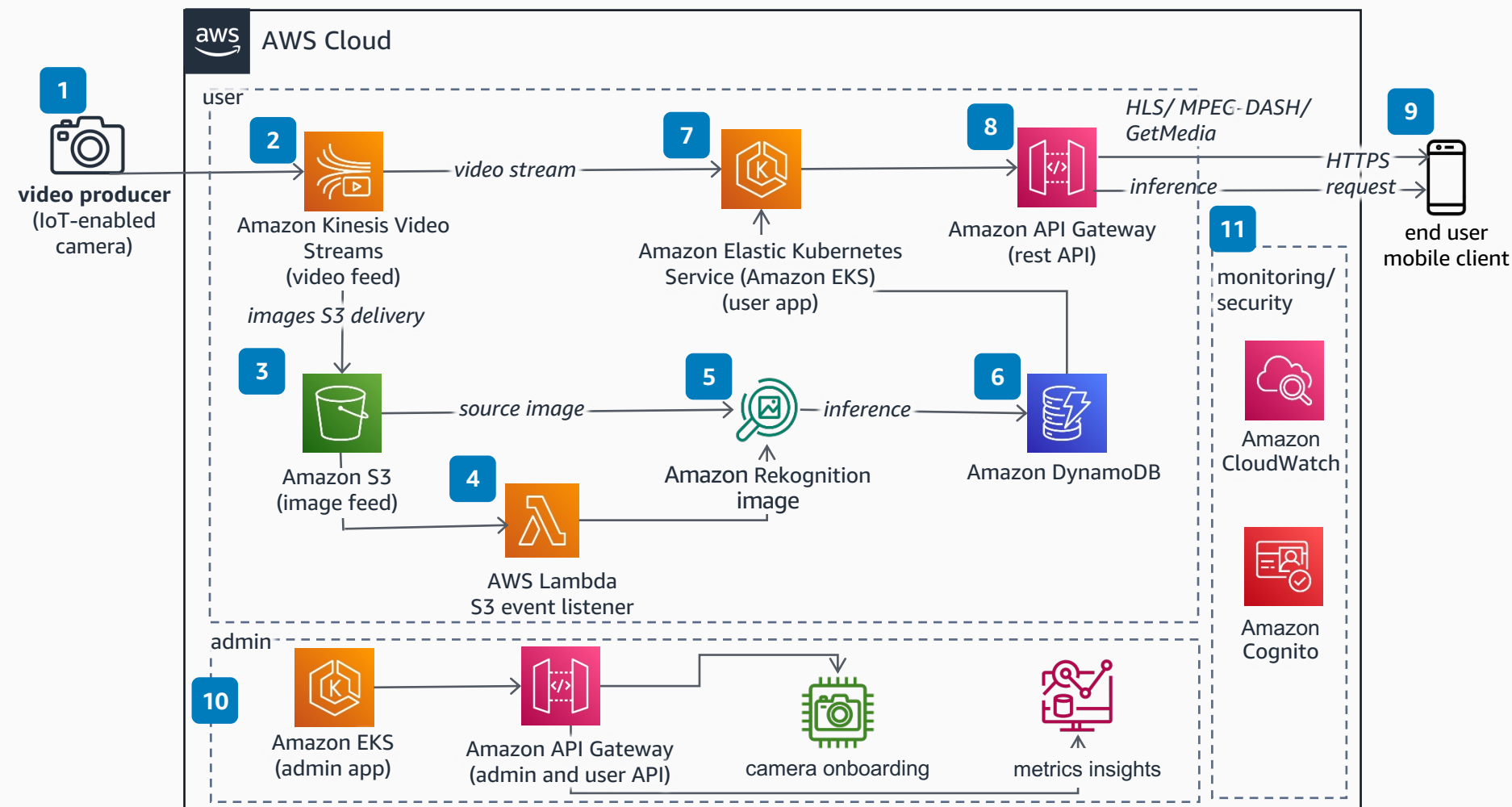


Camera as a Service

This architecture shows how you can use Internet of Things (IoT)-enabled cameras to generate live video feed and machine learning inference that can be consumed by an end user in near real-time.



- 1 Generate video feed using **Amazon Kinesis Video Streams Producer** libraries.
- 2 Ingest live video feed to **Amazon Kinesis Video Streams**.
- 3 Live feed is converted into images through an on-demand or automated feature and sent to **Amazon Simple Storage Service (Amazon S3)**.
- 4 An **Amazon S3** write event cues an AWS Lambda function, and the image is sent to **Amazon Rekognition** to generate inference.
- 5 The inference and metadata are stored in **Amazon DynamoDB**.
- 6 User APIs fetch the inference.
- 7 The user app consumes live feed from **Amazon Kinesis Video Streams**, fetches the inference from **Amazon DynamoDB**, and exposes the live feed using a REST API.
- 8 **Amazon API Gateway** exposes the API for video feed and Inference.
- 9 The end user consumes two APIs exposed by **Amazon API Gateway**. The first API provides video feed using HTTP Live streaming (HLS), [MPEG/DASH](#), or GetMedia streaming. The second video feed provides the machine learning inference.
- 10 The admin app is used for governance, managing administrative APIs, user APIs, camera onboarding, metrics, insights, and so on.
- 11 Use **Amazon CloudWatch** to store logs and metrics generated by complete stack (applications, infrastructure, network, and services). Use **Amazon Cognito** to secure API feed generated by **Amazon API Gateway**.



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AWS Reference Architecture