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Dependencies and CodeArtifact

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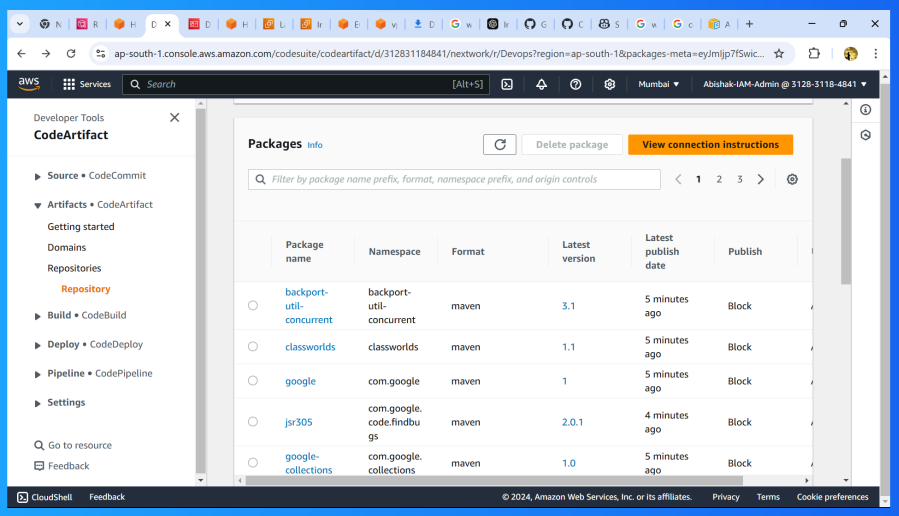

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Introducing today's project!

What is AWS CodeArtifact?

Think of AWS CodeArtifact like a secure closet where you can keep all the building blocks (we call these "packages") your web app needs to work.Even if something goes wrong, CodeArtifact helps you keep copies of the packages.

How I used CodeArtifact in this project

I used code artifact in todays project to keep a backup copies of all the packages/dependencies required for the webapp so that it will be useful for maven to look up for the dependencies for building the project structure.

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

One thing which I didn't expect is how Aws code artifact lets you store the packages/dependencies for our webapp like a backup and lets other services in the CI/CD pipeline access them by using an authorization token.

This project took me...

This project took aprroximately 2 hours which includes theoretical as well as practical session.

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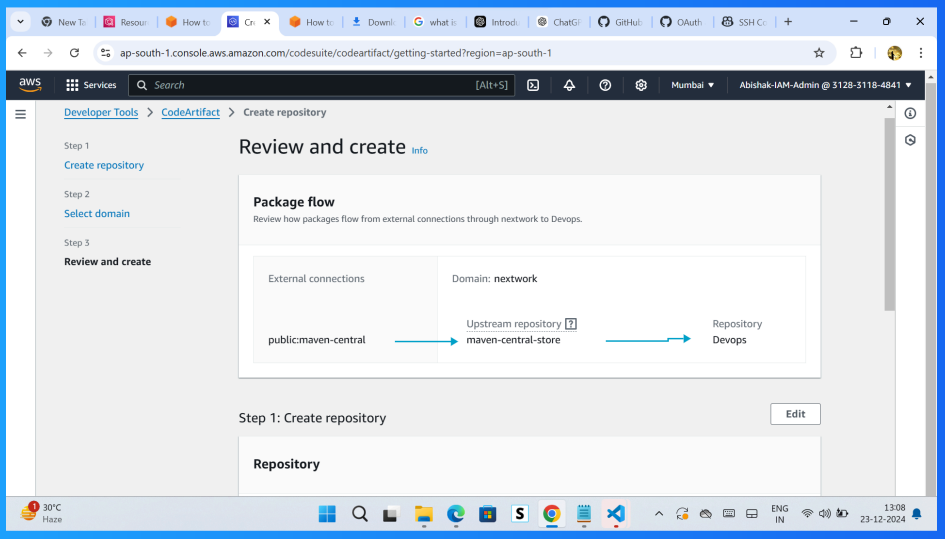
My project has three artifact repositories

The loacal repository is the personal toolbox where you keep all the specific tools and materials for your current project.

The upstream repository is our contact point to the big library (Maven Central), helping us get and store new tools when we need them for our toolbox.

The public repository is the vast package library on the internet where all sorts of Java tools and materials are stored. It's the primary source that supplies packages to other repositories, like maven-central-store.



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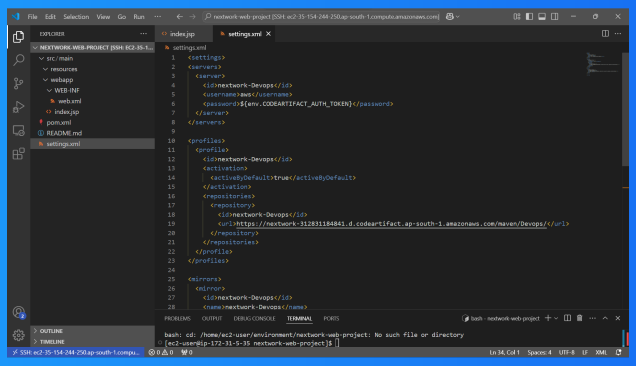
Connecting my project with CodeArtifact

I connected my web app project to CodeArtifact using the command export CODEARTIFACT_AUTH_TOKEN=`aws codeartifact get-authorization-token --domain nextwork --domain-owner 312831184841 --region ap-south-1 --query authorizationToken--output text`

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

settings.xml is a filethat tells Maven where to find the dependencies and how to connect to the right repositories (e.g. the ones in CodeArtifact) to get access.

The snippets of code define repository URLs, authentication details, and other settings so that Maven can correctly work with CodeArtifact to fetch and store your project's dependencies.



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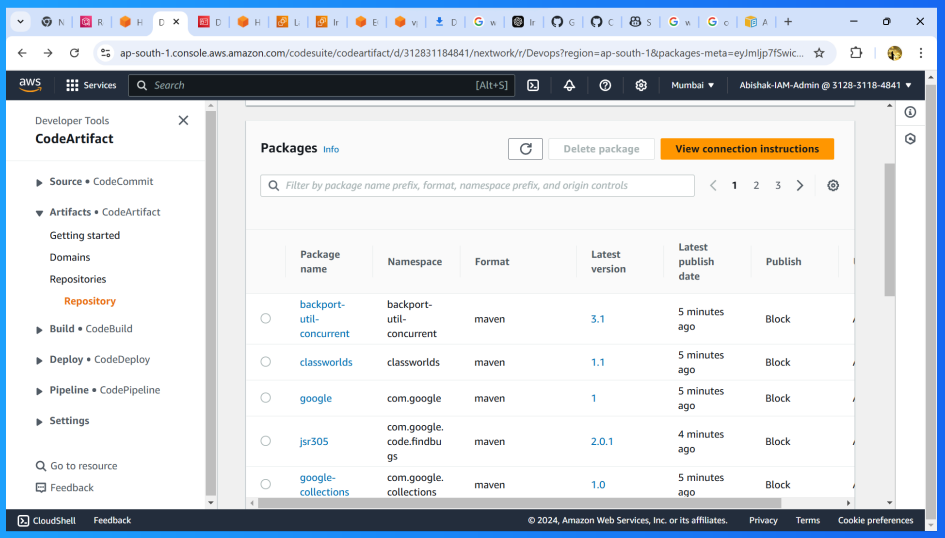
Testing the connection

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

Compiling is like translating your project's code into a language that computers can understand and run. When you compile your project, you're making sure everything is correctly set up and ready to turn into a working app.

Success!

After Compiling I checked if Maven successfully fetched all the tools and materials your web app needs which were downloaded from the upstream repository or Maven Central Repository and are now available as a copy inside CodeArtifact.



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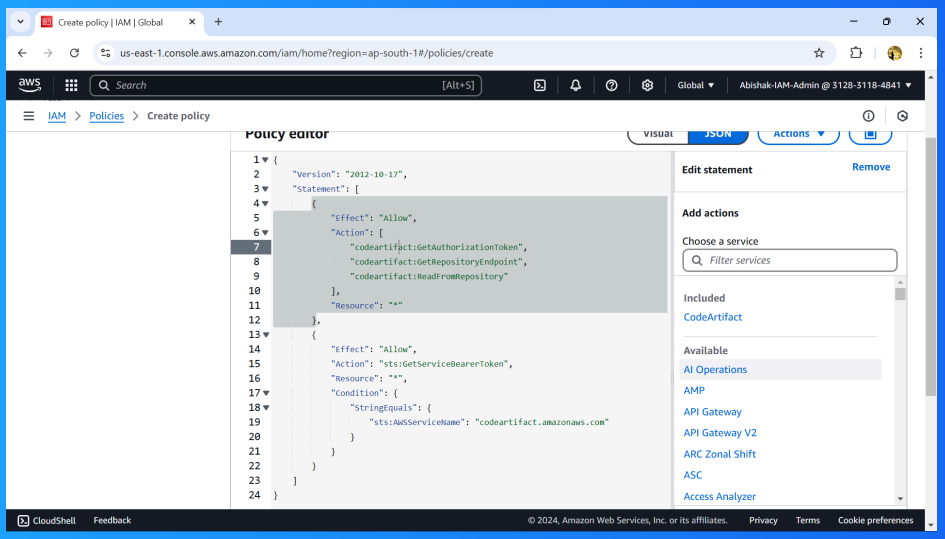
Create IAM policies

The importance of IAM policies

I also created an IAM Policy because other DevOps services like AWS CodeBuild, AWS CodePipeline, and your development environments (like Cloud9) need access to the packages stored in CodeArtifact - but they don't have access by default.

I defined my IAM policy using JSON

This policy will allow the AWS services with credentials to request an authorization token (which is the GetAuthorizationToken action we've allowed) that lets them access the repositories and fetch packages.



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