

Service Name

Amazon Elastic VMware Service

Service Overview

Amazon Elastic VMware Service (Amazon EVS) is a fully managed AWS service that enables organizations to run VMware Cloud Foundation (VCF) environments directly within their Amazon Virtual Private Cloud (VPC) on EC2 bare metal instances. The service allows customers to maintain their existing VMware expertise, tools, and processes while benefiting from AWS's scale, reliability, and broad set of services. Amazon EVS provides a ready-to-use VCF environment that includes VMware ESXi hypervisor, vCenter Server, NSX-T network virtualization, and vSAN storage, enabling customers to deploy fully functional VCF environments in hours without extensive re-architecture.

Key Use Cases

- VMware workload migration: Lift-and-shift migration of on-premises VMware-based virtual machines to AWS without modification or refactoring
- Hybrid cloud operations: Extend on-premises VMware environments to AWS while maintaining consistent operational tools and processes
- Disaster recovery: Implement disaster recovery solutions using familiar VMware technologies like vSphere Site Recovery Manager integrated with AWS services

Features

- **VMware Cloud Foundation Integration:** Full VCF 5.2.1 stack including ESXi, vCenter Server, NSX-T, and vSAN
- **Rapid Deployment:** Deploy fully functional VCF environments in hours with guided workflows
- **Self-Management Control:** Full administrative access to optimize virtualization stack and integrate third-party solutions
- **Flexible Storage Options:** Local vSAN storage and external options like Amazon FSx for NetApp ONTAP
- **Hybrid Connectivity:** Direct Connect and VPN connectivity with VMware HCX support for migration
- **AWS Service Integration:** Native integration with over 200 AWS services while maintaining VMware tools

Value Proposition

Amazon EVS provides a unique value proposition by combining AWS's cloud benefits with familiar VMware tools and processes. Customers can achieve rapid cloud migration

without extensive re-architecture, maintaining existing skills and operational procedures while gaining access to AWS's scale, elasticity, and performance:

- The service offers control over architecture, integration of preferred external solutions, flexible licensing options including bring-your-own-license (BYOL), and choice between self-management or AWS Partner management
- Amazon EVS eliminates the complexity of setting up VMware infrastructure on AWS, provides enterprise-grade reliability, and enables customers to leverage AWS's broad service portfolio for modernization while preserving their VMware investment

Service Integration

Amazon EVS natively integrates with core AWS services to provide comprehensive cloud functionality. Key integrations include Amazon VPC for networking isolation and security, AWS Direct Connect and Site-to-Site VPN for hybrid connectivity, Amazon FSx for NetApp ONTAP for external storage, Elastic Load Balancing for application distribution, and Amazon RDS for database services:

- The service also integrates with AWS Secrets Manager for credential management, Amazon CloudWatch for monitoring and metrics collection, AWS Migration Hub for migration tracking, and AWS Backup for data protection
- Additionally, customers can leverage AWS services like Amazon S3, DynamoDB, and SNS to enhance application functionality while maintaining their VMware-based workloads

Onboarding and Offboarding

Customers begin by completing prerequisites including an active AWS account, appropriate IAM permissions, VMware Cloud Foundation license keys, and EC2 capacity reservations for i4i.metal instances. The process involves creating a VPC with adequate CIDR space, configuring DNS and NTP servers, setting up VPC Route Server with BGP peers, and creating network ACLs:

- Through the AWS console, customers deploy Amazon EVS environments using guided workflows, which automatically provision VCF management appliances and ESXi hosts
- After deployment, customers retrieve VCF credentials from AWS Secrets Manager to access vCenter Server, NSX, and SDDC Manager
- Optional steps include configuring on-premises connectivity via HCX and establishing hybrid network connections through Direct Connect or VPN

Getting Started Guide: <https://docs.aws.amazon.com/evs/latest/userguide/getting-started.html>

Data Removal

The offboarding process involves deleting all Amazon EVS hosts first, followed by deleting the environment itself through the AWS console or CLI. Customers must ensure all workloads are migrated or backed up before deletion. The service automatically removes VCF management appliances, cleans up associated VPC resources, and deletes stored credentials from AWS Secrets Manager. Additional cleanup includes removing VPC Route Server components, network ACLs, and disassociating subnet route tables to ensure complete resource removal and prevent ongoing charges.

Backup/Restore and Disaster Recovery

Amazon EVS provides backup and disaster recovery capabilities through integration with VMware native technologies and AWS services. The service supports familiar VMware disaster recovery solutions using vSphere Site Recovery Manager and can integrate with third-party backup and disaster recovery solutions. Customers can leverage AWS Backup for protecting AWS resources, implement cross-region replication, and utilize external storage solutions like Amazon FSx for NetApp ONTAP with NetApp BlueXP disaster recovery for comprehensive data protection and recovery scenarios.

Backup Capabilities

Amazon EVS supports backup capabilities through multiple approaches including VMware native backup solutions, third-party integrations, and AWS services. The service allows integration with preferred external backup solutions and supports AWS Backup for protecting associated AWS resources. Customers can implement vSAN-based local backup, utilize Amazon FSx for NetApp ONTAP with native NetApp backup capabilities, and leverage AWS services like Amazon S3 for long-term data retention and cross-region backup strategies.

Disaster Recovery

Amazon EVS supports disaster recovery through VMware-native technologies and AWS integration. The service enables Site Recovery Manager deployments, supports multi-AZ configurations for high availability, and integrates with solutions like NetApp BlueXP disaster recovery. Customers can implement disaster recovery to other AWS regions, utilize AWS Elastic Disaster Recovery for broader protection, and maintain familiar VMware disaster recovery processes while benefiting from AWS's global infrastructure and reliability.

Recovery Objectives

Amazon EVS helps customers meet RPO and RTO objectives through multiple mechanisms including VMware vSphere replication for low RPO requirements, multi-AZ deployments for high availability, and integration with AWS services for automated failover. The service supports Site Recovery Manager for orchestrated disaster recovery, enables

cross-region replication for geographic protection, and provides scalable recovery infrastructure that can rapidly provision resources during disaster scenarios to meet aggressive RTO requirements.

Service Constraints

Service Quotas: <https://docs.aws.amazon.com/evs/latest/userguide/service-quotas-evs.html>

FAQ: <https://aws.amazon.com/evs/faqs/>

Technical Requirements

Service Documentation: <https://docs.aws.amazon.com/evs/latest/userguide/index.html>

User Guide: <https://docs.aws.amazon.com/evs/latest/userguide/index.html>

API Reference: <https://docs.aws.amazon.com/evs/latest/APIReference/index.html>

Pricing Overview

Please see the AWS UK G Cloud 15 Pricing Document accompanying this service in the Digital Marketplace.

Public Pricing: <https://aws.amazon.com/evs/pricing/>

Cost Optimization

Amazon EVS offers several unique cost optimization options including flexible consumption models with on-demand, one-year, and three-year commitment options for predictable cost savings. Customers can bring their own VMware licenses (BYOL) to avoid additional licensing costs, utilize AWS Instance Savings Plans and Reserved Instances for underlying EC2 infrastructure, and optimize storage costs through flexible options including local vSAN and external storage like Amazon FSx. The service supports elastic scaling to match workload demands, enabling customers to add or remove hosts based on capacity requirements and avoid over-provisioning.

Savings Considerations

Main cost savings considerations include leveraging existing VMware license investments through BYOL options, utilizing AWS's pay-as-you-use model without upfront commitments or minimum fees, and avoiding the capital expenditure of on-premises infrastructure. Customers can achieve operational cost savings through reduced datacenter footprint, elimination of hardware refresh cycles, and leveraging AWS's economies of scale. Additional savings come from Migration Acceleration Program (MAP) eligibility, reduced operational overhead through managed infrastructure, and the ability to integrate cost-effective AWS services like S3 for backup and archival storage instead of expensive traditional solutions.