PHASE 3 – MEDIA STREAMING USING IBM CLOUD

Creating a virtual cinema platform using IBM Cloud Video Streaming involves several steps, and a simple document outlining the key features, user interface, and user registration/authentication mechanisms might look like this:

Video Preprocessing:

The Dataset has to be pre-processed and saved before building the Media Stream. The code for preprocessing is as follows:

```
import cv2
# Open a video file
video_file = 'input_video.mp4'
cap = cv2.VideoCapture(video_file)
# Check if the video file is opened successfully
if not cap.isOpened():
   print("Error: Could not open video file.")
   exit()
# Get video properties
fps = int(cap.get(cv2.CAP_PROP_FPS))
frame_width = int(cap.get(cv2.CAP_PROP_FRAME_WIDTH))
frame_height = int(cap.get(cv2.CAP_PROP_FRAME_HEIGHT))
# Create a VideoWriter object to save the processed video
output_file = 'output_video.mp4'
fourcc = cv2.VideoWriter_fourcc(*'mp4v')
out = cv2.VideoWriter(output_file, fourcc, fps, (frame_width, frame_height))
while True:
   ret, frame = cap.read()
   if not ret:
      break
 # Perform preprocessing tasks here
 # For example, you can resize the frame
 # frame = cv2.resize(frame, (new_width, new_height))
 # Write the frame to the output video
```

```
    out.write(frame)

    cv2.imshow('Processed Video', frame)
    if cv2.waitKey(1) & 0xFF == ord('q'):
        break
# Release the video capture and writer objects
cap.release()
out.release()
# Close all OpenCV windows
cv2.destroyAllWindows()
```

Virtual Cinema Platform Using IBM Cloud Video Streaming

Platform Features

1. Movie Library:
   - A catalog of available movies for users to browse and choose from.

2. Virtual Screening Rooms:
   - Create virtual screening rooms for specific movies or events.
   - Customize room settings, such as room name, date, and time.
   - Invite friends or share the screening room link.

3. Streaming Integration:
   - Seamless integration with IBM Cloud Video Streaming for high-quality video playback.

4. Chat and Interaction:
   - Real-time chat within screening rooms for users to discuss movies.
   - Option to enable video and audio interaction for viewers.

5. User Reviews and Ratings:

- Users can leave reviews and ratings for movies they have watched.

6. Notifications:

- Receive notifications for upcoming screenings or events.

7. User Profiles:

- Personal profiles with a list of watched movies and reviews.

User Interface Design

Homepage:

- Clean and intuitive layout.
- Movie posters and brief descriptions.
- Access to user profile and notification center.

Movie Page:

- Movie title, description, and trailer.
- Options to watch, rate, and leave a review.
- Share and add to screening room buttons.

Virtual Screening Room:

- Movie title and screening details.
- Video player with chat interface.
- List of participants.

User Profile:

- User details, watched movies, and reviews.

User Registration & Authentication:

Registration:

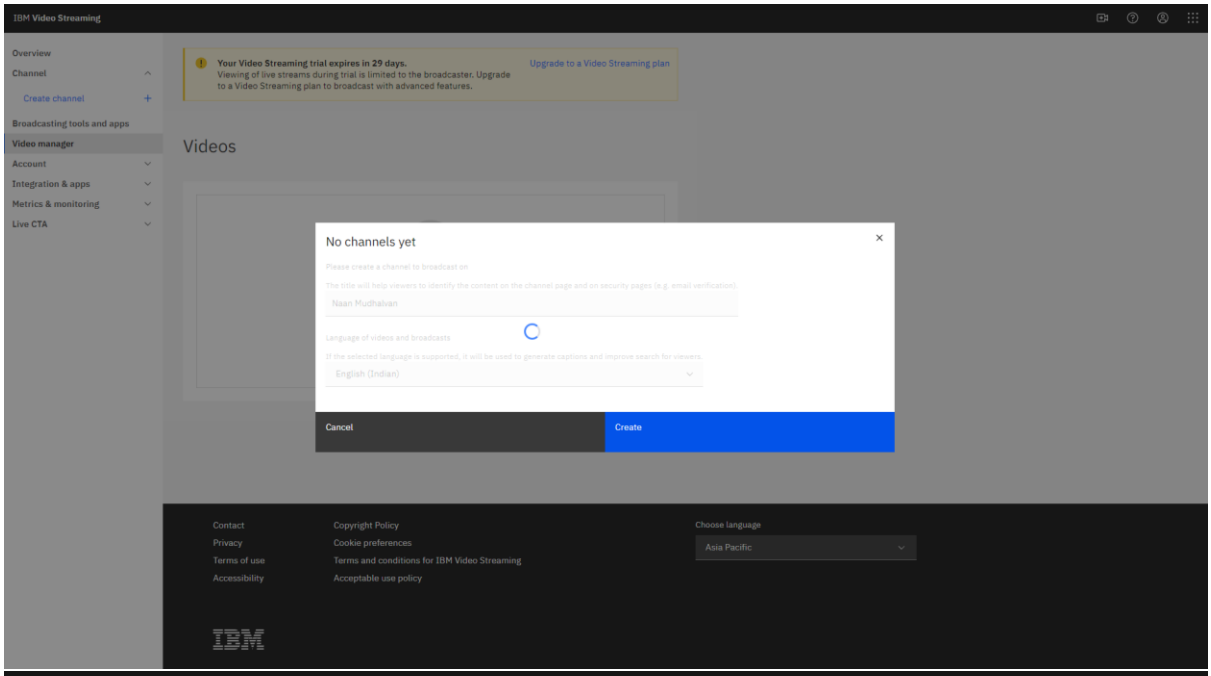
- Users sign up with email, password, and username.
- Verification email sent for account activation.

Authentication:

- Secure login with email and password.
- Option for password reset via email.

Get Started

1. Sign up for an IBM Cloud account.
2. Set up IBM Cloud Video Streaming.
3. Create a database to store user information.
4. Design and develop the user interface.
5. Implement user registration and authentication mechanisms.
6. Integrate the IBM Cloud Video Streaming service.
7. Develop the features, including movie catalog, screening rooms, chat, and reviews.
8. Test the platform thoroughly.
9. Launch the virtual cinema platform.


IBM Video Streaming
Overview
Channel
Create channel
Broadcasting tools and apps
Video manager
Account
Integration & apps
Metrics & monitoring
Live CTA
Your Video Streaming trial expires in 29 days.
Viewing of live streams during trial is limited to the broadcaster. Upgrade to a Video Streaming plan to broadcast with advanced features.
Upgrade to a Video Streaming plan
Videos
No channels yet
Please create a channel to broadcast on
The title will help viewers to identify the content on the channel page and on security pages (e.g. email verification).
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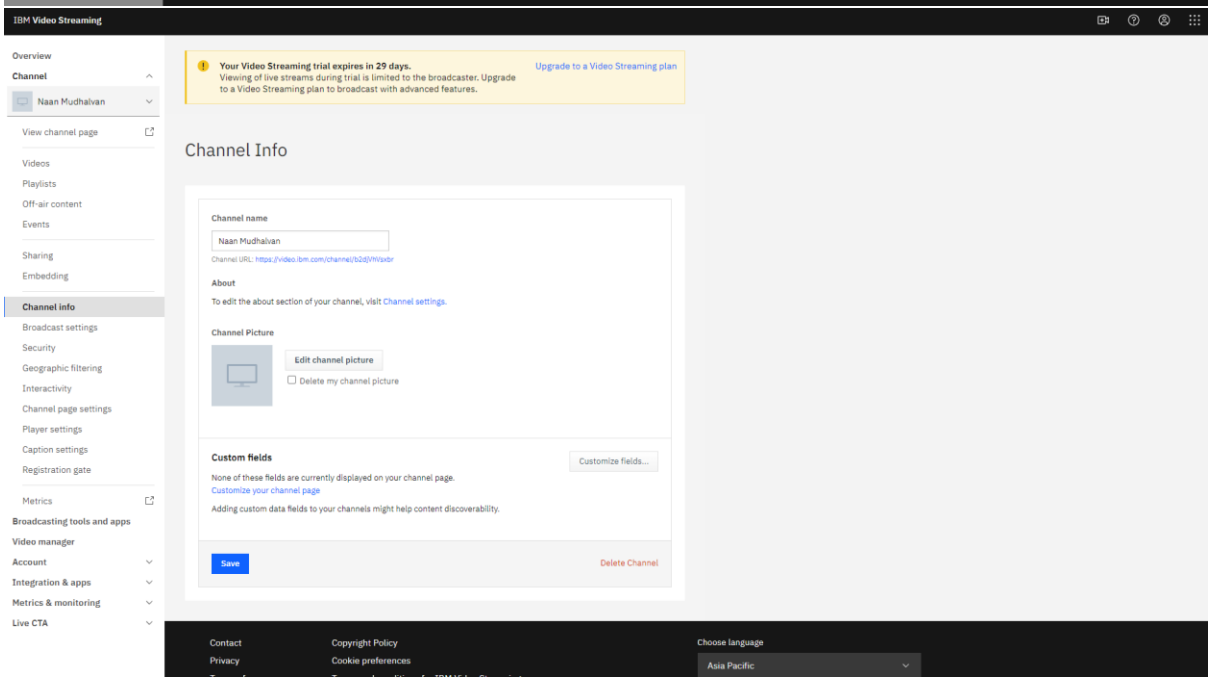
Language of videos and broadcasts
If the selected language is supported, it will be used to generate captions and improve search for viewers.
English (Indian)
Cancel
Create
Contact
Privacy
Terms of use
Accessibility
Copyright Policy
Cookie preferences
Terms and conditions for IBM Video Streaming
Acceptable use policy
Choose language
Asia Pacific
IBM


IBM Video Streaming
Overview
Channel
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View channel page
Videos
Playlists
Off-air content
Events
Sharing
Embedding
Channel info
Broadcast settings
Security
Geographic filtering
Interactivity
Channel page settings
Player settings
Caption settings
Registration gate
Metrics
Broadcasting tools and apps
Video manager
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Live CTA
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Upgrade to a Video Streaming plan
Channel Info
Channel name
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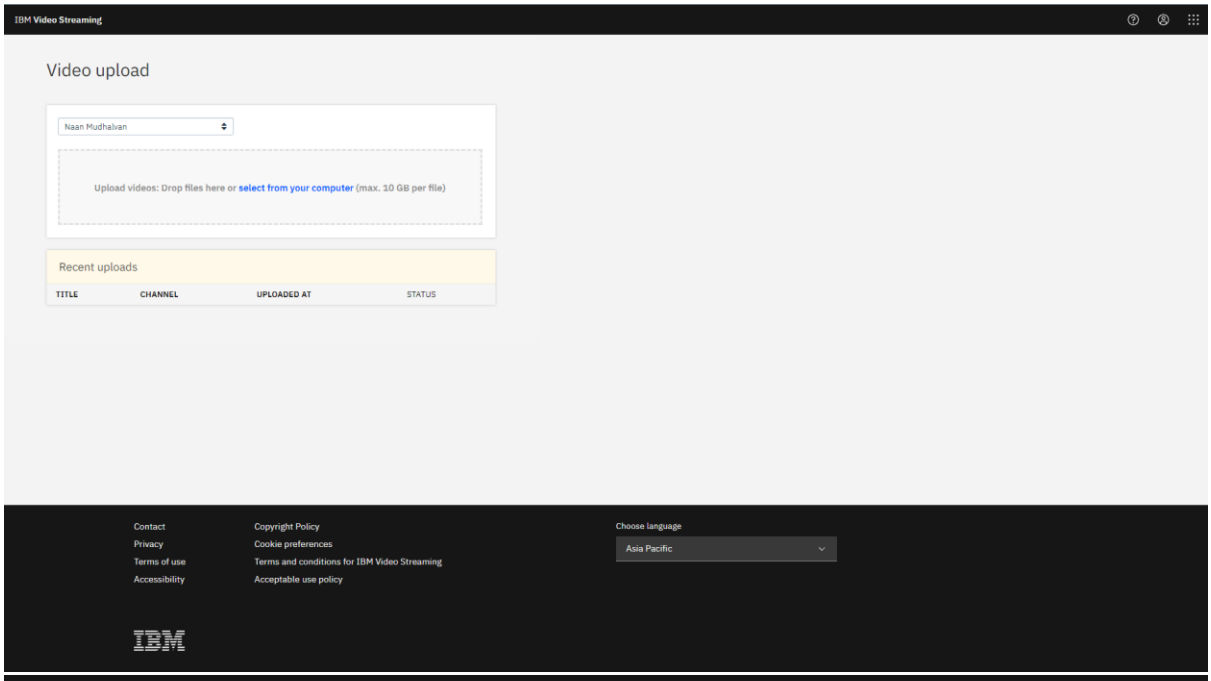
Channel URL: https://video.ibm.com/channel/b2dJVHVaxbr
About
To edit the about section of your channel, visit Channel settings.
Channel Picture
Edit channel picture
Delete my channel picture
Custom fields
Customize fields...
None of these fields are currently displayed on your channel page.
Customize your channel page
Adding custom data fields to your channels might help content discoverability.
Save
Delete Channel
Contact
Privacy
Copyright Policy
Cookie preferences
Choose language
Asia Pacific


IBM Video Streaming
Video upload
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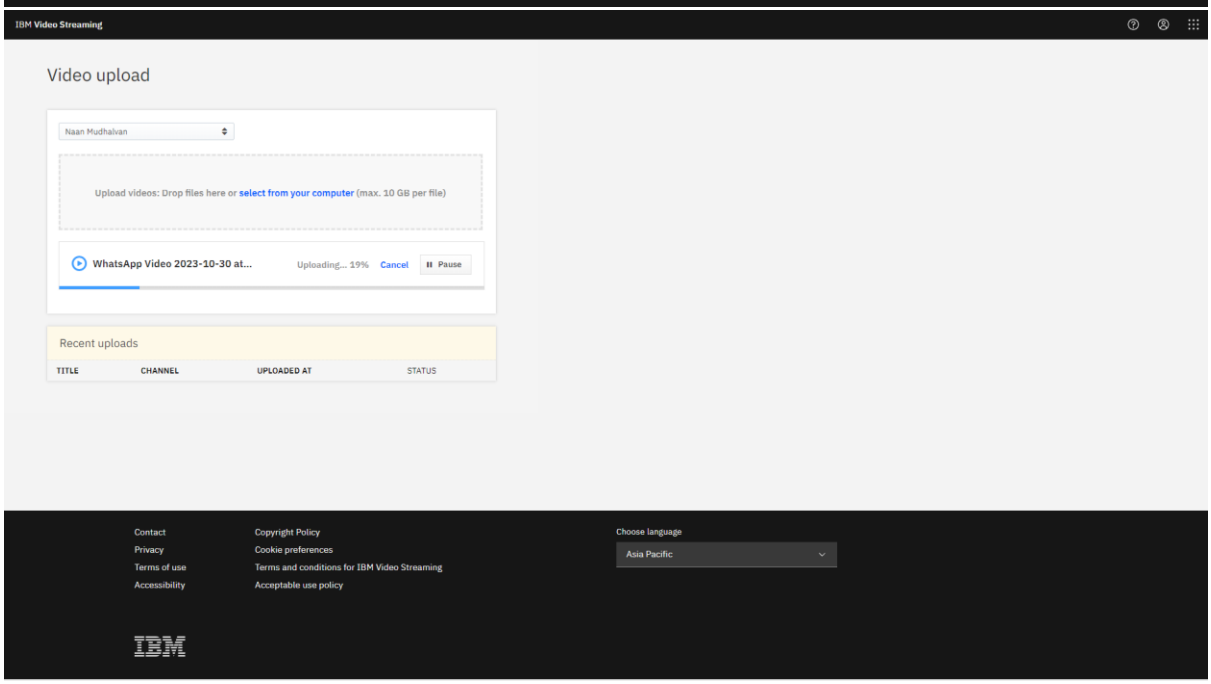
Upload videos: Drop files here or select from your computer (max. 10 GB per file)
Recent uploads
TITLE
CHANNEL
UPLOADED AT
STATUS
Contact
Privacy
Terms of use
Accessibility
Copyright Policy
Cookie preferences
Terms and conditions for IBM Video Streaming
Acceptable use policy
Choose language
Asia Pacific
IBM


IBM Video Streaming
Video upload
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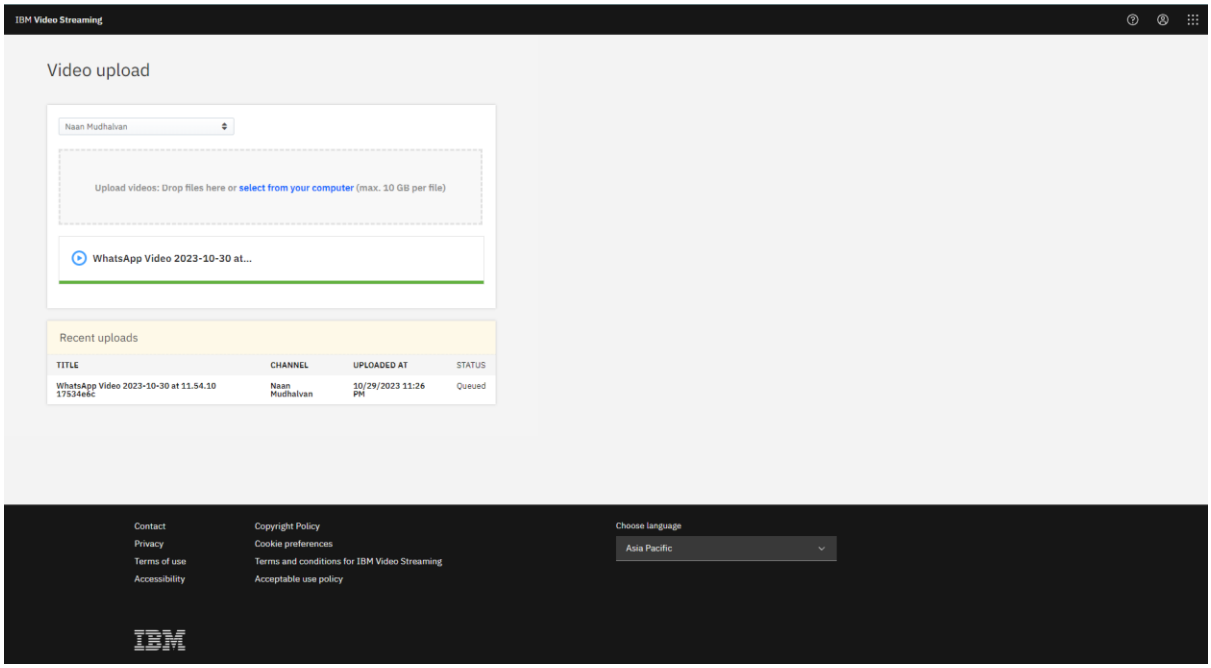
Upload videos: Drop files here or select from your computer (max. 10 GB per file)
WhatsApp Video 2023-10-30 at...
Uploading... 19%
Cancel
Pause
Recent uploads
TITLE
CHANNEL
UPLOADED AT
STATUS
Contact
Privacy
Terms of use
Accessibility
Copyright Policy
Cookie preferences
Terms and conditions for IBM Video Streaming
Acceptable use policy
Choose language
Asia Pacific
IBM


IBM Video Streaming
Video upload
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Upload videos: Drop files here or select from your computer (max. 10 GB per file)
WhatsApp Video 2023-10-30 at...
Recent uploads
TITLE
CHANNEL
UPLOADED AT
STATUS
WhatsApp Video 2023-10-30 at 11.54.10 17534e6c
Naan Mudhalvan
10/29/2023 11:26 PM
Queued
Contact
Privacy
Terms of use
Accessibility
Copyright Policy
Cookie preferences
Terms and conditions for IBM Video Streaming
Acceptable use policy
Choose language
Asia Pacific
IBM