Management offers BIG-IP DNS sync group support. Using the tools available on the BIG-IP user interface, it can be difficult to determine the health of your DNS sync groups. When you use BIG-IP to manage your DNS sync groups, the task becomes quite straightforward. Conduct a quick health check and diagnose health issues. You can also set up an alert to notify you if a sync group health issue occurs, if certificates are out of date, or if services are not running.

Advantages of DNS visibility

- 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.

Statistics 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.

Statistics and Visibility with BIG-IQ Centralized Management

BIG-IQ Centralized Management provides extensive visibility into the health and performance of your BIG-IP devices. It starts where F5's Application Visibility and Reporting (AVR) 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.

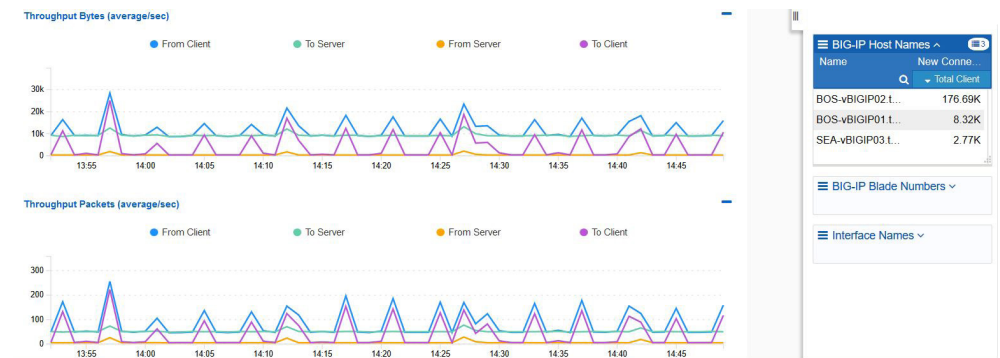
BIG-IQ collects and aggregates detailed metrics such as transactions per second, server and client latency, request and response throughput, and sessions. You can view metrics for virtual servers, pool members—and in the case of BIG-IP APM monitoring—URLs, applications, locations, and additional statistics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

Categories of data collected for dashboards include:

- Device health and performance metrics
- Local traffic (virtual server and pool traffic as well as iRules metrics)
- DNS traffic and performance

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 Centralized Management provides flexible dashboards showing key performance metrics.

BIG-IQ Centralized Management 7000 Platform

The BIG-IQ 7000 platform provides central management with 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:	4.45" (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

BIG-IQ Virtual Edition System Requirements

Processor:	4–8 CPU cores
Memory:	8–64 GB RAM
Network adapters:	2–3 network interfaces
Disk space:	90–500 GB hard drive

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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