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D15A - 45

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Assignment - 1 Ad-Devops

Q.1] Use S3 bucket and host video streaming.

Step 1. Log in to AWS code
- Go to AWS Management console.
- Enter your login credentials.

Step 2. Create an S3 Bucket.
- In the console, search for S3 in the search bar and select S3 from the results.
- Click create bucket.
- Give your bucket a unique name (like "my-video streaming-bucket")
- Choose a region (closer to your audience)
- Scroll down and uncheck Block all public acces
- confirm by checking the acknowledgment box.
- Click create bucket.

Step 3: Upload your video file to S3
- Click on your newly created bucket..
- click the Upload button.
- Add your video file from your computer.
- Click Upload to start the upload process.

Step 4: Set Permissions for Public Acess.
- once the video file is uploaded, you need to make it Publicly accessible.
- Select your video file in the S3 bucket.
- Click the Actions dropdown and choose Make Public.

• confirm the action by clicking make public ag

Step 5. Get the video URL:
• After making the file Public. Click on the video fi
• you will see a URL for the video under object URL. This is the effect direct link to your object.
• Copy this URL.

Conclusion:- While solving this i'm get an error during bucket Policies.
Solved this error using this steps:-

Steps 1: Go to Permissions Tab of your Bucket:
• Click on the Permissions tab of your bucket (not the individual file.)

Step 2: Edit Bucket Policy:
• Click on Bucket Policy.
• Add the following Policy (replace your-bucket-name with your actual bucket name):

```
json
Copy code.
{
"version" : "2012-10-17",
"Statement" : [
{
"Sid" : "PublicReadGetObject",
"Effect" : "Allow",
```

```
"Principal" : "*",
"Action" : "s3:GetObject",
"Resource" : "arn:aws:s3:::your-bucket-name/*"
  }
 }
}
```

Steps: Save the Policy.

final step : Testing Public Access.

- once you've made your video Public, copy the object URL ("you" find it in video file's)
- Paste that URL into your web browser to see if the video plays.

Q.2] ⇒ Discuss BMW and Hot Star case studies using AWS.

BMW and Hostar case studies using AWS.

BMW:

1. Connected car features:
   - Remote diagnostics for car health
   - over-the-air software updates.
   - Real-time traffic information.

2. Improving customer experience: They use AWS to enhance how customers interact with their cars. for example, BMW has added voice-activitated affistants and personalized suggestions using services like Amazon Lex and Amazon Sagemaker.

3. Better manufacturing: BMW used AWS to improve its manufacturing. By analyzing data from machines, they can find problems easly and increase efficiency.

HotStar:

1. Manage Huge traffic: During big events like the Indian Premier league (IPL), many people what at once.

2. Quality Streaming: AWS services like Amazon kinesis and Amazon Elastic Transcoder ensure that users get high-quality streaming.

3. Personalized Recommendations: HotStar used AW's machine learning tools to suggest content to users, making...

their veiwing experience more enjoyable.

key AWS Services used:
- Compute: Amazon Ec2, lambda
- Storage: Amazon s3, Efs
- Database: Amazon RDS, DynamoDB
- Networking: Amazon vpc, Direct connect
- Analytic: Amazon kinesis, Redshift
- machine learning: Sagemaker Rekognition.

AWS helps both companies innovate and deliver top-notch services to their customers.

Q.3] why kubernetes and advantages and disadvantages of kubernates. Explain how adidas uses kubernates.

⇒ why kubernates?
kubernates is polular because it simplifies the management of containerized applications. It automates tasks such as deployment, scaling and monitoring, making it easier for organizations to manage their applications in a dobd environment.

Advantages of kubes nets:
1. Portability: Applications can be moved easily between different environments without major changes.

2. Scalability: kubernets can automatically scale applications up or down based on traffic and demand.

3. Reliability: It features self-healing capabilities, meaning it can restart failed containers and balance workloads to ensure high availability.

4. Efficiency: It optimzed resource usage by running containers on a single host, improving overall efficiency.

Disadvantages of kubernetes:

1. Complexity: It can be complicated to set up and manage, especially for those new to containes technology.

2. Steep learning curve: Required time and knowledge to fully understand and utilize its feature.

3. Resource intensive: It may require more computing resources than simpler solutions, which can increase costs.

4. Management overhead: Requires ongoing management and maintenance, which can add to operational workload.

How Adidas use kubernetes:

1. Faster Development: Streamlined deployment for quicker product launches.
2. Operational Efficiency: Automated tasks, reducing managing time and increasing reliability.
3. Scalability: Easily handled traffic spikes during peak shopping periods.

4. Encouraging Innovation: flexible platform for experimenting with new technologies and ideas.

Specific use cases at adidas:

1. Microservices Architecture: Independent services for better management and deployment.
2. Continuous Delivery: supports quick and efficient build, test, and deployment processes.
3. Hybrid Cloud Deployments: Runs apps on both on-premises and cloud for flexibility and cost savings.

Benefits: modernized IT, improved agility, and enchanced innovation, keeping Adidas competitive.

Q.9 What are Nagios and explain how Nagois are used in E-services?

→ What is Nagois?

Nagios is an open-source monitoring tool that helps organizations keep track of their IT infrastructure including servers, network, and applications.

Key features of Nagios:

1. Monitoring: Tracks the performance and availability of servers, applications, and network devices.
2. Alerts: sends notifications via email or SMS when problems occur, so teams can respond quickly.
3. Reporting: offers detailed reports system performance and uptime, helping identify trends and areas for improvement.

How Nagios used in E-Services:

→ 1. Infrastructure Monitoring: Tracks servers and databases, alerting the IT team if any issue arise.

2. Service Availability: Monitors web services and APIs for accessibility, enabling quick response to outages.

3. Performance Metrics: Collects data on system performance to optimize resources and enhance user experience.

4. Incident Management: Integrates with tools to streamline issue resolution, minimizing downtime.

5. User Experience Monitoring: Checks application performance from the User's perspective to ensure smooth operation.

Benefits: High availability, improved reliability, and better user experience, essential for maintaining service quality and customer satisfaction.