aws

INNOVATE

ONLINE CONFERENCE

WHAT DOES IT TAKE TO CREATE TOMORROW?

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

WHEN FACED WITH CHANGE

WE NEED TO FOCUS LESS ON WHAT WE ARE GOING TO LOSE

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

WHEN FACED WITH CHANGE

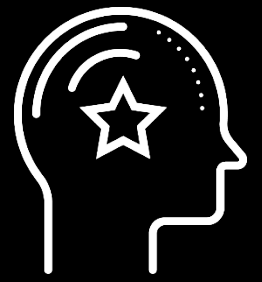
WE NEED TO FOCUS LESS ON WHAT WE ARE GOING TO LOSE

AND MORE ON WHAT WE ARE GOING TO GAIN

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

ACCELERATED
INNOVATION

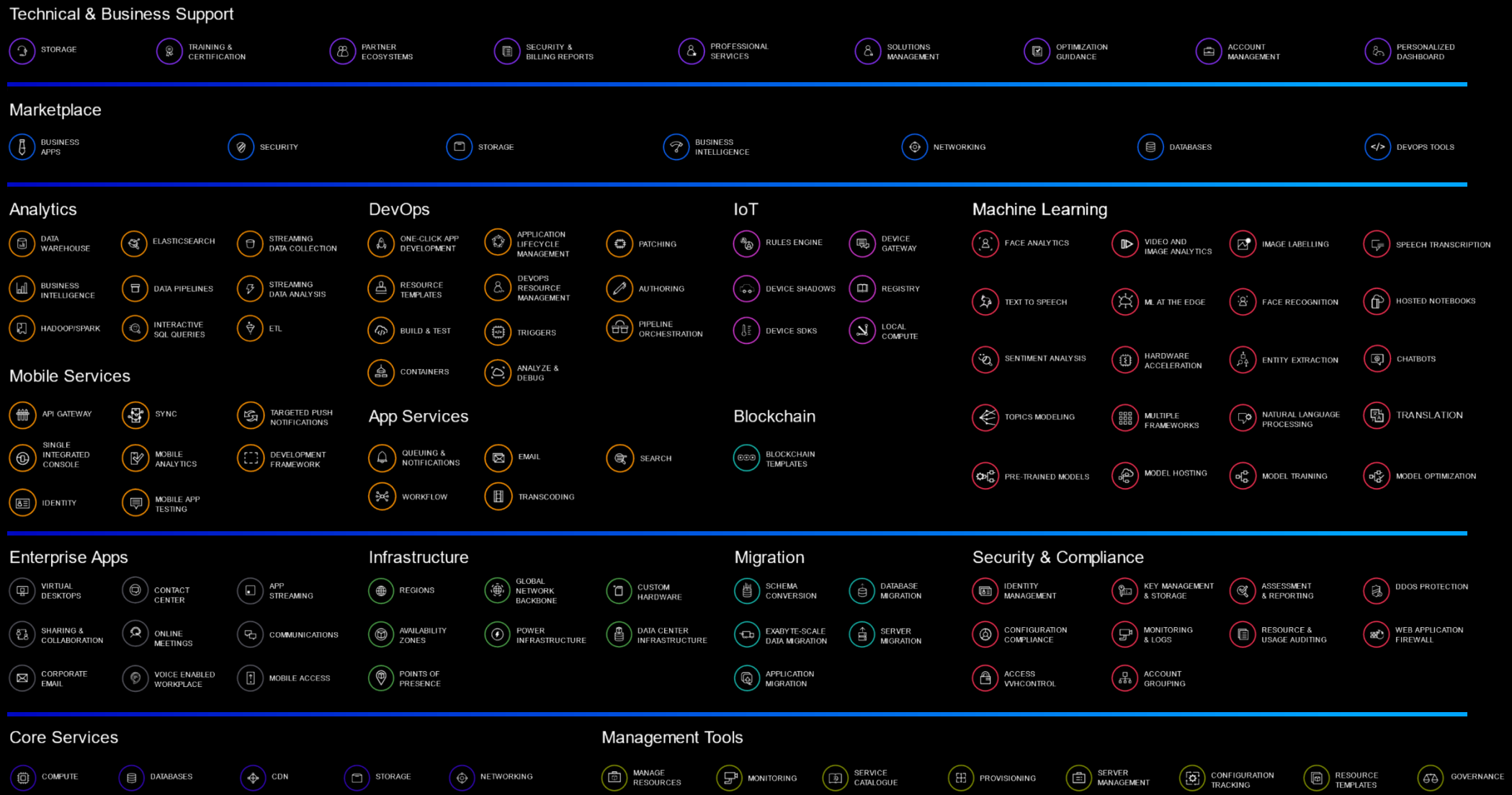
DATA
INSIGHTS



SUPERPOWERED
HUMANS

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

The broadest and deepest platform for today's and tomorrow's builders



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Builders benefit from Choice

Choice doesn't equal complexity

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

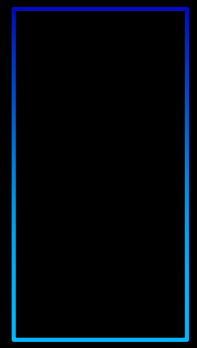
Modern applications

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

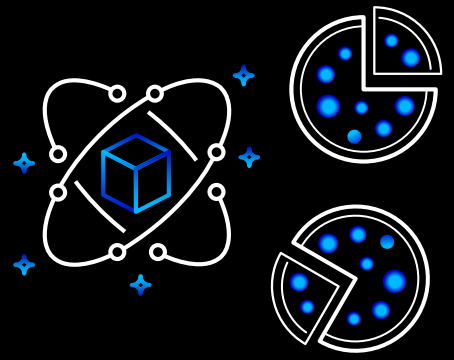
Modern applications

Development transformation at Amazon: 2001–2002

Lesson learned: Decompose for agility



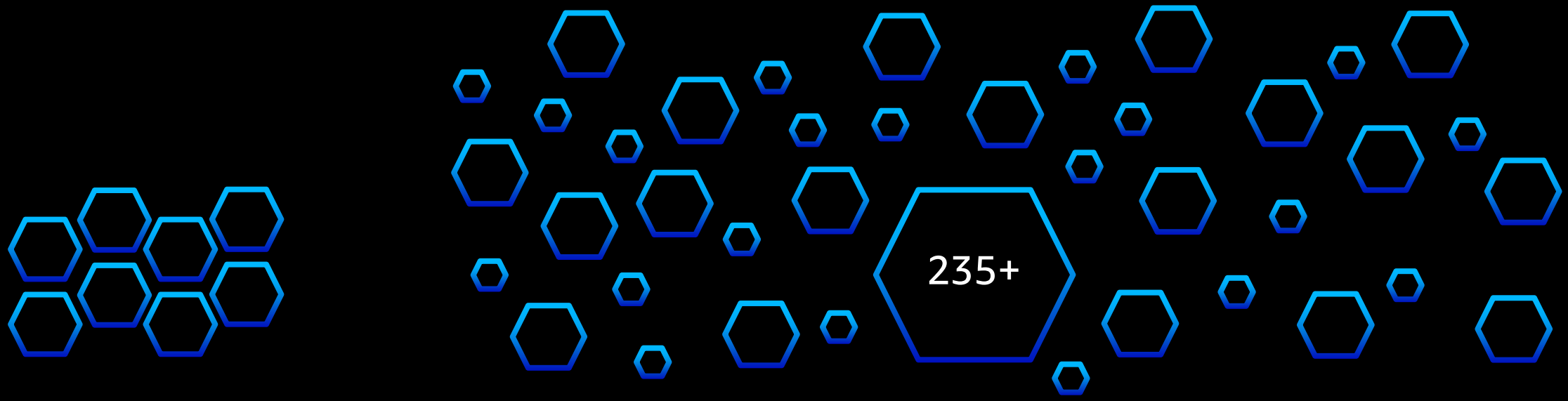
Monolithic
application + teams



Microservices
+ 2 pizza teams

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modern applications



8 separate microservices

More than 235 distributed microservices

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

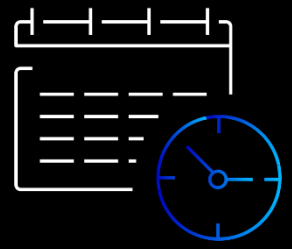
The end goal

Customer value

Reliability

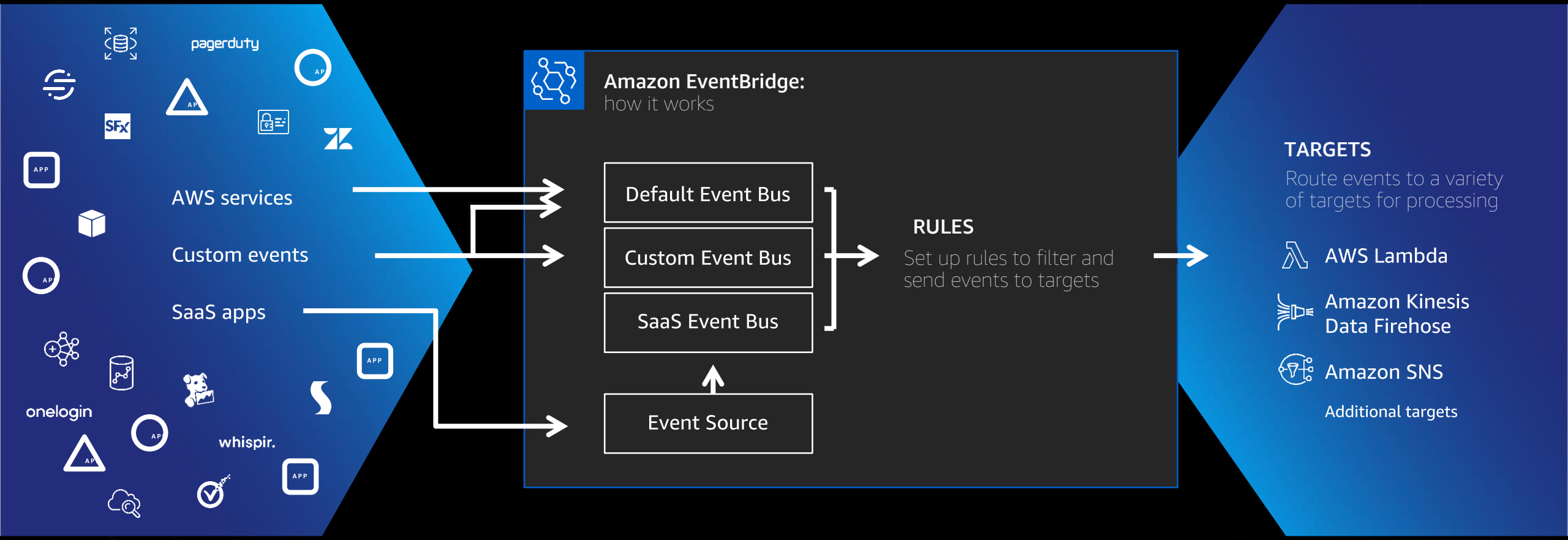
Resilience

Scalability



And do it faster

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

SaaS integration partners

zendesk

pagerduty

Segment

onelogin

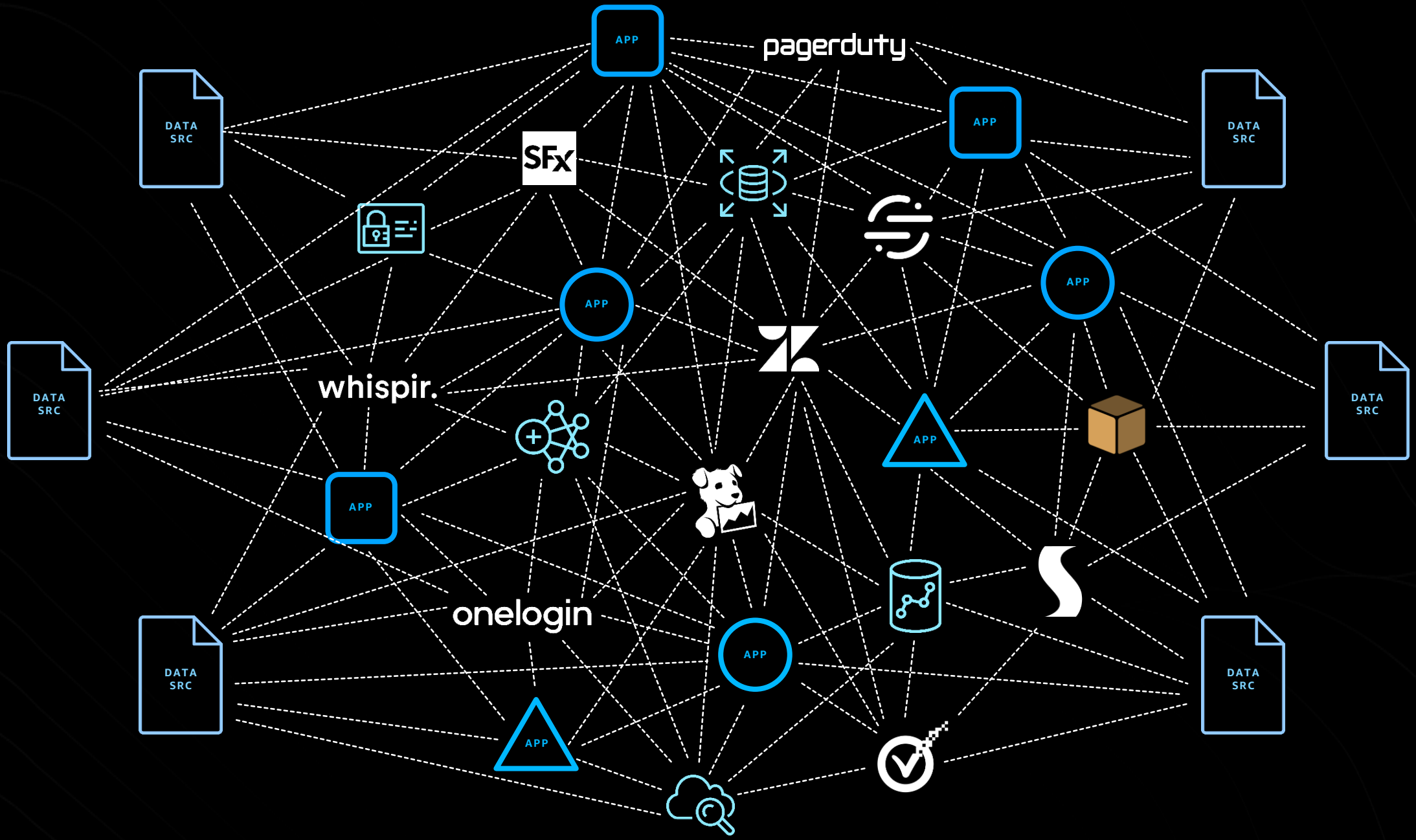
whispir.

SignalFx

Symantec

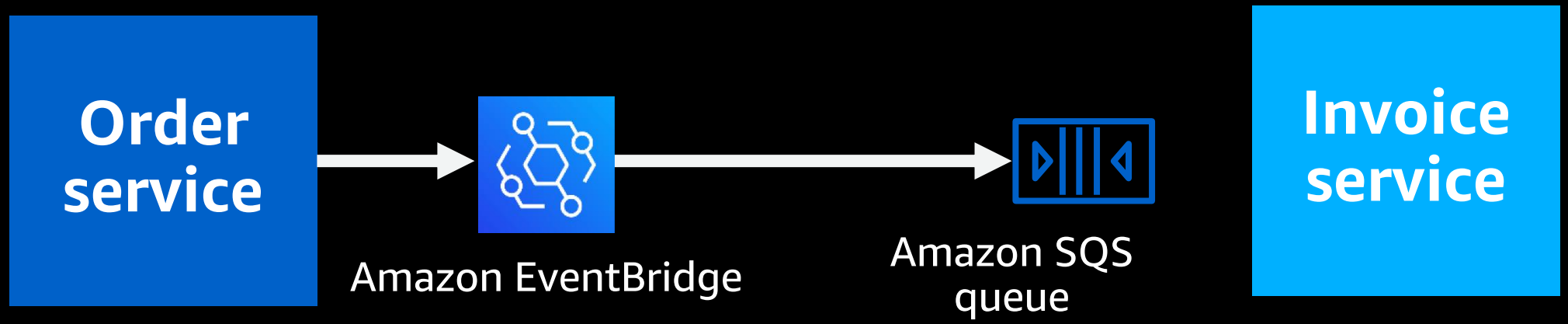
© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws



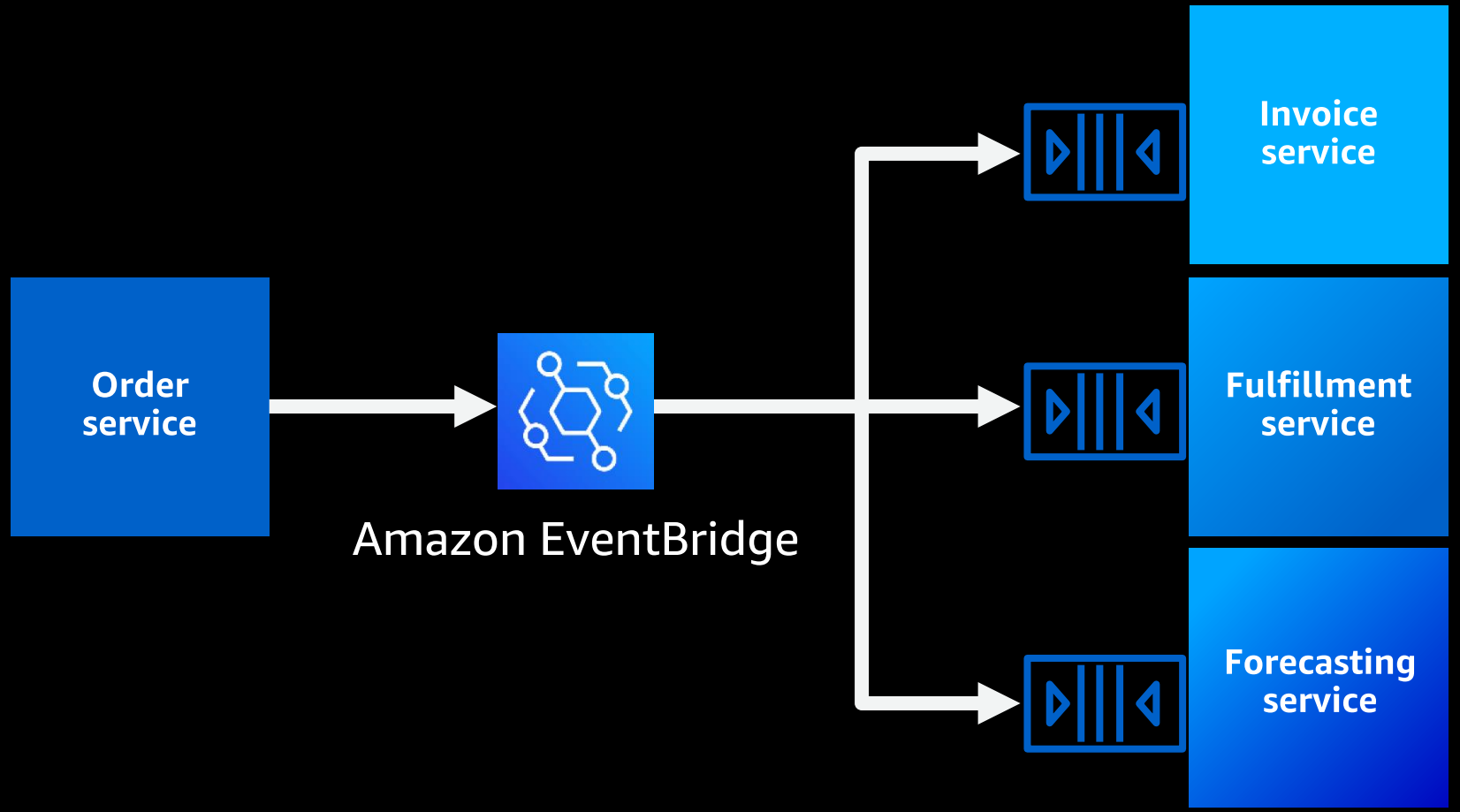
© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Event driven architecture



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

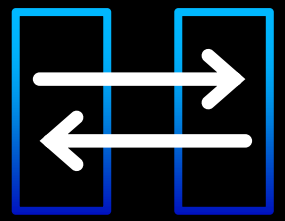
Event driven architecture



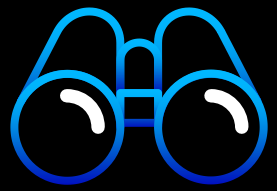
© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modern applications

What is needed

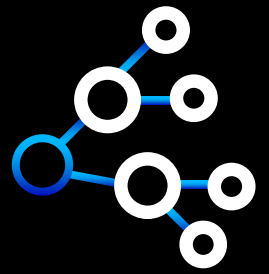


Consistent communications management



Complete visibility

Failure isolation and protection



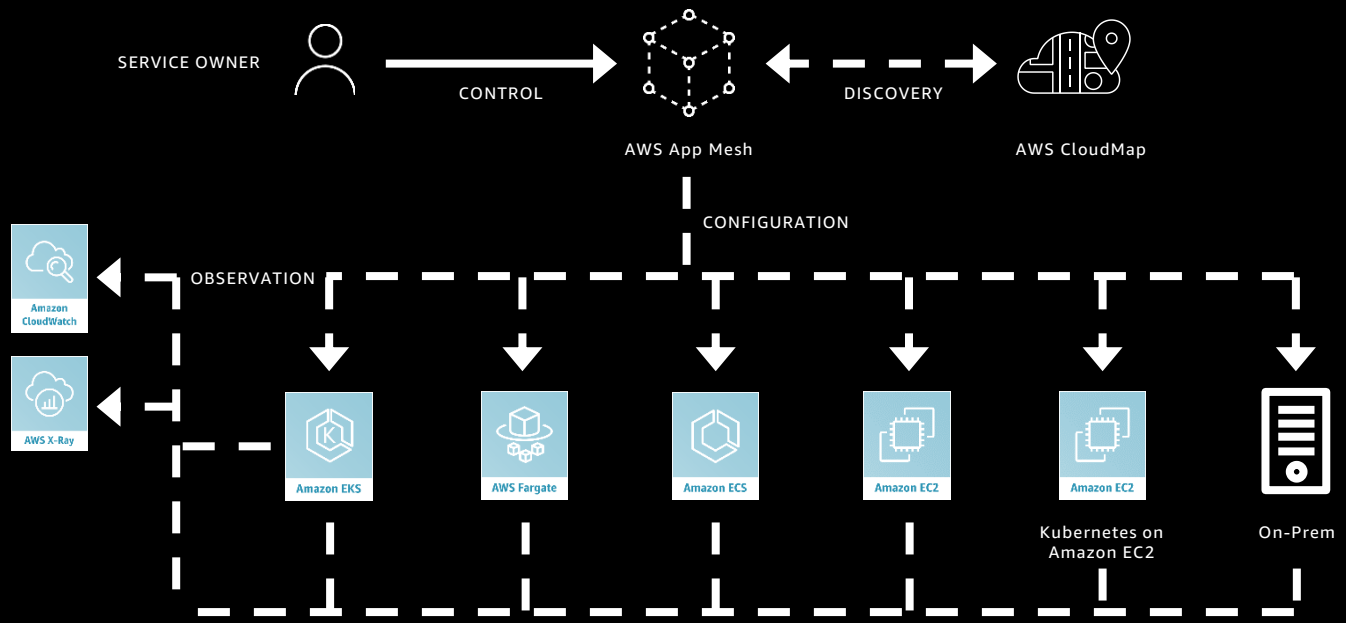
Fine-grained deployment controls

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GENERALLY AVAILABLE

AWS App Mesh

Application-level networking for all your resources

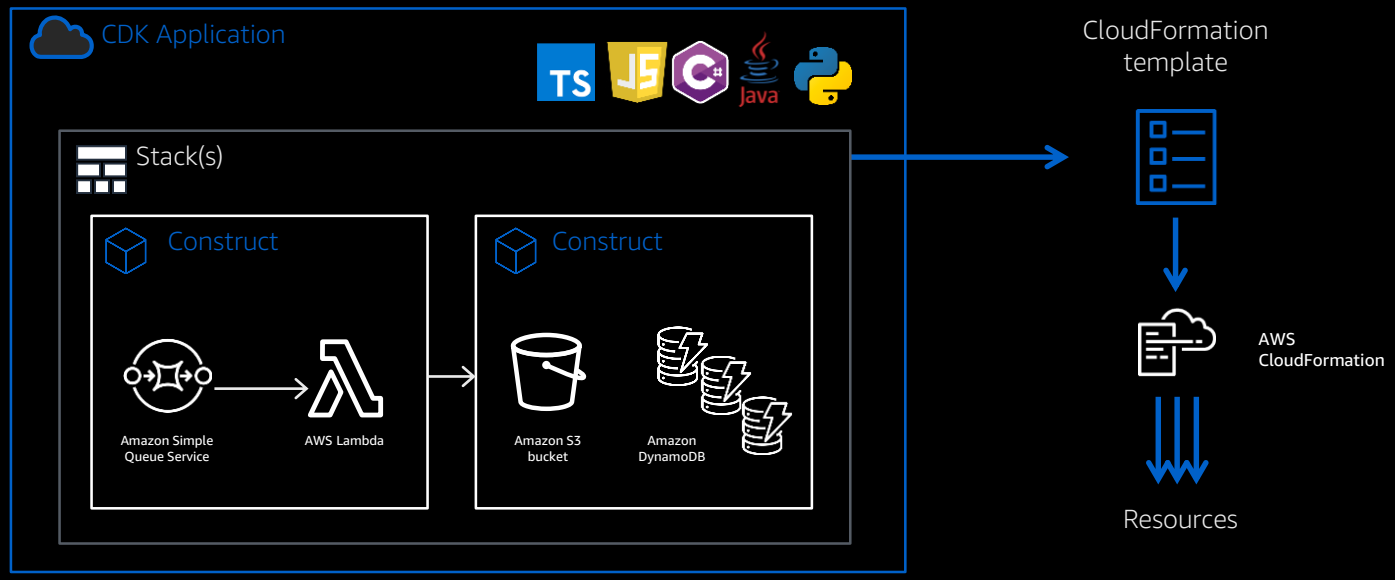


© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Now generally available

AWS Cloud Development Kit

Software development framework for defining cloud infrastructure in code



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Observability is everything

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Security is everyone's job

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Security

Certifications

Global compliance certifications

100% AWS services attested and GDPR ready

Encryption & key management

116 encryption enabled services

54 services integrated with Key Management Service

Threat detection/app security

Threat detection

Machine Learning-powered security

Web application firewall

DDOS protection

Fine-grained access control

Assessment & reporting

Configuration compliance

Resource & usage auditing

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Security automation

Pace of innovation...
meets pace of protection

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

https://docs.aws.amazon.com/security/

Security Documentation by Category

Compute
- Amazon EKS
- AWS Lambda

Storage
- Amazon S3
- AWS Backup
- Amazon S3 Glacier
- AWS Snowball
- AWS Snowball Edge

Databases
- Amazon Aurora
- Amazon DynamoDB
- Amazon ElastiCache
- Amazon Neptune
- Amazon RDS
- Amazon Redshift

Developer Tools
- AWS Codebuild
- AWS X-Ray

Security, Identity, & Compliance
- AWS Security Hub
- AWS WAF

Machine Learning
- Amazon Lex
- Amazon Transcribe

Management & Governance
- AWS Control Tower

Migration & Transfer
- AWS DataSync

Networking & Content Delivery
- AWS Cloud Map
- Amazon CloudFront
- Amazon Route 53

Media Services
- AWS Elemental MediaConnect
- AWS Elemental MediaConvert
- AWS Elemental MediaLive
- AWS Elemental MediaPackage
- AWS Elemental MediaStore
- AWS Elemental MediaTailor

Analytics
- Amazon Athena
- Amazon Elasticsearch Service
- Amazon EMR
- AWS Glue
- Amazon Kinesis Data Analytics for Java Applications
- Amazon Kinesis Data Analytics for SQL Applications
- Amazon Kinesis Data Firehose
- Amazon Kinesis Data Streams
- Amazon Kinesis Video Streams
- Amazon QuickSight

Additional References
- AWS Marketplace

Pillars of AWS Well-Architected

Operational excellence

Security

Reliability

Performance efficiency

Cost optimization

Benefits of AWS Well-Architected Tool

Think cloud-natively

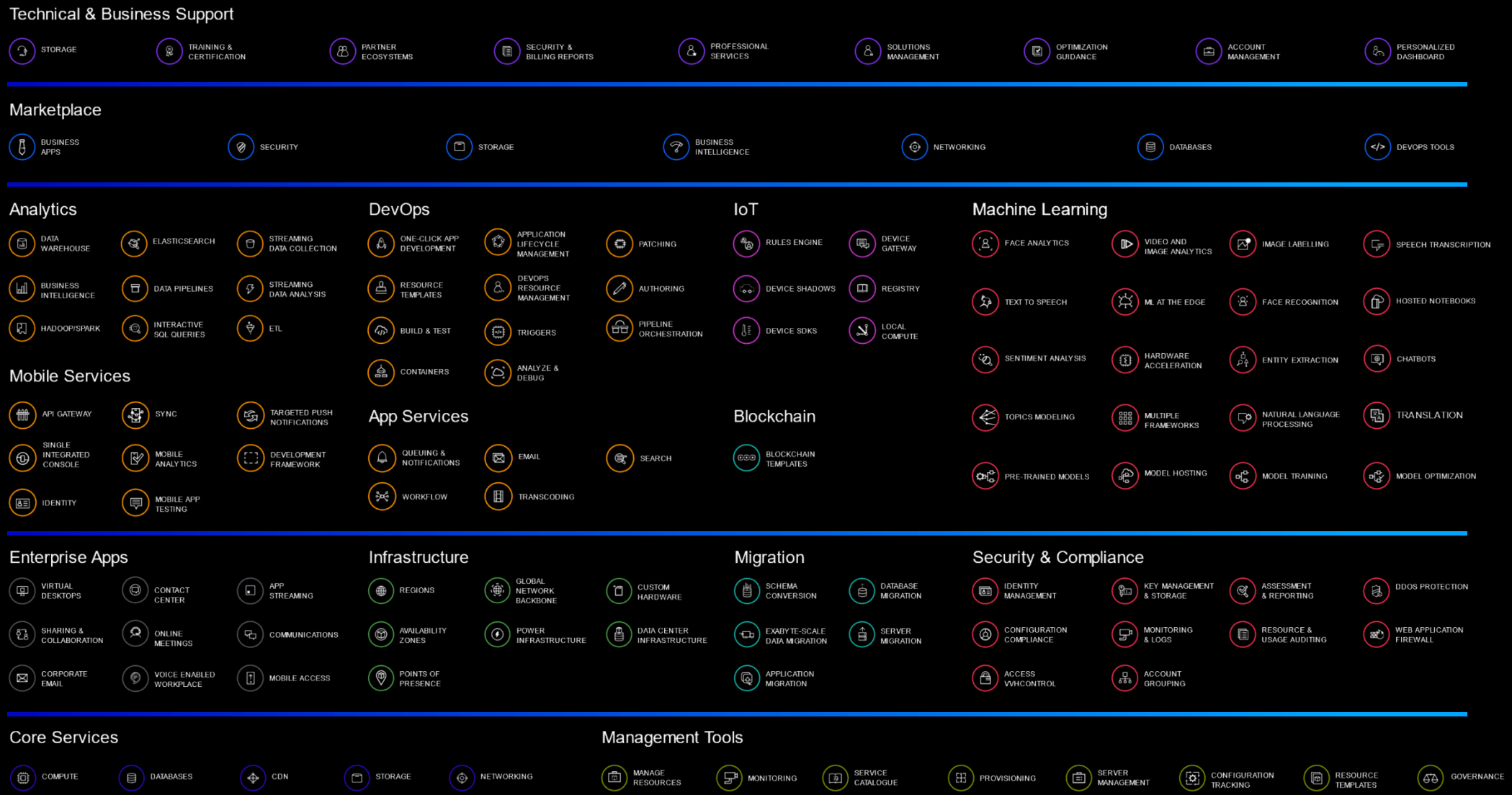
Consistent approach to reviewing architecture

Understand potential impact

Visibility of risks

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

The broadest and deepest platform for today's and tomorrow's builders

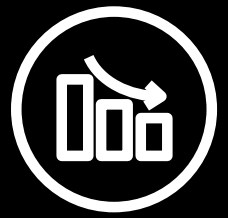


© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

MIGRATION

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

WHY?



Reduce costs

Retire technical debt

Increase agility

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Technical debt doesn't need to be old
Design to retire

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

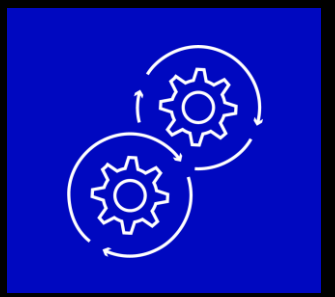
Migration is more than shift the apps

Data transfer
& storage

Database
migration

App
migration

Migration
resources



Hybrid

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

DATA TRANSFER & STORAGE

- AWS Direct Connect
- AWS Snowball
- AWS Snowball Edge
- Amazon Kinesis Data Streams
- Amazon Kinesis Video Streams
- Amazon S3 Transfer Acceleration
- AWS Snowmobile
- AWS Storage Gateway
- Amazon Kinesis Firehose
- AWS Datasync
- AWS Transfer for SMTP

DATABASE MIGRATION

150,000+ databases migrated

APP MIGRATION

SAP

vmware

Windows

MIGRATION RESOURCES

- AWS Migration Acceleration Program
- AWS Cloud Adoption Framework
- AWS Professional Services
- AWS Marketplace

HYBRID

- Data Integration
- VMware Cloud on AWS
- Snowball Edge Compute-Optimized
- AWS Outposts

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

The most complete family of purpose-built databases

KEY VALUE	DOCUMENT	IN-MEMORY	GRAPH	TIME-SERIES	LEDGER
Amazon DynamoDB	Amazon DocumentDB with MongoDB compatibility	Amazon ElastiCache for Redis & Memcached	Amazon Neptune	Amazon Timestream	Amazon QLDB

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

ARTIFICIAL INTELLIGENCE
MACHINE LEARNING

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Broadest and deepest data and analytics portfolio

Visualization & ML	Analytics	Data Lake	Data Movement
Amazon QuickSight	Amazon Redshift	AWS Glue	Amazon S3	AWS Snowball	Amazon Kinesis Data Firehose	AWS Direct Connect	Amazon S3 Transfer Acceleration
Amazon SageMaker	Amazon EMR	Amazon Athena	Amazon Lake Formation	AWS Snowball Edge	Amazon Kinesis Video Streams	Amazon Managed Streaming for Kafka	AWS Database Migration Service
	Amazon Elasticsearch Service	Amazon Kinesis Data Analytics	AWS Glue	AWS Snowmobile	Amazon Kinesis Data Streams	AWS Storage Gateway	AWS Transfer for SFTP

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Entering a new golden age for machine learning

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AI Services

Vision			Speech		Language		Chatbots	Forecasting	Recommendations
Amazon Rekognition Image	Amazon Rekognition Video	Amazon Textract	Amazon Polly	Amazon Transcribe	Amazon Translate	Amazon Comprehend	Amazon Lex	Amazon Forecast	Amazon Personalize

ML Services

Amazon SageMaker

Ground Truth	Notebooks	Algorithms + Marketplace	Reinforcement Learning	
ML at the edge	Training	Performance & accuracy optimization	Deployment	Hosting

ML Frameworks + Infrastructure

Frameworks	Interfaces
TensorFlow, mxnet, PYTORCH	GLUON, Keras

Infrastructure

EC2 P3 & P3n | EC2 C5 | FPGAs | Greengrass | Elastic inference | Inferentia

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Amazon SageMaker

Bringing machine learning to all developers

Build

Pre-built notebooks for common problems

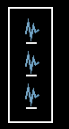
FAST AND ACCURATE DATA LABELING WITH GROUND TRUTH

Fast and accurate data labeling with Ground Truth

REDUCE DATA LABELING COSTS BY UP TO 70%

Built-in, high performance algorithms

MORE THAN 150 ADDITIONAL ALGORITHMS AND MODELS IN AWS MARKETPLACE



Fully-managed reinforcement learning algorithms with SageMaker RL

TRAIN MODELS WITHOUT LABELED TRAINING DATA

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Amazon SageMaker

Bringing machine learning to all developers

BUILD

Pre-built notebooks for common problems

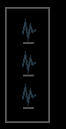
FAST AND ACCURATE DATA LABELING WITH GROUND TRUTH

Fast and accurate data labeling with Ground Truth

REDUCE DATA LABELING COSTS BY UP TO 70%

Built-in, high performance algorithms

MORE THAN 150 ADDITIONAL ALGORITHMS AND MODELS IN AWS MARKETPLACE



Fully-managed reinforcement learning algorithms with SageMaker RL

TRAIN MODELS WITHOUT LABELED TRAINING DATA

Train

One-click training

SET UP AND MANAGE ENVIRONMENTS FOR TRAINING

Optimization

HYPERPARAMETER OPTIMIZATION AND SAGEMAKER NEO

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

New!

Amazon SageMaker Managed Spot Training

Optimize the cost of training machine learning models using Amazon EC2 Spot Instances

Save up to 80% in training costs

Spot capacity fully managed by Amazon SageMaker

Supported for built-in, custom, and AWS Marketplace algorithms

Available soon

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

Amazon SageMaker

Bringing machine learning to all developers

Build

Pre-built notebooks for common problems

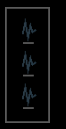
FAST AND ACCURATE DATA LABELING WITH GROUND TRUTH

Fast and accurate data labeling with Ground Truth

REDUCE DATA LABELING COSTS BY UP TO 70%

Built-in, high performance algorithms

MORE THAN 150 ADDITIONAL ALGORITHMS AND MODELS IN AWS MARKETPLACE



Fully-managed reinforcement learning algorithms with SageMaker RL

TRAIN MODELS WITHOUT LABELED TRAINING DATA

Train

One-click training

SET UP AND MANAGE ENVIRONMENTS FOR TRAINING

Optimization

HYPERPARAMETER OPTIMIZATION AND SAGEMAKER NEO

Deploy

One-click deployment

DEPLOY MODEL IN PRODUCTION

Fully managed with auto-scaling, health checks, automatic handling of node failure, and security checks

SCALE AND MANAGE THE PRODUCTION ENVIRONMENT

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

AI Services

Vision			Speech		Language		Chatbots	Forecasting	Recommendations
Amazon Rekognition Image	Amazon Rekognition Video	Amazon Textract	Amazon Polly	Amazon Transcribe	Amazon Translate	Amazon Comprehend	Amazon Lex	Amazon Forecast	Amazon Personalize

ML Services

Amazon SageMaker

Ground Truth	Notebooks	Algorithms + Marketplace	Reinforcement Learning	
ML at the edge	Training	Performance & accuracy optimization	Deployment	Hosting

ML Frameworks + Infrastructure

Frameworks	Interfaces
TensorFlow, mxnet, PYTORCH	GLUON, Keras

Infrastructure

EC2 P3 & P3n | EC2 C5 | FPGAs | Greengrass | Elastic inference | Inferentia

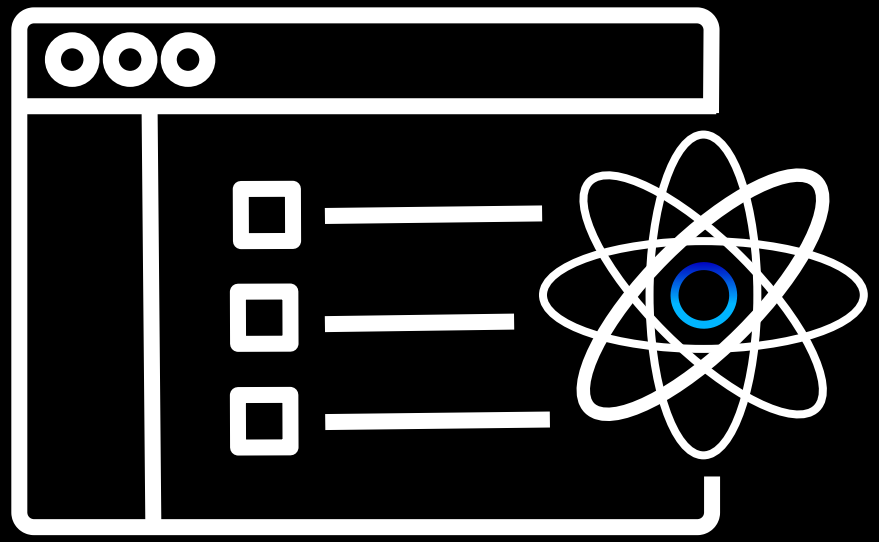
© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Innovation is everywhere
so are

opportunities to learn

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Amazon ML Solutions Lab



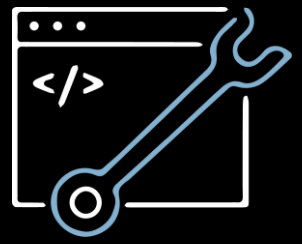
- Brainstorming
- Custom modeling
- Training
- Work side-by-side with Amazon experts

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

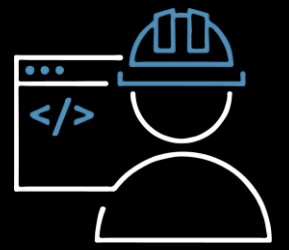
ML Learning Paths

Business decision makers



Developers

Data scientists



Data platform engineers

AWS certified machine learning – specialty exam

Additional learning path for exam readiness available

Learn more at aws.training/machinelearning

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws INNOVATE
ONLINE CONFERENCE - GLOBAL EDITION

Overview

KEYNOTE

EMPOWERING BUILDERS TO CREATE TOMORROW

15 TRACKS

LIVE CODING (TWITCH)	AI/ML	DATABASES
DATA MANAGEMENT	DATA AND ANALYTICS	IOT
MODERN APPLICATION DEVELOPMENT	MIGRATION	SECURITY
DEVELOPERS	GOVERNMENT / PUBLIC SECTOR	PARTNERING WITH AWS
STARTUPS	INDUSTRY SOLUTIONS	LOCALISED TRACKS

LIVE CODING

VIA TWITCH

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

aws INNOVATE
ONLINE CONFERENCE - GLOBAL EDITION

Overview

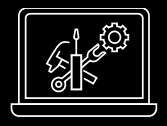
3 LOCALISED TRACKS

- KOREAN TRACK
- SPANISH TRACK
- PORTUGUESE TRACK

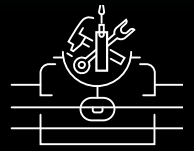
LIVE DEMOS

- COMPUTER VISION
- DEEPRACER
- PHOTOGRAMMERTRY

ACTIVITIES



SHOWCASE ARENA



BUILDERS' ZONE

INNOVATE CHALLENGE

ASK THE EXPERTS

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

aws

Thank you for attending AWS Innovate

We hope you found it interesting! A kind reminder to **complete the survey.**
Let us know what you thought of today's event and how we can improve the event experience for you in the future.

aws-apac-marketing@amazon.com

twitter.com/AWSCloud

facebook.com/AmazonWebServices

youtube.com/user/AmazonWebServices

slideshare.net/AmazonWebServices

twitch.tv/aws

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

LET'S CREATE TOMORROW
THERE'S NEVER BEEN A BETTER TIME TO CREATE

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.