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ASSIGNMENT-1

Q2. Discuss BMW and Hot Star case studies using Aws.

→ BMW and Hot star case studies using Aws.

BMW a renowned global automotive leader, leverages Aws to drive its digital transformation and enhance its operational efficiency. BMW utilizes Aws to power its Connected Drive platform, offering real-time updates, navigation and remote diagnostics by processing vast amounts of vehicle sensor data. Aws services like Amazon Sagemaker and Aws IoT enable BMW To perform advanced data analytics and machine learning, optimizing vehicle performances and customer experiences.

Hotstar, a leading Indian streaming platform, relies on Aws to manage massive traffic spikes, particularly during live events. Using Aws's scalable infrastructure, Hotstar ensures seamless content delivery to millions of concurrent viewers through services like Amazon CloudFront, Amazon S3, Amazon Ec2. Aws's pay-as-you-go model optimizes costs by scaling resources according to demand. The global CDN provides, by Aws ensures low latency and high performance, delivering high-quality streaming experience. Additionally, Aws's security feature protect Hotstar's content and user data, while the platform's ability allows for rapid feature deployment, keeping pace width the fast-evolving entertainment industry.

Sundaram

Q3 Why kubernets and advantages and disadvantages of kubernets. Explain how adidas uses kubernets.

Kubernets is a open-source container orchestration platform that automates the deployment, scaling and management of containerized applications.

Advantages of kubernets:
1) Automation: Automates deployment, scaling and management of containerized applications.
2) Portability: Runs on various environments including public clouds, private clouds and on-premises.
3) Scalability: Easily scales applications horizontally to meet increasing demand.
4) Self-Healing - Detects and replaces failed container ensuring high availability.
5) Resources optimization - Efficiently manages resources reducing costs.

Disadvantages of kubernets:
1) complexity - It can be complex to set up and manage.
2) learning curve - Requires significant time and effort to learn and master.
3) Initial setup - The initial setup can be time-consuming and may require specialized knowledge.

How adidas used kubernets
Adidas leverages kubernets to enhance its application scalability and reliability. By microservices or

Kubernete, Adidas ensures efficient load balancing, automated scaling and seamless application update. Kubernets orchestration capabilities allow adidas to manage its containered applications effectively, ensuring high availability and optimized performance across its digital platforms, thus supporting their global e-commerce and operational needs.

Q4. What are Nagios and explain how Nagios are used in e-services?

-) Nagios is a robust and versatile open-source monitoring tool designed to oversee and manage IT infrastructure. It primarily focuses on monitoring systems, networks and infrastructure, providing comprehensive insights into the performance and health of resources, applications, services and network protocols. Nagios operates by periodically checking the status of various resources through plugins, which can be customized to suit specific monitoring needs. When it detect issues or potential problems, Nagios alerts administrators to prevent downtine and ensure system reliability. In the contest of E-Services, various play a critical role by ensuring the continous availability and optimal performance of online services and applications. E - Services rely heaviy on consistent uptime and quick respons times to met user expectation and maintain

satisfaction. Nagios us helps active achieve this by monitoring the entire infrastructure supporting E-services, including web servers, database networks devices and other critical components. It detects issue like server overload, network outage or application failures, triggering alerts that prompts immediate corrective actions. By using Nagios, organisations can proactively manage their E-services, minimize downtime, enhance user experience and maintain the trust and reliability essentials for digital platforms.

Q1. Use S3 bucket and host video streaming.

-) **Step 1:** Set up program S3 bucket.

(i) Search for S3 on the services section. Click on it then click on create bucket. This will direct you to the bucket creation page. then, give a name to your bucket.

(ii) After creating the bucket, add the video to this this bucket. Click on the name of the bucket, this will redirect you to objects screen. Click on upload.

(iii) Select the required mp4 file and upload it.

(iv) This will start the uploading process.

Step 2:. Set up CloudFront.

(i) Search for CloudFront on services tab. Open it in a new tab.

(ii) On the left pane, under security, click on origin access there, go to Identities (legacy). Create an origin access identity.

(iii) Go back to distributions and create a CloudFront distribution.

(iv) In the origin feild-> Select the s3 bucket where video is uploaded.
Under origin access, select legacy access identities. Select the identity that has been created.
Click on yes. Update bucket policy.
In default cache behaviour, under viewer, select Redirect HTTP to HTTPS.
Under web application Firewall, select- Enable security protection.
Create the distribution. This will deploy it

Step 3- Accessing the hosted video -

(i) once the distribution is deployed, copy its domain name.

(ii) Go to the video in the bucket where it is uploaded. Click on its name. Copy the key of the video.

(iii) On your address URL bar, used the use the link as <domain name> / < key of video>.

Thus, we have deployed a video on S3 bucket using a content Distribution Network (CDN):- cloudFlare.