CloudFront

Amazon CloudFront is a **Content Delivery Network (CDN)** service provided by AWS. It helps deliver content (web pages, videos, images, APIs, etc.) with **low latency** and **high performance** by caching it at edge locations worldwide.

How CloudFront Works

1. **User Requests Content**
    - When a user visits your website or accesses an API, CloudFront routes the request to the nearest **edge location**.
2. **Checks Cache**
    - If the content is already cached at that edge location, CloudFront delivers it instantly.
    - If not, CloudFront fetches it from the **origin server** (e.g., S3, EC2, or another server), caches it, and serves it to the user.
3. **Delivers Fast & Secure Content**
    - CloudFront reduces latency by serving content from nearby locations.
    - It improves security with **DDoS protection, HTTPS, and access control**.

Benefits of CloudFront

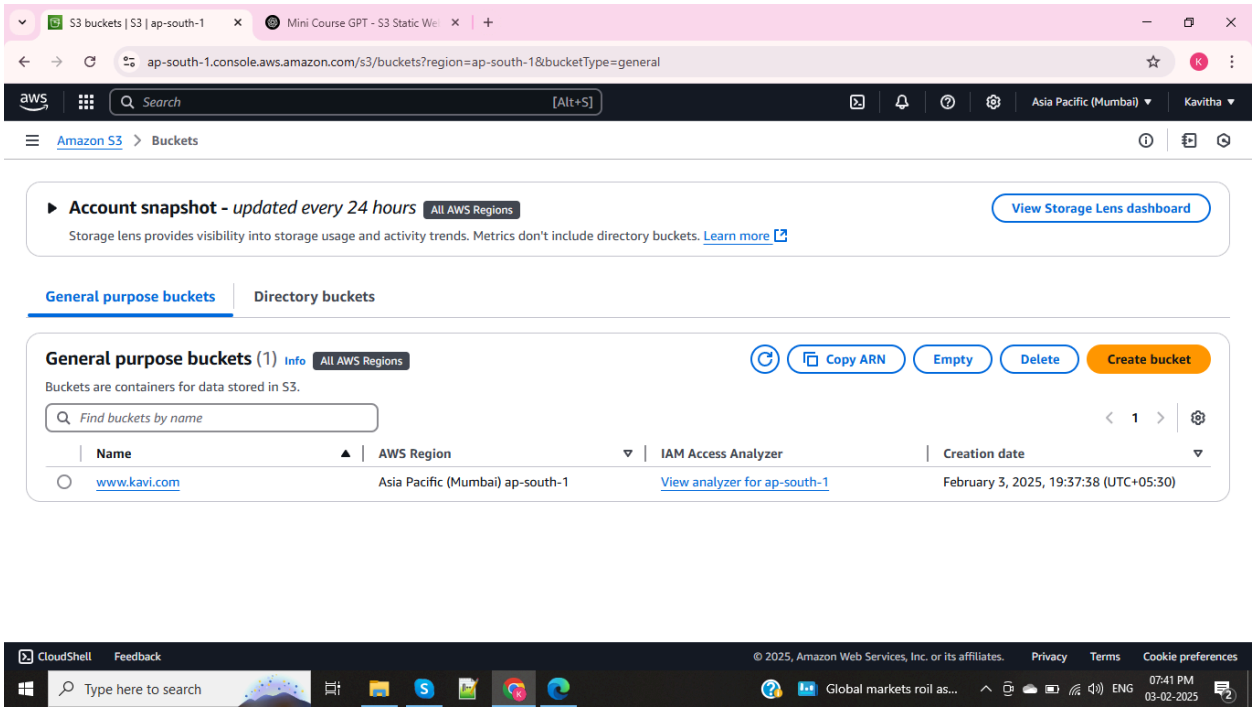
✅ **Faster Content Delivery** – Reduces loading time by serving content from the nearest edge location.
✅ **Lower Latency** – Uses global AWS infrastructure to optimize performance.
✅ **Security** – Supports **HTTPS, AWS Shield, and Web Application Firewall (WAF)** for protection.
✅ **Cost-Effective** – Reduces data transfer costs by caching content at edge locations.
✅ **Scalability** – Handles high traffic loads without impacting performance.

Common Use Cases

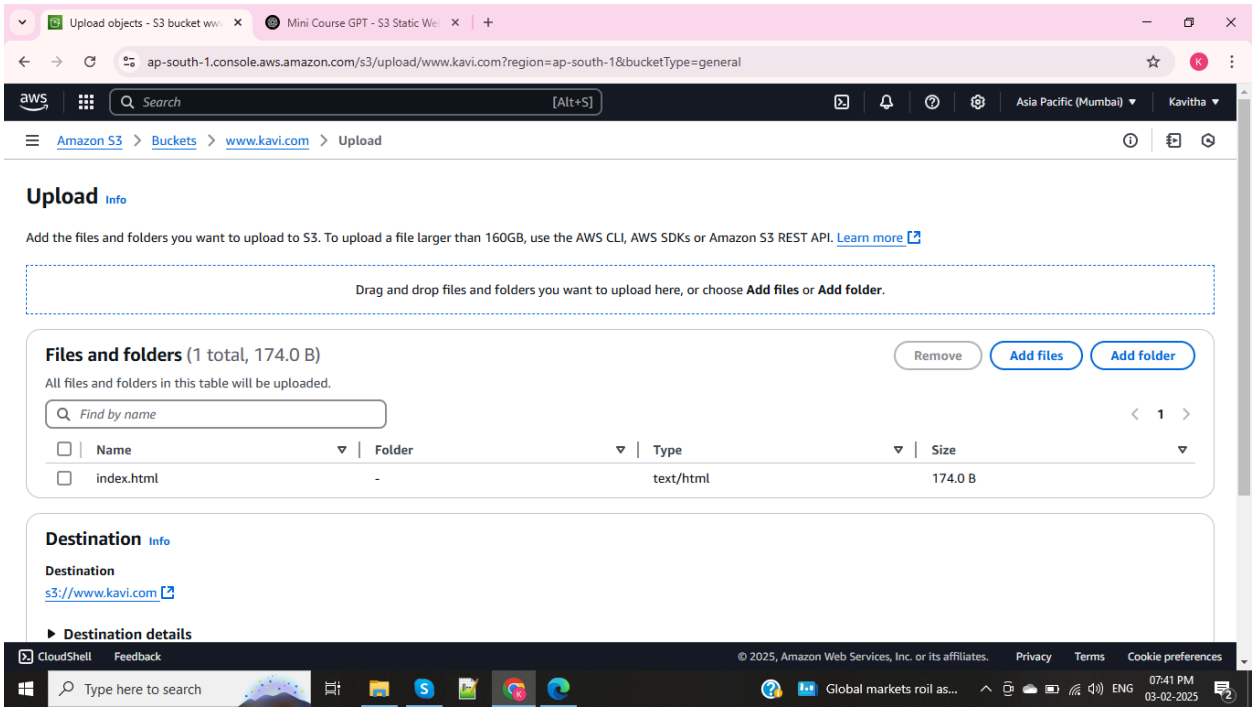
- **Website Acceleration** – Load static and dynamic content faster.
- **Streaming Media** – Deliver videos and live streams efficiently.
- **API Acceleration** – Optimize API response times.
- **Software Distribution** – Speed up downloads of large files.

Have to perform Amazon CouldFront means have to create S3 bucket

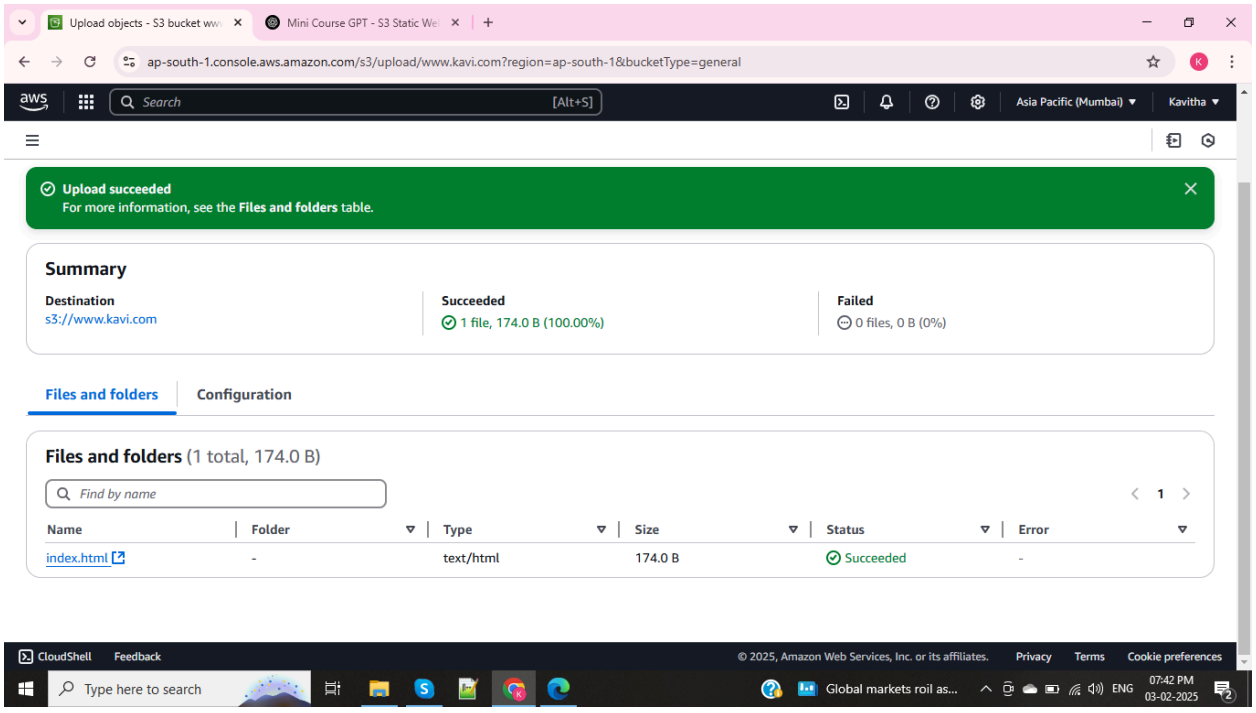
Step1: Creating S3 bucket



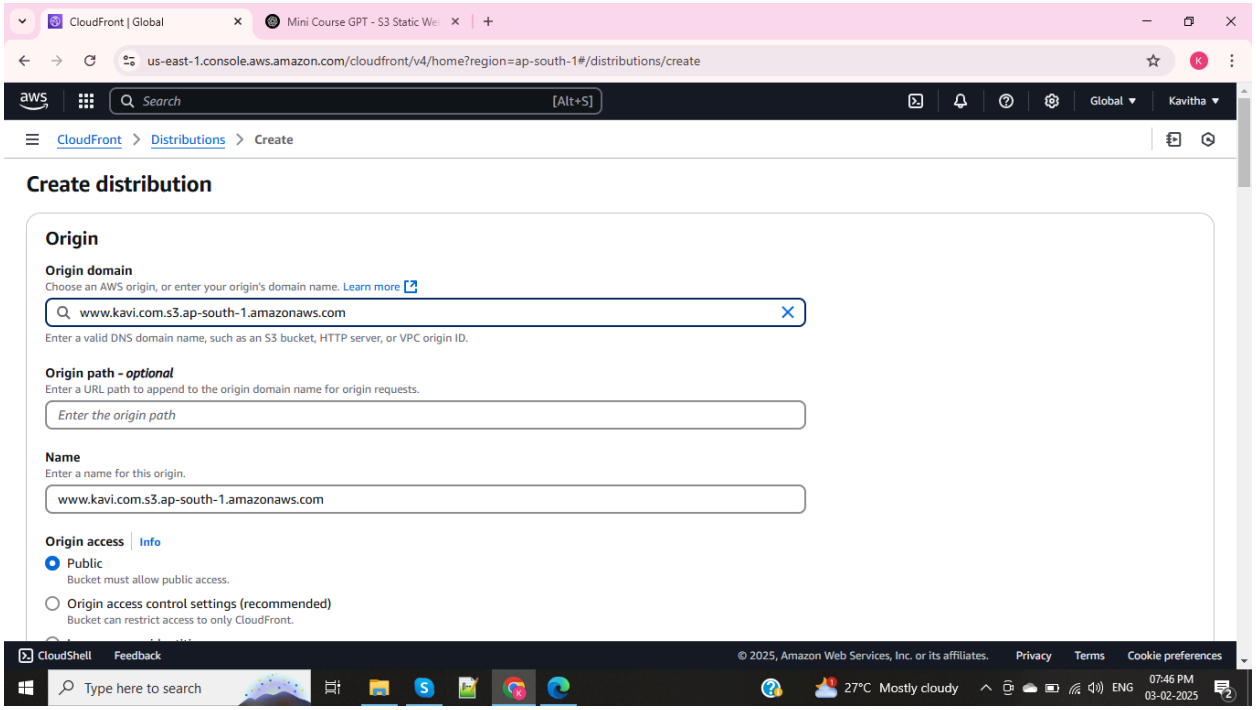
Step2: After creating bucket > upload a index.html file



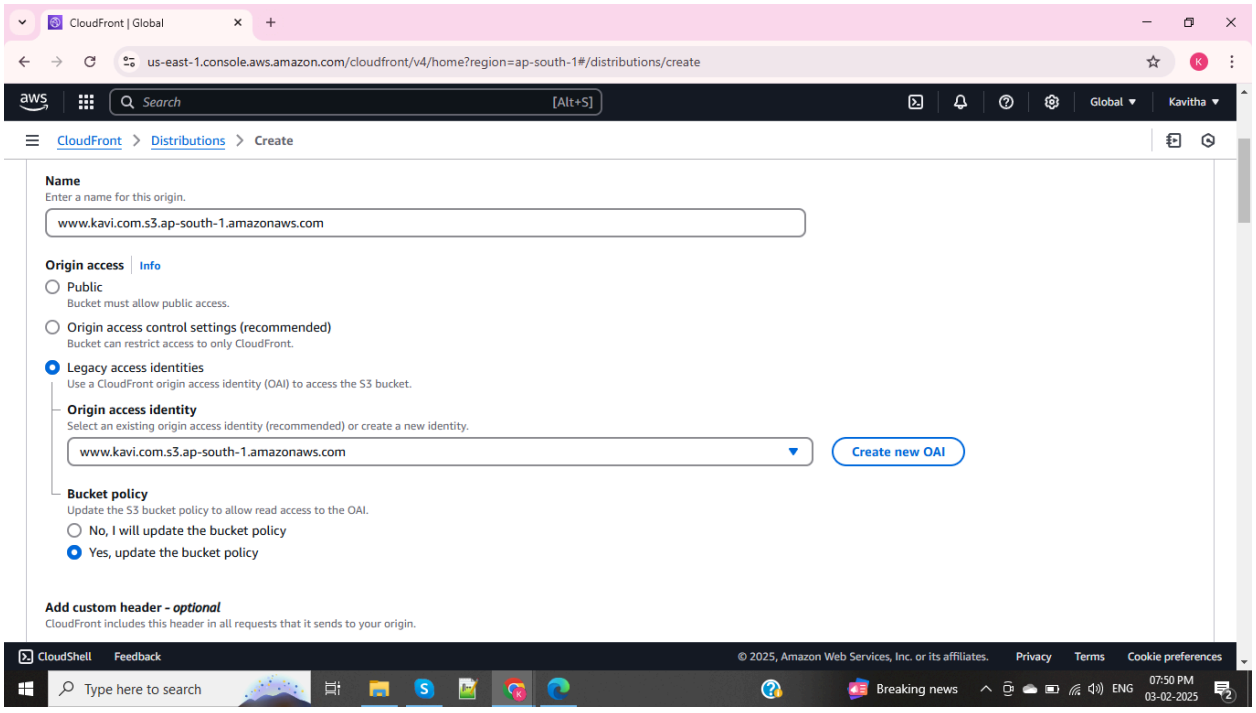
File uploaded successfully



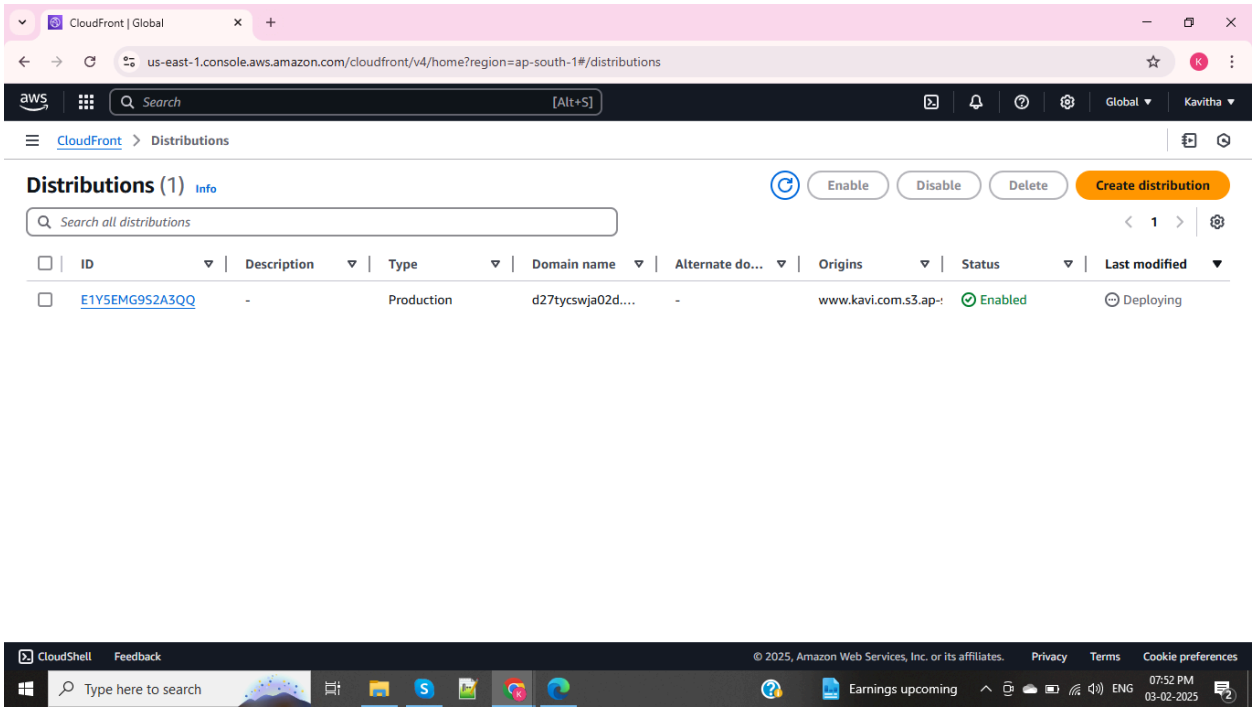
Step3: After upload a file, Go to Cloudfront > create distribution



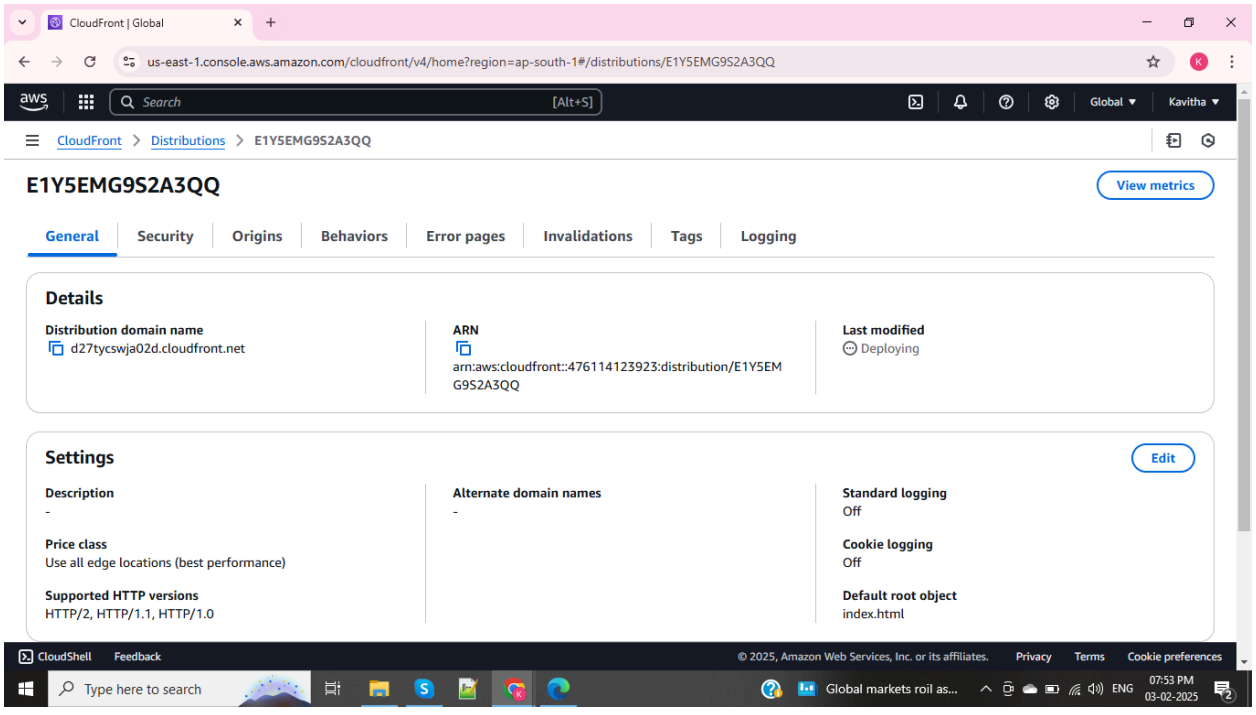
In origin name choose s3 bucket > origin access select legacy access identity (for allow only created user) and create new OAI > Bucket policy-select yes



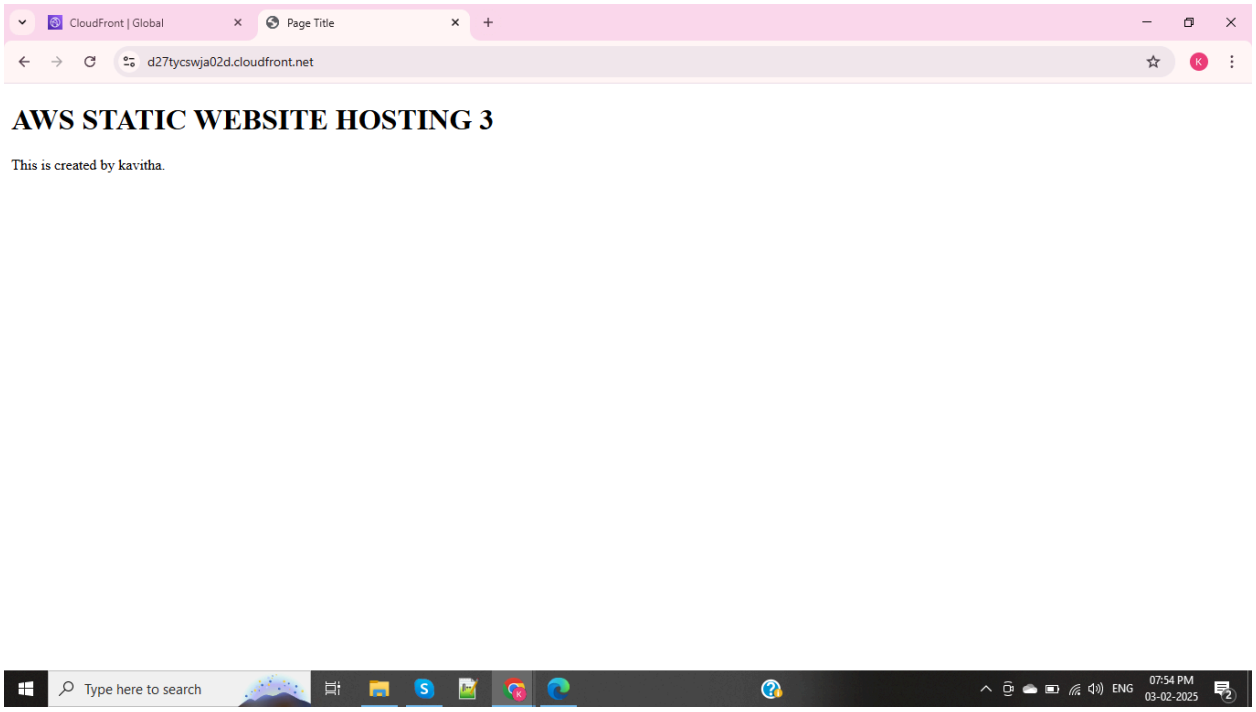
Distributions created successfully



Click the created Distributions > In General copy the distribution domain name & paste in browser



OUTPUT


CloudFront | Global
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