**IR DevOps Test**

**Question 1:**

We need to give access to an AWS IAM user where the IAM user can access S3 console, list buckets, list objects, view bucket policies etc, basically all read operations **except that the user should not be able to download objects.**

Create an AWS CloudFormation stack that demonstrate following items:

* An IAM user creation.
* It should be possible to pass the IAM user name as a parameter.
* An IAM policy applicable to the IAM user that accomplishes above mentioned requirements.

**Make sure to run the CloudFormation stack you create in an AWS account and test that it satisfies the conditions mentioned in this question.** After testing, send us the stack you created.

It would be a plus if you can create above CloudFormation stack via the Serverless Framework (<https://serverless.com/>).

**Question 2:**

You need to architect an automated CICD pipeline from scratch. The requirements are:

1. Code will be stored in GitHub
2. You will need to deploy to AWS.
3. There are 3 AWS accounts matching the stages (Development, Staging, Production)
4. The product being developed is a serverless web application (S3, Lambda, DynamoDB)
5. 4 teams will be working on the same product at the same time

Please describe how you would architect the pipeline:

* What tools you would use to automate the pipeline?
* What operational polices you would you enforce (think ITIL not IAM) to maximize flow but keep the auditors away?
* What would be the processes to promote changes through the stages to production with minimal impact on the user?
* What would be the key metrics to monitor?

**Question 3:**

As part of our Quality Assurance, we need 3 versions of Windows and 2 versions of Linux to test our product.

We need to create new VMs and install the multiple prerequisite packages every time we run the tests.

What would be the best way to automate this process?

(There is no one correct answer - please give as much detail as you can)

**Question 4:**

Evil Corp has a global presence offering services in the US, Europe, South Africa, Singapore, China and Australia. A market leader cheap in the health and payments services, Evil is used by customers of all sizes, some spanning the globe.

You have been asked to review the operations processes of Evil and make recommendations.

Please:

* Describe your approach
* Concerns

Management has given you 6 months to improve operations by 50% against your findings. Please outline a plan of action.

**Question 5:**

On a scale of 0-10, how do you rate your knowledge in the following services?

0: No knowledge. 10: Indepth knowledge.

* AWS CloudFormation
* AWS IAM
* AWS S3
* AWS Lambda
* AWS API Gatway
* AWS DynamoDB
* AWS VPC, EC2s
* AWS Route53
* AWS Kinesis
* AWS IOT
* AWS ElasticeSearch
* AWS CloudWatch
* AWS Cognito
* AWS SNS, SQS
* AWS RDS
* AWS Cloud Security
* Docker
* Kubernetes
* Jenkins
* Ansible
* Java
* NodeJs
* C++
* Groovy
* Microservice
* SOA, ESB