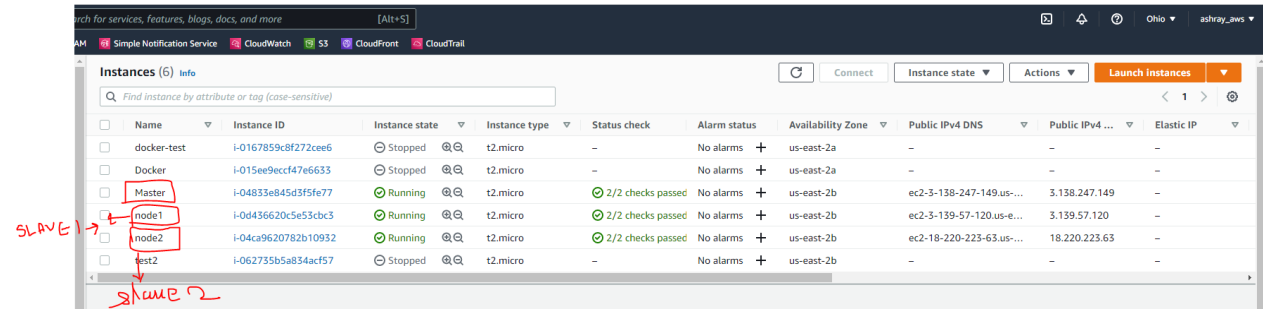


PROJECT2: BUILD GAME OF LIFE ON MASTER AND DEPLOY ON SLAVE1 & SLAVE2

STEP1)

Created Master (JENKINS)and two Slave Machine



STEP2)

Started pipeline job with defining tools required to build .war file (maven + Java) and setting the env to run mvn install.

Stage1-- Cloned the game of life to master and Build it on /root/project2 dir

Script ?

```
1 pipeline{
2
3   agent none
4
5   tools {
6     maven 'maven3.8'
7     jdk 'java1.8'
8   }
9   stages {
10    stage ('git repo clone to master') {
11      agent {
12        label 'built-in'
13        customWorkspace '/root/project2/'
14      }
15    }
16  }
17
18  environment {
19    PATH = "/root/maven/apache-maven-3.8.6/bin:$PATH"
20  }
21
22  steps{
23
24    git 'https://github.com/ashray18/game-of-life.git'
25    dir("/root/project2/") {
26      sh 'mvn install'
27    }
28  }
29 }
```

STEP3)

Stage2- on Node1 installing Tomcat server and starting the services

```
    }
  }
  stage ('deeply war on tomcat server on node 1'){
  agent {
    node{
      label '172.31.20.150'
      customWorkspace '/home/ec2-user/project2/'
    }
  }
  steps{
    sh "sudo rm -rf /home/ec2-user/tomcat"
    sh "sudo mkdir /home/ec2-user/tomcat/"
    sh "sudo chown -R ec2-user:ec2-user /home/ec2-user/tomcat/"
    dir ("/home/ec2-user/tomcat/"){
      sh "sudo wget https://downloads.apache.org/tomcat/tomcat-9/v9.0.65/bin/apache-tomcat-9.0.65.zip "
      sh " sudo unzip apache-tomcat-9.0.65.zip"
      sh " sudo chmod -R 777 apache-tomcat-9.0.65"
    }
    sh "sudo /home/ec2-user/tomcat/apache-tomcat-9.0.65/bin/./startup.sh "
```

STEP4)

Stage3- on Node2 installing Tomcat server and starting the services

```
52 |
53 | }
54 | stage ('deeply war on tomcat server on node 2'){
55 |   agent {
56 |     node{
57 |       label '172.31.17.248'
58 |       customWorkspace '/home/ec2-user/project2/'
59 |     }
60 |   }
61 | }
62 | steps{
63 |   sh "sudo rm -rf /home/ec2-user/tomcat"
64 |   sh "sudo mkdir /home/ec2-user/tomcat/"
65 |   sh "sudo chown -R ec2-user:ec2-user /home/ec2-user/tomcat/"
66 |   dir ("/home/ec2-user/tomcat/"){
67 |     sh "sudo wget https://downloads.apache.org/tomcat/tomcat-9/v9.0.65/bin/apache-tomcat-9.0.65.zip "
68 |     sh " sudo unzip apache-tomcat-9.0.65.zip"
69 |     sh " sudo chmod -R 777 apache-tomcat-9.0.65"
70 |   }
71 | }
72 | sh "sudo /home/ec2-user/tomcat/apache-tomcat-9.0.65/bin/./startup.sh "
73 |
74 | }
75 | }
```

STEP5)

Stage4- To Deploy both the .war files to node1 and node2 use the SCP command

```
/> }  
76 ▾ stage('copy war to both nodes'){  
77 ▾   agent {  
78 ▾     node{  
79       label 'built-in'  
80     }  
81   }  
82 ▾   steps{  
83     sh "sudo scp -i /root/test.pem /root/project2/gameoflife-web/target/gameoflife.war ec2-user@172.31.20.150:/home/ec2-user/tomcat/apache-tomcat-9.0.65/webapps/"  
85     sh "sudo scp -i /root/test.pem /root/project2/gameoflife-web/target/gameoflife.war ec2-user@172.31.17.248:/home/ec2-user/tomcat/apache-tomcat-9.0.65/webapps/"  
86   }  
87 }  
88 }  
89 }  
90 }  
91 }  
92 }  
93 }
```

STEP6)

Stage5- check the node1 and node2 to verify

The screenshot displays the AWS Management Console interface. The top navigation bar shows various AWS services. The main content area is titled 'EC2 > Instances > i-0d436620c5e53cbc3'. It shows the 'Instance summary for i-0d436620c5e53cbc3 (node1)'. Key details include: Instance ID: i-0d436620c5e53cbc3 (node1), Public IPv4 address: 3.139.57.120 (with a link to 'open address'), Private IPv4 addresses: 172.31.20.150, and Instance state: Pending. Below this, a web browser window is open, showing the 'The Game Of Life' website. The browser's address bar shows the URL '3.139.57.120:8080/gameoflife/'. The website content includes a welcome message and a list of rules for the Game of Life.

Welcome to Conway's Game Of Life!

This is a really cool web version of Conway's famous Game Of Life. The Game of Life is a cellular automaton devised by the British mathematician John Horton Conway way back in 1970.

The universe of the Game of Life is an infinite two-dimensional orthogonal grid of square cells, each of which is in one of two possible states, live or dead. Every cell interacts with its eight neighbors, which are the cells that are directly horizontally, vertically, or diagonally adjacent. At each step in time, the following transitions occur:

- Any live cell with fewer than two live neighbours dies, as if caused by underpopulation.
- Any live cell with more than three live neighbours dies, as if by overcrowding.
- Any live cell with two or three live neighbours lives on to the next generation.
- Any dead cell with exactly three live neighbours becomes a live cell.

[New Game](#)

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New EC2 Experience Tell us what you think

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EC2 > Instances > i-04ca9620782b10932

Instance summary for i-04ca9620782b10932 (node2) Info

Updated less than a minute ago

Instance ID i-04ca9620782b10932 (node2) Public IPv4 address 18.220.223.63 | open address Private IPv4 addresses 172.31.17.248

Connect Instance state Actions

The Game Of Life

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New Game

Not secure | 3.138.247.149:8080/jenkins/blue/organizations/jenkins/project2-test/detail/project2-test/46/pipeline

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project2-test < 46 Pipeline Changes Tests Artifacts Restart copy war to both nodes Logout

Branch: -- 43s No changes
Commit: -- 39 minutes ago Started by user ashray

Start git repo clone to master deploy war on tomcat server o... deploy war on tomcat server o... copy war to both nodes End

copy war to both nodes - 2s

- ✓ maven3.0 — Use a tool from a predefined Tool Installation <1s
- ✓ Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. <1s
- ✓ java1.8 — Use a tool from a predefined Tool Installation <1s
- ✓ Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. <1s
- ✓ sudo scp -i /root/.test.pem /root/project2/gameoflife-web/target/gameoflife.war ec2-user@172.31.20.150:/home/ec2-user/tomcat/apache-tomcat-9.0.65/webapps/ — Shell Script <1s
- ✓ sudo scp -i /root/.test.pem /root/project2/gameoflife-web/target/gameoflife.war ec2-user@172.31.17.248:/home/ec2-user/tomcat/apache-tomcat-9.0.65/webapps/ — Shell Script <1s