MODULE 5

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**Amazon CloudFront:** A fast content delivery network (CDN) service that securely delivers data, videos, applications, and application programming interfaces (APIs) to customers globally with low latency and high transfer speeds, all within a developer-friendly environment.

**AWS Direct Connect:** Direct Connect is a cloud service solution that provides the ability to establish a dedicated network connection from your on-premises environment to AWS. Using Direct Connect, you can establish private connectivity between AWS and your data center, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than internet-based connections.

**Caching:**Storing frequently requested data in edge locations so that it can be accessed more quickly.

**Content Delivery Network(CDN):**A system of distributed servers (network) that delivers pages and other web content to a user, based on the geographic locations of the user, the origin of the webpage, and the content delivery server.

**Distribution:** Instructs CloudFront where to get the information that it is caching in the edge locations and how to track and manage the content delivery.

**Edge Location:** A site where data can be stored for lower latency. Often, edge locations will be close to high-population areas that will generate high traffic volumes.

**Origin:**A complex type that describes the Amazon S3 bucket, Hypertext Transfer Protocol (HTTP) server (for example, a web server), or other server from which CloudFront gets your files.

CloudFront works with the edge locations that are part of the AWS Global Infrastructure. Together, they facilitate frequently requested data being cached in the edge locations. While the initial request prompts CloudFront to load the file into the cache, subsequent requests can be fulfilled much more quickly, and some of the work can be offloaded from the origin server.

Caching in edge locations is not permanent, and all cached data has a time to live (TTL), which is the length of time that it is cached for.

Lab 5

1. Open CloudShell from Developer Tools in Services
2. Created a bucket using the CloudShell Terminal in region us-east-1
3. Changed the Permission of the bucket to allow all public access
4. Enabled all ACLIs for the bucket
5. Added a custom script in object policy to grant public read access to the website
6. Uploaded a website script in the bukcet, and granted it public-read access
7. Enabled Static Website hosting
8. Services > Content and Network Delivery > CloudFront
9. Created a CloudFront distribution with endpoint os the S3 bucket, set HTTP and HTTPS as the Viewer Protocol Policy, and disabled security protections.
10. Tested the CloudFront distribution by uploading a custom image in the bucket and accessing it on the website hosted on CloudFront.