



# BIG-IQ CENTRALIZED MANAGEMENT

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## SIMPLIFY MANAGEMENT IN AN APP-CENTRIC WORLD

F5® BIG-IQ® Centralized Management provides a unified point of control for your entire F5 portfolio, ensuring your finger remains on the pulse of F5 devices, modules, and licenses—helping you deliver optimal application availability, performance, and security.

BIG-IQ supports F5 BIG-IP® end-to-end, including: BIG-IP Virtual Editions (VEs), BIG-IP Per-App VEs, BIG-IP iSeries® appliances, and the F5 VIPRION® platform.

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

- [BIG-IP Local Traffic Manager™ \(LTM\)](#)
- [BIG-IP Application Security Manager™ \(ASM\)](#)
- [BIG-IP Advanced Firewall Manager™ \(AFM\)](#)
- [F5 SSL Orchestrator®](#)
- [F5 DDoS Hybrid Defender®](#)
- [BIG-IP Access Policy Manager® \(APM\)](#)
- [F5 Secure Web Gateway Services](#)
- [BIG-IP DNS](#)
- [F5 WebSafe™](#) and [F5 MobileSafe®](#)

# FEATURES OF BIG-IQ

## CLOUD-BASED MANAGEMENT

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

You can run BIG-IQ on AWS and Microsoft Azure, as well as in most private cloud architectures. [Consult an F5 representative](#) about support for Google Cloud Platform and other public cloud environments.

To further simplify and clarify app management, BIG-IQ represents multiple application services that support an app as a single entity. By combining services into a single application, you can visualize and manage the aggregation of these services to get a full view across multiple environments, tiers, or geographies. Additionally, you can still drill down to view the individual services for more specific insights into performance and analytics.

BIG-IQ supports the creation, visibility, and management of applications deployed across multiple devices, clouds, and data centers. This allows for enhanced management capabilities of all DNS, TCP, and HTTP instances of an application deployment, including those configured with the Application Services 3 Extension (AS3). The system administrator can specify user access and management permissions to these application deployments.

BIG-IQ also helps you align to cloud consumption models through its ability to intelligently autoscale BIG-IP application services. BIG-IQ users can leverage advanced analytics and insights to configure their autoscale policies to automatically spin up or spin down VMware, AWS, and Azure-based BIG-IP instances. You can configure BIG-IQ autoscaling for several threshold trigger metrics, including CPU utilization and throughput.

## ROLE-BASED ACCESS CONTROL

Operating at the speed of innovation requires every person within an organization to do their job and do it effectively. That's why role-based access control (RBAC) is so critical, not only for security purposes, but for getting things done efficiently on a day-to-day basis. BIG-IQ 5.4 and above supports fine-grained, highly customizable RBAC, enabling security and application teams to manage their own applications without having to depend on network administrators. Use the predefined roles/permissions configurations in BIG-IQ—or create your own—to manage who can see application dashboards, and edit and deploy services 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.

## CENTRALIZED ANALYTICS LOGS, DASHBOARDS, AND AUDITING

BIG-IQ is a single, end-to-end solution for analyzing the health, performance, and availability of your F5 application delivery and security portfolio in any environment. It provides detailed analytics, logging, and auditing across devices, services, and the applications they support—making it easy to ensure consistency across hybrid and multi-cloud deployments and simplify the troubleshooting process if something goes wrong. This holistic view is powered by deep, application-centric analytics. Analytics are collected using BIG-IQ's Data Collection Devices. Data Collection Device licenses are available free of charge. Once health and performance metrics are captured via Data Collection Device, they are displayed on BIG-IQ's highly customizable dashboards that can:

- Show a high-level, “at-a-glance” status and analytics
- Provide deep application- and role-specific views of app health and performance
- Offer insights into security status, server side round trip time, specific browser performance, and many other helpful metrics
- Extend visibility, analytics, and basic configuration controls to legacy app services (those deployed without a template or using BIG-IQ)

## INTEGRATIONS

### Automation

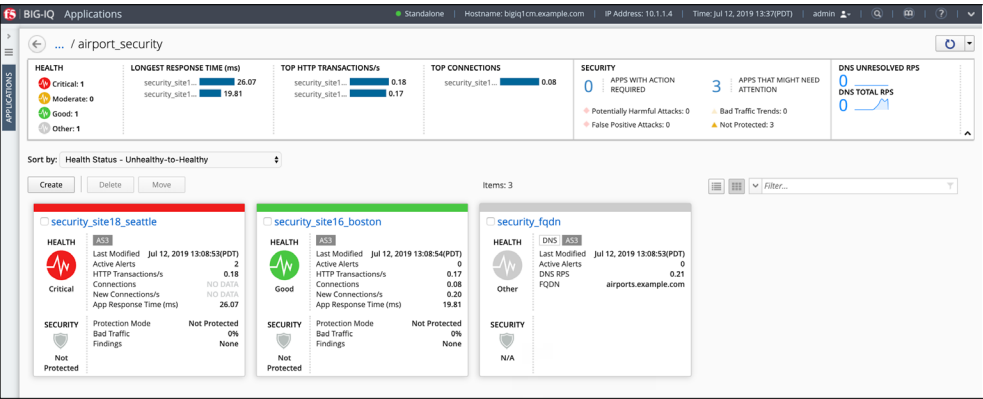
Manage your applications with the Application Services 3 Extension (AS3)—part of the [F5 Automation Toolchain](#)—and BIG-IQ. AS3 and BIG-IQ make it fast and easy to create, configure, and deploy consistent BIG-IP application services and policies.

Through this integration, you can leverage a declarative model—just input the “what” or end state instead of the “how”—to create, import, and edit AS3 templates to use when deploying application services. Using BIG-IQ with AS3's declarative API and templated approach supports standardized, automated declarative app services and security policies, which enables you to accelerate application deployment, ensure consistency, and increase deployment flexibility—all without needing advanced domain expertise.

AS3 declarations can be reused for many services deployments, guaranteeing repeatability and minimizing manual repetition. NetOps teams can use AS3 in BIG-IQ, leveraging an intuitive GUI, while development teams can continue to use the API that they know and love. The BIG-IQ and AS3 integration makes it easier than ever to automate and centrally manage advanced application services as part of the F5 Automation Toolchain.

**Figure 1:** AS3-built app services are denoted in the app-card view. You can use the app-card view for quick insight into overall health of apps and the services that support them.

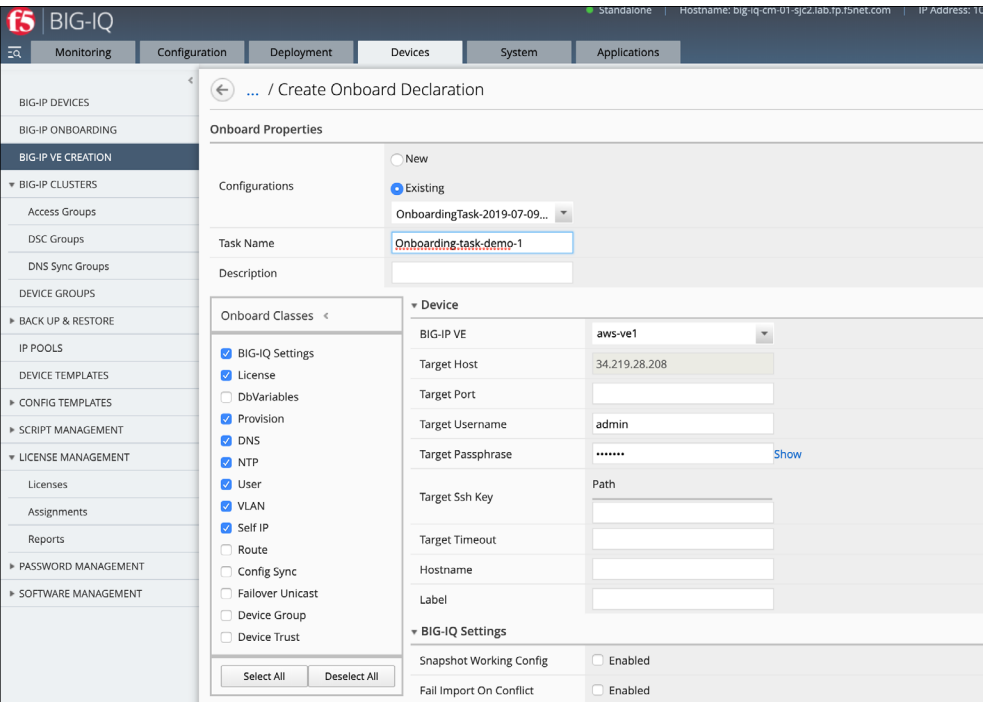
F5 maintains an [AS3 template library](#) for BIG-IQ where you can find templates that you can either use as-is or customize for your deployment environment. The templates can be downloaded directly to your BIG-IQ system. Once downloaded, you can use them just like you would any other AS3 application template. AS3 templates work on the BIG-IQ in much the same way as they do on BIG-IP. For more detail on AS3 and how it works, go to [Using AS3 with BIG-IQ](#).



## Key management

Managing [Venafi](#) and [Let's Encrypt](#) certificate requests through BIG-IQ automates traditionally laborious processes and reduces the amount of time you spend managing certificates and keys for your managed devices. From BIG-IQ, you have a centralized view into the key and certificate lifecycle for your BIG-IP devices across environments.

**Figure 2:** BIG-IQ's integration with Declarative Onboarding helps automate the provisioning and configuration of BIG-IP Devices.



DEVICE MANAGEMENT  
CAPABILITIES

- Discover and monitor all devices.
- Create VE devices directly within BIG-IQ.
- Simplify configuration of BIG-IP VEs with Declarative Onboarding.
- Push centralized software updates.
- Manage licenses, templates, configuration changes, SSL, passwords, and remote scripts.
- Easily configure, backup, and restore devices.
- Intelligently autoscale your BIG-IP VE instances based on advanced analytics.
- Get support for BIG-IP device clusters.
- View reports on utility and subscription license usage.
- Deploy BIG-IQ in High Availability configuration with automatic failover.

Figures 3: BIG-IQ provides flexible dashboards to help manage network access policies and events.

KEY USE CASES

DEVICE MANAGEMENT

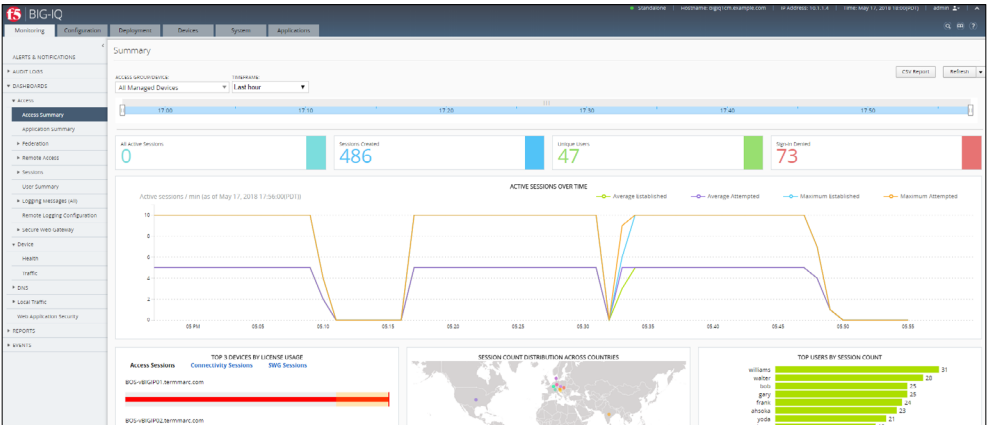
BIG-IQ allows you to inventory and track up to 1,200 managed devices as well as manage the licensing of up to 5,000 devices. Manage devices using an innovative, workflow-based user interface. This is an ideal solution for organizations looking for a comprehensive set of RESTful APIs to integrate the management of an Application Delivery Controller (ADC) into other network management solutions. Save time and money by simplifying the often-complex task of configuring, provisioning, and updating ADCs.

Just as important, BIG-IQ increases IT agility, allowing the network to adapt automatically by seamlessly integrating the creation, deployment, configuration, and licensing of BIG-IP VEs using Declarative Onboarding—part of the F5 Automation Toolchain.

BIG-IQ’s integration with Declarative Onboarding offloads much of the complexity and management overhead associated with configuring BIG-IP VEs—all without the need for deep BIG-IP domain expertise. Declarative Onboarding—like AS3—leverages a robust, reusable set of declarative REST APIs. This declarative model means that users only need to input the desired end state or “what” for BIG-IP VEs, while Declarative Onboarding figures out the “how.”

Version 7.0 and above takes management of BIG-IP devices, services, and security a step further by ensuring “always on” visibility and control with the ability to deploy BIG-IQ in a high availability (HA) configuration with automatic failover.

Using an **active** BIG-IQ, an identically-configured **standby** BIG-IQ, and a “Quorum” Data Collection Device (the deciding vote for designating the active BIG-IQ), the HA configuration of BIG-IQ ensures that you can continue managing BIG-IP devices if your active BIG-IQ loses connection or functionality—without any user intervention. More information on this feature is available on the [F5 Knowledge Center](#).



## ACCESS SECURITY CAPABILITIES

- Enable, manage, and deploy threat campaign mitigation over managed BIG-IP devices (version 14.1 or later) running F5 Advanced Web Application Firewall™.
- Import, view, edit, configure, and deploy security policies from a centralized location.
- Review granular consumption details for each VDI application.
- Search for individual users to view activity or kill sessions.

## REPORTING CAPABILITIES

- View reports on any combination of discovered BIG-IP devices, access groups, and clusters.
- View detailed logs of all Bot requests to managed devices.
- Share, edit, monitor, and evaluate configurations, profiles, and policies.

## SECURITY ADMINISTRATION CAPABILITIES

- Monitor the effectiveness of security policies.
- View and compare policies.
- Manage Unified Bot Defense (BIG-IP version 14.1) with real-time visibility.
- Securely manage shared objects (address lists, port lists, rule lists, policies, and schedules).

## SECURITY AND ACCESS MANAGEMENT

BIG-IQ provides policy deployment, access, and administration management for organizations securing their applications and their networks with BIG-IP ASM, F5 Advanced WAF, F5 SSL Orchestrator, BIG-IP APM, F5 Secure Web Gateway, and BIG-IP AFM.

### Access

BIG-IQ utilizes RBAC to delegate operational tasks, minimize 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. With BIG-IQ, you can manage and monitor up to 100 BIG-IP APM and Secure Web Gateway appliances.

The Visual Policy Editor helps you understand and control access security (e.g., VPN, SSO, federation) policies. Plus, you gain extensive reporting capabilities on your SSL VPN, VDI, users, web access application usage, and Secure Web Gateway activity and ensure policy compliance across your IT landscape.

### Reporting

Get comprehensive security reporting and alerts for BIG-IP AFM including reports for network firewalls, DDoS, and F5 IP Intelligence Services reports from your BIG-IP devices. BIG-IQ also creates firewall rule reports. Reporting for BIG-IP ASM includes application, anomaly, DDoS, and bot reports.

### Security administration

BIG-IQ simplifies verification of existing firewall policies, auditing of policy changes, and tracking policy deployments to specific firewalls and enables you to centrally manage Advanced WAF services. It consolidates L3–4 DDoS profiles, DDoS device-level configurations, profile vector enhancements, and whitelists for controlling DDoS response.

ORCHESTRATION CAPABILITIES

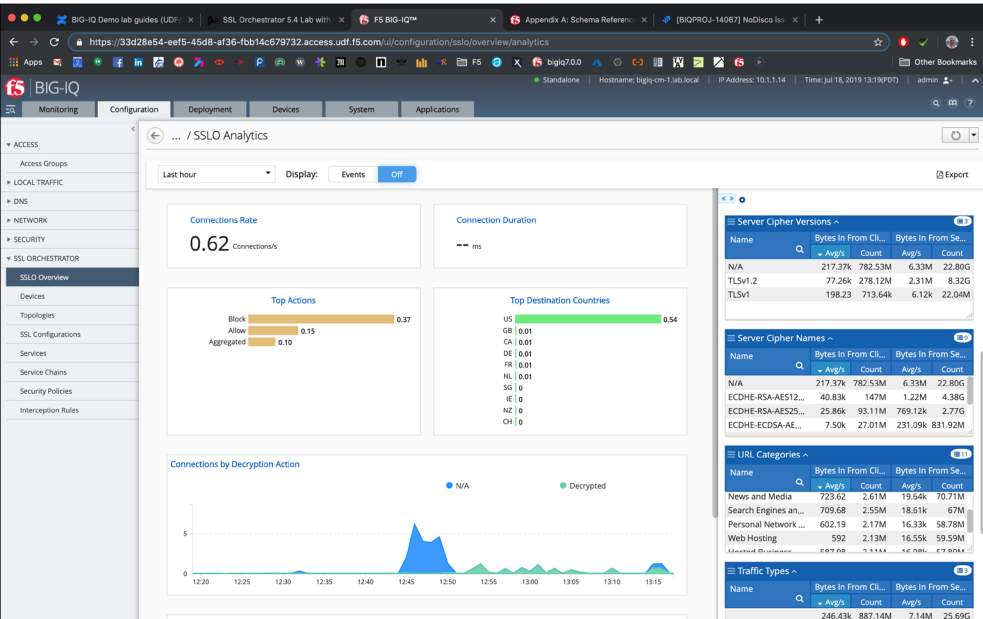
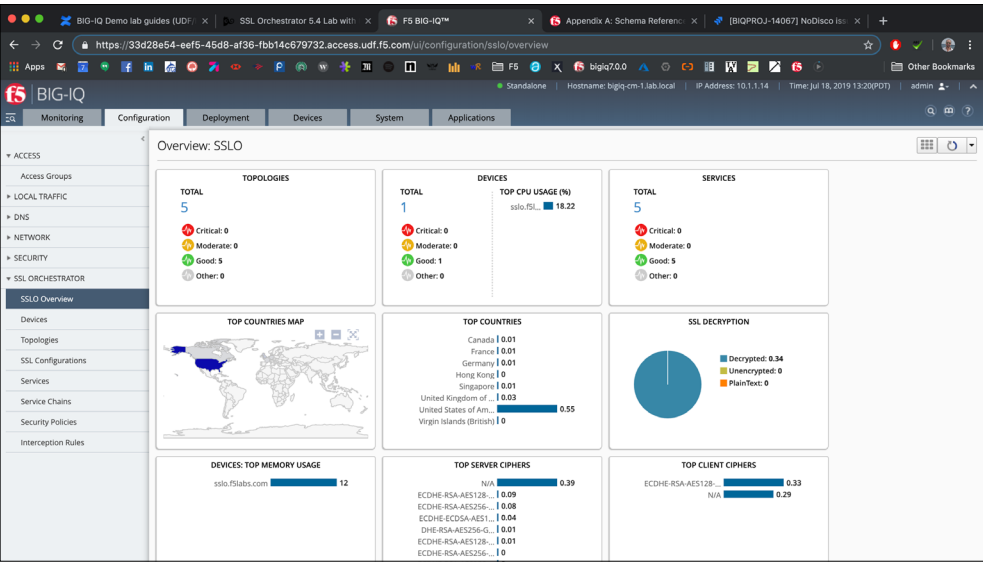
- Simply and quickly create service chains of security inspection services from a pre-built catalog of partners such as Cisco, Symantec, and others.
- Centrally manage topologies and configurations (e.g., services, service chains, policies, and interception rules) for multiple inspection devices and tools.
- Manage classification metrics (e.g., domain name, IP reputation, and others) to configure dynamic service chains.

Figures 4 and 5: BIG-IQ provides both an at-a-glance and a comprehensive view of SSL traffic, topologies, devices, services, and key metrics with analytics.

SSL ORCHESTRATION

With BIG-IQ, you can orchestrate SSL/TLS traffic at scale by centralizing traffic decryption and re-encryption, and intelligently steering traffic to appropriate, dynamic security service chains, allowing for independent service management and monitoring via a dedicated SSL Orchestrator dashboard. This greater visibility provides you with critical management insights into the traffic and health of configured SSL Orchestrator processes and host devices.

Simplify troubleshooting by leveraging insights into traffic decryption, SSL Orchestrator services, and the health of managed SSL Orchestrator processes and host devices.



BIG-IP LTM AND DNS MANAGEMENT CAPABILITIES

- Quickly see the configuration and performance of your DNS infrastructure and BIG-IP LTM devices.
- Create a catalog of app templates to allow customers to rapidly deploy similar applications.
- Manage key load balancing attributes such as VIPs, pools, members, profiles, and nodes.
- Create, discover, edit, and remove F5 iRules®, 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 other BIG-IP LTM modules.

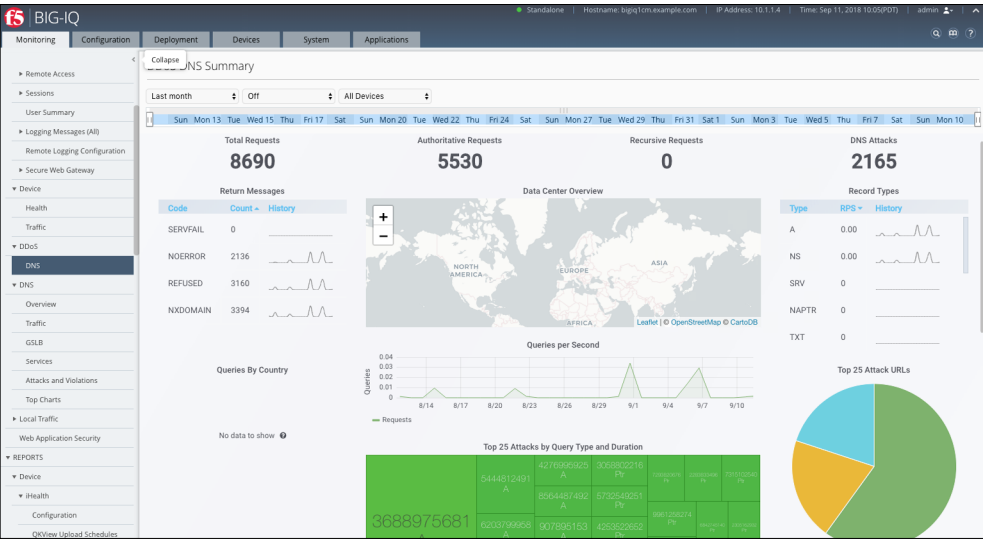
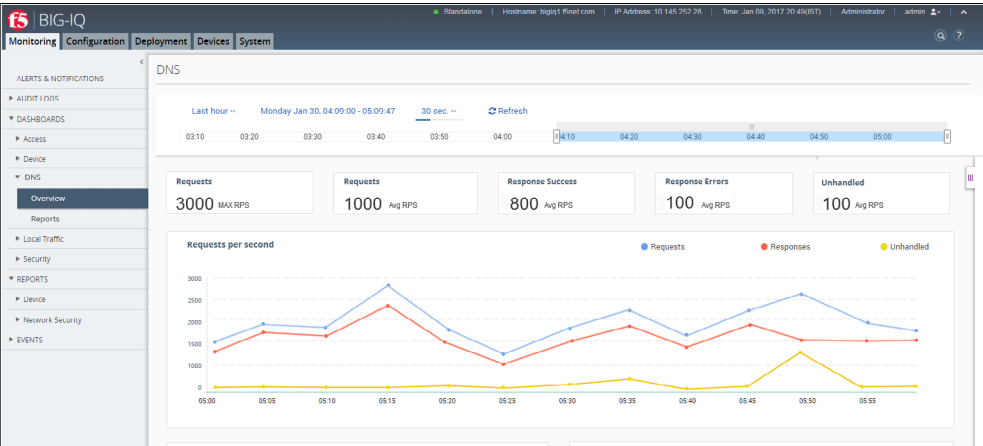
Figures 6 and 7: BIG-IQ provides a comprehensive overview of DNS traffic, services, errors, attacks, and GSLB metrics.

BIG-IP LTM AND BIG-IP DNS MANAGEMENT

BIG-IQ Centralized Management increases productivity and allows you to deliver applications more effectively. It also serves as a unified management solution for BIG-IP LTM modules, giving you greater visibility into network traffic. Gain real-time analytics and an in-depth look at network availability from one centralized dashboard.

BIG-IQ handles many ADC functions including configuration management, health monitoring, certificate management, and large-scale configuration templating. With this solution, you provide application owners with self-service control (i.e., enable, disable, or force offline) of virtual servers and pool members.

By using BIG-IQ to manage BIG-IP DNS, you can create, retrieve, update, and delete all global server load balancing (GSLB) objects; obtain tools to deploy and rollback GSLB policies; and gain the ability to manage DNS listener and profile configurations. BIG-IQ can help you manage query responses with scalability and detect when DNS servers aren't performing optimally.



ANALYTICS AND VISIBILITY  
CAPABILITIES

- Collect and aggregate detailed metrics such as transactions per second, server and client latency, request and response throughput, and sessions.
- Leverage flexible dashboards to troubleshoot faster and more efficiently.

Figure 8: BIG-IQ Centralized Management provides flexible dashboards showing at-a-glance health and performance metrics on a per-application basis.

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.

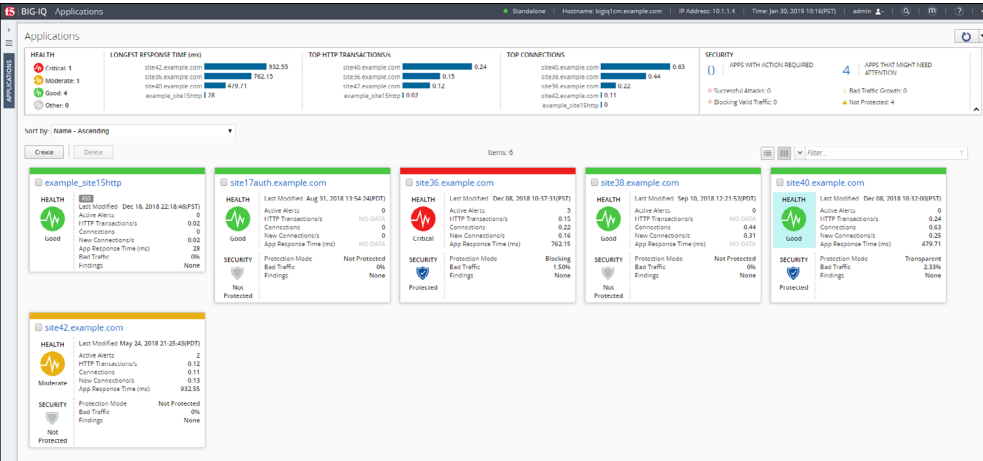
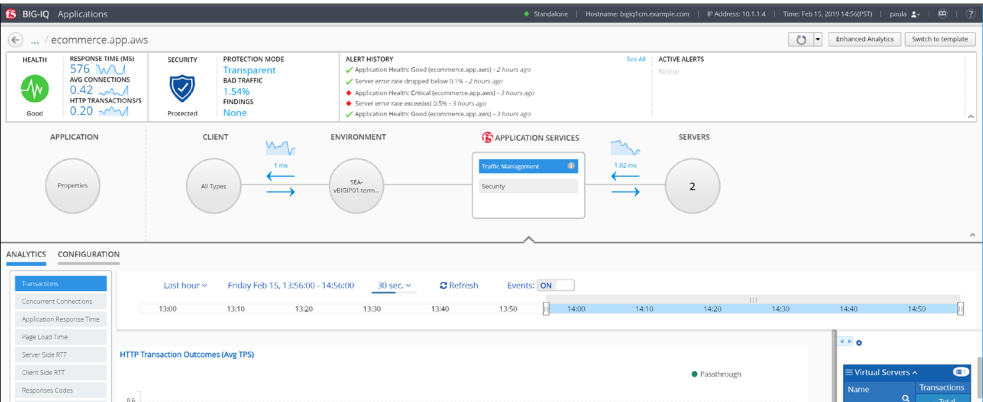


Figure 9: Detailed views for specific applications give you access to advanced analytics, alerts, and other pertinent metrics on app health, security, and performance.



## SYSTEM REQUIREMENTS

- Processor: 4/8 CPU cores
- Memory: 16/32 GB RAM
- Network adaptors: 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/20Gbps 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 S or LR (sold separately, 2 SR included)
40 gigabit fiber ports (QSFP+)	N/A
Power supply	Two 400 W 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°–104° F (0°–40° C)
Operational relative humidity	10–90% at 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
Certification/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](mailto:consulting@f5.com) or visit [f5.com/support](https://f5.com/support).

## MORE INFORMATION

To learn more about BIG-IQ Centralized Management, visit [f5.com](https://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 Knowledge Center](#)

