



0 - Demo and Architecture

06:00

Demo and Architecture



Mark Lesson Complete



Demo

1. List videos

2. Watch a video
3. Sign in/out
4. Upload a video
5. Watch the transcoded video

Tech Stack

1. TypeScript
2. Next.js
3. Express.js
4. Docker
5. FFmpeg
6. Firebase Auth
7. Firebase Functions
8. Firebase Firestore
9. Google Cloud Storage
10. Google Cloud Pub/Sub
11. Google Cloud Run

Full Stack Development

19 / 22

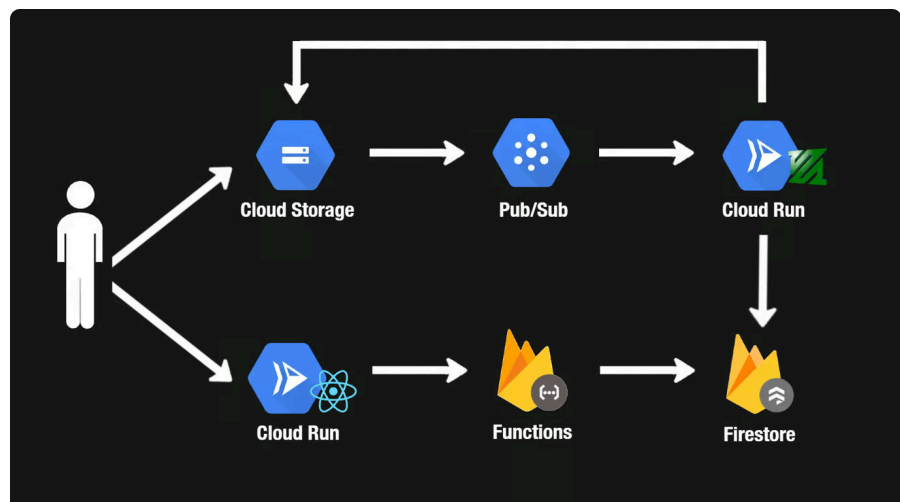
Intro

0 Demo and
8 min FREE
Architecture

1 F 4 min L FREE

Video Processing

Architecture



Service

- 2 **Initialize Video Processing Service**
11 min FREE
- 3 **Process Locally**
13 min FREE
- 4 **Containerize Video Processing Service**
15 min
- 5 **Convert Videos Hosted on Google Cloud Storage**
24 min

Google Cloud

There are a lot of nuanced details that I left out of this diagram, but this is the general idea. To learn more you can checkout this [short design doc](#).

1. Cloud Storage will store the raw and processed videos uploaded by users.
2. Pub/Sub will send messages to the video processing service.
3. Cloud Run will host a *non-public* video processing service. After it transcodes videos, they will be uploaded to Cloud Storage.
4. Cloud Firestore will store the metadata for the videos.
5. Cloud Run will host a Next.js app, which will serve as the Youtube web client.
6. The Next.js app will make API calls to Firebase Functions.
7. Firebase Functions will fetch videos from Cloud Firestore and return them.