Fintech services network automation

Automating Cisco environments with Red Hat Ansible Automation Platform

Reducing costs while improving reliability

Digitization and the adoption of cloud have driven the complexity of management and operations of IT (information technology) systems in financial services and the insurance industry. The pressure is on to reduce operating costs in a highly secure and highly regulated business while also improving the reliability of services. Application and infrastructure services are so intertwined that when one fails, it can ripple across the IT infrastructure estate. Many increases in this operational complexity can be simplified through automation. For example, network automation allows network operations teams to configure, scale, protect, and integrate network infrastructure and application services more efficiently, and in less time.

IT organizations in the financial services and insurance industry desire solutions that align with their operational requirements while simplifying management, providing orchestration, and enhancing security. Network automation is key to providing the speed and connectivity necessary for responsive core system transaction processing and for digital customer interactions. IDC estimates that the worldwide IT automation and configuration management software market reached revenue of US$8.8 billion in 2021. The market is forecast to grow to US$12.8 billion in 2026 at a 2021-2026 compound annual growth rate (CAGR) of 7.9%.[2]

Automated security and compliance of financial services applications

Hybrid and multicloud environments have rapidly become standard for financial services firms. According to a recent Enterprise Cloud Index (ECI) report, financial services outpaced all other industries in the adoption of hybrid cloud. In these mixed environments, manually monitoring system compliance becomes more difficult or nearly impossible.

Without an effective automation strategy, IT teams face several potential pitfalls related to manually checking systems for security and compliance. These pitfalls include:

▸ Being time consuming and tedious.

▸ Being prone to human error.

▸ Not being repeatable, shareable, or verifiable.

▸ Vulnerability to audit failure because of incomplete and inconsistent changelog information.

▸ Inhibited communication between operations and security teams.

Fortunately, a sound automation strategy can help institutions improve their security and compliance, reducing the overall risk to business. An effective automation strategy can also help manage and streamline multicloud environments.

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1 Red Hat case study. *"Japanese IT company automates hardware setup with Red Hat,"*26 Jan. 2021.

2 *IDC Market Forecast, sponsored by Red Hat. "Worldwide IT Automation and Configuration Management Software Forecast, 2022-2026." Doc. #US48870821, February 2022.*

Automation can help financial institutions and insurance firms manage security and compliance more comprehensively and efficiently. It also helps prevent human errors by automating software patches and system configurations. As Verizon noted in its 2021 Financial Services Data Breach Investigations Report, "44% of the breaches were caused by internal actors. The majority of actions performed by these folks are the accidental ones, specifically the sending of emails to the wrong people, which represents a whopping 55% of all error-based breaches."[4] Having protective controls in place aids in overall security.

Comprehensive support for Cisco network and systems platforms

Flexibility is important for both network operators and system administrators. Red Hat® Ansible® Automation Platform allows you to select which processes and procedures to automate. This helps you to start small and then expand according to your strategy, goals, and skills, to deliver the biggest benefit to your organization. You get the flexibility to automate what you need when you need it.

Ansible Automation Platform allows you to add governance and create a bridge between network operations and other parts of the IT organization. It helps teams manage complex network deployments by adding control, knowledge, and delegation to Ansible-powered environments. The Ansible integration with Cisco IOS provides you with the benefits of automation. As you deploy a NetDevOps model to accelerate application deployment to respond to business needs faster, Ansible Automation Platform helps you achieve a truly agile operational model by improving on automation, innovation, and consistency in your IT environment, while maintaining a security-focused consistent operating environment.

Ansible Automation Platform provides automation support for a wide range of Cisco software-defined networking (SDN) products and platforms with:

Table 1. Supported Cisco products and platforms by category

Network device OS	Networking security	Cisco SDN, controllers and NAE
▸ IOS	▸ ASA	▸ ACI
▸ IOS XR	▸ Tetration*	▸ MSO
▸ IOS XE	*Certification pending	▸ NAE
▸ NX-OS		▸ NSO
		▸ DNA

The latest Red Hat certified Cisco collections are available on Ansible automation hub.

> According to a 2021 report from IBM and Ponemon Institute, the average cost of a data breach among companies surveyed reached US$4.24 million per incident in 2021, the highest in 17 years.[3]
>
> **Jupiter Research**

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3 "*IBM Report: Cost of a Data Breach Hits Record High During Pandemic.*" 28 July 2021.
4 "*2021 Financial Services and Insurance Data Security Breaches.*" Verizon Business, 28 March 2022.

Red Hat Ansible Automation Platform with Cisco Application Centric Infrastructure (ACI)

A foundation for building and operating automation at scale

There is no shortage of automation options for today's Cisco users, but many of the solutions are purpose-built for a specific product or require extensive knowledge of complex programming languages. Ansible Automation Platform minimizes the need for understanding complicated platform-specific constructs, as well as vendor-specific command lines, implementations, and application programming interfaces (APIs).

95%

of IT and engineering are prioritizing process automation, with 20% saying it's a high priority.[5]
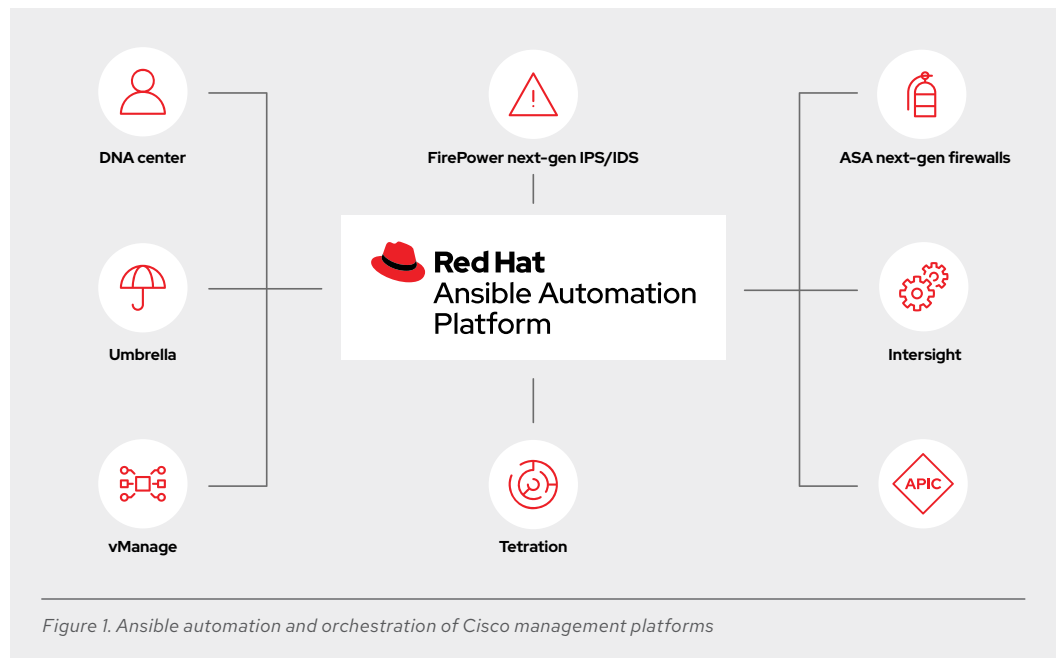
Deloitte Insights

Figure 1. Ansible automation and orchestration of Cisco management platforms

Ansible Automation Platform is the foundation for building and operating automation services at scale, providing businesses with the tools and operational framework in a collaborative and trusted execution environment. It offers a new approach to automating Cisco-based networks and infrastructure management, using Red Hat's long-standing relationship with Cisco, a leader in networking, supporting a broad range of popular products and solutions.

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5 *Rodrigues, Glen, et al. "IT, disrupt thyself: Automatic at scale." Deloitte, 8 Feb. 2022.*
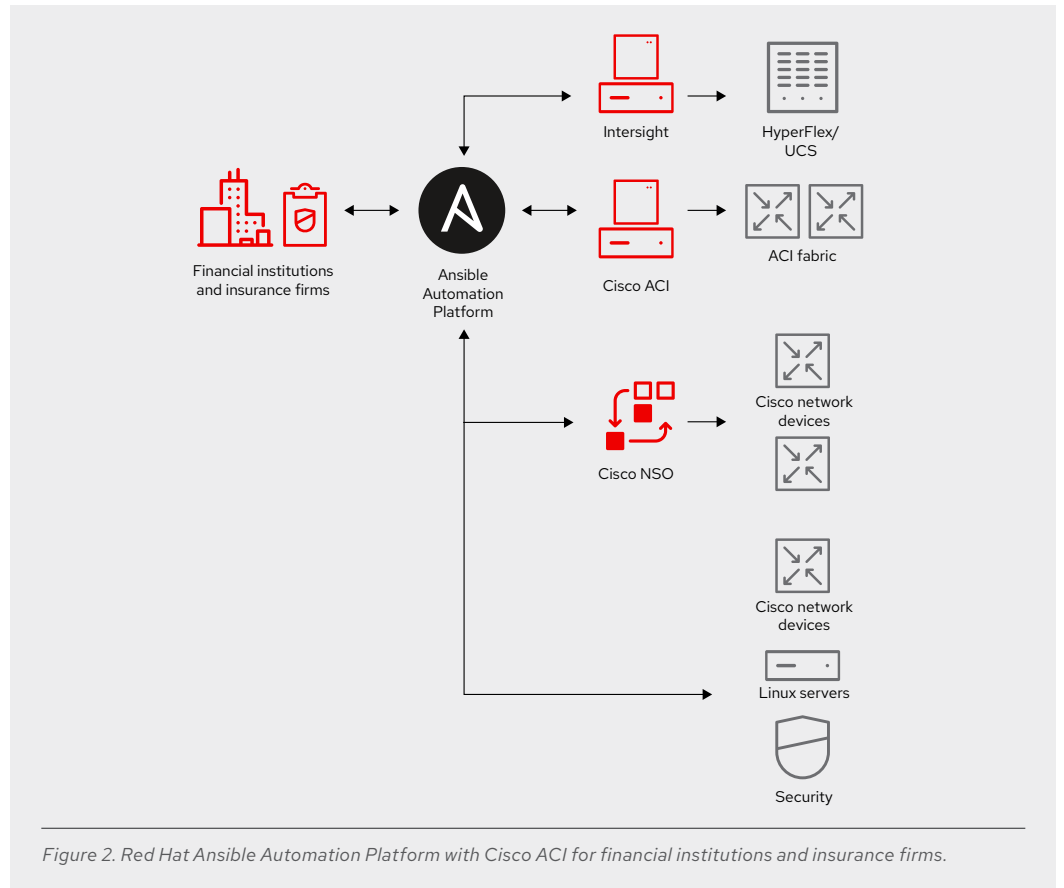
Figure 2. Red Hat Ansible Automation Platform with Cisco ACI for financial institutions and insurance firms.

Ansible Automation Platform allows you to take three simple actions to accelerate your enterprise automation journey:

▶ Create: Get started faster by combining the power of Ansible's massive open-source community and prebuilt certified Ansible Content Collections of the most-used Ansible roles and modules. Codify your infrastructure and share across teams, on-premise, or in a cloud environment.

▶ Scale: Transfer your automation into multiple domains and across different use cases. Stakeholders across development, operations, and business teams can use Ansible in ways that work best for them individually without slowing development time.

▶ Engage: Take your automation even further with analytics, policy and governance, and content management. These tools in Ansible Automation Platform make operations management more efficient, allowing you to solve problems once and share the results with everyone.

Besides saving time and energy, this unique approach provides greater returns on existing investments. Many organizations have invested significant resources into point automation tools for managing specific devices or workflows, but this automation does not scale. Ansible Automation Platform fosters cross-team, cross-device automation by giving different groups, including NetOps, ITOps, and SecOPs a common layer and language in a single pane of glass. This provides a unified display for automating virtually every Cisco-related device, controller, or program connected to a network.
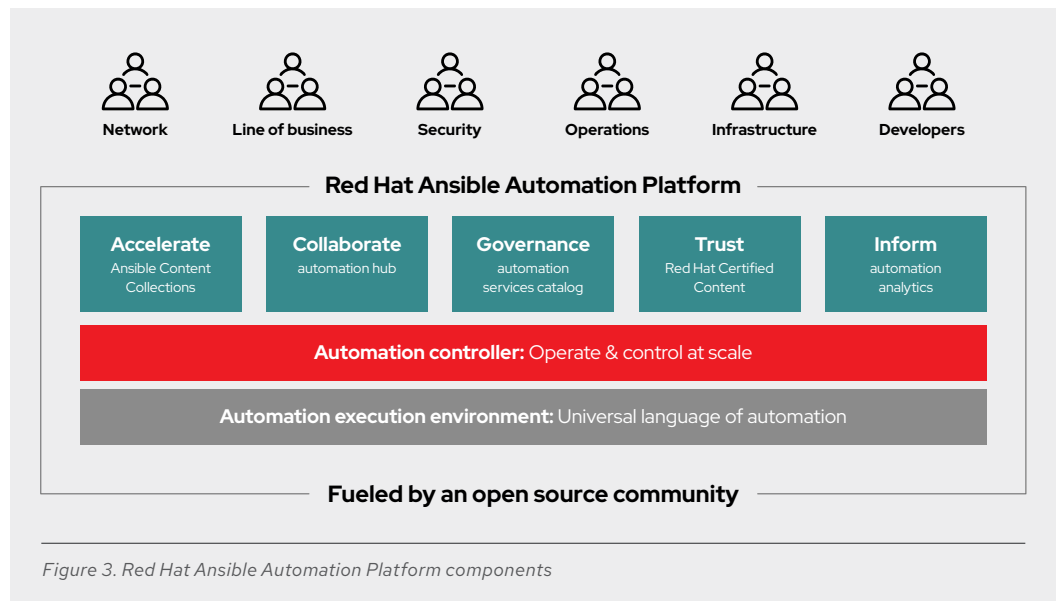
Simple, reliable, and scalable Cisco automation with Red Hat Ansible Automation Platform

To gain the agility, flexibility, and consistency that network administrators require to keep their infrastructure running at peak performance, it is essential to automate each datacenter component—routers, switches, firewalls, IPAM, controllers, servers, and containers. But doing so with individual point products or platform-specific tools is not an efficient approach to scaling infrastructure management.

Ansible Automation Platform integrates with Cisco platforms, allowing automation at greater scale and speed so that you can:

▸ Use Cisco Validated Designs (CVDs) to ease implementation, reduce deployment time, and improve total cost of ownership (TCO).

▸ Reduce the number of manual tasks to provide error-free, repeatable configurations.

▸ Validate changes continuously to ensure compliance.

Ansible Automation Platform is one of the most popular tools for simplifying routine network configuration tasks. It provides post-installation configuration automation that speeds IT transformation for greater agility and the ability to adopt a highly efficient operating model that is more responsive to your business needs.

Figure 3. Red Hat Ansible Automation Platform components

Conclusion

Cisco is a global leader in compute, network, and cloud solutions for enterprise customers, service providers, and financial services and insurance firms. As business continues to digitalize, and customers seek new and more convenient ways to adopt and access products and services, firms continue to build innovative fintech and insurtech offerings while continuing to run the existing business—all with limited resources.

About Cisco

Cisco (NASDAQ: CSCO) is the worldwide technology leader that has been making the Internet work since 1984. Its people, products, and partners help society securely connect and seize tomorrow's digital opportunity today. Discover more at thenetwork.cisco.com and follow them on Twitter at @Cisco.

Ansible Automation Platform helps IT be more responsive to business needs, foster cohesion, and decrease costs. Ansible Automation Platform works across multiple Cisco network platforms, use cases for campus networks, datacenters, and service providers. By combining Cisco solutions such as ACI and UCS/HyperFlex with Ansible Automation Platform, you can receive the benefits of automating with certified collections supported by Cisco and Red Hat—increasing agility, reducing risk, and controlling cost.

As the global, trusted leader in open source solutions for today's enterprises, Red Hat has been helping financial services institutions adapt to continually changing IT regulations and requirements. With Ansible Automation Platform as part of the Red Hat management portfolio, organizations gain greater efficiency, deliver value faster, and solve IT challenges.

Together, Red Hat and Cisco offer complementary products and integrated solutions to simplify, optimize, and automate IT operations, providing scalability, flexibility, and more security to your digital transformation and datacenter modernization projects.

Learn more about:

▸ Red Hat Ansible Network Automation use cases

▸ Ansible Automation Platform no-cost trial

▸ Cisco with Ansible—DevNet

▸ Ansible automation hub—Cisco collections

▸ Certified integration: Ansible and Cisco

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 develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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