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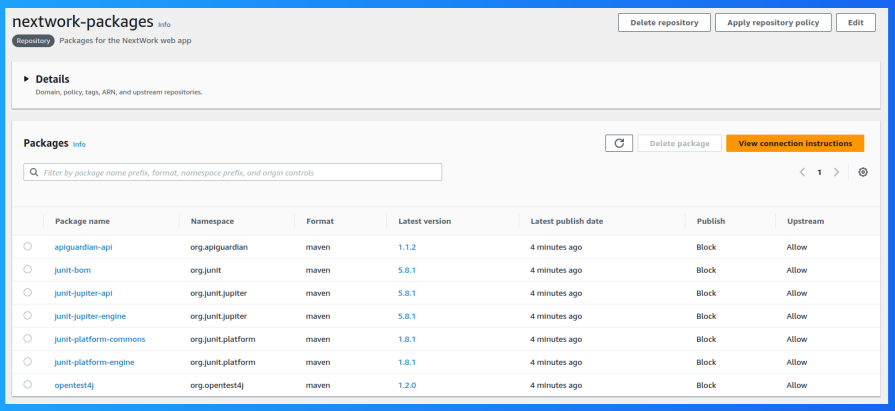
Dependencies and CodeArtifact

Emmanuel Enalpe III



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Introducing today's project!

What is AWS CodeArtifact?

AWS CodeArtifact is a fully managed artifact repository service that makes it easy to store, publish, and share software packages. It supports multiple package formats (like npm, Maven, and PyPI).

How I used CodeArtifact in this project

In today's project, I set up AWS CodeArtifact to store and manage dependencies for my Maven project. I configured the Maven settings to authenticate with CodeArtifact and published my artifacts, streamlining dependency management and version control.

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

I didn't expect the complexity of configuring AWS CodeArtifact with Maven. Navigating the permissions and repository settings took more time than anticipated, but it provided a valuable learning experience in managing cloud resources effectively.

This project took me...

The project took about more than an hour, including setup and other processes to complete this project.

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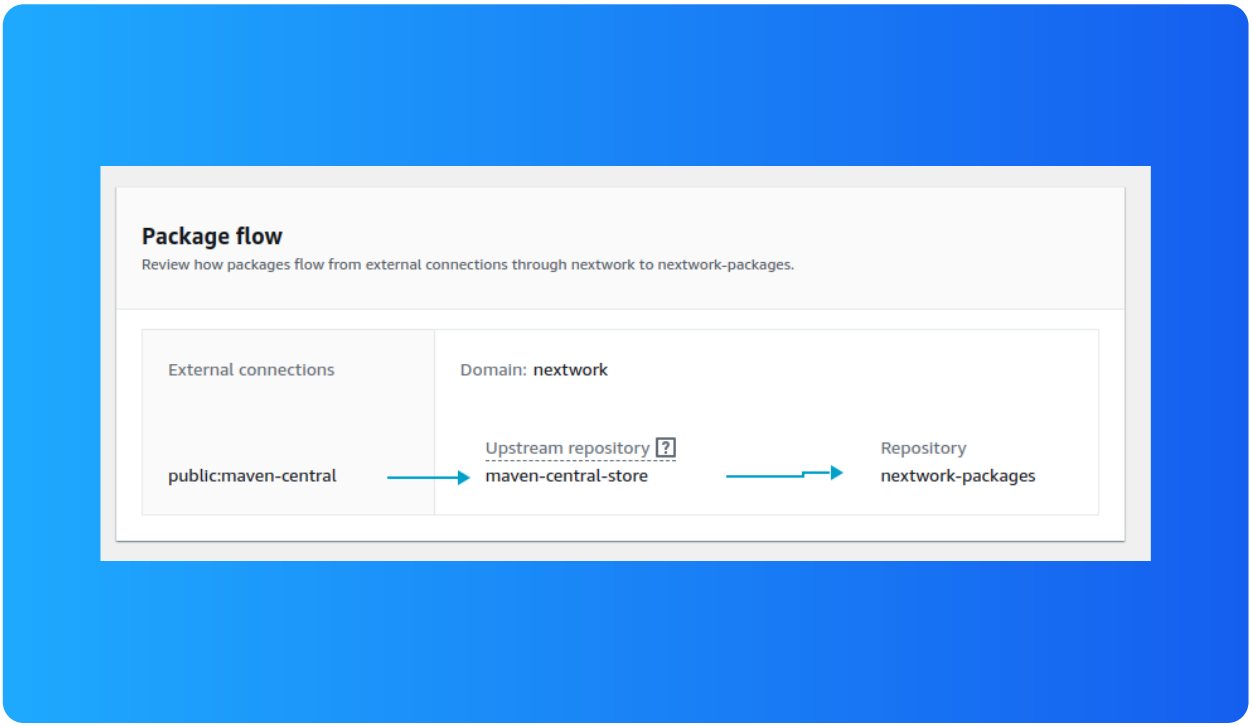
My project has three artifact repositories

The local repository is a version control system storage on a developer's machine, where code changes are tracked and managed before being pushed to a remote repository. It allows for offline commits, branching, and version history.

The upstream repository is the original source repository from which your local or forked repository originates. It serves as the main project repository where updates, fixes, and new features are introduced.

The public repository is a version-controlled space where code and files are shared openly for collaboration. It allows anyone to view, use, and contribute, promoting transparency and teamwork in software development.



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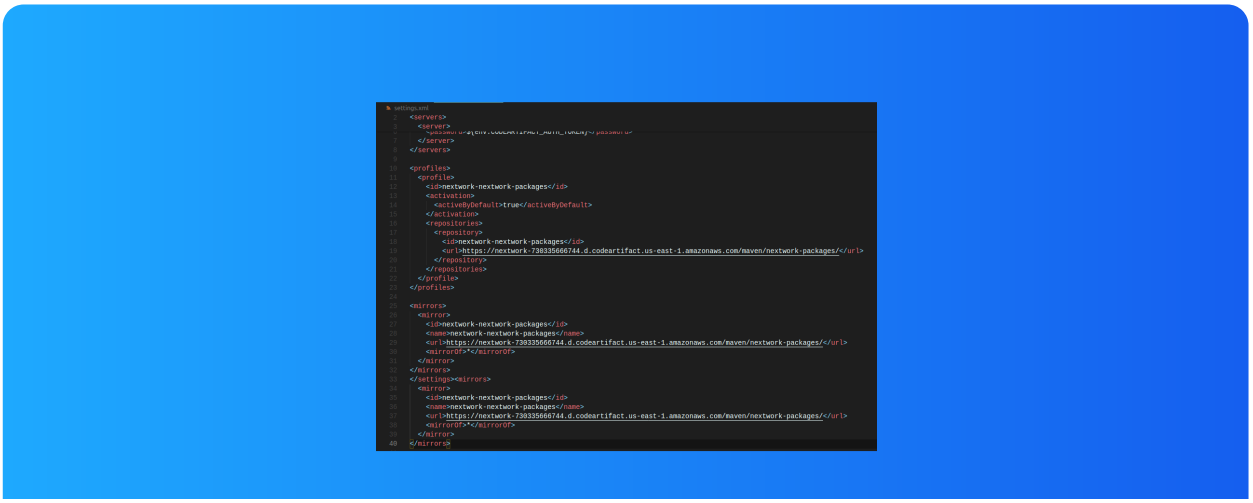
Connecting my project with CodeArtifact

I connected my web app project (via my VS Code) to CodeArtifact to securely store, share, and manage dependencies. It simplifies dependency management by enabling easy access to packages across environments and integrates smoothly with AWS services.

I created a new file, settings.xml, in my web app

`settings.xml` is a configuration file used in Maven projects to define global settings, such as repository locations, authentication credentials, proxy configurations, and build parameters. It customizes the behavior of Maven for the entire system.

The snippets of code configure Maven to authenticate with AWS CodeArtifact for the `nextwork-nextwork-packages` repository.



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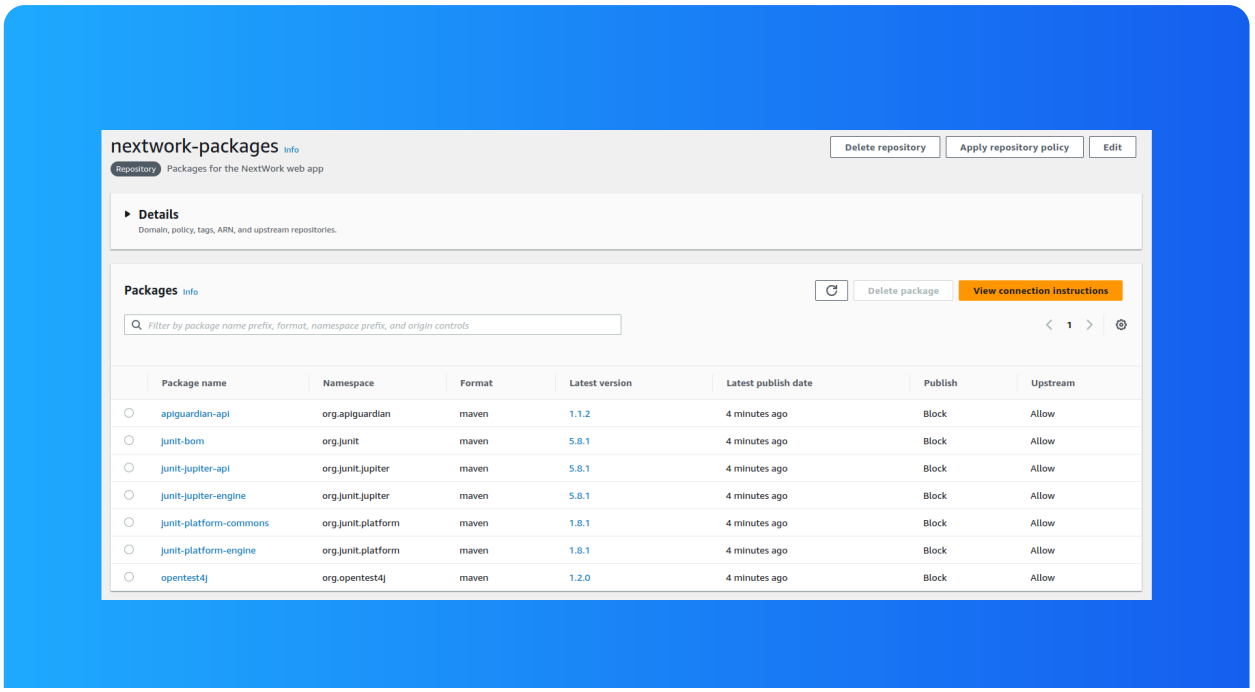
Testing the connection

To test the connection between Cloud9 and CodeArtifact, I compiled my web app

Compiling means converting human-readable source code into machine-readable code (binary or bytecode) using a compiler. This process transforms high-level programming languages into executable programs that a computer can run efficiently.

Success!

After compiling, I checked the target directory in my Maven project. I saw the packaged .jar file along with the compiled class files and resources ready for deployment.



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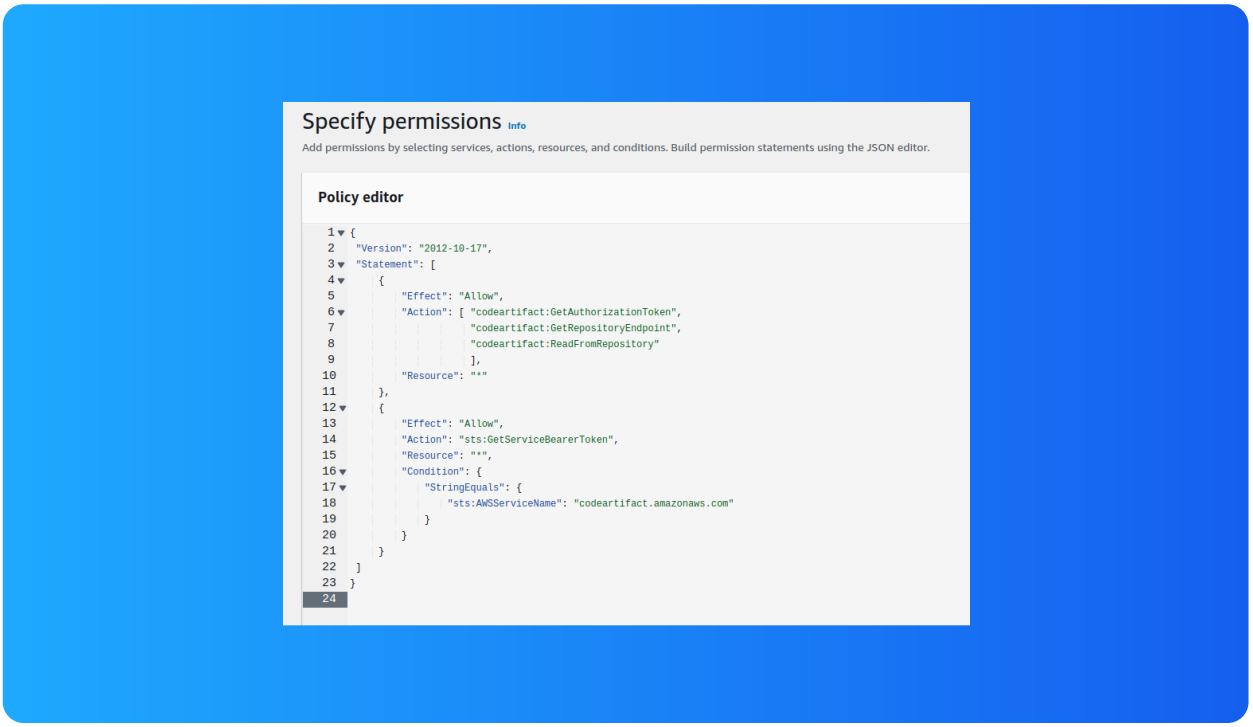
Create IAM policies

The importance of IAM policies

I also created an IAM policy because it defines permissions for accessing specific AWS services and resources, ensuring secure, controlled access and preventing unauthorized actions, which is essential for maintaining cloud security and compliance.

I defined my IAM policy using JSON

This policy will allow the user to get an authorization token, retrieve the repository endpoint, and read from any AWS CodeArtifact repository. It also permits obtaining a service bearer token specifically for AWS CodeArtifact.



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