Blue/Green Deployments

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Document Level Classification

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Introduction

The following document describes the Blue/Green deployment strategy at a high level. This deployment strategy falls under the <u>Reliability Pillar</u> of the <u>AWS Well-Architected Framework</u>. Specifically, <u>REL08-BP04 Deploy using immutable infrastructure</u>.

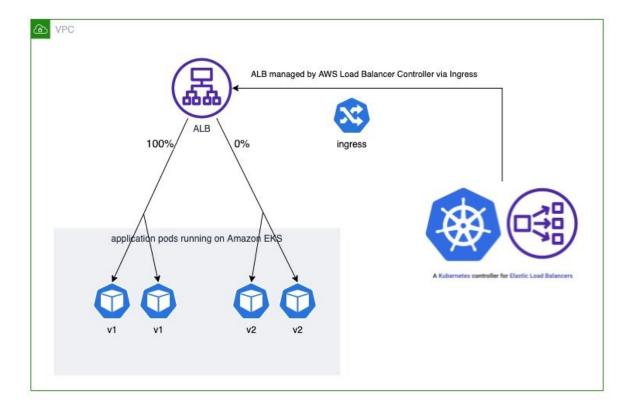
What is a Blue/Green Deployment?

A blue-green deployment is a software deployment strategy in which you deploy 2 similar production environments (blue and green) to release

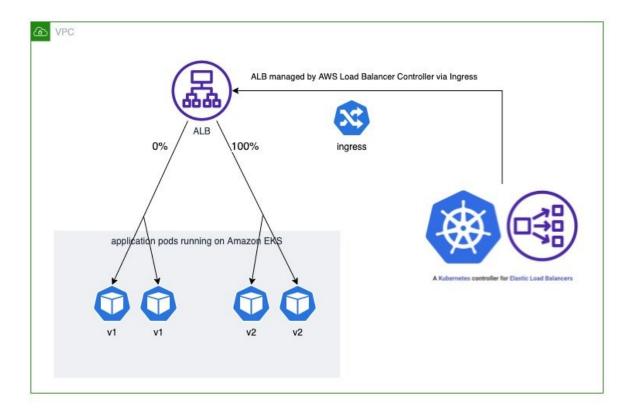
software updates. The blue environment runs the existing software version, while the green environment runs the new version. Only one environment is live at any time, receiving all production traffic. Once the new version passes software testing, the traffic is switched from the old environment to the new environment.

Architecture

The following diagrams illustrate the Blue/Green deployment strategy. In this example, v1 (blue) of the application is taking 100% of the traffic. Traffic is being controlled by the AWS Load Balancer Controller via Kubernetes Ingress.



After v2 (green) of the application has been deployed and has passed software testing, all traffic is shifted over to v2.



Supporting Documentation

- To read more about the Blue/Green deployment strategy using the AWS Load Balancer Controller reference the AWS Blog Post <u>Using</u> <u>AWS Load Balancer Controller for blue/green deployment, canary</u> <u>deployment and A/B testing.</u>
- Codefresh.io also has a in depth guide on Blue/Green deployments in the article What is Blue/Green Deployment?

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