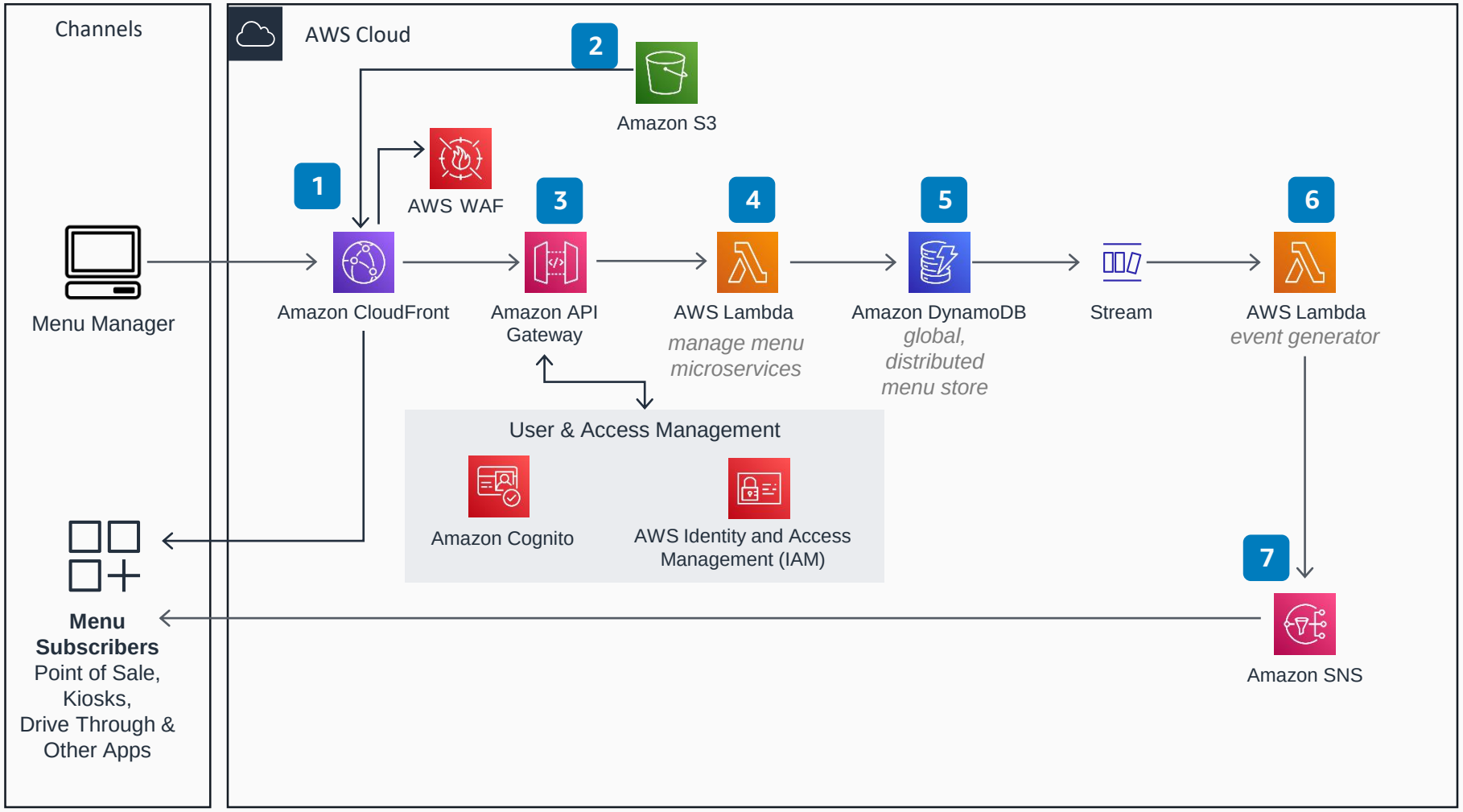
Guidance for Restaurant Menu Maintenance on AWS

Real-time architecture for menu and price updates in restaurants

This architecture enables near real-time publishing of menu and price changes for applications subscribed to these changes in restaurants.



1. All services including: menu create, menu update, and menu retrieve are front-ended by **Amazon CloudFront** for performance with **AWS WAF** (a web application firewall)**.** This protects the content from common exploits.

2. Images and static objects are stored in **Amazon Simple Storage Service** (Amazon S3) for cost and performance efficiency.

3. All APIs are hosted as edge-optimized APIs on **Amazon API Gateway**. **Amazon Cognito** is used for security and AWS Identity and Access Management (IAM) is used for authentication. Caching on **API Gateway** helps improve performance.

4. The actual functionality for managing the menu are realized using **AWS Lambda**

5. **Amazon DynamoDB global tables** are used to store the menu data and changes to the menu are propagated using a **DynamoDB** stream**.** This enables a multi-region active-active data store.

6. **Lambda** is used to create an event generator that listens to events on **DynamoDB** streams to build and emit menu create, menu update, and menu delete events.

7. Menu change events are published on **Amazon Simple Notification Service** (Amazon SNS) where the different applications can subscribe to changes using filter policies for events of interest.

AWS Reference Architecture