

Track 3 | Session 4

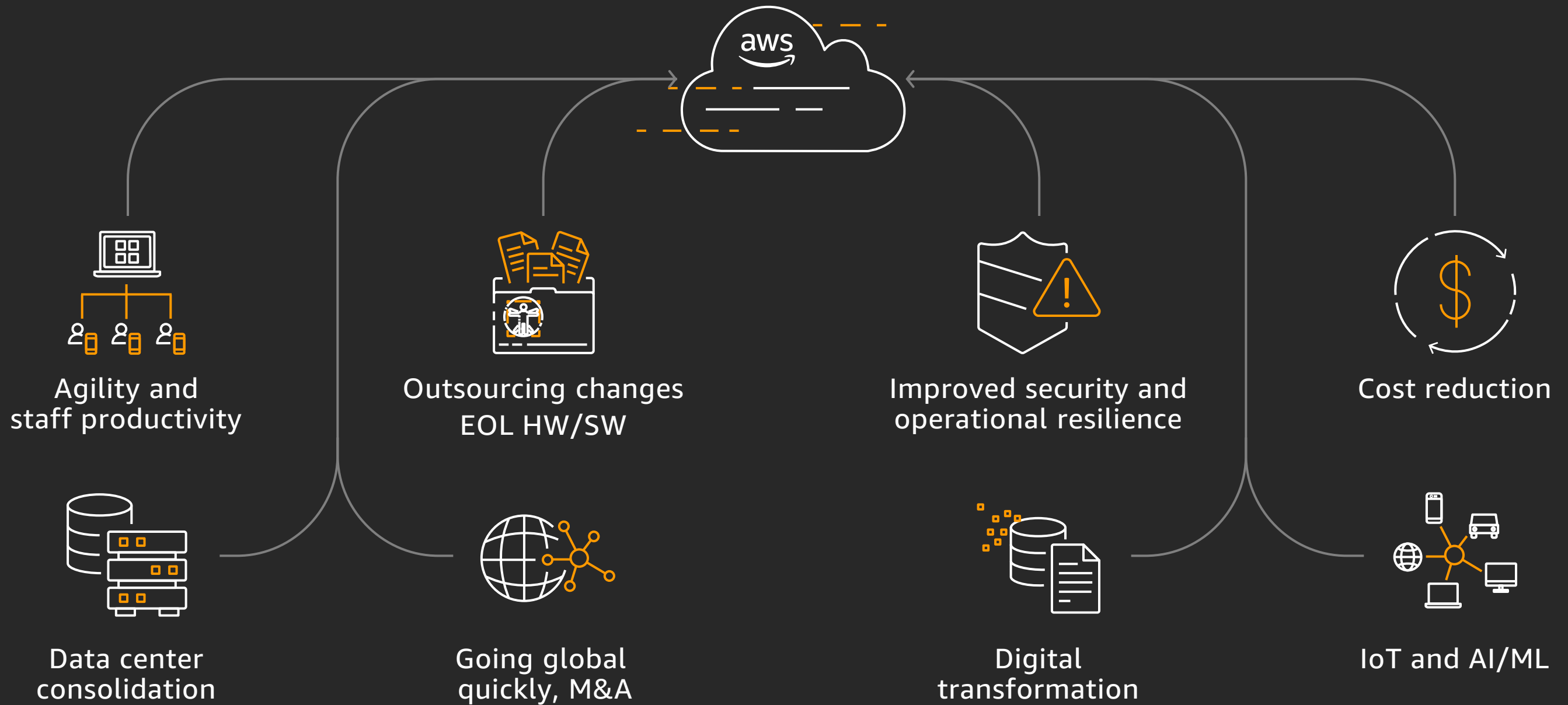
企業工作負載遷移至 AWS 的最佳實踐

Jason Wang

Partner Solutions Architect

Amazon Web Services

Business drivers for migrating to the cloud



Migration to AWS creates value beyond cost savings



Cost savings (TCO)



Staff productivity



Operational resilience



Business agility

What is it?

Infrastructure cost savings/avoidance from moving to the cloud

Efficiency improvement by function on a task-by-task basis

Benefit of improving SLAs and reducing unplanned outages

Deploying new features/applications faster and reducing errors

Examples

50%+ reduction in TCO (**GE**)

Over 500 hours per year of server configuration time saved (**Sage**)

Critical workloads run in multiple AZs and regions for robust DR (**Expedia**)

Build-outs and deployments happen 5x faster (**Intuit**)

← Typical focus →

← Most compelling cloud benefits →
Business/value

Benefits as seen across thousands of migrations

31%

average infrastructure
cost savings

7x

fewer downtime hours (Amazon EC2)
than the next largest cloud provider

62%

in IT staff
productivity boost

3x

more features
delivered per year

Sources: [IDC White Paper | Fostering Business and Organizational Transformation to Generate Business Value with Amazon Web Services, sponsored by Amazon, Larry Carvalho and Matthew Marden \(2018\)](#); AWS analysis

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 a mature third-party migration tooling network to simplify and accelerate each step of the migration process



Most complete migration solutions

A comprehensive 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**

Common questions

How do I create a business case?

How do I get started?

What workloads do I move first?

How do we manage workloads
in the cloud?

What do I have in my environment?

What should I move to the cloud?

How do I migrate these workloads?

How do I get my team re-skilled?

Migration process



Assess



Mobilize



Migrate & modernize

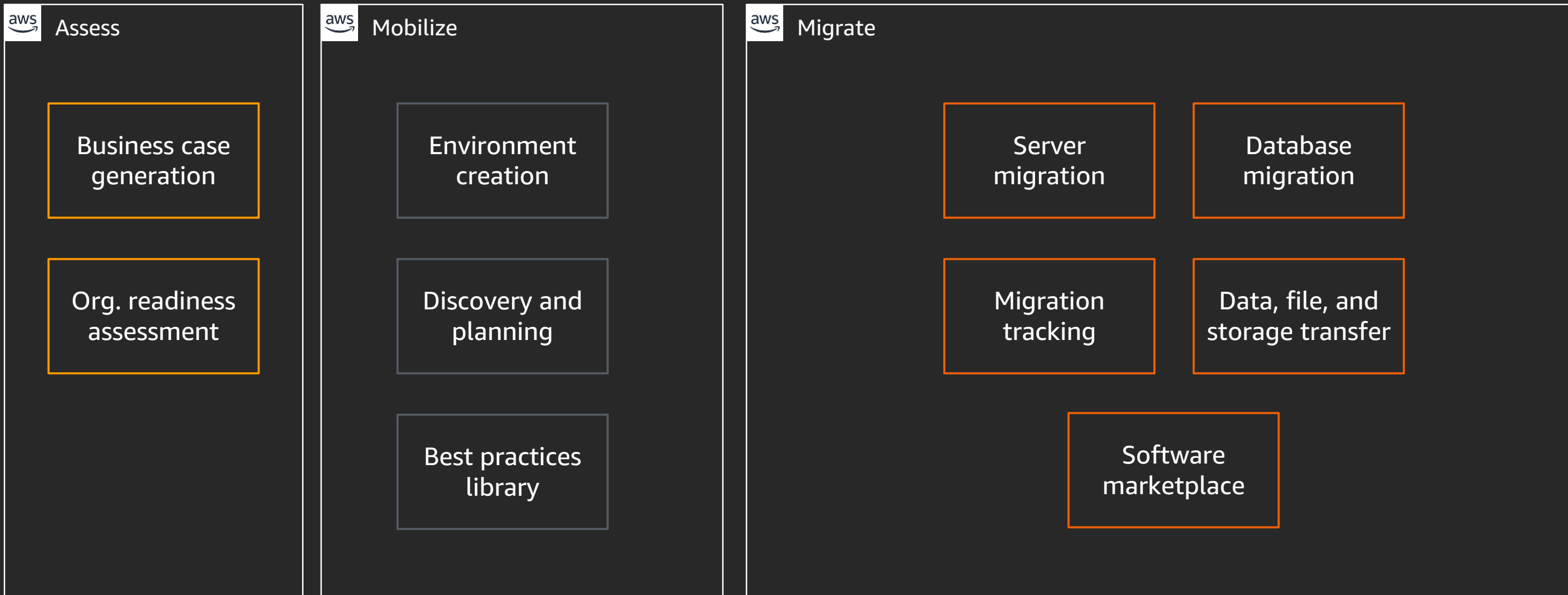
The LYCRA Company

“The capabilities provided by AWS and the strength of their offerings and their teams, are unmatched in the industry. We will continue to leverage our relationship with AWS going forward and look to expand that relationship as we continue our migration to the AWS cloud. I’m a huge fan and would endorse AWS to anybody considering a move to the cloud. I do not say this lightly.”

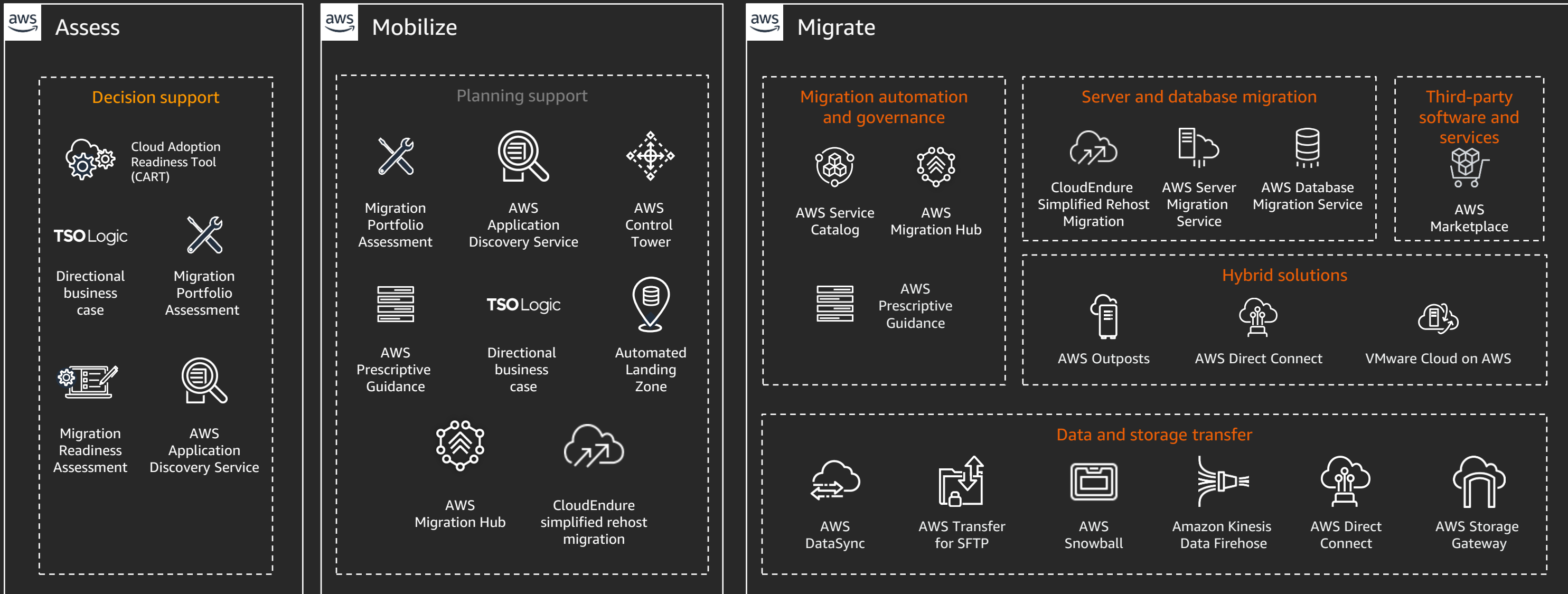
Jon Bergman
CIO

AWS migration tools offer comprehensive set of capabilities

Help customers through assessment, planning, and migration phases



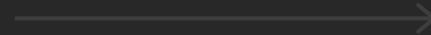
Broadest and deepest set of capabilities to accelerate your migration



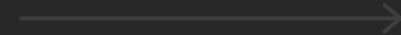
Migration process: Assess



Assess



Mobilize



Migrate & modernize

Migration readiness assessments highlight key areas of focus



Customer data sources
Self-service and
guided assessments
Stakeholder
conversations



**Assessment
focus**



**Readiness
assessment results**



Business
capability assessment

Business
Value realization

People
Roles & readiness

Governance
Prioritization & control



Technical
capability assessment

Platform
Applications & infrastructure

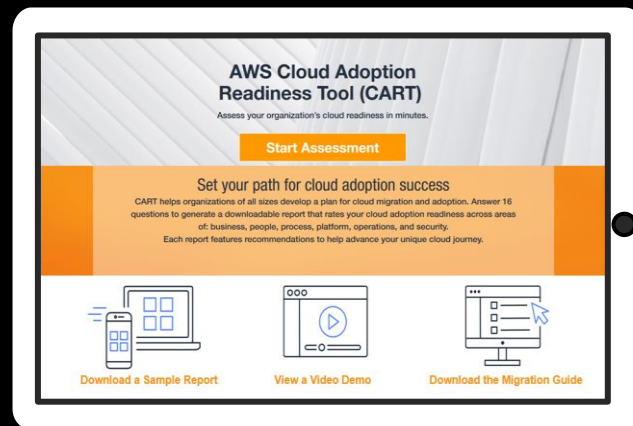
Security
Risk & compliance

Operations
Hybrid & dynamic

Tools to help assess readiness and build a business case



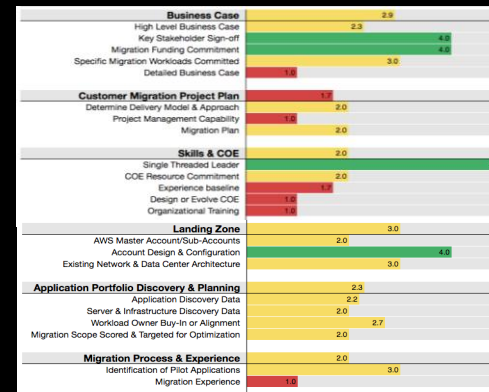
Cloud Adoption Readiness Tool



- Online self-service tool
- 16 questions across 6 perspectives
- Custom report (URL or PDF)
- High-level recommendations on what is required to adopt the cloud successfully
- Suitable for early-stage discussions and small-scale migrations

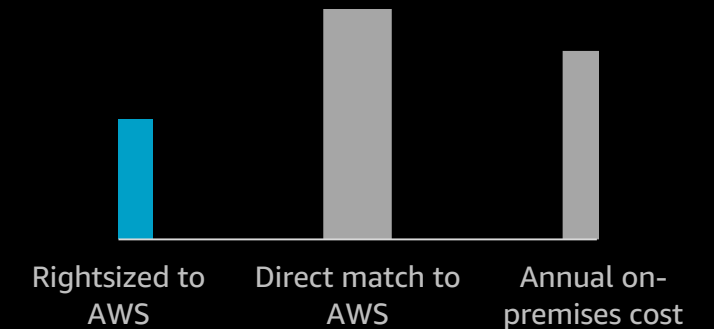
Assess your readiness

Migration Readiness Assessment Workshop



- 1-day workshop
- ~70 questions to identify readiness and gaps for a large-scale migration
- Action plan proposal to close the gaps

TSO Logic



- Leverages existing inventory or agentless discovery tool
- Acquired by AWS in December 2018
- Highlights the financial impact of different software licensing strategies
- Complete business case and TCO analysis
- Optimize compute, storage, and database

Build directional business case

Take a quick survey (<3 min)

Using your device, go to **Cloud Adoption Readiness Tool (CART)**
<https://cloudreadiness.amazonaws.com/#/cart>

Start Assessment

- Quick online survey for you to assess your cloud migration readiness
- Helps you identify focus areas to successfully adopt the cloud
- Assessment report details your readiness across six perspectives: Business, people, process, platform, operations, and security
- Provides recommendations to enable deeper conversation with your teams, Consulting Partner, or Professional Services



Report Heatmap Score Radar

CART Assessment Scores

Business Section Business Rationale - 3 Business Case - 3	People Section Executive Sponsorship - 5 Collaboration - 1 Change Management - 5
Process Section Application & Infrastructure Portfolio Management - 5 Agile Frameworks - 5 DevOps Planning - 3	Platform Section AWS Cloud Account Planning - 3

Get Your Full Report Now

* First Name

* Last Name

* Phone Number

* Email

* Job Title

* Company

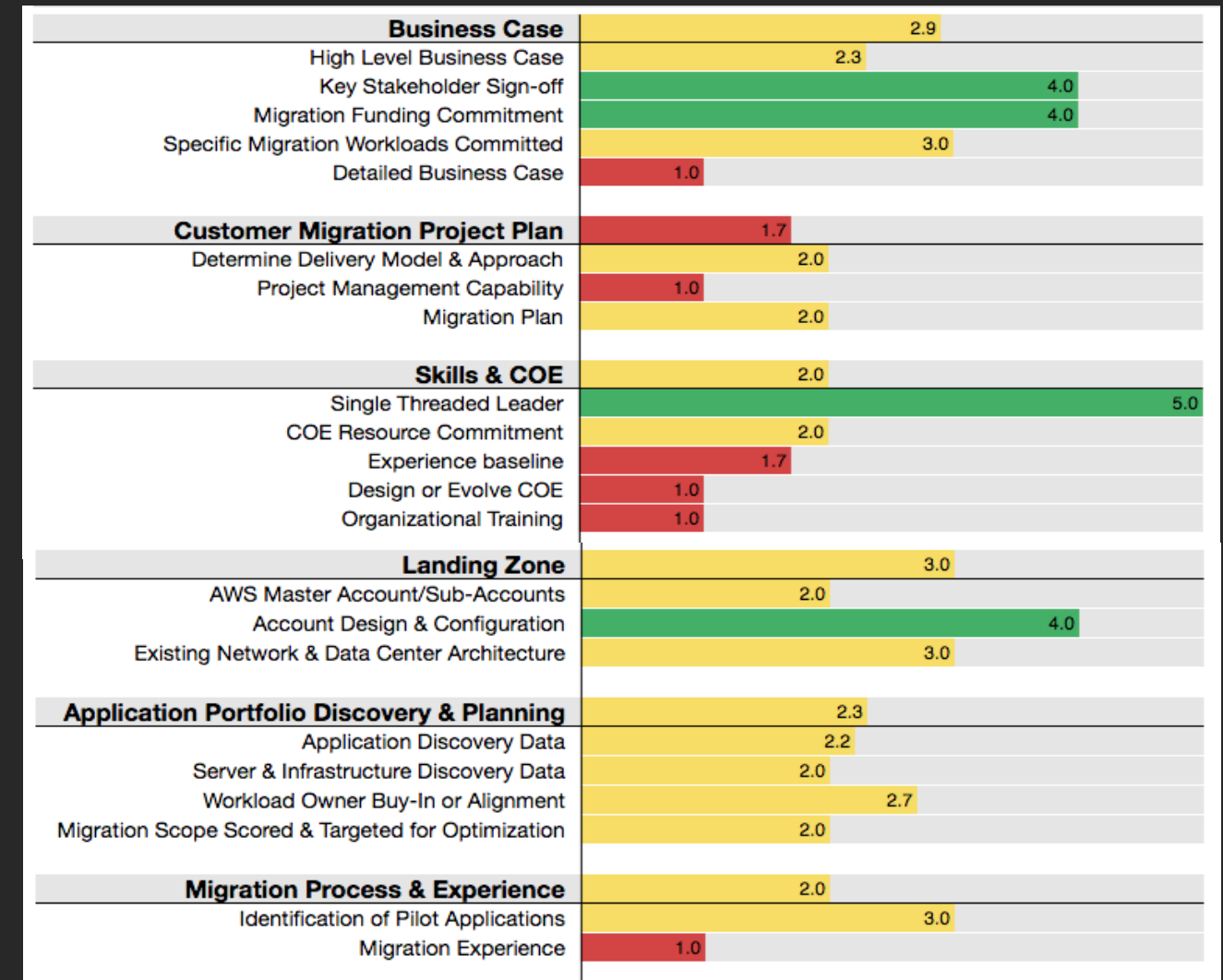
* Company Size

- Select -

Business Section Business Rationale Business Case	People Section Executive Sponsorship Collaboration Change Management	Process Section Application & Infrastructure Portfolio Management Agile Frameworks DevOps Planning
Platform Section AWS Cloud Account Planning	Operation Section Operations & Responsibilities Alignment Future Cloud Operations Continuity Planning	Security Section Operational Cloud Security AWS Experience Documented Security Policies Security Leadership Commitment To Cloud Adoption Strategy

AWS Migration Readiness Assessment

- 1-day workshop, ~70 questions to identify readiness and gaps for a large-scale migration
- Followed by a proposed action plan to close the gaps (e.g., accelerators, an MRP project plan by AWS ProServe / an APN Partner)
- A business case based on total cost of ownership conducted in parallel



TSO Logic



On-premises analysis of compute, local storage, memory, and Windows licenses



Compute |



Memory |



Local attached storage



Windows licenses



Algorithmically determines the best-fit, lowest-cost placement for each workload



Quickly delivers optimized cost-modeling scenarios for your workloads on AWS

On premises

Understand compute and storage: How they are used and the costs of operating

Provisioning

Identify overprovisioning and where AWS can meet or exceed needs at a lower cost

Microsoft licenses

Model which Microsoft licenses can move and where they can move, and compare BYOL with license-included options

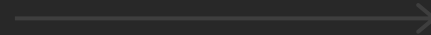
Rightsized

Help customers identify the optimally sized, lowest-cost AWS option for each workload based on utilization

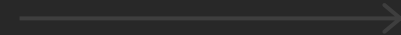
Migration process: Mobilize



Assess

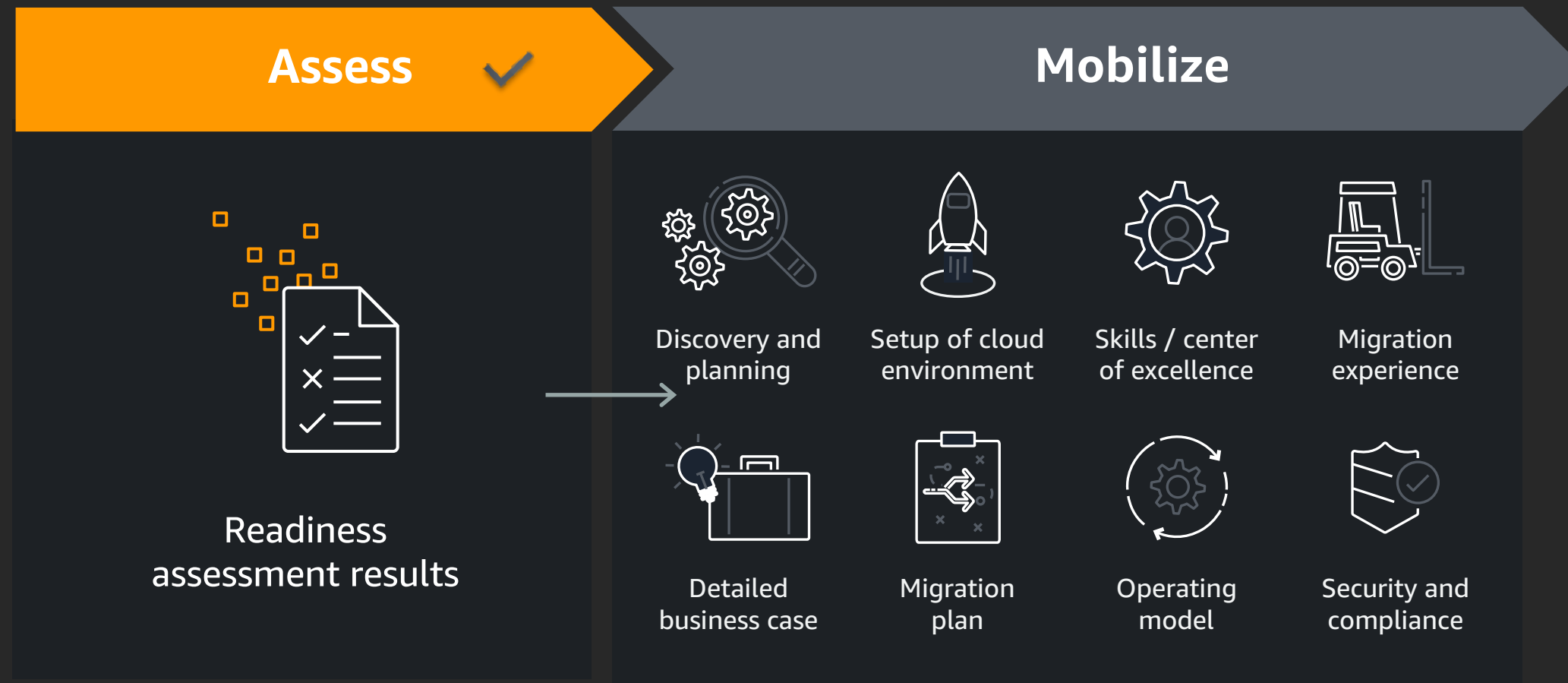
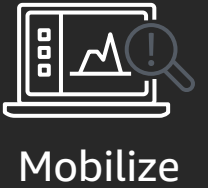


Mobilize



Migrate & modernize

Use assessment results to improve your migration readiness & planning, and mobilize resources

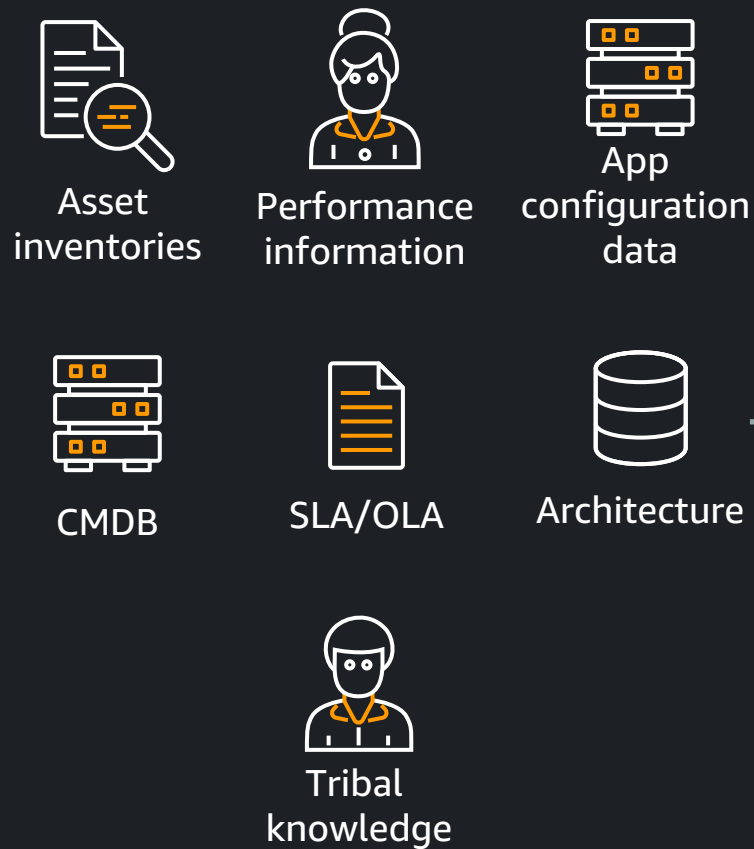


Determine the right migration pattern for your apps

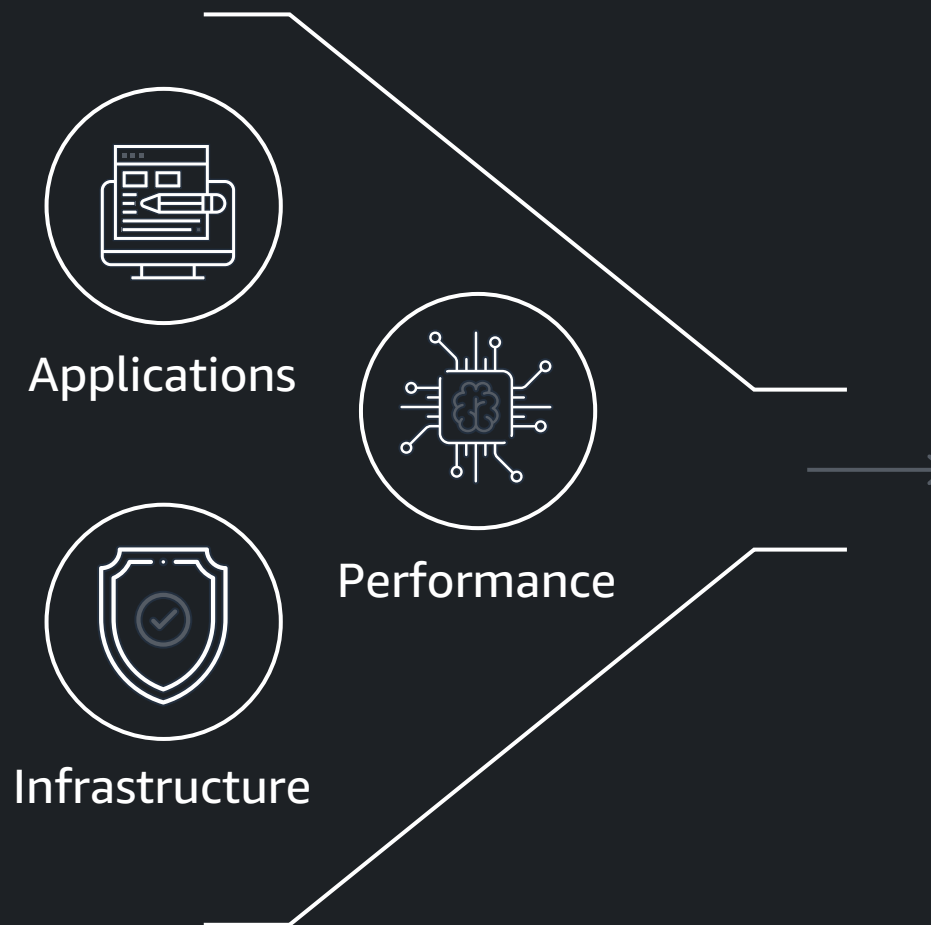


Mobilize

Disconnected and incomplete data

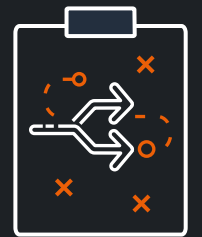


Discover and organize data



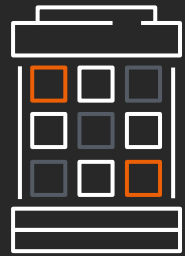
7 Rs

- ✓ Refactor
 - ✓ Re-platform
 - ✓ Repurchase
 - ✓ Rehost
 - ✓ Relocate
 - ✓ Retain
 - ✓ Retire
- Level of effort



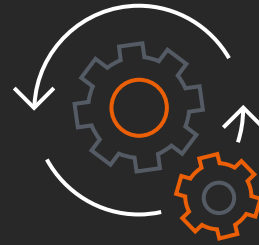
Migration plan
(Backlog)

Select the right operating model for your cloud



Self-managed

- AWS Service Catalog
- AWS Systems Manager
- AWS management tools and services
 - Modeling and provisioning
 - Automation and operations
 - Monitoring and logging
- Third-party tools



AWS Managed Services (AMS)

- 40+ curated services
- "Month-to-month" terms
- Addresses security & compliance (PCI/SOC/ISO/HIPAA/NIST certified/compliant)
- 7 management services provided



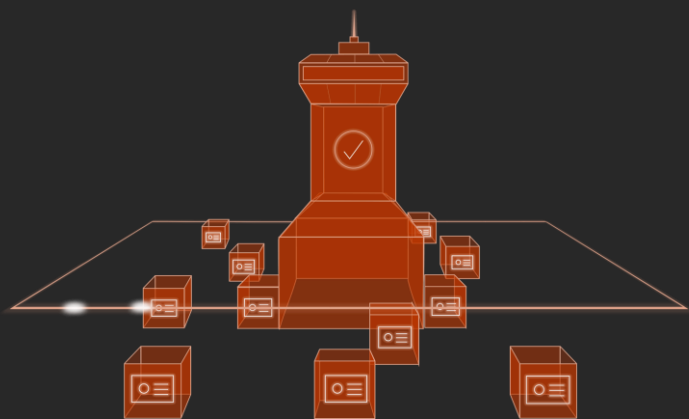
Partner-managed

- 100+ Managed Service Partners (MSP)
- Certification program
- Third-party audit
- Full lifecycle services

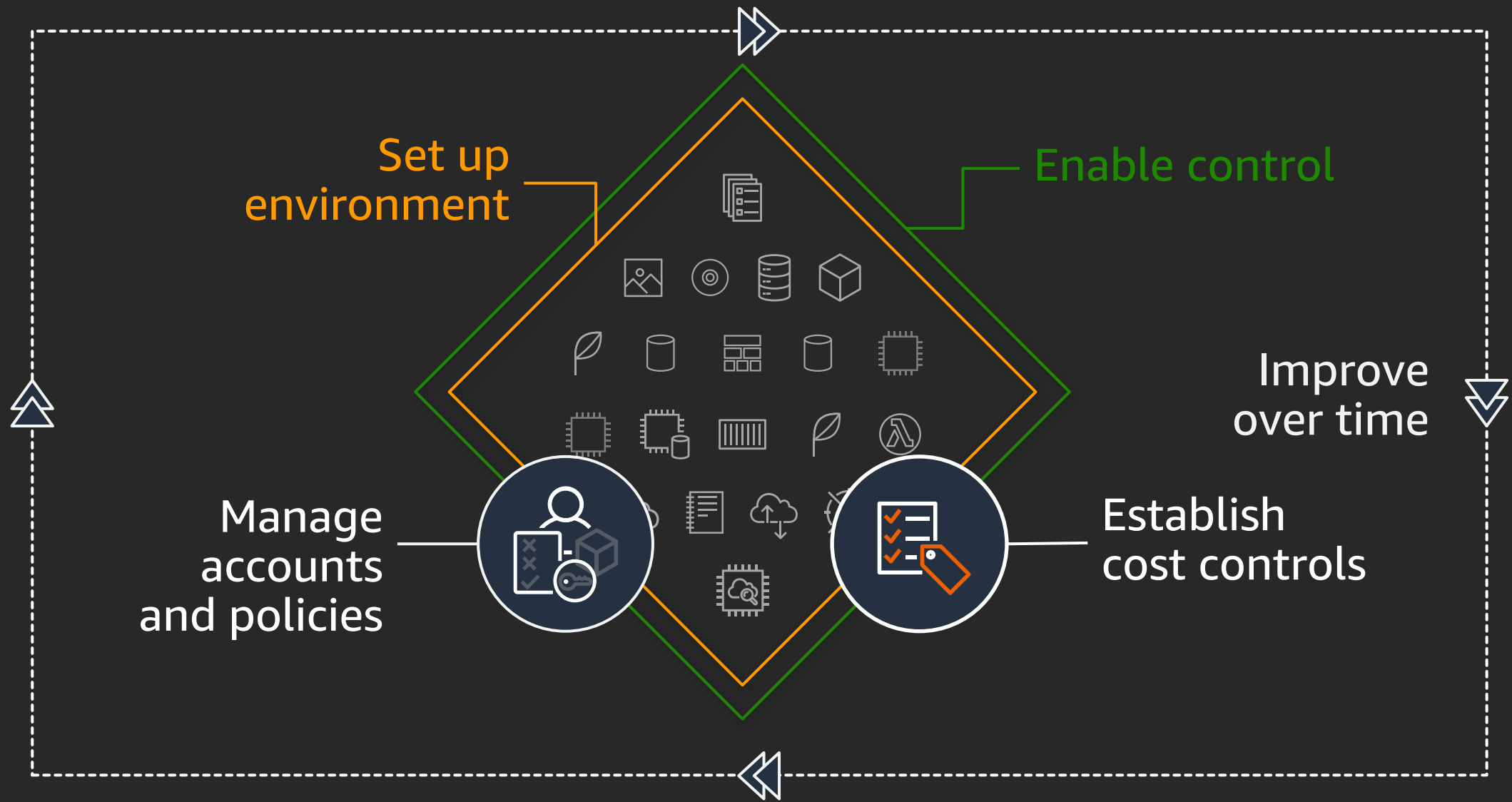
Create your environment on AWS to get started



Mobilize



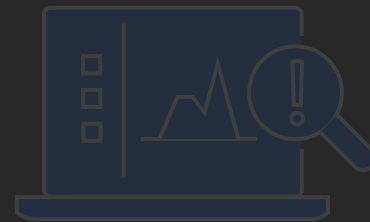
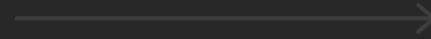
AWS Control Tower



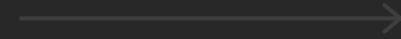
Migration process: Migrate and modernize



Assess

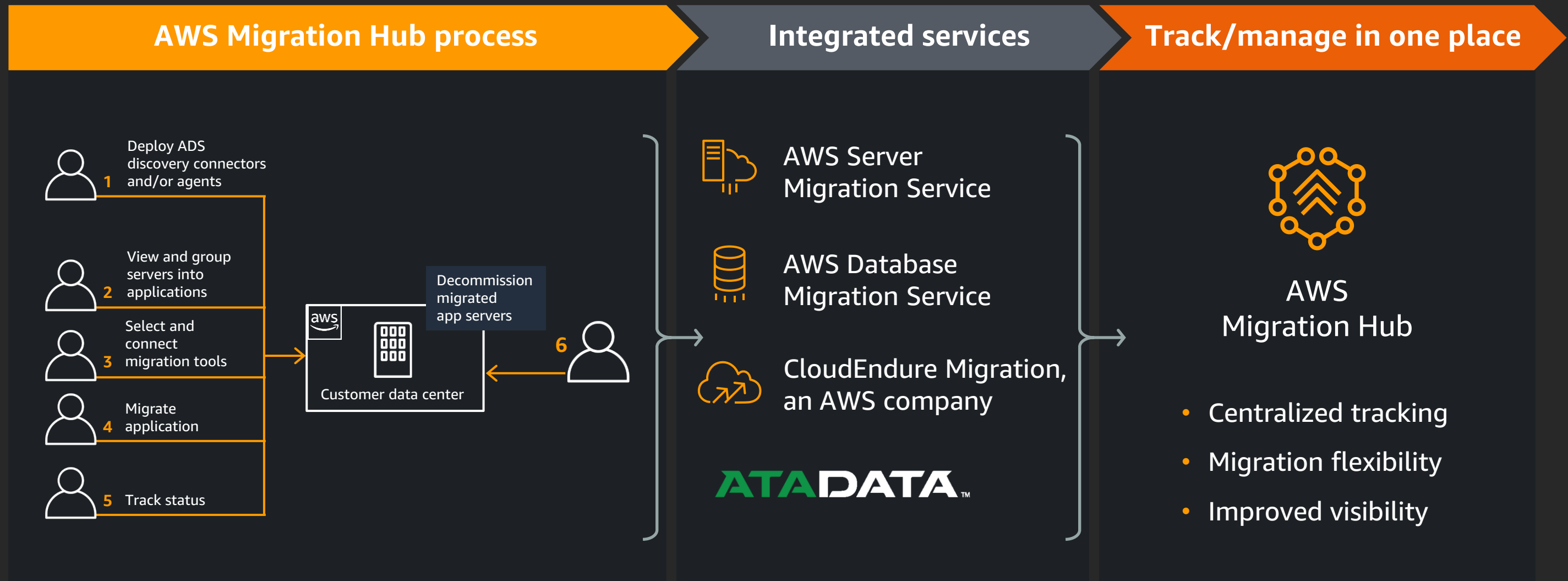


Mobilize



Migrate & modernize

Track and manage your migration using AWS Migration Hub

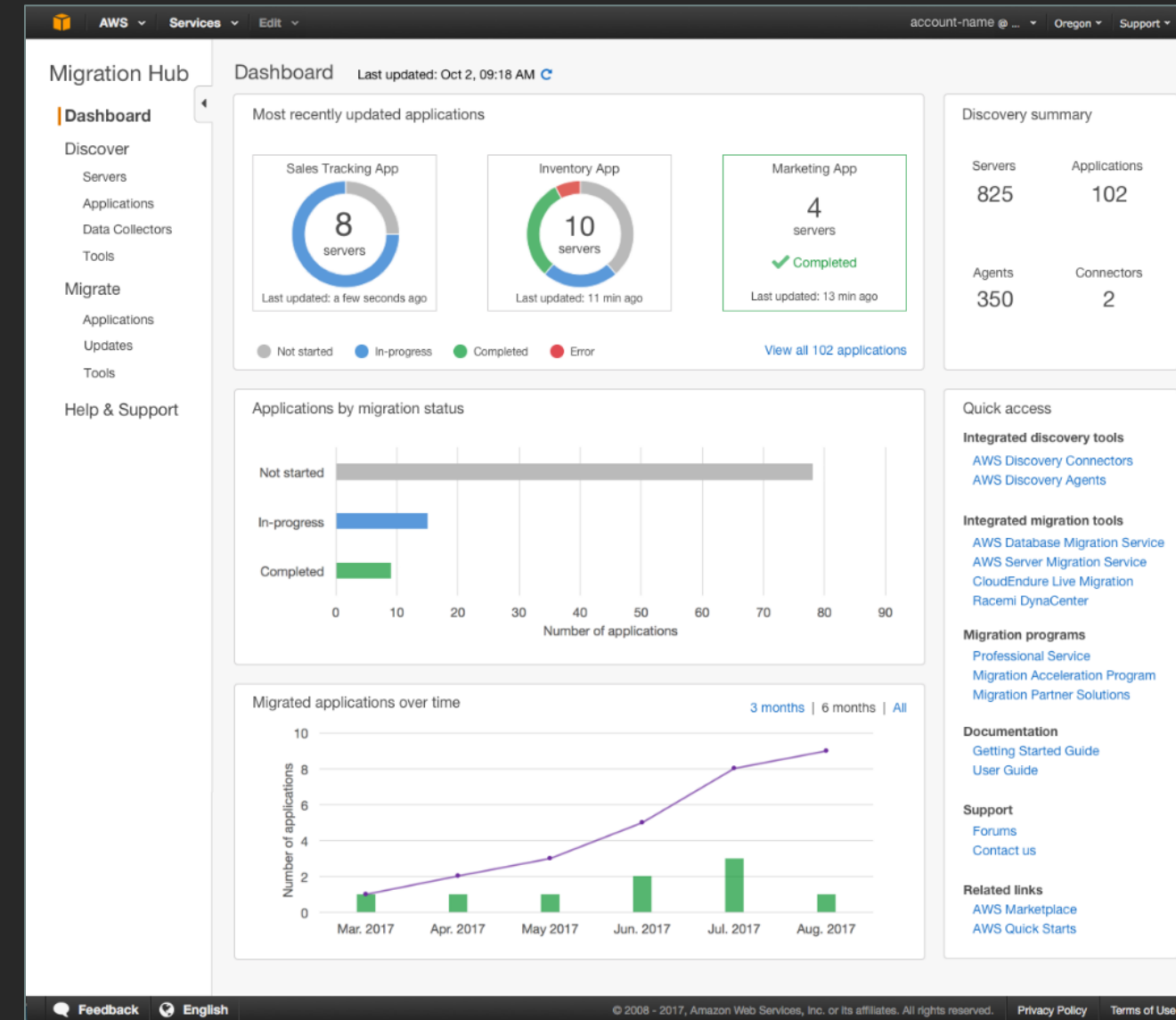


Track and manage your migration using AWS Migration Hub



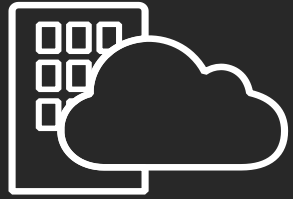
Migrate &
modernize

- ➔ 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 APN Partner tools integrated
- ➔ Available to all AWS customers at no additional charge

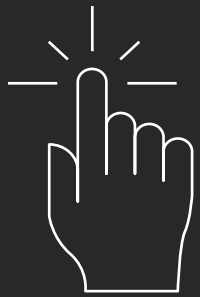


CloudEndure Migration

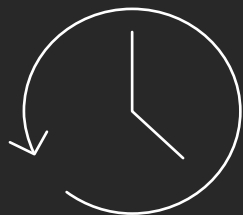
Eliminate complexity and reduce risk for small-to-large migrations



Flexible: Migrate from any source; wide database, VM, OS, and application support



Automated: Simple setup to get started in minutes, with the same process for any workload



Reliable: Migrate with minimal business disruption; short cutover windows and nondisruptive tests

Available at no cost to customers and APN Partners

aws.amazon.com/cloudendure/

AWS Server Migration Service overview



Migrate &
modernize

- Support **VMware (vSphere), Hyper-V/SCVMM** and **other** VMs migration
- **Agentless** VM migration (relies on Server Migration Connector FreeBSD VM)
- Capture **incremental** change made to on-premises VMs and automatically transfer to AWS via TLS encrypted channel
- Most operating systems (Windows, Linux, etc.) supported for migration with appropriate licenses
- Integration with [AWS Migration Hub](#) for visibility and management
- Migrate a group of VMs (applications) simultaneously and orchestrate multiple migrations
- AWS Management Console and API/CLI access
- Launch Amazon EC2 instances from Amazon Machine Images (AMI)



Source:
On-premises server



AWS Server
Migration Service



Target:
Amazon Machine Image

AWS Database Migration Service

Migrating databases to AWS



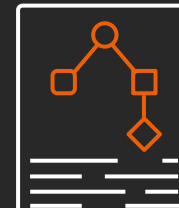
Migrate &
modernize



Migrate between
on premises and **AWS**



Migrate between
databases



Automated
schema conversion



Data replication
for zero-
downtime migration



Develop an optimization roadmap



Migrate & modernize



Migrated applications

Optimize availability and performance

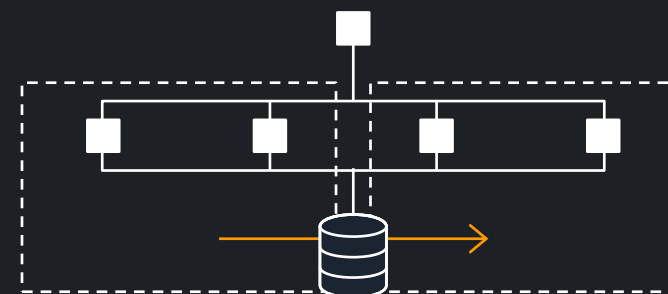
Portfolio tier: **Commodity**

Characteristics

Non-business-critical, low change, minimal risk

Approximate % of portfolio*

50%



Rehosted and repurchased apps



Non-migrated applications



Re-platform,
re-architect

Evolve to breathe new life
into your applications

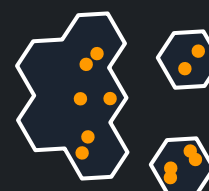
Portfolio tier: **Critical**

Characteristics

Business-critical, but low rate of change

Approximate % of portfolio*

30%



Re-architect, refactor

Split off microservices
from the monolith

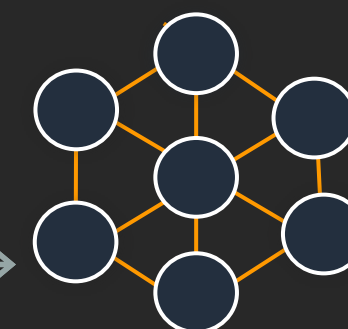
Portfolio tier: **Differentiated**

Characteristics

High rate of change & customer-facing

Approximate % of portfolio*

20%

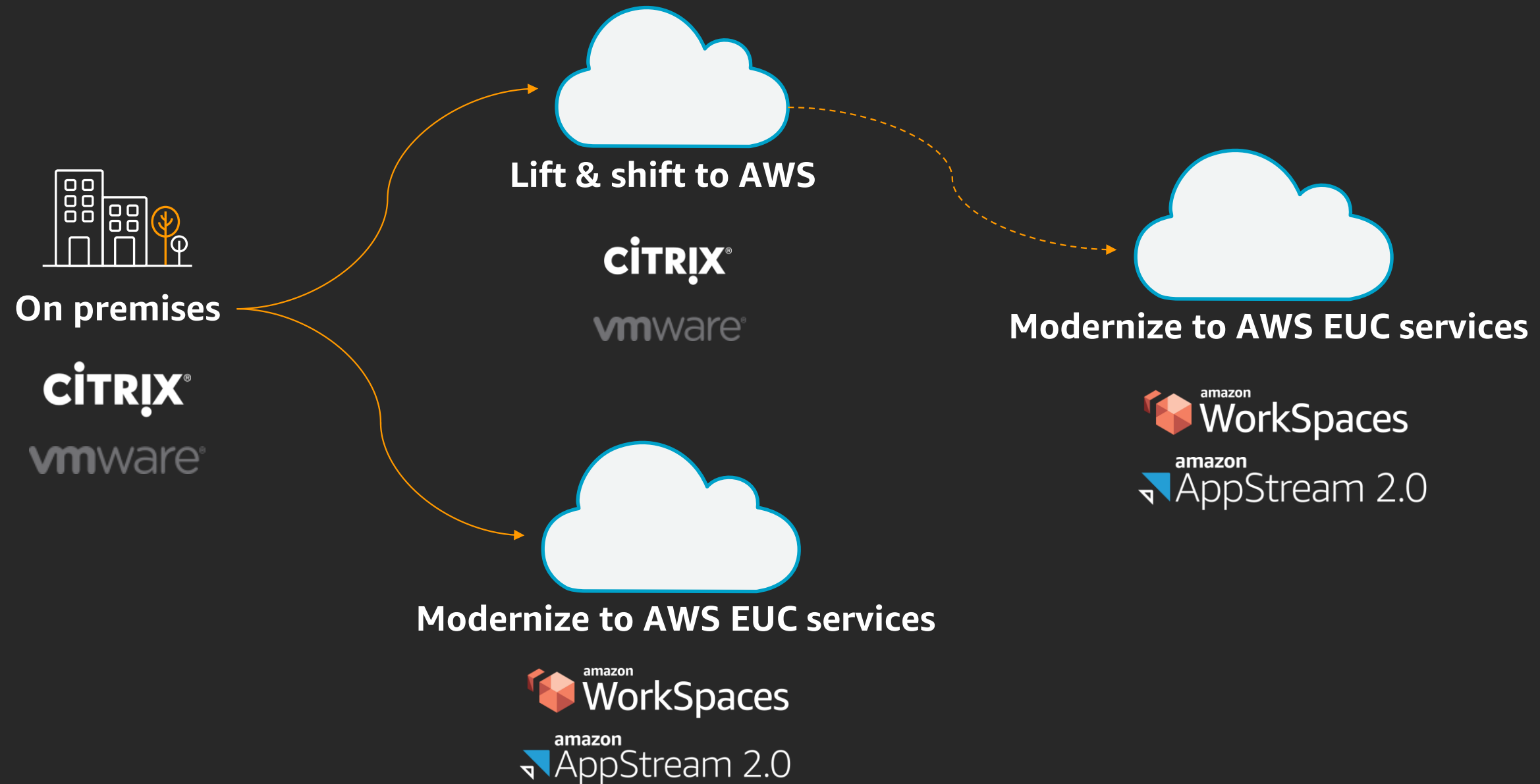


Modernized applications

* By number of applications, not percent of spend, as seen in typical customer environments

Typical customer journey

Not one size fits all, but a pattern



AWS EUC services



Desktop-as-a-Service



Application streaming



File storage



Fully managed



Pay-as-you-go

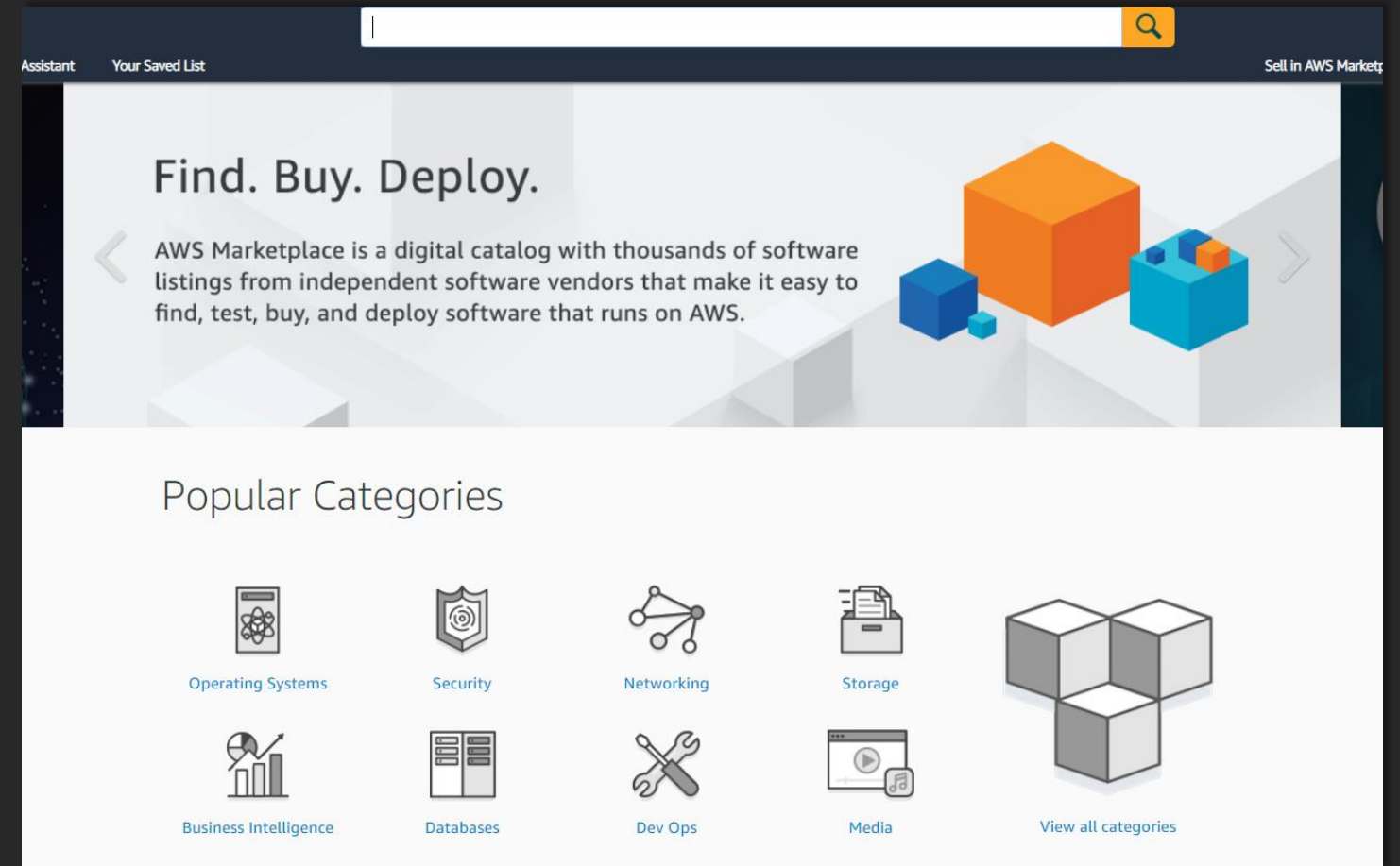


Reliable & secure

















































A growing digital catalog



- Deploy software or data on demand
 - **1,500+** ISVs
 - More than **7,000** product listings
 - Offers **50 categories**
 - **260,000+** active customers
 - More than **850 million** hours of EC2 deployed monthly
 - Deployed in **23 Regions**
-
- Launched in China in February 2020
 - Launched in Cape Town April 2020
 - One simplified bill



Popular categories most often deployed

Operating systems	Security	Storage	Networking	Database	Monitoring	DevOps	BI
 CentOS	 TREND MICRO	 NetApp®	 CISCO	 TERADATA	 splunk>	 GitHub	 + a b e a u
 ubuntu	 paloalto NETWORKS	 druva	 f5®	 SAP®	 + sumologic	 GitLab	 TIBCO™
 debian	 CROWDSTRIKE	 N2WS a Veeam company	 JUNIPER NETWORKS	 snowflake	 DATADOG	 cloudbees	 Qlik®
 SUSE®	 Check Point® SOFTWARE TECHNOLOGIES LTD.	 SoftNAS®	 CITRIX®	 databricks	 New Relic®	 puppet	 alteryx
 ORACLE® Linux	 Barracuda	 VEEAM	 riverbed®	 Couchbase	 APPDYNAMICS	 CHEF™	 MATILLION
 Windows	 FORTINET®	 DELL EMC	 NGINX	 mongoDB®	 dynatrace	 MICRO FOCUS	 Informatica®

AWS data transfer & hybrid cloud storage support migration by making it easy to set up a hybrid environment



Migrate &
modernize

Data center extension



AWS Storage
Gateway



Amazon
VPC



AWS
Direct Connect



AWS
IAM



AWS Directory
Service



AWS
OpsWorks



AWS Systems
Manager



AWS
CodeDeploy

VMware cloud migration



VMware Cloud
on AWS

Cloud services on premises



AWS
Outposts

Cloud services at the edge



AWS
Snowball Edge



AWS IoT
Greengrass

APN Partners to help you migrate



- ➔ AWS Migration Competency Partners (40+)
- ➔ Established AWS migration practice
- ➔ Current Managed Services or DevOps competency
- ➔ APN Consulting Partners (Expertise level: Advanced & higher)
- ➔ AWS certifications and certified consultants
- ➔ Audited annually against competencies

Actions to get started

- 1 Take the [Cloud Readiness Assessment](#)
- 2 Build a directional business case with [TSO Logic](#)
- 3 Take the AWS Migration training [online](#) or [in person](#)
- 4 Establish early wins by leveraging [CloudEndure](#) to migrate first workloads

aws.amazon.com/cloud-migration

Thank you!

Jason Wang

Partner Solutions Architect
Amazon Web Services