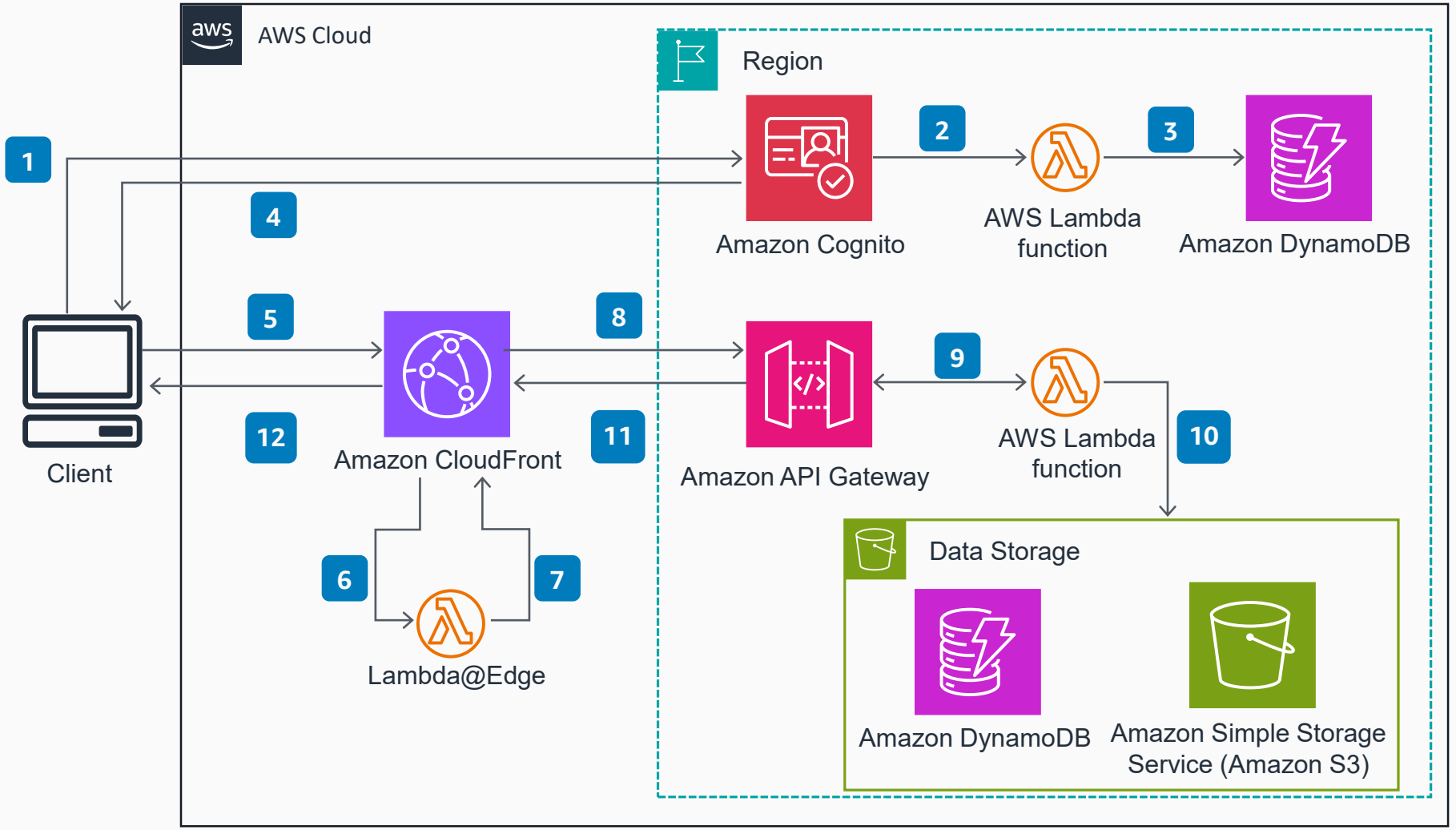
Guidance for Moving Your Paywall to the Edge on AWS

This architecture diagram demonstrates how to serve content and implement paywall logic at the edge with a Lambda@Edge feature of Amazon CloudFront.



1. Client authenticates using an Amazon Cognito user pool (or another identity provider).
2. During authentication, the pre-token generation process for **Cognito** invokes an AWS Lambda function.
3. **Lambda** function looks up the user's subscription information in Amazon DynamoDB and adds it to the JSON Web Token (JWT) as a custom claim.
4. **Cognito** returns JWT to the Client, which stores it in a cookie to authorize content requests.
5. Client initiates a request for content, such as a news article, served by Amazon CloudFront. To authorize the request, the client includes the JWT in a cookie.
6. **CloudFront** invokes a Lambda@Edge function to update the viewer request headers based on whether the user is authorized to view the content.
7. Lambda@Edge validates the JWT and adds a custom header to the request indicating whether user has access to the content based on subscription's data in the JWT.
8. **CloudFront** creates a cache key based on the custom header added in Step 7. If content is not found in cache, it sends an origin request to Amazon API Gateway; otherwise, it skips to Step 12.

Reviewed for technical accuracy August 18, 2023

AWS Reference Architecture

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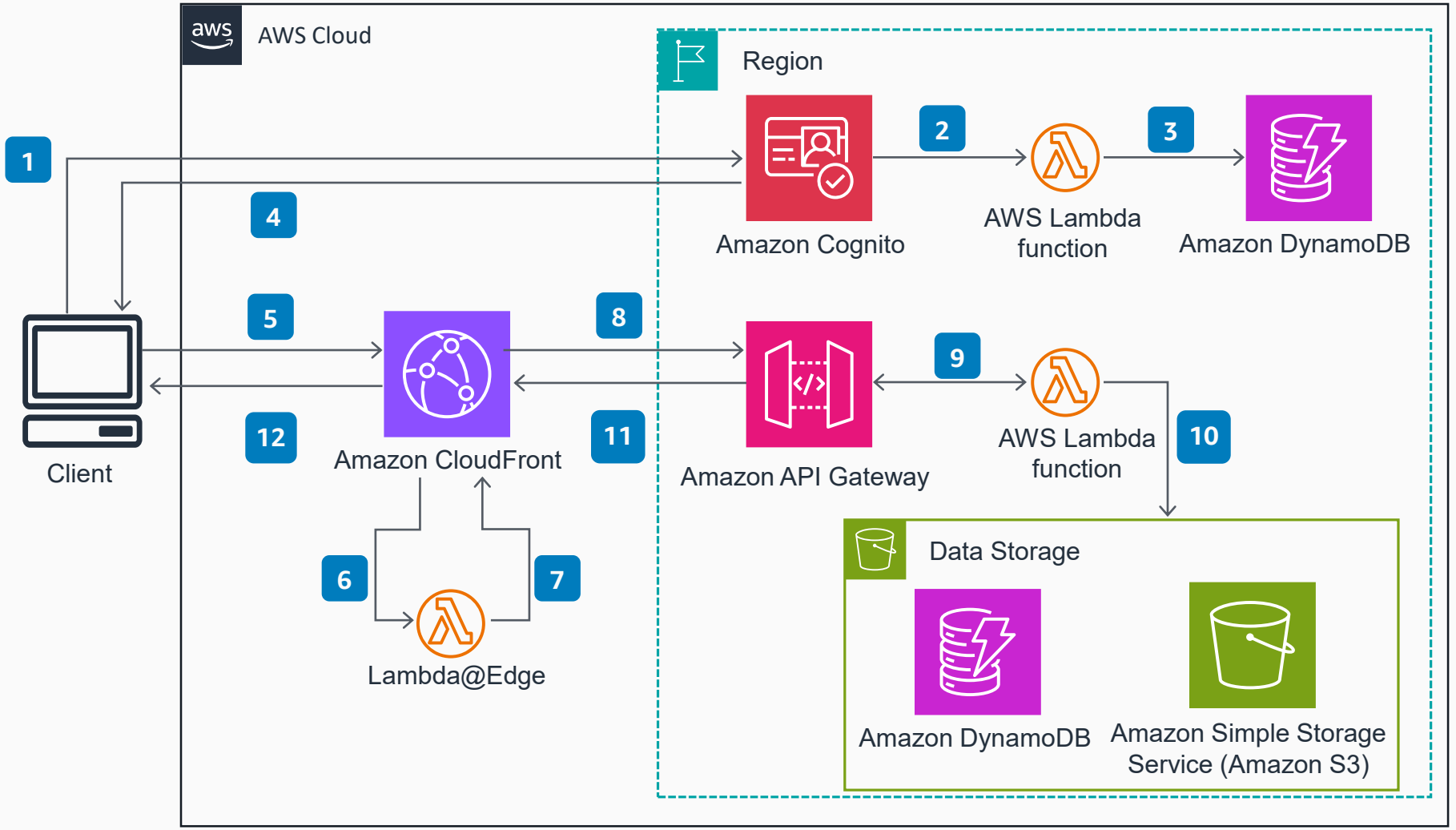

9 **API Gateway** invokes a **Lambda** function to retrieve content.

10 **Lambda** function examines the request header, added in Step 7, to determine if the user has a subscription. If the user has a subscription, it retrieves content from Amazon Simple Storage Service (Amazon S3) or **DynamoDB** based on an identity provided in the request URL. If the user does not have a subscription, the function returns a message that the user is not authorized to view the content.

11 **API Gateway** returns the response generated by the **Lambda** function, which will either be the full content or a message saying that the user is not authorized to access the item.

12 After serving content to the client, **CloudFront** caches it using a key that includes the custom header added in Step 7, thus enabling different versions of the content to be cached for subscribers and non-subscribers.

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