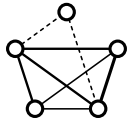# RED HAT OPENSTACK PLATFORM DISTRIBUTES COMPUTING ACROSS THE EDGE

**BRIEF**

OpenStack is a popular choice for cloud deployments across all industries and sizes of corporations.

OpenStack is one of the fastest-growing open source communities with more than 82,000 members from 187 countries around the world.[1]

Red Hat OpenStack Platform provides a tested, proven cloud infrastructure that supports traditional and cloud-native applications and serves as a foundation for digital transformation.

## EDGE COMPUTING ENABLING THE DIGITAL BUSINESS

Fueled by an accelerated pace of business and time-sensitive applications, edge computing helps businesses react faster to incoming data. It rapidly provides actionable insights that help today's widely distributed digital organizations gain competitive advantages.

However, these often smaller remote sites not only inherit traditional datacenter requirements for optimized power and cooling, continuous availability, and security, but they also face unique challenges. These difficulties include operating in a smaller physical environment, network latency, and maintaining operational and management consistency with minimal IT staff.

## EDGE COMPUTING WITH RED HAT OPENSTACK PLATFORM

Red Hat® OpenStack® Platform combines community-powered innovation with production-grade stability and support, creating the foundation of a private cloud. It can help organizations build an edge computing architecture with distributed compute nodes, placing compute power closer to the data source and providing consistent, centralized management from the core to the edge.

## BENEFITS OF DISTRIBUTED COMPUTE NODES

Built on a highly scalable and flexible OpenStack foundation, distributed compute nodes architecture helps organizations across various industries—including telecommunications, transportation, healthcare, and retail—increase efficiency, gain insights faster, and provide enhanced customer offerings that create differentiation.

With distributed compute nodes underpinning deployment of computing resources at the edge, organizations can:

- Scale and distribute their architecture while minimizing operational complexity by centrally managing edge deployments with the same tools used to manage the core OpenStack deployment—ideal for remote sites with limited IT staff.

- Decrease operational expenses through a smaller OpenStack footprint at the edge by using only computing services.

- Enable space-constrained environments that still need to benefit from the functionality offered by OpenStack by using as little as one node at the edge location.

- Gain speed by placing processing closer to the data source, reducing the latency to process requests and providing an enhanced user experience.

- Enhance security with an edge-adopted risk management framework and hardened deployment configuration driven by security automation.

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1  *"The OpenStack Foundation." OpenStack, April 4, 2019.* www.openstack.org/foundation/

# EDGE COMPUTING WITH ALL THE BENEFITS OF RED HAT

With Red Hat OpenStack Platform as the underpinning infrastructure for an edge computing architecture, organizations benefit from a solution built in an open source development model that combines fast-paced, cross-industry innovation with production-grade hardening, integrations, support, and services.

Intensively tested, Red Hat OpenStack Platform meets the rigors of enterprise and telecommunications service provider production environments. Ongoing patching, bug fixes, and certification ensure interoperability with upstream releases. Multiple life-cycle options—up to five years of support for select releases—let you choose when to upgrade and add new features and innovations to your Red Hat OpenStack Platform environment.

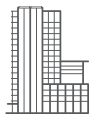## BROAD ECOSYSTEM AND SERVICES FOR SUCCESS

Red Hat's large, certified partner ecosystem lets you customize your edge computing environment with third-party products and technologies with the confidence that they will be interoperable and stable. Expert services teams assess your organization's needs and offer hands-on training and certification courses to help you gain the skills you need to build, operate, and maintain your architecture—from the edge to the core.

## CONCLUSION

Today's organizations are looking to accelerate application and service delivery and innovate faster to differentiate their businesses while empowering IT teams to support digital initiatives. Extending processing power to the edge is key for organizations looking to support new, latency-sensitive applications and Internet of Things (IoT) initiatives that require responsiveness and scale.

By placing IT resources in edge sites using Red Hat OpenStack Platform distributed compute nodes, organizations can offer a better quality of experience to customers through faster application processing. Additionally, the smaller OpenStack footprint creates a lower cost solution with consistent operations.

## 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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