



**AWS  
re:Invent**

**CTD 205**

# **Introduction to Amazon CloudFront**

Tom Witman, AWS

November 29, 2016

# What to Expect from the Session

Understand the CloudFront Content Delivery Network

Benefits of Using CloudFront in Default Architectures

New Features and their Application(s)

Pricing

Getting Started

Learning by Example: customer use cases

## Level Set: **What is a CDN and Why Use One?**

- Content Delivery Network
- Large Distribution of Caching Servers
- Routes Viewers to the Best Location
- Caches Appropriate Content at the Edge
- Accelerates Dynamic Content
- Provides Scalability and Performance of Applications

# The Amazon CloudFront Service

Global Content Delivery Network with Massive Capacity and Scale

Optimized for Performance and Scale

Built in Security Features

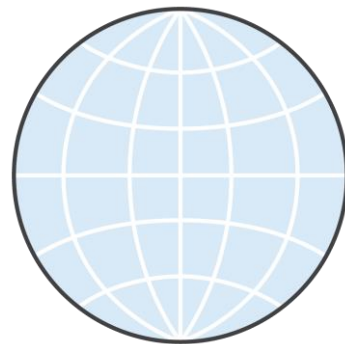
Self-Service Full Control Configurations

Robust Real Time Reporting

Static and Dynamic Object and Video Delivery



Amazon  
CloudFront



# Our Core Tenets

Highly Secure

Highly Available

Scalable

Performant

Cost Effective

Ease of Use

# CloudFront Service Components

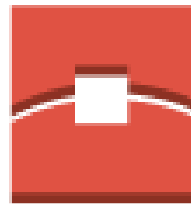
- Distributions
- Origins
- Behaviors
- Restrictions, Error Pages, Tags
- AWS WAF Web ACLs
- Edge Locations
- Price Classes



distribution



Amazon  
CloudFront



edge location

# CloudFront Components: Distributions



distribution

Unique CloudFront.net Domain Name to Reference Objects

*example:* [abc123.cloudfront.net](https://abc123.cloudfront.net)

Specifies Origin(s) of Original Content Versions

*example:* [origin.mysite.com](https://origin.mysite.com)

Types Provide for HTTP/HTTPS

*example:* <https://cdn.mysite.com>

Contain Specific Configurations and Tags

*example:* [origins](#), [behaviors](#), [error pages](#), [restrictions](#)

**HINT:** CNAME the CloudFront.net domain with Amazon Route 53 to personalize the distribution

# CloudFront Components: **Origins**

Any Publicly Accessible Amazon S3 Bucket or HTTP Server

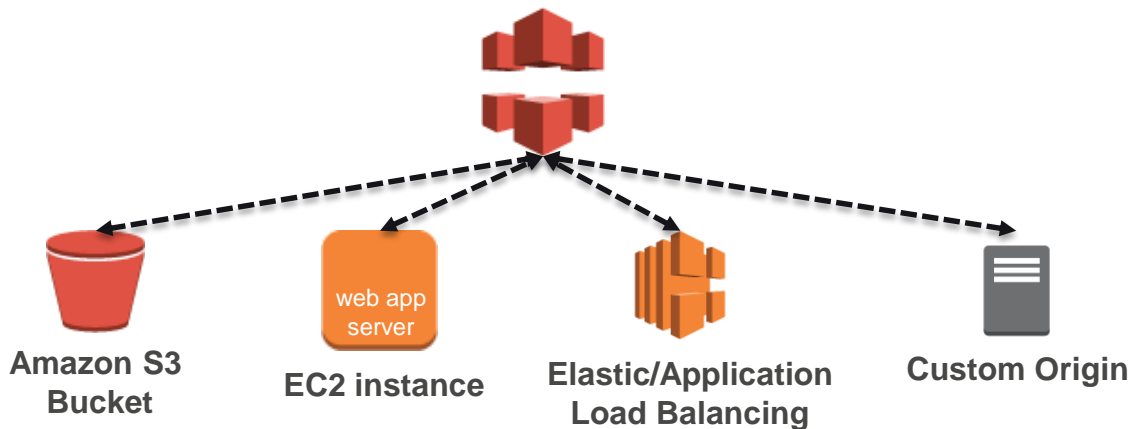
Access Restriction via OAI, Signed URL, or Origin Custom Header

Persistent Connections

Full or Half Bridge SSL Connectivity

Proxy Connections

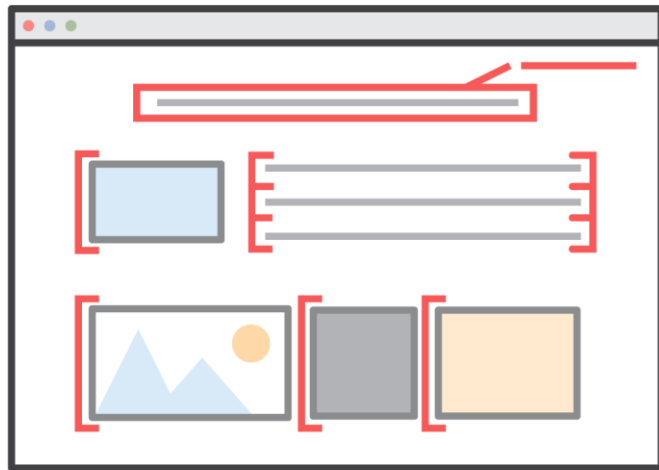
Optimized AWS Resource Connections





# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression



# CloudFront Components: Behaviors

- **Path Pattern Matching**

- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression

## Vary Behavior based on Path Parameters









- Route requests to specific origins
- Set HTTP Protocol
- Set HTTP Methods
- Set Header Options
- Set Caching Options
- Set Cookie and Query String Forwarding
- Restrict Access
- Set Compression

# CloudFront Components: Behaviors

- Path Pattern Matching
- **Origin Selection**
- Headers
- Query Strings / Cookies
- Signed URL
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- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression

**Set Up One to Many Origins**  
**AWS or Custom Resource as Origin**

## Origin Settings

| Origin Domain Name                             | <input type="text" value="testservice.s3.amazonaws.com"/>   |  |       |  |  |   |
|--|---|---|-------|--|--|---|
| Origin Path                                    | <input type="text" value="/js"/>  |  |       |  |  |   |
| Origin ID                                      | <input type="text" value="S3-testservice/js"/>  |  |       |  |  |   |
| Restrict Bucket Access                         | <input checked="" type="radio"/> Yes<br><input type="radio"/> No  |  |       |  |  |   |
| Origin Access Identity                         | <input type="radio"/> Create a New Identity<br><input checked="" type="radio"/> Use an Existing Identity  |  |       |  |  |   |
| Your Identities                                | <input type="text" value="sample"/>   |  |       |  |  |   |
| Grant Read Permissions on Bucket               | <input checked="" type="radio"/> Yes, Update Bucket Policy<br><input type="radio"/> No, I Will Update Permissions   |  |       |  |  |   |
| Origin Custom Headers                          | <table><thead><tr><th>Header Name</th><th>Value</th></tr></thead><tbody><tr><td><input type="text" value="custom-header-one"/></td><td><input type="text" value="value-one"/></td></tr></tbody></table> | Header Name   | Value | <input type="text" value="custom-header-one"/> | <input type="text" value="value-one"/> |  |
| Header Name                                    | Value   |   |       |  |  |   |
| <input type="text" value="custom-header-one"/> | <input type="text" value="value-one"/>  |   |       |  |  |   |

# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- **Headers**
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression

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

Forward Request Headers to the Origin  
Cache Based on Header Values  
Set Object Caching TTLs

Device Detection

**None:** optimized

**Whitelist:** specify headers to forward

**All:** dynamic content, no caching

# CloudFront Components: Behaviors, HTTP Methods

## GET

Requests for content from the cache HTTP, HTTPS and RTMP

## HEAD

Identical to GET except that the server MUST NOT return a message-body in the response. Used for obtaining meta-information about the entity implied by the request without transferring the entity-body itself

## PUT

The fundamental difference between the POST and PUT requests is reflected in the different meaning of the Request-URI.

## POST

Used to request the origin server to accept the entity enclosed in the request as a new subordinate of the resource identified by the Request-URI in the Request-Line.

## PATCH

Used to apply partial modifications to a resource

## DELETE

Requests that the origin server delete the resource identified by the Request-URI

## OPTIONS

Request for information about the communication options available on the request/response chain identified by the Request-URI

# CloudFront Components: Behaviors, Headers

## 1) Vary response based on User Agent.

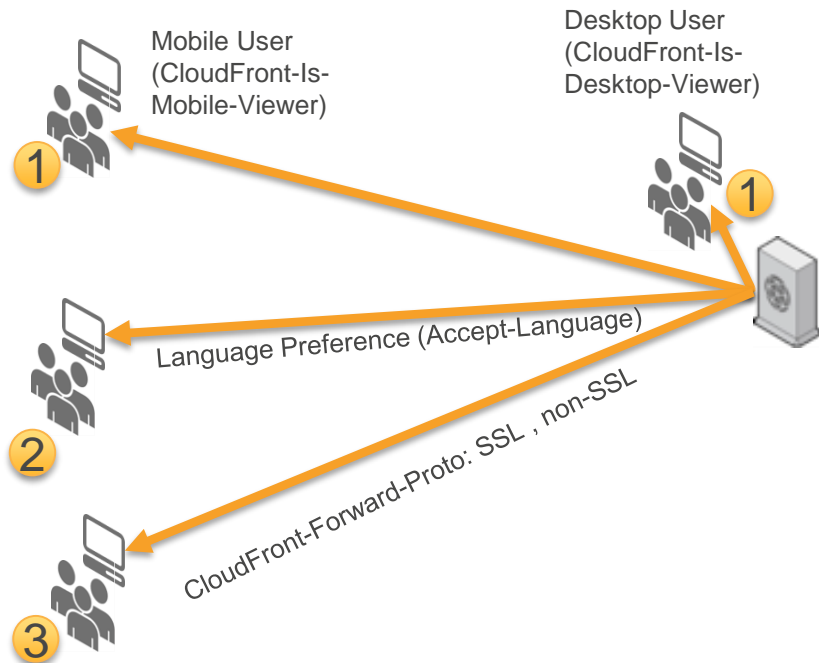
Example: Desktop, Mobile, Tablet

## 2) Vary response based on Language.

Example: user would prefer Danish but will accept British English and other types of English. (Accept-Language: da, en-gb;q=0.8, en;q=0.7 )

## 3) Vary response based on Protocol.

Example: CloudFront-Forward-Proto detected and customer sent different content based on connection type.



# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection Forward Query Strings and Cookies to the Origin
- Headers ?key=querystringparam  
Set-Cookie Header
- **Query Strings / Cookies**
- Signed URL
- SSL Certificates Vary Response Based on Query String/Cookie  
Cache Multiple Copies of Your Object
- Protocol Enforcement Query String / Cookie as Cache Key
- Time To Live (TTL) Forward All
- GZIP Compression Forward Whitelist

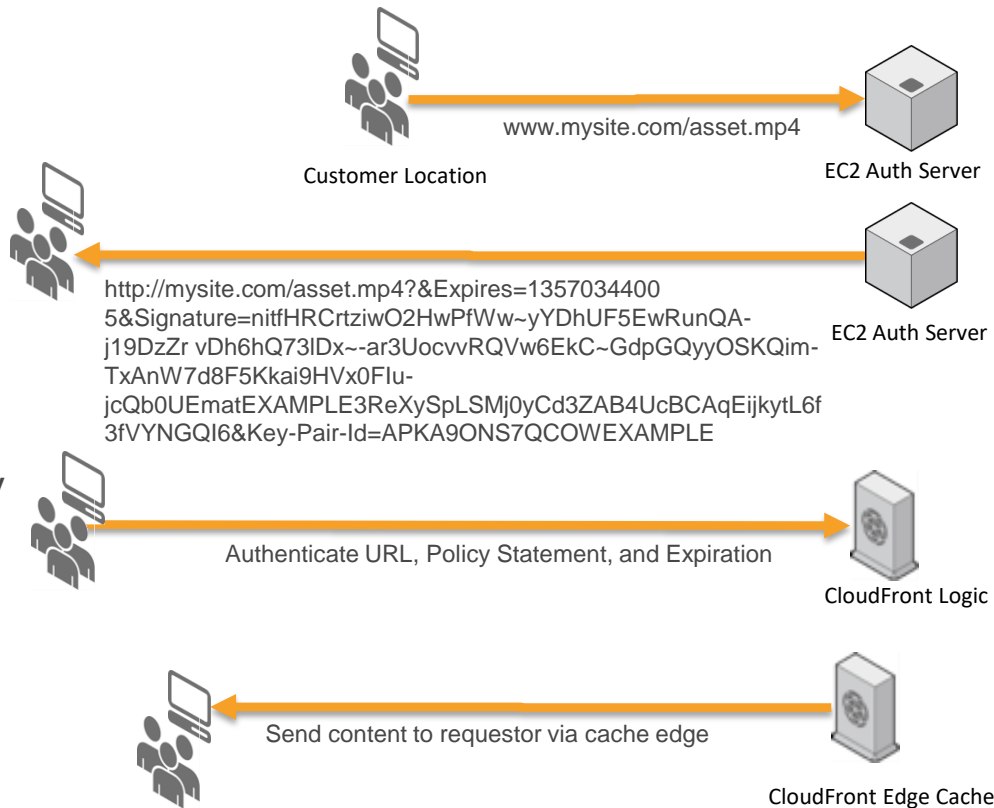
# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- **Signed URL**
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression
- Restrict Access to Content
- Subscription Content, Digital Rights, Etc.
- Canned and Custom Policies
- Application Creates Signed URL
- CloudFront caches based on Signed URL or Signed Cookie



# CloudFront Components: Behaviors, Signed URL

- 1) Request for Content first goes to an authentication server to validate user and generate a signed URL.
- 2) A signed URL is sent back as a 302 redirect from the auth server
- 3) Request to CloudFront made with signed URL, authentication with policy statement, and verification of content freshness (hasn't expired)
- 4) CloudFront authenticates policy statement for signed URL, sets cache key, and sends content to requestor



# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- **SSL Certificates**
- Protocol Enforcement
- Time To Live (TTL)
- GZIP Compression
- CloudFront Shared Cert
- Custom Cert
- AWS Certificate Manager

# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- **Protocol Enforcement**
  - Time To Live (TTL)
  - GZIP Compression

**HTTP and HTTPS:** Viewers can use both protocols.

**Redirect HTTP to HTTPS:** Viewers can use both protocols, but HTTP requests are automatically redirected to HTTPS requests.

**HTTPS Only:** Viewers can only access your content if they're using HTTPS.

# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- **Time To Live (TTL)**
- GZIP Compression

Short TTL = Dynamic Content  
Long TTL = Static Content

Reduce Load on Origin

If Modified Since

Min, Max, Default TTL's

# CloudFront Components: Behaviors

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- **GZIP Compression**

Accept-Encoding: gzip

Compresses and Serves Files

Optimizes Bandwidth Consumption  
and Download Speed

Compresses Files with Header:  
“Content-type” set

# CloudFront Components: Supported File Types

- Path Pattern Matching
- Origin Selection
- Headers
- Query Strings / Cookies
- Signed URL
- SSL Certificates
- Protocol Enforcement
- Time To Live (TTL)
- **GZIP Compression**

|                               |                           |
|-------------------------------|---------------------------|
| application/eot               | application/x-otf         |
| application/font              | application/x-perl        |
| application/font-sfnt         | application/x-ttf         |
| application/javascript        | font/eot                  |
| application/json              | font/ttf                  |
| application/opentype          | font/otf                  |
| application/otf               | font/opentype             |
| application/pkcs7-mime        | image/svg+xml             |
| application/truetype          | text/css                  |
| application/ttf               | text/csv                  |
| application/vnd.ms-fontobject | text/html                 |
| application/xhtml+xml         | text/javascript           |
| application/xml               | text/js                   |
| application/xml+rss           | text/plain                |
| application/x-font-opentype   | text/richtext             |
| application/x-font-truetype   | text/tab-separated-values |
| application/x-font-ttf        | text/xml                  |
| application/x-httpd-cgi       | text/x-script             |
| application/x-javascript      | text/x-component          |
| application/x-mpegurl         | text/x-java-source        |
| application/x-opentype        |                           |

# CloudFront Components: Restrictions, Errors, Tags

- Geographical Restriction
  - White List or Black List
  - Country Level Granularity
- No Additional Charges
- Caching Error Pages
  - 4XX, 5XX Codes
  - Cache Default Page
  - Cache Custom Page

Enable Geo-Restriction ☒ Yes  
☐ No

Restriction Type ☒ Whitelist  
☐ Blacklist

Countries

TV -- TUVALU  
UG -- UGANDA  
UA -- UKRAINE  
AE -- UNITED ARAB EMIRATES  
GB -- UNITED KINGDOM  
US -- UNITED STATES

Add >>

<< Remove

US -- UNITED STATES

400: Bad Request  
403: Forbidden  
404: Not Found  
405: Method Not Allowed  
414: Request-URI Too Long  
416: Requested Range Not Satisfiable  
500: Internal Server Error  
501: Not Implemented  
502: Bad Gateway  
503: Service Unavailable  
504: Gateway Timeout

# CloudFront Components: **AWS WAF Web ACLs**

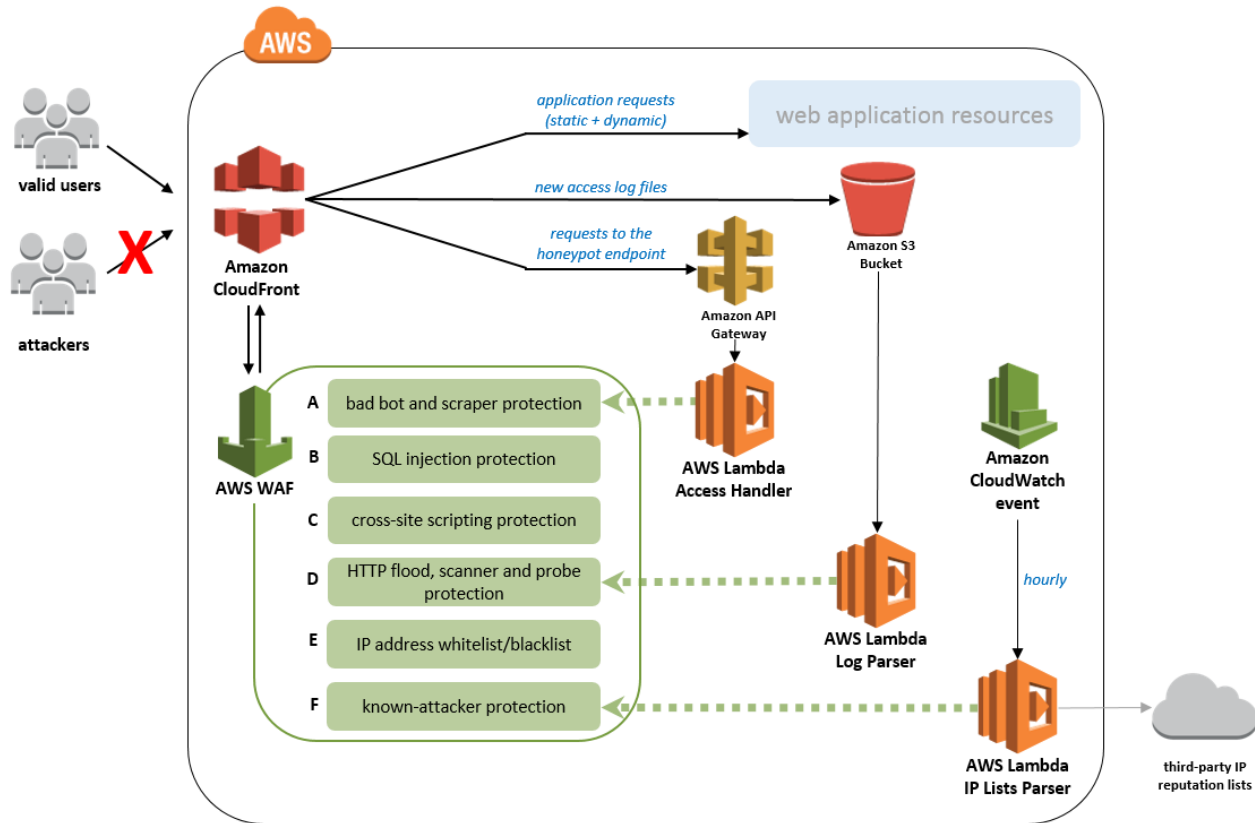
Layer 7 Application Protection

Fast Rule Propagation

Full Control Rules Set

Integration = Automation

Simple Pricing





# CloudFront Components: **Edge Locations**



CloudFront Contains a Global Set of Cache PoPs

Latency Based Routing

Locations Common for CloudFront, AWS WAF, Route 53

Network Expansion On Going

Highly Connected Route Optimized

Tuned for Performance . . .

# Announcing: CloudFront Regional Edge Caches



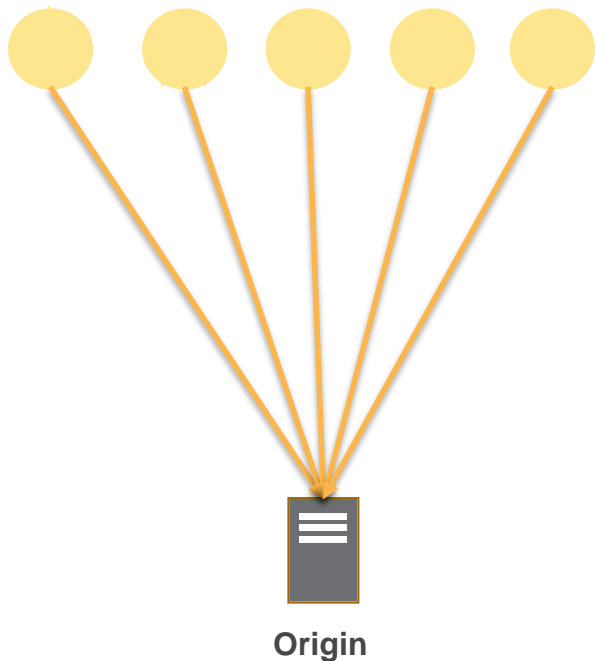
*Nine Regional Edge Caches around the world..*



# CloudFront Regional Edge Caches

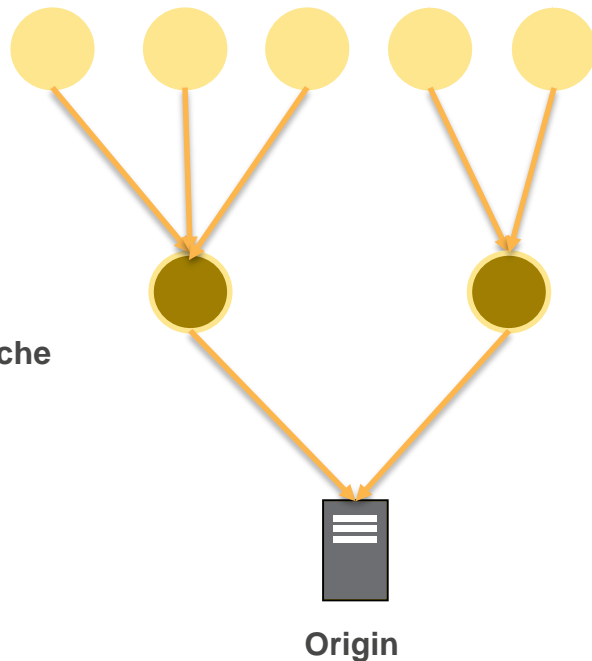
Reducing load on CloudFront origin resources

## Previous Architecture



## New Default Architecture

Edge Locations



# CloudFront Regional Edge Caches - Details

- No need to make any changes to existing CloudFront distributions
- Regional Edge Caches are enabled by default for all CloudFront distributions.
- Regional Edge Caches have feature parity with other edge locations
- No additional costs for regional edge caching
- Measure improvements using cache-hit ratio metrics available on the console

# CloudFront Global Content Delivery Network

68 CloudFront Edge Locations (PoPs), 9 Regional Edge Caches (PoPs), 43 Cities, 5 Continents



## North America

Cities: 18

PoPs: 25

- Ashburn, VA (3)
- Atlanta, GA (2)
- Chicago, IL
- Dallas/Fort Worth, TX (2)
- Hayward, CA
- Jacksonville, FL
- Los Angeles, CA (2)
- Miami, FL
- Minneapolis, MN
- Montreal, QC
- Newark, NJ
- New York, NY (3)
- Palo Alto, CA
- San Jose, CA
- Seattle, WA
- South Bend, IN
- St. Louis, MO
- Toronto, ON



## South America

Cities: 2

PoPs: 3

- Rio de Janeiro, Brazil (2)
- São Paulo, Brazil



## Europe / Middle East / Africa

Cities: 11

PoPs: 20

- Amsterdam, The Netherlands (2)
- Berlin, Germany
- Dublin, Ireland
- Frankfurt, Germany (5)
- London, England (4)
- Madrid, Spain
- Marseille, France
- Milan, Italy
- Paris, France (2)
- Stockholm, Sweden
- Warsaw, Poland



## Asia Pacific

Cities: 12

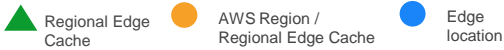
PoPs: 20

- Chennai, India
- Hong Kong, China (3)
- Manila, the Philippines
- Melbourne, Australia
- Mumbai, India (2)
- New Delhi, India
- Osaka, Japan
- Seoul, Korea (3)
- Singapore (2)
- Sydney, Australia
- Taipei, Taiwan
- Tokyo, Japan (3)

**CloudFront Regional Edge Caches**

Regional Edge Caches: 9

Oregon, N. Virginia, Frankfurt, Sao Paulo, Mumbai, Singapore, Seoul, Tokyo, Sydney



# CloudFront Components: Price Classes

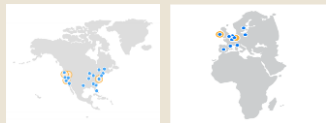
All



68 PoPs, 43 Cities, 22 Countries

Best  
Coverage

North America + Europe



45 PoPs, 28 Cities, 11 Countries

Lowest  
Cost

North America + Europe + East and South East Asia\*



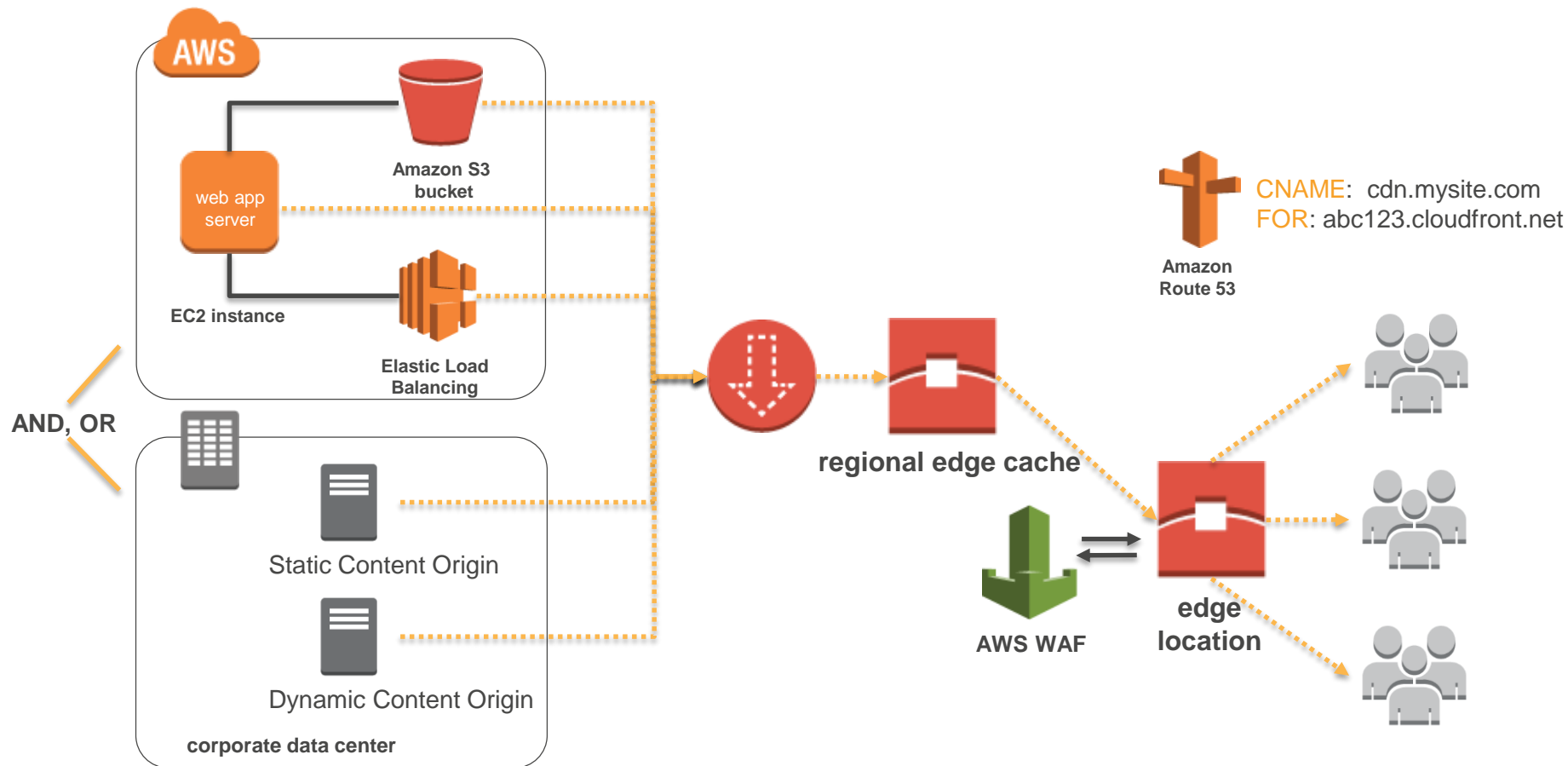
62 PoPs, 38 Cities, 20 Countries

Great Coverage  
+ Optimized  
Cost

*\*does not include India (4) or Australia (2) PoPs*

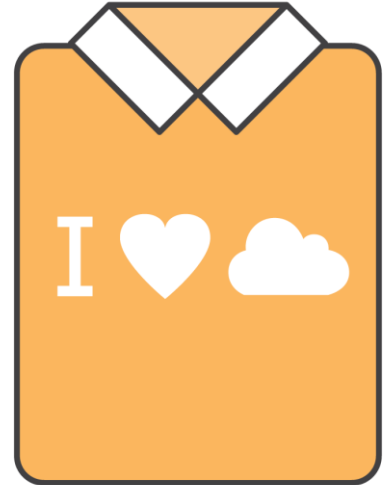
**Deliver Content Globally and Control Pricing to Fit Performance and Cost Objectives**

# CloudFront Components: Example Architecture



# Benefits of Using Amazon CloudFront

- Speed Up Delivery of Web / Mobile Applications
- Scale Application and Reduce Origin Traffic
- Secure Infrastructure with Secure Edge
- Cost Effective Data Transfer
- Applies to Virtually Any Use Case
  - Media/Entertainment
  - Gaming
  - Digital Advertising
  - Software Downloads
  - Financial Services
  - Social Media
  - Education Technology
  - Hotel / Travel





# CloudFront Security and Compliance Features

- **Compliance**
  - PCI DSS Level 1 Compliance
  - ISO 9001, 27001, 27017, 27018
- **Security Enhancements to your infrastructure**
  - Signed URL
  - Signed Cookies
  - Enforce HTTPS to origin
  - Support iOS ATS
  - Support for TLSv1 .1 and TLSv1.2 between edge and origin
  - Add/Modify Request Headers Forwarded From CloudFront to Origin
  - Integration with AWS Certificate Manager (SNI Certs from Amazon)
  - Integration with AWS WAF (web application firewall)
  - Geographic Restriction
  - IPv6 Support



# CloudFront: An Integral Part of AWS

## Mobile Application Delivery

CloudFront, WAF, Route 53



AWS  
Mobile Hub



Amazon  
Cognito

## Static and Dynamic Object Origin

CloudFront, WAF, Route 53, Elastic Transcoder



Amazon API  
Gateway



Amazon  
S3



Amazon EFS

## Web and Application Server Origin

CloudFront, WAF, Route 53, Elemental / Elastic Transcoder



Elastic Load  
Balancing



Amazon EC2



AWS  
Lambda

## Enterprise Applications

CloudFront, WAF, Route 53



Amazon  
WorkMail

# Amazon CloudFront and AWS WAF Pricing

## Pricing Components

Gigabytes Transferred

Request Rates (HTTP, HTTPS)

- GET, HEAD

- PUT, POST, PATCH, OPTIONS, DELETE

Custom SSL Certificate



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## AWS WAF Pricing

- Web ACL

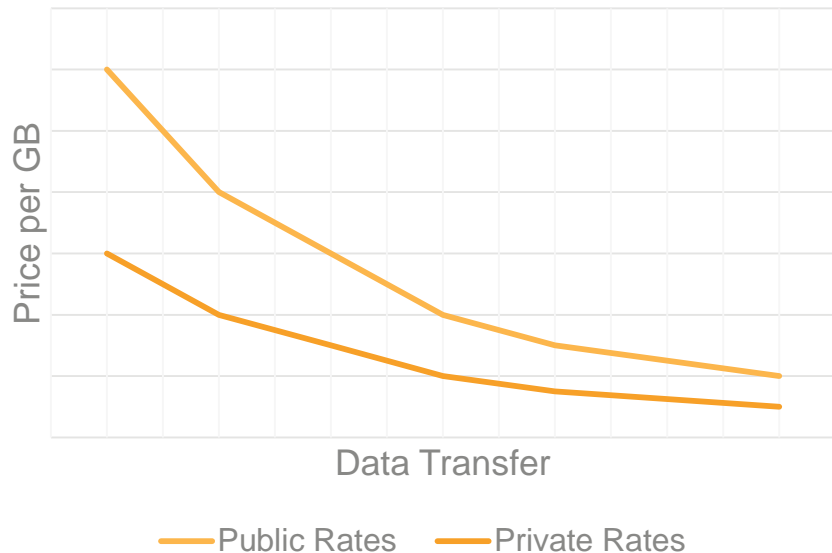
- Rule

- Requests



# CloudFront Pricing: Competitive, Flexible Options

Data Transfer  
Economies of Scale

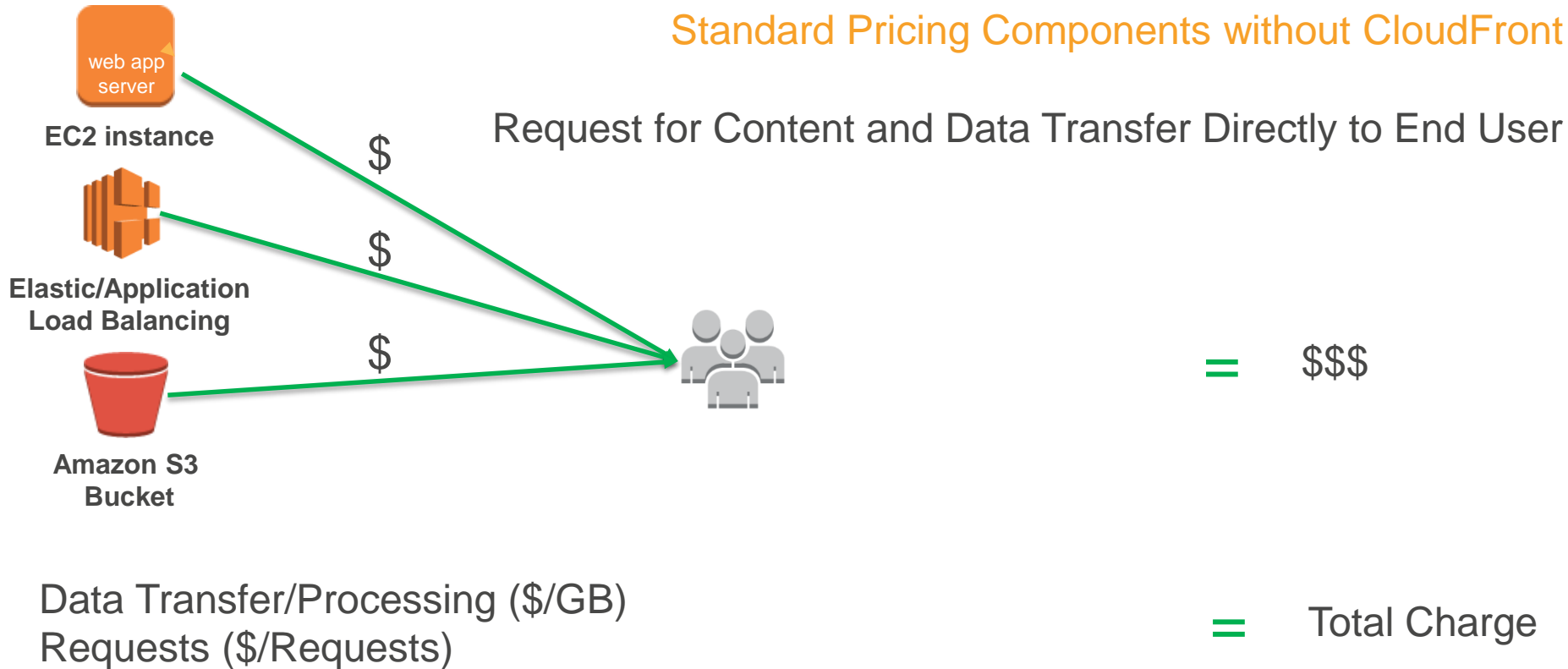


- On-demand, pay for use elastic pricing
- Same pricing for Static and Dynamic Content
- Same pricing for HTTP / HTTPS
- Usage Commitment Options
- GB delivery model
- Free SSL/TLS certs with ACM
- No Platform Fees
- No Charges for DNS Queries to Route 53 ALIAS Records to CloudFront

# Amazon CloudFront Pricing



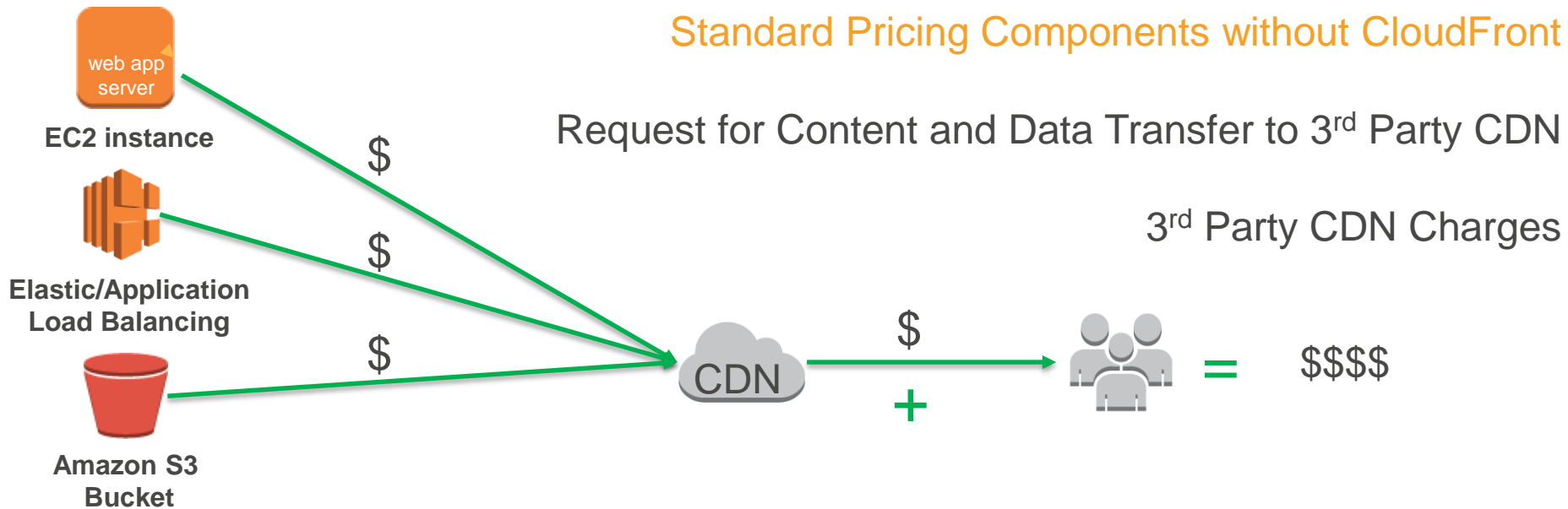
## Standard Pricing Components without CloudFront



# Amazon CloudFront Pricing



## Standard Pricing Components without CloudFront

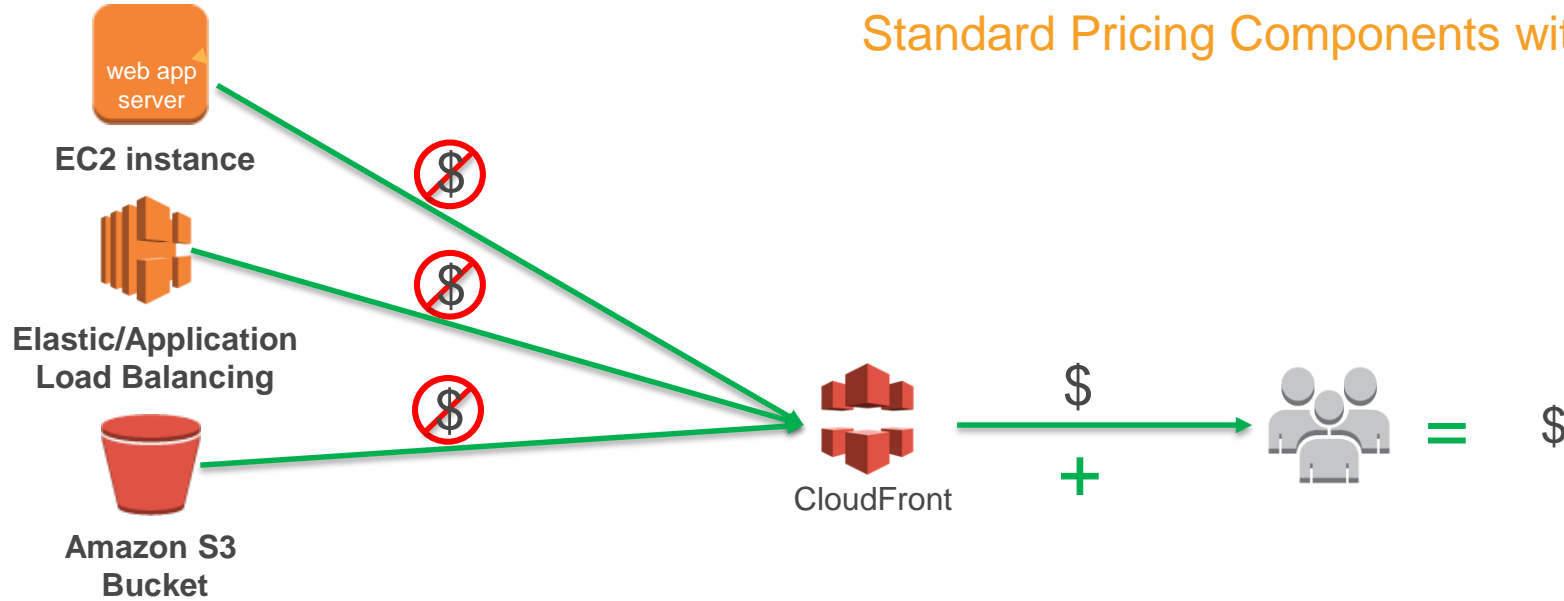


$$\begin{array}{l} \text{Data Transfer/Processing (\$/GB)} \\ \text{Requests (\$/Requests)} \end{array} + \text{3<sup>rd</sup> Party CDN Charges} = \text{Total Charge}$$

# Amazon CloudFront Pricing



## Standard Pricing Components with CloudFront



CloudFront = Total Charge

# Amazon CloudFront Pricing

## On Demand Pricing

[Published Online](#)

Regional Tiered Rates

Pay As You Go

Free Tier

## Reserved Capacity

Reduced Pricing

Contracts Tailored to Use Case

Variable Term



## Price Classes

Optimize for Cost

Regional Data Transfer

User Controlled

Turn On/Off Any Time

No Data Transfer Fees from AWS Origins to Amazon CloudFront

No Charge for Regional Edge Cache

No Charge for SSL/TLS Certs from Amazon Certificate Manager

No Charge for Shared CloudFront certificates

Low Monthly Charge for Custom Hosted Certificates

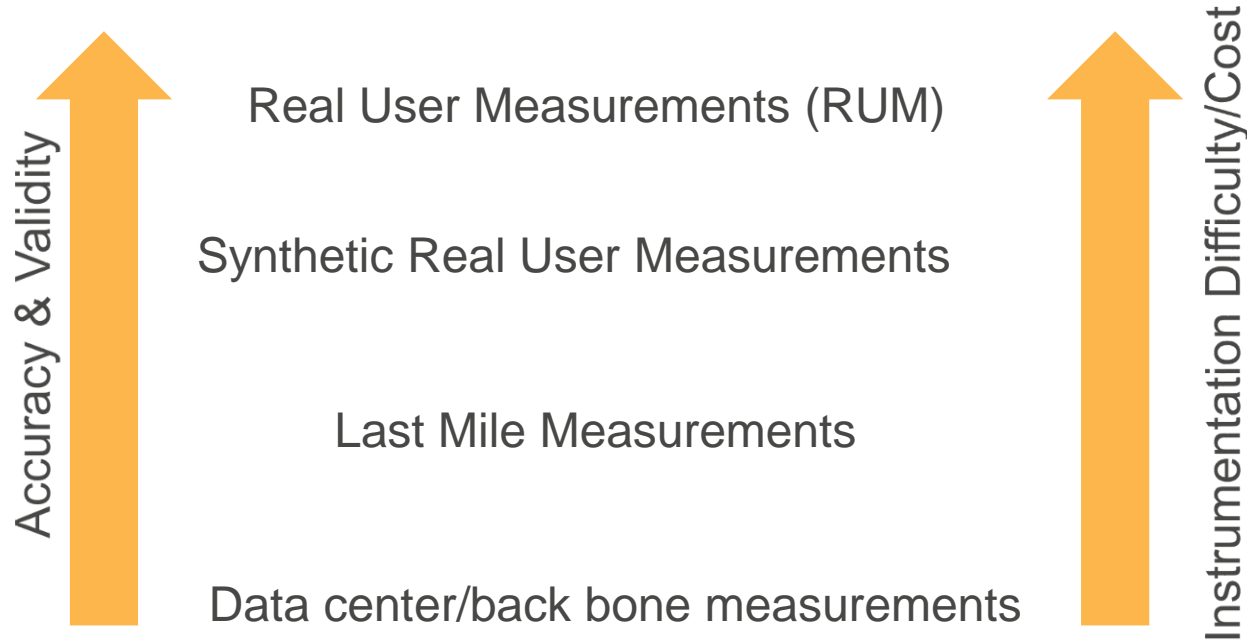
Same Rate, Same Network for HTTP and HTTPS traffic

Simple Request Fees

Covered by Existing Customer Service Plan



# How We Measure Performance & Availability

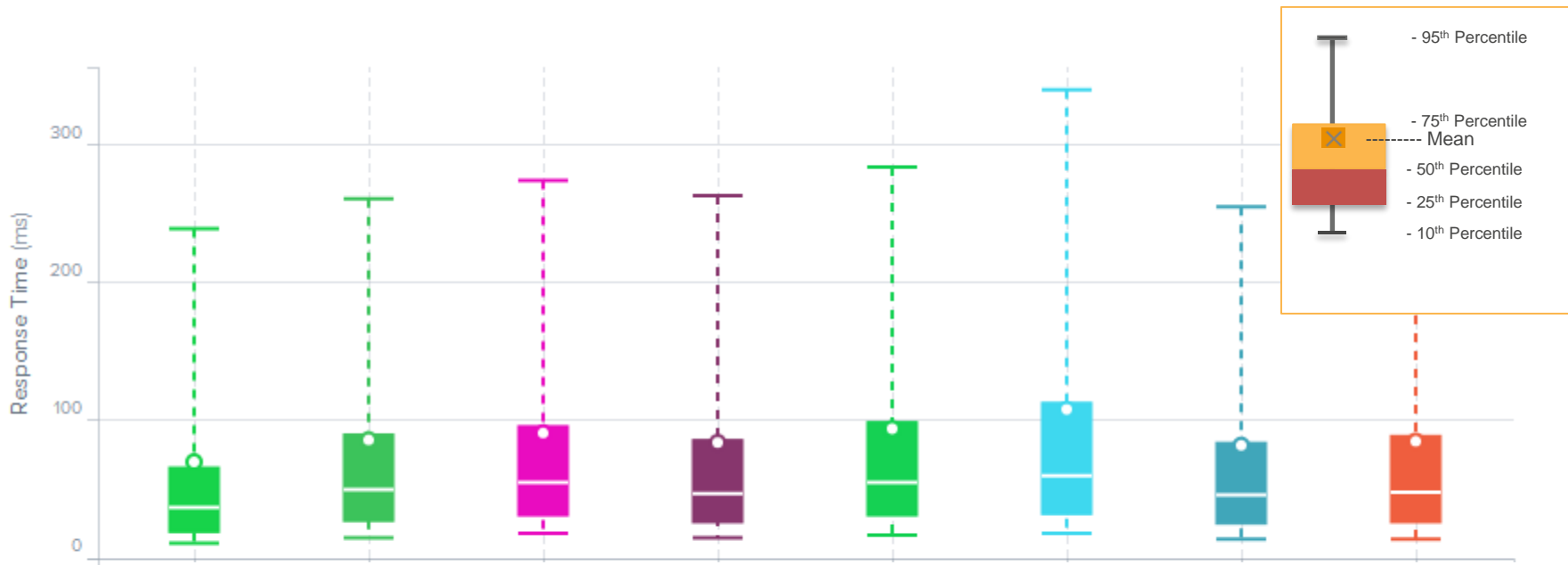


# Availability: Amazon CloudFront Global View



\*Data from Cedexis, Last 30 Days, Availability measured over All Regions. November 2016

# Performance: AWS vs. Traditional Providers

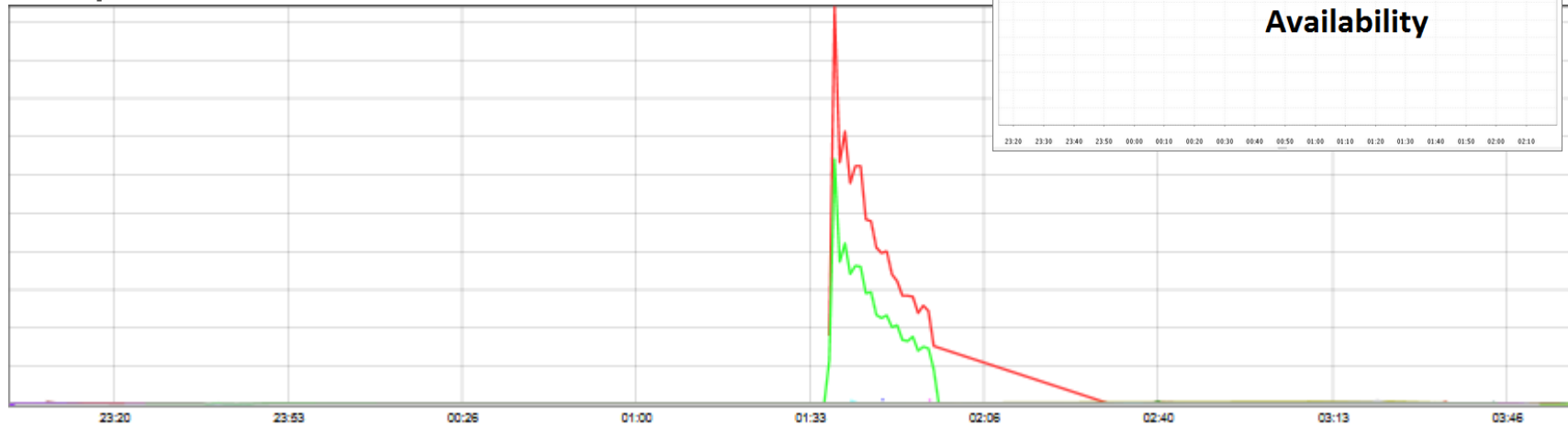


Global CDN Providers Performance Over Past 30 Days\*

# DDoS Mitigation

**No Impact to Availability even during DDoS Attack**

Sample Attack on CloudFront Customer



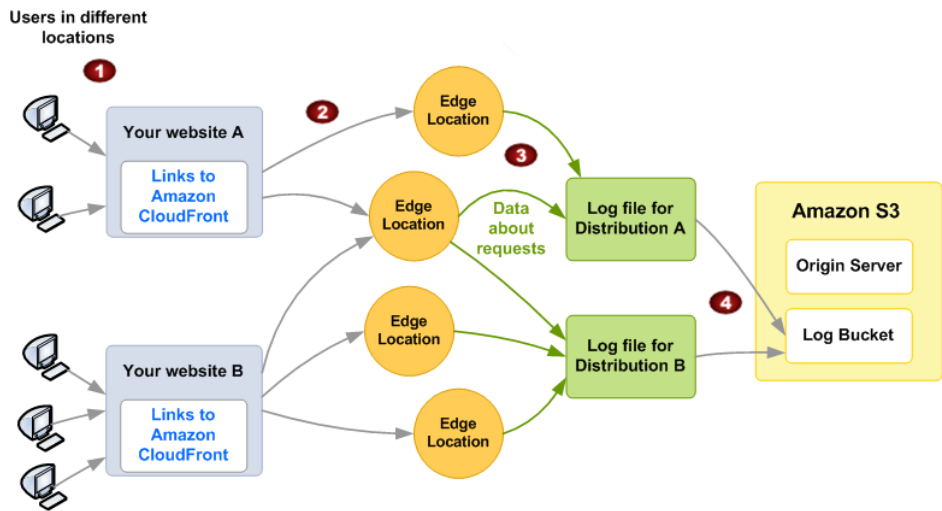
# CloudFront Reporting: Access Logs

W3C Extended Log Format Delivered to S3

Reporting

Permissions Controlled

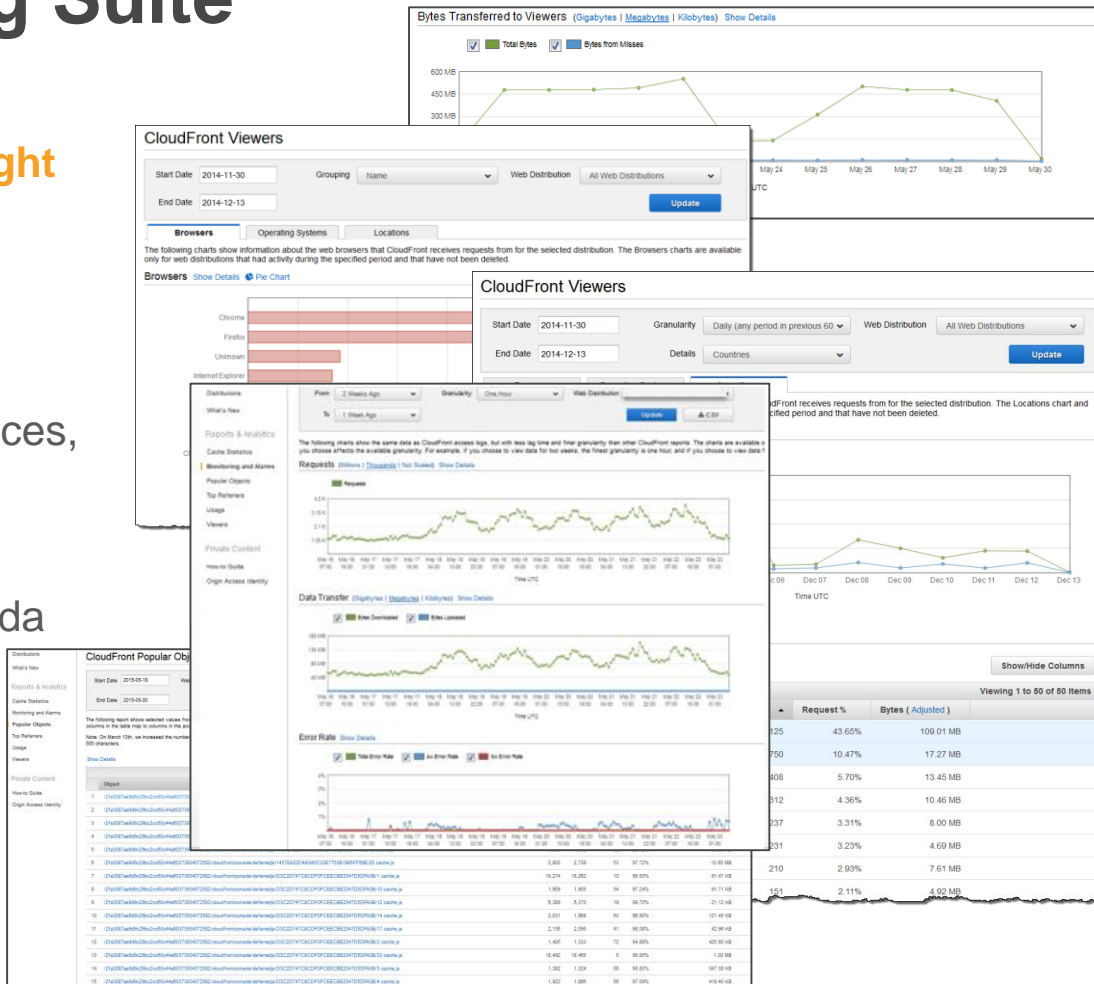
Delivered Several Times / Hour



# CloudFront Reporting Suite

## Rich metrics for more detailed insight

- Cache Statistics
- Usage Charts
- Popular Objects
- Browser, Operating Systems, Devices, Locations, & Top Referrers
- CloudWatch Metrics Integration
- Additional Metrics with AWS Lambda
- 1 -2 Minute Availability



# Amazon CloudFront: What's New?

- AWS Certificate Manager



- IPv6



- HTTP/2



- Query String Whitelisting



- Cost Allocation Tagging



- Origin Security Options



- New Edge Locations



# Getting Started with Amazon CloudFront

- [Developer Guide](#)
- [Tutorials](#) and [Blogs](#)
- [Webinars and Videos](#)



## Amazon CloudFront Developer Guide Kindle Edition

by [Amazon Web Services](#) (Author)

★★★★☆ 4 customer reviews

See all formats and editions

Kindle

\$0.00

[Read with Our Free App](#)

This is official Amazon Web Services (AWS) documentation for the Amazon CloudFront service. This documentation is offered for free here as a Kindle book, or you can read it online or in PDF format at <http://aws.amazon.com/documentation/cloudfront/>.

Amazon CloudFront is a web service for delivering content with low latency and high speed. This guide

[Read more](#)

Length: 644 pages



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## FREE TIER!

50 GB Data Transfer Out and 2,000,000 HTTP and HTTPS Requests each month for one year

[Streaming videos to millions of mobile app users via Amazon CloudFront CDN](#)

[Deploy preconfigured protections using AWS WAF](#)



# AWS CloudFront Partner Program

The **AWS CloudFront Partner Program** validates and certifies key AWS partners who can enable CloudFront CDN specific workloads for AWS customers.



Locate CloudFront Partners at: <https://aws.amazon.com/cloudfront/partners>

# Interested In Becoming a CloudFront Partner?

## Partner Benefits:

- Listing on Amazon CloudFront Website
- Technical, Sales, and Marketing Support
- Flexible CloudFront Pricing Options
- Proof Of Concept Funding
- Links from Blog Posts
- Publish Case Studies
- Early Entry Into Product Beta Programs
- Access to Exclusive Programs and Promotions

Email Us at [CloudFront-Partners@amazon.com](mailto:CloudFront-Partners@amazon.com)

## Amazon CloudFront Delivery Partners

Amazon CloudFront partners help AWS customers deploy a global content delivery network (CDN) service that accelerates delivery of websites, APIs, video content or other web assets. By helping customers deploy Amazon CloudFront, these partners give developers and businesses an easy way to optimize performance, accelerate content and reduce costs.

View the current Amazon CloudFront APN Partners below:

Asia Pacific

Go

### North America Partners



#### 2nd Watch

As an AWS Premier Consulting Partner, 2nd Watch helps enterprises design, deploy and manage cloud solutions and monitors business critical workloads 24x7. For those clients that require content delivery as part of their environment, we utilize Amazon CloudFront with nearly every customer to improve performance of their websites and accelerate content delivery to end users simply, reliably and cost-effectively. Whether our clients need to deliver updates and downloadable content to their end users, live and pre-recorded media files, or dynamic web content, CloudFront provides our clients lower data transfer prices and faster data transfer speeds and works seamlessly with other Amazon Web Services most commonly used in their environments.

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#### CorpInfo

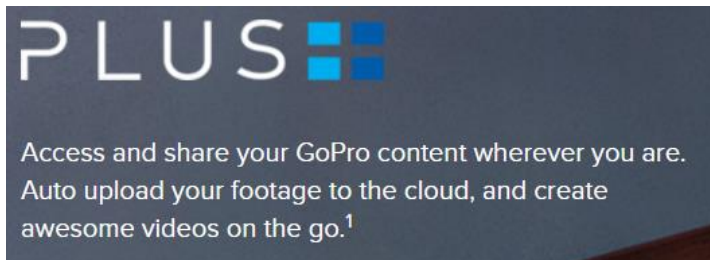
Amazon CloudFront plays an important role in CorpInfo's ability to help customers in 3 distinct areas: (1) For content acceleration – the traditional role of CDN, (2) as a cost mitigation tool. We have found some customers benefit from transferring out large volumes of data via Amazon CloudFront instead of directly from Amazon Elastic Load Balancing or Amazon S3, and (3) Security. AWS WAF has become an important part our discussions with customers. With its integration with Amazon CloudFront, we sometimes use AWS WAF as a way to introduce Amazon CloudFront to customer discussions and solutions.

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# Amazon CloudFront: Customer Use Cases



# Customer Use Case: GoPro



Upload and Deliver Via CloudFront CDN  
Transcode Via Amazon Elastic Transcoder



## Auto Upload to the Cloud

Auto upload photos and videos to the cloud from your HERO5 or computer.<sup>1</sup>



## On-The-Go Editing

Access your footage in the cloud with your phone, then create epic videos anytime, anywhere using Quik.



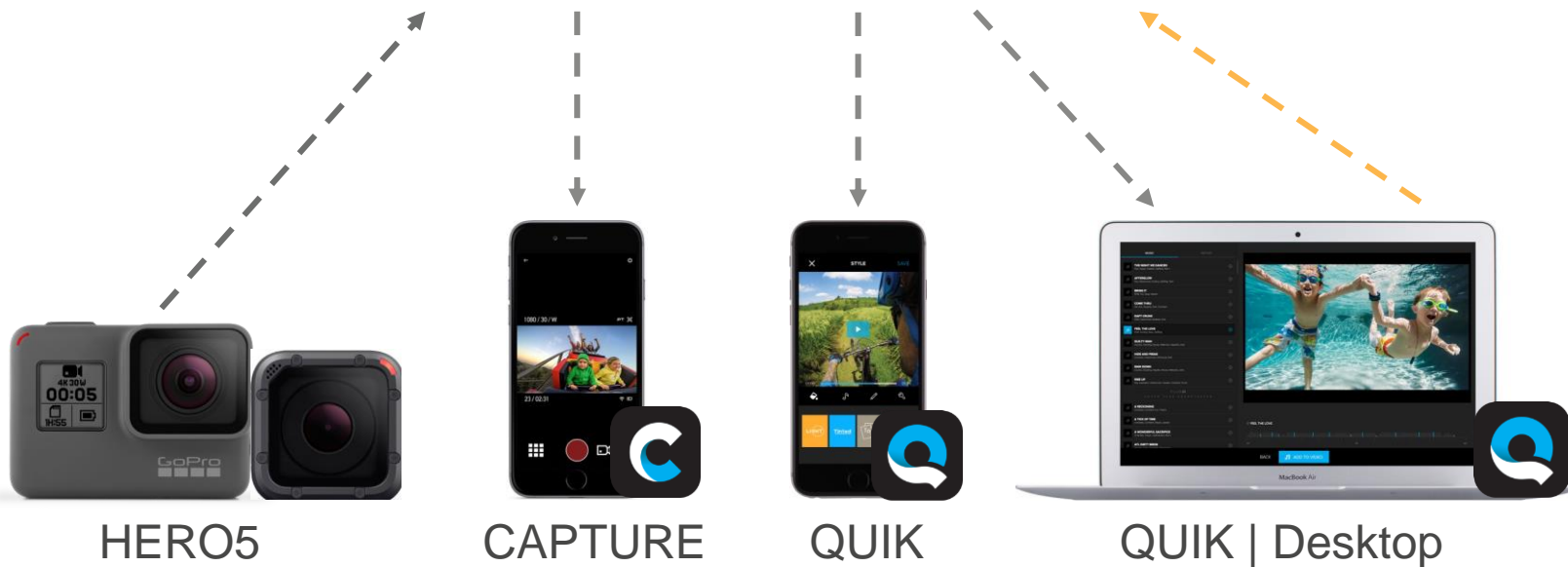
## Soundtrack Library

Unlock an expansive library of soundtracks that dynamically transform your footage into awesome videos.



## Access + share from anywhere.

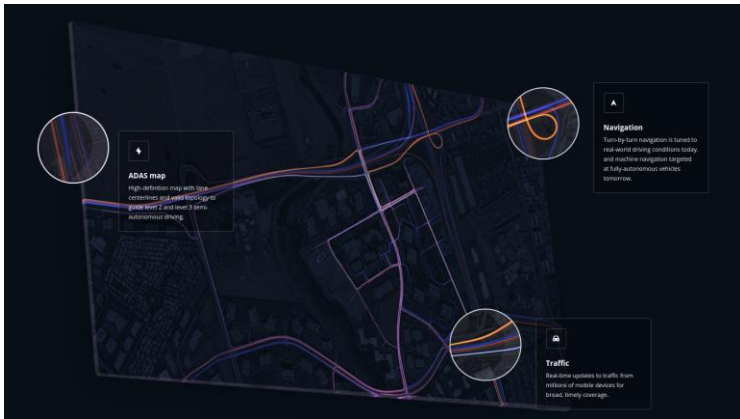
With your GoPro footage available wherever you are, it's easier than ever to create and share your story.



# Customer Use Case: MapBox



- Delivering Detailed Geographic Map Tiles
- Over 200 Million Monthly Average Users (MAU)
- Receives Billions of Requests per Day
- Controls Delivery via Cache Controls
- Protects Assets via AWS WAF Integration
- Speeds Up Delivery of Map Tiles
- Controls Costs



## ▼ Response Headers

[view source](#)

**Access-Control-Allow-Methods:** GET

**Access-Control-Allow-Origin:** \*

**Cache-Control:** max-age=43200,s-maxage=604800

**Connection:** keep-alive

**Content-Length:** 15055

**Content-Type:** image/jpeg

**Date:** Mon, 24 Oct 2016 17:16:09 GMT

**ETag:** "5cba599e12a63d342f71ad4aae89e02c"

**Last-Modified:** Thu, 21 Apr 2016 00:51:55 GMT

# Amazon Trusts CloudFront

amazon.com

amazon  
web services

audible  
an amazon company

Alexa

goodreads

amazon.co.jp

amazon drive

dpreview.com  
Digital Photography Review

amazon echo

music

SHOPBOP

COMIXOLOGY  
an amazon company



diapers.com

Watch Anywhere

Watch Amazon Video from your phone, tablet, games console, Smart TV and from the Web.

You can also download select Prime Video titles for offline viewing on your iOS, Android and Fire phones and tablets.

amazon

fire TV

IMDb



# Experience Matters



- Tuning **Performance** to Global Proportions
- Operating at **Scale** Across Industries
- Delivering and Scaling **Largest** eCommerce Events
- Streaming Live and On Demand **Video** for OTT
- Digital Fulfillment of **Enterprise** and Gaming Software
- Device **Software** Updates
- **Mobile** Application Delivery



# What Did We Learn: **Key Take Away**

- CloudFront enables web applications to scale
- CloudFront secures your content and your architecture
- CloudFront is an integral part of AWS infrastructure
- Default Architecture Component
- No Minimums, Self Service, Enterprise Performance
- Easy to Use
- Free Tier

The background features a large, abstract graphic with blue and orange wavy, ribbon-like shapes. These shapes are overlaid on a pattern of concentric, dotted circles in light gray and orange, creating a sense of motion and depth.

**AWS  
re:Invent**

**Thank you!**



**Remember to complete  
your evaluations!**

# Related Sessions



## Wednesday, November 30<sup>th</sup>

1:00 PM - 2:00 PM : **CTD204** - Offload Security Heavy-lifting to the AWS Edge

5:30 PM - 6:30 PM: **CTD304** - How Mapbox Uses the AWS Edge to Deliver Fast Maps for Mobile, Cars, and Web Users Worldwide

## Thursday, December 1<sup>st</sup>

2:30 PM – 3:30 PM : **CTD305** - Media Delivery from the Cloud: Integrated AWS Solutions for Premium Over the Top (OTT) Content

5:00 PM – 6:00 PM : **CTD301** - Amazon CloudFront Flash Talks: Best Practices on Configuring, Securing and Monitoring your Distribution

## Friday, December 2<sup>nd</sup>

9:30 AM - 10:30 AM : **CTD301** - Amazon CloudFront Flash Talks: Best Practices on Configuring, Securing and Monitoring your Distribution