



VMware Cloud on AWS GovCloud (US)

Seamlessly extend, migrate, and modernize your vSphere workloads to a public cloud designed for the most stringent security

SOLUTION OVERVIEW

- VMware SDDC running on dedicated Amazon EC2 elastic, bare-metal infrastructure
- Achieved FedRAMP High JAB Authorization
- Attained Department of Defense (DoD) Impact Level 5 (IL5) Provisional Authorization
- Sold, operated and supported by VMware
- On-demand capacity and flexible consumption
- Full operational consistency with on-premises SDDC
- Fast and simple bi-directional workload migration
- FIPS 140.2 compliant cryptographic modules for encryption of data at rest and in transit
- Operated and managed by VMware employees who are U.S. citizens on U.S. soil
- Direct access and integration with native AWS services
- Spin up entire SDDC in under 2 hours and scale host capacity in minutes

United States public sector agencies and private sector customers in highly regulated industries want a hybrid cloud service that provides consistent infrastructure and operations across their on-premises and cloud environments to further increase agility and security, while maximizing the use of existing IT investments. The infrastructure supporting these workloads needs to have the scale, performance, availability and hardened security to run highly sensitive government workloads. Government agencies also views public clouds as a way to deliver a higher level of service by managing upfront expenses, operational support and total cost of ownership (TCO).

However, when shifting an on-premises system with regulated workloads and sensitive data, government agencies have several concerns including performance, security, budget, application refactoring complexity, and staff training.

Barriers to adopting public cloud

- **Existing skills and processes** are unsuitable for public cloud deployment and management paradigms
- **Operational inconsistencies** hamper extension of existing security, management, and governance policies
- **Divergent tools and management consoles** multiply cost, resource, and skill requirements
- **Incompatible configurations and capabilities** necessitate costly application changes or refactoring
- **Different machine formats** complicate portability, increase risk, and slow down migration to public cloud

Solution

VMware Cloud™ on AWS GovCloud (US) is powered by VMware Cloud Foundation™, the unified VMware SDDC platform that integrates VMware vSphere®, VMware Virtual SAN™ and VMware NSX™ virtualization technologies. This service is optimized to run on dedicated, elastic, bare-metal AWS infrastructure to protect highly sensitive government workloads with hardened security. VMware Cloud on AWS GovCloud (US) enables government's infrastructure and operations teams to continue to add value to their organizations in the AWS GovCloud (US), while maximizing their VMware investments, without the need to buy new hardware. For any workload this offering enables government agencies to quickly and confidently scale capacity up or down and provide access to native AWS services.

KEY VALUE PROPOSITION OF VMWARE CLOUD ON AWS GOV CLOUD (US)

- Run, manage, and secure production applications in a seamlessly integrated hybrid IT environment
- Familiar skills, tools, and processes for managing private and public cloud environments
- Innovate and respond to changing business demands with the enterprise capabilities of VMware SDDC, coupled with the elastic infrastructure, and the breadth and depth of the AWS services
- Seamlessly move workloads bi-directionally between vSphere-based private and AWS GovCloud (US)
- Rapid time to value with the ability to spin up an entire VMware SDDC in under two hours and scale host capacity in a few minutes
- Leverage established on-premises enterprise security, governance and operational policies, and extend that with the cloud scale and security that AWS GovCloud (US) brings

USE CASE #1: CLOUD MIGRATIONS



- Minimizes complexity and risk of transition
- Simplifies and accelerates speed of migrations
- Reduces cost of migrations
- Extends value of existing enterprise app investments

Jointly engineered by VMware and AWS, this on-demand, scalable service enables IT teams to seamlessly extend, migrate, protect and manage their cloud-based resources with familiar VMware tools. With the same architecture and operational experience on-premises and in the cloud, US public sector IT teams can now quickly derive instant value through the AWS and VMware hybrid cloud experience while meeting the most stringent security and compliance requirements.

VMware Cloud on AWS GovCloud (US) is authorized by FedRAMP (Federal Risk and Authorization Management Program) at High impact level and DISA Impact Level 5 (IL5). With these FedRAMP High ATO and DoD IL5 designations, it recognizes VMware Cloud on AWS GovCloud (US) has the ability to run highly sensitive government workloads with the hardened security and production-grade capabilities that government agencies require. This authorization continues our commitment to support our government customers' security and compliance requirements on the VMware Cloud on AWS GovCloud (US) region.

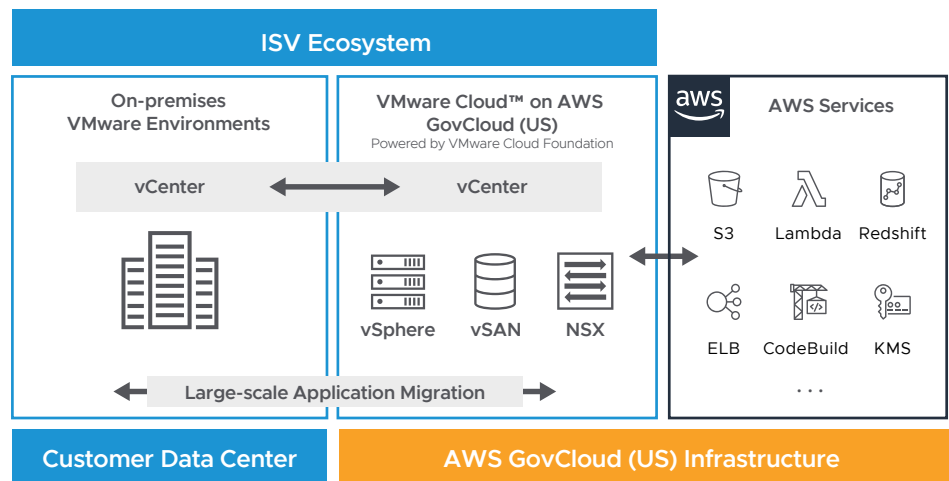


FIGURE 1: VMware Cloud on AWS GovCloud (US) infrastructure

Use cases

VMware Cloud on AWS GovCloud (US) provides a seamlessly integrated hybrid cloud offering addressing use cases that align to a government agency's cloud strategy.

Use case 1: Cloud migration

Accelerate cloud migration without complex conversions or application re-factoring. Run applications on VMware Cloud on AWS GovCloud (US), leveraging the best of familiar VMware technologies in AWS GovCloud (US). Ideal for government agencies who require:

Application specific migrations

- Mission-critical workload that requires the speed, scale, and elasticity of public cloud. Typical situations include application scalability challenges due to unanticipated growth, long procurement cycles resulting in projects falling behind schedule, or new off-the-shelf applications with difficult to predict capacity needs.
- Pool of applications that cannot be refactored or rearchitected for native cloud due to licensing restrictions, technology obsolescence, lack of native cloud capabilities (e.g. multicast), fixed configurations, or resiliency requirements.
- Pool of applications with unfavorable refactoring ROI to native cloud due to lack of time, resources, and skills; or project falling behind schedule and/or budget.

**USE CASE #2:
DATA CENTER EXTENSION**



- Reduces upfront investment costs and delivers compelling TCO
- Accelerates speed of provisioning
- Reduces the complexity by having the same consistent architecture and operations on-premises and in the cloud
- Improved scalability: pay as you grow and as much you need

**USE CASE #3:
APPLICATION MODERNIZATION**



- Fast and seamless path to new modernized applications
- Extends value of existing on-premises enterprise app investments

On-prem footprint reduction

- Partial infrastructure reduction triggered by hardware end-of-life, software upgrades between major versions (e.g. pre-vSphere 6.0, Oracle, SAP, etc.).
- Complex environments with desire to migrate the easy-to-move applications to demonstrate quick wins with public cloud.

Data center-wide migrations

- Data center consolidation due to cost or operational challenges.
- Data center retirement due to DC/co-lo facility lease expiration or organizational cloud mandates.
- Data center right-sizing due to improvements in operational efficiencies, switching to SaaS applications, or improvements in technology.
- On-premises exit due to organizational cloud mandates or outsourcing provider changes.

Use case 2: Data center extension

Extend on-premises data center to VMware SDDC-consistent on-demand, agile capacity in AWS GovCloud (US). Manage on-premises and AWS GovCloud (US) environments through a single-pane of glass in an operationally consistent way extending on-premises tools, processes, and governance to the AWS GovCloud (US). Ideal for government agencies who have the need for:

Footprint expansion

- New projects without provisioning net new capacity in on-premises data centers.

On-demand capacity

- Seasonal spikes in demand without incurring the maintenance and cost of idle, unutilized capacity.
- Temporary capacity needs for unplanned or short notice projects.
- Temporary events with transient capacity requirements including special projects, pop-up training, or industry events.
- Alleviate infrastructure supply chain disruptions.

Flexible lab environment

- Have a need for doing test and development activities in the cloud in an environment that is operationally similar to on-premises environments including software engineering, quality assurance (QA) testing, usability acceptance testing (UAT), penetration (Pen) testing, or IT application/workload testing.

Use case 3: Application modernization

Innovate rapidly and provide improved digital experiences by building next-generation applications and modernizing existing enterprise applications. Leverage the automation capabilities of VMware SDDC, coupled with the elastic infrastructure of the AWS GovCloud(US), and the breadth and depth of AWS services across different categories such as storage, database and analytics, serverless, compute, networking, security, IoT, machine learning and more. Ideal for government agencies who have the need for:

Application modernization

- Utilize cloud-scale infrastructure and innovative AWS GovCloud (US) Platform as a Service (PaaS) services to extend the value of existing enterprise applications.

**USE CASE #4:
DISASTER RECOVERY AS A SERVICE**



- Reduces secondary DR site costs
- Accelerates time-to-protection
- Increases operational resiliency
- Simplifies DR operations
- DR audit

**USE CASE #5:
VIRTUAL DESKTOPS**



- Protect on-premises VDI infrastructure
- Burst desktops from on-premises VDI infrastructure
- Co-locate VDI with cloud applications

RESOURCES

Learn more at [VMware Cloud on AWS GovCloud \(US\)](#)

[VMware Cloud on AWS GovCloud \(US\) roadmap](#)

Visit our [Web-based pricing calculator](#)

Follow us on Twitter [@vmwarecloudaws](#)

[VMware Cloud on AWS Overview, Demos, Webinars and customer stories](#)

[VMware Cloud on AWS TCO 1-Pager](#)

[VMware Cloud on AWS: Latest Blogs and Articles](#)

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

Develop next-generation applications

- Build new applications using native AWS services while leveraging infrastructure availability, scalability, and performance optimization capabilities without having to build them into each application.

Composite applications

- Deliver hybrid applications spanning the data center, cloud, edge, native AWS services or a combination of these.

Use case 4: Disaster recovery as a service

VMware Site Recovery delivers Disaster Recovery as a Service (DRaaS) for VMware Cloud on AWS GovCloud (US) for on-demand site disaster recovery (DR) protection with automated orchestration, failover and failback capabilities. Ideal for government agencies who have the need to:

Deploy new DR

- Protection for on-premises workloads for sites that have not been protected previously.
- Emergency, post-disaster event (e.g. fire, flood, hurricane) that destroyed original primary site.

Replace existing DR

- Do-it-yourself (DIY) DR solutions with cloud service provider managed DRaaS option.
- Legacy DR solutions that are not meeting the organizations cost or recovery objectives.
- Reduce secondary DR site costs with more flexible, on-demand alternative in the cloud.
- Comply with DR audits and resiliency mandates.

Use case 5: Virtual desktops in the cloud

Extend on-premises Horizon VDI environment for virtual desktops and published apps to consistent on-demand, agile VDI environment in AWS GovCloud (US). Manage on-premises and AWS GovCloud (US) VDI environments in an architecturally and operationally consistent way by reusing existing on-premises tools, processes, and governance in AWS GovCloud (US). Ideal for government agencies who have the need to:

Protect on-premises VDI infrastructure

- Unexpected outages and disasters

Burst desktops from on-premises VDI infrastructure

- Irregular or unexpected events
- Pop-up training, industry events, or other one-time activities
- Temporary staging

Co-location with cloud applications

- Native AWS GovCloud (US) or VMware Cloud on AWS GovCloud (US) resident applications
- Partner AWS GovCloud (US) or VMware Cloud on AWS GovCloud (US) resident applications
- SaaS applications resident in AWS GovCloud (US) regions