

# RED HAT CLOUD INFRASTRUCTURE

DATASHEET



Red Hat Cloud Infrastructure named IaaS/PaaS Product of the Year.

Techworld, November 2013

## OVERVIEW

Red Hat® Cloud Infrastructure helps you build and manage a private Infrastructure-as-a-Service (IaaS) cloud based on datacenter virtualization and management technologies for traditional workloads. It also provides an on-ramp to a highly scalable, public-cloud-like infrastructure based on OpenStack®. With Red Hat Cloud Infrastructure, you can implement an integrated infrastructure to increase your IT department's value and improve manageability.

Built upon the trusted and enterprise-hardened Red Hat Enterprise Linux® platform, Red Hat Cloud Infrastructure helps you implement an open private cloud to deploy and efficiently manage traditional enterprise workloads and the new class of cloud-architected workloads.

Red Hat Cloud Infrastructure is a single-subscription offering that integrates the following products:

- **Red Hat Enterprise Virtualization:** A complete datacenter virtualization product for Linux and Windows workloads that enables you to build an agile, secure, and highly scalable virtualization foundation with the features needed for traditional enterprise application workloads.
- **Red Hat CloudForms:** An open hybrid cloud management solution that provides visibility and control over existing heterogeneous virtual infrastructures and lets you deploy, monitor, and manage cloud services across virtualization products (e.g., Red Hat Enterprise Virtualization and VMware vSphere), Red Hat Enterprise Linux OpenStack Platform, and an increasing numbers of public cloud platforms.
- **Red Hat Enterprise Linux OpenStack Platform:** A massively scalable IaaS product that delivers an open, flexible, and enterprise-ready private cloud foundation of OpenStack—optimized for and integrated with Red Hat Enterprise Linux.

## OPEN PRIVATE CLOUD NOW, OPENSTACK TOMORROW

If your company is like most others, you're experiencing pain on several common fronts. For one, you're probably paying too much for virtualization or cloud infrastructure solutions. You probably have several management tools for these topologies, and they still don't cover all of your virtualization, cloud, and public cloud infrastructure needs. You likely have developers who have turned to Amazon, or other public cloud providers, to develop applications, rather than waiting weeks or months for servers or virtual machines (VMs) to be provisioned in the exact manner they need. At the very least, this "shadow IT" isn't centrally managed, proves costly over time, and may violate IT security policies.

You're also probably intrigued by OpenStack and its potential to massively scale at a cost far lower than you are paying current proprietary vendors year in and year out. But you've also spent years building your current infrastructure and don't want to rip and replace these investments and start over.



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## RED HAT CLOUD INFRASTRUCTURE AT A GLANCE

- Manages your entire infrastructure from a single console
- Use one solution as your needs evolve—from traditional virtualization to private cloud, hybrid cloud, and public cloud
- Build a private cloud based on datacenter virtualization, traditional workloads, and/or hybrid deployment models
- Easily migrate workloads and applications dynamically across all infrastructures
- Offers choice and interoperability without vendor lock-in
- Add scalable cloud capabilities inside your datacenter to bring public cloud workloads back in house
- Includes top virtualization benchmarks for performance and scalability<sup>2</sup>

If any of this sounds familiar, Red Hat Cloud Infrastructure can help—with a low-cost, high-performance virtualization solution, a robust management tool for heterogeneous clouds and virtualization topologies, and Red Hat's supported, enterprise-ready OpenStack product. With this solution, you have the flexibility to deploy any combination of these fully integrated components in a manner dictated by your current needs and future plans. Red Hat Cloud Infrastructure is far less expensive, yet far more comprehensive than alternative solutions. It's designed to work with your existing infrastructure investments, offering you choice, rather than vendor lock-in, and full control of your strategic direction.

The solution can address all of your virtualization and private cloud needs. Need more virtualization capacity and better heterogeneous management, but wary of paying steep proprietary prices? The combined strength of Red Hat Enterprise Virtualization and Red Hat CloudForms provides a highly secure, full-featured virtualization solution with a heterogeneous management tool that spans not just Red Hat Enterprise Virtualization, but VMware vSphere and Microsoft Hyper-V as well.

Looking to move to an enterprise private cloud or expand your existing cloud infrastructure? For your high SLA workloads that demand maximum uptime, Red Hat Enterprise Virtualization, with its high availability features, can be combined with CloudForms, and its broad cloud management functionality. This combined solution can be used to create and extend a cloud infrastructure consisting of multiple heterogeneous virtualization technologies, and even public cloud providers, all managed from a single interface.

For cloud-enabled applications, Red Hat Enterprise Linux OpenStack Platform and CloudForms provide a massively scalable public-cloud-like infrastructure with management, self-service provisioning, chargeback, and more. This solution allows you to regain control of "shadow IT" applications built on Amazon, by either migrating them to Red Hat Enterprise Linux OpenStack Platform or providing visibility and management over them with CloudForms.

Use cases for OpenStack are broad and you might elect to move portions of your applications to the platform, provision VMs to developers or technicians across your organization for data modeling and collaboration, or build modular customer-facing applications that can be quickly updated to provide rapid competitive advantage. Because Red Hat is the world's leading provider of open source solutions, a founding member of the OpenStack Foundation, and the top corporate contributor<sup>1</sup> for the OpenStack Grizzly and Havana community releases, you can confidently rely on Red Hat Cloud Infrastructure and the underlying support to meet your unique private cloud needs.

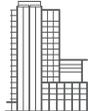
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<sup>1</sup> [www.stackalytics.com/](http://www.stackalytics.com/)

<sup>2</sup> Based on SPECvirt\_sc2010 benchmark results as of November 2013

## FEATURES BY USE CASE

FEATURE CATEGORIES BY USE CASE	CAPABILITIES
<b>Cost-effective managed virtualization</b>	
Open	<ul style="list-style-type: none"> <li>• Offers choice and interoperability with no proprietary lock-in</li> </ul>
Leading performance	<ul style="list-style-type: none"> <li>• Offers top virtualization benchmarks for performance and scalability on the SPECvirt_sc2010 benchmark</li> </ul>
Hybrid	<ul style="list-style-type: none"> <li>• Unifies life cycle management for multiple hypervisor and cloud technologies through a centralized administration console</li> </ul>
<b>Foundation for an open, private cloud</b>	
Standards	<ul style="list-style-type: none"> <li>• Meets private cloud use cases based on datacenter virtualization, traditional workloads, and hybrid deployment models</li> </ul>
Capacity	<ul style="list-style-type: none"> <li>• Accelerates your private cloud environment's capacity using open virtualization technologies at a much lower cost, unifying with your existing proprietary virtualization capacity</li> </ul>
Support	<ul style="list-style-type: none"> <li>• Allows for deployment of an OpenStack, standards-based private cloud, built on enterprise-grade Red Hat Enterprise Linux OpenStack Platform</li> <li>• Provides enterprise support from Red Hat for Red Hat Enterprise Linux OpenStack Platform</li> </ul>
<b>Foundation for an open hybrid cloud</b>	
Hybrid	<ul style="list-style-type: none"> <li>• Manages hybrid capabilities across vendors and between a public and private cloud</li> </ul>
<b>Foundation for a private cloud in the future</b>	
Future-proof	<ul style="list-style-type: none"> <li>• Provides support for and the ability to adopt OpenStack technology on your timeline, when your applications and workloads are ready</li> </ul>


**ABOUT RED HAT**

Red Hat is the world's leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services. Red Hat is an S&P company with more than 70 offices spanning the globe, empowering its customers' businesses.

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**SYSTEM REQUIREMENTS**

- **Red Hat Enterprise Virtualization Manager:** Recommended 1-2 quad core x86\_64 processors, 16 GB RAM, 50 GB disk, 1 Gbps Ethernet NIC
- **Red Hat Enterprise Virtualization Hypervisor:** 1 CPU with Intel® 64 or AMD64 CPU extensions, and AMD-V™ or Intel VT® hardware virtualization extensions, 2 GB RAM, 10 GB local disk storage, 1 GB Ethernet NIC
- **Red Hat CloudForms 3.0:** Delivered as a virtual appliance in Open Virtual Format (OVF) for either Red Hat Enterprise Virtualization 3.0 or later, or VMware vSphere
- **Red Hat Enterprise Linux OpenStack Platform 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. 2 GB RAM, 50 GB available disk space, 2 x 1 Gbps Network Interface cards
- **Red Hat Enterprise Linux OpenStack Platform controller 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. 2 GB RAM, 50 GB available disk space, 1 Gbps Network Interface cards

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All benchmark comparisons based on benchmark addressing performance evaluation of datacenter servers used in virtualized server consolidation at [www.spec.org/virt\\_sc2010/](http://www.spec.org/virt_sc2010/) as of November 1, 2013. SPEC® and the benchmark name SPECvirt\_sc® are registered trademarks of the Standard Performance Evaluation Corporation.

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