

Understanding the Costs of Public and Private Cloud

There have been a lot of articles over the last few years around public cloud versus private cloud. These have spoken to both sides of the argument that one may be better than another, but we often get lost in the classic case of “everyone I talk to” which presents a rather unscientific sample set to derive real data from.

There was an [interesting post put out recently by Matt Asay](#) which touched on the difficulties in dealing with private clouds. The conversation that triggered it, [or a tweet in this case](#), was based on some licensing hurdles that someone was being faced with. What was interesting is that it led Matt to theme the article around the advantage of public cloud over private cloud using the Microsoft licensing issue as the trigger.

Licensing in the cloud is difficult, period. Trust me, I’ve had to evaluate licensing options for software covering everything from Microsoft tools, to Oracle, to Red Hat Enterprise Linux, and dozens of other products and platforms. Licensing is challenging at the best of times to figure out for some products, but it becomes particularly adventurous on elastic workloads. It is especially brutal when you get into mixing CPU, socket, vCPU, server, and client licenses.

Let’s put licensing aside for a minute though, and get back to the basics of why we see wins and challenges (no, I won’t say losses) in private and public clouds. Here are a few of my thoughts on the wins and challenges with either platform. There are many things that may not be covered here, so comments are always welcome if you have more to add. This is just meant to cover the top of mind things that I have discussions around with customers and peers.

DISCLAIMER/WARNING: These are just a few reasons on either side of the discussion. I know there are many more, and there is more detail on each, but I just wanted to lay the foundation a bit here.

What are some Wins with Private Cloud?

Control of cost: You know what it costs to run your infrastructure every month. Right or wrong, and all of the utilization percentage questions aside, the predictability of the costs is a real win for many organizations.

Data Locality: Keeping the data close to the compute workload and to the consumer of the data. This is a hard reality that many discover. We have TB of data for a reason, so it’s not always appropriate to fire it up into the cloud when it’s used by desktop applications or report cubes which reside in a data center just to name a couple of examples.

Data Compliance: It’s 10 AM, do you know where your sensitive data is? Yes, it’s in my data center.

Lifecycle Control: One thing that we do enjoy is having a sense of control over the lifecycle of the applications and infrastructure. We may not quite be ready for rapid release cycles and updates that can be thrust upon us as public cloud consumers. We have to admit that it’s called legacy for a reason, and whether we like it or not, the organization may not quite be ready for the forced agility that can come with a provider controlled environment.

What are some Challenges with Private Cloud?

Security: If you haven't included security in your workflow and planning when deploying a private cloud, you will find out quickly that you may have a problem. There are lots of excellent advantages, but added complexity at the same time.

Compliance: This goes hand in hand with security, because understanding the security and ACL model of a private cloud is critical for ensuring compliance. Making sure that data protection and segregation in a multi-tenant cloud requires more thought and care than a traditional virtualization infrastructure. It's all there to be managed, but it is not ready to go out of the box.

Cost: Private clouds require infrastructure maintenance. Both physical and software resources are going to be a part of both capital and operational expenses. If your environment is truly elastic and varied, you can often find yourself having to heavily over provision in order to keep up with demand.

Complexity: Both setup and operation of private cloud infrastructure can be expensive and difficult. It isn't to say that it is always this way, but I've seen a lot of teams face both technical and organizational problems adopting private clouds as a tool.

Knowledge: Who knows your environment the best? As some companies hire the supposed 10x engineers to build a cloud platform, they have to also be sure that 10x engineer is doing 10x documentation and training. Many private cloud builds go well, but the engineers who design them may go elsewhere and leave a challenging platform to manage going forward without the knowledge.

What are some Wins with Public Cloud

Agility to deploy and manage: Base setup is already completed. Simply leverage existing service offerings which can be done easily through self-service portals and via externally facing APIs. It really seems like it couldn't be simpler than that.

Try and Buy: Kick the tires on a service, and if you like it, evaluate the viability for cost, ROI, performance and more. The advantage is that you can try before you buy and if you don't get the results, you are

Burst capability: Need 100 instances for a day or a week or a month? No problem. Need 1000 instances for a day or a week or a month? No problem. It's really just that easy. Putting load balancing gear in front of the environment is often baked into the public cloud platform too, so you really don't have to go elsewhere to design your resilient, elastic application platform.

Innovate at a rapid pace: Amazon has thousands (that's a total ballpark based on some estimates it's about 3000) of software engineers. I doubt that many organizations could have that pool of resources to design, build, and innovate their platform. Some do, like some of the large application environments and financial institutions, but it's not as common to have thousands of staffers dedicated to software innovation.

Continuous improvement of service (usually): It's assumed that the service will become better over time as the greater use of the services. More customers will drive more new development and features. That's a major value proposition of the cloud services.

What are some Challenges with Public Cloud?

Data gravity: Unless your data is close to where it is being consumed by applications, there is a little thing called latency that will become very obvious to you.

Cost: I both agree and disagree that public cloud is cheaper. For elastic workloads there are distinct cost advantages. The ability to get on-demand expansion and to retract as needed to reduce costs is undeniably there in public, but not private cloud. That said, persistent workloads can be, and often are, more expensive on public cloud platforms.

Security: Where is my data? Who may have access to it? Has there been a breach? What auditing is available? The list goes on with regards to security

Regulatory issues: PIPEDA (Personal Information Privacy and Electronic Documents Act) is one I've been very close to over the years. This is just one example, and many more exist. European nations have strict regulations around data storage, encryption, and privacy. Other countries have specific limitations on the use of encryption.

Hey, what happened to Service X?: If you bank on a cloud service, it may also disappear. In other words, just like any other software or hardware platform you choose, it could have a fixed lifecycle that is outside of your control.

Forget Big Data, How about Bad Data

I've worked in organizations that use file serving as a major part of their business. Yes, are always told that all data should be in the cloud. When you have dozens of terabytes of data that is being used for Excel, Word, and other day-to-day productivity applications, the reality is that data is expensive to keep in the cloud. It is expensive because it is big, with odd read/write patterns, and it requires quite low-latency access to the applications that run it. And yes, those applications are on lots of desktops.

We all agree that Office365 can solve this, but the very same organizations that I've seen running terabytes of Excel, Word, and Access files, are in Financial Services, or Health Services. Cloud is not an option due to regulations as highlighted above. That will change at some point probably, but not for quite some time.

Both Options Win

Let's be honest about this and admit that both options have legitimate wins, challenges, and in some cases there are absolute limitations that prevent choosing one of the options.

What I do want to emphasize here is that public cloud did something wonderful for both business and technology. Public cloud taught us that it could be done differently, and that agility in infrastructure gives real tangible and intangible benefits. I'm a huge proponent for public cloud, but for the right reasons. Here are some that I think stand out when we look at what the public cloud is able to deliver today, and as it evolves.

And one thing I have to add is that you should definitely [read a lot of what Matt has to say elsewhere](#) as he's a great writer and covers some excellent topics and has been a contributor in many ways to the tech community.

Platform9 - Public Cloud Features for Private Cloud Deployments

UPDATE: Platform9 URL updated to <http://www.platform9.com> and you can also follow them on Twitter [@Platform9Sys](https://twitter.com/Platform9Sys)

Something new just arrived on the scene this morning. You may have already seen Platform 9 in the past over at their [website](#):



I recently sat down for a presentation and interview with two of the Platform9 co-founders, Sirish Raghuram and Madhura Maskasky. We discussed the overall platform and the evolution of the concept that brought the team together to create this new and exciting startup.

With roots in VMware, the founding team is comprised of product engineering specialists who have a rich history in virtualization and understanding what the barriers are for customers to take the next steps towards a cloud-oriented management model. Not only that, but the investors and advisory team who have come together to bring Platform9 to the launchpad today are a strong group with significant experience across the industry.

You can [view a full bio of the founders at the Platform9 website here](#).

So, let's talk about Platform9!

Solving a Problem

With any product, the key is to be answering a question and solving a problem. The problem that is being faced to day by many organizations is that the barrier to entry for creating self-service deployment and management platforms can be relatively high. There are tools available today such as VMware vCloud and the OpenStack platform which can achieve much of this, but the installation, integration, and ongoing management can be a challenge.

Upgrade? No Problem

Platform9 is being built as a fully managed platform. Updates will be managed centrally and distributed to the appliances on-premises and monitored by the Platform9 team. I asked about how they will work with organizations who are less comfortable with rapid change and CI/CD style deployments. Sirish ensured that they have the ability to work with organizations if there is a strict requirement to adapt to some specific change windows.

One thing that did come up also is that there is no rollback option during upgrades. Effectively, it is a go forward, fix forward methodology. In the even that any issues occur, the Platform9 team will be on the case to get you back up and running. Recall that this is the additional provisioning layer over and above your current virtualization infrastructure. In other words, any issues would only affect the

Platform9 environment and not your underlying infrastructure.

For those who have worked with OpenStack or vCloud, you will already know that upgrading is generally not a friendly or simple process. In my mind this management feature is one of the top sellers.

KVM Now, Docker and VMware Coming Soon!

The underlying virtualization platform on which Platform9 is being built is the very popular KVM hypervisor. In fact, this slide from their announcement will pretty clearly tell you their road map:



At this point KVM will lead for them as the platform of choice, with Docker and VMware vSphere as the next targets. Some may ask why this was the order chosen. After speaking with Sirish, I've learned that it is a clear business decision to lead with a known, widely used hypervisor, and then to build against other largely popular platforms while also taking product engineering challenges.

While some use the phrase "low hanging fruit", we have to see that it is a smart business decision to take working products and knowledge and continue to use the traction on those implementations to engineer the next generation.

I, along with many others, will be anxiously awaiting the Docker and VMware releases which will have road maps laid out over the coming months.

Networking - Nova Ready, Neutron Coming

On the networking side of the product, Platform9 will be launched with Nova network as the networking platform for its OpenStack release. As you can imagine, I was quick to ask about the integration with more advanced networking using OpenStack Neutron which is also on the feature list for a future release. This would bring the ability to tie into extended L2/L3 network features and SDN platforms such as VMware NSX and Cisco ACI.

Nova network is very popular in OpenStack deployments today for many organizations should will make the addition of Platform9 relatively seamless and simple.

Authentication and Authorization

Good news: Platform9 uses the native OpenStack Identity platform, Keystone.

Not quite as good news: Platform9 uses the native OpenStack Identity platform, Keystone.

I really do like the work happening in Keystone, but there can be some challenges with external authentication and authorization depending on your directory services infrastructure. Active Directory is most likely one of the prominent players in enterprise directory services, and there can be some extra work required for AD integration in Keystone.

Luckily, there are lots of tips on how to get AD nicely tied in to Keystone, and the Platform9 team tell me that Active Directory is definitely on their radar as a target feature for connectivity. Secondary to the third-party authentication is that you will have to provision users into the platform as a standalone system. Again, this is something that the team have noted and we hope to see future enhancements to

Why Platform9?

This is the ultimate question that is asked about any vendor that we evaluate. Is this the right solution? What I've come to know about Platform 9 is that they are building off of a strong history with customer focus. Enabling rapid, self-service provisioning for private clouds is something I'm excited to see.

There is a large gap in the market place today for organizations who may be invested heavily in virtualization, but are having trouble envisioning the next steps to embrace private cloud methodologies and technologies. This looks like it has real potential to lead those customers to the next step in their journey with a managed approach to ensure that it is a smooth transition.

Service discovery and tagging were talked about as big ticket items coming soon which will really ramp up the feature set nicely.

A Look Inside Platform9

For those familiar with the OpenStack Horizon dashboard, you may see some similarities in the interface for Platform9. Since the product is OpenStack based, it is only natural to take the best of the Horizon usability and marry it with the enhancements that have been added by the Platform9 team.

The infrastructure management screen shows an overall view of the Platform9 environment as it connects to the cloud. By showing the authorized nodes on-premises we can see the total view including an aggregate.

Zoom in just a bit further and you see the detailed list of hosts plus the individual resource consumption and number of running instances. Roles are also visible to illustrate what the host does as a part of your OpenStack infrastructure.



Clicking on the **Images** tab shows the available images which can be deployed as running instances in your private cloud. This is also a familiar view for those who have seen OpenStack Horizon, but with some enhancements and also a **Browse Public Catalog** which will show available images that can be imported to the local cloud.



On our **Instances** tab you will see the collective view of all active instances running in your tenant. You can control each instance, or perform tasks on multiple instances in a few simple clicks. The aggregate view is nice and provides a common look and feel to the rest of the product.



User, role, and tenant management is as simple as a few clicks also. You'll see that Platform9 has done most of their customizing inside the software rather than trying to re-invent the interface. They smartly took advantage of the simple, clean OpenStack Horizon dashboard.



Series A Funding Announcement

Not to be outdone by the product release, but Platform9 is also proudly announcing their Series A funding from Redpoint Ventures. The 4.5 Million dollar funding round.

“We believe the private cloud management market is ripe for disruption. Platform9 is one of the most innovative companies in this space, and customer excitement and engagement has been phenomenal,” said Redpoint Ventures Partner Satish Dharmaraj, who has joined Platform9’s board. “Platform9 is uniquely positioned to seize this opportunity with their all-star founding team and cloud-based delivery model.”

This is definitely an exciting day for the team and for many organizations who will be very keen to take a look at how Platform9 may fit into their infrastructure.

My Thoughts on Platform9

Three words: Watch This Company


This is going to be great to watch as the team moves through their public launch. They are currently in beta with 12 customers. I hope to get some time to really test drive the product and share my experiences with you. Thanks to the team for hosting me in a preview session!

The focus of the team, and the product, is on ease of use. Rapid, AWS style of resource deployment. A much needed feature, and one I think will be well received.

Make sure to visit their site at <http://Platform9systems.com> for more information and if you are at VMworld you can drop by and visit them in person at Booth #324.

Read the [full press release on funding here](#) and the [official public announcement for Platform 9 here](#).

[DiscoPosse VMworld 2014 Sessions - Voting is open!](#)

 It’s that time of year again! Voting has just opened up for the VMworld 2014 sessions. This is a first for me as I’ve thrown my hat into the game with two exciting session submissions.

There is a great field of entries available to choose from, and I hope that you will find my sessions to be ones that make the cut for entry in San Francisco this August.

Since I have a strong focus in what I do towards align processes for automation and orchestration to help SMB (Small to Medium Business) I wanted to deliver towards my target market at VMworld. This is often a missing piece of the puzzle at large conferences which can tend towards presenting big, "Enterprise" solutions.

Here are the title sections for my sessions:

2763 - Bridging the Gap to Private Cloud for Small and Medium Business



2768 - Appliance all the Things!



Help us Create Your Ideal VMworld!

This is your opportunity to guide your VMworld experience by telling the VMware team exactly what you want to see there. It is important that you have a say

Session Voting is open **May 5 - May 18 at 11:59 pm PDT** and you can get there by clicking below. Happy voting, and I hope to earn a spot and to be able to see you at the session!



[Do you even private cloud, bro?](#)

An article has gotten some heat this week titled "IT's Losing Battle Against Cloud Adoption" (<http://readwrite.com/2014/01/31/it-losing-battle-cloud-adoption-enterprise#awesm=~ouZIMj5VXqNMOF>) which is spurring lots of conversation regarding the accuracy of the source numbers.

While we can't confirm specific numbers of implementations, it takes only a few Tweet questions and a you will quickly find that there are over 100 implementations of VMware vCloud out there today. Effectively there are a lot of folks that are calling FUD on this one, but the challenge comes with how we can accurately rebut this type of an article.

Me and my Shadow...IT

We hear the classic reference to "Shadow IT" which is a great way to highlight one of the challenges within organizations. But we have to be careful when we define exactly what it is that is considered Shadow IT when we talk about it.



Is it really fair to consider that there is an organization out there, regardless of what they do, that has their entire IT portfolio controlled? Can any company really say that it has a total awareness of what products are being used by their workforce in their day-to-day activities?

If anyone were to tell me that they have every application environment known, approved, and documented, I'm going to call Bravo Sierra on that. It isn't a reality, but is that really a problem?

The Private Cloud misnomer

✘ This one is even more of an issue, which is part of what Matt Asay's article highlights. The generally accepted criteria to define a cloud include: Self-Service, Elastic, On-Demand.

The long-running argument by many public cloud advocates is that private cloud is not cloud, simply because it cannot meet the requirement of being truly elastic. Again, this is semantics in a lot of ways because the elasticity is only a concern if the business consumer is outpacing the IT organization's growth strategy for compute and storage.

The article specifically talks about the lack of a true Self-Service model in many organizations, and to this I have to agree, but there is a caveat. The real question is "Does a complete Self-Service IT organization really exist in a public or private cloud?", though I doubt that the answer exists, because we will never have a 100% acceptance on either side.

I would challenge that even the most advanced IT organizations and fully engaged DevOps teams will still have some straggling business consumers that find they have to go outside the lines a bit sometimes.

I also agree that we have to tread carefully when we throw around the term Private Cloud because there are implications, and simply having a bunch of virtual servers is definitely not a cloud infrastructure.

Running Salesforce isn't a failure of Enterprise IT

One of the popular apps that calls the validity of Enterprise IT into question is Salesforce.com with their popular SaaS offering that owns a significant chunk of the CRM marketplace.

Does the fact that Salesforce gains adoption by Enterprise customers signal the failure of the IT organization? Personally, I don't think this is the case at all. What Salesforce is to me, is a viable answer to a specific business need, and it can be well accepted by Enterprise IT as a part of the overall portfolio of managed services. We have to be careful when we get roped into the broad brushed statements about cloud products marking the end of Enterprise IT.

The many truths of statistics

✘ One of the challenges that we face in finding the "true answer" to any question, is that we use statistics and surveys to derive the answer, but the source information is both perfect and completely flawed at the same time.

"It has long been recognized by public men of all kinds. . . that statistics come under the head of lying, and that no lie is so false or inconclusive as that which is based on statistics." - Hilaire Belloc

In politics, the statistic is king: “54% say that they would vote for <candidate A>” and similar stats are flashed in front of us, and then the opposing party will spend their day creating a new result from the same statistical results, or they will simply tear down the validity of the survey based on the participants.

Paul Barsch has a great article on statistics here which gives an insight into the potential pitfalls: <http://paulbarsch.wordpress.com/2010/04/29/do-you-speak-statistics/>

So what am I saying here?

What I’m saying here is that you should form your own opinion of how successful your IT organization is, and what the appropriate products are. I am in the business of debunking FUD claims in the market as I assess technology for my company, and in doing so I have learned that even the “wrong” solution based on somebody’s statistics, may in fact be just right for my organization.

A beautifully worded portion of Matt’s article is as follows:

“If anything, it seems like IT needs to shift away from its role as gatekeeper to instead being an enabler, one that finds different ways to deliver security.”

This is something that I think we can all agree on, and hopefully we can all work towards the greater good which is to service our business consumers by enabling them with IT solutions, whether it is public cloud, private cloud, or something as simple as a well crafted Excel document ☐

I don’t agree with much that is being said in the article just knowing that the 100 vCloud versus 200 CloudStack/OpenStack doesn’t sit well with me as a true representation of the current deployment numbers, but I applaud Matt for creating some great conversation around this just the same.

The TL;DR for this is “don’t always believe what you read” and when someone says “the numbers don’t lie”, they are right; The numbers don’t lie, it’s the people that use the numbers that do.