DATASHEET

RED HAT ENTERPRISE VIRTUALIZATION FOR SERVERS

AT A GLANCE

- Complete end-to-end enterprise virtualization solution
- Combines an advanced KVM hypervisor with an enterprise class management system
- Delivers record-setting performance and scalability along with unmatched consolidation ratios
- Comprehensive management feature set
- Open source solution with active community of contributors avoiding proprietary vendor lock-in
- Complete portfolio of training and consulting services available
- Lowest cost of ownership among enterprise virtualization platforms
- Essential internal cloud capability with self-service, automation, and detailed reporting built in

OVERVIEW

Red Hat® Enterprise Virtualization is a complete virtualization management solution. Created by the people who brought you Red Hat Enterprise Linux, Red Hat Enterprise Virtualization takes you beyond bare metal to meet your critical business demands, while leveraging the performance advantages, competitive pricing, and trusted, stable environment that you expect from Red Hat.

Red Hat Enterprise Virtualization builds on the powerful Kernel-based Virtual Machine (KVM) hypervisor and the oVirt open virtualization management platform, projects started and released to the community by Red Hat. Red Hat Enterprise Virtualization is the platform of choice for virtualized Linux workloads and represents a true strategic virtualization alternative to organizations looking for better total cost of ownership, faster return on investment, and avoidance of vendor lock-in when compared to proprietary virtualization platforms.

IDEAL FOR LARGE SCALE VIRTUALIZATION AND INTERNAL CLOUD DEPLOYMENTS

Red Hat Enterprise Virtualization offers enterprises the ideal platform on which to base large scale virtualization initiatives and internal/private cloud deployments. The powerful Kernel-based Virtual Machine (KVM) hypervisor has achieved record setting virtualization benchmark results as well as unmatched consolidation ratios. The fully featured enterprise management system enables customers to centrally and effectively manage their entire virtual environment – virtual data centers, clusters, hosts, guest virtual servers, networking, and storage. Fully featured with high availability, live migration, storage live migration, policy-based workload balancing, image management, live snapshots and thin provisioning. With guest operating system support for Red Hat Enterprise Linux guests (32 bit and 64 bit) and for Microsoft Windows Guests (32 bit and 64 bit) complete with paravirtualized network and block drivers, Red Hat Enterprise Virtualization has been engineered to support your entire IT infrastructure.

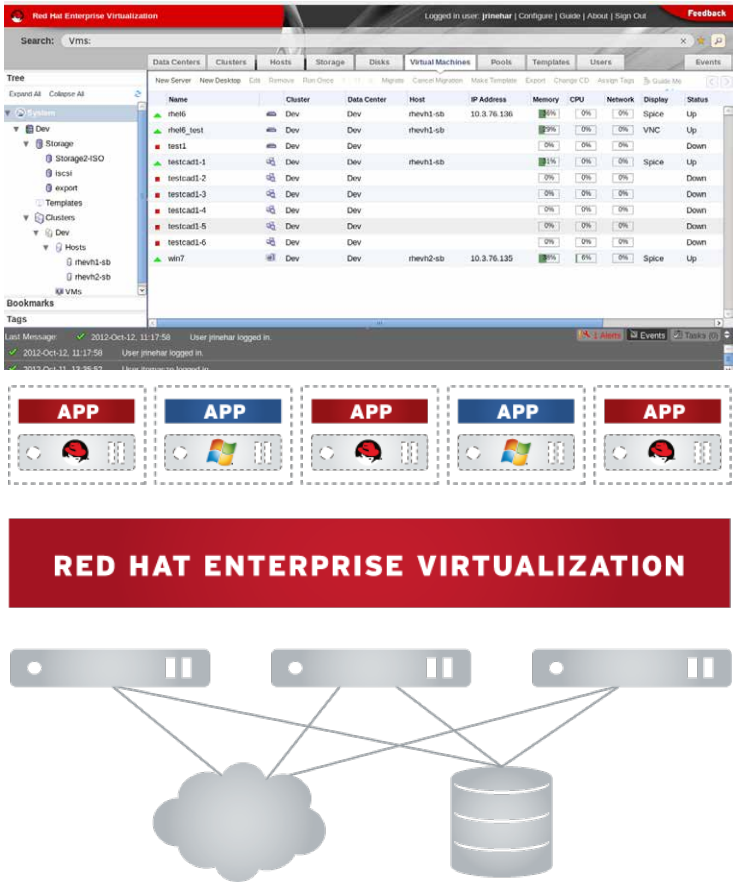

Figure 1

SIGNIFICANTLY INCREASES UTILIZATION AND AGILITY WHILE REDUCING COSTS

By transitioning workloads from physical servers to virtual machines, data center consolidation significantly increases the utilization and agility of computing resources while reducing operational costs with more efficient use of power and space. Capital cost savings in server hardware is the most immediate benefit and can range from a reduction of 40% to 75%. Operations also benefit from the reduced requirements for space and power and with the improved on-going management of their servers. For new server hardware, more can be done with less as multiple workloads (running on virtual machines) can more effectively utilize shared physical servers. Virtual machines can also be provisioned much more rapidly than physical servers. High availability and rapid recovery can easily be built into the solution much more cheaply than with physical servers which has cost savings benefits for ongoing business continuity. Through resource scheduling and policy-driven workload balancing, optimization of the entire virtual infrastructure can be more effectively maintained.

Feature Categories	Capability
Red Hat Enterprise Virtualization Hypervisor	• A bare-metal, high-performance and secure hypervisor based on enterprise-hardened Red Hat Enterprise Linux kernel with KVM (Kernel-based Virtual Machine) technology • Image-based small-footprint hypervisor with minimized security footprint • Support for VLAN, network bonding, and wide range of network devices including 10GB interface • Supports all 64 bit x86 server platforms that are certified for Red Hat Enterprise Linux (Requires Intel-VT or AMD-V hardware virtualization extensions). Supports all storage systems certified on Red Hat Enterprise Linux
Red Hat Enterprise Virtualization Manager	• A centralized management system with a search driven graphical interface supporting up to 100s of hosts and 1000s of virtual machines (Built on RHEL 6 and JBoss EAP for superior performance and scalability)
Fully featured enterprise management	• Live migration, storage live migration, policy-based workload balancing, high availability, live snapshots, power saving, cluster maintenance, image management, templating, thin-provisioning, event monitoring, and more
Industry leading performance and scalability	• Hosts support up to 160 cores and 2 TB of RAM. Guests support up to 160vCPUs and 2 TB of RAM; Clusters support up to 200 hosts • Industry leading SPECvirt_SC2010 results
Support for both Windows and Linux virtual machines	• Servers - Red Hat Enterprise Linux, RHEL 3, 4, 5, and 6; 32 and 64 bit; Windows Server 2003, 2003 R2, 2008, 2008 R2; 32 and 64 bit; SVVP and WHQL certified • Desktops - Red Hat Enterprise Desktop 5 and 6, 32 and 64 bit; Windows XP 32 bit: Windows 7 32 and 64 bit
Advanced SELinux kernel-based security	• Highest level of kernel-based security capability for immediate intrusion detection and isolation for virtual machines and hosts with Security Enhanced Linux (SELinux) and sVirt protection
Automation and customization	• RESTful API allows all aspects of Red Hat Enterprise Virtualization to be automated, managed, and configured programmatically • A Python-based command line interface allows for scripting and automation • Hooks mechanism allows administrators to define scripts to modify virtual machine definitions or run system commands
Self Service User Portal	• Enables end users to self provision virtual machines, define templates, and administer their own environments • Administrators can define per-user quotas for disk space, CPU usage and memory
Reporting and monitoring	• Detailed historical reporting capabilities, based on Jasper reports, are integrated into base product to monitor historical usage, trending, quality of service. Over 25 prebuilt reports and dashboards included
Storage	• Supported storage includes iSCSI, Fibre Channel, NFS, local storage, Red Hat Storage and other POSIX compliant filesystems • Supported features include storage live migration, live snapshots, shared disks, floating disks, VM disk hotplug/unplug, direct LUN attach to VM

Feature Categories	Capability
Internationalization	• The administration and user portal supports English, French, German, Spanish, Japanese, and Simplified Chinese.
System Requirements	• RHEV-Manager: Recommended 1-2 quad core x86_64 processors, 16 GB RAM, 50 GB disk, 1 Gbps Ethernet NIC • RHEV-Hypervisors: 1 CPU with Intel® 64 or AMD64 CPU extensions, and AMD-VTM or Intel VT® hardware virtualization extensions. 2 GB RAM. 10 GB local disk storage. one 1 GB Ethernet NIC • Administrative console: Internet Explorer 8 and higher on Windows or Mozilla Firefox 10 and higher on Red Hat Enterprise Linux • User portal: Internet Explorer 8 and higher on Windows, with the SPICE ActiveX control installed or Mozilla Firefox 10 and higher on Red Hat Enterprise Linux, with the SPICE plugin installed (provided by the spice-xpi package)

ABOUT RED HAT

Red Hat, the world's leading provider of open source solutions and an S&P 500 company, is headquartered in Raleigh, NC with more than 70 offices spanning the globe. Red Hat provides high-quality, affordable technology with its operating system platform, Red Hat Enterprise Linux, together with cloud, virtualization, applications, management, storage and service-oriented architecture (SOA) solutions, including Red Hat Enterprise Virtualization and JBoss Enterprise Middleware. Red Hat also offers support, training and consulting services to its customers worldwide. Learn more: **www.redhat.com**.

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