

1- Poniendo en funcionamiento Jenkins

```
Activities Terminal sep 22 14:16
manuel@manuel-Aspire-A315-54K: ~/jenkins

manuel@manuel-Aspire-A315-54K:~$ export JENKINS_HOME=~/jenkins
manuel@manuel-Aspire-A315-54K:~$ mkdir -p $JENKINS_HOME
manuel@manuel-Aspire-A315-54K:~$ cd $JENKINS_HOME
manuel@manuel-Aspire-A315-54K:~/jenkins$ wget http://mirrors.jenkins.io/war-stable/latest/jenkins.war
--2022-09-22 14:11:06-- http://mirrors.jenkins.io/war-stable/latest/jenkins.war
Resolving mirrors.jenkins.io (mirrors.jenkins.io)... 52.167.253.43
Connecting to mirrors.jenkins.io (mirrors.jenkins.io)|52.167.253.43|:80... connected.
HTTP request sent, awaiting response... 308 Permanent Redirect
Location: https://mirrors.jenkins.io/war-stable/latest/jenkins.war [following]
--2022-09-22 14:11:07-- https://mirrors.jenkins.io/war-stable/latest/jenkins.war
Connecting to mirrors.jenkins.io (mirrors.jenkins.io)|52.167.253.43|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://ftp-nyc.osuosl.org/pub/jenkins/war-stable/latest/jenkins.war [following]
--2022-09-22 14:11:08-- https://ftp-nyc.osuosl.org/pub/jenkins/war-stable/latest/jenkins.war
Resolving ftp-nyc.osuosl.org (ftp-nyc.osuosl.org)... 64.50.233.100, 2600:3404:200:237::2
Connecting to ftp-nyc.osuosl.org (ftp-nyc.osuosl.org)|64.50.233.100|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 93504273 (89M) [application/x-java-archive]
Saving to: 'jenkins.war'

jenkins.war 100%[=====>] 89,17M 824KB/s in 2m 3s

2022-09-22 14:13:13 (743 KB/s) - 'jenkins.war' saved [93504273/93504273]
```

```
Activities Terminal sep 22 14:17
manuel@manuel-Aspire-A315-54K: ~/jenkins

manuel@manuel-Aspire-A315-54K:~/jenkins$ java -jar jenkins.war --httpPort=8081
Running from: /home/manuel/jenkins/jenkins.war
webroot: EnvVars.masterEnvVars.get("JENKINS_HOME")
2022-09-22 17:16:04.571+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2022-09-22 17:16:06.064+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2022-09-22 17:16:06.173+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Jetty-10.0.11; built: 2022-06-21T21:12:44.640Z; git: d988aa01
6e0bb2de6fba84c1659049c72eae3e32; jvm 11.0.16+8-post-Ubuntu-0ubuntu120.04
2022-09-22 17:16:06.664+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty
.jsp.JettyJspServlet
2022-09-22 17:16:06.758+0000 [id=1] INFO o.e.j.s.DefaultSessionIdManager#doStart: Session workerName=node0
2022-09-22 17:16:07.444+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: /home/manuel/jenkins found at: EnvVars.m
asterEnvVars.get("JENKINS_HOME")
2022-09-22 17:16:07.836+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@acf859d{Jenkins v2.361.1,,file:///home/manuel/jenk
ins/war/,AVAILABLE}[/home/manuel/jenkins/war]
2022-09-22 17:16:07.866+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@3e6f3f28{HTTP/1.1, (http/1.1)}{0.0.0.0
:8081}
2022-09-22 17:16:07.909+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started Server@7ceb3185{STARTING}[10.0.11,sto=0] @4301ms
2022-09-22 17:16:07.923+0000 [id=24] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2022-09-22 17:16:08.304+0000 [id=31] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2022-09-22 17:16:08.332+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2022-09-22 17:16:09.586+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2022-09-22 17:16:09.593+0000 [id=33] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2022-09-22 17:16:09.601+0000 [id=35] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2022-09-22 17:16:09.975+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2022-09-22 17:16:09.976+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2022-09-22 17:16:09.976+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2022-09-22 17:16:09.978+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2022-09-22 17:16:10.063+0000 [id=49] INFO hudson.model.AsyncPeriodicWork#lambda$doRun$1: Started Download metadata
2022-09-22 17:16:10.079+0000 [id=49] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file:/home/manuel/jenkins/war/WEB-INF/lib/groovy-all-2.4.21.jar) to con
structor java.lang.invoke.MethodHandles$Lookup(java.lang.Class,int)
WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.vmplugin.v7.Java7$1
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
2022-09-22 17:16:10.909+0000 [id=36] INFO jenkins.install.SetupWizard#init:

*****
```

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

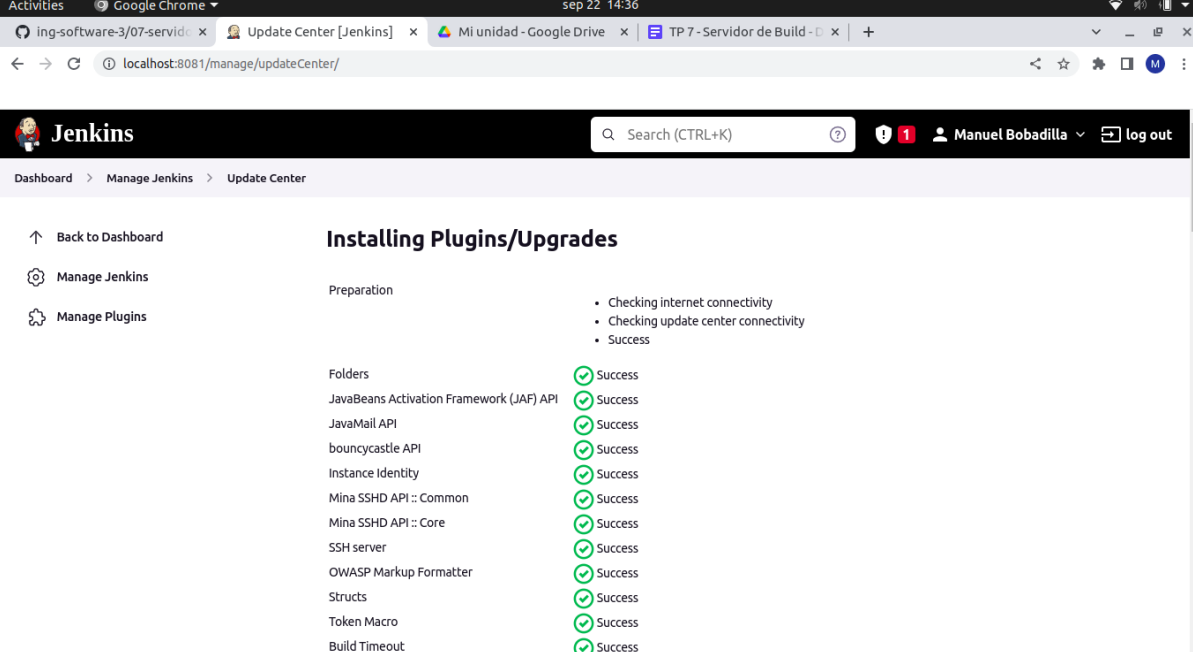
[Start using Jenkins](#)

Jenkins 2.361.1

2- Conceptos generales

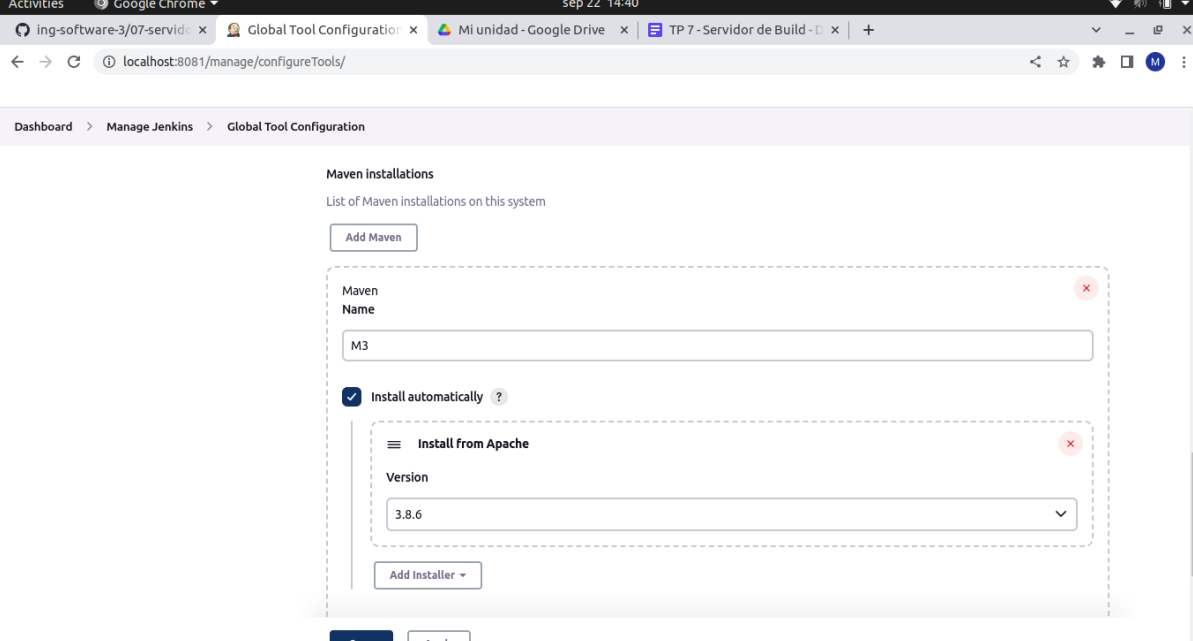
{to do}

3- Instalando Plugins y configurando herramientas



The screenshot shows the Jenkins Update Center interface. The top navigation bar includes the Jenkins logo, a search bar, and the user name 'Manuel Bobadilla' with a 'log out' button. The breadcrumb trail is 'Dashboard > Manage Jenkins > Update Center'. On the left, there are links for 'Back to Dashboard', 'Manage Jenkins', and 'Manage Plugins'. The main section is titled 'Installing Plugins/Upgrades'. It shows a 'Preparation' status with a list of steps: 'Checking internet connectivity', 'Checking update center connectivity', and 'Success'. Below this, a list of plugins is shown with their installation status, all marked as 'Success' with green checkmarks:

Plugin	Status
Folders	Success
JavaBeans Activation Framework (JAF) API	Success
JavaMail API	Success
bouncycastle API	Success
Instance Identity	Success
Mina SSHD API :: Common	Success
Mina SSHD API :: Core	Success
SSH server	Success
OWASP Markup Formatter	Success
Struts	Success
Token Macro	Success
Build Timeout	Success
Gradle	Success



The screenshot shows the Jenkins Global Tool Configuration page. The breadcrumb trail is 'Dashboard > Manage Jenkins > Global Tool Configuration'. The page title is 'Maven installations'. Below the title, it says 'List of Maven installations on this system'. There is an 'Add Maven' button. A form is shown for adding a new Maven installation:

- Maven Name:** A text input field containing 'M3'.
- Install automatically:** A checkbox that is checked.
- Install from Apache:** A sub-section containing:
 - Version:** A dropdown menu showing '3.8.6'.
 - Add Installer:** A button.

At the bottom of the form, there are 'Save' and 'Apply' buttons.

4- Creando el primer Pipeline Job

The screenshot shows the Jenkins web interface in Google Chrome. The browser tabs include 'ing-software-3/07-servid...', 'hello-world Config [Jenki...', 'Mi unidad - Google Drive', and 'TP 7 - Servidor de Build...'. The address bar shows 'localhost:8081/job/hello-world/configure'. The page has a breadcrumb 'Dashboard > hello-world >'. On the left, the 'Configuration' sidebar has 'General', 'Advanced Project Options', and 'Pipeline' (selected). The 'Pipeline' section shows 'Definition' set to 'Pipeline script'. A 'Script' editor contains a Groovy pipeline script:

```
1 pipeline {
2   agent any
3
4   stages {
5     stage('Hello') {
6       steps {
7         echo 'Hello World'
8       }
9     }
10  }
11 }
12
```

 A dropdown menu on the right of the script editor is set to 'Hello World'. Below the script editor, the 'Use Groovy Sandbox' checkbox is checked. At the bottom are 'Save' and 'Apply' buttons.

The screenshot shows the Jenkins web interface in Google Chrome. The browser tabs include 'ing-software-3/07-servid...', 'hello-world #2 Console [J...', 'Mi unidad - Google Drive', and 'TP 7 - Servidor de Build...'. The address bar shows 'localhost:8081/job/hello-world/2/console'. The page has a breadcrumb 'Dashboard > hello-world > #2'. The top navigation bar shows the Jenkins logo, a search bar, a notification icon, the user 'Manuel Bobadilla', and a 'log out' link. On the left, the sidebar has 'Status', 'Changes', 'Console Output' (selected), 'View as plain text', 'Edit Build Information', 'Delete build '#2'', 'Restart from Stage', 'Replay', 'Pipeline Steps', 'Workspaces', and 'Previous Build'. The main area is titled 'Console Output' with a green checkmark icon. It displays the following log output:

```
Started by user Manuel Bobadilla
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /home/manuel/jenkins/workspace/hello-world@2
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Hello)
[Pipeline] echo
Hello World
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Automatiza la ejecución de una serie de comandos

5- Creando un Pipeline Job con Git y Maven

```
pipeline {
  agent any

  tools {
    // Install the Maven version configured as "M3" and add it to the path.
    maven "M3"
  }

  stages {
    stage('Build') {
      steps {
        // Get some code from a GitHub repository
        git 'https://github.com/jglick/simple-maven-project-with-tests.git'

        // Run Maven on a Unix agent.
        sh "mvn -Dmaven.test.failure.ignore=true clean package"

        // To run Maven on a Windows agent, use
        // bat "mvn -Dmaven.test.failure.ignore=true clean package"
      }
    }

    post {
      // If Maven was able to run the tests, even if some of the test
      // failed, record the test results and archive the jar file.
      success {
        junit '**/target/surefire-reports/TEST-*.xml'
        archiveArtifacts 'target/*.jar'
      }
    }
  }
}
```

Pasos:

Como herramienta instala Maven, con la versión indicada cuando se instaló

Luego, al construir, trae código de github, después corre maven

A continuación, corre test de junit

Activities Google Chrome sep 22 14:59

ing-software-3/07-servido x simple-maven #1 [Jenkins x Mi unidad - Google Drive x TP 7 - Servidor de Build - x +

localhost:8081/job/simple-maven/1/

Dashboard > simple-maven > #1

Status

</> Changes

Console Output

Edit Build Information

Delete build '#1'

Git Build Data


Test Result

Restart from Stage

Replay


Pipeline Steps


Workspaces


 **Build #1 (Sep 22, 2022, 2:55:46 PM)**


[Add description](#)

Started 3 min 29 sec ago
Took **46 sec**


 **Build Artifacts**

 [simple-maven-project-with-tests-1.0-SNAPSHOT.jar](#) 1.71 KB [view](#)

 Started by user [Manuel Bobadilla](#)

 **Revision:** 3748ac65b450e23c95c43a96c0139ff0c38da617
Repository: <https://github.com/jglick/simple-maven-project-with-tests.git>

- refs/remotes/origin/master

 **Test Result** (1 failure)
[test.SomeTest.test5](#)

REST API Jenkins 2.361.1

En el status se puede ver como la configuración en el script define los elementos creados en el pipeline

El pipeline corrió correctamente, uno de los test de Junit falló

6- Utilizando nuestros proyectos

```
Salida de Consola:
Started by user Manuel Bobadilla
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /home/manuel/jenkins/workspace/spring-boot
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Tool Install)
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Build)
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] withEnv
[Pipeline] {
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir
/home/manuel/jenkins/workspace/spring-boot/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url
https://github.com/Manuel-Bobadilla/spring-boot.git # timeout=10
Fetching upstream changes from
https://github.com/Manuel-Bobadilla/spring-boot.git
> git --version # timeout=10
> git --version # 'git version 2.25.1'
> git fetch --tags --force --progress --
https://github.com/Manuel-Bobadilla/spring-boot.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 1341ca4a1e3ea5a49b9bed2fae244cafe5165ff3
(refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 1341ca4a1e3ea5a49b9bed2fae244cafe5165ff3 # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D main # timeout=10
> git checkout -b main 1341ca4a1e3ea5a49b9bed2fae244cafe5165ff3 # timeout=10
Commit message: "pom"
First time build. Skipping changelog.
[Pipeline] sh
+ mvn -Dmaven.test.failure.ignore=true clean package
[INFO] Scanning for projects...
[INFO]
```



```

[INFO] -----< org.springframework.boot:spring-boot-sample-actuator >-----
[INFO] Building Spring Boot Actuator Sample 2.0.2
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-clean-plugin:3.0.0:clean (default-clean) @
spring-boot-sample-actuator ---
[INFO] Deleting /home/manuel/jenkins/workspace/spring-boot/target
[INFO]
[INFO] --- maven-resources-plugin:3.0.1:resources (default-resources) @
spring-boot-sample-actuator ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 1 resource
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.7.0:compile (default-compile) @
spring-boot-sample-actuator ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 6 source files to
/home/manuel/jenkins/workspace/spring-boot/target/classes
[INFO]
[INFO] --- maven-resources-plugin:3.0.1:testResources (default-testResources) @
spring-boot-sample-actuator ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.7.0:testCompile (default-testCompile) @
spring-boot-sample-actuator ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 3 source files to
/home/manuel/jenkins/workspace/spring-boot/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.9:test (default-test) @
spring-boot-sample-actuator ---
[INFO] Surefire report directory:
/home/manuel/jenkins/workspace/spring-boot/target/surefire-reports

-----
T E S T S
-----

Running sample.actuator.HelloWorldServiceTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.132 sec
Running sample.actuator.ExampleInfoContributorTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.716 sec

Results :

Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @
spring-boot-sample-actuator ---

```

```
[INFO] Building jar:
/home/manuel/jenkins/workspace/spring-boot/target/spring-boot-sample-actuator-2.
0.2.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.0.2.RELEASE:repackage (default) @
spring-boot-sample-actuator ---
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.450 s
[INFO] Finished at: 2022-09-22T16:10:00-03:00
[INFO] -----
Post stage
[Pipeline] junit
Recording test results
[Checks API] No suitable checks publisher found.
[Pipeline] archiveArtifacts
Archiving artifacts
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

7- Utilizando nuestros proyectos con Docker

Script de Jenkins utilizado

```
pipeline {
    agent any

    tools {
        // Install the Maven version configured as "M3" and add it to the path.
        maven "M3"
    }

    stages {
        stage('Build') {
            steps {
                // Get some code from a GitHub repository
                git branch: 'main', url:
                'https://github.com/Manuel-Bobadilla/spring-boot.git'

                // Run Maven on a Unix agent.
                sh "mvn -Dmaven.test.failure.ignore=true clean package"

                // To run Maven on a Windows agent, use
                // bat "mvn -Dmaven.test.failure.ignore=true clean package"
            }
            post {
                // If Maven was able to run the tests, even if some of the test
                // failed, record the test results and archive the jar file.
                success {
                    junit '**/target/surefire-reports/TEST-*.xml'
                    archiveArtifacts 'target/*.jar'
                }
            }
        }
        stage('DockerHub Upload'){
            environment{
                DOCKER_CREDS=credentials('credenciales-dockerhub')
            }
            steps {
                sh 'docker login -u $DOCKER_CREDS_USR -p $DOCKER_CREDS_PSW'

                sh 'docker build -t "test-jenkins" .'

                sh 'docker tag test-jenkins manuelbobadilla/test-jenkins:latest'

                sh 'docker push manuelbobadilla/test-jenkins:latest'
            }
        }
    }
}
```

Jenkins

Search (CTRL+K) Manuel Bobadilla log out

Dashboard > spring-boot > #20

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#20'

Git Build Data

Test Result

Restart from Stage

Replay

Pipeline Steps

Build #20 (Sep 22, 2022, 4:32:52 PM)

Keep this build forever

Started 12 min ago
Took 9 min 34 sec

Add description


Build Artifacts
spring-boot-sample-actuator-2.0.2.jar 24.14 MB view

Changes
1. dockerfile (details / githubweb)

Started by user Manuel Bobadilla

Revision: b75fc976fa1ece73bd1c92a761b8c511966495e5
Repository: https://github.com/Manuel-Bobadilla/spring-boot-git
• refs/remotes/origin/main


Test Result (no failures)



manuelbobadilla Edit profile
Community User Joined September 15, 2022


Repositories Starred Contributed

Displaying 2 of 2 repositories



manuelbobadilla/test-jenkins
By manuelbobadilla • Updated 4 minutes ago
0 Stars

Image



manuelbobadilla/node-test
By manuelbobadilla • Updated 2 days ago
7 Downloads 0 Stars

Image