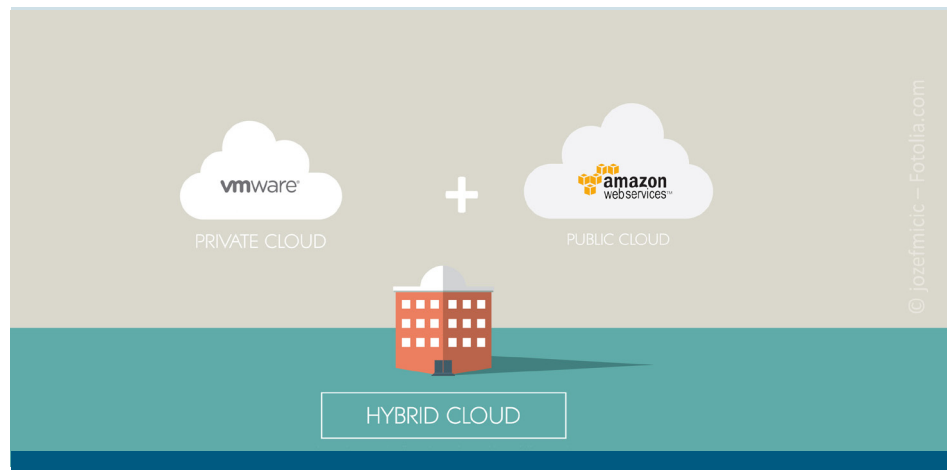




## SVA WHITEPAPER

# VMWARE ON AWS: SETTING UP A HYBRID CLOUD SUCCESSFULLY



**MORE AND MORE COMPANIES ARE OPTING FOR CLOUD SOLUTIONS**

**HYBRID CLOUDS OFFER MANY IMPORTANT ADVANTAGES**

## PREFACE

Today, companies are seeking ways to make their operations more agile, innovative and cost effective. But many data centres are already outdated, although they are barely ten years old. There is a demand for a new, virtualised infrastructure that frees users from the chains of legacy hardware, and can be scaled on demand. This is why more and more companies now opt for cloud solutions. The most common solution is the hybrid cloud – a combination of a private and a public cloud.

Hybrid clouds offer important benefits for IT. Thanks to the public cloud, storage capacities can be scaled easily to suit any workload. The on-premises infrastructure also benefits from new additional services from the cloud. This makes companies more agile and more cost efficient, and also helps to foster innovation by giving DevOps teams a much better basis to work on.

Surveys confirm that more and more companies now use cloud solutions for greater flexibility. Gartner predicts that global public cloud revenues will rise 21.4 % in 2018 to USD 186.4 billion.<sup>1</sup> According to the IDC, expenditure for public clouds in Germany alone will grow from EUR 2.8 billion in 2015 to EUR 9 billion in 2022.<sup>2</sup> And in the SME segment, 64 % of companies now integrate cloud services in their business.<sup>3</sup>

<sup>1</sup> Gartner: Gartner Forecasts Worldwide Public Cloud Revenue to Grow 21.4 Percent in 2018.

<sup>2</sup> IDC Central Europe: Infografik: Cloud Computing in Deutschland 2017.

<sup>3</sup> Pols, Axel und Marko Vogel: Cloud Monitor 2017. Eine Studie von Bitkom Research im Auftrag von KPMG.



**46 % OF GERMAN  
COMPANIES ARE  
PLANNING A HYBRID  
CLOUD SOLUTION**

**VMWARE CLOUD ON AWS  
OFFERS THE BEST OF  
BOTH WORLDS**

### HYBRID CLOUD MAKES THE DIFFERENCE

The IDC survey ‘Hybrid Cloud Makes the Difference’<sup>4</sup> also shows that hybrid cloud environments are the best way to achieve the necessary agility. New functionalities, applications and resources can be used faster – and with a hybrid infrastructure comprising a public cloud and the on-premises environment, today’s critical drivers for digital transformation can also be implemented. As a result, 46 percent of German and 38 percent of European companies are already planning to implement a hybrid cloud solution.

In fact, 84 percent of companies in Europe have already adopted multi-cloud environments. Again, hybrid clouds are the preferred solution, particularly for better, faster processing of legacy workloads in the private cloud.<sup>5</sup> John Gallant’s verdict, as Senior Vice President IDG Research Services, was that “Hybrid cloud is the great enabler of digital business.”<sup>6</sup>

But which is the best hybrid cloud solution? Or rather, which public cloud complements an existing private cloud perfectly? We looked around – and found an ideal solution for our clients.

### HYBRID CLOUD ON A HYPERSCALER

VMware Cloud on AWS enables VMware customers to implement a hybrid cloud solution on the AWS hyperscaler for the first time ever. The goal is to give IT a consistent hybrid cloud environment in which workloads can be transferred smoothly between the private and the public cloud. Simplicity and security are other key aspects of this hybrid cloud solution.

**Special feature:** The hybrid cloud architecture extends the functionality of software-defined data centres (SDDCs) and VMware management tools by adding the comprehensive, innovative AWS Public Cloud portfolio. This offers server-less computing, Elastic Beanstalk, databases, analytics, virtual desktops, and mobility, application and IoT services.

In VMware Cloud on AWS, a vSphere cluster can be scaled automatically using the Elastic Distributed Resources Scheduler (EDRS). The EDRS monitors the vSphere cluster continuously, and assesses demand autonomously.

Hence, companies benefit from VMware’s scalable virtualisation solutions and can also use extensive AWS cloud services on demand. Best of all, IT staff can manage resources in the cloud using familiar VMware tools – no need to learn new tools or software.

<sup>4</sup> Interxion: IDC-Studie: Hybrid Cloud macht den Unterschied.

<sup>5</sup> NTT Com: New Research reveals how Hybrid Cloud is really being implemented across 14 European countries.

<sup>6</sup> IDG Research Services: Hybrid Cloud Computing. The great enabler of digital business.



**HIGHLY SCALABLE, SECURE  
AND INNOVATIVE SERVICES**

**VMWARE HYPERVISOR  
INSTALLS DIRECTLY ON THE  
AWS HARDWARE**

## 1. WHAT IS VMWARE CLOUD ON AWS?

### FROM HYPERVISOR TO HYPERSCALER

VMware Cloud on AWS is an on-demand cloud service co-developed by AWS and VMware. It offers highly scalable, secure and innovative services, and makes it easy for companies to extend their local, VMware vSphere-based environments to the AWS Cloud. The basis is Amazon's ultra-modern Bare Metal Infrastructure, which is provided automatically. The VMware Hypervisor is installed directly on the Hyperscaler hardware (Bare Metal). This makes it easy to shift workloads to the AWS Cloud from an on-premises VMware infrastructure.

As a result, VMware Cloud on AWS is particularly suitable for companies with an Enterprise Class IT infrastructure who wish to offload local, vSphere-based workloads to the public cloud. It also enables them to consolidate and extend their data centre capacity and optimise disaster recovery. A further benefit is the ability to use identical VMware technologies (e.g., vSphere, vSAN, NSX and vCenter) in local data centres and in the AWS Cloud. Setting up a new VMware SDDC cluster in the AWS Cloud is effortless, using either the web-based console or REST API. That makes the transition even faster and easier.

Moving to the hybrid cloud has other benefits too: it gives VMware customers access to the wide range of AWS services – for even more opportunities and innovations.

**Another thing:** Thanks to Stretched Cluster support, high availability across the AWS Availability Zones (AZs) is guaranteed; this is particularly important for business-critical applications. A Stretched Cluster distributes resources across multiple Availability Zones without having to modify the application. With this feature, vMotion or live workloads are available instantly within clusters across two Availability Zones. That means higher resilience for business-critical applications.

Many customers in a wide range of sectors already use VMware Cloud on AWS. These include companies in the health and transport sectors, financial service providers, public authorities, service providers and many more besides. The most common usages are cloud migration of single applications, data centre extension and disaster recovery (DR). That said, the VMware/AWS hybrid cloud offers unlimited deployment potential, and we look forward to seeing what new services this partnership will inspire in years to come.



## **EASILY EXTEND DATA CENTRES INTO THE CLOUD**

## **GUARANTEED HIGH AVAILABILITY WITH ZERO RECOVERY POINT**

### **1.1 ADVANTAGES OF VMWARE CLOUD ON AWS**

The partnership between VMware and AWS opens up totally new opportunities and benefits for companies. These include:

#### **FAST MIGRATION TO THE CLOUD**

Companies can simply extend their on-premises data centre into the cloud, with no modifications or conversions. They can also move workloads back from the cloud to the data centre, depending on their performance or capacity needs at any given time. The choice is theirs.

**Best of all:** In Hybrid Linked Mode (HLM), you can even connect VMware Cloud on AWS with a single on-premises SSO domain and control them via a single GUI (graphical user interface).

#### **HIGHEST AVAILABILITY LEVELS**

The partnership between VMware and Amazon also increases availability. VMware-based workloads can be migrated even faster to the high-availability, highly scalable AWS Bare Metal infrastructure. Using Stretched Clusters, VMware Cloud on AWS can also ensure high availability with a Zero Recovery Point for every application in the AWS Availability Zones (AZs).

#### **OTHER INNOVATIONS WITH AWS**

VMware customers benefit most of all from the wide range of AWS services, which can advance – or even enable – innovation. Examples of AWS services include data processing (AWS Lambda), databases, analyses, object storage (Amazon S3), Internet of Things, Security, Mobile and more besides.

VMware customers also enjoy further new benefits: using applications provided on VMware, companies can now access AWS databases such as Aurora, Dynamo or Redshift and perform petabyte-scale data analyses.

#### **FAMILIAR WORKFLOWS**

If your IT people already know VMware technologies like vSphere, vSAN, NSX and vCenter, no extra training is needed. Moving applications between local environments and the AWS Cloud is easy, and requires no additional hardware or applications.

#### **MORE SECURITY WITH DRaaS**

With VMware Disaster Recovery as a Service (DRaaS), business continuity is also assured. Thanks to VMware Site Recovery Manager (SRM), the on-demand service is now available for the AWS Cloud too. So for companies, storing a copy of their VMware data centre in the Cloud is swift and simple. They also benefit from numerous AWS security features, such as VPN connections using Internet Protocol Security (IPsec) between an on-premises environment and the AWS Cloud.



### **OFFLOAD DATA-INTENSIVE WORKLOADS EASILY TO THE CLOUD**

#### **CAPACITY ON DEMAND**

If your IT department needs more storage or computing power, it can simply offload workloads to the cloud without any additional modifications, and without leaving the familiar VMware environment.

#### **EVEN MORE OPPORTUNITIES FOR DEV AND TEST ENVIRONMENTS**

The AWS Cloud can also improve Dev & Test environments by providing additional AWS services. This helps companies develop new applications and business-relevant services even faster.

#### **USE VMWARE TECHNOLOGY IN THE CLOUD TOO**

Are your people already familiar with VMware technologies like vSphere, vSAN, NSX or vCenter? Now they can use them in the cloud too – thanks to VMware on AWS.

#### **PROCESS BIG DATA FASTER**

Data-intensive workloads can now be easily processed in the AWS Cloud. What's more, VMware vSAN native compression and deduplication also reduces overall operating costs.

#### **IMPROVED DESKTOP ACCESS**

VMware Horizon lets companies extend their local desktop services via the cloud and bring virtual desktops closer to their locations. This reduces latency and improves the end-user experience.

#### **CONSOLIDATING DATA CENTRES**

Most companies end up using multiple data centres to satisfy their data demands. Consolidating data centres in one big Hybrid Cloud solution lets you accelerate the infrastructure, eliminate shadow IT and save money.

#### **ENHANCED APPLICATION MOBILITY**

Hybrid Cloud Extension (HCX) makes it even easier to move applications between on-premises and cloud environments – regardless of which vSphere version you run.

#### **GLOBAL SUPPORT**

VMware Global Support Services (GSS) provide implementation support for VMware Cloud on AWS – worldwide.

#### **MORE PRODUCTIVITY AND EFFICIENCY WITH VR OPS**

Improve your production IT's performance. VMware vRealize Operations makes it even easier to plan ahead and manage capacities on-premises and in the cloud. And with baselines, you can create targeted patches for selected objects such as hosts, VMs or Virtual Appliances (Vas) too.

### **USING VMWARE TECHNOLOGY FOR THE FIRST TIME IN THE CLOUD**

### **GLOBAL SUPPORT**



**VSPHERE, VSAN AND NSX ARE COMPONENTS OF THE VIRTUALISATION PLATFORM**

**VSPHERE OFFERS EFFICIENT MANAGEMENT**

### **MADE BY VMWARE**

All support, patches and upgrades are supplied exclusively by VMware. Since VMware is responsible for the architecture, companies work with a contact partner they have often known for years.

### **1.2 DOWNSIDES**

There aren't many, but as in most partnerships, a few disadvantages do need to be considered.

#### **LONGER TRAINING FOR NEW VMWARE CUSTOMERS**

Unlike existing VMware customers, newcomers will need to get acquainted with the vSphere environment first. Although VMware claims that customers who don't know SDDC will get their bearings quickly, it's wise to factor in training time.

#### **OPERATING AND INVESTMENT COSTS BALANCE OUT**

Most companies either book an on-demand packet, or sign a one or three-year agreement. This boosts flexibility, but transfers costs instead of cutting them: instead of procurement, they pay for service. On top of processing capacity, further costs are incurred for network traffic and the use of AWS services.

### **1.3 COMPELLING TECHNOLOGIES: VSPHERE, VSAN, NSX**

If you're already familiar with the benefits of vSphere, NSX and vSAN you can skip Section 1.3. For all other readers, here is a brief explanation:

#### **VSPHERE – A VIRTUALISATION PLATFORM FOR THE HYBRID CLOUD**

VMware vSphere is the virtualisation platform for the Software Defined Data Centre (SDDC) and the hybrid cloud. VMware vSphere bundles and displays large infrastructures such as storage, networks and CPUs in a common environment, and enables simple, efficient management of all components.

#### **BENEFITS:**

- One platform for all applications
- Accelerated application performance
- Simple, efficient management
- Automation of many processes and functions
- Comprehensive, integrated security features
- High availability



### **VSAN IS DIRECTLY INTEGRATED IN THE HYPERVISOR**

#### **VSAN – THE SOFTWARE-BASED STORAGE SOLUTION**

vSAN is a storage solution for virtualised environments that is integrated directly in the Hypervisor. Storage and processing performance can be run on the same physical host with minimal effort. Thanks to vSphere integration, vSAN can be managed easily in a vSphere web client, and offers multiple additional functionalities such as vMotion, High Availability (VA), Distributed Resource Scheduler (DRS), Error Tolerance (ET), Site Recovery Manager, vRealize Automation™ and vRealize Operations.

#### **BENEFITS:**

- Flexible scaling of storage
- Easy management and provision via VM storage guidelines
- 10x faster response times
- Seamless integration in vSphere Web Client vCenter
- High Performance read-and-write caching with SSD
- Reduces Total Cost of Operation (TCO)

### **NSX PERMITS SECURE MICRO-SEGMENTATION**

#### **NSX – NETWORK VIRTUALISATION AND MICRO-SEGMENTATION**

VMware NSX is a network virtualisation platform for the Software Defined Data Centre (SDDC). Its key feature: the operating model of a virtual machine is applied to entire networks. With NSX, network functionalities such as switching, routing and firewalling are integrated in the Hypervisor, and can be used via the Hypervisor in the entire environment.

**Important:** VMware Cloud on AWS can also run without NSX-V (NSX for vSphere). Another advantage: you can connect a single NSX-V Edge to a SDDC. VMware NSX reproduces the entire network environment in software form, so every network topology – from simple to complex multi-layer networks – can be created and provided in seconds.

### **CREATE NETWORK ENVIRONMENTS IN A FEW EASY STEPS**

#### **BENEFITS**

- Virtualised network – no hardware configuration
- Innovations are as fast as software updates
- NSX is easy to integrate in an existing network infrastructure
- Micro-segmentation for even higher security
- Automated security guidelines for workloads
- Individually secured virtual desktops
- Immediate Disaster Recovery and Active-Active data centres
- Demilitarized Zones (DMZ) everywhere

NSX is an important component of VMware Cloud on AWS. Like vSphere, NSX is optimised to work perfectly in the AWS environment. NSX also links ESXi-Host VMware to the Amazon VPC network.



**THE VCENTER MANAGES BOTH ENVIRONMENTS**

**SIMPLE NETWORK CONFIGURATION**

With VMware Cloud on AWS, network admins can create an environment in just a few easy steps. First, they log in to the portal for VMware Cloud on AWS and configure the network, e.g., the VPN connection or firewall access. Then the cloud admins log in to the vCenter platform to access the networks they created. The admins can now create logical networks and connect VMs as required. They can also define which traffic may pass through the firewall and the VPN networks.

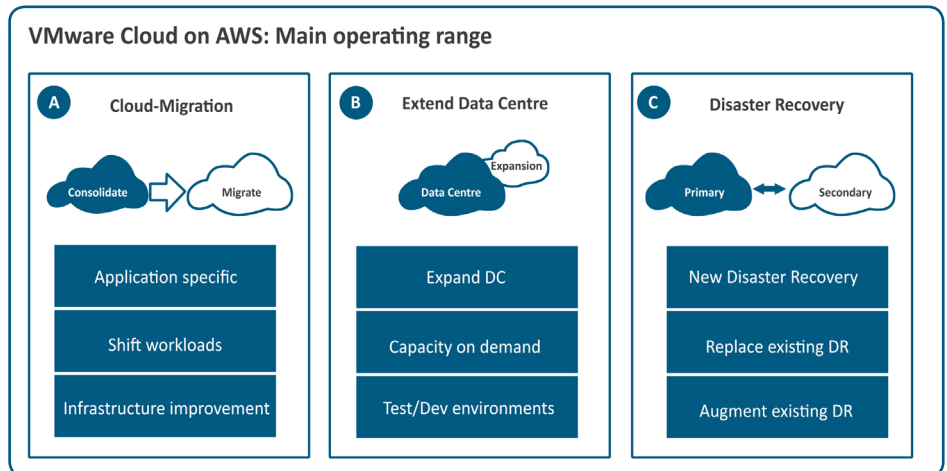
**NEW ROLES FOR CLOUD ADMINS**

With VMware Cloud on AWS, the vCenter admin role also changes. Since the DSSC infrastructure is predefined in the cloud, the customer cloud admin cannot make changes to management appliances. He or she has full control over the workload, but has read access only for management workloads and the infrastructure.

**1.4 WHERE DOES IT PAY TO USE VMWARE CLOUD ON AWS?**

Hybrid cloud solutions can be effective in many areas, and are particularly suitable for extending the company data centre – for example to make IT more flexible, or to add computing and storage capacity.

**IDEAL FOR FLUCTUATING WORKLOADS**



**FOR VARIOUS AND VARYING WORKLOADS**

With VMware Cloud on AWS, IT departments that repeatedly shift workloads between the data centre and cloud benefit from seamless, bidirectional migration. vSphere vMotion makes it easy to shift workloads between the local data centre and the AWS Cloud, based on your current needs.

**EASILY EXTEND DATA CENTRES**

**FOR SIMPLE, SWIFT DISASTER RECOVERY**

Customers who integrate Disaster Recovery as a Service (DRaaS) in their existing VMware-based DR solutions also benefit from proven VMware technology in the Cloud. What’s more, additional services such as VMware Site Recovery Manager (SRM) and vSphere Replication offer high scalability, high availability and high speed in the AWS Cloud.





**VIRTUALISED NETWORKS  
AS THE BASIS OF A  
MODERN DATA CENTRE**

**TO EXTEND AND CONSOLIDATE YOUR DATA CENTRE**

VMware Cloud on AWS gives companies the benefits of AWS Cloud (e.g., scalability) and makes it easy to extend data centre capacity to accommodate load spikes or Dev & Test environments. Companies with multiple data centres can now streamline administration by consolidating them easily in this hybrid cloud solution.

**TO VIRTUALISE A DATA CENTRE**

As a virtualisation platform, VMware vSphere is fully equipped to decouple the data centre from the hardware. By simplifying the automation of many functionalities and processes, this eases the load on your people, simplifies data centre processes and saves money – an important factor particularly where Big Data is concerned.

**TO MODERNISE A DATA CENTRE**

The advent of cloud solutions has transformed virtualised networks from a fringe phenomenon to the basis of every modern data centre. Companies that still run legacy hardware know the problem well. Thanks to VMware, Unix-based legacy infrastructures can now be easily migrated to virtualised Linux.

So actually, companies benefit from VMware Cloud on AWS twice over: from a virtualised on-premises network, and from the various AWS Cloud services.

**FOR DEVOPS TEAMS AND CONTAINER-BASED APPLICATIONS**

Particularly in development, containers are an important tool for testing or migrating applications. With vSphere Integrated Containers, DevOps teams can run normal and container-based applications in parallel on the same infrastructure.

**LESS EFFORT TO RUN  
REMOTE LOCATIONS TOO**

**TO SUPPORT REMOTE LOCATIONS**

Virtualisation makes it even easier to operate remote locations and branches. This lightens the workload for people on site, and saves money.

**1.5 WHY CHOOSE A HYBRID CLOUD SOLUTION?**

A first-class hybrid cloud solution lets you run workloads on-premises and in public clouds in equal measure, using existing tools and services. Smooth operation calls for seamless integration of both infrastructures, and a platform that can manage the on-premises and public cloud infrastructure.

**WHAT SHOULD COMPANIES CONSIDER?**

A public cloud uses a different infrastructure than an on-premises environment. Yet often, IT departments try to manage their public cloud infrastructure in the same manner as their on-premises environment – despite the fact that the public cloud needs different settings and tools.



## **TEST VMWARE CLOUD ON AWS FOR 30 DAYS**

## **FLEXIBLE, HOURLY-BASED ON-DEMAND LICENSING**

### **WHAT QUESTIONS SHOULD YOU BE ASKING YOURSELF?**

When considering a hybrid cloud solution, it's wise to address the following questions:

1. How do we stop the public cloud from becoming just a place to offload 'unwanted' data?
2. How do we ensure consistent workflows?
3. How do we make the hybrid cloud easy to use?
4. How can we use our existing IT budget to the max?
5. What's the best way to manage the hybrid cloud?
6. How do we secure SLAs in the hybrid cloud?
7. How do we make sure applications from the on-premises environment are compatible with the public cloud too?

### **1.6 GETTING STARTED IN THE HYBRID CLOUD**

For companies seeking a cost-effective way to test hybrid cloud solutions, VMware Cloud on AWS has the perfect offer. The 'Single Host SDDC' starter pack lets companies test initial workloads and functionalities for 30 days for as little as \$ 5.60 per hour. During that period, they can also switch to a production SDDC (with 4 hosts) and try out even more functionalities and tools. The VMware website calculator makes it easy to work out the exact costs:

<https://cloud.vmware.com/vmc-aws-pricing>

### **1.7 ON-DEMAND LICENSING**

Why sign long licensing agreements right away? VMware offers on-demand licensing, billed by the hour. This gives companies the flexibility to add hosts as needed, while paying only for the hours the host was active.

Alternatively, companies that can foresee their near-term requirements accurately can opt for a one or three-year agreement, saving up to 50 % compared to on-demand licensing. For details, see the VMware calculator at:

<https://vmcsizer.vmware.com/>



## IMPORTANT POINTS FOR ADMINS

## 2. STEP BY STEP INTO THE HYBRID CLOUD

To get VMware Cloud on AWS up and running successfully, consider these points first:

### 1. DEFINE WHICH APPLICATIONS YOU WANT TO MIGRATE

Which applications are suitable for the cloud? Compile a list of which applications you want to migrate, and in which order. It's best to start with a smaller, less critical application before tackling a complex application that might involve dependencies.

**Pro Tip:** vRealize Network Insight helps you see how your applications interact.

### 2. RUN A COST ASSESSMENT

Every admin needs to know how much VMware Cloud on AWS they need. The VMware Assessment Tool can help – by creating lists of the number of hosts, costs and a cost comparison.

### 3. USE CONTENT LIBRARIES

Before creating new workloads with VM Templates, ISOs, OVAs and scripts, you need to transfer them to the new environment. To do this, use Content Libraries to create a local content library in your on-premises vCenter.

### 4. CONNECT ON-PREMISES ENVIRONMENTS WITH THE CLOUD

To manage the public cloud and your on-premises environment in a unified way, you need to connect the two. Solutions such as Hybrid Linked Mode (HLM) by vSphere make it easy to extend your vCenter Management into the cloud. Alternatively, use vRealize Operations and vRealize Automation for provision, storage management, and for problematic cases in both environments.

### 5. SELECT THE CONNECTIONS

With VMware Cloud on AWS, admins can create a secure connection to the management network, and also to the compute network via IPsec-VPN or L2VPN/L3VPN –either online or via AWS Direct Connect. For on-premises workloads to communicate with workloads on VMware Cloud on AWS, a VPN connection must first be established.

### 6. REDUCE WORKLOADS' RESOURCE USAGE

After checking applications and their workloads, check whether you can reduce resource usage before migration. Many workloads are oversized; this wastes money and storage capacity.

**Pro Tip:** use the Reclaimable Dashboard in vRealize Operations.



**PLAN THE MIGRATION  
PROCESS CAREFULLY**

## 7. PLAN THE MIGRATION PROCESS

There are several ways to migrate to VMware Cloud on AWS. Here are the most important:

**Restart:** Use simple workloads. Restart them via the Content Library in the VMware Cloud on AWS.

**Cold migration:** Providing HLM is configured, you can shut down the workload and migrate it to VMware Cloud on AWS.

**Live migration:** You can also migrate business-critical workloads while they are running. Use Live vMotion for this. HLM must be configured, and an L2VPN must be set up.

**Batch und bulk migration:** With Hybrid Cloud Extension (HCX), even large data volumes are easy to migrate using live, warm or cold migration. You can either migrate immediately, or at a set time in the future.

Migrating different vSphere versions: Use IHCX to establish loose connections between different vSphere versions.



**VMWARE CLOUD ON AWS  
IS UP TO 17 % MORE COST  
EFFECTIVE**

**65 % OF COMPANIES  
ALREADY USE VSPHERE**

### 3. VMWARE CLOUD ON AWS VS. MICROSOFT AZURE PUBLIC CLOUDS

While Microsoft tells companies they can only use an Azure-compatible infrastructure to set up a hybrid cloud, VMware takes a different approach: Companies can keep their on-premises infrastructure and extend it easily and seamlessly into the cloud, via a partner such as AWS.

The Taneja Group compared the performance of VMware Cloud on AWS and Microsoft Azure Public and Private Cloud.<sup>7</sup> The results are remarkable: “For a 180-virtual server workload environment in a public cloud configuration, VMware Cloud was 14–17 % more cost-effective than Microsoft Azure.” VMware Cloud on AWS was also compelling in terms of upgrading: “When we added the cost of upgrading to a hybrid cloud configuration, the advantage of VMware Cloud over Azure technologies jumped to 39 %.”

Another interesting finding was that 68 % of IT staff are planning to use a hybrid cloud as their preferred architecture. But survey participants said the ability to keep their old infrastructure when switching to hybrid cloud was equally important.

The main requirement for setting up a hybrid cloud with Azure is Azure Stack. But installing Azure Stack as an on-premises environment requires an infrastructure from manufacturers like HPE, Dell EMC or Lenovo, with the software stack deployed on pre-defined hardware. So companies have to buy new infrastructure if they prefer a hybrid cloud with Azure. VMware Cloud on AWS makes things far easier by simply extending the existing infrastructure.

At first glance, the VMware solution appears more cost-intensive. But thanks to the new, transparent pricing policy with dedicated hardware, companies can reduce costs with virtually no risk. According to the survey, over 65 % of companies already use VMware vSphere as their preferred virtualisation platform, or are planning to do so. This makes the VMware solution an easy choice.

<sup>7</sup> Taneja Group: VMware Cloud on AWS: A new approach to Public Cloud offers more value than Azure alternatives.



#### 4. CHECKLIST: ARE YOU READY FOR VMWARE CLOUD ON AWS?

Here are the key questions to help you decide whether a hybrid cloud solution will fit your company:

##### CHECK BOX

- Do you already use VMware solutions?
- Have you created an on-premises environment?
- Do you want to offload workloads to the public cloud?
- Are you currently planning to set up a hybrid cloud?
- Is your data centre already virtualised, or are you thinking of doing so?
- Are you looking for an on-demand licensing model for the cloud?
- Do you often have load spikes in your data centre and require additional resources?



**WELL WORTH THE MOVE**

**COMPANIES WIN TWICE OVER: FROM VMWARE, AND FROM AWS**

## 5. CONCLUSION

Setting up a hybrid cloud sounds tempting for many businesses because it offers more flexibility and agility with less company infrastructure. Companies who make the move reap the rewards and appreciate the benefits afterwards.

However, many companies that planned to move to hybrid cloud have experienced big problems. Of more than 400 companies polled by the Taneja Group<sup>8</sup>, just 7 % migrated successfully to the hybrid cloud. Of the other 93 %, only one company in five got further than the planning stage. What went wrong?

The problem is that initially, many infrastructure vendors only plan a private cloud for their customers, without considering how to connect it to a public or hybrid cloud later on. This is bound to cause issues: either a new infrastructure needs to be purchased, as described with Azure, or migrating workloads from the private cloud to a different cloud environment proves difficult because tests and modifications would be needed first.

So which hybrid cloud solution would suit businesses best? Probably one that connects the on-premises environment with the cloud in a flexible way. One that only bills for what you use, is easy to handle, and requires little upfront training. VMware Cloud on AWS ticks all those boxes relatively easily. Existing VMware customers can simply extend their existing infrastructure into the public cloud – no need for converting, restructuring or refactoring.

VMware Cloud on AWS supports workloads in both on-premises environments and the public cloud. Customers decide for themselves where the workloads run. And since this on-demand service also provides access to additional AWS services, companies benefit twice over by enjoying the benefits of VMware and AWS at the same time. Hence, VMware Cloud on AWS is an ideal hybrid cloud solution with Enterprise Class SDDC software on the AWS Cloud.

Based on the above, we agree with the conclusions of the Taneja Group survey: “Taneja Group strongly recommends that businesses give VMware Cloud on AWS a try. There is nothing to lose and much to gain.”<sup>9</sup>

**Any questions about VMware Cloud on AWS? May we advise you on hybrid cloud solutions? We’re happy to help.**

<sup>8</sup> Taneja Group: VMware Cloud on AWS: A new approach to Public Cloud offers more value than Azure alternatives.

<sup>9</sup> Taneja Group: VMware Cloud on AWS: A new approach to Public Cloud offers more value than Azure alternatives.



## 6. FAQs

### WHAT IS VMWARE CLOUD ON AWS?

VMware Cloud on AWS is a VMware offering that brings VMware Enterprise Class SDDC software into the Amazon Web Services (AWS) cloud. The hybrid cloud is based on the VMware Cloud. VMware products for data processing, storage and network virtualisation are used cross-platform throughout the cloud.

### WHAT LICENSING MODELS DOES VMWARE CLOUD ON AWS OFFER?

Customers can choose either an on-demand service, or a 1 or 3-year licensing agreement.

### WHO SUPPORTS VMWARE CLOUD ON AWS?

VMware handles the entire support. There is just one support number, and VMware handles all aspects of lifecycle management, billing and accounts.

### IS THERE SUPPORT FOR AWS SERVICES TOO?

No, support for AWS services is provided solely by AWS.

### DO I NEED AN AWS ACCOUNT?

Yes, you need an AWS account connected to VMware Cloud on AWS. You will be prompted to create your account during the onboarding process. The advantage is that you can also use AWS services such as Amazon S3, Redshift and many others.

### WHO BILLS FOR WHAT?

VMware bills you for what you use in the VMware Cloud on AWS. Any other AWS services you may use are billed by AWS.

### WHERE IS VMWARE CLOUD ON AWS CURRENTLY AVAILABLE?

In AWS Europe (Frankfurt and London), AWS USA East (North Virginia), AWS USA West (Oregon) and Sydney.

### CAN I USE AWS SERVICES TOO?

Yes. The SDDC environment is linked to the customer's VPC via the Elastic Network interface, so it provides access to AWS services.

### WHAT'S A SINGLE-HOST SDDC STARTER CONFIGURATION?

This is an affordable starter pack that lets customers test VMware Cloud on AWS for 30 days. It's designed for customers who wish to trial VMware Cloud on AWS thoroughly before migrating their runtime environment (at least 4 hosts). Please note: this 1-node environment is intended for non-production workloads.





### **DOES VMWARE CLOUD ON AWS COMPLY WITH THE NEW DSGVO DATA PROTECTION REGULATION?**

Yes. Click here for full details of compliance:

<https://cloud.vmware.com/community/2018/05/24/vmware-cloud-aws-gdpr-ready/>

### **HOW IS VMWARE CLOUD CONFIGURED ON AWS?**

VMware Cloud runs on dedicated single tenant hosts in the AWS Cloud. Each host corresponds to an Amazon EC2 i3.metal instance with 2 sockets and 18 cores per socket, plus 512 GiB RAM and 15.2 TB of Raw SSD memory.

Each host can run up to 100 VMs. Clusters can contain anything from 4 to 32 hosts.

### **HOW DO I MANAGE RESOURCES ON VMWARE CLOUD IN AWS?**

Use VMware Cloud Web Console for tasks such as adding and removing hosts, configuring firewalls and other network settings. You can also use the same admin tools as before.

### **WHAT'S THE MAXIMUM SUPPORTED CLUSTER SIZE?**

32 ESXi hosts.

### **WHAT STORAGE OPTIONS DOES VMWARE CLOUD ON AWS OFFER?**

Storage for VMS is provided by VMware vSAN technology. Additionally, every SDDC cluster uses an 'All Flash' vSAN storage solution based on NVMe instance storage. This ensures high performance and low latency.

### **DOES VSAN ENCRYPT DATA?**

Yes, all data is encrypted upon storage.

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