VMware Cloud™ on AWS

Cloud Migration Buyers Guide

AT A GLANCE

Migration and post-migration challenges hinder organizations from taking full advantage of the cloud. A seamless hybrid cloud model has become the preferred option for enabling enterprises to mitigate these challenges.

KEY BENEFITS

• Enables rapid push-button migration of any workload at scale to enterprise-ready, highly scalable VMware environments on the AWS cloud.

• Easy bi-directional workload portability and direct access to native AWS services.

• Familiar VMware technologies and common APIs that allow customers to continue utilizing their existing skillsets, tools, processes and policies.

73% of respondents say that the cloud (private/public) will be their primary deployment venue for a majority of their workloads in 2020.[1]

89% of respondents replied that having the same architecture on-premises and in the cloud is important.[2]

Cloud infrastructure is becoming the primary deployment environment for a majority of workloads. As organizations pursue a measured approach to infrastructure and workload changes via the adoption of a hybrid cloud strategy, they're recognizing that having the same architecture on-premises and in the cloud is important. This enables consistent infrastructure and operations across on-premises and cloud, thereby reducing complexity and management burdens.

When undertaking a cloud migration initiative, customers need to keep key factors in mind in order to leverage existing on-premises investments and realize the agility, flexibility, and cost efficiencies moving to the cloud offers. This paper's goal is to help our customers understand the key factors they need to consider while undertaking a cloud migration initiative—from building a business case upfront, to developing a migration plan and running the environment post-migration.

Cloud is mainstream and has become synonymous with that of a public utility. Use of the cloud touches every person and every business both personally and professionally. While organizations have daily interaction with the cloud, not all of them are purely in the cloud. Many organizations are taking a measured approach to deploying workloads, opting for a hybrid cloud model that relies on on-premises infrastructure to support mission critical workloads.

Further, as organizations move to the cloud, migration and post-migration challenges hinder organizations from fully reaping the benefits of the cloud. The hybrid cloud model has become the preferred mode to enable organizations to maintain consistency of infrastructure and operations across these two frontiers.

Factors to consider when migrating to the cloud

Factor #1: Build a business case for migrating to the cloud

Organizations need to identify the business benefits that they hope to achieve by moving to the cloud, obtain executive sponsorship for the cloud migration initiative, and ensure alignment and buy-in from relevant stakeholders. Ensure the initiative is prioritized and funded appropriately across the organization.

47% of respondents replied that it takes over one person-year to refactor and migrate a packaged application and 48% of respondents replied that it takes over one person-year to refactor and migrate a custom-built application.[3]

APPLICATION TYPES

Packaged - Generally available, standardized apps licensed for use on one or more servers. Examples include Oracle RAC, Microsoft SQL, and SAP.

Custom-built - Apps developed by an internal development or IT team, or a third-party consultant using infrastructure components such as database, app and web servers.

MIGRATION APPROACHES

Relocate - Live-migrate existing applications without downtime.

Re-host - Move an application from on-premises to the cloud without modifying any code. This typically involves service disruption.

Re-platform - Move an application while making a few cloud optimizations to allow the application to take advantage of cloud capabilities and reduce cost or management effort (e.g., by enabling auto-scaling of cloud instances or moving the application to a fully managed platform). This may also include repackaging the application into containers.

Re-architect or re-factor - Modify or adapt the architecture or internal structure of an application to allow it to run more easily and effectively in the cloud without changing its fundamental capabilities or external behavior (e.g. by breaking and re-coding the app into a set of microservices and/or further abstracting app components from the underlying platform).

Replace with SaaS - Instead of migrating an on-premises application to the cloud, replace it in the cloud with a SaaS alternative or cloud-ready alternative of the application.

While each organization's business case should be driven by their business imperatives, there are some common themes– for example, topline growth enabled by faster time to market, improved development cycles, increased scale, access to innovations in hardware/software, etc. They could also be related to improving the bottom line by lowering total cost of ownership, increasing operational resilience or creating productivity improvements. In addition to a business case, organizations also need to think through the people and process changes that accompany a move to the cloud.

Factor #2: Identify the right cloud platform and watch for blind spots

Identify the right migration strategy - For many applications, if organizations choose the right cloud platform, there is no necessity to refactor or re-architect their applications to realize the benefits of the cloud. Refactoring or re-architecture of applications is complex and often requires that code is rewritten, which is time-consuming. The migration strategy directly impacts the budget and time it takes to complete the cloud migration initiative.

Skill gaps - Organizations have invested billions of dollars in infrastructure technology, management, and operations solutions as well as developing the skills of their IT teams. When incorporating native cloud platforms into existing infrastructures, much of that investment is not transferable. Couple that with the shortage of skills (90% of respondents reported skills shortages in cloud-related disciplines in a recent 451 Research survey[4]), it is no wonder that 71% of IT departments have cited an average $258M of lost revenue due to this gap.[5] This causes organizations to maintain multiple operations teams, adding costs to a hybrid or multi-cloud agenda and leaving many to ask if they have or can acquire the right skills for this journey.

Infrastructure considerations - Organizations want enterprise-class reliability and consistency when it comes to security, portability, platform availability, and disaster recovery. Moving workloads to a new infrastructure also requires its own set of considerations with everything from workload characteristics, application migration, and cloud specific licensing schemes.

Migration cost - Quantifying the cost of migrating workloads over to the cloud involves planning and execution costs. Remember to factor in any consulting fees, auxiliary staffing needs, costs associated with refactoring applications, testing and validation, and application downtime during migrations.

Operating cost - Hybrid cloud environments often require separate tools and processes for management. Further, interoperability between existing environments and new cloud environments is another key consideration. These involve learning curves and the incorporation of new processes into existing paradigms of management, which contribute to increased operating costs. Finally, organizations need to have the right tools to manage cloud spend. Managing cloud spend is a challenge for 76% of respondents, while a smaller 21% see it as a significant challenge.[6]

Factor #3: Planning and executing cloud migration

Prioritizing workloads in stages enables organizations to start small, think big and scale fast. Understanding the application complexity versus overall risk to the business lets them identify the best candidate workloads to move to the cloud and the sequence of those moves. Application complexity is a combination of the dependencies and specific requirements that the workload may have. Overall risk to the business is directly correlated to the criticality of the application to the business.

Often separating out workloads into categories such as business critical applications, virtual desktops, advanced computing and cloud-native apps can help organizations create an inventory and start their discovery, identification and prioritization work. Once identified and prioritized, organizations can effectively size and cost their cloud environment needs..

Factor #4: Running your environment after migration

Organizations also need to keep post-migration activities in mind.

Considerations include:

- What parts of the activities are taken care of by the cloud provider or by the customer themselves?
- How easy, programmatic, and policy-driven are day two operations?
- How often and how transparent are maintenance upgrades?
- What is the process for incident management and notification?
- What tools do organizations have to optimize their environments, perform troubleshooting, and obtain support for issues?

Conclusion

As cloud becomes the primary deployment environment for a majority of workloads, organizations need to consider a number of factors in order to successfully realize the benefit of moving to the cloud. A hybrid strategy offers a measured approach that enables organizations to leverage existing on-premises investments even as workloads are moved to the cloud for greater agility, flexibility and cost-efficiencies. But in order to do that successfully, customers need a consistent infrastructure and operations to reduce complexity and accelerate hybrid cloud deployment.

In order to remove complexity from cloud migrations and ensure the fastest and simplest path to the hybrid cloud, VMware and AWS jointly engineered VMware Cloud on AWS. Designed for VMware customers, this cloud service enables rapid push-button migration of any workload at scale to enterprise-ready, highly scalable VMware environments on the AWS cloud. VMware Cloud on AWS offers easy bi-directional workload portability and direct access to native AWS services. At the heart of this service are familiar VMware technologies and common APIs that allow customers to continue utilizing their existing skillsets, tools, processes and policies, and focus on business outcomes rather than re-tooling their people, processes, and technologies.

RESOURCES

Learn more about our VMware Cloud on AWS service at the VMW on AWS website

Review the VMW on AWS Solution Brief and VMW on AWS TCO 1-pager

Watch informative demos, overview videos, webinars and hear from our customers: VMW on AWS on YouTube

Read our latest VMW on AWS blogs

Follow us on Twitter @vmwarecloudaws and give us a shout with #VMWonAWS

Get started now with VMware Cloud on AWS: https://cloud.vmware.com/vmc-aws/get-started

1. Voice of the Enterprise: Digital Pulse, Vendor Evaluations 2018, 451 Research (n=1,008)
2. VMware Core Metrics Survey, 2018 (n=1,633)
3. Taneja Group: App refactoring and migration to the cloud topline findings, January 2019 (n=236, n=201)
4. 2019 Trends in cloud transformation, 451 Research, Nov 2018
5. Cost of Cloud Expertise - http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/the-cost-of-cloud-expertise.pdf, Sep 2017
6. RightScale 2018 State of the Cloud Report