

VMware on IBM Cloud:

How VMware customers can deploy new or existing applications with SoftLayer resources.

Introduction

This paper focuses on how existing VMware customers can gain a strategic advantage by leveraging the IBM Cloud platform, while retaining the capabilities of their on-premises VMware infrastructure. It assumes a cursory understanding of the features and functionality of VMware, as well as basic familiarity with SoftLayer. The goal of this paper is to educate customers on the benefits of migrating VMware environments to SoftLayer in a hybrid cloud configuration. This paper is not meant to be an exhaustive analysis or implementation guide for running VMware in a SoftLayer data center.

What is VMware?

VMware is an industry leader in virtualization. The company offers a suite of cloud-based products that enable the virtualization of compute, storage, and networking. It has enabled IT departments to transform their static server and network infrastructures into dynamic resource pools, which can be provisioned on demand based on the ever-changing needs of any organization.

Challenges for the Software-Defined Data Center

Transforming from static IT infrastructure to a dynamic Software-Defined Data Center (SDDC) brings new challenges. For example, the SDDC allows IT departments to react quickly to changing organizational needs, but it also sets the bar higher, increasing user and management expectations that IT will always deliver a nearly instantaneous response.



USER
EXPECTATIONS



HARDWARE
CONSTRAINTS



FLUCTUATING
DEMAND

The chief challenge is that even with software like VMware to manage and optimize data center resources, IT departments are still bound by hardware constraints. For instance, on-premises data centers have a limited amount of floor space for racks of servers, storage, and networking. Even with consolidation, the data centers are still often constrained by the amount of available power and cooling.

Demand can also be cyclical, such as seasonal workloads in the retail sector. While the demand must be met, it is often impractical to size an on-premises data center for the peak burst capacity,

especially when that capacity is only used for 3–4 months in the year. That leaves IT departments in the uncomfortable position of choosing between over-sizing or under-sizing their data centers.

That's where cloud computing comes in. Public cloud providers can deliver the compute power needed when your own data center is overwhelmed. And while all public cloud providers boast elasticity and immense scalability, this scalability often comes at a hefty hidden cost: retraining your IT operations staff on yet another management interface. That's because most public cloud providers have a one-size-fits-all approach to workload provisioning that doesn't include customers bringing their own VMware environments or applications into the cloud.

SoftLayer is different.

You Don't Need to Sacrifice Control to get Elasticity

Adopting a cloud strategy shouldn't force you to choose between elasticity and control. With SoftLayer you don't need to trade the reliability and success of your VMware infrastructure to get the expandability your organization needs. Your experience maintaining a proven and reliable VMware infrastructure is an asset to be leveraged—not traded—to get the freedom of near-boundless growth in the cloud

By providing a global cloud platform with high performance compute, networking, and storage you need on demand, SoftLayer delivers the elasticity your organization craves without forcing you to completely rewrite the book on IT operations.

SoftLayer enables you to transform your existing VMware private cloud into a massively scalable hybrid cloud, without reinventing your IT department.

Leverage Hybrid Cloud

Imagine a logical pool of server, storage, and networking resources that extends across your organization and into the Internet to include the resources you have provisioned at public cloud providers. From this pool, you can provision workloads based on cost, location, or performance.

Now imagine that you can actually manage all these resources using the same tools that you've been using for years. This is a hybrid cloud. By extending your VMware infrastructure into the SoftLayer cloud, you can tackle initiatives like capacity expansion, disaster recovery & backup, data center consolidation, migration, compliance, security, and dev, test, and lab training.

Capacity Expansion

Quickly address resource constraints by bursting workloads into VMware on IBM Cloud.

Data Center Consolidation

Consolidate legacy infrastructures onto an automated and centrally managed, software-defined data center.

Migration

Powered by RackWare software, Cloud Migration Services is a flexible, secure migration solution that eliminates the pains of migration existing, heterogeneous environments to the IBM Cloud.

Dev, Test & Lab Training

Get the agility, scalability, and security you need to support rapid application development and testing cycles with VMware on IBM Cloud.

Compliance

VMware on IBM Cloud provides the basis for a trusted cloud infrastructure suitable for workloads subject to regulatory compliance.

Disaster Recovery & Backup

This backup and disaster recovery solution is based on an AltaVault® appliance from NetApp® and the IBM Cloud, which together enables you to efficiently store, manage, and retrieve your data.

Security

Enterprises moving their workloads onto a public cloud environment face new potential security concerns as their systems are deployed onto platforms they do not own and can be moved from server to server.

SoftLayer changed cloud computing the way VMware changed on-premises data centers.

In years past, adopting cloud computing meant leaving behind your existing data center management techniques and technologies in favor of what the cloud provider felt was best for your organization (or theirs). In most cases, all workloads had to be virtualized, yet you had no control over (or choice in) the hypervisor.

SoftLayer changed this by giving you the choice to run your workload in a shared or dedicated environment—on virtualized or physical servers. By providing high performance compute services in the cloud, you have total control and total flexibility. For VMware customers, you can deploy VMware applications on servers in SoftLayer data centers, and extend—not replace— your infrastructure management model.

In your organization, you have complete visibility to all the server, storage, and networking equipment.

Why would you expect less of a cloud provider?

SoftLayer provides complete transparency of the underlying infrastructure, delivering extensive management tools to simplify your provisioning and maintenance operations. In addition, you have complete control over your servers, storage, networking, and security resources, allowing you to reconfigure the cloud to suit your organization's needs, just as you would with your own data center.

By running your VMware environment in SoftLayer, you get the best of both worlds. VMware delivers maximum efficiency and the flexibility to oversee your workloads' virtual resources, while SoftLayer provides complete control and transparency of the physical infrastructure, all in a highly scalable cloud environment. Plus, in SoftLayer you don't get woken up in the middle of the night to fix hardware failures!

Let's explore some of the key areas where SoftLayer increases your VMware value proposition.

Global Reach

Whether your organization is based in a single city or spread across the globe, we can help. SoftLayer is a global provider of cloud services, with dozens of data centers worldwide. We have data centers in North America, South America, Europe, India, Asia, and Australia. Expanding into foreign markets is challenging enough without the added complexity of building out a data center.

As your organization expands into new markets, SoftLayer can help you reduce your startup capital investment costs by leveraging our worldwide network of data centers. In addition to removing the stress of building your own data center or computer room, you reduce your deployment time from months to days.

The global distribution of SoftLayer's data centers is also beneficial from the perspectives of scalability, business continuity, and data sovereignty. You can maintain compliance, while retaining your existing VMware infrastructure and IT staff. In fact, you can choose to centralize your cluster(s) in one location, or decentralize everything based on your organizational needs. You have total visibility of the data centers and their location, complete with detailed inter-data center latency information found in SoftLayer's Looking Glass portal: <http://lg.softlayer.com>

Consistent Management Setup

You can take advantage of a hybrid cloud set up and maintain your current controls. Expand or move your VMware cloud environments to any SoftLayer data center quickly and easily with the VMware management control panel your team already uses.

By building your VMware infrastructure on SoftLayer, you retain complete control over your applications and use the same network, security, and compliance settings that you established in your on-premises VMware environment.

Speed of Deployment

Leveraging the cloud means you get to take advantage of one of the cloud's biggest assets: speed. This benefit also applies when deploying an entire VMware stack. All the components you need for your VMware environment or application can be provisioned on demand from compute virtualization to storage and networking.

Learn more about the advantages of leveraging the SoftLayer infrastructure for VMware.

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