

## Marketing Agency Lambda Pipeline for one of the world's largest beverage corporations

CANDID



*Candid developed a CI/CD pipeline template for our client's agency partners that leverages AWS Lambda, and provides automated testing and analysis of compliance standards as well as automated deployments from registered code repositories.*

### **BACKGROUND**

One of the world's largest beverage corporations, our client, engages with several creative and technical agencies for digital marketing solutions such as consumer websites, mobile applications, digital advertising content and vending machine interactions. Each agency is required to build technology solutions based on guidelines prescribed by the client. However, variances were continuously found in the delivery timeline, reliability, quality, and implementation amongst agencies that were not consistent throughout.

### **THE PROBLEM**

The existing client architecture needed enhancements that enabled agencies to rapidly deploy applications in a reliable, consistent, safe and scalable environment.

### **THE CANDID SOLUTION**

The Candid team proposed a CI/CD pipeline template for the AWS Lambda-based microservices that would be used by agency. The pipeline template offered a turnkey solution that automated testing and analysis of standards compliance as well as automated deployments from registered code repositories.

## Actions speak louder than advice.



### ACTION

Focusing on the business needs, Candid developed an in-repo YAML defined pipeline template executed by GoCD. Each pipeline represented a unique AWS Lambda function, monitored by Amazon CloudWatch. Each function had its own independent automated testing, standards compliance and deployment.

- The GoCD server polled the YAML pipeline definition in the repository for any changes. If the pipeline definition changed then the GoCD server reconfigured all of the pipelines to process the AWS Lambda testing and analysis. The pipeline definition file used YAML based anchoring as a template mechanism so that each pipeline used the same stages, jobs and tasks that were defined only once in the file.
- A pipeline polled the same repository for any shared code between AWS Lambda functions. The code was only used by the designated AWS Lambda function for that pipeline. A pipeline automatically deployed to a Test environment. If all tests passed for the AWS Lambda function, then they were deployed to a Production environment based on manual approval of the promotion.
- Automated testing of the pipeline included Mocha based unit testing as well as automated code coverage analysis, using the nyc tool. It also included compliance standards for code coverage defined uniformly across all AWS Lambda functions to ensure the same minimum quality standards were enforced across all partners.

### OUTCOME

Today, each marketing agency is able to leverage a DevOps process based on the Serverless® framework to deploy AWS Lambda functions for all new services. The project was also featured at re:Invent 2016 by [Patrick Brandt](#), Solutions Architect.

### RESULTS

- Every single function gets its own CI/CD pipeline that can be developed and deployed independently
- Per function deployment supports the CI/CD DevOps delivery model
- Depending on the organizational structure the pipeline definitions may be consolidated in a central repository to offer better change control
- Automation reduces cost and time

### AWS SERVICES USED

- AWS Lambda
- Amazon CloudWatch

### THIRD PARTY APPLICATIONS USED

- GoCD
- Mocha
- Serverless® framework

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# CANDID

Contact Candid to find out how we can put advice into action for you.

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