

# Utilizing DevOps for Faster Deployment of CI/CD End-to-End Framework

## Client Overview

The client needed an automated system that will integrate various code changes and a build and release pipeline for HP Roam infrastructure and services.



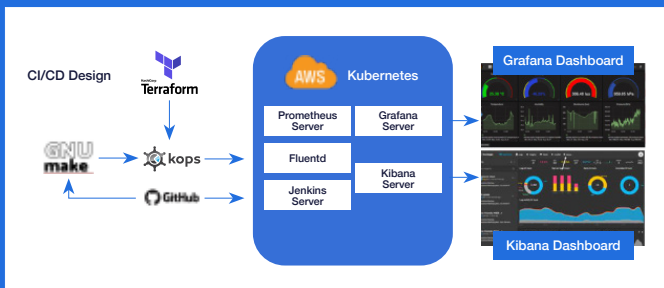
## The Challenges

One of the most critical parts of designing a cloud-based print solution is integrating different technologies to deploy an end-to-end framework. Using traditional software development, the client was unable to remediate build failures promptly and lacked an integrated dashboard to monitor metrics.

## The Solution

InfoPeople utilized DevOps methodology to implement infrastructure provisioning and configuration management for a cloud-based print solution. **The design process is highlighted by the following solutions and tools that were used to execute the DevOps project quickly and efficiently:**

- Makefile-based CI/CD end-to-end framework
- Terraform to set up infrastructure and manage all AWS resources
- Kubernetes cluster with AWS EC2 using kops
- Jenkins for continuous integration and builds
- Prometheus, Fluentd, Grafana, and Kibana using Helm



The following DevOps services were provided in the CI/CD design process:

- **Infrastructure as Code** for automated infrastructure set up in AWS
- **Continuous Integration** for frequent code changes integration and automated build
- **Continuous Delivery** for automated build and release pipeline using Jenkins
- **Continuous Monitoring** for continuous observability, intelligence, and metrics
- **Dashboards for monitoring** the infrastructure and services for HP Roam
- **On-call support** from offshore to remediate alerts and quicker recovery from failures

## Outcomes Delivered



Automated infrastructure for build and release pipeline



Developed dashboards to visualize results from multiple data sources simultaneously



Continuous integration, delivery, and monitoring to gather metrics and to recover from failures quickly