



Introducing AWS Edge location in Egypt

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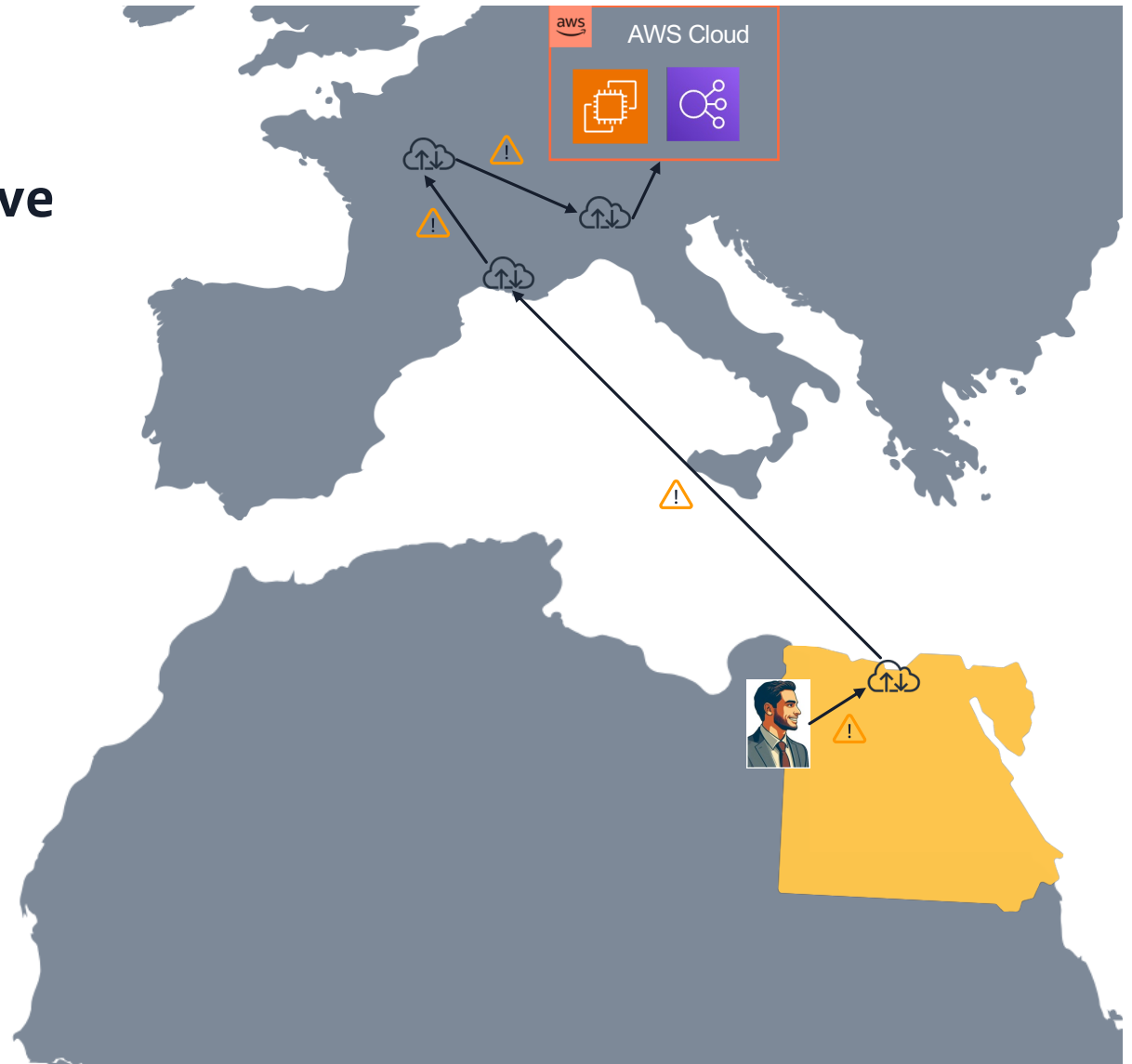
Ahmad

- CISO of a startup in Cairo
- Loves football
- Big fan of Mohamed Salah
- Koshari is his favorite dish



The internet is too unpredictable to watch a live football match without buffering

- Ahmad home
- ISP gateway
- Transit provider
- Transit provider
- AWS border network
- Stream hosted in AWS region





**Ahmad is considering
to cancel his premium
subscription**

Lower quality



Buffering



**“Slow is the new
broken”**

(most likely) Steve Souders



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AWS edge network

KEY

●

Edge location

⊙

Multiple edge locations

●

Regional Edge caches

600+ locations
100+ cities
50+ countries
400gbps links



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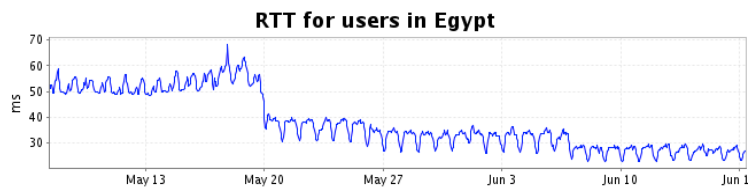


Amazon CloudFront

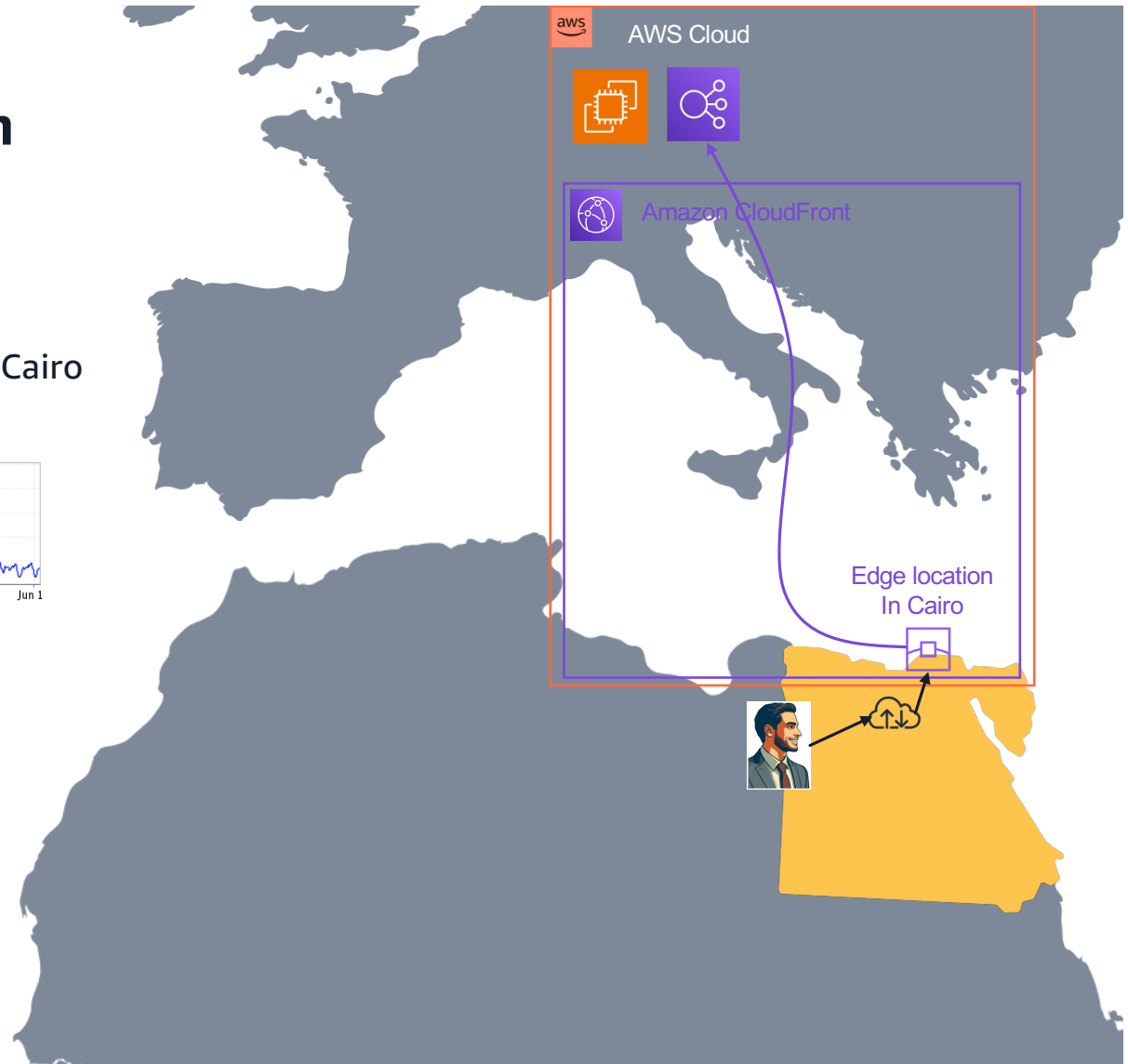
- AWS's Content Delivery Network (CDN)
- Global AWS service
- Built with the cloud on demand vision
- Foundational building block for Well Architected applications on AWS
- Expansion in the Middle-East

AWS cloud meets Ahmad in Egypt

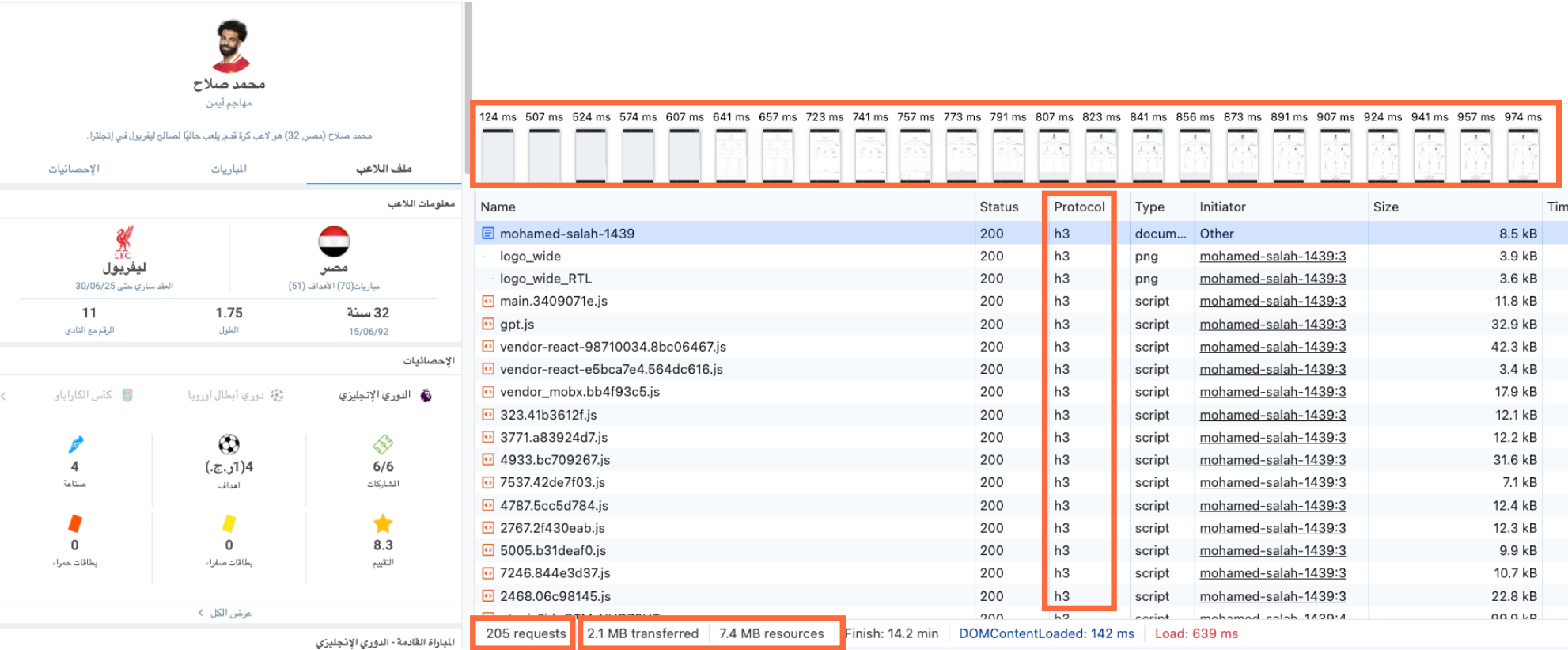
- Video segments are served locally from Cairo



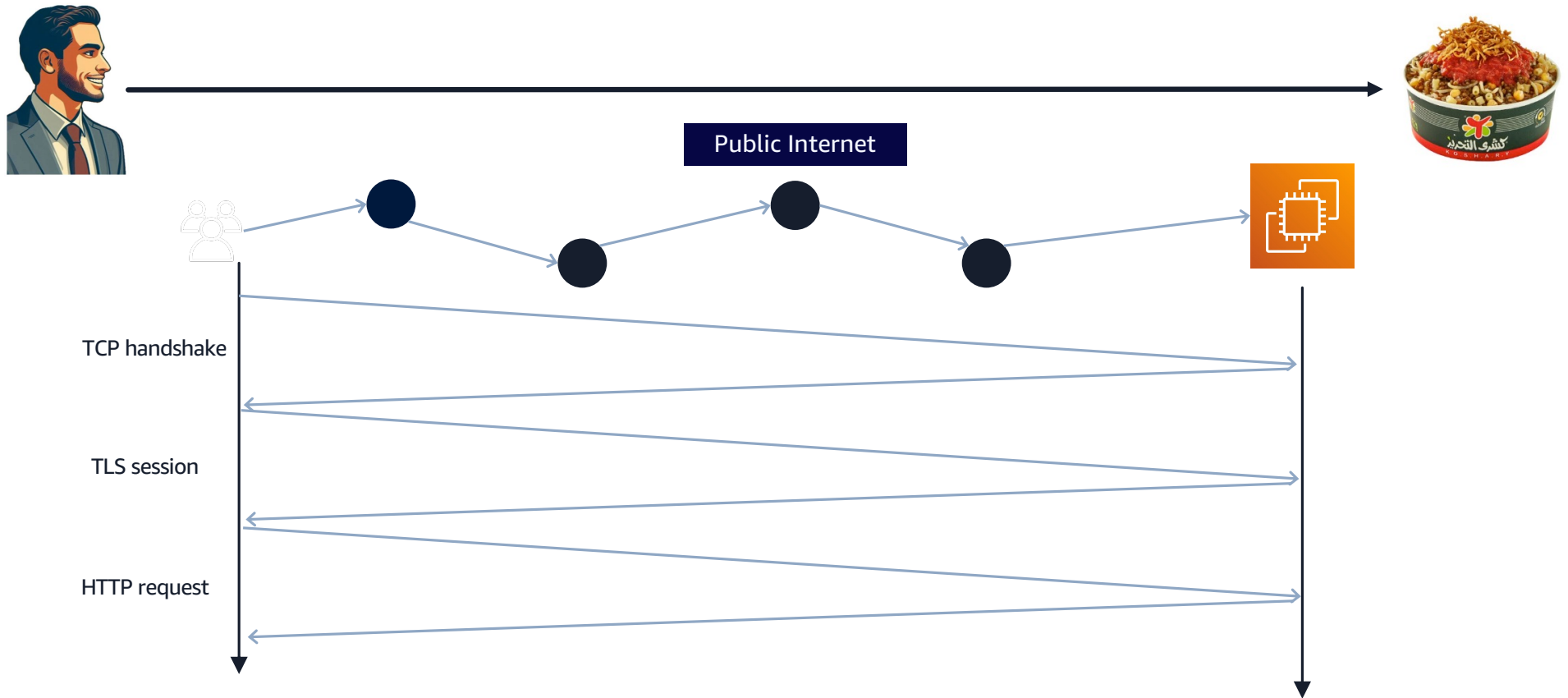
- Cache misses on private network



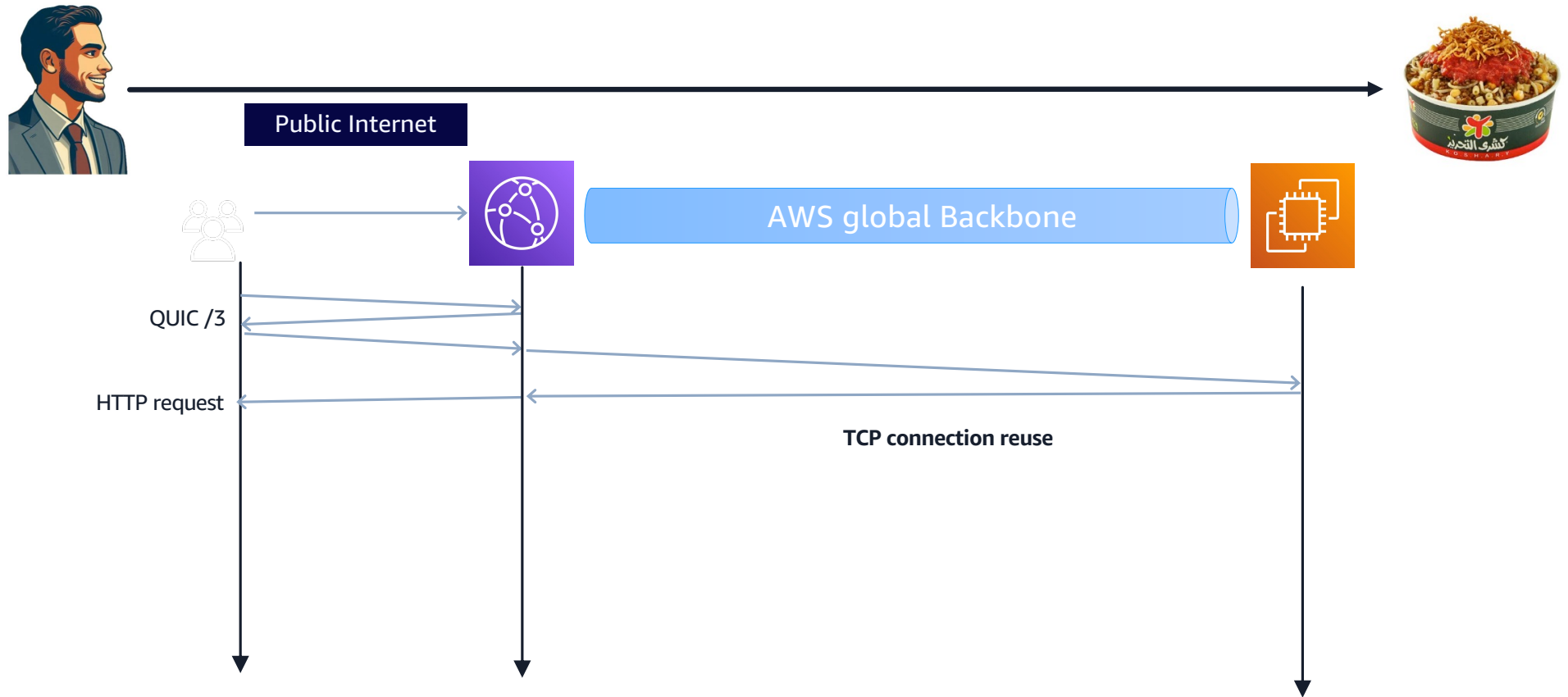
Web pages load faster



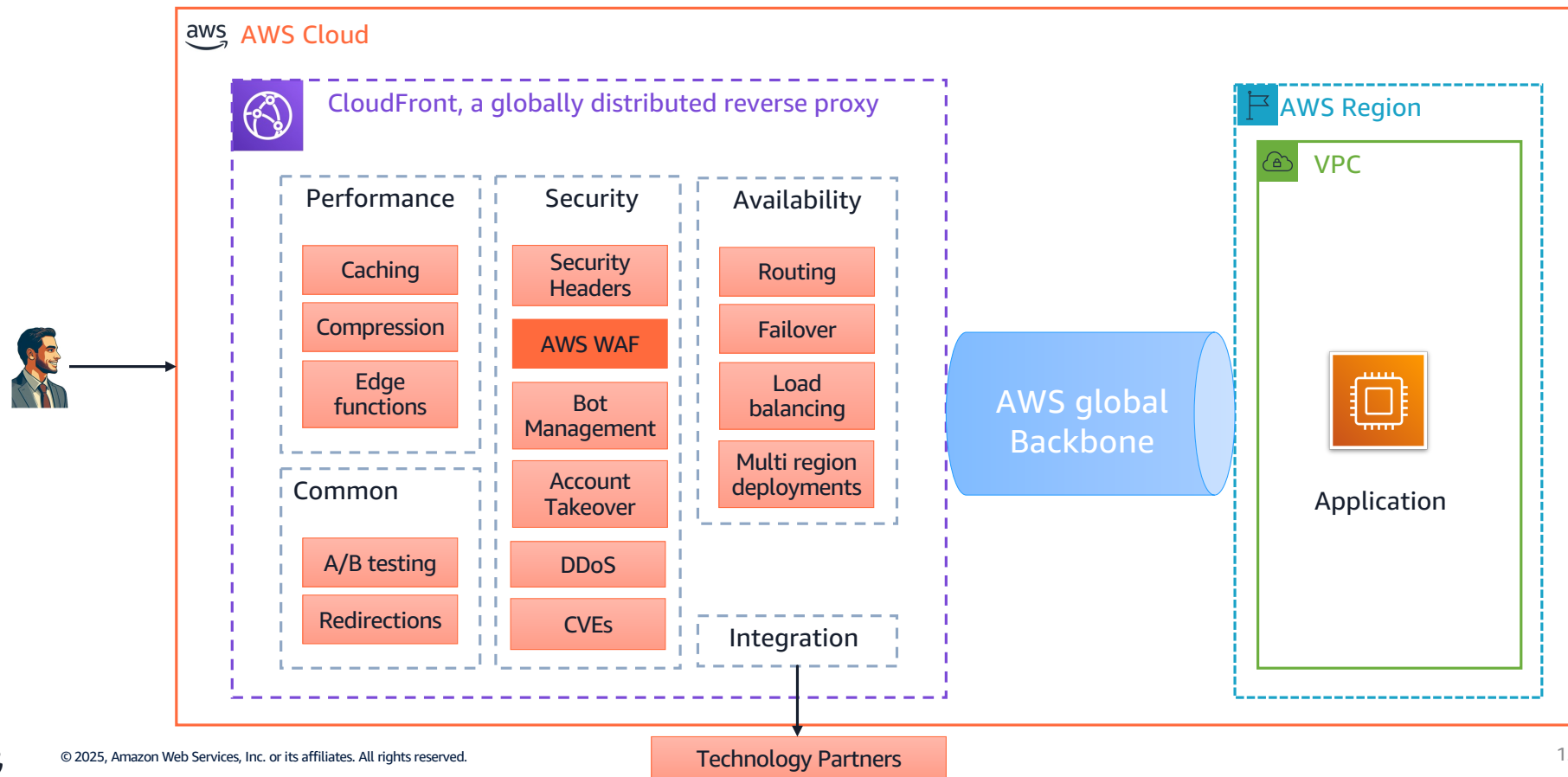
API without CDN



API acceleration with CloudFront



Mental model of CloudFront



Edge functions available with CloudFront

Lambda@Edge



- Long-running workloads
- More complex use cases
- Scaling considerations

Use cases

- Content customization
- Store-locator functionality
- Integration with SaaS vendors
- Waiting room functionality

CloudFront Functions



- Light-weight functions
- Highest scale applications
- Access to Key Value Store

Use cases

- URL rewriting
- Serving redirects at the edge
- Visitor session authentication
- HTTP response manipulation

Example use-cases from customers



Feature flags



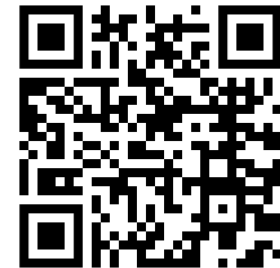
Image Optimization



Multi-tenant
routing



Origin-less URL
shortener





Cybersecurity



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Security with CloudFront

Same architecture for local and international markets

Works well with AWS

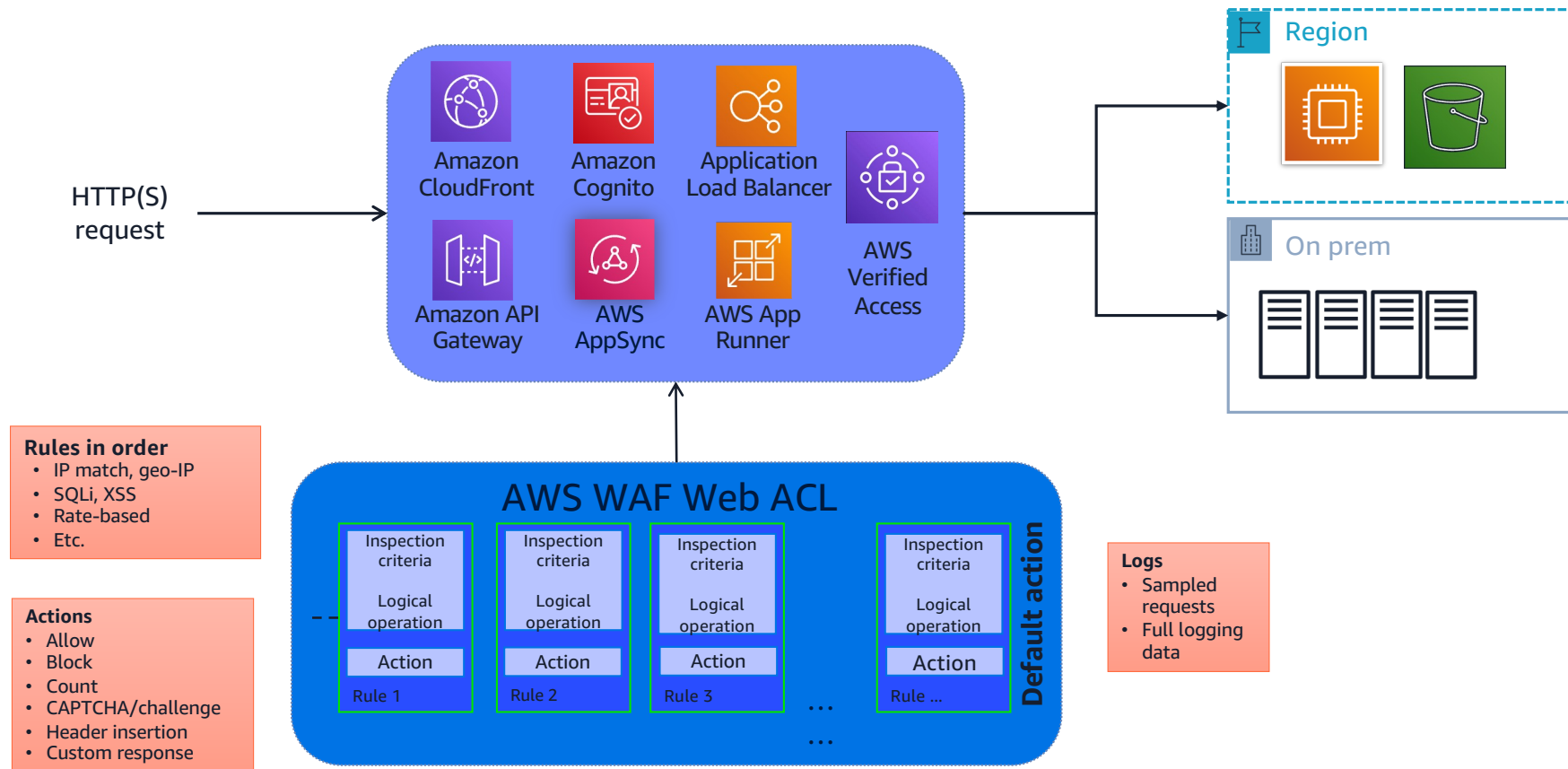
Out of the box complete protection against layer 3 and layer 4 DDoS attacks

Security at the edge

Advanced Web Application Firewall (WAF) capabilities by without WAF infrastructure to manage



How does AWS WAF work?



Ahmad's threat modeling

DDoS attacks

Protect the availability of APIs



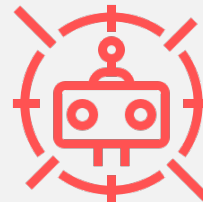
Account Takeover

Protect login endpoints from credential stuffing



GenAI costs

Avoid a denial of wallet situation with the customer service chatbot



OWASP top 10

Baseline security



DDoS protection

1M

Yearly DDoS attacks

EB

Data analyzed /min

100M

Daily interactions
with honeypots

Threat Intel

Anycast

Blackwatch

Vanguard

Madpot

Security of the Cloud

IP reputation

Rate limits

Automatic DDoS detection

Shield Response Team

Security in the Cloud



Stop bots from abusing GenAI endpoints with Bot Control

277\$

GenAI cost saved for 1\$
invested in Bot Control

NIS221 – re:Inforce 2024

Bot signatures

JavaScript challenge to verify browser capabilities

Client side fingerprinting to detect automation frameworks

Behavioral analysis using session id

ML based detection of coordinated activities

CAPTCHA solving

Let's confirm you are human

Choose all the chairs



English

Confirm



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Next steps?



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Application Security & Performance

RESOURCE



<https://s12d.com/edge4dev>




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Application Security and Performance Overview Getting Started Web Acceleration Perimeter Protection

Managing false positives in AWS WAF

Thwart cyber threats, such as DDoS attacks, undesired bot traffic and malicious CVE exploits.

 PAGE CONTENT

Overview

Designing WAF rules with low false positives

Overview

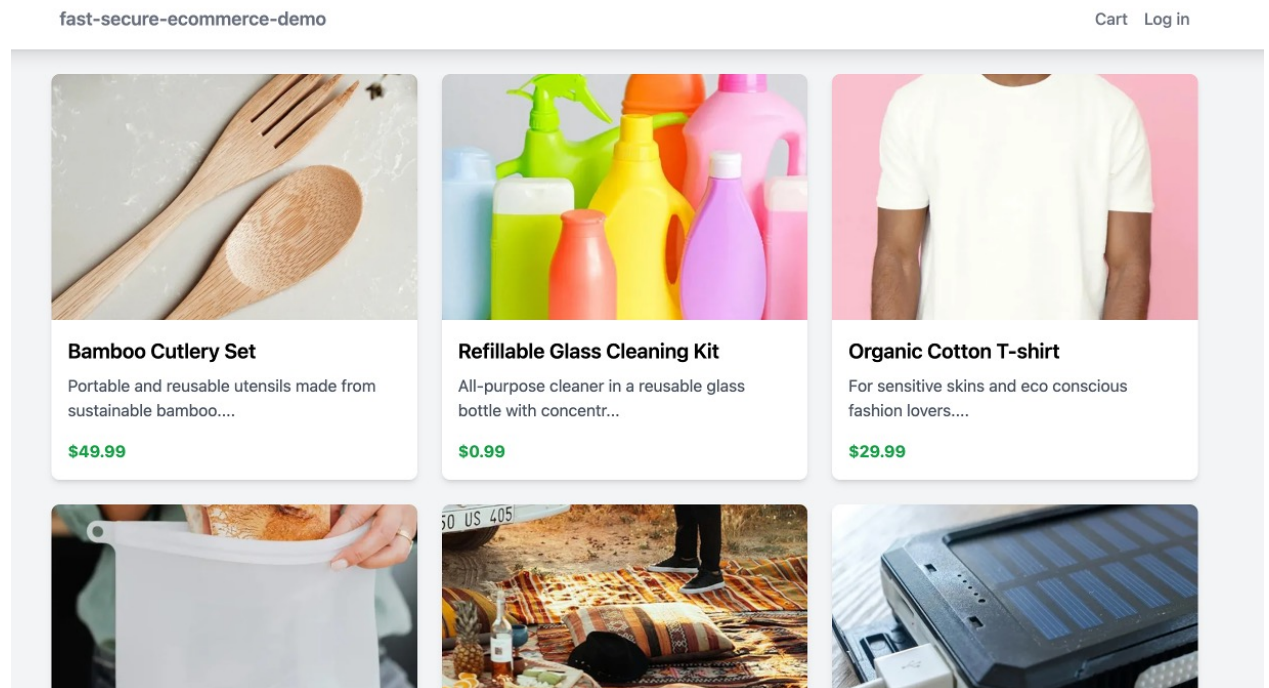
Adding security controls such as WAF to a web application, increase positives are the occurrences of blocking legitimate user requests, w Managing false positives include designing rules that minimize then

Application Security & Performance

RESOURCE



<https://s12d.com/boutique>



Proof of Concept

Always on Free tier (1TB / month)

Bootstrap quickly using the AWS Console

Support by AWS and specialized partners

Private Pricing



Thank you!

Achraf Souk

 /achrafsouk



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