DevOps(Day-50): Your CI/CD Pipeline on AWS -Part-1

Maninder Singh

Dear Learners, After discuss the AWS interview questions in previous article, In today article we have discuss the AWS CodePipeline and its deployment.

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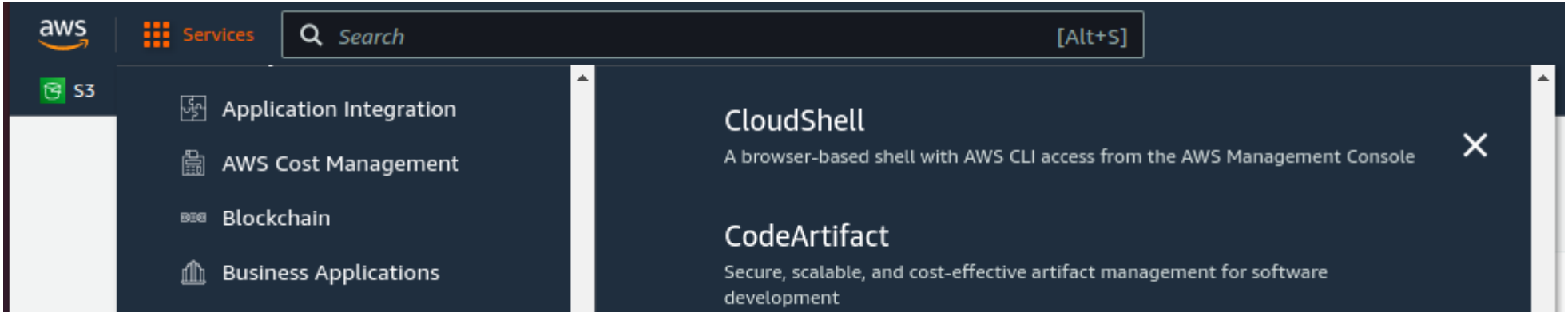
What if tell you, in the next 4 days, you will be making a CI/CD pipeline on AWS with these tools:-

What is CodeCommit?

CodeCommit is a managed source control service by AWS that allows users to storage,manage and version their source code and artifacts securely and at a scale. It supports the Git, integrates with other AWS services,enables collaboration through branch and merge workflows and provides audit logs and compliance reports to meet regulatory and track changes.




Compute
Containers
Customer Enablement
Database
Developer Tools
End User Computing
Front-end Web & Mobile
Game Development
Internet of Things
Machine Learning
Management & Governance
Media Services
Migration & Transfer
Networking & Content Delivery
Quantum Technologies
Robotics
Satellite
Security, Identity, & Compliance
Storage
CodeBuild
Build and Test Code
Amazon CodeCatalyst
Integrated DevOps Service
CodeCommit
Store Code in Private Git Repositories
CodeDeploy
Automate Code Deployments
CodePipeline
Release Software using Continuous Delivery
CodeStar
Quickly develop, build, and deploy applications
Amazon CodeWhisperer
Build applications faster with the ML-powered coding companion.
AWS FIS
Improve resiliency and performance with controlled experiments.
X-Ray
Analyze and Debug Your Applications
Maninder Singh

Code Commit in AWS Diagram.

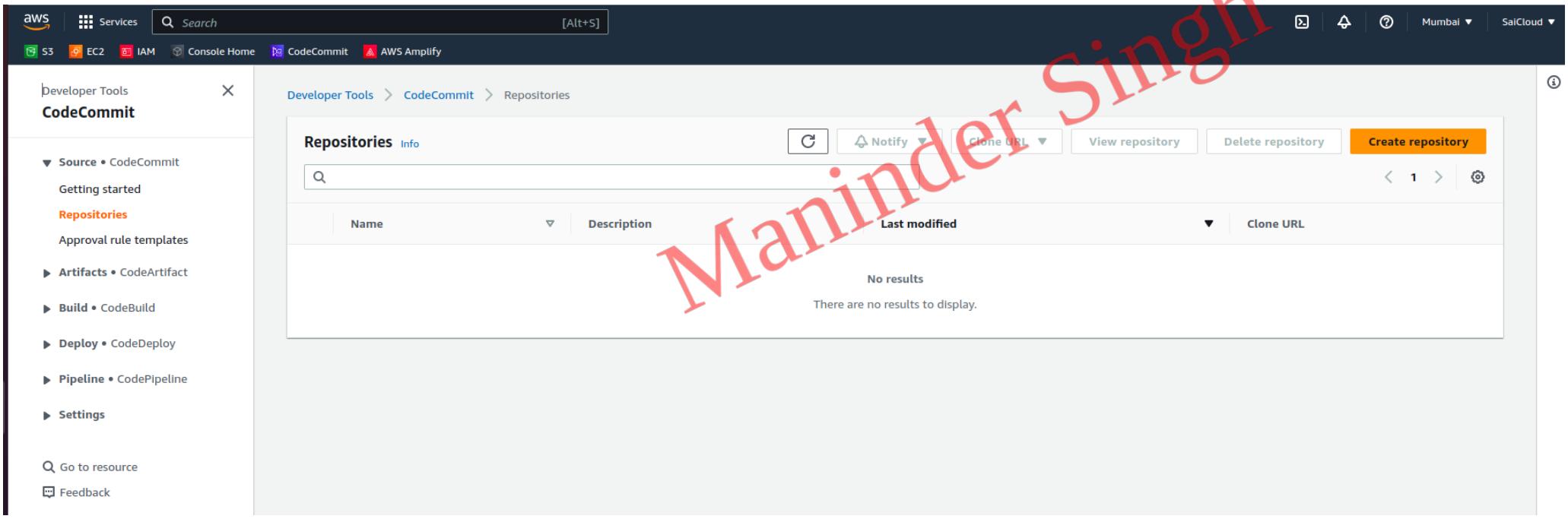
Task-01

Create and Configure a CodeCommit repository

Login to the AWS Management console with user name and password.

Set up a code repository on CodeCommit and clone it on your local.

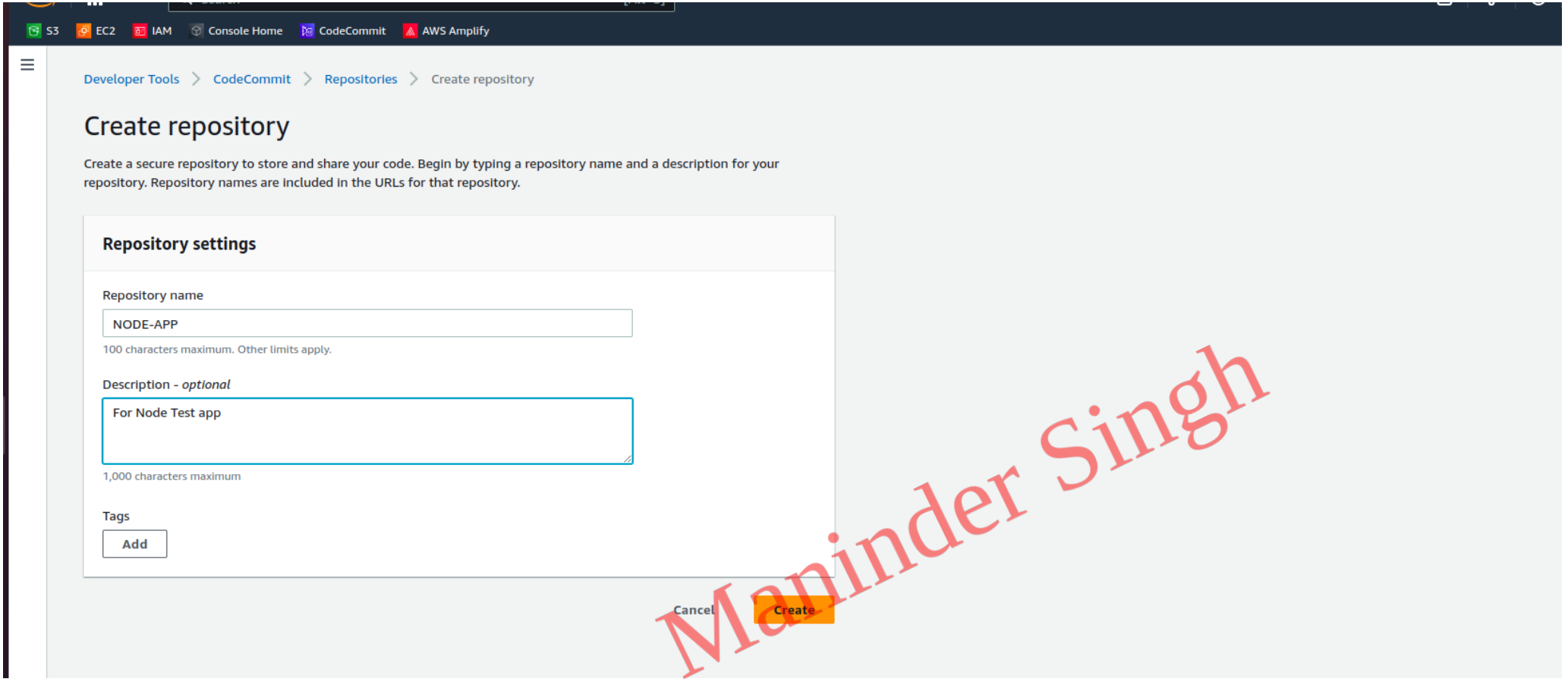
Navigate to the CodeCommit section of AWS console.



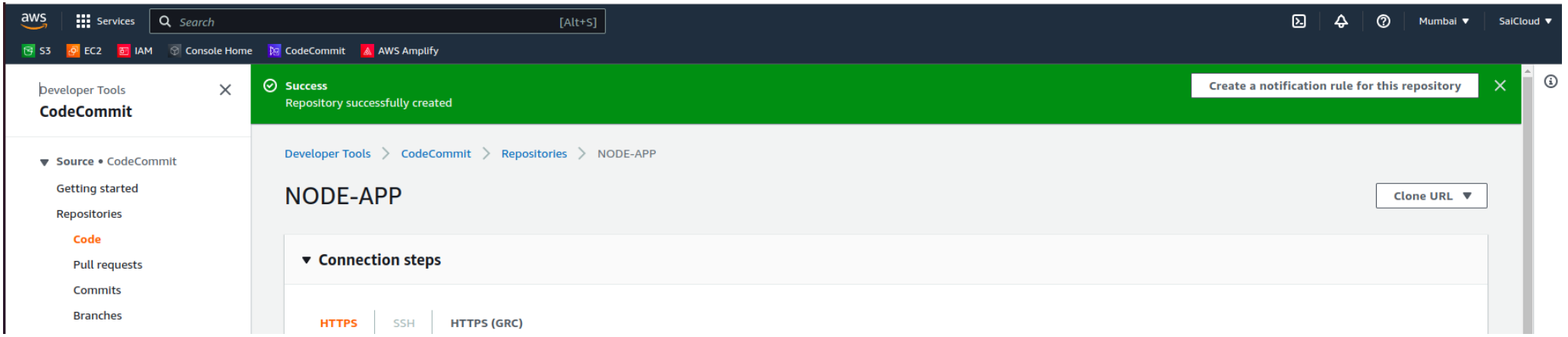
Navigate to the CodeCommit section of AWS console Diagram.

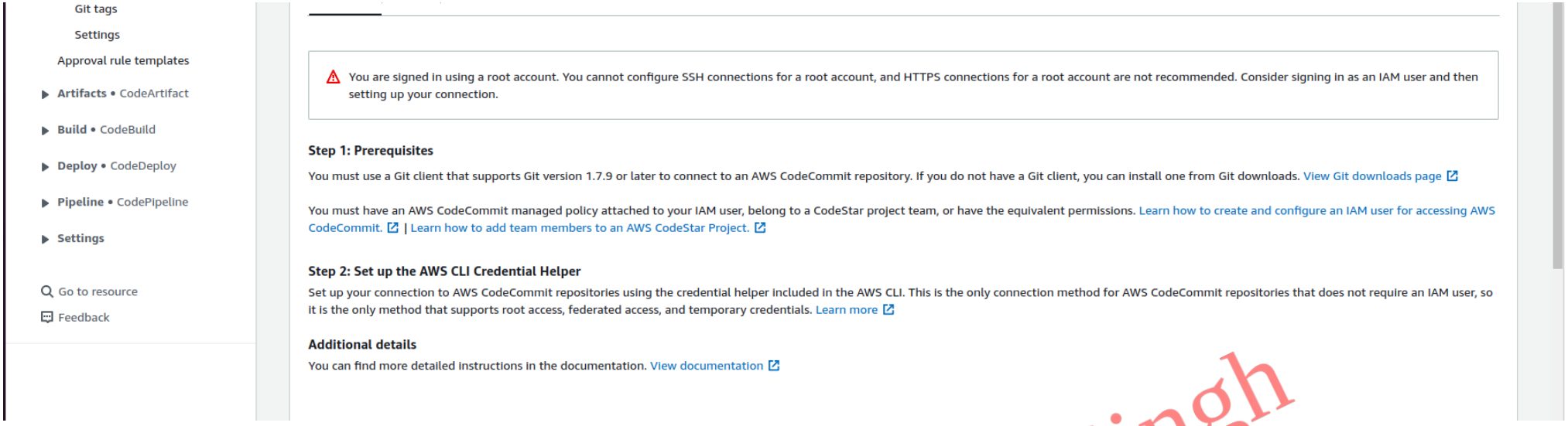
Create a repository by giving a name and description

Click on the create option.

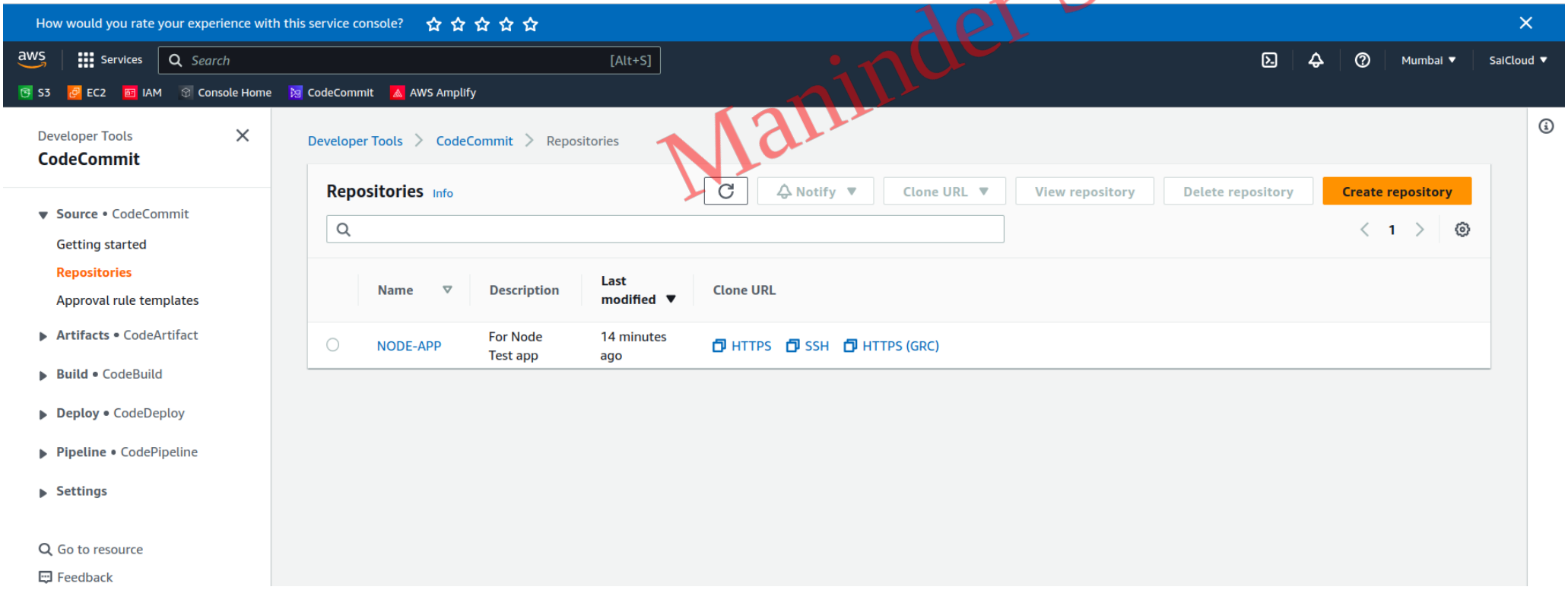


Create a repository by giving a name and description Click on the create option. Diagram.





A repository redidt-app is now created.



A repository redidt-app is now created Diagram.

You need to setup Git Credentials in your AWS IAM.

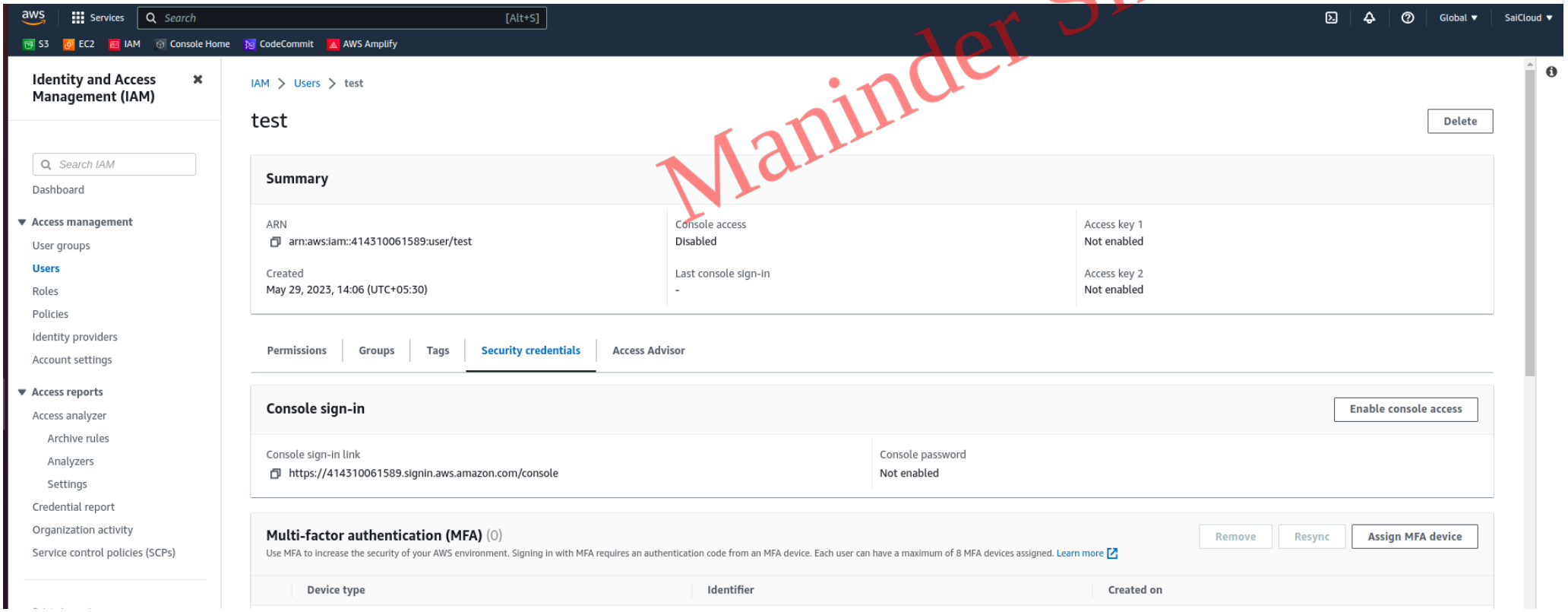
1 Navigate to the IAM Section and create a user and group as we have seen in our previous blog this week as a part of AWS tasks.

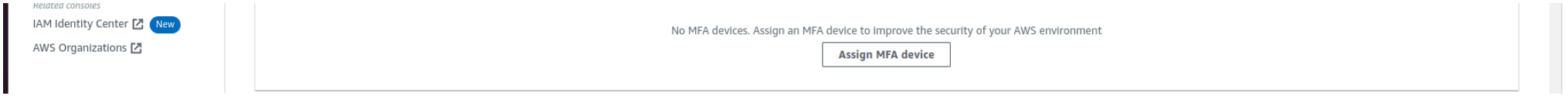
2 Go to the IAM console

Click on Users in the left-hand menu and then click on your username.

Click on Users in the left-hand menu and then click on your username Diagram.

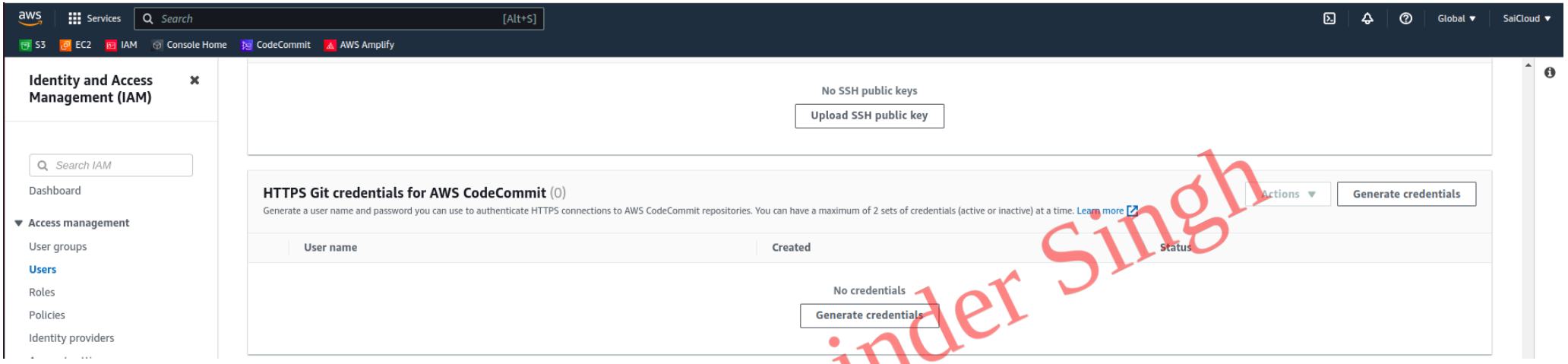
Scroll down to the security credentials section.



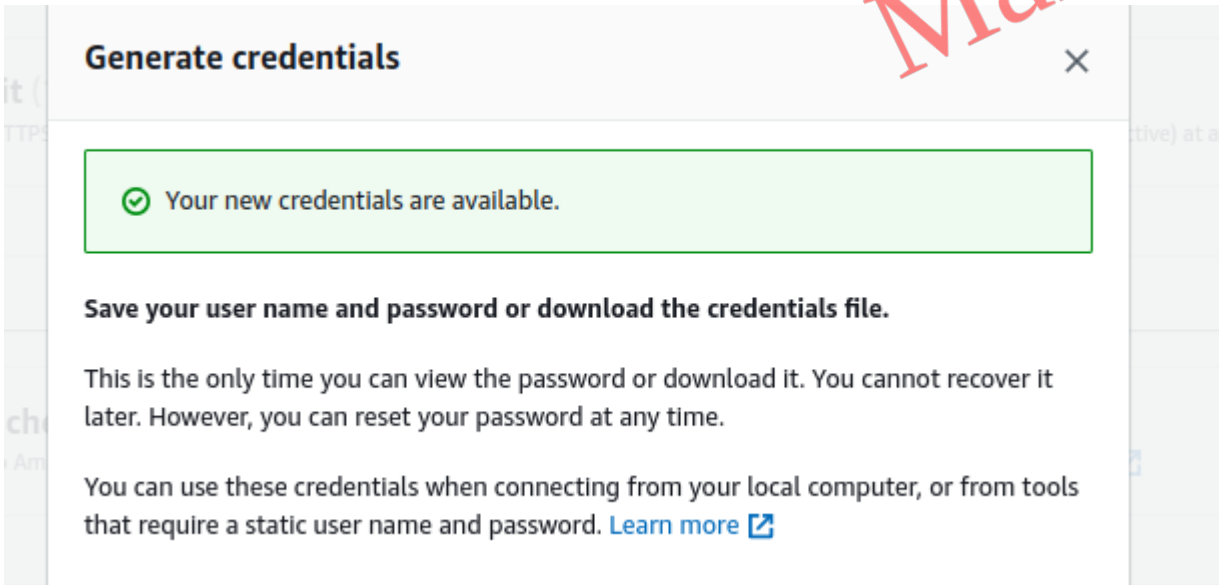


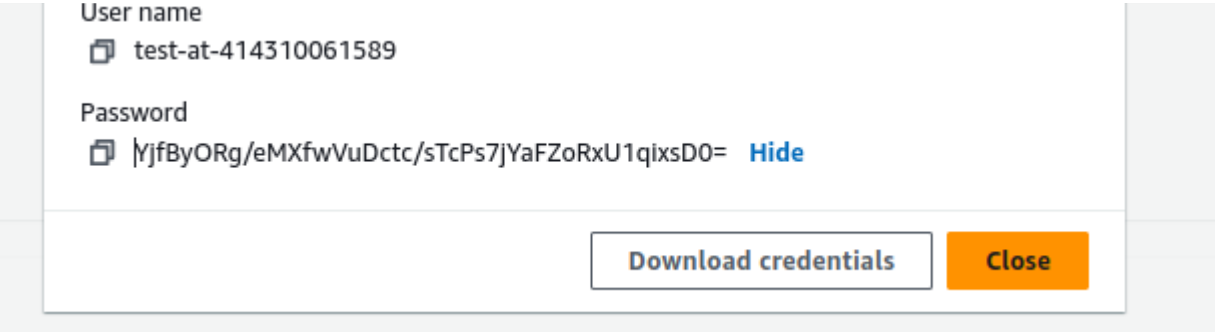
Scroll down to the security credentials section Diagram.

Under the security credentials,scroll down and come to HTTPS GIt credentials for AWS CodeCommit section click on Generate Credentials.



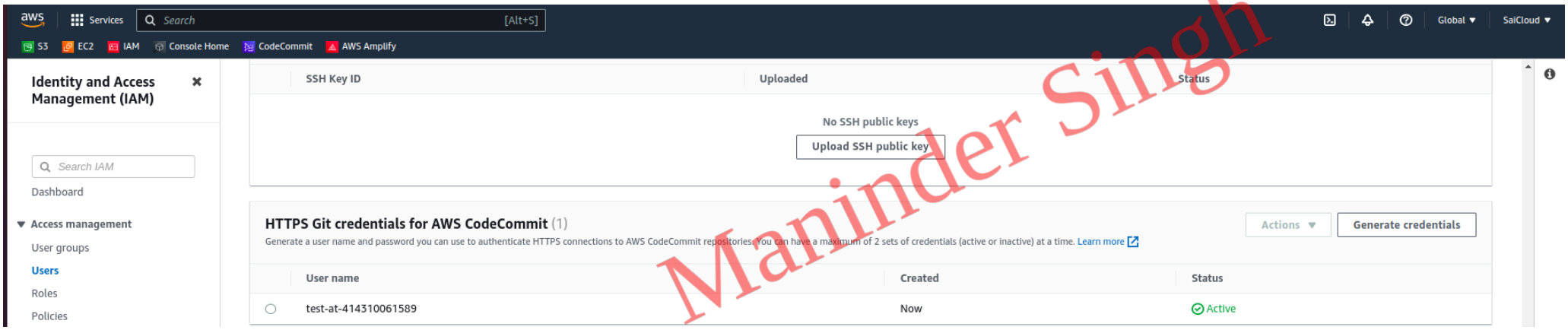
After Click on the Download Credentials button your Git credentials and click on Close.





HTTPS GIt credentials for AWS CodeCommit section click on Generate Credentials Diagram.

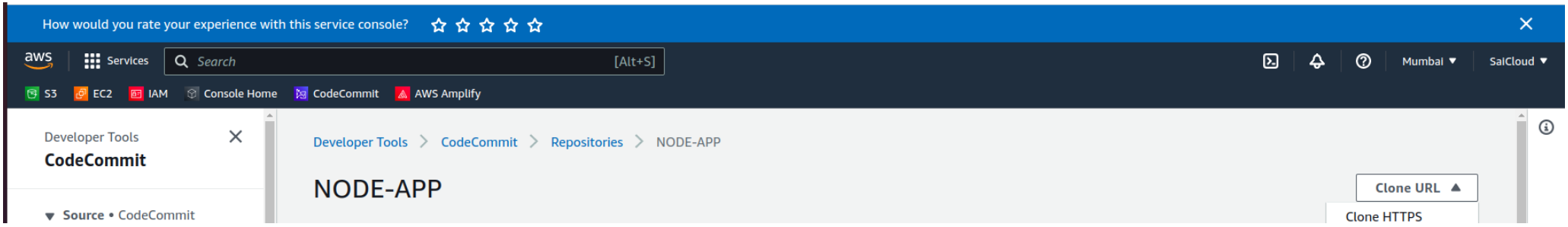
Now your Git Credentials are created.

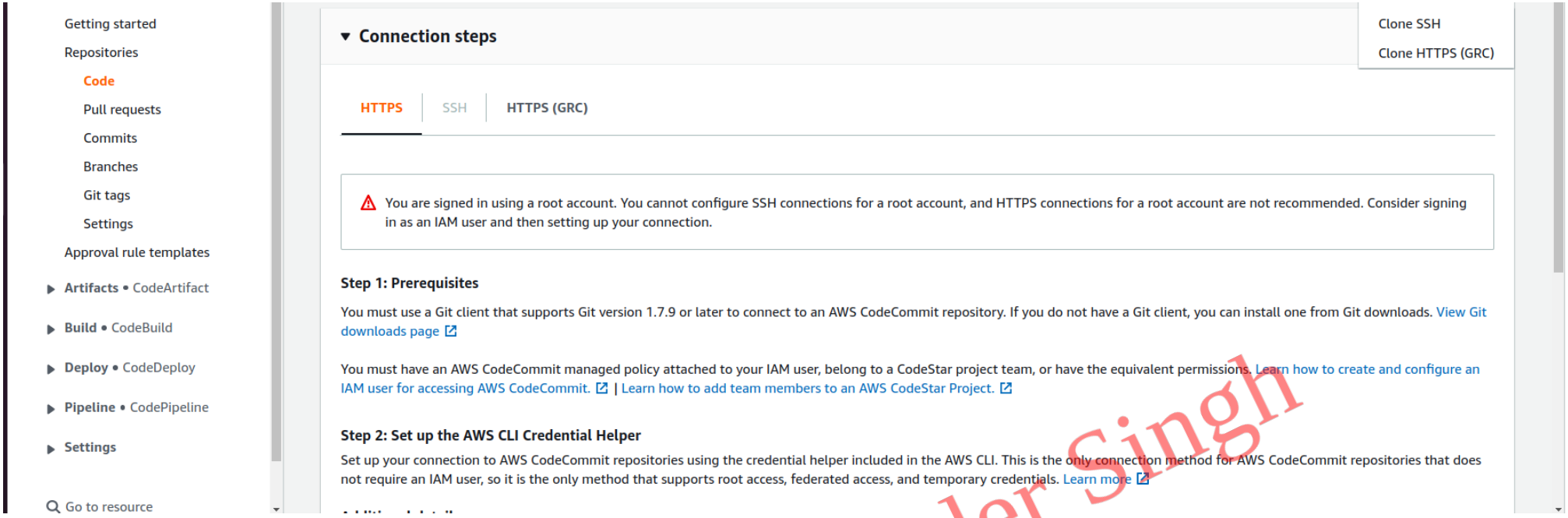


Now your Git Credentials are created. Diagaram.

Use the Credentials in your local and then clone the repository form the codecommit.

In the code commit,Go inside your repository that you created in above steps , In right hand side click Clone URL and choose Clone HTTPS.





In right hand side click Clone URL and choose Clone HTTPS Diagram.

Open a terminal on your local machine.

Navigate to the directory where you want to clone the repository.

Run the following Commands

you will be prompted to enter your Git Credentials. Enter the username and password that you downloaded earlier.

you will be prompted to enter your Git Credentials. Enter the username and password that you downloaded earlier Diagram.

You have now set up a CodeCommit repository and cloned it on your local machine using Git Credentials in AWS IAM. (Note: Your user has aws codecommit permission to perform this action).

Task-02

Add a new file form the local and commit to your local branch

Create a new file in the local repository directory.

Create a new file in the local repository directory Diagram.

Check the status using the using command "git status"

```
ubuntu@ip-172-31-3-140:~/NODE-APP$ ls
file.txt
ubuntu@ip-172-31-3-140:~/NODE-APP$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file.txt

nothing added to commit but untracked files present (use "git add" to track)
ubuntu@ip-172-31-3-140:~/NODE-APP$
```

Check the status using the using command "git status Diagram.

Add the new file to your local branch using the following commads.

```
ubuntu@ip-172-31-3-140:~/NODE-APP$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        file.txt

nothing added to commit but untracked files present (use "git add" to track)
ubuntu@ip-172-31-3-140:~/NODE-APP$
ubuntu@ip-172-31-3-140:~/NODE-APP$ git add file.txt
ubuntu@ip-172-31-3-140:~/NODE-APP$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   file.txt

ubuntu@ip-172-31-3-140:~/NODE-APP$
```

Commit the changes to your local branch using the following commands.

```
ubuntu@ip-172-31-3-140:~/NODE-APP$
ubuntu@ip-172-31-3-140:~/NODE-APP$ git commit -m "added file.txt"
[master (root-commit) 7615dd9] added file.txt
 Committer: maninder <ubuntu@ip-172-31-3-140.ap-south-1.compute.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 file changed, 3 insertions(+)
 create mode 100644 file.txt
ubuntu@ip-172-31-3-140:~/NODE-APP$ git status
On branch master
Your branch is based on 'origin/master', but the upstream is gone.
  (use "git branch --unset-upstream" to fixup)

nothing to commit, working tree clean
ubuntu@ip-172-31-3-140:~/NODE-APP$
```


Commit the changes to your local branch using the following commands Diagram.

Push the local changes to CodeCommit repository.

Push the changes form your local branch to the codeCommit repository using the following commands:

```
  System information as of Mon May 29 14:36:22 UTC 2023

  System load:  0.0               Processes:             103
  Usage of /:   21.9% of 7.57GB   Users logged in:       1
  Memory usage: 24%               IPv4 address for eth0: 172.31.3.140
  Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.
```

```
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
New release '22.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Mon May 29 14:20:16 2023 from 110.224.70.186
ubuntu@ip-172-31-3-140:~$
ubuntu@ip-172-31-3-140:~$ ls
NODE-APP  aws  codecommit
ubuntu@ip-172-31-3-140:~$ cd NODE-APP/
ubuntu@ip-172-31-3-140:~/NODE-APP$ ls
file.txt
ubuntu@ip-172-31-3-140:~/NODE-APP$ git push origin master
Username for 'https://git-codecommit.ap-south-1.amazonaws.com': test-at-414310061589
Password for 'https://test-at-414310061589@git-codecommit.ap-south-1.amazonaws.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 335 bytes | 335.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote: Validating objects: 100%
To https://git-codecommit.ap-south-1.amazonaws.com/v1/repos/NODE-APP
 * [new branch]      master -> master
ubuntu@ip-172-31-3-140:~/NODE-APP$
```

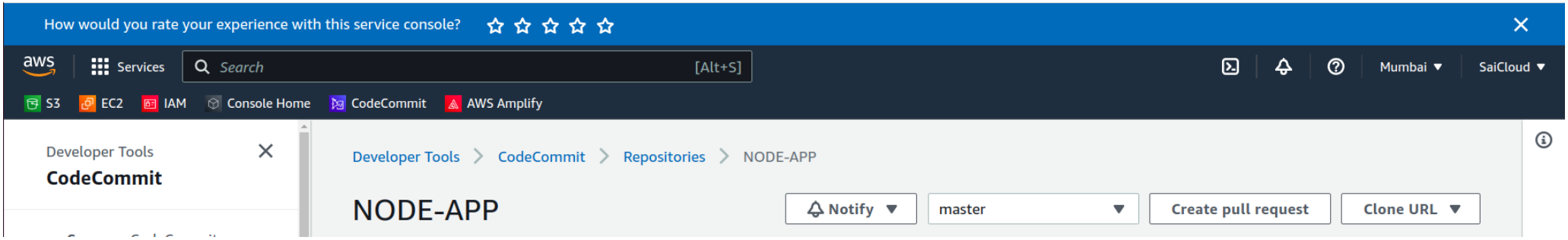
Push the changes form your local branch to the codeCommit repository using the following commands: git push origin master Diagram.

Verify that the changes have been pushed to the codeCommit repository.

Go to the code commit repository that you created earlier, you should see the new file listed in the repository files.

Go to the code commit repository that you created earlier, you should see the new file listed in the repository files Diagram.

You can see the content of the file.



You can see the content of the file Diagram.

Thank you for reading !! I hope you find this article helpful!!

Maninder Singh

Next Topic:

Day 51:- we have completed AWS [CodeCommit.Next](#) few days we'll learn these tools/ Services:-