

Advance devops Assignment

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No.: 1804.

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Q1 Use S3 bucket and host video streaming.

→ ① Create an S3 Bucket.

Go to S3 Service in AWS Console:

Navigate to the S3 Service by searching for "S3" in the AWS Management Console.

Create a bucket:-

Click "Create Bucket"

Give your bucket a unique name.

Choose a region closest to your users for low latency.

Leave the default settings for Public access disabled.

Complete the creation process.

② Upload Video Files

Open S3 bucket:- After creation, open the S3 bucket

Upload files:-

click "Upload" to select your video files.

choose the appropriate permissions

⑧ Configure Bucket permission for streaming

Edit bucket Policy: Open the Permission tab of your bucket. Setup the necessary permissions. You can create a Policy to allow public access to Object in the bucket.

⑨ Enable CloudFront for CDN and streaming.

To optimize video streaming performance and reduce latency use Amazon CloudFront, which is AWS Content Delivery Network.

⑩ Secure content

If you need protect video access

Signed URLs:- Use CloudFront to set up signed URLs to access to your videos authenticated user or specific time.

⑥ Set Up Video Players On Website :-

Embedded :- Use an HTML5 video player or third-party JS libraries like video.js

⑦ Test the Video Stream

- Test the video on different devices and network conditions to ensure it works seamlessly.
- Ensure video buffering and playback.

⑧ Monitor and Scale :-

Use AWS CloudWatch to monitor the performance and traffic of your streaming setup. You can automatically scale the cloudFront distribution for a large numbers of viewers.

Discuss BMW and Hotstar case studies using AWS.

Case 1 :- BMW Group On AWS

- ① BMW can now manage billions of data points generated by millions of vehicles, ensuring seamless connected car services.
- ② The use of AWS IoT and analytics services enables BMW to provide diagnostics and predictive maintenance for customers.
- ③ By using AWS Pay as you go model, BMW has significantly reduced the costs associated with running and maintaining its own data centers.
- ④ The BMW Group can now innovate and deploy new connected services faster than ever before, providing enhanced experiences.

Case 2 - Hotstar on AWS

- Q1 Hotstar successfully handled over 25 million concurrent viewers during IPL matches, setting a new global record for live streaming.
- (R) With AWS low latency content delivery network (CDN) and auto-scaling capabilities, Hotstar provides a buffer-free streaming experience to millions of users across different geographies.
- (B) By leveraging AWS Auto Scaling, Hotstar ensures efficient resource usage, minimizing costs during non-peak hours.
- (A) AWS allows Hotstar to quickly roll out new features like interactive content, live stats and personalized recommendations.

Q3 Why Kubernetes and advantages and disadvantages of Kubernetes? Explain how it is used.

→ Kubernetes automates the deployment, scaling, and management of containerized applications, providing flexibility, scalability, and resilience.

environments.

Advantages - Kubernetes ensures high availability and probability automated across environments.

Scaling

multi cloud environments.

Disadvantages - Kubernetes has a steep learning curve, is resource-intensive, and requires expert knowledge for optimal use.

Addidas leverages Kubernetes for its cloud native infrastructure, enabling rapid scaling, efficient resource management, and continuous deployment for its global digital platforms.

Q4

What are Nagios and explain how Nagios are used in FTS Services?

→

Nagios is a open source monitoring tool used to track the health and performance of IT infrastructure, networks, including servers and services.

Nagios monitors critical components like web servers, databases, and APIs ensuring uptime, detecting service disruptions, and providing real-time notifications to maintain seamless delivery. It helps identify and resolve issues quickly to prevent downtime and ensure continuity.

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