vmware® vFORUM 2019

Accelerating your Cloud Migration with VMware Cloud on AWS

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What is VMware Cloud on AWS?

How does it work?

What are the top use cases?

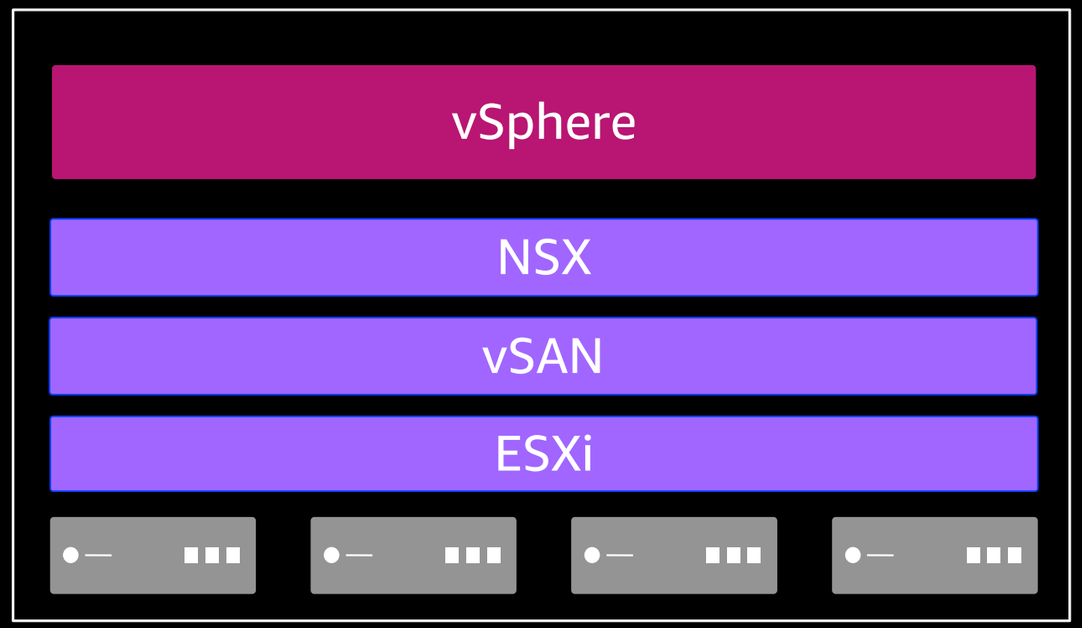
What is VMware Cloud on AWS?

VMware Cloud on AWS

A jointly engineered, hybrid cloud solution delivering the best of both worlds

VMware Cloud on AWS

Software-defined data center (SDDC)



SDDC as an on-demand cloud service
Zero to workload ready in 90 minutes
Add host capacity in 12 minutes

Managed by VMware
Patching, Updates and Upgrades
Auto host remediation

Elasticity and agility
Clusters from 3 to 16 hosts
Up to 20 clusters per SDDC

Account structure

VMware Cloud SDDC account

A new AWS account to run SDDC resources

Is owned, operated, and paid directly by VMware

Single tenant for all SDDC resources

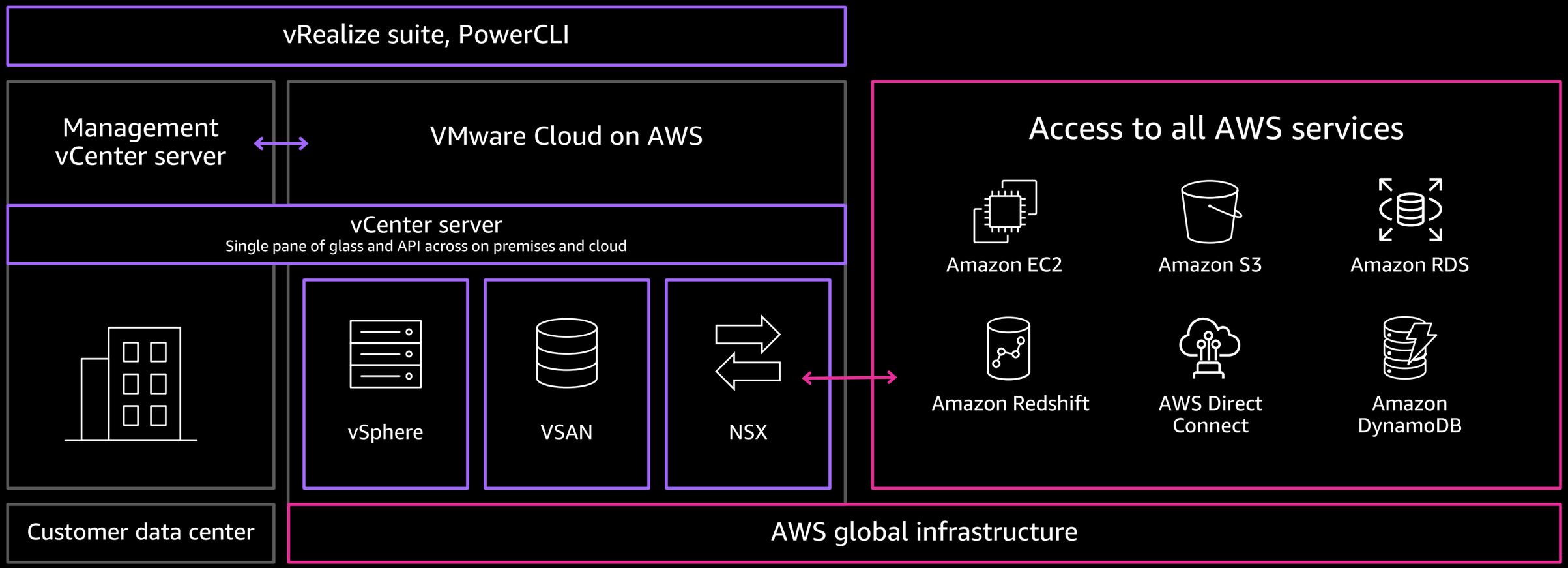
AWS customer-owned account

Is owned, operated, and paid directly by the customer

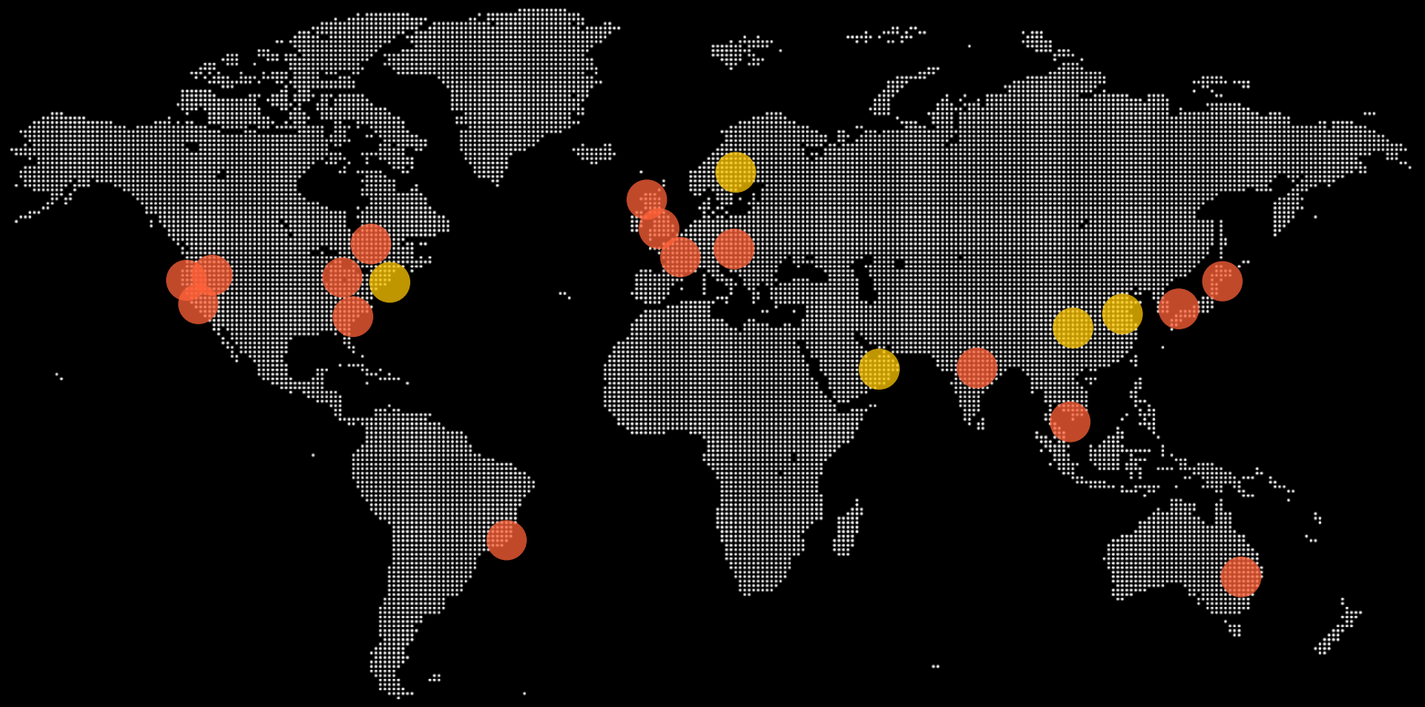
Private connectivity to VMware Cloud SDDC

Full access to the native AWS services

VMware Cloud on AWS architecture



Expanding global reach by launching additional regions in 2019



Available

US West – Oregon
US East – N. Virginia
Europe – London
Europe – Frankfurt
Europe – Ireland
Asia Pacific – Sydney
Asia Pacific – Singapore
Europe – Paris
Asia Pacific – Tokyo
Asia Pacific – Seoul
Asia Pacific – Mumbai
US West – N. California
US East – Ohio
GovCloud (US West)
Canada – Central
So. America – Sao Paulo

Planned

China – Hong Kong
Asia Pacific – Osaka
Middle East – Bahrain
Gov Cloud US East
Europe – Sweden

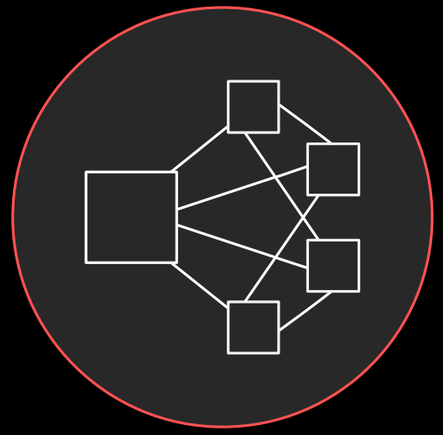
Innovation jointly engineered by VMware and AWS

Connectivity

AWS Direct Connect

High availability and reliability

Stretch cluster

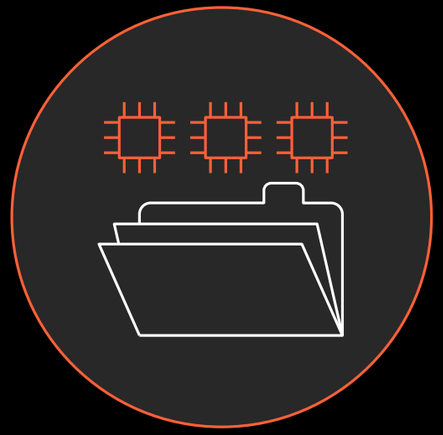


Security

Distributed firewall

Storage

vSAN and EBS



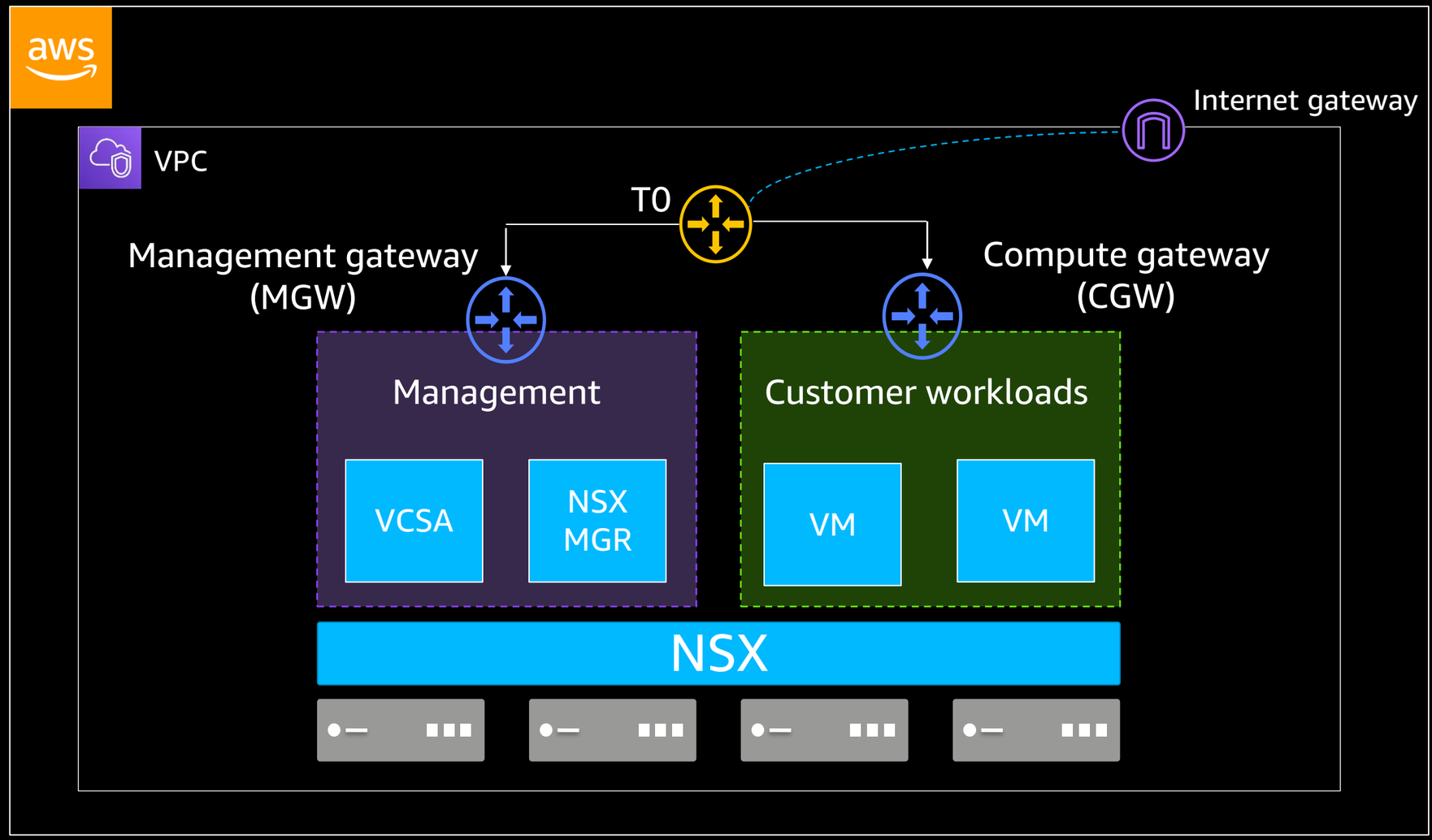
Integration

Access to AWS services

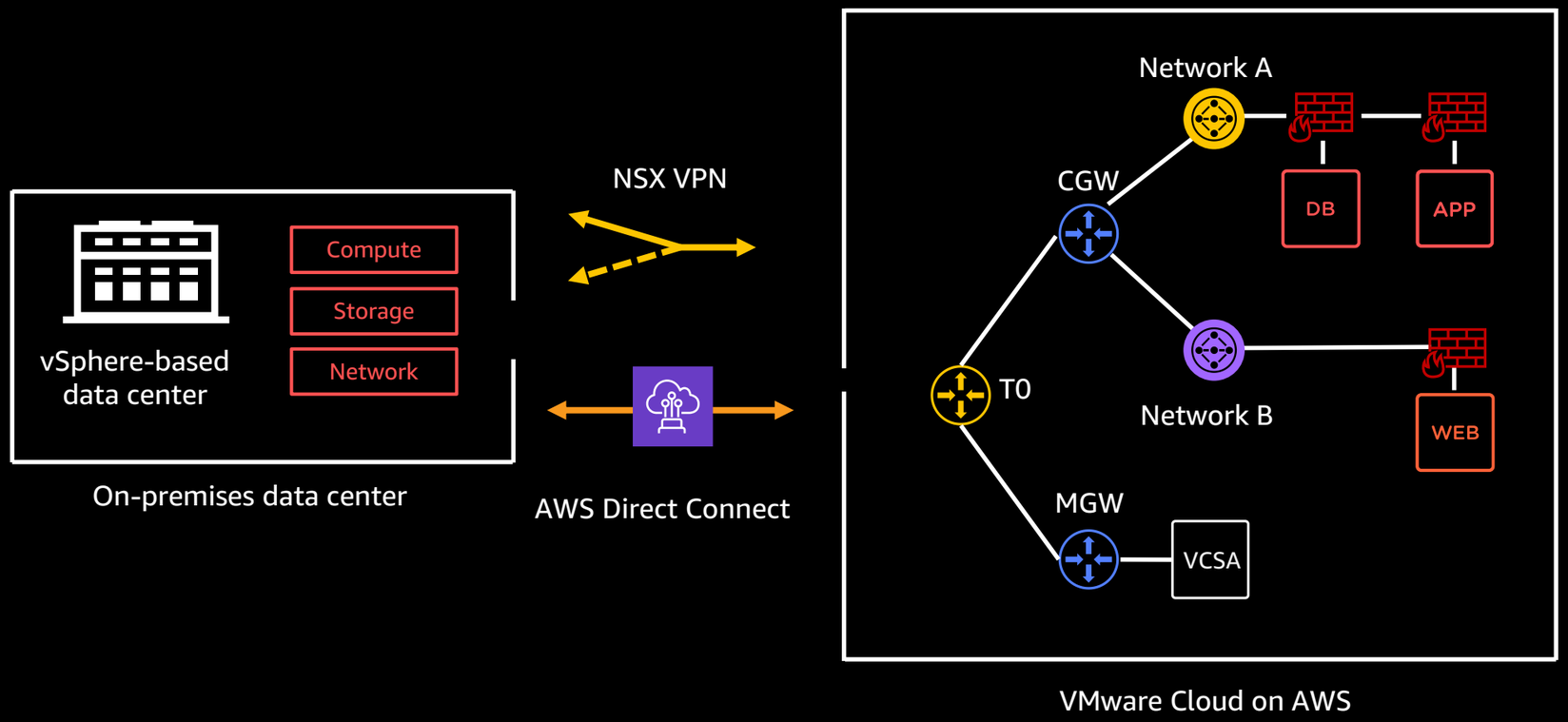
Connectivity for the hybrid cloud

Overlay versus underlay networks

VMware Cloud on AWS SDDC account



Connectivity



Distributed firewalling

- Micro-segmentation security for VMware Cloud on AWS workloads

Simplified hybridity

- Data center and VMware Cloud on AWS interconnectivity with AWS Direct Connect for all traffic types, without need for VPN tunnels

Route-based VPN and redundancy

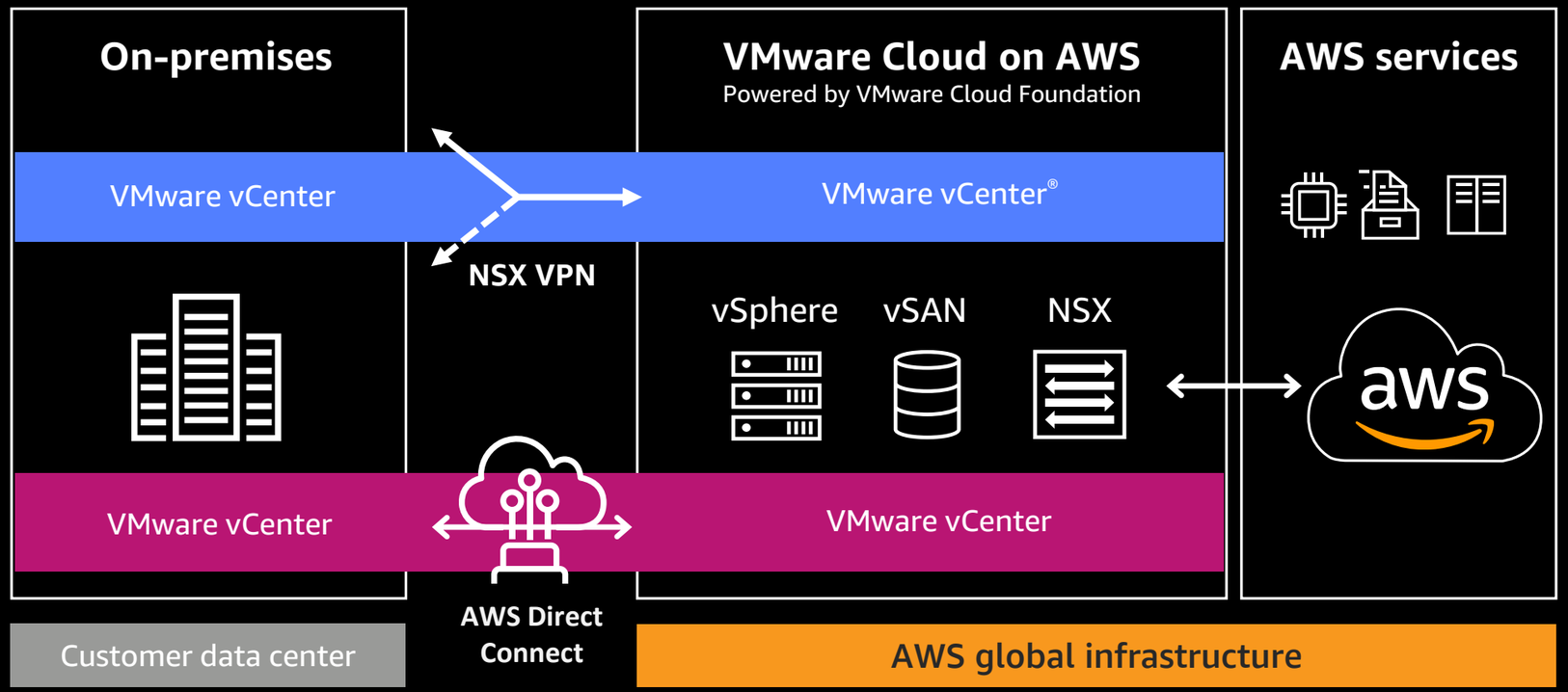
- Dynamic routing protocol simplifies redundancy

Achieve high-performance connectivity

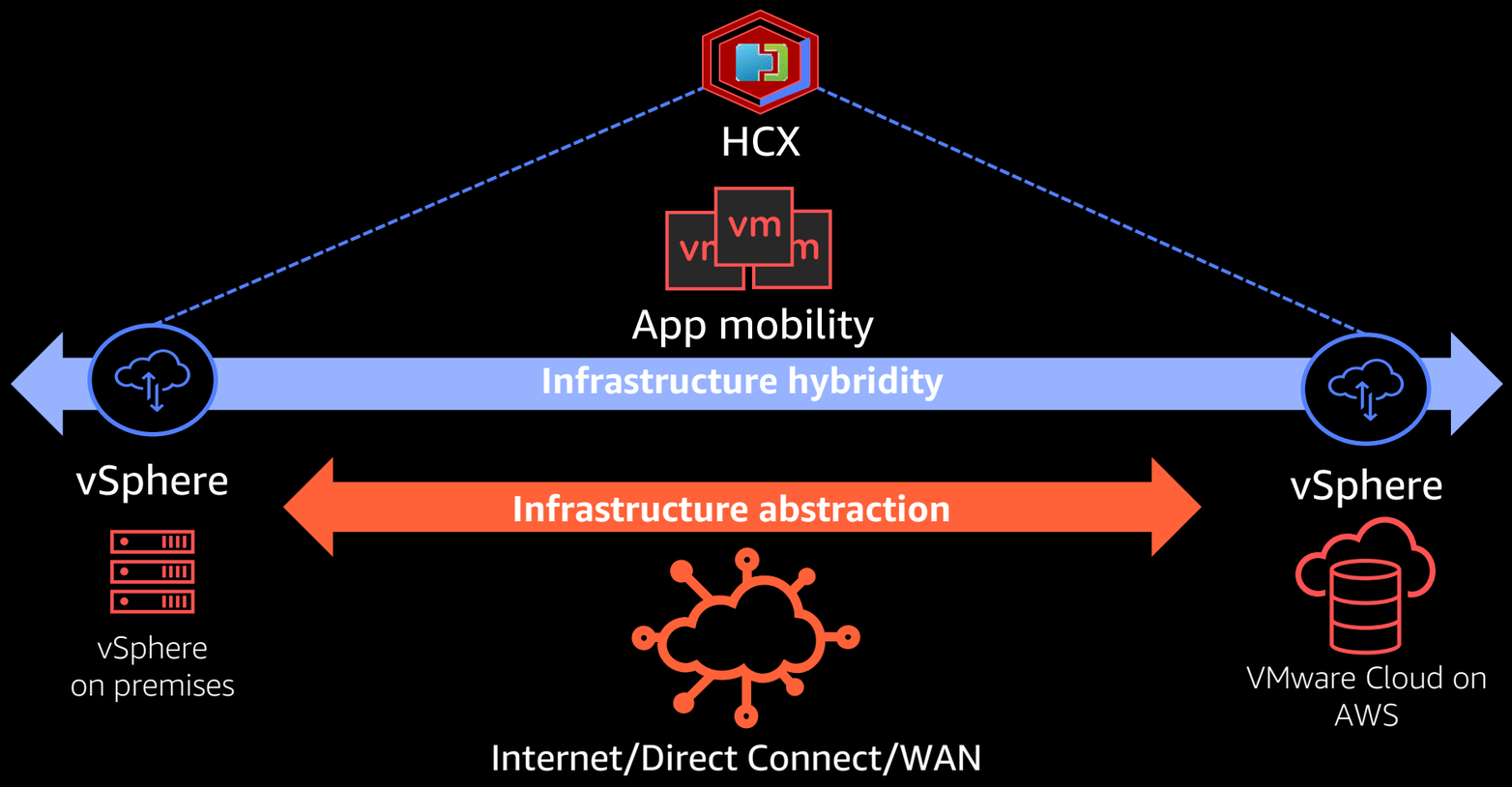
AWS Direct Connect

Private, dedicated network connection with guaranteed connectivity performance

Best suited for customers with critical workloads that need predictable throughput



Using VMware HCX for large-scale migrations



- App mobility between **any vSphere versions** across on premises and VMware Cloud on AWS
- Best-in-class migration, **VMware Cloud Motion with vSphere replication** with **zero downtime**
- Secure, bi-directional, traffic engineered, network extension with auto VPN set up

Architecting for high availability and DR

Stretched clusters for VMware Cloud on AWS

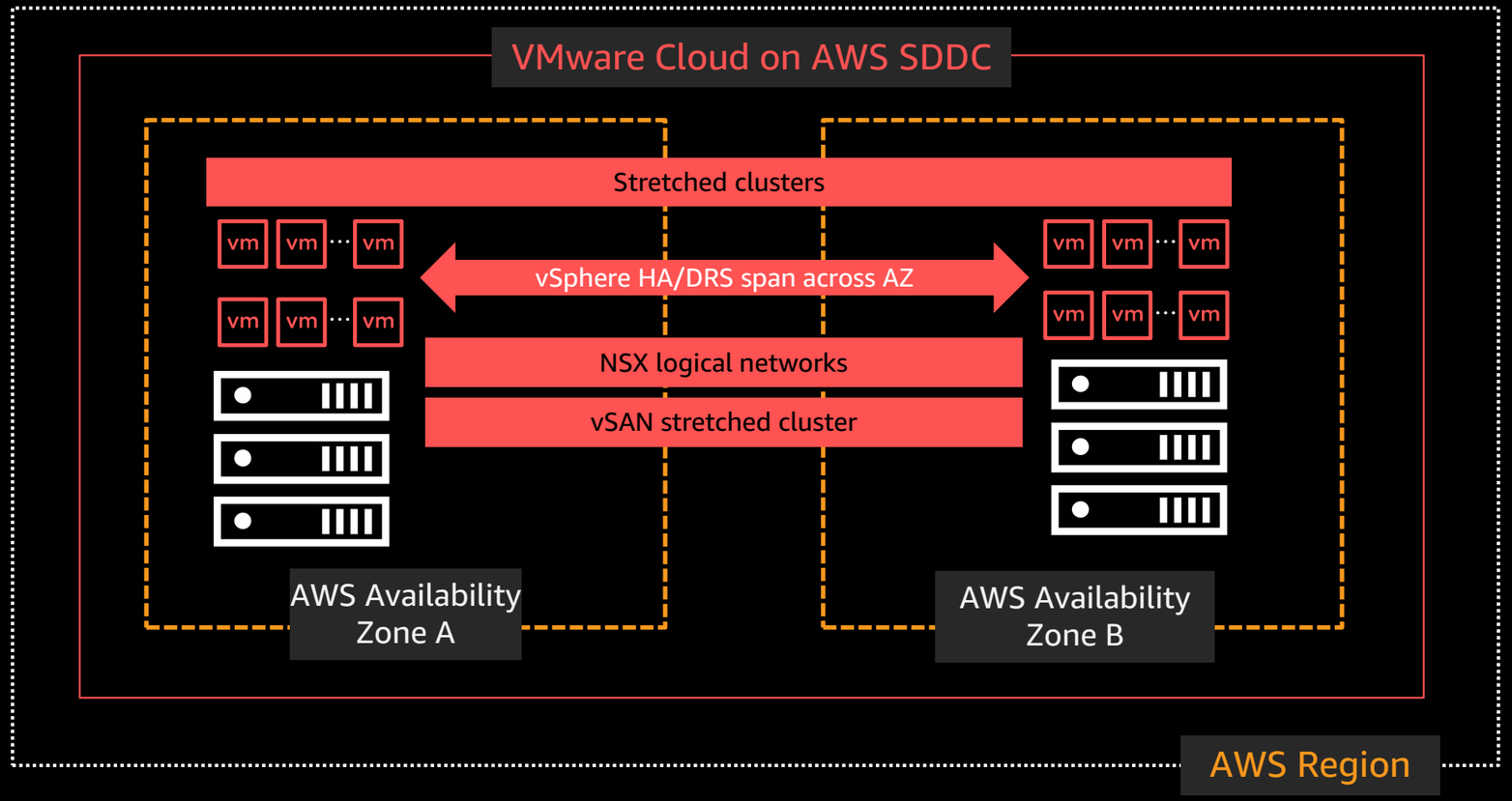
Zero RPO high availability (HA) across Availability Zones (AZs)

No necessity to architect in the application

Common logical networks with vSphere HA/DRS enabled

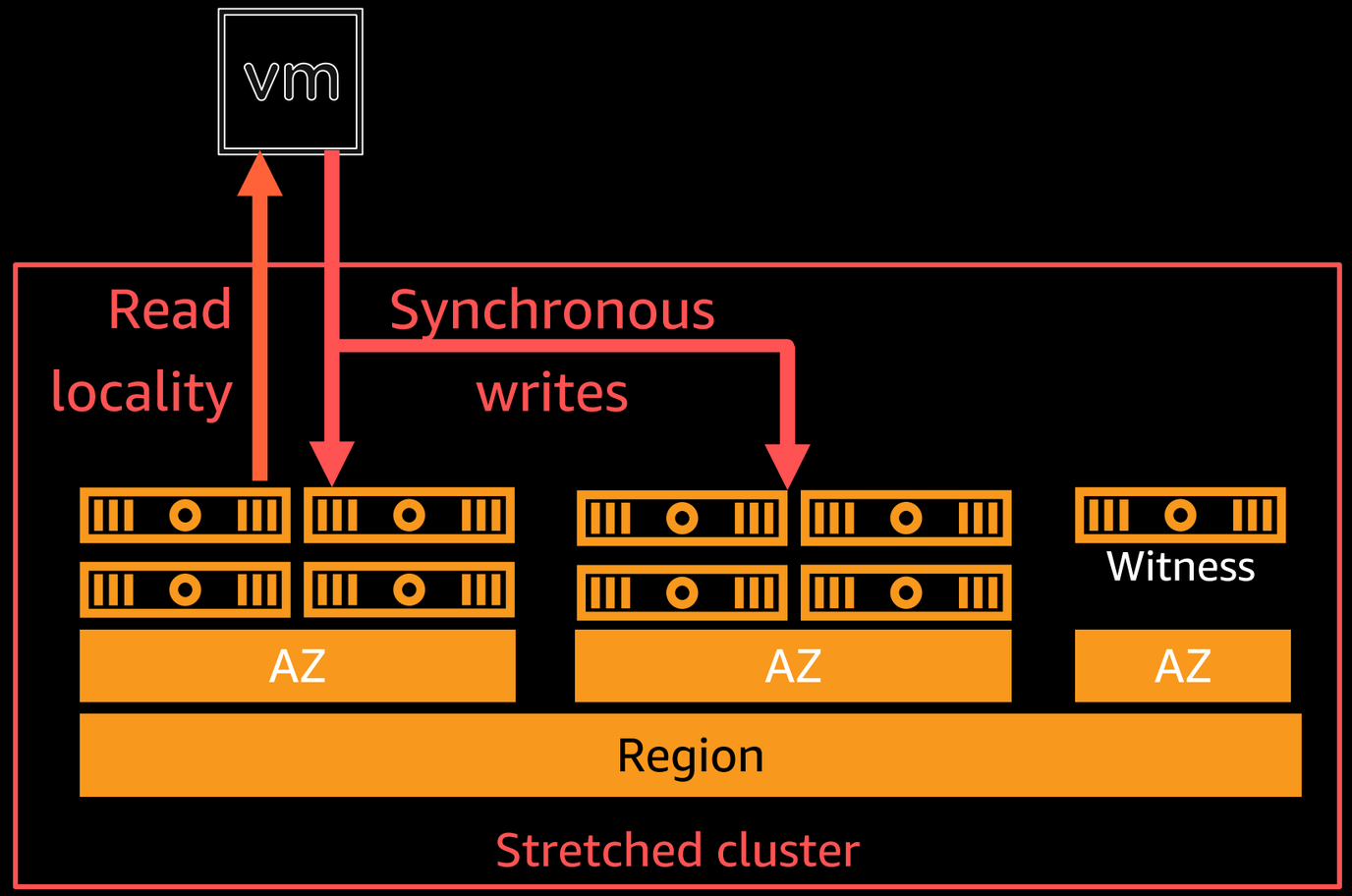
Synchronous replication between AZs for mission-critical applications

AZ availability treated as vSphere HA event and VM is restarted in the other AZ



Cross–Availability Zone traffic

vSAN stretched cluster—replication traffic



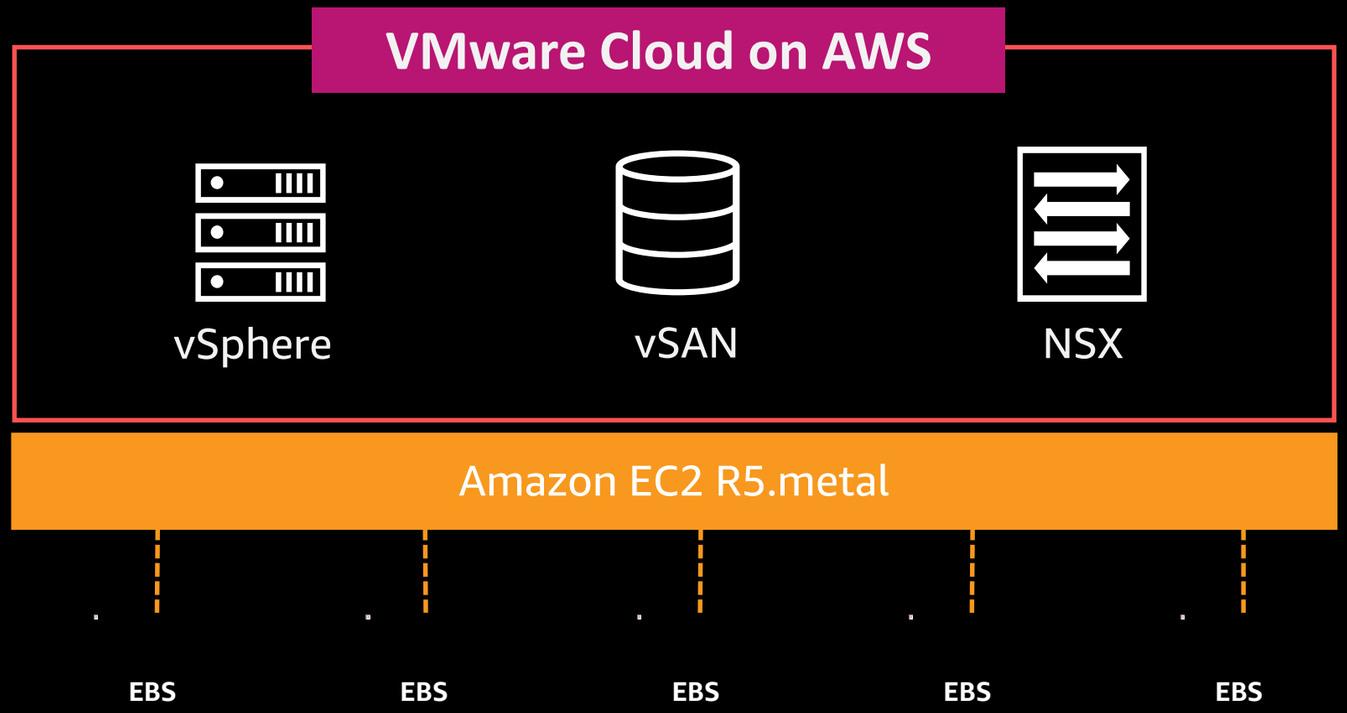
Traffic types

Read traffic serviced by AZ that VM resides on

Synchronous replication commits writes to both AZs

Witness traffic dependent on number of objects

New high-capacity storage option backed by Amazon EBS



Amazon EC2 R5.metal instance with flexible storage

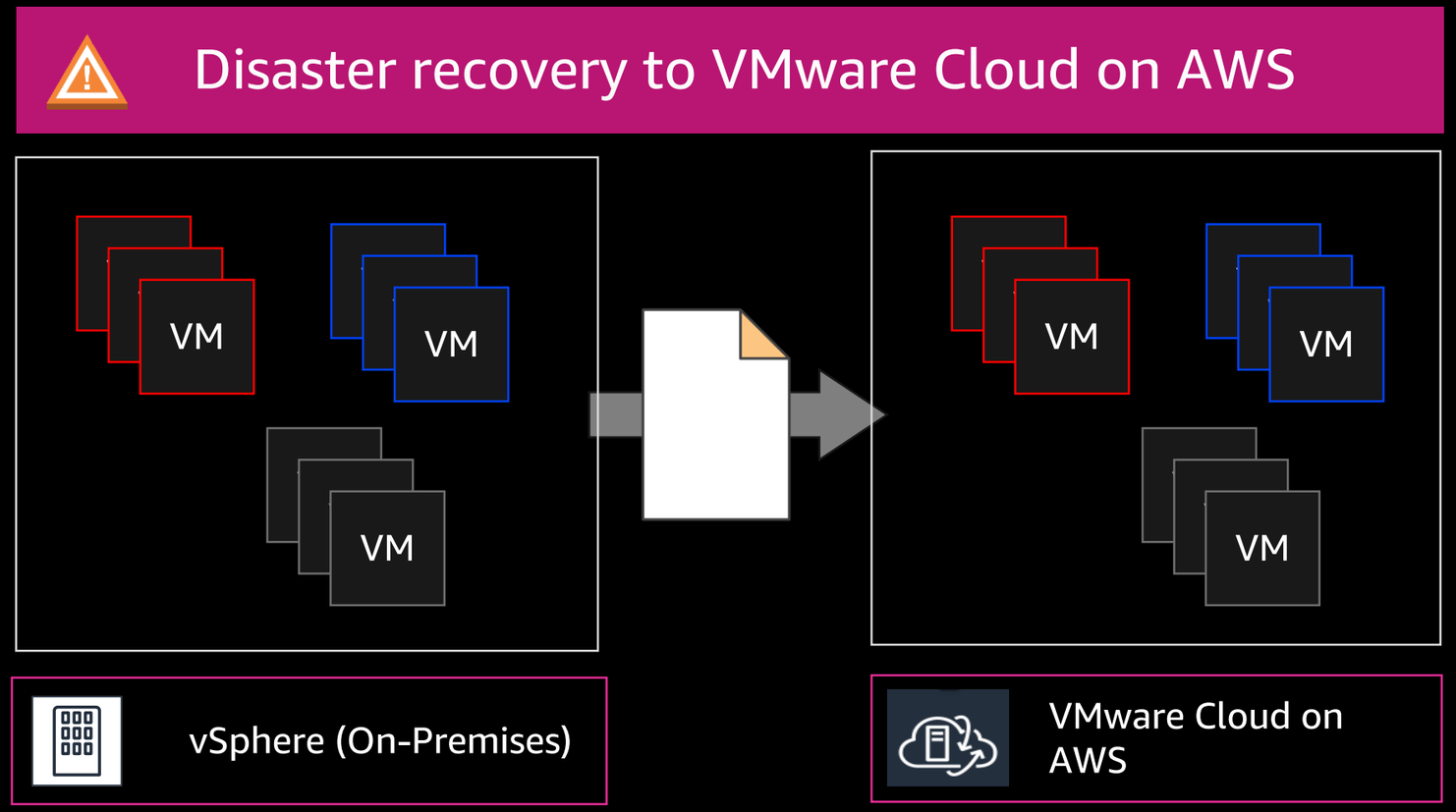
Storage per host range from 15 to 35 TB in increments of 5 TB

Choose the amount of storage used on all hosts within the cluster

R5.metal clusters can be added to an existing SDDC with at least one existing provisioned cluster

Amazon EC2 R5.metal: R5.metal instances are based on 2.5 GHz Intel Platinum 8000 series (Skylake-SP) processors. Each host has 2 sockets, 48 cores, 96 hyper-threads, 768 GiB RAM, and 25 Gbps network bandwidth.

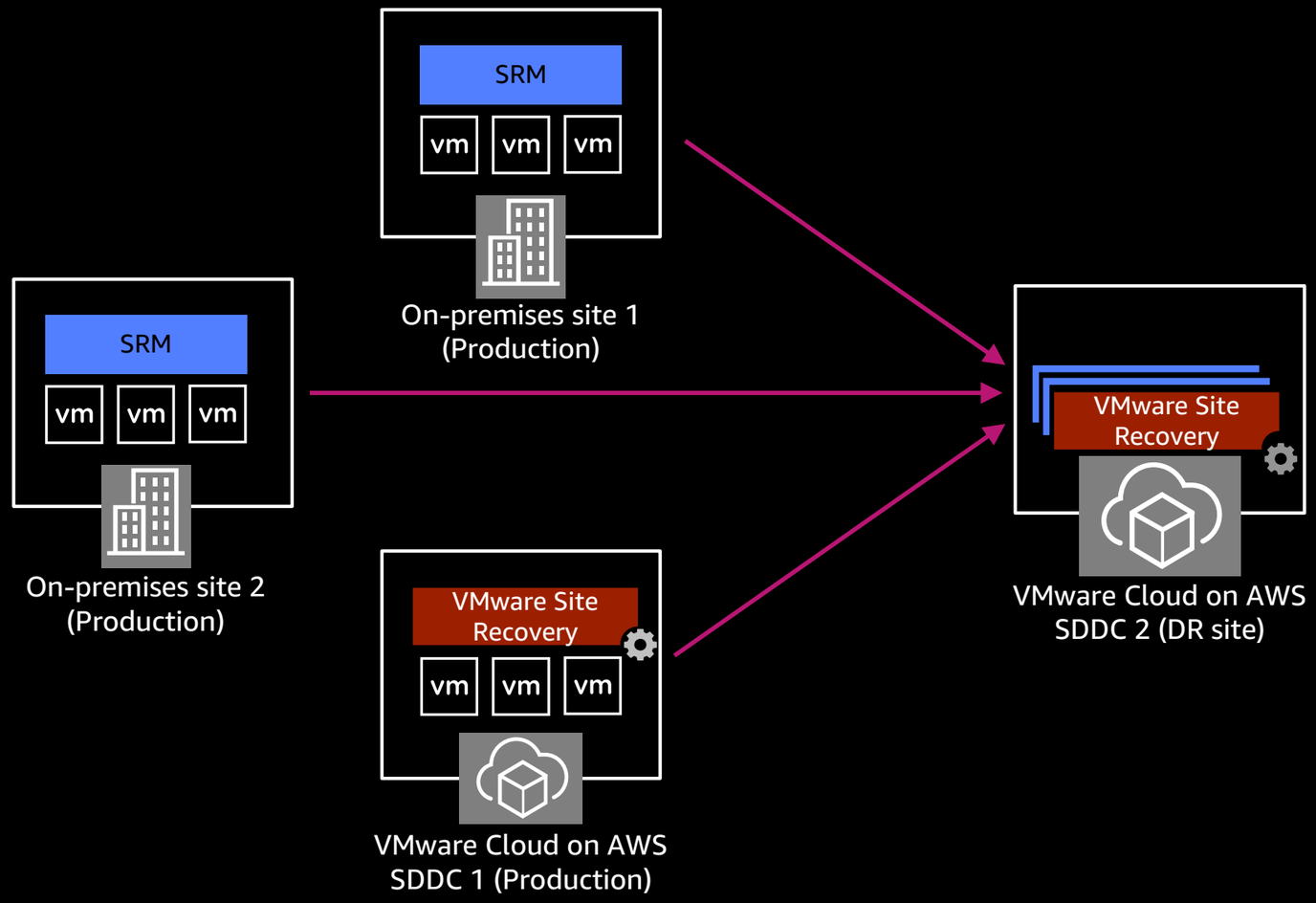
Disaster recovery to the cloud with VMware Site Recovery



Overview of goals

- Deliver as a service
- Build on VMware's established disaster recovery solutions
- Provide application centric DR runbook automation
- Remove need for dedicated DR data center
- Integrate deeply with the VMware Cloud on AWS services

Protecting multiple sites with VMware Site Recovery



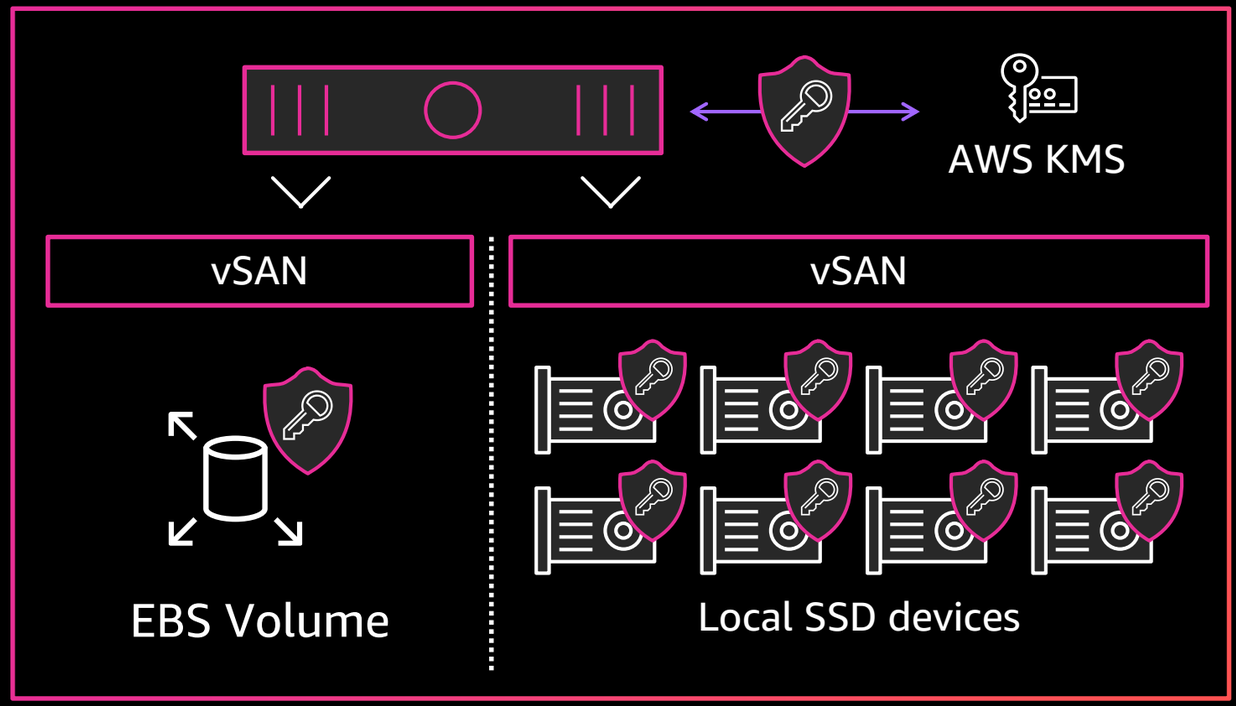
Multi-site protection

- Protect multiple sites to a single VMware Cloud on AWS SDDC
- Reduce costs and operational complexity
- Protected sites can be on-premises or other cloud SDDCs
- Other multi-site topologies supported, as well

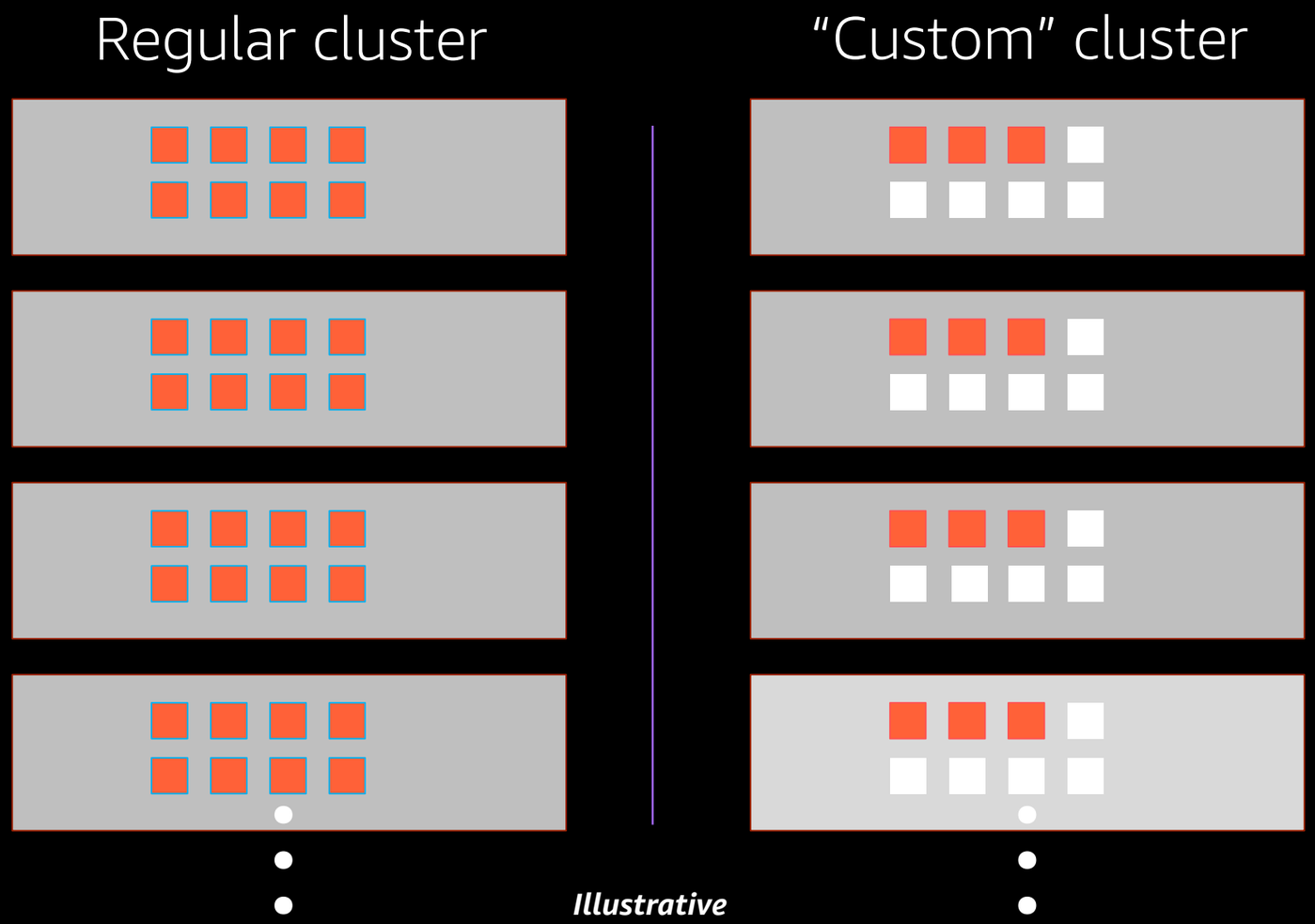
Infrastructure and security

In VMware Cloud on AWS, your data is securely encrypted by default

Seamless, centralized control over your encryption keys using AWS Key Management Service (AWS KMS) across environments now integrated with Vmware vSAN volume encryption



Custom CPU core counts

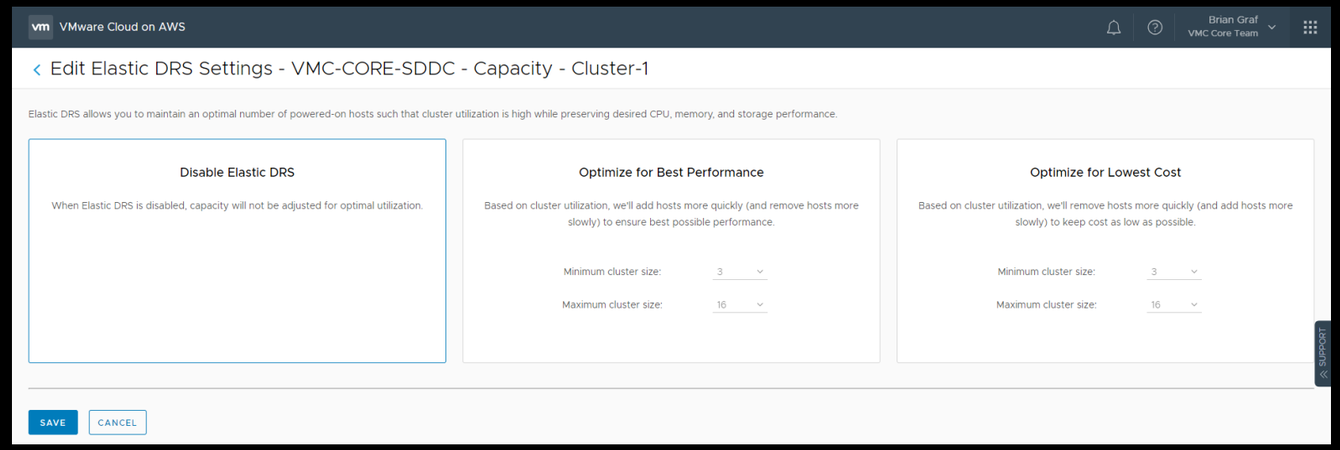


Reduce licensing costs

- Increased deployment flexibility
- Specify a lower number of CPU cores you need per host (applied cluster wide)
- Reduce costs for running applications licensed per core

Elastic DRS

Scaling hosts for on-demand requirements

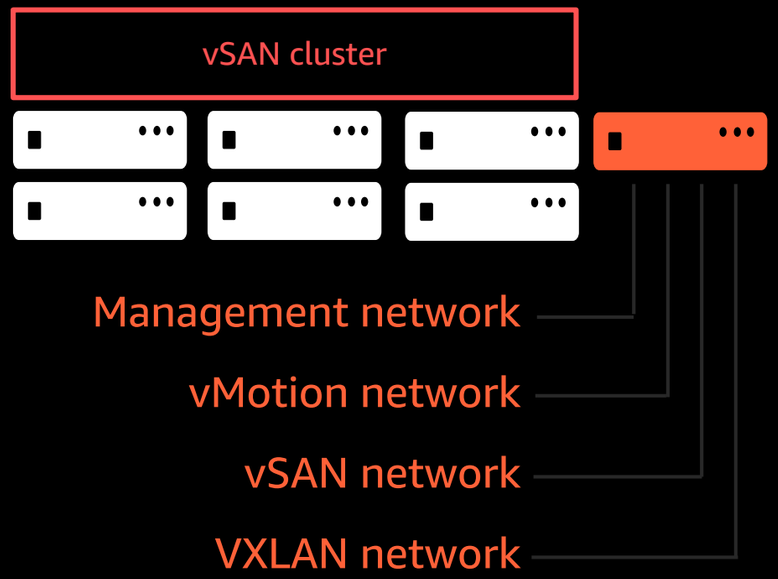


- Enabled at the cluster level
- Disabled by default
- Automatically scale cluster based on utilization
- Monitoring interval every five minutes
- Scales up when ANY resource crosses predefined threshold
- Scales down when ALL resources consistently remain below thresholds

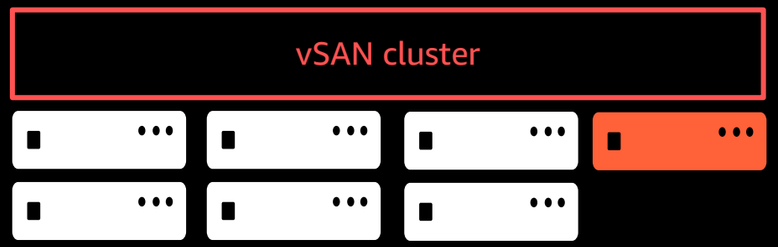
Automatic cluster configuration

1. Host is added

2. Automatic network configuration

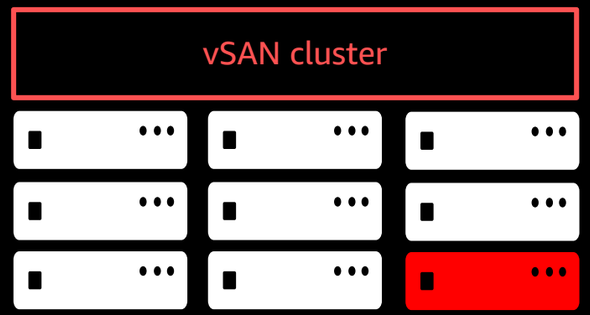


3. vSAN datastore capacity increase

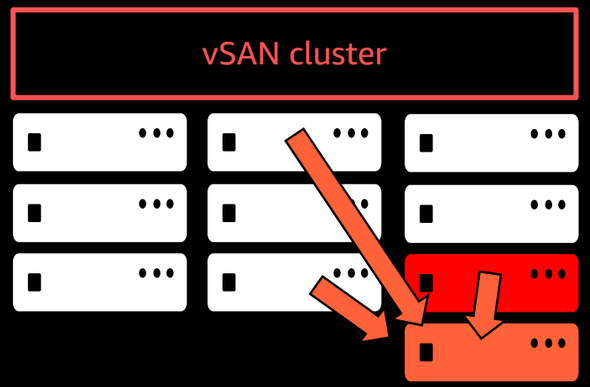


Automated hardware remediation

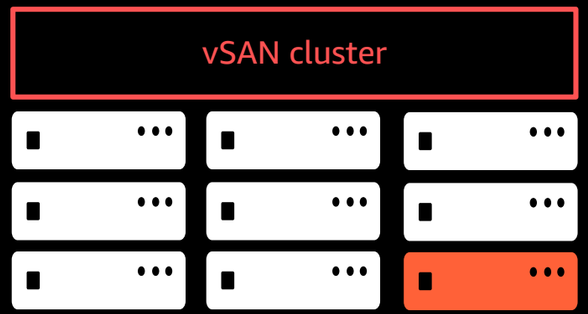
1. Host fails, or problem identified



2. New host added to cluster. data from problem host rebuilt, and/or migrated

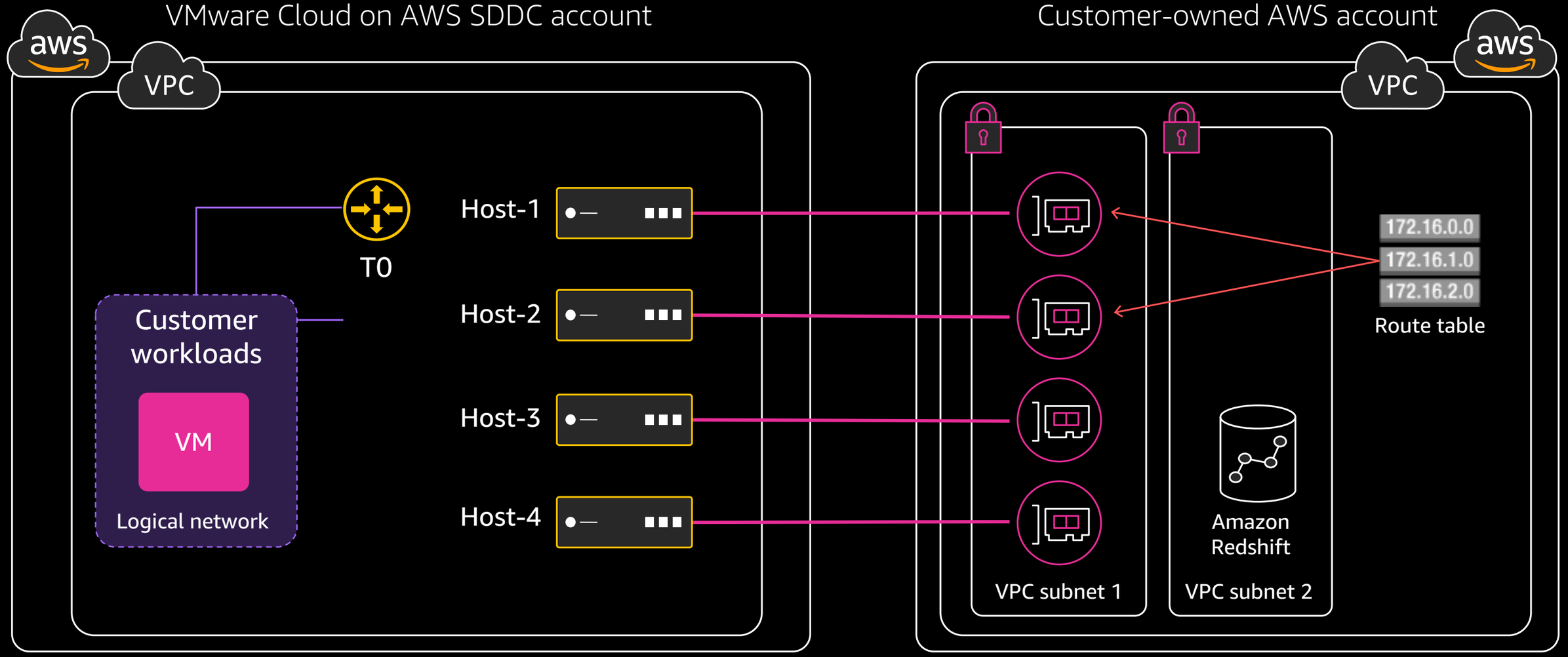


3. Previous host evacuated from cluster, fully replaced by new host

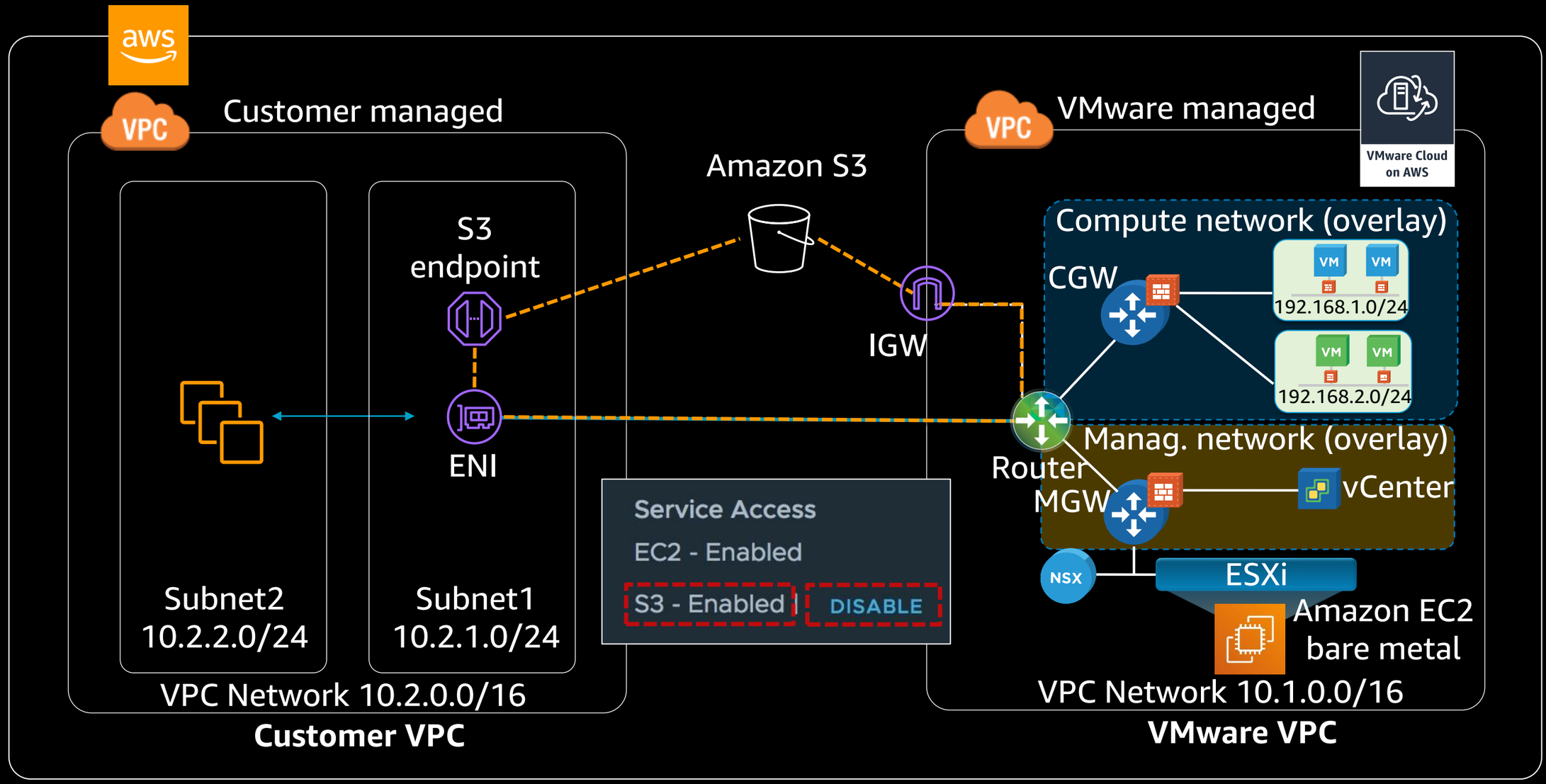


Integrating with native AWS services

AWS account connectivity



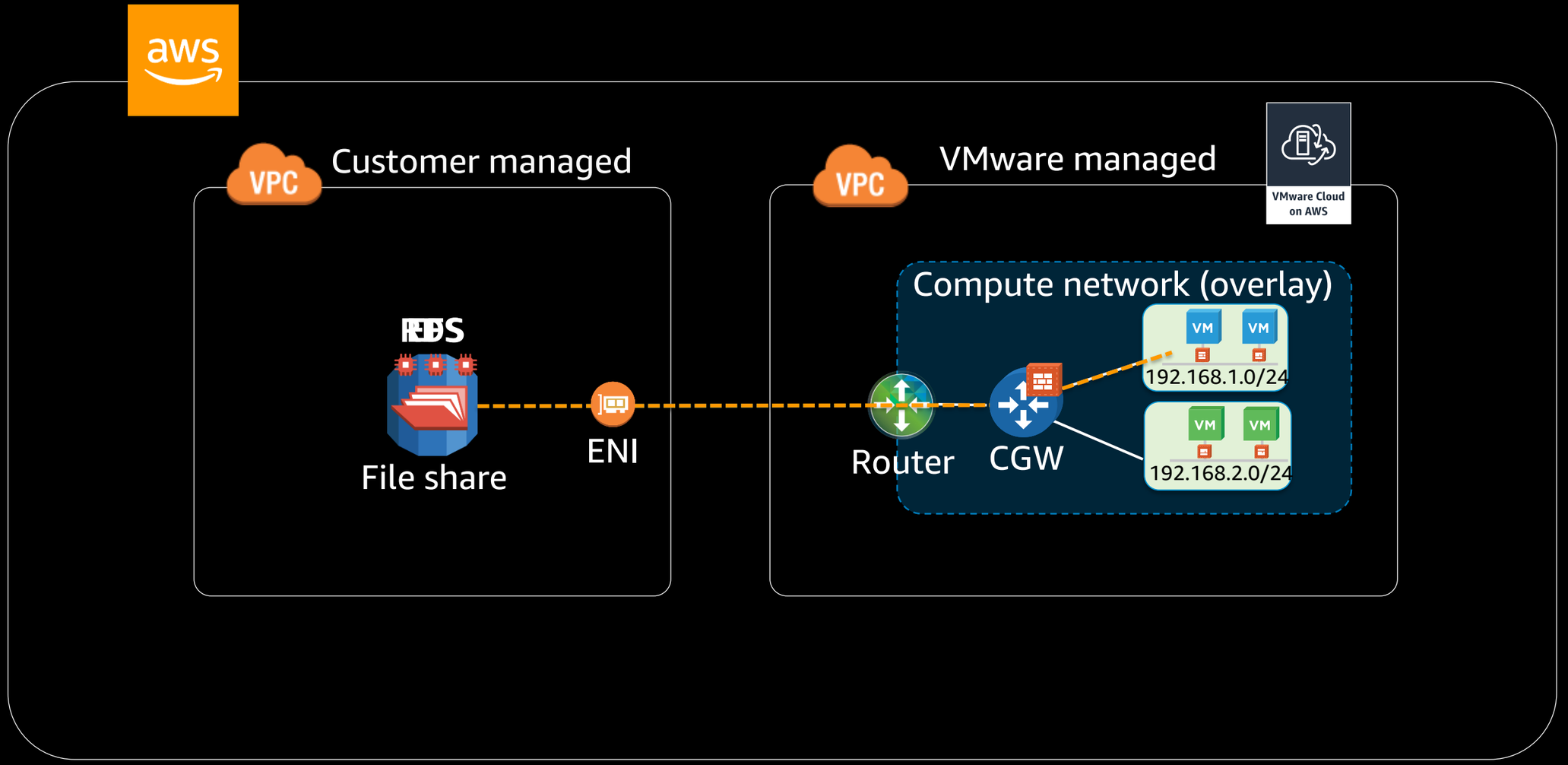
VPC gateway endpoint - Amazon S3



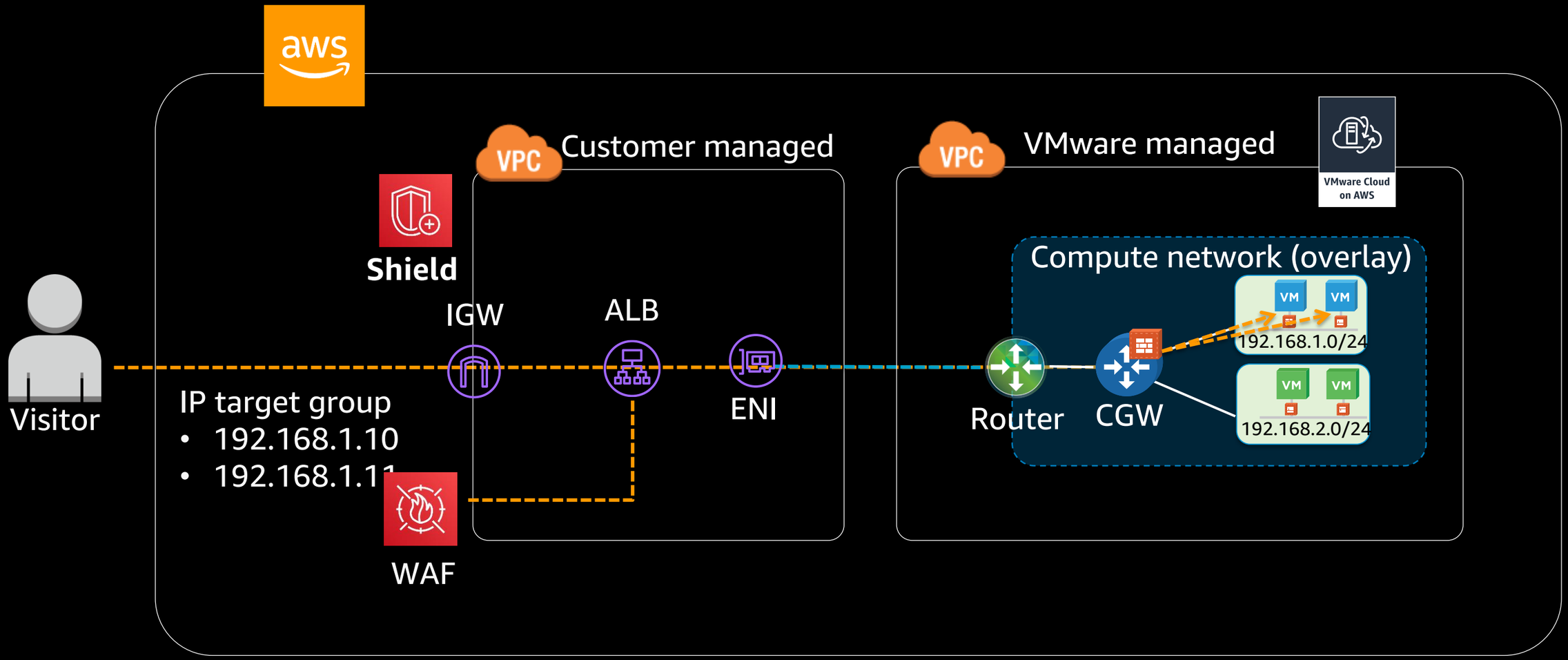
What services can be accessed using AWS PrivateLink?

- AWS services:
  - Amazon CloudWatch Logs
  - AWS CodeBuild
  - Amazon EC2 API
  - Elastic Load Balancing API
  - AWS Key Management Service
  - Amazon Kinesis Data Streams
  - AWS Service Catalog
  - Amazon SNS
  - AWS Systems Manager
  - And more…
- Endpoint services hosted by other AWS accounts
- Supported AWS Marketplace partner services

AWS services within a customer-managed VPC



Application protection using Amazon ALB



Get started with VMware Cloud on AWS!

VMware Cloud on AWS

What	Details	Learn more!
Hands-on lab	Test drive VMware Cloud on AWS in hosted environment	https://www.vmware.com/try-vmware/vmc-aws-hol-labs.html
Starter single-host SDDC	30-day trial period	http://vmwa.re/vmc1host

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Thank You