vmware | **aws**

VMware Cloud on AWS

Top 5 Challenges of Migrating Applications to the Cloud

START

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Adapting people
and processes

Challenge 2:
Re-architecting applications
to run in public clouds

Challenge 3:
Resiliency of mission-
critical applications

Challenge 4:
Cost, time and risk

Challenge 5:
Security and
governance

Resources
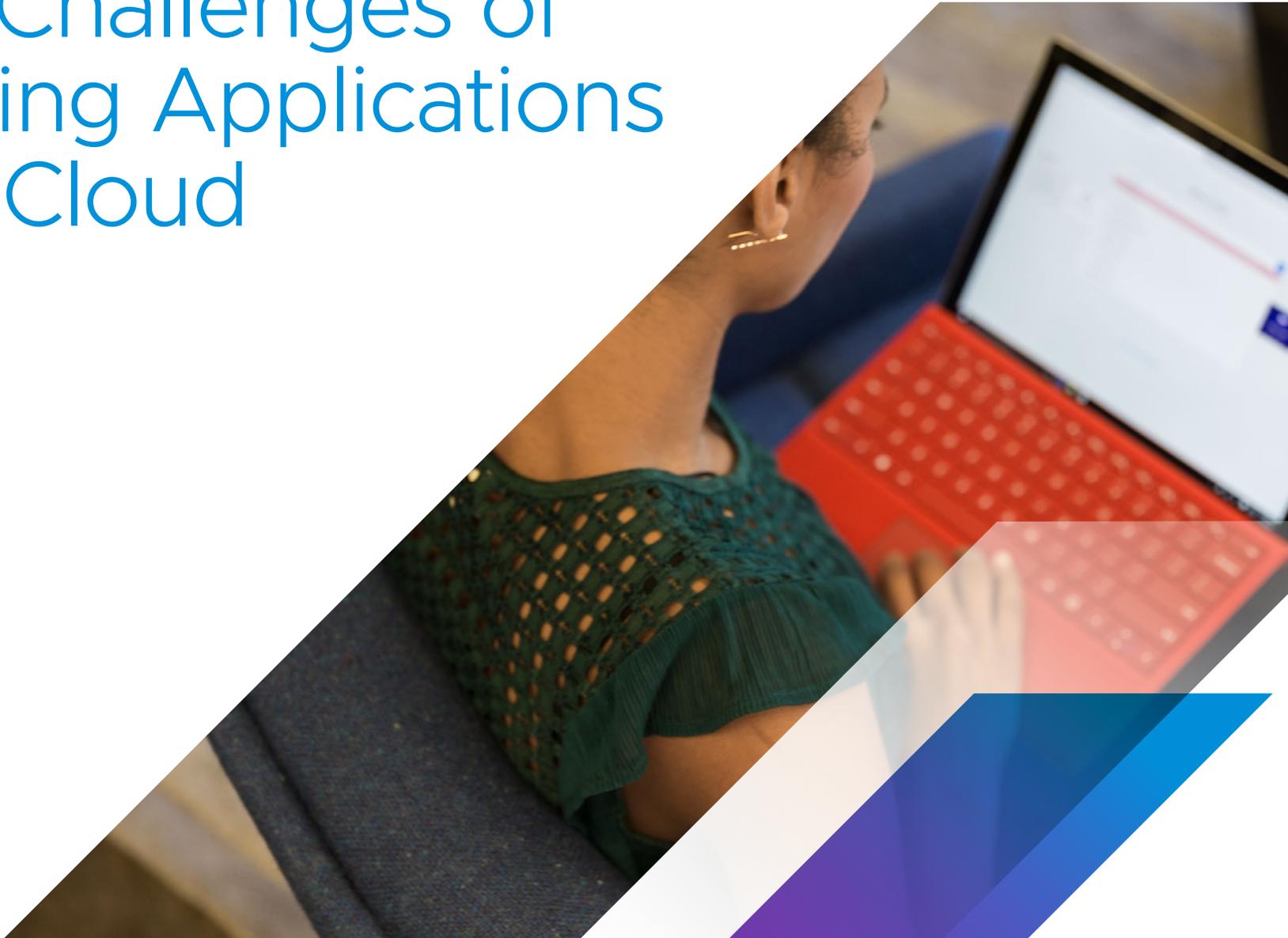
As global workloads accelerate and businesses pursue application modernization to deliver improved digital experiences to win, serve and retain customers, the need for greater agility and global deployment options have made public cloud an increasingly attractive option. Customers view public clouds as a way to gain flexibility and speed to respond to changing business needs, accelerate innovation and align costs to business requirements by managing upfront expenses, operational support and TCO.

But before reaping the benefits of public cloud, businesses need to successfully move there. This is easier said than done. The first step is often the hardest. Once the decision is made, complexity abounds as companies struggle to adapt and migrate applications to run in a cloud environment. And after migrating to the cloud, when customers decide to modernize existing applications, they face many challenges that increase the cost, risk, and time of their modernization project. If you're considering migrating and modernizing your applications, understand the challenges and choose the right solution to fit your business needs.

The Solution: VMware Cloud on AWS

Helping customers seamlessly migrate and extend their VMware vSphere®-based environments to VMware Cloud™ on AWS and modernize their applications—without incurring unnecessary risks, costs, or downtime—is our priority.

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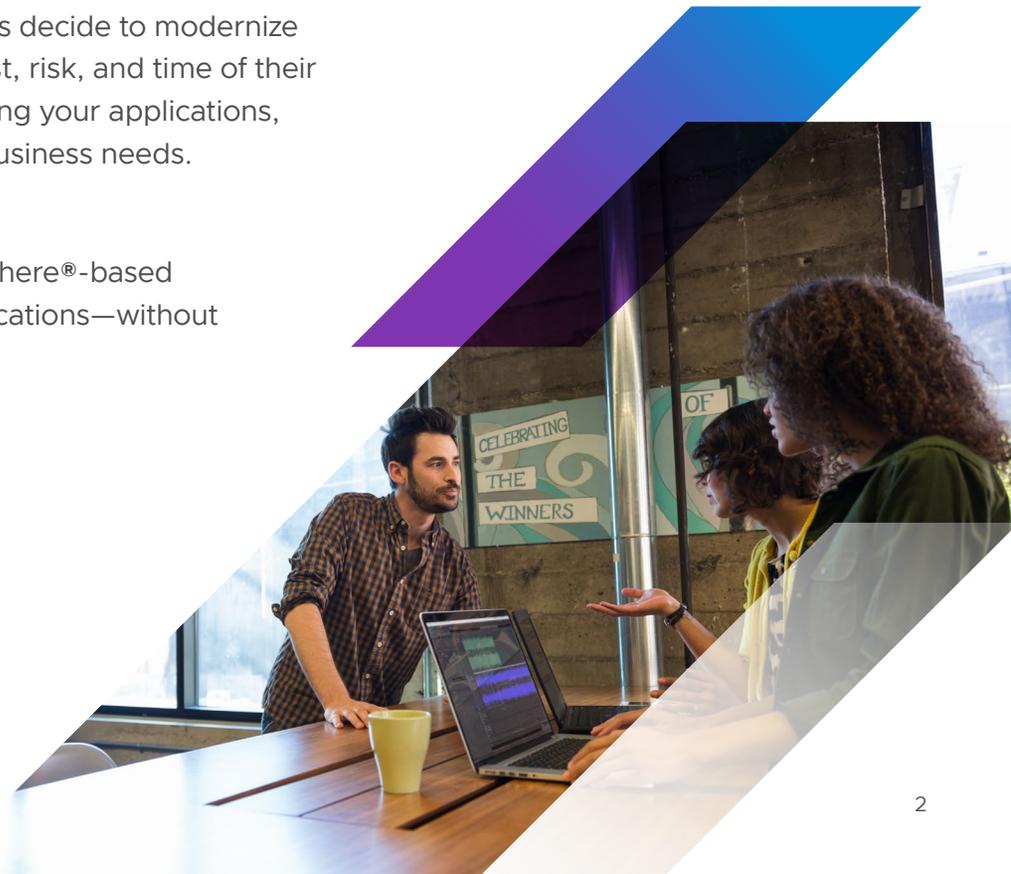
Challenge 1: Adapting people and processes

- People and processes must change and adapt to develop new skillsets and tools for public cloud environments.

- Acquiring cloud skills disrupts current operational effectiveness due to the increased burden of hiring, training and retraining the appropriate talent.

- Resistance from existing employees threatened by the change can limit the effectiveness of cloud adoption.

- Skill shortages exist in application development/delivery and infrastructure teams to develop for and operate in the cloud in order to modernize existing applications.

The Solution: VMware Cloud on AWS

VMware Cloud on AWS offers the same VMware environment that you are using on-premises, enabling you to leverage familiar and proven VMware skills, tools and processes.

In order to modernize IT infrastructure and applications, DevOps and infrastructure teams can use familiar developer tools and automation tools that they were using on-premises.

Your organization is not required to invest in new skills or additional people to immediately take advantage of public cloud capabilities.

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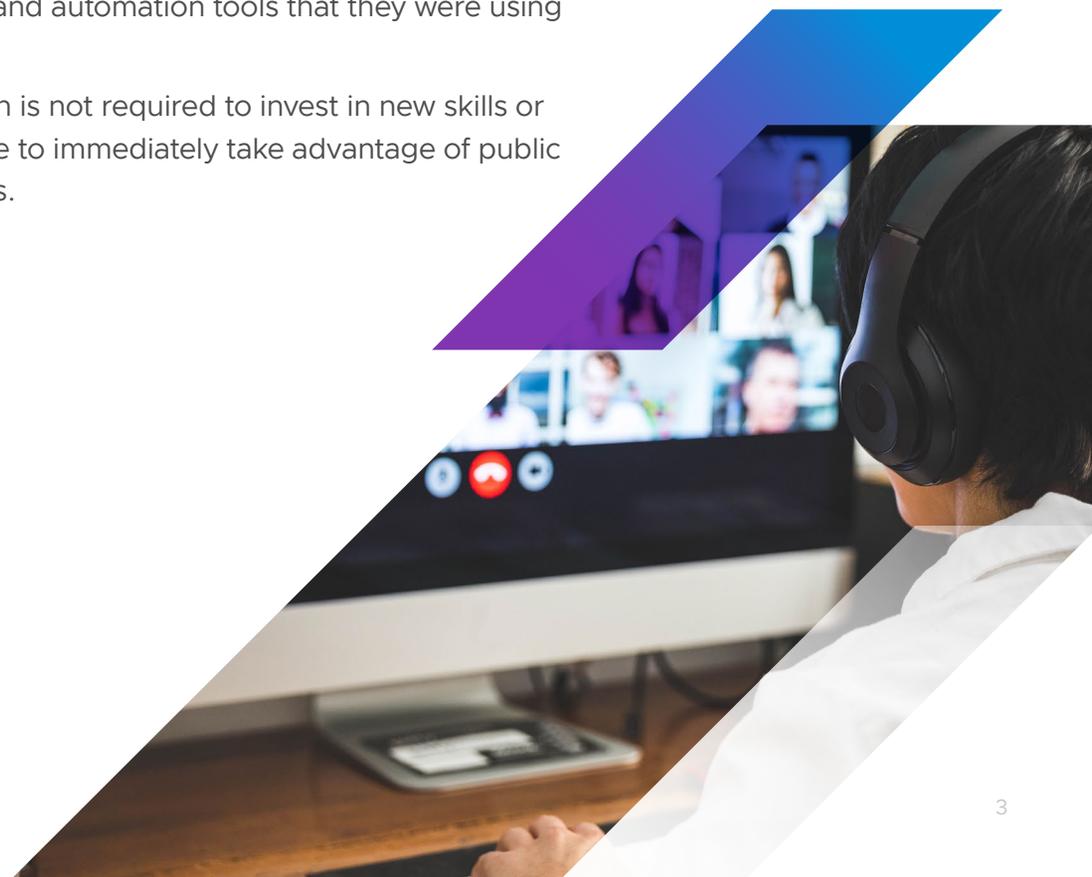
Challenge 2: Re-architecting applications to run in public clouds

- Existing applications running in on-premises data centers are not designed to run on public cloud infrastructure and require redesign before migrating.

- Most applications must be rearchitected, machine formats must be converted, and everything must be thoroughly revalidated.

- Networks must be integrated and reconfigured, and storage must be migrated and conform to capabilities available in public cloud.

- Existing business processes and operations could be disrupted due to potential for application downtime during modernization.

The Solution: VMware Cloud on AWS

VMware Cloud on AWS extends your on-premises infrastructure to the cloud, and therefore no redesign is required to migrate applications.

VMware HCX® is available with VMware Cloud on AWS at no additional cost, so that you can quickly and easily migrate one or thousands of applications.

Support for VMware Tanzu™ Kubernetes Grid™ Plus on VMware Cloud on AWS provides a consistent Kubernetes experience for operators across enterprise environments, including vSphere on-premises, in the public cloud, and at the edge.

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Challenge 3: Resiliency of mission-critical applications

- Mission-critical applications must meet the same or better performance and availability requirements after migration as before.

- Applications that have relied on infrastructure to provide desired level of resiliency need to be re-implemented to provide built-in resiliency.

- All mission-critical workloads need to be thoroughly retested in the public cloud environment to ensure that desired availability targets are met.

The Solution: VMware Cloud on AWS

VMware Cloud on AWS enables live application migration to the cloud with no downtime or disruption.

VMware Cloud on AWS provides virtual machine, host and AWS Availability Zone failure protection at the infrastructure level without having to redesign applications for the cloud.

Customers can rapidly migrate their applications to the cloud without downtime. Once in the cloud, they can start transforming these applications by leveraging modern frameworks such as Kubernetes, enriching them with native cloud services, and automating the underlying infrastructure operations with DevOps tooling.

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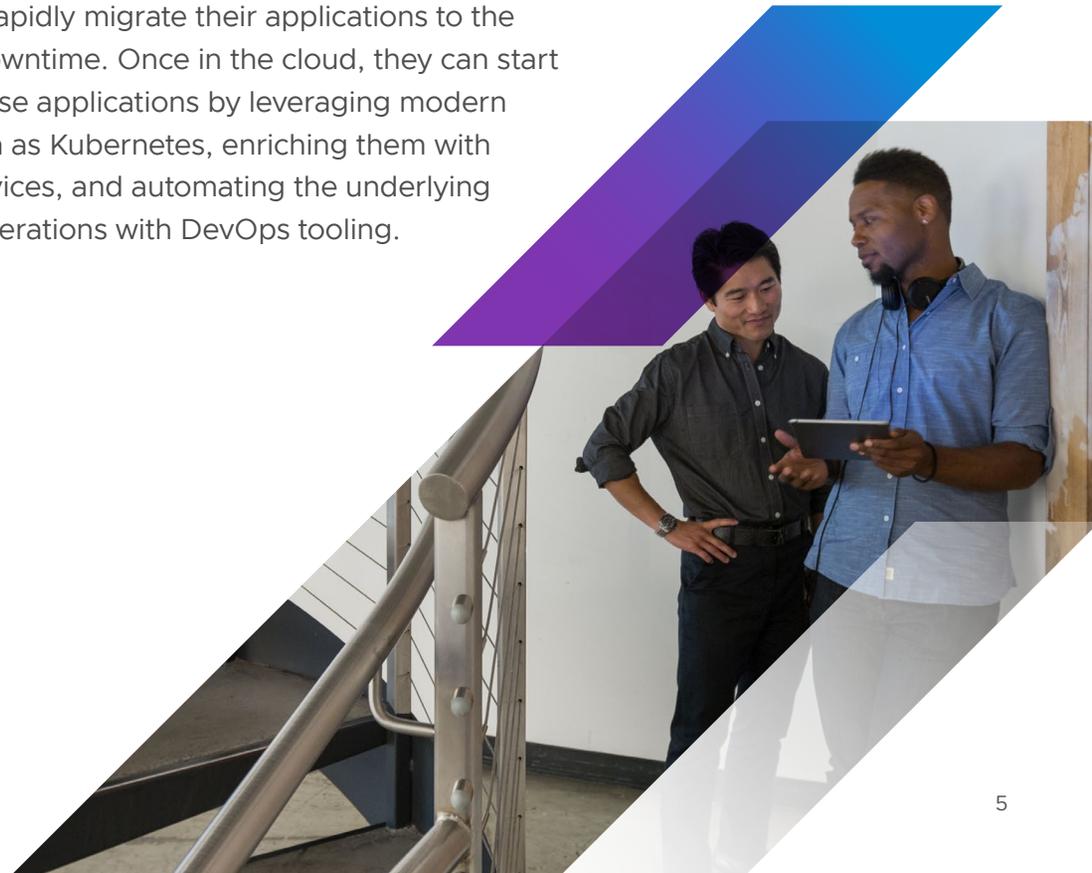
Challenge 4: Cost, time and risk

- Migrating applications to the cloud is complex, and the rework required to make the leap is costly and time-consuming.

- The effort required to migrate applications to cloud is often underestimated, resulting in projects that run over time and budget, or underdeliver in achieving the goals.

- Cloud migration projects drain resources and budgets from other critical IT activities, increasing the risk to support of ongoing business objectives.

- Inability to extract the maximum use of existing IT investments while modernizing applications - e.g., perhaps the entire application need not be rewritten or refactored.

- Inability to easily and seamlessly leverage CI/CD methodologies, application catalogs and native cloud services to enrich enterprise applications due to a fragmented technology ecosystem.

The Solution: VMware Cloud on AWS

Applications require no rework to migrate to VMware Cloud on AWS, saving migration costs and time and increasing the likelihood that your cloud migration project will succeed.

Further, seamless integration with DevOps tools, automation tools, and native AWS services, and support for containerized workloads with Tanzu Kubernetes Grid Plus, accelerates your application modernization journey while reducing costs and complexities.

More than $1,000

Saved per virtual machine in migration costs, by VMware Cloud on AWS customers

Over $2.7M

Savings by VMware Cloud on AWS customers, by avoiding rearchitecting of applications

"The Total Economic Impact™ of VMware Cloud on AWS," a commissioned study conducted by Forrester Consulting on behalf of VMware, August, 2019

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Challenge 5: Security and governance

- Organizations give up a certain degree of control over their infrastructure in public cloud. Security policies and practices must be updated to conform with this new model.

- The differences between on-premises and public cloud infrastructure limit the reuse of established security and governance procedures and tools.

- Public cloud infrastructure has different consumption patterns. New governance models need to be established to control how cloud resources are acquired.

The Solution: VMware Cloud on AWS

VMware Cloud on AWS enables you to extend existing on-premises enterprise security, governance and operational policies to the cloud.

Customers can migrate their current on-premises security solution along with established configurations, rules and policies.

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Further Resources

Traditional migration practices involve a significant number of person hours, an assortment of tools and substantial risk, not to mention the actual time required to move from point A to point B. Data gravity further complicates cloud adoption and migration of production workloads – especially stateful apps with lots of data.

VMware Cloud on AWS offers the best of both worlds, allowing organizations to seamlessly integrate their on-premises data center environments on elastic, bare-metal AWS infrastructure, while leveraging existing skills and toolsets. And once in the cloud, you can start your modernization journey with minimal disruption to your business.

Learn more about VMware Cloud on AWS

VMware Cloud on AWS website

VMware Cloud on AWS: Overview

Try the *VMware Cloud on AWS Hands-on Lab* for a first-hand immersive experience

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