



# Building Clouds on VMware: Competitive Pricing Review

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## Scope

This review assumes you want to build a private cloud on top of an existing virtualized datacenter composed of multiple hosts (servers) running vSphere and managed by one or several vCenter Server instances that can be distributed across multiple sites. It is understood that you do not want to abandon your investment in VMware by retooling the entire stack, but rather, you want to continue managing your infrastructure with already familiar and powerful VMware tools, such as vSphere and vCenter Server. This report compares the pricing of OpenNebula and VMware cloud management platforms, namely vCloud and vRealize, and highlights OpenNebula's key differentiators that are asked about most frequently. OpenNebula exceeds the cloud management requirements of most enterprise and service provider users, and in the particular case analyzed, it can result in up to 75% cost savings.

## What are vCloud and vRealize?

**vRealize Suite**<sup>1</sup> is a VMware cloud management platform for managing a heterogeneous, hybrid enterprise cloud. It proactively addresses health, performance, and capacity management of IT services across heterogeneous and hybrid cloud environments to improve efficiency, performance, and availability. VMware offers three vRealize Suite editions (Standard, Advanced, and Enterprise) which each provide different functionality at different price points, and require vSphere (Standard or Enterprise Plus editions) and vCenter Server.

**vCloud Suite**<sup>2</sup> is a package that includes VMware's vSphere (Enterprise Plus edition) hypervisor and vCenter with VMware vRealize Suite. There is an additional discount applied for customers who purchase vCloud Suite as opposed to customers purchasing vSphere and vRealize Suite separately. vCloud Suite is intended for enterprise customers who are interested in purchasing a cloud management platform solution and expanding their vSphere capacity.

**vCloud Director**<sup>3</sup> is VMware's cloud service-delivery platform intended for service providers. It is a cloud provisioning and management interface for any VMware-based environment, forming a pervasive cloud fabric that can bring any vSphere endpoint under its management umbrella. vCloud Director has certain core capabilities, including one-click deployment, multi-site management capabilities, multi-tenant operational efficiencies, Kubernetes support, and workflow automation.

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<sup>1</sup> [https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/vrealize-suite/vmware\\_vrs\\_datasheet.pdf](https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/vrealize-suite/vmware_vrs_datasheet.pdf)

<sup>2</sup> <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vcloud-suite-pricing-packaging-whitepaper.pdf>

<sup>3</sup> [https://cloudsolutions.vmware.com/assets/blte433bab4d3d0872b/What\\_s\\_New\\_with\\_vCloud\\_Director\\_10.pdf](https://cloudsolutions.vmware.com/assets/blte433bab4d3d0872b/What_s_New_with_vCloud_Director_10.pdf)

## What is OpenNebula?

**OpenNebula**<sup>4</sup> is a simple, open source cloud management platform that seamlessly integrates with existing vCenter infrastructures to leverage advanced features—such as vMotion, HA or DRS scheduling—provided by the VMware vSphere product family. OpenNebula exposes a multi-tenant, self-service, cloud-like provisioning layer on top of vSphere and vCenter, including features like service elasticity, Virtual Data Centers (VDCs), multi-site capabilities, and hybrid cloud computing connecting in-house vCenter infrastructure with public clouds.

## Value of OpenNebula Subscription

OpenNebula subscriptions provide the assurance of having the OpenNebula experts steadily involved, under SLA guidelines—standard 9-to-5 or premium 24/7—backing your cloud. On top of this, they unlock additional benefits for corporate users, including gaining access to an enterprise repository with maintenance and LTS versions of the OpenNebula Enterprise Edition and Enterprise Tools, knowledge base and notifications about critical issues, as well as access to exclusive services provided by OpenNebula consultants and engineers.

When comparing the OpenNebula Subscription to VMware vCloud and vRealize licensing,<sup>5</sup> OpenNebula offers a number of material benefits, including:

- Significantly lower total cost of ownership (TCO).
- No capital expenses (CapEx), OpenNebula is fully open source, so there are no licensing costs as with proprietary software deployments.
- Operating expenses (OpEx) charged via subscription.
- Subscription sold per host with any number of sockets (CPUs)—VMware licenses and support are sold per single socket.

## Simple Case Pricing Review

As a simple case study, we will compare the three-year total cost of ownership (TCO) when building a private cloud on a single cluster with 10 servers, each having two CPUs, running vSphere and managed by one vCenter instance as a single cluster. Prices below are list prices (VMware<sup>6</sup> and OpenNebula<sup>7</sup>) only. Discounts would be applied depending on volume, length of contract and other factors.

Both vRealize and OpenNebula require vSphere (Standard edition is enough) and vCenter Server Standard.

VMware Platform Infrastructure	3-year Total Cost of Ownership (TCO)
10 vSphere standard hypervisors x 2 sockets	\$31,000
1 vCenter standard	\$8,820
<b>TOTAL</b>	<b>\$39,820</b>

<sup>4</sup> <https://support.opennebula.pro/hc/en-us/articles/360039827192-VMware-Cloud-Datasheet>

<sup>5</sup> <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/whitepaper/vrealize-suite-licensing-pricing-packaging.pdf>

<sup>6</sup> <https://store-us.vmware.com>

<sup>7</sup> <https://support.opennebula.pro/hc/en-us/articles/208381403-OpenNebula-Subscription-Guide>

Now let us evaluate the three-year TCO of the cloud management layer with **OpenNebula's** full-featured distribution compared with **vRealize Standard**, which is VMware's least expensive option with limited functionality that does not include automation features.

Three-year Total Cost of Ownership (TCO)	
1 <b>OpenNebula</b> Premium for 10 ESX hosts:	1 <b>vRealize</b> Standard for 20 CPUs:
<b>\$54,000</b>	<b>\$143,180</b>
DIFFERENCE: <b>\$89,180</b>	

*A CPU is the equivalent of a VMware PLU ("Portable License Unit")<sup>8</sup>*

This case study reveals savings of more than **\$89K (about \$30K per year)** by using OpenNebula over vSphere/vCenter to build your cloud. And if you are using servers with more than two CPUs, or building a cloud with more than 10 servers, you will see that **the savings increase dramatically**. For example, in the same case using four-CPU servers, the savings would be more than \$60K per year. The costs associated with the lock-in nature of VMware's licensing and support, and the per-CPU licensing model, can actually result in many enterprises seeing their TCO inflate significantly over time.

## Key Differentiators

**Lower TCO** → Compared with vRealize, OpenNebula delivers a lower TCO and helps to reduce OpEx budget pressure and concerns.

**No Vendor Lock-In** → Once you have built your cloud with OpenNebula on VMware, you can then add new resources based on open source hypervisors—like KVM, LXC or Firecracker—and hence use OpenNebula as a migration framework to the open cloud.

**Simplicity** → Very easy to install, upgrade, and maintain, with easy-to-use graphical interfaces.

**Customizable** → Completely open, customizable and modular, so it can be adapted to your needs and components.

**Multi-site and Hybrid** → You can manage a distributed collection of vCenter instances across multiple data centers with a single OpenNebula instance, and connect your cloud to public cloud providers.

<sup>8</sup> <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/vrealize/vmware-portable-license-unit.pdf>

## Summary

Using OpenNebula to build a VMware cloud can have **significant economic benefits** for any enterprise and will improve both infrastructure flexibility, business agility, and the bottom line. OpenNebula provides, on top of vSphere/vCenter, the most demanded management features to build clouds for enterprises and service providers, matching most of the features offered by vCloud Director and vRealize at a fraction of their cost. The main advantage of OpenNebula is the strategic path to openness as you move beyond virtualization toward a private cloud. By adopting OpenNebula, you take a step toward **liberating your stack** from vendor lock-in. Being a platform independent software, you can gradually migrate to other virtualization platforms. OpenNebula can leverage your existing VMware infrastructure, protecting IT investments, and at the same time avoid future vendor lock-in, gain more control over your infrastructure, and strengthen the negotiating position of your company. Have a look at our **Case Studies**<sup>9</sup> to learn more from our users and customers about how they are putting OpenNebula to work.

## Ready for a Test Drive?

You can evaluate OpenNebula on your VMware vCenter environment and build a cloud in only five minutes by downloading **vOneCloud**,<sup>10</sup> an easy-to-deploy evaluation tool that contains all required OpenNebula services within a single virtual appliance based on CentOS Linux.

# vOneCloud

## LET US HELP YOU DESIGN, BUILD, AND OPERATE YOUR CLOUD



### CONSULTING & ENGINEERING

Our experts will help you design, integrate, build, and operate an OpenNebula cloud infrastructure



### OPENNEBULA SUBSCRIPTION

Get access to our Enterprise Edition and to our support and exclusive services for Corporate Users



### MANAGED SERVICES

Our team of experts can fully manage and administer your OpenNebula cloud for you

Sign up for updates at [OpenNebula.io/getupdated](https://opennebula.io/getupdated)

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<sup>9</sup> <https://opennebula.io/case-studies/>

<sup>10</sup> <https://vonecloud.opennebula.io>