

Automate cloud-native datacenter infrastructure

Highlights

Provide a security-focused public cloud experience for private cloud infrastructure with Juniper Apstra and Red Hat OpenShift.

Reduce time-to-market to provision and deploy new services at lower cost by automating Kubernetes, IP networking, security services, and Day 2 operations.

Lower the risk of downtime and manage the combined life cycle of all private-cloud infrastructure—compute, storage, and multivendor networking—through a single pane of glass.

Orchestrate new cloud-native network functions (CNFs) while supporting existing virtual network functions (VNFs).

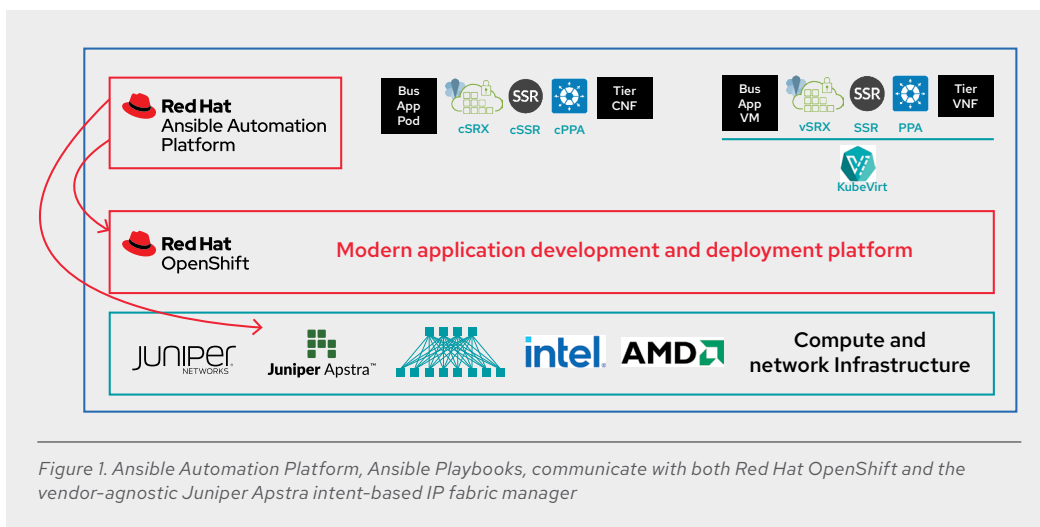
Deliver modern and open network infrastructure on-premise

Public cloud offerings are compelling, and organizations increasingly want to deploy and consume their private cloud services with a public cloud experience. At the same time, cloud-native applications and the rise of artificial intelligence and machine learning (AI/ML) are placing new demands across on-premise datacenter infrastructure. To address these new demands, organizations are asking for full automation of multivendor private cloud infrastructure—with orchestration of compute resources, storage, and Internet Protocol (IP) networking together.

Juniper Networks and Red Hat provide a cloud-native datacenter infrastructure solution that addresses this need by integrating [Juniper Apstra](#) intent-based networking with [Red Hat® OpenShift®](#). The combination minimizes complexity by using Ansible® Playbooks accessed with [Red Hat Ansible Automation Platform](#) to automate Kubernetes (through Red Hat OpenShift) as well as automating and validating the design, deployment, and operation of datacenter networks through Juniper Apstra. Both Juniper and Red Hat components are open source, and the solution also supports multivendor-based IP network infrastructure, avoiding proprietary lock-in.

Private cloud infrastructure designed for modern cloud-native applications

Historically, application platforms and IP network configuration management have required separate manual and vendor-specific coordination to prepare IP infrastructure for new applications, wasting valuable time-to-market. Ansible Automation Platform working with both Juniper Apstra and Red Hat OpenShift (Figure 1) can help organizations rapidly deliver virtualization and container-based solutions on a single unified platform, capturing the enhanced scalability, portability, and efficiency that Kubernetes environments can offer.



Juniper Networks believes that connectivity is not the same as experiencing a great connection.

From real-time fault isolation to proactive anomaly detection and self-driving corrective actions, Juniper provides campus, branch, datacenter, and WAN operations with next-level predictability, reliability, and security.

Solution capabilities overview

The Juniper Networks and Red Hat cloud-native datacenter infrastructure solution features key capabilities, allowing organizations to:

- ▶ **Manage the entire private cloud infrastructure life cycle.** Red Hat Ansible adoption allows private cloud infrastructure management behind a single pane of glass, effectively combining the management of Red Hat OpenShift and Juniper Apstra with Ansible Playbooks.
- ▶ **Auto-react through predefined Ansible Playbooks.** [Event-Driven Ansible](#) provides the event-handling capability to automate time-consuming tasks and respond to changing conditions by automatically reconfiguring infrastructure through Red Hat OpenShift and Juniper Apstra.
- ▶ **Develop and deploy virtualized and containerized applications.** As the industry's leading hybrid cloud application platform powered by Kubernetes, Red Hat OpenShift brings together tested and trusted services to reduce the friction of developing, modernizing, deploying, running and managing applications.
- ▶ **Take advantage of intent-based networking.** Juniper Apstra employs high levels of intelligence, analytics, and orchestration to improve network operations and uptime, allowing operators to describe the business outcomes they wish to accomplish—while the network converts those objectives into the configuration necessary to achieve them.



About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with [award-winning](#) support, training, and consulting services.

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