**Action Plan Document: Jenkins Pipeline Recovery after AWS Account Suspension**

**Objective:**

The objective of this action plan is to recreate the Jenkins Pipeline on AWS in the event of an account suspension. The pipeline includes essential steps such as checking out from GitHub, installing dependencies for Node.js, building a Node.js application, integrating SonarQube for code quality analysis, logging into DockerHub, building Docker images, and pushing images to DockerHub.

**Action Plan:**

1. Assess the Situation:

Confirm the AWS account suspension and the reason behind it.

Determine the necessary steps to resolve the suspension, whether it involves clearing dues, resolving compliance issues, or contacting AWS support.

2. Set Up a New AWS Account:

If the suspension cannot be resolved, create a new AWS account.

Ensure that the necessary IAM (Identity and Access Management) users, roles, and policies are configured in the new account.

3. Deploy Jenkins on AWS:

Launch a new EC2 instance or deploy Jenkins on an existing EC2 instance.

Configure security groups and ensure that necessary ports are open.

Install and configure Jenkins on the EC2 instance.

4. Deploy Sonarqube on AWS - steps mentioned here: [Studio-Ghibli/SQ-on-EC2.docx at documentation-branch · Vikx001/Studio-Ghibli (github.com)](https://github.com/Vikx001/Studio-Ghibli/blob/documentation-branch/SQ-on-EC2.docx):

Launch a new EC2 instance or deploy Sonarqube on an existing EC2 instance.

Configure security groups and ensure that necessary ports are open.

Install and configure Sonarqube on the EC2 instance.

5. Configure Jenkins Pipeline:

Access Jenkins dashboard and install required plugins for Git integration, Node.js, SonarQube, Docker, etc.

**Pipeline script:**

pipeline {

agent any

tools {nodejs 'node'}

stages {

stage('Checkout from GitHub') {

steps {

checkout scmGit(branches: [[name: '\*/development']], extensions: [], userRemoteConfigs: [[url: 'https://github.com/Vikx001/Studio-Ghibli.git']])

}

}

stage('Install dependencies'){

steps{

dir('frontend/studio-ghibli'){

sh ('npm install')

}

}

}

stage('Build'){

steps{

dir('frontend/studio-ghibli'){

sh ('npm install --save-dev nyc && npm install istanbul --save-dev && npm install --save-dev @babel/plugin-proposal-private-property-in-object && npm run build')

}

}

}

stage('Static Code Analysis') {

environment {

SONAR\_URL = "http://44.204.44.47:9000"

}

steps {

dir('frontend/studio-ghibli'){

script{

withCredentials([string(credentialsId: 'sonarqube', variable: 'SONAR\_AUTH\_TOKEN')]) {

withSonarQubeEnv('sonar') {

//sh "npm install --save-dev mocha chai"

//sh "npm test -- --coverage"

// sh "npm run sonartest"

//sh "npm run coverage"

sh "npm install sonar-scanner"

sh "npm run sonar"

}

}

}

}

}

}

stage('Sonarqube quality gate check') {

steps{

timeout(time: 1, unit: 'HOURS'){

waitForQualityGate abortPipeline: true

}

}

}

}

}

6. Update Pipeline Credentials:

Update any credentials or access tokens required for GitHub, SonarQube, and DockerHub in Jenkins credentials manager.

7. Change the Sonarqube URL where necessary:

* Change Sonarqube URL in Jenkins > manage jenkins> system section
* Change SQ URL in Sonar properties file on GitHub
* Change SQ URL in pipeline script
* Change Jenkins URL in Sonarqube webhook
* Change Jenkins webhook link in GitHub

8. Test the Pipeline:

Run the Jenkins pipeline manually to ensure that all stages execute successfully.

Verify that the code is checked out, dependencies are installed, the application is built, SonarQube analysis is performed, Docker images are built, and images are pushed to DockerHub.

9. Integrate Pipeline with GitHub Webhooks:

Configure GitHub webhooks to trigger the Jenkins pipeline automatically on code commits or pull requests.

**Conclusion:**

Recreating the Jenkins pipeline on AWS after an account suspension involves setting up a new AWS account, deploying Jenkins, configuring the pipeline, and testing it thoroughly. By following this action plan, you can ensure a smooth transition and continuation of the development workflow despite AWS account suspension.