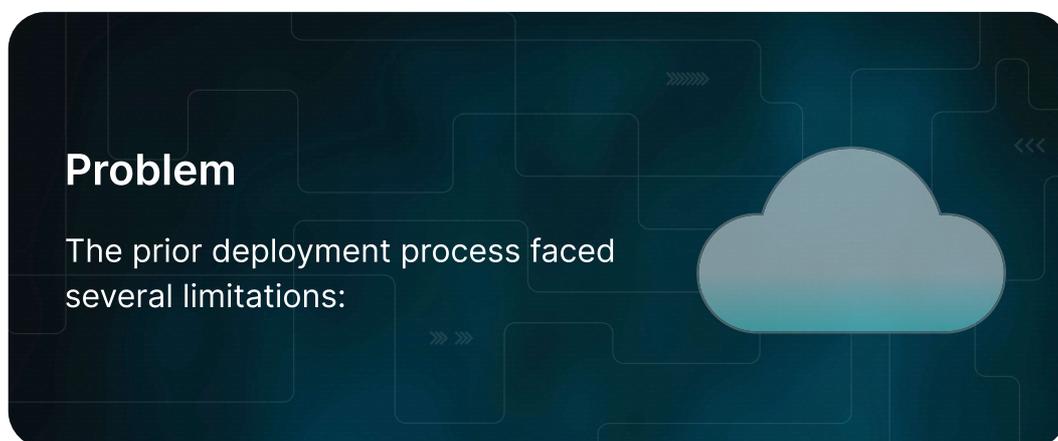


# HQ in Switzerland Implements **Blue/Green** **Deployments** for ECS with **Cross-Account** **Pipeline**



# Introduction

HQ in Switzerland, a prominent IT and Services company, sought to modernize its deployment strategy for its Amazon Elastic Container Service (ECS) applications. The existing deployment process was manual, time-consuming, and prone to errors. It also introduced downtime and risked destabilizing the production environment. To address these challenges, HQ in Switzerland embraced Blue/Green deployments and integrated them into a cross-account pipeline for streamlined and risk-free updates.



- **Downtime and risk:**

Manual deployments risked introducing downtime and instability during updates, impacting user experience and potentially halting business operations.

- **Manual effort:**

The manual approach was time-consuming and inefficient, requiring significant resources and increasing the risk of human error.

- **Limited scalability:**

The existing process lacked the flexibility to handle frequent updates or scale effectively for larger deployments.

To enhance deployment agility and minimize disruptions, HQ in Switzerland aimed to:

- **Implement Blue/Green deployments:**

This strategy would launch updates to a dedicated green environment while the existing blue environment served live traffic. Once validated, the green environment would become the new blue, ensuring seamless transitions and zero downtime.

- **Automate deployments:**

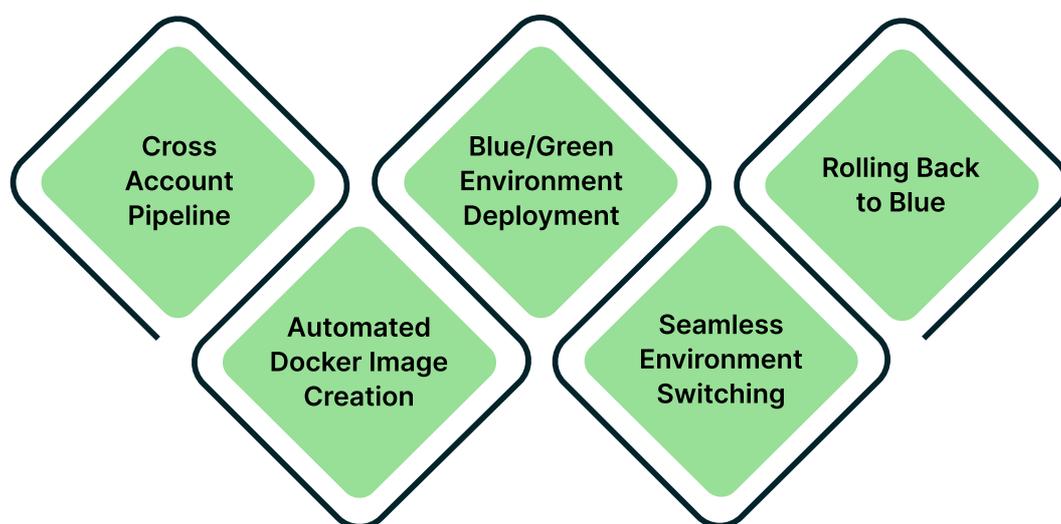
Integrate the Blue/Green strategy into a cross-account pipeline to automate docker image creation, ECS deployments, and environment switching, minimizing manual intervention and reducing error-prone steps.

- **Maintain high availability:**

Ensure constant service availability throughout the deployment process, minimizing user impact and potential revenue loss.

## Solution

To achieve these goals, HQ in Switzerland implemented the following solution:



- **Cross-account pipeline:**

Leveraged AWS CodeBuild and CodePipeline to establish a secure pipeline spanning its development and production accounts.

- **Automated docker image creation:**

Integrated CodeBuild into the pipeline to automate the creation of new docker images from code changes, ensuring consistency and efficiency.

- **Blue/Green environment deployment:**

The pipeline deployed the new image to a dedicated green ECS environment and ran automated tests to validate its functionality and performance.

- **Seamless environment switching:**

If tests passed, the pipeline automatically switched traffic routing from the blue environment to the green, completing the Blue/Green transition without downtime.

- **Rolling back to blue:**

The pipeline provided rollback capabilities to seamlessly revert to the previous blue environment if any issues arose during the green deployment.

## Results

The implementation of the Blue/Green deployments with a cross-account pipeline has yielded significant benefits for HQ in Switzerland, including:

- **Zero downtime deployments:**

Updates are now seamlessly executed without interrupting service availability, minimizing user impact and revenue loss.

- **Reduced risk:**

Automated deployments and environment switching minimize the risk of human error and unstable deployments.

- **Improved efficiency:**

The automated pipeline saves time and resources compared to manual deployments, allowing teams to focus on higher-value tasks.

- **Increased scalability:**

The pipeline can handle frequent updates and easily scale to accommodate larger deployments.

- **Enhanced user experience:**

Continuous delivery with near-zero downtime ensures a smooth and uninterrupted user experience.

## Conclusion

HQ in Switzerland's successful implementation of Blue/Green deployments for ECS with a cross-account pipeline showcases the power of automation and modern deployment strategies. By embracing this approach, the company has achieved faster and safer updates, maximized uptime, and improved user experience, ultimately gaining a competitive edge in the IT and Services landscape. This case study serves as a valuable example for organizations seeking to optimize their ECS deployments and deliver a seamless user experience.

