MAM102-R

An AWS guide for VMware administrators

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At a Glance: AWS for VMware at re:Invent 2024

MONDAY, DECEMBER 2nd

MAM102-R – Chalk Talk
An AWS guide for VMware administrators
10:30 AM | MGM Grand, Boulevard 169 (Option 1)

MAM104 – Breakout (Customer Stories)
AWS for VMware migrations: Successes, roadmaps, & strategies
11:30 AM | Caesars Forum, Summit 232, Turquoise

MAM302 – Workshop
Virtual machine to AWS: Rapid migration & modernization
12:00 PM | MGM Grand, Grand 117

HYB303 – Workshop
Step-by-step migration of on-premises VMware workloads to AWS Outposts
3:30 PM | MGM Grand, Grand 111

MAM214 - Breakout (Customer Stories)
Gilead Sciences' AWS migration: From VMware to cloud transformation
4:30 PM | MGM Grand, Grand 122

TUESDAY, DECEMBER 3rd

KEY002 – Keynote
CEO Keynote with Matt Garman
8:00 AM | Venetian, Ballroom F
(Keynotes are walk up only. No registration required)

STG337 – Chalk Talk
Migrate any VMware workload from anywhere to improve your TCO
1:00 PM | MGM Grand, 305

MAM218 – Chalk Talk
Technical decisions for a seamless migration from VMware to AWS
4:30 PM | Mandalay Bay, South Pacific D

MAM202-R – Workshop
From VMs to cloud-native: An AWS modernization journey
4:30PM | Mandalay Bay, Lagoon F (Option 1)

MAM238-INT – Innovation Talk
Automating migration and modernization to accelerate transformation
5:30 PM | Venetian, Palazzo Ballroom B

WEDNESDAY, DECEMBER 4th

MAM315 – Workshop
Simplify VMware server migrations via AWS Migration Hub and Amazon Q
9:00 AM | Mandalay Bay, Islander I

HYB401 – Chalk Talk
AWS hybrid cloud and edge computing from the lens of VMware architects
10:00 AM | MGM Grand, 307

MAM102-R1 – Chalk Talk
An AWS guide for VMware administrators
4:00 PM | Wynn, Montrachet 1 (Option 2)

THURSDAY, DECEMBER 5th

MAM103 – Breakout
The future of your VMware-based workloads with AWS
11:00 AM | Mandalay Bay, South Seas F

MAM202-R1 – Workshop
From VMs to cloud-native: An AWS modernization journey
12:00 PM | Mandalay Bay, Lagoon F (Option 2)

* Kindly note that session details, including locations, schedules, and speakers, are subject to change. Please consult the AWS Events app for the most up-to-date information.
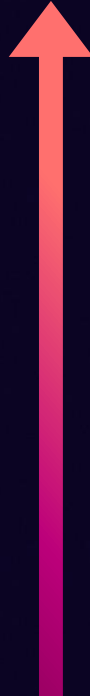
How familiar are you with AWS?

Future state of your VMware-based workloads

AWS Regions

All cloud-native benefits and high ROI

	Modern apps	Refactor
	Managed services	Replatform
	Containers	Replatform
	Amazon EC2	Rehost
	Amazon EVS (Preview)	Relocate

Rapid adoption, foundation of cloud benefits, and fast ROI

Alternative partner offerings

NUTANIX CLOUD CLUSTERS (NC2) ON AWS	RED HAT OPENSHIFT SERVICE ON AWS (ROSA)

AWS on-premises

Ability to run AWS cloud services on-premises

AWS Outposts

- Managed services
- Containers
- Amazon EC2

Amazon
Elastic VMware Service

The fastest path to migrate and operate VMware-based workloads on AWS

PREVIEW

- Simplify and accelerate your migration to AWS
- Retain control of your VMware architecture in the cloud
- Choose to self-manage or leverage AWS Partners for a managed experience
- Embrace AWS innovation to transform your workloads

Amazon Elastic VMware Service (Amazon EVS)

Customer data center

On-premises
vSphere based environment

vSphere

vSAN   NSX

AWS Global Infrastructure

AWS CloudFormation, AWS CLI, AWS SDK

Amazon EVS

VMware Cloud Foundation

SDDC Manager   vSphere   vSAN   NSX

Amazon EC2   Amazon S3   Amazon RDS   AWS Shield

Amazon CloudWatch   AWS Systems Manager   Elastic Load Balancing   Amazon Bedrock
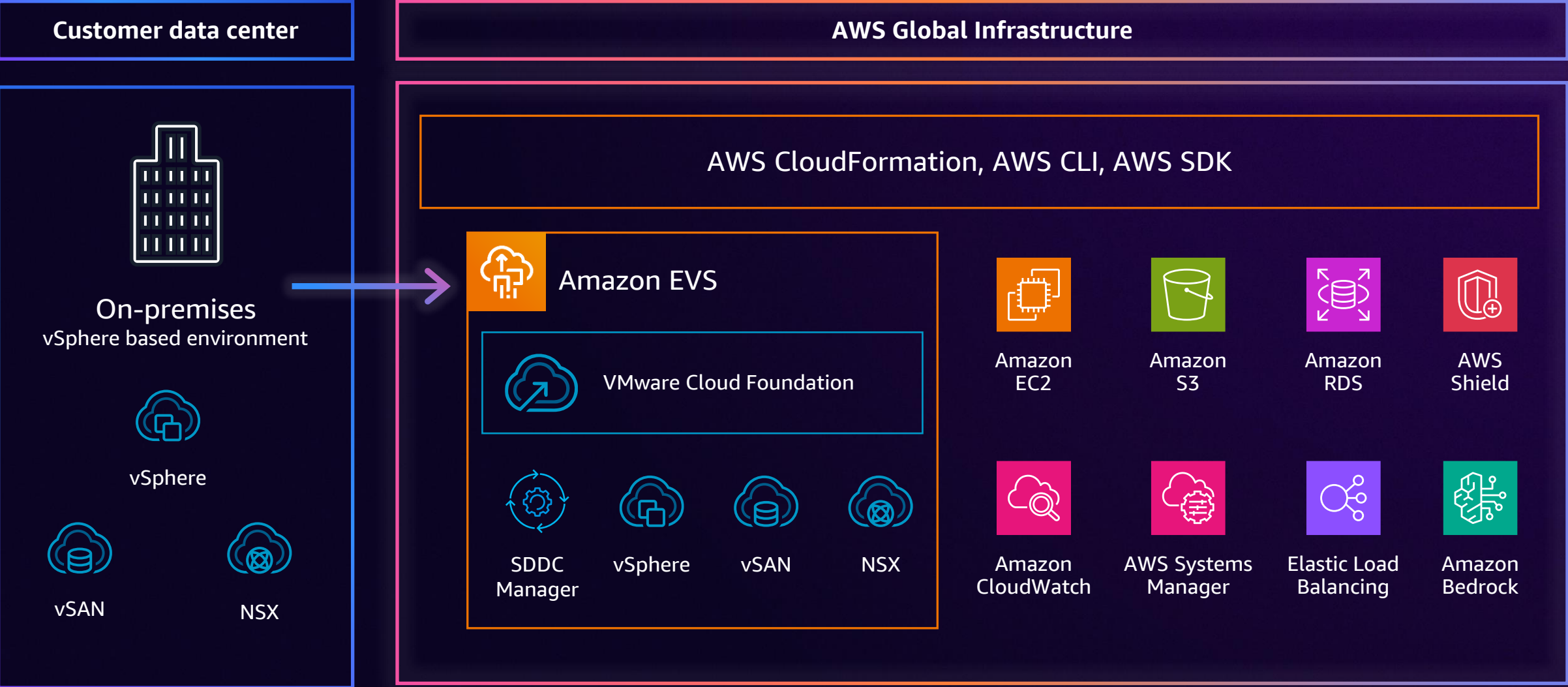
VMware to AWS technology mapping

Customer

vCenter NSX Manager VM VM VM VM

Management datastore Workload datastore

NSX Virtual Distributed Switch

vSphere cluster with vSAN

VMware

AWS Management Console

Amazon EC2

Amazon Virtual Private Cloud
(Amazon VPC)

Amazon Elastic Block Store
(Amazon EBS)

Infrastructure
managed by AWS
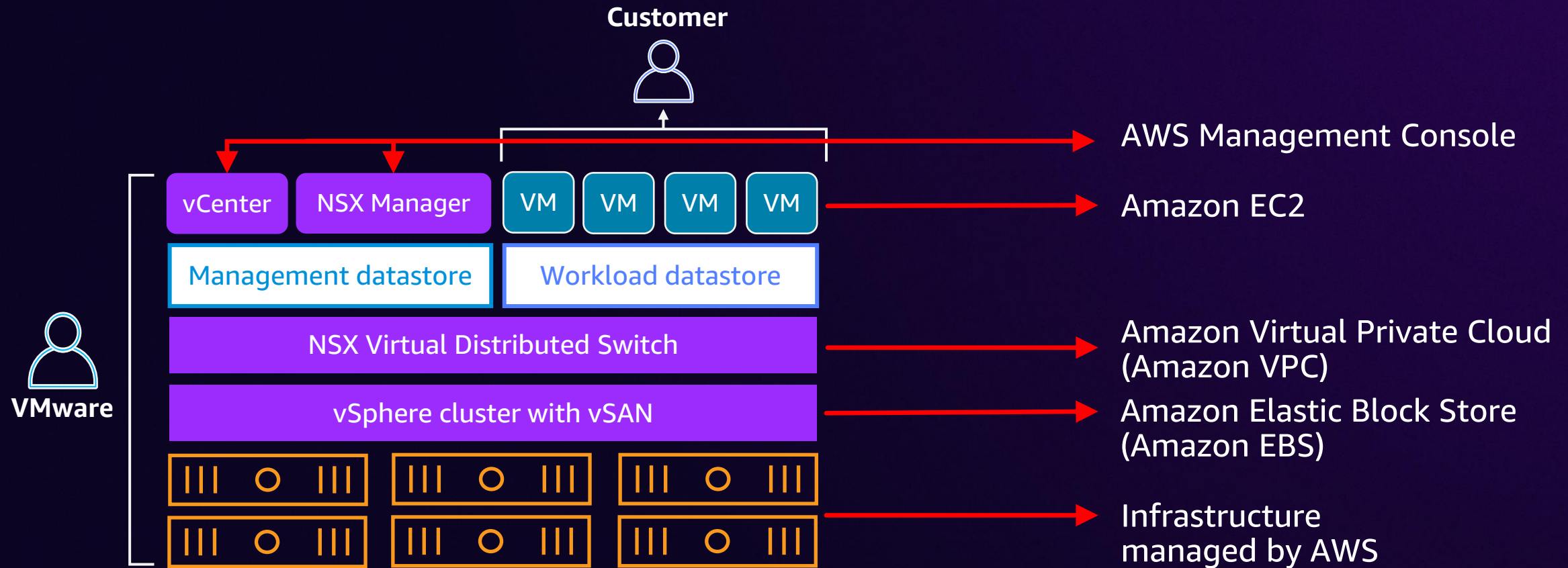
Technology features mapping

VMware	AWS
Compute	
Virtual machines	Amazon EC2 instances
VDI machines	Amazon WorkSpaces
Containers	Amazon ECS, Amazon EKS, AWS Fargate
Storage	
Storage (VMDK)	Amazon EBS volumes
Storage (network file systems)	Amazon EFS, Amazon FSx for Windows File Server, Amazon FSx for NetApp ONTAP & Amazon FSx for Lustre
Networking	
Networking	Amazon VPC, subnets, route tables, etc.
Firewalls	Amazon EC2 security groups and NACLs, AWS Network Firewall, AWS WAF
F5, Avi, and NetScaler load balancers	Application Load Balancer, Elastic Load Balancing, Network Load Balancer; third-party support in Amazon EC2

Technology features mapping

VMware	AWS
Functionality	
DR	Multi-AZ and multi-Region architecture/AWS Elastic Disaster Recovery
vMotion	EC2 live migration (*)
Storage vMotion/Storage DRS	Not required – Amazon EBS provides dedicated storage
Golden images/templates	Amazon Machine Image (AMI)
Management tools	Use same tools or AWS services such as AWS Systems Manager
Active directory integration	Same or with AWS Directory Service
Backup via tools	Same tools or AWS services with AWS Backup
vCenter permissions	AWS Identity and Access Management (IAM)
Mem CPU ballooning/overcommit	Amazon EC2 provides dedicated resources
Thin provisioning of storage	Available on Amazon EFS

Technology features mapping

VMware	AWS
Functionality	
Hot Add and Hot Expansion of vDisks	Amazon EBS Elastic Volumes
Snapshot behavior – Kept on VM storage	Amazon EBS snapshot can be considered backups. Stored externally on Amazon S3
MAC address spoofing	ENI retention
VMware HCX	AWS Application Migration Service (AWS MGN) and Cloud Migration Factory on AWS
VMware Aria Automation	AWS Service Catalog
VMware Aria Operations	AWS Systems Manager
VMware Aria Operations for Logs	AWS CloudTrail, Amazon CloudWatch Logs
VMware Aria Operations for Networks	AWS Network Manager

Technology features mapping

VMware	AWS
Functionality	
OS Patching (not provided by VMware)	AWS Systems Manager
VMware PowerCLI	AWS CLI, AWS Tools for PowerShell

What do your workloads look like?

Migration options
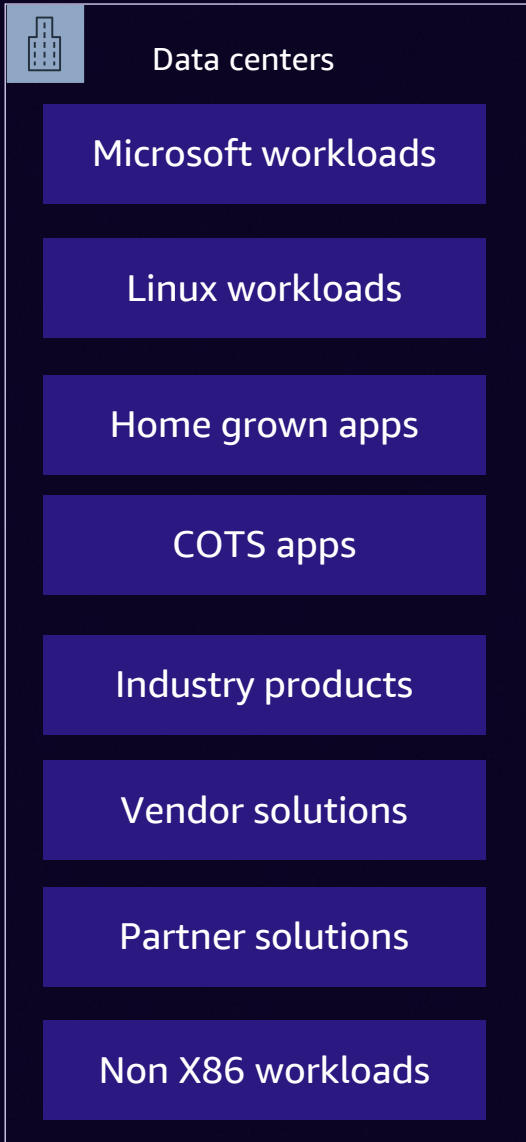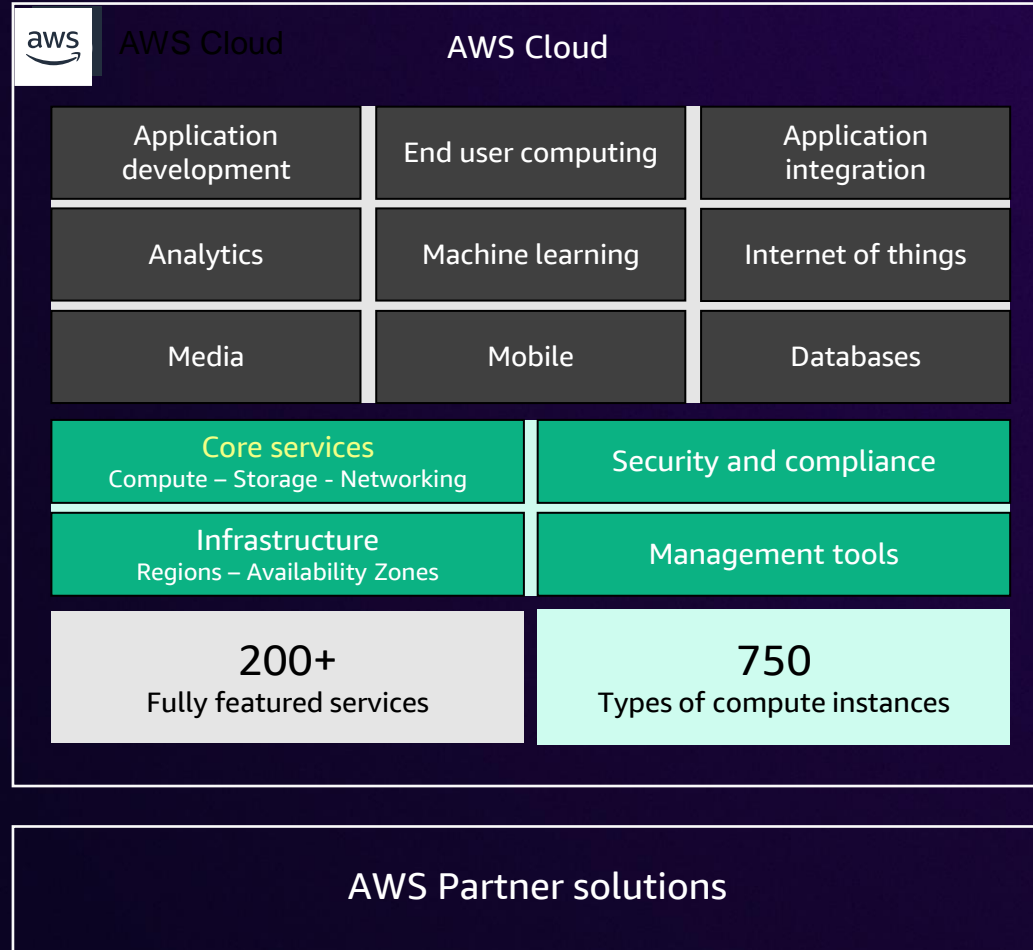
Have you considered migrating these to AWS?

Has anyone migrated their VMware workloads to AWS?

Migrate and modernize using AWS MGN

AWS Application Migration Service (AWS MGN) is a highly automated lift-and-shift (rehost) solution that simplifies, expedites, and reduces the cost of migrating applications to AWS. It allows companies to lift and shift a large number of physical, virtual, or cloud servers without compatibility issues, performance disruption, or long cutover windows.

- Migrate applications to AWS with or without changes to applications or workflows

- AWS MGN automates migration to AWS

- You can start modernizing using AWS MGN preconfigured or custom actions during cutover

- Access the full range of AWS capabilities to modernize applications running on AWS

AWS MGN benefits

Simplify, expedite, and reduce the cost of migrating your applications to AWS

Flexible

Migrate from any source

Wide range of OS, application, and database support

Suitable for large-scale migrations

Reliable

Robust, predictable, non-disruptive continuous replication

Short cutover windows with minimal downtime

Highly secure

Highly automated

Minimal skill set required to operate

Easy, non-disruptive tests prior to cutover

Easily plugs into migration factories and cloud COEs

How AWS MGN works
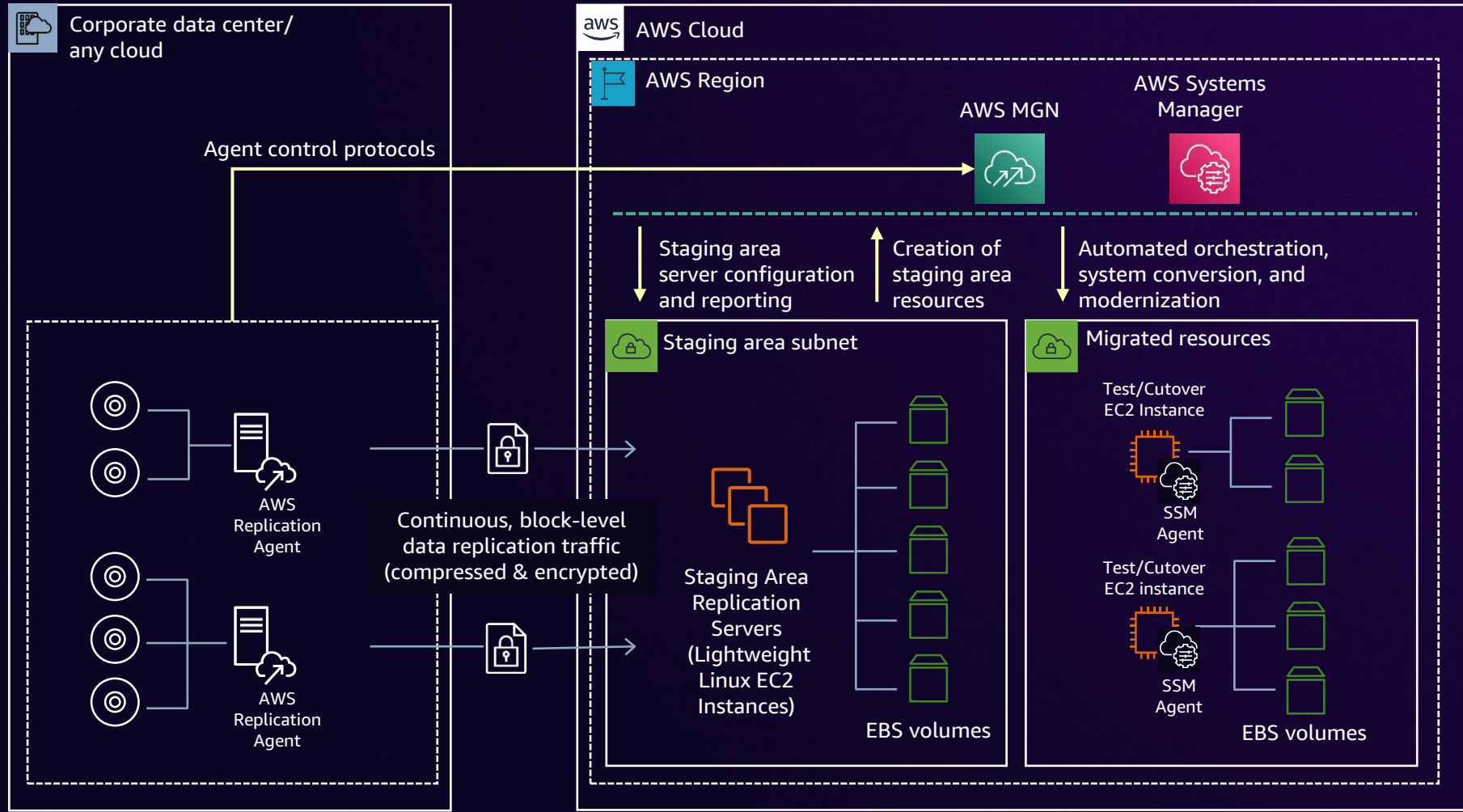
How AWS MGN works (agentless replication option)

Corporate data center

ESXi
- Guest 1
- Guest 2
- Disks

VDDK

MGN vCenter Appliance

vCenter Appliance

API

vCenter Client

AWS Replication Agents

Snapshot shipping (compressed & encrypted)

Agent control protocols

AWS Cloud

AWS Region

AWS MGN

Staging area server configuration and reporting

Creation of staging area resources

Automated orchestration and system conversion enables short cutover windows

Staging area subnet

Staging area replication servers (Lightweight Linux EC2 instances)

EBS volumes

Migrated resources

Test/Cutover EC2 instance

Test/Cutover EC2 instance

EBS volumes

What are your biggest concerns or hesitations?

How do we get started?

Start with an AWS assessment

- Assess your environment and get recommendations to optimize compute, storage, and licensing

- Build a migration and licensing strategy to unlock cost savings as you transition to AWS

36% average compute cost savings versus on premises[1]

33.83% faster migrations[1]

58% more migrations[1]

[1] AWS Finance, AWS benchmark data of customers who have run an optimization and licensing assessment compared to customers who have not

Cloud readiness assessment

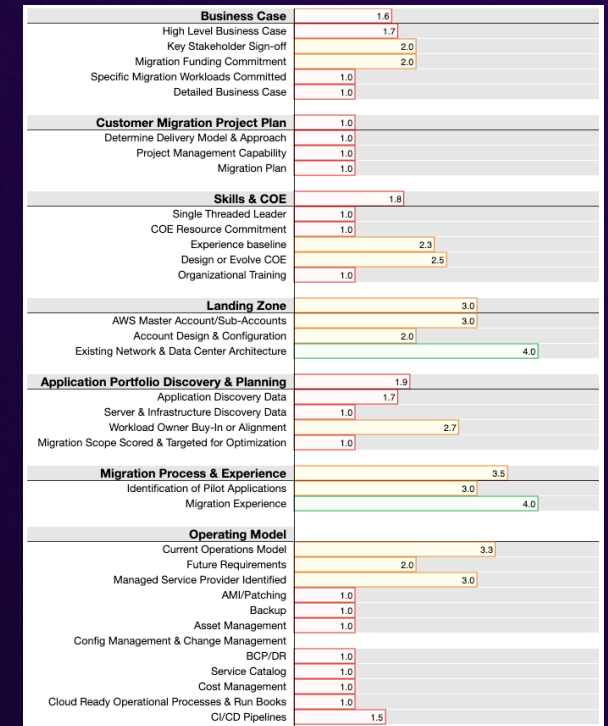The assessment includes question survey and interactive activities conducted as a 1-day workshop

- Alignment of leadership teams
- Consensus on decision interdependency
- Identification of gaps and readiness

Action plan and proposal to close the gaps and accelerate to the next phase of adoption (e.g., accelerators, mobilize project)

Business capability focused	Business Value realization
	People & change Organizational alignment and readiness
	Governance Prioritization and control
Technical capability focused	Platform Applications and infrastructure
	Security Risk and compliance
	Operations Hybrid and dynamic

https://aws.amazon.com/professional-services/CAF/

Business Case — 1.6
High Level Business Case — 1.7
Key Stakeholder Sign-off — 2.0
Migration Funding Commitment — 2.0
Specific Migration Workloads Committed — 1.0
Detailed Business Case — 1.0

Customer Migration Project Plan — 1.0
Determine Delivery Model & Approach — 1.0
Project Management Capability — 1.0
Migration Plan — 1.0

Skills & COE — 1.8
Single Threaded Leader — 1.0
COE Resource Commitment — 1.0
Experience baseline — 2.3
Design or Evolve COE — 2.5
Organizational Training — 1.0

Landing Zone — 3.0
AWS Master Account/Sub-Accounts — 3.0
Account Design & Configuration — 2.0
Existing Network & Data Center Architecture — 4.0

Application Portfolio Discovery & Planning — 1.9
Application Discovery Data — 1.7
Server & Infrastructure Discovery Data — 1.0
Workload Owner Buy-In or Alignment — 2.7
Migration Scope Scored & Targeted for Optimization — 1.0

Migration Process & Experience — 3.5
Identification of Pilot Applications — 3.0
Migration Experience — 4.0

Operating Model
Current Operations Model — 3.3
Future Requirements — 2.0
Managed Service Provider Identified — 3.0
AMI/Patching — 1.0
Backup — 1.0
Asset Management — 1.0
Config Management & Change Management
BCP/DR — 1.0
Service Catalog — 1.0
Cost Management — 1.0
Cloud Ready Operational Processes & Run Books — 1.0
CI/CD Pipelines — 1.5

Diagnose migration readiness, align leadership teams, and build a case for change

QR links

Request an OLA

AWS Cloud Readiness Assessment

Nutanix Cloud Clusters (NC2) on AWS

Simple skills and operations

Low learning curve for VMware admins

Runs directly in your AWS account

Simplified AWS resource management

Automation tools to self manage

Right-size cost optimization

Oversubscribe CPU and memory

Portable Nutanix licenses

Choice of 7 Amazon EC2 instances

High performance storage options

Rapid migration

Migrate from VMware with Nutanix Move tool

Automated deployment in ~1 hour

Minimal business risk, no IP address changes

Easy to modernize to AWS

Flexible

31 AWS Regions with 7 host types

Pay as you go and subscription options

NC2 software on AWS Marketplace

Use existing EDP/PPA for AWS hardware

Hybrid cloud

Single pane of glass to management

Multiple DR options with Amazon S3

Data center extension

Quickly scale with AWS

Red Hat OpenShift Service on AWS (ROSA)

Fully managed by AWS & Red Hat

Jointly developed and supported by AWS and Red Hat

Runs directly in your AWS account

Single unified bill from AWS

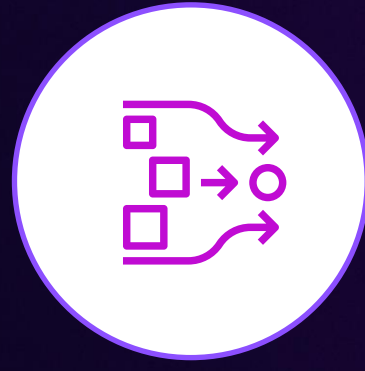Simplified AWS resource management

Console service

Create OpenShift clusters from the AWS console or CLI

Integrated experience for cluster creation, management, and support systems

Integrate to more than 170 AWS services

Rapid migration

Faster migration of VMs with Migration Toolkit for Virtualization, migrating VMs AS-IS into ROSA

Use Red Hat Migration Toolkits to simplify the migration of your applications, containers, and runtimes into ROSA

Flexible

Modernize legacy VM applications over time into containers or maintain them as VMs

Accelerate app delivery with a single platform that can manage "mixed applications" with the same tools

Lower cost & easy integration to AWS

Quickly scale with AWS

Use existing EDP/PPA for AWS hardware

Leverage your existing AWS commitment to use OpenShift

Red Hat Enterprise Linux already included in ROSA service fees

AWS cloud-native migration via ISVs

ISV SOFTWARE CAN ACCELERATE MIGRATIONS FROM MONTHS TO WEEKS

Training to help vSphere admins develop cloud skills
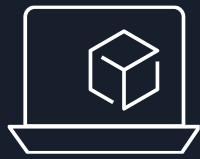
Digital training
AWS Skill Builder

600+ on-demand courses

Risk-free practice with 1,000+ lab experiences

Exam prep and real-world application through gamified training

Instructed-led classroom training

Immersive and hands-on

Work through problems and complex topics alongside AWS experts

AWS Certification

Validate skills

Identify your experts

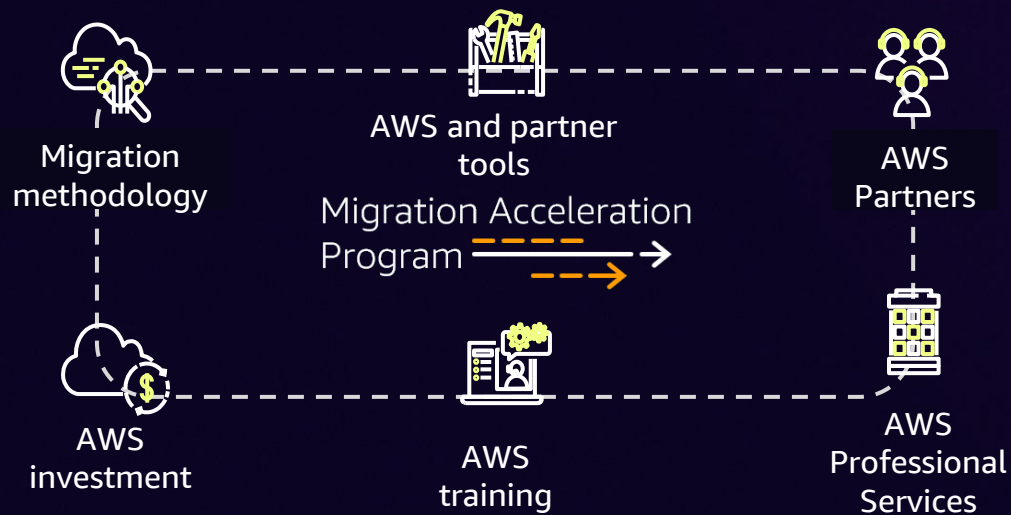Retain top talent by funding exam fees

AWS education programs

Tap into a pipeline of entry-level cloud talent

Create in-house training to develop your early-career talent and drive meaningful change in local communities

Speed up your migration and reduce costs

- Accelerate your cloud journey with a comprehensive and proven cloud migration program

- Access tools, automation capabilities, training, expertise from AWS Partners, and dedicated AWS investments to support your migration

- New: no-cost license offer for VMware migration tooling (RiverMeadow, CloudHedge, Matilda Cloud, MontyCloud, CAST Software)

Migration methodology

AWS and partner tools

Migration Acceleration Program

AWS Partners

AWS investment

AWS training

AWS Professional Services

1.7x more cost savings

5.7x more staff productivity

4.3x more business agility

vs. migration without MAP

- Based on 2019 AWS value benchmarking research – a double-blind study conducted by independent third-party market research firm (Omnicom Group)
- 1,000+ US AWS customers with more than 1 year on AWS after migration, and respondents are IT leaders and application or LOB owners. Sample size: 1,036 customers without MAP | 32 customers with MAP

Migration Acceleration Program (MAP) link

Get started with MAP

Getting started

Assess your VMware estate

Request an AWS assessment for cost savings on licensing, business case, and migration planning

Leverage partners

Engage with our large network of AWS for VMware and migration competency partners

Decide on approach and strategy

Determine your migration approach and timelines

Utilize incentive programs

Take advantage of our incentive programs designed specifically for VMware migrations

Thank you!

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