



Enabling Your Users to Rightsize Their VMs

by **Helen Abbott**, on Aug 20, 2015 8:00:00 AM

How do you ensure that all VMs in your virtualized infrastructure are allocated the correct resources for their workload? Allowing your users to rightsize their VMs is a great way to minimize cost and maximize performance.

Why rightsize VMs?

There are several reasons to rightsize your VMs:



Viewing rightsizing recommendation details for a selected VM

- › Over-allocation wastes expensive server resources and decreases ROI for the infrastructure.

- › Configuring a VM with more virtual CPUs than its workload may cause slightly increased resource usage, potentially impacting performance on very heavily loaded systems. Common examples of this include a single-threaded workload running in a multi-vCPU VM, or a multi-threaded workload in a VM with more vCPUs than the workload can effectively use. Even if the guest operating system doesn't use some of its vCPUs, configuring VMs with those vCPUs still imposes some small resource requirements that translate to real CPU consumption on the host.
- › Allocating enough memory to hold the working set of applications you will run in the VM minimizes swap activity and the associated disk thrashing.
- › Allocating more memory than required unnecessarily increases the VM memory overhead, thus consuming memory that could be used to support more VMs.
- › Over-allocation of vCPU causes performance problems on heavily loaded hosts (all vCPUs need to be scheduled to run at the same time).
- › In the VMware context specifically, VMs with less memory and/or fewer vCPUs provide more opportunities for VMware DRS to migrate them in order to improve balance across the cluster. VMs with larger memory sizes and/or more vCPUs add more constraints for migration. It's also easier to manually distribute and balance smaller workloads across the available hosts.
- › For managed service providers, rightsizing can increase billable resources sold to customers.

How does rightsizing work?

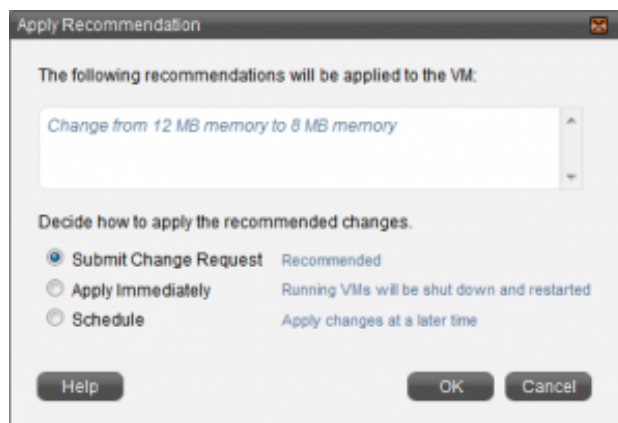
Rightsizing Recommendations	
Rightsizing means ensuring that all VMs in your virtualized infrastructure are allocated the correct resources for their workload, with the goal of minimizing cost and maximizing performance.	
<p>memory ✖ 4 Mixed rows</p> <p>130 - 001 Memory (slow)</p> <p>Cost Before: \$3506 Cost After: \$3504 Savings: \$2</p> <p>Show Details Apply All Ignore All Exclude VM</p>	
<p>ibrian vCPU (slow), Memory (slow)</p> <p>Cost Before: \$4508 Cost After: \$3506 Savings: \$1002</p> <p>Show Details Apply All Ignore All Exclude VM</p>	
<p>test119 vCPU (slow), Memory (slow)</p> <p>Cost Before: \$6919 Cost After: \$4917 Savings: \$2002</p> <p>Show Details Apply All Ignore All Exclude VM</p>	
<p>win 2003 r2 001 vCPU (slow), Memory (slow)</p> <p>Cost Before: \$6904 Cost After: \$5779 Savings: \$1125</p> <p>Show Details Apply All Ignore All Exclude VM</p>	

Easily filter a long list of recommendations by entering text in the filter field.

Embotics® vCommander™ issues CPU and memory rightsizing recommendations for VMs on VMware vCenter and Microsoft SCVMM using performance data from the virtualization platform (and optionally from Splunk, a performance monitoring tool). vCommander can also rightsize Amazon EC2 VMs. In this case, vCommander issues instance type rightsizing recommendations based on CPU performance metrics. Performance samples are taken each night, or when manually requested by a user. You can configure the thresholds that trigger a change, as well as the length of the period to analyze before recommending a change.

VM resource configuration changes may occur outside the recommendation system, so that recommendations are fulfilled or no longer apply. vCommander keeps track of resource configuration changes that occur outside the recommendation system and adjusts recommendations accordingly.

Adding more memory to a VM can actually degrade performance of the host or cluster. For example, on a host with 4 GB of memory, if the VMs are using all but 256 MB of that memory, adding 512 MB to one VM on that host might cause performance issues on the host. Likewise, adding memory to a VM that has a high ESX swap rate (indicating that the host is overcommitted) can also cause performance issues on the host. To prevent this problem, if the memory capacity of the host or cluster is less than two VM workloads, memory rightsizing recommendations include a capacity warning.



Granular permissions allow you to control what options users see.

Granular permissions

vCommander permissions allow you to control whether Service Portal users can see upsizing recommendations, downsizing recommendations, or both.

You can also control how users can apply a recommendation — immediately, through a change request, or by scheduling it for later.

A flexible, easy-to-use interface



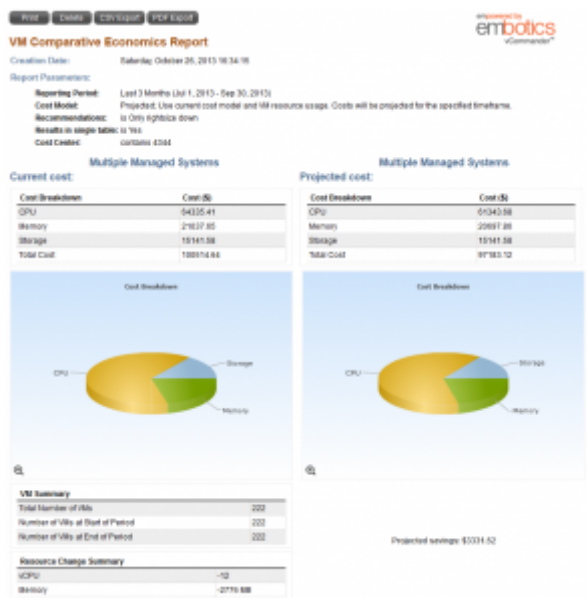
The VM Performance pane on the Service Portal Dashboard

It's easy to find, review, manage and apply rightsizing recommendations with vCommander.

A link to current rightsizing recommendations is displayed in the VM Performance pane on the Service Portal Dashboard.

You can easily search for VMs with recommendations, using a set of rightsizing properties.

You can save your search for easy access at any time. You can schedule this search to be emailed as a report, too.



The built-in VM Comparative Economics report

Assessing the cost-effectiveness of rightsizing recommendations

The VM Comparative Economics Report helps you assess the cost-effectiveness of rightsizing recommendations.

Want to learn more about vCommander's rightsizing recommendations? Check out Rightsizing VMs in our online documentation. And stay tuned for a future blog post in which we'll discuss using rightsizing to control public cloud instance costs.

Topics: Administration | How-to | VM Sprawl & Rightsizing | Best Practices | vCommander

Tweet

Like Share

SHARE

First Name*

Last Name

Email*

Website

Comment*

We're committed to your privacy. Embotics uses the information you provide to us to contact you about our relevant content, products, and services. You may unsubscribe from these communications at any time. For more information, check out our [Privacy Policy](#).

This is a rich text area, you can add whatever copy you like

protected by reCAPTCHA

[Privacy](#) - [Terms](#)

SUBMIT COMMENT

About this blog

Subscribe to the Cloud Management blog for news, analysis, advice and opinions from our team of experts and thought leader guests. Join our community to receive updates directly to your inbox.

Subscribe to Email Updates

Email*

We're committed to your privacy. Embotics uses the information you provide to us to contact you about our relevant content, products, and services. You may unsubscribe from these communications at any time. For more information, check out our [Privacy Policy](#).

SUBSCRIBE

Recent Posts

Remote Work Has Spiked – Your Cloud Costs Don't Have To

Taking Stock: The Current State of Enterprise Cloud

Reducing Your AWS Costs Seem Impossible? We've Got Good News

Embotics + Snow Software: Technology Intelligence for a Hybrid World

Commander 8 - Understanding & Insight

Recommended Posts

Embotics + Snow Software: Technology Intelligence for a Hybrid World

vCommander 7 Brings Hybrid Cloud Management to the Next Level

5 Factors to Chargeback/Showback Success

Service Delivery Success Factors (Part 3)

The Evolution of Cloud Computing

Posts by Topic

Cloud Management Platform (CMP) (75)

vCommander (35)

Cloud Automation Software (31)

Cloud Management (31)

Cost Management (29)

[+ see all](#)

Blog Archive

April 2020 (1)

February 2020 (1)

December 2019 (2)

November 2019 (2)

October 2019 (1)

[+ see all](#)



FROM OUR BLOG

REMOTE WORK HAS SPIKED - YOUR CLOUD COSTS DON'T HAVE TO

TAKING STOCK: THE CURRENT STATE OF ENTERPRISE CLOUD

REDUCING YOUR AWS COSTS SEEM IMPOSSIBLE? WE'VE GOT GOOD NEWS

EMBOTICS + SNOW SOFTWARE: TECHNOLOGY INTELLIGENCE FOR A HYBRID WORLD

CONNECT WITH US



© 2021 EMBOTICS CORPORATION