

# Application Migrations Using AWS Server Migration Service (SMS)

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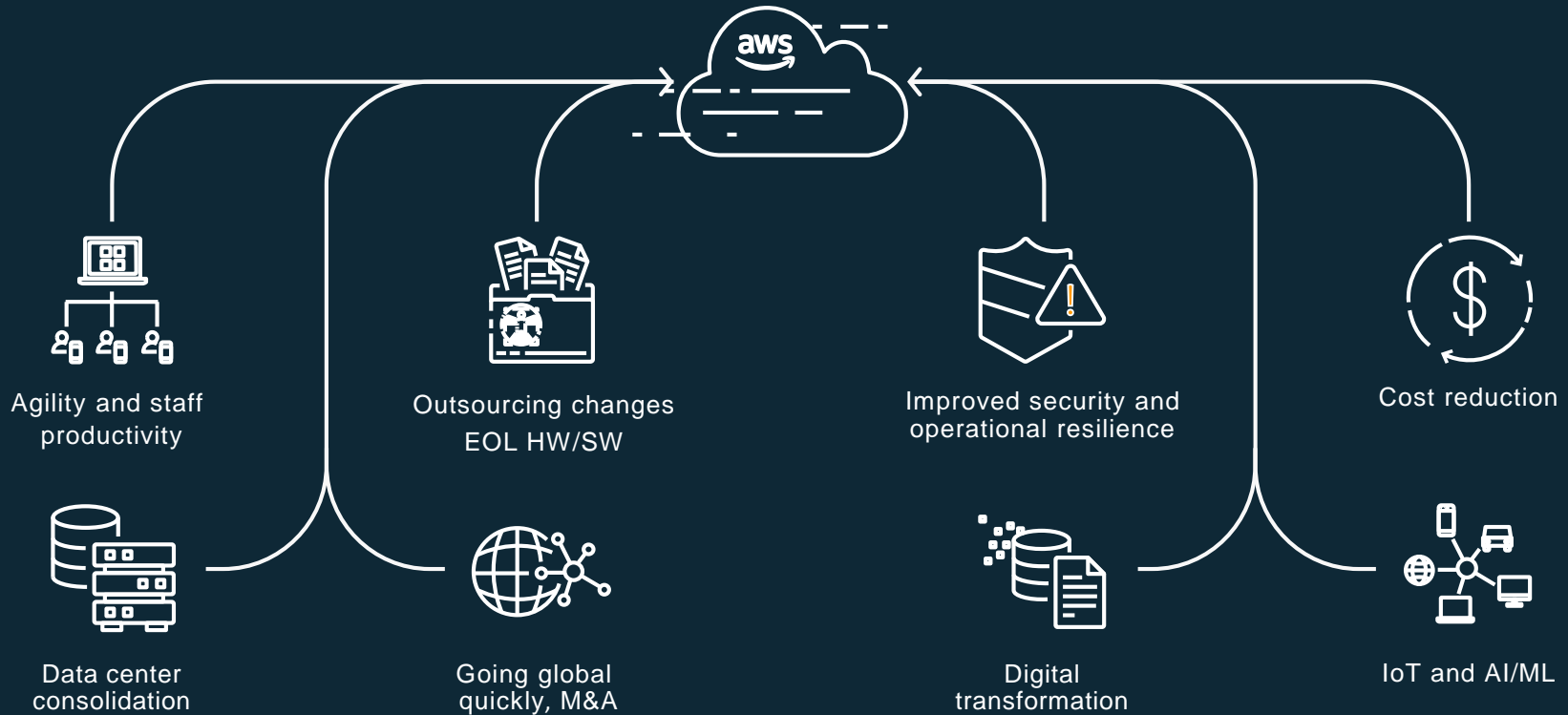
# Learning Objectives

- Cloud migration drivers, challenges, and services
- Learn how to migrate existing applications from on-premises VMWare, Hyper-V, or Microsoft Azure to AWS
- See a demonstration of migrating a multi-tiered Windows application from VMWare to AWS and launching it into AWS using the auto-generated AWS CloudFormation template
- See a demonstration of migrating a .NET application from Azure to AWS
- Discuss best practices and frequently asked questions



# Cloud Migration

# Business drivers for migrating to the cloud



# Migration process



# Common challenges of migrations

- Diverse infrastructure and OS types
- Legacy applications
- Complex databases
- Busy, continuously changing workloads
- Delays in approving installation of migration agents
- Machine compatibility issues
- Expensive specialized cloud skills required
- Downtime and performance disruption
- Tight project timelines and limited budgets

# AWS Migration Services

## Assessment

- TSO Logic
- AWS Cloud Value Framework

## Readiness & planning

- AWS Application Discovery Service
- AWS Control Tower
- AWS Landing Zone

## Migrations

- **CloudEndure Migration**
- **AWS Server Migration Service (SMS)**
- AWS Database Migration Service (DMS)
- AWS VM Import / Export
- AWS DataSync
- AWS Snow Family of Services
- AWS Transfer for SFTP

## Operations & Optimizations

- AWS Managed Services
- Amazon CloudWatch
- AWS Systems Manager
- AWS License Manager
- AWS CloudTrail

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AWS Migration Hub  
Partner Tools on AWS Marketplace

# Migration Services for Different Use Case

- **CloudEndure Migration**

- Agent-based migration to rehost a large number of machines quickly from multiple source platforms (physical, virtual, or another cloud) to AWS without worrying about compatibility, performance disruption, long cutover windows, or long distance data replications.

- **AWS Server Migration Service**

- Agentless migration of a large number of on-premises VMWare, Hyper-V, or Azure workloads to AWS

- **OTHER OPTION: vMotion for VMware Cloud on AWS**

- Quickly relocate hundreds of applications virtualized on vSphere to the AWS Cloud in just days, while maintaining consistent operations with your on-premises environments

- **OTHER USE CASE: CloudEndure DR:**

- Disaster recovery into AWS for minimal Recovery Point Objective (RPO) and Recovery Time Objective (RTO) for all applications, and to significantly reduce traditional disaster recovery expenses.



# AWS Server Migration Service (SMS)

An agentless service which makes it easy and fast for you to migrate thousands of on-premises VMWare, Hyper-V, or Azure workloads to AWS.

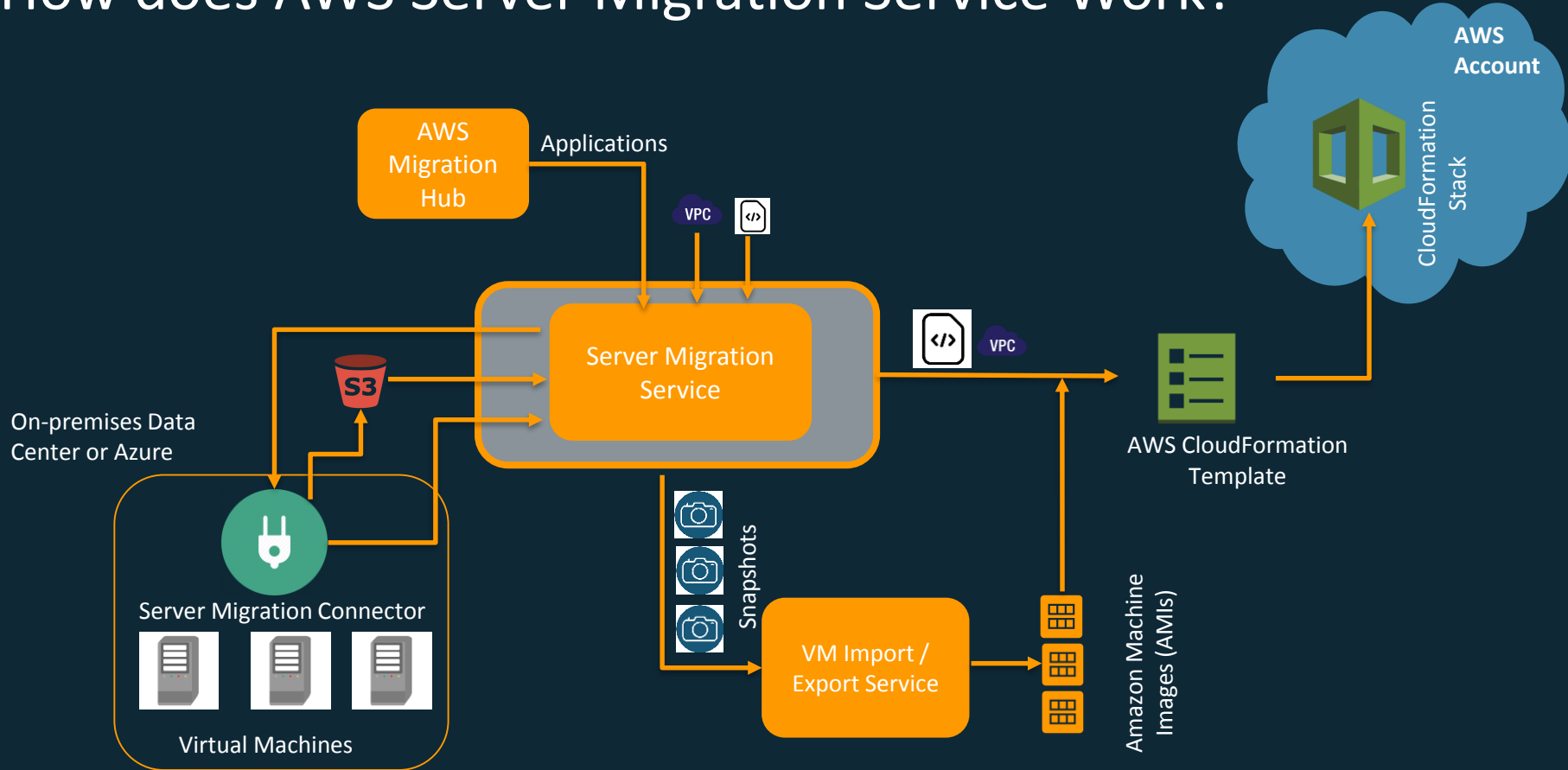
## Key Benefits

- Easy to get started and schedule migrations
- No dependency on agents deployment to migrate
- Incremental replication for fast migration with limited downtime
- Cost effective migrations with no additional cost to use the service

# Key features of AWS Server Migration Service

- Multi-server application migrations
- Encrypted Amazon Machine Image (AMI) migration support for HIPAA eligible, secure data transfer
- Integrated with AWS Migration Hub
- End-to-end automation of replication from on-premises server to AMI
  - Reduced manual efforts and speed up migration process significantly
- Incremental replication of live server volumes
  - Test server migrations iteratively until final cutover
  - Reduce downtime at cutover (support on-demand replication additionally)
  - Less network bandwidth consumption
- AWS Management Console based GUI
  - Transparency of the migration process

# How does AWS Server Migration Service Work?



# Demonstration 1: Setup Server Migration Connector and Import Server Catalog



# Demonstration 2: Migrate SharePoint from on-premises to AWS



# Demonstration 3: Migrate a .NET application from Azure to AWS



# Best Practices, Additional Resources, and FAQs

# Best practices

- Use VM Pre-requisites for migration readiness - [https://docs.aws.amazon.com/vm-import/latest/userguide/vmie\\_prereqs.html](https://docs.aws.amazon.com/vm-import/latest/userguide/vmie_prereqs.html)
- Deploy SMS Connector closer to hypervisor and deploy multiple connectors for scaling
- Migrate VMs in batches or group of servers as an application for optimal performance
- Use AWS PrivateLink with AWS Direct Connect to optimize data transfer



# Additional Resources

- **AWS Server Migration Service Documentation**
  - User Guide:  
<https://docs.aws.amazon.com/server-migration-service/latest/userguide/index.html>
  - API Reference:  
<https://docs.aws.amazon.com/server-migration-service/latest/APIReference/index.html>
  - AWS CLI Reference:  
<https://docs.aws.amazon.com/cli/latest/reference/sms/index.html>
  - Support for AMI Encryption  
<https://aws.amazon.com/about-aws/whats-new/2018/11/aws-server-migration-service-adds-support-for-ami-encryption/>
- **AWS Server Migration Service Blogs**
  - [How To Migrate Multi-Tier Environments Using The AWS Server Migration Service](#)
  - [AWS Server Migration Service – Server Migration to the Cloud Made Easy!](#)
- **CloudEndure**
  - Service Details: <https://aws.amazon.com/cloudendure>
  - Documentation: <https://docs.cloudendure.com>

# Start your migration journey to AWS



Learn more at <https://aws.amazon.com/server-migration-service/>

# Frequently Asked Questions

- What data does the AWS Server Migration Service Connector capture from VMware vCenter?
- What kind of servers can be migrated to AWS using AWS Server Migration Service?
- What operating systems does AWS Server Migration Service support?
- How long can I replicate my server volumes from on-premises to AWS?
- Where are my replicated server volumes stored?



# Questions & Answers

# Thank You!

<https://aws.amazon.com/server-migration-service/>

# Common business outcomes

Agility

Build and operate your **foundation for innovation**

Operational  
efficiency

Obtain substantial **cost savings**, freeing up resources to **focus on what differentiates your business**

Reduced risk

Migrate through a secure and proven approach that reduces IT risks by moving to a more **resilient IT model**

# Mint.com migrated to focus on building new products

“Data center management is **not our core business**.  
Our business is helping people improve their financial lives. We wanted to **focus more on delivering exceptional financial-management products** and less on managing the backend IT environment.”



—Sean McCluskey, Director of Application Development and Cloud Operations, Intuit Mint



**25%** cost reduction



**15%** improvement in DBA productivity



Failover scenarios now **1 min** vs. **30 min**



**Hours** vs. **weeks** to spin up new service