

RED HAT CLOUD INFRASTRUCTURE

DATASHEET

“Red Hat ... leads the evaluation with its powerful portal, top governance capabilities, and a strategy built around integration, open source, and interoperability.”

THE FORRESTER WAVE™
PRIVATE CLOUD SOFTWARE SUITES
Q1 2016

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 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 build an open, private cloud to deploy and manage both cloud-based and traditional enterprise 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 independent virtual infrastructures. With it, you can deploy, monitor, and manage cloud services across multiple virtualization platforms – such as Red Hat Enterprise Virtualization and VMware vSphere – as well as on Red Hat OpenStack Platform and an increasing number of public cloud platforms.

Red Hat Satellite: A system management platform that provides life-cycle management for Red Hat Enterprise Linux on 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 Red Hat CloudForms, it ensures lower 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 necessary features for traditional enterprise application workloads.

Red Hat OpenStack Platform: A massively scalable IaaS product that delivers an open, flexible, and enterprise-ready private cloud foundation – optimized for and integrated with Red Hat Enterprise Linux. This product also includes 64TB of Red Hat Ceph Storage.

Red Hat Enterprise Linux: Forms the basis of both Red Hat Enterprise Linux and Red Hat Enterprise Virtualization at the hosted 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 have probably faced infrastructure challenges on several fronts, all acting in concert to threaten IT's organizational relevance. You may be paying too much for virtualization or cloud infrastructure solutions. You may also have several expensive or homegrown management tools for these topologies that don't cover all of your virtualization, cloud, and public cloud infrastructure needs.



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**RED HAT CLOUD
 INFRASTRUCTURE
 AT A GLANCE**

- 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 hybrid deployment models.
- Migrate workloads and applications easily and dynamically across all infrastructures.
- Get choice and interoperability without vendor lock-in.
- Add scalable cloud capabilities inside your datacenter to bring public cloud workloads back in house.
- Rely on top virtualization benchmarks for performance and scalability.¹
- Oversee and orchestrate your entire cloud infrastructure from a single console.
- Use integrated life-cycle management that ensures automated provisioning, configuration management, and software management of Red Hat Enterprise Linux and any RPM-based application.

If you have multiple lines of business (LOBs) demanding that you deliver services more rapidly, you need a solution to help you meet user demand with faster application performance and greater scalability – plus faster time to market for the new workloads that LOBs need for competitive advantage. 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. However, this shadow IT is not centrally managed, can prove costly over time, and may violate IT security policies.

To help combat this, you may be interested in OpenStack and its potential to massively scale at a cost far lower than you are paying current proprietary vendors. But if you have also spent years building your current infrastructure, you may not want to rip out these investments and start over.

If any of this sounds familiar, Red Hat Cloud Infrastructure can help. It offers a robust cloud management platform for managing independent cloud environments and virtualization topologies; a life-cycle management tool; a low-cost, high-performance virtualization solution; and Red Hat's supported, enterprise-ready OpenStack product. With this solution, you can deploy any combination of these fully integrated components the way you need them today, and change them in the future. Red Hat Cloud Infrastructure is far less expensive than alternative solutions, yet far more comprehensive.² It's designed to work with your existing infrastructure, offering you choice and control of your direction – without vendor lock-in.

UNIFIED DATACENTER VIRTUALIZATION

The solution can address all of your virtualization and private cloud needs. Need more virtualization capacity and unified 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 management tool that spans not just Red Hat Enterprise Virtualization, but VMware vSphere and Microsoft Hyper-V as well. The addition of Red Hat Satellite allows Red Hat Enterprise Linux life-cycle management within the deployment – automatically patching and updating Red Hat Enterprise Virtualization hypervisors and provisioning Red Hat Enterprise Linux guests on command.

PRIVATE CLOUD-BASED ON VIRTUALIZATION TECHNOLOGIES

Looking to move to an enterprise private cloud or expand your existing cloud infrastructure? For large Service Level Agreement (SLA) workloads that demand maximum uptime, Red Hat Enterprise Virtualization can be combined with CloudForms and its broad cloud management functionality, as well as Red Hat Satellite's life-cycle management. This combined solution can be used to create and extend a cloud infrastructure consisting of multiple heterogeneous virtualization technologies and public cloud providers.

OPENSTACK-BASED CLOUD ARCHITECTURE

For cloud-enabled applications, Red Hat OpenStack Platform, CloudForms, and Red Hat Satellite provide a massively scalable, public cloud-like infrastructure that includes configuration, management, self-service provisioning, and chargeback. This solution lets you regain control of shadow IT applications, either by migrating them to Red Hat OpenStack Platform or by using CloudForms to provide visibility and management.

¹ <http://www.stackalytics.com>

² https://roianalyst.alinean.com/ent_02/AutoLogin.do?d=473970471489625683

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 competitive advantage. Because Red Hat is a founding member of the OpenStack Foundation and a top corporate contributor² 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.

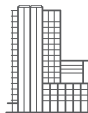
USE CASES

USE CASES	CAPABILITIES
Cost-effective managed virtualization	
Open	<ul style="list-style-type: none"> • Offers choice and interoperability without lock-in
Leading performance	<ul style="list-style-type: none"> • Offers top virtualization benchmarks for performance and scalability on the SPECvirt_sc2010 benchmark
Hybrid	<ul style="list-style-type: none"> • Unifies life-cycle management for multiple hypervisor and cloud technologies through a centralized console
Complete	<ul style="list-style-type: none"> • Manages the complete life cycle of host and tenant operating systems at scale through a centralized console
Foundation for an open, private cloud environment	
Standards	<ul style="list-style-type: none"> • Meets private cloud use cases based on datacenter virtualization, traditional workloads, and hybrid deployment models
Capacity	<ul style="list-style-type: none"> • Accelerates your private cloud environment's capacity using open virtualization technologies at a much lower cost, unifying with your existing proprietary virtualization capacity
Support	<ul style="list-style-type: none"> • Allows for deployment of an OpenStack, standards-based private cloud environment, built on enterprise-grade Red Hat OpenStack Platform • Provides enterprise support from Red Hat for Red Hat OpenStack Platform
Foundation for an open hybrid cloud environment	
Hybrid	<ul style="list-style-type: none"> • Manages hybrid capabilities across vendors and between a public and private cloud
Foundation for a future private cloud environment	
Future-proof	<ul style="list-style-type: none"> • Provides support for and the ability to adopt OpenStack technology on your timeline, when your applications and workloads are ready

TECHNICAL SPECIFICATIONS

SYSTEM REQUIREMENTS

- **Red Hat Enterprise Virtualization Manager:** Recommended 1-2 quad core x86_64 processors, 16GB RAM, 50GB disk, 1 Gbps Ethernet network interface controller (NIC)
- **Red Hat Enterprise Virtualization Hypervisor:** 1 CPU with Intel 64 or AMD64 CPU extensions, and AMD-V 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 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 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. Red Hat Enterprise Linux 6.5 or later, 2GB RAM, 50GB available disk space, 1 Gbps network interface cards
- **Red Hat Satellite 6:** 64-bit architecture, Red Hat Enterprise Linux 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 software solutions, using a community-powered approach to 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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