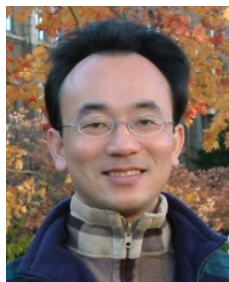


AWS Content Delivery Network: Lab 5 Using CloudFront as a CDN for a Website

Time: 2022/5/6 (Friday) 18:30-20:30
Place: 電資406室, 國立臺北大學 (NTPU)



戴敏育 副教授

Min-Yuh Day, Ph.D, Associate Professor

國立臺北大學 資訊管理研究所

Institute of Information Management, National Taipei University

<https://web.ntpu.edu.tw/~myday>

2022-05-06





戴敏育 博士 (Min-Yuh Day, Ph.D.)

aws academy

Accredited
Educator

aws
certified

Solutions
Architect

Associate

aws
certified

Cloud
Practitioner

國立臺北大學 資訊管理研究所 副教授
中央研究院 資訊科學研究所 訪問學人
國立臺灣大學 資訊管理 博士

Publications Co-Chairs, IEEE/ACM International Conference on
Advances in Social Networks Analysis and Mining (ASONAM 2013-)

Program Co-Chair, IEEE International Workshop on
Empirical Methods for Recognizing Inference in Text (IEEE EM-RITE 2012-)

Publications Chair, The IEEE International Conference on
Information Reuse and Integration for Data Science (IEEE IRI)



Outline

- **AWS Content Delivery Network: Lab 5**
Using CloudFront as a CDN for a Website
 - **AWS Academy Introduction to Cloud: Semester 1**
 - **Module 5 Content Delivery**
 - **Lab 5 - Amazon CloudFront**

Available AWS Certifications

3

Professional

Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

SAP



2

Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

SAA



Architect



Operations



Developer

1

Foundational

Six months of fundamental AWS Cloud and industry knowledge

CLF

Cloud Practitioner



Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the **exam guide**



Available AWS Certifications

3

專業級

兩年使用 AWS 雲端設計、操作及疑難排解解決方案的廣泛經驗

SAP



2

助理級

一年使用 AWS 雲端解決問題和實作解決方案的經驗

SAA



架構師



營運



開發人員

1

基礎

六個月的基礎 AWS 雲端和產業知識

CLF

雲端從業人員



專家級

考試指南中指定的專業領域中的 AWS 雲端技術經驗



企業雲端運算入門

(Foundation of Business Cloud Computing)

雲端概念概述

(Cloud Concepts Overview)

企業雲端運算入門 (Foundation of Business Cloud Computing) (BA4, NTPU) (Spring 2022)
(AWS Academy Cloud Foundations; ACF) (AWS Certified Cloud Practitioner)
(BA4, NTPU) (3 Credits, Elective) (U4010) (自主學習課程)(商業智慧與大數據分析學士學分學程)
(1102) (國立台北大學企管系4A, 4B) (選修3學分) (授課教師：謝榮桂，戴敏育) (2022.02 - 2022.06)
(週三 Wed, 6, 7, 8, 14:10-17:00) (台北大學三峽校區 商3F10)

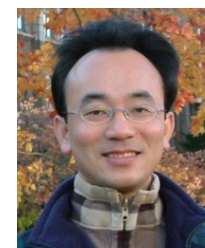


謝榮桂 (Jung-Kuei Hsieh), 戴敏育 (Min-Yuh Day)

National Taipei University

國立臺北大學

2022-02-23





國立臺北大學
National Taipei University



Accredited
Educator



**Cloud
Practitioner**



**Solutions
Architect**
Associate

教學目標



- 本課程主要介紹亞馬遜公司的雲端運算服務 **Amazon Web Services (AWS)**，
對於想要全面瞭解企業雲端運算概念的同學，
本課程將詳細介紹
雲概念、
AWS 核心服務、
安全性、
架構、
定價和相關支援等服務，
並以通過認證 **AWS Certified Cloud Practitioner** 為目標。



Course Objectives

- This course introduces **Amazon Web Services (AWS)**, the cloud computing service of Amazon.
- For students who want to fully understand the concept of enterprise cloud computing, this course will introduce the AWS Academy Cloud Foundations.
- Topics include **Cloud Concepts Overview, Cloud Economics and Billing, AWS Global Infrastructure Overview, AWS Cloud Security, Networking and Content Delivery, Cloud Compute, Cloud Storage, Cloud Databases, Cloud Architecture, Cloud Automatic Scaling and Monitoring.**
- The course objective is training students to pass the certification of **AWS Certified Cloud Practitioner.**

內容綱要

- 說明如何使用 AWS 帳戶的最佳實務
- 說明AWS架構完善的框架和設計原則
- 說明AWS高可用性和可靠性
- 描述AWS設計決策的業務影響
- 描述AWS如何設置組織結構以簡化帳單和提高帳戶可見性
- 說明AWS替代支援選項和功能

Course Outline

- 1. Cloud Concepts Overview**
- 2. Cloud Economics and Billing**
- 3. AWS Global Infrastructure Overview**
- 4. AWS Cloud Security**
- 5. Networking and Content Delivery**
- 6. Cloud Compute**
- 7. Cloud Storage**
- 8. Cloud Databases**
- 9. Cloud Architecture**
- 10. Cloud Automatic Scaling and Monitoring**

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
1	2022/02/23	雲端概念概述 (Cloud Concepts Overview)
2	2022/03/02	雲端經濟與計費 (Cloud Economics and Billing)
3	2022/03/09	AWS全球基礎設施概述 (AWS Global Infrastructure Overview)
4	2022/03/16	AWS雲端安全 (AWS Cloud Security)
5	2022/03/23	網路和內容交付 (Networking and Content Delivery)
6	2022/03/30	雲端計算 (Cloud Compute)

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
7	2022/04/06	放假一天 (Make-up Holiday, No Classes)
8	2022/04/13	雲端儲存 (Cloud Storage)
9	2022/04/20	雲端數據庫 (Cloud Databases)
10	2022/04/27	雲端架構 (Cloud Architecture)
11	2022/05/04	雲端自動擴展和監控 (Cloud Automatic Scaling and Monitoring)
12	2022/05/11	學生自主學習 (Self-learning)

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
13	2022/05/18	學生自主學習 (Self-learning)
14	2022/05/25	雲端專案成果報告與討論 (Cloud Project Presentation and Discussion)
15	2022/06/01	學生自主學習 (Self-learning)
16	2022/06/08	期末專案成果報告 (Final Project Presentation)
17	2022/06/15	學生自主學習 (Self-learning)
18	2022/06/22	學生自主學習 (Self-learning)



AWS Products and Services



Analytics



Application Integration



AR & VR



AWS Cost Management



Blockchain



Business Applications



Compute



Customer Engagement



Database



Developer Tools



End User Computing



Game Tech



Internet of Things



Machine Learning



Management & Governance



Media Services



Migration & Transfer



Mobile



Networking & Content
Delivery



Quantum Technologies



Robotics



Satellite



Security, Identity &
Compliance



Storage



AWS Compute



Compute

Amazon EC2

Virtual servers in the cloud

Amazon EC2 Auto Scaling

Scale compute capacity to meet demand

Amazon Elastic Container Registry

Store and retrieve docker images

Amazon Elastic Container Service

Run and manage docker containers

Amazon Elastic Kubernetes Service

Run managed Kubernetes on AWS

Amazon Lightsail

Launch and manage virtual private servers

AWS Batch

Run batch jobs at any scale

AWS Elastic Beanstalk

Run and manage web apps

AWS Fargate

Run containers without managing servers or clusters

AWS Lambda

Run code without thinking about servers

AWS Outposts

Run AWS infrastructure on-premises

AWS Serverless Application Repository

Discover, deploy, and publish serverless applications

AWS Wavelength

Deliver ultra-low latency applications for 5G devices

VMware Cloud on AWS

Build a hybrid cloud without custom hardware



AWS Database



Database

Amazon Aurora

High Performance Managed Relational Database

Amazon DynamoDB

Managed NoSQL Database

Amazon DocumentDB (with MongoDB compatibility)

Fully managed document database

Amazon ElastiCache

In-memory Caching System

Amazon Managed Apache Cassandra Service

Managed Cassandra-compatible database

Amazon Neptune

Fully Managed Graph Database Service

Amazon Quantum Ledger Database (QLDB)

Fully managed ledger database

Amazon RDS

Managed Relational Database Service for MySQL, PostgreSQL, Oracle, SQL Server, and MariaDB

Amazon RDS on VMware

Automate on-premises database management

Amazon Redshift

Fast, Simple, Cost-effective Data Warehousing

Amazon Timestream

Fully managed time series database

AWS Database Migration Service

Migrate Databases with Minimal Downtime



AWS Storage



Storage

Amazon Simple Storage Service (S3)

Scalable Storage in the Cloud

Amazon FSx for Lustre

High-performance file system integrated with S3

AWS Backup

Centralized backup across AWS services

CloudEndure Disaster Recovery

Highly automated disaster recovery

Amazon Elastic Block Store (EBS)

EC2 block storage volumes

Amazon FSx for Windows File Server

Fully managed Windows native file system

AWS Snow Family

Physical devices to migrate data into and out of AWS

Amazon Elastic File System (EFS)

Fully managed file system for EC2

Amazon S3 Glacier

Low-cost Archive Storage in the Cloud

AWS Storage Gateway

Hybrid Storage Integration



AWS Networking & Content Delivery



Networking & Content
Delivery

Amazon VPC

Isolated Cloud Resources

Amazon API Gateway

Build, Deploy, and Manage APIs

Amazon CloudFront

Global Content Delivery Network

Amazon Route 53

Scalable Domain Name System

AWS PrivateLink

Securely Access Services Hosted on AWS

AWS App Mesh

Monitor and control microservices

AWS Cloud Map

Application resource registry for microservices

AWS Direct Connect

Dedicated Network Connection to AWS

AWS Global Accelerator

Improve application availability and performance

AWS Transit Gateway

Easily scale VPC and account connections

Elastic Load Balancing

Distribute incoming traffic across multiple targets



AWS Security, Identity & Compliance



Security, Identity &
Compliance

AWS Identity & Access Management
Manage User Access and Encryption Keys

Amazon Cognito
Identity Management for your Apps

Amazon Detective
Investigate potential security issues

Amazon GuardDuty
Managed Threat Detection Service

Amazon Inspector
Analyze Application Security

Amazon Macie
Discover, Classify, and Protect your Data

AWS Artifact
On-demand access to AWS compliance reports

AWS Certificate Manager
Provision, Manage, and Deploy SSL/TLS Certificates

AWS CloudHSM
Hardware-based Key Storage for Regulatory Compliance

AWS Directory Service
Host and Manage Active Directory

AWS Firewall Manager
Central Management of Firewall Rules

AWS Key Management Service
Managed Creation and Control of Encryption Keys

AWS Resource Access Manager
Simple, secure service to share AWS resources

AWS Secrets Manager
Rotate, Manage, and Retrieve Secrets

AWS Security Hub
Unified security and compliance center

AWS Shield
DDoS Protection

AWS Single Sign-On
Cloud Single Sign-On (SSO) Service

AWS WAF
Filter Malicious Web Traffic



AWS Cost Management



AWS Cost Management

AWS Cost Explorer

Analyze Your AWS Cost and Usage

AWS Budgets

Set Custom Cost and Usage Budgets

AWS Cost and Usage Report

Access Comprehensive Cost and Usage Information

Reserved Instance Reporting

Dive Deeper into Your Reserved Instances (RIs)

Savings Plans

Save up to 72% on compute usage with flexible pricing

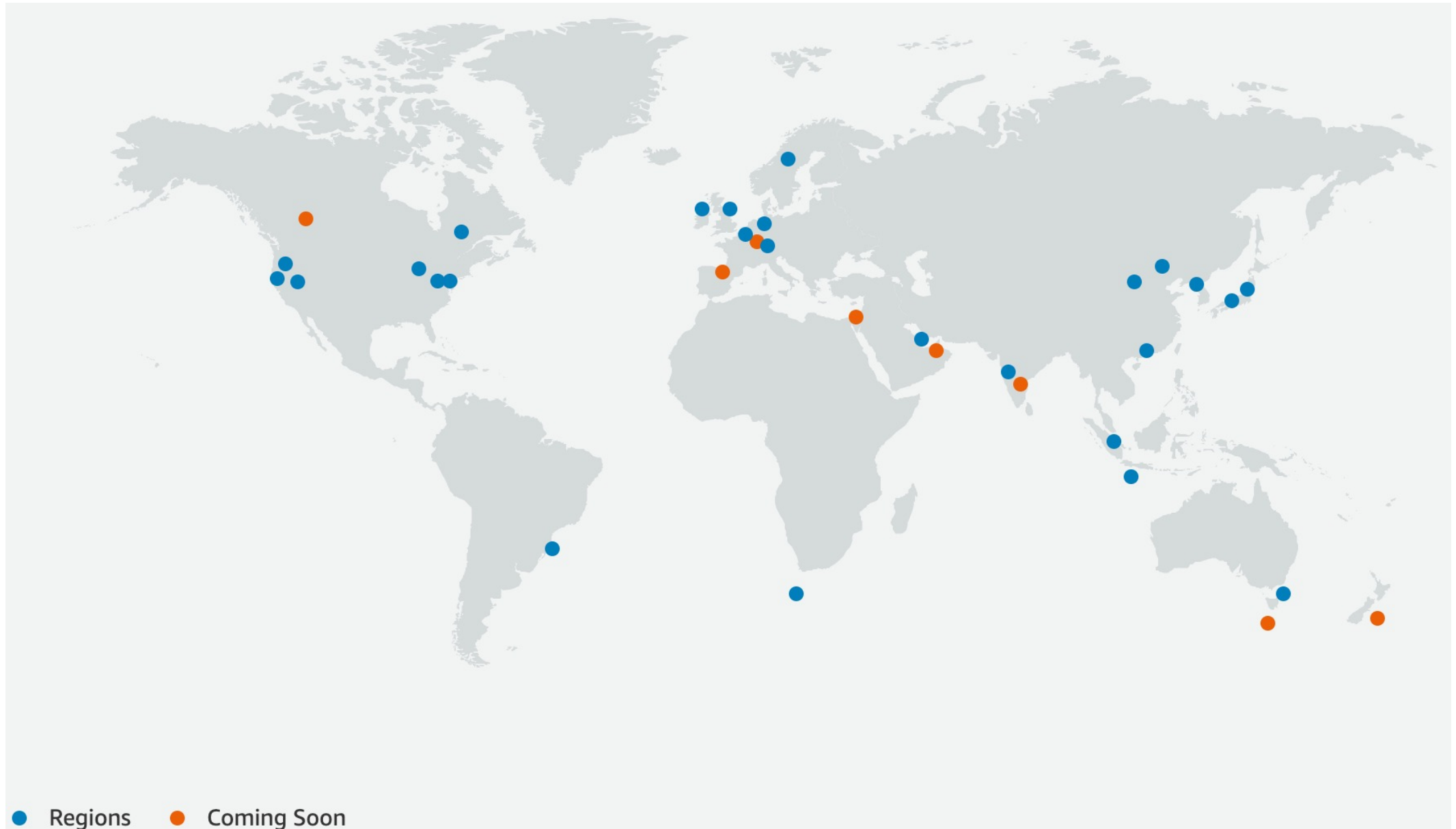


AWS Content Delivery Network:

Lab 5

Using CloudFront as a CDN for a Website

AWS Global Cloud Infrastructure



Source: <https://aws.amazon.com/about-aws/global-infrastructure/>

AWS Global Cloud Infrastructure

Regions and Availability Zones

US West (Oregon) Region

Availability Zones: 4

Launched 2011

Local Zones: 7

Launched 2019



Regions



Edge locations

US East (Northern Virginia) Region

Availability Zones: 6

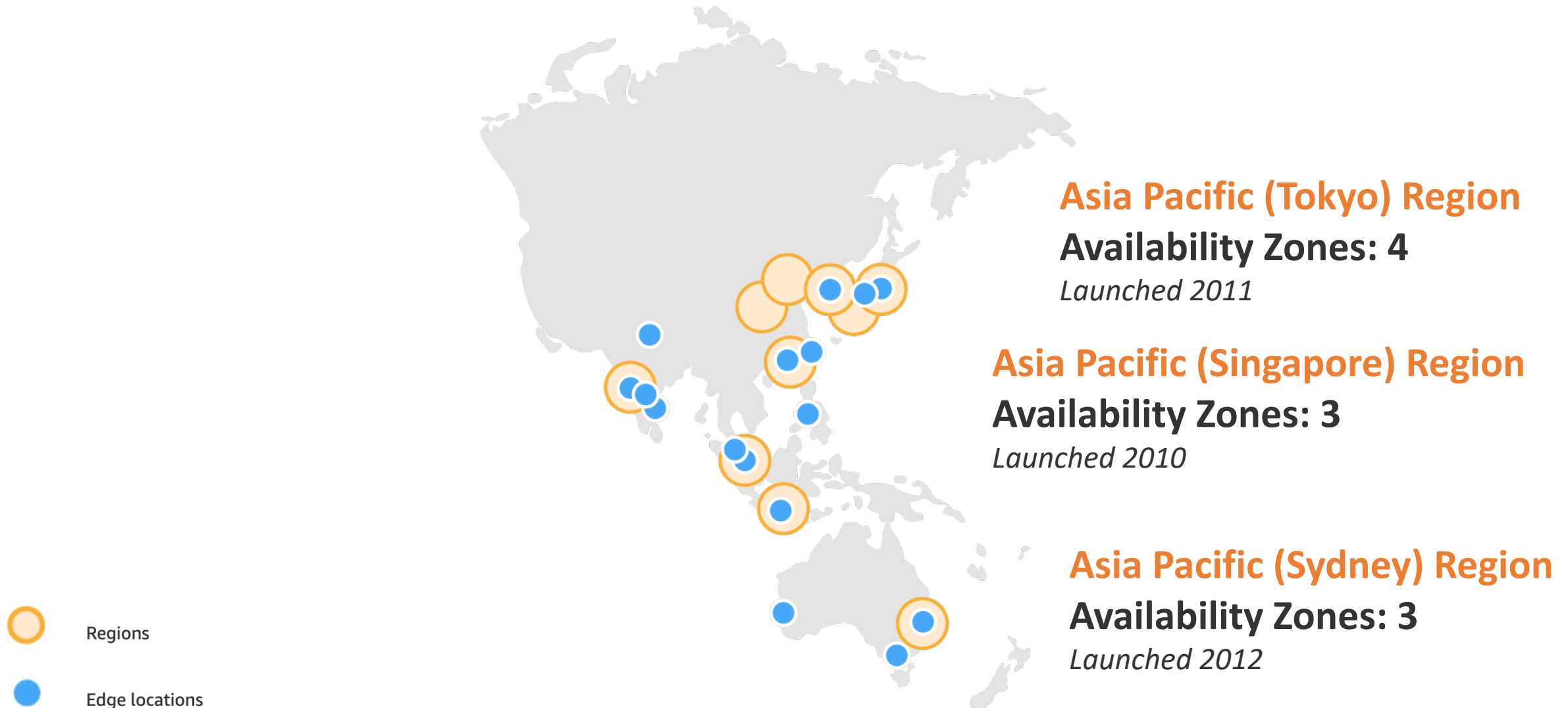
Launched 2006

Local Zones: 10

Launched 2020

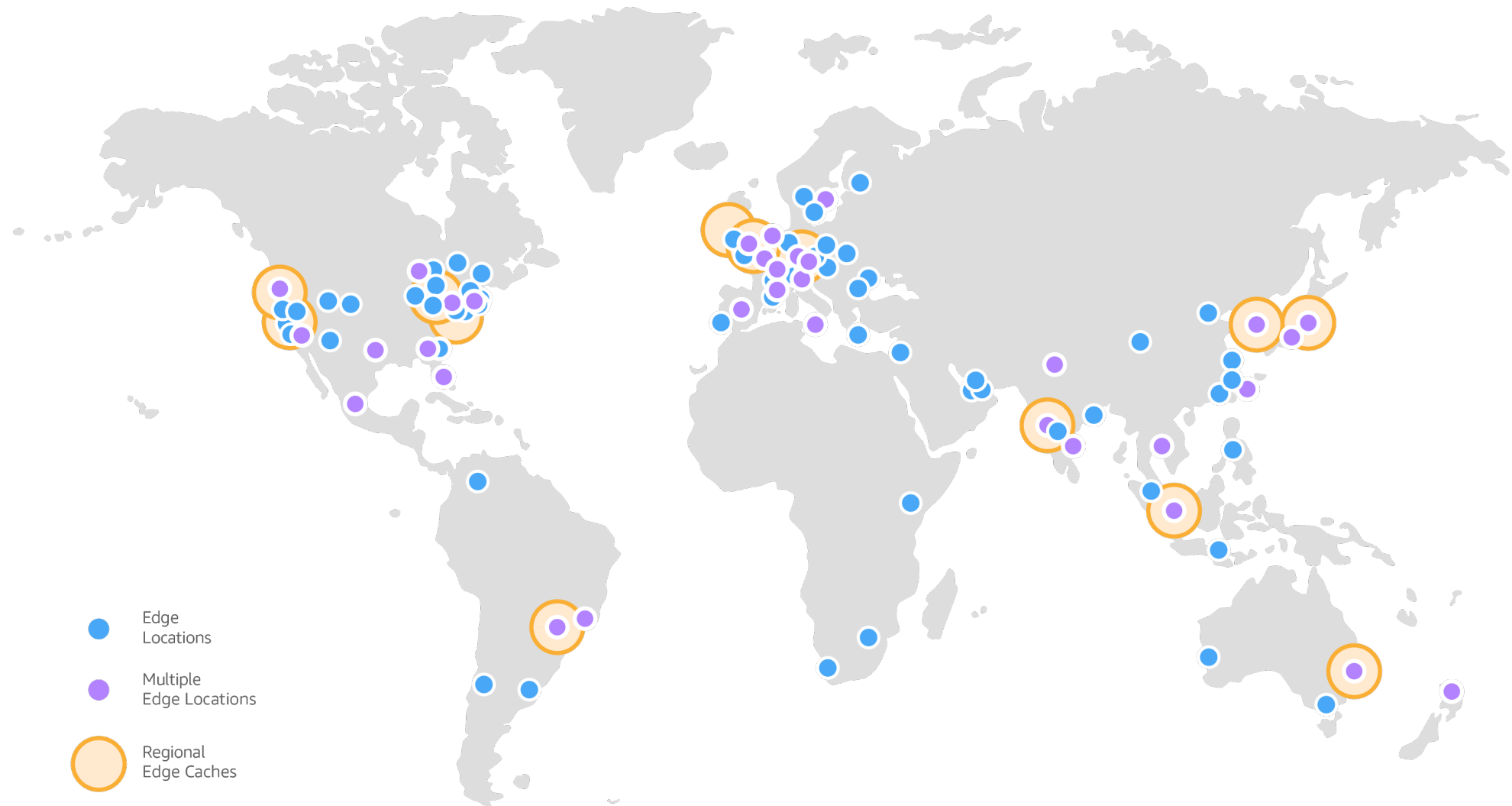
AWS Global Cloud Infrastructure

Regions and Availability Zones




Amazon CloudFront

Global Edge Network: Edge locations, Regional Edge caches



Amazon CloudFront



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Amazon CloudFrontOverviewFeaturesPricingGetting StartedResources ▼MediaCustomersPartners

Amazon Personalize | Deliver real-time personalized user experiences at scale »

« Network and Content Delivery

Amazon CloudFront

Securely deliver content with low latency and high transfer speeds

[Get Started with Amazon CloudFront](#)

1 TB of data transfer out
with the [AWS Free Tier](#)

Reduce latency by delivering data through 310+ globally dispersed Points of Presence (PoPs) with automated network mapping and intelligent routing.

Improve security with traffic encryption and access controls, and use AWS Shield Standard to defend against DDoS attacks at no additional charge.

Cut costs with consolidated requests, customizable pricing options, and zero fees for data transfer out from AWS origins.

Customize the code you run at the AWS content delivery network (CDN) edge using serverless compute features to balance cost, performance, and security.

<https://aws.amazon.com/cloudfront/>

27

AWS Academy Introduction to Cloud: Semester 1 [18745]

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use **Amazon CloudFront** as a **content delivery network (CDN)** for a **website** that is stored in the **Amazon Simple Storage Service (Amazon S3)**.

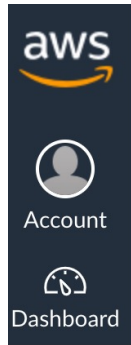
Duration

This lab requires approximately **40 minutes** to complete.

Module 5 Lab:

Using CloudFront as a CDN for a Website

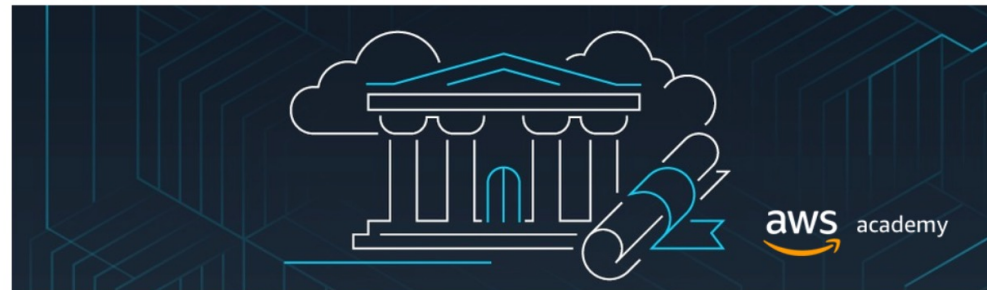
- **Access the AWS Management Console**
- **Task 1. Create an S3 bucket using the AWS CLI**
- **Task 2. Add a bucket policy**
- **Task 3. Upload an HTML document**
- **Task 4. Test your website**
- **Task 5. Create a CloudFront distribution to serve your website**
- **Lab complete**



≡ AICv1Sem1EN-18745

Home
Modules
Discussions
Grades

AWS Academy Introduction to Cloud: Semester 1 [18745]



AWS Academy Introduction to Cloud: Semester 1 is an exploration of cloud computing. In this course, students explore cloud computing services, applications, and use cases. Students dive into cloud computing best practices and learn how cloud computing helps users develop a global infrastructure to support use cases at scale while also developing and inventing innovative technologies.

This course provides students with classroom instruction that introduces cloud computing skills and accelerates students toward the next steps in their educational journey. The content of this course is aligned to the K-12 Computer Science Framework Practices including computational thinking. The seven core practices of computer science describe the behaviors and ways of thinking that computationally literate

View Course Stream

View Course Calendar

View Course Notifications

To Do










Nothing for now

Recent Feedback





Nothing for now




AWS Academy Introduction to Cloud: Semester 1 [18745]

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



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[Modules](#)
[Discussions](#)
[Grades](#)

▼ Module 4 - Virtual Servers			Complete All Items	⊖
	Student Guide			
	Lab 4.1 - EC2 Viewed		✓	
	Lab 4.2 - S3 Viewed		✓	
	Module 4 Knowledge Check 100 pts Score at least 80.0			○

▼ Module 5 - Content Delivery			Complete All Items	
	Student Guide			
	Lab 5 - CloudFront			
	Module 5 Knowledge Check 100 pts Score at least 80.0			○

AWS Academy Introduction to Cloud: Semester 1 [18745]

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

<https://awsacademy.instructure.com/courses/18745/modules/items/1536169>

The screenshot displays the AWS Academy interface. On the left is a dark sidebar with navigation links: Home, Modules, Discussions, Grades, Courses, Calendar, Inbox (4), History, and Help (10). The main content area is titled 'Module 5 Lab: Using CloudFront as a CDN for a Website'. It includes a 'Lab overview' section stating: 'In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3).' and a 'Duration' section stating: 'This lab requires approximately **40 minutes** to complete.' The interface also features a top navigation bar with 'Start Lab', 'End Lab', 'AWS Details', and 'Readme' buttons, and a bottom navigation bar with 'Previous' and 'Next' buttons.

AWS Academy Introduction to Cloud: Semester 1 [18745]

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

<https://awsacademy.instructure.com/courses/18745/modules/items/1536169>

The screenshot shows a web browser window with the URL awsacademy.instructure.com/courses/18745/modules/items/1536169. The page features a dark sidebar on the left with navigation links: Account, Dashboard, Courses, Calendar, Inbox (4), History, and Help (10). The main content area has a breadcrumb trail: AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront. Below this is a navigation bar with 'Home', 'Modules' (selected), 'Discussions', and 'Grades'. On the right, there are buttons for 'Start Lab', 'End Lab', 'AWS Details', 'Readme', and a close icon. The lab title 'Module 5 Lab: Using CloudFront as a CDN for a Website' is prominently displayed. Below the title is a 'Lab overview' section stating: 'In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3)'. The 'Duration' section states: 'This lab requires approximately 40 minutes to complete.' The 'Access the AWS Management Console' section is partially visible. At the bottom, there are 'Previous' and 'Next' navigation buttons.

aws

Lab 5 - CloudFront

awsacademy.instructure.com/courses/18745/modules/items/1536169

AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

Home

Modules

Discussions

Grades

Start Lab

End Lab

AWS Details

Readme

EN-US -

Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3).

Duration

This lab requires approximately **40 minutes** to complete.

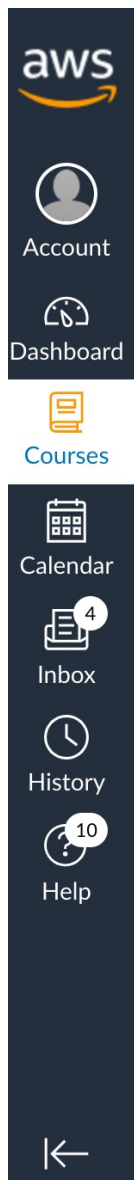
Access the AWS Management Console

Previous

Next

AWS Academy Introduction to Cloud: Semester 1 [18745]

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

▶ Start Lab

■ End Lab

i AWS Details

i Readme



EN-US -

Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3).

Duration

This lab requires approximately **40 minutes** to complete.

Access the AWS Management Console

1. To start the lab session, choose **Start Lab** in the upper-right corner of the page.

◀ Previous

Next ▶

Access the AWS Management Console

1.To start the lab session, choose **Start Lab** in the upper-right corner of the page.

The lab session starts.

A timer displays in the upper-right corner of the page and shows the time remaining in the session.

Tip: To refresh the session length at any time, choose **Start Lab** again before the timer reaches 0:00.

Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.

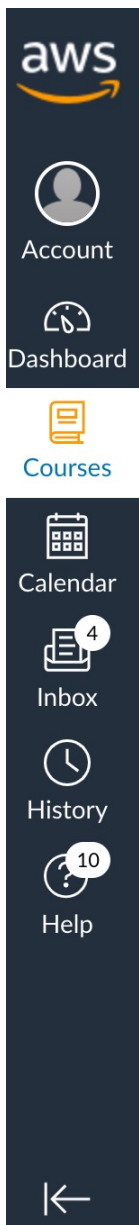
2.To return to these instructions, choose the **Readme** link in the upper-right corner.

3.To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

A new browser tab opens and connects you to the AWS Management Console.

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

1 ▶ Start Lab ■ End Lab ⓘ AWS Details ⓘ Readme ✕

EN-US - ▾

1. To start the lab session, choose **Start Lab** in the upper-right corner of the page.

Access the AWS Management Console

- To start the lab session, choose **Start Lab** in the upper-right corner of the page.
 - The lab session starts.
 - A timer displays in the upper-right corner of the page and shows the time remaining in the session.

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- To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

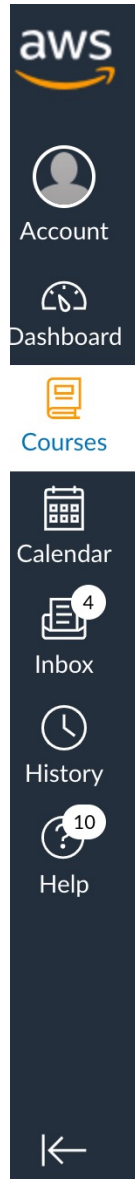
A new browser tab opens and connects you to the AWS Management Console.

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

Start Lab

End Lab

AWS Details

Readme



EN-US -

Access the AWS Management Console

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Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.



2. To return to these instructions, choose the **Readme** link in the upper-right corner.
3. To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

◀ Previous


Next ▶

AWS Academy Introduction to Cloud: Semester 1


Module 5 Content Delivery: Lab 5 - Amazon CloudFront




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History








Help




 AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS 

02:00



Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use Amazon CloudFront as a content delivery network to serve static content stored in the Amazon Simple Storage Service (Amazon S3).

Duration

This lab requires approximately **40 minutes** to complete.

Access the AWS Management Console

1. To start the lab session, choose **Start Lab** in the upper right corner of the page.

Region: us-east-1

Lab ID:
arn:aws:cloudformation:us-east-1:642038365284:stack/c53687a86499ccfd-11ec-b0b8-12d887b15299

Creation Time: 2022-05-05T22:32:02-0700

Start session at: 2022-05-05T22:32:03-0700










Remaining session time:
02:00:00 (120 minutes)

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



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Help


≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

01:51

▶ Start Lab

■ End Lab

ⓘ AWS Details

📖 **Readme**

✕

2. To return to these instructions, choose the **Readme** link in the upper-right corner.

Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3).

Duration

This lab requires approximately **40 minutes** to complete.

Access the AWS Management Console

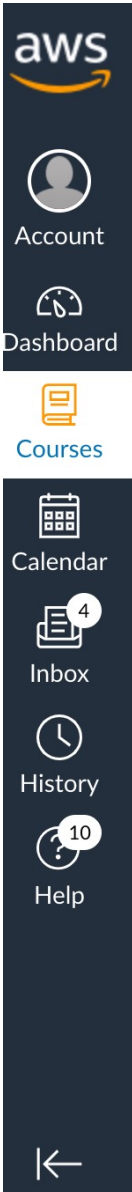
1. To start the lab session, choose **Start Lab** in the upper-right corner of the page.
 - The lab session starts.

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

01:59

▶ Start Lab

■ End Lab

ℹ AWS Details

ℹ Readme



Access the AWS Management Console

1. To start the lab session, choose **Start Lab** in the upper-right corner of the page.
 - The lab session starts.
 - A timer displays in the upper-right corner of the page and shows the time remaining in the session.

Tip: To refresh the session length at any time, choose **Start Lab** again before the timer reaches 0:00.

Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.

2. To return to these instructions, choose the **Readme** link in the upper-right corner.
3. To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

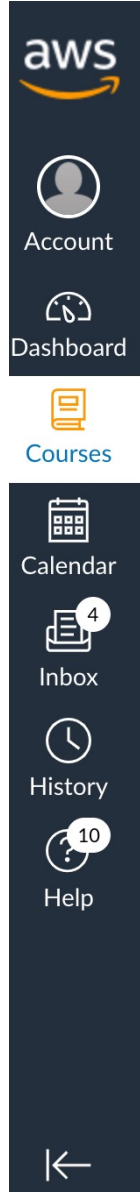
A new browser tab opens and connects you to the AWS Management Console.

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



UCv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

3

AWS

01:58

▶ Start Lab

■ End Lab

i AWS Details

i Readme



3. To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

A new browser tab opens and connects you to the AWS Management Console.

- The lab session starts.
- A timer displays in the upper-right corner of the page and shows the time remaining in the session.

Tip: To refresh the session length at any time, choose **Start Lab** again before the timer reaches 0:00.

Before continuing, wait until the lab environment is ready. The environment is ready when the lab details appear on the right side of the page and the circle icon next to the **AWS** link in the upper-left corner turns green.

2. To return to these instructions, choose the **Readme** link in the upper-right corner.
3. To connect to the AWS Management Console, choose the **AWS** link in the upper-left corner, above the terminal window.

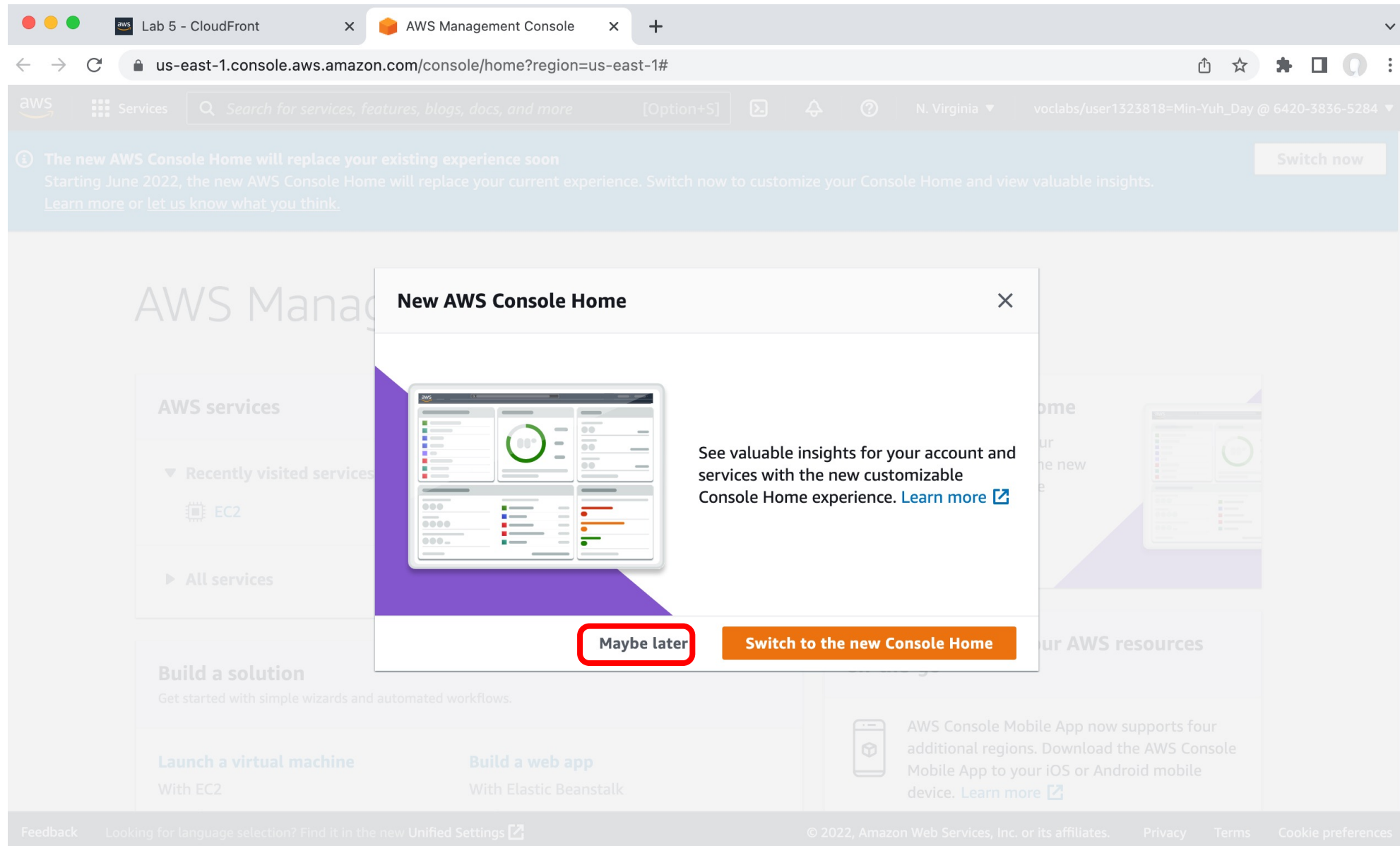
A new browser tab opens and connects you to the AWS Management Console.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront



AWS Academy Introduction to Cloud: Semester 1

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us-east-1.console.aws.amazon.com/console/home?region=us-east-1#


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The new AWS Console Home will replace your existing experience soon
Starting June 2022, the new AWS Console Home will replace your current experience. Switch now to customize your Console Home and view valuable insights.
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AWS Management Console


AWS services

▼ Recently visited services

 CloudFront

 CloudShell

 S3

 EC2

► All services

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Build a solution

Get started with simple wizards and automated workflows.

[Launch a virtual machine](#)

[Build a web app](#)

Stay connected to your AWS resources on-the-go










 AWS Console Mobile App now supports four additional regions. Download the AWS Console Mobile App to your iOS or Android mobile device. [Learn more](#)

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront



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AWS 

01:53


 Start Lab


 End Lab

 AWS Details

 Readme



 Cloud Access Close

AWS CLI: 

Cloud Labs




Remaining session time: 01:52:11(113 minutes)


Session started at: 2022-05-05T20:14:17-0700

Session to end at: 2022-05-05T22:14:17-0700

Accumulated lab time: 00:07:49 (8 minutes)

No running instance

SSH key   

AWS SSO 

AWSAccountId	642038365284
Region	us-east-1

 Previous

Next 

Task 1. Create an S3 bucket using the AWS CLI

4. Choose the **Services** menu, locate the **Developer Tools** services, and select **CloudShell**.

If a welcome pop-up window appears, choose **Close**.

AWS CloudShell is a browser-based shell that gives you command line access to your AWS resources in the selected AWS Region.

5. Copy and paste the following code into a text editor:

```
cd ~  
aws s3api create-bucket --bucket (bucket-name) --region us-east-1
```

```
cd ~  
aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1
```

6. In the code that you copied, replace **(bucket-name)** with a unique Domain Name System (DNS)-compliant name for your new bucket.

7. Run the updated code in the CloudShell terminal.

If a pop-up window appears, choose **Paste**.

The output should look similar to the following:

```
{  
  "Location": "/mylabbucket12345"  
}
```


AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

4

us-east-1.console.aws.amazon.com/console/home?region=us-east-1#

aws Services Search for services, features, blogs, docs

The Star Lear

Business Applications

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Customer Enablement

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Internet of Things

Machine Learning

Management & Governance

Media Services

Migration & Transfer

Networking & Content Delivery

Quantum Technologies

Robotics

Developer Tools

Cloud9
A Cloud IDE for Writing, Running, and Debugging Code

CloudShell
A browser-based shell with AWS

CodeArtifact
Secure, scalable, and cost-effective development

CodeBuild
Build and Test Code

CodeCommit
Store Code in Private Git Repository

CodeDeploy
Automate Code Deployments

CodePipeline
Release Software using Continuous Integration

Task 1. Create an S3 bucket using the AWS CLI

4. Choose the **Services** menu, locate the **Developer Tools** services, and select **CloudShell**.
If a welcome pop-up window appears, choose **Close**.
AWS CloudShell is a browser-based shell that gives you command line access to your AWS resources in the selected AWS Region.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ us-east-1.console.aws.amazon.com/cloudshell/home?region=us-east-1#

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Creating the environment...


AWS CloudShell

us-east-1

ⓘ If the arrow keys aren't working correctly, click here to learn more. Don't show this message again


Welcome to AWS CloudShell

AWS CloudShell is a browser-based shell that gives you command-line access to your AWS resources in the selected AWS region. AWS CloudShell comes pre-installed with popular tools for resource management and creation. You have the same credentials as you used to log in to the console. [Learn more](#)




Pre-installed tools

AWS CLI, Python, Node.js and more



Storage included

1 GB of storage free per AWS region



Saved files and settings

Files saved in your home directory are available in future sessions for the same AWS region





☐ Do not show again Close



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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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 AWS CloudShell Actions ▼ 

us-east-1

 If the arrow keys aren't working correctly in CloudShell, see [Troubleshooting AWS CloudShell](#) 


[Don't show this message again](#)

Preparing your terminal...

```
[cloudshell-user@ip-10-1-109-189 ~]$ Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-10-1-109-189 ~]$
```

5

```
cd ~
aws s3api create-bucket --bucket (bucket-name) --region us-east-1
```

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS CloudShell interface. A terminal window is open, and a red circle with the number 5 is overlaid on the terminal output. A dialog box titled "Safe Paste for multiline text" is displayed in the foreground. The dialog box contains a warning icon and the text: "Text that's copied from external sources can contain malicious scripts. Verify the text below before pasting." Below this text, the command `cd ~` and `aws s3api create-bucket --bucket (bucket-name) --region us-east-1` are shown. At the bottom of the dialog box, there is a checkbox labeled "Ask before pasting multiline code" which is checked, and two buttons: "Paste" and "Cancel".

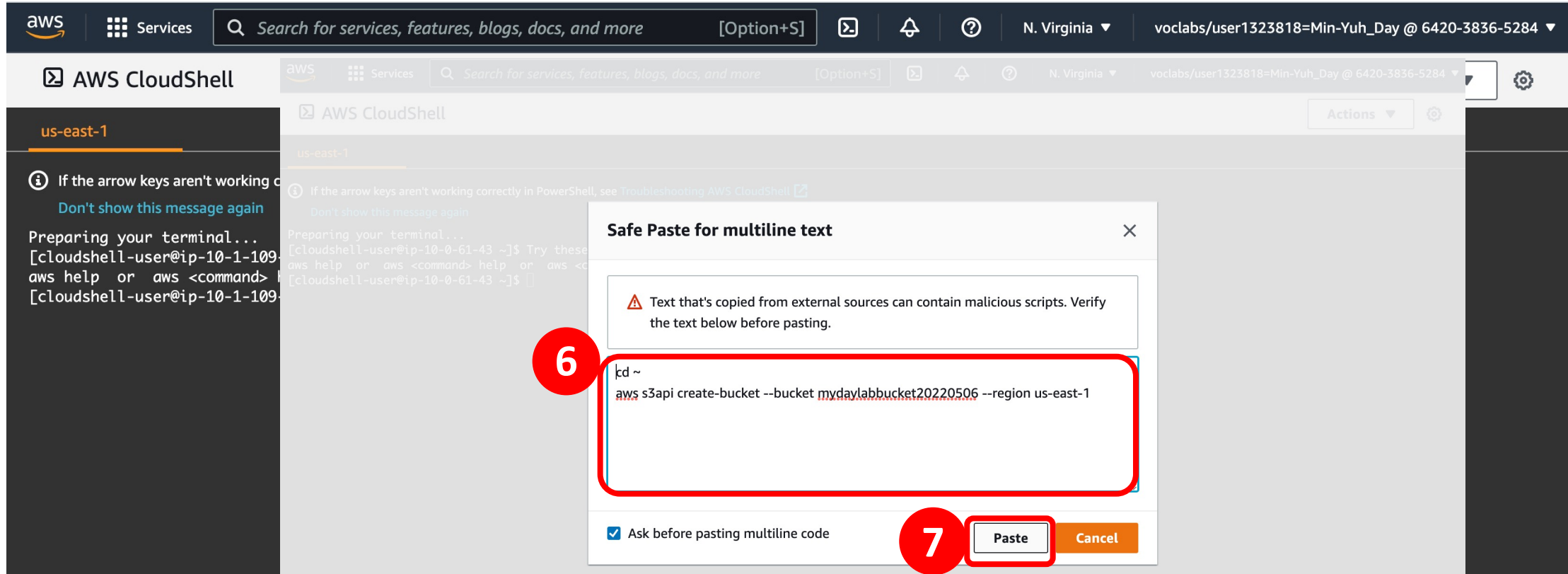
5. Copy and paste the following code into a text editor:

```
cd ~
```

```
aws s3api create-bucket --bucket (bucket-name) --region us-east-1
```

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



5. Copy and paste the following code into a text editor:





```
cd ~  
aws s3api create-bucket --bucket (bucket-name) --region us-east-1
```


5. Copy and paste the following code into a text editor:

```
cd ~  
aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1
```

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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AWS CloudShell Actions ▼ 

us-east-1

```
[cloudshell-user@ip-10-1-109-189 ~]$ cd ~  
[cloudshell-user@ip-10-1-109-189 ~]$ aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1
```

5. Copy and paste the following code into a text editor:
`cd ~
aws s3api create-bucket --bucket (bucket-name) --region us-east-1`

5. Copy and paste the following code into a text editor:
`cd ~
aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1`

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

AWS CloudShell

us-east-1

```
[cloudshell-user@ip-10-1-109-189 ~]$ cd ~
[cloudshell-user@ip-10-1-109-189 ~]$ aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1
{
  "Location": "/mydaylabbucket20220506"
}
[cloudshell-user@ip-10-1-109-189 ~]$
```

6

(bucket-name)

mylabbucket12345

mydaylabbucket20220506

yourbucket20220506

7

5. Copy and paste the following code into a text editor:

```
cd ~
```

```
aws s3api create-bucket --bucket mydaylabbucket20220506 --region us-east-1
```

6. In the code that you copied, replace **(bucket-name)** with a unique Domain Name System (DNS)-compliant name for your new bucket.

7. Run the updated code in the CloudShell terminal.

If a pop-up window appears, choose **Paste**.

The output should look similar to the following:

```
{
  "Location": "/mylabbucket12345"
}
```

ferences

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

Task 2. Add a bucket policy

In this task, you will add a bucket policy through the AWS CLI to make the content publicly available.

8. In the console, choose the **Services** menu, locate the **Storage** section, and choose **S3**.

9. Choose the name of the bucket that you just created.

10. Choose the **Permissions** tab.

11. In the **Bucket policy** section, choose **Edit**.

12. To grant public read access for your website, copy and paste the following bucket policy into the policy editor.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadForGetBucketObjects",
      "Effect": "Allow",
      "Principal": "*",
      "Action": [
        "s3:GetObject"
      ],
      "Resource": [
        "arn:aws:s3:::example-bucket/*"
      ]
    }
  ]
}
```

13. In the policy, replace **example-bucket** with the name of your bucket.

14. At the bottom of the page, choose **Save changes**.

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot displays the AWS Management Console interface. On the left, the 'Services' menu is open, with the 'Storage' option highlighted at the bottom. A red circle with the number '8' is placed next to the 'Storage' option. In the main content area, the 'Storage' section is displayed, listing various services: AWS Backup, EFS, AWS Elastic Disaster Recovery, FSx, S3, S3 Glacier, and Storage Gateway. The 'S3' service is highlighted with a red box, and a red circle with the number '8' is placed next to it. The 'S3' service description reads: 'Scalable Storage in the Cloud'. The top of the console shows the 'Services' menu icon and the search bar.

8. In the console, choose the **Services** menu, locate the **Storage** section, and choose **S3**.

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Amazon S3

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Multi-Region Access Points

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Block Public Access settings for this account

Storage Lens

Dashboards

AWS Organizations settings

Feature spotlight 3

AWS Marketplace for S3

Amazon S3 > Buckets

Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

View Storage Lens dashboard

Buckets (1) Info

Buckets are containers for data stored in S3. [Learn more](#)

Copy ARN

Empty

Delete

Create bucket

Find buckets by name

< 1 >

Name	AWS Region	Access	Creation date
<div>9</div> <div><div></div><div>mydaylabbucket20220506</div></div>	US East (N. Virginia) us-east-1	Objects can be public	May 6, 2022, 11:45:11 (UTC+08:00)

9. Choose the name of the bucket that you just created.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS Management Console interface for the Amazon S3 console. The left sidebar contains navigation options: Buckets, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, Access analyzer for S3, Storage Lens, Dashboards, AWS Organizations settings, Feature spotlight (3), and AWS Marketplace for S3. The main content area shows the bucket 'mydaylabbucket20220506' with tabs for Objects, Properties, Permissions (highlighted), Metrics, Management, and Access Points. Below the tabs, there is a section for 'Objects (0)' with a description and links to 'Amazon S3 inventory' and 'Learn more'. A row of buttons includes 'Copy S3 URI', 'Copy URL', 'Download', 'Open', 'Delete', and 'Actions'. Below these are 'Create folder' and 'Upload' buttons. A search bar for objects is present. At the bottom, a table header shows columns for Name, Type, Last modified, Size, and Storage class, followed by a message 'No objects' and 'You don't have any objects in this bucket.' with an 'Upload' button.

10. Choose the **Permissions** tab

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS Management Console interface. At the top, the navigation bar includes the AWS logo, a 'Services' menu, a search bar, and user information. The left sidebar shows the 'Amazon S3' console with a list of features like 'Buckets', 'Access Points', and 'Storage Lens'. The main content area displays the 'mydaylabbucket20220506' bucket page. The 'Permissions' tab is highlighted with a red box and a red circle containing the number '10'. A yellow callout box points to the 'Permissions' tab with the text '10. Choose the Permissions tab'. Below the tabs, the 'Permissions overview' section shows 'Access' settings, indicating 'Objects can be public'. The 'Block public access (bucket settings)' section explains that public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. It recommends turning on 'Block all public access' to ensure that public access to all your S3 buckets and objects is blocked. The settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. A 'Learn more' link is provided. An 'Edit' button is visible at the bottom of the 'Block public access' section.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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AWS Marketplace for S3

Permissions overview

Access

Objects can be public

Block public access (bucket settings)

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

Edit

Block all public access

Off

Individual Block Public Access settings for this bucket

Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

Edit

Delete

11

11. In the **Bucket policy** section, choose **Edit**.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

11 **Bucket policy**

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts.
[Learn more](#)

Edit **Delete**

11. In the **Bucket policy section, choose **Edit**.**


No policy to display. **Copy**

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services

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Amazon S3 > Buckets > mydaylabbucket20220506 > Edit bucket policy

Amazon S3

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Feature spotlight 3

AWS Marketplace for S3

12 **Edit bucket policy** Info

Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

Policy examples [↗](#) Policy generator [↗](#)

Bucket ARN

arn:aws:s3:::mydaylabbucket20220506

Policy

```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid": "Statement1",
6       "Principal": {},
7       "Effect": "Allow",
8       "Action": [
9         "s3:GetObject"
10      ],
11      "Resource": [
12        "arn:aws:s3:::example-bucket/*"
13      ]
14    }
15  ]
16 }
```

Available

AMP

API Gateway

12. To grant public read access for your website, copy and paste the following bucket policy into the policy editor.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadForGetBucketObjects",
      "Effect": "Allow",
      "Principal": "*",
      "Action": [
        "s3:GetObject"
      ],
      "Resource": [
        "arn:aws:s3:::example-bucket/*"
      ]
    }
  ]
}
```

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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Amazon S3

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Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts.
[Learn more](#)

Policy examples

Policy generator

Bucket ARN

arn:aws:s3:::mydaylabbucket20220506

Policy

```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid":
6         "PublicReadForGetBucketObjects",
7       "Effect": "Allow",
8       "Principal": "*",
9       "Action": [
10        "s3:GetObject"
11      ],
12      "Resource": [
13        "arn:aws:s3:::example-bucket/*"
14      ]
15    }
16  ]
17 }
```

Edit statement

PublicReadForGetBuck

Remove

1. Add actions

Choose a service

Filter services

Included

S3

Available

AMP

API Gateway

API Gateway V2

Access Analyzer

13. In the policy, replace **example-bucket** with the name of your bucket.

Feedback

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aws

Services

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Amazon S3

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AWS Marketplace for S3

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts.
[Learn more](#)

Policy examples

Policy generator

Bucket ARN

arn:aws:s3:::mydaylabbucket20220506

Policy

1 {

2 "Version": "2012-10-17",

3 "Statement": [

4 {

5 "Sid": "PublicReadForGetBucketObjects",

6 "Effect": "Allow",

7 "Principal": "*",

8 "Action": [

9 "s3:GetObject"

10],

11 "Resource": [

12 "arn:aws:s3:::mydaylabbucket20220506/*"

13],

14 }]

15 }

16 }

13. In the policy, replace **example-bucket** with the name of your bucket.

Edit statement

PublicReadForGetBucket

Remove

1 {

"Version": "2012-10-17",

"Statement": [

{

"Sid": "PublicReadForGetBucketObjects",

"Effect": "Allow",

"Principal": "*",

"Action": [

"s3:GetObject"

],

"Resource": [

"arn:aws:s3:::mydaylabbucket20220506/*"

]

}

]

}

Account

Feedback

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS IAM console interface. On the left, the navigation pane includes 'Amazon S3' and 'Storage Lens'. The main content area displays a JSON policy document with line numbers 13 through 16. Below the JSON editor, there are buttons for 'Add new statement', '2. Add a resource', and '3. Add a condition (optional)'. A red error box is visible, stating 'Unexpected error' with the message: 'Network Failure - verify permissions to access-analyzer:ValidatePolicy in IAM to use policy validation.' At the bottom right, there are 'Cancel' and 'Save changes' buttons. A yellow callout box with the number '14' in a red circle points to the 'Save changes' button. The footer contains links for 'Feedback', 'Looking for language selection? Find it in the new Unified Settings', and copyright information for 2022 Amazon Web Services, Inc.

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Amazon S3

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▼ **Storage Lens**

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► AWS Marketplace for S3

13
14
15
16

AppFlow

AppIntegrations

AppStream 2.0

AppSync

Application Auto Scaling

Application Cost Profiler

2. Add a resource Add

3. Add a condition (optional) Add

+ Add new statement

JSON Ln 12, Col 48

Security: 0 Errors: 0 Warnings: 0 Suggestions: 0 Preview external access

Unexpected error

- Network Failure - verify permissions to access-analyzer:ValidatePolicy in IAM to use policy validation.

14. At the bottom of the page, choose **Save changes**.


14

Cancel Save changes


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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services

[Option+S]



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Amazon S3

Buckets

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

Access analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

AWS Organizations settings

Feature spotlight 3

AWS Marketplace for S3

Successfully edited bucket policy.

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 Info

Publicly accessible

Objects

Properties

Permissions


Metrics

Management

Access Points

Permissions overview

Access

 Public

Block public access (bucket settings)

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

Feedback

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Amazon S3


- Buckets**
- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3


- Block Public Access settings for this account


- Storage Lens**
- Dashboards
- AWS Organizations settings

- Feature spotlight 3


- AWS Marketplace for S3



✔ Successfully edited bucket policy. 

 Edit


Block all public access
 Off
► Individual Block Public Access settings for this bucket


Bucket policy

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts.
[Learn more](#) 

 Edit  Delete

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadForGetBucketObjects",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::mydaylabbucket20220506/*"
    }
  ]
}
```

 Copy

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Task 3. Upload an HTML document

In this task, you will upload the index.html file for your webpage to the S3 bucket.

15. Open the context menu (right-click) for the following link, and then choose **Save link as:** [index.html](#)

16. Save the index.html file to your local computer.

17. In the console, choose the **Objects** tab.

18. Upload the index.html file to your bucket.

Choose **Upload**.

Drag and drop the index.html file onto the upload page. An alternative is to choose **Add files**, navigate to the file, and choose **Open**.

19. Expand the **Permissions** section.

20. Under **Predefined ACLs**, select **Grant public-read access**.

A warning message similar to **Granting public-read access is not recommend** appears below the setting you selected.

21. Below the warning, check the box next to **I understand....**

22. At the bottom of the page, choose **Upload**.

23. Choose **Close**.

The index.html file appears in the **Objects** list.

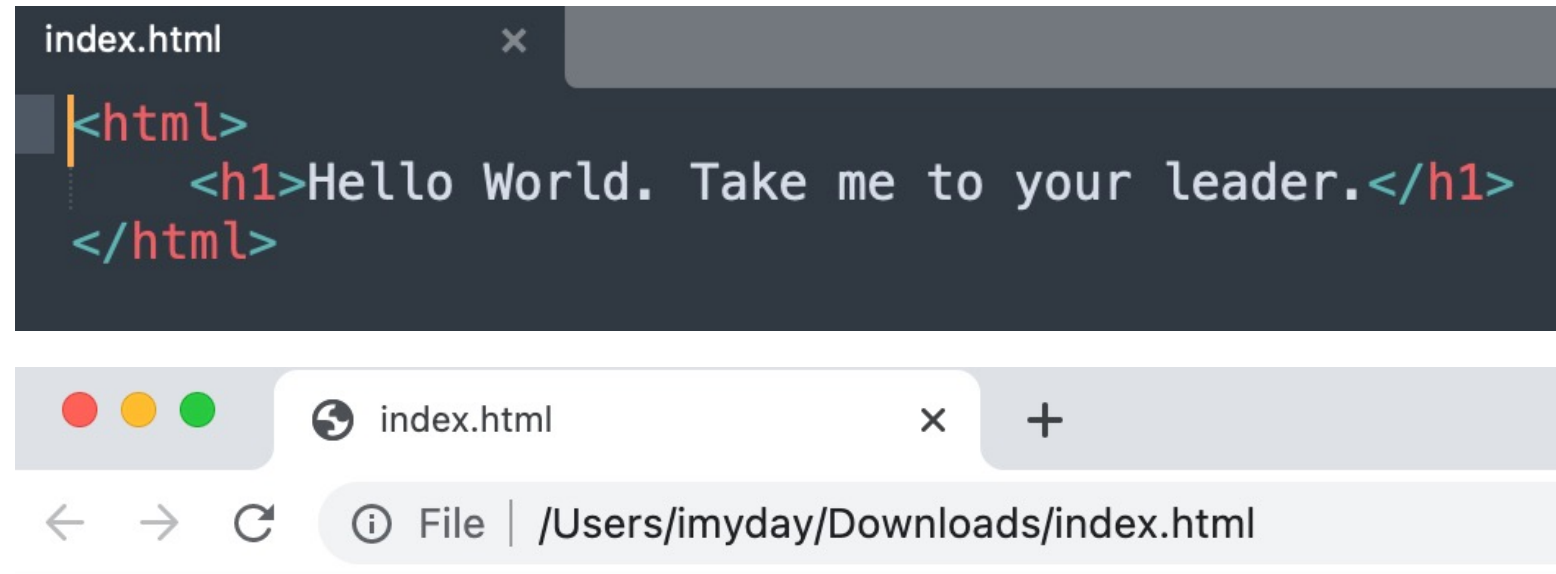
AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

15. Open the context menu (right-click) for the following link, and then choose **Save link as:** [index.html](#)
16. Save the index.html file to your local computer.

[index.html](#)

```
<html>
  <h1>Hello World. Take me to your leader.</h1>
</html>
```



Hello World. Take me to your leader.

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Amazon S3 ×

Buckets

- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- Access analyzer for S3

Block Public Access settings for this account

▼ **Storage Lens**

- Dashboards
- AWS Organizations settings

Feature spotlight 3

► AWS Marketplace for S3

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 Info

Publicly accessible

17 **Objects** Properties Permissions Metrics Management Access Points

17. In the console, choose the **Objects** tab.

Objects (0)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Refresh Copy URI Copy URL Download Open Delete Actions ▼

Create folder **18** **Upload**

18. Upload the index.html file to your bucket. Choose **Upload**.

Find objects by prefix

	Name ▲	Type ▼	Last modified ▼	Size ▼	Storage class ▼
No objects					
You don't have any objects in this bucket.					





Upload



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 Amazon S3 > Buckets > mydaylabbucket20220506 > Upload 

Upload Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (0)
All files and folders in this table will be uploaded.

18

Add files

Add folder

<input type="checkbox"/>	Name	Folder	Type
No files or folders			
You have not chosen any files or folders to upload.			

Destination

18 Upload the index.html file to your bucket.
Choose **Upload**.
Drag and drop the index.html file onto the upload page. An alternative is to choose **Add files**, navigate to the file, and choose **Open**.

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Amazon S3 > Buckets > mydaylabbucket20220506 > Upload

Upload [Info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (1 Total, 64.0 B) [Remove](#) [Add files](#) [Add folder](#)

All files and folders in this table will be uploaded.

Find by name < 1 >

Name	Folder	Type	Size
index.html	-	text/html	64.0 B





Destination


Destination
s3://mydaylabbucket20220506

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<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	index.html	-	text/html	64.0 B

Destination

Destination

[s3://mydaylabbucket20220506](#)

► **Destination details**

Bucket settings that impact new objects stored in the specified destination.


19



▼ **Permissions**

Grant public access and access to other AWS accounts.

19.Expand the **Permissions** section.


Access control list (ACL)

Grant basic read/write permissions to other AWS accounts. [Learn more](#) 

 AWS recommends using S3 bucket policies or IAM policies for access control. [Learn more](#) 





Access control list (ACL)


☒ Choose from predefined ACLs

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 **Permissions**
Grant public access and access to other AWS accounts.

Access control list (ACL)
Grant basic read/write permissions to other AWS accounts. [Learn more](#)

 AWS recommends using S3 bucket policies or IAM policies for access control. [Learn more](#)

Access control list (ACL)

- ☒ Choose from predefined ACLs
- ☐ Specify individual ACL permissions

Predefined ACLs

- ☒ **Private (recommended)**
Only the object owner will have read and write access.
- ☐ **Grant public-read access**
Anyone in the world will be able to access the specified objects. The object owner will have read and write access. [Learn more](#)

Properties
Specify storage class, encryption settings, tags, and more.

Cancel Upload

20

20. Under **Predefined ACLs**, select **Grant public-read access**.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ s3.console.aws.amazon.com/s3/upload/mydaylabbucket20220506?region=us-east-1

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

ⓘ AWS recommends using S3 bucket policies or IAM policies for access control. [Learn more](#)

Access control list (ACL)

- ☒ Choose from predefined ACLs
- ☐ Specify individual ACL permissions

Predefined ACLs

- ☐ Private (recommended)
Only the object owner will have read and write access.
- ☒ **Grant public-read access**
Anyone in the world will be able to access the specified objects. The object owner will have read and write access. [Learn more](#)

20

20. Under **Predefined ACLs, select **Grant public-read access**.
A warning message similar to **Granting public-read access is not recommended** appears below the setting you selected.**

Granting public-read access is not recommended
Anyone in the world will be able to access the specified objects. [Learn more](#)

21

☒ I understand the risk of granting public-read access to the specified objects.

21. Below the warning, check the box next to **I understand....**

22

22. At the bottom of the page, choose **Upload.**







Cancel Upload



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Module 5 Content Delivery: Lab 5 - Amazon CloudFront



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  **Upload succeeded**
View details below.

Upload: status

 The information below will no longer be available after you navigate away from this page.



Summary

Destination s3://mydaylabbucket20220506	Succeeded  1 file, 64.0 B (100.00%)	Failed  0 files, 0 B (0%)
--	---	---

Files and folders

Configuration

Files and folders (1 Total, 64.0 B)

 1 

Name	Folder	Type	Size	Status	Error
------	--------	------	------	--------	-------

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23



Close


24. Choose **Close**.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services [Option+S]    Global  voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284 

  **Upload succeeded**
View details below.



 The information below will no longer be available after you navigate away from this page.


Summary


Destination <code>s3://mydaylabbucket20220506</code>	Succeeded  1 file, 64.0 B (100.00%)	Failed  0 files, 0 B (0%)
---	---	---

Files and folders | Configuration

Files and folders (1 Total, 64.0 B)

  1 

Name	Folder	Type	Size	Status	Error
index.html	-	text/html	64.0 B	 Succeeded	-

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS S3 console interface. The browser address bar displays the URL: `s3.console.aws.amazon.com/s3/buckets/mydaylabbucket20220506?region=us-east-1&tab=objects`. The console header includes the AWS logo, a 'Services' menu, a search bar, and user information. The breadcrumb navigation shows 'Amazon S3 > Buckets > mydaylabbucket20220506'. The bucket name 'mydaylabbucket20220506' is prominently displayed with an 'Info' link and a 'Publicly accessible' status badge. Below this, a tabbed interface shows 'Objects' as the active tab, with other tabs for 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access Points'. The 'Objects (1)' section contains a descriptive paragraph and a row of action buttons: 'Refresh', 'Copy S3 URI', 'Copy URL', 'Download', 'Open', 'Delete', 'Actions', 'Create folder', and 'Upload'. A search bar labeled 'Find objects by prefix' is also present. Below the search bar is a table listing the objects in the bucket. The table has columns for 'Name', 'Type', 'Last modified', 'Size', and 'Storage class'. A single object, 'index.html', is listed with a size of '64.0 B' and 'Standard' storage class. A red rectangle highlights the 'Objects' tab and the table containing the 'index.html' file. Below the screenshot, a yellow text box states: 'The index.html file appears in the **Objects** list.'

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 [Info](#)

Publicly accessible

Objects | Properties | Permissions | Metrics | Management | Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	index.html	html	May 6, 2022, 12:44:59 (UTC+08:00)	64.0 B	Standard

The index.html file appears in the **Objects** list.

Task 4. Test your website

24. Select the **Properties** tab, and scroll down to the **Static website hosting** section.

25. Choose **Edit**.

26. Select **Enable**.

27. In the **Index document** text box, enter index.html

28. Select **Save changes**.





29. Scroll down to the **Static website hosting** section again, and copy the **Bucket website endpoint** URL to your clipboard.



30. Open a new tab in your web browser, paste the URL you just copied, and press **Enter**.

The **Hello World** webpage should display. You have successfully hosted a static website using an S3 bucket!

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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 Amazon S3 > Buckets > mydaylabbucket20220506 

mydaylabbucket20220506 [Info](#)


Publicly accessible **24**

Objects **Properties** Permissions Metrics Management Access Points

Bucket overview

AWS Region US East (N. Virginia) us-east-1	Amazon Resource Name (ARN)  arn:aws:s3:::mydaylabbucket20220506	Creation date May 6, 2022, 11:45:11 (UTC+08:00)
---	--	--

Bucket Versioning


Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#) 

Edit

Bucket Versioning
Disabled

Multi-factor authentication (MFA) delete

Feedback

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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Object Lock

Store objects using a write-once-read-many (WORM) model to help you prevent objects from being deleted or overwritten for a fixed amount of time or indefinitely. [Learn more](#) 

 **You don't have permission to get Object Lock details**
You or your AWS administrator must update your IAM permissions to allow s3:GetBucketObjectLockConfiguration. After you obtain the necessary permission, refresh the page. [Learn more about Identity and access management in Amazon S3](#) 


► API response

Requester pays

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. [Learn more](#) 

Requester pays
Disabled


Static website hosting


Use this bucket to host a website or redirect requests. [Learn more](#) 

Static website hosting
Disabled

24. Select the **Properties** tab, and scroll down to the **Static website hosting** section.







25. Choose **Edit**.





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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

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 Amazon S3 > Buckets > mydaylabbucket20220506 > Edit static website hosting 

Edit static website hosting [Info](#)

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#) 

Static website hosting

☒ Disable





☐ Enable



26. Select **Enable**.

Cancel **Save changes**

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services [Option+S]    Global ▼ voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284 ▼

Edit static website hosting [Info](#)

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#) 


Static website hosting

☐ Disable


☒ Enable



Hosting type

☒ Host a static website

Use the bucket endpoint as the web address. [Learn more](#) 

☐ Redirect requests for an object

Redirect requests to another bucket or domain. [Learn more](#) 


 For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#) 

27

Index document

Specify the home or default page of the website.

27. In the **Index document** text box, enter index.html

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the Amazon CloudFront console interface. At the top, there's a navigation bar with the AWS logo, 'Services' link, a search bar, and user information. The main content area is divided into two sections: 'Error document - optional' and 'Redirection rules - optional'. The 'Error document' section has a text input field containing 'error.html'. The 'Redirection rules' section has a table with one row labeled '1'. At the bottom right, there are two buttons: 'Cancel' and 'Save changes'. The 'Save changes' button is highlighted with a red rectangle and a red circle with the number 28 next to it. A yellow callout box with the text '28. Select Save changes.' points to the 'Save changes' button.

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Error document - optional
This is returned when an error occurs.

error.html

Redirection rules - optional
Redirection rules, written in JSON, automatically redirect webpage requests for specific content. [Learn more](#)

1

28. Select **Save changes**.

Cancel Save changes

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ s3.console.aws.amazon.com/s3/buckets/mydaylabbucket20220506?region=us-east-1&tab=properties

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☑️ Successfully edited static website hosting. ✕ ⓘ

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 [Info](#)


Publicly accessible

Objects Properties Permissions Metrics Management Access Points


29

29. Scroll down to the **Static website hosting** section again, and copy the **Bucket website endpoint** URL to your clipboard.

Bucket overview


AWS Region	Amazon Resource Name (ARN)	Creation date
US East (N. Virginia) us-east-1	 arn:aws:s3:::mydaylabbucket20220506	May 6, 2022, 11:45:11 (UTC+08:00)

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#) 

[Edit](#)

Bucket Versioning

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← → ↻ s3.console.aws.amazon.com/s3/buckets/mydaylabbucket20220506?region=us-east-1&tab=properties

Services [Option+S] Global ▼ voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284 ▼

☑ Successfully edited static website hosting.

Requester pays Edit

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. [Learn more](#)

Requester pays
Disabled

Static website hosting Edit

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting
Enabled

Hosting type
Bucket hosting

Bucket website endpoint
When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

<http://mydaylabbucket20220506.s3-website-us-east-1.amazonaws.com>

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

http://mydaylabbucket20220506.s3-website-us-east-1.amazonaws.com/

30

← → ↻ ⚠ Not Secure | mydaylabbucket20220506.s3-website-us-east-1.amazonaws.com

Hello World. Take me to your leader.

30. Open a new tab in your web browser, paste the URL you just copied, and press **Enter**. The **Hello World** webpage should display. You have successfully hosted a static website using an S3 bucket!

Task 5. Create a CloudFront distribution to serve your website

In this task, you will create an Amazon CloudFront distribution to serve your website.

31. Choose the **Services** menu, locate the **Networking & Content Delivery** section, and choose **CloudFront**.

32. Choose **Create Distribution**.

33. Under **Web**, choose **Get Started**.

34. Choose the text box next to **Origin Domain Name** and select the endpoint from your S3 bucket.

35. For **Viewer Protocol Policy**, ensure that **HTTP and HTTPS** is selected.

36. Scroll to the bottom of the page and select **Create Distribution**.

A new CloudFront distribution displays in the distributions list. The **Status** will say *In Progress* until your website has been distributed. This may take up to 20 minutes.

When the **Status** says *Deployed*, you can test your distribution.

37. Copy the **Domain Name** value for your distribution and save it to a text editor to use in a later step.

Task 5. Create a CloudFront distribution to serve your website

38. Create a new HTML file to test the distribution.

Find and download an image from the internet.

Navigate to your S3 bucket and upload the image file to it, making sure to grant public access as you did when uploading the HTML file earlier in this lab.

Create a new text file using Notepad and copy the following text into it:

```
<html>
  <head>My CloudFront Test</head>
  <body> <p>My test content goes here.</p>
        <p>
  </body>
</html>
```

Replace **domain-name** with the domain name that you copied earlier for your CloudFront distribution.

Replace **object-name** with the file name of the picture file that you uploaded to your S3 bucket.

The edited line of code should look similar to the following:

```
<p>
```

Save the text file with an HTML extension.

39. Use an internet browser to open the HTML file that you just created.

If the image that you uploaded shows, your CloudFront distribution was successful. If not, repeat the lab.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

The screenshot shows the AWS Management Console interface. On the left, the 'Services' menu is highlighted with a red box. The 'Networking & Content Delivery' section is also highlighted with a red box. A red circle with the number '31' is next to the 'CloudFront' service, which is also highlighted with a red box. A yellow callout box contains the text: '31. Choose the Services menu, locate the Networking & Content Delivery section, and choose CloudFront.'

31. Choose the **Services** menu, locate the **Networking & Content Delivery** section, and choose **CloudFront**.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ us-east-1.console.aws.amazon.com/cloudfront/v3/home?region=us-east-1#/welcome

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Networking & Content Delivery

Amazon CloudFront

Securely deliver content with low latency and high transfer speeds

Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency and high transfer speeds.

32 **Create a CloudFront distribution**

Get started with CloudFront

Enable accelerated, reliable and secure content delivery for Amazon S3 buckets, Application Load Balancers, Amazon API Gateway APIs, and more in 5 minutes or less.

32. Choose Create Distribution.

Benefits and features

Reduce latency

The CloudFront network has 225+ points of presence (PoPs) that are connected by fully redundant, parallel

Improve security

Use CloudFront for perimeter protection, traffic encryption, and access controls. AWS Shield Standard

AWS Free Tier

- 1 TB of data transfer out
- 10,000,000 HTTP or HTTPS requests
- 2,000,000 CloudFront Function invocations
- Each month, always free

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

us-east-1.console.aws.amazon.com/cloudfront/v3/home?region=us-east-1#/distributions/create

Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

CloudFront > Distributions > create

Create distribution

33. Under **Web**, choose **Get Started**.

34. Choose the text box next to **Origin Domain Name** and select the endpoint from your S3 bucket.

Origin

Origin domain
Choose an AWS origin, or enter your origin's domain name.

Choose origin domain

Origin path - optional Info
Enter a URL path to append to the origin domain name for origin requests.

Enter the origin path

Name
Enter a name for this origin.

Enter origin name

Add custom header - optional
CloudFront includes this header in all requests that it sends to your origin.

Add header





Enable Origin Shield Info

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AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services [Option+S]    Global ▼ voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284 ▼

CloudFront > Distributions > create

Create distribution

Origin

Origin domain

Choose an AWS origin, or enter your origin's domain name.

34

Amazon S3

mydaylabbucket20220506.s3.amazonaws.com

Elastic load balancer

No origins available.

Mediastore container

No origins available.

Mediapackage container

No origins available.

Add header

Enable Origin Shield [Info](#)

Origin Shield is an additional caching layer that can help reduce the load on your origin and help protect its availability.

34. Choose the text box next to **Origin Domain Name** and select the endpoint from your S3 bucket.

Feedback

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

CloudFront > Distributions > create

Create distribution

34

Origin

Origin domain
Choose an AWS origin, or enter your origin's domain name.

mydaylabbucket20220506.s3.us-east-1.amazonaws.com

Origin path - optional [Info](#)
Enter a URL path to append to the origin domain name for origin requests.

Enter the origin path

Name
Enter a name for this origin.

mydaylabbucket20220506.s3.us-east-1.amazonaws.com

S3 bucket access [Info](#)
Use a CloudFront origin access identity (OAI) to access the S3 bucket.

☒ Don't use OAI (bucket must allow public access)







☐ Yes use OAI (bucket can restrict access to only CloudFront)


Add custom header - optional
CloudFront includes this header in all requests that it sends to your origin.

34. Choose the text box next to **Origin Domain Name** and select the endpoint from your S3 bucket.

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

 Services [Option+S]    Global  voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284 



Default cache behavior

Path pattern [Info](#)

Default (*)

Compress objects automatically [Info](#)

☐ No

☒ Yes

Viewer

35

Viewer protocol policy

☒ HTTP and HTTPS

☐ Redirect HTTP to HTTPS

☐ HTTPS only

Allowed HTTP methods

☒ GET, HEAD

☐ GET, HEAD, OPTIONS

☐ GET, HEAD, OPTIONS, PUT, POST, PATCH, DELETE


Restrict viewer access

If you restrict viewer access, viewers must use CloudFront signed URLs or signed cookies to access your content.

☒ No

☐ Yes

35. For **Viewer Protocol Policy**, ensure that **HTTP and HTTPS** is selected.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

Choose certificate

[Request certificate](#)

Supported HTTP versions
Add support for additional HTTP versions. HTTP/1.0 and HTTP/1.1 are supported by default.

☒ HTTP/2

Default root object - optional
The object (file name) to return when a viewer requests the root URL (/) instead of a specific object.

Standard logging
Get logs of viewer requests delivered to an Amazon S3 bucket.

☒ Off
☐ On

IPv6

☐ Off
☒ On

Description - optional

36

Cancel **Create distribution**

36. Scroll to the bottom of the page and select **Create Distribution**.

A new CloudFront distribution displays in the distributions list. The **Status** will say *In Progress* until your website has been distributed. This may take up to 20 minutes.

When the **Status** says *Deployed*, you can test your distribution.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ us-east-1.console.aws.amazon.com/cloudfront/v3/home?region=us-east-1#/distributions/E1KV76ERM1SLYU

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

☑ Successfully created new distribution. ✕

CloudFront > Distributions > E1KV76ERM1SLYU

E1KV76ERM1SLYU

General | Origins | Behaviors | Error pages | Geographic restrictions | Invalidations | Tags

Details

37. Copy the **Domain Name** value for your distribution and save it to a text editor to use in a later step.

Distribution domain name 📄 dj1ero5u806ee.cloudfront.net	ARN 📄 arn:aws:cloudfront::642038365284:distribution/E1KV76ERM1SLYU	Last modified ⋮ Deploying
--	---	------------------------------

Settings

https://dj1ero5u806ee.cloudfront.net

Edit

Description -	Alternate domain names -	Standard logging Off
Price class Use all edge locations (best performance)		Cookie logging Off

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AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

38. Create a new HTML file to test the distribution.

Find and download an image from the internet.

Navigate to your S3 bucket and upload the image file to it, making sure to grant public access as you did when uploading the HTML file earlier in this lab.

Create a new text file using Notepad and copy the following text into it:

```
<html>
  <head>My CloudFront Test</head>
  <body> <p>My test content goes here.</p>
    <p>
  </body>
</html>
```

Replace **domain-name** with the domain name that you copied earlier for your CloudFront distribution.

Replace **object-name** with the file name of the picture file that you uploaded to your S3 bucket.

The edited line of code should look similar to the following:

```
<p>
```

Save the text file with an HTML extension.

38

index2.html

x

```
1  <html>
2    <head>My CloudFront Test</head>
3    <body>
4      <p>Min-Yuh Day at AWS S3 CloudFront</p>
5      <p>
6    </body>
7  </html>
```

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ s3.console.aws.amazon.com/s3/buckets/mydaylabbucket20220506?region=us-east-1&tab=objects

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 Info

Publicly accessible

38. Navigate to your S3 bucket and upload the image file to it, making sure to grant public access as you did when uploading the HTML file earlier in this lab.


Objects Properties Permissions Metrics Management Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you need to explicitly grant them permissions. [Learn more](#)

Refresh Copy S3 URI Copy URL Download Open Delete Actions Create folder **38** Upload

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	 index.html	html	May 6, 2022, 12:44:59 (UTC+08:00)	64.0 B	Standard

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ s3.console.aws.amazon.com/s3/upload/mydaylabbucket20220506?region=us-east-1

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

Amazon S3 > Buckets > mydaylabbucket20220506 > Upload

Upload [Info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, or the S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folder**

38 **Add files** **Add folder**

Files and folders (2 Total, 89.1 KB)
All files and folders in this table will be uploaded.

Find by name < 1 >

<input type="checkbox"/>	Name ▲	Folder ▼	Type ▼	Size ▼
<input type="checkbox"/>	Myday_Photo.jpg	-	image/jpeg	88.9 KB
<input type="checkbox"/>	index2.html	-	text/html	215.0 B

Destination

Destination
s3://mydaylabbucket20220506

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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38. Navigate to your S3 bucket and upload the image file to it, making sure to grant public access as you did when uploading the HTML file earlier in this lab.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

Amazon S3 > Buckets > mydaylabbucket20220506

mydaylabbucket20220506 Info

Publicly accessible




Objects Properties Permissions Metrics Management Access Points

Objects (3)

Objects are the fundamental entities stored in Amazon S3. You explicitly grant them permissions. [Learn more](#)

Refresh Copy S3 URI Copy URL Download Open Delete Actions Create folder Upload

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	 index.html	html	May 6, 2022, 13:50:01 (UTC+08:00)	64.0 B	Standard
<input type="checkbox"/>	 index2.html	html	May 6, 2022, 14:12:54 (UTC+08:00)	215.0 B	Standard
<input type="checkbox"/>	 Myday_Photo.jpg	jpg	May 6, 2022, 14:12:56 (UTC+08:00)	88.9 KB	Standard

38. Navigate to your S3 bucket and upload the image file to it, making sure to grant public access as you did when uploading the HTML file earlier in this lab.

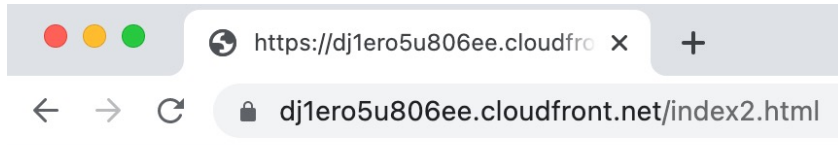
38

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

39

<https://dj1ero5u806ee.cloudfront.net/index2.html>



39. Use an internet browser to open the HTML file that you just created.
If the image that you uploaded shows, your CloudFront distribution was successful. If not, repeat the lab.



```
index2.html
1 <html>
2   <head>My CloudFront Test</head>
3   <body>
4     <p>Min-Yuh Day at AWS S3 CloudFront</p>
5     <p>
6   </body>
7 </html>
```

```
<html>
  <head>My CloudFront Test</head>
  <body>
    <p>Min-Yuh Day at AWS S3 CloudFront</p>
    <p>
  </body>
</html>
```

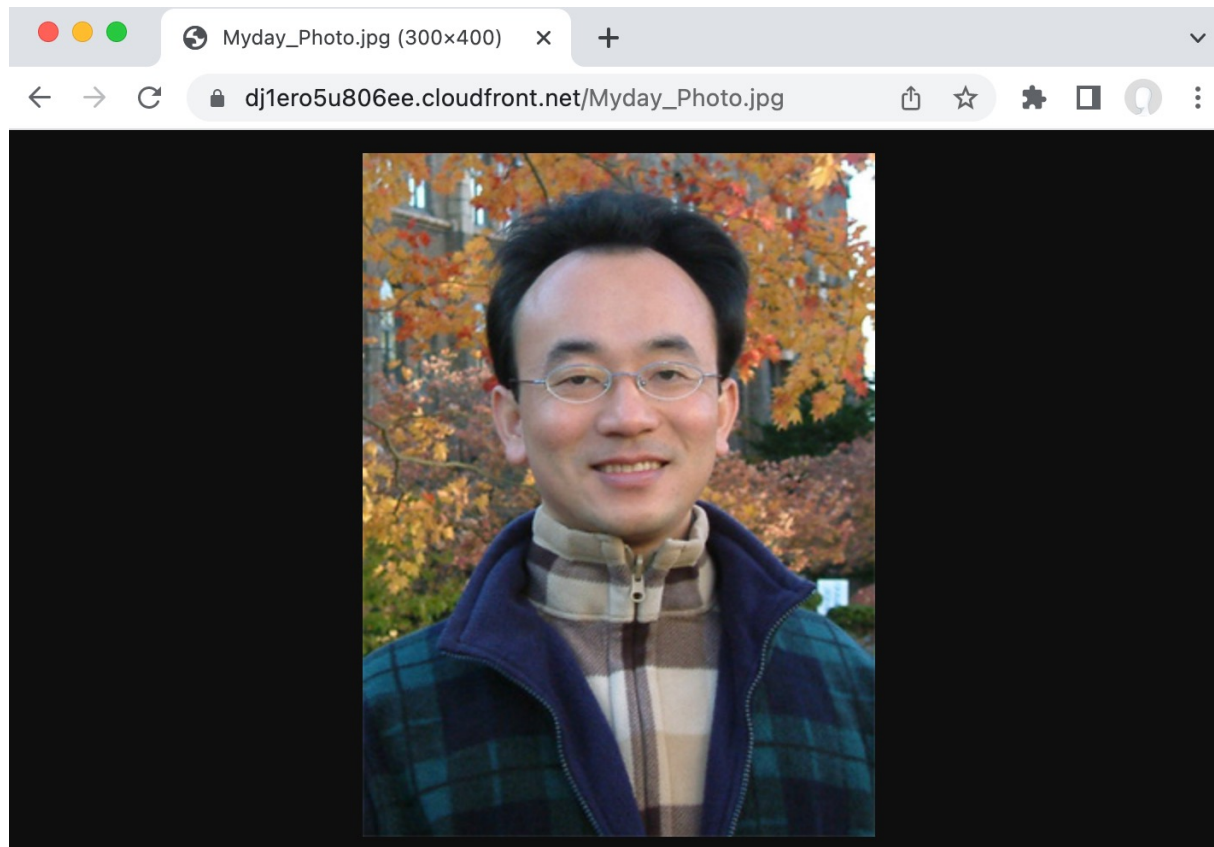
AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

39

39. Use an internet browser to open the HTML file that you just created.
If the image that you uploaded shows, your CloudFront distribution was successful. If not, repeat the lab.

https://dj1ero5u806ee.cloudfront.net/Myday_Photo.jpg



AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

Lab complete

Congratulations! You have completed the lab.

40. Log out of the AWS Management Console.

In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.

Choose **Sign Out**.

41. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront

← → ↻ us-east-1.console.aws.amazon.com/cloudfront/v3/home?region=us-east-1#/distributions

40

aws Services Search for services, features, blogs, docs, and more [Option+S] Global voclabs/user1323818=Min-Yuh_Day @ 6420-3836-5284

CloudFront

- Distributions
- Policies
- Functions
- What's new [NEW](#)
- ▼ Telemetry
 - Monitoring
 - Alarms
 - Logs
- ▼ Reports & analytics
 - Cache statistics
 - Popular objects
 - Top referrers
 - Usage
 - Viewers
- ▼ Security
 - Origin access identities
 - Field-level encryption

CloudFront > Distributions

Distributions (1) Info

Search all distributions

	ID	Descrip...	Domai...	Alterna...	Origins	Status	Last m...
<input type="checkbox"/>	E1KV76ERM1SLYU	-	dj1ero5u8...	-	mydaylabbucke	✓ Enabled	May 6, 20

40. Log out of the AWS Management Console.

In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.

Choose **Sign Out**.

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Module 5 Content Delivery: Lab 5 - Amazon CloudFront

us-east-1.console.aws.amazon.com/cloudfront/v3/home?region=us-east-1#/distributions

aws Services Search for services, features, blogs, docs, and more [Option+S] Global

CloudFront X

Distributions

Policies

Functions

What's new **NEW**

▼ **Telemetry**

Monitoring

Alarms

Logs

▼ **Reports & analytics**

Cache statistics

Popular objects

Top referrers

Usage

Viewers

▼ **Security**

Origin access identities

Field-level encryption

CloudFront > Distributions

Distributions (1) Info

Search all distributions

<input type="checkbox"/>	ID	Descrip...	Domai...	Alterna...
<input type="checkbox"/>	E1KV76ERM1SLYU	-	dj1ero5u8...	-

Account ID: 6420-3836-5284

Federated user: voclabs/user1323818=Min-Yuh_Day

Account

Organization

Service Quotas

Billing Dashboard

Settings

40

Switch role Sign out

40. Log out of the AWS Management Console.

In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.







Choose **Sign Out**.


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← → ↻ aws.amazon.com/console/?nc1=h_ls      



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≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

41

AWS 

00:50

▶ Start Lab

■ End Lab

i AWS Details

i Readme



40. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

ddd_v1_w_4S

EN-US -

```
<p>
```

- Save the text file with an HTML extension.

39. Use an internet browser to open the HTML file that you just created.

If the image that you uploaded shows, your CloudFront distribution was successful. If not, repeat the lab.

Lab complete

Congratulations! You have completed the lab.

40. Log out of the AWS Management Console.

- In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.
- Choose **Sign Out**.

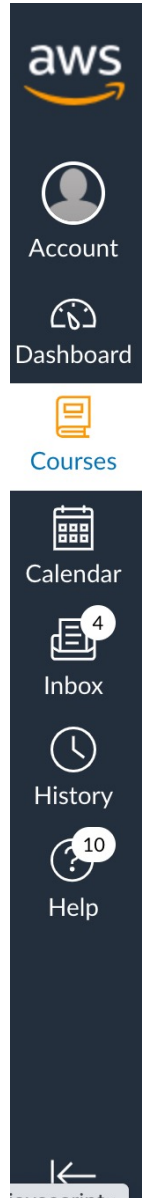
41. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

00:50 Start Lab End Lab AWS Details Readme

Are you sure you want to end the lab?

⚠ If you choose yes, all the resources and data that have been configured in your AWS account will be permanently deleted.

41 Yes No

40. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

Congratulations! You have completed the lab.

40. Log out of the AWS Management Console.

- In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.
- Choose **Sign Out**.










41. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

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≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS ●

00:00

▶ Start Lab

■ End Lab

i AWS Details

i Readme



ddd_v1_w_4

Module 5 Lab: Using CloudFront as a CDN for a Website

Lab overview

In this lab, you will use Amazon CloudFront as a content delivery network (CDN) for a website that is stored in the Amazon Simple Storage Service (Amazon S3).

Duration

This lab requires approximately **40 minutes** to complete.

Access the AWS Management Console

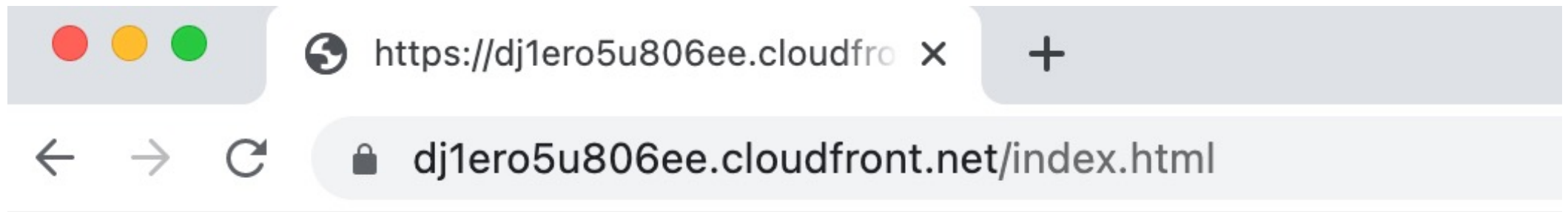
1. To start the lab session, choose **Start Lab** in the upper right corner of the page.

◀ Previous

Next ▶

AWS Academy Introduction to Cloud: Semester 1
Module 5 Content Delivery: Lab 5 - Amazon CloudFront










`https://dj1ero5u806ee.cloudfront.net/index.html`



Hello World. Take me to your leader.

AWS Academy Introduction to Cloud: Semester 1

Module 5 Content Delivery: Lab 5 - Amazon CloudFront



Account

Dashboard

Courses

Calendar

Inbox

History

Help


≡ AICv1Sem1E... > Modules > Module 5 - C... > Lab 5 - CloudFront

AWS 

00:00

▶ Start Lab

■ End Lab

i AWS Details

i Readme



ip: my blog http://d111h2b230-cdn.cloudfront.net/procedure.jpg are my blog image

- Save the text file with an HTML extension.

39. Use an internet browser to open the HTML file that you just created.

If the image that you uploaded shows, your CloudFront distribution was successful. If not, repeat the lab.

Lab complete

Congratulations! You have completed the lab.

40. Log out of the AWS Management Console.

- In the upper-right corner of the page, choose your user name. Your user name begins with **voclabs/user**.
- Choose **Sign Out**.

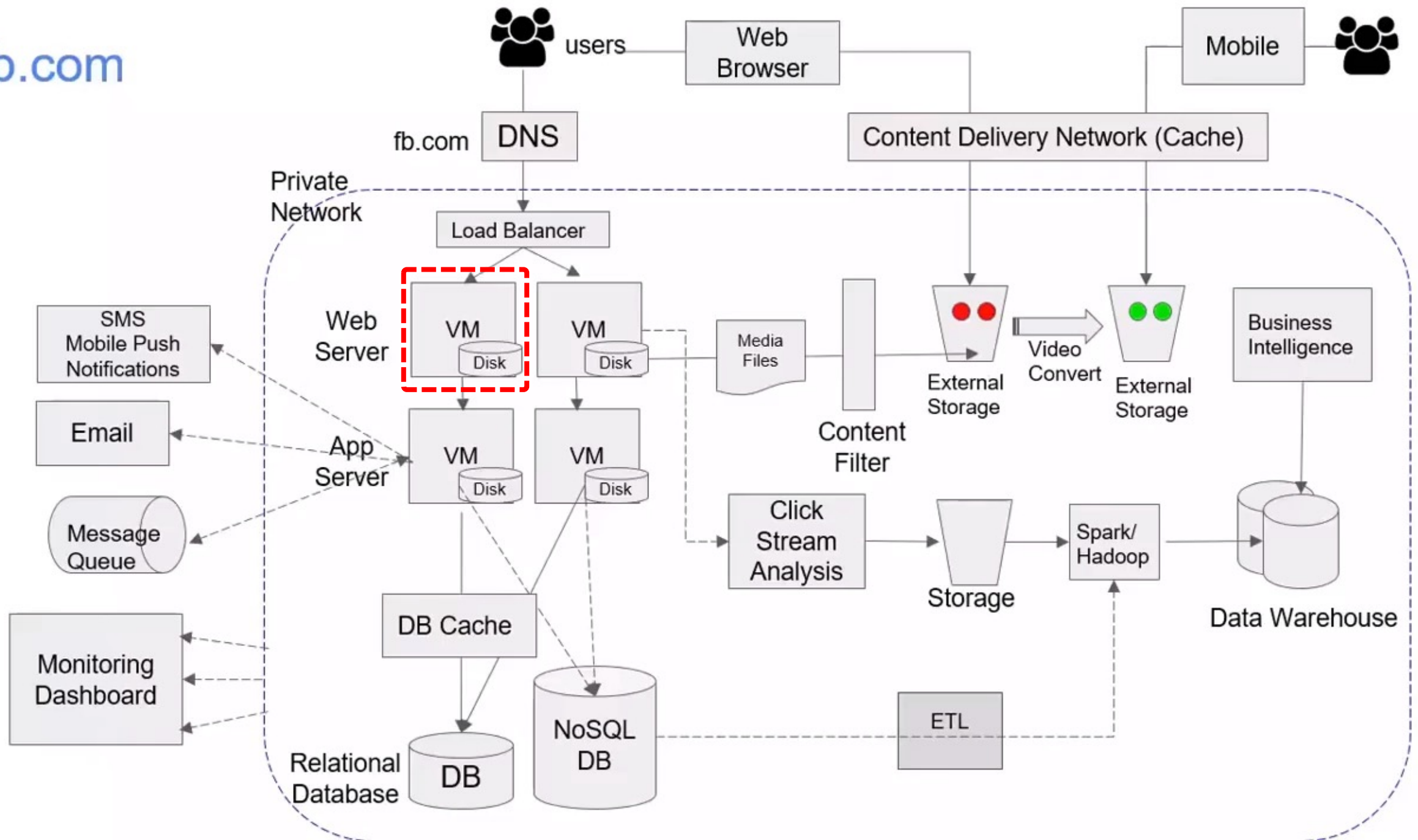
41. Choose **End Lab** at the top of this page, and then select **Yes** to confirm that you want to end the lab.

◀ Previous

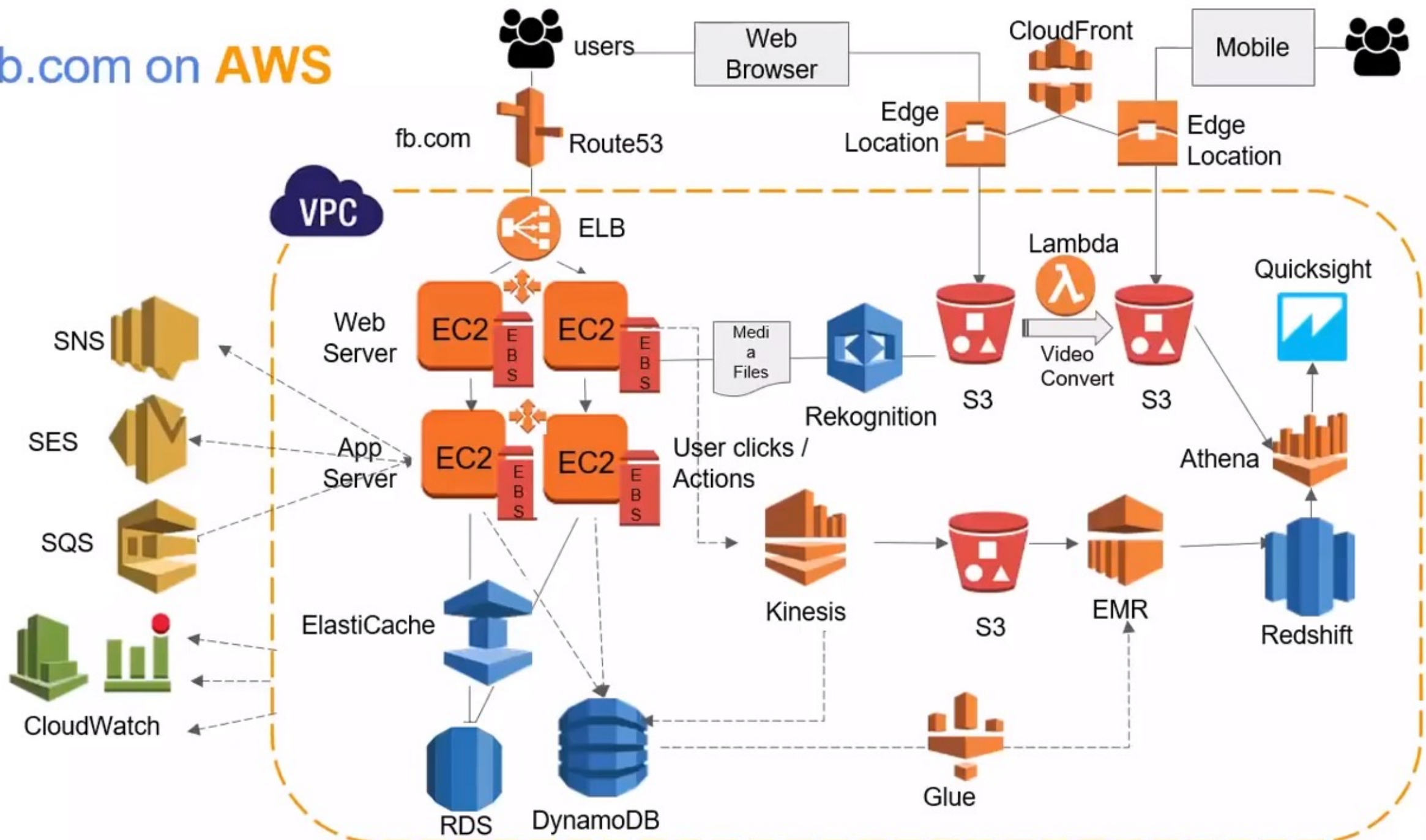
Next ▶



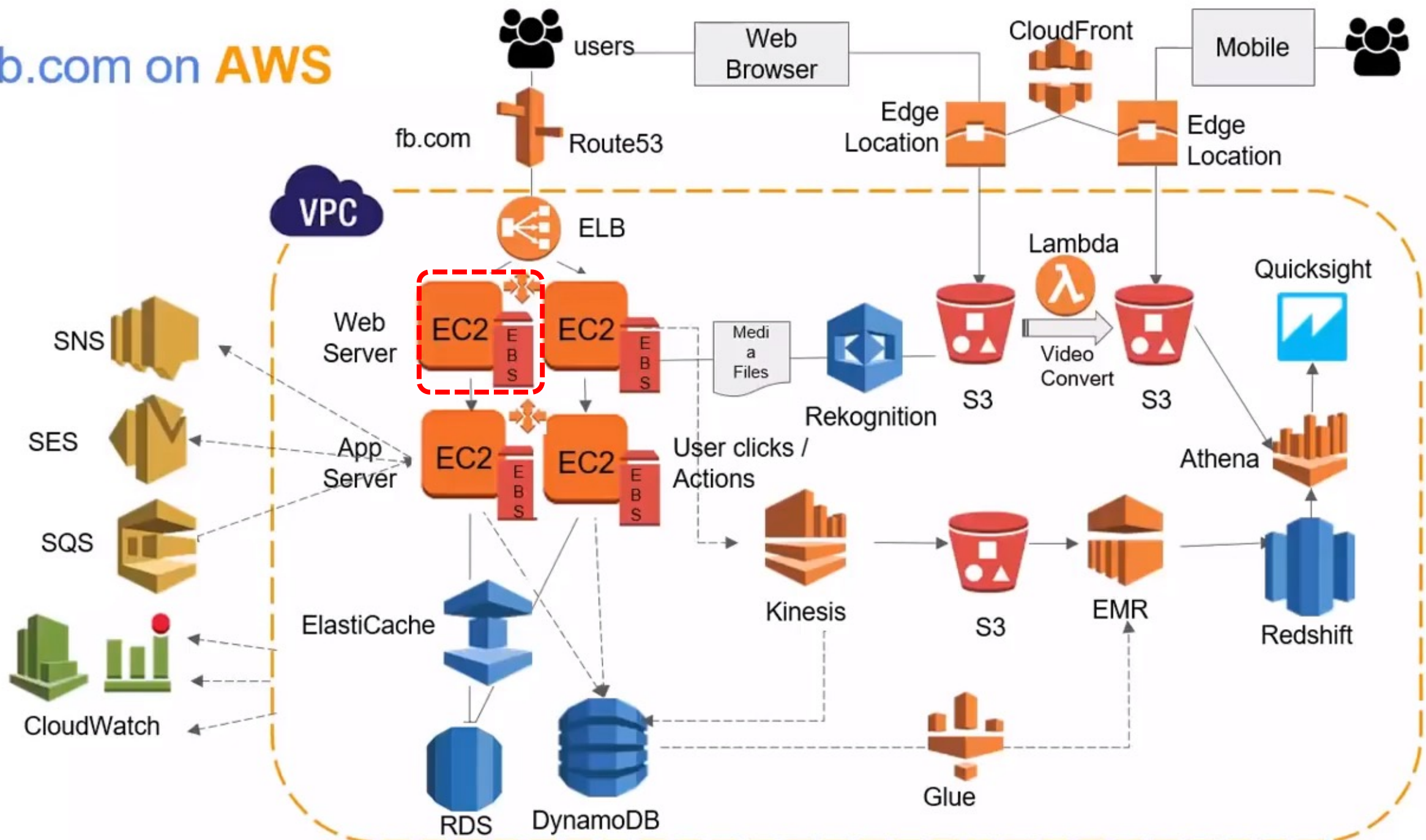
Web Application with AWS Core Services



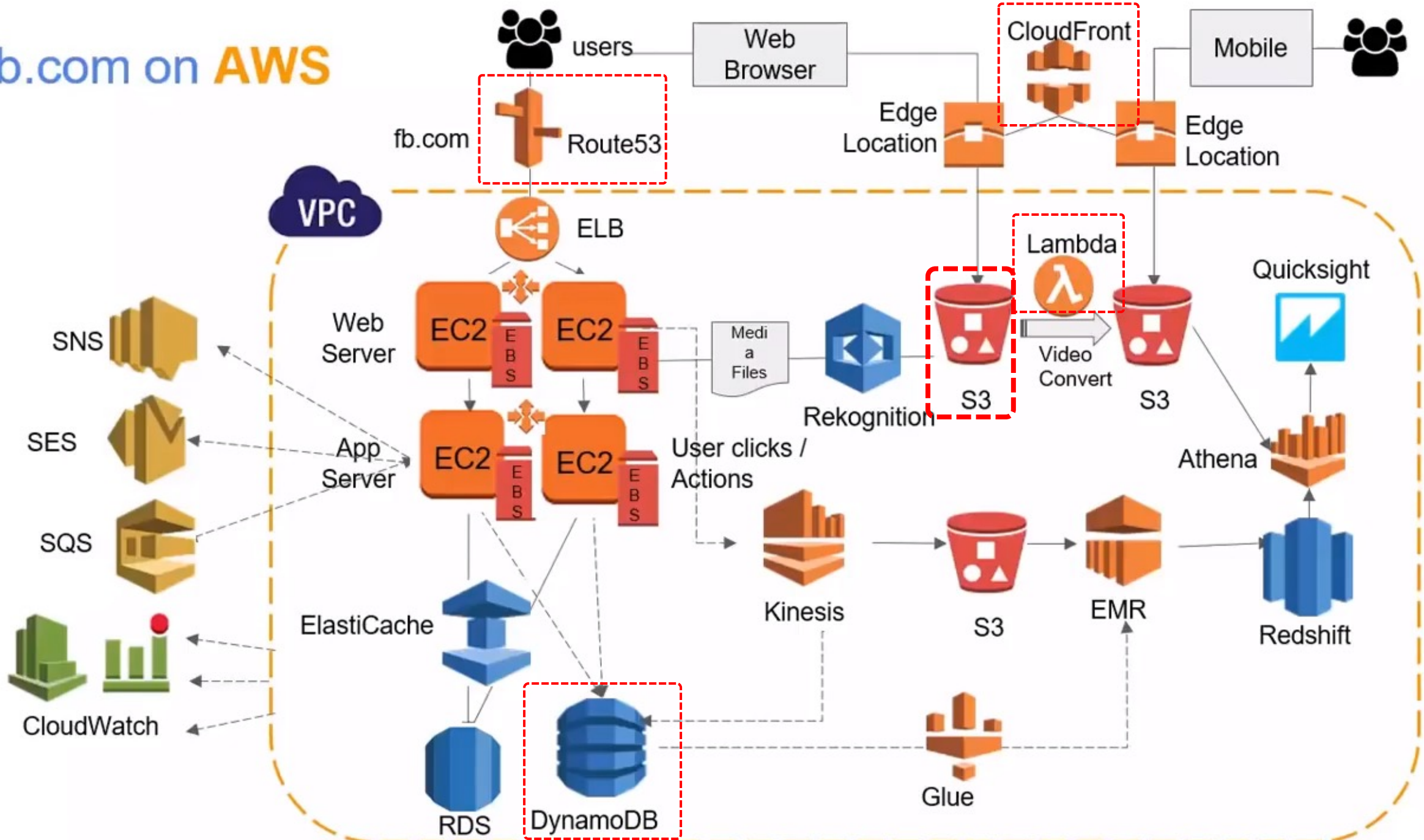
fb.com on AWS



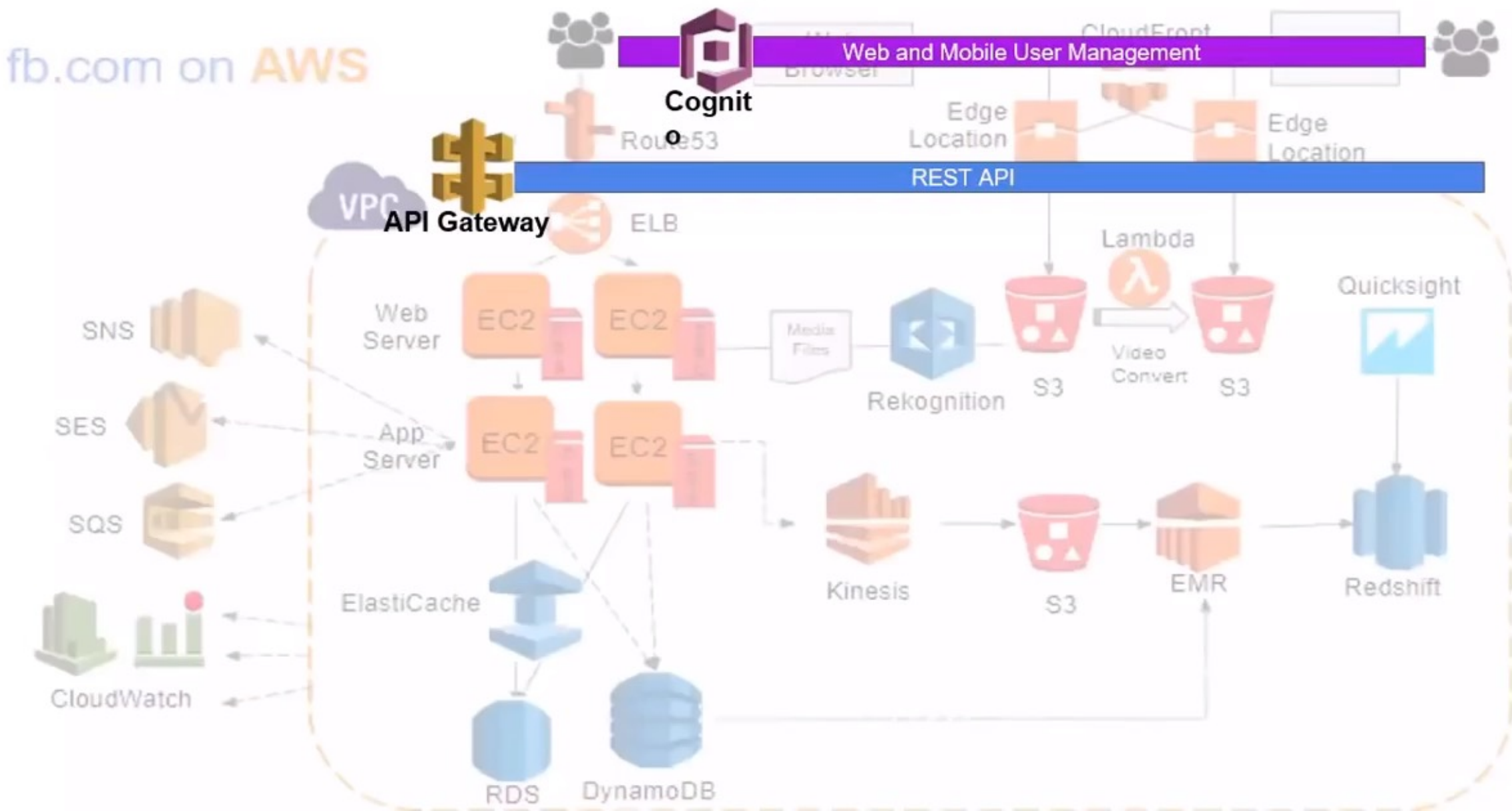
fb.com on AWS



fb.com on AWS

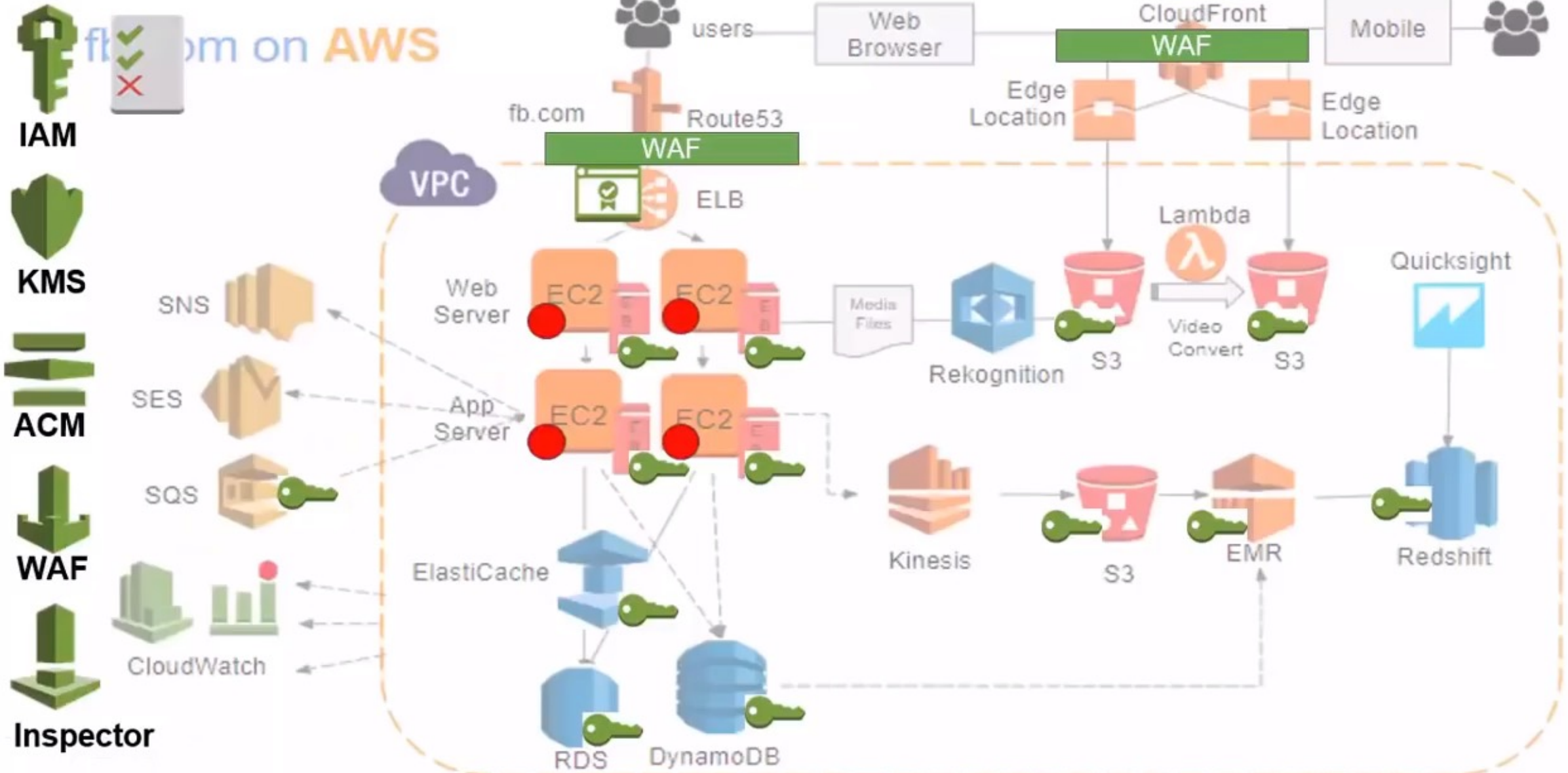


AWS Application Services



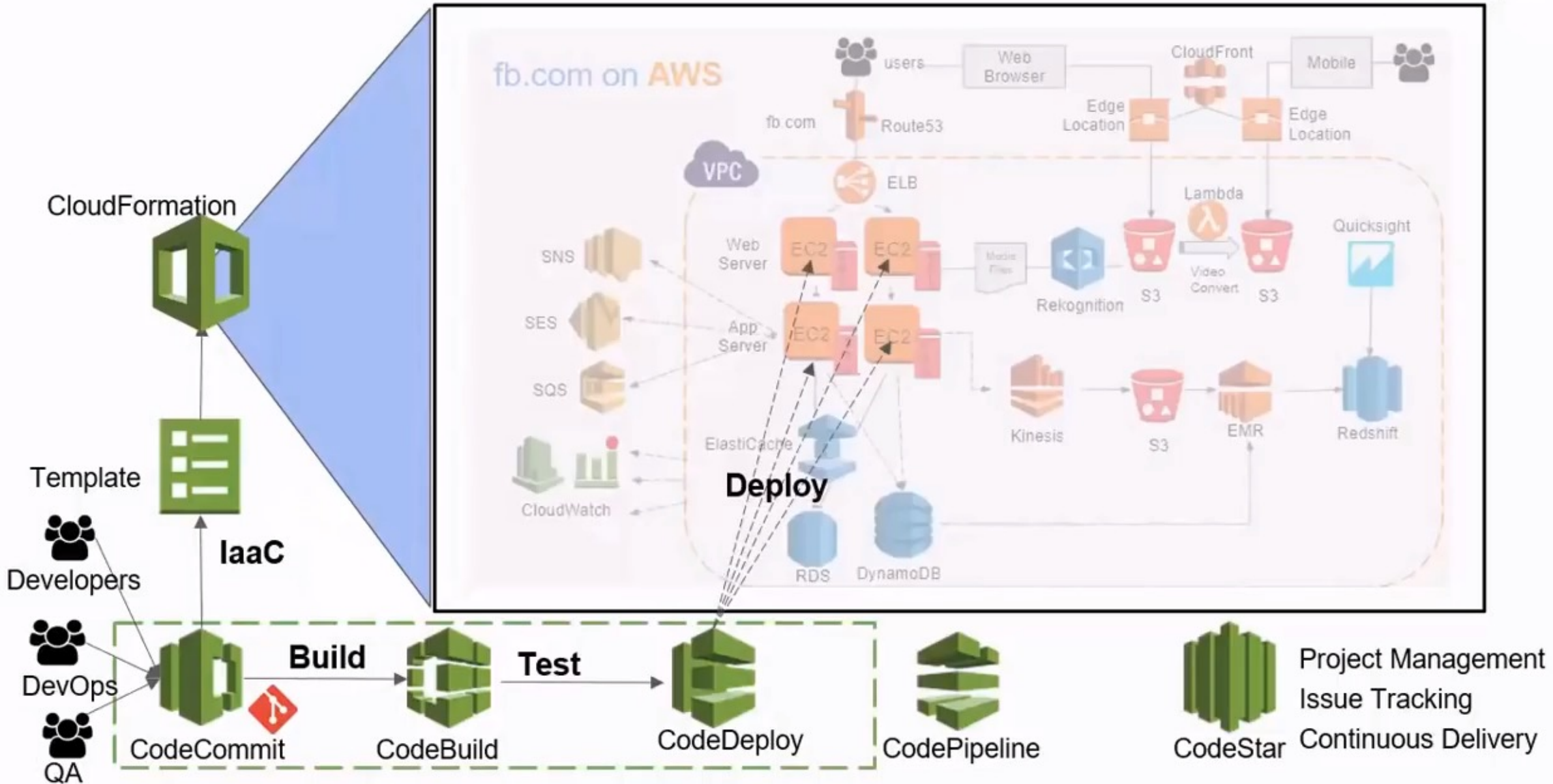
Source: AWS Training Center (2019), Introduction to AWS Services, <https://youtu.be/Z3SYDTMP3ME>

AWS Security Services



AWS Development and DevOps Services

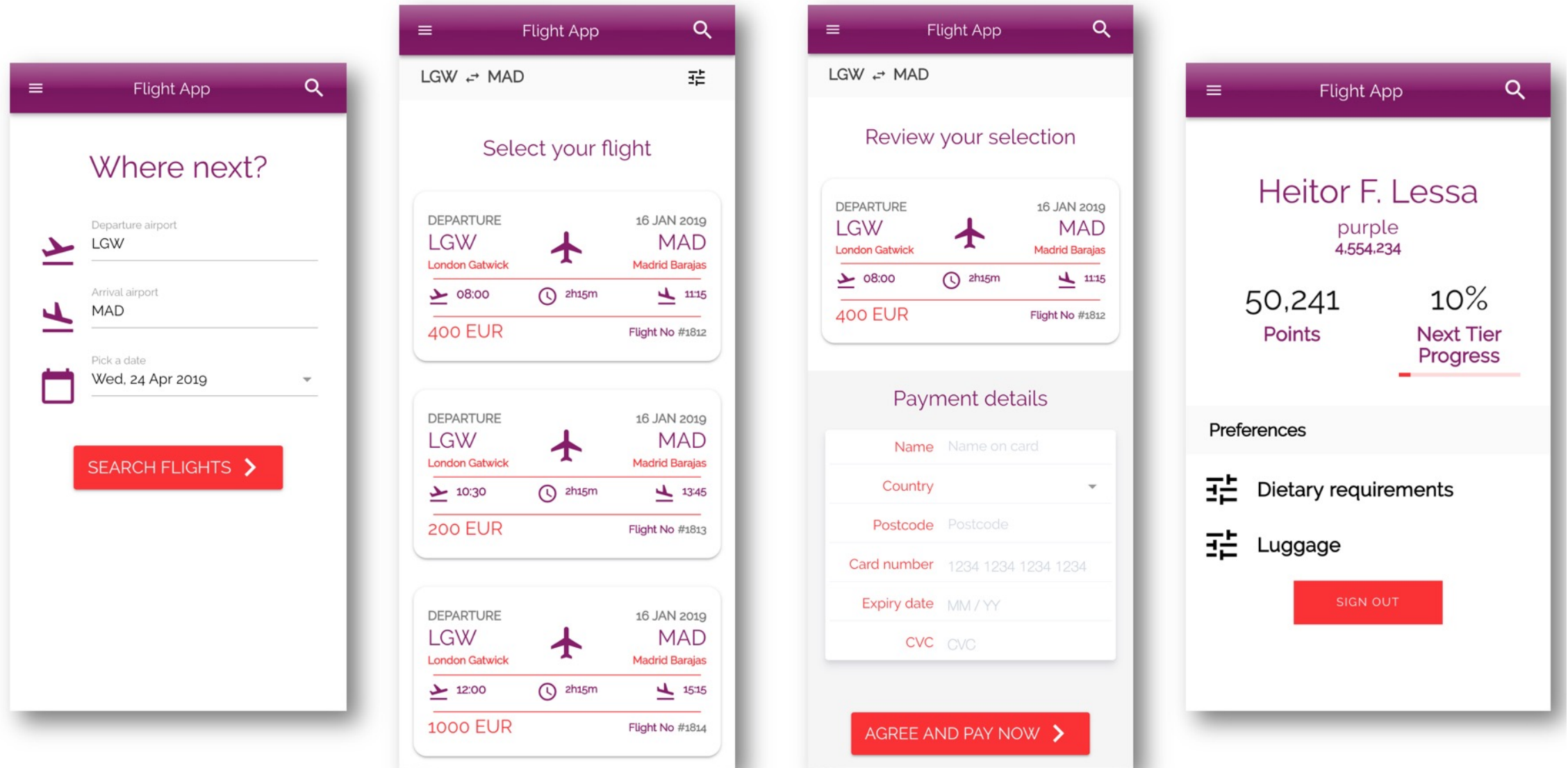
AWS Region





AWS Serverless Architecture

AWS Serverless Airline Booking



The image displays four sequential screens of a mobile flight booking application, all featuring a purple header with a hamburger menu icon, the text "Flight App", and a search icon.

- Screen 1: "Where next?"** This is the search screen. It contains input fields for "Departure airport" (set to LGW), "Arrival airport" (set to MAD), and "Pick a date" (set to Wed, 24 Apr 2019). A red button labeled "SEARCH FLIGHTS >" is at the bottom.
- Screen 2: "Select your flight"** This screen shows three flight options from LGW (London Gatwick) to MAD (Madrid Barajas) on 16 JAN 2019. Each option includes a flight icon, departure/arrival times, duration, price, and flight number.
 - Option 1: 08:00 - 11:15, 2h15m, 400 EUR, Flight No #1812
 - Option 2: 10:30 - 13:45, 2h15m, 200 EUR, Flight No #1813
 - Option 3: 12:00 - 15:15, 2h15m, 1000 EUR, Flight No #1814
- Screen 3: "Review your selection"** This screen displays the details of the selected flight (Option 1 from Screen 2). It includes the route LGW to MAD, departure/arrival times, duration, price (400 EUR), and flight number (#1812). Below this is a "Payment details" section with fields for Name, Country, Postcode, Card number, Expiry date, and CVC. A red button labeled "AGREE AND PAY NOW >" is at the bottom.
- Screen 4: User Profile** This screen shows the user's profile for Heitor F. Lessa, with a purple membership level and 4,554,234 points. It also displays 50,241 points and a 10% progress bar towards the next tier. Below this is a "Preferences" section with options for "Dietary requirements" and "Luggage". A red button labeled "SIGN OUT" is at the bottom.



AWS Serverless Airline Booking Stack

UI/UX



Quasar framework



Vue.js

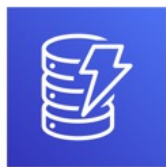


AWS Amplify



Stripe Elements

Data/Lang



Amazon DynamoDB



Python

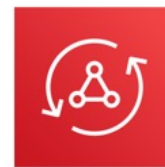


Typescript



JavaScript

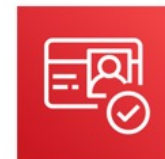
API/Auth



AWS AppSync



Amazon API Gateway



Amazon Cognito

Messaging



Amazon SNS

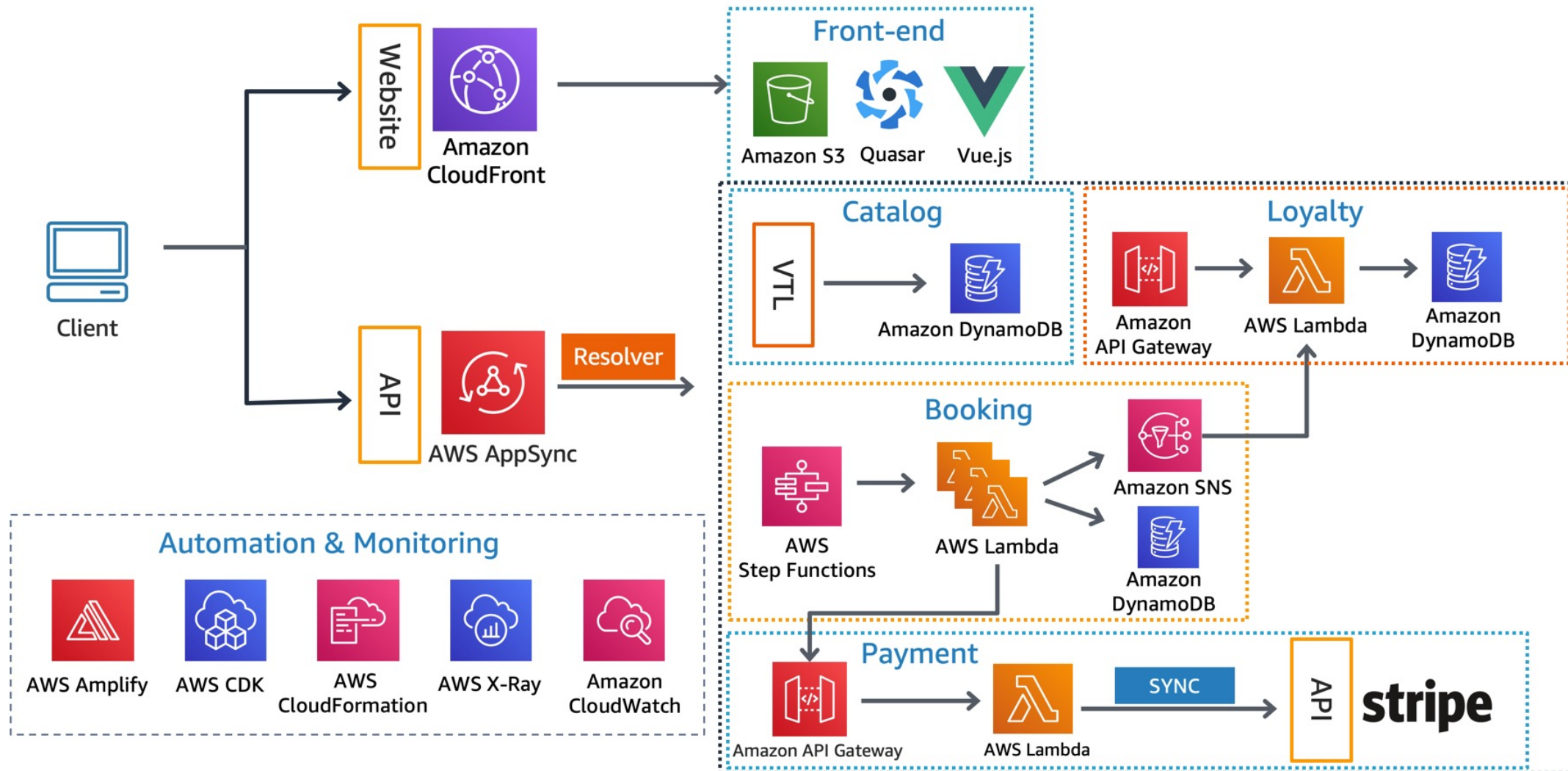


AWS Step Functions



AWS Serverless Airline Booking

High level infrastructure architecture

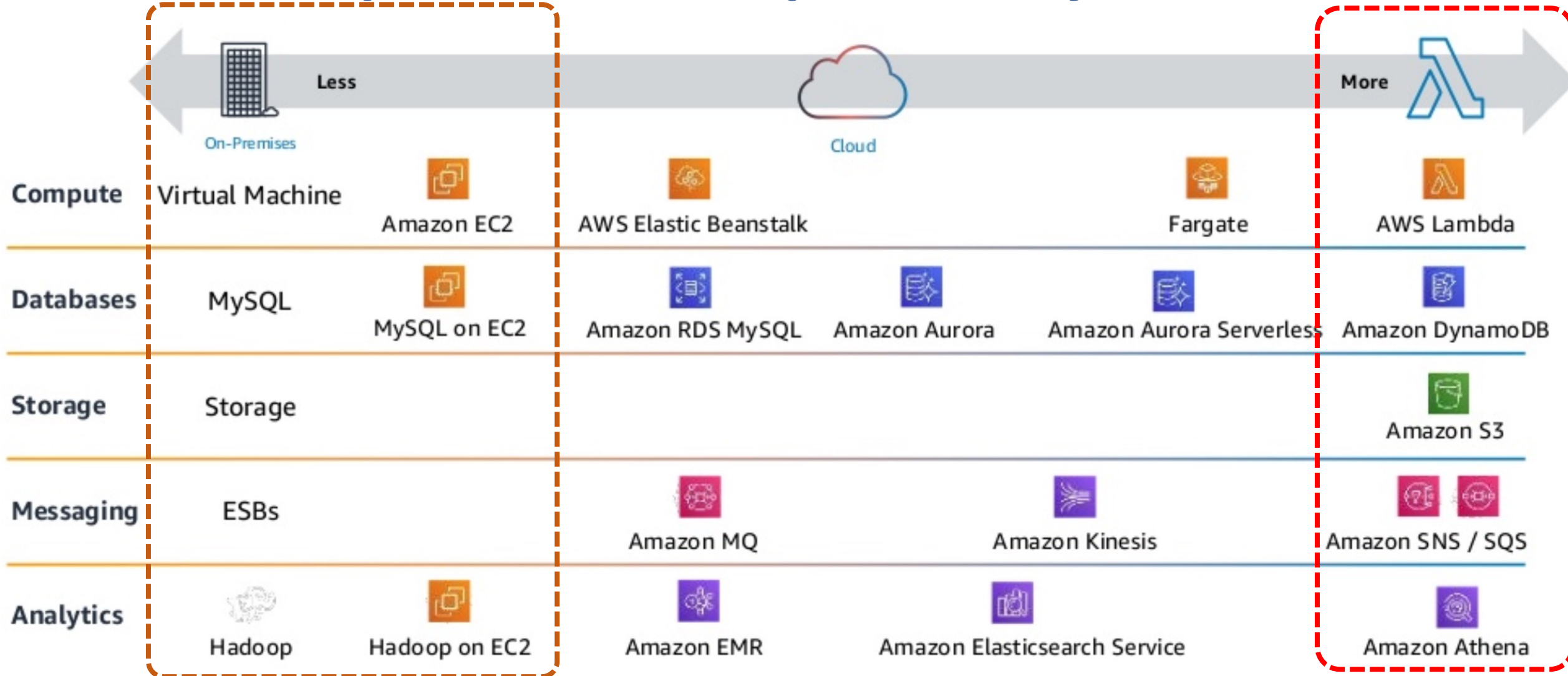


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AWS Serverless Architecture

AWS Operational Responsibility Models





Build a Serverless Web Application

aws Build a Serverless Web Application

Projects on AWS:

Build a Serverless Web Application

with AWS Lambda, Amazon API Gateway, Amazon S3, Amazon DynamoDB, and Amazon Cognito



Introduction

1

Host a static website

2

Manage users

3

Build a serverless backend

4

Deploy a RESTful API

5

Terminate resources

Overview

In this tutorial, you'll create a simple serverless web application that enables users to request unicorn rides from the [Wild Rydes](#) fleet. The application will present users with an HTML based user interface for indicating the location where they would like to be picked up and will interface on the backend with a RESTful web service to submit the request and dispatch a nearby unicorn. The application will also provide facilities for users to register with the service and log in before requesting rides.

Application Architecture

AWS Experience: Beginner

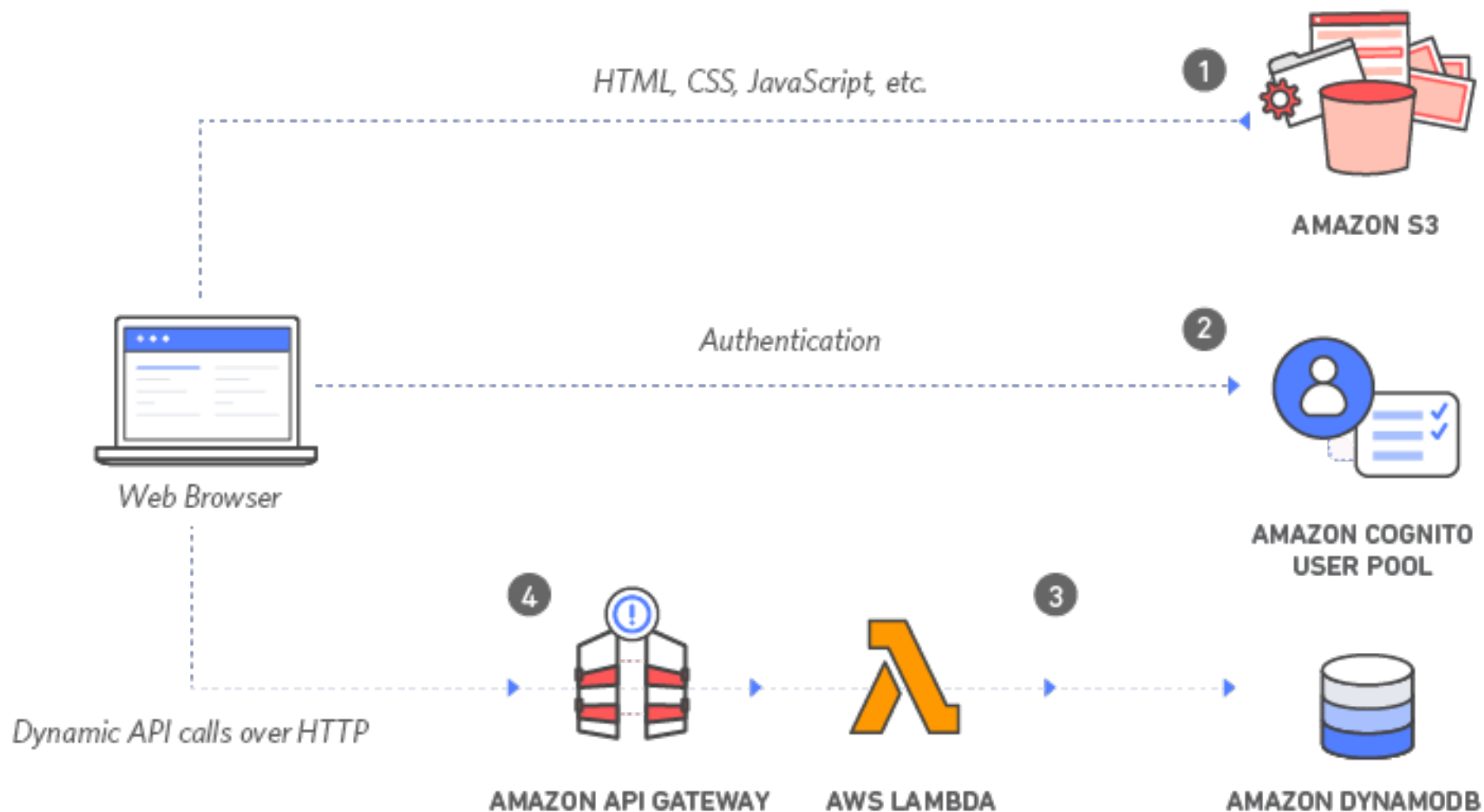
Time to complete: 2 hours

Cost to complete: Each service used in this architecture is eligible for the [AWS Free Tier](#). If you are outside the usage limits of the Free Tier, completing this tutorial will cost you less than \$0.25*.



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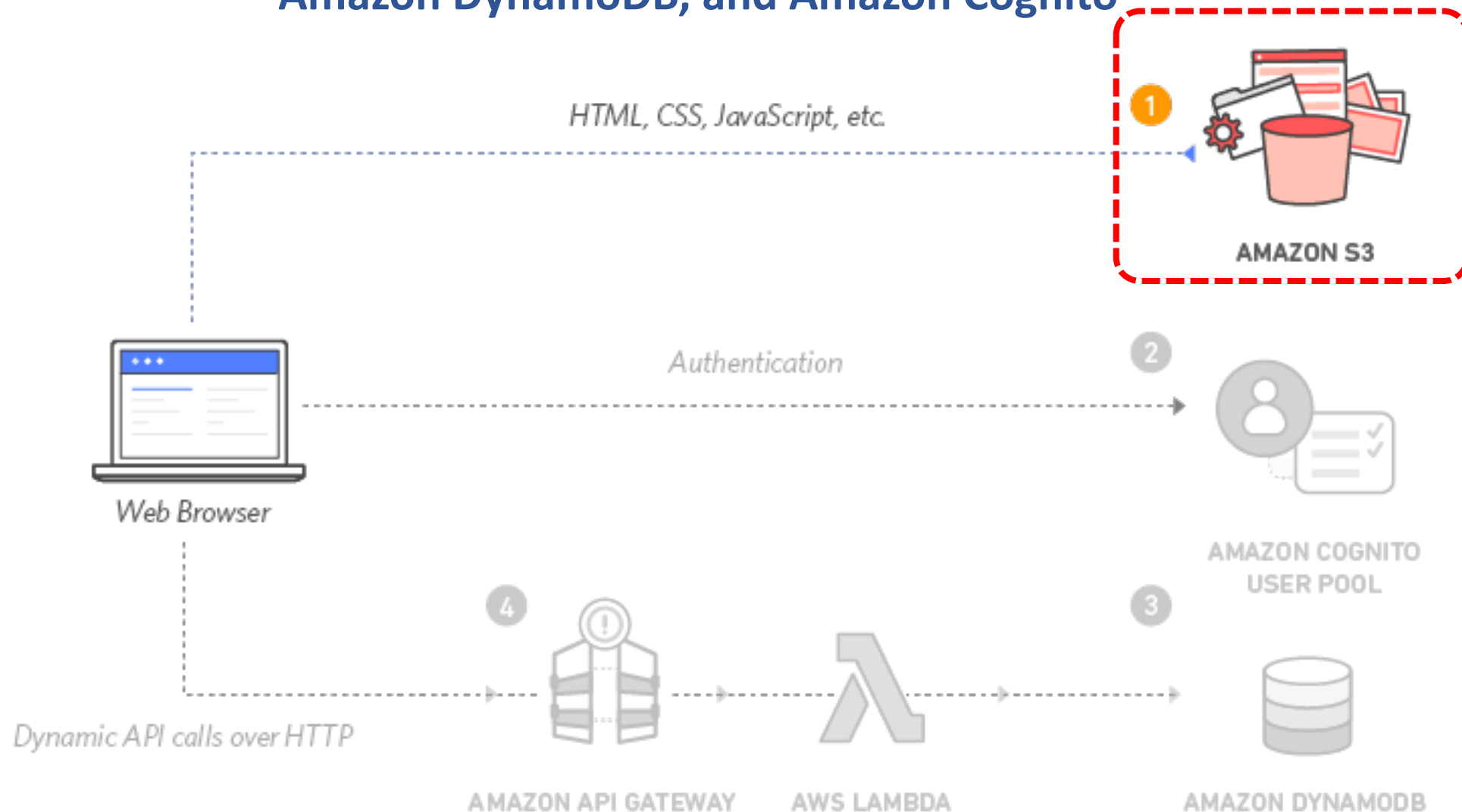




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1





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1

Static Web Hosting

Amazon S3 hosts static web resources including HTML, CSS, JavaScript, and image files which are loaded in the user's browser.

HTML, CSS, JavaScript, etc.

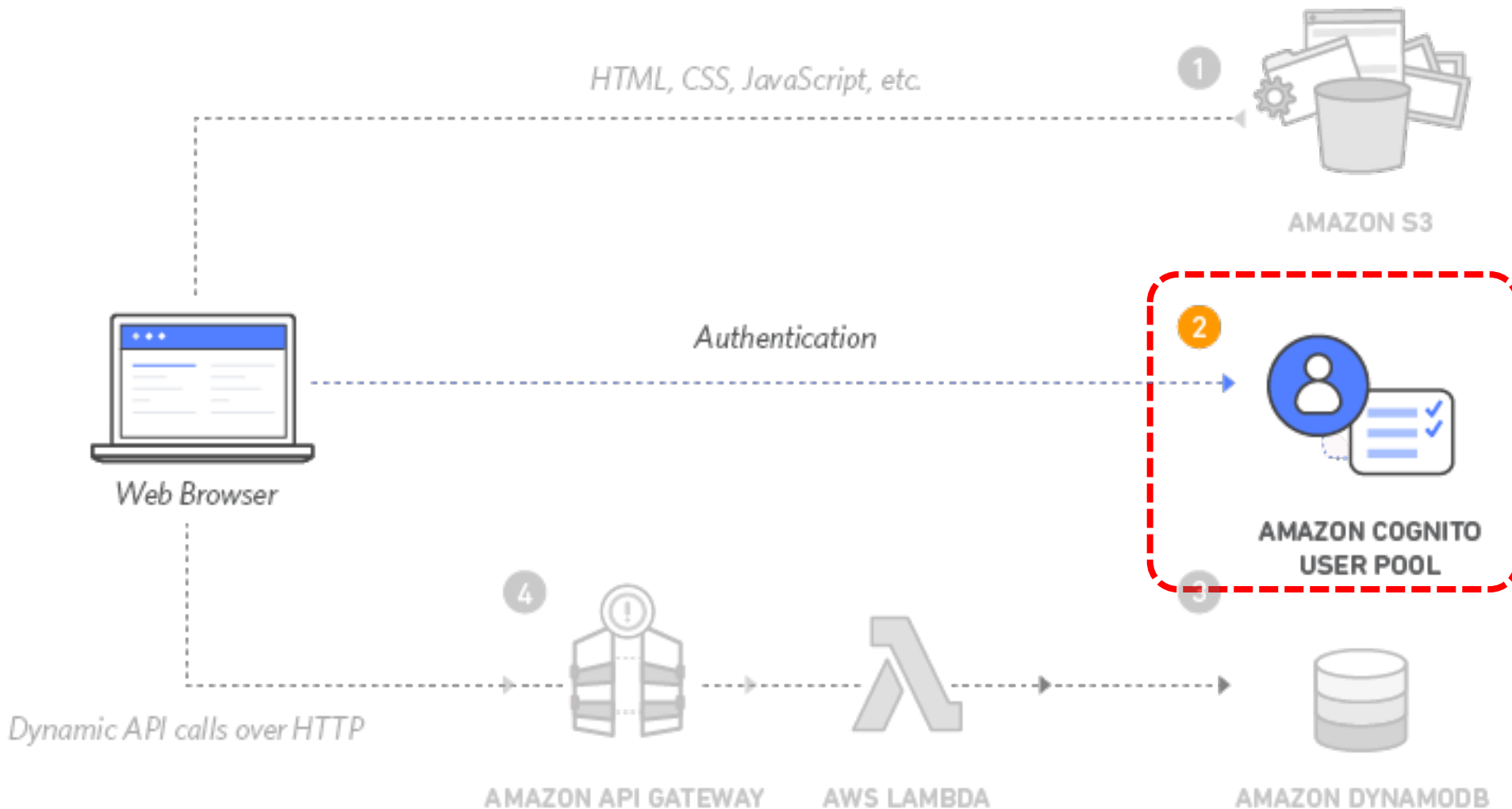




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2





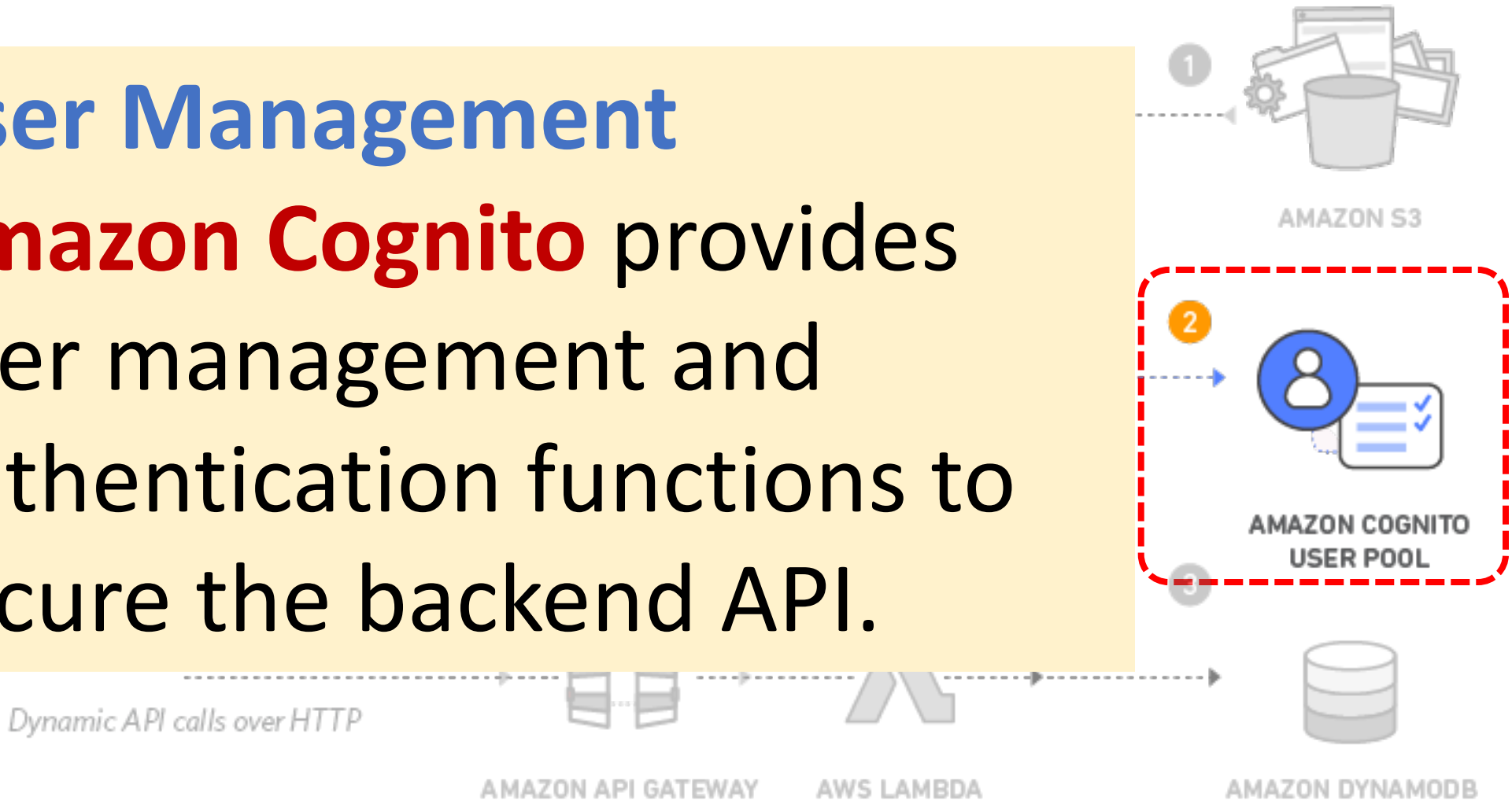
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2

User Management

Amazon Cognito provides user management and authentication functions to secure the backend API.

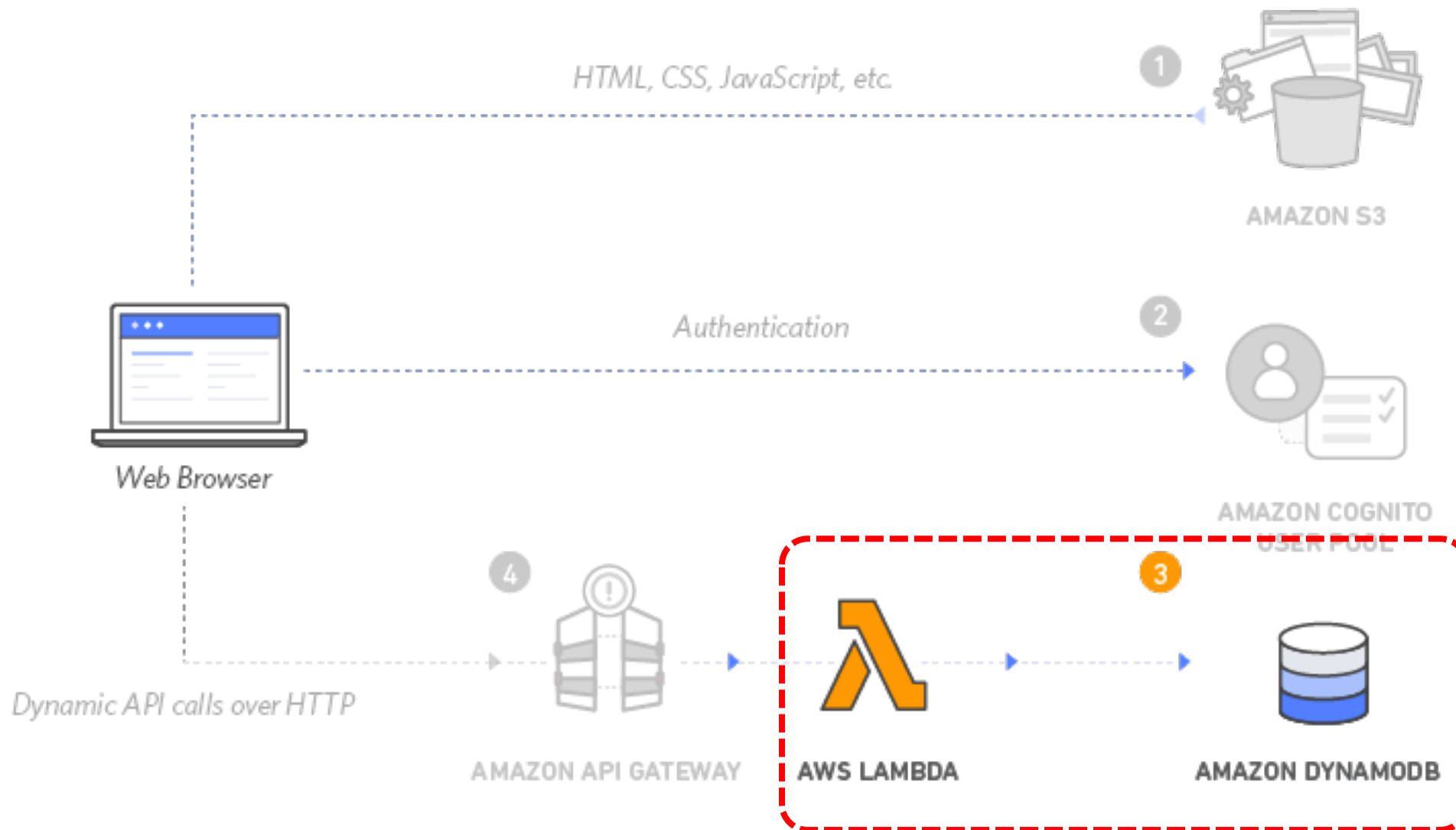




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3





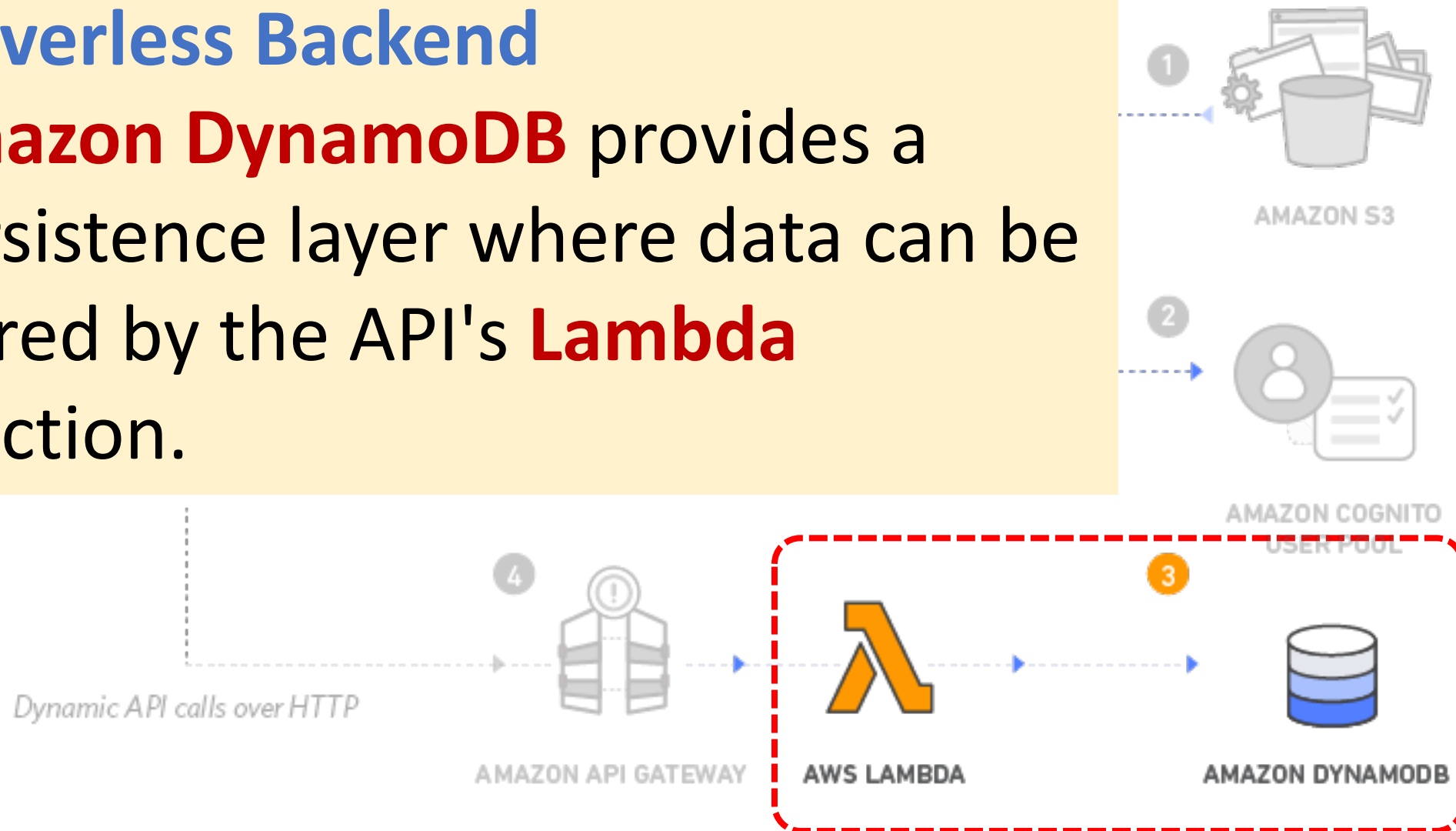
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3

Serverless Backend

Amazon DynamoDB provides a persistence layer where data can be stored by the API's **Lambda** function.

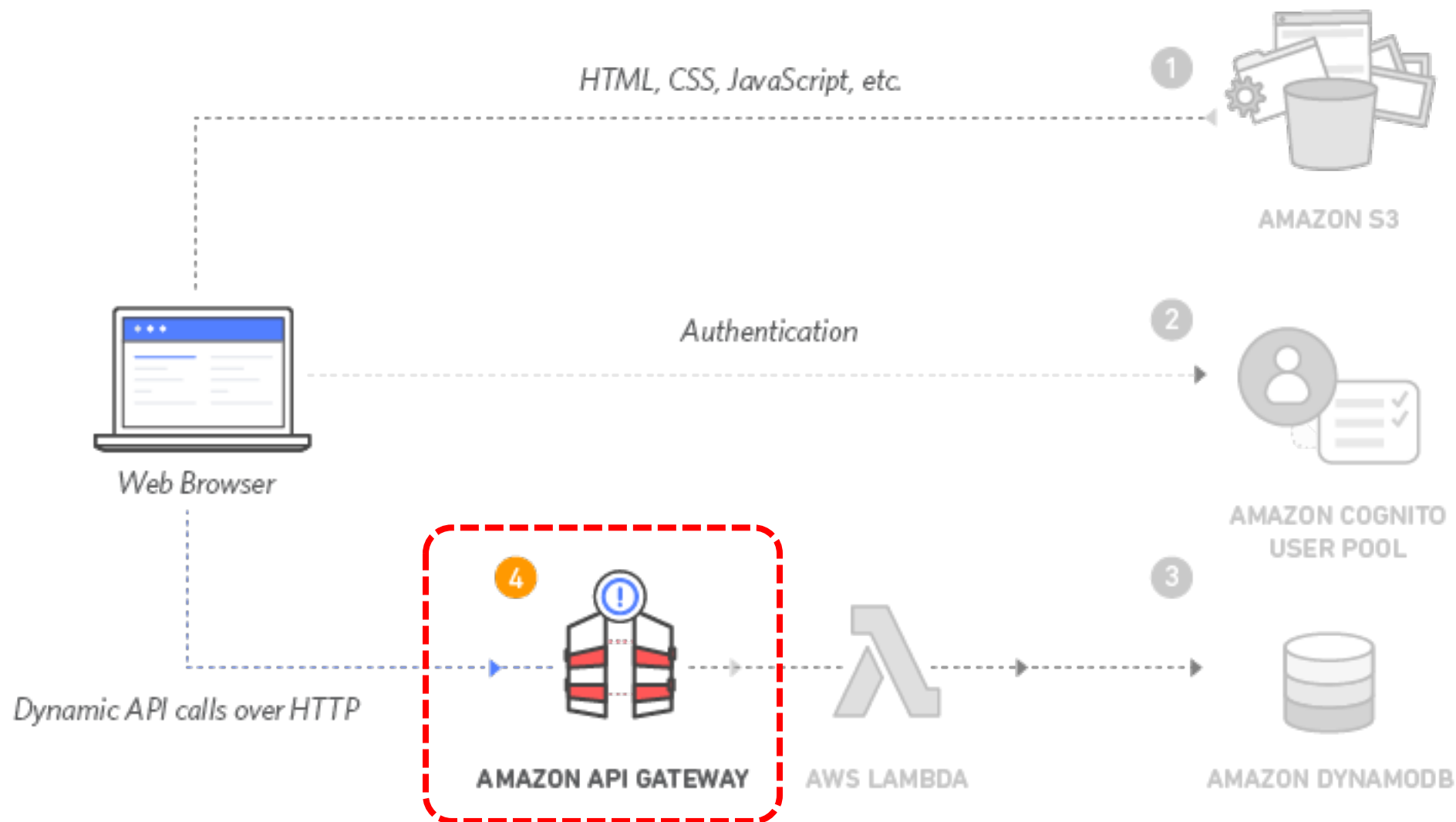




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4





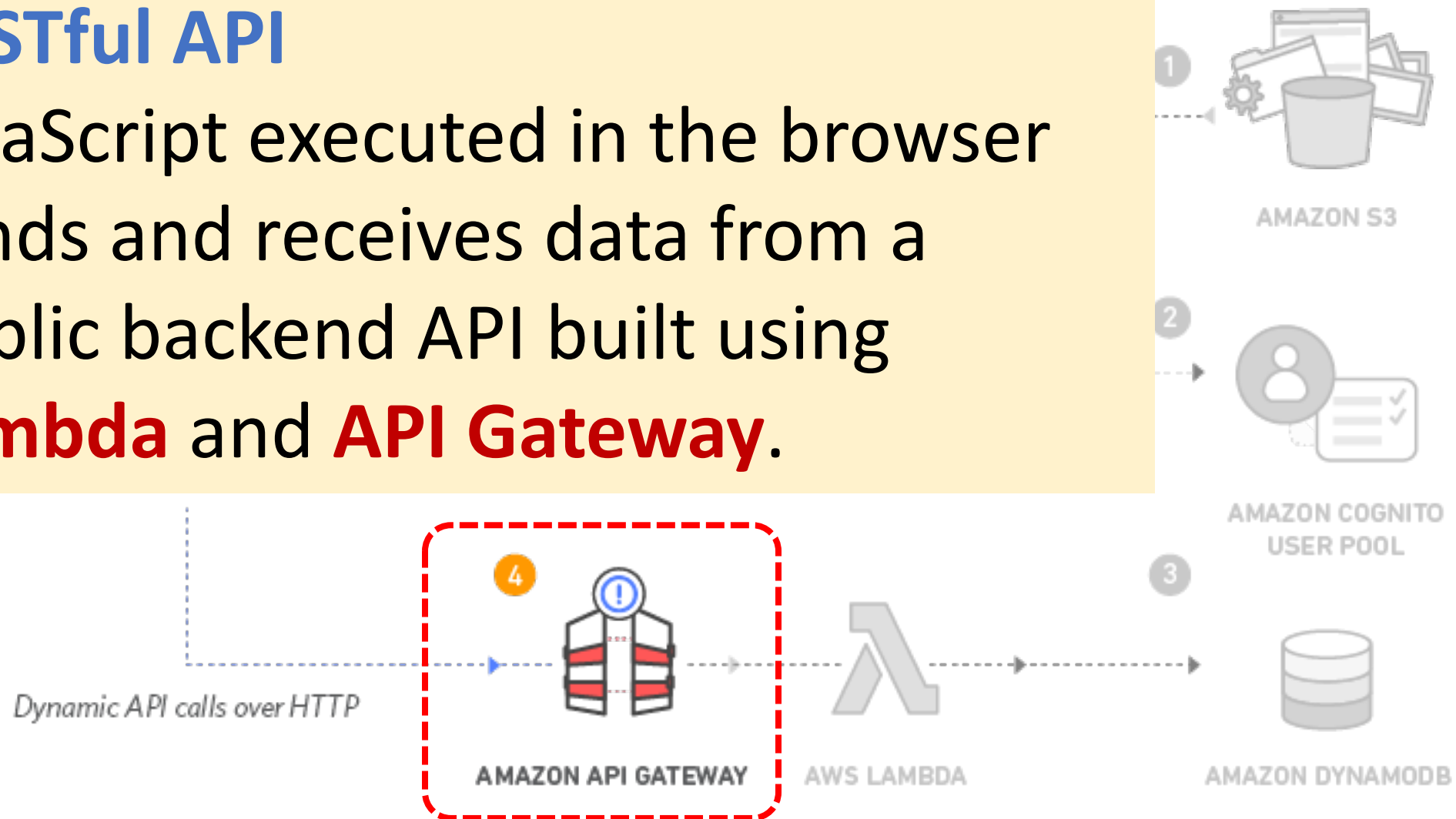
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4

RESTful API

JavaScript executed in the browser
sends and receives data from a
public backend API built using
Lambda and **API Gateway**.





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5 Terminate resources

Resource Cleanup

You will terminate an **Amazon S3** bucket, an **Amazon Cognito** User Pool, an **AWS Lambda** function, an **IAM** role, a **DynamoDB** table, a **REST API**, and a **CloudWatch** Log.

It is a best practice to **delete resources** you are no longer using to avoid unwanted charges.

Summary

- **AWS Content Delivery Network: Lab 5**
Using CloudFront as a CDN for a Website
 - **AWS Academy Introduction to Cloud: Semester 1**
 - **Module 5 Content Delivery**
 - **Lab 5 - Amazon CloudFront**

References

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- <https://www.aws.training/>
- <https://aws.amazon.com/training/awsacademy/>
- <https://aws.amazon.com/education/awseducate/>
- **AWS Academy Introduction to Cloud: Semester 1**
 - <https://awsacademy.instructure.com/courses/18745>
- **AWS Certified Cloud Practitioner**
 - <https://aws.amazon.com/certification/certified-cloud-practitioner/>
- **AWS Certified Solutions Architect – Associate**
 - <https://aws.amazon.com/certification/certified-solutions-architect-associate/>
- **AWS Cloud Practitioner Essentials (Second Edition)**
 - <https://aws.amazon.com/training/course-descriptions/cloud-practitioner-essentials/>
- **Architecting on AWS**
 - <https://aws.amazon.com/training/course-descriptions/architect/>

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Q & A

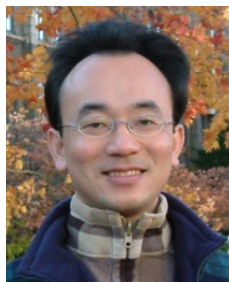
AWS Content Delivery Network: Lab 5

Using CloudFront as a CDN for a Website

Time: 2022/5/6 (Friday) 18:30-20:30

Place: 電資406室, 國立臺北大學 (NTPU)

aws educate | Cloud Ambassador
2020 Cohort



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2022-05-06

