RED HAT ENTERPRISE VIRTUALIZATION

COMPETITIVE PRICING GUIDE

RED HAT ENTERPRISE VIRTUALIZATION AT A GLANCE

- Purchased via a per-managed socket-pair, per year subscription.
- Doesn't include costly "Editions" that force you into expensive upgrades to get a feature you need.
- Red Hat Enterprise Viurtalization costs 60–80% less than competing solutions.
- Red Hat Enterprise Virtualization Manager included with subscription (no need to purchase separately, deploy as many as you need).
- Just count your hypervisor sockets, choose your SLA, and deploy pairs.

EXECUTIVE SUMMARY

This document compares the pricing of Red Hat Enterprise Virtualization with the pricing of VMware vSphere 5.1 for server virtualization. Both the Red Hat Enterprise Virtualization subscription pricing and the VMware vSphere 5.1 license and support pricing are explained prior to the detailed pricing comparisons for the use cases of 100 and 300 virtual servers.

As the analysis reveals, a Red Hat Enterprise Virtualization costs 60–80% less than VMware vSphere 5.1 in these use cases. Or in other words, VMware can be up to five times more expensive.

To focus on a true cost comparison, this analysis only considered the virtualization solution consisting of the hypervisor host and enterprise management system. Server hardware costs and virtual server operating system costs are not included since they would be identical for both solutions.

COMPARING RED HAT ENTERPRISE VIRTUALIZATION PRICING TO VMWARE PRICING

It is important to understand Red Hat and VMware's different pricing models to accurately compare costs across platforms. In a typical virtualization solution, you may have the following elements: hypervisor, management server, and management agent. For each element, you may also need to consider an upfront license fee and a subscription fee for maintenance and support.

RED HAT ENTERPRISE VIRTUALIZATION PRICING

All Red Hat products are offered under a subscription model that includes product access, all updates, and support. Rather than charging high, upfront license costs, Red Hat charges an annual subscription fee that costs the same each year and is based on the level of support you need.

The Red Hat Enterprise Virtualization subscription is priced on a per-socket pair (for each hypervisor) and includes the Red Hat Enterprise Virtualization Manager and the Red Hat Enterprise Virtualization Hypervisor. Red Hat Enterprise Virtualization Hypervisor is a bare metal, small foot-print Kernel-based Virtual Machine (KVM) hypervisor based on the full Red Hat Enterprise Linux kernel. Alternatively, a customer can choose to deploy the full Red Hat Enterprise Linux with KVM operating system on the hypervisor host server to be managed by Red Hat Enterprise Virtualization Manager. Each managed socket pair on a virtualization host requires one subscription of Red Hat Enterprise Virtualization.

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The subscription pricing for Red Hat Enterprise Virtualization has been designed to simplify the specification and purchasing of your virtualization solution. The straightforward subscription model and single, enterprise-ready edition of Red Hat Enterprise Virtualization make specification and cost forecasting predictable and easy, benefiting both new and existing Red Hat customers.

SUBSCRIPTION	INCLUDES
Red Hat Enterprise Virtualization	• Unlimited nodes of Red Hat Enterprise Virtualization Manager • 2 sockets of Red Hat Enterprise Virtualization Hypervisor • Support and updates • No vRAM limits • All Red Hat Enterprise Virtualization features for virtualized servers and desktops (no editions).
Red Hat Enterprise Virtualization Support	Included in above base subscription Standard (business-hour support) or Premium (24 x 7 support) level

STEP-BY-STEP PROCESS TO CALCULATE RED HAT ENTERPRISE VIRTUALIZATION PRICING:

1. Total the socket pairs of your managed hypervisor server host servers.
2. Choose support level (business-hour or 24x7).
3. Multiply your socket pair total (determined in step 1) by either $999 (for business hour support) or $1,499 (for 24x7 support).

VMWARE VSPHERE 5 PRICING

The VMware virtualization solution consists of vSphere nodes (hypervisor and vCenter management agent) and the vCenter Management server. Each vSphere node license includes a vCenter Management license. Pricing is based on a per-socket model for the vSphere nodes, and a per-server model for the vCenter Management Server.

The vSphere product is packaged into different "editions" of Standard, Enterprise, and Enterprise Plus that differ by management functionality. In general, from a functionality comparison, Red Hat Enterprise Virtualization compares closest to the VMware vSphere 5.1 Enterprise Edition.

In addition to the upfront license fees for the per-socket basis, there is also an annual service and support contract called Support and Subscription or (SnS) which entitles the customer to support, patches, and upgrades. The customer must also purchase a VMware vCenter Management server license separately. While VMware markets its ESXi bare metal hypervisor as an effectively "free" product, ESXi does not include support, is limited to 32GB vRAM, and does not support advanced multinode management without upgrading it to one of the paid editions of vSphere 5.1.

For a typical environment, the customer will need to purchase the following:

SUBSCRIPTION	INCLUDES
vCenter Management Server license	• 1 node of vCenter Management Server • No management agents • No hypervisor
vCenter Management Server support subscription	• Support and updates for above • Gold (business-hour support) or Platinum (24 x 7 support) level
vSphere 5.1 license (editions include Standard, Enterprise, Enterprise Plus)	• 1 socket of ESXi hypervisor • 1 socket of vCenter Management Agent
vSphere 5.1 support subscription	• Support and updates for above • Gold or Platinum support level

STEP-BY-STEP PROCESS TO CALCULATE VSPHERE 5 PRICING AND LICENSING:

1. Total minimum of one vCenter Management Server license key.

2. Choose the Edition (Standard, Enterprise, Enterprise Plus), based on:

- Features (some features require moving to a more expensive edition)
- Limits for vCPU/VM (Standard supports up to 8 vCPU/VM, Enterprise supports up to 32 vCPU/VM, Enterprise Plus is required for 33-64 vCPU/VM

3. Total sockets or processors of hypervisor server hosts.

4. Multiply one vSphere license key for each physical processor or socket.

PRICING SCENARIOS

For each of these pricing scenarios, the first-year cost of acquiring and supporting the virtualization management and hypervisor software and the three-year cost of ownership is examined. The costs for the hardware and for the guest operating systems have not been included since they will be the same for both a VMware and a Red Hat Enterprise Virtualization deployment.

100 VIRTUAL MACHINE GUESTS

The following table has the comparison of three-year costs for Red Hat Enterprise Virtualization and VMware vSphere 5.1 Enterprise Edition. In this scenario, 100 virtual machines (VMs) are configured for small to medium workloads supporting IT and web infrastructure services.

THREE-YEAR TCO ANALYSIS	RED HAT ENTERPRISE VIRTUALIZATION	VMWARE VSPHERE ENTERPRISE EDITION
Number of servers	10	10
Number of sockets	20	20
License costs (one-time)	$0	$62,495
Annual support /subscription costs	$14,990	$15,629
Total first-year costs	$14,990	$78,124
For the first year, VMware vSphere Enterprise is more than 5 X more expensive than Red Hat Enterprise Virtualization.		
Total three-year costs	$14,970	$109,382

The following is a breakout of the above costs:

FIRST-YEAR COSTS	QTY	PRICE	TOTAL PRICE
Red Hat Enterprise Virtualization Premium (24 x 7 support) (per socket pair)	10	$1,499	$14,990
VMware vSphere Enterprise (per socket)	20	$2,875	$57,500
VMware vSphere Enterprise SnS Platinum (24x7 support) (per socket)	20	$719	$14,380
VMware vCenter Server Standard	1	$4,995	$4,995
VMware vCenter Server SnS Platinum (24x7 support)	1	$1,249	$1,249
Total VMware vSphere 5.1 first-year cost			**$78,124**

300 VM GUESTS

In this scenario, 300 VMs are configured for a broad range of workloads, including decision support and business processing applications. These workloads tend to need higher amounts of memory and CPU processing capability.

In this configuration, Red Hat Enterprise Virtualization is compared with the vSphere Enterprise Plus Edition that offers the full range of vSphere features including 64 vCPU/VM, SR-IOV, and vCloud Durector, which are features that are also found in Red Hat Enterprise Virtualization.

THREE-YEAR TCO ANALYSIS	RED HAT ENTERPRISE VIRTUALIZATION	VMWARE VSPHERE ENTERPRISE PLUS EDITION
Number of servers	30	30
Number of sockets	60	60
License costs (one-time)	$0	$214,695
Annual support /subscription costs	$44,970	$53,689
Total first-year costs	$44,970	$268,384
For the first year, VMware vSphere Enterprise Plus is 6 X more expensive than Red Hat Enterprise Virtualization.		
Total three-year costs	**$134,910**	**$375,762**

The following is a breakout of the above costs:

FIRST-YEAR COSTS	QTY	PRICE	TOTAL PRICE
Red Hat Enterprise Virtualization Premium (24 x 7 support) (per socket pair)	60	$1,499	$44,970
VMware vSphere Enterprise (per socket)	60	$3,495	$209,700
VMware vSphere Enterprise SnS Platinum (24x7 support) (per socket)	60	$874	$52,440
VMware vCenter Server Standard	1	$4,995	$4,995
VMware vCenter Server SnS Platinum (24x7 support)	1	$1,249	$1,249
Total VMware vSphere 5.1 first-year cost			**$268,384**

This pricing scenario uses the following parameters and values:

PARAMETER	VALUE
Server processors	Two processors with 8 cores per processor
Server memory capacity	Supports up to 384GB RAM
Target host utilization	75%
Virtual machines (100 VM guests)	Average of 2 vCPU and 4 GB vRAM
Virtual machines (300 VM guests)	Average of 4 vCPU and 8-16 GB vRAM
vCPU/pCore	2–3
vRAM/pRAM	1
Support	24x7

SUMMARY

In summary, Red Hat Enterprise Virtualization offers compelling value by matching the VMware vSphere 5.1 offering with core functionality but at a price that, in some cases, can be 60–80% less expensive. The Red Hat subscription model offers benefits to both new and existing Red Hat customers. And the straightforward per socket pair management subscription and single enterprise-ready edition of Red Hat Enterprise Virtualization Manager make specification and cost forecasting easy.

Red Hat product offerings, pricing, terms, and conditions are accurate in the United States as of May 2013 and are subject to change. Pricing for non-Red Hat virtualization platforms and guest operating systems are based on published retail or volume license pricing in the United States as of May 2013 and is subject to change.

WHAT'S NEXT

For more information, visit **www.redhat.com/rhev** or contact your local Red Hat sales office or Red Hat authorized partner.

REFERENCE

VMware vSphere Pricing, VMware vSphere 5 Licensing, Pricing and Packaging, **www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html** (May, 2013)

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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