

## DATASHEET

# RED HAT ENTERPRISE VIRTUALIZATION: COMPETITIVE PRICING GUIDE

### AT A GLANCE

- Buy RHEV for Servers on a per managed-socket per year subscription
- No costly “Editions” that force you into expensive upgrades to get a feature you need
- RHEV for Servers costs 60-80% less than the VMware vSphere 5.1 solution.
- RHEV Manager included with subscription - no need to purchase separately; deploy as many as you need
- Just count your hypervisor sockets, choose your SLA, and go!

### EXECUTIVE SUMMARY

This document compares the pricing of Red Hat Enterprise Virtualization (RHEV) with the pricing of VMware vSphere 5.1 for server virtualization. Both the RHEV for Servers 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 RHEV for Server solution costs 60-80% less than VMware vSphere 5.1 solution 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

For Red Hat Enterprise Virtualization, Red Hat uses a pricing model which is different than the model used by VMware for vSphere 5.1. It is important to understand these differences 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 think about an upfront license fee and a subscription fee for maintenance and support.

### RED HAT ENTERPRISE VIRTUALIZATION FOR SERVERS PRICING

All Red Hat products are offered under a subscription model that includes product access, all updates and product 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 (RHEV) for Servers subscription is priced on a per-socket basis (for each hypervisor) and includes the RHEV Manager and the RHEV Hypervisor (RHEV-H). RHEV-H is a bare metal, small foot-print Kernel-based Virtual Machine (KVM) hypervisor based on the full Red Hat Enterprise Linux kernel (RHEL). Alternatively, a

customer can choose to deploy the full RHEL with KVM operating system on the hypervisor host server to be managed by RHEV-Manager. Each managed socket on a virtualization host requires one subscription of RHEV for Servers.

Note: Red Hat Enterprise Virtualization for Desktops subscription pricing is an add-on to the Red Hat Enterprise Virtualization for Servers product and is sold in groups of 25 desktops.

The subscription pricing and licensing for Red Hat Enterprise Virtualization have 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 (RHEV) for Servers	<ul style="list-style-type: none"><li>• Unlimited nodes of RHEV Manager</li><li>• 1 socket of RHEV-H hypervisor</li><li>• Support and updates</li><li>• No vRAM limits</li><li>• Entire RHEV for Server feature set (no editions)</li></ul>
RHEV for Server Support	Included in above base subscription Standard (Business hours) or Premium (24 x 7) level

### Step-by-step process to calculate RHEV for Servers pricing.

1. Count sockets of hypervisor server hosts.
2. Choose support level (Standard or Premium)
3. Buy subscriptions for the number of sockets in managed hypervisor host servers.

### 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 the different “editions” of Standard, Enterprise and Enterprise Plus which differ by management functionality. In general, from a functionality comparison, Red Hat Enterprise Virtualization for Servers compares to the VMware vSphere 5.1 Enterprise Edition.

In addition to the upfront license fees for the per-socket, 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	<ul style="list-style-type: none"> <li>• 1 node of vCenter Management Server</li> <li>• No management agents</li> <li>• No hypervisor</li> </ul>
vCenter Management Server Support Subscription	<ul style="list-style-type: none"> <li>• Support and updates for above</li> <li>• Gold (Business hours) or Platinum (24 x 7) level</li> </ul>
vSphere 5.1 License (editions include Standard, Enterprise, Enterprise Plus)	<ul style="list-style-type: none"> <li>• 1 socket of ESXi hypervisor</li> <li>• 1 socket of vCenter Management Agent</li> </ul>
vSphere 5.1 Support Subscription	<ul style="list-style-type: none"> <li>• Support and updates for above</li> <li>• Gold (Business hours) or Platinum (24 x 7) level</li> </ul>

### Step-by-step process to calculate vSphere 5 pricing and licensing.

1. Buy a minimum of one vCenter Management Server license.
2. Choose Edition (Standard, Enterprise, Enterprise Plus), based on:
  - Features (some features require moving to 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. Count sockets or processors of hypervisor server hosts.
4. Buy 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 RHEV virtualization deployment.

### 100 VIRTUAL MACHINE GUESTS

The following table has the comparison of three year costs for Red Hat Enterprise Virtualization for Servers and VMware vSphere 5.1 Enterprise Edition. In this scenario 100 virtual machines 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	\$14,980	\$15,629
<b>Total First Year Costs</b>	<b>\$14,980</b>	<b>\$78,124</b>
For the first year, VMware vSphere Enterprise is over 5 X more expensive than RHEV.		
<b>Total Three Year Costs</b>	<b>\$44,940</b>	<b>\$109,382</b>

The following is a breakout of the above costs:

First Year Costs	Qty	Price	Total Price
RHEV for Servers Premium (24 x 7) (per socket)	20	\$749	\$14,980
VMware vSphere Enterprise (per socket)	20	\$2,875	\$57,500
VMware vSphere Enterprise SnS 24x7 (per socket)	20	\$719	\$14,380
VMware vCenter Server Standard	1	\$4,995	\$4,995
VMware vCenter Server SnS 24x7	1	\$1,249	\$1,249
<b>Total VMware vSphere 5.1 first year cost</b>			<b>\$78,124</b>

### 300 Virtual Machine Guests

In this scenario, 300 virtual machines are configured for broader 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, RHEV 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 the RHEV for servers standard offering.

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	\$44,940	\$53,689
<b>Total First Year Costs</b>	<b>\$44,940</b>	<b>\$268,384</b>
For the first year, VMware vSphere Enterprise Plus is 6 X more expensive than RHEV.		
<b>Total Three Year Costs</b>	<b>\$134,820</b>	<b>\$375,762</b>

The following is a breakout of the above costs:

First Year Costs	Qty	Price	Total Price
RHEV for Servers Premium (24 x 7) (per socket)	60	\$749	<b>\$44,940</b>
VMware vSphere Enterprise Plus (per socket)	60	\$3,495	\$209,700
VMware vSphere Enterprise Plus SnS 24x7	60	\$874	\$52,440
VMware vCenter Server Standard	1	\$4,995	\$4,995
VMware vCenter Server SnS 24x7	1	\$1,249	\$1,249
<b>Total VMware vSphere 5.1 first year cost</b>			<b>\$268,384</b>

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, RHEV for Servers virtualization solution 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 management subscription and single enterprise-ready edition of Red Hat Enterprise Virtualization Manager for Servers make specification and cost forecasting easy.

To help you compare, Red Hat has developed an online TCO calculator and configurator for Red Hat Enterprise Virtualization. For more information, go to <http://www.redhat.com/rhev/server/cost>.

Red Hat product offerings, pricing, terms and conditions are accurate as of September 2012 and are subject to change and local pricing. 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 September 2012 and is subject to change and local pricing.

## WHAT'S NEXT

For more information, please go to <http://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](http://www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html) (June, 2012)

VMware vSphere Pricing, 2012, [www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html](http://www.vmware.com/products/datacenter-virtualization/vsphere/pricing.html) (September 7, 2012)

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### ABOUT RED HAT

Red Hat was founded in 1993 and is headquartered in Raleigh, NC. Today, with more than 70 offices around the world, Red Hat is the largest publicly traded technology company fully committed to open source. That commitment has paid off over time, for us and our customers, proving the value of open source software and establishing a viable business model built around the open source way.

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