Connection®
we solve IT®

The Definitive Guide to Migrating to the Cloud

Migrate apps to the public cloud with multi-cloud infrastructure solutions

vmware® CLOUD™

Contents

01 Overview

Organizations worldwide are competing to develop the most innovative and reliable applications to meet growing customer needs and decrease time to market.

To meet growing consumer expectations, organizations must ensure that business-critical workloads operate in the most optimal, future ready IT environment.

This often means migrating to the cloud to improve agility, lower total cost of ownership (TCO) and accelerate innovation using cloud-native development and automation technology.

Despite the benefits the cloud can bring, many organizations can face challenges during the migration process. From infrastructure incompatibilities to moving workloads without disrupting tightly bound networks of dependent applications, successful cloud migration requires careful planning.

In this guide, we'll explore the historical shifts driving cloud migration, the migration challenges organizations face and how an effective multi-cloud infrastructure solution can eliminate many of these obstacles.

vmware® CLOUD™

02 It Begins with Applications

Applications are a necessity for the modern organization. For a business to provide quality products and services, it needs reliable and user-friendly applications supporting its day-to-day operations.

Knowing this, how can organizations put themselves in the best possible position to innovate and meet customer expectations? How can they optimize their resources to make application development, implementation and use as effective and efficient as possible, without sacrificing their security or reliability?

To answer these questions, we first need to understand how applications came to revolutionize the way we interact with businesses, organizations and one another.

vmware® CLOUD™
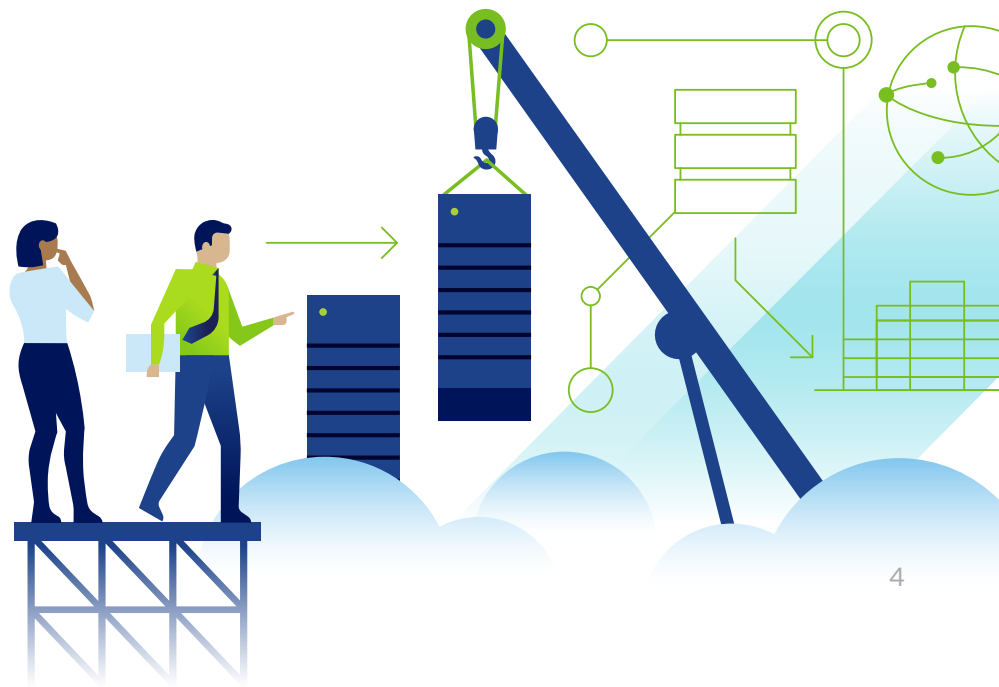
The evolution of applications

Applications execute a function, perform a task or range of tasks, and often require user interactivity to do so. An application can be self-contained or designed around a group of programs that consist of a set of operations that runs the application for an end user.[1]

Now many retail transactions take place between a self-checkout kiosk or even an application on a customers' mobile device.

Applications have evolved to a point where they can now provide customers with a service experience on par with or superior to interacting with a human. This was a major turning point for organizations worldwide.

Consider self-checkout retail stores. Previously, shopping was an interaction between a customer and a store clerk, but now many retail transactions take place between a self-checkout kiosk or even an application on a customers' mobile device.[2]

Today, with the digital transformation occurring across all industries, organizations are increasingly empowered to take care of more of the operational aspects of running a business on their own. As a result, the nature and span of applications have had to evolve to keep up.
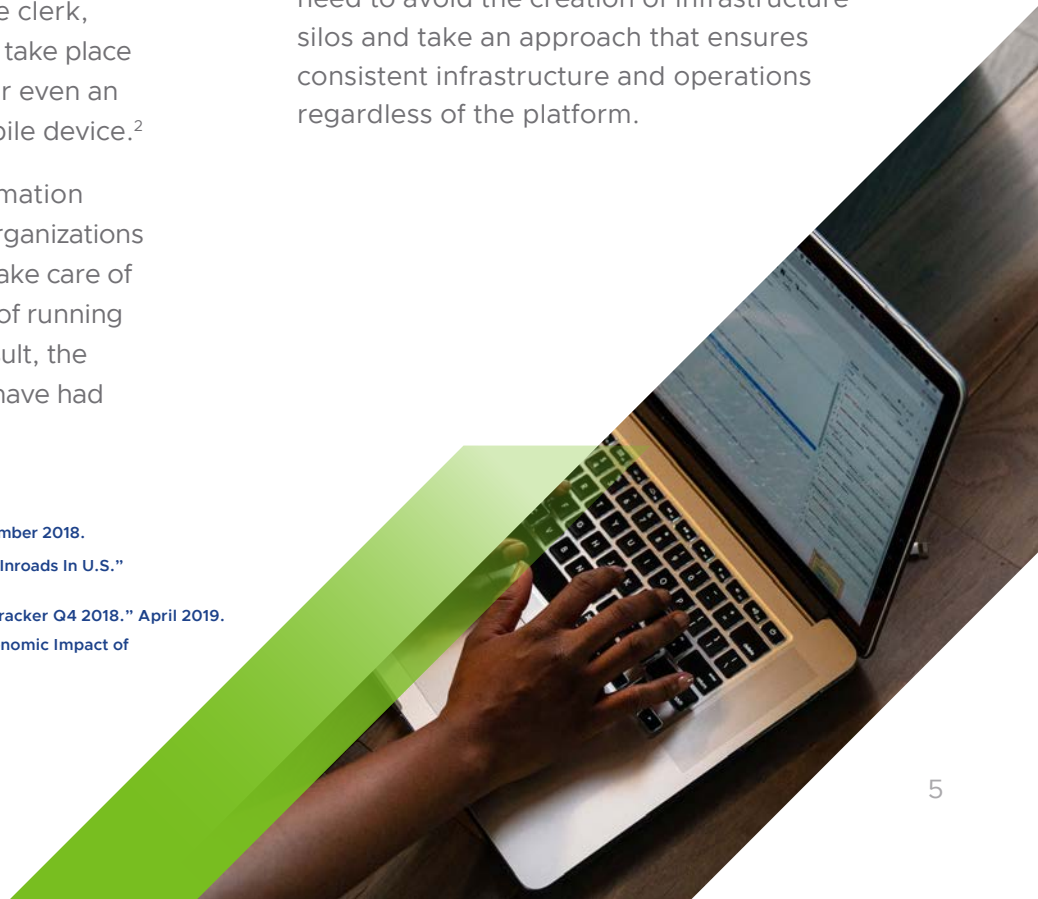
Application needs drive strategy

Increasingly, applications are deployed and operated across a diverse infrastructure landscape.

With the pressure to deliver goods and services quicker, the increased dependence on applications is accelerating. In fact, more applications are expected to be deployed in the next 5 years than in the last 40 years.[3]

Organizations must decide how to deploy, optimize, manage and support their ever-evolving application portfolio, which drives a set of infrastructure decisions. Organizations spend approximately $1 million and countless resource hours to migrate 1,000 virtual machines (VMs) to the cloud.[4]

This is a significant investment to simply rewrite an application for another environment without driving true value and innovation. As a result, organizations need to avoid the creation of infrastructure silos and take an approach that ensures consistent infrastructure and operations regardless of the platform.

[1] TechTarget. "Application." Margaret Rouse. September 2018.

[2] The Wall Street Journal. "Cashierless Stores Make Inroads In U.S." August 12, 2019.

[3] IDC. "Worldwide Quarterly Converged Systems Tracker Q4 2018." April 2019.

[4] Forrester Consulting and VMware. "The Total Economic Impact of VMware Cloud on AWS." August 2019.

vmware® CLOUD™

Silver linings: The benefits of cloud migration

In the past, organizations made large CapEx investments in the form of physical data centers, placing these in offices or co-location facilities to support compute, storage and networking needs of their applications.

Now, organizations can leverage the public cloud as an operational expenditure (OpEx), subscription-based service. The cloud allows them to take advantage of economies of scale, outsource a range of operations and connect to a global network of servers with access to innovative new development services. The cloud is also an important component of app transformation initiatives, enabling organizations to modernize existing apps, integrate with cloud services, convert to cloud native architectures and build additional value into the existing estate of applications.

Cloud migration opens the door to reduced CapEx, greater agility, and innovative new services.

Greater agility

Companies need to be able to quickly change tactics, adapt to new environments and develop new ways of thinking to remain relevant. Those that lay down more permanent structures and processes find their investments quickly become obsolete, leaving them unable to keep up.

That's why today, investing in CapEx is considered a risky strategy. It's always possible for a new technological advancement to make an organization's fixed asset investment redundant overnight.

An OpEx model reduces this investment risk by allowing organizations to pay for resources as they go, meaning they won't lose everything if their situation changes.

Once the organization adopts a cloud model, new services and resource capacity can be spun up on-demand resulting in new applications delivered faster than ever, speeding time to market and value created for customers and internal stakeholders.

vmware® CLOUD™

Reduced maintenance and upkeep costs

Companies often fail to look beyond the upfront investment costs of a physical data center to the costs that will accrue over the years.

These costs for ongoing support, maintenance, power, cooling and staffing can be significant. According to Forrester, organizations can reduce their average data center costs by $1.4 million by leveraging the public cloud.[5]

The cloud can eliminate these financial pressures due to economies of scale. Public cloud providers are able to reduce their maintenance, upkeep, power, cooling and staffing costs per server unit, compared to a data center run by a private organization.

These savings can then be passed on to the customer, providing a more cost-effective supply of storage, compute and connectivity for their applications.

Infrastructure refresh savings

Over time, increased load and decreased efficiency take their toll on data centers just as they do with any machine. Traditionally, an organization would have to refresh their infrastructure— a costly, time-consuming and ongoing process of keeping data center software and hardware up to scratch.

Today, organizations can instead migrate applications to the cloud at the end of a hardware refresh cycle. Those that migrate with a multi-cloud infrastructure solution are the most efficient—leveraging the same platform and skills for their infrastructure on-premises as in the public cloud. A study by IDC found that organizations spend 57% less migrating to the cloud using a multi-cloud infrastructure solution than migrating directly to the cloud provider environment.[6]

[5]Forrester Consulting and VMware. "The Total Economic Impact of VMware Cloud on AWS." August 2019.

[6]IDC and VMware. "The Business Value of Running Applications on VMware Cloud on AWS in VMware Hybrid Cloud Environments." Richard L. Villars, Deepak Mohan, and Matthew Marden. October 2020.

vmware® CLOUD™

Efficient and flexible resourcing

Organizations often have to predict how much infrastructure they will use in the future to accurately allot budget and resource requirements. If they invest too little, the business risks providing a slow and unreliable service to customers. The trend has become to purchase too much, with businesses collectively wasting $62 billion on unused data center capacity every year.[7]

When migrating to the cloud, organizations can take advantage of a flexible pricing model, only paying for the computing resources being used by the applications they have living in the cloud at any given time.

If their product or service takes off, they can simply purchase additional capacity to meet customer demand. If demand subsides, they can then scale their usage down to minimize waste.

Learn more about flexible capacity in the cloud in our *Enterprise Guide to Scaling on Demand*.

Additional growth capital

There is a lot of capital tied up in redundant data centers, maintenance and upkeep, and unused capacity. When organizations move to the cloud, they can eliminate the costs associated with managing on-premises infrastructure while only paying for the capacity they need, which presents a significant opportunity for cost saving. These funds could instead be used for revenue-generating activities such as new product development or marketing that could make all the difference to a company striving to stay ahead in today's fiercely competitive marketplace.

Businesses waste

$62

billion on unused data center capacity every year[7]

[7] DSM. "Typical Data Center Costs for Small Businesses." March 2019.

vmware® CLOUD™

Time savings

In addition to the cost-saving benefits, the public cloud promises another key advantage that is very appealing to organizations: savings in time.

By moving workloads from on-premises to the cloud, organizations outsource a number of their most time-consuming IT management and maintenance activities. IDC found that IT teams spend 48 percent less time on average managing infrastructure in the cloud.[8] This frees IT teams to focus on revenue-generating activities, such as developing features, fixes and new innovations, to improve customer experience and gain an edge over competitors.

Modernizing Applications

By migrating applications to the cloud, organizations gain access to an expansive world of cloud services. This brings benefits from improving application deployment efficiency to developing new features.

IT can enable developers with new environments to build modern applications, including Kubernetes for containerized apps. Artificial intelligence and machine learning technologies can be used to modernize existing applications and develop next-gen applications that differentiate the business.

The hybrid and multi-cloud advantage

In the same study by IDC, organizations surveyed had an average of $6.56 million higher annual revenue after migrating to the cloud[9]. It is a strategic priority to drive business forward.

vmware® CLOUD™

However, relying solely on the public cloud for all workloads isn't the ideal solution for some organizations. It's sometimes cheaper to maintain applications with specific dependencies on-premises, and many organizations require specific workloads remain in-house to adhere to compliance and data sovereignty regulations.

The ideal infrastructure for the majority of organizations is one that includes both environments.

The decision of whether or not to migrate is a strategic one and must be made case by case depending on the cost and complexity of migrating an application or data center, and the benefits achieved once in the cloud.

The ideal infrastructure for the majority of organizations is one that includes both environments, providing the stability and familiarity of on-premises, while jointly leveraging public cloud services and scalability. This is the hybrid cloud. Adding multiple public cloud providers enables flexibility, failover, and the best fit for every application. This reality many organizations find themselves in, is multi-cloud.

In the next section, we will explore the challenges organizations face when migrating to the cloud, and how a seamless multi-cloud infrastructure can help overcome them.

vmware® CLOUD™

03 Challenges of Migrating to the Cloud

The modern organization is under incredible pressure to maintain growth and innovation at an exponential rate. As a result, many have rushed to adopt technologies such as cloud computing without fully understanding or planning for the challenges they will face along the way.

Moving applications and data to public cloud providers involves working through a set of challenges involving staff skills, operationalizing the new environment, and unexpected time and effort to refactor apps to cloud APIs.

The data reflects these difficulties. In a recent survey by Accenture, nearly two-thirds of companies reported they had not achieved the benefits they expected from cloud migration.[10]

The following outlines the most common pain points organizations face when migrating, and the approaches they should take to overcome them.

[10] Accenture. "Cloud outcomes survey: Expectation vs. reality." June 6, 2019

vmware® CLOUD™

Lack of strategic planning

The decision of whether or not to migrate to the cloud is a complex one depending on the value of the application, the impact it will have on the business, the cost and complexity of migrating, and the benefits achieved once in the cloud. Despite this, Gartner estimates that less than one-third of organizations have a documented cloud strategy.[11]

> **"**
> Organizations that do not have a high-level cloud strategy driven by their business strategy will significantly increase their risk of failure and wasted investment.
>
> DAVID CEARLEY
>
> Vice President and Gartner Fellow

With the pressure to innovate, it's not surprising that many organizations rush to migrate without taking the time to look before they leap. The result is that many of these attempts backfire, causing projects to stall or requiring applications to be moved back to their original on-premises environments.

Strategic planning challenges

- Failure to develop a clear business case for cloud migration

- Lack of consideration for dependencies between infrastructure, applications and operations

- Lack of equal consideration for technical requirements and business needs

- Not researching and understanding the range of relevant application requirements and migration strategies

- Attempting to migrate before testing and learning

Solution

Developing a comprehensive migration strategy is the best assurance an organization has to make their migration successful. Organizations should consider everything from desired business outcomes, to investment priorities, deployment models, service providers, talent sourcing and cloud policies.

Many elements of a sound migration strategy depend on organizational structure and culture. Those migrating to the cloud can also put themselves in the best possible position by choosing an experienced cloud infrastructure provider, and using best-in-class tools to comprehensively map their applications and estimate costs.

[11] Gartner. "Advance Cloud Technology." 2019.

vmware® CLOUD™

Skills shortages

As many as 86% of organizations report shortages in IT staffing, with many acute skills gaps related to cloud platforms.[12] Attempting to manage the complexities of cloud migration without the right teams in place can open organizations up to additional costs and risks.

Skills shortage challenges

- Migrations being undertaken without appropriate strategies in place

- Increased security risk in migration due to lack of expertise

- Cost of upskilling staff to learn new tools or environments

- Business leaders circumventing IT in making migration decisions

- Migration process delayed with retraining existing staff or hiring of new staff

Solution

The ideal solution eliminates the need for upskilling or hiring new staff to complete a migration. It is preferential to leverage existing tools and skillsets, allowing their IT team to lend their expertise to the migration process in a cost-effective, timely and efficient manner.

Explore and analyze cognitive biases and risks of cloud adoption, compare the cost-effectiveness of different infrastructure options and decide on which approach is right for you with The Complete Guide to Cloud Economics.

[12] 451 Research. "Cloud Trends in 2020: The Year of Complexity, and its Management". January, 2020.

vmware® CLOUD™

Incompatible infrastructures between clouds

One of the most commonly cited migration challenges is incompatible and legacy infrastructure, affecting 43 percent of organizations.[13]

Many organizations expect they'll be able to move applications built on-premises directly to their cloud environment. However, this strategy often fails to account for variances in both environments.

Different environments have different operating systems and different APIs to connect into underlying services. Often, organizations experience performance issues or, in worst-case scenarios, the application doesn't work in the new environment at all.

"

The so-called lift-and-shift method of migrating legacy applications 'as is' to the cloud often doesn't work, because public cloud providers require applications to run in their specific environments.

KURT SCHERER AND BOB BLACK

Kurt Scherer, Senior Manager, and Bob Black, Principal, Cloud Infrastructure and Engineering, Deloitte Consulting LLP [14]

43%

of organizations cite infrastructure incompatibility and/or application sprawl as a migration challenge.[13]

[13] Accenture. "Cloud outcomes survey: Expectation vs. reality." June 6, 2019
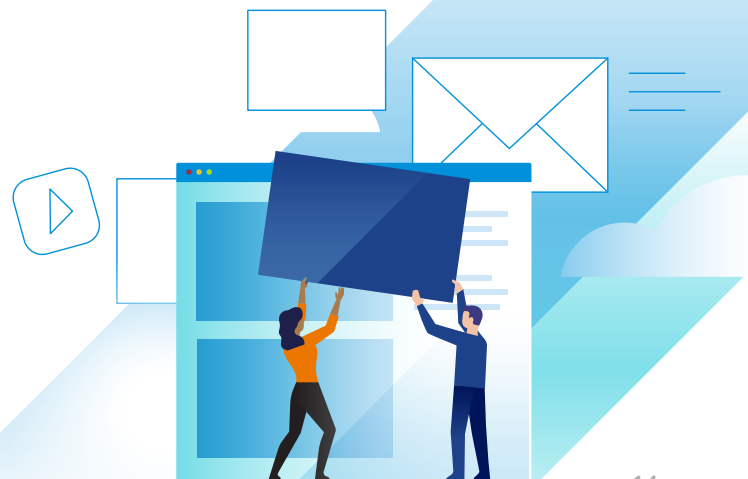
[14] The Wall Street Journal. "Hybrid Cloud to the Rescue." Kurt Scherer and Bob Black. January 16, 2018.

vmware® CLOUD™

Compatibility challenges

- Centralizing management and operations across multiple cloud environments

- Conflicting APIs, policies, UIs and other components

- Having limited network integration between on-premises and public cloud environments

- Achieving connectivity between environments for identity, usage, cost, performance, and process tracking

- Maintaining data integrity during updates and patches to environments

Solution

Many cloud solutions require significant investment of time, money and IT resources to ensure applications are compatible across environments. Instead, organizations would benefit from a unified infrastructure service, providing a single, consistent infrastructure across a seamless multi-cloud environment, removing the compatibility problem.

Migrating applications with dependencies

Infrastructure, operations and applications form the three key layers organizations must consider when migrating, and dependencies between these layers can cause a range of complications if left unresolved.

For example, migrating an application that relies on operational management by an on-premises system can cause serious performance issues if not planned properly. In extreme cases, applications fail to work entirely and have to be brought back to the data center—an expensive and time-consuming operation.

Application dependency challenges

- Lack of clear visibility over data flows between applications

- Latency caused by data transfer between on-premises and cloud-migrated applications

- Ripple effect to interdependent on-premises applications when moving a single application

- Moving the data tier to the cloud or leaving it in the on-premises environment during migration can cause service disruption

Solution

To avoid dependency issues, organizations need to visualize how applications interact with their operating systems, infrastructures and one another across all environments.

Ideally, the goal is to minimize compatibility challenges, providing consistency between environments to remove complications caused by dependencies between infrastructure layers, and allowing interdependent applications to transfer data seamlessly once migrated.

vmware® CLOUD™
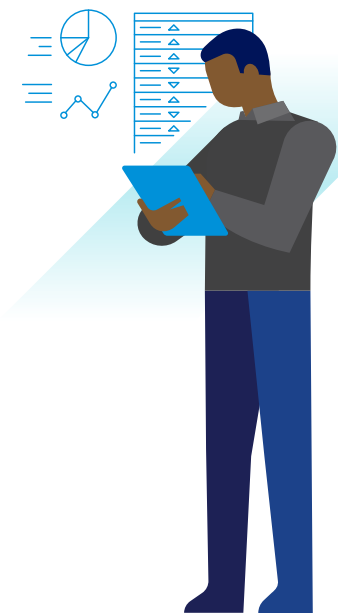
Lack of support for security policies

In the early phases of cloud adoption, many organizations were paralyzed by the security implications of moving workloads to the cloud. Public cloud providers have made strides in securing their own environments, shifting security concerns to how cloud customers use these environments, primarily surrounding configuration and data protection.

Each provider brings its own unique security policies, and these may not align with the policies an organization has established on-premises. This can make migrating challenging, as the security architecture on-premises may not match how the cloud environment is configured.

Security challenges

- Increased security risk when moving data from one environment to another

- Increased costs and complexity of data encryption and ownership of encryption keys

- Maintaining secure configurations amidst constantly evolving cloud capabilities

- Cloud provider security frameworks that are inadequate for highly regulated industries (e.g. financial services, healthcare)

Solution

Visibility is fundamental to maintaining consistent security when migrating. By gaining full visibility of their policies from on-premises to the cloud, organizations can uncover and amend misconfigurations and address data risk. According to Gartner, those organizations that do implement appropriate visibility and control tools will experience one-third fewer security failures in the coming years.[15]

[15] Gartner, Inc. "Is the Cloud Secure?" Kasey Panetta. October 10, 2019.

vmware® CLOUD™

Cost of refactoring and rewriting applications

Most organizations face challenges associated with cost when migrating to the cloud. A lift-and-shift migration to native cloud platforms often doesn't work and can put application performance at risk. To make on-premises applications work properly in the new environment, organizations often have to modify code.

One method is refactoring—applying a series of small behavior-preserving transformations to the code that modifies the application to make it suitable for the new environment. However, many engineers experienced in on-premises environments aren't proficient with refactoring for the cloud, leaving organizations unable to utilize their in-house talent.

The other commonly used method is to rewrite the application entirely. Each of these methods involve significant investments in time and money on the part of the organization, and this compounds with the number of applications that need modification.

Refactoring and rewriting challenges

- Legacy code that isn't compatible with cloud-based infrastructure environments

- Resource-intensive requirements for updating legacy applications to prepare for migration

- Compounded resource usage depending on the number of incompatible workloads to be migrated

Solution

Ideally, organizations utilize an infrastructure platform that allows their existing applications to be migrated without modification. With consistent infrastructure and operations from on-premises to the cloud, organizations would be able to move existing applications without any need for refactoring or rewriting—with the destination environment already set up to support the migrating workloads.

vmware® CLOUD™

Modernizing Applications

Modern applications are transforming businesses, enabling delivery of improved digital experiences to win, serve and retain customers. These modern applications need to drive business outcomes such as increased business agility, innovation, growth and market differentiation while balancing costs, security, reliability and control.

Application modernization challenges

When organizations consider modernization of their applications once in the cloud, some of the key challenges they face include:

- Lock-in to cloud provider APIs, causing difficulty with application portability and interoperability across their hybrid and multi-cloud environment

- Disparate management tools and security controls

- Multiple operating models and processes across on-premises and cloud environments

- Skill shortage in application development/delivery and infrastructure teams

- Siloes of expensive resources created when modernizing on disparate platforms

- Disruption to existing business processes and operations during modernization

Solution

The cloud has played an important role in helping technology teams to not only deliver new applications but also provide an avenue for modernizing existing applications. Organizations can maintain the value of their existing applications and leverage the skills of their IT staff today while migrating to the cloud and modernizing apps by using a single multi-cloud infrastructure platform.

Multi-cloud infrastructure platforms span both on-premises and multiple public cloud environments, enabling seamless application migration without downtime or refactoring. Once in the cloud, IT staff can provide a developer environment with container orchestration and access to cloud-native services, allowing app modernization from the same multi-cloud platform. Applications are portable between clouds, providing simple failover design and the flexibility to find the best, most cost-effective fit for every app.

vmware® CLOUD™

04 Migrating with VMware Cloud

VMware has developed a multi-cloud infrastructure platform that addresses the cloud migration challenges many organizations are facing. With VMware Cloud, organizations can merge their on-premises environment with the cloud and modernize their applications while removing compatibility and consistency challenges.

Consistent operations across environments ensure that established policies and practices for security, automation and governance are preserved, protecting data and applications while minimizing the operational requirements for IT. What's more, the entire solution is built on the most proven and broadly deployed infrastructure portfolio in the world.

VMware Cloud provides the fastest path for migrating to the cloud with the flexibility to choose any public cloud provider. Organizations have the freedom to match individual apps to the best cloud, migrating without interruption and without the cost, time or risk of refactoring apps.

vmware® CLOUD™

In 2022, 75% of organizations will deploy a unified management system for their clouds, networks, and datacenters to counter business resiliency threats from infrastructure costs and operational complexity.

IDC. "IDC FutureScape: Worldwide Future of Digital Infrastructure 2021 Predictions". October, 2020.

Disaster Recovery

Address infrastructure reliability with disaster recovery delivered as a service. Failover capacity is delivered on-demand, so it is only paid for when needed.

Application Modernization

Accelerate time to modernization of existing apps with integrated Kubernetes and access to native cloud services.

This approach provides a best-in-class solution to a range of use cases.

Application migration

Accelerate cloud migration without the cost, complexity and risk of refactoring applications by leveraging a consistent, multi-cloud infrastructure platform.

Data center consolidation and migration

Implement a rapid and large-scale migration of applications and entire data centers with minimal to no downtime, and no disruption to mission-critical applications such as Oracle, SAP and Microsoft SQL.

Cloud-to-cloud migration

Achieve seamless portability between public clouds, while retaining application integrity.

VMware Cloud

VMware Cloud is a multi-cloud infrastructure and app development platform that runs on any public cloud, data center, or edge location.

VMware Cloud can accelerate the app journey for all organizations, supporting app modernization initiatives and enabling rapid migration to any cloud, and unifying all environments with consistent operations and security.

vmware® CLOUD™

A Single Platform for All Apps

One platform for virtualized, containerized, Kubernetes, AI/ML and next generation apps including data streaming, high throughput and serverless. Built on VMware Cloud Foundation Hyperconverged Infrastructure (HCI) combining virtualized compute, storage, and network with integrated Kubernetes and direct access to cloud-native services.

The Fastest Path to Migrate

Organizations have the freedom to match individual apps to the best cloud, migrating without interruption and without cost, time or risk of rewriting apps. Work across any cloud seamlessly: AWS, Azure, Google Cloud Platform, IBM Cloud, Oracle Cloud, Alibaba Cloud, and thousands of verified partner clouds worldwide.

Modern Development Experience

The fastest, most simple path to modernize apps with containers. VMware Cloud features Tanzu, an integrated Kubernetes solution that can be deployed and centrally managed across public clouds, on-premises, and edge locations. Developers have the flexibility to build and deploy containerized apps on any cloud, access secure open-source components, leverage pre-built container images, collaborate on APIs, and optimize their application performance with pre-wired observability.

Lowest TCO for IT Infrastructure

Unified management and operations deliver efficiency, eliminate specialized systems and architectures, and protect apps and data with intrinsic security, resulting in lower TCO compared to multiple, disconnected infrastructure providers.

OpEx Cost Model

VMware Cloud Universal is a subscription offering that simplifies the purchase and consumption of VMware Cloud, allowing you to shift both private and public cloud infrastructure costs from CapEx to OpEx and allocate infrastructure between private and public cloud as needed.

VMware Cloud is built uniquely for today's multi-cloud world: helping organizations embrace cloud faster and more successfully, accelerating modern app delivery and unlocking the value of every cloud.

vmware® CLOUD™

VMware HCX®

Part of VMware Cloud, VMware HCX simplifies application migration, workload rebalancing and business continuity across data centers and clouds. HCX enables high-performance, large-scale app mobility across VMware vSphere® and non-vSphere cloud and on-premises environments to accelerate data center modernization and cloud transformation. HCX automates the creation of an optimized network interconnect and extension, and facilitates interoperability across KVM, Hyper-V and vSphere 5.0+ to current vSphere versions. This delivers live and bulk migration capabilities without the need to redesign the application or re-architect networks.

Organizations can leverage VMware HCX to maintain business continuity while migrating, and lower TCO by conducting large-scale migrations to the public cloud.

vmware® CLOUD™

VMware Disaster Recovery

In the event of a disaster, organizations have multiple options to ensure infrastructure resiliency and business continuity. VMware Cloud Disaster Recovery provides on-demand failover capacity, delivered as an easy-to-use SaaS solution with cloud economics. It combines cost-efficient cloud storage with simple SaaS-based management for IT resiliency at scale. Organizations benefit from consistent VMware operations across production and DR sites and a 'pay when you need' failover capacity model for disaster recovery (DR) resources.

Additionally, VMware Site Recovery Manager allows for high-speed disaster recovery with even lower downtime. Organizations can protect workloads by replicating to another VMware Cloud location, enabling partial or full-site recovery. If disaster recovery is invoked, there is no reconfiguration of IPs, reducing complexity and allowing for faster recovery.

> "
> Since moving to VMware Cloud, I'm worrying less about operational uptime. There is a certainty, an assurance that everything works. Also, we feel we're at the forefront of technology. There are additional features coming online every month.
>
> **SAM AKROYD**
>
> Technical Services Manager, Stagecoach

VMware Cloud Provider Program

Partnering with one of the more than 4,600 *VMware Cloud Providers* worldwide helps organizations drive their digital transformation with cloud services based on trusted VMware technology, designed to reduce the complexity of migration.

VMware Cloud Providers enable organizations to run, manage, connect and secure their entire application portfolio on any cloud. Migrating to the cloud with a VMware Cloud Provider holds a number of benefits.

vmware® CLOUD™

Seamless multi-cloud

Organizations benefit from agility, efficiency and savings of a public cloud that leverages their on-premises technology and investments to unlock enterprise-grade networking, security and availability— enabling unparalleled compatibility.

Data sovereignty

With a network of cloud providers located across more than 100 countries, organizations can easily keep data and applications local for simplified adherence to national data security and privacy regulations.

Assured service

Organizations can streamline cloud management and ensure security for their corporate IP with cloud providers that maintain the specific standards and compliance certifications required across a range of industries.

Flexibility and choice

Organizations can count on their cloud provider as a trusted advisor to extend their IT to the cloud, enabling them to focus on business. With more than 4,000 providers to choose from, organizations are sure to find the specialized services to meet their unique business needs.

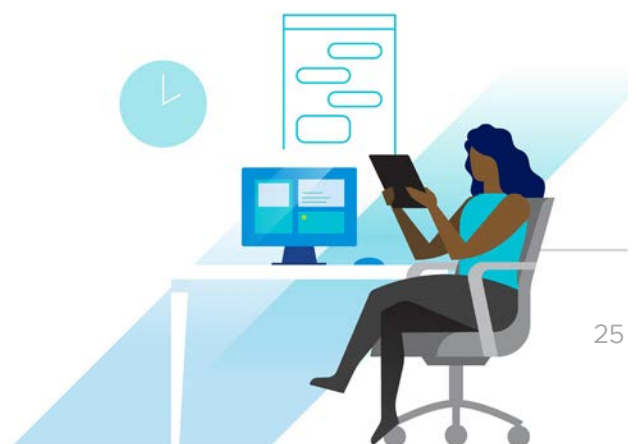**vm**ware® CLOUD™
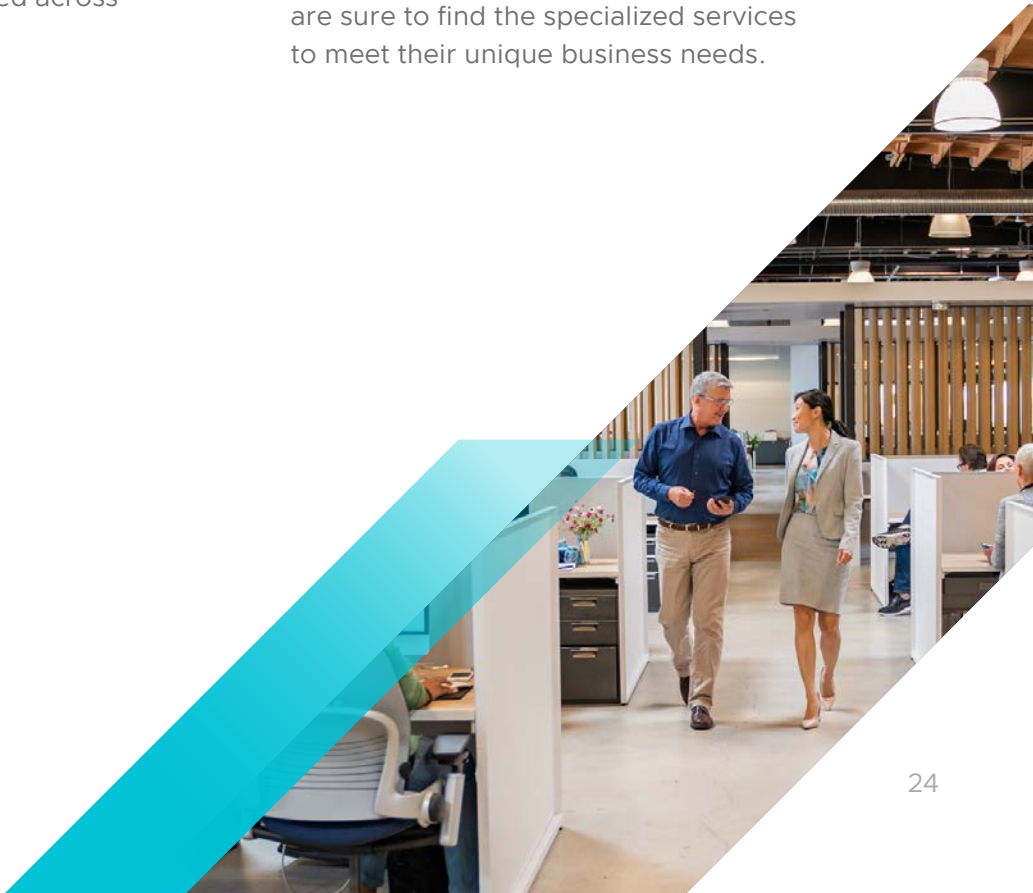
05 A Simple Solution

"How do we take the first step?" That's the most common question organizations ask about cloud migration, according to AWS Enterprise Strategist Ishit Vachhrajani.[16] With technology leveling the playing field for companies of all sizes, there's no time to hesitate.

As the world becomes increasingly variable and complex, organizations need to reduce the complexity and effort involved in their processes. An organization won't stand a chance innovating against lean start-ups if it is stuck trying to overcome compatibility challenges or navigate application dependencies without the right tools.

The solution to achieving this simplicity is to implement a seamless, future ready multi-cloud environment. With familiar, integrated tools and systems, organizations can migrate single applications or entire data centers to the cloud, providing the time and resources to focus on what's important—developing innovative, useful new products and services.

Migrating to the cloud doesn't have to be difficult. Organizations that choose to leverage seamless multi-cloud infrastructure get all the benefits of the cloud, without the interoperability, dependency and cost challenges that cause so many to flounder and stall.

[16] AWS. "Bias for action – Take the first step." Ishit Vachhrajani. July 30, 2019.

vmware® CLOUD™

Want to get started today?

Test drive VMware Cloud with a Hands-on Lab

⇨ *VMware Cloud on AWS Hands-On Lab*

⇨ *Azure VMware Cloud Solution Hands-On Lab*

⇨ *Google Cloud VMware Engine Hands-On Lab*

⇨ *Oracle VMware Cloud Solution Hands-On Lab*

⇨ *Alibaba Cloud VMware Solution Hands-On Lab*

Want help with your cloud migration?

Connection
we solve IT

Contact a Connection Account Manager for more information on VMware Cloud.

Business Solutions
1.800.800.0014
www.connection.com/VMware

Enterprise Solutions
1.800.369.1047

Public Sector Solutions
1.800.800.0019

vmware® CLOUD™