



Streamline application services

Automate operations and accelerate agility with Red Hat and F5/NGINX

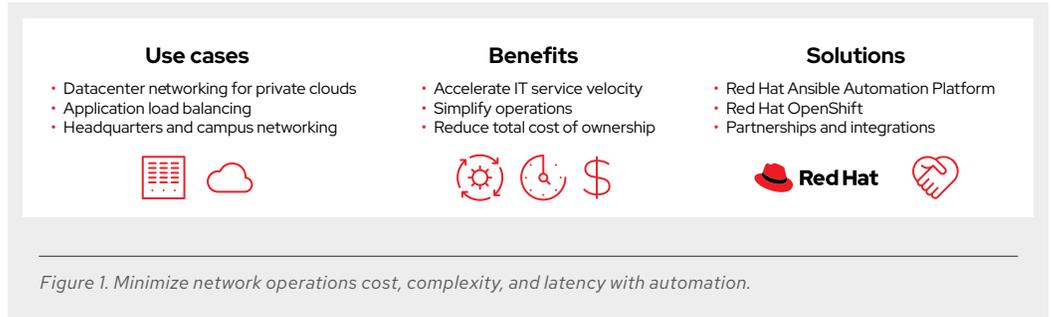
“By 2023, 60% of datacenter networking configuration activities will be automated, up from 30% in early 2020.”¹

“Governments have accelerated their digital journey along three major dimensions: scaling digital infrastructure, creating a more digitally savvy workforce, and investing in citizen connectivity.”²

Introduction

Agencies and institutions are looking to cloud-based applications and services to improve user productivity and mobility, and comply with mandates like Cloud Smart. Many public sector organizations rely on outdated network management practices that inhibit IT agility and impair application delivery. For many, provisioning network services, managing bandwidth, and troubleshooting problems is a manually intensive, error-prone proposition involving multiple vendor-specific command line interfaces (CLIs) or proprietary element management systems.

Red Hat helps organizations build modern, programmable networks that eliminate manual administrative processes and break down deployment barriers. Red Hat® Ansible® Automation Platform, Red Hat® OpenShift®, and certified Red Hat partner integrations help organizations improve NetOps productivity, speed, and efficiency, and boost application performance, reliability, and service quality.



F5/NGINX application security and delivery solutions help organizations create, better secure, and operate adaptive applications that reduce costs, improve operations, and better protect users. F5 and NGINX provide certified Collections and Operators for Ansible Automation Platform and Red Hat OpenShift. The solutions let you automate manually intensive, error-prone tasks including complex operations like configuring security policies.

Together, F5/NGINX and Red Hat provide comprehensive automation for your most critical applications and assets.

- ▶ F5 BIG-IP is fully automatable using certified Ansible Collections to assist with Day-0, Day-1, and Day-2 operations.
- ▶ NGINX Controller has certified Ansible Collections to automate provisioning of NGINX software load-balancing instances.



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¹ Chessman, Josh, et. al. “Market Guide for Network Administration and Orchestration Tools,” Gartner Research, Sept. 2020.

² Rao, Aditi, et. al. Deloitte Insights. *Government Trends 2021*.

- ▶ F5 BIG-IP and NGINX certified Operators let you scale and secure your most critical containerized applications.

Red Hat and F5/NGINX can help your organization automate NetOps, reduce expenses, and increase business agility by automating operations and accelerating the pace of business and by automating, scaling, and by making application workloads more secure in hybrid environments.

Automating operations and accelerating the pace of business

Agencies and institutions are adopting cloud-based applications, containers, and microservices architectures to improve agility, scalability, and resiliency, but inefficient network configuration and management practices can impair IT operations and hinder cloud migration and application modernization efforts. Red Hat can help you build programmable and adaptable networks that eliminate resource-intensive, time-consuming administrative tasks, streamline operations, and accelerate the pace of business.

Red Hat Ansible Automation Platform lets you automatically configure network elements and provision network services in real time to speed up application delivery and address fluctuating traffic demands and evolving business requirements. The flexible solution integrates with a variety of physical and virtualized network devices, software-defined network elements, and cloud-based network services.

Based on open source standards and an agentless architecture, Ansible Automation Platform gives you a simple, extensible path to modern network operations, while still supporting your current processes and existing infrastructure. Certified Content Collections from Red Hat network infrastructure partners let you introduce full-function enterprise automation workflows quickly and confidently.³

“Ansible (Automation Platform) continues to grow quickly, particularly among enterprises that are automating networks. A robust community ecosystem contributes to Ansible (Automation Platform) success.”

Gardner, Chris, et. al.

“The Forrester Wave™: Infrastructure Automation Platforms, Q3 2020.”
Forrester, Aug. 2020.

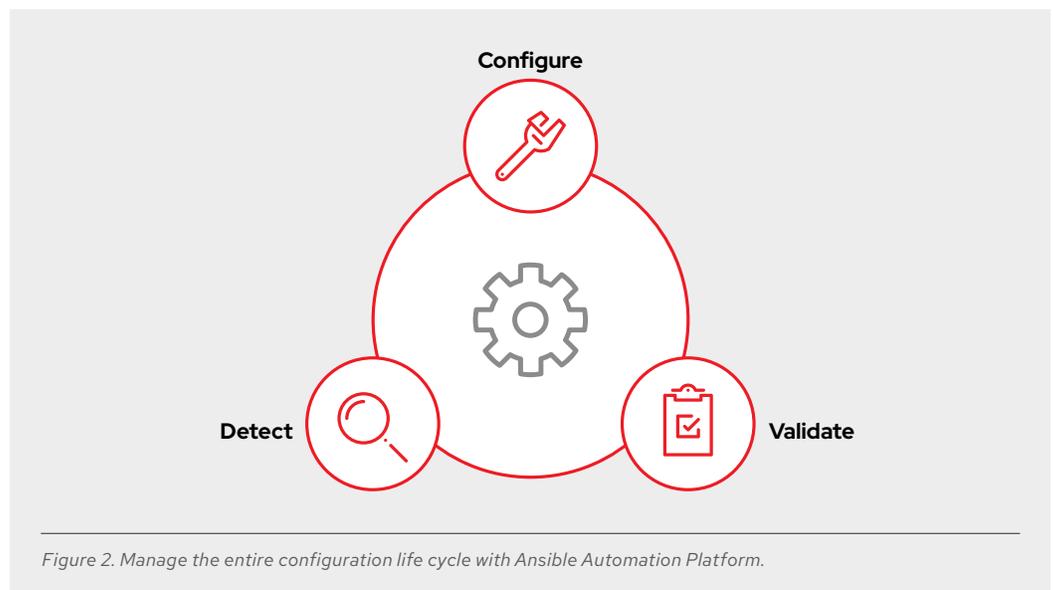


Figure 2. Manage the entire configuration life cycle with Ansible Automation Platform.

³ A Collection is a standardized distribution format for Ansible content that can include playbook examples, roles, modules, and plugins.



“50% of network professionals prioritize network automation for addressing disruptions.”

2021 Global Networking Trends
Cisco, November 2020

“Adopting tools which can not only automate application delivery, but also protect those applications no matter where they live, is incredibly important.”

Bill Church
Chief Technology Officer,
F5 US Federal Solutions

For containerized environments, Red Hat OpenShift uses a software-defined networking approach that makes it easy to control communications between pods and across clusters. A programmable network fabric lets you dynamically manage and steer traffic to enforce security policies, balance performance, and provide fast failover and high availability.

Ansible Automation Platform and Red Hat OpenShift help network operations teams:

- ▶ **Accelerate IT service agility.** Improve agility by eliminating ineffective, manual administrative processes. Automatically stand up network resources and provision network services without IT intervention.
- ▶ **Free network operations staff to focus on innovation.** Administrators spend less time configuring network infrastructure and more time working on strategic tasks.
- ▶ **Reduce total cost of ownership.** Minimize ongoing network operations expense and complexity. Simplify administration. Avoid overprovisioning networking resources and system capacity. Reduce upfront capital outlays and tightly align network infrastructure investments with evolving bandwidth demands.
- ▶ **Boost performance, resiliency, and service quality.** Adapt network resources in real time based on policy to address live conditions and to support diverse workloads with distinct characteristics and QoS requirements. Automatically prioritize, shape, and route traffic to optimize performance, availability, and service quality.
- ▶ **Reduce risk and uncertainty.** Strengthen security by automating access controls, enforcing policies, and automatically identifying vulnerabilities and mitigating issues. Centrally view network configuration information and audit trails to support audits and improve compliance.

Automate, scale, and secure application workloads in hybrid environments

Public sector organizations must accelerate application delivery to keep pace with rapidly evolving mission requirements. Many are introducing DevOps practices and deploying applications in hybrid environments to speed up development and delivery. Whether you deploy applications in public clouds, private clouds, or a combination of them, F5/NGINX application security and delivery solutions (identity and access management, web application firewalls, TCP optimization, etc.) can help you optimize the performance, security, and availability of your production workloads.

F5, the market leader in application delivery services, and Ansible, the market leader in automation, have partnered to help you increase service velocity and improve agility. The integrated solution lets you automate F5/NGINX deployment, provisioning, and configuration management tasks to streamline operations and accelerate the pace of change. Key features and benefits include:

- ▶ End-to-end automation from provisioning to application deployment.
- ▶ Faster configuration, greater consistency, and increased automation.
- ▶ No new software to install on your BIG-IP device.
- ▶ Prebuilt Ansible F5 modules for best practices and continuous compliance.

Just like Ansible Automation Platform helps you manage app workflows, NGINX Controller helps you manage your NGINX Plus instances in multiple environments, including Red Hat Enterprise Linux®. The Ansible Collection for NGINX Controller lets you add NGINX Controller into your regular

workflows so your developers can automate common tasks including ephemeral API token generation, managing certificate life cycles, and configuration of controller objects (gateways, applications, and components).

Learn more

Manually intensive, time-consuming network configuration and management processes can impede application modernization projects and impair cloud migration initiatives. Together, Red Hat and F5 help you streamline network operations, improve service delivery and agility, and make the most of your technology investments.

To learn more about F5/NGINX and joint solutions with Red Hat, visit www.f5.com/redhat.

To learn more about how Red Hat Ansible Automation Platform can help you streamline network operations, visit [Red Hat Ansible Network Automation](#). To learn more about Red Hat OpenShift, visit www.openshift.com.

About F5

F5 (NASDAQ: FFIV) is a multicloud application security and delivery company that enables our customers—which include the world’s largest enterprises, financial institutions, service providers, and governments—to bring extraordinary digital experiences to life. For more information, go to f5.com. You can also follow @F5 on Twitter or LinkedIn for more information about F5, its partners, and technologies.



About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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