

Jenkins pipeline Project

Credentials save in Jenkins:

The screenshot shows the Jenkins Global credentials (unrestricted) page. It lists five entries:

- Online_Exam
- Akshata-Walkar/*****
- git-repo-url
- akshu072/*****
- email-recipient

Each entry has a delete icon and three dots for more options.

Pipeline run successfully :

The screenshot shows the Jenkins Pipeline Stage View for the Online_Exam pipeline. The stage view table is as follows:

	Hello	Clone Code from GitHub	Optional: Test SonarScanner	SonarQube Scan	Build & Push Docker Image	Optional: Test Application	Declarative: Post Actions
Average stage times: (full run time: ~1min 28s)	132ms	2s	986ms	16s	47s	76ms	20s
Jan 05 15:34	132ms	2s	986ms	16s	47s	76ms	20s
No Changes							

Below the stage view is the SonarQube Quality Gate section, which shows:

- Online_Exam: Failed
- server-side processing: Success

At the bottom right, there is a message: "Activate Windows Go to Settings to activate Windows."

Push image to Docker-Hub :

The screenshot shows the Docker Hub interface. On the left, there's a sidebar with options like Repositories, Hardened Images, Collaborations, Settings, Default privacy, Notifications, Billing, Usage, Pulls, and Storage. The main area is titled 'Repositories' and shows three entries:

Name	Last Pushed	Contains	Visibility	Scout
akshu072/online_exam	9 minutes ago	IMAGE	Public	Inactive
akshu072/my	9 months ago		Private	Inactive
akshu072/public_repository	10 months ago	IMAGE	Public	Inactive

At the bottom right, there's a message: "Activate Windows Go to Settings to activate Windows."

SonarQube :

The screenshot shows the SonarQube interface for the 'Online_Exam' project. The top navigation bar includes links for Projects, Issues, Rules, Quality Profiles, Quality Gates, Administration, and More. The main content area is titled 'main' and shows a 'Quality Gate' status as 'Failed'. A message indicates 'The last analysis has warnings. See details'. Below this, sections for 'New Code' (1 failed) and 'Overall Code' are shown. At the bottom, it says '1 condition failed' and provides links for 'New issues' and 'Accepted issues'. There's also a message: "Activate Windows Go to Settings to activate Windows."

GitHub repository link : https://github.com/Akshata-Waikar/Online_Exam.git

Jenkins pipeline code :

```
pipeline {  
    agent any  
  
    stages {  
  
        stage('Hello') {  
            steps {  
                echo 'Hello World'  
            }  
        }  
  
        stage('Clone Code from GitHub') {  
            steps {  
                script {  
                    echo 'Cloning repository...'  
                    withCredentials([usernamePassword(  
                        credentialsId: 'git-creds',  
                        usernameVariable: 'GIT_USER',  
                        passwordVariable: 'GIT_TOKEN'  
)]) {  
                        bat """  
                            if exist project rmdir /s /q project  
                        """  
                    }  
                }  
            }  
        }  
    }  
}
```

```

        git clone
https://%GIT_USER%:%GIT_TOKEN%@github.com/Akshata-
Waikar/Online_Exam.git project
        """
    }
}
}
}

stage('Optional: Test SonarScanner') {
steps {
    echo 'Checking if SonarScanner CLI is available...'
    bat 'C:\\sonar-scanner-7.3.0.5189-windows-x64\\bin\\sonar-scanner -v
|| echo "SonarScanner not found"'
}
}

stage('SonarQube Scan') {
steps {
    script {
        withSonarQubeEnv('sonar-local') {
            withCredentials([string(credentialsId: 'Online_Exam', variable:
'SONAR_TOKEN')]) {
                bat """
cd project
C:\\sonar-scanner-7.3.0.5189-windows-x64\\bin\\sonar-
scanner ^
-Dsonar.projectKey=Online_Exam ^
-Dsonar.sources=. ^

```

```

        -Dsonar.host.url=%SONAR_HOST_URL% ^
        -Dsonar.login=%SONAR_TOKEN%
        """
    }
}
}
}
}

stage('Quality Gate') {
    steps {
        script {
            timeout(time: 5, unit: 'MINUTES') { // wait max 5 min for Quality
                Gate
                    def qg = waitForQualityGate()
                    echo "Quality Gate status: ${qg.status}"
                    if (qg.status == 'OK') {
                        echo "Quality Gate passed successfully."
                    } else {
                        error "Pipeline aborted due to Quality Gate failure:
${qg.status}"
                    }
                }
            }
        }
    }
}

stage('Build & Push Docker Image') {

```

```
steps {
    script {
        withCredentials([usernamePassword(
            credentialsId: 'docker-Hub',
            usernameVariable: 'DOCKER_USER',
            passwordVariable: 'DOCKER_PASSWORD'
        )]) {
            bat """
                echo %DOCKER_PASSWORD% | docker login -u
                %DOCKER_USER% --password-stdin
                docker build -t akshu072/online_exam:latest project
                docker push akshu072/online_exam:latest
            """
            }
        }
    }

stage('Optional: Test Application') {
    steps {
        echo 'You can add any application tests here if needed'
    }
}

post {
    always {
        echo 'Cleaning up...'
    }
}
```

```
        bat 'docker logout'

    }

success {
    echo 'Build Succeeded! Sending email...'
    withCredentials([string(credentialsId: 'email-recipient', variable: 'EMAIL_TO')]) {
        emailext(
            subject: "SUCCESS: Jenkins Build
${currentBuild.fullDisplayName}",
            body: """<p>Good news! Your Jenkins build succeeded.</p>
<p>Build URL: ${env.BUILD_URL}</p>""",
            to: "${EMAIL_TO}",
            mimeType: 'text/html'
        )
    }
}

failure {
    echo 'Build Failed! Sending email...'
    withCredentials([string(credentialsId: 'email-recipient', variable: 'EMAIL_TO')]) {
        emailext(
            subject: "FAILURE: Jenkins Build
${currentBuild.fullDisplayName}",
            body: """<p>Oops! Your Jenkins build failed.</p>
<p>Check console output here: ${env.BUILD_URL}</p>""",
            to: "${EMAIL_TO}",
            mimeType: 'text/html'
        )
    }
}
```

```
)  
}  
}  
}  
}
```

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