



# RED HAT ENTERPRISE LINUX RUNS BEST ON RED HAT ENTERPRISE VIRTUALIZATION: CALCULATE YOUR SAVINGS

## RED HAT ENTERPRISE VIRTUALIZATION FOR SERVERS TCO CALCULATOR

Red Hat has developed an online total cost of ownership (TCO) calculator for Red Hat Enterprise Virtualization for Servers. This document demonstrates how to use the TCO calculator to develop a configuration for virtualizing your Red Hat Enterprise Linux servers and to compare your TCO on Red Hat Enterprise Virtualization to other virtualization platforms.

## RED HAT MAKES IT EASY TO CALCULATE YOUR SAVINGS

Try the TCO calculator by visiting [redhat.com/rhev/server/cost](http://redhat.com/rhev/server/cost) and clicking on the “calculate your savings” banner.

The Red Hat Enterprise Virtualization TCO calculator uses a few simple inputs to determine an optimal configuration for your environment. It then calculates costs on Red Hat Enterprise Virtualization, VMware vSphere 4, and Microsoft Hyper-V.

The result is a comparison between the three platforms and a corresponding report that you can download or have sent to your email address.

## STEP BY STEP

The “Server Profile” tab allows you to enter information about your virtualization project. From the “Preferred Server Configuration” tab, pick the virtualization server on which you are standardizing. For example, if you are using a blade server system with a standard 2-socket, 32 GB blade, you would choose “2 Sockets (quad core) 32 GB” as your server configuration. You also need to choose your support level, either Standard 12x5 or Premium 24x7.

Operating System	Number of Virtual Machines
Red Hat Enterprise Linux	0
Red Hat Enterprise Linux AP	0
Microsoft Windows Server 200x Standard	0
Microsoft Windows Server 200x Enterprise	0
<b>Total</b>	<b>0</b>

Three Year TCO Analysis

Thousands: Red Hat, VMware, Microsoft

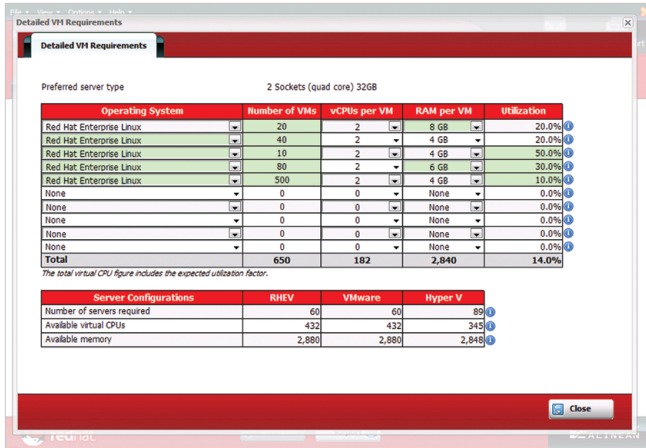
The “Server Profile” tab shows a simple matrix of operating systems and virtual machine count. If you want to estimate the costs of your environment, you simply enter the number of Red Hat Enterprise Linux machines you are looking to virtualize.

If you click on the “Detailed VM Requirements” button, you can enter additional details about each virtual machine, including CPUs, memory, and utilization.

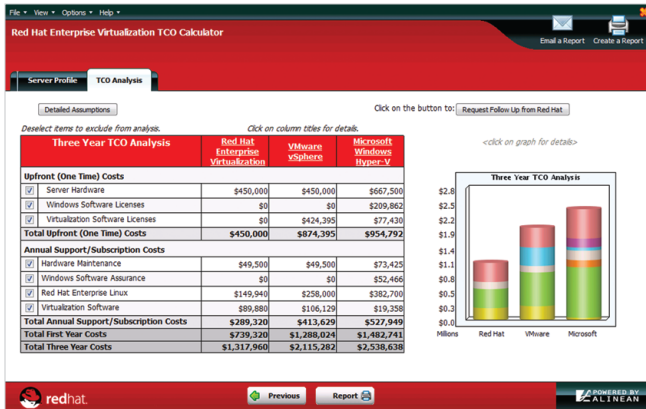
# CALCULATE YOUR SAVINGS

## RED HAT® ENTERPRISE VIRTUALIZATION

For Servers

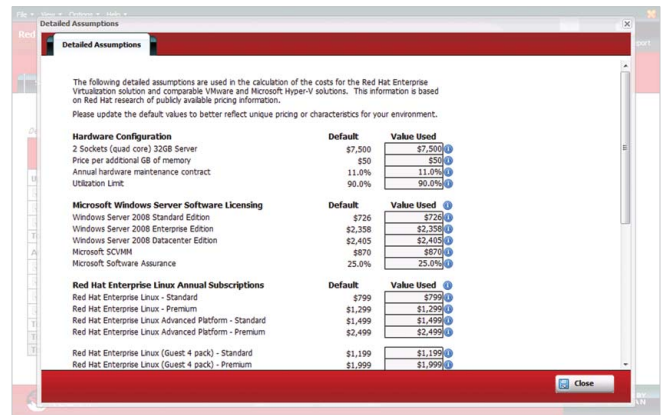


Once you have entered the number of machines you are looking to virtualize, you can click on the "TCO Analysis" tab to see your results.

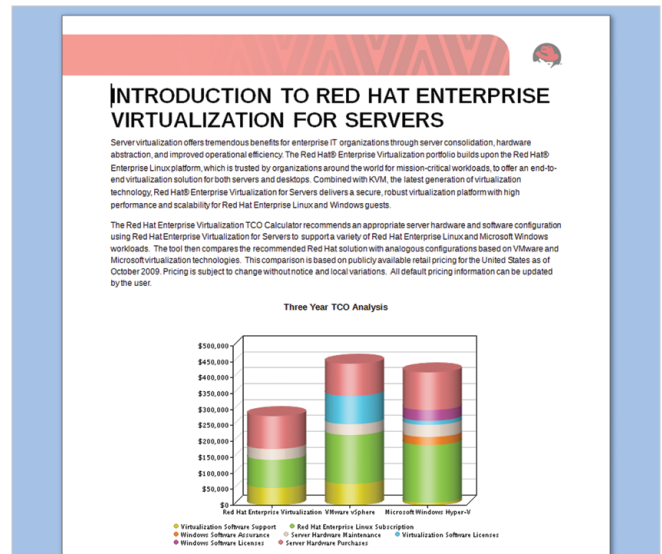


On the left side of your screen, you have a chart showing the upfront and annual subscription charges for each product. All Red Hat products are on a subscription model, so the costs do not appear in the upfront section. The chart shows you the total first-year costs, which include upfront costs plus one year of subscription, and the total three-year costs. You can uncheck line items to exclude them from the analysis. You can also click on the product names to choose between different editions.

The "Detailed Assumptions" button reveals the assumptions the model is using with regard to pricing, hardware configurations, and more. You can change these variables to reflect special pricing or lower target utilization rates, and the changes will be reflected in the calculated configuration.



When you are satisfied with the results of the analysis, you can click on either "Email a Report" or "Create a Report" to receive a copy of the TCO report. You can customize the report to include other aspects of your virtualization project or copy its charts into a presentation or other document.





## TCO CALCULATOR MODEL LOGIC

The TCO calculator is designed to allow you to compare Red Hat solutions to others. As such, it makes some assumptions that make it a good starting point for configuring your Red Hat Enterprise Virtualization environment, but it is not a true configuration or quoting tool.

First of all, the model allows you to pick only one type of target server for your workload. This fits with most virtualization projects, but it may not be the case in yours. To allow comparison, the model assumes that once you have maxed out either the memory or the CPU on a single server, you will buy another one. It does not, for example, add memory to each server or add additional CPUs.

The model assumes both Red Hat and VMware achieve a 150% memory overcommit level, which is conservative. Microsoft does not currently offer memory overcommit, so it requires a one-to-one ratio of virtual to physical memory. This is why the calculator usually reports more physical hardware and more software licenses for Microsoft Hyper-V.

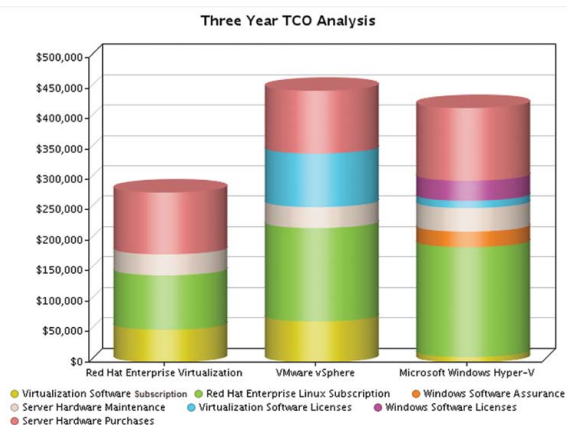
Finally, to reduce costs, the calculator always assumes the user will choose a reasonable, low-cost method of licensing guests. In a pure Linux or Windows environment, this will be the less expensive of the various guest licensing models. In mixed environments, the model often chooses a configuration in which the physical servers are divided between a Linux cluster and a Windows cluster, and the lowest cost choice is applied to that cluster.

In the real world, you may decide to choose a more expensive option that gives you added flexibility or to divide your machines differently. The calculator makes these assumptions so that the comparison between platforms is as consistent as possible.

## COMPARE AND SEE

We compared the cost of virtualizing the same Red Hat Enterprise Linux workload on Red Hat Enterprise Virtualization and two other leading virtualization platforms for a three-year period. The Red Hat solution is clearly the least expensive in both the first-year upfront cost as well as over time.

### TOTAL COST FOR THREE YEARS: 200 RED HAT ENTERPRISE LINUX GUESTS



We used the Red Hat Enterprise Virtualization TCO Calculator to analyze the total three-year costs for 200 Red Hat Enterprise Linux guests virtualized using either the Red Hat, VMware, or Microsoft platform. These are the total direct costs for each solution. Red Hat software is priced on a subscription basis, so the costs of Red Hat Enterprise Virtualization are shown as Virtualization Software Subscription.



## THE BOTTOM LINE

Red Hat Enterprise Linux not only runs best on Red Hat Enterprise Virtualization, but the combination also offers a lower total cost of ownership that will help you get the most out of your datacenter. The Red Hat Enterprise Virtualization TCO calculator allows you to calculate your savings for yourself.

## WHAT'S NEXT?

For more information on how Red Hat Enterprise Linux runs best on Red Hat Enterprise Virtualization, visit [redhat.com/promo/rhelrunsbestonrhev](http://redhat.com/promo/rhelrunsbestonrhev), or contact your local Red Hat Enterprise Virtualization reseller.

For more information on the Red Hat Enterprise Virtualization total cost of ownership and a link to our online TCO calculator, visit [redhat.com/rhev/server/cost](http://redhat.com/rhev/server/cost).

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