



# The Enterprise Guide to Scaling on Demand

Accelerate scalability with VMware  
Future Ready Cloud Solutions



vmware®

intel.

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# 01

## Overview



The rise of consumer power over the last two decades has led customers to expect far more from businesses, across every industry.

Customers now demand fast, reliable service around the clock, and in a world of instant, global user reviews, the consequences of not meeting these expectations can be devastating to a company's bottom line.

To ensure they had the compute, storage and networking power to deliver services to customers reliably in the past, IT relied on capital expenditure investments, purchasing large-scale on-premises data center capacity.

However, many enterprises have had difficulty purchasing just the right amount of capacity to meet spikes in customer demand while minimizing expensive and wasteful excess storage.

Enterprises face a similar challenge in disaster recovery (DR), where they must purchase seldom-used backup data centers to safeguard against infrastructure failure.

Organizations are leveraging a future ready cloud infrastructure for data center scalability and DR, paying only for the resources they use, when they use them.

Many enterprises have had difficulty purchasing just the right amount of capacity to meet spikes in customer demand, while minimizing expensive and wasteful excess storage.

As they've matured, enterprises have employed hybrid cloud solutions to leverage benefits of both on-premises and cloud environments. In doing so, they've found themselves faced with a new set of challenges in establishing the right hybrid cloud infrastructure to deliver on their cost and efficiency objectives for scalability and DR.

**In this eBook, we'll explore the industry shifts driving cloud adoption for elastic capacity, the challenges enterprises face in this new paradigm, and how emerging services are making seamless scalability from the data center to the cloud a reality.**



# 02

## Why Enterprises Need the Ability to Scale on Demand



### Business in the age of CX

It's a truism providing fast and reliable service around the clock can help grow a business' customer base.

However, recent increases in consumer power have raised the importance of delivering positive customer experiences, including ensuring reliable delivery of services, to maintain reputation. Indeed, given the growing importance of customer experience, companies should be thinking about measuring 'return on experience' (ROX) to better understand how customers interact with brands.<sup>1</sup>

Customers today are empowered to leave and read endless reviews about brands and products. Online reviews can have a huge influence on a person's propensity to purchase, with the average consumer reading 10 reviews before feeling able to trust a business.<sup>2</sup>

Today, in addition to speed, simplicity and personalization, 24x7 availability is a minimum expected requirement for service providers.

With increasing numbers of brands competing for market share across all industries, it's easier than ever for unsatisfied customers to jump ship following a negative experience, sharing their story as they go and moving to a provider with more positive user reviews. This has placed more power in the hands of consumers, with businesses scrambling to hold onto flighty customers.

<sup>1</sup> PWC. "It's time for a consumer-centred metric: introducing 'return on experience': Global Consumer Insights Survey 2019." 2019

<sup>2</sup> BrightLocal. "Local consumer review survey." December 2019.

The most successful organizations in this new paradigm are those able to predict customer desires and deliver a better experience. For example, Uber was able to disrupt the transportation industry by providing a faster, easier way to order rides, and Netflix reinvented the entertainment industry with streamlined delivery of movies and TV series.

The impact of improved customer experience has had a ripple effect, raising service expectations across all industries as innovative organizations respond to the trend. Today, in addition to speed, simplicity and personalization, 24x7 availability is a minimum expected requirement for service providers.

Despite this, many organizations still struggle to ensure their IT infrastructure has enough capacity to maintain availability during spikes in customer demand. Attempting to predict the amount of capacity required is challenging, and many organizations experience server failures when their services are inundated with customer requests.

In the education industry, this could be caused by the influx of students trying to register for classes after enrollment. In retail, websites slow to a crawl or crash annually when stampeded by shoppers on Black Friday. And no organization is immune to system failures caused by natural disasters, power outages or human error.

**To provide uninterrupted availability, and to do so in a cost-effective manner, enterprises must be able to scale their data center usage to meet the ebbs and flows of market demand.**

# 1/5

of shoppers

will abandon their shopping cart if a website crashes.<sup>3</sup>

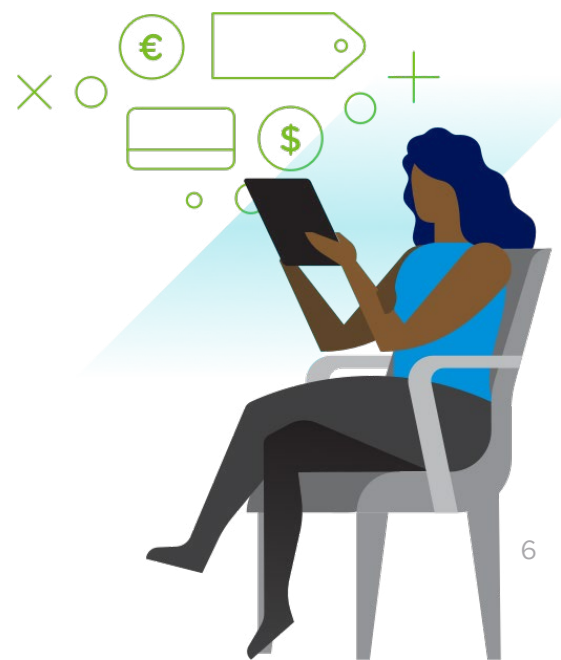
# 90%

of shoppers

polled said they left an e-commerce site that failed to load fast enough.<sup>4</sup>

<sup>3</sup> Serrano, Stephen. "Top 10 Reasons (and Solutions) for Shopping Cart Abandonment" Barilliance, January 2019.

<sup>4</sup> Martins, Andrew. "Why Slow Website Performance Hurts Retail Websites." Business News Daily, June 2019.



## Isolated clouds aren't enough

Any company that doesn't embrace traditional, on-premises IT environments is no longer capable of meeting these growing demands.

In the past, businesses made major investments in capital expenditure (CapEx), building large, on-premises data centers, hoping they'd purchased enough capacity. In addition to setup and maintenance costs, such as utilities and site rental, data centers require personnel investments, and are inflexible and costly to update for additional capacity.

They are also highly inefficient—Despite their cost, these investments are no guarantee a business will have adequate capacity to meet unexpected spikes in traffic.

Looking for a new solution, many enterprises have turned to subscription-based operational expenditure (OpEx) through the public cloud. This enables them to take advantage of scalable usage and pricing, low-cost storage and cloud-native services.

However, relying solely on public cloud adoption for all workloads isn't the ideal solution for most enterprises. Applications often have to be refactored to work optimally in a cloud environment, and organizations have to be mindful of consistently adhering to compliance and data sovereignty regulations.

**The ideal infrastructure for the majority of enterprises is one that provides the stability and familiarity of on-premises environments, while jointly leveraging public cloud services and scalability.**

## Scalability and certainty: The hybrid cloud solution

Many businesses today employ a hybrid cloud approach to meet their scalability challenges.

By extending their on-premises environments to the public cloud, enterprises can move their applications to the best-suited environment and leverage the public cloud for additional capacity and disaster recovery as needed. This approach has proved optimal for many businesses—58 percent of enterprises planned a hybrid cloud strategy in 2019, with the figure growing year on year.<sup>5</sup>

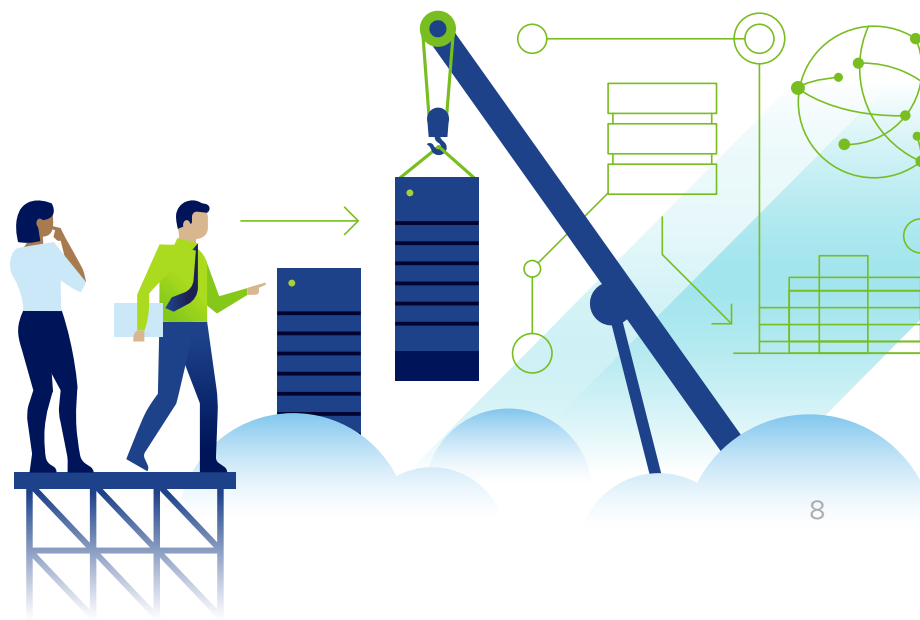
Hybrid cloud infrastructure holds a number of advantages for businesses, allowing them to:

### Scale cloud usage to meet customer demand

With enterprise data centers becoming increasingly distributed, it becomes harder to manage workload placement and ensure optimal use of IT infrastructure.

A hybrid cloud solution simplifies this process, allowing enterprises to take advantage of elastic capacity, scaling public cloud usage to accommodate fluctuations in demand. This safeguards businesses against system failures and the slowing of services, which can cost revenue and cause long-term damage to a brand's reputation.

<sup>5</sup> RightScale. "2019 State of the Cloud Report." 2019





## Leverage the cloud for disaster recovery and backup

Traditional disaster recovery requires the leasing or purchasing of a secondary data center as backup in the event of a machine failure, power outage or natural disaster. These sites require significant investment for servers, connectivity, power and cooling, site maintenance, and personnel. They can also be slow to provide recovered files due to the load times of physical servers.

In contrast, cloud-based DR, often known as disaster recovery as a service (DRaaS), outsources the upkeep and maintenance of DR sites, simplifying the process and providing cost benefits. Due to its reliance on virtual machines (VMs), cloud-based DR is faster to recover, often booting within seconds, and less expensive than relying on disks or tapes stored in warehouses.

Cloud-based DR also has the advantage of rapid failover, in which the secondary cloud site assumes networking, storage and compute processes in the event of a primary site system failure.

## Scale workloads to specific regions

Leveraging the scalability of cloud, organizations can rapidly expand into new markets while eliminating the cost and effort of establishing their own infrastructure each time. Regional data protection regulations, such as GDPR, can increase the complexity and cost of these new opportunities.

However, with effective scalability through a hybrid infrastructure, enterprises can extend their data centers to public clouds physically located in the same geographic region as their new market; for example housing specific data only within the EMEA territory, ensuring compliance.

## Want to get started today?



**Test drive VMware Cloud™ on AWS with a Hands-on Lab**



# 03 Challenges of Scaling on Demand

While there are a number of clear hybrid cloud benefits, achieving these is more complex than simply running public and on-premises environments at the same time.

The modern enterprise is under incredible pressure to maintain growth and innovation at an exponential pace. As a consequence, many have rushed to adopt the latest technological advancements, such as hybrid cloud infrastructure, without properly developed strategies, leading to performance problems down the road.

Cost, security, compliance and governance are common challenges to hybrid cloud adoption.<sup>6</sup>



<sup>6</sup>Thorne, Gary. "How to Overcome 4 Common Challenges to Hybrid Cloud Adoption." CIO, August 2019.

Many organizations are now finding themselves encumbered with incompatible infrastructures and operational systems, creating new challenges and making managing workloads between environments costly and time-consuming.

Enterprises face hybrid cloud infrastructure difficulties in the following areas:



Scaling across incompatible infrastructures

Organizations today run applications on an average of 3.4 public and private clouds, and are experimenting with 1.5 more clouds.<sup>7</sup>

This finding highlights a real need for consistent infrastructure and operations between bounded on-premises and cloud environments. Lack of compatibility can cause outages, system failures and drastically reduced business productivity with significant financial consequences.

### Compatibility challenges

- Achieving connectivity between environments for authorization, authentication, usage tracking, cost and performance optimization, automation and process mapping
- Having limited network integration between on-premises and public cloud environments
- Conflicting APIs, policies, UIs and other components
- Maintaining data integration during updates and patches to environments

### Solution

Many hybrid cloud solutions require significant investment of time, money and IT resources to ensure compatibility is achieved. Enterprises require an out-of-the-box service that provides a single, consistent infrastructure across a seamless hybrid environment, without the challenges caused by incompatibility between on-premises and public clouds.

<sup>7</sup>RightScale. "2019 State of the Cloud Report." 2019



## Cross-cloud operations management

Scaling across on-premises and public clouds without operational integrity can be difficult.

Without a comprehensive management service, organizations are faced with the complexity of using two or more systems to operate workloads.

### Management challenges

- Lack of standardization for management and configurations of cloud services and on-premises data centers
- Lack of visibility and control over environments due to conflicting systems
- Difficulty maintaining management control amid ever-changing behaviors of resources, end users and networks
- Lack of performance management of capabilities to allow for automatic scaling of resources per consumption by users and groups

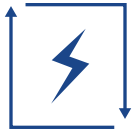
- Cost of hiring and upskilling additional staff to manage different operations requirements between on-premises and the cloud, and from cloud to cloud
- Difficulty establishing clear identity and access management policies
- Difficulty maintaining compliance with industry standards and regulations across inconsistent environments

### Solution

Enterprises require simplified management across on-premises and public cloud environments using a single set of tools.

These operational tools must provide visibility across the entire scope of the enterprise's operations and allow for comprehensive control over a range of functions in both environments. To avoid costly and time-consuming upskilling, it would benefit many enterprises to employ systems their teams are already familiar with.





## Disaster recovery systems and policies

Organizations are striving toward a cloud-enabled future, yet many still rely on outdated and mismatched tools for backup, recovery and outages, threatening their ability to protect applications and data in the event of an outage.

Some enterprises have adopted a cloud-based approach to disaster recovery, but without consistency across infrastructure, operations and DR policies, they will be faced with inefficient and expensive processes.

### Disaster recovery challenges

- Complexities of dealing with multiple, disconnected DR tools
- Latency caused by public cloud DR located in a different regional location to enterprise, which can be problematic for critical applications that demand high response times
- Incompatibility between on-premises applications and the public cloud DR service
- Lack of ability to recover individual files rather than entire VMs

### Solution

To better manage the complexity of cloud-based DR, enterprises require a single, simplified disaster recovery solution, unifying protection of their data in a reliable service. Organizations would benefit from a DR service with consistent infrastructure to their existing on-premises environment to eliminate compatibility issues.

Enterprises also need a service provider that maintains enough global sites to ensure their DR server is located in the same geographic location as their on-premises environment, reducing latency and allowing for support of critical applications.

Organizations would benefit from a DR service with consistent infrastructure to eliminate compatibility issues.



## Cost of redundant environments

Traditionally, organizations have purchased and maintained excess system capacity to cope with anticipated, temporary customer demand.

In fact, data center operators typically build three data centers for every two they need—they over-provision to mitigate the risk of poor performance.<sup>8</sup> This financial outlay is clearly an inefficient use of resources. However, the alternative—to under-provision and experience lost traffic, revenue and reputation—can be far more costly to an enterprise in the long term. Enterprises face a number of challenges in better managing capacity with hybrid solutions.

### Challenges around managing redundancy costs

- Lack of elastic capacity that scales according to enterprise requirements
- Lack of comprehensive visibility of cloud usage to ensure redundant environments are shut down
- Lack of automation to scale down cloud usage or select lower-cost clouds or regions

<sup>8</sup> Ikemoto, Sherman. "Tackling Overprovisioning in Enterprise Data Centers." Mission Critical, February 2020.

### Solution

Every industry experiences periodic—and even unpredictable—spikes in market demand, putting pressure on existing systems.

To meet this demand, enterprises need the ability to tap into public cloud capacity and scale quickly and seamlessly. This will allow them to pay only for what they use, when they use it. Services should also include automated policies to ensure cloud capacity is scaled down when unused.

## Want to get started today?



**Test drive VMware Cloud on AWS with a Hands-on Lab**



## Extension of virtual desktops and applications

As organizations strive for greater agility and global deployment options, the migration of virtual desktop/application environments to public cloud brings obvious benefits. Yet, the move to the cloud often requires significant person hours, an assortment of disparate tools and introduces substantial risk to the overall IT environment.

### Challenges around managing virtual desktop extension to the cloud

- Lack of interoperability between on-premises and cloud deployments
- Difficulty personalizing and managing virtual desktops and applications at scale
- Increased costs associated with additional time, planning, capital and management resources
- Lack of consistent security for desktops and applications from the data center to the cloud

### Solution

As businesses make the move to the cloud, they need a comprehensive and consistent solution to secure applications, infrastructure and data. With the right solution in place, running virtual desktops and applications in the public cloud improves agility, global reach and the ability to respond to changing business needs. Now, organizations can accelerate innovation and control costs based on business requirements while managing upfront expenses, operational support demands and TCO.



## Future Ready Solutions

During periods of crisis, manual IT operations, poorly documented business continuity processes, rigid or outdated infrastructure, and challenges scaling infrastructure and operations all create points of risk for the majority of businesses. Furthermore, securing key applications and business services grows more complex and more vulnerable as employees, applications and systems move to remote access models. The challenge becomes keeping the workforce productive, sustaining business operations, maintaining reliability and performance for existing applications, delivering on current customer commitments, and regaining stability operationally and financially.

### Challenges around remote access

- Scaling a remote workforce tied to traditional models of end-user computing
- Inability to scale infrastructure resources, including network capacity
- Lack of formal, documented business continuity processes
- Insufficient automation creating a dependency on in-person IT and operations teams

### Solution

Enterprises require an integrated solution to deploy agile platforms aligned to digital transformation goals. The ability to rapidly address immediate challenges; protect critical systems, data and business operations; and adapt and evolve rapidly enables businesses to build a stronger, more secure future. A future ready solution is key to driving specific business outcomes in a phased process, returning customers to growth, hardening every business against future challenges, and driving innovation to support business goals.



# 04 VMware and Scaling on Demand

VMware has developed a portfolio of services that answers the broad scope of hybrid cloud infrastructure challenges enterprises face.

These solutions provide businesses with the consistent infrastructure and operations required to meet unexpected fluctuations in traffic and system failures, with simple, rapid and reliable on-demand scalability and disaster recovery capabilities.

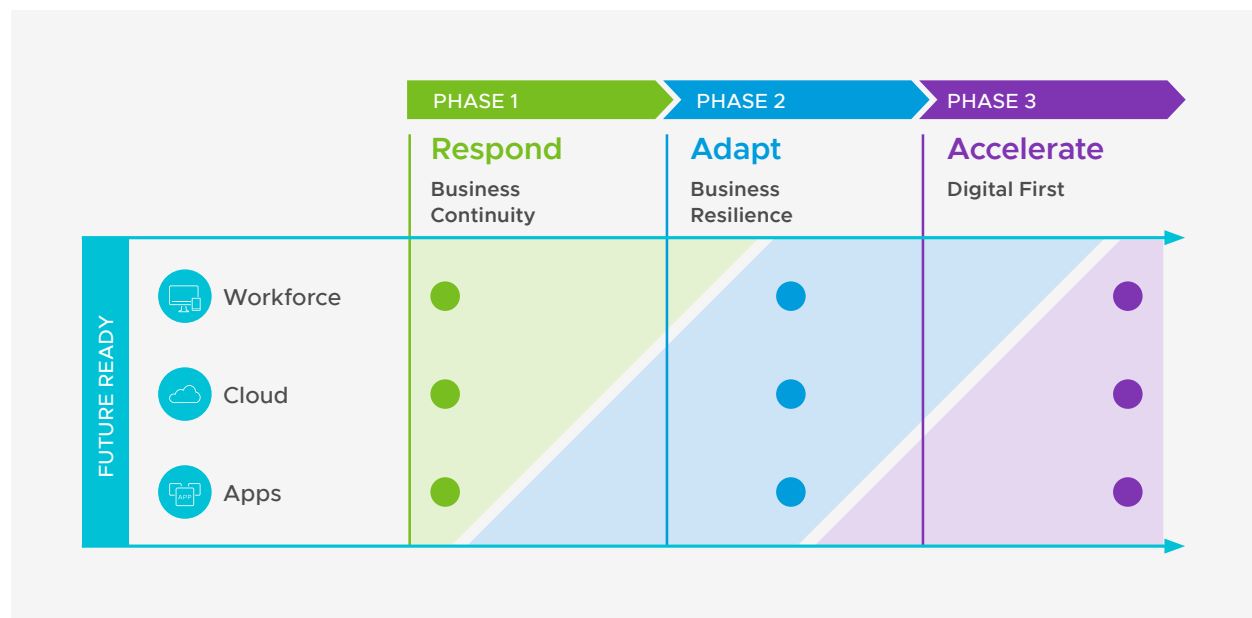
**With comprehensive hybrid cloud management, customers now have the ability to leverage public and private cloud environments as a single pool of resources to scale on demand.**

## VMware Future Ready model

Built around key concepts and technical frameworks that are universal for every organization, VMware Future Ready™ Solutions address the many limitations of systems, processes, team structures and business models exposed during the COVID-19 crisis.

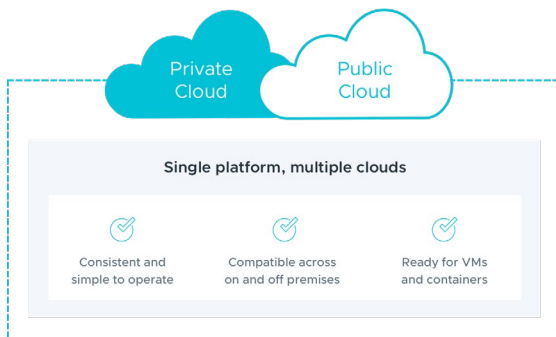
They include a complete set of products, services, technical resources and expertise to help your organization to become Future Ready, no matter where you are on your journey.

Each phase is underpinned by a proven and robust set of technology solutions that address key business requirements and prepare you to progress towards a digital-first future.



## VMware Cloud Foundation

Organizations can now customize their capacity in the cloud with *VMware Cloud Foundation™*, which delivers the essential cloud infrastructure capabilities for some of the broadest, most demanding hybrid cloud strategies, enabling consistent infrastructure and consistent operations for private cloud, public cloud and edge scenarios.



### VMware Cloud Foundation delivers:

- A standardized architecture
- Consistent infrastructure deployed from the data center to the cloud
- Consistent operations from the data center to the cloud
- Proven disaster recovery solutions
- An automated and simplified model for disaster recovery
- A broad footprint of more than 4,500 cloud providers (VMware Cloud Provider™ Program) operating across more than 120 countries to support diverse regional needs, strict compliance and data sovereignty regulations



Move at the speed of business

VMware Cloud Foundation simplifies IT operations across a seamless hybrid cloud environment while maintaining security and providing elastic scalability, and the ability to expand into new regions as needed.

The speed and simplification provided in these capabilities enables organizations to focus on business goals, with the confidence their technology stack can support decisions and growth no matter how quickly their business is expanding. The native capability of cloud computing to seamlessly adapt takes enterprise agility to the next level.

VMware Cloud Foundation removes the complexity of deploying and running hybrid cloud. It accelerates merger and acquisition processes, and allows businesses to meet the needs of seasonal or cyclical spikes in demand without disruption, excess cost or complexity.

This solution makes digital transformation more accessible for organizations everywhere, accelerating their journey to the ideal cloud infrastructure.

**VMware Cloud Foundation removes the complexity of deploying and running hybrid cloud.**

## VMware Cloud on AWS

*VMware Cloud on AWS* enables enterprises to scale seamlessly from a consistent infrastructure based on VMware vSphere, delivered on AWS—the world’s leading public cloud.



### Enterprise-grade capabilities

With VMware Cloud on AWS, enterprises are able to leverage predictable, high-performance compute, storage and networking—delivered by vSphere, VMware vSAN™ and VMware NSX®—running on Amazon EC2 elastic, bare-metal infrastructure.

In addition to a range of capabilities that enable application uptime and prevent the lateral spread of threats and more secure data, the service enables automatic scaling and load balancing of environments with Elastic DRS.

VMware Cloud on AWS customers have an option to use VMware Site Recovery™ or VMware Cloud Disaster Recovery™ for a simple yet comprehensive DRaaS solution.

Organizations manage VMware Cloud on AWS infrastructure with VMware vCenter Server, which can be linked to on-premises vCenter Servers to provide a single unified management console for both environments.



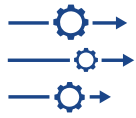
## Intel and VMware Cloud on AWS

Intel and VMware Cloud on AWS provide IT organizations a path to digital transformation, delivering consistent infrastructure and consistent operations across data centers and public clouds to accelerate application speed and agility for business innovation and growth.

The latest release of VMware Cloud on AWS, which can now run on Amazon EC2 i3en.metal instances powered by 2nd Generation Intel® Xeon® Scalable processors, includes new capabilities for enhanced disaster recovery and migrating applications to the cloud. Organizations benefit from higher performance for data-intensive workloads and lower cost per GB of raw storage. Intel® Mesh architecture optimizes data sharing and memory access among all vCPUs to take full advantage of 1.5x more RAM and 4.3x more raw storage capacity (compared to i3) while delivering consistent, low latencies.\*

\*For more information, see [Storage Optimized instances](#).

Organizations that are running VMware on-premises on Intel® Xeon® servers can benefit from the same Intel software optimizations and robust application testing in VMware Cloud on AWS, leading to consistent and predictable application performance. Enterprises can also leverage VMware vSphere® features such as VMware vMotion® for load balancing, upgrades, and migrations between on-premises and the cloud.



### Simple and consistent operations

VMware Cloud on AWS provides a single inventory view of both on-premises and VMware Cloud on AWS resources using vCenter Server technology. Organizations can also reduce operational overhead by leveraging existing skills, tools, processes and familiar VMware technologies in the public cloud.

In addition, the service provides an in-product, unified support experience, bringing together intelligent search, chat support, service request management, service health and community help.



### Familiar and seamless

VMware Cloud on AWS allows enterprises to scale capacity at will, using familiar VMware technologies plus a broad range of third-party technology solution providers validated to work with VMware Cloud on AWS.

With a comprehensive support service, users can leverage a single point of contact for all their support issues. The service also updates automatically, allowing users to focus on applications while VMware and its partners take care of infrastructure patches and upgrades.



### Flexible consumption

Using this VMware Cloud on AWS service, enterprises are able to align costs to their business needs with flexible consumption options and investment protection. They are able to consume on demand hourly, or take advantage of one-year and three-year reserved models for deeper discounts.

VMware Cloud on AWS also includes rapid provisioning, enabling users to spin up an entire VMware software-defined data center (SDDC) environment in two hours on average, and add or remove hosts in minutes, or let Elastic DRS do the job automatically based on optimal utilization.



VMware Cloud on AWS helps us build on our success with VMware in our private, on-premises environment and cost effectively extend services to a global hybrid cloud.

**BEN TANNER**

Director of Cloud Enablement, IHS Markit

# VMware Horizon 8

Together with VMware Cloud on AWS, VMware Horizon® 8 delivers a robust, feature-rich cloud platform for virtual desktops and applications. This solution combines the enterprise capabilities of VMware SDDC, delivered as a service on AWS for a simple, secure and scalable solution.

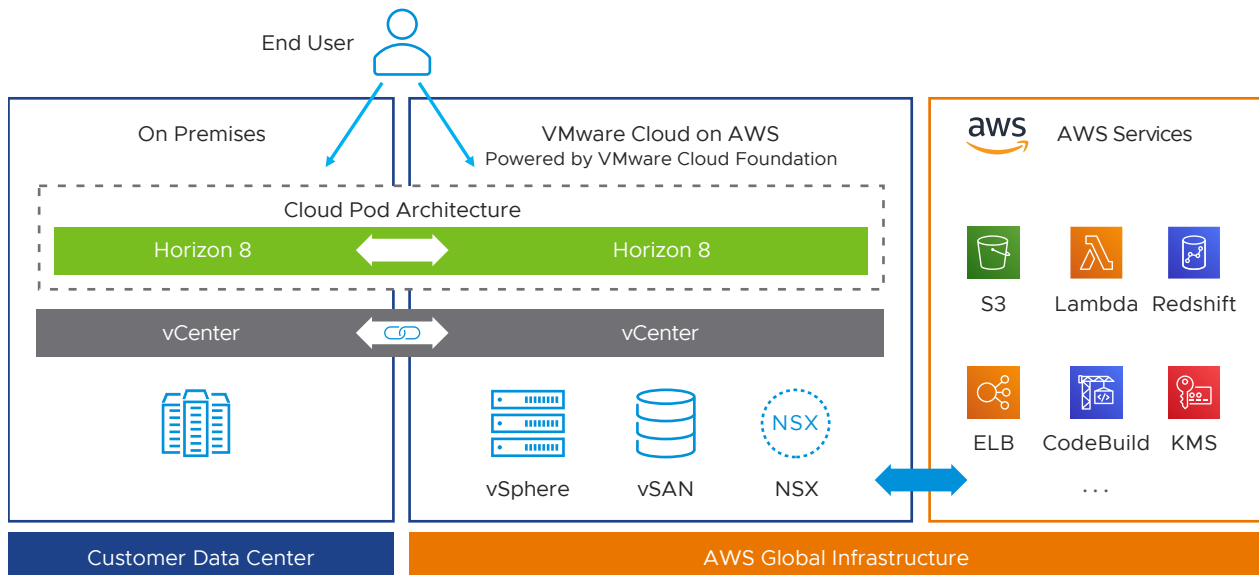
## Horizon 8 on VMware Cloud on AWS delivers:

- Rapid time to value and cloud-scale elasticity
- Simplified management for improved outcomes with familiar, enterprise-grade features and tools
- Optimized cost with a pay-as-you-go OpEx model
- Ease of deployment with familiar Horizon 8 expertise and tools



Get cloud scale and agility

Running Horizon 8 on VMware Cloud on AWS enables organizations to easily add and extend desktop services without investing time or capital. By leveraging familiar skills and tools, organizations can secure applications, infrastructure, data and access. A unified dashboard delivers health monitoring and help desk services for global Horizon 8 deployments from the Horizon Cloud Management Console. Additionally, the Horizon 8 Cloud Pod Architecture delivers a seamless hybrid cloud by linking multiple pods together—on VMware Cloud on AWS and on-premises environments—for a large, unified desktop and application environment. Organizations can also take advantage of flexible, consumption-based billing to avoid upfront infrastructure expenses and paying only for what is used.



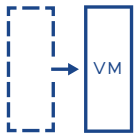
## VMware Site Recovery

Together with VMware Cloud on AWS, VMware Site Recovery allows enterprises to protect their workloads both on premises and on the public cloud, with on-demand disaster recovery as a service.



### Downtime reduction

Using the service, enterprises are able to minimize downtime with 5-minute recovery point objective (RPO) replication, leveraging ready-to-go cloud infrastructure.



### One-click failover

VMware Site Recovery simplifies the process of setting up for failover. Enterprises can automate and orchestrate failover to the cloud from on-premises data centers or other cloud availability zones in the event of a disaster.



### Non-disruptive testing

When establishing a comprehensive DR service to protect enterprise workloads, it's essential to test your setup, so you can be confident your DR plans will work as expected when you need them most. VMware Site Recovery allows you to conduct frequent, non-disruptive testing to ensure protection of all workloads.

## Case study: Prodigio Solutions and VMware Cloud

Tech provider Prodigio Solutions ensures healthcare organization procurement teams at more than 5,400 care sites find the right supplies, from the right vendor, at the right price.

With clients requiring 24x7x365 support, Prodigio realized it needed a high-performance, reliable infrastructure, including robust DR capabilities. With their existing on-premises environment, requisitioning and deploying additional hardware to meet each new demand required up to two months of work, stretching the company's working capital.

### With VMware Cloud

Prodigo can now onboard most new clients in less than two weeks, dramatically shortening a process that previously took six to eight weeks.

The high availability and DR capabilities of VMware Cloud contribute additional data protection and business continuity value that Prodigio can pass along to its own clients.

## VMware Cloud Disaster Recovery

VMware Cloud Disaster Recovery offers an easy-to-use, on-demand Disaster-Recovery-as-a-service solution with cloud economics:



### On-demand

Instant power-on, pilot light capacity, no VM format conversions, and rapid ransomware recovery deliver a fast recovery experience.



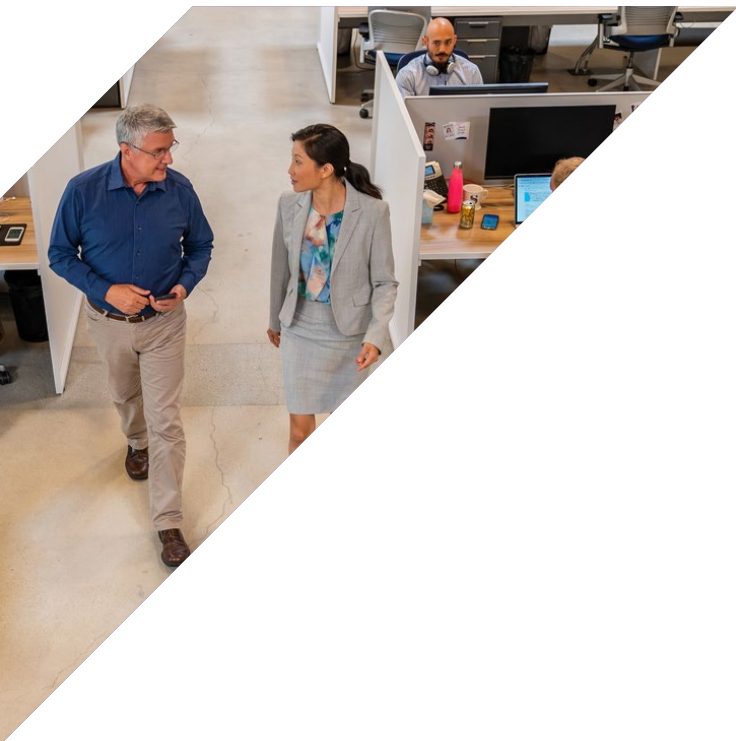
### Cloud economics

Customers benefit from cost-efficient cloud storage coupled with a “pay when you need” capacity model for a low total cost of ownership DR solution. Built-in failback is efficient, as only changes are transferred back to the production site.



### Easy to use

The same consistent, familiar VMware environment and management tools are on the DR site, removing the need for new training or operational processes. SaaS-based management can eliminate the need to deploy and lifecycle-manage the DR software. Continuous DR health checks and built-in audit reports deliver a simplified operational experience.





“

We now have the capability to failover at a moment's notice to keep our business, and our customers' businesses, running. When our customers say that Prodigio's software works so smoothly and is always available, that's a proud moment.

TONY BOLLINGER

Operations Manager, Prodigio Solutions



## VMware HCX

*VMware HCX*® enables you to move applications seamlessly between environments, accelerating workload migration by as much as 10x and reducing downtime by 90 percent.



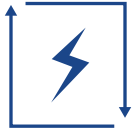
Multi-cloud application mobility

Transform your data center with secure, seamless app mobility between vSphere 5.0+ on-premises environments and the cloud, without upgrading your vSphere version. Enable zero-downtime “live” migrations and scheduled, low-downtime, large-scale migrations. Multiple VM migration models (including vMotion, live, warm and cold) make it easy.



Infrastructure hybridity

VMware HCX enables seamless and secure cloud on-boarding with secure proxy for vMotion; secure network extension; and high-throughput, WAN-optimized, load-balanced multisite bidirectional interconnects.



## Disaster recovery

In the event of a disaster, VMware HCX can be used to recover your networking layer. Traffic routes are maintained, allowing for high-speed DR with low downtime. HCX can also be used to avoid anticipated disasters, migrating SDDCs from disaster zones to safe locations when disaster warnings are received.

Protect workloads by replicating data to a VMware Cloud Provider, enabling partial or full-site recovery. If DR is invoked, there is no reconfiguration of IPs, reducing complexity and allowing for faster recovery.

If disaster recovery is invoked, there is no reconfiguration of IPs, reducing complexity and allowing for faster recovery.



Since moving to VMware Cloud, I'm worrying less about operational uptime. There is a certainty, an assurance that everything works. Also, we feel we're at the forefront of technology. There are additional features coming online every month.

**SAM AKROYD**

Technical Services Manager, Stagecoach

Want to get started today?



**Test drive VMware Cloud on AWS with a Hands-on Lab**



**Learn more about pricing for VMware Cloud on AWS**



# 05 Preparing for the Unknown



The pace of innovation can place a strain on IT in trying to keep up with business goals and consumer expectations.

While nobody knows what the future holds for business, it's clear the pace of change will only continue to accelerate. Leading enterprises have realized this and are placing a premium on the ability to pivot as needed—investing in flexibility over rigidity and size.

Early forays into the cloud to meet this demand were based on the optimistic notion that adoption of a cloud-only approach would solve all of a business's agility challenges.

Referred to by VMware CEO Pat Gelsinger as the period of “cloud pollyanna,” these enterprises believed moving their data centers to the cloud in full would improve efficiency and cut costs across the board—with no downsides.

VMware and CloudHealth: Better Together



Having tested this paradigm, many enterprises have realized they took a step too far. Businesses have come to the realization that the cloud isn't an on/off switch. Instead, like many things in life, cloud adoption is an evolution, and hybrid cloud is the logical step for the majority of organizations.

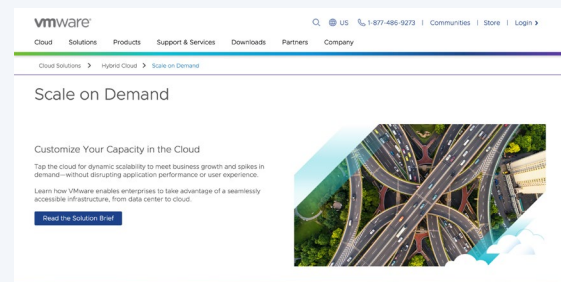
In taking this step, they're not entirely throwing out their on-premises environments and starting over, but building on their existing infrastructure, adding to their capabilities while becoming leaner and more agile.

With this approach, and the correct knowledge, insights and technological functionality, it is possible to achieve flexible resource usage, only paying for what customers demand, while still maintaining the familiarity and security of existing systems. The result is an agile infrastructure that quickly pivots to meet whatever the market throws at it.

As these enterprises have discovered, achieving a future ready cloud infrastructure for on-demand scalability and DR doesn't have to be difficult.

The result is an agile infrastructure that quickly pivots to meet whatever the market throws at it.

Visit the Scale on Demand page on our website to discover how you can customize your capacity in the cloud to simplify operations, reduce costs and ensure consistent, reliable service.





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