

# F5 NGINX Plus: Application Delivery for your Modern Apps and APIs

## Key Benefits

### Uncompromising uptime and service availability

Ensure uninterrupted service with high availability, session persistence, and proactive health monitoring to efficiently distribute traffic and maintain reliability during failovers and peak demand.

### Zero-downtime upgrades with APIs

Deliver updates at the speed of business with zero-downtime deployments. NGINX Plus enables on-the-fly changes to routing, security, and workflows while offering extendable functionality through NGINX JavaScript (njs) and LUA scripting, as well as APIs for advanced customizations.

### Robust security

Strengthen security while maintaining flexibility with integrated safeguards across your application delivery stack. NGINX Plus streamlines authentication with support for protocols like OAuth and SAML and enforces granular access controls using rate limiting, RBAC, and whitelisting to protect APIs, IoT, and applications.

NGINX Plus is a high-performance, lightweight application delivery and API traffic management solution that empowers enterprises to build and secure digital experiences at scale. Built on the trusted foundation of NGINX open source, NGINX Plus enhances speed, reliability, and observability while simplifying operations.

As part of F5's Application Delivery & Security Platform, NGINX Plus plays a critical role in helping organizations deliver, optimize, and secure modern applications and APIs. This platform is a unified solution designed to ensure reliable performance, robust security, and seamless scalability for applications deployed across cloud, hybrid, and edge architectures.

NGINX Plus is a key component of NGINX One the all-in-one, subscription-based package that unifies all NGINX's capabilities. NGINX One brings together the features of NGINX Plus, NGINX App Protect, and NGINX Kubernetes and management solutions into a single, easy-to-consume package. As a cornerstone of the NGINX One package, NGINX Plus extends the capabilities of open-source NGINX with features designed specifically for enterprise-grade performance, scalability, and security.

NGINX Plus provides features such as advanced load balancing, dynamic configuration, SSL/TLS termination, application caching, built-in monitoring with over 200 real-time metrics, and high availability, making it ideal for most demanding environments required by modern enterprises, where scale, performance, and availability are paramount.

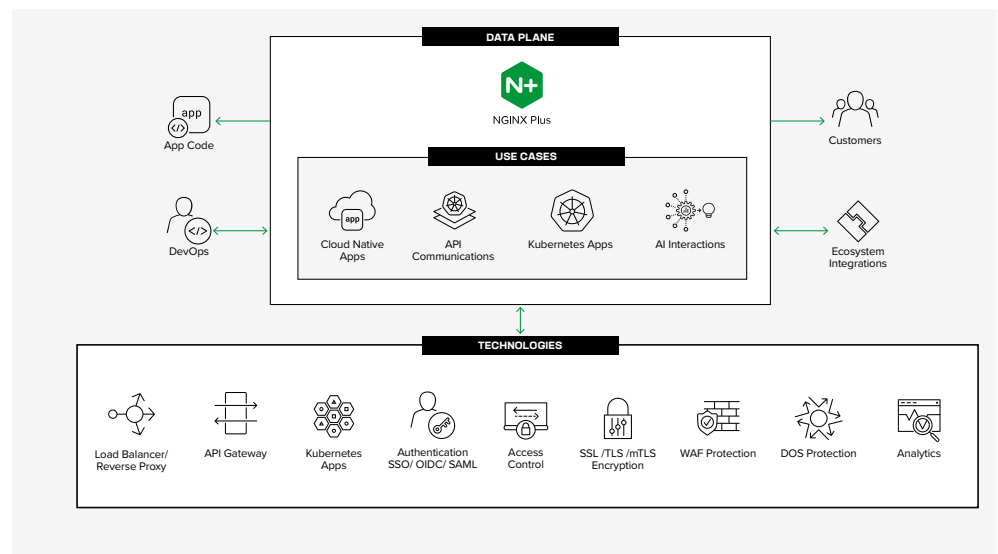


Figure 1: NGINX Plus Within NGINX One: Unified Management and Enterprise Features

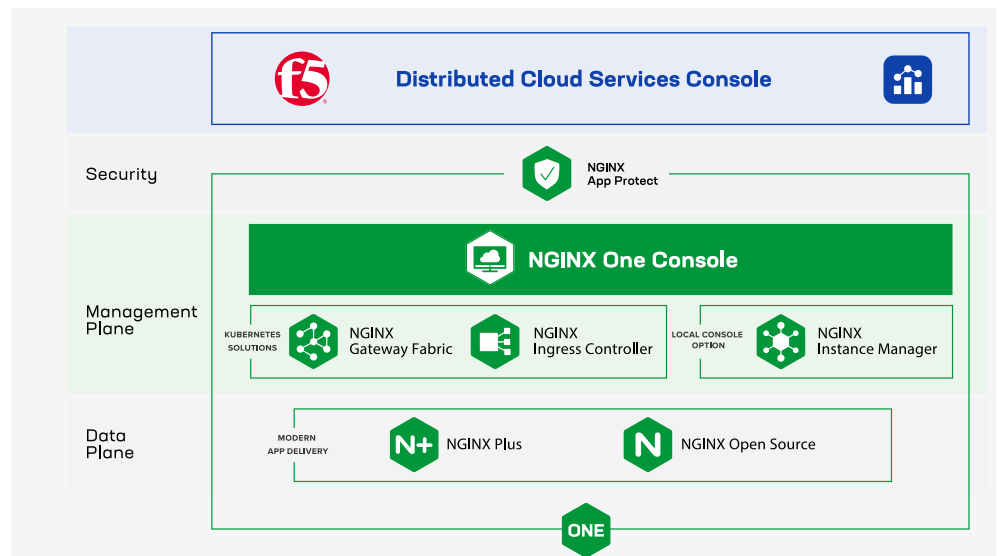
## Key Benefits

### Enhanced observability

Enhance observability for faster troubleshooting with advanced monitoring and diagnostics. NGINX Plus offers real-time metrics on latency, errors, and throughput through integrations like Prometheus and Grafana. It also provides detailed tracing using OpenTelemetry to identify bottlenecks and optimize modern app performance.

### Enterprise-grade scalability

Easily handle traffic surges and scale for future growth. NGINX Plus ensures reliable performance during peak loads and dynamically adjusts to support hybrid, cloud-native, and containerized environments.



## FEATURES

NGINX Plus is designed to deliver advanced capabilities for delivering modern applications and APIs combining security, scalability, and observability. Whether optimizing traffic, securing APIs, implementing or advanced load balancing, NGINX Plus equips enterprises to serve high-performing applications

### NGINX Plus features include:

#### Authentication

- HTTP Basic Authentication
- HTTP authentication subrequests
- X.509 client certificate authentication
- NTLM authentication
- Encrypted JSON Web Token (JWT, JWE) validation support
- OpenID Connect support
- Single sign-on (Keycloak, Okta, OneLogin, Ping Identity, most identity providers)
- SAML support

#### Content cache

- Static and dynamic content caching
- Micro and byte-range caching
- Serve cached content during origin server failure for improved uptime
- Override or set Cache-Control headers
- Cache purging

### **High availability**

- Active-active and active-passive high availability (HA) modes
- Configuration synchronization
- State sharing for session persistence, rate limiting, and key-value stores
- Easy installation with built-in HA scripts

### **Load Balancer**

- HTTP, TCP, and UDP load balancing
- Random with Two Choices, Round Robin, and Least Connections algorithms
- Passive health checks
- Active HTTP, TCP, and UDP health checks (customizable HTTP status code checks, regex matching for HTTP responses, and TCP Connect health checks)
- IP Hash session persistence and sticky-cookie/session persistence (insertion/learning)
- Sticky-route session persistence
- Layer 7 request routing
- Least Time algorithm
- Service discovery using DNS
- IP transparency with support for Direct Server Return (DSR)
- MQTT protocol support for load balancing
- IOT traffic with session persistence

### **Monitoring**

- Stub status module with aggregated metrics
- Extended status module with over 150 unique metrics
- Real-time graphical dashboard
- JSON output for integration with monitoring tools
- OpenTelemetry tracing support

### **Programmability**

- NGINX JavaScript module for scripting and advanced configurations
- Lua scripting language support
- Ansible automation tool integration
- Key-value store for dynamic configuration
- NGINX Plus API for managing upstream servers, key-value stores, and real-time metrics
- Dynamic reconfiguration without process reloads for managing upstream servers and variables in key-value stores
- QuickJS support for advanced scripting

### **Security Controls**

- Request, connection, and bandwidth limiting
- IP address access control list (ACL)
- Dual stack RSA/ECC SSL/TLS offloading
- Server-side SSL/TLS encryption and mutual TLS proxying
- TLS 1.3 support
- Secure links for controlled content delivery
- Dynamic DDoS mitigation
- F5 Device ID+ integration for improved security
- NGINX App Protect WAF module (additional cost, based on F5's market-leading WAF technology)

### **Streaming Media**

- Live streaming for RTMP, HTTP Live Streaming (HLS), and DASH
- Video-on-Demand (VoD) support for Flash (flv) and MP4 files
- Adaptive-bitrate VoD for HLS and Adobe HTTP Dynamic Streaming (HDS)
- Bandwidth controls for MP4 streaming

### **Third-Party Integrations**

- Kubernetes Ingress Controller
- OpenShift Router integration
- Compatibility with third-party modules (Headers-More, Set-Misc, etc.)
- Certified modules (e.g., 51Degrees for device-specific configurations, ForgeRock for identity integration)

### **Web Server/Reverse Proxy**

- Lightweight static content delivery with lower memory footprint
- Reverse proxying for gRPC, HTTP, Memcached, PHP-FPM, SCGI, and uwsgi servers
- IP address geolocation (requires MaxMind GeoIP database)
- HTTP/2 and HTTP/3 termination

### **Supported Environments**

- Cloud
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)
- Microsoft Azure
- VMware

### **Containers**

- Docker
- Kubernetes
- OpenShift

### **CPUs**

- ARM (64-bit)
- PowerPC (64-bit)
- x86 (64-bit)

### **Operating Systems**

- Alpine Linux
- Amazon Linux
- CentOS
- Debian
- FreeBSD
- Oracle Linux
- RHEL
- SUSE
- Ubuntu

### **More Information**

To learn more about NGINX Plus, [contact](#) your F5 representative, or visit [F5.com](https://f5.com)

