Steps to Automate the CI/CD Pipeline in AWS

1. **Setup AWS Infrastructure with IaC (CloudFormation)**:
    - Create a CloudFormation template to provision the necessary AWS resources such as CodeCommit, CodeBuild, CodePipeline, EC2 instances for Jenkins and SonarQube, and ECR for Docker images.

2. **Setup CodeCommit Repository**:
    - Create a repository in AWS CodeCommit to store your source code.
    - Push your source code to the CodeCommit repository.

3. **Setup Jenkins on AWS EC2**:
    - Launch an EC2 instance and install Jenkins.
    - Configure Jenkins with the necessary plugins (e.g., Git, AWS CodeBuild, Docker, SonarQube).
    - Create a Jenkins job to pull code from CodeCommit, perform build and test operations, and trigger SonarQube for code analysis.

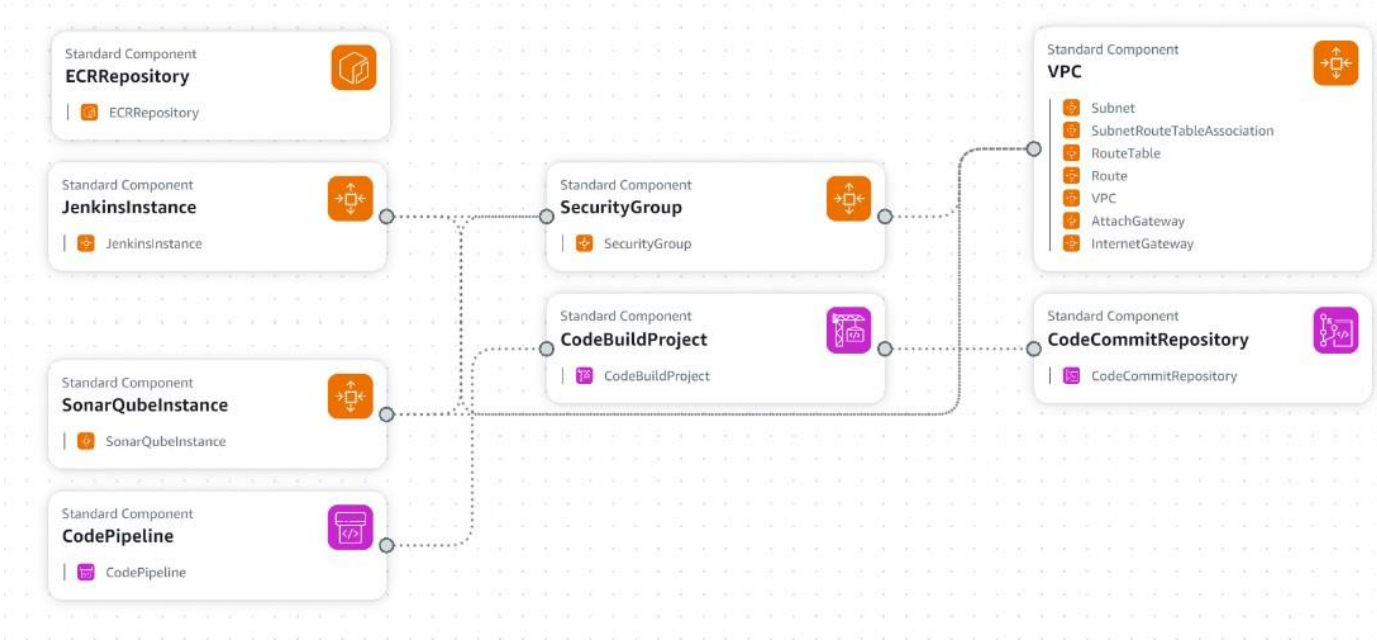
4. **Setup SonarQube on AWS EC2**:
    - Launch an EC2 instance and install SonarQube.
    - Configure SonarQube for static code analysis.

5. **Configure AWS CodeBuild**:
    - Create a CodeBuild project to build Docker images.
    - Integrate CodeBuild with Jenkins to trigger builds upon code changes.

6. **Setup AWS CodePipeline**:
    - Create a CodePipeline to automate the end-to-end process from code changes to deployment.
    - Integrate CodePipeline with CodeCommit, CodeBuild, and Jenkins.

7. **Deploy Docker Containers**:
    - Push the built Docker images to Amazon ECR (Elastic Container Registry).
    - Deploy the Docker containers on ECS (Elastic Container Service) or EKS (Elastic Kubernetes Service).

8. **Automate Infrastructure with CloudFormation**:
    - Use CloudFormation templates to automate the setup of all the above AWS services and resources.



Provisioning Infrastructure with AWS CloudFormation