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On the fast track: Accelerated migration with VMware Cloud on AWS

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Cloud transformation is accelerating

57%

of customers are looking to migrate more workloads to the cloud*



59%

of customers want to optimize existing use of cloud (cost savings)



55%

Faster time to market for mature cloud adopters vs. on premises**

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*Source: Flexera 2022 State of the Cloud Report
**Source: McKinsey Quarterly 2021

VMware Cloud on AWS

DRIVEN BY 4 MAJOR USE CASES

Cloud migrations



Application-specific

Data center–wide

Infrastructure refresh

William HILL

Data center extension



Footprint expansion

On-demand capacity

Test/dev

PennyMac

Disaster recovery



Protect additional workloads

DR data center replacement

Add or modernize DR solutions

BRINKS

Next-generation applications



Application modernization

Next-gen application buildout

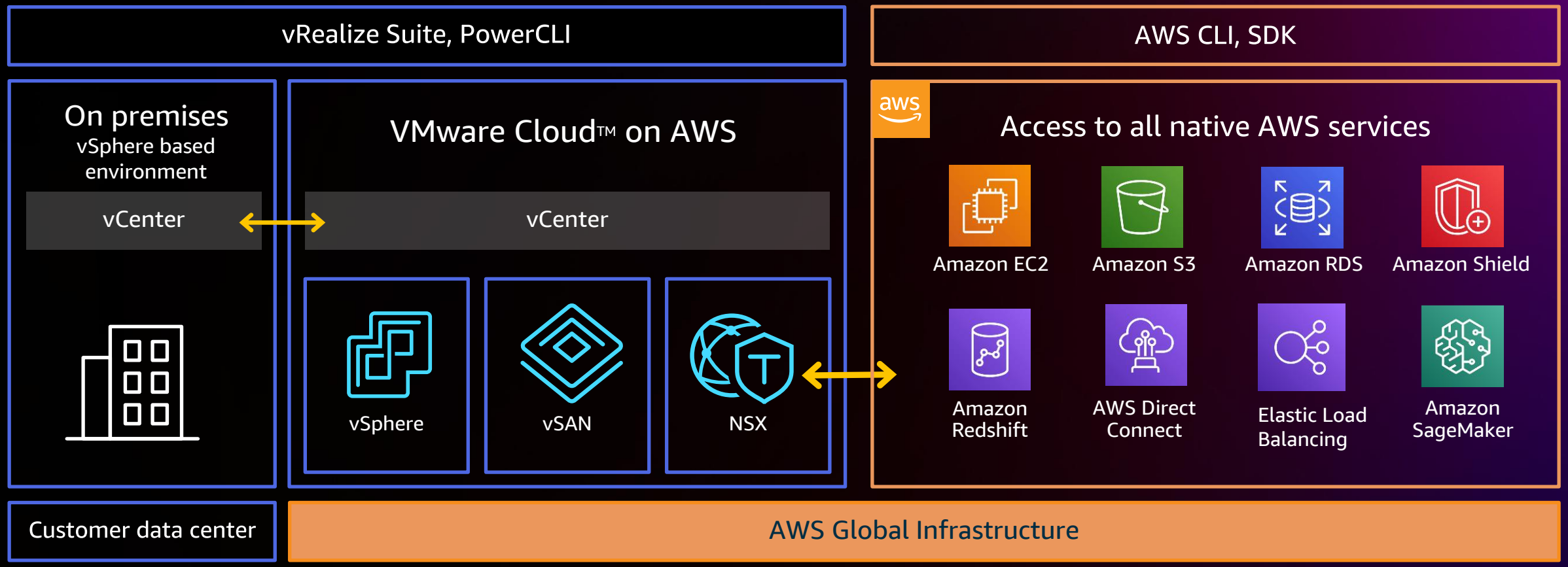
Enterprise workloads

S&P Global Ratings

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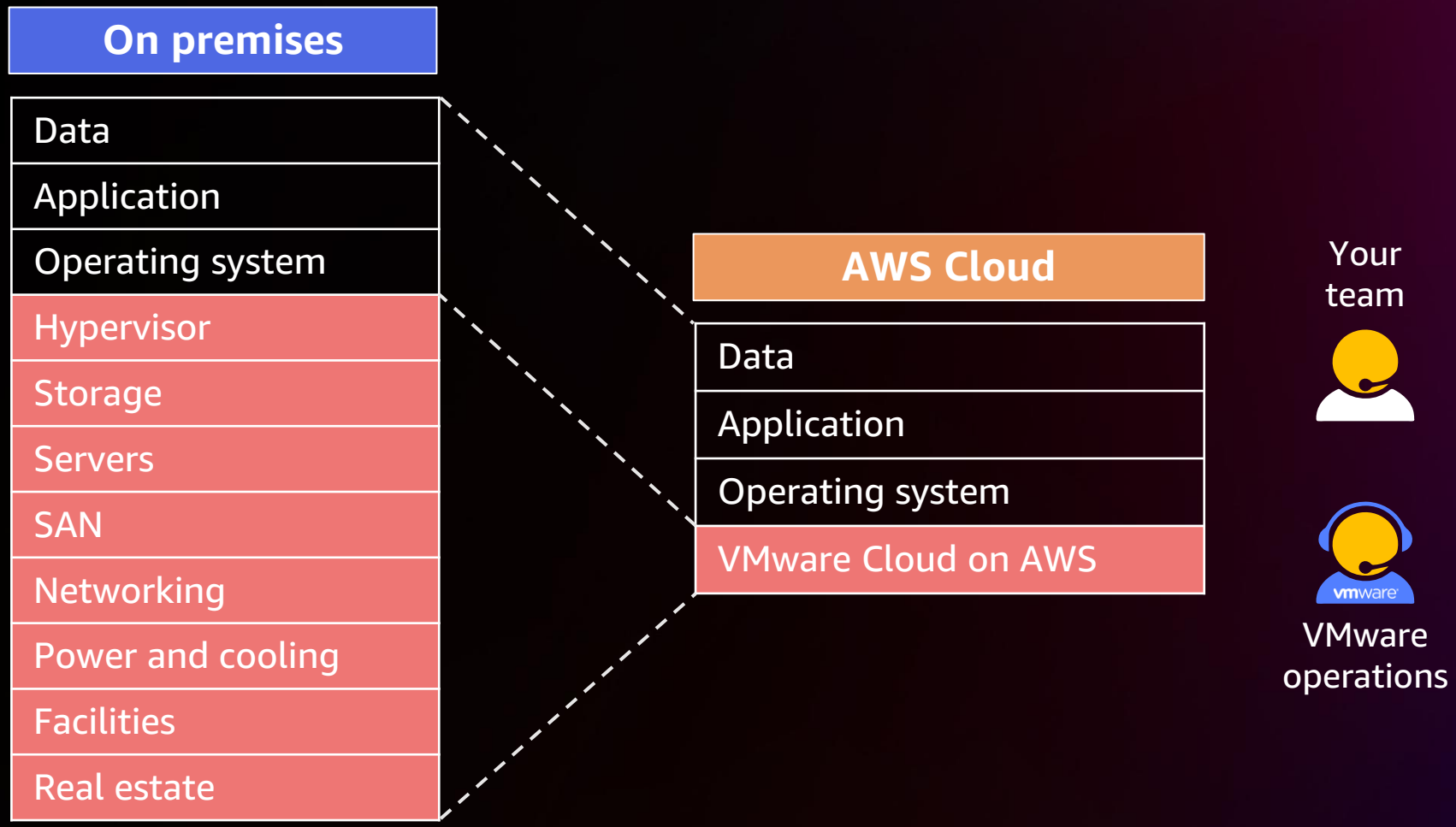
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VMware Cloud on AWS



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Reduce undifferentiated heavy lifting



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Benefits of VMware Cloud on AWS



Managed by VMware



Operational consistency



Workload portability



Native integration



Application modernization

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AWS global infrastructure



- VMware Cloud on AWS – 21 Launched Regions
- AWS Regions – 27 Launched Regions
- AWS Regions – 7 Announced Regions

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Storage options

			
	Primary storage	**Supplemental storage**	
	VMware managed	**VMware managed**	**AWS managed**
	Local Instance Storage powered by vSAN	**VMware Cloud Flex Storage**	**FSx For NetApp ONTAP**
Customer fit	HCI simplicity and straightforward consumption	VMware-managed and natively integrated storage service	NetApp data services and multi-protocol support for workload VMs
Scope	vSphere Cluster	SDDC	Multiple SDDCs/Orgs
SLA	Single-AZ 99.9% Multi-AZ 99.99%	Single-AZ 99.9%	Multi-AZ 99.99% Provided by AWS
Pricing	Per $/node	Per $/GiB	Priced on multiple line items

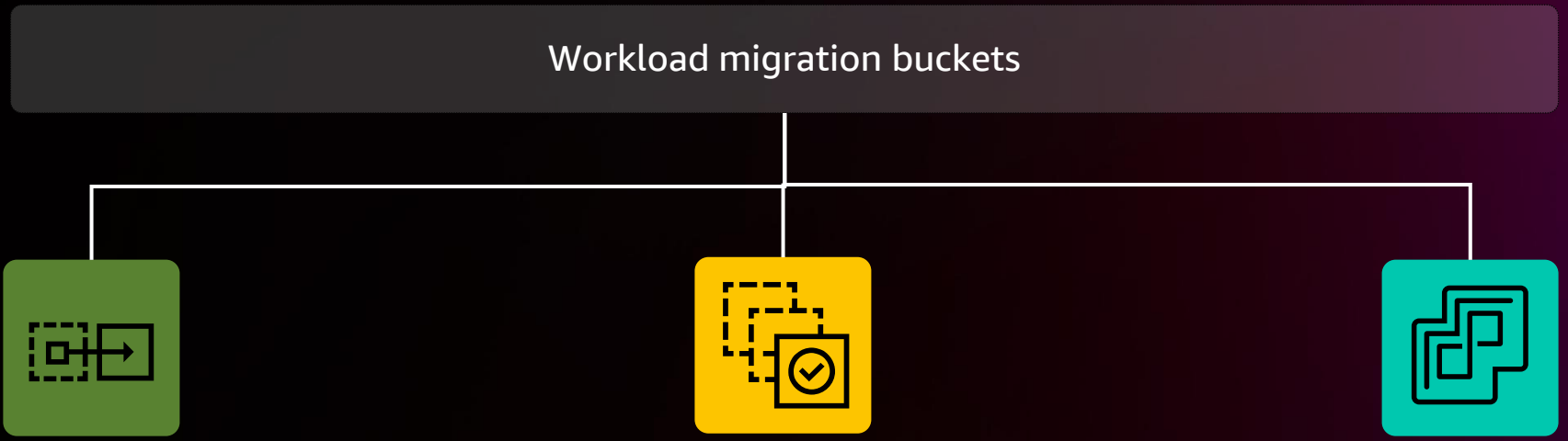
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Instances types and specifications

Typical use case	I3	I4i	I3en
	General purpose clusters	General purpose clusters next-gen	General purpose or storage bound clusters
Suitable for	Workloads with high transaction rates: • Databases used in OLTP • High-speed analytics	Workloads that need fast access to datasets on local storage: • Transactional databases • NoSQL databases • VDI workloads	Workloads with high storage capacity needs and high transaction rates: • NoSQL databases • Distributed File Systems • Data Warehouse with high random I/O
Compute			
CPU type	Intel Xeon E5-2686	Intel Xeon Ice Lake	Intel Xeon Cascade Lake
CPU cores	36 Cores @ 2.3GHz	64 cores @ 3.5 Ghz (128 HT Cores)	48 Cores @ 2.5GHz (96 HT cores)
Custom core count	8,16, 36	8, 16, 24, 30, 36, 48, 64	8, 16, 24, 30, 36, 48
RAM	512 GiB	1024 GiB	768 GiB
Storage			
Type	vSAN with local NVMe All Flash	vSAN with local AWS Nitro SSD	vSAN with local NVMe All Flash
Capacity & Optimization	~10.7 TiB (raw) Deduplication & Compression	~22.5 TiB (raw) Compression ONLY	~45.8 TiB (raw) Compression ONLY
Supplemental storage	AWS FSx for NetApp ONTAP or VMware Cloud Flex Storage		
Network			
Physical speed	25 Gbps	75 Gbps In-transit encryption on the NIC for east–west traffic	100 Gbps In-transit encryption on the NIC for east–west traffic

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Migration options



Downtime

Cold migration

HCX Cold Migration

Backup and Restore

OS Assisted Migration

Minimal downtime

HCX Bulk Migration

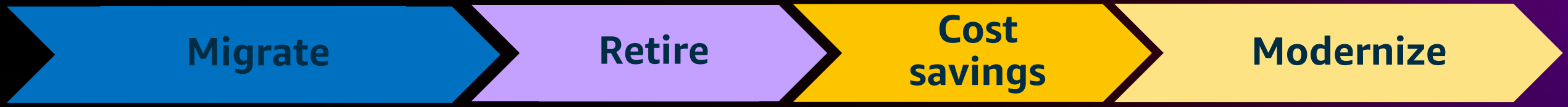
No downtime

vMotion

HCX vMotion

HCX Replication Assisted vMotion

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31%

Average infrastructure cost savings

62%

IT staff productivity boost

43%

Fewer security incidents per year

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Migrations with HCX

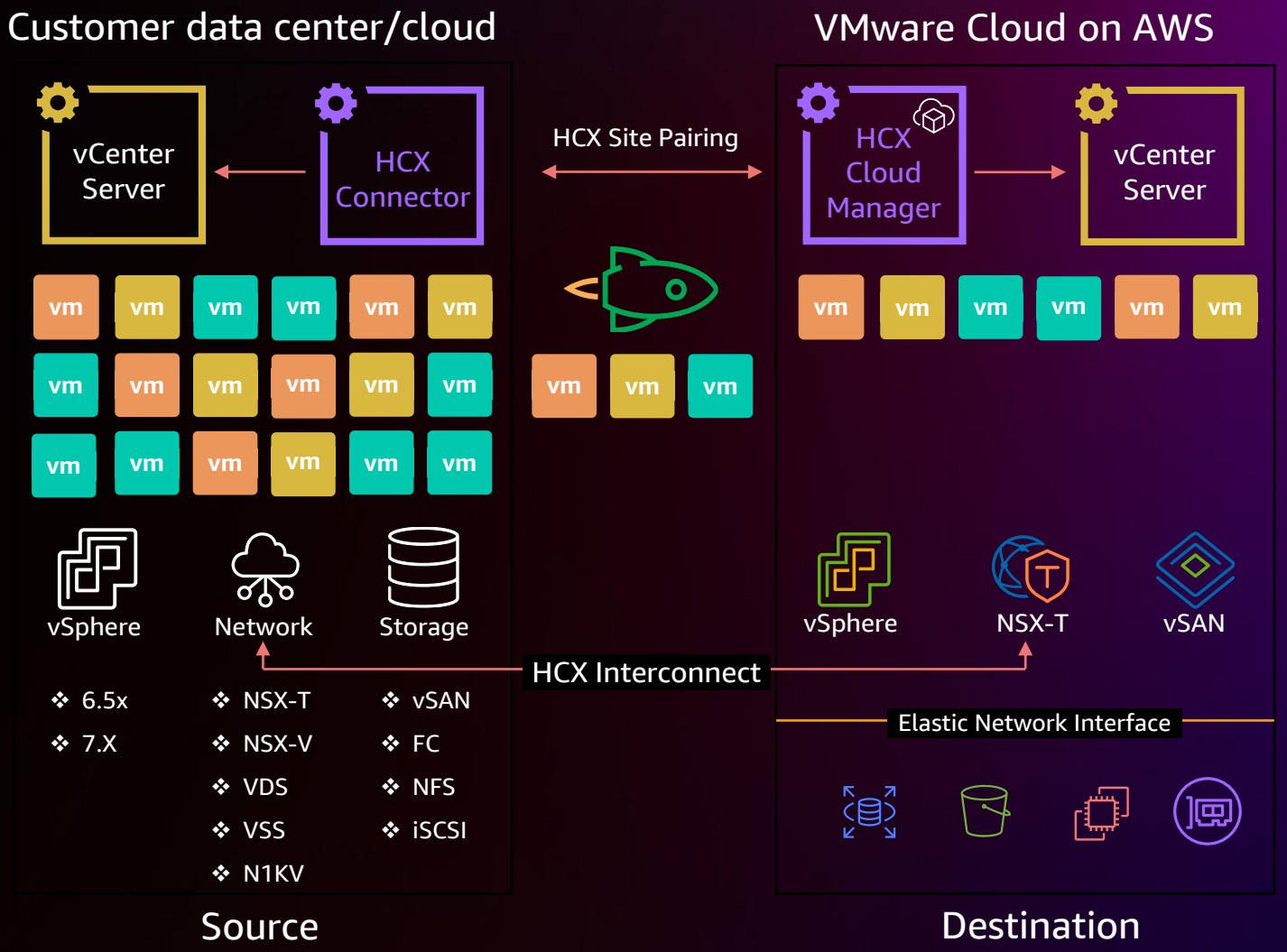
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HCX migration methods

HCX migration types

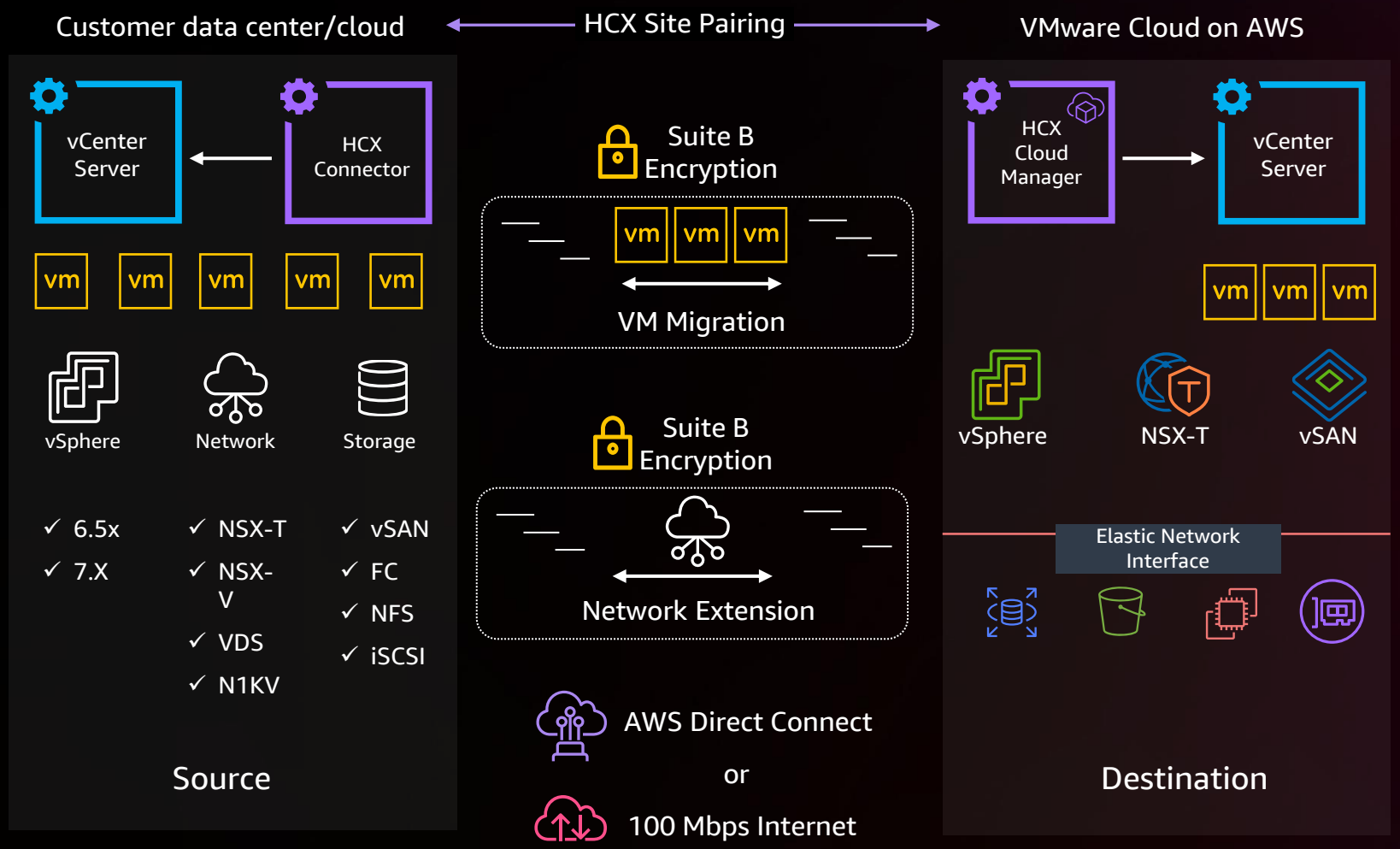
- Cold Migration = Downtime
- vMotion = No Downtime
- Bulk Migration = Minimal Downtime
- Replicated Assisted vMotion = No Downtime
- OS Assisted Migration = Conversion Downtime

* KVM / Hyper-V



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VMware Hybrid Cloud Extension™ (HCX) Service



Included with subscription for VMware Cloud on AWS

Supports vSphere 6.5x, 7.x (check interoperability)

Online and offline VM migration at scale options

Agnostic to on-premises vMotion network design

Built-in WAN optimization, de-dupe, and compression

Accessible via

- vSphere HTML5 plugin
- HCX standalone client
- HCX API & PowerCLI

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Migrations with HCX Demo

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Migrations without HCX

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Hybrid Migration with vMotion

Benefits

- Migrate virtual machines (VMs) in a running state without downtime
- Familiar, simple-to-use solution
- Can migrate back to on-premises environment



Key requirements

- On-premises installation of vSphere 6.7U2 or higher
- Hybrid Linked Mode
- AWS Direct Connect (DX)

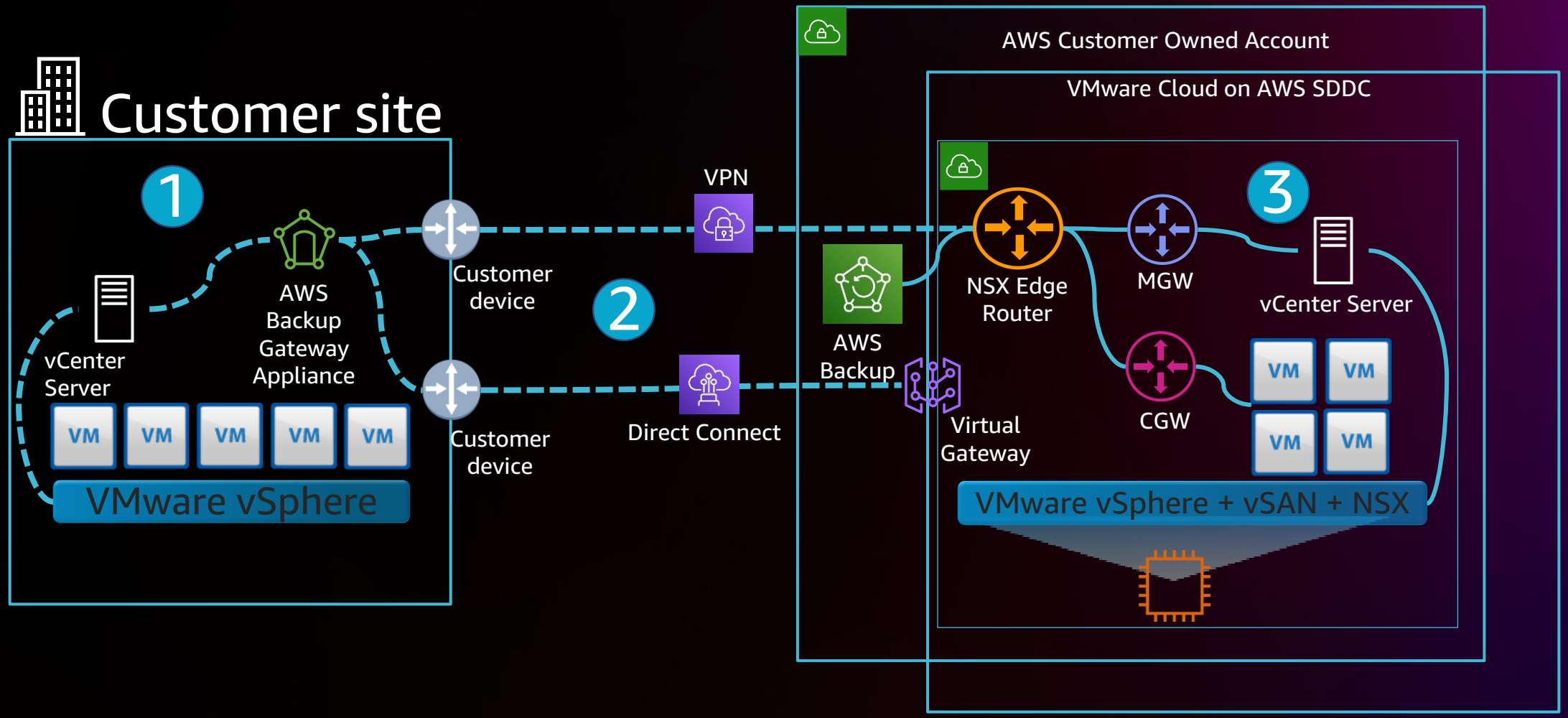
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Migrations using Backup & Restore

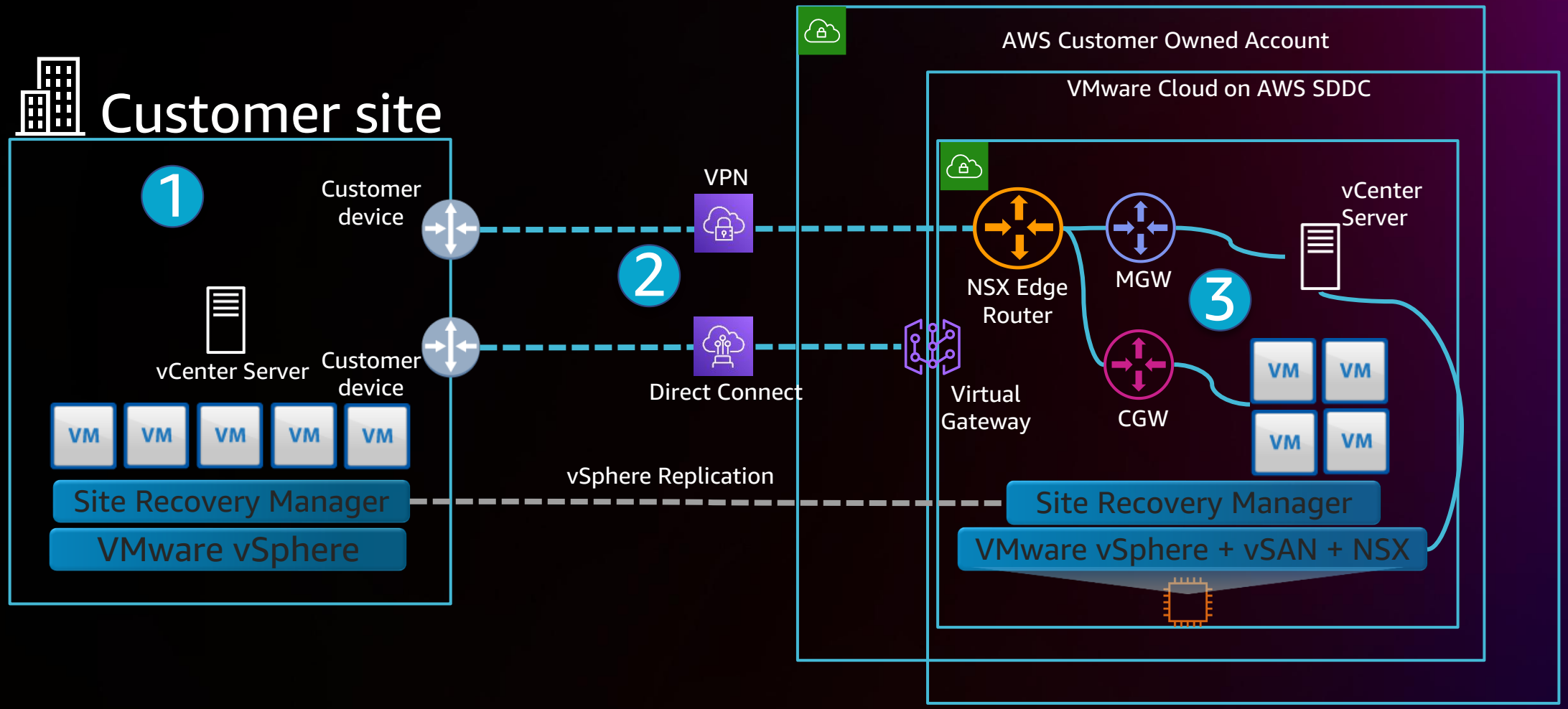
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AWS Backup & Restore for VMware Cloud on AWS



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VMware Site Recovery Manager (VSR)



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Selecting a migration option

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Recommendations for selecting a migration option



HCX

For its ease of use and advanced capabilities, HCX should be the default option for the majority of migrations



vMotion

Consider vMotion without HCX if migrating a handful of VMs and HLM is already in place



Backup and Restore

If HCX cannot be installed, or if on-premises VMs are already being backed up to AWS (e.g., using Amazon S3), consider a migration using backup and restore

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Additional resources

VMware Cloud on AWS

The Fastest, Safest Path for all your VMware Workloads

Migrating Workloads to VMware Cloud on AWS with Hybrid Cloud Extension (HCX)

VMware Cloud on AWS - Fundamentals - Hands-on Lab

AWS speakers, more resources are on the wiki

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Thank you!

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