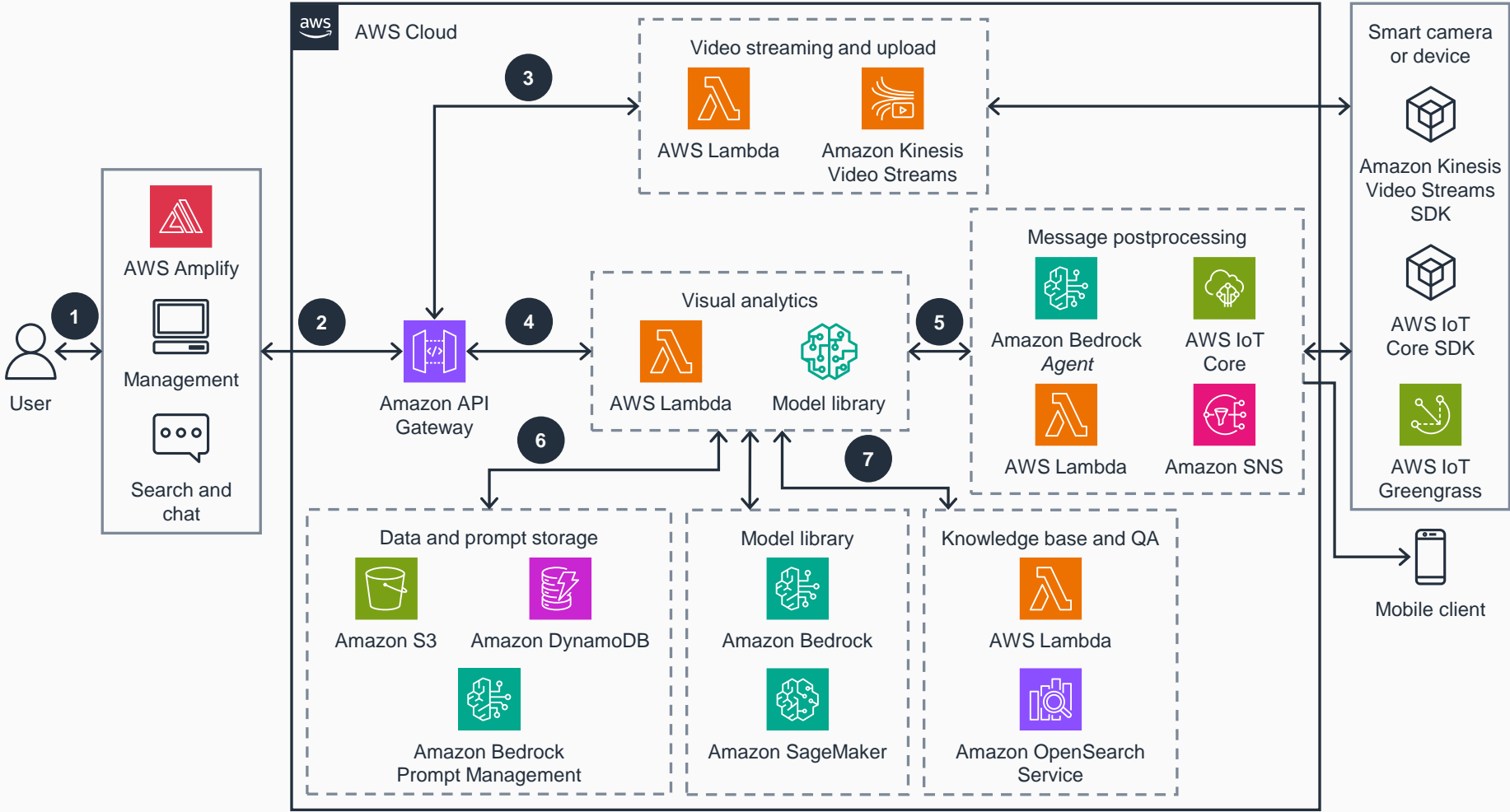


Guidance for Multimodal Video Analytics of Smart Product Subscription Services on AWS

This architecture diagram shows how to integrate generative AI with your smart connected products to enhance video analytics, enabling you to offer value-added subscription services and enhance user engagement.



- 1 Ingest data, edit prompts, perform analytics, and set postprocessing actions on a website hosted on **AWS Amplify**.
- 2 The website passes the request to and receives a response from **Amazon API Gateway**.
- 3 **API Gateway** directs a request to the video-streaming-and-upload component, which integrates video data from a smart camera (using **Amazon Kinesis Video Streams**) or image data (from **AWS IoT Core**). Use **AWS IoT Greengrass** to manage and deploy machine learning models to edge devices.
- 4 **API Gateway** forwards the analysis request, which includes video frames and prompts, to the visual analytics component. This component, equipped with an **AWS Lambda** function and a model library, processes the request and returns the result from the language model to **API Gateway**. The model library includes the foundation models on **Amazon Bedrock** and an open-source model hosted on **Amazon SageMaker**.
- 5 If you specify a postprocessing action through natural language input, the LLM agent, delivered by an **Amazon Bedrock** agent or **Lambda**, will implement it through various capabilities hosted in **Lambda** functions. One example includes sending SMS messages to mobile clients or notifications to edge devices.
- 6 You can store the videos in **Amazon Simple Storage Service (Amazon S3)**. You can also store video metadata and fine-tune prompts on **Amazon DynamoDB**. The prompts can also be managed by **Amazon Bedrock Prompt Management**.
- 7 You will have the option to save intermediate results of video analysis to **Amazon OpenSearch Service** through a **Lambda** function. Then, on the website, you can use an LLM through **Amazon Bedrock** to conduct question-and-answer sessions based on the video content.

