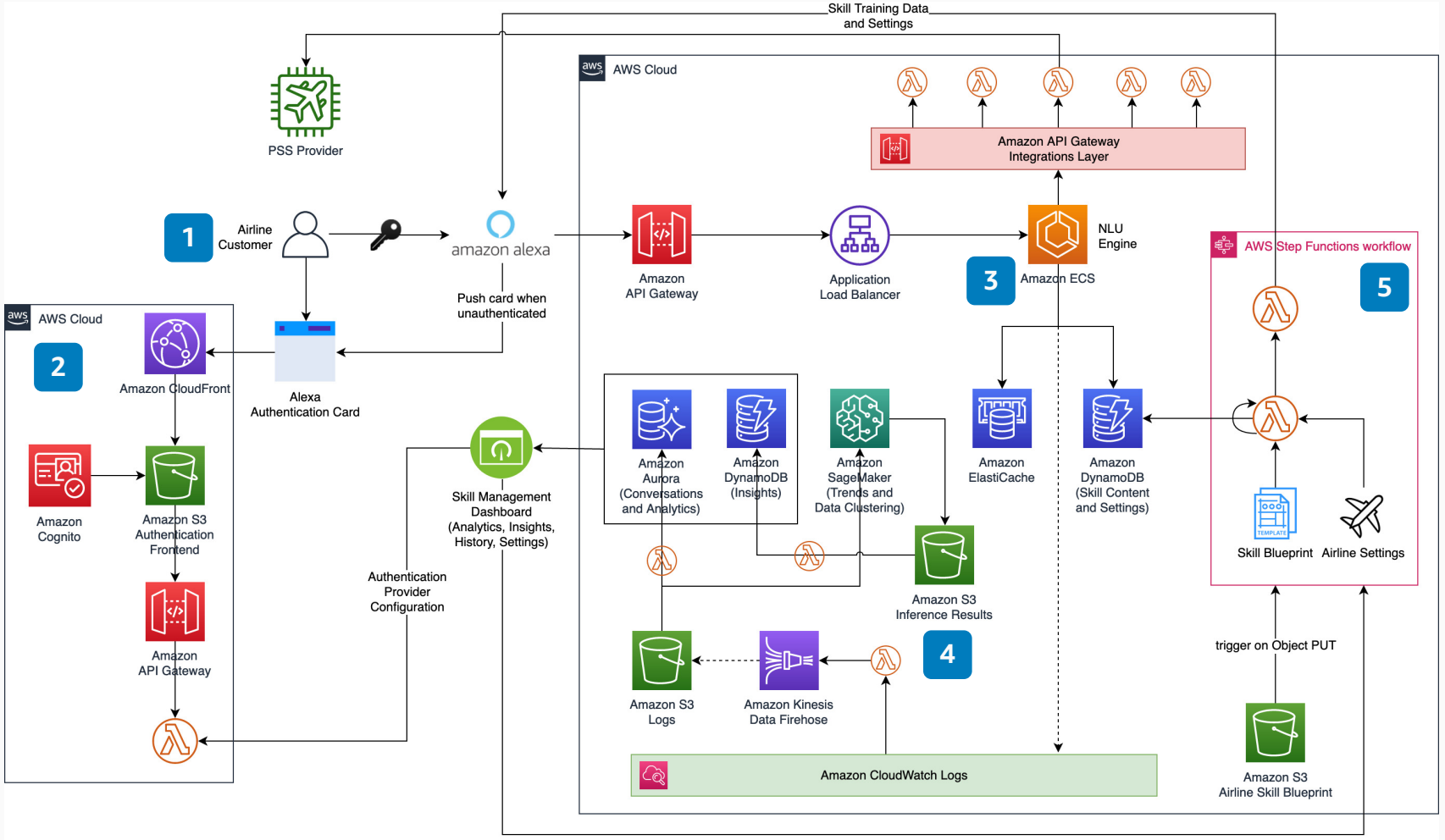
# Amazon Alexa Skill for Airlines

## Alexa Skill for Booking and Managing Air Travel

NLX used Amazon Web Services (AWS) to implement an Alexa Skill for airlines that enables travelers to check in, book seat upgrades, check their flight status, and more, all done seamlessly via voice. The implementation includes insights, analytics, and integrations with the airline's systems.




**1** A traveler enables the airline's **Alexa Skill** in their **Amazon Alexa App**. During their first interaction with the skill, **Alexa** prompts the customer to authenticate and pushes an authentication card to the **Amazon Alexa App**.

**2** The authentication flow is built as a serverless website deployed using **Amazon S3**, **Amazon API Gateway**, and an **AWS Lambda** function. The **AWS Lambda** function is responsible for retrieving authentication provider information for the airline, to be used by **Amazon Cognito** to authenticate the customer. **Amazon CloudFront** is used to ensure optimal network latency across the globe.

**3** Use **Amazon API Gateway**, **Application Load Balancer**, and **Amazon ECS** to deploy your Natural Language Understanding (NLU) engine at scale, while making it resilient to failure and minimizing response times. Using **Amazon DynamoDB** and **Amazon ElastiCache,** you get low-latency, easy access to the skill's content and the conversation state.

**4** **Amazon CloudWatch, Amazon Kinesis Data Firehose,** and **Amazon S3** provide a scalable solution for capturing and storing application logs and events. With **AWS Lambda**, you can keep your analytics up-to-date, stored in **Amazon Aurora**. Finally, you can use **Amazon SageMaker** to build AI/ML models for spotting trends and insights across conversations, which you can store in **Amazon DynamoDB** for easy consumption by your reporting dashboards.

**5** Using **Amazon S3** PUT triggers and **AWS Step Functions**, you can orchestrate a workflow that updates your application content and your **Alexa Skill** configuration every time you update your application's content, settings, or training data.

As conversational AI technology evolves, consumer demands evolve as well, to the extent where a multi-channel digital strategy is no longer optional. This reference architecture helps airlines deliver a secure, integrated experience for booking and managing air travel, seamlessly via Amazon Alexa. The solution can integrate with PSS providers like Amadeus, Sabre, and Navitaire, making it suitable for any airline to adopt.

*Reviewed for technical accuracy March 10, 2021*

**AWS Reference Architecture**