

# End-to-End CI/CD Pipeline Implementation using Jenkins & AWS

## AWS Ec2 Instance

The screenshot shows the AWS EC2 Instances page. A single instance is listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
netflix applica...	i-0cdb0298c41d76792	Running	t2.medium	-	No alarms	ap-southeast-2a	ec2-13-211-126-

Detailed instance information for 'i-0cdb0298c41d76792 (netflix application)':

Details	Security	Networking	Storage	Status checks	Monitoring	Tags
Instance summary	Public IPv4 address copied 13.211.126.33   open address	Running	Private IPv4 addresses 172.31.11.199	Public IPv4 DNS ec2-13-211-126-33.ap-southeast-2.compute.amazonaws.com   open address		
Instance ID	i-0cdb0298c41d76792 (netflix application)	IPv6 address	Hostname type	Private IP DNS name (IPv4 only)		

## Jenkins CI/CD Pipeline

The screenshot shows the Jenkins Pipeline interface for the 'Pipeline netflix application' project.

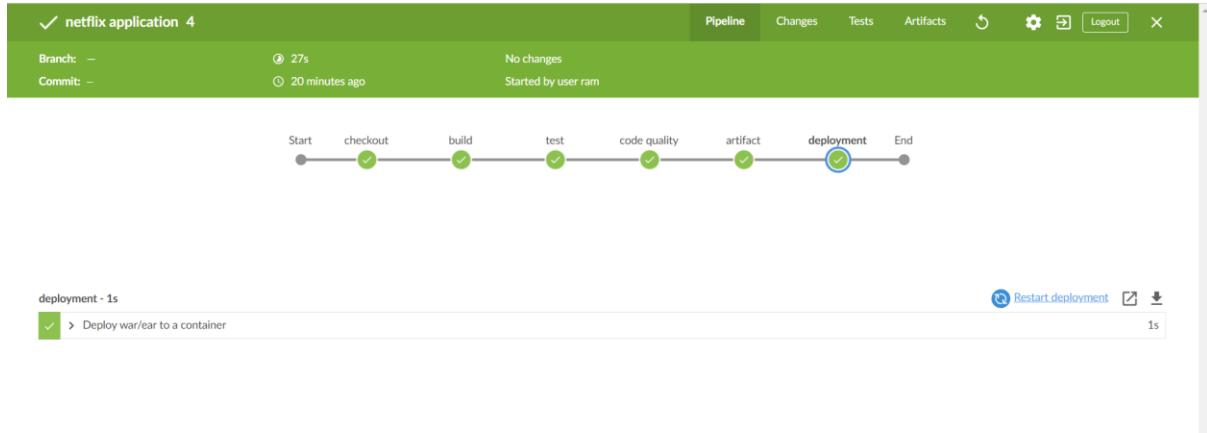
**Project Navigation:** Status, Changes, Build Now, Configure, Delete Pipeline, Full Stage View, Open Blue Ocean, Rename, Pipeline Syntax.

**Pipeline Configuration:** Pipeline name: Pipeline netflix application. Average stage times: checkout (738ms), build (2s), test (2s), code quality (13s), artifact (6s), deployment (1s). Last build (#4) ran 16 seconds ago on Sept 02 at 11:19 with No Changes.

**Stage View:** Shows the duration of each stage in the pipeline.

checkout	build	test	code quality	artifact	deployment
738ms	2s	2s	13s	6s	1s

**Build History:** Trend dropdown, Filter builds..., Last build (#4), 16 sec ago on 02-Sep-2023, 5:49 AM.



## Pipeline Code

Instances | EC2 | ap-southeast-2 | netflix application Config [Jenkins] | Java Home myweb | Netflix Login Page | CodingNepal | +

Not secure | 13.211.126.33:8090/job/netflix%20application/configure

Gmail YouTube Maps Dashboard: Python... NextStep: Tata Con... TCS ION Digital Lea... KodNest Team Watch Movies Onli... AWS Management... GitHub

Dashboard > netflix application > Configuration

**Configure**

Definition Pipeline script

General Advanced Project Options Pipeline

```

1 - pipeline {
2   agent any
3   stages {
4     stage ('checkout') {
5       steps {
6         git 'https://github.com/devopsbyrahim/jenkins-java-project.git'
7       }
8     }
9     stage ('build') {
10    steps {
11      sh 'mvn compile'
12    }
13  }
14  stage ('test') {
15    steps {
16      sh 'mvn test'
17    }
18 }

```

Use Groovy Sandbox

Save Apply

REST API Jenkins 2.414.1

## Sonar Qube (Code Quality)

The screenshot shows the SonarQube dashboard for the project 'Java Home myweb' on branch 'master'. The 'Overview' tab is selected. The 'QUALITY GATE STATUS' section indicates a 'Passed' status with a green background and the message 'All conditions passed.' Below this, the 'MEASURES' section displays various metrics:

Measure	Status	Score
New Code	Since September 2, 2023 Started 9 minutes ago	Reliability A
New Bugs	0	Security A
New Vulnerabilities	0	Reviewed
New Security Hotspots	0	Security Review A
Added Debt	0	Maintainability A
New Code Smells	0	

At the top right, it says 'Last analysis had 2 warnings' on 'September 2, 2023 at 11:19 AM Version 1.2.2'.

## Tomcat Web Server

The screenshot shows the Tomcat Web Application Manager interface. At the top, there's a banner with the Apache logo and the text 'THE APACHE® SOFTWARE FOUNDATION'. Below the banner, the title 'Tomcat Web Application Manager' is displayed. A message box shows 'Message: OK'. The main area has tabs for 'Manager', 'List Applications', 'HTML Manager Help', 'Manager Help', and 'Server Status'. The 'Applications' table lists the following applications:

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/netflix	None specified	Archetype Created Web Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

# Output

