RED HAT CLOUD INFRASTRUCTURE

DATASHEET

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 deliver services faster, increase your IT department's value, reduce total cost of ownership (TCO), 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 CloudForms: An open hybrid cloud management platform that provides visibility and control over existing heterogeneous virtual infrastructures. With it, you can deploy, monitor, and manage cloud services across multiple virtualization platforms (e.g., Red Hat Enterprise Virtualization and VMware vSphere), Red Hat Enterprise Linux OpenStack Platform, and an increasing number of public cloud providers.

Red Hat Satellite: A system management platform that provides lifecycle management for Red Hat Enterprise Linux for both host and tenant operating systems within Red Hat Cloud Infrastructure. This includes provisioning, configuration management, software management, and subscription management. Working in concert with CloudForms, it ensures lower cost of ownership (TCO), reduced complexity, and greater control.

Red Hat Enterprise Virtualization: A complete datacenter virtualization product for Linux and Windows workloads that lets you build an agile, secure, and highly scalable virtualization foundation with the features needed for traditional enterprise application workloads.

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.

Red Hat Enterprise Linux: Forms the basis of Red Hat Enterprise Linux OpenStack Platform and Red Hat Enterprise Virtualization at the host operating system layer. In addition, a customer can opt to purchase Red Hat Cloud Infrastructure with unlimited guests.

YOUR CLOUD, YOUR WAY, YOUR TIMETABLE

WITH CHALLENGES COME OPPORTUNITIES

Like many organizations, you're probably faced with infrastructure challenges on several fronts, all acting in concert to threaten IT's organizational relevance. For one, you're probably paying too much for virtualization or cloud infrastructure solutions. You probably also have several expensive or homegrown management tools for these topologies, and they still don't cover all of your virtualization, cloud, and public cloud infrastructure needs.

You likely have multiple lines of business (LOBs) demanding that you deliver services more rapidly. This includes meeting user demand with faster application performance and greater scalability when needed, but also faster time to market for the ever increasing amount of new workloads that

LOBs need for competitive advantage. And when virtual machines (VMs) can't be provisioned quickly
enough, developers and LOBs frequently turn to Amazon or other public cloud providers to build and
host their workloads. At the very least, this shadow IT isn't centrally managed, proves costly over
time, and may violate IT security policies.

To help combat this, you're 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.

If any of this sounds familiar, Red Hat Cloud Infrastructure can help – with a robust cloud management
platform for managing heterogeneous clouds and virtualization topologies; a system management
tool for life cycle management; a low-cost, high-performance virtualization solution; 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 the way you need them today with the choice
to change them in the future. Red Hat Cloud Infrastructure is far less expensive, yet far more compre-
hensive than alternative solutions. It's designed to work with your existing infrastructure investments,
offering you choice and full control of your strategic direction – free from vendor lock-in.

HETEROGENEOUS DATACENTER VIRTUALIZATION

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.
Red Hat Satellite allows for lifecycle management of Red Hat Enterprise Linux within the Red Hat
Cloud Infrastructure deployment. For example, hypervisors within Red Hat Enterprise Virtualization
or compute nodes within Red Hat Enterprise Linux OpenStack platform can be automatically
updated based on an organization's lifecycle management policies using Red Hat Satellite. Similarly,
Red Hat Enterprise Linux guests hosted can be automatically provisioned or updated as well.

PRIVATE CLOUD BASED ON VIRTUALIZATION TECHNOLOGIES

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 func-
tionality, as well as the life cycle management offered by Red Hat Satellite. This combined solution
can be used to create and extend a cloud infrastructure consisting of multiple heterogeneous virtu-
alization technologies, and even public cloud providers.

OPENSTACK-BASED CLOUD ARCHITECTURE

For cloud-enabled applications, Red Hat Enterprise Linux OpenStack Platform, CloudForms, and
Satellite provide a massively scalable, public-cloud-like infrastructure with management, self-service
provisioning, chargeback, configuration management, and more. This solution lets you 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. You might elect to move portions of your applications to the
platform, provision VMs to developers or technicians across your organization for data modeling
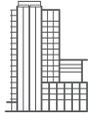and collaboration, or build modular customer-facing applications that can be quickly updated to your

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competitive advantage. Because Red Hat is a founding member of the OpenStack Foundation and a top corporate contributor[2] for the past four community releases, you can confidently rely on technology that is created and supported by Red Hat. And because Red Hat is the world's leading provider of open source solutions, you can confidently rely on technology that is created and supported by the company with the broadest expertise available.

USE CASES

USE CASES	CAPABILITIES
Cost-effective managed virtualization	
Open	• Offers choice and interoperability with no proprietary lock-in
Leading performance	• Offers top virtualization benchmarks for performance and scalability on the SPECvirt_sc2010 benchmark
Hybrid	• Unifies life cycle management for multiple hypervisor and cloud technologies through a centralized administration console
Complete	• Manage the complete life cycle of host and tenant operating systems at scale from a single console
Foundation for an open, private cloud	
Standards	• Meets private cloud use cases based on datacenter virtualization, traditional workloads, and hybrid deployment models
Capacity	• Accelerates your private cloud environment's capacity using open virtualization technologies at a much lower cost, unifying with your existing proprietary virtualization capacity
Support	• Allows for deployment of an OpenStack, standards-based private cloud, built on enterprise-grade Red Hat Enterprise Linux OpenStack Platform
	• Provides enterprise support from Red Hat for Red Hat Enterprise Linux OpenStack Platform
Foundation for an open hybrid cloud	
Hybrid	• Manages hybrid capabilities across vendors and between a public and private cloud
Foundation for a private cloud in the future	
Future-proof	• Provides support for and the ability to adopt OpenStack technology on your timeline, when your applications and workloads are ready

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2 www.bitergia.com

TECHNICAL SPECIFICATIONS

SYSTEM REQUIREMENTS

- **Red Hat Enterprise Virtualization Manager**: Recommended 1-2 quad core x86_64 processors, 16GB RAM, 50GB disk, 1 Gbps Ethernet NIC

- **Red Hat Enterprise Virtualization Hypervisor**: 1 CPU with Intel® 64 or AMD64 CPU extensions, and AMD-VTM or Intel VT® hardware virtualization extensions, 2GB RAM, 10GB local disk storage, 1GB Ethernet NIC

- **Red Hat CloudForms 3.1**: 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. 2GB RAM, 50GB 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. RHEL 6.5 or later, 2GB RAM, 50GB available disk space, 1 Gbps Network Interface cards

- **Red Hat Satellite 6**: 64-bit architecture, RHEL 6.5 or later, a minimum of two CPU cores, minimum of 8GB memory but ideally 12GB. During installation, any additional yum repositories other than those specified in the Red Hat Satellite installation documentation MUST be disabled.

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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