

Juniper Unite Cloud-Enabled Branch

Simplifying, Automating, and Transforming the Enterprise Branch Towards the Cloud

Challenge

The ongoing adoption of cloud-based solutions, coupled with the increasing sophistication of security threats, is forcing enterprises to re-examine their branch strategies. Enterprises must secure their branches in a more agile manner, while simplifying operations and reducing costs.

Solution

Juniper Unite Cloud-Enabled Branch offers a comprehensive solution that allows enterprises to dynamically apply uniform security policies to every branch, consolidate multiple appliances into a single device at each site, and unitize cost-effective Internet-based connectivity.

Benefits

- Simplifies branch deployment, management, and operations while accelerating service bring-up
- Secures the branch with a suite of solutions that employs cloud-based threat defense services and feeds to centrally defend locations
- Integrates Juniper and third-party services and applications simultaneously, providing cohesive, best-in-class options for customers
- Implements SD-WAN with application-aware routing, using various network links appropriate for business applications

Cloud-based applications have become mission-critical requirements for today's highly dynamic market. More than ever, enterprises—ranging from multinational enterprises (MNEs) to small and midsize businesses (SMBs)—rely on such cloud-based applications to support their communications, operations, and transactions.

Meanwhile, WAN connectivity has long been an issue for enterprises. Branch connections have been rigid, complex, and expensive; now, with more cloud-based applications consumed by employees, WAN architectures must support such applications as well as the changing traffic patterns they create. With the advent of both virtualization and software-defined WAN (SD-WAN) technologies, enterprises can now liberate themselves from old architectures and adopt more flexible, cost-effective, and optimized “cloud-enabled” branch architectures. The speed and agility with which enterprises can add branch offices, apply network and security policies across all locations, and deploy new services will accelerate, while the cost of maintaining branch connectivity will decline.

The Challenge

While most data centers today have been modernized to adopt cloud-based technologies, branch offices remain a bottleneck for enterprises wanting to adopt cloud applications. Security is a major concern for enterprises moving their branch to the cloud, as they are particularly vulnerable to cyberattacks. Increased use of cloud-based applications in the branch demand a more intelligent, secure, and reliable WAN connectivity.

Unfortunately, branch deployment is a time-consuming and manual process. Hardware appliances must be shipped to each location, requiring truck rolls that result in long lead times. Each network appliance must be configured and provisioned—a complex and costly process that requires highly specialized skills—while ongoing maintenance and operations contribute their own unique challenges.

Businesses need a more efficient, lower cost method for adding new network connections in the branch, ideally using automation to ensure normal daily operations. Furthermore, the proliferation of business-critical, cloud-based applications requiring higher bandwidth in the branch demand intelligent traffic routing that directs content over multiple network links from the branch to augment the use of premium WAN connections such as MPLS links. This intelligent routing of traffic requires real-time link performance monitoring.

The Juniper Networks Cloud-Enabled Branch Solution

Juniper Networks is delivering such a solution today. The Juniper Networks® Unite Cloud-Enabled Branch is a simple, open, and secure solution that redefines branch deployments by enabling enterprise customers to turn on secure, cloud-ready branch offices on demand, letting them evolve smoothly towards the cloud and support new digital business initiatives. By leveraging Juniper Networks Junos® operating system automation, along with Juniper Networks Contrail Service Orchestration and the NFX250 Network Services Platform, Juniper's Cloud-Enabled Branch enables agile branch deployments. SD-WAN



functionality within the Juniper Cloud-Enabled Branch allows enterprises to leverage Internet connectivity to reduce WAN costs while improving operational efficiency. Unlike other SD-WAN-only vendors, Juniper's Cloud-Enabled Branch is based on a platform for deploying enterprise services and applications from a rich technology partner ecosystem.

Juniper's Cloud-Enabled Branch incorporates Contrail Service Orchestration, a modular service orchestration and service assurance platform with robust resource management and control capabilities built on an open framework. Automated service creation simplifies the service life cycle, enabling enterprises to quickly conceive and create highly customizable services in just minutes. Subsequent service additions, changes, and expansions can be fully automated, replacing traditional manual processes to reduce the risk of human error and eliminate network interruptions.

The Juniper Cloud-Enabled Branch also incorporates industry-leading security applications, including IP VPN, firewall, content filtering, antivirus, and unified threat management (UTM). This allows customers to define adaptive security policies based on customizable threat intelligence and cloud-based anti-malware applied pervasively across locations. In contrast to other SD-WAN-only vendors, Juniper's 2,000+ Professional Services engineers, combined with an extensive network of Professional Services partners, can help customers plan, build, and operate their unique solution services. Juniper's holistic approach ensures delivery of the Cloud-Enabled Branch across customer sites of all sizes and needs. Once in production, Juniper's maintenance and advanced service offerings, as well as managed service offerings from our Professional Services partners and Partner Support Services program, help maintain and operate a Juniper Cloud-Enabled Branch.

Juniper's automation workshops, deployment and design services, and educational offerings ensure that customers are equipped with the knowledge and resources they need to fully leverage the advanced capabilities of Contrail Service Orchestration, as well as virtualized applications running on the NFX250 platform, including the Juniper Networks vSRX virtual firewall.

The Juniper Cloud-Enabled Branch Solution: Building Blocks

The building blocks for Juniper's Cloud-Enabled Branch feature carrier-grade reliability and security bundled with intelligent automation and the flexibility to simplify the enterprise branch office's transition to the cloud. Juniper's Cloud-Enabled Branch consists of the following components:

- NFX250 Network Services Platform, an open, standards-based compute device that hosts virtualized software components to deliver a high-performance, low-cost solution for hosting flexible and virtualized software components
- Third-party network services from technology alliance partners or custom enterprise applications that simultaneously run on the NFX250 platform
- Juniper Networks SRX Series Services Gateways, including the vSRX virtual firewall, which provide a foundation for implementing a wide array of protection such as high-performance UTM services, next-generation firewall services, and dynamic threat defense and intelligence
- Juniper Networks Sky Advanced Threat Prevention (Sky ATP), a cloud-based service that integrates with SRX Series gateways to deliver advanced anti-malware protection against "zero-day" and unknown threats

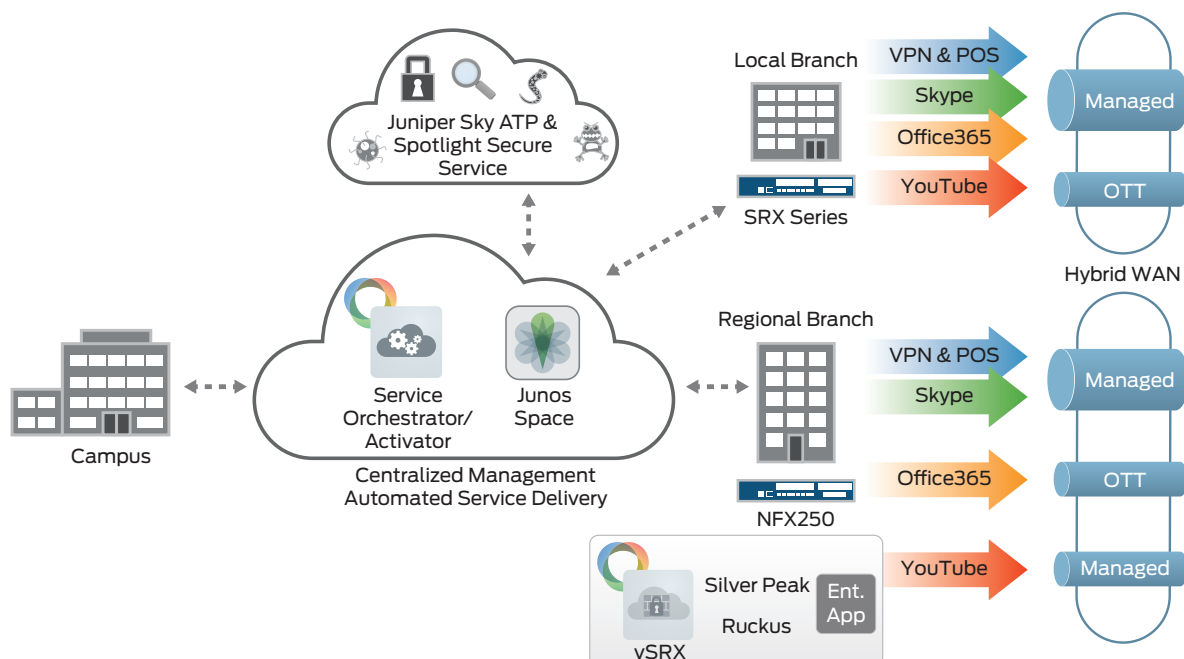


Figure 1: Juniper's Cloud-Enabled Branch

- Juniper Networks Spotlight Secure, a cloud-based threat intelligence platform that aggregates threat feeds from multiple sources to deliver open, consolidated, actionable intelligence to SRX Series gateways
- Contrail Service Orchestration, which governs composition, administration, and creation of flexible and efficient branches through an open framework, providing complete life cycle management of an enterprise branch office

The Juniper Cloud-Enabled Branch is backed by Juniper's Services and Support organization, which offers extensive experience in planning, building, and migrating branch offices to cloud-based architectures while minimizing risk and delivering results.

Features and Benefits

Maximize IT Value Through Operational Excellence

Juniper's Cloud-Enabled Branch is the only scalable solution to support multi-deployment models, delivering the scalability enterprises need to expand throughout the cloud with consistent service coherency and feature parity. Enterprise customers benefit from an affordable, centralized, pay-as-you-go deployment model that can swiftly expand into a distributed model for high availability, performance, and compliance. Juniper's Cloud-Enabled Branch is also extensible as an overlay between sites, enabling enterprise customers to virtualize internal services and increase service velocity to satisfy ever-growing business requirements.

Assure Application Performance

Juniper's Cloud-Enabled Branch simplifies service creation and supports highly customized service delivery. A simple GUI service design portal offering built-in, functional drag-and-drop network designer tools lets enterprises quickly create and deliver new and personalized services. The network designer tools provide the flexibility to choose appropriate virtual services that run on the NFX250 platform, connect virtual services, specify interface data paths, and implement policies and quality-of-service (QoS) rules designed to meet overall performance goals.

Ensure Agility

Unlike traditional branches where service deployment is a lengthy and manual process, Juniper's Cloud-Enabled Branch drastically reduces new branch creation time from days to just minutes. This allows IT personnel to adopt a fast-fail approach toward branch creation with little risk, introducing differentiated services and a rapid path to revenue with innovative new branch designs.

Provide Internet Economies

Juniper's Cloud-Enabled Branch allows customers to augment costly MPLS circuits with more cost-effective Internet access, delivering advanced security to alleviate concerns associated with public broadband, while providing connectivity in a reliable fashion.

Reduce Operational Expenditure

Juniper's Cloud-Enabled Branch reduces OpEx by adopting automation along with a centralized management and orchestration system. Contrail Service Orchestration improves all facets of the branch office life cycle, simplifying operations and eliminating manual processes such as installation, provisioning, and configuration of virtualized services.

Enable Business Policy-Driven Branch Configurations

Customer business requirements are fluid, changing constantly to reflect market dynamics. Juniper's Cloud-Enabled Branch lets enterprises react and respond to these changes in near real time, quickly moving from a one-size-fits-all model to a highly personalized, reactive model that transforms a branch to suit the prevailing business needs. Policies can be defined at the Contrail Service Orchestration console, and the necessary configurations proliferate automatically to reflect those policies.

Summary—Juniper Enables the Branch Office in the Cloud

Juniper's Cloud-Enabled Branch revolutionizes the way branch offices are designed and deployed, overcoming the challenges associated with deployment, management, and evolution by simplifying and automating the creation of customizable satellite facilities. Juniper's Cloud-Enabled Branch supports flexible deployment models with unprecedented scale for expanding onsite and scaling up in the cloud with vSRX virtual firewall and security functionalities running on a standards-based compute platform. By focusing on simplified branch configurations, orchestration, and operations, Juniper's Cloud-Enabled Branch enhances network performance, lowers costs, and delivers branch creation in an agile manner, elevating IT efficiency and ultimately leading to increased profitability.

Next Steps

For more information about the Juniper Networks Cloud-Enabled Branch, please contact your Juniper representative, or go to www.juniper.net/us/en/solutions/.

About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at Juniper Networks or connect with Juniper on [Twitter](https://twitter.com/juniper) and [Facebook](https://facebook.com/juniper).

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