



Build a Web App and IDE in AWS



sru anu

```
SRUJAN SA@LAPTOP-3R9GMTQJ MINGW64 ~/Downloads (main)
$ ssh -i "C:\Users\SRUJAN SA\Downloads\project5 (1).pem" ec2-user@ec2-3-1
11-218-255.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-3-111-218-255.ap-south-1.compute.amazonaws.
com (3.111.218.255)' can't be established.
ED25519 key fingerprint is SHA256:dsLj5FBv6HaDYiHBsFgsyjLZjRKB70MAXscs8uV
IzLk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-111-218-255.ap-south-1.compute.amazonaws.
com' (ED25519) to the list of known hosts.

A newer release of "Amazon Linux" is available.
  Version 2023.5.20241001:
Run "/usr/bin/dnf check-release-update" for full release and version upda
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Introducing Today's Project!

What is AWS Cloud9 and why is it useful?

AWS Cloud9 is a cloud-based IDE for writing, running, and debugging code. It offers collaboration, pre-configured tools, and AWS service integration.

How I'm using Cloud9 in this project

I used AWS Cloud9 to develop my Java web application. It provided an integrated development environment with tools for coding, debugging, and running my project directly in the cloud.

One thing I didn't expect...

One unexpected aspect of the project was how seamlessly AWS Cloud9 integrated with other AWS services, making it easier to manage resources directly from the IDE without complex setups.

This project took me...

Configuring the cloud took me around one and a half hours, which was the most time-consuming part of the project.

sru anu
NextWork Student

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Set up an IAM User

An IAM user is an individual identity created within an AWS account by the root user, with specific permissions granted to access and manage certain AWS services.

The importance of IAM users

It's important to use IAM users because they provide controlled access to AWS resources, ensuring that each user only has the permissions necessary for their role, enhancing security and management.

I created an IAM user with AdministratorAccess permission, granting full access to all AWS services and resources.

Retrieve password

You can view and download the user's password below or email users instructions for signing in to the AWS Management Console. This is the only time you can view and download this password.

Console sign-in details		Email sign-in instructions
Console sign-in URL	https://nextwork-alias-srujan.signin.aws.amazon.com/console	
User name	srujan-IAM-Admin	
Console password	***** Show	

[Cancel](#) [Download .csv file](#) [Return to users list](#)



Environments & IDEs

What is an environment?

An environment is a cloud-based development workspace in AWS Cloud9 where you can write, run, and debug code. It includes essential tools for coding in various programming languages, all accessible from a browser.

What is an IDE?

An IDE is an Integrated Development Environment, a software application that provides tools like a code editor, debugger, and build automation to help developers write, test, and manage code efficiently.

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Launch a Cloud9 IDE

The benefit of using Cloud9

Using Cloud9 has the benefit of being cloud-based, which means you can access your development environment from anywhere, collaborate in real time, and avoid managing local configurations.

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Maven & Java

Maven is a build automation tool for Java projects that manages dependencies, builds, and deploys applications using a standard project structure.

Maven is required in this project because it simplifies dependency management, automates the build process, and ensures consistency across the project structure, making development more efficient.

Maven is required in this project because it streamlines dependency management, automates the build process, and facilitates easier project configuration, ensuring consistency and efficiency throughout development.

Maven is required in this project because it simplifies dependency management, automates builds, and integrates with tools, enhancing project efficiency. Java is needed for its platform independence and extensive libraries, making it ideal for app development.

```
[ec2-user@ip-172-31-46-235 ~]$ java -version
openjdk version "22.0.2" 2024-07-16
OpenJDK Runtime Environment Corretto-22.0.2.9.1 (build 22.0.2+9-FR)
OpenJDK 64-Bit Server VM Corretto-22.0.2.9.1 (build 22.0.2+9-FR, mixed mode, sharing)
[ec2-user@ip-172-31-46-235 ~]$ sudo amazon-linux-extras enable corretto8
sudo: amazon-linux-extras: command not found
[ec2-user@ip-172-31-46-235 ~]$ mvn -version
-bash: mvn: command not found
[ec2-user@ip-172-31-46-235 ~]$ mvn -version
Apache Maven 3.2.5 (12a6b3acb947671f09b81f49094c53f426d8ceaf; 2014-12-14T17:29:23+00:00)
Maven home: /usr/share/apache-maven
Java version: 22.0.2, vendor: Amazon.com Inc.
Java home: /usr/lib/jvm/java-22-amazon-corretto.x86_64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.1.109-118.189.amzn2023.x86_64", arch: "amd64", family: "unix"
[ec2-user@ip-172-31-46-235 ~]$ |
```



Create the Application

To create a simple Java web app, I ran the command: mvn archetype:generate -DgroupId=com.nextwork.app -DartifactId=nextwork-web-project -DarchetypeArtifactId=maven-archetype-webapp -DinteractiveMode=false.

Once the web app was created, my IDE's file explorer was populated with a standard Maven project structure, including directories like `src`, `webapp`, and configuration files like `pom.xml`.

To customize this web app's display, I updated the HTML file to include a personalized greeting, changing the content to: `<html><body><h2>Hello Srujan!</h2><p>This is my NextWork web application working!</p></body></html>`

```
[ec2-user@ip-172-31-46-235 ~]$ cd nextwork-web-project
[ec2-user@ip-172-31-46-235 nextwork-web-project]$ ls
pom.xml  src
[ec2-user@ip-172-31-46-235 nextwork-web-project]$ cd src
[ec2-user@ip-172-31-46-235 src]$ ls
main
[ec2-user@ip-172-31-46-235 src]$ cd main
[ec2-user@ip-172-31-46-235 main]$ ls
resources  webapp
[ec2-user@ip-172-31-46-235 main]$ cd webapp/
[ec2-user@ip-172-31-46-235 webapp]$ ls
WEB-INF  index.jsp
[ec2-user@ip-172-31-46-235 webapp]$ nano index.jsp
[ec2-user@ip-172-31-46-235 webapp]$ █
```



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