**Interview Questions by SG-based companies**

1. Food Delivery company - DevOps Engineer

* Given a fixed budget, design a fully automated CI/CD pipeline that developers can use when making feature enhancements. Name the different tools that you will use in the pipeline at each step.
* What deployment technique would be suitable for our CI/CD application?
* What are the trade-offs you have to consider when building your CI/CD pipeline?
* You have 5 servers behind a load balancer. You notice that one server is taking 80% of the traffic while the other 4 servers are only serving 20% of the traffic. Why is this so? What should you do to spread the traffic evenly?
* How would you begin debugging your web application errors that are of 4xx status codes? How about error 500x status codes?

1. E-Commerce company - DevOps Engineer

* What is the difference between a VM and a container?
* How are the different layers created in Docker images?
* Explain what stateful and stateless architectures are
* Explain what is Continuous Integration
* Explain how Continuous Deployment and Continuous Delivery differ
* What is the difference between Monolithic, Service-Oriented and Microservices Architecture?
* Explain Test Driven Development. How is this different than Business Driven Development?
* What are the different types of code testing?
* How do I integrate automated testing in the pipeline? At which stage of the pipeline should automated testing be at?

1. Government-affiliated company - DevOps Engineer

* You are working in an organization that has 10 different applications. These 10 applications are related but share different databases, VPCs, compute instances and network layers. You are asked to help build CI/CD pipelines as well as the terraform scripts for these applications. How would you approach it?
  + Would you create 10 different CI/CD pipelines or just 1?
  + How would you segregate your AWS resources for each application?
  + Is your implementation scalable in case we have 10 new applications?

1. Financial institution - Site Reliability Engineer

* You see a server that is hitting 80% CPU utilization and no one is aware of this due to a lack of an automated server check. What can you do to make sure this process can be fixed in the future?
* What do you do if you notice your server has a memory leak? What can be done to fix this?
* Your team members are reporting issues connecting to a linux server. What would be your course of action to fix this?
* Create a simple automation bash script to look for the string “ERROR” in all files under /var/log/ and write all the lines to a new file called error.txt

1. Start Up / Consultancy - DevOps Engineer / Architect

* Explain the flow of a DNS resolver
* Difference between NACL and security groups
* Architecture use cases on AWS
* Test on AWS concepts(For e.g. IAM)
* Hands on using Terraform / Ansible (open book , allowed to access terraform /ansible documentation)
* Difference between NLB and ALB + security group configs on them
* Terraform multi environment deployment file structure

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