# AWS TECHSHIFT
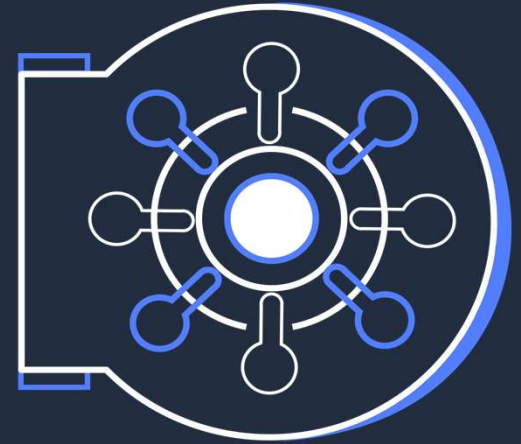# EMBARK

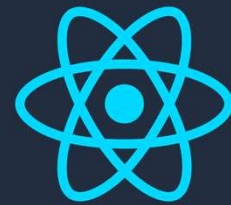## Static Web Hosting

A static website delivers content in the same format in which it is stored without altering the contents of the files. No server-side code execution is required.
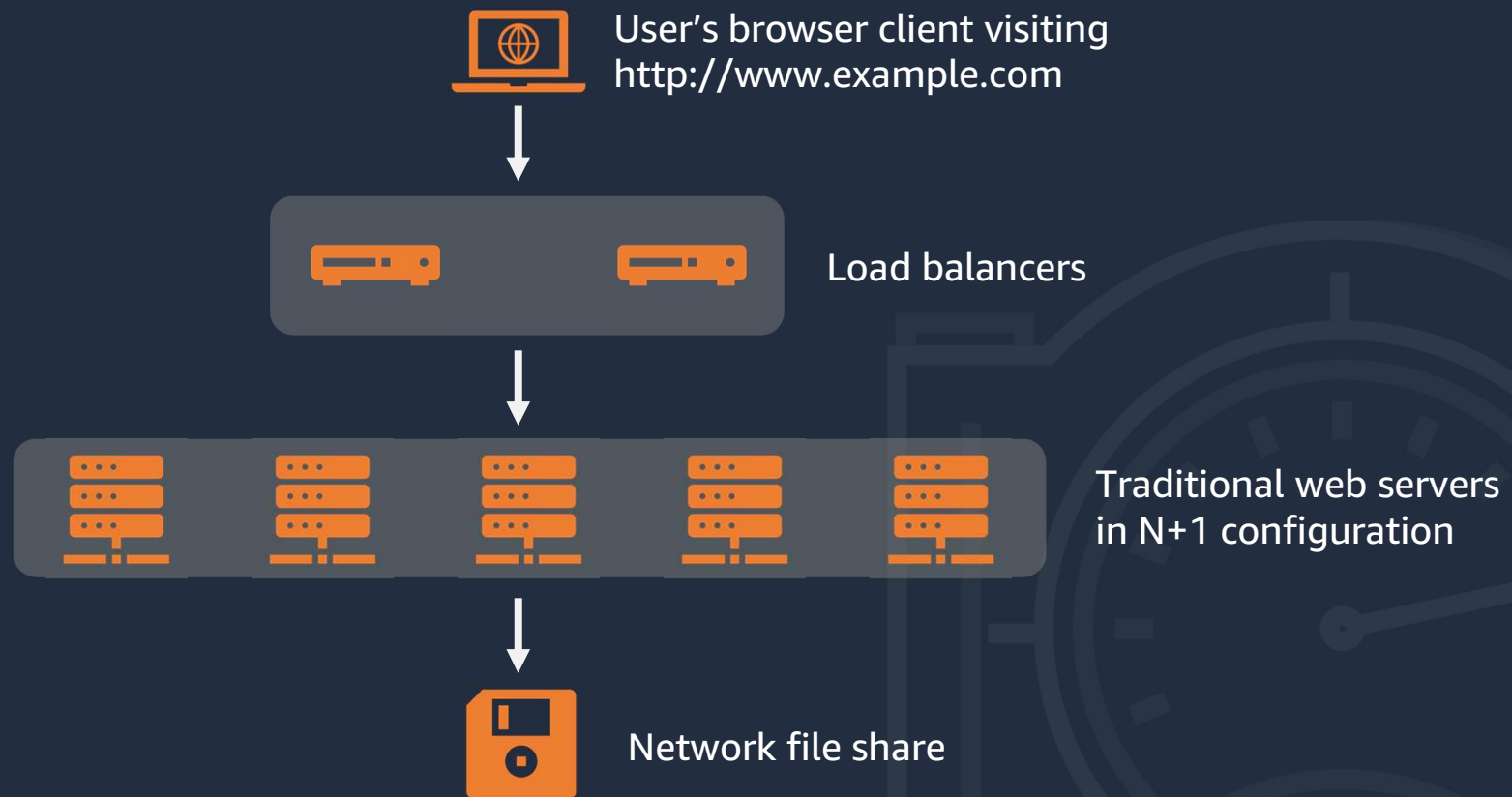
Angular

React JS

VueJS

HTML 5 + JavaScript

We care about performance and efficiency we need
to shift some load around…

- Non-hierarchical object store

- Industry-leading performance, scalability, availability, and durability
  - 11 9's durability

- Wide range of cost-effective storage classes
  - Standard, Standard-IA, One Zone-IA, Glacier & Glacier Deep Archive
  - Intelligent-Tiering - Optimize costs by automatically moving data to the most cost-effective access tier
  - Lifecycle rules

- Good for things like:
  - Static assets ( css, js, images, videos )
  - Backups
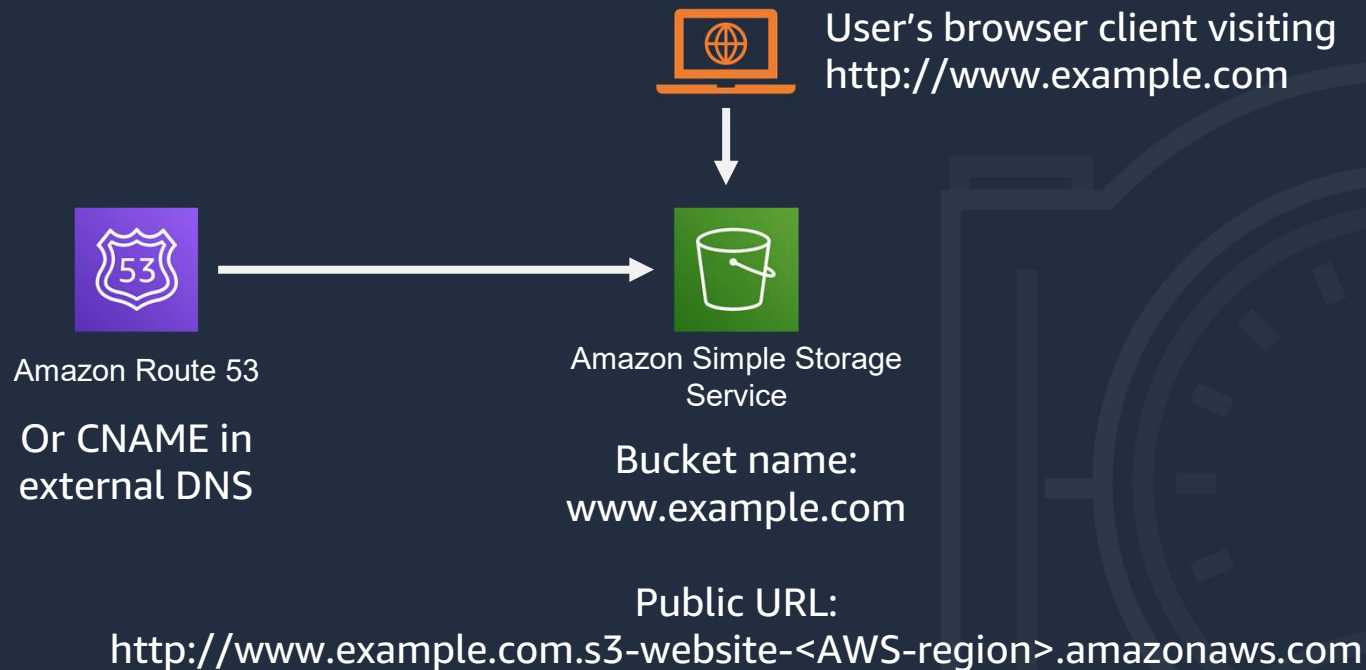  - Logs

# AWS TECHSHIFT   S3 Storage classes

| | S3 Standard | S3 Intelligent-Tiering | S3 Standard-IA | S3 One Zone-IA | S3 Glacier | S3 Glacier Deep Archive |
|---|---|---|---|---|---|---|
| Design Durability | 99.999999999% | 99.999999999% | 99.999999999% | 99.999999999% | 99.999999999% | 99.999999999% |
| Design Availability | 99.99% | 99.9% | 99.9% | 99.5% | 99.99% | 99.99% |
| SLA | 99.9% | 99% | 99% | 99% | 99.9% | 99.9% |
| Availability Zones | 3+ | 3+ | 3+ | 1 | 3+ | 3+ |
| Retrieval Fee | - | - | Per GB | Per GB | Per GB | Per GB |
| First Byte Latency | Milliseconds | Milliseconds | Milliseconds | Milliseconds | Select minutes or hours | Select hours |

Secure by default, but access can be granted using;

- AWS Identity and Access Management
- Access Control Lists
- Bucket Policies
- Query String Authentication and Signed URIs

aws

*Amazon Simple Storage Service (Amazon S3) can host static websites without a need for a web server. The website is highly performant and scalable at a fraction of the cost of a traditional web server.*

User's browser client visiting
http://www.example.com

Amazon Route 53

Or CNAME in
external DNS

Amazon Simple Storage
Service

Bucket name:
www.example.com

Public URL:
http://www.example.com.s3-website-<AWS-region>.amazonaws.com

*Amazon S3 enforces a security-by-default policy, we must grant
the public access to read our files.*

```json
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": [
        "s3:GetObject"
      ],
      "Resource": [
        "arn:aws:s3:::S3_BUCKET_NAME_GOES_HERE/*"
      ]
    }
  ]
}
```

But S3 stores files in a single region. Lets get the files closer to our users…

aws
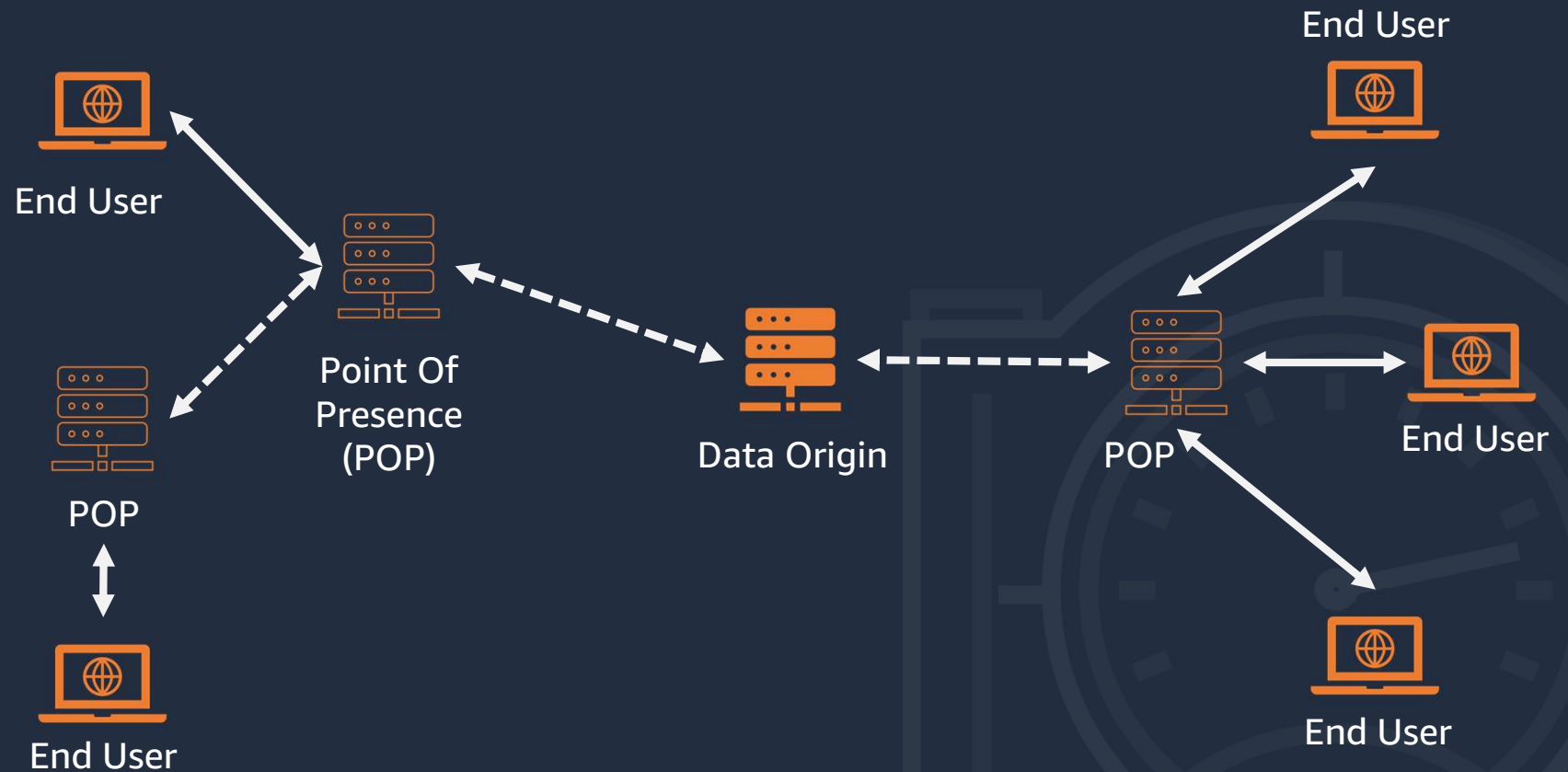
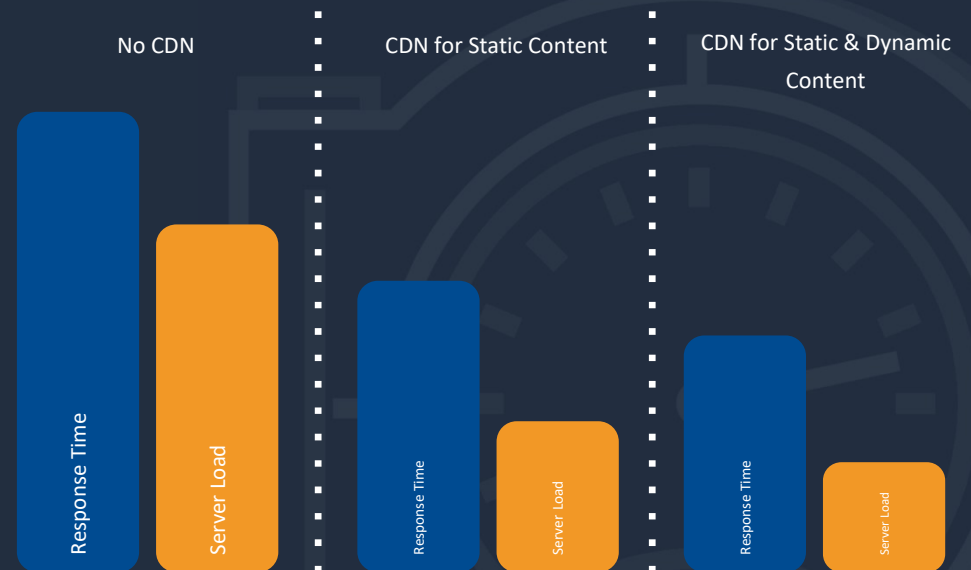## Amazon CloudFront is a web service for scalable content delivery.

- Cache content at the edge locations around the world for faster delivery
- Helps lower load on origin infrastructure
- Dynamic and static content
- Streaming video
- Zone apex support
- Custom SSL certificates
- Low TTLs ( as short as 0 seconds )
- Optimized to work with EC2, Amazon S3,
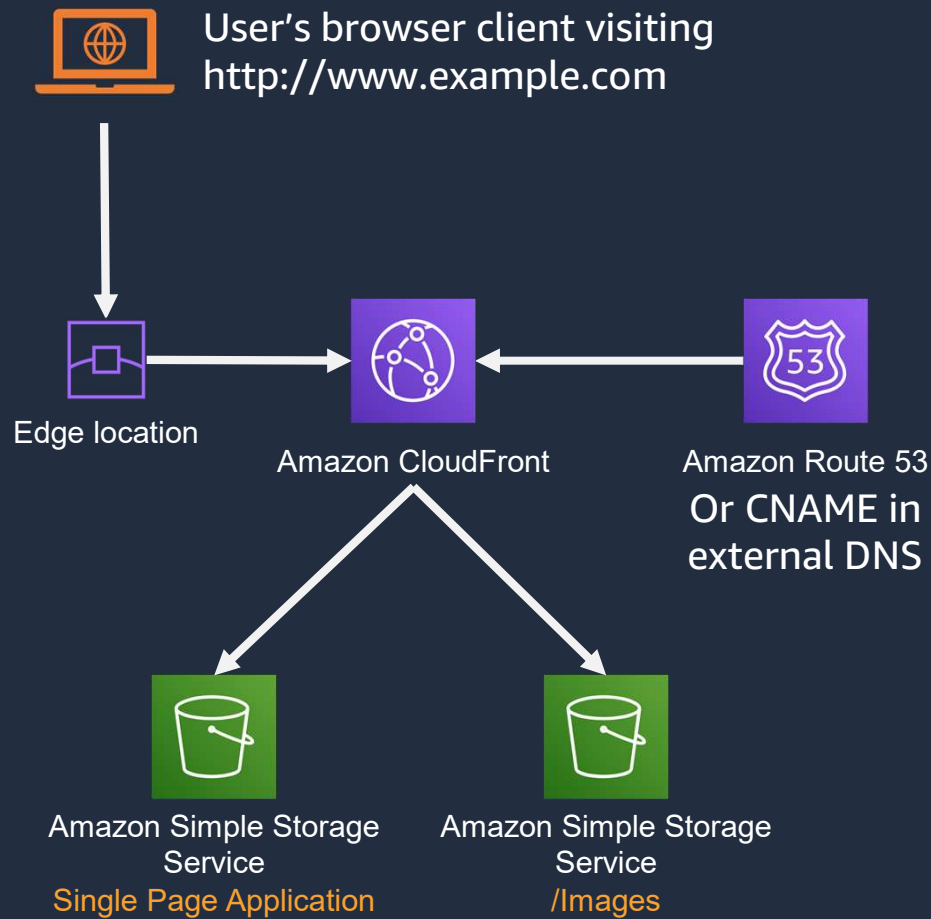  Elastic Load Balancing, and Route53
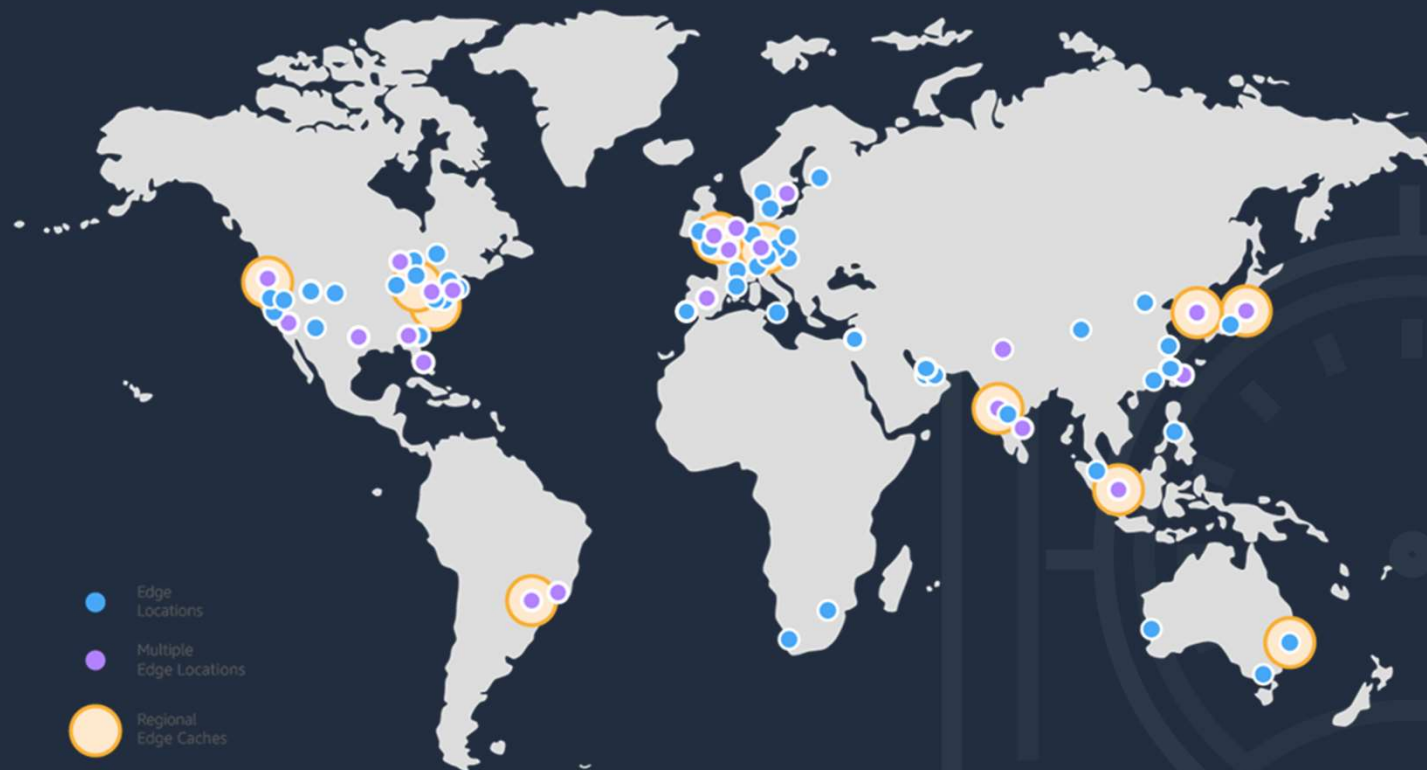
- # Dynamic content & API acceleration

- # Lambda@Edge

- # Upload Acceleration

- # Multiple Origins

No CDN

CDN for Static Content

CDN for Static & Dynamic Content

Response Time

Server Load

Response Time

Server Load

Response Time

Server Load

User's browser client visiting
http://www.example.com

Edge location

Amazon CloudFront

Amazon Route 53
Or CNAME in
external DNS

Amazon Simple Storage
Service
Single Page Application

Amazon Simple Storage
Service
/Images

```json
{
  "Sid": "PublicReadGetObject",
  "Effect": "Allow",
  "Principal": "CFOriginAccessIdentity",
  "Action": [
    "s3:GetObject"
  ],
  "Resource": [
    "arn:aws:s3:::S3_BUCKET_NAME_GOES_HERE/*"
  ]
}
```

# End