

# MEDIA STREAMING USING CLOUD APPLICATION

## PHASE - 2

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## **Define Project Objectives:**

This step entails defining the goals and reason of your media streaming challenge. It's essential to have a clear know-how of what you intention to achieve with the undertaking, along with offering on-call for video streaming or live broadcasting.

## **Requirements Gathering:**

Gather each technical and non-technical requirements for your media streaming application. This consists of components just like the anticipated quantity of concurrent users, the fine of streaming (e.G., HD or 4K), compatibility with numerous devices (cell, computing device, smart TVs), and any unique capabilities (chat, feedback, person profiles) you need to consist of.

## **Select Cloud Service Providers:**

Choose the cloud carrier companies, which include AWS, Azure, or GCP, that align with your undertaking's wishes. Different vendors provide various offerings that can be leveraged in building and scaling your media streaming software.

## **Architectural Design:**

Plan the architecture of your media streaming utility. This includes defining the structure and components that make up the device, such as content material storage, delivery mechanisms, content material encoding, transcoding, and security functions.

## **Content Storage:**

Select a cloud-based storage answer for website hosting your media content material, together with movies or audio documents. Options like Amazon S3, Google Cloud Storage, and Azure Blob Storage are commonly used for this cause. Ensure the garage is scalable and can take care of huge media files.

## **Content Preparation:**

Prepare your media content material for streaming via encoding and transcoding it into numerous codecs and bitrates. This is critical for adapting to specific gadgets and network situations.

## **Security Implementation:**

Implement security measures to guard your media content from unauthorized get right of entry to or piracy. This may additionally involve encryption, get admission to controls, and user authentication.

## **Content Delivery Network (CDN):**

Incorporate a CDN into your architecture to decorate content material delivery. CDNs help in lowering latency and delivering content material efficaciously to users worldwide.

## **Streaming Protocol Selection:**

Choose a streaming protocol, like HTTP Live Streaming (HLS), Dynamic Adaptive Streaming over HTTP (DASH), or Real-Time Messaging Protocol (RTMP), based to your challenge's necessities and the gadgets you intend to support.

## **Player Integration:**

Implement a media participant inside your software that may play content streamed the usage of the chosen protocol. Ensure compatibility with the selected streaming era.

### **User Interface Design:**

Design and increase user interfaces on your media streaming utility. These interfaces have to be user-friendly, responsive, and compatible with various devices and display sizes.

### **User Authentication and Authorization:**

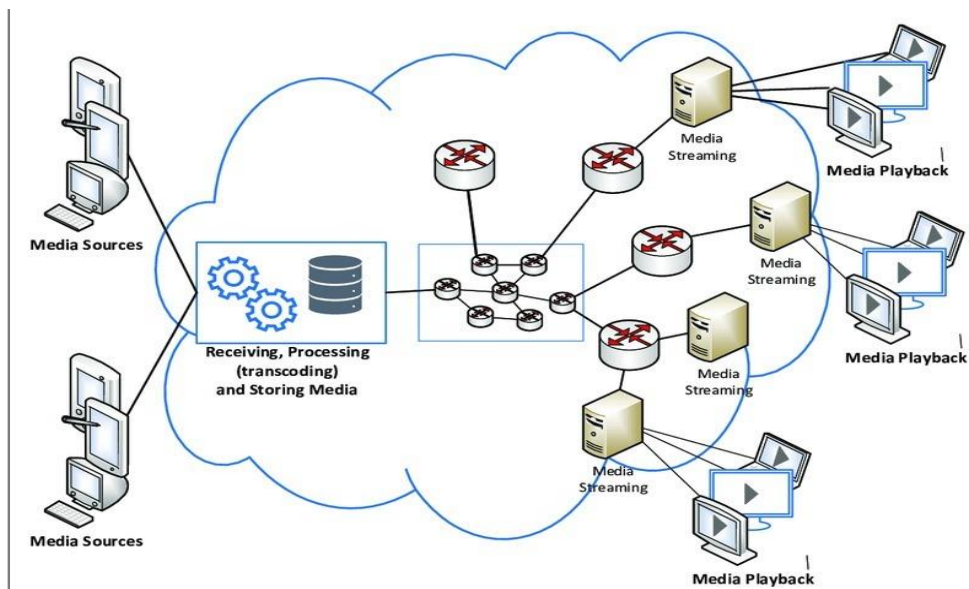
Implement mechanisms for user authentication and authorization to govern get entry to for your content. This may also contain user registration, login structures, and subscription fashions for top class content.

### **Quality of Service (QoS) Monitoring:**

Establish tracking gear to song the fine of service (QoS) skilled with the aid of users. Metrics which includes buffering fees, video exceptional, and person engagement assist you to make sure a notable streaming revel in.

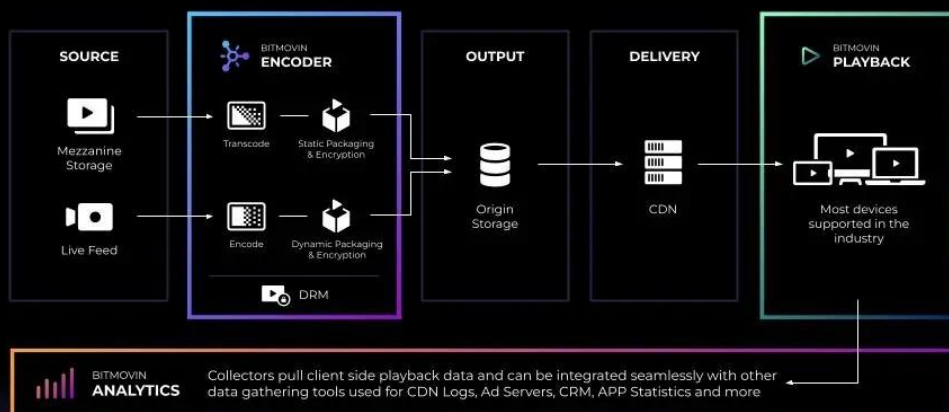
### **Testing and QA:**

Conduct thorough checking out of your media streaming application to pick out and remedy any problems or bugs. Testing ought to cowl compatibility, performance, protection, and person experience factors. This step is crucial to ensure a clean person experience and system reliability



## Video streaming workflow

Bitmovin provides APIs that integrate our Encoding, Player and Analytics seamlessly within any workflow



# CLOUD COMPUTING ARCHITECTURE

