

MULTICLOUD ENABLER POWERED BY RED HAT AND JUNIPER

Proven innovation simplifies and secures multicloud environments

PARTNER SOLUTION OVERVIEW

MULTICLOUD ENABLER
IS A SOFTWARE-DEFINED
MULTICLOUD MANAGEMENT
SOLUTION USING:

- Red Hat OpenShift
- Red Hat OpenStack
- Juniper Contrail Enterprise Multicloud

SOLUTION BENEFITS:

- Strengthened security
- Simplified multicloud management
- End to end visibility
- Automated issue remediation

INTRODUCTION

Today's enterprises rely on public and private clouds to enable business agility. Implementing these modern cloud technologies can result in greater complexity and potential security risks. Application workloads, regardless of whether they reside in containers or virtual machines (VMs), on premise, or in public clouds, must be thoroughly visible and able to be managed. Maintaining security, compliance with corporate IT standards, efficiency, and a consistent user experience are other challenges.

Managing these diverse environments with customized solutions is expensive and can limit a business' flexibility to take advantage of future innovation. These customers need solutions that can help them design Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) services in private datacenters and move workloads dynamically and securely between the clouds. Multicloud Enabler powered by Red Hat and Juniper provides a comprehensive multicloud platform that offers efficient and consistent operations with the ability to deploy and run workloads on any cloud - anywhere.

MULTICLOUD ENABLER - SECURE, SIMPLE, OPEN

The Multicloud Enabler solution helps businesses develop and deploy containers for applications and services using Red Hat OpenStack® Platform as the IaaS in their private clouds and Red Hat OpenShift® Container Platform as the PaaS. The solution uses Juniper Networks Contrail Enterprise Multicloud, Red Hat OpenStack, and Red Hat OpenShift Container Platform to connect, secure, and monitor workloads across private clouds and public clouds with a unified software-defined network (SDN). Multicloud Enabler powered by Red Hat and Juniper is designed to simplify and eliminate deployment and operation complexities, while maintaining an open and more secure cloud environment.

Contrail Enterprise Multicloud enables advanced analytics to monitor and analyze the entire infrastructure, rendering operations simpler and more effective. Contrail Enterprise Multicloud provides comprehensive, real-time visibility into the multicloud environment, along with intent-based analytics that allow for automated, preventative remediation in real time.

SOLUTION BENEFITS

With the Multicloud Enabler solution, enterprises benefit from:

- **Simple, automated and unified management.** Deploy and manage multiple VMs and container cloud environments as one cloud.
- **A unified security policy.** Protect user data, the infrastructure, and company intellectual property with multidimensional segmentation.
- **Open standards-based environments.** Capitalize on the rapid innovation found in open source communities and easily integrate multi vendor products.
- **Improved regulatory compliance.** Define, enforce, and monitor regulatory policies to maintain compliance in a simple manner.



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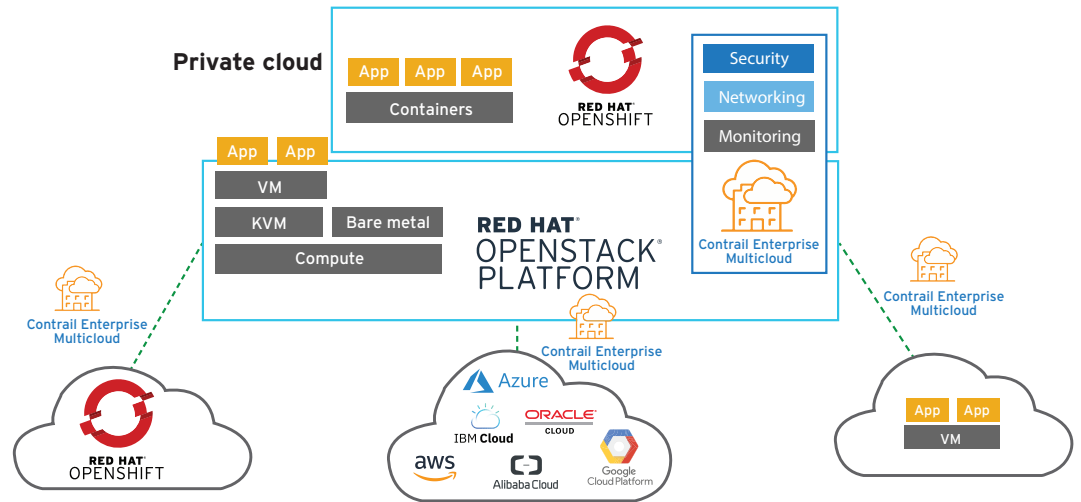


Figure 1: A simplified, secure path to multicloud implementations with Red Hat and Juniper Networks

- **An accelerated time to market.** Deploy new applications and manage multiple VMs and container cloud environments with a unified, consistent view, increasing the business' agility and time to market.
- **Advanced networking capabilities.** Creates an on-demand infrastructure that includes auto-scaling, improved onboarding for diverse applications, and smart input-output (I/O) to manage unpredictable and changing environments.

SOLUTION COMPONENTS

RED HAT OPENSIFT CONTAINER PLATFORM

Red Hat OpenShift Container Platform brings Linux® containers and Kubernetes to the enterprise. The platform helps organizations develop, build, deploy, and manage new and existing applications across physical, virtual, or public cloud infrastructures. It accelerates application development with automated workflows that make it easy to move from source code to production-ready container images for deployment. Red Hat OpenShift Container Platform is built on open source standards and is a secure, proven, and reliable container platform for organizations of any size. Regardless of your application architecture, OpenShift lets you easily and quickly build, develop, and deploy in nearly any infrastructure, public or private.

RED HAT OPENSTACK PLATFORM

Red Hat OpenStack Platform combines the power of Red Hat Enterprise Linux® with OpenStack technology to deliver a scalable foundation to build and manage an open private or public cloud. Red Hat OpenStack Platform uses Red Hat Enterprise Linux as the operating environment for services, access to hardware resources, and third-party integration with existing or new systems. Red Hat Enterprise Linux provides system-wide performance, scalability, and security as an operating system for the guest applications running in these virtual environments. For customers considering an OpenStack deployment, it matters which OpenStack distribution and which Linux offering to choose. Red Hat – recognizing the critical interdependencies between the two – co-engineered them with closely aligned product engineering teams.

JUNIPER CONTRAIL ENTERPRISE MULTICLOUD

Contrail Enterprise Multicloud is a single platform that manages heterogeneous compute environments, including bare metal servers, virtual machines, containers, and networking devices in both private and public clouds. It controls networking and security orchestration policies, including microsegmentation and advanced analytics. It manages end-to-end policy and control of:

- **Overlay.** The software-defined networking (SDN) capability, based on the open-source network virtualization project, Tungsten Fabric, enables organizations to deploy workloads in any environment. It offers continuous overlay connectivity to any workload running on any compute technology from networking devices to bare metal servers, virtual machines, and containers.
- **Underlay.** With integrated device management capabilities, Contrail Enterprise Multicloud helps automate the setup and life-cycle management of fabrics. Organizations can apply and control unified policies across physical and virtual multivendor environments.
- **Cloud.** Through extensibility and portability, teams can orchestrate workloads running in public and private clouds with consistent, end-to-end network, and security policy management.
- **Security.** Contrail Enterprise Multicloud allows organizations to define, apply, and manage policies uniformly across the environment from a central location using micro-segmentation. An integrated virtual router (vRouter) acts as a distributed element on every host where applications reside, enforcing security, redirecting suspicious traffic, and monitoring traffic flows. Contrail Enterprise Multicloud enforces the same level of security in your containerized workloads through Kubernetes integration.
- **Analytics.** Contrail Enterprise Multicloud enables real-time infrastructure performance monitoring (IPM) of networking devices, applications, and cloud infrastructure. With visibility across physical and virtual environments and intent-based analytics, it can predict, alert, and help to remediate issues in real time.

JUNIPER NETWORKS AND RED HAT STRATEGIC ALIGNMENT

Juniper Networks is a Premier Partner for Red Hat. The companies work together to test and certify the solution. Juniper Networks Contrail Enterprise Multicloud has been seamlessly integrated with Red Hat products so that Red Hat OpenStack and Red Hat OpenShift Container Platform are the defaults to handle all connectivity and security, ensuring the scalability and performance of the solution.

CONCLUSION

The Multicloud Enabler solution simplifies the deployment and operation of multicloud infrastructures, allowing enterprises to navigate the complexities of cloud deployment and operations simply and securely. It provides organizations with a trusted, open, and integrated software stack solution that doesn't compromise performance, scale, or availability. The Multicloud Enabler solution is:

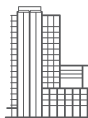
- **Secure.** With multi-dimensional segmentation and security built in, user data, application, infrastructure, and company intellectual property are preserved.
- **Simple.** Through software-defined networking and complete infrastructure visibility in a single platform, it offers an environment that is much easier for application development and deployment.
- **Open.** Using an open source approach to integration, enterprises avoid expensive, proprietary solution lock-in, and retain flexibility for future innovation.

LEARN MORE

For more information, visit <https://www.redhat.com/en/partners/juniper> or <https://www.juniper.net/us/en/products-services/sdn/contrail/multicloud-enabler/>. Try Multicloud Enabler powered by Red Hat and Juniper for free in a safe, cloud-hosted environment by visiting <http://juniper.net/try>.

ABOUT JUNIPER

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon, and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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