



CASE STUDY

CI /CD ROLLOUT TO STREAMLINE FREQUENT RELEASES



ABOUT AXCESS.IO

AXCESS.IO is a niche provider of Managed Cloud services to the businesses worldwide and has served an ever-growing number of clients since its inception. In a relatively short period of time, AXCESS.IO has quickly become a niche consulting firm specializing in Cloud Advisory, Cloud Managed Services, and DevOps Automation.

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CLIENT (HUBBLE CONNECTED) BACKGROUND

Hubble is an end to end cloud-based solution that makes it easy for customers to stay connected with their favorite people, places and pets by delivering live video and up-to-date smart notifications wherever they are. Hubble works with numerous leading Original Equipment Manufacturers (OEMs) and Internet of Things (IoT) providers that offer complete SDK, API integration documentation and reference design, enabling them to rapidly integrate and connect new products to the cloud.

For many clients, Hubble acts as a platform-as-a-service provider which enables the top brands to develop their business standards.

THE PROBLEM/ REQUIREMENT

At Hubble Connected, there are numerous deployment types performed daily, including, development, production, and staging. All of this is executed within 300+ servers. This complexity, volume and scale can lead to technical chaos. On average, there are more than 50 weekly deployments on multiple stacks, opening gateways to numerous manual testing processes and manual deployment. This consumes an enormous amount of time and often leads to delays in the final deployment.

All of the company's servers were running on Java application which required Continuous Integration/ Continuous Delivery (CI/CD) tools to ensure quick and fluent deployment. There were several challenges with such a system, including:

- Run and automate a CI/CD/CT/CM pipeline without any disruption for all service requests including the single service request for different applications used throughout the process.
- Enable push-button deployment through right branching or single window process.
- Draft a swift and high-availability infrastructure having auto-scaling potential and load balancing features ensuring load maintenance and accurate traffic flow throughout the deployment process.

OUR SOLUTION

Access.io analyzed the various applications and development processes and suggested a solution which would enable rapid deployment through CI/CD pipeline to decrease the needed for the overall deployment process by using different auto-scaled environmental and scaling activities. This required development of a single click deployment process through the Jenkins console. All other measures and steps in the process were fully automated and integrated.



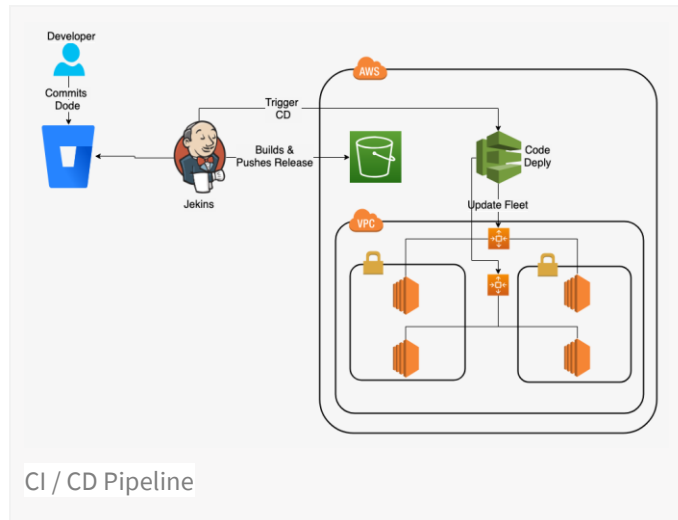
Tools and technologies used with CI/CD pipeline:

BITBUCKET

The updated version of Bitbucket ensured and controlled the repository.

JENKINS

Jenkins accelerated the software development process by 10X. It managed and controlled the software delivery process throughout the following steps: build document, stage, deployment, lifecycle, packages, static code analysis and more.



AWS CODEDEPLOY

AWS CodeDeploy was used to release new features and configure EC2 servers, and serverless Lambda. This helped decrease overall downtime throughout the application deployment process and handled the complex application updates without putting the application at risk.

AWS USAGE IN THE PROCESS

As a smart deployment service, AWS CodeDeploy automates the application deployment process to different cloud-based mediums like Amazon EC2 instances, Serverless Lambda functions, Amazon ECS Services, and on-premises instances. However, we can also deploy multiple applications on preferred mediums like Multimedia files, Packages, Code, Multi-media files, Web and configuration files, Executables, Scripts, etc.

AWS CodeDeploy deploys application content which runs on the server and is preserved in Amazon S3 buckets, serverless Lambda function, Bitbucket responsibilities, and GitHub repositories. A major benefit of AWS CodeDeploy is there is no need to make changes to the existing code, preserving the flow of code and deployment.

THE BENEFITS OF AWS INCLUDE

1. AWS is an easy to use platform based on SaaS based applications.
2. It gives the developer complete access to select any operating system, web application platform, programming language, and database.
3. It is the best approach to harden the infrastructure, and to improve the overall code structure.

THE FINAL OUTCOME

In conjunction with Jenkins, the brilliant functionalities of AWS DevOps tools managed different integration steps through highly configurable workflows and improved the release quality by allowing the QA team to integrate automated test scripts in the pipeline. AWS CodeDeploy eliminated outages through seamless rolling deployments to the fleets of workload in different regions and availability zones.