AWS DevOps Interview Questions

1. What are the core components of DevOps?

Ans: The core components of DevOps

- Continuous Integration
- Continuous Testing
- Continuous Development
- Continuous Feedback
- Continuous Monitoring
- Continuous Deployment
- Continuous Monitoring

2. Why AWS for DevOps?

Ans: There are a number of benefits in using AWS for DevOps. Few of them are as follows:

- AWS is a ready-to-use service. It doesn't require any headroom for software and setups to start with.
- If it is a single instance or scaling up to hundreds at a time, with AWS, the provision of computational resources are endless.
- The pricing and budgets are kept in check to ensure mobility and you will get an equal return on investment with pay-as-you-go policy in AWS service.
- You can build fast and achieve effective results in terms of development, testing and deployment with the automation practices of AWS DevOps.
- AWS services are easy to use with the command-line interface and using SDKs and APIs makes it highly programmable and effective.

3. What is the role of a DevOps engineer?

Ans: There is no particular career track for becoming a DevOps engineer. They are either developers who get benefited in deployment and network operations or sysadmins who are passionate for scripting and coding and influencing them into the build taking place side by collecting the planning of test and deployment.

4. What is CodePipeline in AWS DevOps?

Ans:

- CodePipeline is an AWS service which provides continuous integration and continuous delivery. Along with this, it also has provisions of infrastructure updates as well.
- After every single build, the operations such as building, testing, and deployment becomes very easy with the set release model protocols that are defined by a user.
- CodePipeline ensures delivering reliability for new software updates and features rapidly.

5. What is CodeBuild in AWS DevOps?

Ans:

- AWS CodeBuild compiles source code, runs tests, and produces software packages which are ready for deployment.
- With CodeBuild, you can provision, manage and scale your own construct servers.
- It processes the union builds concurrently and scales at all times, thus the builds don't have to wait in a queue.

6. What is CodeDeploy in AWS DevOps?

Ans:

- CodeDeploy is an automated service which processes the deploying code to any instances either it is local servers or Amazon's EC2 instances.
- It mainly handles all the complexity that is involved in updating the applications for release.
- The direct advantage of CodeDeploy is its functionality that helps users rapidly release new builds and model features and avoid any sort of downtime during this process of deployment.

7. What is CodeStar in AWS DevOps?

Ans:

- AWS CodeStar enables you to speedily produce, fabricate, and deploy applications on AWS.
- AWS CodeStar provides a unified fanatic interface, enabling you to easily govern your software to facilitate happenings in one area.
- With AWS CodeStar, you can set up your entire continuous delivery toolchain in minutes, allowing you to begin releasing code faster.

8. Is there any difference between DevOps and Agile? If yes, please elaborate.

Ans: There exist numerous overlapping elements between these two concepts but also there are many differences that must be taken into consideration.

- A key principle of Agile revolves around seamless development or production of software.
- DevOps deals with the deployment of the software. The main objective is to make sure there are faster turnaround time, high reliability, and minimum error.

9. What is AWS Lambda in AWS DevOps?

Ans:

- Lambda is a computation service where the users can run their code without having to provision or manage servers explicitly.
- Without prior integration, the users can run any piece of code for their applications or services by using AWS Lambda.
- It is very simple as uploading a piece of code and Lambda takes care of everything that is required to run and scale the code.

10. What is AWS CodeCommit in AWS DevOps?

Ans:

- CodeCommit is a source control service provided in AWS that hosts Git repositories safely in a highly scalable manner.
- Using CodeCommit, one can remove the setup and maintenance of a source control system requirement and scale its infrastructure as per need.

11. What are Microservices in AWS DevOps?

Ans: Microservice provides the design approaches for building a single application as a set of services. Each of these services will run by its own process structure and communicates with every other service using a structured interface, which is both lightweight and easy to use. The communication of these services is mostly based on HTTP and API requests.

12. What do you understand about AWS CloudFormation in AWS DevOps?

Ans:

- AWS CloudFormation in AWS DevOps is the services which provide simpler and easy access for businesses and developers.
- It builds a collection of related AWS resources. Moreover, it enables businesses and developers to provide these elements in a predictable and orderly manner.

13. What is VPC in AWS DevOps?

Ans:

- A VPC stands for Virtual Private Cloud which is a cloud network that is mapped to an AWS account.
- The AWS infrastructure helps users to create regions, subjects, routing tables, and even Internet gateways in the AWS accounts.
- It provides users with the ability to use EC2 or RDS as per requirements.

14. What is meant by Infrastructure as Code (IaC)?

Ans:

- IaC is a common DevOps feature in which the code and the software development techniques helps in managing the overall infrastructure from continuous integration to the version control system.
- Moreover, the API model in the cloud helps developers work on the entire infrastructure programmatically.

15. What is a hybrid cloud in AWS DevOps?

Ans:

- A hybrid cloud is the computation setting which uses a combination of private and public clouds.
- Hybrid clouds are created using a VPN tunnel that is inserted between the cloud VPN and the on-premises network.
- AWS Direct Connect has the ability to bypass the Internet and connect securely between the VPN and a data centre easily.

16. What are some of the challenges that arise when creating a DevOps pipeline?

Ans:

- It handles data migration techniques and implements new features easily.
- When migration doesn't work, then the system will be in an unstable state and it leads to issues down the pipeline. This is solved within the CI environment that makes use of a feature flag, which helps in incremental product releases.
- The rollback functionality in DevOps pipeline can help in mitigating a few of the challenges.

17. What is the importance of buffer in Amazon Web Services?

Ans:

- A buffer synchronizes different components and handles the incoming traffic.
- The components are inclined to work in an unstable way of receiving and processing the requests.
- A buffer creates an equilibrium that links various apparatus and crafts the effort at an identical rate for supplying more rapid services.
- With a buffer, it is very easy to balance the incoming traffic rate and the usage of the pipeline which ensures unbroken packet delivery in all conditions across the cloud platform.

18. Why do you need a Continuous Integration of Dev & Testing?

Ans:

- Continuous Integration of Dev and Testing improves the quality of software and reduces the delivery time by replacing the traditional testing after completing all development.
- It allows the Dev team to easily detect and locate problems early because developers need to integrate code into a shared repository several times a day. Each check-in is then automatically tested.

19. What is AWS LoT in AWS DevOps?

Ans: AWS LoT is a cloud management platform that adds provisions for connected devices for interacting with all the cloud applications smoothly and securely.

20. What is EBS in AWS DevOps?

Ans:

- EBS is a virtual storage area network in AWS.
- EBS or Elastic Block Storage names the block-level volumes of storage, which are used in the EC2 instances.
- It is highly compatible with other instances and stores the data reliably.

21. What is a build project in AWS DevOps?

Ans:

- A build project defines how CodeBuild will run a build.
- Build project in AWS DevOps include the following information such as.

a. Where to get the source code?
b. Which build environment to use?
c. What build commands to run?
d. Where to store the build output?

- A build environment is a combination of an operating system, programming language runtime and tools used by CodeBuild to run a build.

22. How do you configure a build project in AWS DevOps?

Ans: A build project is configured through the console or the AWS CLI. You must specify source repository location, the build commands, the runtime environment, the IAM role assumed by the container and the compute class required to run the build. Alternatively, you can specify build commands in a “buildspec.yml” file.

23. Which programming frameworks does CodeBuild support in AWS DevOps?

Ans: CodeBuild provides pre-configured environments for supported versions of Java, Android, Python, Node.js, Ruby, Go and Docker. Further, you can also customize the environment by creating a Docker image and then uploading it to the Amazon EC2 Container Registry or the Docker Hub registry. You can reference this custom image in your build project.

24. What is Amazon QuickSight in AWS DevOps?

Ans: Amazon QuickSight is a fast, cloud-powered business analytics service that builds visualizations, performs ad-hoc analysis and quickly extracts the business insights from the data easily.

25. Briefly explain how you will handle revision control?

Ans: In order to handle revision control, you need to first post on GitHub or SourceForge. This ensures that your post can be seen by everyone. Moreover, one can also post the checklist from exactly the last revision. It will make sure that if any unresolved cases exist, they can be resolved easily.

26. What is an Amazon Machine Image?

Ans:

- Amazon Machine Image (AMI) is a snapshot of the root filesystem.
- AWS Amazon Machine Image provides the necessary information for launching an “instance”. An instance is a virtual server in the cloud computing environment.
- An AMI encloses a template for the instance’s root volume, a block device mapping, and launch permissions.

27. How do Kubernetes containers communicate in AWS DevOps?

Ans: An entity called a pod is used to map between containers in Kubernetes. One pod can contain more than one container at a time. Due to the flat network hierarchy of the pod, communication between each of these pods in the overlay network becomes straightforward.

28. What is configuration management in terms of infrastructure?

Ans:

- Configuration Management consists of numerous tools which involve in the delivery automation and infrastructure operations.
- It mainly keeps the server ready for deployment of an application once it is developed.
- The common examples of configuration management include the settings related to the network configuration and installation of system packages.
- The system admin or Ops must ensure that there exists parity in varying systems. It will be possible by provisioning the systems.

29. Why AWS DevOps Matters?

Ans: The Software and the Internet have changed the modern world industry from shopping to entertainment to banking. Now the software is no longer supported by a business but preferably it has become an integral part of an organisation.

Organisations started interacting with their customers through this software delivered as online services or applications and on all sorts of devices. They are using this software for increasing the operational efficiencies by transforming every part of the value chain, such as logistics, communications, and operations.

In the same manner, the physical goods companies have transformed how they design, build and deliver their products using industrial automation. Today, these organisations have to transform how they build and deliver software.

30. How is AWS CloudFormation different from AWS Elastic Beanstalk?

Ans:

These services are designed in such a way that it complements each other.

AWS Elastic Beanstalk:

- It provides a very easy deployment environment that runs applications in the cloud.
- It is integrated with developer tools and enables a one-stop experience for you in managing the lifecycle of your applications.

AWS CloudFormation:

- It is a very convenient provisioning mechanism for a broad range of AWS resources.
- It supports the infrastructure needs for many different types of applications such as

a. Existing enterprise applications.

b. Legacy applications.
c. Applications built using a variety of AWS resources.
d. Container-based solutions.