AWS re:Invent

NOV. 29 – DEC. 3, 2021 | LAS VEGAS, NV

NET309

Build a statically generated website with Amazon CloudFront

Alan Erdley
Sr. Edge Go-to-Market Specialist
AWS

Jaiganesh Girinathan
Sr. Edge Specialist Solutions Architect
AWS

Special thanks to Yury Yakubov – Sr. Edge Specialist Solutions Architect, AWS



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Agenda

Why performance and security matter

Amazon CloudFront overview

Lab introduction

Building

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“More than half of [mobile page] visits are abandoned if the page takes over 3 seconds to load.”

Addy Osmani and Ilya Grigorik

Source: “Speed is now a landing page factor for Google Search and Ads”
https://developers.google.com/web/updates/2018/07/search-ads-speed

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Search engine page ranking factors

Page load speed

Optimized for mobile

Available (minimal downtime)

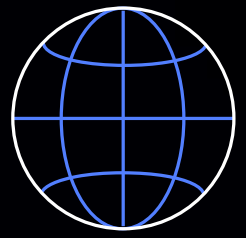
Secured with SSL certificates

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Why Amazon CloudFront?



Performance



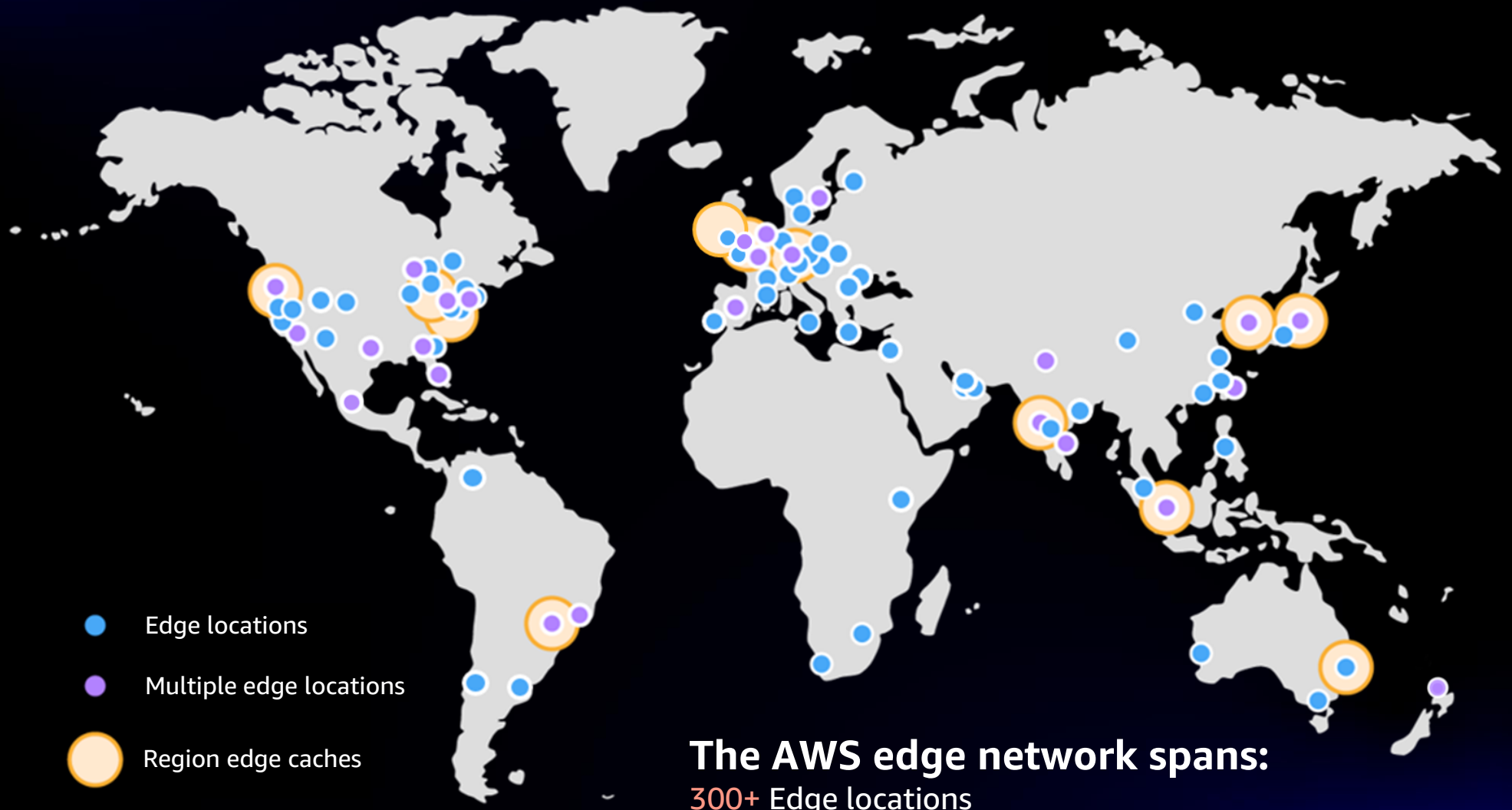
Availability



Security

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Improve performance and availability



The AWS edge network spans:

300+ Edge locations

90 cities in 47 countries

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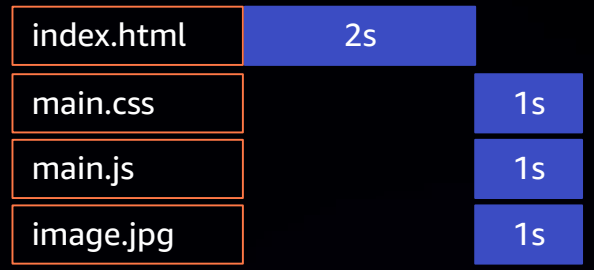
Last mile optimization

HTTP 1.1



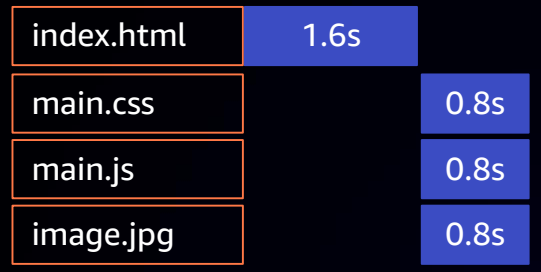
Total time: 5s

HTTP 2



Total time: 3s

Edge compression & image optimization



Total time: 2.4s

aws

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Securely deliver content

TLS v1.3 – up to 33% faster than TLS v1.2

Better DDoS resiliency

Block undesired bots

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Time to build!

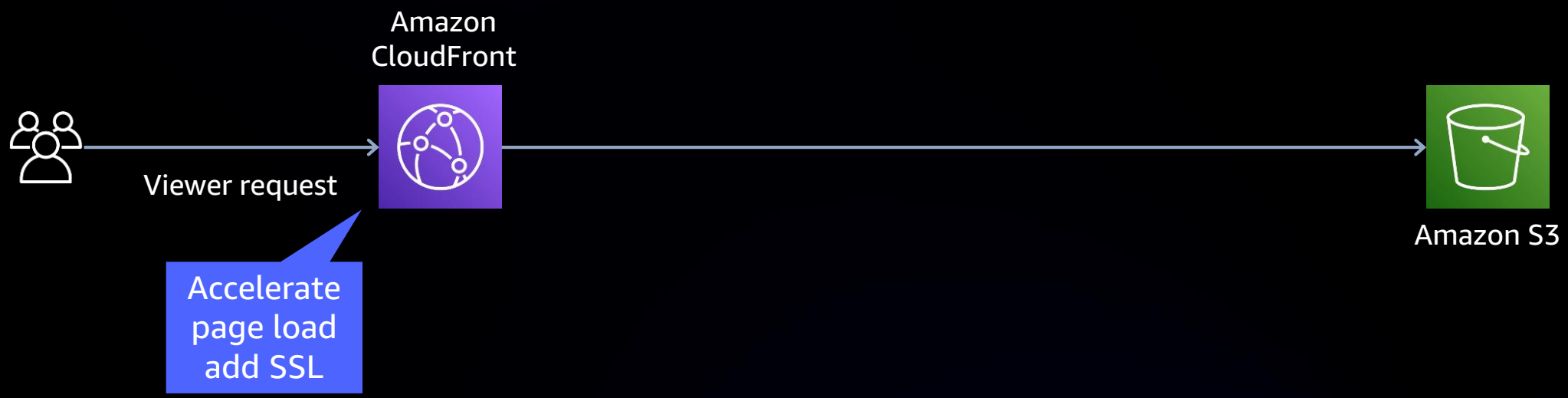
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Solution diagram



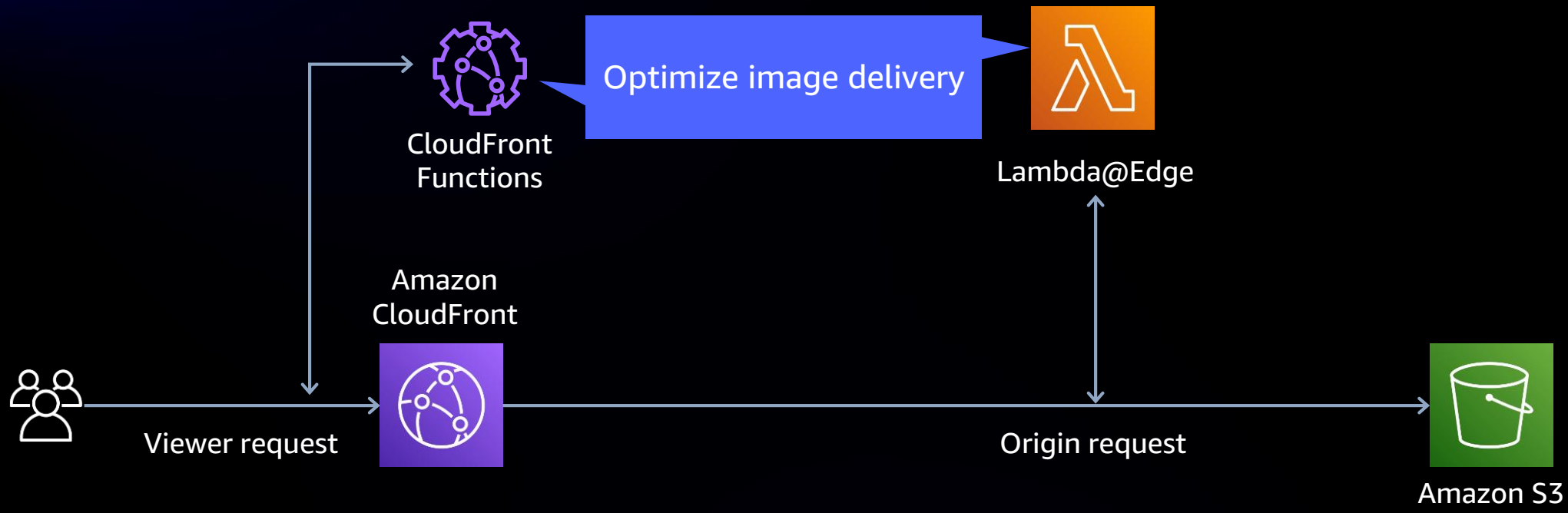
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Solution diagram



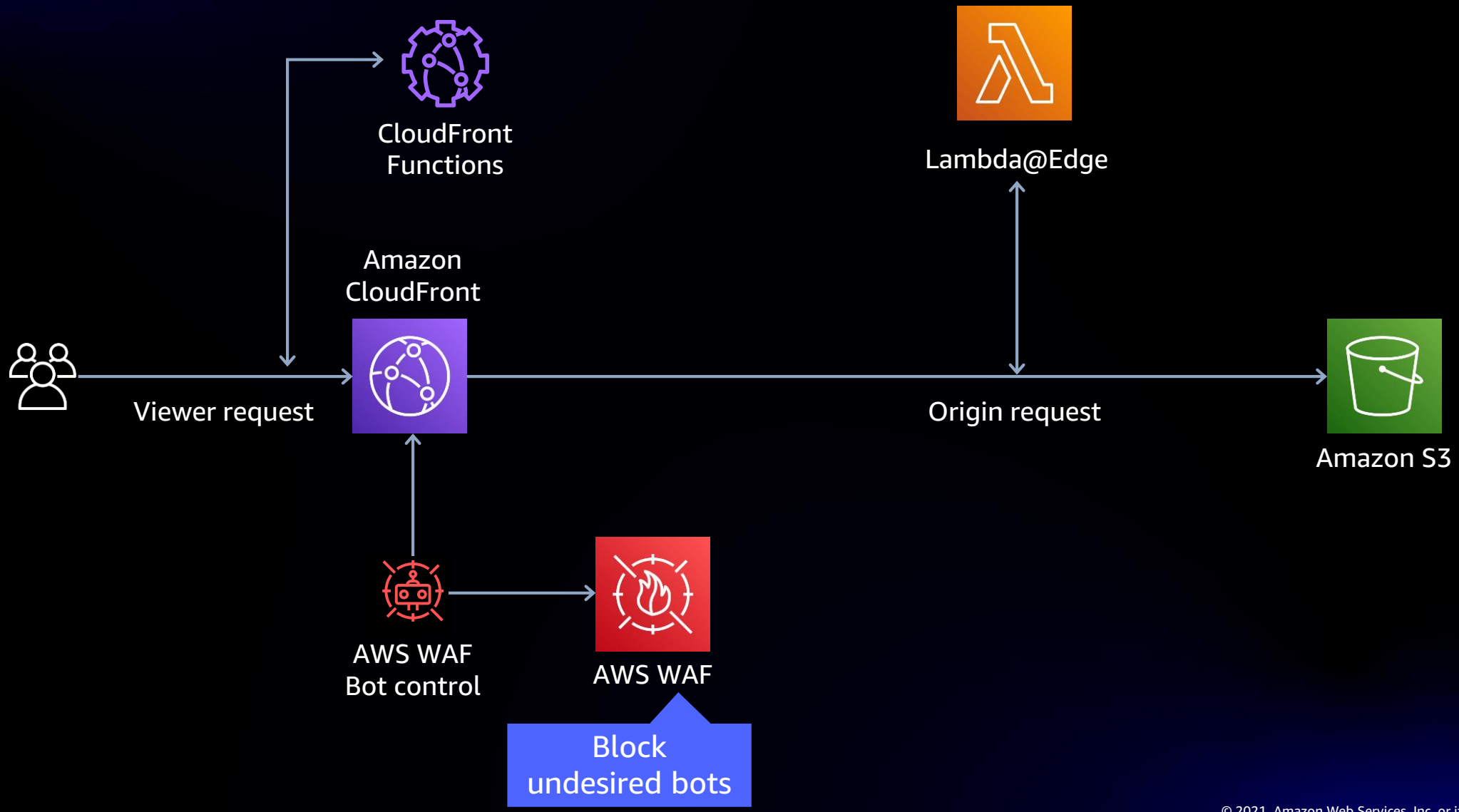
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Solution diagram



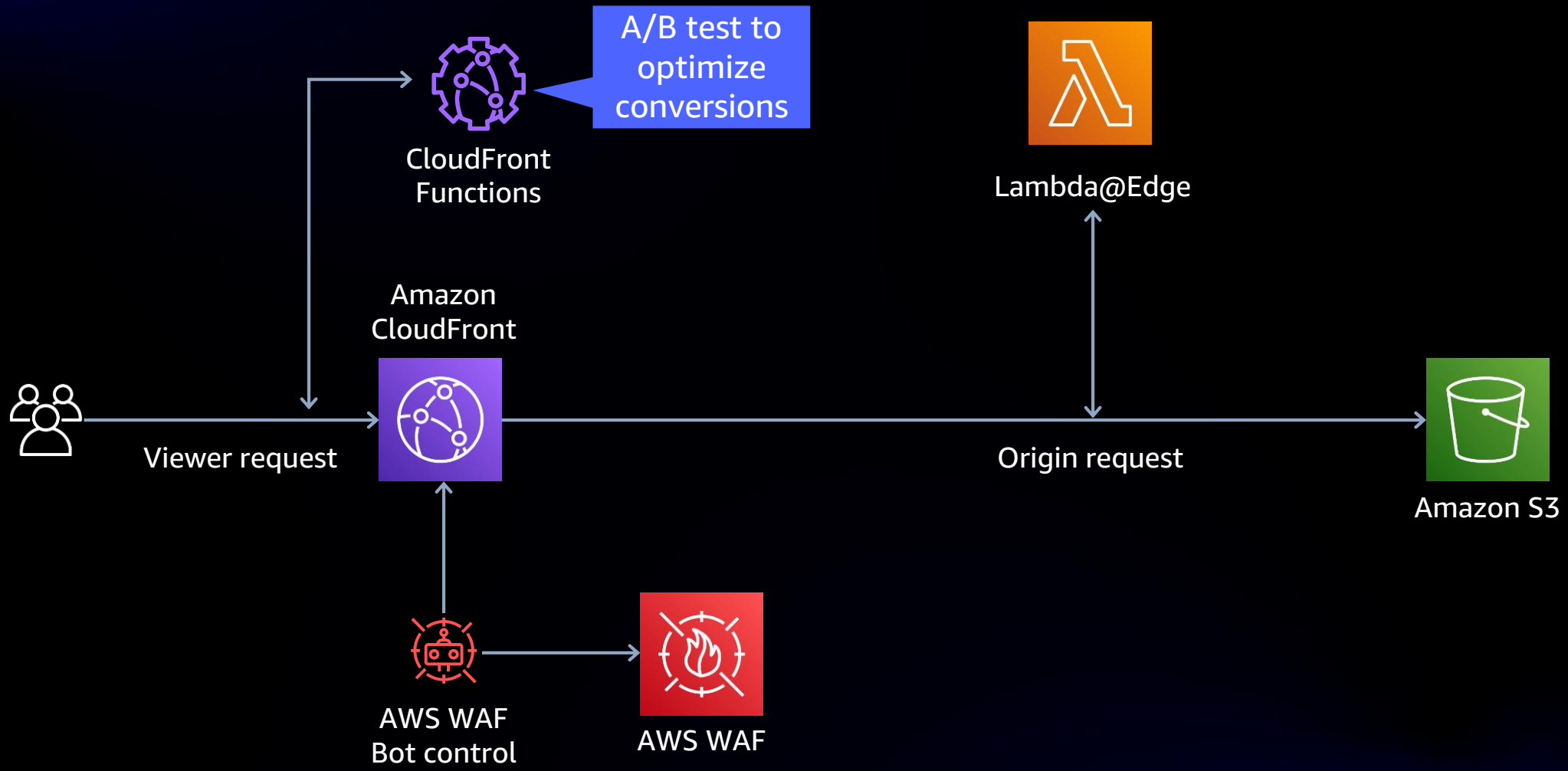
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Solution diagram



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Solution diagram

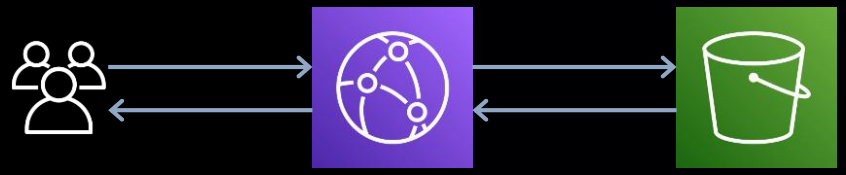


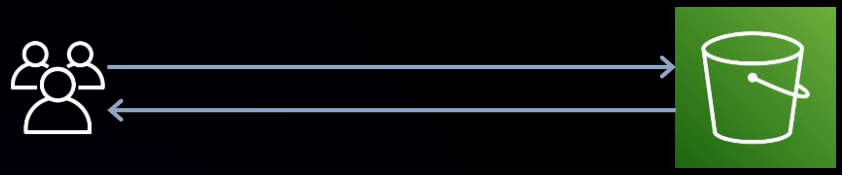
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Lab: Acceleration

Goal: Deploy the website to Amazon S3 and enable its delivery using Amazon CloudFront

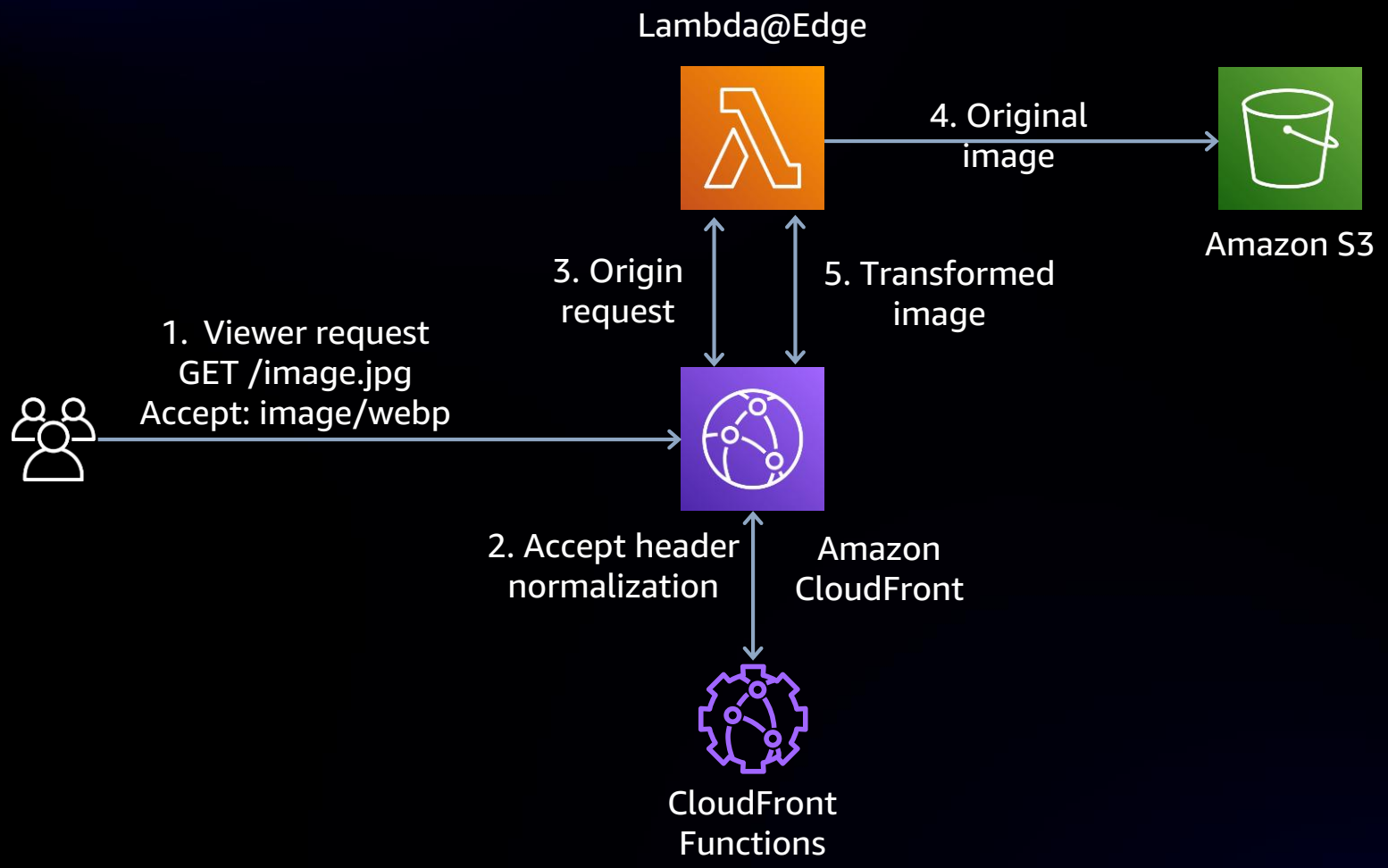
Using https://www.webpagetest.org/ verify the impact of Amazon CloudFront on download speed:





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Lab: Image optimization

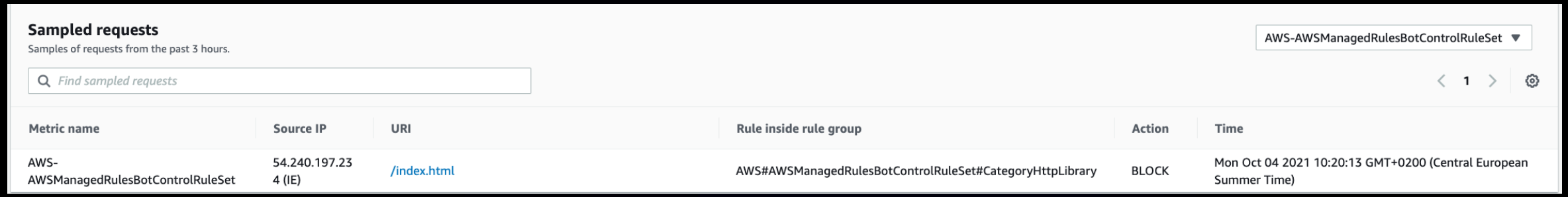


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Lab: Block the undesired bots

Goal: Create WAF configuration and bot control

- Test if a verified bot still can access your website using https://www.linkedin.com/post-inspector/
- Imitate a bad bot pretending it's LinkedIn using Curl:



Sampled requests

Samples of requests from the past 3 hours.

AWS-AWSManagedRulesBotControlRuleSet

Find sampled requests

1

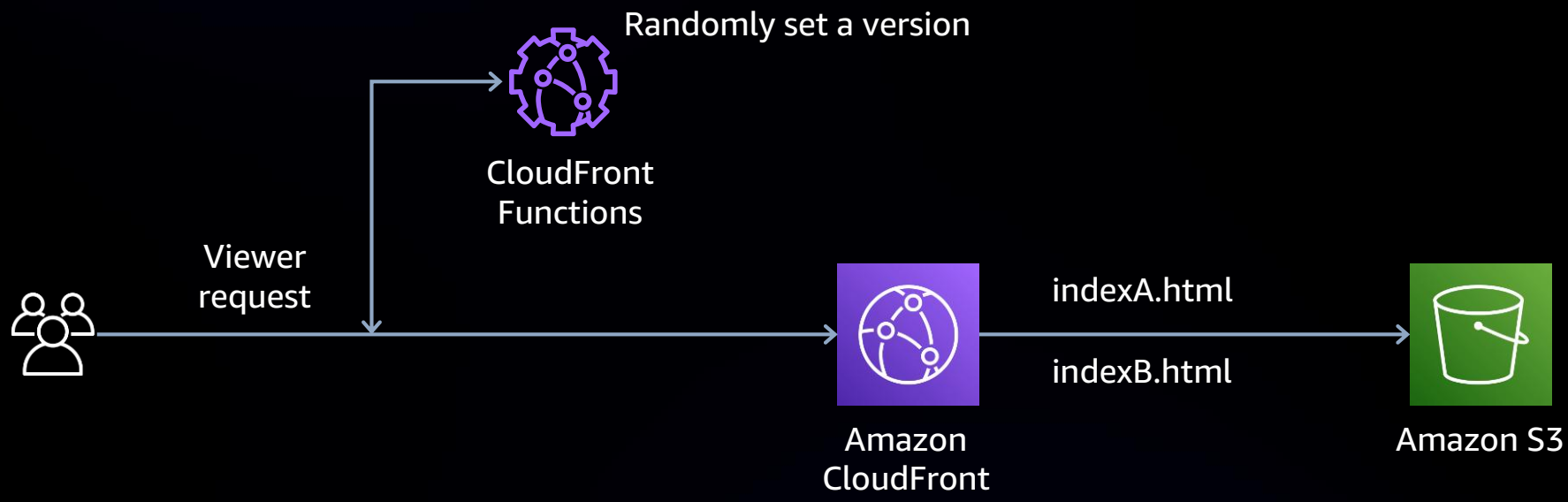
Metric name	Source IP	URI	Rule inside rule group	Action	Time
AWS-AWSManagedRulesBotControlRuleSet	54.240.197.234 (IE)	/index.html	AWS#AWSManagedRulesBotControlRuleSet#CategoryHttpLibrary	BLOCK	Mon Oct 04 2021 10:20:13 GMT+0200 (Central European Summer Time)

Challenge: Create a custom response

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Lab: A/B testing

Goal: split the traffic between version A and version B of your website



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Workshop Resources

Lab Guide

https://tinyurl.com/dyc7p43a

Event Engine Hash Code

cf5b-1abc7e9424-bb

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Related sessions

Fri, Dec 3, 2021 10:45 am

NET324 – Web security: 2021 updates and implementations

Recorded

NET323 – Designing secure microservice architecture to protect APIs

Recorded

NET210 – Building low-latency websites with Amazon CloudFront

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Thank you!

Alan Erdley
erdleya@amazon.com

Jaiganesh Girinathan
ganeshji@amazon.com

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