

Red Hat Services Journey: NFV Adoption

Gain value from cloud computing and NFV

Telecommunications networking technology is moving from closed and proprietary solutions to a network function virtualization (NFV) architecture. In NFV architecture, software-based networking functions, known as virtual- and cloud-native network functions (VNFs/CNFs), run on cloud platforms that use commodity hardware to provide high-performing and highly available virtual infrastructure.

NFV standardizes and optimizes hardware costs and cloud operations while providing the ability to create and foster an open networking platform. NFV also provides open access to a large ecosystem of vendors, giving telecommunications service providers choice, agility, and faster time to market for new product and service introductions. With faster launches, you can spend more time innovating, which can make your organization more competitive and responsive in quickly evolving markets.

With the introduction of NFV-based 5G and edge networking, cloud platforms for networking become critical. As a result, telcos must accelerate their adoption of cloud technology.

Beyond technology, a holistic and strategic solution should introduce a transformation in approach. By embracing open standards and best practices, you can transform your team's skills and establish a culture of collaboration and continuous, positive change – while maintaining architectural control of your business.

Red Hat® Services Journey: NFV Adoption helps telcos overcome the challenges of adopting cloud technology and NFV, including:

- ▶ Adopting and understanding new cloud technologies, such as virtualization, containerization, and automation.
- ▶ Sourcing, training, and retaining staff with needed skills in these new technologies.
- ▶ Designing, building, and initiating operations on new cloud platforms.
- ▶ Automating cloud deployments to support the ongoing deployment of large numbers of edge locations.
- ▶ Creating new operational processes and aligning them with existing standards.
- ▶ Evolving and scaling the cloud platform to support a growing and successful business.

In addition, NFV adoption compliments other transformational offerings from Red Hat, including Red Hat Open Innovation Labs and additional training. If you are interested, we recommend talking to your account team about digital transformation opportunities.



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Adopting NFV for 5G and edge environments

Red Hat's NFV+5G services help telcos build, operate, and scale cloud-based networks. These services provide an approach that simplifies and automates the process of establishing an industrialized NFV environment, while helping to build a strong culture of innovation and self-sufficiency.

To successfully deploy NFV, we recommend that you create a core team to collaborate with the Red Hat Services team to establish and evolve your capabilities across the three pillars of transformation: people, processes, and technology.

Red Hat NFV+5G services support both rigorous initial design and build phases for specific hardware, networking, and workload requirements, as well as ongoing agile service frameworks. We organize the services engagements into three-month increments with clear, high-level objectives, built from a tested and constantly evolving NFV+5G services catalog, which contains deliverables across the entire life cycle of a NFV platform. These services can be combined both into larger fixed-scope increments and into ongoing services, where they are planned and delivered in an agile and flexible manner.

To deploy NFV, Red Hat works with partners, including systems integrators, VNF/CNF and software-defined network (SDN) vendors, hardware vendors, orchestration vendors, and other contributors to the telecommunications ecosystem. The flexibility of our NFV services accommodates their integration with and support of major NFV deployments and their ongoing evolution.

A typical Red Hat NFV services engagement would be organized as follows:

- 1. Blueprint services.** Conduct requirements workshops and agree to requirements. Conduct design activities and agree on design. Develop a customer-specific blueprint reference architecture built on Red Hat reference architectures, instantiate it in a lab, and implement Infrastructure as Code artifacts to manage its life cycle and serve as a basis for the development of automation of further cloud deployments.
- 2. Build services.** Deploy and validate test, pre-production, and production NFV platforms. Establish an approach to new product introduction and operational management that follows agile practices with automated workflows and customer feedback loops to inform prioritization.
- 3. Sustaining services.** Continuously improve and refine both business approach and technology implementations to address challenges as they emerge in the market and create opportunities for innovation. Evolve the architecture to support the onboarding of new virtualized or containerized network functions for new business models. Deploy new NFV sites and edge locations using automation.

The Red Hat Services difference

Working directly with Red Hat engineering and support organizations, Red Hat Consulting teams bring advanced skills to deliver solutions using Red Hat products and open standards. With exclusive insight into upcoming features and product roadmaps, nobody is better positioned to align teams, streamline processes, and make enterprise systems and applications work together using open source and proprietary technologies.

Telco industry focus. Red Hat Consulting includes regional telco practices. These architects and consultants combine Red Hat product expertise with the knowledge and experience of designing and deploying them for NFV solutions.

Straight from the source. Red Hat Consulting teams communicate directly with Red Hat support and product development organizations. Many of our consultants are also active contributors to the upstream open source communities behind Red Hat technologies, bringing you unparalleled expertise.

Diverse technical knowledge. Red Hat Consulting maintains deep experience with open source and proprietary systems and applications platforms. Our comprehensive understanding of the technology market helps us provide you with a complete view of your environment. Our guidance is based on a holistic understanding of building enterprise systems, not just our own products.

Mentor-based approach. Red Hat Consulting's approach gives you the information and skills you need to move to Red Hat solutions in a safe and efficient manner. Red Hat believes that knowledge must be open and shared, just like source code.

Crucial, real-world training. Red Hat Training and Certification develops role-based knowledge through hands-on training. We cover emerging and foundational open source technologies, for building real-world skills that support critical commoditization and transformation projects alike.



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 integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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