



F5 BIG-IP Next Local Traffic Manager

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Next-Generation Application Delivery Software

Applications drive innovation and profitability, playing a vital role in modern business functions. Application portfolios, the environments they're deployed in, and the tools and processes surrounding them are also evolving at an unprecedented pace, becoming increasingly complex, multi-faceted, and autonomous in nature. These portfolios are also more frequently distributed across core, cloud, and edge locations to minimize latency and improve user experience. This distributed nature brings greater operational complexity and security risk. Organizations depend on application delivery services and network infrastructure running at peak performance with app-centric security to meet current and future challenges.

F5® BIG-IP® Next™ Local Traffic Manager™ (LTM) is the next generation of BIG-IP software, built to offer greater automation opportunities, customization, scalability, and ease-of-use for organizations running applications on-premises, in the cloud, or at the edge. Built for these distributed app portfolios, BIG-IP Next LTM provides the application delivery and security needed to ensure the availability and performance of applications running in any environment.

The Next Generation of BIG-IP Software

KEY BENEFITS

Scale applications rapidly and reliably to optimize for today's demands, ensuring that your users have access to the applications they need.

Customize app services with iRules to control applications—from connection types to traffic management—and adapt to application delivery challenges.

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Automate app deployment and management using F5 automation services native to BIG-IP Next LTM for a declarative approach to efficiently implement, configure, and manage per-app and platform configurations. User-defined templates make it easy to create a service catalog for apps based on their environment.

Upgrade software with little to no app downtime and enable faster deployment of major software upgrades, as well as low-impact control plane updates, reducing maintenance windows and lowering management overhead.

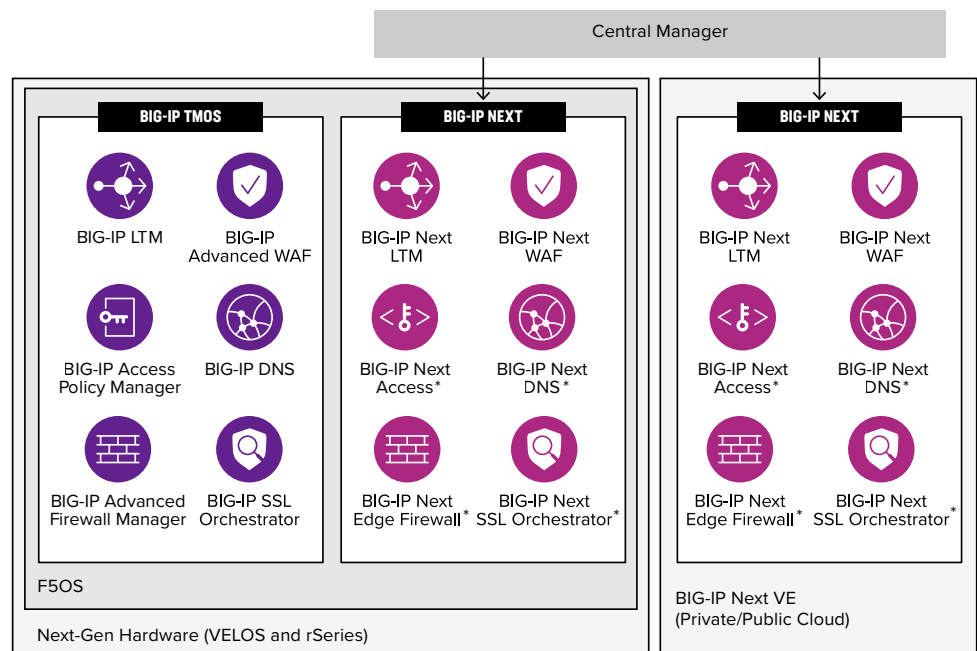
Gain insights with in-depth metrics into network and app traffic and system health for supportability and to reduce time-to-resolution with rapid root cause analysis.

Rearchitected for the Future

Powerful, declarative APIs form the foundation of BIG-IP Next LTM's API-centric design, reducing the complexity that DevOps, NetOps, SecOps, and other BIG-IP-reliant teams encounter when managing and automating app delivery and security deployments. BIG-IP Next LTM is available across a myriad of deployment and consumption models and can run alongside BIG-IP TMOS as tenants on next-gen F5 platforms for seamless app services migration. It can be deployed in public or private clouds as a Virtual Edition (VE) and on VELOS and select rSeries systems. BIG-IP Next Central Manager, the native, default UI for BIG-IP Next, can manage instances of BIG-IP Next across platforms.

Figure 1: F5 BIG-IP and BIG-IP Next software both run on next-gen F5 platforms for seamless app services deployment. BIG-IP TMOS solutions are available as **Virtual Editions**.

*BIG-IP Next Access, DNS, Edge Firewall, SSL Orchestrator, Policy Enforcer, and CGNAT will also be available on F5's next-gen hardware (rSeries and VELOS) in future BIG-IP Next releases.



BIG-IP Next LTM's redesigned software layer is rearchitected for the future, leveraging a modern framework at its core to offer rapid instance upgrades for the latest security and application delivery updates as well as greater performance, automation of app services, scalability, and ease-of-use for organizations running applications on premises, in the cloud, or at the edge.

CONTROL TRAFFIC AND GAIN APPLICATION INTELLIGENCE

Application Traffic Management

BIG-IP Next LTM intelligently balances app traffic, eliminating single points of failure while monitoring the status and availability of app servers in a group, ensuring that applications are always on and running at peak performance under heavy loads.

Application Delivery Optimization

BIG-IP Next LTM improves app load times and user experience with connection optimization and management, HTTP compression, RAM Cache performance, and F5 OneConnect™. It also makes real-time protocol and traffic-management decisions based on application and server conditions, and enables rule customization and programmability, as well as TCP and content offloading.

Application Visibility and Monitoring

BIG-IP Next LTM supports active and passive monitoring so teams can understand how an application is performing for users based on application response times, network conditions, and user context. Active monitors check the status of the endpoints at regular intervals while passive monitors check the health of the endpoints based on a specified number of connection attempts or data request attempts that occur within a specified period.

SECURE APPLICATION DELIVERY WITH INDUSTRY-LEADING TLS PERFORMANCE AND ATTACK MITIGATION

BIG-IP Next LTM delivers best-in-class TLS performance and visibility for inbound and outbound traffic, protecting users by encrypting everything from client to server. Maximize defense-in-depth security with dynamic, policy-driven decryption and traffic steering through a security-inspection service chain. Decrypt, optimize, and re-encrypt TLS traffic with cutting-edge protocol and cipher support, without compromising the security of the TLS connection.

BIG-IP Next LTM also defends against DDoS attacks and provides Internet Content Adaptation Protocol (ICAP) services for integration with virus and data loss protection (DLP).

CUSTOMIZE APPLICATION DELIVERY SERVICES WITH EXTENSIVE PROGRAMMABILITY

Local Traffic Policies

BIG-IP Next LTM local traffic policies are a structured, data-driven collection of rules created by populating tables in a web UI. These policies allow inspection, analysis, modification, routing, redirecting, discarding, or manipulation of traffic, and solve common use cases previously covered by individual iRules. For example, create a policy that determines whether a client is using a mobile device, and then redirect requests from mobile devices to the applicable mobile website URL.

iRules

The F5 iRules® scripting language—F5’s traffic scripting interface—enables programmatic analysis, manipulation, and detection of all aspects of the traffic in a network. Customers routinely implement security mitigation rules, support new protocols, and fix application related errors in real time. iRules enables easy and rapid development and deployment solutions across multiple applications.

FAST

BIG-IP Next LTM simplifies app deployment through F5 Application Services Templates (FAST) that are reusable and afford comprehensive instance control. These templates enable teams to simplify and standardize the deployment, management, and analysis of enterprise application services rather than individually managing configurations and objects. This enables completely autonomous deployments with the added benefit of providing a better security posture by default. FAST also provides greater visibility into and control over app delivery while drastically reducing app deployment time. This app-centric approach aligns the network with applications and adapts application delivery to business needs.

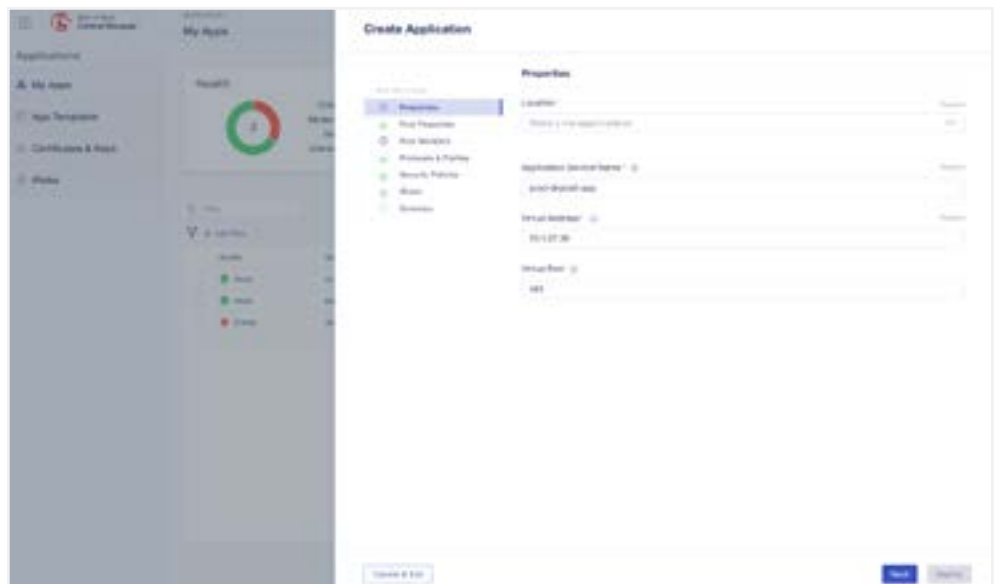


Figure 2: Easily edit and save FAST templates from load balancing and HTTP to SNAT, WAF, and SSL for quick deployment.

VERSIONING FOR AN APPLICATION'S MOST CRITICAL COMPONENTS

BIG-IP Next LTM allows users to optimize their apps more extensively and with greater granularity than ever before. For example, you can reduce the risk of a scripting mistake causing broad negative consequences with BIG-IP Next LTM's new versioning capability. Teams can more precisely identify the apps to which an iRule is attached and won't be able to change an iRule on an application that is already in production.

This versioning capability applies broadly to the configuration items found in BIG-IP Next LTM. In this way, users will be able to:

- Create a configuration item like a template or iRule to configure, deploy, or manage an application within their network.
- Save an instance of a configuration item as a known-good version, allowing other team members to iterate further from a proven starting point.
- Reduce blast radius by staging the rollout of an updated configuration item based on variables like its environment or location.
- Gain more control over how configuration changes are applied to applications.
- Revert to a known-good version of a given configuration item.
- Roll back faulty versions or versions that need to be updated in isolation.
- Observe differences between versions of apps and configuration items to determine most viable solutions.
- Utilize version history to see development through iteration cycles.

All of these functions empower teams to manage their apps with more visibility, control, and precision.

STREAMLINE OPERATIONS AND AUTOMATION

Teams can integrate app services deployments as part of their CI/CD pipelines with leading automation and orchestration tools and process tasks concurrently from multiple orchestrators with multi-threading.

F5 automation services allow automatic management of network and application services such as traffic management and application security through the F5® BIG-IP® Next™ Central Manager interface. Automation is inherent in BIG-IP Next LTM with device on-boarding enabling initial provisioning of F5 platforms, as well as configuration of layer 2–3 objects such as DNS servers, hostnames, and VLANs. You can also automate layer 4-7 application services with F5 BIG-IP Application Services 3 Extension (AS3) using declarative APIs.

AS3's automated declarations reduce configuration time from weeks or months to minutes, reducing time to market.

STREAM TELEMETRY TO THE INDUSTRY'S MOST POPULAR CONSUMERS

BIG-IP Next LTM allows streaming telemetry data that aggregates, normalizes, and forwards statistics and events to popular third-party analytics and applications. Observability is enabled by default within BIG-IP Next Central Manager for all BIG-IP Next instances within an environment. Additionally, logs and telemetry data can be sent to the industry's key monitoring, observability, and analytics services for long term storage and data compliance purposes.

IMPLEMENT FLEXIBLE PLATFORMS AND MANAGEMENT

F5's next-generation, API-centric Application Delivery Controller (ADC) platform provides agility with the scale, depth of security, and investment protection needed for both established and emerging apps.

The F5 VELOS platform is the next generation of F5's industry-leading chassis-based systems, offering unprecedented performance and scalability within a single ADC. Seamlessly scale capacity by adding modular blades in a chassis, without disruption, and mix traditional BIG-IP tenants as well as next-generation BIG-IP tenants in the future. With BIG-IP Next LTM on next-gen platforms, customers can achieve a higher ROI as system resources are allocated more effectively.

BIG-IP Next is available on next-gen F5 platforms, including:

- **F5 VELOS:** Powerful next-generation chassis system. Learn more in the [VELOS data sheet](#).
- **F5 rSeries:*** API-centric appliance for traditional and emerging apps. Learn more in the [rSeries data sheet](#).
- **BIG-IP Virtual Edition:** Cloud optimized instance for public or private cloud. Learn more in the [BIG-IP Virtual Edition \(VE\) data sheet](#).
- **BIG-IP Next Cloud-Native Network Functions (CNF):** Network functions for service providers implemented as containers and orchestrated by Kubernetes.

*BIG-IP Next LTM is available on select rSeries appliances at launch.

INTELLIGENTLY SCALE YOUR INFRASTRUCTURE

BIG-IP Next LTM is designed with independent control and data planes. This way, the data plane operates uninterrupted, improving overall app performance. This makes it easy to realize operational consistency and comply with business needs across environments, removing the friction of migrating applications between legacy architectures and next-gen platforms.

To further enhance scalability, the VELOS next-gen chassis, rSeries appliance, and Virtual Edition software support multi-tenancy, enabling robust deployment and scaling of app services. This functionality also empowers the F5 platforms to host flexible, multi-tenant options across system resources and enables even more tenant density than was previously achievable in BIG-IP TMOS LTM.

GAIN CONTROL AND VISIBILITY WITH BIG-IP NEXT CENTRAL MANAGER, BIG-IP NEXT'S NATIVE CONTROL INTERFACE

Designed to simplify management, monitoring, and visualization of a BIG-IP Next infrastructure through an intuitive interface, BIG-IP Next Central Manager reduces the time and complexity needed to perform critical tasks and workloads. BIG-IP Next Central Manager is the single source of truth for managing workflows, ensuring consistency, and enforcing compliance.

Key functionality includes:

- Full instance lifecycle management
- Security enforcement policy and compliance management
- GUI- and API-driven service provisioning and troubleshooting
- Detailed visibility and analytics
- Automation leveraging BIG-IP AS3 and FAST

Leverage in-depth monitoring and metrics to gauge app health and gain fast visibility into the network and security posture. Quickly scan and reference app data, set refresh requirements, and filter for desired top stats.

SEAMLESS MIGRATIONS WITH THE BIG-IP NEXT CENTRAL MANAGER MIGRATION SERVICE

Developed to facilitate effortless shifts between BIG-IP solutions, the BIG-IP Next Central Manager Migration Service simplifies and accelerates migrations to BIG-IP Next by converting

existing BIG-IP configurations into declarative configurations that are compatible with BIG-IP Next. This drastically reduces the time and effort required to transition applications between the two solutions while also simplifying future configuration changes. In addition, the Migration Service seamlessly migrates iRules to BIG-IP Next, utilizing BIG-IP AS3 as the foundation for this process. It transforms User Configuration Set (UCS) files or AS3 declarations describing current BIG-IP configurations into AS3 declarations that replicate these configurations on BIG-IP Next. This process can be performed for entire BIG-IP instances, or on a per-app basis, allowing migrations to be performed at the user's pace. Users can also migrate per-app on the same F5 chassis, or to a VE elsewhere—as long as there's a Next instance running, you can migrate an app there.

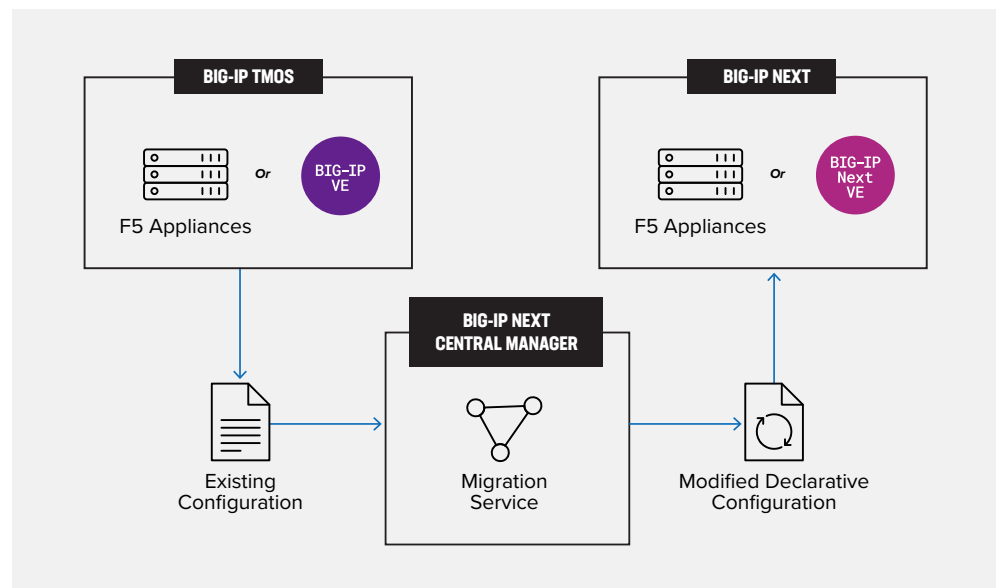


Figure 3: Accelerate migrations from BIG-IP to BIG-IP Next on next-gen platforms via the BIG-IP Next Central Manager Migration Service.

MEET BUSINESS NEEDS WITH FLEXIBLE DEPLOYMENT AND LICENSING OPTIONS

BIG-IP Next LTM may be licensed via an assortment of consumption models:

- **Subscription:** Renewable one- to three-year subscriptions afford initial upfront savings and include access to F5 premium support.
- **Perpetual:** A one-time CapEx investment provides complete solution ownership.
- **Utility:** This pay-as-you-grow (PAYG) model includes access to F5 premium support without the need for a long-term commitment.

License instances of BIG-IP Next LTM according to business needs and purchasing directives. For hardware purchases:

- License BIG-IP Next LTM on VELOS per chassis and blade. Subscription, Perpetual, and Flexible-Consumption Plans (FCPs) are available.
- License BIG-IP Next LTM on rSeries per appliance. Subscription, Perpetual, and Flexible-Consumption Plans (FCPs) are available.

License a **virtual edition** of BIG-IP Next LTM based on vCPU and bandwidth needs. Available as a subscription, perpetual license, pay-as-you-grow license, bring-your-own-license model, and flex consumption plan.

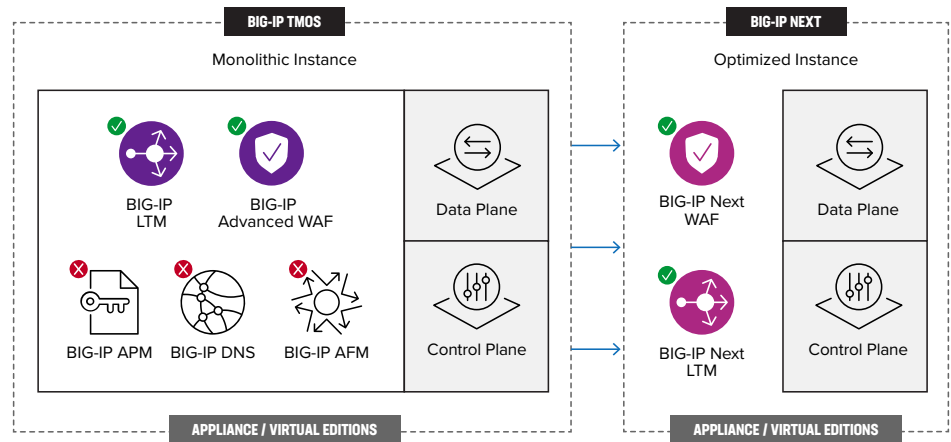


Figure 4: Reduce instance spin-up times and footprints by deploying only the desired solution.

BIG-IP NEXT LOCAL TRAFFIC MANAGER FEATURES

Whether running as a standalone instance or part of a collection of BIG-IP Next modules, BIG-IP Next LTM is based on F5's intelligent, native container-based operating system delivering a modern, highly automatable, and highly scalable architecture to provide customers with the advanced, secure application delivery services that their core, cloud, and edge workloads require.

Application Traffic Management

- Intelligent load balancing methods
- Application protocol support (HTTP/2, SSL/TLS, TCP/UDP, etc.)
- Application health monitoring
- Application connection state management
- F5 OneConnect

Application Delivery Optimization

- RAM Cache
- Ability to customize HTTP parameters

Secure Application Delivery

- SSL/TLS encryption offload (hardware accelerated)
- SSL visibility, connection, and session mirroring

Application Visibility and Monitoring

- F5 Analytics: system health and traffic metrics
- High-speed logging and log accessibility
- Stack component and pool member metrics

Programmable Infrastructure

- iRules for data plane programmability with syntax validation
- iRules versioning available

Ecosystem Integrations

Automation of app services from ecosystem:

- Terraform

Automation

- Automation services for declarative app services configurations
- BIG-IP AS3 automates layer 4-7 services
- Onboarding declaratively for initial provisioning and configurations
- Log telemetry streaming for data export to third-party analytics
- FAST templates for declarative app services configurations and deployment

MORE INFORMATION

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

Web

[DevCentral](#)

Data sheets

[VELOS](#)

[rSeries](#)

[Virtual Edition \(VE\)](#)

Articles and guides

[State of App Strategy 2023: Digital Transformation Journey Is Finally Paying Off](#)

[Secure, Simplify, Innovate: Charting a Path to Adaptive Apps](#)

[Coupled with Next-Gen BIG-IP Software, New Line of F5 Hardware Builds the Bridge to a Distributed Cloud World](#)

[3 Tips for Maintaining a High-Performing App Portfolio](#)

[Choose advanced cloud solutions that'll scale into the future](#)

[Load Balancing Your Applications](#)

