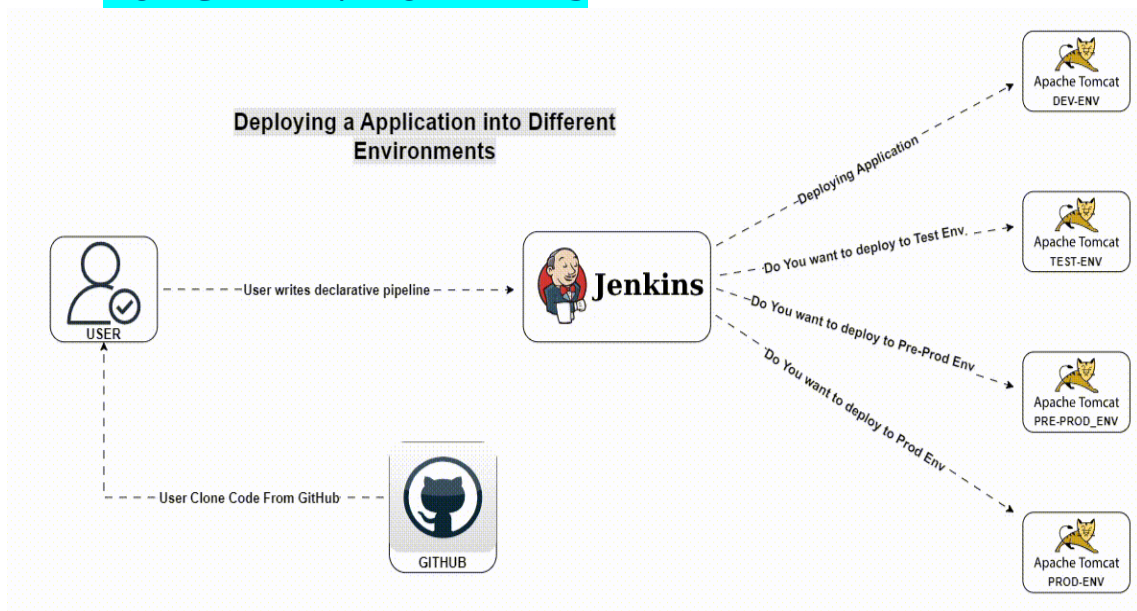


# DEVOPS PROJECT

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## Project: DEPLOY AN APPLCATION IN DIFFERENT TOMCAT ENVIRONMENTS



## Create Instances In AWS

Instances | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:v=3;\$case=tags:true%5C,client:false;\$regex=tags:false%5C,client:false

Services Search [Alt+S]

EC2 VPC RDS

Instances (4/6) Info

Find Instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
tomcat-prod	i-067cd6fe925cebd15	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-54-...
tomcat-test	i-069478673fd15a2f2	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-54-...
tomcat-preprod	i-0c36d003b33e196e0	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-54-...
Tomcat-test	i-01fb9be376eb02328	Stopped	t2.micro	-	No alarms	us-east-1b	-
ALL IN ONE	i-05c215234bbd659e9	Stopped	t2.xlarge	-	No alarms	us-east-1a	-
tomcat-dev	i-03de0f55ddc8356dc	Running	t2.large	2/2 checks passed	No alarms	us-east-1a	ec2-54-...

Instances: i-067cd6fe925cebd15 (tomcat-prod), i-069478673fd15a2f2 (tomcat-test), i-0c36d003b33e196e0 (tomcat-preprod), i-03de0f55ddc8356dc (tomcat-dev)

## Create a job with pipeline:

EC2 Instance Connect | Pipeline Syntax: Snippet | Dashboard (Jenkins)

Not secure | 54.173.115.105:8080

Jenkins

Search (CTRL+K)

venkat log out

Dashboard

+ New Item

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

All +

S	W	Name	Last Success	Last Failure	Last Duration
✓	☁	DevOps Project	33 min #16	1 hr 9 min #13	10 min

Icon: S M L Icon legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Queue

No builds in the queue.

54.173.115.105:8080/# atus

## Write a pipeline syntax:

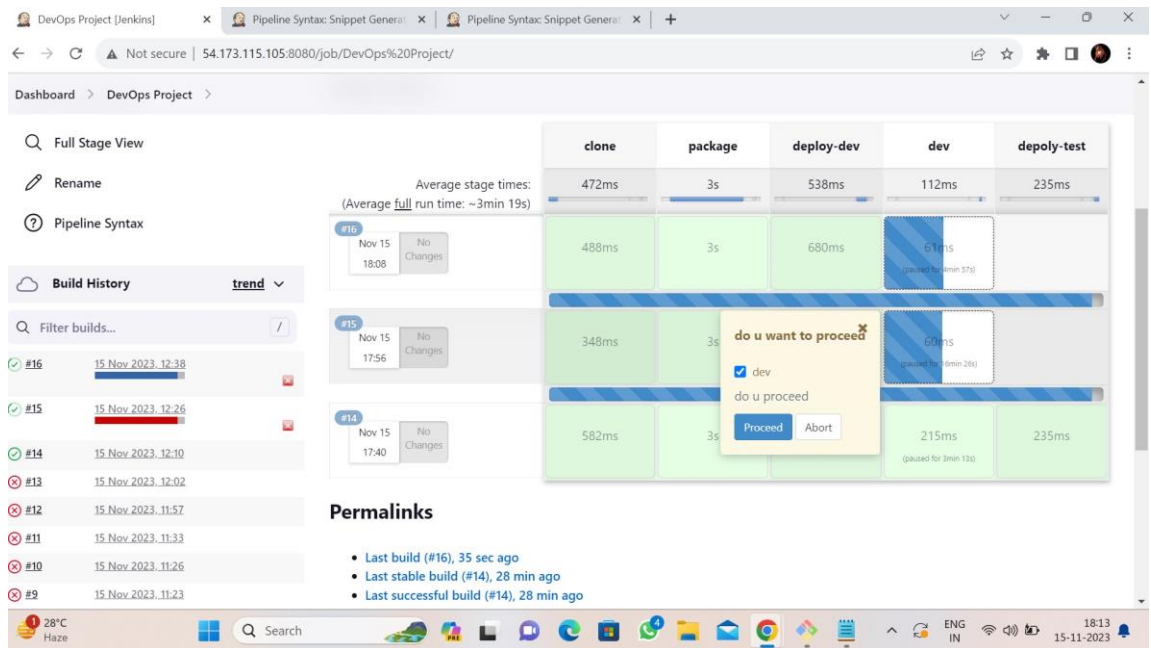
```
pipeline {
    agent any
    stages{
        stage('clone'){
            steps{
                git 'https://github.com/Singareddy-Venkatesh/dockerjenkin.git'
            }
        }
        stage('package'){
            steps{
                sh 'mvn package'
            }
        }
        stage('deploy-dev'){
            steps{
                deploy adapters: [tomcat9(credentialsId: 'tomcat', path: '', url:
'http://54.173.115.105:8081')], contextPath: 'dev', war: '**/*.war'
            }
        }
        stage('dev'){
            steps{
                input (
                    message: 'do u want to proceed',
                    parameters: [booleanParam(defaultValue: true, description: 'do u
proceed', name: 'dev')]
                )
            }
        }
        stage('depoly-test'){
            steps{
                deploy adapters: [tomcat9(credentialsId: 'tomcat', path: '', url:
'http://54.227.67.116:8081')], contextPath: 'test', war: '**/*.war'
            }
        }
        stage('test'){
            steps{
                input (
                    message: 'do u want to proceed',
                    parameters: [booleanParam(defaultValue: true, description: 'do u
proceed', name: 'dev')]
                )
            }
        }
    }
}
```

```

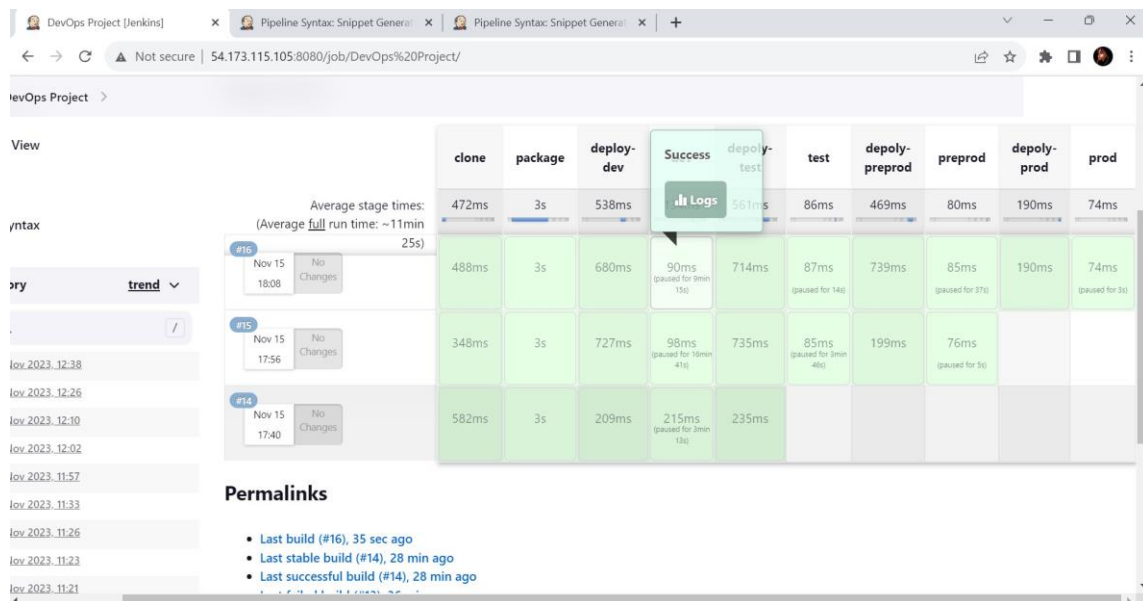
        )
    }
}
stage('depoly-preprod'){
    steps{
        deploy adapters: [tomcat9(credentialsId: 'tomcat', path: '', url:
'http://54.152.153.114:8081']], contextPath: 'preprod', war: '**/*.war'
        }
    }
stage('preprod'){
    steps{
        input (
            message: 'do u want to proceed',
            parameters: [booleanParam(defaultValue: true, description: 'do u
proceed', name: 'dev')]
        )
    }
}
stage('depoly-prod'){
    steps{
        deploy adapters: [tomcat9(credentialsId: 'tomcat', path: '', url:
'http://54.160.185.210:8081']], contextPath: 'prod', war: '**/*.war'
        }
    }
stage('prod'){
    steps{
        input (
            message: 'do u want to proceed',
            parameters: [booleanParam(defaultValue: true, description: 'do u
proceed', name: 'dev')]
        )
    }
}
}
}

```

**Apply & save and build Now**



## Finally, ALL Stages Successfully Completed



## Console Output

EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | Pipeline Syntax: Snippet | x | DevOps Project #16 Con | x | + | v | - | o | x |

← → ↻ ⚠ Not secure | 54.173.115.105:8080/job/DevOps%20Project/16/console

Dashboard > DevOps Project > #16

Status

</> Changes

Console Output

View as plain text

Edit Build Information

Delete build '#16'

Git Build Data

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

### Console Output

```
Started by user venkat
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/DevOps Project@2
[Pipeline] {
[Pipeline] stage
[Pipeline] { (clone)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/Singareddy-Venkatesh/dockerjenkin.git
> git init /var/lib/jenkins/workspace/DevOps Project@2 # timeout=10
Fetching upstream changes from https://github.com/Singareddy-Venkatesh/dockerjenkin.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
> git fetch --tags --force --progress -- https://github.com/Singareddy-Venkatesh/dockerjenkin.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/Singareddy-Venkatesh/dockerjenkin.git # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
```

EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | Pipeline Syntax: Snippet | x | DevOps Project #16 Con | x | + | v | - | o | x |

← → ↻ ⚠ Not secure | 54.173.115.105:8080/job/DevOps%20Project/16/console

Dashboard > DevOps Project > #16

```
example@0:1m --@[m
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by com.thoughtworks.xstream.core.util.Fields
(file:/var/lib/jenkins/.m2/repository/com/thoughtworks/xstream/xstream/1.3.1/xstream-1.3.1.jar) to field
java.util.Properties.defaults
WARNING: Please consider reporting this to the maintainers of com.thoughtworks.xstream.core.util.Fields
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
[0:1;34mINFO@]m Packaging webapp
[0:1;34mINFO@]m Assembling webapp [java-tomcat-maven-example] in [/var/lib/jenkins/workspace/DevOps
Project@2/target/java-tomcat-maven-example]
[0:1;34mINFO@]m Processing war project
[0:1;34mINFO@]m Copying webapp resources [/var/lib/jenkins/workspace/DevOps Project@2/src/main/webapp]
[0:1;34mINFO@]m Webapp assembled in [23 msecs]
[0:1;34mINFO@]m Building war: /var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war
[0:1;34mINFO@]m WEB-INF/web.xml already added, skipping
[0:1;34mINFO@]m
[0:1;34mINFO@]m [0:1m--- [0:32maven-dependency-plugin:2.3:copy@]m [0:1m(default)]@]m @ [0:36mjava-tomcat-maven-
example@0:1m --@]m
[0:1;34mINFO@]m Configured Artifact: com.github.jsimone:webapp-runner:8.5.11.3:jar
[0:1;34mINFO@]m Copying webapp-runner-8.5.11.3.jar to /var/lib/jenkins/workspace/DevOps
Project@2/target/dependency/webapp-runner.jar
[0:1;34mINFO@]m [0:1m-----@]m
[0:1;34mINFO@]m [0:1;32mBUILD SUCCESS@]m
[0:1;34mINFO@]m [0:1m-----@]m
```

EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | EC2 Instance Connect | u | x | Pipeline Syntax: Snippet | x | DevOps Project #16 Con | x | + | v | - | o | x |

← → ↻ ⚠ Not secure | 54.173.115.105:8080/job/DevOps%20Project/16/console

Dashboard > DevOps Project > #16

```
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision e367653ca3a1ab110d8daa476196c71ea74d4327 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f e367653ca3a1ab110d8daa476196c71ea74d4327 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git checkout -b master e367653ca3a1ab110d8daa476196c71ea74d4327 # timeout=10
Commit message: "Update README.md"
> git rev-list --no-walk e367653ca3a1ab110d8daa476196c71ea74d4327 # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (package)
[Pipeline] sh
+ mvn package
[0:1;34mINFO@]m Scanning for projects...
[0:1;34mINFO@]m
[0:1;34mINFO@]m [0:1m-----< [0:36mcom.example:java-tomcat-maven-example@0:1m >-----@]m
[0:1;34mINFO@]m [0:1mBuilding hello Maven Webapp 1.0-SNAPSHOT@]m
[0:1;34mINFO@]m [0:1m-----[ war ]-----@]m
[0:1;34mINFO@]m
[0:1;34mINFO@]m [0:1m--- [0:32maven-resources-plugin:2.6:resources@]m [0:1m(default-resources)]@]m @ [0:36mjava-
tomcat-maven-example@0:1m --@]m
[0:1;33mWARNING@]m Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform
dependent!
[0:1;34mINFO@]m skip non existing resourceDirectory /var/lib/jenkins/workspace/DevOps
```

EC2 Instance Connect | u x | EC2 Instance Connect | u x | EC2 Instance Connect | u x | Pipeline Syntax: Snippet | x | DevOps Project #16 Con | x | + | - | o | x |

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Dashboard > DevOps Project > #16

```
[@1;34mINFO[@m Finished at: 2023-11-15T12:38:31Z
[@1;34mINFO[@m -----[@m
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (deploy-dev)
[Pipeline] deploy
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war
to container Tomcat 9.x Remote with context dev
  Redeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Undeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Deploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (dev)
[Pipeline] input
Input requested
Approved by venkat
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (deploy-test)
[Pipeline] deploy
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war
to container Tomcat 9.x Remote with context test
  Redeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Undeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Deploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (test)
[Pipeline] input
Input requested
Approved by venkat
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (deploy-preprod)
[Pipeline] deploy
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war
to container Tomcat 9.x Remote with context preprod
  Redeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Undeploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
  Deploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
[Pipeline] }
```

EC2 Instance Connect | u x | EC2 Instance Connect | u x | EC2 Instance Connect | u x | Pipeline Syntax: Snippet | x | DevOps Project #16 Con | x | + | - | o | x |

← → ↻ ⚠ Not secure | 54.173.115.105:8080/job/DevOps%20Project/16/console | ⌂ ☆ ⚙ □ 🔴 ⋮

Dashboard > DevOps Project > #16

```
DEPENDENCY
[@1;34mINFO[@m skip non existing resourceDirectory /var/lib/jenkins/workspace/DevOps
Project@2/src/main/resources
[@1;34mINFO[@m
[@1;34mINFO[@m @1m--- @0;32mmaven-compiler-plugin:3.1:compile@1m @1m(default-compile)@1m @ @36mjava-tomcat-
maven-example@0;1m ---@1m
[@1;34mINFO[@m No sources to compile
[@1;34mINFO[@m
[@1;34mINFO[@m @1m--- @0;32mmaven-resources-plugin:2.6:testResources@1m @1m(default-testResources)@1m @
@36mjava-tomcat-maven-example@0;1m ---@1m
[@1;33mWARNING@1m Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform
dependent!
[@1;34mINFO[@m skip non existing resourceDirectory /var/lib/jenkins/workspace/DevOps
Project@2/src/test/resources
[@1;34mINFO[@m
[@1;34mINFO[@m @1m--- @0;32mmaven-compiler-plugin:3.1:testCompile@1m @1m(default-testCompile)@1m @ @36mjava-
tomcat-maven-example@0;1m ---@1m
[@1;34mINFO[@m No sources to compile
[@1;34mINFO[@m
[@1;34mINFO[@m @1m--- @0;32mmaven-surefire-plugin:2.12.4:test@1m @1m(default-test)@1m @ @36mjava-tomcat-
maven-example@0;1m ---@1m
[@1;34mINFO[@m No tests to run.
[@1;34mINFO[@m
[@1;34mINFO[@m @1m--- @0;32mmaven-war-plugin:2.2:war@1m @1m(default-war)@1m @ @36mjava-tomcat-maven-
example@0;1m ---@1m
```



```
Approved by venkat
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (deploy-prod)
[Pipeline] deploy
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war
to container Tomcat 9.x Remote with context prod
[/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war] is not deployed. Doing a
fresh deployment.
  Deploying [/var/lib/jenkins/workspace/DevOps Project@2/target/java-tomcat-maven-example.war]
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (prod)
[Pipeline] input
Input requested
Approved by venkat
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

## Final Stage: Deployed in tomcat servers

## DEV ENVIRONMENT

EC2 Inst

EC2 Inst

Pipeline

DevOps

/manag

/manag

/manag

/manag

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54.173.115.105:8081/manager/html

Manager

List Applications

HTML Manager Help

Manager Help

Server Status

Applications

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

## Test Environment



EC2 Inst x EC2 Inst x EC2 Inst x Pipeline x DevOps x /manag x /manag x /manag x +

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message. v

Manager

List Applications

HTML Manager Help

Manager Help

Server Status

Applications

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/docs	None specified	Tomcat Documentation	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/examples	None specified	Servlet and JSP Examples	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/host-manager	None specified	Tomcat Host Manager Application	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/java-tomcat-maven-example	None specified	Archetype Created Web Application	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/manager	None specified	Tomcat Manager Application	true	1	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>
/test	None specified	Archetype Created Web Application	true	0	<div><div>Start</div><div>Stop</div><div>Reload</div><div>Undeploy</div></div> <div><div>Expire sessions</div> with idle <math>\geq</math> 30 minutes</div>

## PRE-PROD ENVIRONMENT

EC2 Inst: x

EC2 Inst: x

Pipeline: x

DevOps: x

/manag: x

/manag: x

/manag: x

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Manager

List Applications

HTML Manager Help

Manager Help

Server Status

Applications

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

Deploy

## PROD ENVIRONMENT

EC2 Inst

EC2 Inst

EC2 Inst

Pipeline

DevOps

/manag

/manag

/manag

/manag

Not secure | 54.160.185.210:8081/manager/html

Manager

List Applications

HTML Manager Help

Manager Help

Server Status

Applications

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

**SUCCESSFULLY**

**PROJECT COMPLETED**

