Video Features of Rekognition

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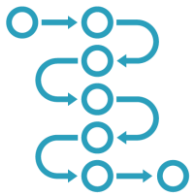
Rekognition and Video Processing

All of the image processing features

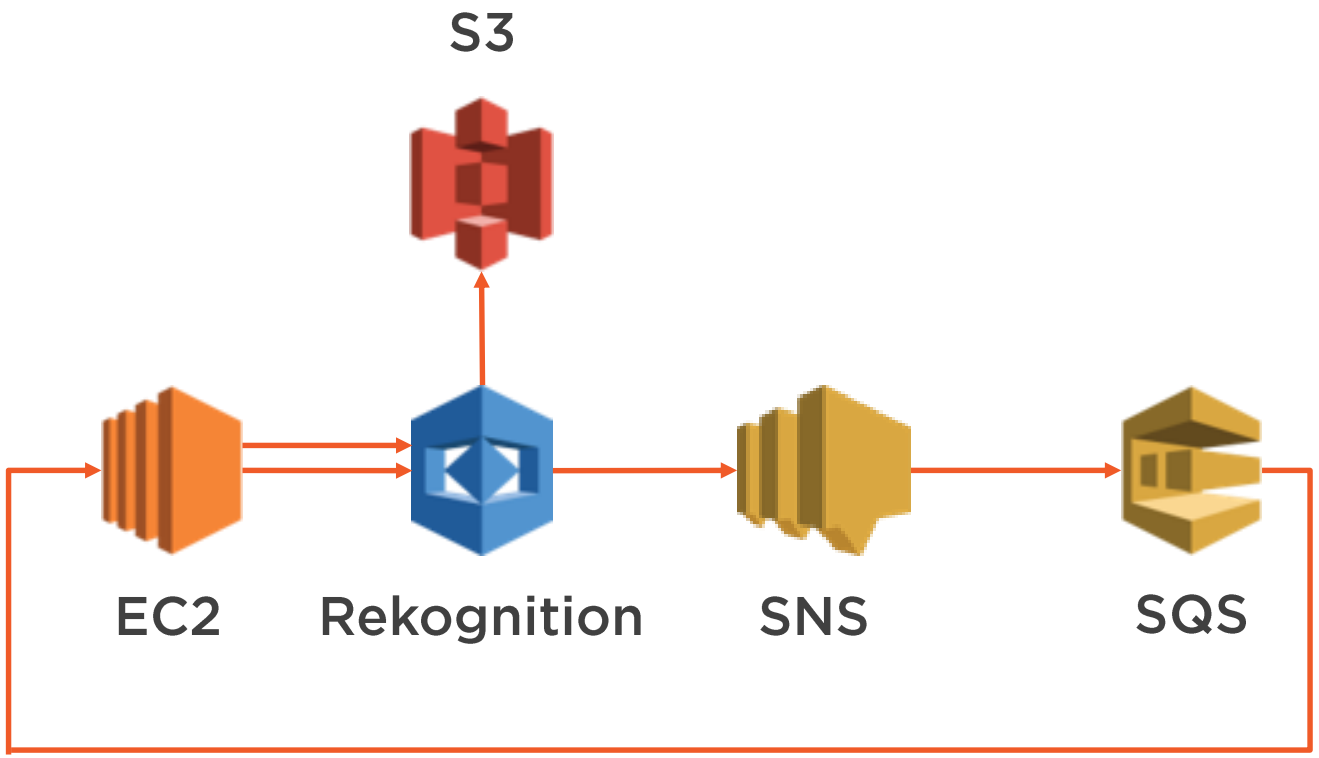
Works with Kinesis for real time video processing

Person tracking and pathing

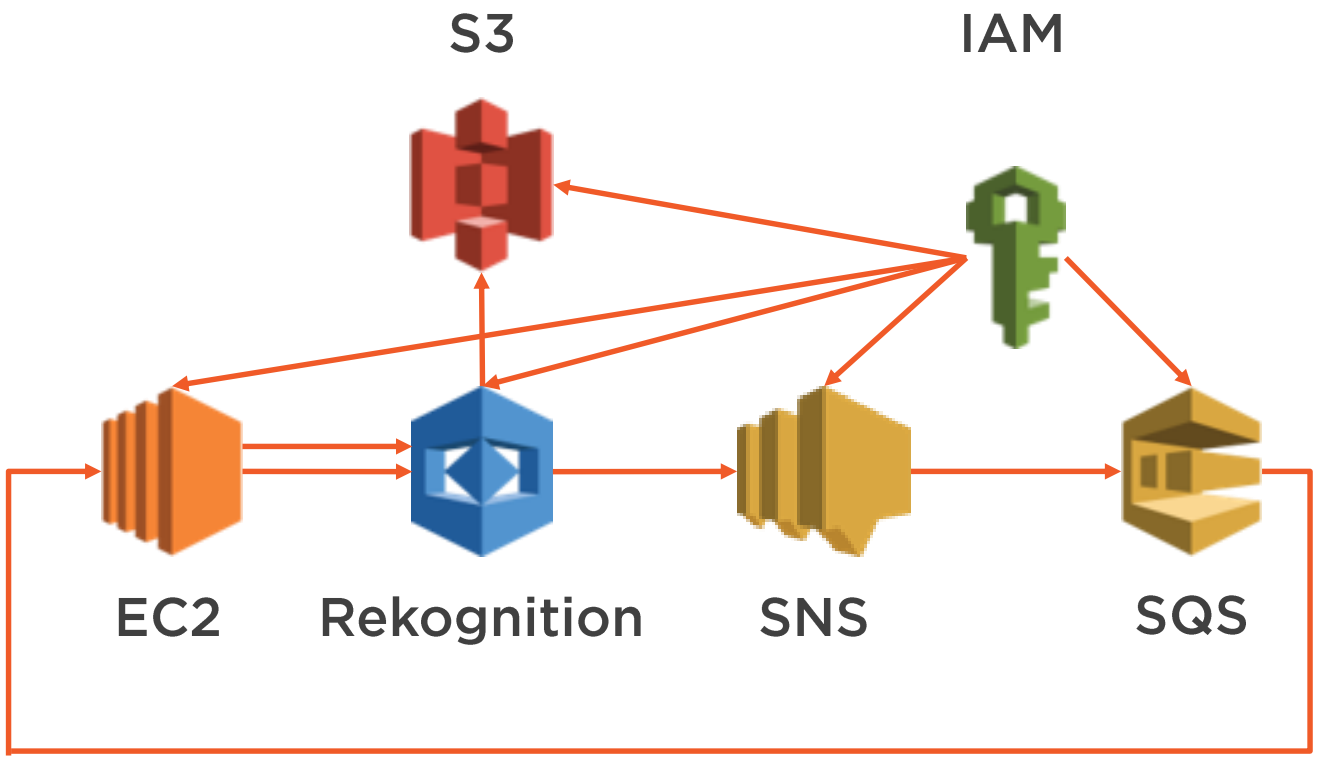


Asynchronous and event driven

How a Video is Processed



How a Video is Processed



Setting Up for Video Processing

IAM has both users and roles

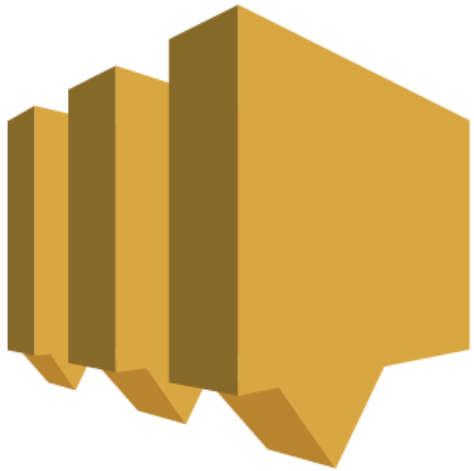
Create a user and assign rights

Add that user to Cloud9 EC2

Create a role for Rekognition Service

Add a policy for SNS access

Setting Up for Video Processing



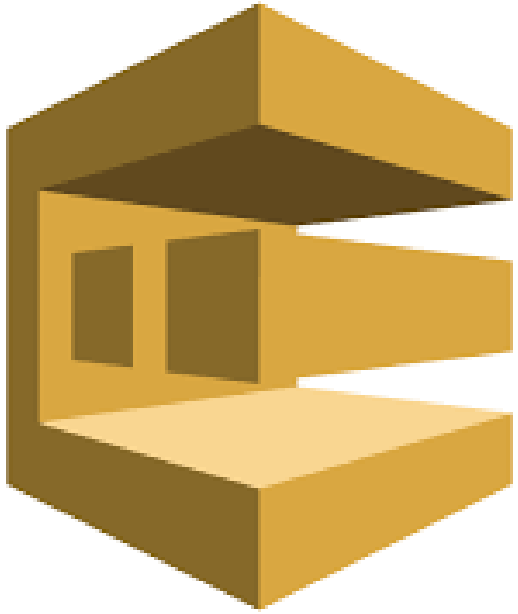
Simple Notification Service

Trigger many different events

Rekognition publishes to SNS topic

Create a topic for Rekognition to publish

Setting Up for Video Processing



Simple Queue Service

- Stores messages with limited lifetime
- Polled for processing completion

Create a queue and allow SNS access

Connect with SNS topic

Setting Up for Video Processing

Cloud 9 is a special instance of EC2

Update the credentials file

- Access Key
- Secret Key

Video Setup Review

SNS – Create a topic

SQS – Create queue and subscribe to topic

IAM – Create a role for Rekognition

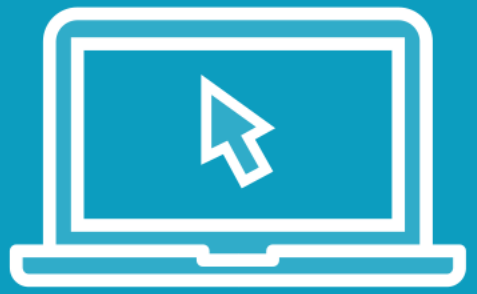
- Add inline policy for topic

IAM – Create user

- Add S3, SNS, and SQS
- Add inline policy for role

EC2 – Add user profile

Demo



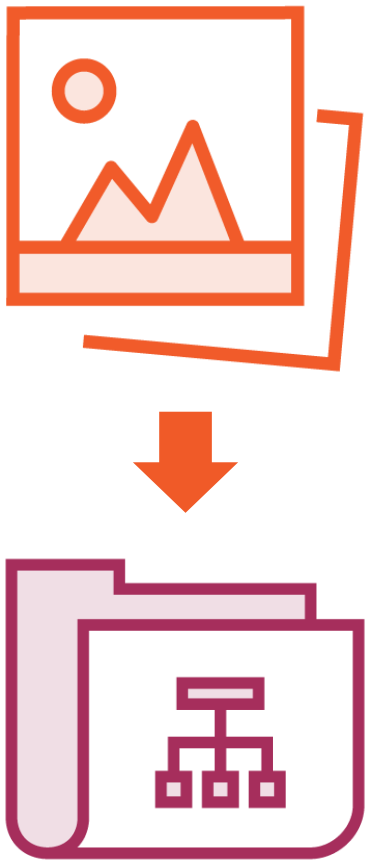
AWS Command Line Interface (CLI)

Issue command to start video analysis

Fetch results from Rekognition

Video Object and Scene Detection

Object and Scene Detection



Video in S3 bucket

Process objects and scenes at timestamps

- Start analysis process
- Monitor SQS for completion
- Fetch output
- Save output to JSON file

```
package com.amazonaws.samples;
import com.amazonaws.services.rekognition.AmazonRekognition;
import com.amazonaws.services.rekognition.AmazonRekognitionClientBuilder;
import com.amazonaws.services.rekognition.model.CelebrityDetail;
import com.amazonaws.services.rekognition.model.CelebrityRecognition;
. . .
```

Using the Java Sample with Maven

Comment out the first line or you will get a class not found error.

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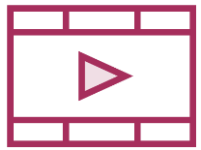
Person Tracking and Pathing

Person Tracking



Examines video for facial information

Each discovered face is added to collection. First person identified has an index = 0

As new faces are detected they are added to the collection

Output at each timestamp gives index and location of detected match to collection

Summary

Setting up for video requires allowing access between services using IAM

Video processing in always asynchronous

All image process features are available

Person tracking is a unique feature

Real time streams can be processed