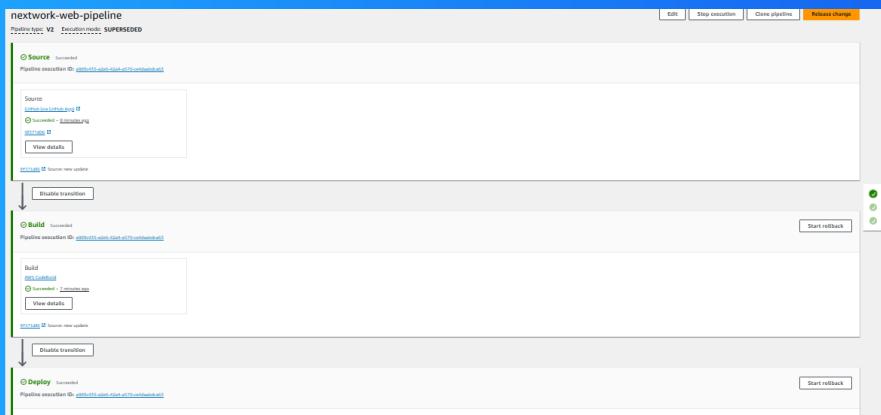




CI/CD with CodePipeline

G Gloria





Introducing Today's Project!

What is AWS CodePipeline?

AWS CodePipeline automates code updates, moving them from development to deployment. It helps speed up releases, reduces errors, and ensures apps stay updated and reliable.

How I used CodePipeline in this project

I used AWS CodePipeline to automate deploying my web app. It took my code through Source, Build, and Deploy stages efficiently. When errors occurred, I used a rollback to restore the previous version in Deploy, keeping Source and Build intact.

One thing I didn't expect in this project was...

One thing I didn't expect in this project was how easy it was to rollback the Deploy stage without affecting the Source or Build stages. It's a great way to fix deployment issues quickly while keeping the latest code and build changes intact.

This project took me...

This project took me about 1 hour to complete. It was a well-paced, hands-on experience that let me explore AWS CodePipeline, learn about rollbacks, and understand how to manage deployments effectively.

CI/CD Pipeline

A CI/CD pipeline is an automated process for building, testing, and deploying code. CI ensures code changes are integrated and tested frequently, while CD automates delivering updates to production or staging, ensuring faster, more reliable releases.

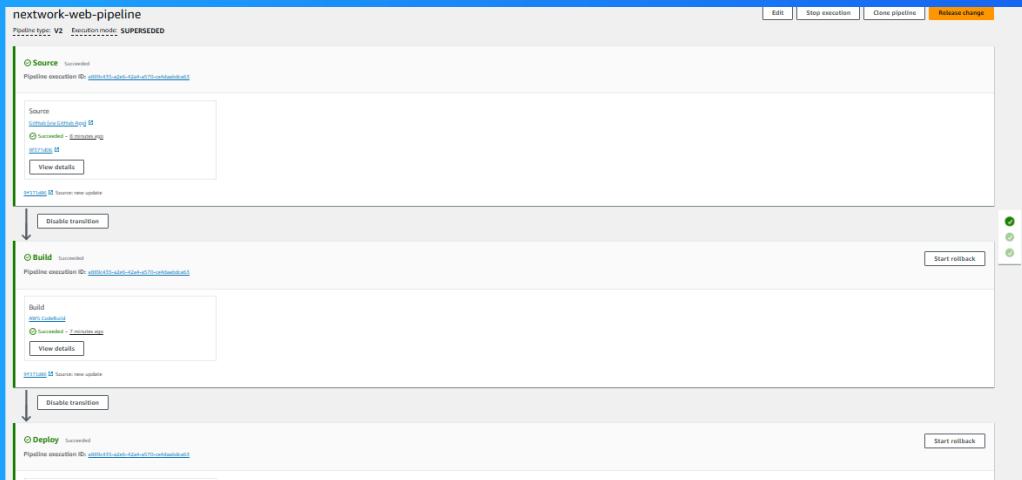
My CI/CD pipeline has three stages

The source stage is the first step in a CI/CD pipeline. It pulls the code from a repository, like GitHub and detects changes, such as commits or updates. This triggers the pipeline to start the process of building, testing, and deploying the app.

The build stage is where the application's code is compiled, dependencies are installed, and the code is packaged into a deployable format. It ensures the application is ready for deployment and often includes running unit tests to verify code quality.

The deploy stage is where your application is moved to the server or environment where users can access it. This stage ensures the latest build is live and operational for your audience.

CI/CD Pipeline



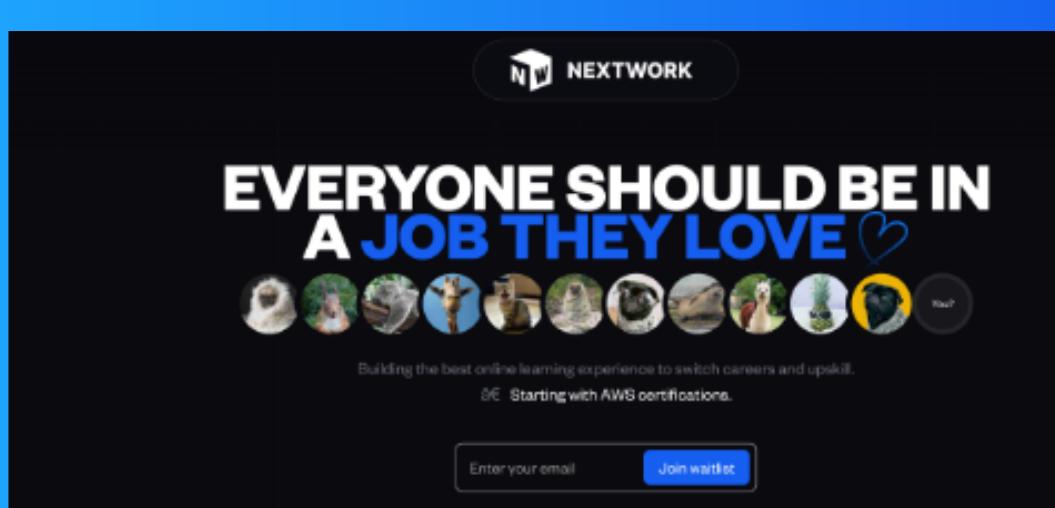


Releasing a Change

My CI/CD pipeline gets triggered by pushing changes to the GitHub repo. Whenever I and push updates to the main or a specific branch, the pipeline starts automatically, ensuring the latest code is tested, built, and deployed without manual steps.

I tested my pipeline's trigger by making two updates to my web app's source code. These changes were updating the index.jsp file and adding a folder image asset. I then committed and pushed these changes to my GitHub repository.

Once my pipeline executed successfully, I checked my EC2 webserver instance by accessing its public IP address or domain in a browser to verify that the updated version of my web app was deployed and functioning as expected.

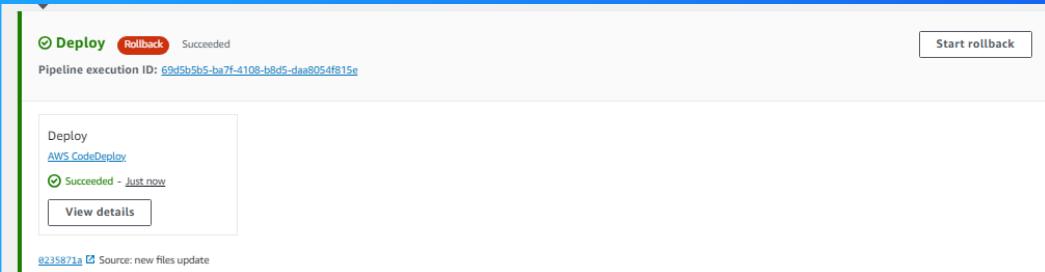


Trigger A Rollback

A rollback in a pipeline means going back to an older, working version of your app when the new one has problems. It helps fix issues quickly and keeps the system stable without causing more trouble for users.

I initiated a rollback on the deploy stage. This stage handles releasing the application to the live environment, and the rollback was needed to fix issues caused by the new version.

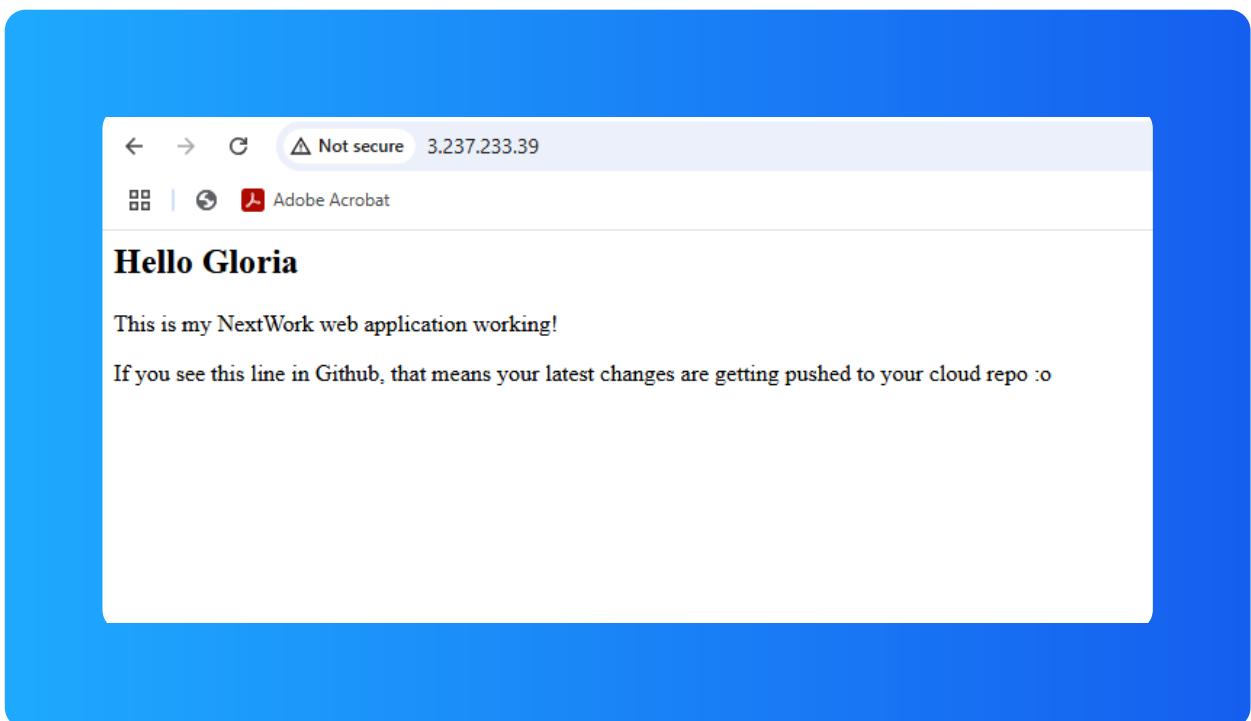
I checked the source stage and learned it was unaffected by the rollback. The rollback only changed the deploy stage, so the previous stayed same. The source stage just fetches the code and wasn't part of the issue, so no changes were made there.



Reverting a Rollback

Once the rollback was complete, my web app returned to the previous version before the index.jsp update. The site looked as it did before recent changes because only the deploy stage was reverted, leaving the source and build stages unchanged.

To update my Deploy stage back to the latest version of my source code, I selected "Release change" in CodePipeline. This updated all stages Source, Build, and Deploy to the latest version, restoring the NextWork home page on my web app.





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