

Deploying JAMstack applications using Amazon S3, CloudFront, and Lambda@Edge

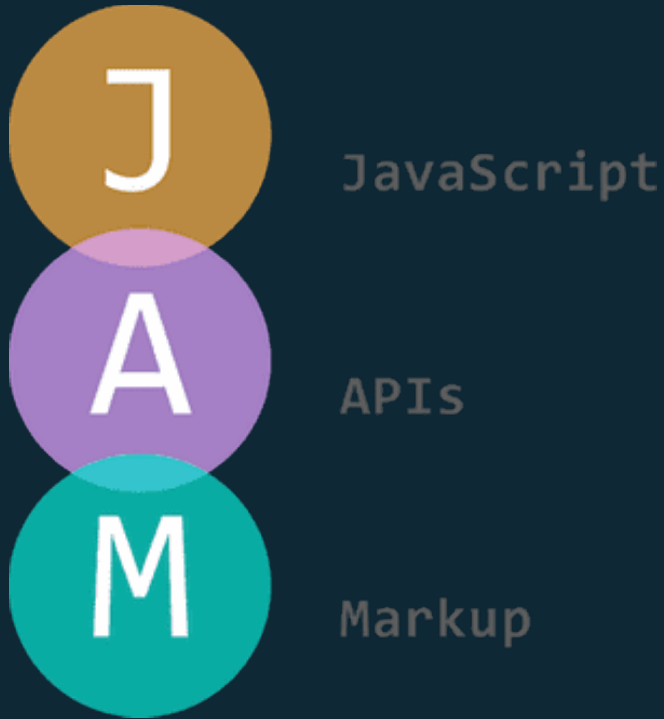
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Agenda

- What is JAMstack?
- Benefits and workflow
- Overview of CloudFront and Lambda@Edge
- Demo
- Q&A

What is JAMstack?



JAMstack is:

- A set of architectural practices. It is not about a specific technology or framework.
- A way of building sites with better performance, security, scale, and developer experience.
- Running sites without needing a web server. All files are pre-rendered and are served directly from a CDN.

Benefits of JAMstack

Simpler Systems

Front end is decoupled from the back end, allowing developers to focus on only one area

Higher Scale

Using CDNs for caching gives unlimited scale across the globe

Improved Performance

Cached files are served close to the end user

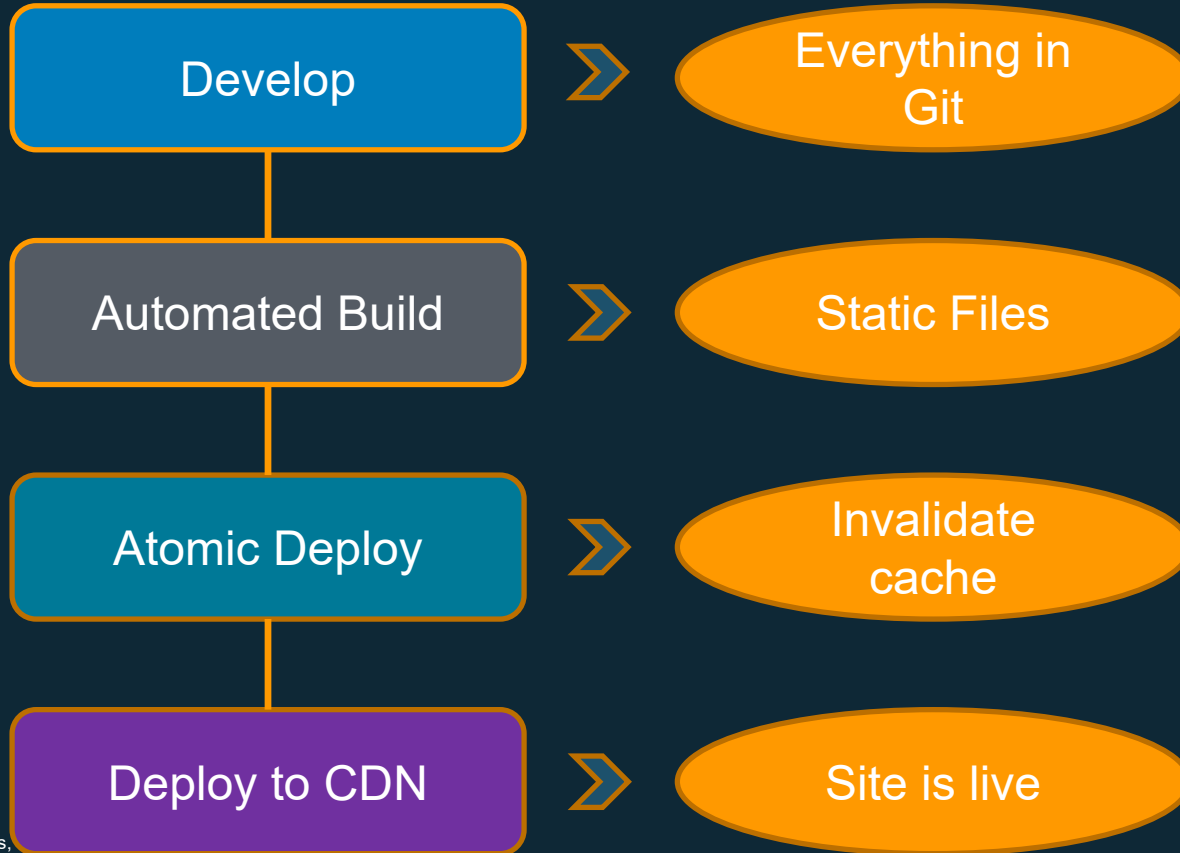
Lower Cost

There are no servers to run or manage. Hosting and CDN can be free for small sites

Increased Security

There are no web servers or databases to worry about

Workflow of JAMstack



What is Amazon CloudFront?

CloudFront is Amazon's content delivery network (CDN)

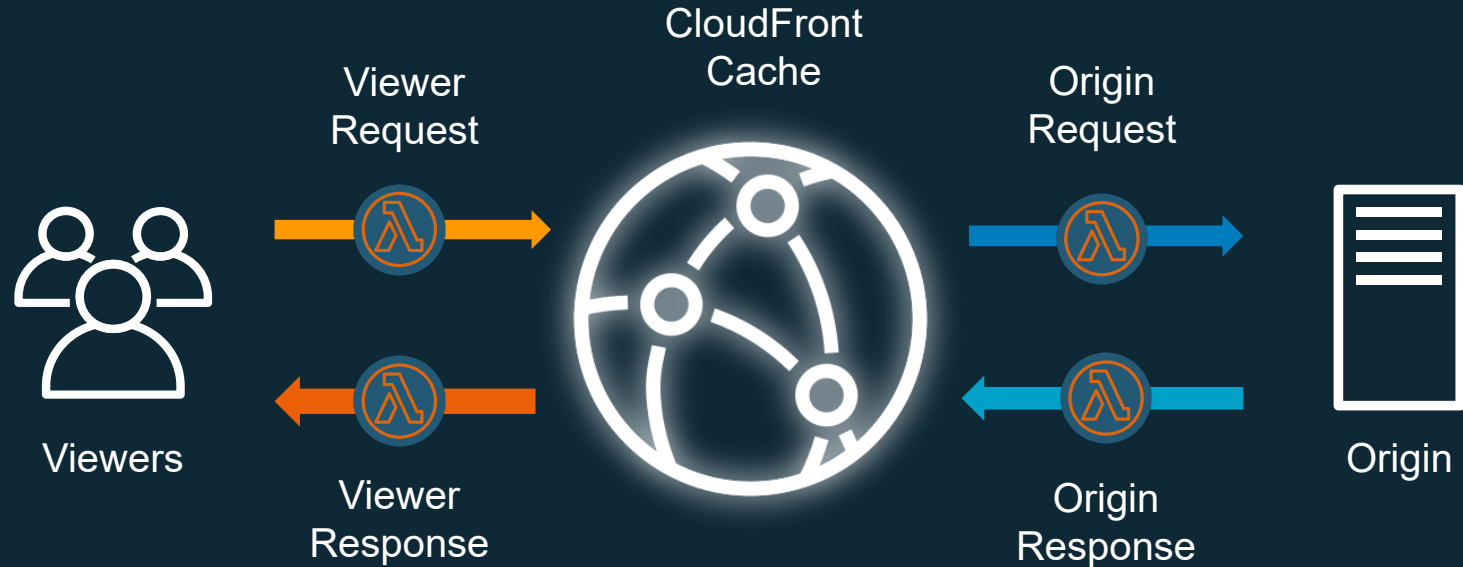
Securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds

CloudFront is integrated with AWS – both physical locations that are directly connected to the AWS global infrastructure, as well as other AWS services

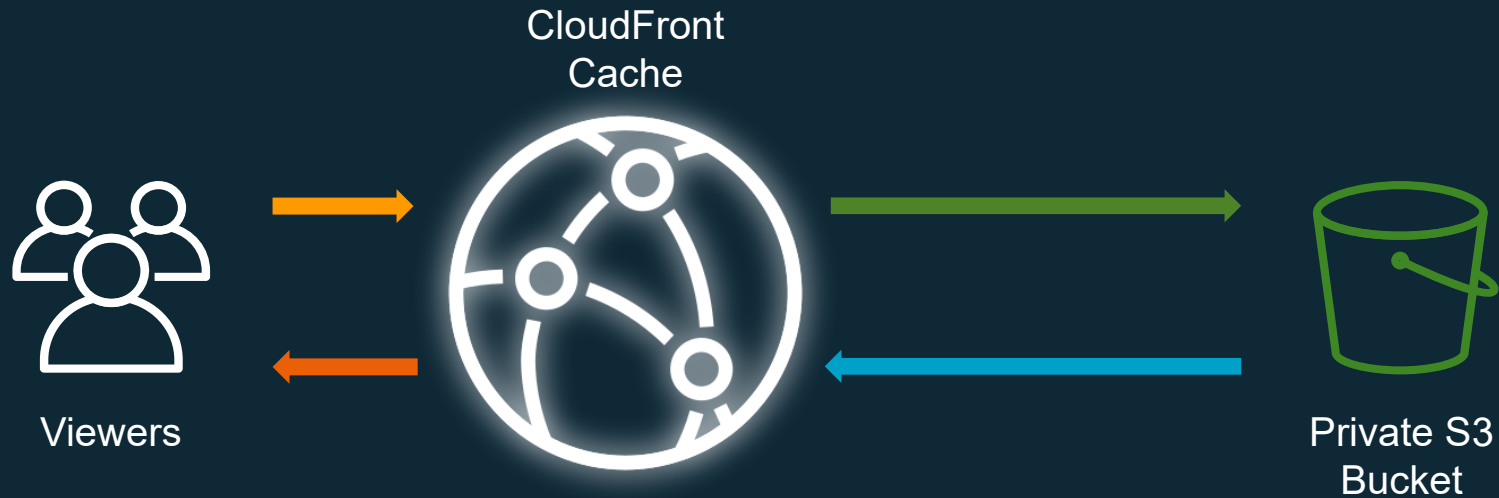
Features a global network of >200 points of presence



CloudFront and Lambda@Edge



Demo architecture



S3 static website hosting vs. CloudFront

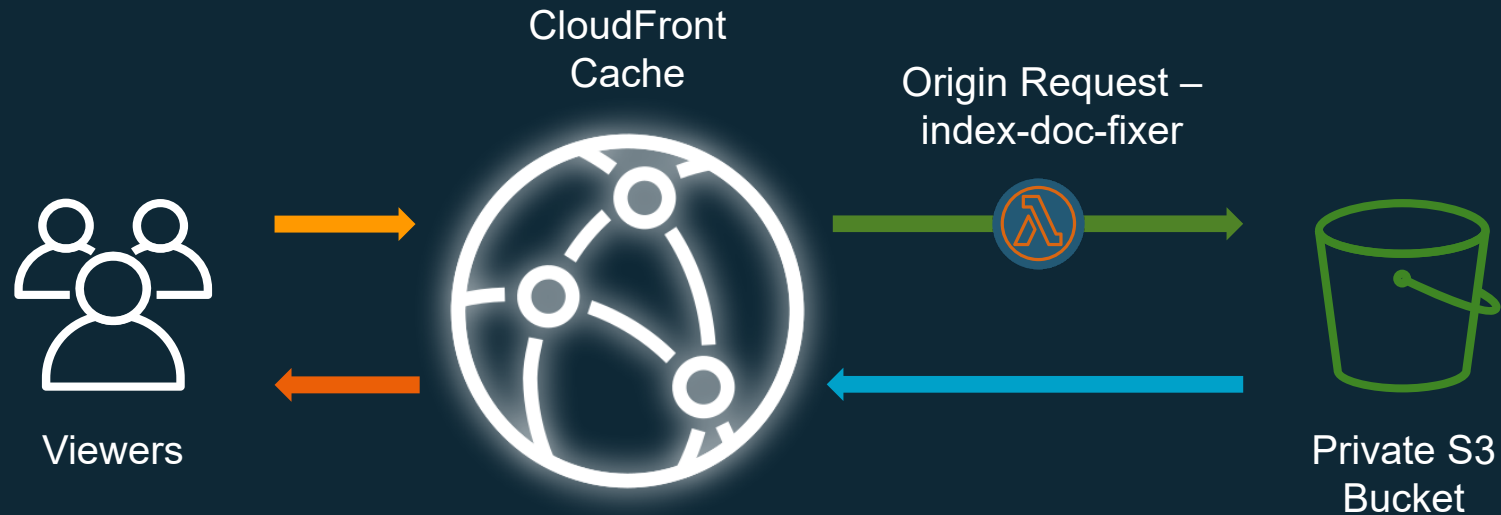
S3: Index document

- `www.example.com` → `www.example.com/index.html`
- `www.example.com/blog` → `www.example.com/blog/index.html`

CloudFront: Default root object

- `www.example.com` → `www.example.com/index.html`
- `www.example.com/blog` → **404: `www.example.com/blog`**

Demo architecture



S3 static website hosting vs. CloudFront

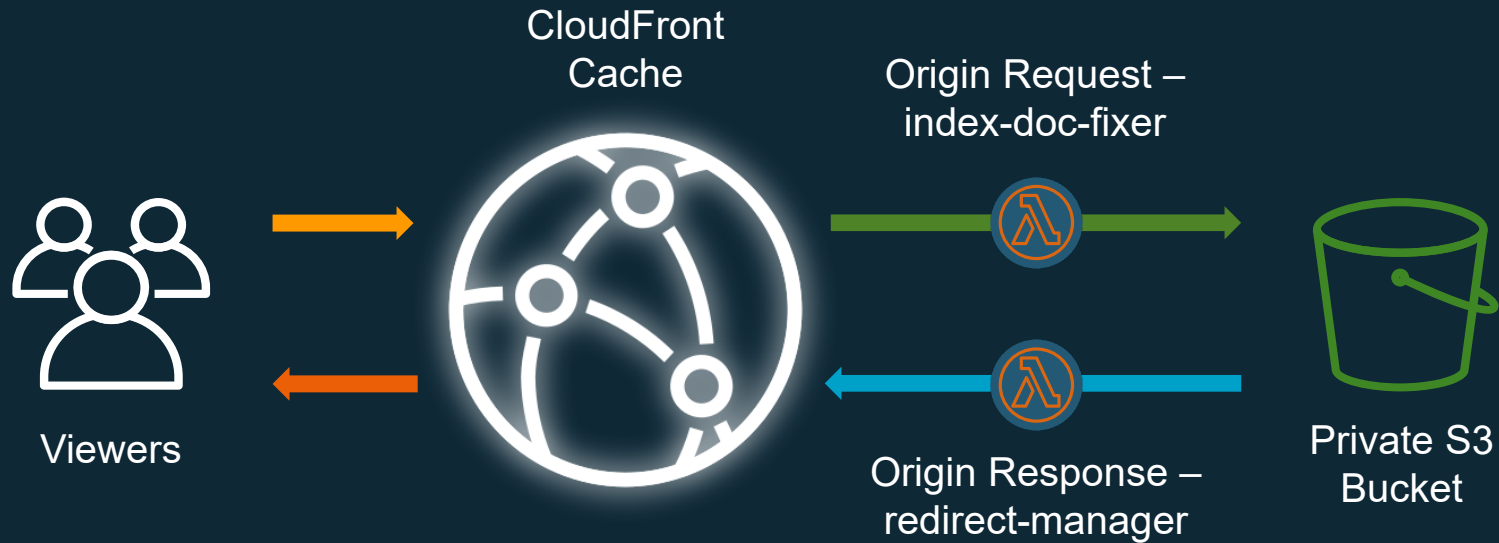
S3: Redirects as metadata

- /path1.html → 301: /path2.html
- /path3.html → 301: www.amazon.com

CloudFront: S3 redirects are ignored

- /path1.html → /path1.html
- /path3.html → /path3.html

Demo architecture



Demo

Q&A

Thank you!