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PROJECT NAME:MEDIA STREAMING WITH CLOUD COMPUTING

Sign Up for IBM Cloud:

If you don’t already have an IBM Cloud account, sign up for one at IBM Cloud.

Create a Watson Media Service:

Log in to your IBM Cloud account.

Create an instance of IBM Watson Media by selecting “Create Resource” and searching for “Watson Media” in the IBM Cloud catalog.

Follow the prompts to create your Watson Media service instance.

Set Up a Live Streaming Event:

After creating the Watson Media service instance, navigate to the Watson Media dashboard.

Create a new live streaming event, configure settings, and obtain stream keys for encoding software (e.g., OBS, FFmpeg, or hardware encoders).

Configure Your Streaming Software:

Use streaming software or hardware to set up the video and audio source, and configure the stream using the stream key provided by IBM Watson Media.

Start Streaming:

Start streaming from your source, and the content will be transmitted to the IBM Watson Media service.

View the Stream:

Your viewers can access the live stream via the provided URL, which is generated when you create the event.

Project Title: Virtual Event Streaming Platform

Project Description:

Create a virtual event streaming platform that enables users to host and attend live virtual events. The platform will use IBM Cloud’s streaming services to facilitate live video streaming, chat interactions, and content sharing.

Project Components:

User Authentication and Registration:

Implement user registration and authentication using IBM Cloud’s Identity and Access Management (IAM).

Event Management:

Create an interface for event organizers to schedule and manage virtual events.

Use IBM Cloud’s Cloud Foundry or Kubernetes to deploy the application backend and front-end.

Live Video Streaming:

Utilize IBM Watson Media Services or IBM Cloud Video Streaming to facilitate live video streaming for events.

Integrate a live streaming SDK or API provided by IBM to handle video broadcasting.

Chat and Interaction:

Implement a real-time chat system using IBM Cloud’s messaging or WebSocket services to allow attendees to interact during the event.

Content Sharing:

Enable event organizers to share presentation materials, slides, and documents in real-time during the event.

Scalability and High Availability:

Configure auto-scaling and high availability to handle a large number of concurrent viewers.

Analytics and Reporting:

Integrate IBM Cloud monitoring and analytics services to track the performance of the live streams and gather insights into attendee engagement.

Security and Access Control:

Implement security measures to protect live streams and ensure that only registered attendees can access events.

Challenges:

Ensuring low latency for live video streaming.

Managing and optimizing cloud resources for scalability and cost-efficiency.

Implementing secure access control and privacy measures.

Dealing with potential technical issues during live events.

Deliverables:

A functional virtual event streaming platform.

Documentation on how to use the platform for event organizers and attendees.

Deployment instructions for running the project on IBM Cloud.

A report detailing your project’s architecture, challenges faced, and lessons learned.

Learning Opportunities:

Hands-on experience with IBM Cloud’s streaming and cloud services.

Building a complete web application with features like user authentication, real-time chat, and live streaming.

Managing cloud resources for scalability and cost-efficiency.

Gaining insights into the challenges and considerations for hosting virtual events.

This project provides an opportunity to explore various aspects of cloud-based streaming and web development while creating a useful platform for virtual events. It can be expanded and customized based on specific requirements and use cases.