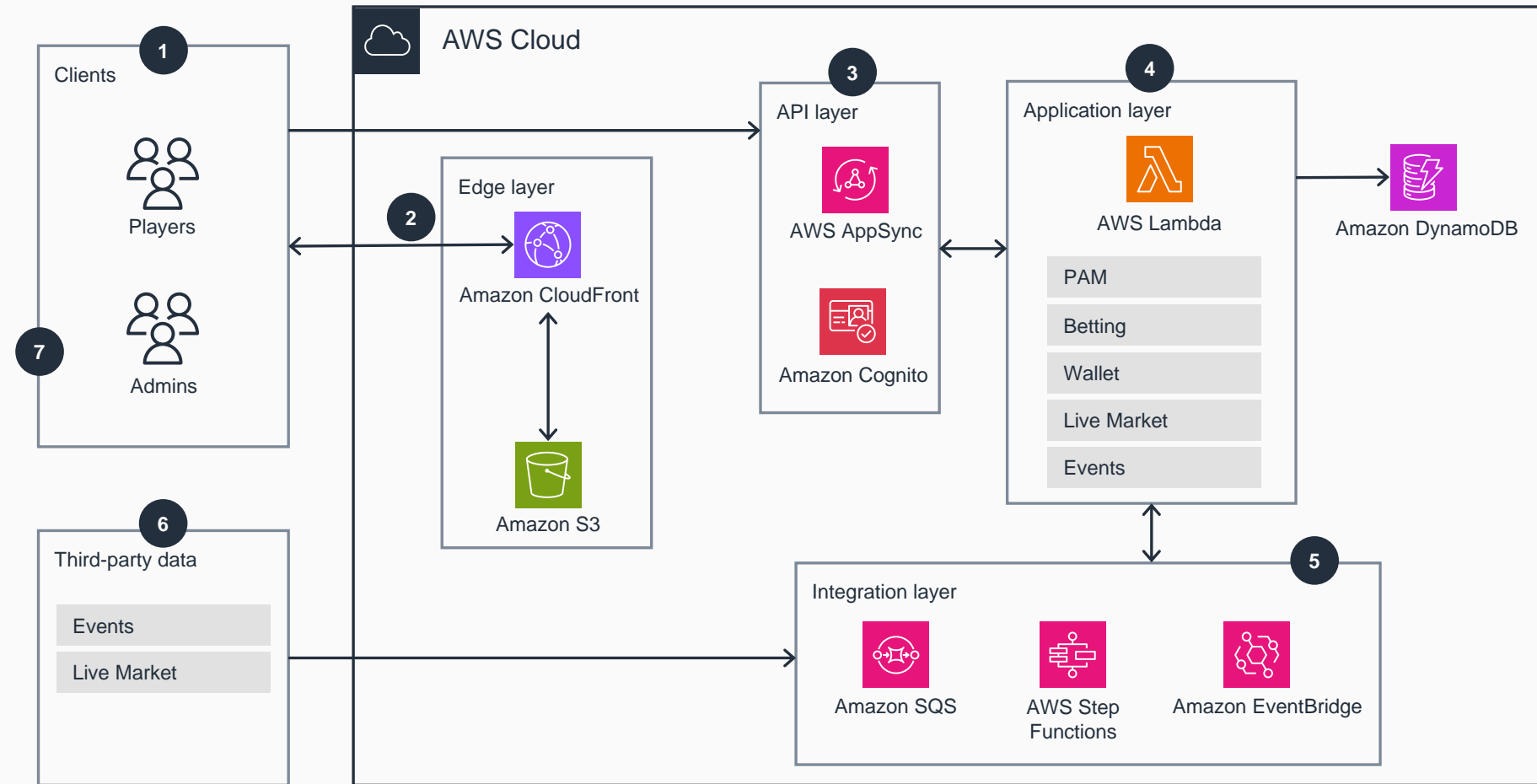


# Guidance for Building an Event-Driven Sportsbook on AWS

This architecture diagram illustrates how sports betting operators can build a serverless, event-driven sportsbook on AWS.



- 1 Players connect to the application through a web user interface.
- 2 An **Amazon CloudFront** distribution serves the user interface. **Amazon Simple Storage Service (Amazon S3)** provides the origin for static content.
- 3 **AWS AppSync** resolves all queries, mutations, and subscriptions for both the front-end and back-end using GraphQL APIs. **Amazon Cognito** provides secure access to various APIs and data sets.
- 4 **AWS Lambda** functions provide the application layer for business processes like player account management (PAM), betting, wallet, trading, live market applications, and events. **Amazon DynamoDB** stores user and market data, which the application uses to power the application.
- 5 **Amazon Simple Queue Service (Amazon SQS)** and **Amazon EventBridge** provide notifications about state changes across the system such as wallet deposits or the end of sporting events. **AWS Step Functions** orchestrates state changes between different parts of the system.
- 6 Third-party data providers push data streams containing fixture updates and live market odds to **EventBridge**. The application layer updates players' views through subscription.
- 7 **AWS AppSync** allows admins to suspend markets in near real-time, immediately stopping players from placing bets on selected markets to reduce risk exposure.

