

RED HAT OPENSTACK PLATFORM

DATASHEET

IN BRIEF

Red Hat OpenStack Platform is a production-ready foundation to help you create, deploy, scale, and manage a secure and reliable public or private OpenStack cloud.

READY FOR OPENSTACK?

As a community project, OpenStack is being developed and changed quickly. Red Hat removes risk by providing long-term stability through an enterprise software life cycle, and provides world-class, production-level support from a trusted technology partner.

PRODUCT OVERVIEW

Red Hat® OpenStack® Platform combines the power of Red Hat Enterprise Linux® with Red Hat OpenStack technology to deliver a scalable and secure foundation to build and manage an open private or public cloud.

OpenStack depends on Linux as the operating environment for its services, access to hardware resources, and third-party integration with existing or new systems. OpenStack also depends on Linux for system-wide performance, scalability, and security and as an operating system for the guest applications running in these virtual environments.

If your organization is considering an OpenStack deployment, it matters which OpenStack distribution and which Linux offering you choose. This is why Red Hat – recognizing the critical interdependencies between the two – co-engineered them together with closely aligned product engineering teams. Paired with Red Hat CloudForms’ open, hybrid management for workloads and infrastructure as well as Red Hat Ceph Storage’s highly redundant, software-defined storage, Red Hat OpenStack Platform is an integrated, optimized, and managed foundation for production-ready clouds.

FEATURES AND BENEFITS

By choosing Red Hat OpenStack Platform, you benefit from the fast pace of open source project innovation while maintaining a stable platform for production deployment. With Red Hat OpenStack Platform, you can concentrate on delivering the cloud services your customers demand, while Red Hat maintains the core OpenStack code and the underlying Linux platform on which it depends.

DEPLOY AND MANAGE OPENSTACK WITH CONFIDENCE

Reliable deployments with live upgrades	The director in Red Hat OpenStack Platform checks systems throughout the installation process to provide consistent, automated cloud deployment. It features live orchestrated system upgrades and updates, ensuring long-term, production-ready stability with little downtime.
Integrated orchestration	The Red Hat OpenStack Platform director provides system-wide orchestration of OpenStack resources, including bare-metal provisioning.
Unlimited Red Hat Enterprise Linux uses	Red Hat Enterprise Linux can operate on host nodes and unlimited virtualized workloads on OpenStack. ¹



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¹ Red Hat OpenStack Platform is available for purchase with or without unlimited Red Hat Enterprise Linux guests. Both versions include Red Hat Enterprise Linux for OpenStack host controller nodes.

**QUICKLY BUILD THE APPS
YOUR BUSINESS NEEDS
WITH A MODERN I.T.
INFRASTRUCTURE**

Consider Red Hat Cloud Suite. Learn more at redhat.com/cloud-suite

For more information on OpenStack, visit openstack.org

For more information on Red Hat cloud solutions, visit redhat.com/products/cloud-computing

**OPENSTACK TECHNOLOGY
LEADERSHIP FROM
RED HAT**

Red Hat has been a top code contributor to the OpenStack project since 2011. Learn more at stackalytics.com/?release=ewton&metric=commits.

**BUILD YOUR OPENSTACK
CLOUD ON THE INDUSTRY-
LEADING HYPERVISOR
FROM RED HAT**

The Red Hat Virtualization Hypervisor, based on KVM technology, holds top scores in the industry-standard SPECvirt hypervisor benchmark for performance, density, and scalability. Learn more at spec.org/virt_sc2013/resultsandspec.org/osg/virt_sc2010/results

Included workload and infrastructure management	Red Hat CloudForms can manage OpenStack workloads and infrastructure. It gives you resource management and data collection over OpenStack clouds, such as resource monitoring and reporting, compliance assurance, chargeback and showback, service cataloging, user management, and heat template management.
Reliable storage	Every Red Hat OpenStack Platform subscription includes 64TB of Red Hat Ceph Storage for users to get started with highly scalable and redundant object, block, and file storage. ²
Hardened for enterprise	An extensive patching, bug-fixing, testing, and certification process ensures broad compatibility and performance with upstream community releases.
Highly available infrastructure	Red Hat OpenStack Platform maintains high availability and policy-driven measures, including infrastructure failure recognition, automated host node evacuation, downed node fencing, and automatically restarts workloads on remaining available hosts.
Enterprise software life cycle	Red Hat provides stable branch releases of OpenStack and Linux that are supported for an enterprise production life cycle – beyond the six-month release cycle of the OpenStack community. Customers can choose to standardize for up to five years on certain releases or stay on top of the latest features by updating every six months to one year.
Expansive ecosystem	Red Hat has built the world’s largest certified OpenStack partner ecosystem for Red Hat OpenStack Platform. It includes thousands of certified servers and third-party software, plus an OpenStack-specific certification program with partners in the compute, storage, networking, ISV software, and service fields.
Technology leadership	Red Hat is a top code contributor to many OpenStack projects and a long-time leader in the OpenStack, Ceph storage, and broader Linux communities – making Red Hat an ideal supporter of full-scale OpenStack deployments.
Security	SELinux military-grade security technologies prevent intrusions and protect data when running in public or private OpenStack clouds.
Performance	The Red Hat Virtualization Hypervisor provides superior performance for OpenStack workloads. Based on Kernel-based Virtual Machine (KVM), the hypervisor holds record-breaking performance scores on the SPECvirt_sc2013 benchmark. ³

² Additional capacity of Red Hat Ceph storage sold separately.

³ All comparisons are based on a benchmark addressing performance evaluation of datacenter servers used in virtualized server consolidation at www.spec.org/virt_sc2013/ as of March 10, 2016. SPEC® and the benchmark name SPECvirt_sc® are registered trademarks of the Standard Performance Evaluation Corporation (SPEC).

RED HAT CERTIFIED TRAINING

Get your IT team trained on OpenStack and certified with our lab-intensive courses and performance-based exams. Learn more at redhat.com/en/services/training/openstack

PROFESSIONAL CONSULTING SERVICES

Red Hat offers a portfolio of consulting offerings for cloud technology solutions, including:

- Consulting discovery sessions
- Consulting assessments
- Consulting smart start

Learn more at redhat.com/consulting

Integrated stack

Red Hat OpenStack Platform helps relieve deployment and management burdens by integrating with a portfolio of Red Hat cloud infrastructure products.

- Deploy Red Hat Enterprise Linux as host nodes and virtual machines to gain performance, security, and operational advantages.
- Use Red Hat CloudForms as a unified infrastructure and to manage virtual workloads on Red Hat OpenStack Platform.⁴
- Set up Red Hat Ceph Storage for highly redundant, scale-out block, object, and image storage.
- Use Red Hat Virtualization for traditional scale-up virtualization alongside new OpenStack scale-out workloads.
- Deploy Red Hat OpenShift Container Platform to build a DevOps Platform-as-a-Service (PaaS) with containers.
- Access Red Hat Satellite for application and operating system entitlement, including images and host package management displayed by the director in Red Hat OpenStack Platform.

With Red Hat OpenStack Platform, your organization can access the most widely deployed enterprise Linux operating system, use Red Hat CloudForms for infrastructure and workload management, and take advantage of 64TB of Red Hat Ceph Storage to build an optimized and integrated OpenStack cloud. Find more information at redhat.com/en/technologies/linux-platforms/openstack-platform.

TECHNICAL SPECIFICATIONS

Red Hat OpenStack Platform will run on any server platform certified for Red Hat Enterprise Linux. The following minimums are required for specific server roles:

Compute nodes

- 64-bit x86 processor with support for the Intel 64 or AMD64 CPU extensions, and the AMD-V or Intel VT hardware virtualization extensions enabled (recommended minimum of four cores)
- A minimum of 6GB of RAM (additional RAM may be required based on the amount of memory the user intends to make available to virtual machine instances)
- A minimum of 40GB of available disk space (1TB is recommended for practical use)
- 2 x 1Gbps network interface cards (at least two NICs are recommended for production environments)
- Each compute node requires intelligent platform management interface (IPMI) on server's motherboard

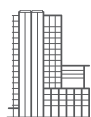
⁴ Included Red Hat CloudForms is limited to management over Red Hat OpenStack infrastructure and virtual workloads only. Additional providers (e.g. VMware) are sold separately.

Controller nodes

- 64-bit x86 processor with support for the Intel 64 or AMD64 CPU extensions
- A minimum of 32GB of RAM (64GB is recommended for optimal performance)
- A minimum of 40GB of available disk space
- 2 x 1Gbps network interface cards

Red Hat OpenStack Platform director

- 8-core 64-bit x86 processor with support for the Intel 64 or AMD64 CPU extensions
- Red Hat Enterprise Linux 7.3 as the host operating system
- A minimum of 16GB of RAM
- A minimum of 40GB of available disk space (10GB of free space is needed before attempting an Overcloud deployment or update)
- A minimum of 2 x 1Gbps network interface cards (10Gbps is recommended for provisioning network traffic, especially if provisioning a large number of nodes in Overcloud)



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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