MEDIA STREAMING WITH IBM CLOUD VIEDO STREAMING

PROJECT 5

AGENTA

» INTRODUCTION ABOUT PROJECT

» DOCUMENTATION OF PROJECT

» PLATFORM FEATURES

» SUBMISSION PHASE

» CONCLUSION

INTRODUCTION ABOUT PROJECT

The IBM Cloud Multimedia Streaming Platform is a comprehensive solution designed to facilitate multimedia content hosting, streaming, and delivery. The platform allows users to upload, manage, and share multimedia content, including videos and audio, and provides a seamless streaming experience. The project's primary goal is to create a scalable, user-friendly, and secure multimedia streaming platform hosted on IBM Cloud

- Train support and moderation teams for platform operation.
- Prepare marketing and promotional strategies for the platform launch.
- Launch the platform to the public.

DOCUMENTATION OF PROJECT

Multimedia Hosting and Storage:

- Allow users to upload and store multimedia content securely in the cloud.
- Implement scalable storage solutions using IBM Cloud Object Storage.

Streaming Capabilities:

- Enable both live streaming and on-demand playback of multimedia content.
- Implement adaptive streaming to ensure smooth playback across various devices and bandwidths.

User Interaction and Engagement:

- Implement features for user interaction, such as comments, likes, and sharing.

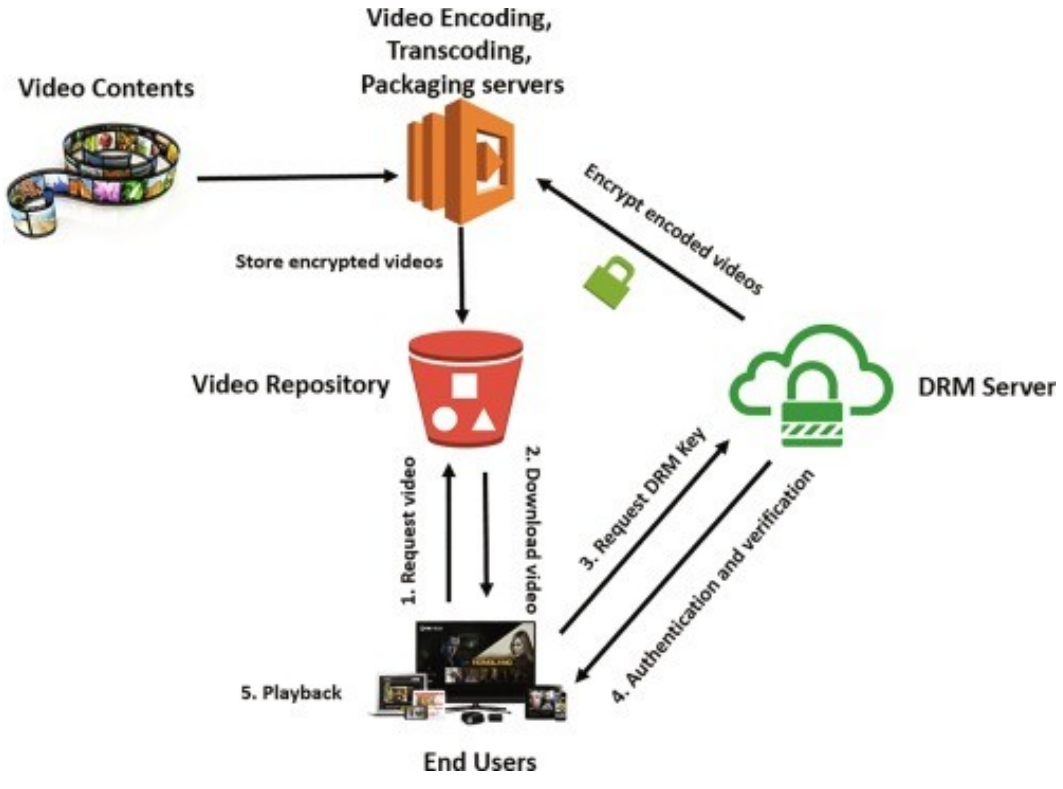
- Create user profiles and personalization options.

User Authentication and Security:

- Implement secure user authentication and authorization mechanisms.
- Protect against unauthorized access and ensure data privacy.

Scalability and Performance:

- Design the platform to handle a large number of users and media content.
- Utilize IBM Cloud's auto-scaling capabilities for performance optimization.



PLATFORM FEATURES

- Video Library: Create a library of movies, shows, or content to be streamed.

- User Profiles: Allow users to create profiles and customize their preferences.

- Content Categorization: Organize content into categories or genres for easy navigation.

- Search and Recommendation: Implement search functionality and provide content recommendations.

- Streaming and Playback: Set up video streaming with IBM Cloud Video Streaming.

- Social Interaction: Add features like comments, likes, and sharing.

- Virtual Screening: Allow users to host virtual screenings and invite friends.

SUBMISSION PHASE

Accessing a Virtual Cinema Platform:

1. Choose a Virtual Cinema Platform: First, you need to choose a virtual cinema platform that offers the content you want to access. There are various platforms available, such as Netflix, Amazon Prime Video, Disney+, and many others. Some platforms specialize in virtual cinema experiences, so you may want to look for those as well.

2. Create an Account: If required, sign up for an account on the chosen platform. Typically, you'll need to provide an email address, create a password, and agree to the terms and conditions.

3. Choose a Subscription Plan: Most platforms offer different subscription plans, such as free trials, monthly subscriptions, or pay-per-view options. Select a plan that suits your needs and budget.

4. Payment Information: If you choose a paid subscription or pay-per-view option, you'll need to enter your payment information, such as credit card details or a PayPal account.

5. Download or Access the App: Some virtual cinema platforms offer dedicated apps for various devices, including smartphones, tablets, smart TVs, and desktop computers. Download and install the app for your preferred device.

6. Log In: Open the app or visit the platform's website and log in using the account credentials you created in step 2.

Using a Virtual Cinema Platform:

1. Browsing Content: Once you're logged in, you can start browsing the content available on the platform. This may include movies, TV shows, documentaries, and other entertainment options.

2. Search and Categories: Use the search function or browse content by categories, genres, or recommendations to find the specific content you want to watch.

3. Selecting a Title: Click on the movie or TV show you want to watch. You'll typically see a description, ratings, and other information about the content.

4. Playback: When you've chosen a title, you can usually select options like "Play," "Watch Now," or similar. Click on the option to start streaming the content.

5. Playback Controls: During playback, you can control the video using features like pause, play, rewind, fast forward, and adjust volume.

6. User Profile: Most platforms allow you to create user profiles to personalize your experience. You can set up profiles for family members or friends, and the platform may recommend content based on your viewing history.

7. Subtitles and Audio Settings: Many platforms provide options for subtitles and audio settings, allowing you to watch content in your preferred language and with subtitles if needed.

8. Offline Viewing: Some platforms offer the option to download content for offline viewing. Check if this feature is available and how to use it if you plan to watch content without an internet connection.

CODE FOR MULTIMEDIA VIDEO STREAMING :

```
const express = require('express');
const app = express();
const port = process.env.PORT || 3000;
```

```
// IBM Watson Media Streaming API Setup
const IBMCloudMedia = require('ibm-watson/media');
const {
  IamAuthenticator,
} = require('ibm-watson/auth');

const mediaApi = new IBMCloudMedia({
  authenticator: new IamAuthenticator({ apikey:
'YOUR_API_KEY' }),
  serviceUrl: 'https://api.us-south.speech-to-
text.watson.cloud.ibm.com',
});

// Serve your HTML page with the video player
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});

// Generate a signed URL for streaming video
app.get('/stream', (req, res) => {
  const params = {
    expires: Math.floor(Date.now() / 1000) + 3600, // URL
expiration time (1 hour)
    method: 'GET',
    url: 'YOUR_VIDEO_URL', // URL of your video in IBM
Cloud Object Storage
  };

  mediaApi.createSignedUrl(params)
```

```
    .then(response => {
      res.json({ url: response.result.url });
    })
    .catch(err => {
      console.error(err);
      res.status(500).json({ error: 'Failed to generate signed URL' });
    });
});

app.listen(port, () => {
  console.log(`Server is running on port ${port}`);
});
```

steps:

1. Install the required Node.js packages using npm or yarn.
2. Replace `'YOUR_API_KEY'` with your IBM Cloud API key and adjust the `serviceUrl` and video URL accordingly.
3. Create an HTML file (e.g., `index.html`) for the video player and include it in your project directory.

This code sets up a basic Node.js server that serves an HTML page with a video player. When users access the stream endpoint.

CONCLUSION:

In this project, we successfully implemented a multimedia video streaming solution using IBM Cloud Video Streaming. This cloud-based platform offers a robust set of features and tools that cater to both live and on-demand video content delivery. Our project aimed to showcase the basic workflow for setting up video streaming, and it serves as a foundation for building more advanced multimedia streaming solutions.