

[What's the Deal with OpenStack and Containers? \(aka When Fads Won't Go Away\)](#)

Let me start this off with a very true personal story, and it leads to why containers are becoming more important than a lot of people realize.

DISCLAIMER: This is a bit fun, but very real. Hype is happening, but this little story should help you to see what I'm talking about and how to cut through the hype to see what is real amongst it.

When I started working in technology, I was surrounded by teams of Novell admins. I became Novell certified and began working in the infrastructure support at various levels. I was also surrounded by long-time mainframe folks who continued to say **"There's no need for these Novell servers, all the data is on the mainframe. Plus, a lot of the Novell server tools won't be ready for production."**

Fast forward a couple of years and I began exploring distributed systems on Windows platforms even though it wasn't something that was being used at the company I was at. I was then being told by my peers **"There's no need for these Windows servers, all the data is on the mainframe or the Novell servers. Plus, Windows is too unstable and won't be ready for production."**

With all of the Windows production server infrastructure expanding, I started running Active Directory when it was on Windows 2000. Yes, Windows 2000. This was to look at migration planning, and how to fully leverage the new capabilities that it offered. Not surprisingly, I was told by many of my peers **"There's no need for Active Directory, all of the data is on the mainframe, Novell Servers, and the Windows Servers aren't in need of a directory service. Plus, Active Directory is too new and won't be ready for production."**

Not too many months later I began exploring the world of Linux a lot more and developing orchestration scripts for that platform to help with web development. I was using a variety of tools that tied in with existing systems, and I was also expanding into PowerShell at the same time on my Windows infrastructure with full production on Active Directory. I was then told by my peers **"There's no need for orchestration, because all the automation is running on the mainframe, and now that the Novell servers are gone, the new production Active Directory can be managed in the GUI. Plus, tools like PowerShell and Linux are too new and won't be ready for production."**

I began working with VMware virtualization heavily at vSphere 2.5, and was deploying development resources into it and designing for production. I was being told by my peers **"There's no need for VMware, all of the physical servers will perform better and VMware virtualization won't be ready for production."**

Over the last 2 years I've been working heavily on OpenStack and container infrastructure including Docker, Rocket, and also diving in with PaaS platforms such as Cloud Foundry. Today [VMware launched their cloud-native application initiative](#) and released VMware Photon Linux and VMware Lightwave. I've been told over the last while, and especially today **"There's no need to look at OpenStack or all of these container platforms, because all the data is on-premises and running in virtualization platforms. Plus, things like Docker and OpenStack won't be ready for production."**

SPOILER ALERT: In another 18 months, take a guess which technologies will be flourishing in production at a lot of organizations? ☐

SPOILER ALERT: SDN and network virtualization is also on my radar and I've been testing lots of that...just sayin'

I'm not saying that I'm a visionary. Trust me, I am following the lead of the visionaries. I'm just simply seeing the writing on the wall and making sure to keep ahead of the curve wherever I can. I've been watching great leading work by Scott Lowe, Cody Bunch, Nick Weaver, James Watters, Martin Cassado, William Lam, Kenneth Hui, and many more who have been working on projects that are typically at the early part of development.

It's not to say that everyone is going to be running containers and OpenStack, but don't dismiss what is happening in those ecosystems. They have a strong use case. SDN and other interesting technologies are facing the same challenge. Many organizations will be slow to adopt them, and that's fine. Just be careful when we say that it's "Not ready for production" because while many keep repeating that phrase, the technology is catching up and ends up becoming production before people are willing to realize it.

ONE MORE NOTE: I also don't say that legacy is going away, or that recent technologies are going away. There will continue to be a massive market for many technologies of varying ages and maturity for a long, long time. Of my top 10 viewed posts this month, 6 of the 10 are PowerShell posts. The long tail of the technology lifecycle proves itself to be as strong as the leading edge.

[Some Thoughts on OpenStack Readiness in the News](#)

Let me start with this a disclaimer: these are my thoughts from my experiences with the industry thus far. That said, I hope it makes sense to clarify some of the news and punditry happening in the OpenStack ecosystem.

12 years ago I was installing VMware and trying to get buy-in from my operations team, my development team, and from management. Today, it's not even an option to not choose virtualization as the option for most organizations. Does that mean that hardware stopped selling? No. In fact, we've even seen information about the rise in mainframes and LTO tape sales despite so many pundits talking about the end of both technologies.

If we had Twitter 10 years ago, the headlines and tweets would have read: "Hardware vendor X loses deal to VMware consolidation", and people would have been chattering back and forth from the hardware vendor and from the VMware community. We didn't have Twitter then though. So, let's talk about the last few days in OpenStack as highlighted by reports about PayPal, and the unfortunate news about Nebula shutting down.



Just in case you didn't know the background to the VMware and OpenStack debate happening at PayPal, there was a lot of history over the last year regarding rumors that PayPal was migrating

away from their VMware platform to OpenStack running on KVM. These rumors had been proven to be incorrect, and all of the parties at PayPal, VMware, and at participating vendors involved in supporting PayPal have acknowledged that the story spun out of control. Plans were underway to utilize OpenStack, but by no means was this a rip and replace happening at a rapid pace as some of the stories had indicated.

This was revisited again with the [recent article by Ben Kepes at Forbes](#), who I absolutely recommend you [follow on Twitter](#) and [read his content](#).

All of the spin aside, this is a big move by a big company. It also is only a small percentage of the overall VMware business, so it is by no means a nail in the coffin as some may want to allude to.

At the same time that was happening, we heard the terrible news that Nebula, an OpenStack private cloud vendor, was shutting its doors. The team at Nebula have been phenomenal contributors to the OpenStack community and ecosystem, and this is obviously terrible news for them and customers of Nebula.

Again, we have to also note that this is not to be taken as a sign that OpenStack itself is failing. If a grocery store shuts down, we don't go on about how people are no longer using food.

This is where the question always comes about OpenStack readiness.

Is OpenStack Ready?

The real question is "are you ready for OpenStack?" which is the same as what was said 12 years ago when we asked "is virtualization ready?", and the same reverse question was the real one we needed to ask.

OpenStack has some growing pains to endure still. There are challenges with deployment, and operations. There are challenges with scale. At the same time, most organizations aren't anywhere near the size where scale is an issue. Most organizations that are exploring OpenStack will build operational procedures as they go because they may have been lacking in the first place which is why they are looking to a new platform.

The issues that are being felt as organizations explore OpenStack, are the same ones they are experiencing with public cloud, with VMware vCloud, with CloudStack, and any other private or public cloud alternative. Organization change is often the biggest challenge when moving towards a private cloud platform. This goes hand in hand with the same changes needed to enable agile development practices, or better orchestration tools.

VMware and OpenStack - Apples and Oranges

If we look at timelines, VMware at 5 years old, was on ESX version 2.0 release in wider use and had just launched ESX Server 3.0 with patches up to 3.0.2 (http://en.wikipedia.org/wiki/VMware_ESX). I was running the latest copy of ESX server at my organization and often getting push back from folks on the idea that we may be heading down a road with a product that isn't ready for production use for enterprise applications.

I wrote [recently about the great OpenStack Superuser article about the 5 year summary of the project](#) and how the vision of the OpenStack foundation, and the community, was growing and morphing into something very cool. While there is a lot of growing to go through, there has also been an incredible amount of, dare I say maturity, developed by the OpenStack platform.

VMware has a wide ecosystem inside its product portfolio. These tools are sometimes loosely coupled, and sometimes tightly bound. The fundamental core of VMware is their hypervisor (ESXi) and the management tools that tie into it. OpenStack is designed to be a private cloud platform, using any hypervisor as the hosting platform. OpenStack is meant to augment and advance the ability of the hypervisor. Using open APIs and a self-service dashboard, we can use OpenStack to provision and manage our workloads and tenants.

There really is so much more to the products, and so much more to the story. OpenStack and VMware have been targets of some interesting debates lately, and will continue to be for quite some time. I think that we should embrace the challenges, and embrace the potential. Let's just get back to the business of building our infrastructure to meet business demands. That, after all, is what technology is all about.

[OpenStack Learning Challenges - Drawing the Owl](#)

It's a funny meme that we see regularly. It can be the "How to make a Turducken" or "How to make reindeer cupcakes" or some kind of before and after craft process that is made to look seemingly simple by the expert who is doing it. My example I use regularly is one called "How to draw an owl".



The reason why this is funny and frighteningly close to home is that when we are exploring new technologies, we often have trouble getting onboard with something new. I pride myself on being able to learn new things quickly, but in almost every case there is something along the way that doesn't work during the learning process. This can be daunting as we start down the road on a new product.

We see this happening all the time as people try to take the first steps by installing OpenStack:



This can be a frustrating part of the process for sure, and I see this challenge everywhere I go, both for operations teams and for development teams.

In the [Current Status podcast](#) (Episode 11) I had a chance to discuss OpenStack in general, and the focus of a lot of the content was around the importance of it along with the challenges of learning OpenStack because of the many different flavors, distributions, deployment tools, and base environments. Not only is OpenStack fundamentally different than what many VMware and Hyper-V administrators are used to, but the ways we deploy and manage OpenStack are incredibly varied.

We had a lot of fun chatting, and touched on a lot of areas around challenges with OpenStack and adoption.

OpenStack Learning Resources

The trick with learning is to find the right way to learn that matches your style. For some, this means an in-person classroom situation. For others, it may be online videos, or perhaps one-on-one with a mentoring partner to really have a more direct teacher-student connection. Regardless of your preference, there is probably something that can help you with OpenStack. Let's take a look at a few of them here.

OpenStack Meetups and User Groups

Meetup.com is filled with exciting technology communities that are informally supported, often vendor-agnostic, and provide a great way to connect with others who are established with a software or system that you are looking to get involved with. [OpenStack Meetup groups](#) are in nearly every city, and even if there isn't one already, you may be able to start one where you are.

[OpenStack User groups](#) are also popping up in many cities. These are the official OpenStack supported user community meetings that help to bring more people together to

OpenStack Summit

Attending the OpenStack Summit is a phenomenal way to become very close to this community. While there may be a cost issue with attending the event depending on your situation, the great thing is that the sessions and keynote presentations are uploaded to Youtube for free viewing after the event ([Paris](#) and [Atlanta](#)).

You may also see the #vBrownbag team there delivering tech talks ([Paris](#) and [Atlanta](#)) which is another great way to consume some OpenStack goodness as the 10 minute tech talk format opens the door for many vendors and community members to share information.

Online Video Training

I would be remiss if I didn't shamelessly plug my [Pluralsight course Introduction to OpenStack](#) and there is more in the works to be brought to this great platform. If you need help getting started with Pluralsight, I also have a number of 30-day unlimited usage trial coupons that I can share. Feel free to add a comment below and I will email you with your trial code.

As mentioned above, there is also the #vBrownbag which has an OpenStack track where we saw a great series called Couch to OpenStack where a number of contributors worked on helping folks build a small lab as we walked through what each of the programs are, and how to do some basic administration in an OpenStack environment.

Classroom and Virtual Classroom Training

At [OpenStack.org/training](#) there is also a training section which gives a list of available companies and resources for traditional classroom training. Some are aimed at certification-oriented training such as that offered by Red Hat, and you will also see distribution-agnostic content which is geared towards general OpenStack operators.

More resources are popping up every month as we see more people growing the OpenStack education community. This is a good sign of the strength of the community and the momentum that is building around OpenStack.

Books and Blogs

Another great resource you can learn with is the [OpenStack Cookbook](#) which is currently being updated to be reprinted with updates of the Juno release. Not only will you have the book as a great reference guide for building your OpenStack cloud, but you can also use the [OpenStack Cookbook multi-node lab which runs using Vagrant and VirtualBox](#) (LINK LINK). I use the cookbook as a quick way to spin up a lab, and for those who want to learn about orchestrating your OpenStack deployment, you can view the open source code right in the [Github project](#).

The blogging ecosystem is also a great way to gain access to resources. There are really too many to list, and I wouldn't want to leave anyone out by accident, but I suggest you do some searching and you may be surprised by how vibrant the OpenStack blogging community is.

OpenStack Growth - Why Learning About it is Important

If you are a VMware administrator, you should understand how Microsoft Hyper-V works, right? The reason is that you have not only know why your current solution works, but what comparable solution are available to deliver the best business value. As OpenStack grows and becomes a more viable option for today's organizations, we all should embrace the learning process so that when it does become something you have to work with that you are ready for it.

While I seem like an early adopter to a lot of people, I consider myself late to the game compared to many people. The reason is that OpenStack was at the 5th release (Essex) already when I jumped in to begin my learning journey. One thing that you can see out of this though, is that there is never a time when it's too late to begin learning about OpenStack.

People and process is the most important part of the why OpenStack is important really. While the technology is of obvious importance, the real value of OpenStack comes with what problem it is solving. Being able to create better operational practices for your organization is what it is really purpose-built for.

If you are looking for help to begin your OpenStack journey, feel free to reach out. I am happy to do anything I can to connect you with the right resources and people to make OpenStack something that is part of your toolkit.

[Platform9 on KVM in General Availability; Launch of VMware Beta Program](#)

It is an exciting day for the team at Platform9 as they [announce the general availability \(GA\) of their product for KVM hosts, and much more](#). The concept of [private cloud on existing infrastructure](#) was what really raised my interest in Platform9 when I had the [opportunity to cover their launch](#) in August of 2014.

Platform9 at Tech Field Day

I would be remiss if I didn't also mention that Platform9 co-founders Sirish Raghuram and Madhura

Maskasky were presenters at the recent [Tech Field Day, Virtualization Field Day 4](#) in Austin. There was a networking event during the week that I attended with my team from Turbonomic, and had some time to chat with Sirish and Madhura about the company and how things are going.

Driven by Simplicity, Powered by Demand

As part of the core tenets of their business, Platform9 is built to deliver self-service on-demand infrastructure management with simplicity similar to that offered by Amazon Web Services.

This simple flow shown below gives you the view of just how simple it can be to get Platform9 enabled for your own infrastructure:



Simplicity is a key selling point. Anyone who has attempted to use vCloud, vCAC, OpenStack, and other private cloud platforms will be acutely aware of the investment in time and testing to get that infrastructure up and running. Being able to deploy Platform9 as quickly and seamlessly as possible is a leading indicator of how well this will be adopted in my opinion.

At VMworld in 2014, Platform9 ran a contest called “Test Drive” where attendees could use a lab environment running KVM with existing VMs already in place. The goal was to see how quickly and simply that the admin could deploy and enable Platform9 to manage the KVM infrastructure and discover the workloads. The top 3 competitors completed the task in around 3 minutes. This is a nod to the engineering team at Platform9 for sure!

Labeling of servers within the interface was talked about in the original beta, and this has proven to be a popular feature. Tagging of workloads allows for effective organization and management. This is something that has been long sought after by VMware administrators and linux virtualization admins alike.

KVM, Platform9, and General Thoughts on the Industry

In a conversation I had with Sirish prior to the launch, we discussed a lot of what Platform9 is doing, as well as some general discussions around the industry at large and things that the Platform9 team have discovered through the course of the earlier beta work leading to today’s GA launch.

Among the things we discussed, we discovered that many customers today are running multiple products in order to move towards the goal of agility and diversity.

Platform9 has seen good feedback that it makes sense to keep management in a single system. This has been validated by every customer during the beta release and in early discussions.

Sirish also highlighted that many of their customers have significant experience with dev/test processes. They are used to AWS and quickly onboarding users. It’s natural that the primary user is a development user, and customers who are moving to QA are now coming into the platform.

We also discussed Docker, and the growth of KVM:

People are taking KVM more seriously. It isn't just the edge organizations who are running linux already. We think that Docker is going to also get better and customers who want to run these side-by-side will want a consistent workflow, and a single management interface.

The adoption of OpenStack and Docker will naturally grow as we ease the pain of bringing these products to the data center. This is why I have been very pleased with the work done already by Platform9, and I envision that they have a strong future ahead based on their principles.

I agreed with something Sirish brought up that Docker itself may seem disruptive, but it is in fact an incremental advance in virtualization. The move of virtualization further up the stack is what is driving people towards PaaS offerings and containers, but we are still going to be seeing traditional virtualization as a major part of the data center for a long time to come.

Of the linux derivatives driving OpenStack, top contenders seem to be CentOS, Ubuntu and RHEL (Red Hat Enterprise Linux). This validates much of what I've seen in speaking with customers, and early adopters of OpenStack.

VMware and Platform9 - Beta Program Launch

As discussed in the early roadmap, Platform9 is being build to also leverage existing infrastructure for customers running VMware vSphere as their platform of choice. While there is momentum gaining on KVM as a virtualization platform for all types and sizes of organizations, we can't ignore the amount of VMware deployments around the globe that are ideal candidates for Platform9.

As of today, the official launch of the VMware beta program is underway with 20 customers participating in that technical preview. During my chat with Sirish we talked about some of their current customers, some of whom are running VMware vSphere alongside KVM to evaluate the best of breed solution for particular workloads. This an option I am seeing many organizations go with rather than the immediate rip-and-replace of one hypervisor platform for the other.

Companies in a situation with multiple hypervisor platforms are ideal candidates for Platform9 as they can deploy quickly and manage their entire disparate infrastructure pool using a single interface. This simplicity will help enable them to get back to the point of managing workloads, rather than infrastructure.

The customers for the VMware program come from all over the globe, and are sampled from multiple industry verticals. This also highlights the diversity on the customer side that are already working with, and who are investigating private cloud options. Many customers were also consumers of public cloud services like AWS, but have decided to bring that capability in-house in order to maximize their investment in their existing data centers, while maintaining the agility once found only in the public cloud.

Here is a video of Madhura Maskasky at Tech Field Day previewing the Platform9 integration with VMware. As you can imagine, this was exciting for the delegates to see, and I envision that excitement will extend to customers everywhere when they see the advantage of leveraging Platform9 in conjunction with their current vSphere infrastructure.

Why Platform9?

This is the classic question that anyone should ask. Just like with any infrastructure tool that you

will choose to manage your data center, it is important to understand the “why?” of that choice.

Agility within your infrastructure is an enabler for better business processes. As a proponent of the people, process, technology approach, I am a firm believer that what Platform9 is doing will be a great benefit to many organizations big and small. Introducing the features of a private cloud with a fully managed product will elevate the IT operations to be able to concentrate on better development and IT consumption practices. All of this is being done to create more agility to drive business to be better at what it does best: satisfying its customers.

As shown in their press release, the pricing model is also very simple:

Pricing and Availability□ Platform9 Managed OpenStack is now generally available with three tiers: Lite is a free tier for those testing or learning about OpenStack, and is limited in scale Business tier with unlimited scale is priced at \$49 per CPU per month (annual subscription required) Enterprise tier for advanced features and premium support Customers can sign up for the Lite tier or start their free Business/Enterprise trial via <http://www.platform9.com>.

I encourage you to take the time to [read more about Platform9 at their website](#), and you can also follow them on Twitter ([@Platform9sys](#)). Congratulations to the team on this announcement, and I look forward to seeing the results as they move towards the GA launch of their VMware offering once the beta program is completed.