

VIRTUALIZE YOUR CENTRAL OFFICE TO GAIN FLEXIBILITY AND BOOST INNOVATION

SOLUTION BRIEF



Worldwide, hundreds of thousands of central offices connect users and devices at the network edge to the network core. There are more than 10,000 central offices in the United States alone.¹

Virtualizing your central office allows you to provide a variety of services to your customers, including:

- Broadband internet access.
- Software-defined wide area networks (SD-WAN).
- Content delivery networks (CDN).
- Mobile broadband access.
- Voice over Long Term Evolution (VoLTE) services.
- Enterprise virtual customer premise equipment (vCPE).

CENTRAL OFFICES ARE CRITICAL FOR EDGE SERVICES

Telecommunications service providers use central offices (COs) to deliver network access and services to enterprise, residential, and mobile customers. Located at the network edge, hundreds of thousands of COs connect access and aggregation networks to metro and core networks, making them a key asset in service delivery. Even so, the purpose-built, proprietary hardware most service providers rely on can limit agility and innovation, preventing them from offering the modern services users demand today.

Virtualizing your CO with network functions virtualization (NFV) and software-defined networking (SDN) technologies can alleviate these challenges by improving agility, innovation, and customer experience while also reducing costs. The Red Hat® virtual central office solution combines modern cloud and container platforms with advanced automation and management tools to form an ideal foundation for agile, innovative, and cost-effective COs.

VIRTUALIZE YOUR CENTRAL OFFICE AND MODERNIZE YOUR CAPABILITIES

To be effective, your virtual central office (VCO) must support a wide range of mobile, enterprise, and residential services using a common infrastructure. This requires a platform that delivers high performance, scalability, and service assurance across virtualized and container environments.

The Red Hat virtual central office solution is an open pluggable framework for edge deployments based on Red Hat technologies. These co-engineered, tested, and hardened open source technologies serve as a stable, interoperable base for certified third-party applications and services from Red Hat's comprehensive partner ecosystem (Figure 1). Partner products and technologies are validated to work reliably with Red Hat products, giving you more choice when deploying services. Red Hat also works closely with organizations and communities to help advance the technologies and use cases service providers demand.

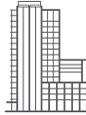
INCREASE AGILITY AND FLEXIBILITY

Implementing the Red Hat virtual central office solution gives you the infrastructure scalability, manageability, and automation needed to keep up with both unexpected and planned growth and market changes. Dynamically, massively, and automatically scale resources from a common infrastructure. Redirect resources from less-used services to those in higher demand at any time. Operate and administer your entire infrastructure from one interface with advanced, unified management and automation tools. Plus, you can use container technologies to strategically deploy and move applications across environments.

DELIVER MORE CUSTOMER VALUE

Deploying the Red Hat virtual central office solution lets you take advantage of open source innovation to provide a higher quality of service to your customers. Use the distributed architecture to move services from your datacenter to the network edge to improve performance and customer

¹ OPNFV, "Virtual Central Office: Building a Virtual Central Office (VCO) with open source communities and components," September 2017. opnfv.org/wp-content/uploads/sites/12/2017/09/OPNFV_VCO_Oct17.pdf.



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.

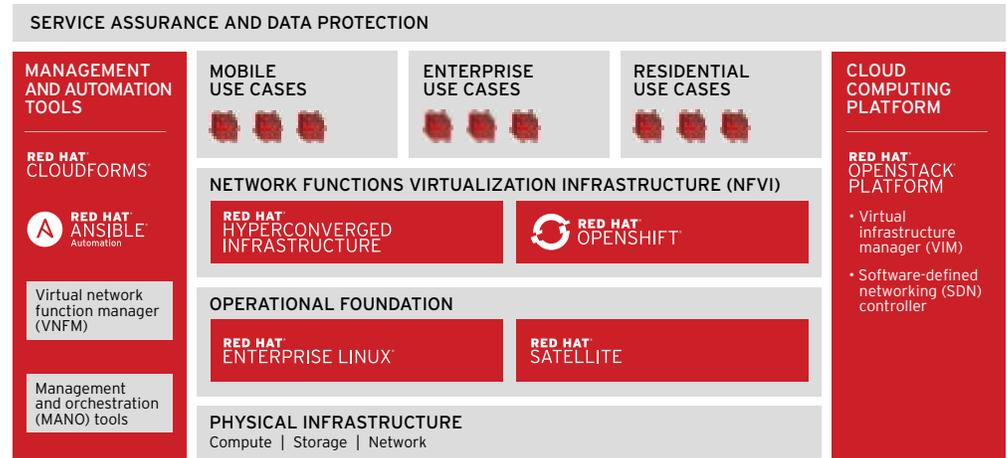


Figure 1. The Red Hat virtual central office solution architecture

experience. Launch, deliver, and scale services quickly and reliably across cloud-based infrastructure with automated management tools. Take advantage of Red Hat's open source development methods to access the latest innovations faster. Rapidly create compelling new services using modern application development approaches with an integrated environment for building and deploying containerized applications.

REDUCE COSTS

Virtualizing your central offices with an open framework, like the Red Hat virtual central office solution, can help you reduce costs. In fact, open source-based VCO deployments feature up to 43% lower total cost of ownership (TCO) compared to conventional central offices.² Share hardware and staffing costs across services, increase resource utilization, and improve overall efficiency with common, unified infrastructure. Shift large capital expenses (CapEx) from proprietary appliances to lower, predictable operating expenses (OpEx) and economical, commercially available hardware and software. Gain more choice and predictable pricing with in-production support, updates, bug fixes, and information included in Red Hat subscriptions.

LEARN MORE

Virtualizing your central offices can help you become more agile, deliver more value to your customers, and reduce costs. The Red Hat virtual central office solution provides a flexible, cost-effective foundation for modernization and innovation. Combined with certified partner applications and services, this solution lets you build an adaptable environment for building and delivering compelling services, so you can remain competitive in a fast-changing market. [Red Hat Consulting](#) also offers an [NFV adoption program](#) and [Discovery Sessions](#) to help you plan your transformation and modernization project using a simple, organized, and automated approach.

Learn more about Red Hat virtual central office solution at redhat.com/vco.

² OPNFV, "VCO TCO Solution Brief: A Virtual Central Office Results in Reduced Total Cost of Ownership," June 2018. opnfv.org/wp-content/uploads/sites/12/2018/06/OPNFV_SolutionBrief_VCO_TCO_Web_060818.pdf.

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NORTH AMERICA
1 888 REDHAT1

EUROPE, MIDDLE EAST,
AND AFRICA
00800 7334 2835
europe@redhat.com

ASIA PACIFIC
+65 6490 4200
apac@redhat.com

LATIN AMERICA
+54 11 4329 7300
info-latam@redhat.com



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