3 Ways VMware vCenter® is Still Relevant for Cloud Adoption

Ryan Jarvis
Senior Solutions Engineer, Faction Inc.

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Who should read this?

This book is about cloud integration of VMware environments and the role of vCenter:

- How vCenter is used today
- Why vCenter is valuable
- How utilizing VMware can save you time and money in cloud adoption

Who this eBook is written for:

- Leaders who weigh and justify the benefits of utilizing private and hybrid cloud solutions to solve their IT and application challenges.
- A CTO who is concerned with how their applications deliver value for their organization.
- A CFO wondering how to maximize the financial benefits of private and hybrid cloud.
- An IT leader who is wondering what technologies can give them the benefits of cloud while leveraging the people, process, and technologies their team has now.

Do any of these apply to you? If so, you should read on.

Introduction

The driving force(s) for cloud adoption varies widely by organization. Whether it's the perceived financial benefits, a pending office relocation, increased agility, or the appeal to get out of the business of managing hardware and datacenters – sometimes the benefits of cloud don't outweigh the familiarity and ease of integration of home.

When accustomed to having vCenter access it can be a difficult task to mirror an on-premise IT strategy into today's cloud landscape. Third party software API integrations, restricted hypervisor access, and custom cloud provider UIs can have limited control, functionality, and interoperability. This forces IT departments to explore completely re-architecting their environment and adapting their toolsets to meet the requirements of a cloud service provider.

Some camps argue that the aim in cloud adoption is abstracting the infrastructure and moving away from proprietary tools like VMware to developer-centric platforms like AWS or Azure. However, many IT departments are hesitant to move their IT crown jewels: ERP systems, databases, and other critical business applications to the public cloud. IT teams often realize during a transition to a public cloud that the tools they use to monitor workloads and ensure their SLAs, are missing or drastically different in the public cloud. The operational effects of the public cloud are most impactful to these type of persistent workloads.

These applications do not easily fit the "T-shirt size" instances of the public clouds, which often require resource over-provisioning to find an appropriate size, and lack the administrative control to properly manage, monitor, and troubleshoot these critical workloads. Most IT departments simply don't have the time, resources, or money available to re-platform these applications to overcome these challenges. These groups prefer the VMware toolsets due to its deep visibility, broad customization, and ability to ensure SLAs are met, but would like to get out of the management of datacenters and hardware refresh cycles.

Most IT departments have a VMware-based environment today and rely on VMware to deliver non-disruptive hardware maintenance, high availability, and plugin compatibility for third-party software products like backup, monitoring, and security. These features are powered by VMware's vCenter Server, which drives incredible services and value everyday in on-premise platforms, but is very uncommon in the cloud market today.

This presents a gap in the market for organizations that are looking to retain control, integrate existing assets, and utilize existing expertise while entrusting the management of hardware and datacenters to a cloud provider in return for a strong SLA and on-demand scalability.

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IT Professionals & the Value of VMware Expertise

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In less than a decade, the IT industry moved from legacy datacenters running physical servers, to completely virtualized environments, and finally to running billions of virtual workloads across hundreds of cloud providers. VMware was a true pioneer in the virtualization market, and customer adoption was quick and expansive. This jolt in progress and innovation was driven by rampant server sprawl, application silos, and system availability issues in the legacy datacenters, which products like VMware helped solve. VMware quickly became the defacto virtualization platform, and a market of highly trained IT professionals grew up around this transformation.

There are now over 221,000 trained VMware administrators, and it's estimated that VMware still owns 80-85% of traditional IT virtual workloads. Almost every hardware and software platform today either has an alliance partnership with VMware, 3rd party plugin, and/or was built to VMware compatibility guidelines. The breadth of the VMware community and ecosystem is incredible, as is the business value created by the platform. This ecosystem has created a very large market for professionals trained on VMware vCenter and the vSphere platform, as well as 3rd party products, and these skills will continue to be needed as the cloud adoption curve grows.

VMware's CEO Pat Gelsinger presented at the VMworld 2016 kickoff general session to a group of around 26,000 attendees and shared some very interesting statistics. VMware noted that in 2016 there were in total 116M virtual workloads, of which 15% were in the public cloud in the form of SaaS and IaaS, and 12% were in private clouds in the form of IaaS, while 72% remained on-premise in traditional IT environments. [1] This represents significant growth in the cloud industry, notably in the public cloud as SaaS products have become the standard for certain applications, including Microsoft Office 365, Google Apps, and Salesforce. VMware estimates that by 2021 there will be 255M virtual workloads; 30% in SaaS and IaaS public clouds and 20% in private IaaS private clouds, with 50% remaining on-premise in traditional IT environments [1]. This shows that 23% of virtual workloads today are in the cloud, and over the next five years an additional 27% of virtual workloads will be migrated to the cloud. The total number of virtual workloads is expected to more than double over the next five years.

> *...in 2016 there were in total 116M virtual workloads... by 2021 there will be 255M virtual workloads...*
>
> **-Pat Gelsinger, CEO of VMware**

To help offset this growth many organizations are looking to the cloud to provide the additional scale, agility, and elasticity to VMware's offering. However, as we have heard from many IT departments, they are hesitant to learn a new platform or endure the time and effort required to make their applications ready for the public cloud. Their preference is to scale their existing framework driving additional business value.

VMware administrators have proven their ability to architect, implement, and maintain virtual environments through vCenter, capable of improving application availability while lowering costs. These skillsets will remain in high demand over the coming years as virtual workloads increase and organizations seek private and hybrid cloud options to help offset this growth, and integrate various public and private cloud services.

Are you taking advantage of this skillset availability or turning your back on it?

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Value of vCenter & 3rd Party Integrations

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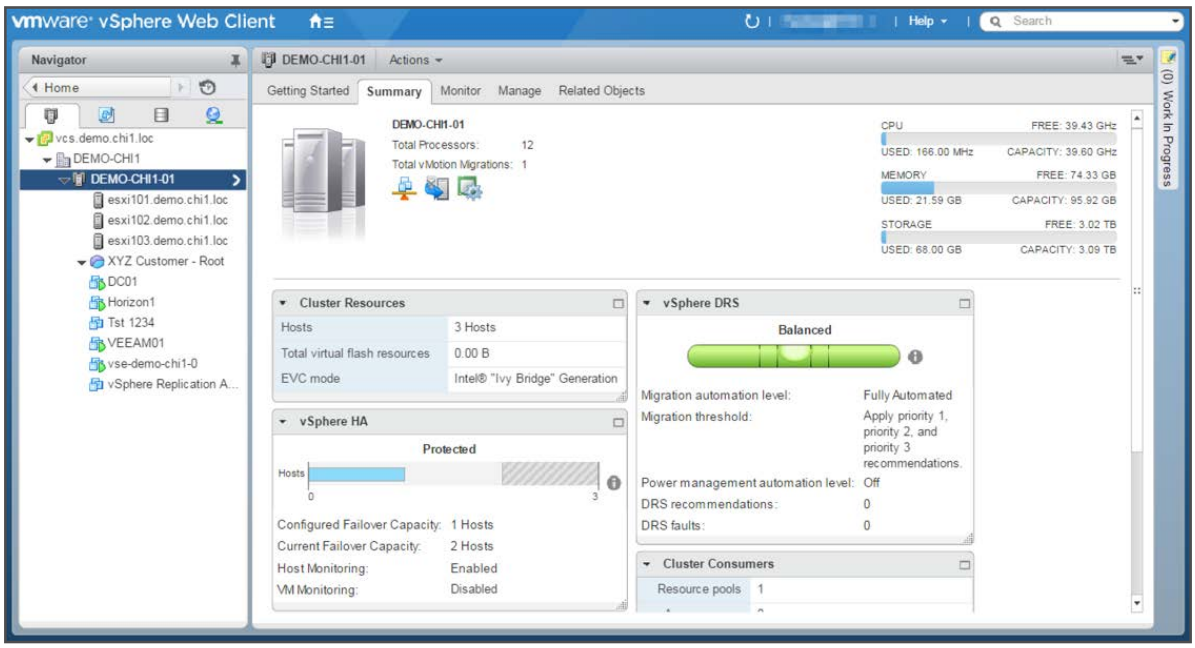
When evaluating cloud service providers, the integration of existing assets, processes, and security posture is a chief concern for most IT departments. Organizations can be blindsided by the drawbacks of losing access to vCenter, as this service provides the integration point for many 3rd party products.

Backup software, as an example, relies on having access to the vCenter to leverage the Changed Block Tracker (CBT) and snapshots to provide comprehensive image-based backups. Similarly, Business Continuity and Disaster Recovery tools like Site Recovery Manager and Zerto, need access to vCenter to replicate changes to paired replica VMs. Security products like TrendMicro's® "Deep Security," require access to the hypervisor to deliver agentless Anti-Virus and Anti-Malware services.

Monitoring platforms such as Solarwinds require vCenter access to collect logs, create alarms, and define virtual objects. Citrix XenDesktop Provisioning Services requires access to vCenter to help orchestrate desktop management and stream image updates to virtual desktops.



VMware vSphere Web Client

IT departments spend considerable time architecting and deciding on these various technology solutions and have worked hard internally to justify and create a budget for existing assets and services - many of which are working well and under a current support contract. The ability to keep what is working well, while operationalizing the infrastructure is a common goal.

This strategy can be easily hamstrung by the integration options offered by the cloud service provider (CSP). Often the CSP maintains administrator level access to vCenter and provides either vCloud Director or a homegrown custom UI for client access. Tools like the examples above are usually selected and managed by the customer, but in the typical CSP model, they are selected and administered by the provider. This can have major cost and operational impacts.

To the right is a list of some of the categories and products that IT departments often rely on and have integrated into their on-premise environment – all of which are dependent on full access to vCenter.

If the CSP is managing or limiting the integration of 3rd party products this obviously translates to a loss of control of the integration, administration, and troubleshooting.

Image based Backup Software

- Veeam™
- Commvault®
- Varitas™

Replication and BC/DR Software

- VMware Site Recovery Manager®
- Zerto™
- Veeam™

Monitoring, Analytics, and Incident Response

- PagerDuty™
- Solarwinds®
- LogicMonitor®
- Servicenow®
- Splunk®

Agentless Security Software

- Anti-Virus
- Anti-Malware

Virtual Desktop and Virtual Application Software

- Citrix HDX®, Citrix XenApp®, Citrix XenDesktop®
- VMware Horizon®

Loss of Control without vCenter Access

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VMware vCenter is the primary control point for vSphere environments and enables administrators to manage all the core features within vSphere from a single UI. However, some of the most important attributes of vCenter cannot be granted via role based permissions or multi-tenanted and therefore must be controlled by the provider. This yields a lack of control and an inability for organizations to implement existing toolsets and technical operations in a cloud environment. These challenges can cause significant operational, financial, and availability impacts.

Some examples:

Example 1: Troubleshooting events would involve a support ticket. Without access to vCenter, an administrator cannot perform traditional troubleshooting methodologies, like pulling logs from the syslog collector or use esxtop to identify performance issues.

Example 2: Without vCenter access, you cannot create VM Affinity/Anti-affinity rules on hosts, which are commonly used to ensure compliance with core and socket based licensing programs. A similar challenge recently shocked the AWS community, as Oracle's new licensing model effectively doubled the licensing requirements on EC2. [2]

Example 3: VMware has made an incredible investment into their performance reports and vRealize Operations Suite. These features allow users to intricately examine their resource utilization, tune applications to achieve best CPU performance, and predict growth over time - as well as save money by identifying overprovisioned resources.

More and more IT departments are now supporting workloads that are client facing. The availability of workloads is no longer an internal issue, compounding the effects of downtime and performance degradation. Without the ability to enable IT departments to integrate familiar toolsets, maintain proven technical operations, and troubleshoot workloads appropriately; then organizations will be forced to either stay on-premise or make significant compromises in selecting a new provider. It's one thing to say you have an SLA when delivering an application; but how can you prove it without the type of visibility that vCenter and vRealize Operations Manager provide?

Faction Cloud

We at Faction didn't like these options, so we've seamlessly integrated a customer dedicated vCenter into every private cloud we deploy. Allowing every customer access to a VMware self-managed private cloud starting at $1,500 a month. With administrator level access, our customers can bring their existing environments into our cloud, deploy existing toolsets, and have an unprecedented level of control. We don't think that just because an IT team wants to stop managing hardware and start running their business, they should be forced to change tools and processes.

Our cloud is simple, fast, and secure; and the deep access and broad customization in our environment leads to infinite variety for our customers. From backup and disaster recovery to tier 1 applications on high-performance disk, to virtual desktops, to cold storage, our cloud has the building blocks for any workload.

Learn how our private cloud was designed to makes your use of public cloud easier by downloading our Hybrid Cloud eBook!

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