

TRANSFORM YOUR NETWORK

SIMPLIFY MODERNIZATION WITH AN INNOVATIVE
ECOSYSTEM OF CERTIFIED SOLUTIONS AND PARTNERS

TELECOMMUNICATIONS ECOSYSTEM E-BOOK

TABLE OF CONTENTS

Adapt to growing network demand.....	3
Modernize through partnership.....	4
Red Hat's partner network for telecommunications.....	5
Deploy the right applications for today and tomorrow.....	6
Build an adaptable foundation for your network.....	8
Seamlessly integrate your network environment.....	10
Next steps.....	13

HOW TO NAVIGATE THIS E-BOOK

This e-book is interactive. Move through it by scrolling, using the navigation bar at the bottom of the screen, or by using the forward and back buttons on the left and right sides of each page.

 Previous page

 Next page

 Skip to section

ADAPT TO GROWING NETWORK DEMAND

The telecommunications industry is changing. Keeping up with new demand for services requires telecommunications service providers to continuously grow their networks. Scalability and manageability are critical to accomplish this growth quickly and without increasing budgets. As a result, many service providers are adding modern network technologies and transforming their network infrastructure and services.

No single vendor can deliver a complete, end-to-end network solution, so partnering is essential. The Red Hat® network ecosystem brings together industry-leading partners and trusted open source communities to deliver innovative, validated, integrated solutions—like network functions virtualization (NFV), multicloud deployments, and environments for transforming monolithic applications to cloud-native microservices—to the telecommunications industry. Red Hat also collaborates with partners like Intel to advance the underlying technologies on which modern networks are based. These products and services are tested, supported, and certified to perform on Red Hat-based infrastructure. Detailed certification policies ensure compatibility and stable operation.

Red Hat works closely with ecosystem partners to certify the latest releases on an ongoing basis. As a result, you can always choose the network applications, robust platforms, and integrated technologies and services that work best for your organization, with confidence that they will work together reliably.

ADJUSTING TO ACCELERATING NETWORK DEMAND

Demand for all network services is growing quickly. By 2023, worldwide monthly mobile data traffic is expected to grow at a 39% compound annual growth rate (CAGR) to reach

107 exabytes.

Source: Ericsson, "[Ericsson Mobility Report](#)," June 2018.

MODERNIZE THROUGH PARTNERSHIP

Modernize your network with innovative, interoperable, and adaptable solutions from a rich partner ecosystem. Red Hat helps you connect agility with stability, speed with security, and choice with unity to build a foundation for success.



SIMPLIFY YOUR TRANSITION

Red Hat unites vendors, applications, components, and technologies to help you build the right infrastructure for your business and simplify the transition to modern network operations with seamless experiences.



CHOOSE YOUR COMPONENTS

Red Hat offers the broadest ecosystem for telecommunications service providers, giving you more flexibility. Confidently choose the components your organization needs, knowing they will work together reliably.



DEPLOY ADAPTABLE SOLUTIONS

Red Hat's ecosystem lets you build an adaptable foundation that unifies your network and IT infrastructure. Deploy the applications and workloads your customers demand today and evolve your infrastructure over time.

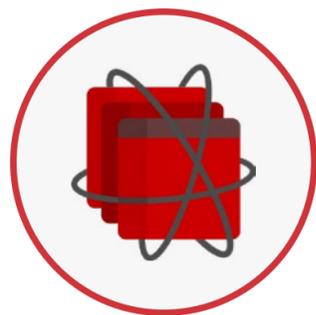


FOCUS ON YOUR OWN SUCCESS

Red Hat delivers flexible solutions to advance your business. We have partnerships with traditional vendors and new market entrants to help you build a modern infrastructure that adapts on your terms and schedule.

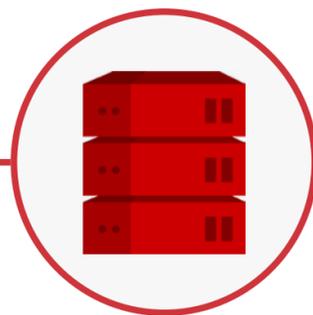
RED HAT TELECOMMUNICATIONS PARTNER NETWORK

Our broad partner ecosystem encompasses applications, infrastructure, and integrated technologies and services, giving you both choice and interoperability. Working with key partners like Intel, we help improve the virtual network function (VNF) onboarding experience and ensure that service providers are able to deploy truly horizontal platforms.



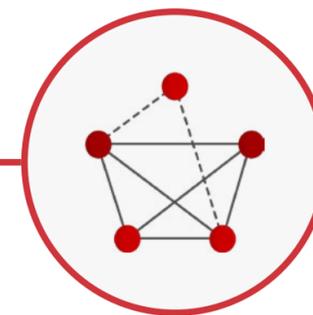
TELECOMMUNICATIONS APPLICATIONS

Choose from a variety of applications, VNFs, and management and orchestration tools.



FOUNDATIONAL INFRASTRUCTURE

Build an adaptable network foundation focused on manageability, scalability, and automation.



INTEGRATED SERVICES AND TECHNOLOGIES

Unify your environment with complete, integrated solutions and seamless experiences.

DEPLOY THE RIGHT APPLICATIONS FOR TODAY AND TOMORROW

Applications and network functions form the core of your end-customer offerings. Customer demand for new and innovative applications continues to grow. In fact, 61% of telecommunication service providers say emerging technologies and services are critical to their organization's long-term success.¹

Red Hat coordinates with partners creating network applications, VNFs, and management and orchestration tools to give you more choice. Certification programs ensure partner products run reliably on Red Hat-based infrastructure, including physical, virtualized, cloud, and containerized environments. Red Hat also works with key VNF partners to build and validate joint solution offerings.

¹ Telecoms.com, "Annual Industry Survey 2017," December 2017.

EXPANDING NETWORK SERVICES

The number of Voice over LTE (VoLTE) subscriptions is expected to reach

5.5 billion

by the end of 2023, creating a foundation for interoperable consumer and enterprise communication services on devices across LTE, Wi-Fi, and 5G.

Source: Ericsson, "Ericsson Mobility Report," June 2018.

KEY APPLICATIONS



Virtualized evolved packet core (vEPC)



Virtualized radio access network (vRAN)



Service assurance



Load-Balancing-as-a-Service (LBaaS)



Security



Virtualized evolved packet gateway (vEPG)

APPLICATION ECOSYSTEM PARTNER SPOTLIGHT



Gain agility and flexibility with vEPC.

Rapidly configure, provision, and launch LTE and 5G services on a unified mobile network infrastructure. Based on open technologies and platforms from Red Hat, Affirmed Networks provides innovative vEPC solutions that deliver the agility and flexibility needed to respond to growing traffic demand while reducing total cost of ownership (TCO).



Deliver more value with vRAN.

Provide more customer value, reduce network costs, and prepare for future growth and uncertainty. AltioStar offers a virtualized radio access network (vRAN) solution with full functionality—including flexible network topologies. This certified solution uses open source infrastructure from Red Hat and radio technologies from AltioStar.



Deploy new services with confidence.

Deliver the services your customers demand without worrying about interoperability. Ericsson has validated nine VNFs on Red Hat OpenStack® Platform and its networks carry around 40% of the world's mobile traffic.² As industry leaders, we continue to collaborate to develop, validate, and document additional virtualized network use cases like vEPC.

BUILD AN ADAPTABLE NETWORK FOUNDATION

You need a reliable, flexible infrastructure to run your network applications and meet growing demand for services. Manageability, scalability, and automation are essential attributes for network expansion and transformation, allowing you to operate your network more efficiently and without increasing costs.

Working with leading hardware, plugin, and infrastructure software partners, Red Hat delivers a modern, adaptable foundation for network operations. We collaborate with key partners from our enterprise ecosystem, like Intel, to extend advances in enterprise IT technologies into network infrastructure. There are many Red Hat-certified infrastructure partners and validated joint solutions available to fit your organization's requirements.

PROTECT YOUR CURRENT NETWORK INVESTMENTS

Red Hat management and automation tools work with the infrastructure and software you already have to help you unify your environments and run more efficiently.



KEY INFRASTRUCTURE ELEMENTS



Servers



Network
interface
cards (NICs)



Drives and
storage



Software-defined
networking
(SDN) controllers

INFRASTRUCTURE ECOSYSTEM PARTNER SPOTLIGHT



Automate network modernization.

Deliver a variety of VNFs while lowering costs and increasing agility. Cisco works with Red Hat to provide an integrated NFV solution that is reliable, easy, and fast to deploy. Our solutions provide high service availability, simplified operations, and optimized, workload-agnostic designs. We continue to collaborate to deliver modern, open, digital architectures.



**Hewlett Packard
Enterprise**

Speed network transformation.

Reduce costs, improve flexibility, and optimize service delivery with solutions that speed network transformation. HPE collaborates with Red Hat to develop, deliver, and support NFV, digital video services (DVS), media function virtualization (MFV), and software-defined wide-access network (SD-WAN) solutions based on open source platforms.



Simplify multicloud adoption.

Manage and run applications and services across virtual, container, and cloud environments with unified connectivity, security, and visibility administration. A leader in automated, scalable, and secure networks, Juniper Networks works with Red Hat to simplify adoption of multicloud environments with open, security-focused solutions.

SEAMLESSLY INTEGRATE YOUR NETWORK ENVIRONMENT

Integration and interoperability between new systems, legacy infrastructure, and components across your environment are critical for delivering reliable, high-quality services to your customers. Incompatibilities between components can lead to increased downtime, reduced performance, and lower customer satisfaction.

These are also important considerations when building modern network infrastructures that contain technologies, products, and components from many vendors and open source communities. Red Hat collaborates with a variety of partners to provide complete, integrated solutions with seamless experiences.



CHOOSE YOUR NETWORK INTEGRATION PATH

Red Hat works with many integration partners to provide the services and solutions you need. Purchase and deploy complete, integrated, and coengineered solutions within your environment, or engage a partner to plan and build a custom infrastructure for you. **The choice is yours.**

KEY INTEGRATIONS



Integrated and coengineered solutions



Seamless integration engagements

INTEGRATION ECOSYSTEM PARTNER SPOTLIGHT



Implement open source at scale.

Take advantage of industry expertise to deploy customized solutions that advance your business. For more than a decade, Accenture and Red Hat have teamed up to help you implement open source solutions for complex, large-scale projects. Using Red Hat technologies and specialized skills, Accenture helps you improve performance and create sustainable value.



Support business and operations.

Transition from physical networks to cloud service environments with open, vendor-agnostic, catalog-driven solutions. Amdocs partners with Red Hat to provide digital business and operations support system (BSS and OSS) solutions. The company also used Red Hat OpenShift® Container Platform to develop its latest BSS and OSS solution.

INTEGRATION ECOSYSTEM PARTNER SPOTLIGHT



Build open cloud ecosystems.

Build open, innovative, sustainable ecosystems around your cloud-based networks. Huawei works with Red Hat to deliver certified NFV and SDN solutions based on Red Hat OpenStack Platform. These solutions let you run critical workloads reliably on both on-premise infrastructure and on Huawei's public cloud platform.



Deliver critical workloads reliably.

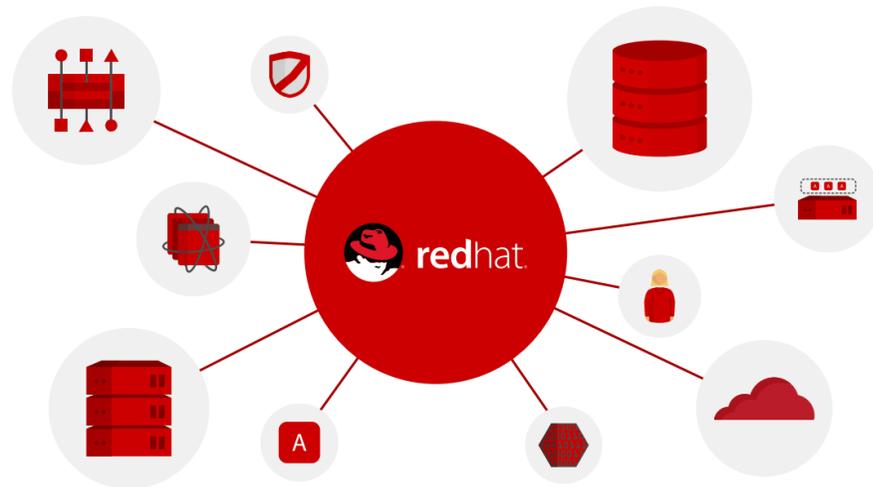
Deploy services like vEPC and virtual customer premises equipment (vCPE) with high-performance NFV and SDN solutions based on reliable, open, and scalable cloud platforms. For more than two decades, NEC has collaborated with Red Hat to deliver advanced computing and open source software solutions for critical workloads and operations.



Validate multivendor solutions.

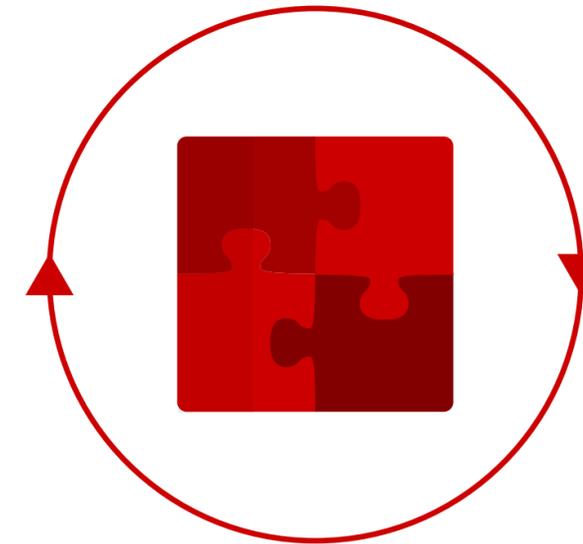
Quickly design, test, and validate the right multivendor solutions for your organization. Partnering with Red Hat, World Wide Technology (WWT) provides product demonstrations, sand box environments, proofs of concepts, and solution validation, integration, and testing services. Validated solutions can be sent to WWT's supply chain for deployment.

FLEXIBLE BUYING OPTIONS TO FIT YOUR NEEDS



MIX AND MATCH

Work with an integration partner to build a custom solution based on your choice of components. Red Hat serves as the central connection point for ecosystem components.



INTEGRATED EXPERIENCE

Choose a complete, prepackaged, repeatable, and scalable solution from our ecosystem partners. Red Hat brings partners together to develop, test, and certify these solutions.

THE CHOICE IS YOURS

Modernize your network with innovative, interoperable, and adaptable solutions from the most robust partner ecosystem for telecommunications. Whatever your needs, we can help you successfully prepare for a changing future.



accenture

affirmed

ALTIOSTAR

amdocs

Atos

big switch
networks



DELL EMC

DXC.technology



HCL

Hewlett Packard
Enterprise



IBM



JUNIPER
NETWORKS

kaloom

Lenovo

MAVENIR

metaswitch

mycomOSI

NEC

Netcracker



NOKIA

nuagenetworks
From Nokia



ribbon
communications

SevOne

TATA
CONSULTANCY
SERVICES

Tech
Mahindra

vasona
networks

World Wide Technology



**Start your network transformation
the open source way.**

go.redhat.com/telecommunications



**Learn about Red Hat technologies
for telecommunications.**

redhat.com/telco