



Migration To AWS: The Foundation You Should Know For Digital Native Applications

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Why do customers migrate their application to AWS



Customers Choose to Migrate to AWS

Software and Internet

eCommerce

Fintech

Enterprise



Amazon Web Services (AWS) provides a **highly available, scalable, reliable, secure and cost efficient** global cloud infrastructure

Customer Benefits with AWS Cloud

Global,
Comprehensive
and Secure

Scalability

Global,
Breadth and Depth
of Services

Save time and
focus on business



"One of our metrics for success is the **reduction of time to deploy** within our teams. We use this method to launch applications pretty quickly compared to a traditional deployment. Moreover, **reducing the cost of a rollback to zero means we can be fearless with deployments.**"

Murari Gopalan
Technology Director
Expedia

UK retailer **Shop Direct** needed to ensure website **availability**. By moving its e-commerce platform to AWS, the company, which sees 880,000 unique visitors/day, can **scale with demand** and has improved availability. In 2013, the company handled record **Black Friday orders of nearly 10,000 orders/hour.**

Andy Wolfe
CIO
Shop Direct

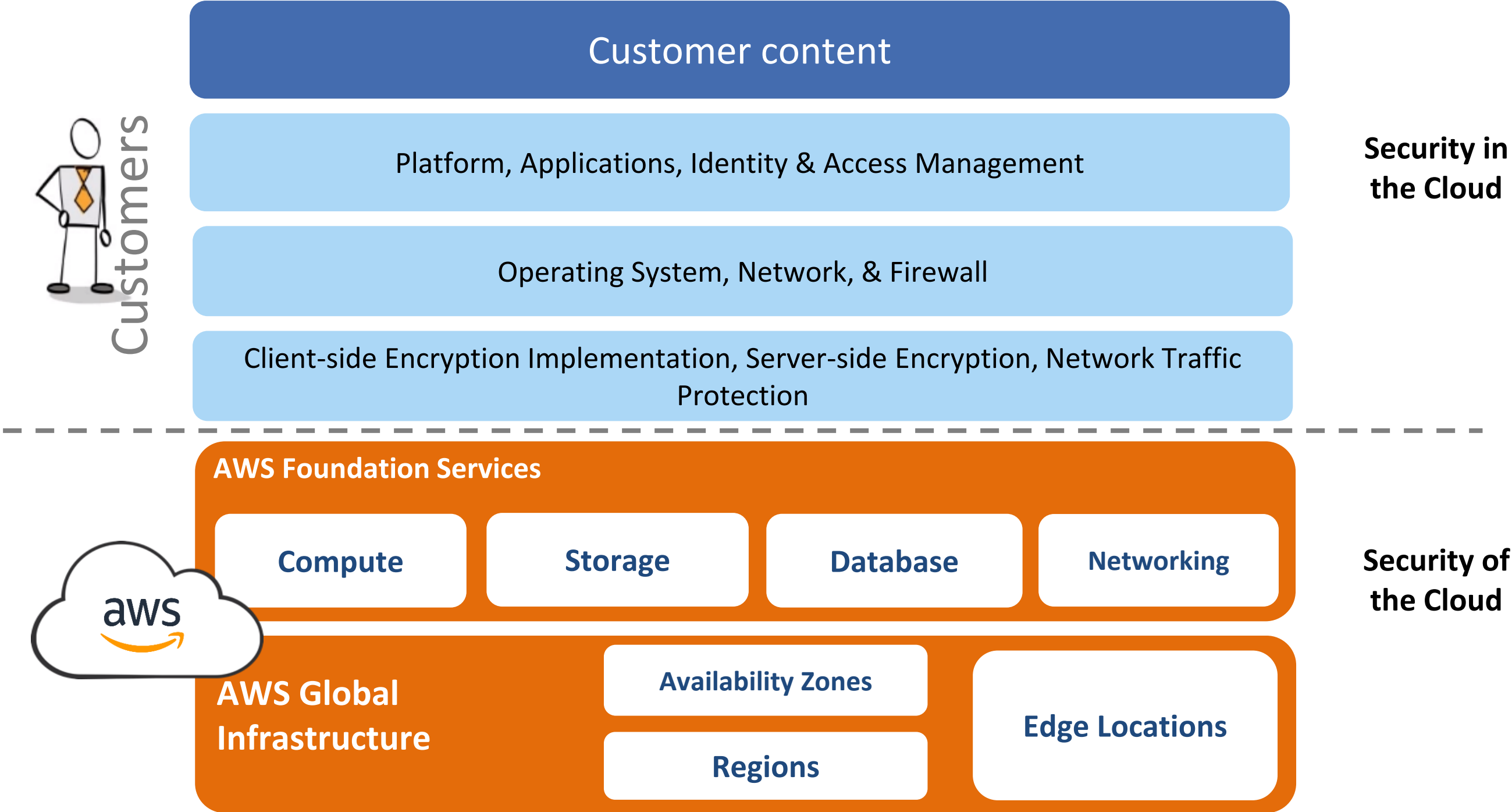
The San Francisco-based Airbnb began operation in 2008 and currently has hundreds of employees **across the globe** supporting property rentals in nearly **65,000 cities in 191 countries**

Mike Curtis,
VP of Engineering
airbnb

"Using AWS has **saved hundreds of hours** in IT staff time and enabled us to use our engineers' time more strategically. We can deploy our team members on more strategic, **revenue-generating projects** rather than configuring servers and undertaking backup and maintenance activities" says Lee.

Happy Lee
Chief Product Officer,
91App

Shared Responsibility Model



Business drivers for migrating to the cloud



Benefits as seen across thousands of migrations

31%

Average infrastructure
cost savings

7x

Fewer
downtime hours

62%

IT staff
productivity boost

3x

More features
delivered per year

Sources: IDC, AWS Analysis

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Why use AWS to migrate your workloads?



Most migration experience

Over a million active customers; leading brands migrate to AWS



Most comprehensive and mature migration tools

AWS migration tools, as well as mature third-party migration tooling ecosystem to simplify and accelerate each step of the migration process



Broad partner ecosystem

80+ Migration certified partners, ISVs, and system integrators to help customers assess, mobilize and execute their cloud migration



Most complete migration solutions

Set of programs and solutions to accelerate your cloud journey



Migrated ~5,500 instances in 9 months, reduced storage costs by 50% and compute costs by 20%, and sped up provisioning 10x from 4 weeks to 2 days



Migrated more than 600 workloads to AWS in under 14 months, including some Unix to Linux conversions, driving year-over-year cost reduction, and cut processing time from 36 hours to 10 seconds



Releases over 50+ deployments per hour

Why Do Customers Find It Hard To Start Migrations?

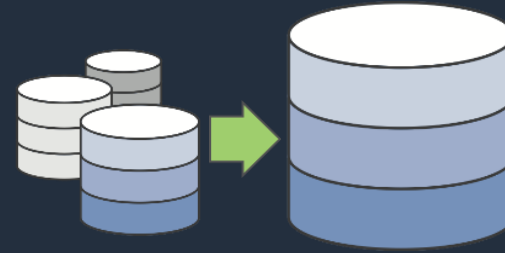
“Fear of the Unknown”



Outdated server
and application
inventory



Unsupported
Applications



Undefined
Process &
Migration Plan



Lack of a
definitive
Business Case

What AWS services involved in the migration to AWS



Migration process



Assess

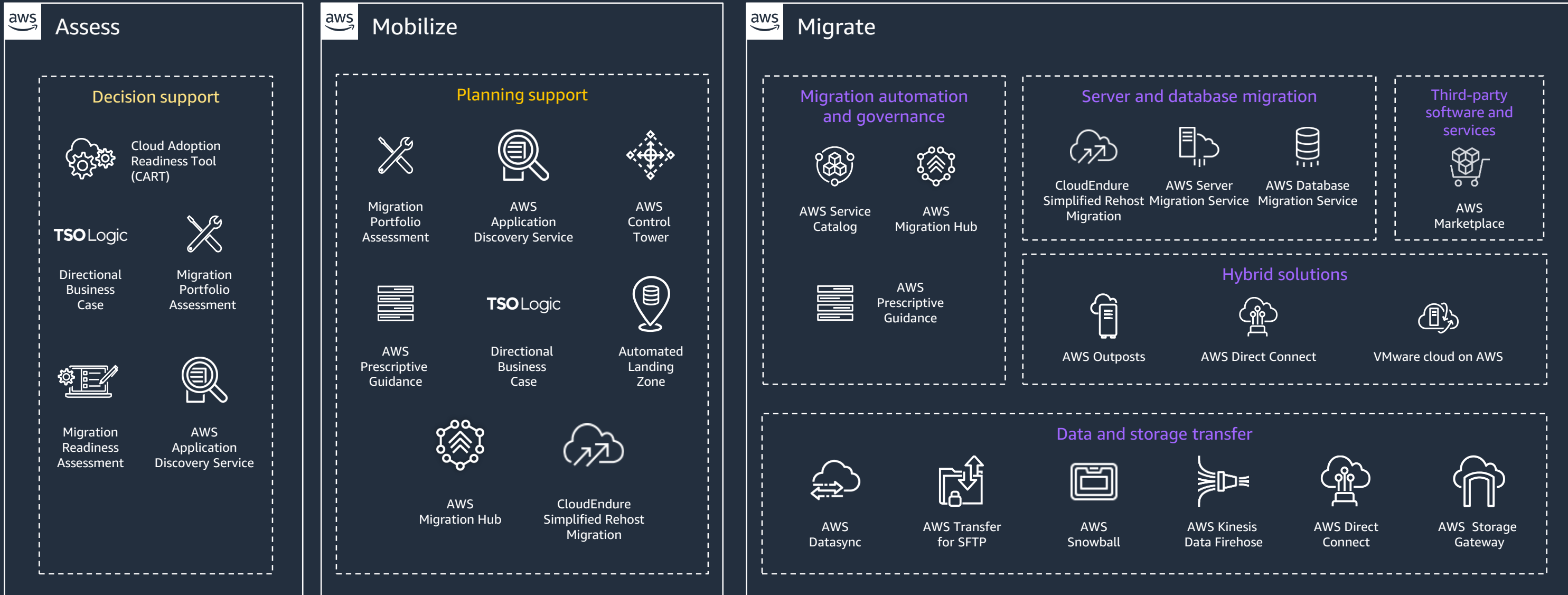


Mobilize



Migrate & modernize

Broadest and deepest set of capabilities to accelerate your migration

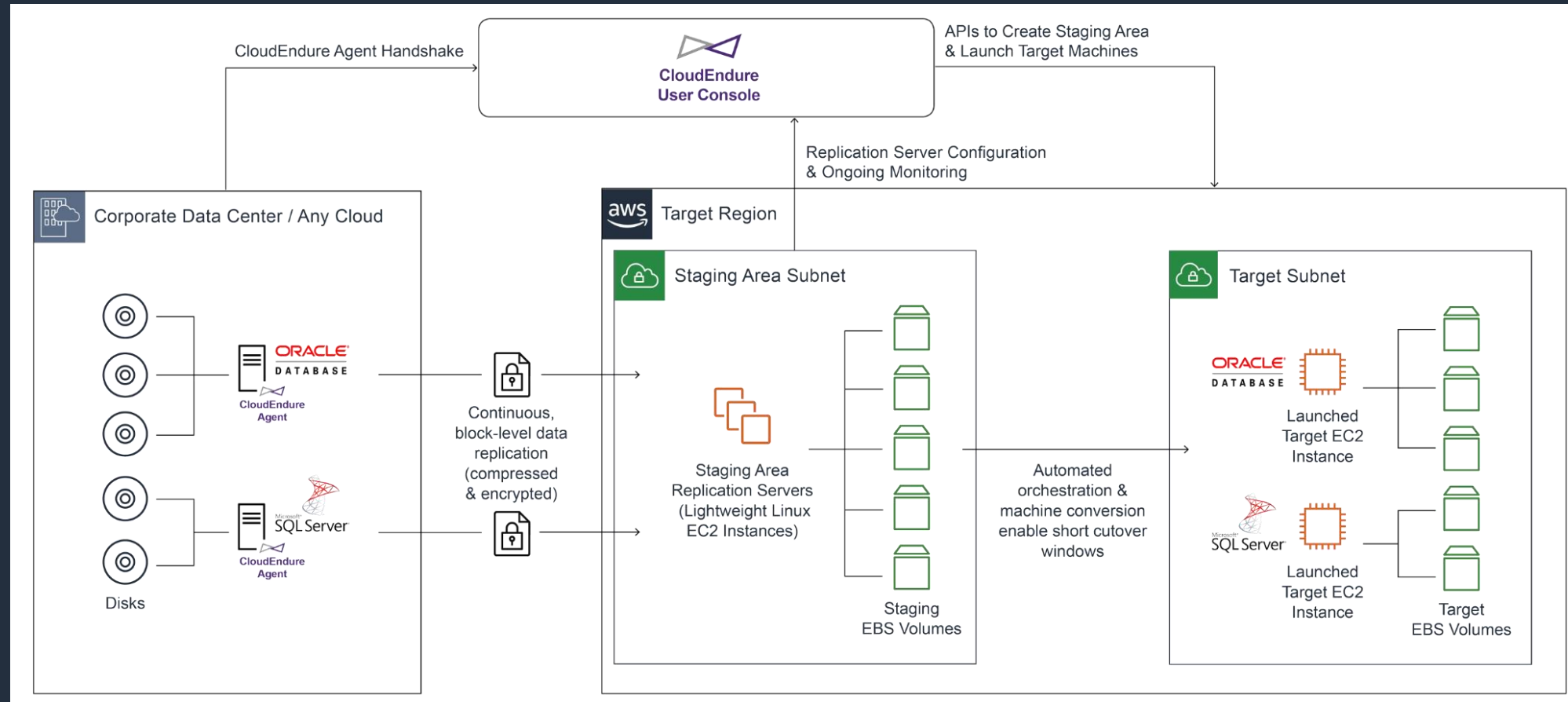


Simplify and accelerate migration with CloudEndure Migration

Continuously replicates any application or database from any source into AWS

Business outcome: self-service, rapid, reliable migration with minimal business disruption

CloudEndure Migration is **free** to all AWS customers



Simplify and accelerate migration with AWS Database Migration Service

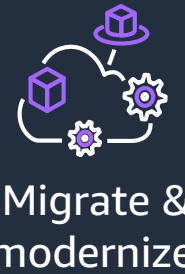


- Start your first migration in **10 minutes or less**
- Keep your **apps running** during the migration
- **Replicate** from within, to, or from AWS
- Move data to the same or **different database** engine

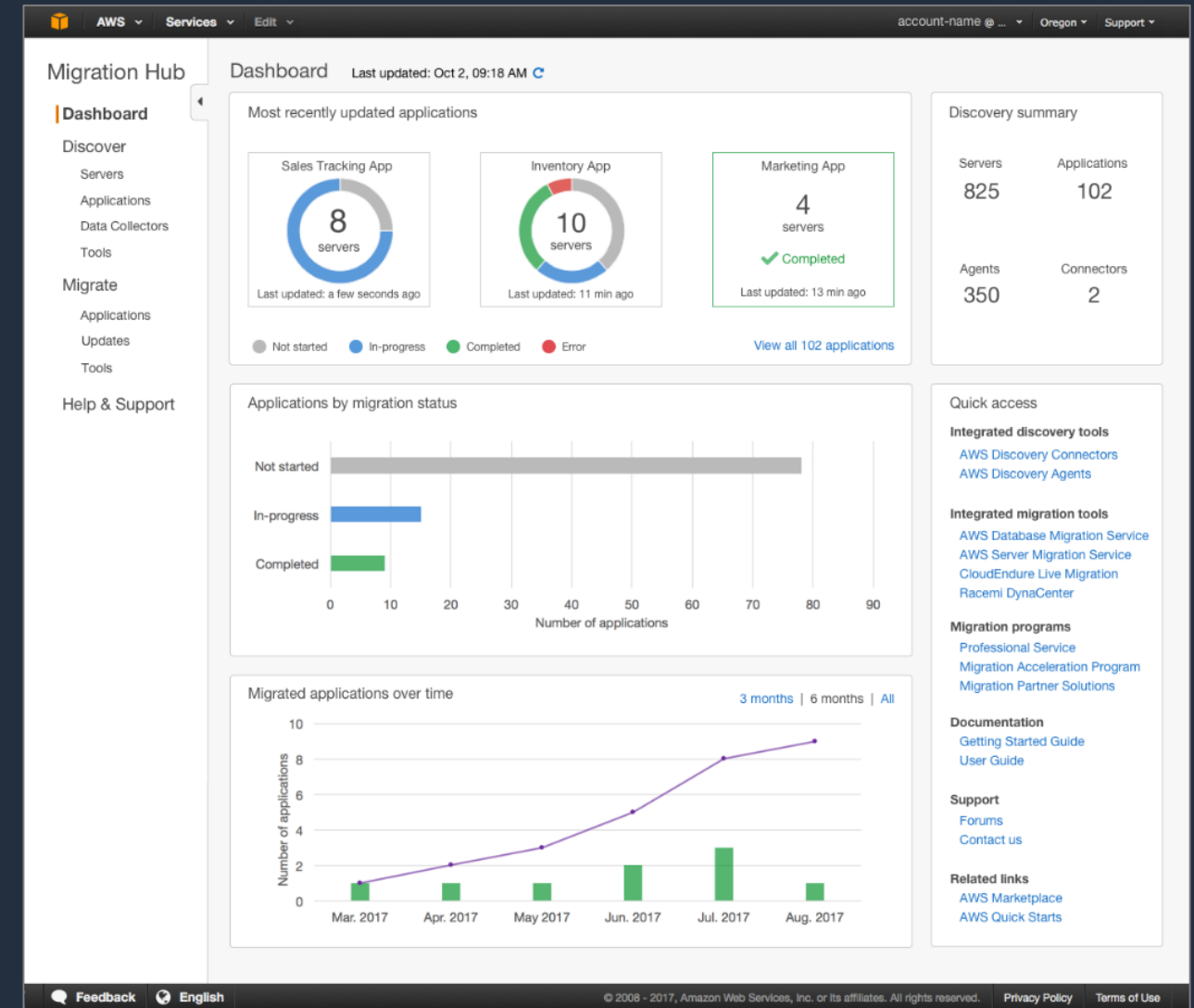
Sources*	Targets*
Oracle	Oracle
SQL Server	SQL Server
Azure SQL	PostgreSQL
PostgreSQL	MySQL
MySQL	Amazon Redshift
SAP ASE	SAP ASE
MongoDB	Amazon S3
Amazon S3	Amazon DynamoDB
IBM DB2	Amazon Kinesis
	Amazon ElasticSearch

Consult [CHAP_Source.html](#) and [CHAP_Target.html](#) pages for latest DMS sources and targets

Track and manage your migration with AWS Migration Hub



- ➔ Track the migration status of your applications across multiple tools in one place
- ➔ Discover using AWS ADS or Import discovery data from existing sources
- ➔ Use the migration tools that best fit your needs—AWS or Partner tools integrated
- ➔ Available to all AWS customers at no additional charge



AWS services and Demo on common customer questions and scenario



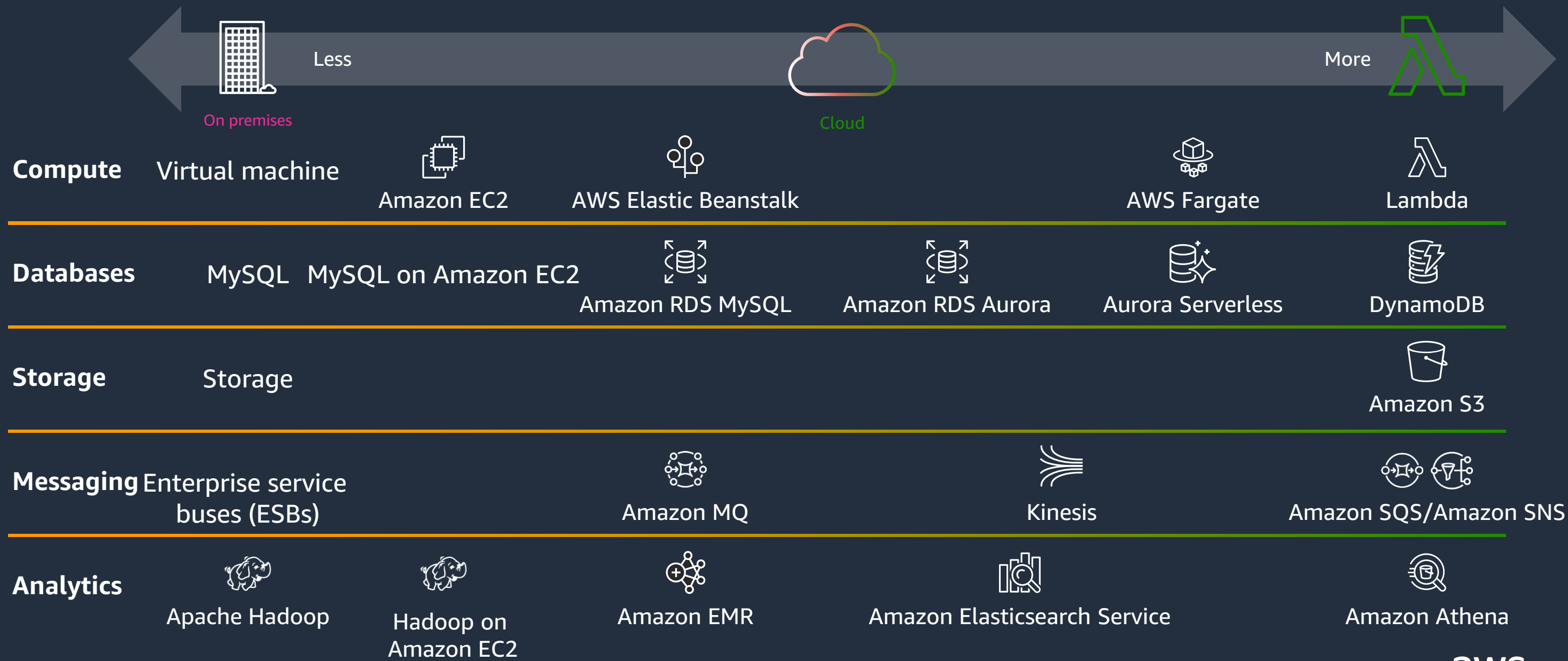
1. How my e-commerce site scale to handle traffic spike in the event of Marketing campaigns such as Black Friday?

How my e-commerce site scale to handle traffic spike in the event of Marketing campaigns such as Black Friday?

- Use Route53
 - Use Route 53 to configure DNS failover for your load balancer
- Leverage Elastic Load Balancing
 - Automatically distribute incoming application traffic across multiple instance with least outstanding requests routing algorithm
- Use Auto Scaling Group with multiple instance type
 - Leverage EC2 fleets to launch a fleet of instances that spans EC2 instance types and Availability Zones
- Boosting DB performance with Amazon ElastiCache
- Leverage Aurora
 - use Aurora Auto Scaling to automatically add or remove Aurora Replicas in response to changes in performance metrics
 - Enable performance insights to illustrate the database's performance and help analyse any issues that affect it.
- Monitoring with Cloudwatch
 - Set up notification and Run command from Cloudwatch Events
 - Set up Cloudwatch Synthetics to monitor sites, API endpoints, web workflows, and more

2. How do developers leverage AWS to focus on application as business scales?

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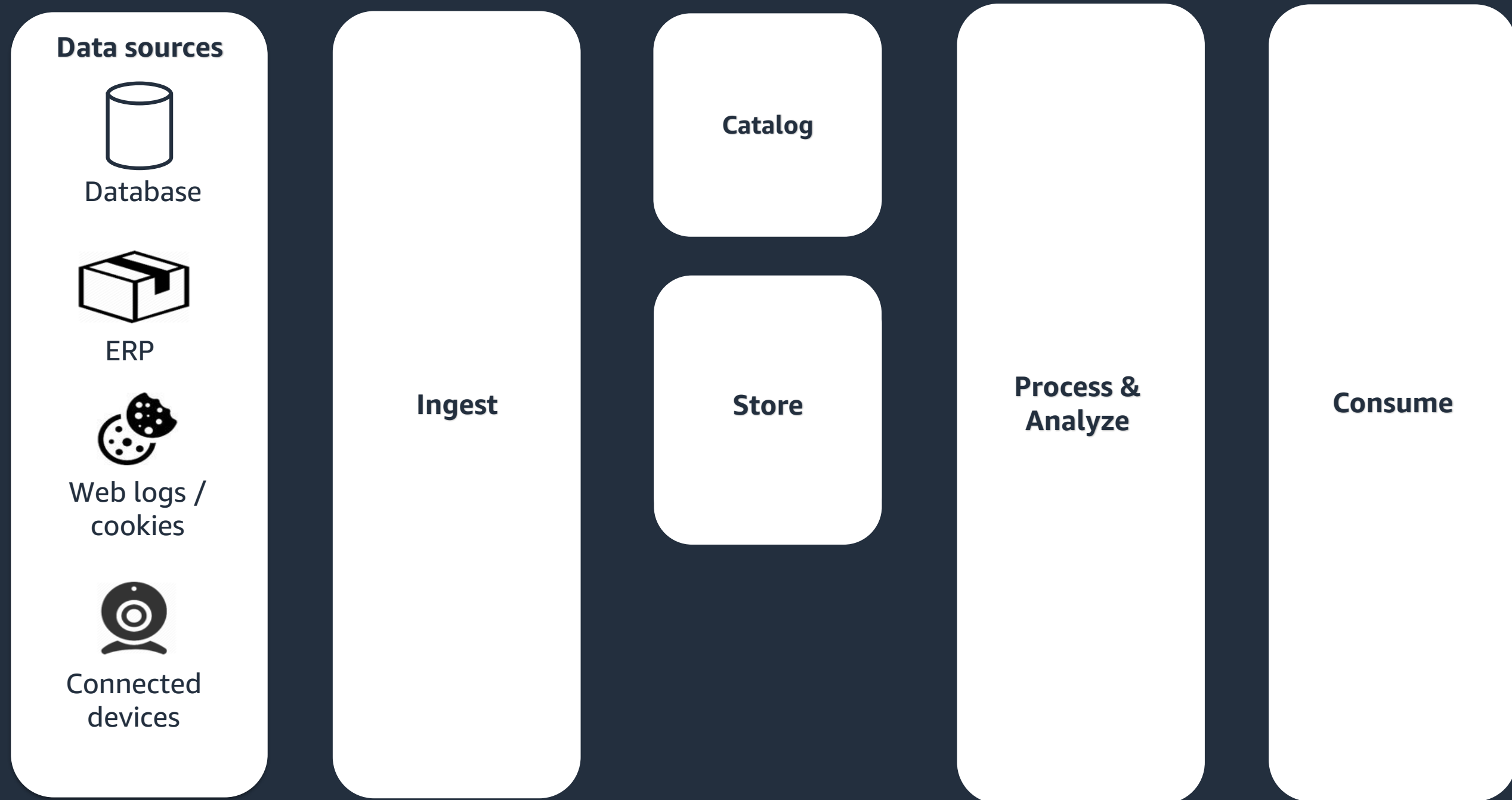


Comparison of operational responsibility

	AWS manages	Customer manages
Lambda Serverless functions	<ul style="list-style-type: none">• Data source integrations• Physical hardware, software, networking, and facilities• Provisioning	<ul style="list-style-type: none">• Application code
Fargate Serverless containers	<ul style="list-style-type: none">• Container orchestration, provisioning• Cluster scaling• Physical hardware, host OS/kernel, networking, and facilities	<ul style="list-style-type: none">• Application code• Data source integrations• Security config and updates, network config, management tasks
Amazon ECS/Amazon EKS Container-management as a service	<ul style="list-style-type: none">• Container orchestration control plane• Physical hardware software, networking, and facilities	<ul style="list-style-type: none">• Application code• Data source integrations• Work clusters• Security config and updates, network config, firewall, management tasks
Amazon EC2 Infrastructure-as-a-service	<ul style="list-style-type: none">• Physical hardware software, networking, and facilities	<ul style="list-style-type: none">• Application code• Data source integrations• Scaling• Security config and updates, network config, management tasks• Provisioning, managing scaling and patching of servers

3. What AWS services support on our business ML/AI initiatives?

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What AWS services support on our business ML/AI initiatives?



The AWS ML Stack

Broadest and most complete set of machine learning capabilities









AI SERVICES

VISION	SPEECH		TEXT			SEARCH	CHATBOTS	PERSONALIZATION	FORECASTING	FRAUD	DEVELOPMENT	CONTACT CENTERS
Amazon Rekognition	Amazon Polly	Amazon Transcribe <small>+Medical</small>	Amazon Comprehend <small>+Medical</small>	Amazon Translate	Amazon Textract	Amazon Kendra	Amazon Lex	Amazon Personalize	Amazon Forecast	Amazon Fraud Detector	Amazon CodeGuru	Contact Lens <small>For Amazon Connect</small>

ML SERVICES

	Ground Truth	AWS Marketplace for ML	SageMaker Studio IDE							Neo	Augmented AI
			Built-in algorithms	Notebooks	Experiments	Processing	Model training and tuning	Debugger	Autopilot	Model hosting	Model Monitor

ML FRAMEWORKS & INFRASTRUCTURE

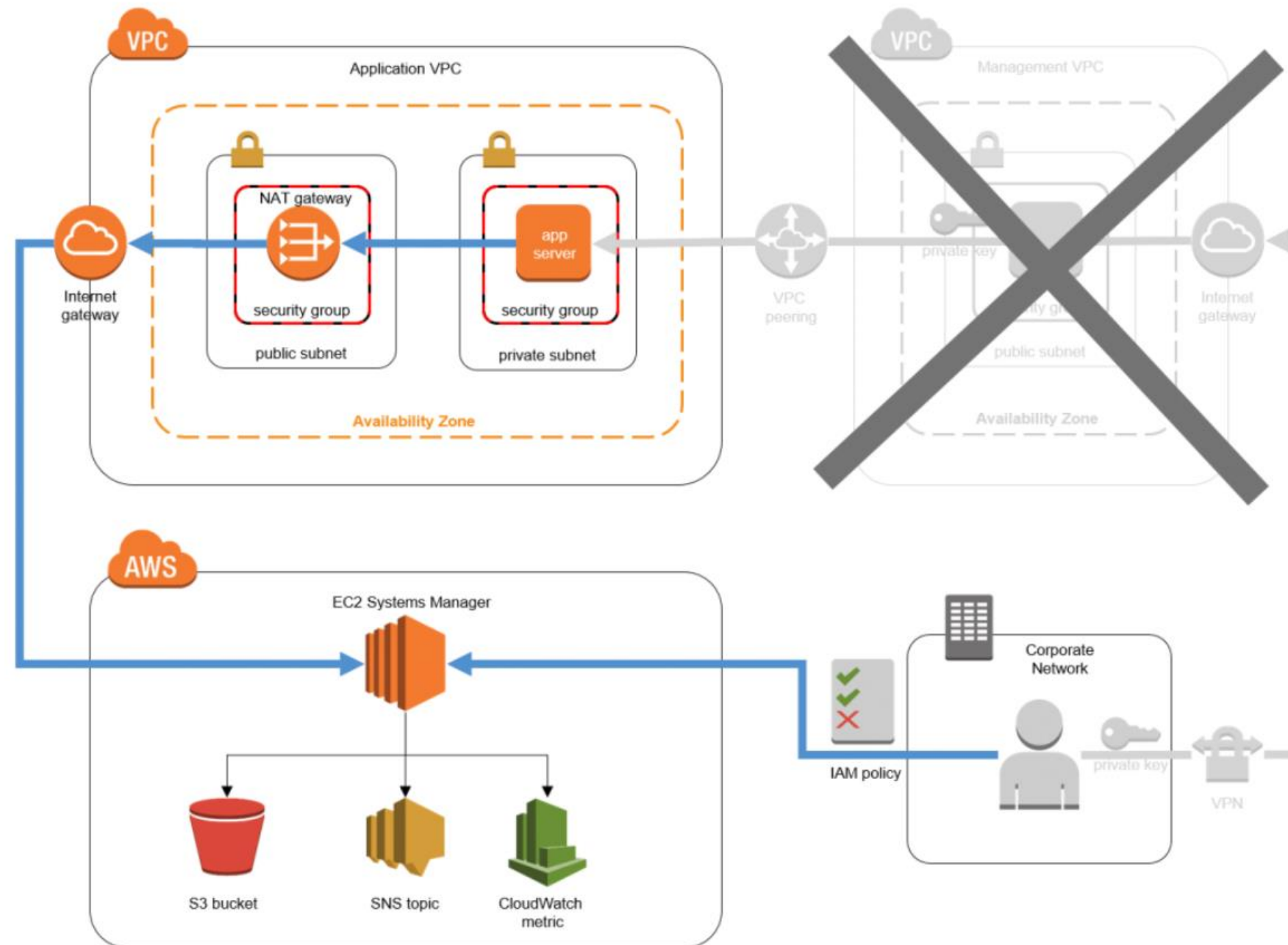
 TensorFlow		 GLUON	 Keras	Deep Learning AMIs & Containers	GPUs & CPUs	Elastic Inference	Inferentia	FPGA
 PYTORCH								
 				 DeepGraphLibrary				

4. How can I encrypt the data and protect the data on AWS?

DEMO

5. When System Operator want to access servers in private subnet. Do I need to set up a Bastion Host?

Remove Bastion Hosts

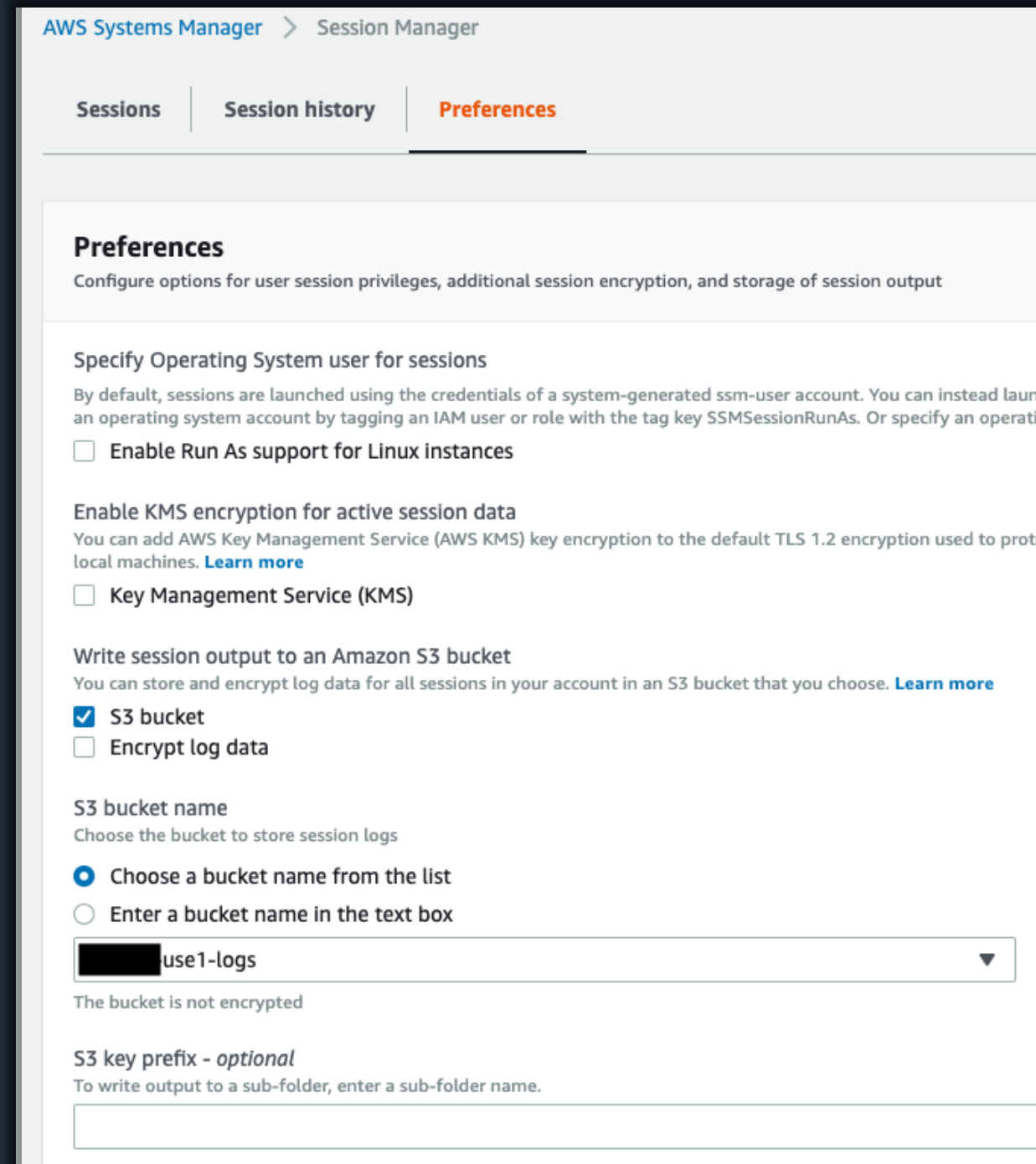


Session Manager

- Quickly and securely access your Windows and Linux Managed Instances
- Session Manager is a managed service that provides you with one-click secure access to your Managed Instances
- Centralized access control over who can access your instances and full auditing capabilities
- Quickly view audit trails of user access to Managed Instances

Session Audit Trail Logging

- Session Manager lets you store your Session output logs to:
 - S3
 - CloudWatch Logs



The screenshot shows the AWS Systems Manager console, specifically the Session Manager Preferences page. The page has a breadcrumb trail 'AWS Systems Manager > Session Manager' and three tabs: 'Sessions', 'Session history', and 'Preferences' (which is active). The 'Preferences' section is titled 'Preferences' with a subtitle 'Configure options for user session privileges, additional session encryption, and storage of session output'. It contains several settings:

- Specify Operating System user for sessions:** A text area with a description and a checkbox for 'Enable Run As support for Linux instances'.
- Enable KMS encryption for active session data:** A text area with a description and a checkbox for 'Key Management Service (KMS)'.
- Write session output to an Amazon S3 bucket:** A text area with a description and a checkbox for 'S3 bucket' (which is checked). Below it is a checkbox for 'Encrypt log data'.
- S3 bucket name:** A section with a description and two radio buttons: 'Choose a bucket name from the list' (selected) and 'Enter a bucket name in the text box'. Below the radio buttons is a dropdown menu showing 'use1-logs'.
- S3 key prefix - optional:** A text area with a description and a text input field.

DEMO

Summary



Benefits of Migration to AWS

Innovation

Broadest and Deepest Sets of Services

Agility

Scalability and Global

Security

Cost Saving

ML/AI



Standard
Consulting
Partner

Provide Professional Service and Managed service for AWS environment

Scenario:
Project - based application hosting,
Build your own Data Lake, BI,
Machine Learning solution/AI
solution



AWS Startup Migrate program

- Startups migrate external workloads from other cloud platforms, co-location or on-premises to AWS Cloud.
- To make this transition stress-free for you AWS offers you Service Credits, Partner Support, Business Support and Consultation or training from a Startup Specialist.

Program Benefits

The Startup Migrate program benefits are aimed at offsetting **migration related costs** to ease the transition and remove blockers to migration.

Benefits :

- **AWS Service Credits**

To offset AWS costs of the workload being migrated during the migration

- **Partner Funding**

(upto 1X the size of the workload being migrated) so that a startup can have a partner do the migration for them.

- **Business Support Credits**

\$5K valid for 1 year

Who is Eligible?

Program is specially designed for startups.

Startup Definition : Privately owned, funded organizations. Pre-IPO. Non-Public.



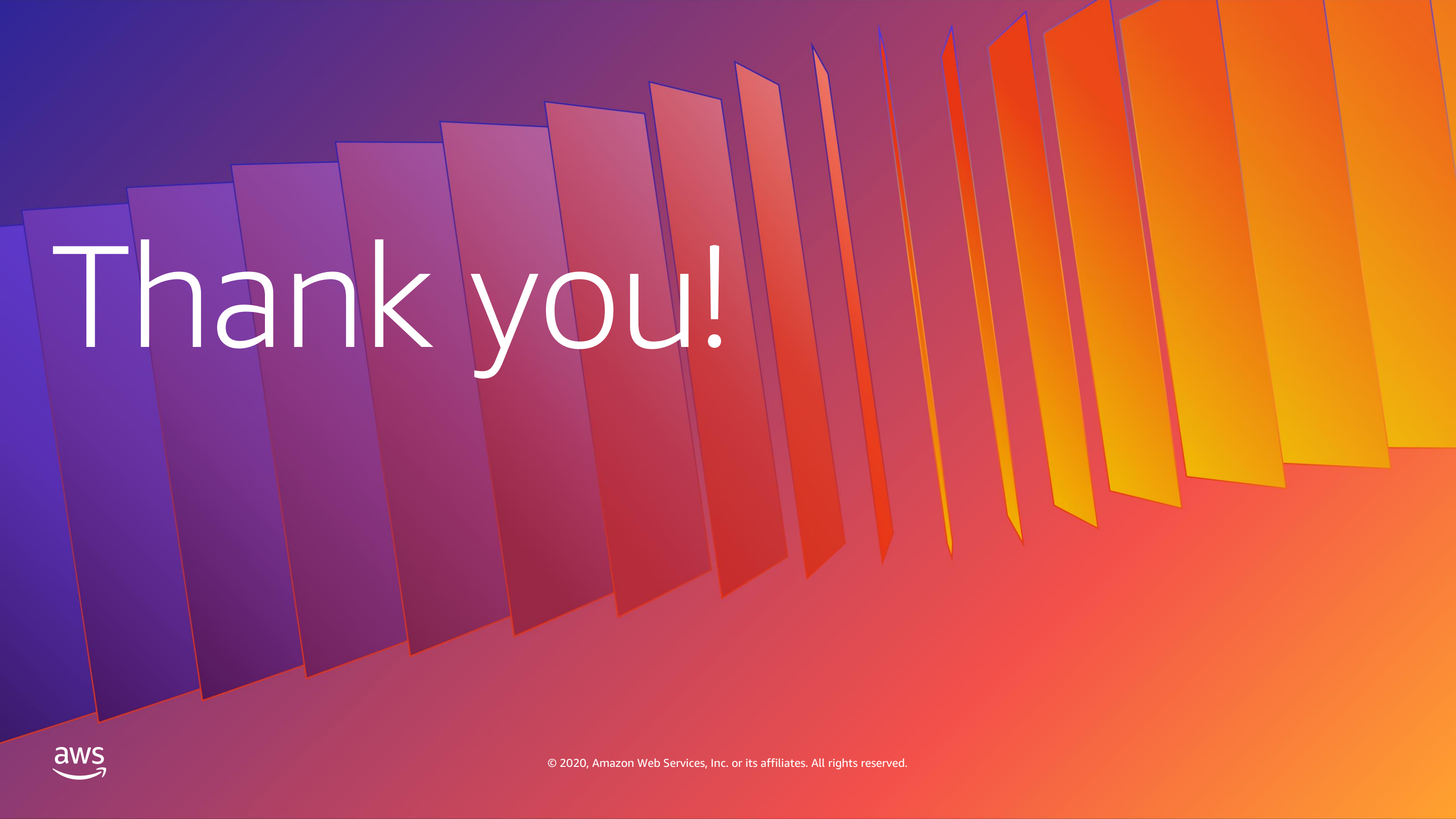
Actions to get started

- 1 Contact Us! We arrange SA Office Hour for Initial Migration Assessment
- 2 POC Credit or Start Up Migration Program
- 3 Take the Cloud Readiness Assessment: <https://cart.splashthat.com/>
- 4 Build a directional business case with Migraton Evaluator:
<https://aws.amazon.com/migration-evaluator/>
- 5 Take the AWS Migration training online or in-person:
<https://aws.amazon.com/training/course-descriptions/migrating/>

aws.amazon.com/cloud-migration

Q & A





Thank you!

