

# Top 5 Challenges of Extending Data Centers to the Public Cloud

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vmware®

aws

## The public cloud offers many advantages to organizations

Organizations will continue to benefit from their data center investments—infrastructure, people, processes—for the foreseeable future. However, many of these organizations are also looking for the **unique advantages offered by public cloud** that cannot be cost-effectively delivered with today's static data center environments, including:



Access to unlimited on-demand compute and storage capacity



Usage-based pricing

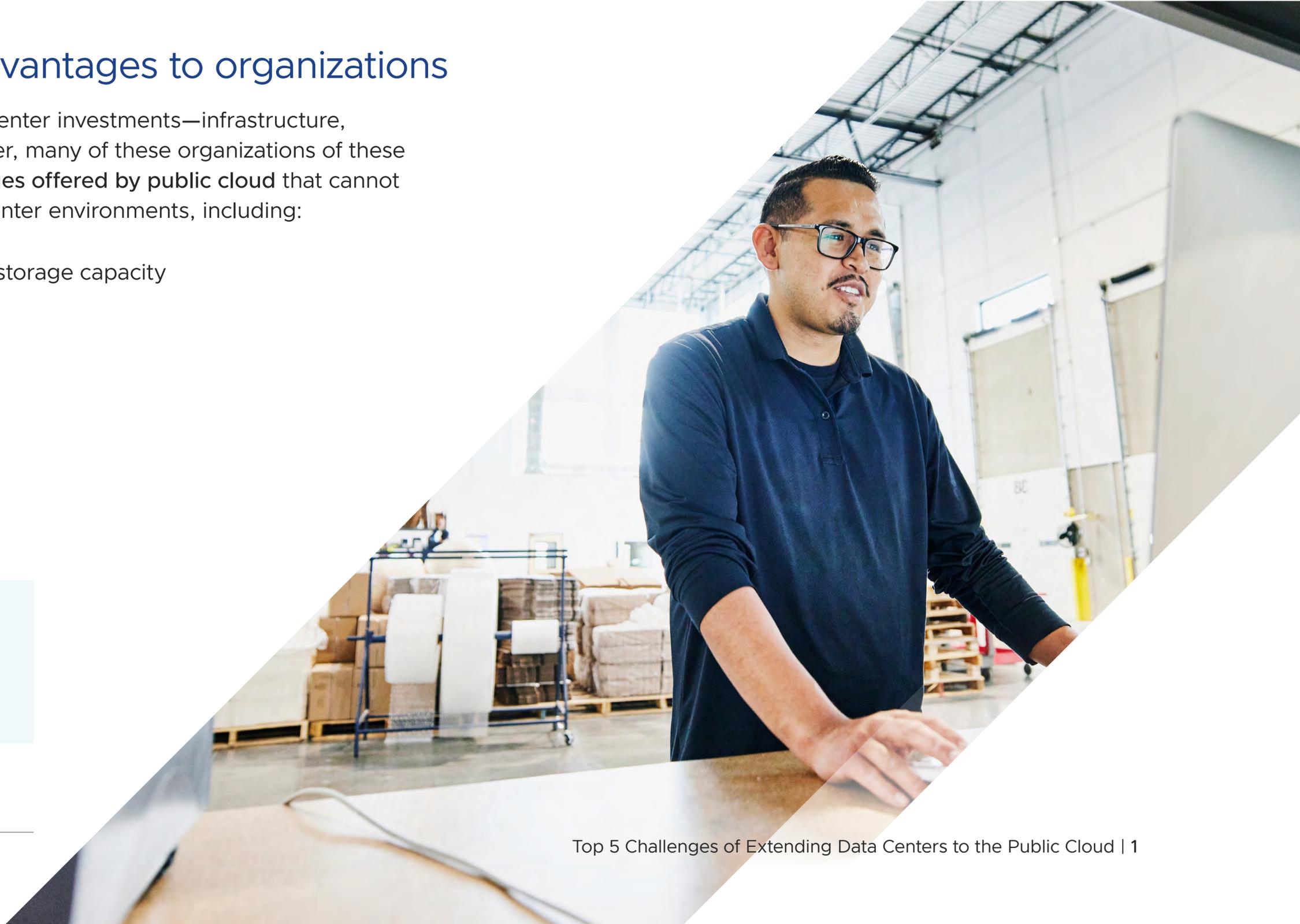


Global data center footprint



Availability of innovative cloud services

**66% of tech buyers will prioritize as-a-service consumption models for infrastructure purchases by 2026 to help restrain IT spending growth and fill IT Ops talent gaps.<sup>1</sup>**



## Challenges of extending data centers to the public cloud

Before reaping the benefits of public cloud, organizations must successfully integrate their on-premises data centers with the public cloud, which is no easy task. There are many technical, process and skill differences required to leverage these environments. In this guide, explore how VMware Cloud™ on AWS helps to address these five common data center extension challenges:

**57% of all respondents identified that infrastructure management in the public cloud is more complicated than on-premises infrastructure management.<sup>2</sup>**

1

Incompatible configurations and capabilities

2

Different skillsets and processes

3

Divergent tools and management consoles

4

Different machine formats

5

Operational inconsistencies

## Challenge #1: Incompatible configurations and capabilities



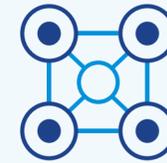
Existing applications running in on-premises data centers are not designed to run on public cloud infrastructure and **require redesign before migrating**, adding to the costs of application rework.



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



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



### The Solution: VMware Cloud on AWS

With compatible infrastructure across on-premises and cloud, with VMware Cloud on AWS you can extend your on-premises infrastructure to the cloud without any application changes or redesign, which saves both costs and time associated with the data center extension process.

Since no application rework is required, there is less risk of application issues arising during or after the migration.

57%

Lower overall cost to migrate<sup>3</sup>

## Challenge #2: Different skillsets and processes



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



**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.



### The Solution: VMware Cloud on AWS

With consistent operations across on-premises and cloud environment, VMware Cloud on AWS enables you to leverage familiar and proven VMware skills, tools and processes and thus minimizes the learning curve.

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, allowing for a smooth transition to the cloud.

Your organization does not need to invest in new skills or additional employees to start taking advantage of the public cloud capabilities immediately.

**48%** more efficient IT infrastructure teams with VMware Cloud on AWS<sup>3</sup>

## Challenge #3: Divergent tools and management consoles



**Different tools and management consoles** across on-premises and cloud environment multiply cost, resource and skill requirements.



**Difficult to manage** hybrid cloud environment with multiple management consoles



**On-premises and cloud toolsets** work in isolation to manage their respective environments.



### The Solution: VMware Cloud on AWS

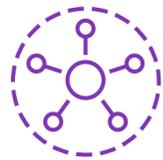
With the same vCenter console across on-premises and cloud environment, IT teams can seamlessly manage the hybrid cloud environment without any complexities involved.

With features such as Hybrid Linked Mode, you can have a single pane of glass view for all of your resources across on-premises and cloud environment.

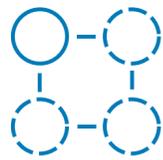
With support for the VMware Aria solutions such as VMware Aria Automation, VMware Aria Operations, VMware Aria Operations for Networks, and VMware Aria Operations for Logs, organizations can leverage the same cloud management tools across their on-premises and cloud environments to automate, optimize, plan, scale and troubleshoot their hybrid cloud deployments.

**59%** less staff time required with VMware Cloud on AWS<sup>3</sup>

## Challenge #4: Different machine formats



Different machine formats **complicate the application portability** and customers have to face vendor lock-in issues due to lack of bi-directional application portability.



With different machine formats, **applications must be rearchitected, machine formats must be converted**, and everything must be thoroughly revalidated which makes application migration very costly and time consuming.



Existing business processes and operations could be disrupted due to the potential for **application downtime during application conversion process**.



### The Solution: VMware Cloud on AWS

With the same virtual machine (VM) format across on-premises and cloud environment, you do not need to re-architect your applications while migrating to VMware Cloud on AWS which in turn saves a lot of costs, time and risks.

Also you get bi-directional workload portability so that you can move your application across on-premises and cloud environment as per your needs.

# 46%

Faster to migrate with  
VMware Cloud on AWS<sup>3</sup>

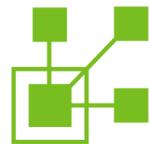
## Challenge #5: Operational inconsistencies



Operational inconsistencies **hamper the extension of existing security, management and governance policies.**



Organizations **need to update security policies and practices after moving to the cloud** 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

VMware Cloud on AWS enables you to leverage established existing on-premises enterprise security, governance and operational policies and 3rd party solutions in the cloud.

Customers can migrate their current on-premises security solution along with established configurations, rules and policies. Further, VMware Aria Suite provides a platform to establish a consistent governance model.

# 44%

lower three-year cost of operations  
with VMware Cloud on AWS<sup>3</sup>

## Further resources

Integrating data centers with public clouds involves a significant number of person hours, an assortment of tools and substantial risk and cost, not to mention the actual time required to move applications from one environment to the other. Lack of familiar management tools that can administer both environments, the need for different skillsets, and inconsistent security postures dampen the speed, flexibility, scale, elasticity and global reach benefits of public cloud.

VMware Cloud on AWS offers the best of both worlds, allowing organizations to seamlessly integrate their on-premises data center environments with a VMware environment running on elastic, bare-metal AWS infrastructure delivered as a service, 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

Visit the VMware Cloud on AWS [website](#)

Watch VMware Cloud on AWS [overview](#)

Learn how VMware Cloud on AWS can help you [seamlessly extend your data center to the cloud](#)

Try the [VMware Cloud on AWS Hands-on Lab](#) for a first-hand immersive experience

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