OVERVIEW

Red Hat Enterprise Linux® has been delivering performance levels that IT organizations trust and rely on for more than 10 years. In the same way, Red Hat Enterprise Virtualization, powered by the people who brought you enterprise Linux, takes you beyond bare metal to meet your critical virtualization demands for today and the future.

Red Hat Enterprise Linux with Smart Virtualization enables organization to virtualize mission-critical applications while delivering unparalleled performance, scalability, and security features.

KEY BENEFITS

PERFORMANCE

According to independent benchmarking results published by SPECVirt_sc2010, Red Hat Enterprise Virtualization has achieved record-breaking performance benchmarks, and holds the best 2-socket and 4-socket scores and the only published 8-socket and 16-socket server scores. This means that you can rely on Red Hat Enterprise Virtualization to deliver the performance you need, independent of your selected hardware platform.

Additionally, according to published test results by IBM and Red Hat, Red Hat Enterprise Virtualization running on Red Hat Enterprise Linux delivers performance of more than one million I/O per second (IOPS) on a single virtual server. This means that you require fewer virtual machines (VMs) to achieve the same results, saving on software costs and hardware resources without sacrificing performance.

SCALABILITY

Red Hat Enterprise Virtualization can quickly scale to meet evolving business demands. With host scalability of up to 160 CPUs and 2TB of RAM per host and comparable guest scalability of up to 160 virtual CPUs and 2TB virtual RAM, you can rely on Red Hat Enterprise Virtualization to virtualize even the largest x86_64 systems. In addition, almost any workload on bare metal can be virtualized on Red Hat Enterprise Virtualization and scale without limitations (with cluster support of up to 200 hosts).

EXTENDED HARDWARE SUPPORT

Red Hat Enterprise Linux has one of the largest ecosystems of certified hardware platforms and Red Hat works closely with all of the major hardware vendors, including IBM, HP, and Hitachi. This collaboration ensures that the latest hardware features are rapidly adopted in Red Hat Enterprise Linux.

Because the Red Hat Enterprise Virtualization hypervisor shares a common kernel with Red Hat Enterprise Linux, you can use a wide variety of certified hardware platforms. And as new features are added to Red Hat Enterprise Linux, the hypervisor inherits those features without additional engineering.

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2. Khoa Huynh, Ph.D, Andrew Theurer, Dor Laor, Red Hat Enterprise Linux KVM Hypervisor I/O, August 2012
The ongoing tuning and optimization of Red Hat Enterprise Linux immediately benefits Red Hat Enterprise Virtualization, so you can take advantage of secure hardware platforms that are continually enhanced and expanded.

**ENHANCED SECURITY**

Virtual environments have unique administrative and security threats that must be contained in an efficient and secure process. The security features of Red Hat Enterprise Virtualization include Red Hat Secure Virtualization (sVirt) and proven Security-Enhanced Linux (SELinux) technologies.

SELinux, first deployed in Red Hat Enterprise Linux 4.0, was developed by the National Security Agency (NSA), Red Hat, and the open source community.

With SELinux, Red Hat virtualization architecture treats each VM as its own process that is managed by a kernel-level hypervisor. Because each virtual machine is treated as a process, SELinux establishes a security boundary around each virtual machine. This security boundary is monitored and enforced by the kernel, restricting the VM's access to resources outside of its boundary (e.g., host machine data files or other VMs).

sVirt adds to SELinux's labeling capabilities and provides additional benefits for security administration, preventing administrators from creating manual labeling errors that can compromise VMs.

**COST SAVINGS**

Red Hat Enterprise Linux with Smart Virtualization is the most cost-effective solution for virtualizing your Red Hat Enterprise Linux workloads. It provides you with an enterprise-grade hypervisor, virtualization management tools, and guest operating system in one subscription at a very competitive price.

**CONCLUSION**

If your organization is already running Red Hat Enterprise Linux and you want to see your virtualization performance take off, consider Red Hat Enterprise Virtualization. Benefit from a virtualization platform that leverages many of the Red Hat Enterprise Linux features that have enabled your organization to deliver outstanding service levels. Save money and save time so that you can focus on how to add more value for your customers.

**LEARN MORE**

For more information about Red Hat Enterprise Virtualization, visit [www.redhat.com/rhev](http://www.redhat.com/rhev).

To learn more about Red Hat Enterprise Linux, visit [www.redhat.com/rhel](http://www.redhat.com/rhel).

To purchase Red Hat Enterprise Linux with Smart Virtualization, contact your Red Hat sales representative.