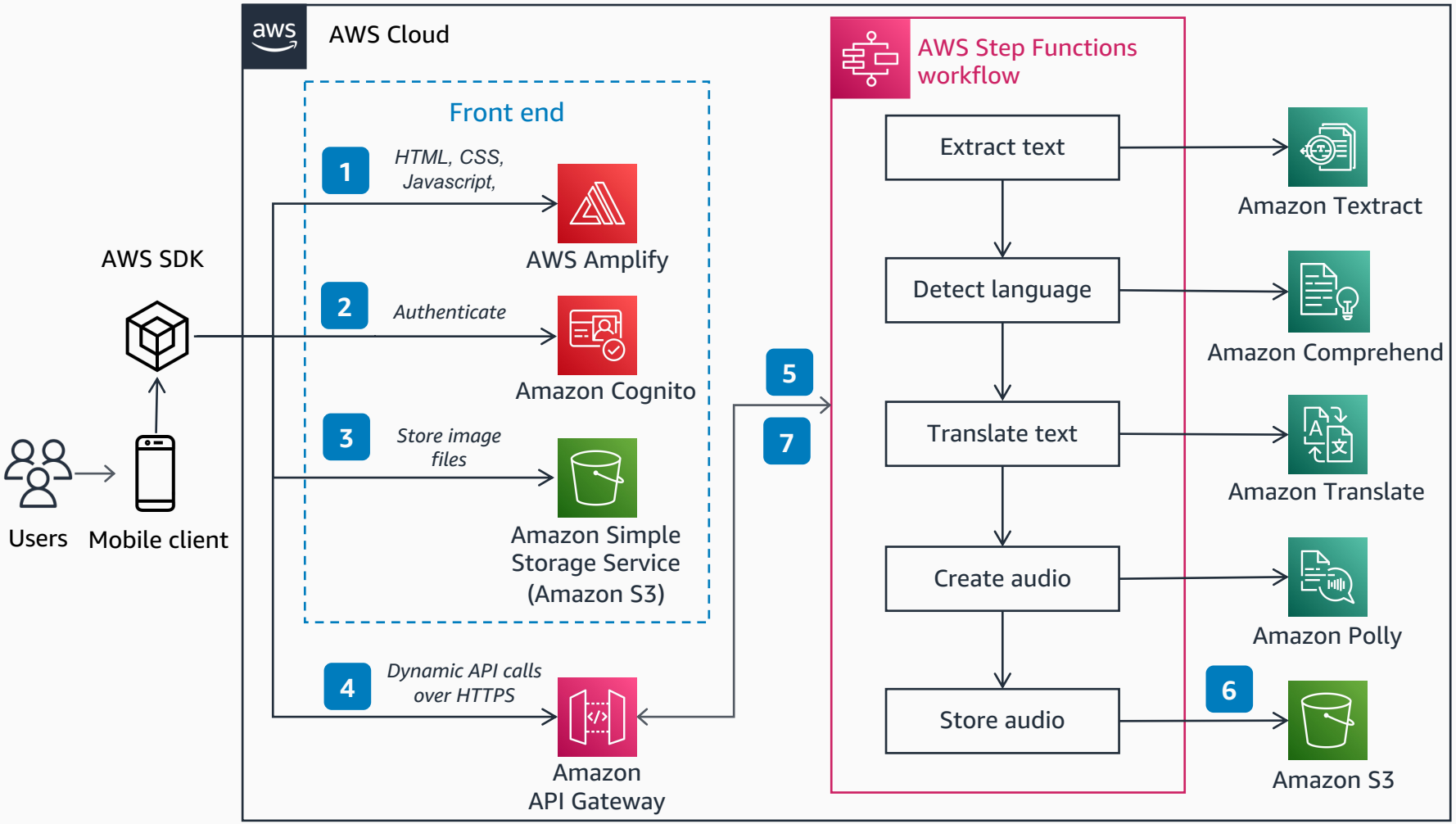
# ReadForMe

The ReadForMe web app utilizes the AWS Cloud to enable the visually-impaired to hear paper documents using an event-driven serverless architecture using AI services.




1. **AWS Amplify** distributes the ReadForMe web app, consisting of HTML, JavaScript, and CSS, to end users' mobile devices.
2. The **Amazon Cognito** identity pool grants temporary access to the **Amazon S3** bucket.
3. The user uploads an image file to the **Amazon S3** bucket using **AWS SDK** through the web app.
4. The ReadForMe web app invokes the backend AI services by sending the **Amazon S3** object key in the payload to **Amazon API Gateway**.
5. **API Gateway** instantiates an **AWS Step Functions** workflow. The state machine orchestrates the Artificial Intelligence /Machine Learning (AI/ML) services **Amazon Textract**, **Amazon Comprehend**, **Amazon Translate**, and **Amazon Polly**, using **AWS Lambda** functions.
6. The **AWS Step Functions** workflow creates an audio file as output and stores it in **Amazon S3** in MP3 format.
7. A pre-signed URL with the location of the audio file stored in **Amazon S3** is sent back to the user's browser through **API Gateway**. The user's mobile device plays the audio file using the pre-signed URL.

*Reviewed for technical accuracy January 25, 2022*



**AWS Reference Architecture**