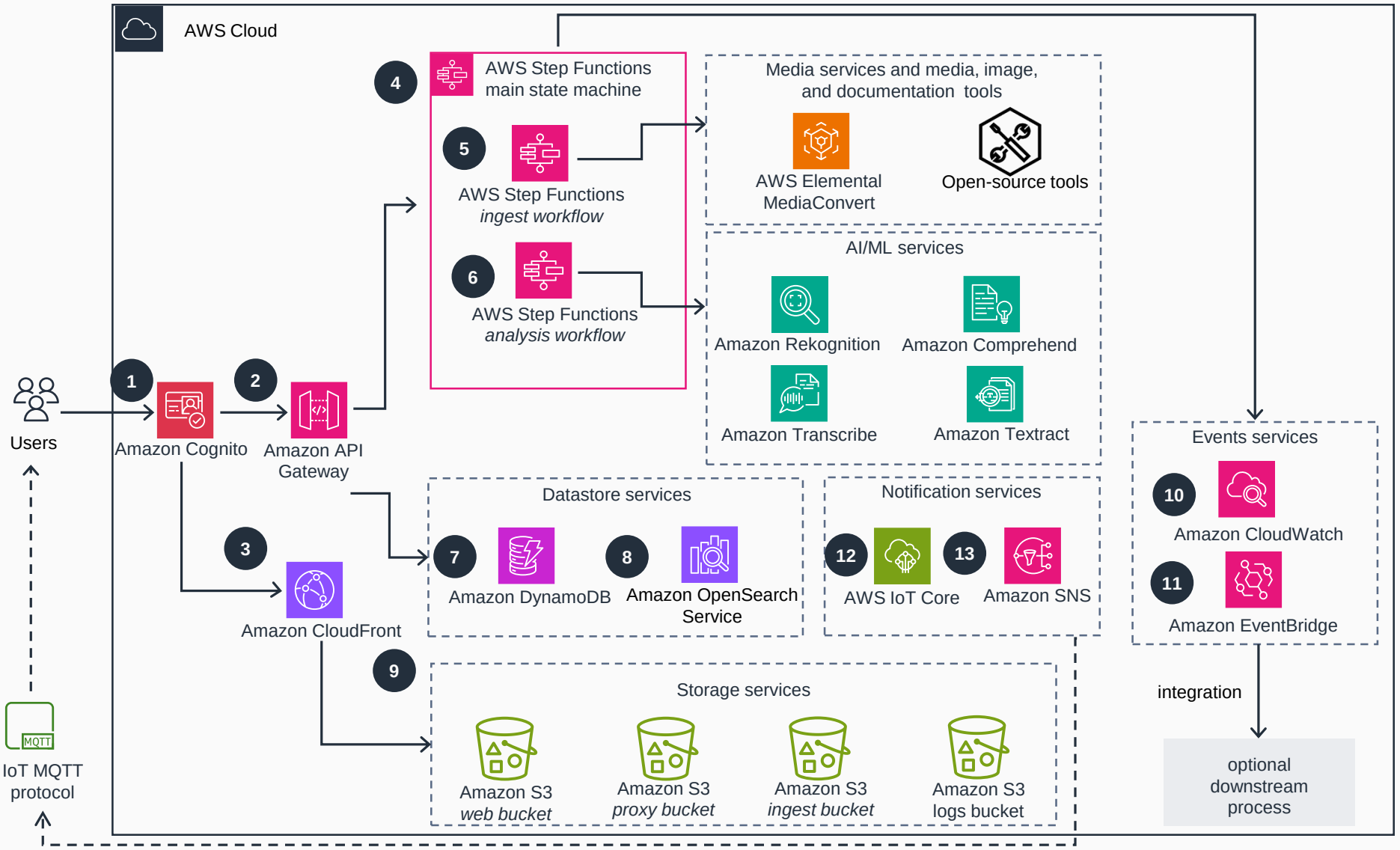
# Guidance for Media2Cloud on AWS

This architecture diagram shows how you can extract key details from your media files in your AWS accounts. This slide shows details on steps 1-8. For more on steps 9-13, go to the next slide.




1. An **Amazon Cognito** user pool to provide a user directory.
2. An **Amazon API Gateway** RESTful API endpoint, which is configured to use **AWS Identity and Access Management** (IAM) authentication.
3. An **Amazon CloudFront** distribution that hosts the web application artifacts, such as minimized JavaScript files and graphics stored in the web bucket.
4. An **AWS Step Functions** main state machine which serves as the entry point to the backend ingestion and analysis workflows.
5. An **Step Functions** ingestion sub-state machine that orchestrates the ingestion process by media file type and generates proxies for ingested media. It uses **AWS Elemental MediaConvert** for video and audio files and open-source tools for image files and documents.
6. A **Step Functions** analysis sub-state machine that is responsible for the analysis process. It consists of **Step Functions** that run analysis jobs with **Amazon Rekognition**, **Amazon Transcribe**, **Amazon Comprehend**, and **Amazon Textract**.
7. **Amazon DynamoDB** tables to store artifacts generated during the ingestion and analysis processes, such as overall status, pointers to where intermediate files are stored, and state machine run tokens.
8. An **Amazon OpenSearch Service** cluster, which stores ingestion attributes and machine learning metadata, and facilitates your search and discovery needs.

*Reviewed for technical accuracy December 15, 2023*



**AWS Reference Architecture**

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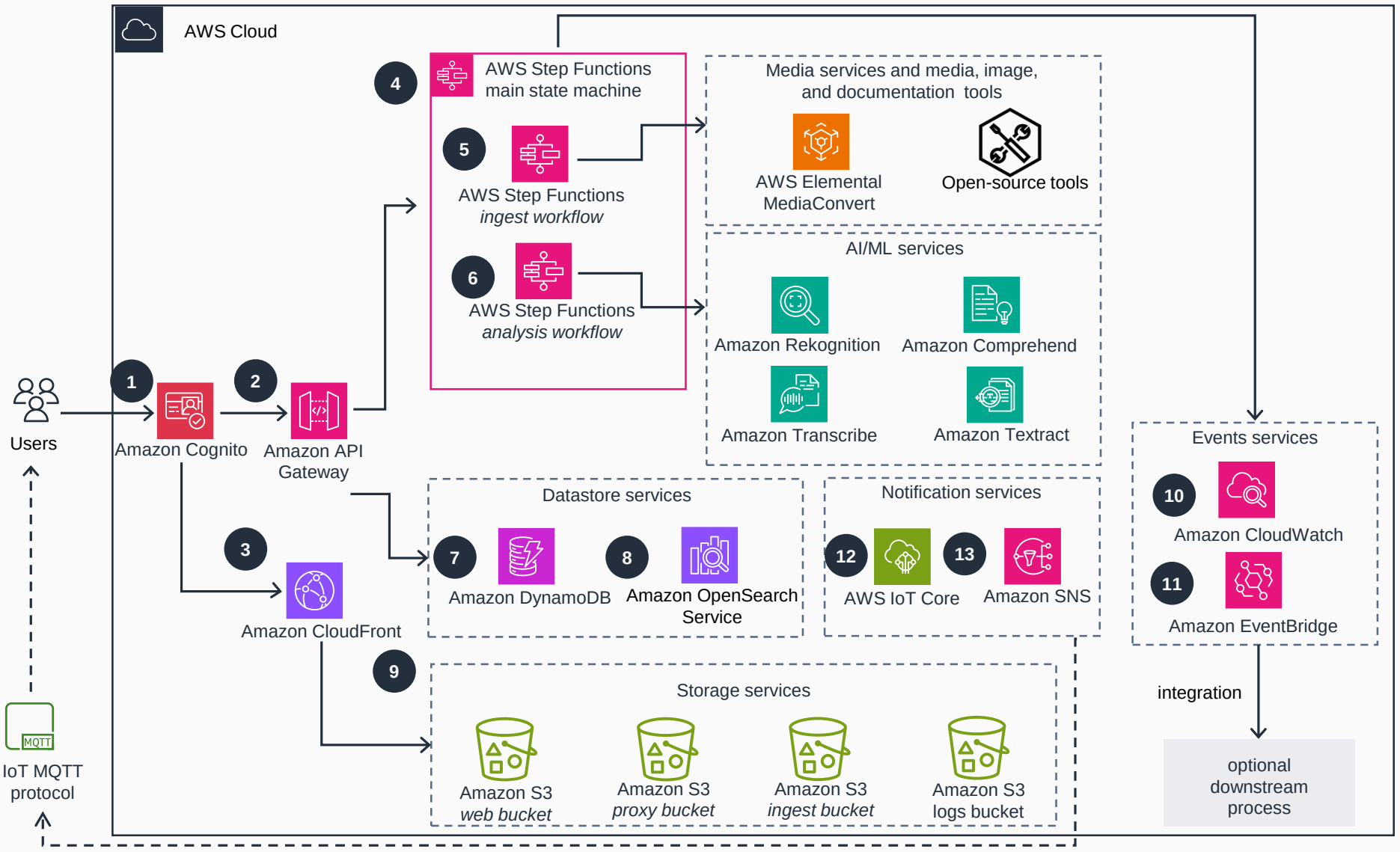
Steps 9-13




9 Four **Amazon Simple Storage Service** (Amazon S3) buckets store: uploaded content, file proxies that the Guidance generates during ingestion, static web application artifacts, and access logs for services used.

10 **Amazon CloudWatch** event rules that are logged when specific tasks undergo state changes.

11 **Amazon EventBridge** used by an internal queue management system where the backlog system notifies workflows (state machines) when a queued artificial intelligence and machine learning (AI/ML) request has been processed.

12 An **AWS IoT Core** topic that allows the ingestion and analysis workflows to communicate with the front-end web application asynchronously through publish or subscribe MQTT messaging.

13 **Amazon Simple Notification Service** (Amazon SNS) topics to allow **Amazon Rekognition** to publish job status in the video analysis workflow, and to support custom integration with your system.

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**AWS Reference Architecture**