



NextWork.org

Dependencies and CodeArtifact



Gloria

Packages <small>Info</small>						
Package name	Namespace	Format	Latest version	Latest publish date	Publish	Upstream
backport-util-concurrent	backport-util-concurrent	maven	3.1	Just now	Block	Allow
classworlds	classworlds	maven	1.1	Just now	Block	Allow
google	com.google	maven	1	Just now	Block	Allow
jcr505	com.google.code.fluidb.ugis	maven	2.0.1	Just now	Block	Allow
google-collections	com.google.collections	maven	1.0	Just now	Block	Allow
commons-cli	commons-cli	maven	1.0	Just now	Block	Allow
commons-logging-api	commons-logging	maven	1.1	Just now	Block	Allow
junit	junit	maven	3.8.2	Just now	Block	Allow
log4j	log4j	maven	1.2.12	Just now	Block	Allow
apache	org.apache	maven	5	Just now	Block	Allow
maven	org.apache.maven	maven	2.2.1	Just now	Block	Allow
maven-artifact	org.apache.maven	maven	2.2.1	Just now	Block	Allow



Introducing today's project!

What is AWS CodeArtifact?

AWS CodeArtifact is a service for storing, managing, and sharing software packages securely. It helps with dependency management, ensures package security, and works with tools like Maven, making it easier to build and maintain projects efficiently.

How I used CodeArtifact in this project

I used AWS CodeArtifact in today's project to store and manage dependencies for my web app. It acted as a central repository, allowing Maven to securely fetch the packages needed to build and compile the application.

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

One thing I didn't expect in this project was how easy AWS CodeArtifact made it to manage dependencies. It handled the setup and let Maven quickly get the packages needed, making the process much simpler than I thought.

This project took me...

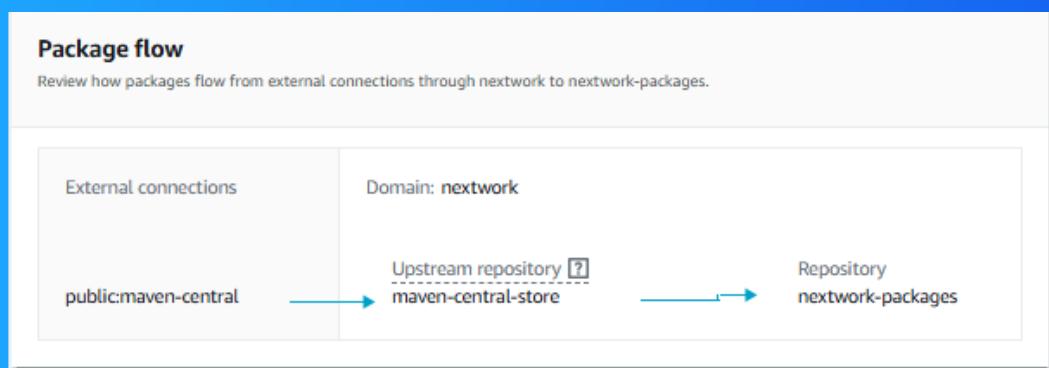
This project took me about 30 minutes to complete. The clear steps and tools like AWS CodeArtifact made the process straightforward and efficient, building on what I learned from previous projects.

My project has three artifact repositories

The local repository is the version of your project stored on your computer. It allows you to track changes, commit updates, and prepare files before pushing them to a remote repository like GitHub, ensuring organized version control locally.

The upstream repository is the remote version of your project, usually on platforms like GitHub. It stores the central codebase and lets you push local changes, pull updates, and collaborate with others by syncing code.

The public repository is a remote repository that is accessible to anyone. It allows others to view, download, and contribute to your project, making it ideal for open-source collaboration and sharing code with a wider audience.



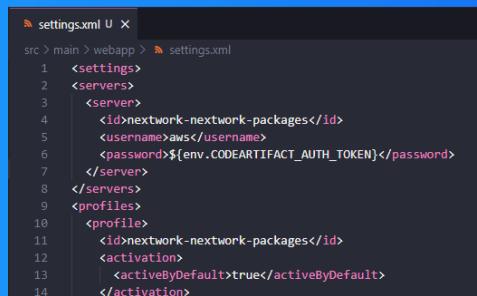
Connecting my project with CodeArtifact

I connected my web app project (via my VSCode IDE) to CodeArtifact to manage dependencies efficiently. CodeArtifact acts as a central repository for storing and retrieving packages, ensuring my project has the right tools and libraries.

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

`settings.xml` is a configuration file used by Maven to define global settings for a project, like repository credentials, proxy settings, or plugin configurations. It ensures Maven can access required dependencies and resources for building the project

The snippets in `settings.xml` configure Maven with CodeArtifact. Servers store authentication details, profiles guide Maven to fetch dependencies from `nextwork-packages`, and mirrors redirect requests to this repository, ensuring secure access.



```
<settings>
  <servers>
    <server>
      <id>nextwork-nextwork-packages</id>
      <username>aws</username>
      <password>${env.CODEARTIFACT_AUTH_TOKEN}</password>
    </server>
  </servers>
  <profiles>
    <profile>
      <id>nextwork-nextwork-packages</id>
      <activation>
        <activeByDefault>true</activeByDefault>
      </activation>
    </profile>
  </profiles>
</settings>
```

Testing the connection

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

Compiling means turning the code you write into a format the computer can understand and run. It checks for errors in the code and creates a file that can be executed.

Success!

After compiling, I checked the `nextwork-packages` folder on AWS CodeArtifact. I saw the dependencies and compiled files stored there, including packages and configurations that Maven fetched and used to build the web app successfully.

Packages <small>Info</small>						
Filter by package name prefix, format, namespace prefix, and origin controls						
	Package name	Namespace	Format	Latest version	Latest publish date	Publish
<input type="checkbox"/>	backport-util-concurrent	backport-util-concurrent	maven	3.1	Just now	Block Allow
<input type="checkbox"/>	classworlds	classworlds	maven	1.1	Just now	Block Allow
<input type="checkbox"/>	google	com.google	maven	1	Just now	Block Allow
<input type="checkbox"/>	jsr305	com.google.code.findbugs	maven	2.0.1	Just now	Block Allow
<input type="checkbox"/>	google-collections	com.google.collections	maven	1.0	Just now	Block Allow
<input type="checkbox"/>	commons-cli	commons-cli	maven	1.0	Just now	Block Allow
<input type="checkbox"/>	commons-logging-api	commons-logging	maven	1.1	Just now	Block Allow
<input type="checkbox"/>	junit	junit	maven	3.8.2	Just now	Block Allow
<input type="checkbox"/>	log4j	log4j	maven	1.2.12	Just now	Block Allow
<input type="checkbox"/>	apache	org.apache	maven	5	Just now	Block Allow
<input type="checkbox"/>	maven	org.apache.maven	maven	2.2.1	Just now	Block Allow
<input type="checkbox"/>	maven-artifact	org.apache.maven	maven	2.2.1	Just now	Block Allow

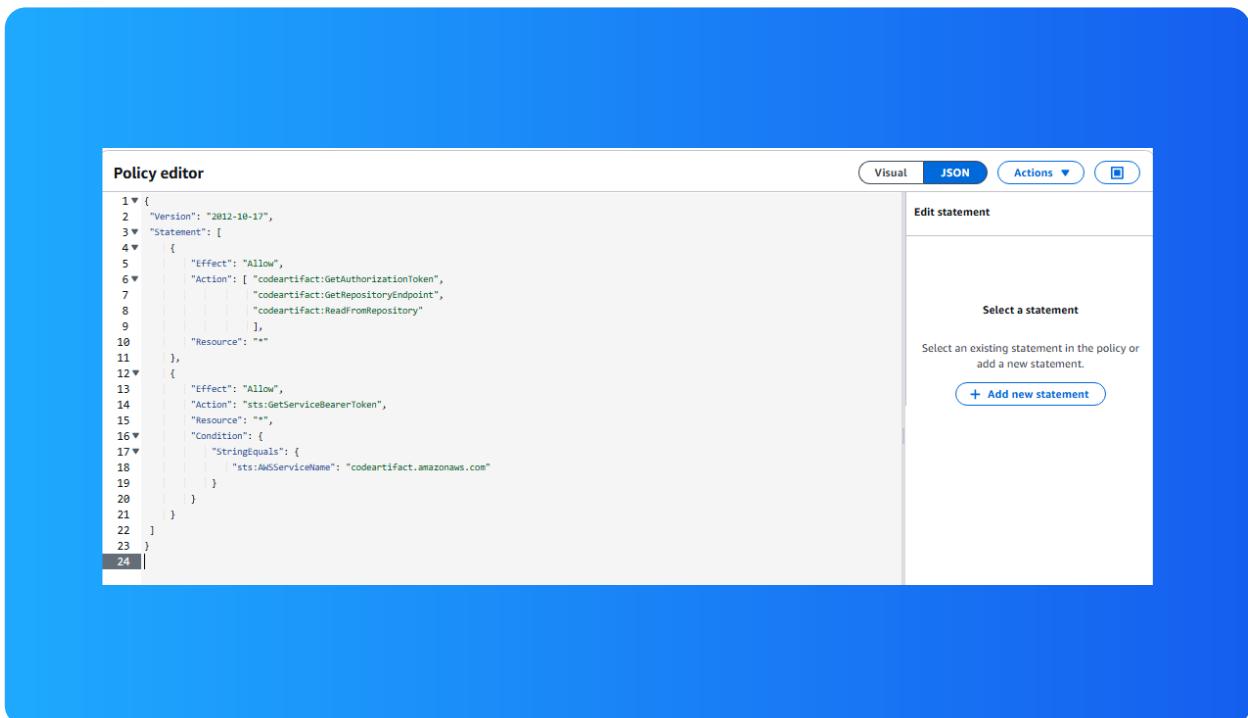
Create IAM policies

The importance of IAM policies

I also created an IAM policy because it defines specific permissions for accessing AWS resources. This ensures secure and controlled access, allowing my web app project to interact with services like CodeArtifact and CodePipeline

I defined my IAM policy using JSON

This policy will allow actions like getting a token, accessing the repository, reading data from it, and securely connecting to CodeArtifact. It ensures the app can fetch and use the packages needed to build and run properly.





NextWork.org

Everyone should be in a job they love.

Check out nextwork.org for
more projects

