AWS Quick Start

Build a Serverless Web Application

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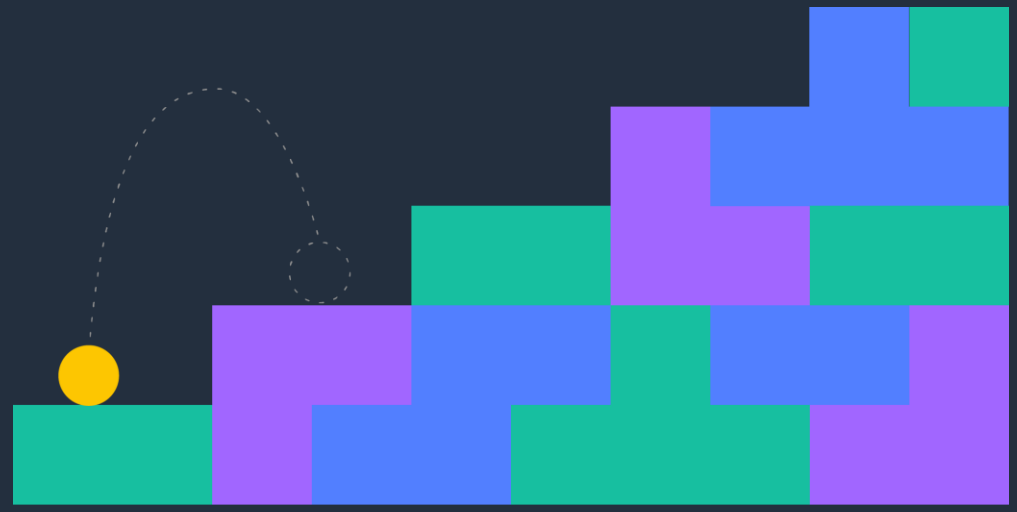
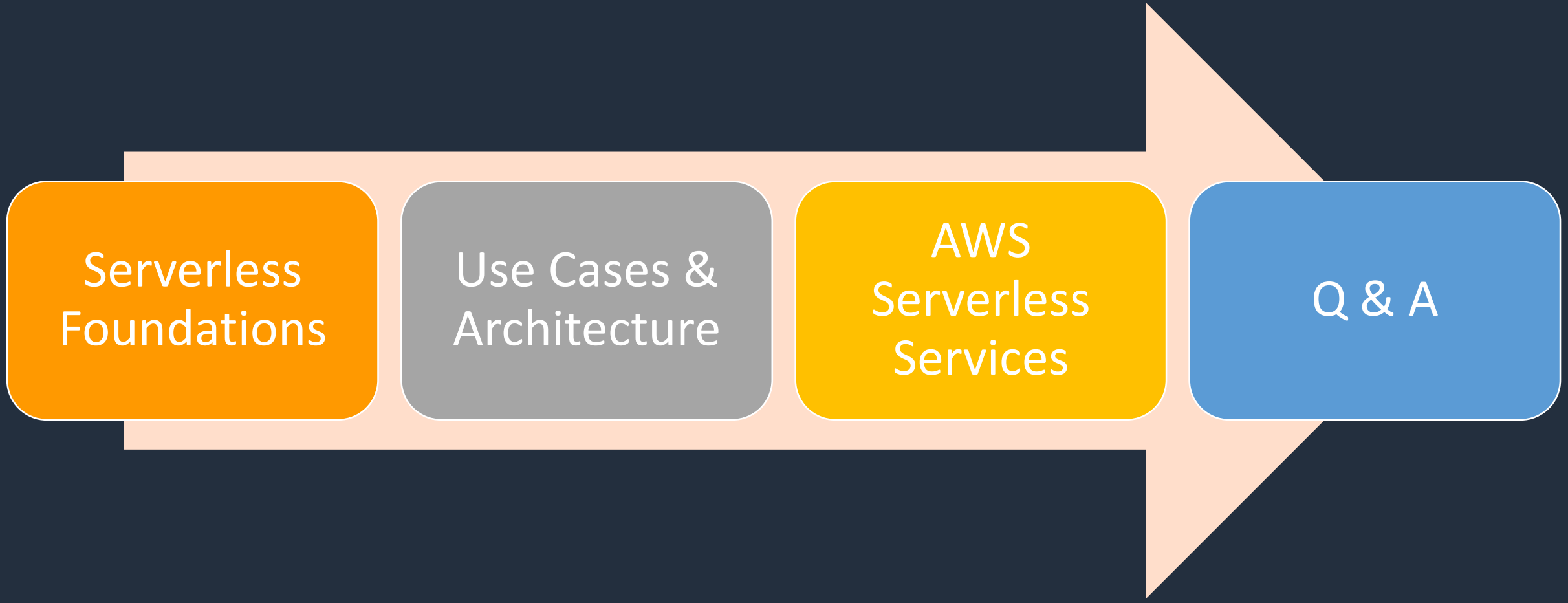
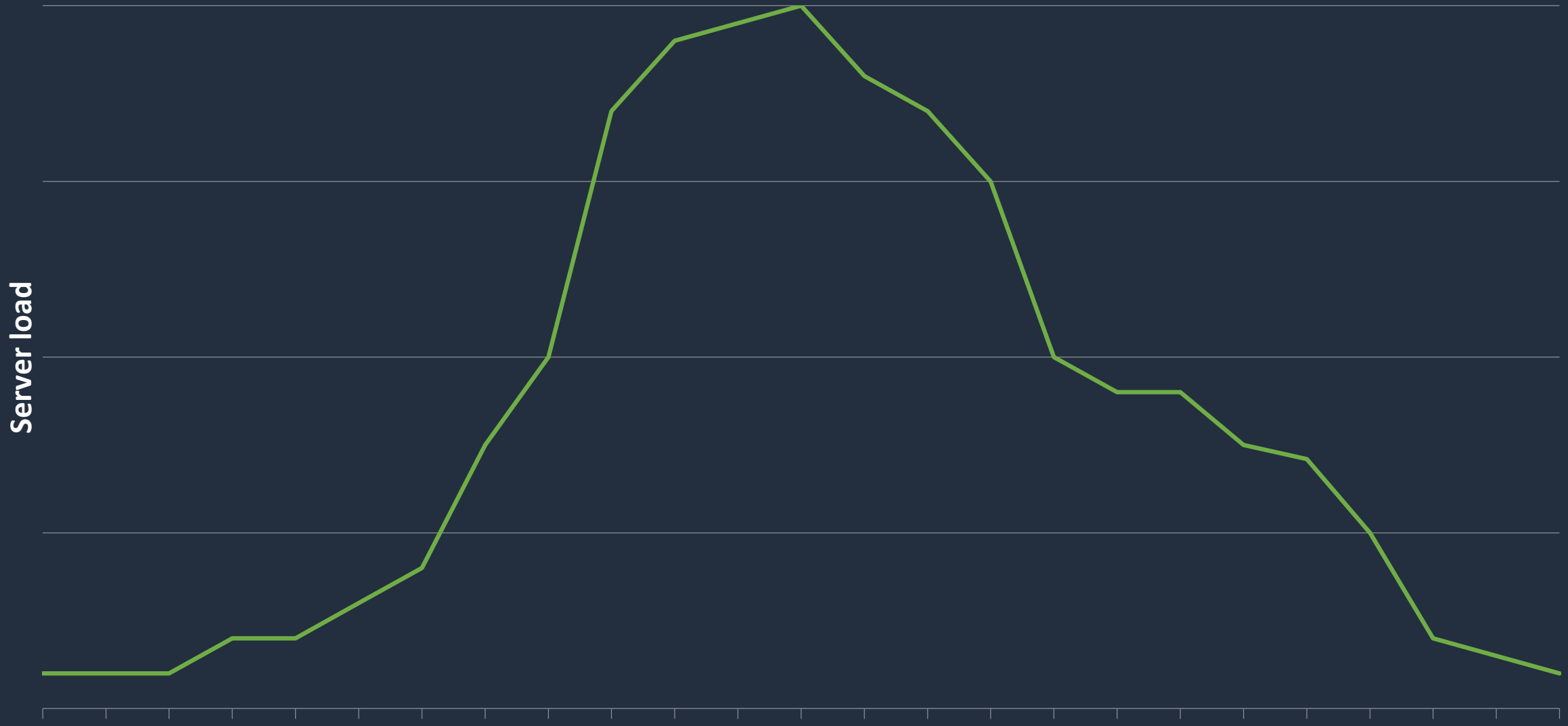


Agenda



Why serverless?



Serverless Means …

No servers to provision or manage

Scales with usage

Never pay for idle

Built in availability and fault tolerance

Spectrum of AWS Serverless Services

Compute and API Proxy


AWS Lambda


Lambda@Edge


Amazon API Gateway

Datastores, Storage, Orchestration, Analytics, Interprocess Messaging


Amazon DynamoDB


Amazon Aurora Serverless (preview)

AWS AppSync


Amazon S3


AWS Step Functions


Amazon Kinesis


Amazon SQS


Amazon SNS

Developer Tools


AWS Cloud9


AWS Serverless Application Model (SAM)


AWS CodeBuild


AWS CodePipeline


AWS X-Ray

Open Source and third parties

aws

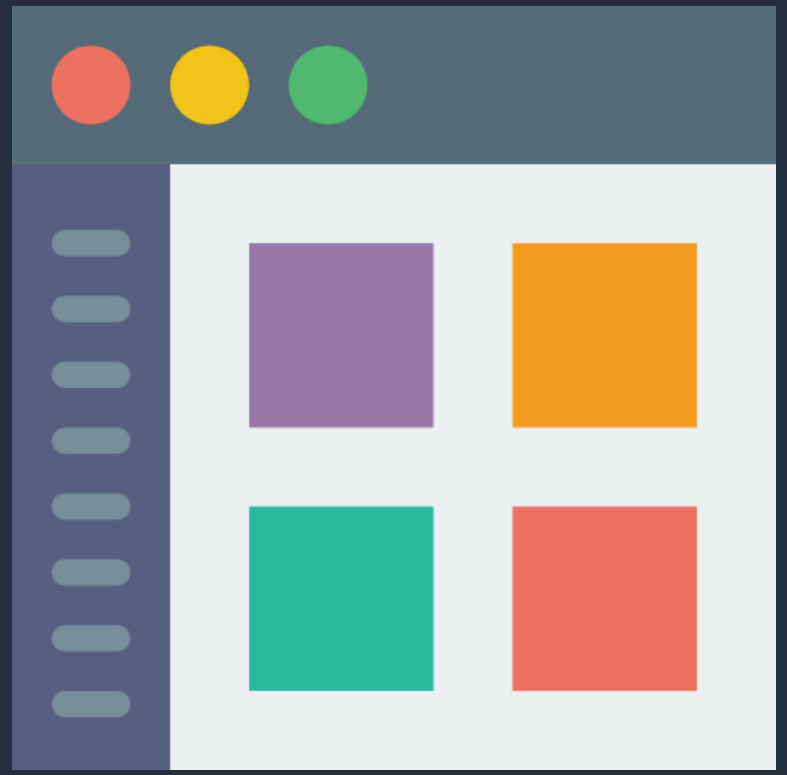
Focus on building business logic

CUSTOMERS LOVE SERVERLESS

aws

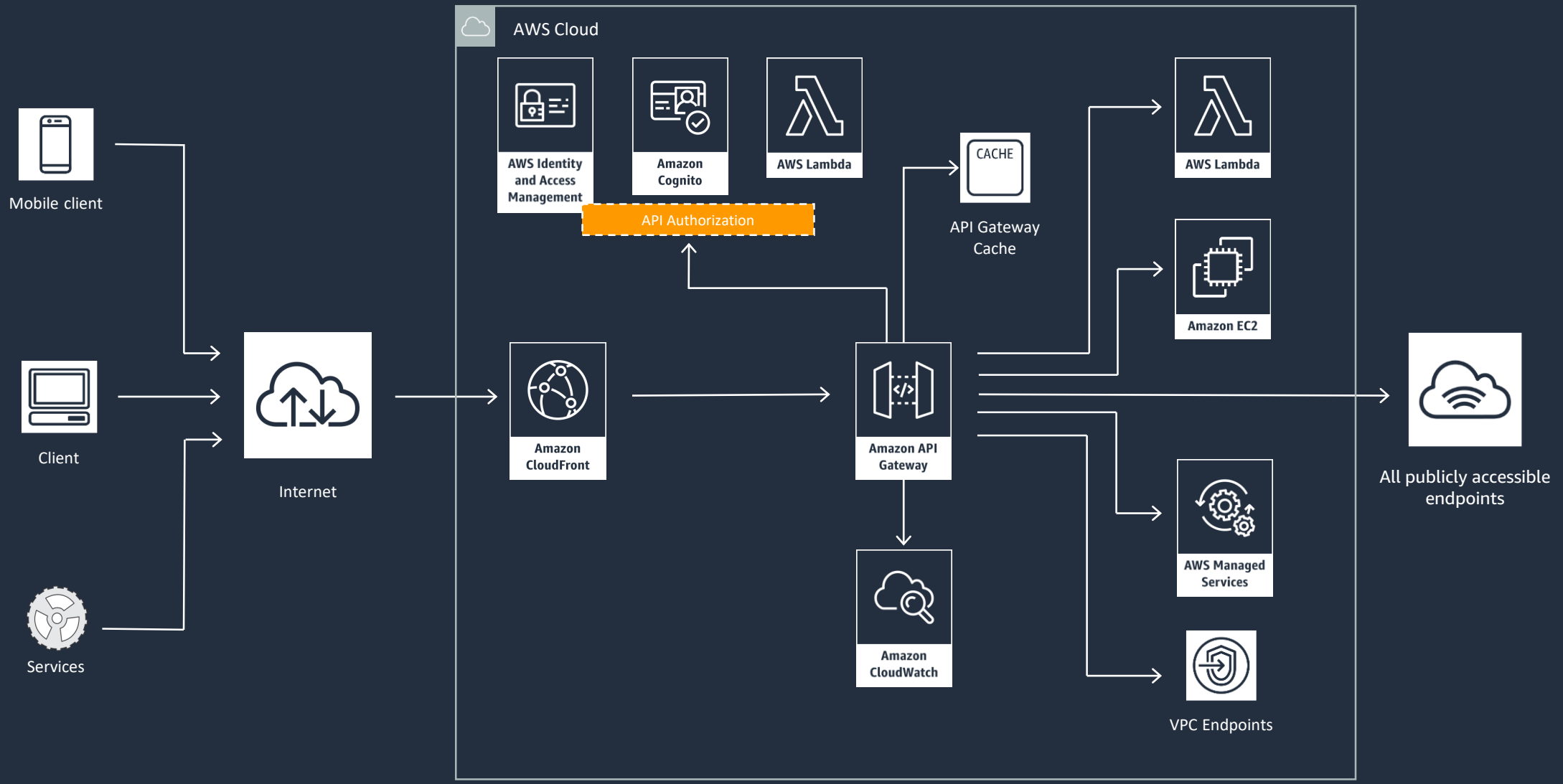
What we can do with serverless?

Serving Static Content



Icon made by FlatIcon

Serving Dynamic Content - Restful



Serverless Hotel Booking Chatbot

AWS Lambda and Amazon Lex

"Book a Hotel in NYC"

Book | a | Hotel | in | NYC

Automatic Speech Recognition

Hotel Booking

New York City

Natural Language Understanding

Intent/Slot Model

Utterances

Hotel Booking	
City	New York City
Check in	Nov 30th
Check out	Dec 2nd

"Can I go ahead with the booking?

Confirmation: "Your hotel is booked for Nov 30th"

Amazon Polly

"Your hotel is booked for Nov 30th"

Services to get started for building your serverless applications.

AWS Lambda

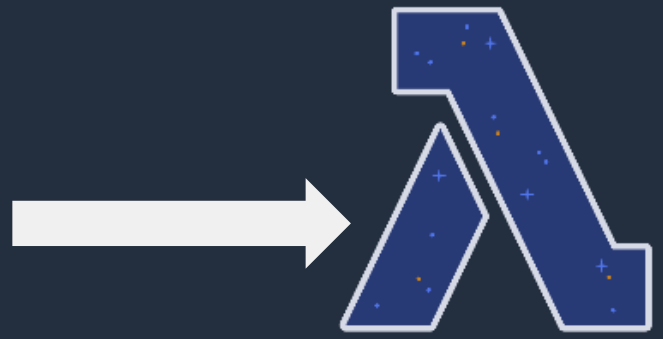
Event source

Changes in data state

Requests to endpoints

Changes in resource state

Lambda function



Node.js
Python
Java
C#
Go

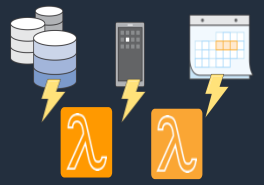
Services (anything)

aws

Using AWS Lambda

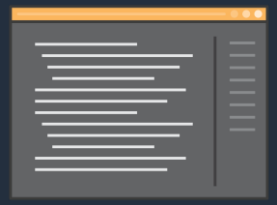
Bring your own code

Simple resource model



Flexible use

Flexible authorization



Authoring functions

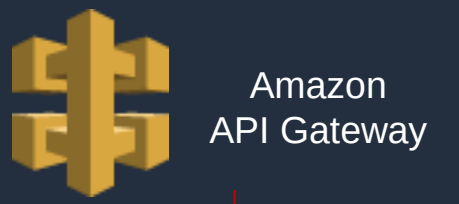
Programming model

Monitoring and logging

Stateless

Lambda execution model

Synchronous (push)



Amazon
API Gateway

/order

Lambda
function

• Asynchronous (event)

Amazon
SNS

Amazon
S3

Reqs

Lambda
function

• Stream-based

Amazon
DynamoDB

Amazon
Kinesis

Changes

AWS Lambda
service

Function

Event sources that trigger AWS Lambda

DATA STORES


Amazon S3


Amazon DynamoDB


Amazon Kinesis


Amazon Cognito

ENDPOINTS


Amazon API Gateway


AWS IoT


AWS Step Functions


Amazon Alexa

DEVELOPMENT AND MANAGEMENT TOOLS


AWS CloudFormation


AWS CloudTrail


AWS CodeCommit


Amazon CloudWatch

EVENT/MESSAGE SERVICES

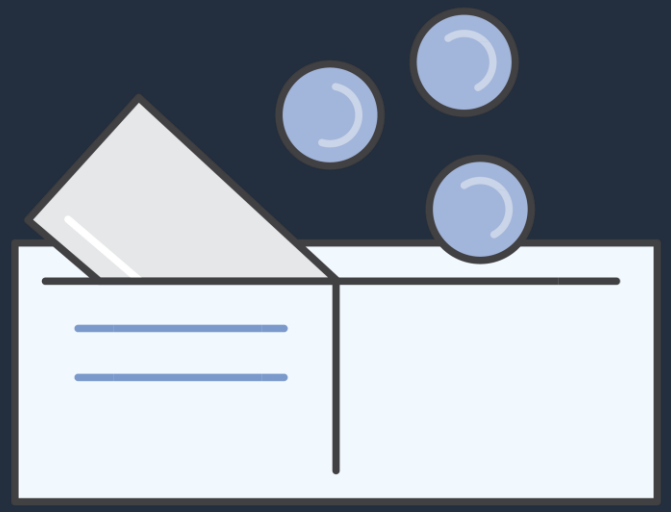

Amazon SES


Amazon SNS


Cron events

… and more!

Fine-grained pricing



Free Tier
1M requests and 400,000 GB of compute.
Every month, every customer.

Buy compute time in 100ms increments

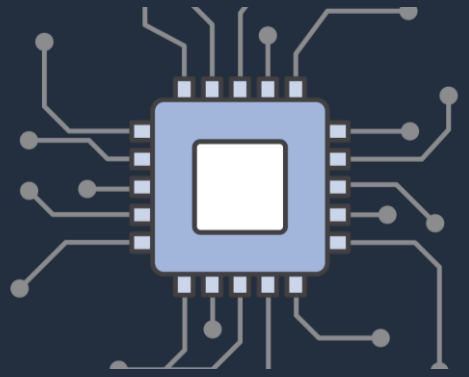
Low request charge

No hourly, daily, or monthly minimums

No per-device fees

Never pay for idle

Amazon API Gateway



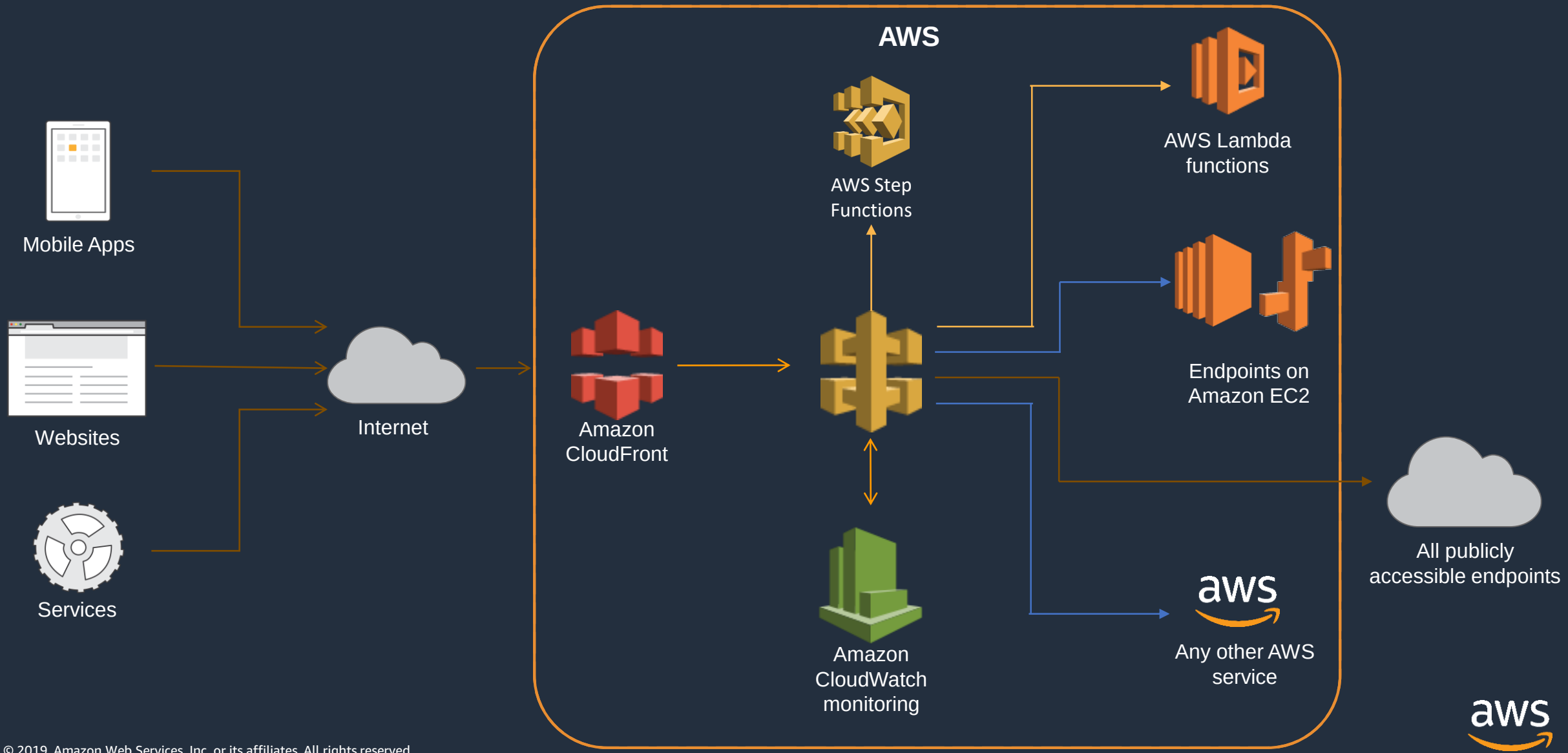
Create a unified API front end for multiple micro-services

DDoS protection and throttling for your backend

Authenticate and authorize requests to a backend

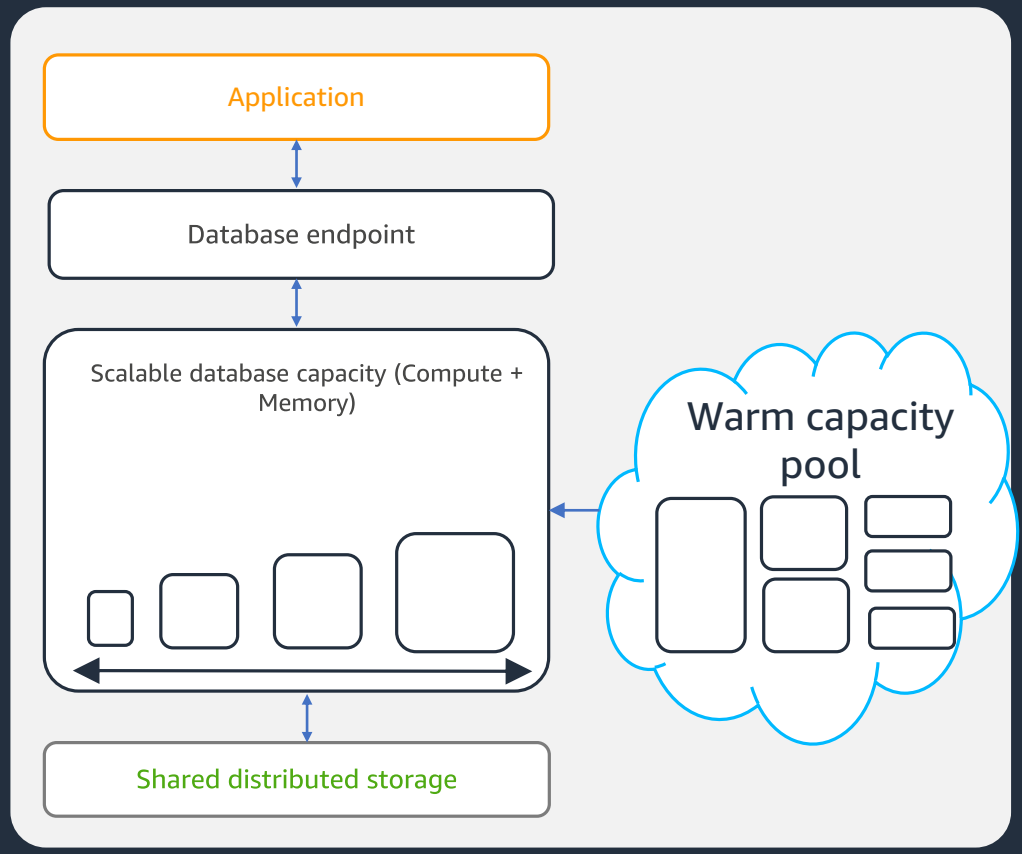
Throttle, meter, and monetize API usage by third-party developers

Amazon API Gateway



Aurora Serverless

On-demand, auto-scaling database for applications with variable workloads



Starts up on demand, shuts down when not in use

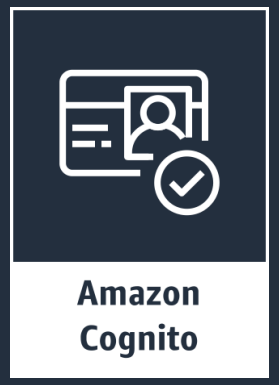
Automatically scales with no instances to manage

Pay per second for the database capacity you use

Amazon DynamoDB

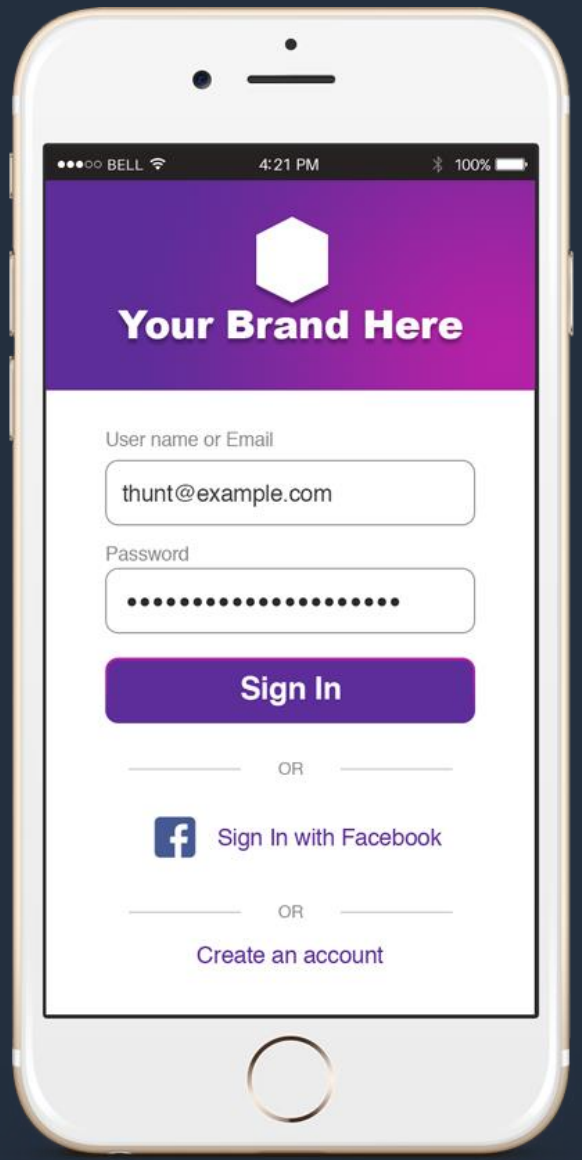
AWS Database Migration Service (AWS DMS)!

- Managed NoSQL database
- Provisioned throughput
- Fast, predictable performance
- Fully distributed, fault tolerant
- JSON support
- Items up to 400 KB
- Time-to-live (TTL)
- Streams and triggers
- AWS Application Auto Scaling
- Global tables

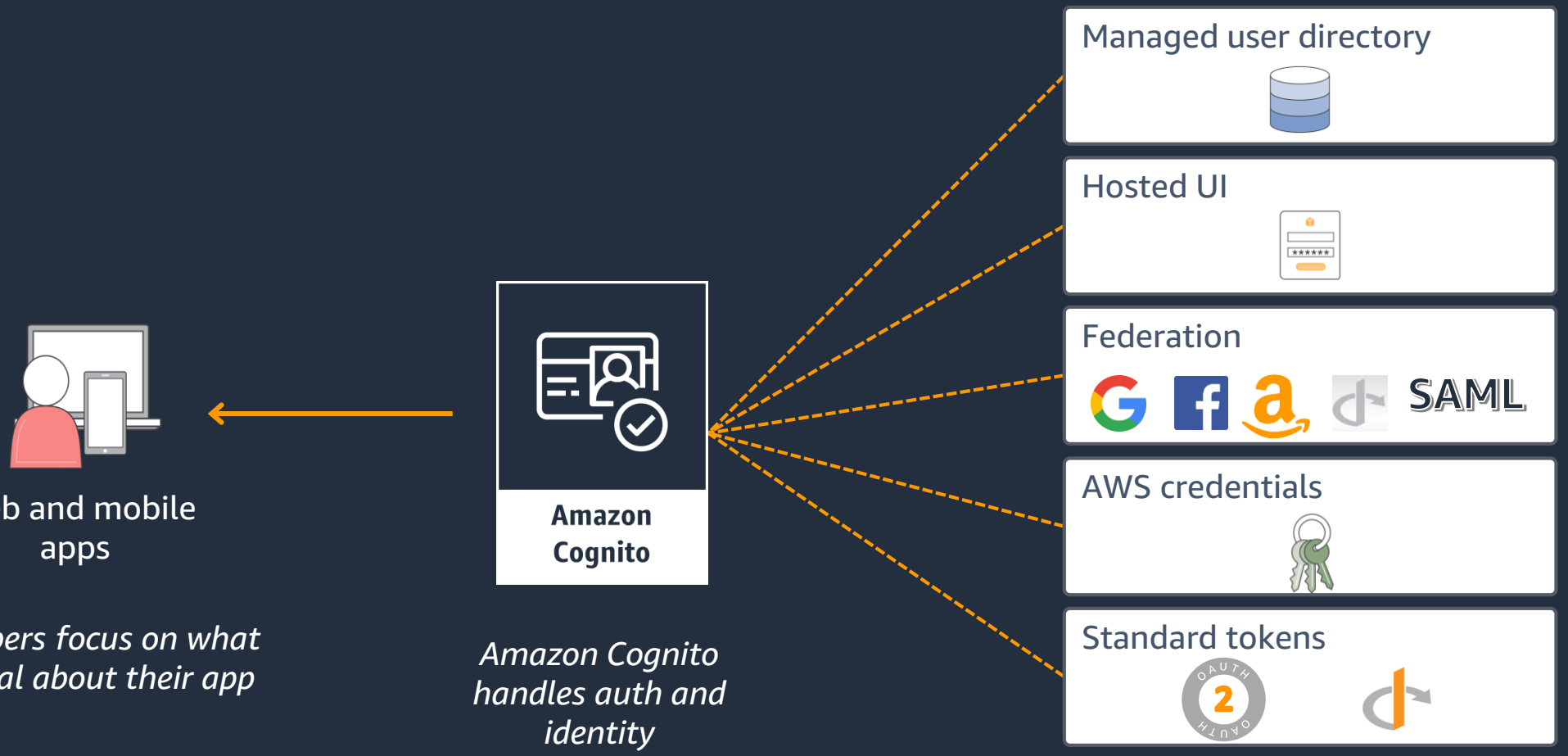


Amazon Cognito

Simple and Secure User Sign-Up, Sign-In, and Access Control



Amazon Cognito overview



Amazon Simple Storage Service (Amazon S3)

Object-based storage

Highly durable

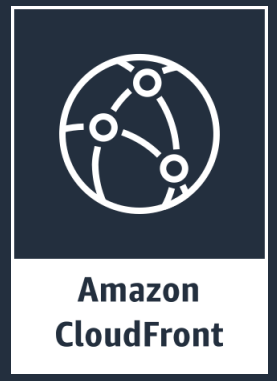
Great for static assets

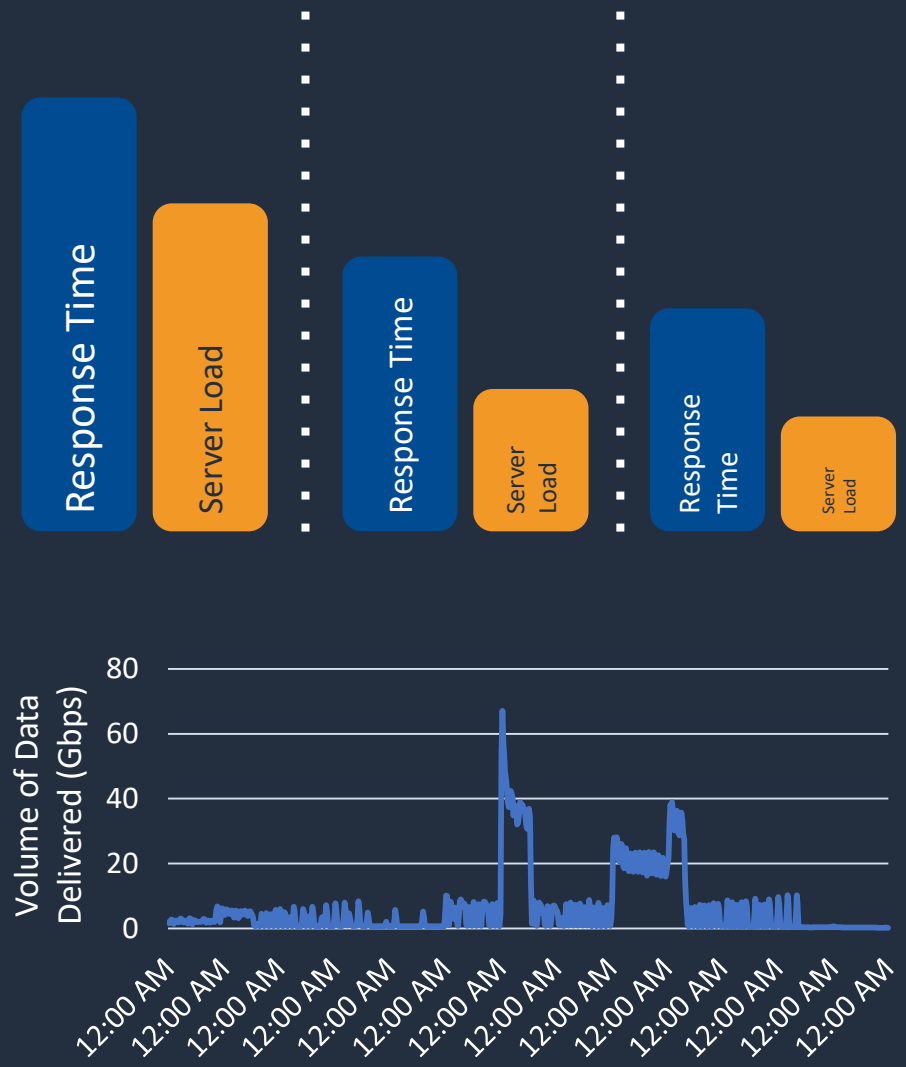
“Infinitely scalable”

Objects up to 5 TB in size

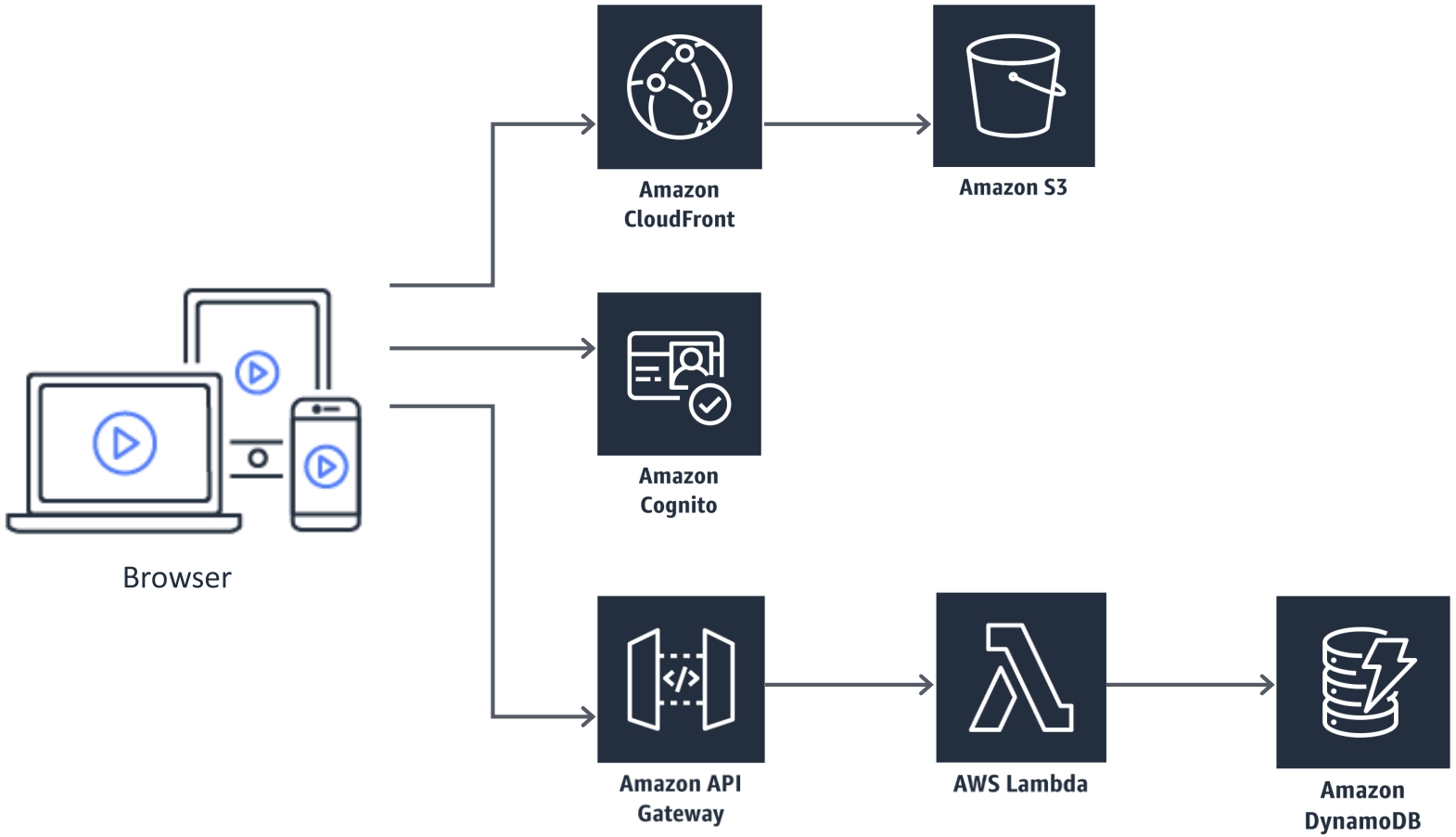
Encryption at rest and in transit

Amazon CloudFront





Bringing It All Together…



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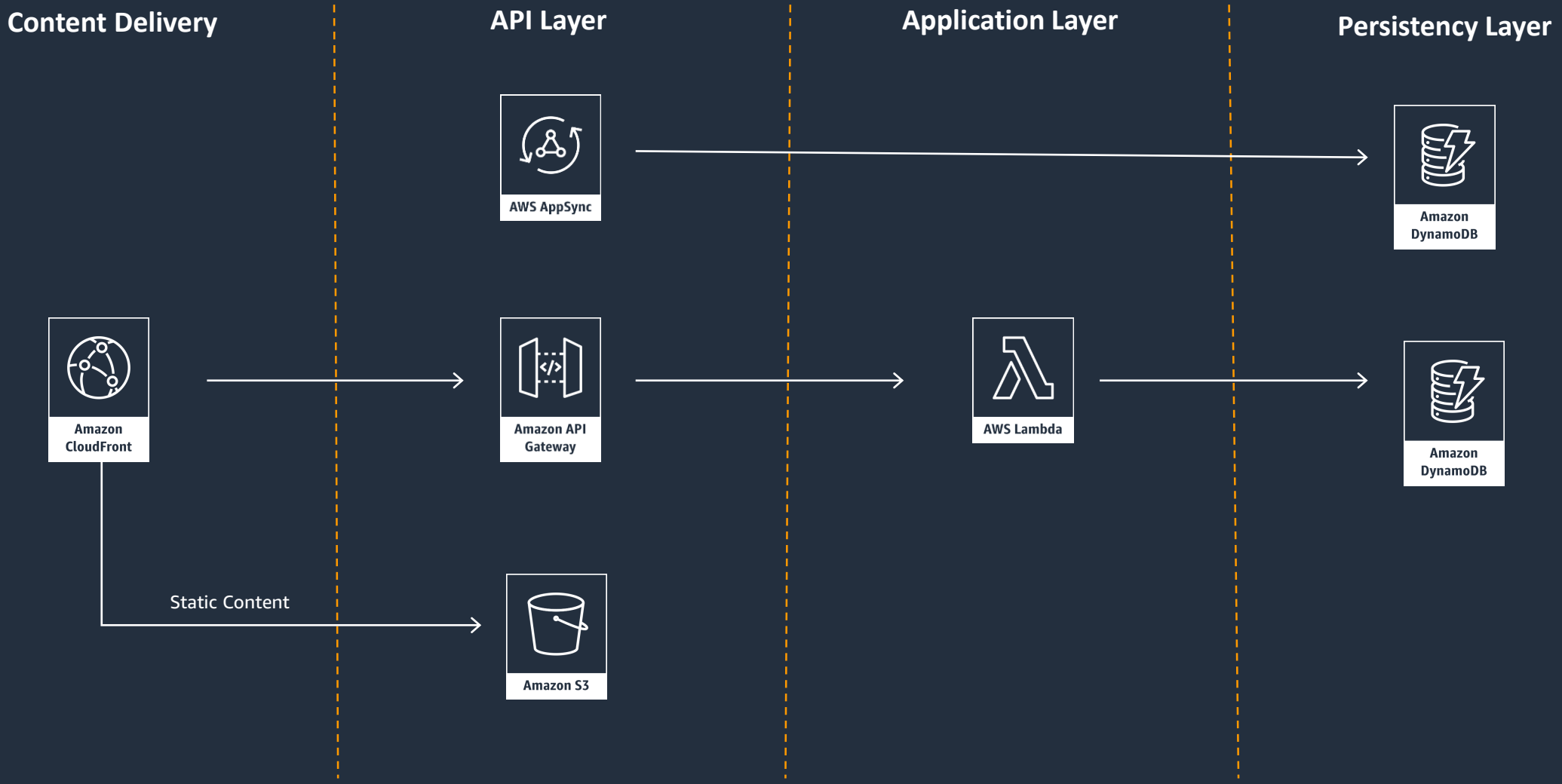


How about Containers?

Serverless Containers?

ENABLE FOCUS ON APPLICATIONS

Make ***tasks*** (containers) a fundamental compute primitive

AWS Fargate

Run containers *without* managing servers or clusters

No instances
to manage

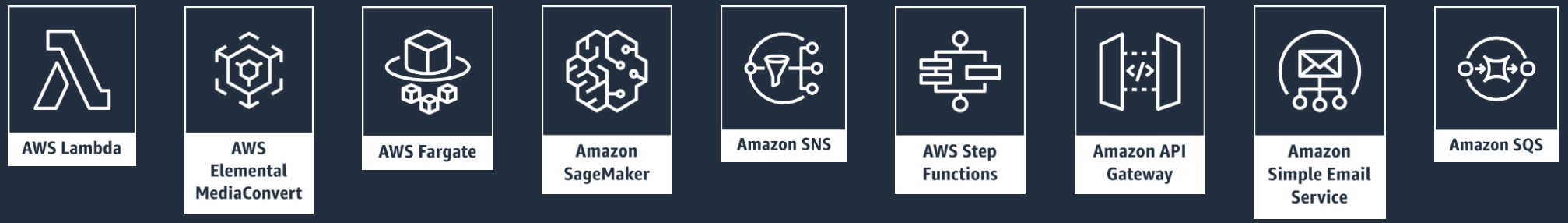
Task
native API

Resource
based pricing

aws

Summary

Serverless = focusing your efforts on what provides value to users.



aws.amazon.com/serverless

Serverless Computing and Applications

> Build and run applications without thinking about servers

Find serverless applications

Serverless computing allows you to build and run applications and services without thinking about servers. Serverless applications don't require you to provision, scale, and manage any servers. You can build them for nearly any type of application or backend service, and everything required to run and scale your application with high availability is handled for you.

Building serverless applications means that your developers can focus on their core product instead of worrying about managing and operating servers or runtimes, either in the cloud or on-premises. This reduced overhead lets developers reclaim time and energy that can be spent on developing great products which scale and that are reliable.

Thank You for Attending AWS Quick Start

We hope you found it interesting! A kind reminder to **complete the survey.**
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