



F5 AUTOMATION TOOLCHAIN

Simple yet powerful declarative automation for the provisioning, deployment, and visibility of F5 BIG-IP devices and services.



IDEAL FOR:

- Standardizing application services
- Quickly creating and provisioning BIG-IP services
- Giving app developers and DevOps more autonomy
- Exporting analytics data from BIG-IP products
- Building advanced continuous integration/continuous deployment (CI/CD) pipelines that include F5 products

DEPLOY APPS TO MARKET FASTER WITHOUT SACRIFICING PERFORMANCE OR SECURITY

As organizations attempt to meet the demands of digital transformation, many challenges arise. Often, chief among them is having to choose between deployment velocity, app security, and performance. F5® Automation Toolchain provides a unified set of flexible, nonlicensed software downloads that eliminate the choice between speed and effective app deployment. Automation Toolchain makes it fast and easy to programmatically configure and roll out F5® BIG-IP® devices and services—helping solve a common network and security bottleneck so you can realize the vision and benefits of Infrastructure as Code.

DECLARATIVE INTERFACES

Tell the system what you want and let it figure out how to make that result happen. The declarative interfaces in Automation Toolchain minimize the networking, security, and F5 product knowledge required to quickly and effectively provision BIG-IP instances and apply the desired app services while reducing errors in provisioning and deployment. That saves time. So does having one tool for provisioning L1–3 objects as well as L4–7 services on the BIG-IP platform. The use of human readable JSON declarations makes it easier to ensure you're configuring as intended.

PROGRAMMATIC WORKFLOWS

Ensure a single source of truth for BIG-IP provisioning when every instance is onboarded, deployed, and monitored using the streamlined and repeatable method of Automation Toolchain. A single API call defines each desired end-state to simplify deployment and activate BIG-IP services faster and more accurately. Meet compliance initiative requirements and document that compliance more easily when you can monitor deployment and analytics from one source of truth.

SEAMLESS INTEGRATIONS

Automation Toolchain operates with other F5 products and popular third-party orchestration, source control, and analytics tools for use with all BIG-IP devices and services, whether on-premises, in public and private clouds, or both. These include not only BIG-IP modules such as BIG-IP® Local Traffic Manager™ (LTM) and BIG-IP® DNS and F5® Advanced Web Application Firewall (Advanced WAF) but also third-party tools such as Ansible, Terraform, Splunk, Azure Log Analytics, and AWS CloudWatch. Of course, Automation Toolchain is fully supported by F5 so that your deployments stay quick and easy even as times and tools change.

DEPLOYMENT CHALLENGES	SOLUTION	BENEFITS
<p>Initial manual provisioning of BIG-IP requires a high degree of expertise and can be time-consuming, error-prone, and difficult to deploy consistently.</p>	<p>Declarative Onboarding</p> <ul style="list-style-type: none"> • A declarative BIG-IP API extension readies BIG-IP instances—whether hardware, virtual editions (VEs), or containers—for L1–3 services. • A single JSON-based REST API call simplifies configuration. 	<ul style="list-style-type: none"> • Standardize and simplify BIG-IP device deployments. • Speed deployments. • Minimize errors and complexity. • Empower every application team member to make the most of BIG-IP deployment capabilities.
<p>A high degree of subject matter expertise is required to work with app services, which makes it harder for low-touch CI/CD pipelines to function while still ensuring appropriate performance and security services are attached. And consistent app deployment remains a challenge in any development environment.</p>	<p>Application Services 3 Extension</p> <ul style="list-style-type: none"> • A single JSON-based REST API call simplifies app service configuration. • One easy-to-use tool makes app service configuration more repeatable and consistent. • The BIG-IP API extension streamlines provisioning for F5 app services on BIG-IP products. • Works with many third-party automation and orchestration tools. 	<ul style="list-style-type: none"> • Standardize and simplify BIG-IP app services provisioning. • Speed app deployment. • Increase the consistency of app service deployments across apps. • Minimize errors and complexity. • Ensure app security compliance. • Empower every team member to make the most of BIG-IP app services capabilities.
<p>Proactive, data-driven decisions concerning BIG-IP devices are harder without sufficient visibility, particularly when you need to align different views of your app landscape or build and manage interoperable, multi-vendor solutions that include analytics.</p>	<p>Telemetry Streaming</p> <ul style="list-style-type: none"> • Real-time streaming from BIG-IP instances to your data store keeps data up to the minute. • Visibility options for BIG-IP devices and services include F5 Analytics, F5® iHealth®, and audit, CGNAT, and event logs. • Obtain data that can be consumed by many popular third-party analytics packages. • A single JSON-based REST API call aggregates, normalizes, and forwards statistics. 	<ul style="list-style-type: none"> • Keep your finger on the pulse of your F5 estate. • Build custom analytics and visibility via a declarative model. • Operate optimized CI/CD pipelines. • Create highly customized analytics solutions that make the most sense for your business.
<p>Meeting speed-to-market demands, reducing human error (and the significant costs that result), and building a mature and programmatic automation practice often give enterprises a strategic advantage—but are extremely difficult to achieve.</p>	<p>F5 Application Service Templates (FAST)</p> <ul style="list-style-type: none"> • This unified, cross-platform templating framework for F5 solutions is the successor to deprecated F5® iApps® templates. • FAST declaratively provisions and deploys new app services on BIG-IP instances. • Highly customizable through the JSON schema, FAST can be used for HTTP, HTTPS, TCP, and UDP apps. 	<ul style="list-style-type: none"> • Simplify and unify templating for F5 solutions via an open, JSON-based API. • Align to advanced application development practices with modern languages and CI/CD pipeline integration. • Democratize working with templates for F5 and third-party solutions across roles. • Increase deployment flexibility and composability.

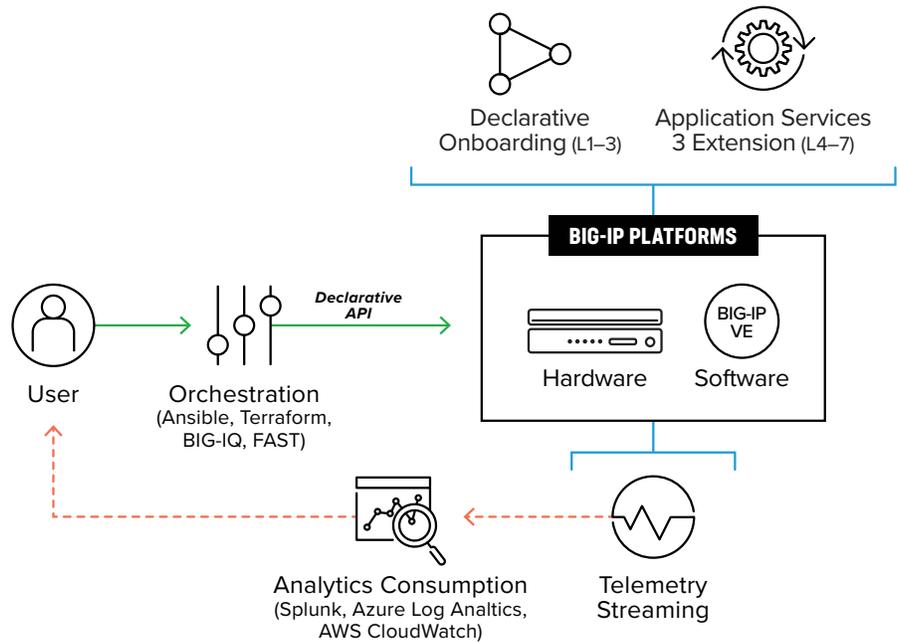


Figure 1: Automation Toolchain makes it easier to configure and deploy BIG-IP instances and apply desired app services.

Automation Toolchain integrates with popular F5 products, including:

- Advanced WAF
- BIG-IP LTM
- BIG-IP DNS
- BIG-IP® CGNAT
- BIG-IP® Advanced Firewall Manager™ (AFM)
- F5® SSL Orchestrator®
- VNF Manager (part of F5 Packaged NFV Solutions)
- BIG-IQ® Centralized Management

It's time to automate your app delivery and security services. Learn more and get started at [F5 Cloud Docs](#), or contact your F5 representative.

