



10 QUESTIONS, 10 ANSWERS

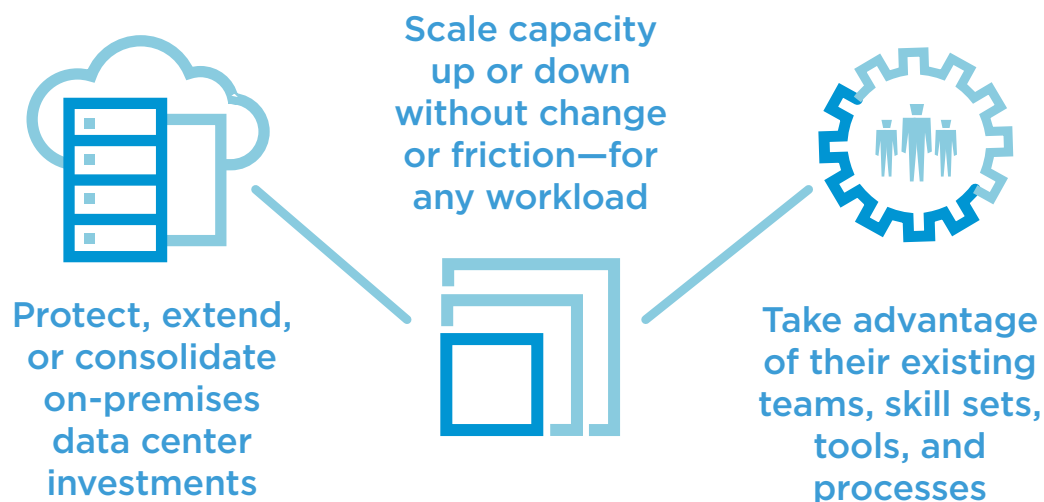
Get to know
VMware Cloud on AWS –
The Best-in-Class Hybrid
Cloud Service




GET TO KNOW VMWARE CLOUD ON AWS: THE BEST-IN-CLASS HYBRID CLOUD SERVICE

IT leaders focused on finding ways to become more agile, accelerate innovation, and better optimize costs are finding success with hybrid clouds.

They can leverage the enterprise-grade capabilities that hybrid clouds offer to:





VMware Cloud™ on AWS seamlessly supports workloads on-premises and in the public cloud, and provides the flexibility to choose where the workloads run. It's a best-in-class hybrid cloud service that brings VMware enterprise-class SDDC software to the AWS Cloud, delivered as an on-demand service with access to AWS services including storage, databases, analytics, and more.

If you're looking for more information about how enterprises leverage hybrid clouds, what makes for a best-in-class enterprise cloud, or whether VMware Cloud on AWS is for you, you're sure to find it here.

In this guide we've compiled [industry statistics](#), [frequently asked questions](#), and links to [additional resources](#) to keep you in the know.

“The right technology stack for the hybrid cloud is finally available with this offering.”

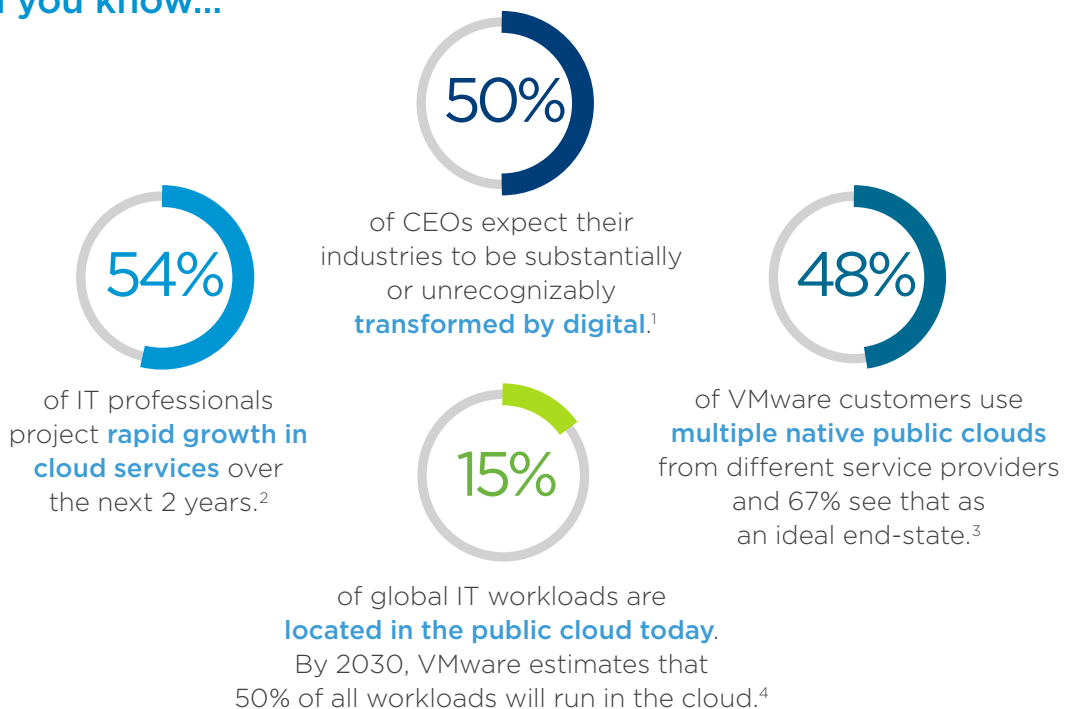
- **Naoki Wakasugi**, Director Information Infrastructure Control Department,
Digital Transformation Division **Ricoh Co., Ltd**

INDUSTRY STATISTICS: ENTERPRISE CLOUD ADOPTION BY THE NUMBERS

The public cloud has stepped out of the shadows into the limelight as enterprises across industries and geographies scale their usage of it.

It's now a top-of-mind topic among just about everyone from CIOs charged with creating long-term cloud strategies to vSphere administrators tasked with managing complex environments.

Did you know...



TOP TEN FREQUENTLY ASKED QUESTIONS

Read on for answers to common questions about hybrid clouds, the best-in-class VMware Cloud on AWS service, and how VMware vSphere® administrators can maximize its value.

1 | Why should an enterprise consider hybrid cloud?

Public cloud adoption is mainstream, driven by the need for greater agility and faster innovation. That's why today, 60 percent of large enterprises are running workloads in the public cloud⁵, and 48 percent are using multiple public clouds⁶. Hybrid clouds integrate the public cloud with on-premises infrastructure and can give IT the ability to strategically choose where they want to run their workloads.

With hybrid clouds, IT leaders can:



2 | What is a 'best-in-class' hybrid cloud?

Many organizations want to run IT workloads on-premises and in public clouds, while taking advantage of existing teams, skill sets, and tools. This requires seamless integration and a common operating platform across on-premises infrastructure and the public cloud.

Best-in-class hybrid cloud solutions, such as VMware Cloud on AWS, enable you to:



Accelerate innovation

- New application development
- Application modernization
- Dynamic capacity needs



Optimize costs

- Cloud mandate
- Shift from CapEx to OpEx
- Application portability



Respond faster to change

- M&A activities
- Data sovereignty, closeness to end user, new capacity
- Continuity of operations



Learn more about the evolution of hybrid cloud and its role in helping enterprises accelerate cloud adoption in the white paper [Balancing Freedom and Control: Evolution of the Cloud](#).

3 | What should enterprises keep in mind when considering a hybrid cloud strategy?

Enterprises are adopting or accelerating their use of cloud in order to gain the agility to respond to changing business needs, support innovation, and better align spend to business requirements.

But many IT professionals spend too much time trying to manage a public cloud infrastructure that requires different skill sets and tools than their on-premises environment.

Six Considerations to Keep in Mind

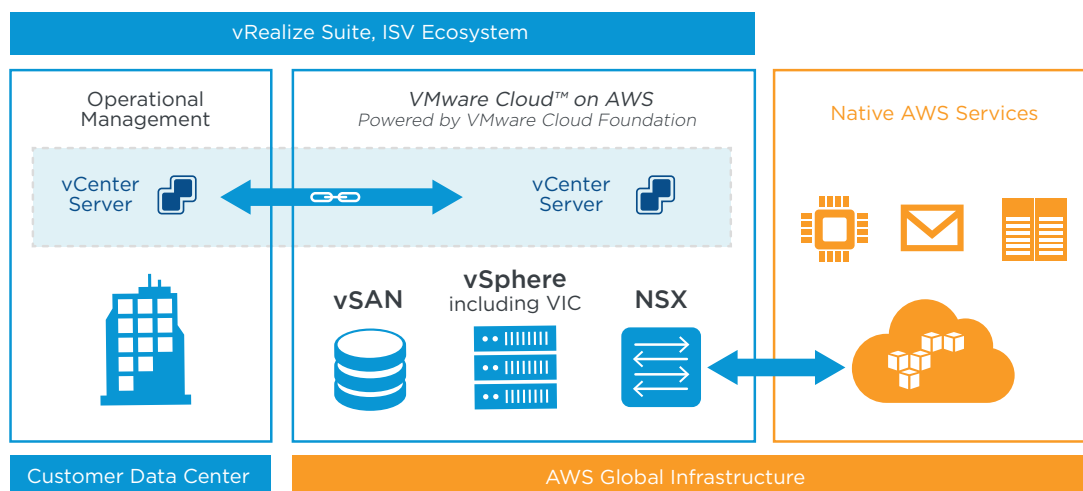
1. How can I avoid creating a new cloud silo?
2. How can I ensure operational consistency and simplicity?
3. How do I get the maximum leverage out of my existing investments in skill sets and tooling?
4. How can I better control, manage, and secure these environments and my workloads?
5. How do I provide enterprise-class application SLAs consistently across private and public clouds?
6. How do I ensure compatibility with applications between on- and off-premises?

4 | What is VMware Cloud on AWS?

VMware Cloud on AWS is a vSphere-based cloud service that will bring enterprise-class Software-Defined Data Center (SDDC) software to the AWS cloud, with seamless access to AWS services.

VMware Cloud on AWS is powered by VMware Cloud Foundation™, a unified SDDC platform that integrates vSphere, VMware vSAN™, and VMware NSX® virtualization technologies, and is optimized to run on next-generation, elastic, bare-metal AWS infrastructure. The service provides access to the broad range of AWS services, together with the functionality, elasticity, and security customers have come to expect from the AWS Cloud. Enterprises can manage this service from an existing VMware vCenter Server® interface with the ability to easily scale AWS resources.

VMware Cloud on AWS – Service Overview



5 | How does VMware Cloud on AWS benefit enterprises?

VMware Cloud on AWS combines the best of VMware and AWS to enable customers to realize significant benefits including:

- **Best-in-class hybrid cloud capabilities** – Leverage market-leading VMware technologies across compute (vSphere), storage (VMware vSAN), and networking (VMware NSX) optimized to run on next-generation, elastic, bare metal AWS infrastructure.
- **Simple and consistent operations** – Rapidly provision and scale AWS resources that are operationally consistent with vSphere-based clouds—on demand.
- **Cloud-scale flexibility** – Powered by the same platform that powers an enterprise’s VMware technology-based, on-premises data centers, VMware Cloud on AWS delivers workload portability across clouds with no complex and time-consuming application re-platforming required.
- **Operated and supported by VMware** – All software components of this service are fully certified and supported by VMware. VMware will be responsible for the patches and upgrades of the infrastructure software components.

6 | What purchase options will be offered for VMware Cloud on AWS?

Organizations will be able to purchase dedicated clusters that combine VMware software and AWS infrastructure, either on demand or as a subscription service.

Customer Spotlight: Scripps Network Interactive

“VMware Cloud on AWS really enables us the ability to protect and run mission critical systems. And without having to go through the onerous process of buying additional gear, I can scale it up and I can scale it down, at will. That’s what the business wants us to be able to do.”

- **Chuck Hoppenrath**, Cloud and Infrastructure Architect,

Scripps Network Interactive



Discover how VMware Cloud on AWS allows Scripps Network Interactive to migrate, run and protect mission-critical workloads at scale. [Watch the video now.](#)



7 | Who provides support for VMware Cloud on AWS?

VMware Cloud on AWS is a VMware service that is delivered, operated, sold, and supported by VMware. That means that customers will have one support number to call and all infrastructure lifecycle management, support, billing, and account management will be handled by the world-class support team at VMware.

In addition, customers will have access to resources and tools to ensure success, including chat support and forums.






8 | What steps can vSphere administrators take to ready their organizations for success with VMware Cloud on AWS?

Find applications to migrate - Start auditing your environment looking for good application candidates to move to the cloud, and decide in what order they should make the transition. The criteria used to select good candidates is highly subjective, but could include business, cost, compliance, geographic, size and security considerations. You may also want to consider a phased approach to your cloud migration, starting with smaller and less critical applications before moving onto larger, more complex ones.


Speaking of complexity, you should always look for application candidates that have fewer dependencies and aren't tightly intertwined with other applications in your datacenter.


Untangled applications are easier to move and less likely to cause on-premise and cloud cross-communication problems. [vRealize Network Insight](#) helps you to identify such applications by allowing you to easily view dependencies and flows between application components.



Run a cost assessment - One of the first questions to ask when preparing for a VMware Cloud on AWS project is “[How much VMware Cloud on AWS do I need?](#)” To answer this VMware provides an easy to use VMware Cloud on AWS Assessment tool, which can quickly give you the number of hosts you will need, their estimated cost and a simple cost comparison to your current private cloud environment.

Consolidate your content - If you want to create new workloads in VMware Cloud on AWS using VM templates, ISOs, OVAs and scripts, you will need to copy these assets over to the new environment. One of the fastest and easiest ways to onboard content into the SDDC vCenter is by using [Content Libraries](#), which can help you organize and prep content for sharing. You can start today by creating a local content library in your on-premises vCenter.






Unified management Unified management allows you to connect your public and on-premise clouds, and provides a consistent management layer between the two environments. To drive unified management you need to ensure your on-premise tools are ready for, and support, VMware Cloud on AWS. VMware provides several solutions that fit the bill here:


[vSphere's Hybrid Linked Mode](#) (HLM) is a brand-new feature available only for VMware Cloud on AWS, which provides the ability to extend the administrator's vCenter management view from on-premises to SDDC cloud.

[vRealize Operations and Automation](#) fully support VMware Cloud on AWS, providing provisioning, capacity management and troubleshooting across on-premise and cloud.




Consider your connectivity options - VMware Cloud on AWS allows customers to connect to both the management network and the compute network via IPSEC VPN or L2VPN; online or through AWS Direct Connect. The management and compute networks are both segmented for greater security. If you wish to have on-premises workloads communicate with workloads on VMware Cloud on AWS, your networking team will need to [allow a VPN connection](#) between the two networks. You can set this up with your network and security teams before signing up to VMware Cloud on AWS.

Reclaim before migrating - Once you have chosen your applications and are familiar with their associated workloads you should look at reducing their resource usage, before migrating them to the cloud. Reclaiming unneeded resources from workloads can save you money and space. You can use the Reclaimable Dashboard on vRealize Operations to quickly [identify and reclaim unused disk, CPU and memory](#) from your virtual environment.



Determine your migration process - There are a number of ways to move workloads into VMware Cloud on AWS and it's important to determine which option or combination of options is best for you:

- **Start fresh** - With simple “cattle” workloads (e.g. web servers) it may be easier to use the Content Library and start the workload afresh within VMware Cloud on AWS.
- **Cold migration** - If you have HLM configured, you can simply shut down the workload and move it to VMware Cloud on AWS. This is another great option for “cattle” workloads.
- **Live migration** - Live vMotion can be used for more business-critical workloads that you don't want to start and stop. This can be done if HLM is configured and a L2VPN is established.
- **Batch/bulk migration** - VMware has enabled new migration capabilities with [Hybrid Cloud Extension \(HCX\)](#). HCX enables large-scale datacenter migrations to be executed live, warm or cold. Migrations and connectivity are optimized to leverage datacenter-to-VMware Cloud on AWS WAN links.



Bulk migration can be executed immediately or in a scheduled fashion. This allows mass VM migration into the cloud with incremental in-line transformations performed in flight (VM hardware version upgrades, VMware tools updates etc.)

- **Migration across different vSphere versions** – IHCX provides loosely coupled interconnects across vSphere versions without merging administrative and fault domains. This allows you to migrate VMs across various vSphere versions - 5.x+ to the latest SDDC instances running in VMware Cloud on AWS.

“Very exciting. Huge potential. Could be the first step in a whole new era for VMware.”

- **Matthew Wallace**, VP Product Management and Product Development, Solutions Marketing, **Faction**

9 | How can vSphere administrators maximize the value of VMware Cloud on AWS?

The more software-defined a data center using VMware technologies is, the more valuable VMware Cloud on AWS becomes.

Adopting VMware Cloud Foundation on premises is the easiest and fastest way to integrate a VMware Software-Defined Data Center (SDDC). It includes vSphere, vSAN, NSX, and automated lifecycle management, and provides all the foundational components to unlock the maximum value of the hybrid solution, when paired with VMware Cloud on AWS.

Upgrading to vSphere 6.5 on-premises (minimum requirement is vSphere 6.0U3c) will be required for ensuring hybrid operations.



Step-by-Step Approach to Implementing a SDDC

- **vSphere** – vSphere 6.5 is ideal for a hybrid infrastructure (minimum requirement is VMware 6.5)
- **VMware NSX Network Virtualization Platform** – NSX automates and drives consistency for network and security services and policies, and is required for cross-cloud VMware vSphere vMotion®
- **vSAN and/or vVOLs (SPBM)** – Important for driving common storage policies and improving operational consistency across on-premises and VMware Cloud on AWS

Additionally, VMware Site Recovery Manager™ and the VMware vRealize® Suite are valuable tools for mass migrations, intelligent operations management, automation, and governance.

10 | What types of enterprises can benefit the most from VMware Cloud on AWS?

Any enterprise that wants to leverage or extend VMware-based infrastructure to the AWS Cloud for reasons such as meeting a cloud mandate, supporting M&A, consolidating infrastructure, or modernizing applications can greatly benefit from VMware Cloud on AWS.

VMware Cloud on AWS will enable enterprises to modernize their infrastructure using their existing tools and skill sets. They can do this without the need to do complex conversions, refactoring, or re-architecture. In addition, VMware Cloud on AWS will also provide seamless access to AWS services.



vmware®



aws

Leading compute, storage, and network virtualization capabilities
Support for a broad range of workloads
De facto standard for the enterprise DC

Flexible consumption economics
Broadest set of cloud services
Global scale and reach

Jointly engineered solution delivers the best of VMware and AWS for customers



Try it yourself!

[Hands-on Labs](#): A quick hands-on tool, the Hands-on Lab provides a preview on how an SDDC is created and connected.

Proof of Concept: If you have documented use cases to validate and test, and they align with current service capabilities, you can test them with a Proof of Concept that lasts two weeks and is run by our VMware Cloud on AWS Specialist Team.

Pilot: If you would like to validate use cases for a longer period of time you can purchase a Pilot. This gives you the added benefit of keeping any data and IP you create within the Pilot itself, where it can later be easily shifted into production.

“This service is on track to become a solid offering for customers who want to adopt the cloud flexibly, without going through the troubles of re-factoring their applications.”

- **Greg Thursam**, Pre-Sales Engineering Manager, **AHEAD**

Additional Resources

Here are opportunities to learn more about VMware Cloud on AWS:



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Subscribe to the [VMware Cloud on AWS video playlist on YouTube](#)



WP [VMware Cloud on AWS Technical Overview](#)



Infographic [Get Ready for the Next Phase of your Cloud Journey](#)

Sources:

1 Gartner “2016 CEO Survey: The Year of Digital Tenacity,” analyst Mark Raskino, April 2016

2 Economist Intelligence Research, August 2016

3,4 VMware Research, Customer Voice/Incircle Survey, 2016

5 Balancing Freedom and Control: Evolution of the Cloud - 2006 - 2030, VMware white paper

6 IDC Infographic Video, Public Cloud for Data Extension and Replacement, July 2016



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