Advance devops assignment no. 4

(05/05) R.

Q.1) Use S3 bucket and host video Streaming.

Ans: 1) log into AWS console

- Go to AWS management console
- Enter your login credentials

2) Create an S3 bucket

- On the console, search for S3 in the search bar and select S3 from the results.
- click Create bucket
- Give your bucket a unique name.
- Choose a region
- Scroll down and uncheck Block all public access
- Confirm by checking the acknowledgement box
- Click create bucket.

3) Upload your video file to S3

- Click on your newly created bucket
- Click on the upload button.
- Add your video file from your computer
- Click upload to start the upload process.

Set Permission for public Access.
- Confirm the action by clicking make public again.

5. Get the video URL.

- After making the file public, click on the video file
- You will see a URL for the video under Object URL.
- Copy the URL

6. Edit the Bucket policy

```
{
  "Version": 2012-10-17",
  "Statement": [
    {
      "Sid": PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action":" S3:GetObject",
      "Resource": " arn:aws:S3:::video-bucket/* "
    }
  ]
}
```

Q.2) Discuss BMW and Hot Star case studing using AWS.

→ BMW: A connected driving Expreince BMW is a leader in car technology and AWS has helped them a lot in creating connected cars.

- Connected cars features: BMW has developed features like remote diagonostic, over the air-updates and real-time traffic info. AWS provides the necessary tools and infrastructure to make the features work.

- Improving Customer experience: They use AWS to enhance the customers interact with their cars for example BMW has added voice activated assistance and personalized suggestions using services like Amazon lex.

- Better manufactering: BMW uses AWS to improve its manufactering. By analyzing data from machines, they can find problem early and inrease efficieny.

- A streaming revolution: Hotstar is India's biggest video streaming platforms offering a huge range of movies, TV shows and sports AWS has been key of Hotstar success helping them.

- Manage huge traffic: During big events like IPL many people watch at once. AWS helps Hotstar handle this stage in traffic without slowing down.

- Quality streaming: AWS services like Amazon Kinesis ensures that users highly stream quality.

- Personalized Recommendation: Hotstar uses AWS machine learning tools to suggest contents to users making their viewing experience more enjoyable

Key AWS services:

- Compute : Amazon EC2

- Storage : Amazon S3, Amazon EFS

3) Why Kubernetes and advantages and disadvantages of Kubernates. Explain How adidas uses Kubernetes.

ns: Kubernetes is popular 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 cloud environment.

Advantages of Kubernetes:

1) Portability: Application can be moved easily between different environment without major changes.

2) Scalability: Kubernetes 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 workload.

Disadvantages of Kubernetes:

1) Complexity: It can be complicated to set up and manage. espically for those new to container

2) Step learning curve: Requires time and knowledge to fully understand and utilizes its features.

3) Resource Intensive: It may require more computing resources than simpler solutions.

Adidas has adopted Kubernetes to enhance its IT infrastructure and improve its ability to respond to market needs.

Q.4) What are Nagios and explain how Nagios are used in E-services?

Ans Nagios is an open source monitoring tools that helps the organization keeps track of their IT infrastructure, including servers, networks and applications. It provides a way to ensure that systems are running smoothly and alerts users if any issues arise.

Key feature of Nagios:

- Monitoring: Tracks the performance and availability of servers, application and network devices.
- Alerts: sends notification via email or SMS when problems occur, so teams can respond quickly.

How Nagios is used in E-services:

Nagios plays a vital role in the operation of e-services by ensuring that online systems are reliable and efficient.

- Infrastructure monitoring: Nagios monitors services, databases and other IT components to ensure they are operational. If a server goes down, Nagios alerts the IT team immediately.