Practice for Lesson 4: Integrating Jenkins Pipelines with Jobs

Practices for Lesson 4

Overview

In these practices, you will trigger the Jenkins Jobs from one job to another automatically in the Jenkins Dashboard, create the pipeline using Groovy script in Jenkins instance and learn to integrate the GitHub source code to the Jenkins pipeline, and further delegate a pipeline Job using Agent in Jenkins Instance.

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Practice 4-4: Delegate a Pipeline Job using Agent in Jenkins Instance

Overview

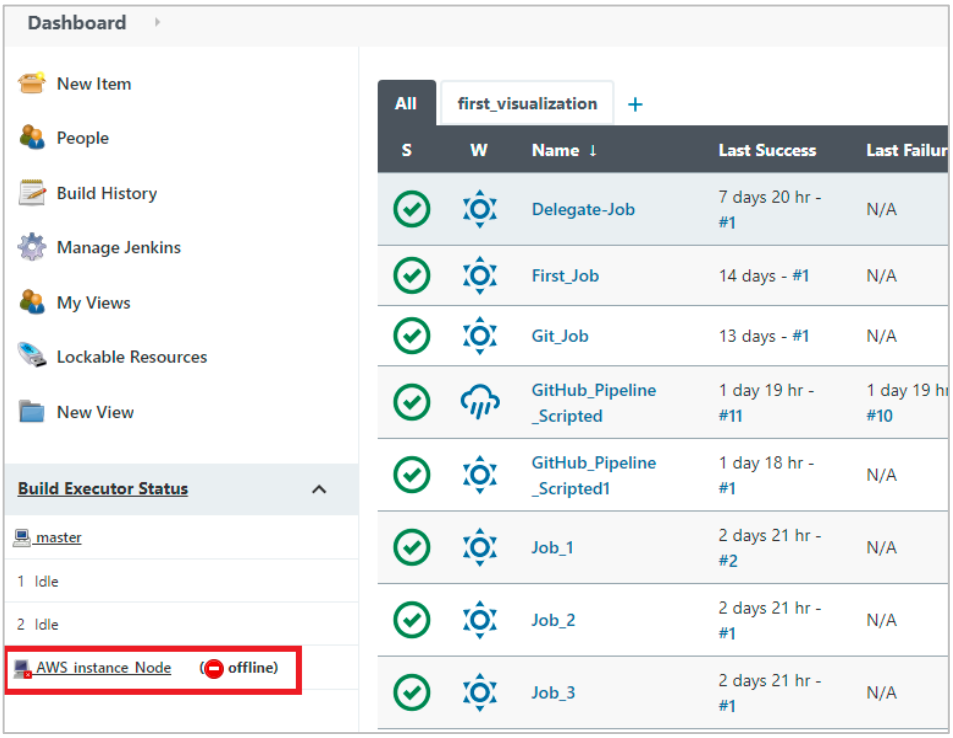
In this practice, you will learn how to delegate a pipeline Job using Agent in Jenkins Instance.

Assumptions

You should have completed the Practice of Lesson 4-3.

Tasks

1. Activate the Agent node configured in practice 3-3 in Jenkins instance.
   a. In the Jenkins Dashboard page navigate to **Build Executor Status** and verify the Agent node status. Click on the agent node as shown below.



   b. To activate the **Agent node**, copy the link from **Run from agent command line** as shown below.

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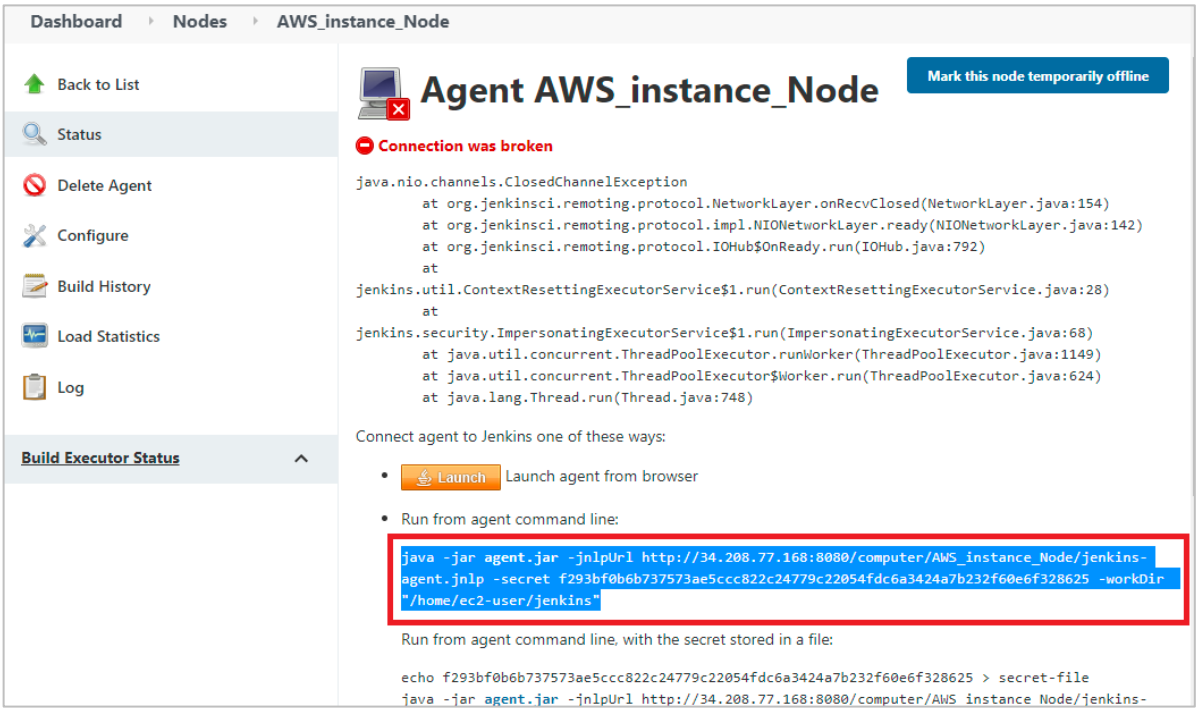

c. Open Putty terminal connected to the **agent-node** and paste the command to execute as shown below.

```
[ec2-user@ip-172-31-26-239 ~]$ java -jar agent.jar -jnlpUrl http://34.208.77.168
:8080/computer/AWS_instance_Node/jenkins-agent.jnlp -secret f293bf0b6b737573ae5c
cc822c24779c22054fdc6a3424a7b232f60e6f328625 -workDir "/home/ec2-user/jenkins"
Apr 15, 2021 10:29:23 AM org.jenkinsci.remoting.engine.WorkDirManager initialize
WorkDir
INFO: Using /home/ec2-user/jenkins/remoting as a remoting work directory
Apr 15, 2021 10:29:23 AM org.jenkinsci.remoting.engine.WorkDirManager setupLoggi
ng
INFO: Both error and output logs will be printed to /home/ec2-user/jenkins/remot
ing
Apr 15, 2021 10:29:23 AM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: AWS_instance_Node
Apr 15, 2021 10:29:24 AM hudson.remoting.jnlp.Main$CuiListener <init>
INFO: Jenkins agent is running in headless mode.
Apr 15, 2021 10:29:24 AM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 4.7
```

d. On successful execution, the connection will be established by displaying **Connected** as shown below.

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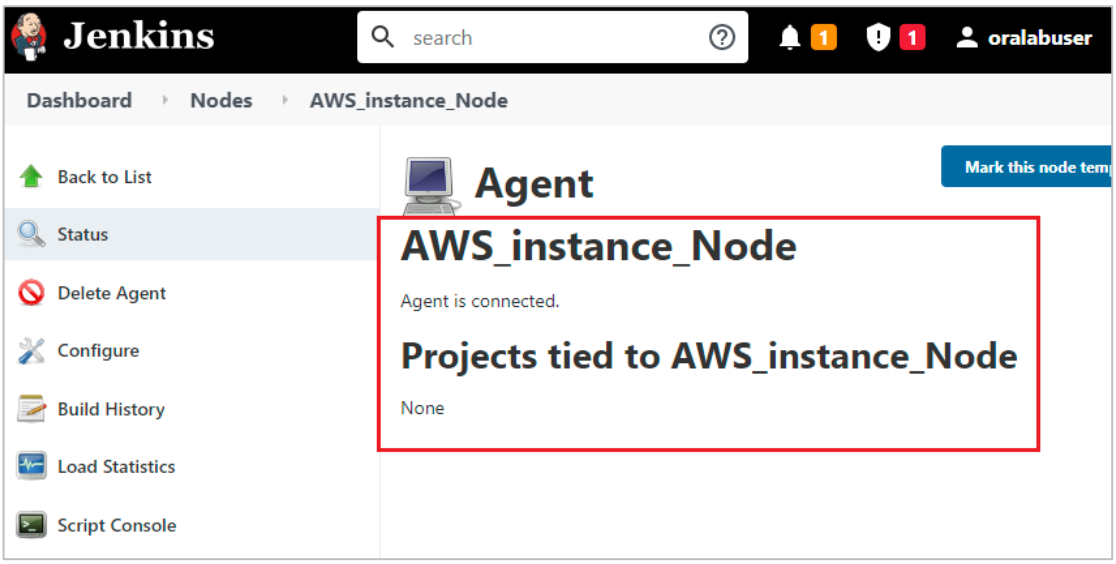
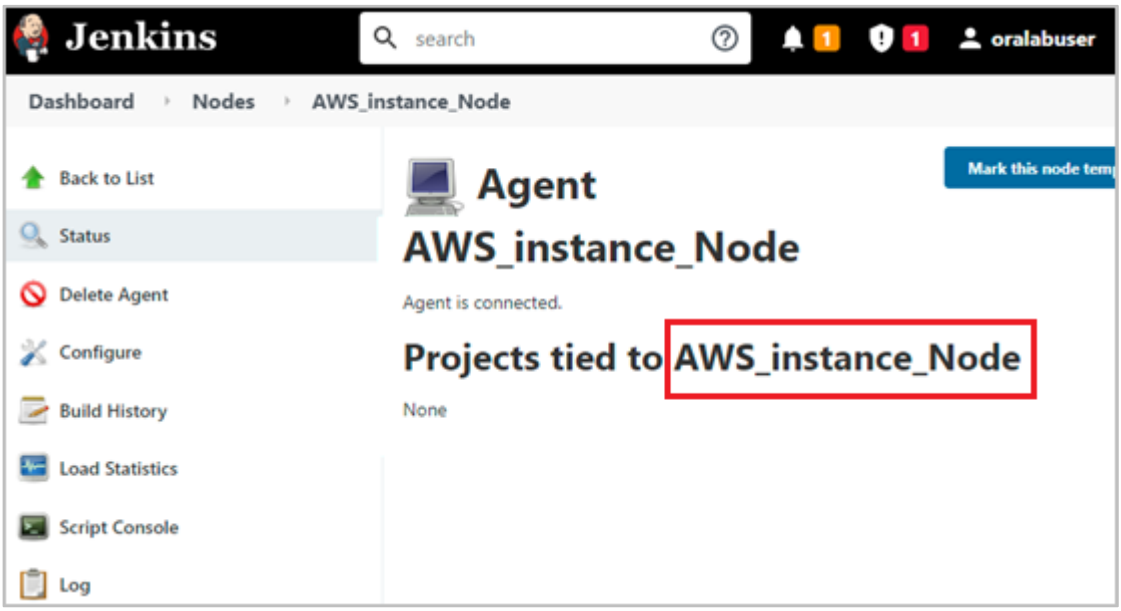
```
Apr 15, 2021 10:29:24 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Apr 15, 2021 10:29:24 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to 34.208.77.168:46111
Apr 15, 2021 10:29:24 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLP4-connect
Apr 15, 2021 10:29:24 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: 22:59:fd:4e:67:d9:7d:87:06:49:16:00:6c:13:c8:2d
Apr 15, 2021 10:29:25 AM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

e. Open Jenkins dashboard and refresh the agent node page to verify the connection to master node as shown below.



f. Copy the label of the agent node to execute the pipeline job on agent node as shown below.



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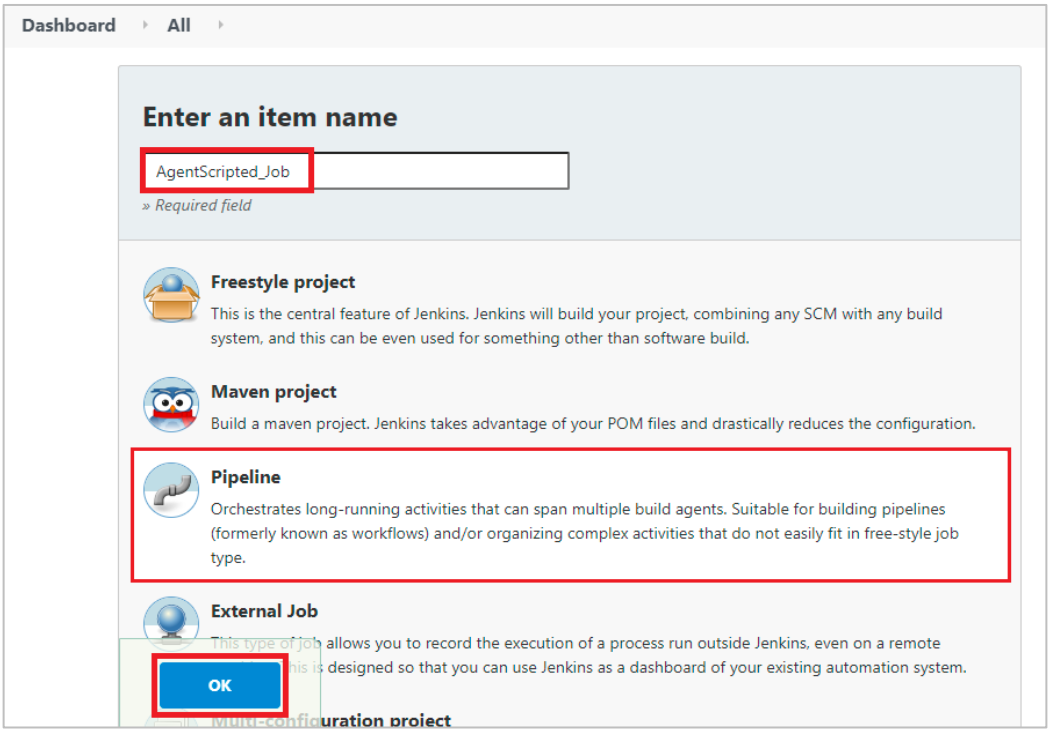
2. Create a new pipeline job to be executed on the agent node in Jenkins

   a. In Jenkins Dashboard, navigate to main menu, select **New item** and provide the name for the job, select **Pipeline** and click **OK**



   b. Copy the Groovy script provided below and paste it in the **Script** block. As shown below provide the respective label of the Agent node in Jenkins.

   Note: It is the same code used in practice 4-3.

```
pipeline {
      agent {
          label 'AWS_instance_Node'
      }
      stages {
            stage('Git-Checkout') {
                  steps {
                        echo "Checking out from Git Repo";
                        git branch: 'main', url:
'https://github.com/oralabuser/PipelineScript.git'
                  }
            }
            stage('Build') {
                  steps {
                        echo "Building the checked-out project!";
                        sh 'bash Build.sh'
                  }
            }
```

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```
            stage('Unit-Test') {
                  steps {
                        echo "Running JUnit Tests";
                        sh 'bash Unit.sh'
                  }
            }
            stage('Quality-Gate') {
                  steps {
                        echo "Verifying Quality Gates";
                        sh 'bash Quality.sh'
                  }
            }
            stage('Deploy') {
                  steps {
                        echo "Deploying to Stage Environment for more
tests!";
                        sh 'bash Deploy.sh'
                  }
            }
      }
      post {
            always {
                  echo 'This will always run'
            }
            success {
                  echo 'This will run only if successful'
            }
            failure {
                  echo 'This will run only if failed'
            }
            unstable {
                  echo 'This will run only if the run was marked as
unstable'
            }
            changed {
                  echo 'This will run only if the state of the pipeline
has changed'
                  echo 'For example, if the Pipeline was previously
failing but is now successful'
            }
      }
}
```

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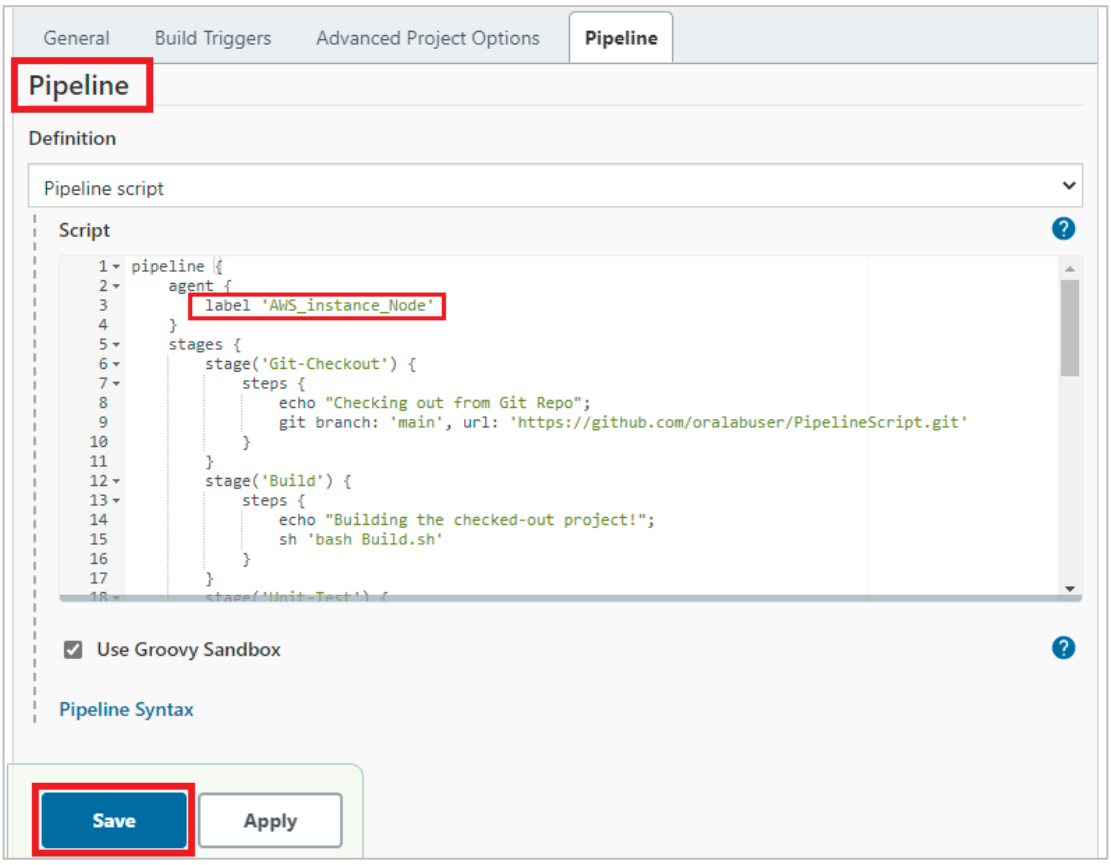
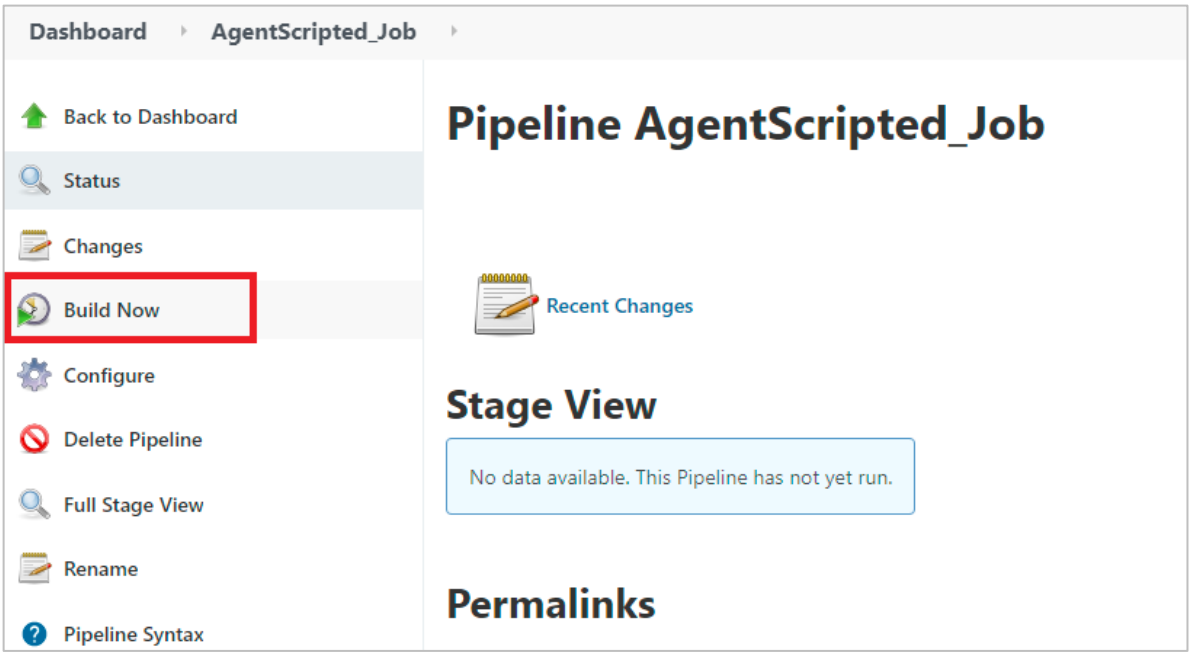
c. Click **Save** as shown below.



d. Select **Build Now** from the menu to execute the Pipeline agent scripted job as shown below.



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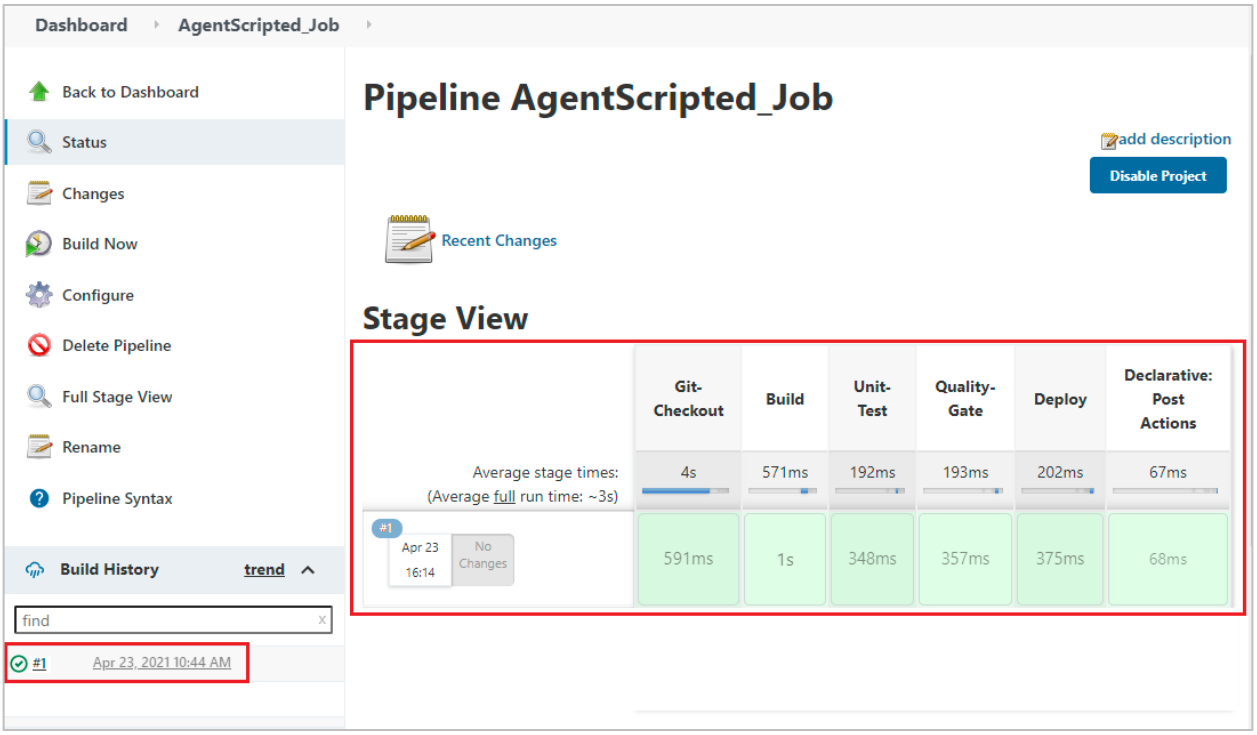
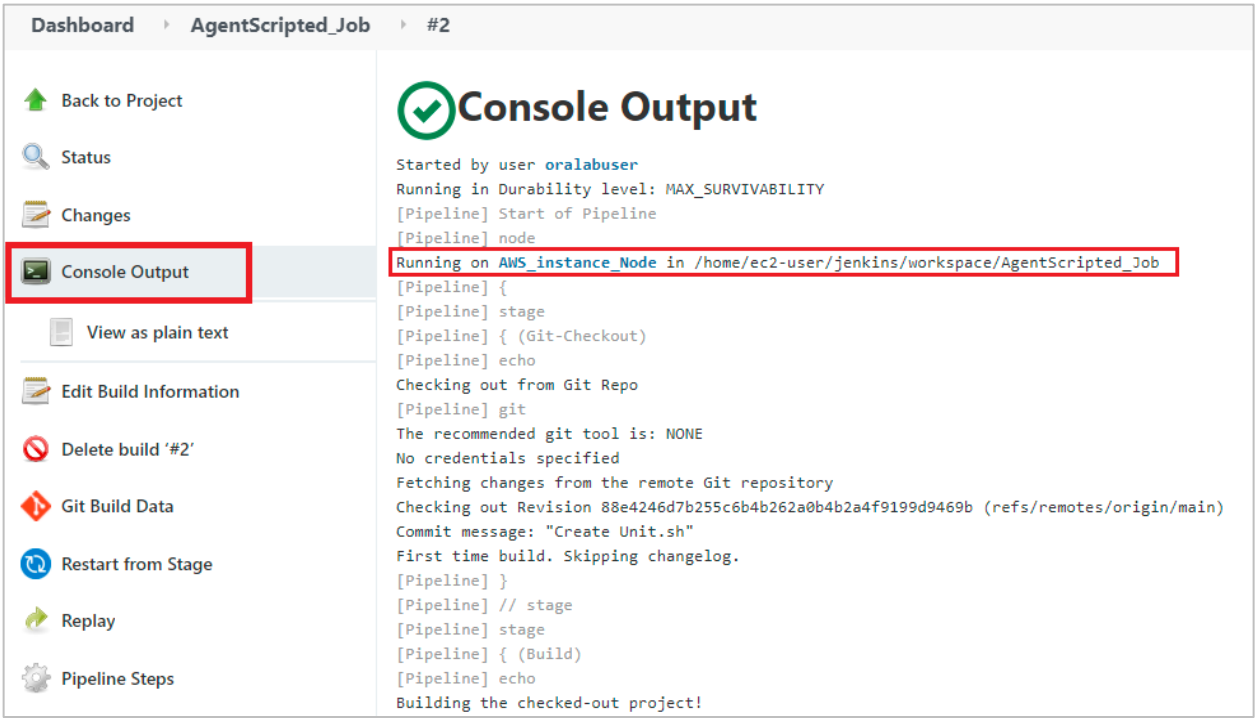
e. As shown below **view** the **stages** of **pipeline** getting executed on the agent node and click on the link under **Build History** as shown below.



f. Click on **Console Output** to view the execution of the scripted pipeline on agent node integrating with the GitHub.



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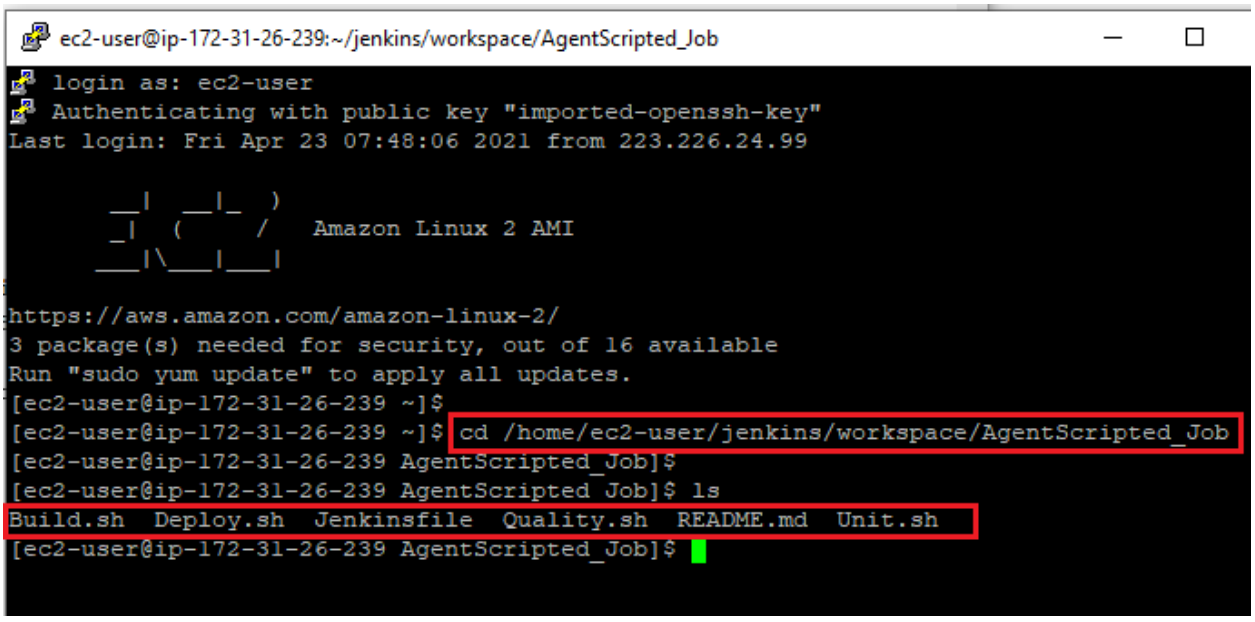
g. As shown below the scripted pipeline is executed successfully on agent node.

```
+ bash Deploy.sh
Deploying Build : 04/23/21 : 10:44:57
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
This will always run
[Pipeline] echo
This will run only if the state of the pipeline has changed
[Pipeline] echo
For example, if the Pipeline was previously failing but is now successful
[Pipeline] echo
This will run only if successful
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

h. Connect to **agent node** instance from Putty to verify the path of the workspace consisting of the GitHub repository files as shown below.



3. Close the terminal, and Logout from the AWS Management console and Jenkins Dashboard.

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