VMware Cloud on AWS

Extend your data center to the cloud

Solution at a glance

- VMware SDDC running on dedicated Amazon EC2 elastic, bare metal infrastructure

- Delivered, operated and supported by VMware and its partners

- On-demand capacity and flexible consumption

- Complete operational consistency with on-premises SDDC

- Fast and simple bi-directional workload migration

- Seamless large-scale workload portability and hybrid operations with VMware HCX

- Global AWS footprint, reach, availability

- Direct access and integration with native AWS services

- Spin up the entire SDDC in under 2 hours and scale host capacity in minutes

- Fully managed Kubernetes services with no additional cost

- Scale storage independent of compute with external NFS datastore options

Organizations will continue to benefit from their data center investments, yet many of these organizations are also looking to benefit from the unique advantages offered by public cloud that cannot be cost-effectively delivered with today's traditional data center environment. They need to have a seamless way to integrate their existing data center infrastructure with the public cloud.

Digital transformation is driving businesses to the cloud to stay competitive. These businesses have several reasons to adopt cloud beyond their data center perimeter:

Expand to new locations
Obtaining capacity for new projects to support the business, or expanding into new geographies, without building new data centers or investing in over-provisioning of existing resources

Access capacity on-demand
Handling unplanned, temporary or seasonal capacity needs without having to incur the capital expense of maintaining spare capacity

Extend application modernization to your premises
Developing new cloud applications that need to integrate with on-premises applications or extending on-premises applications to access native cloud services

Provide flexible test, dev, lab and training environments
Deploying as-needed environments for ephemeral workloads such as test, development, lab and training environments

Enable remote workforce
Enabling remote workers and alleviating travel restrictions by provisioning Virtual Desktop Infrastructure in the cloud

But integrating the public cloud with your existing data center infrastructure can be challenging due to the many technical, process, and skills differences required to leverage both of these environments simultaneously:

- Mismatched architectures between on-premises and cloud environments

- Different tools, skill sets, operating and security models

- The need to rearchitect and refactor applications for public cloud infrastructure

- Incompatible hypervisor, networking, storage and management stacks

- Enable a remote workforce and alleviate travel restrictions by provisioning Virtual Desktop Infrastructure in the cloud

vmware®

Lotte Corporation

4000 devices moved to the cloud in under 20 months using VMware Cloud on AWS

Post their merger, Lotte found it challenging to ensure smooth business operations and employee experience due to silos between the merged departments. This had the potential to impact business development.

Lotte has now migrated 4,000 VDI units to VMware Cloud on AWS, improving employee experience and maximizing business profitability.

Be cloud-smart with VMware Cloud on AWS

VMware Cloud™ on AWS is a jointly engineered service that brings VMware's enterprise-class Software-Defined Data Center software to the AWS Cloud's dedicated, elastic, bare-metal infrastructure, delivered as an on-demand service with optimized access to AWS services, enabling IT teams to rapidly migrate and modernize VMware vSphere® applications in AWS Cloud by leveraging the best of both worlds.

Enterprise-ready turnkey cloud service
Built-in enterprise infrastructure services for business-critical applications that don't have to be bolted-on, outsourced, or built into individual applications, delivered as a native, fully managed AWS service.

Fast, non-disruptive cloud migration
Fast, cost-effective, less risky way to migrate, re-platform, or refactor existing and build new business-critical applications in the cloud.

Consistent, familiar cloud platform
Leverage existing skills, tools, and processes to migrate, operate and modernize enterprise applications in the public cloud.

Pragmatic, non-disruptive modernization
Rich set of deeply integrated options for modernizing enterprise applications anywhere along the cloud adoption journey that aligns with available resources, timelines and skills.

Compelling TCO
Lower TCO compared to on-premises and public cloud alternatives because of unique resource optimization options, integrated enterprise capabilities and capitalizing existing investments in skills, tools and processes.
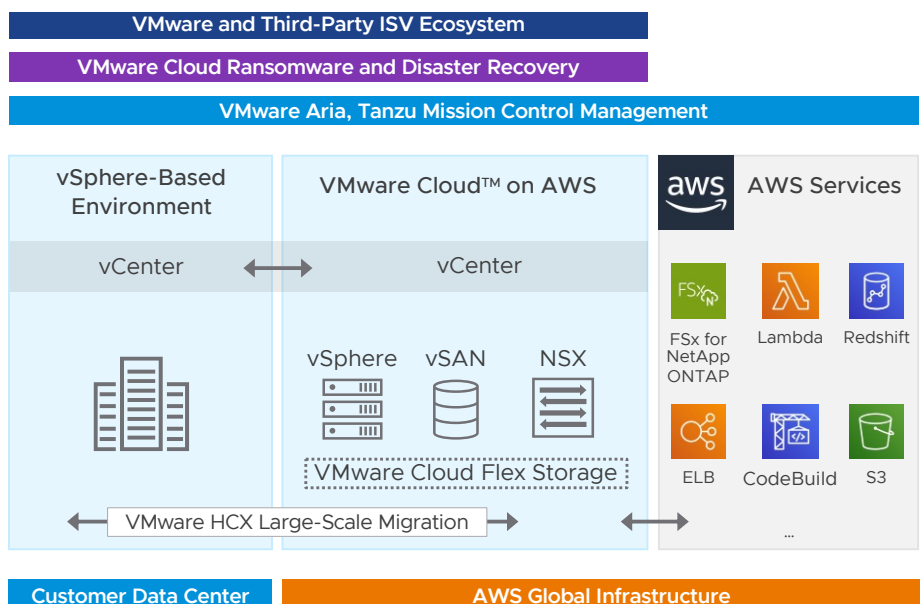

Figure 1: VMware Cloud on AWS.

"Route Mobile is a key player in the CPaaS value chain creating significant value for enterprises through its technology expertise and geographical reach. A robust and scalable digital environment allows us to offer customers a reliable, unified digital communication solution translating into a superb customer experience globally."

Mr. Ramesh Helaiya, CTO, Route Mobile

Route Mobile

100% application availability ensured among RML's client's customers with VMware Cloud on AWS

Route Mobile (RML) helps clients build deeper engagement with its customers by providing a frictionless user experience based on the Communication Platforms as a Service (CPaaS) principle.

To mitigate challenges from increased infrastructure and maintenance costs to third party dependencies and limited availability of private hosting services, RML focused its attention on cloud-based solutions from VMware that offer agile, consumption-based infrastructure with strong operational control.

Key scenarios: Data center extension use-case

With VMware Cloud on AWS, you can extend an on-premises data center to VMware SDDC-consistent, on-demand, agile capacity in AWS Cloud. Manage on-premises and VMware Cloud on AWS environments through a single-pane of glass in an operationally consistent way extending on-premises tools, processes and governance to the AWS Cloud.

Key scenarios in this use case include:

Infrastructure expansion:

• Scale IT infrastructure for new projects without provisioning net new capacity in an on-premises data center.

• Expand the footprint across different global geographies without building new data centers in those regions.

• Gain faster infrastructure provisioning that seamlessly integrates with existing systems post-merger or acquisition.

On-demand capacity:

• Scale infrastructure for seasonal spikes in demand without incurring the maintenance and cost of idle, under-utilized capacity. Meet burst capacity needs for unplanned or short notice projects or events with transient capacity requirements (such as special projects, pop-up training or industry events). Scale and deliver line-of-business applications in a timely manner in order to avoid business disruptions.

• Provision IT infrastructure in the cloud that is operationally similar to on-premises environment for testing and development activities. This includes activities such as software engineering, quality assurance (QA) testing, usability acceptance testing, penetration testing or IT application/workload testing.

• Set up an IT infrastructure in the cloud for an IT lab or online training portal for internal teams.

Virtual desktops in the cloud:

• Protect on-premises VDI infrastructure against unexpected outages and disasters with an operationally consistent and technically compatible environment in the AWS Cloud.

• Burst desktops from the on-premises VDI infrastructure when quick access to capacity is required (e.g., virtual desktops needed for irregular or unexpected events, pop-up training, industry events, one-time activities, temporary staging, etc.).

• Co-locate virtual desktops with cloud applications to reduce the effects of latency on user experience (e.g., Native AWS Cloud or VMware Cloud on AWS resident applications, Partner AWS Cloud or VMware Cloud on AWS resident applications, or SaaS applications resident in AWS Cloud regions).

Key capabilities

1. Consistent infrastructure between the vSphere environment in your data center and vSphere SDDC managed by VMware in AWS Cloud

- No need for re-architecting applications to move them to the cloud or back

- Using the latest version of the vSphere hypervisor, VMware Cloud on AWS gives you the freedom to configure any vCPU, memory and storage combination for virtual machines (VMs)

- The widest range of on-premises VMware deployments available to seamlessly build a hybrid cloud, whether you have just vSphere, or are deploying a fully integrated SDDC

- VMware vMotion and HCX provide seamless bi-directional mobility of applications between environments so resources can be moved to and from the cloud without retrofitting the infrastructure, eliminating complex migration assessments and mitigating associated risk

2. Unified view of your hybrid cloud environment, including your on-premises data center and VMware SDDC in AWS Cloud. Connect all your vCenters, whether in the cloud or on-premises, using Hybrid Linked Mode and vCenter Cloud Gateway. Manage VMware Cloud on AWS resources as an extension of your data center using VMware vRealize® cloud management platform and VMware cloud services

3. On-demand expansion of your data center capacity to the cloud with no impact to application uptime or disruption to end users

- Automatic scaling of capacity based on utilization policy with Elastic DRS

- Consumption-based pricing for flexibility and to eliminate idle capacity

- Ability to expand your global footprint in 16+ AWS regions and more coming

- Ability to spin up virtual desktops in the cloud in just few minutes with Horizon 8 running on VMware Cloud on AWS

4. Seamless and efficient network integration between your on-premises and public cloud environment

- Extending your on-premises Layer 2 network using NSX Gateway

- Accelerating and securing the data crossing the WAN link using VMware

- HCX which includes traffic engineering, load balancing, WAN optimization techniques and VPN

5. Enterprise-grade infrastructure delivered as a service with platform capabilities for the the needs of mission-critical applications

- Deliver agility and rapid time to value with the ability to spin up entire VMware Cloud on AWS SDDC in typically under 2 hours and scale capacity within minutes on average

- Predictable, high-performance compute with vSphere, the industry's leading virtualization platform, running on elastic AWS bare-metal infrastructure

Resources

Get started with VMware Cloud on AWS free trial

- Flexible policy-driven resource management with compute policies, reservations/limits/shares, memory ballooning and VMware vSphere® Distributed Resource SchedulerTM (DRS)

- Built-in resiliency with failure protection at VM, host and AWS Availability Zone level with vSphere High Availability and automated host remediation

- Zero Recovery Point Objective (RPO) high availability across Availability Zones with Stretched Clusters

- Zero-click, enterprise-class storage with vSAN, with encryption, deduplication and compression

- Advanced security with built-in capabilities such as NSX micro-segmentation with distributed L4 firewall and NSX Advanced Security add-on with L7 firewall

6. **Consistent operations and management tools across the cloud infrastructure and on-premises environment with familiar and proven technologies:**

- Eliminate re-training by using familiar skills, tools and processes for managing cloud environments with consistent operations for improved productivity and reduced costs

- Consistent operations delivered by the same on-premises technologies such as VMware vCenter Server for day-to-day operations and VMware Aria set of technologies for advanced hybrid cloud management operations

7. **Extend existing operational practices to public cloud**

- Continue to use established on-premises governance and operational policies and extend that with the cloud security, compliance and availability that AWS Cloud brings

8. **Comprehensive ecosystem of proven VMware and 3rd party solutions**

- Robust ecosystem: Customers can extend the capabilities of VMware Cloud on AWS through a robust set of 300+ open-source and third-party solutions that they have been using on-premises and that are validated for use on VMware Cloud on AWS SDDCs