

Jenkins is a self-contained, open source automation server which can be used to automate all sorts of tasks related to building, testing, and delivering or deploying software.

Is one of the most popular free open-source CI solutions that is widely used in software engineering. It is a server-based CI application, written in Java that requires a web server to operate on. Thousands of users all over the world love working with Jenkins as it allows automating builds and tests quickly.

<https://www.jenkins.io/>



Jenkins installation and configuration is out scope of this document.

In the demo, Github is going to be used as a repository and for this we need a token. The token must have the "repo" and "user: email" permissions.

<https://help.github.com/es/github/authenticating-to-github/creating-a-personal-access-token-for-the-command-line>

Pipeline creation

Jenkins Pipeline (or simply "Pipeline" with a capital "P") is a suite of plugins which supports implementing and integrating *continuous delivery pipelines* into Jenkins.

A **Jenkinsfile** can be written using two types of syntax - Declarative and Scripted.

<https://www.jenkins.io/doc/book/pipeline/syntax/>

We use a Declarative Pipeline.

Jenkinsfile (Declarative Pipeline)

```
pipeline {  
    agent any      1  
    stages {  
        stage('Build') {  2
```

```

        steps {
            //      3
        }
    }
    stage('Test') {      4
        steps {
            //      5
        }
    }
    stage('Deploy') { 6
        steps {
            //      7
        }
    }
}
}

```

1. Execute this Pipeline or any of its stages, on any available agent.
2. Defines the "Build" stage.
3. Perform some steps related to the "Build" stage.
4. Defines the "Test" stage.
5. Perform some steps related to the "Test" stage.
6. Defines the "Deploy" stage.
7. Perform some steps related to the "Deploy" stage.

First example – Simple Pipeline

Pipeline

Definition

Pipeline script

Script

```

1= pipeline {
2=   agent { label 'master' }
3=   stages {
4=     stage('sample stage') {
5=       steps {
6=         echo "Hello World!"
7=       }
8=     }
9=   }
10= }

```

Jenkins interface:

localhost:8787/job/Simple-Pipeline/

Jenkins

Panel de Control > Simple-Pipeline

- Back to Dashboard
- Status
- Changes
- Construir ahora Construir ahora
- Configurar
- Borrar Pipeline
- Move
- Full Stage View
- Open Blue Ocean
- Rename
- Pipeline Syntax

Historia de tareas Tendencia

find

- #4 7 nov. 2021 22:20
- #3 7 nov. 2021 22:20
- #2 7 nov. 2021 22:12
- #1 7 nov. 2021 22:11

Pipeline Simple-Pipeline

Recent Changes

Stage View

Average stage times:
(Average full run time: ~4s)

Stage	Time
build	281ms
#4	106ms
#3	133ms
#2	196ms
#1	691ms

Press “Construir ahora” and Pipeline starts:

Simple-Pipeline [Jenkins] x +

localhost:8787/job/Simple-Pipeline/

Jenkins

Panel de Control > Simple-Pipeline

- Back to Dashboard
- Status
- Changes
- Construir ahora
- Configurar
- Borrar Pipeline
- Move
- Full Stage View
- Open Blue Ocean
- Rename
- Pipeline Syntax

Historia de tareas Tendencia

find

- #5 9 nov. 2021 23:29
- #4 7 nov. 2021 22:20

Pipeline Simple-Pipeline

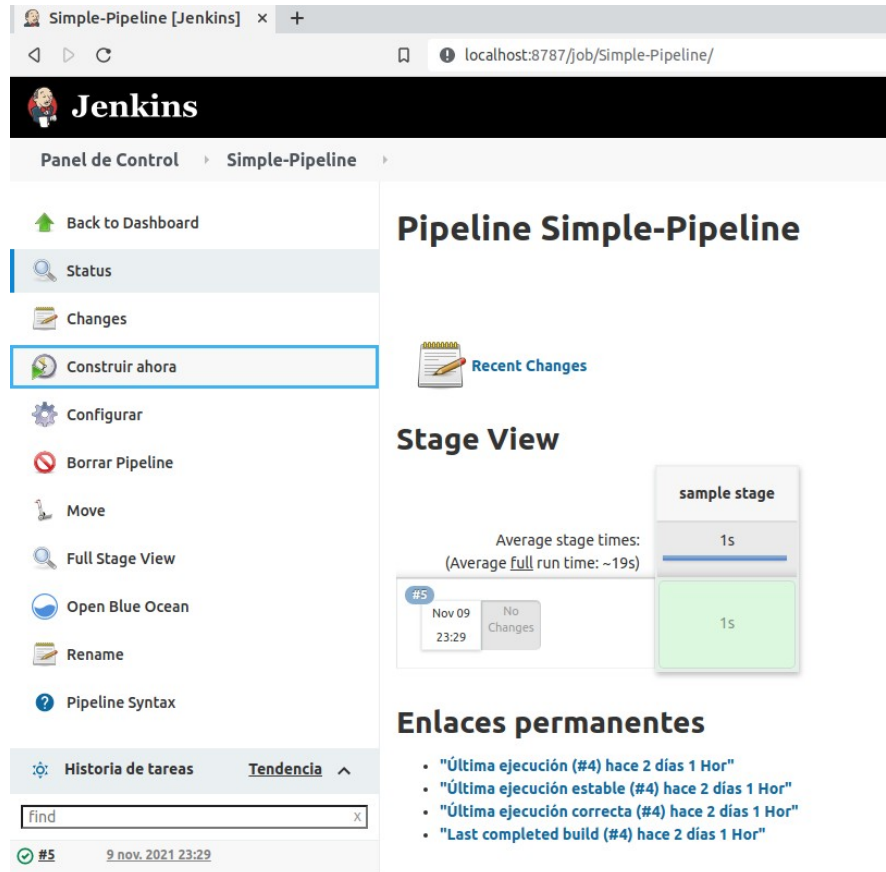
Recent Changes

Stage View

Average stage times:
(Average full run time: ~4s)

Stage	Time
build	281ms
#5	2s
#4	106ms
#3	133ms
#2	

If all was ok:



The screenshot shows the Jenkins web interface for a pipeline named 'Simple-Pipeline'. The left sidebar contains a 'Panel de Control' with various actions. The 'Construir ahora' (Build Now) button is highlighted with a blue border. The main content area displays the 'Pipeline Simple-Pipeline' title, a 'Recent Changes' section, a 'Stage View' showing a 'sample stage' with a duration of 1s, and a section titled 'Enlaces permanentes' (Permanent Links) with four links related to the last build (#4).

Panel de Control > Simple-Pipeline >

- Back to Dashboard
- Status
- Changes
- Construir ahora**
- Configurar
- Borrar Pipeline
- Move
- Full Stage View
- Open Blue Ocean
- Rename
- Pipeline Syntax

Historia de tareas Tendencia

find

#5 9 nov. 2021 23:29

Pipeline Simple-Pipeline

Recent Changes

Stage View

Average stage times:
(Average full run time: ~19s)

sample stage

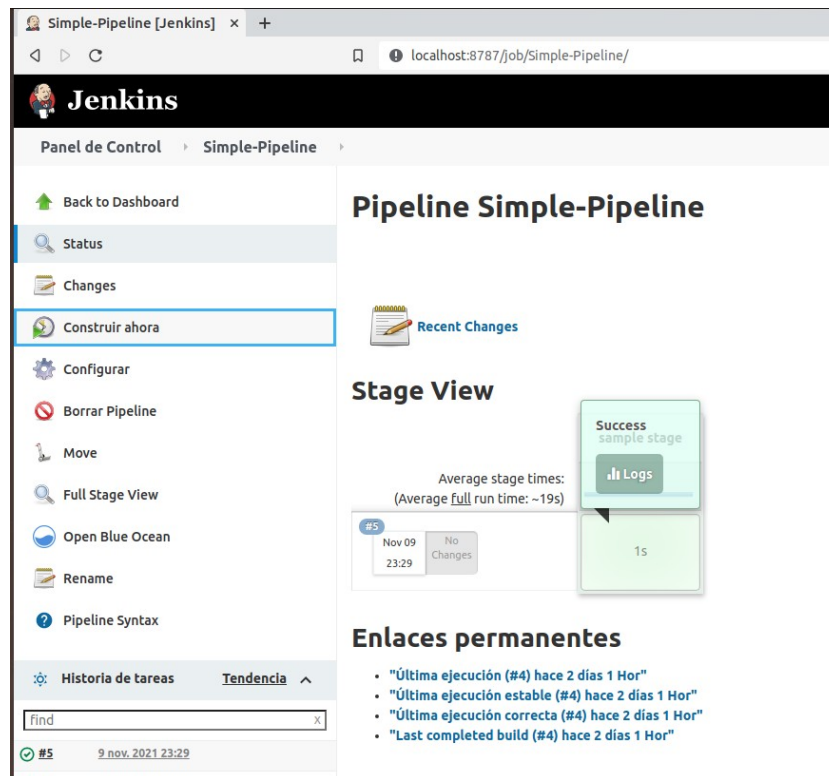
1s

#5 Nov 09 23:29 No Changes

Enlaces permanentes

- "Última ejecución (#4) hace 2 días 1 Hor"
- "Última ejecución estable (#4) hace 2 días 1 Hor"
- "Última ejecución correcta (#4) hace 2 días 1 Hor"
- "Last completed build (#4) hace 2 días 1 Hor"

We can see logs for every Pipeline step:



This screenshot is similar to the previous one, but the 'Logs' button in the 'Stage View' section is highlighted with a green border. The 'Enlaces permanentes' section now shows links for build #5, indicating a new build has been triggered.

Panel de Control > Simple-Pipeline >

- Back to Dashboard
- Status
- Changes
- Construir ahora**
- Configurar
- Borrar Pipeline
- Move
- Full Stage View
- Open Blue Ocean
- Rename
- Pipeline Syntax

Historia de tareas Tendencia

find

#5 9 nov. 2021 23:29

Pipeline Simple-Pipeline

Recent Changes

Stage View

Average stage times:
(Average full run time: ~19s)

Success sample stage

Logs

1s

#5 Nov 09 23:29 No Changes

Enlaces permanentes

- "Última ejecución (#4) hace 2 días 1 Hor"
- "Última ejecución estable (#4) hace 2 días 1 Hor"
- "Última ejecución correcta (#4) hace 2 días 1 Hor"
- "Last completed build (#4) hace 2 días 1 Hor"

In this simple pipeline, only show the message:

The screenshot shows the Jenkins web interface for a job named 'Simple-Pipeline'. The browser address bar indicates the URL is 'localhost:8787/job/Simple-Pipeline/'. The page is divided into several sections:

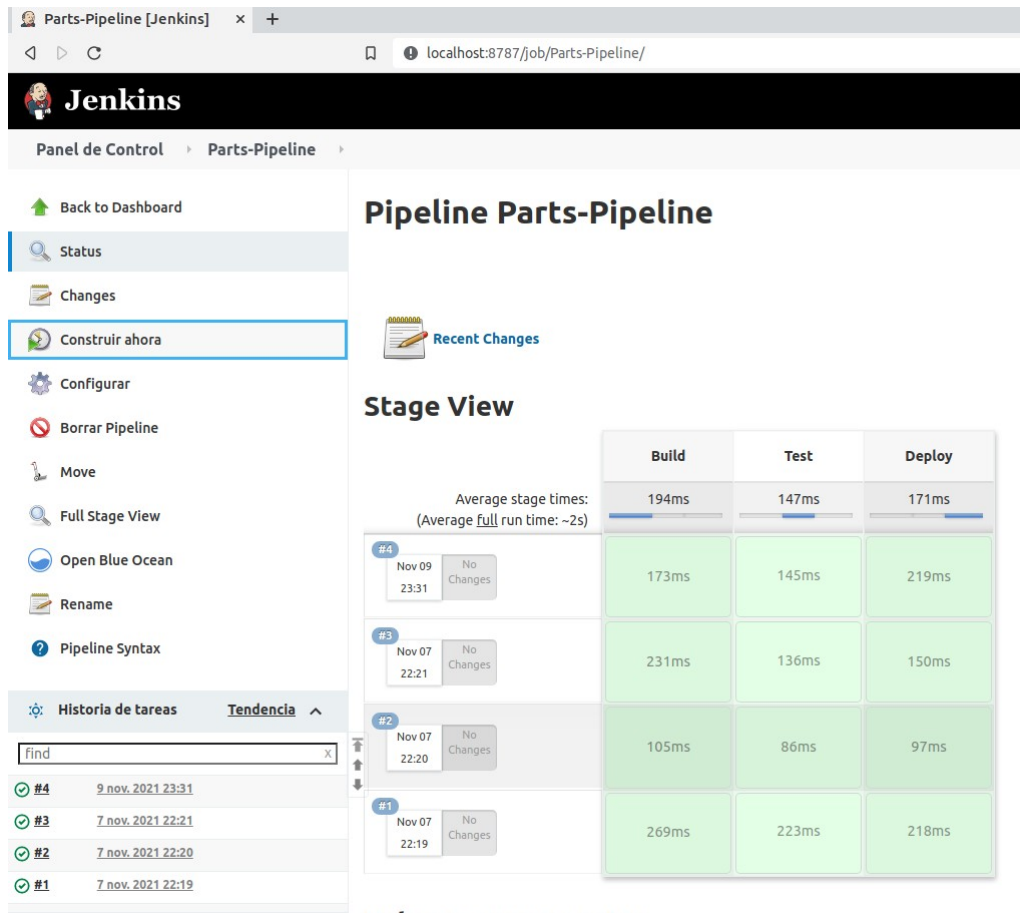
- Stage Logs (sample stage):** Displays the output of the 'Print Message -- Hello World!' step, which has a self time of 26ms. The log shows 'Hello World!'.
- Left Sidebar:** Contains navigation links for Status, Changes, Construir ahora, Configurar, Borrar Pipeline, Move, Full Stage View, Open Blue Ocean, Rename, and Pipeline Syntax.
- Recent Changes:** A section showing the last build (#5) on Nov 09 at 23:29, with no changes.
- Stage View:** A visual representation of the pipeline stages. It shows 'sample stage' with an average stage time of 1s and an average full run time of ~19s.
- Enlaces permanentes:** A list of permanent links for the build, including 'Última ejecución (#4) hace 2 días 1 Hor', 'Última ejecución estable (#4) hace 2 días 1 Hor', 'Última ejecución correcta (#4) hace 2 días 1 Hor', and 'Last completed build (#4) hace 2 días 1 Hor'.

Pipeline with more than one step

The screenshot shows the Jenkins 'Pipeline' definition page. The 'Definition' section is selected, and the 'Pipeline script' tab is active. The script is as follows:

```
1 pipeline {
2   agent any
3
4   stages {
5     stage('Build') {
6       steps {
7         echo 'Building..'
8       }
9     }
10    stage('Test') {
11      steps {
12        echo 'Testing..'
13      }
14    }
15    stage('Deploy') {
16      steps {
17        echo 'Deploying....'
18      }
19    }
20  }
21 }
```

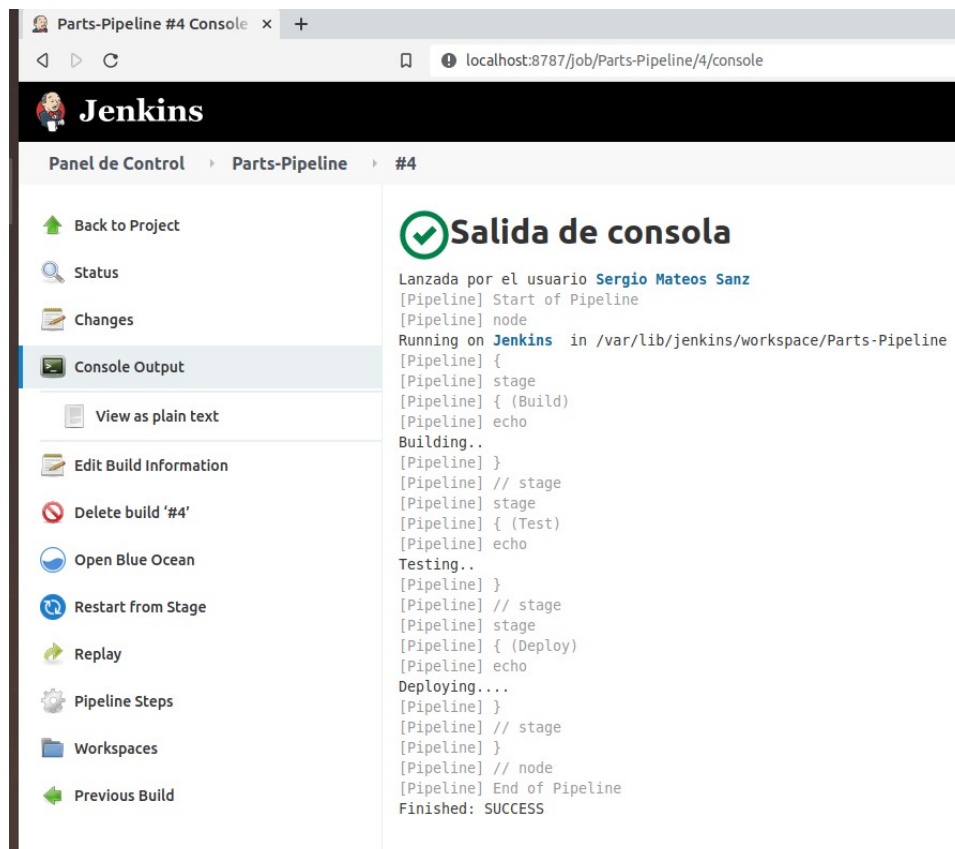
Pipeline execution (same way than before):



The screenshot shows the Jenkins web interface for the 'Parts-Pipeline'. The left sidebar contains navigation links: Back to Dashboard, Status, Changes, Construir ahora (highlighted), Configurar, Borrar Pipeline, Move, Full Stage View, Open Blue Ocean, Rename, and Pipeline Syntax. Below these is a 'Historia de tareas' section with a search bar and a list of builds: #4 (9 nov. 2021 23:31), #3 (7 nov. 2021 22:21), #2 (7 nov. 2021 22:20), and #1 (7 nov. 2021 22:19). The main content area is titled 'Pipeline Parts-Pipeline' and shows a 'Stage View' for build #4. It includes a table of stage times and a list of recent changes.

	Build	Test	Deploy
Average stage times: (Average full run time: ~2s)	194ms	147ms	171ms
#4 Nov 09 23:31 No Changes	173ms	145ms	219ms
#3 Nov 07 22:21 No Changes	231ms	136ms	150ms
#2 Nov 07 22:20 No Changes	105ms	86ms	97ms
#1 Nov 07 22:19 No Changes	269ms	223ms	218ms

We can see output console:



The screenshot shows the Jenkins web interface for the 'Parts-Pipeline' build #4. The left sidebar contains navigation links: Back to Project, Status, Changes, Console Output (highlighted), View as plain text, Edit Build Information, Delete build '#4', Open Blue Ocean, Restart from Stage, Replay, Pipeline Steps, Workspaces, and Previous Build. The main content area is titled 'Salida de consola' and shows the console output for build #4.

```
Lanzada por el usuario Sergio Mateos Sanz
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/Parts-Pipeline
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Build)
[Pipeline] echo
Building..
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Test)
[Pipeline] echo
Testing..
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy)
[Pipeline] echo
Deploying....
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Pipeline with GitHub repository connection

localhost:8787/job/pipelineBlueOcean/configure

Jenkins

búsqueda

Sergio Mateos Sanz

Panel de Control > pipelineBlueOcean >

General

Branch Sources

Build Configuration

Scan Repository Triggers

Orphaned Item Strategy

Health metrics

Properties

Pipeline Libraries

Display Name

Description

Testing Jenkins

[Plain text] Visualizar

Disable

☐ (No new builds within this Multibranch Pipeline will be executed until it is re-enabled)

Branch Sources

GitHub

Credentials

BlueOcean Folder Credentials

Add

User SergioMateosSanz

Repository HTTPS URL

Repository HTTPS URL

https://github.com/SergioMateosSanz/Jenkins-test

Validate

Repository Scan - Deprecated Visualization

Behaviours

Save

Apply

Within repository

localhost:8787/job/pipelineBlueOcean/configure

Jenkins

búsqueda

Sergio Mateos Sanz

Panel de Control > pipelineBlueOcean >

General

Branch Sources

Build Configuration

Scan Repository Triggers

Orphaned Item Strategy

Health metrics

Properties

Pipeline Libraries

Repository Scan - Deprecated Visualization

Validate

Behaviours

Within repository

Discover branches

Strategy

All branches

Discover pull requests from forks

Strategy

Merging the pull request with the current target branch revision

Trust

From users with Admin or Write permission

May not be supported on older versions of GitHub Enterprise. See help button.

Discover pull requests from origin

Strategy

Merging the pull request with the current target branch revision

General

Clean before checkout

Delete untracked nested repositories

Save

Apply

Checkout

localhost:8787/job/pipelineBlueOcean/configure

Panel de Control > pipelineBlueOcean >

GeneralBranch SourcesBuild ConfigurationScan Repository TriggersOrphaned Item StrategyHealth metricsPropertiesPipeline Libraries

Add source ▾

Build Configuration

Mode

by Jenkinsfile ▾

Script Path

Jenkinsfile

Scan Repository Triggers

☐ Periodically if not otherwise run

Orphaned Item Strategy

Jobs for removed SCM heads (i.e. deleted branches) can be removed immediately or kept based on a desired retention strategy. By default, jobs will be removed as soon as Jenkins determines their associated SCM head no longer exists. As an example, it may be useful to configure a different retention strategy to be able to examine build results of a branch after it has been removed.

☒ Discard old items

Days to keep old items

if not empty, old items are only kept up to this number of days

Max # of old items to keep

if not empty, only up to this number of old items are kept

Health metrics

Health metrics...

Properties

Pipeline Libraries

SaveApply

to any Pipeline jobs inside this folder. These libraries will be untrusted, meaning their code runs in the Groovy sandbox.

GitHub Repository:

SergioMateosSanz / Jenkins-testPublic

Unwatch ▾1Star0Fork0

<> CodeIssuesPull requestsActionsProjectsWikiSecurityInsightsSettings

master ▾1 branch0 tags

Go to fileAdd fileCode ▾

SergioMateosSanz testing

✓ 8178179 yesterday 4 commits

.mvn/wrapper

first commit

yesterday

src

first commit

yesterday

.gitignore

first commit

yesterday

Jenkinsfile

testing

yesterday

README.md

add README.md

yesterday

mvnw

first commit

yesterday

mvnw.cmd

first commit

yesterday

pom.xml

first commit

yesterday

README.md

tests with jenkins

About

Testing Jenkins

Readme

Releases

No releases published

Create a new release

Packages


No packages published

Publish your first package

Languages

Java 100.0%

Jenkinsfile:


SergioMateosSanz testing ✓

Code:

The screenshot shows an IDE with the following components:

- Top Bar:** Jenkins-demo - helloWorldControllerImpl.java
- Left Sidebar (Project Structure):**
 - Jenkins-demo
 - src
 - main
 - java
 - com.ironhack.Jenkins.demo
 - controller
 - implementations
 - helloWorldControllerImpl (selected)

- Main Editor:**

```

1 package com.ironhack.Jenkins.demo.controller.implementation;
2
3 import com.ironhack.Jenkins.demo.controller.interfaces.helloWorldController;
4 import org.springframework.http.HttpStatus;
5 import org.springframework.web.bind.annotation.GetMapping;
6 import org.springframework.web.bind.annotation.ResponseStatus;
7 import org.springframework.web.bind.annotation.RestController;
8
9 @RestController
10 public class helloWorldControllerImpl implements helloWorldController {
11
12     @Override
13     @GetMapping("/helloWorld")
14     @ResponseStatus(HttpStatus.OK)
15     public String helloWorld() {
16
17         return "hello world";
18     }
19 }
20
21
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95
96
97
98
99
100

```

Pipeline starts:

The screenshot shows the Jenkins web interface for a pipeline named 'pipelineBlueOcean/master'. The left sidebar contains navigation links: Up, Status, Changes, Construir ahora (highlighted), Ver Configuración, Full Stage View, Open Blue Ocean, GitHub, and Pipeline Syntax. Below these is a 'Historia de tareas' (Task History) section with a search bar and a list of three builds (#3, #2, #1) with their timestamps.

The main content area is titled 'Branch master' and shows 'Full project name: pipelineBlueOcean/master'. It includes a 'Recent Changes' section and a 'Stage View' table. The 'Stage View' table displays average stage times and a detailed breakdown of stage durations for three builds.

	Declarative: Checkout SCM	Init	Test	Build
Average stage times:	2s	301ms	1min 12s	37s
(Average full run time: ~2min 4s)				
#3 Nov 09 23:42 No Changes				
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

This screenshot is identical to the one above, showing the Jenkins web interface for the 'pipelineBlueOcean/master' pipeline. It displays the same navigation sidebar, task history, and 'Stage View' table with stage durations for builds #3, #2, and #1.

	Declarative: Checkout SCM	Init	Test	Build
Average stage times:	3s	343ms	48s	37s
(Average full run time: ~2min 4s)				
#3 Nov 09 23:42 No Changes	3s	427ms		
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

Panel de Control

pipelineBlueOcean

master

Up

Status

Changes

Construir ahora

Ver Configuración

Full Stage View

Open Blue Ocean

GitHub

Pipeline Syntax

Historia de tareas

Tendencia

find

#3 9 nov. 2021 23:42

#2 8 nov. 2021 23:28

#1 8 nov. 2021 23:22

Branch master

Full project name: pipelineBlueOcean/master

Recent Changes

Stage View

Average stage times:
(Average full run time: ~2min 4s)

	Declarative: Checkout SCM	Init	Test	Build
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

Panel de Control

pipelineBlueOcean

master

Up

Status

Changes

Construir ahora

Ver Configuración

Full Stage View

Open Blue Ocean

GitHub

Pipeline Syntax

Historia de tareas

Tendencia

find

#3 9 nov. 2021 23:42

#2 8 nov. 2021 23:28

#1 8 nov. 2021 23:22

Branch master

Full project name: pipelineBlueOcean/master

Recent Changes

Stage View

Average stage times:
(Average full run time: ~2min 7s)

	Declarative: Checkout SCM	Init	Test	Build
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	40s
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

Enlaces permanentes

As before examples, we can see logs for every step:

The screenshot shows the Jenkins interface for a pipeline named 'pipelineBlueOcean'. The 'Stage Logs (Test)' section is expanded, displaying the output of a 'Shell Script -- mvn test' step. The logs show the initialization of Tomcat, the starting of the ServletWebServerApplicationContext, and the successful execution of the test suite. The test results are summarized as follows:

Test Results
Tests run: 3, Failures: 0, Errors: 0, Skipped: 0

The logs also show the total time for the test stage as 01:08 min and the finish time as 2021-11-09T23:43:37+01:00.

Below the logs, the 'Historia de tareas' (Task History) section is visible, showing a list of tasks with their status and duration. The tasks are:

Task ID	Status	Duration
#1	Success	8 nov. 2021 23:22
#2	Success	8 nov. 2021 23:28
#3	Success	9 nov. 2021 23:42

The screenshot shows the Jenkins interface for the same pipeline. The 'Stage Logs (Build)' section is expanded, displaying the output of a 'Shell Script -- mvn package -Dmaven.test.skip=true' step. The logs show the copying of test resources, the compilation of test sources, the packaging of the main artifact, and the successful execution of the build process. The build results are summarized as follows:

Build Results
Build successful

The logs also show the total time for the build stage as 20.792 s and the finish time as 2021-11-09T23:44:17+01:00.

Below the logs, the 'Historia de tareas' (Task History) section is visible, showing a list of tasks with their status and duration. The tasks are:


Task ID	Status	Duration
#1	Success	8 nov. 2021 23:22
#2	Success	8 nov. 2021 23:28
#3	Success	9 nov. 2021 23:42

Now, we force an code error (return “hello people”, not “hello world”):

```
Jenkins-test / src / main / java / com / ironhack / Jenkins / demo / controller / implementations / helloWorldControllerImpl.java in master

<> Edit file Preview changes Spa

1 package com.ironhack.Jenkins.demo.controller.implementations;
2
3 import com.ironhack.Jenkins.demo.controller.interfaces.helloWorldController;
4 import org.springframework.http.HttpStatus;
5 import org.springframework.web.bind.annotation.GetMapping;
6 import org.springframework.web.bind.annotation.ResponseStatus;
7 import org.springframework.web.bind.annotation.RestController;
8
9 @RestController
10 public class helloWorldControllerImpl implements helloWorldController {
11
12     @Override
13     @GetMapping("/helloworld")
14     @ResponseStatus(HttpStatus.OK)
15     public String helloWorld() {
16
17         return "hello people";
18     }
19 }
20
```



Commit changes

return hello people

Add an optional extended description...

☒ Commit directly to the `master` branch.
☐ Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changes

Cancel

Pipeline execution...

The screenshot shows the Jenkins interface for a pipeline named 'pipelineBlueOcean/master'. The 'Stage View' displays a table of stage execution times for four runs. The 'Test' stage is highlighted in blue, indicating it passed successfully. The 'Build' stage is also highlighted in blue, indicating it passed successfully. The 'Declarative: Checkout SCM' stage is highlighted in green, indicating it passed successfully. The 'Init' stage is highlighted in green, indicating it passed successfully. The 'Average stage times' are shown as: Declarative: Checkout SCM (3s), Init (385ms), Test (58s), Build (38s). The 'Average full run time' is ~2min 7s.

Run	Declarative: Checkout SCM	Init	Test	Build
#4 Nov 09 23:46 1 commit	1s	513ms	1min 53s	
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	40s
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

But fail in “Test” step:

The screenshot shows the Jenkins interface for a pipeline named 'pipelineBlueOcean/master'. The 'Stage View' displays a table of stage execution times for four runs. The 'Test' stage is highlighted in red, indicating it failed. The 'Build' stage is highlighted in red, indicating it failed. The 'Declarative: Checkout SCM' stage is highlighted in green, indicating it passed successfully. The 'Init' stage is highlighted in green, indicating it passed successfully. The 'Average stage times' are shown as: Declarative: Checkout SCM (3s), Init (385ms), Test (1min 15s), Build (29s). The 'Average full run time' is ~2min 7s.

Run	Declarative: Checkout SCM	Init	Test	Build
#4 Nov 09 23:46 1 commit	1s	513ms	1min 15s failed	608ms failed
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	40s
#2 Nov 08 23:28 No Changes	1s	127ms	1min 5s	40s
#1 Nov 08 23:22 No Changes	6s	475ms	1min 19s	34s

Go to logs:

The screenshot shows the Jenkins web interface for the pipelineBlueOcean/master job. The left sidebar contains navigation links: Up, Status, Changes, Construir ahora (highlighted), Ver Configuración, Full Stage View, Open Blue Ocean, GitHub, and Pipeline Syntax. The main area displays the 'Branch master' view. It includes a 'Recent Changes' section showing a commit on Nov 09 at 23:46. The 'Stage View' section shows a table of stages and their durations. A red box highlights an error in the 'Test' stage.

Stage	Declarative: Checkout SCM	Init	Test	Build
#4 Nov 09 23:46 1 commit	1s	513ms	1min 15s failed	608ms failed
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	40s

Failed with the following error(s)
Shell Script script returned exit code 1
See stage logs for more detail.

And see the test error:

The screenshot shows the 'Stage Logs (Test)' view in Jenkins. It displays the output of a shell script running 'mvn test'. The output shows a failure in the 'Test' stage. The error message is: 'Failed to execute goal org.apache.maven.plugins:maven-surefire-plugin:2.22.2:test on project pipelineBlueOcean-master: There are test failures.' The logs also include instructions on how to debug the failure, such as using the '-e' switch for Maven or the '-X' switch for full debug logging. The bottom of the screen shows a summary of the stages and their durations, with the 'Test' stage marked as failed.

```
[1;31mERROR[m] o[1;31mTests run: 3, Failures: 1, Errors: 0, Skipped: 0[m  
[1;34mINFO[m] o[1;31m-----o[m  
[1;34mINFO[m] o[1;31mBUILD FAILUREo[m  
[1;34mINFO[m] o[1;31m-----o[m  
[1;34mINFO[m] Total time: 58.686 s  
[1;34mINFO[m] Finished at: 2021-11-09T23:47:43+01:00  
[1;34mINFO[m] o[1;31m-----o[m  
[1;31mERROR[m] Failed to execute goal o[32morg.apache.maven.plugins:maven-surefire-plugin:2.22.2:testo[m on project o[36mpipelineBlueOcean-master: o[1;31mThere are test failures.o[m  
[1;31mERROR[m] o[1;31mo[m  
[1;31mERROR[m] o[1;31mPlease refer to /var/lib/jenkins/workspace/pipelineBlueOcean_master/target/surefire-reports for the individual test results.o[m  
[1;31mERROR[m] o[1;31mPlease refer to dump files (if any exist) [date].dump, [date]-jvmRun[N].dump and [date].dumpstream.o[m  
[1;31mERROR[m] -> o[1m[Help 1]o[m  
[1;31mERROR[m]  
[1;31mERROR[m] To see the full stack trace of the errors, re-run Maven with the o[1m-eo[m switch.  
[1;31mERROR[m] Re-run Maven using the o[1m-Xo[m switch to enable full debug logging.  
[1;31mERROR[m]  
[1;31mERROR[m] For more information about the errors and possible solutions, please read the following articles:  
[1;31mERROR[m] o[1m[Help 1]o[m http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
```


We also see on console output:


```
Jenkins / pipelineBlueOcean  pipelineBlueOcean » mast x +
localhost:8787/job/pipelineBlueOcean/job/master/4/console

Panel de Control  pipelineBlueOcean  master  #4
:: spring boot :: (V2.3.0)

2021-11-09 23:47:35.524 INFO 89910 --- [main] c.i.Jenkins.demo.JenkinsDemoApplication : Starting JenkinsDemoApplication using Java 11.0.11 on sergio-VivoBook-15-ASUS-
Laptop-XS408A with PID 89910 (started by jenkins in /var/lib/jenkins/workspace/pipelineBlueOcean_master)
2021-11-09 23:47:35.527 INFO 89910 --- [main] c.i.Jenkins.demo.JenkinsDemoApplication : No active profile set, falling back to default profiles: default
2021-11-09 23:47:39.138 INFO 89910 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8088 (http)
2021-11-09 23:47:39.376 INFO 89910 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2021-11-09 23:47:39.379 INFO 89910 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.54]
2021-11-09 23:47:40.579 INFO 89910 --- [main] o.a.c.c.c.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2021-11-09 23:47:40.590 INFO 89910 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 5038 ms
2021-11-09 23:47:42.316 INFO 89910 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8088 (http) with context path ''
2021-11-09 23:47:42.348 INFO 89910 --- [main] c.i.Jenkins.demo.JenkinsDemoApplication : Started JenkinsDemoApplication in 7.414 seconds (JVM running for 36.785)
[1:34mINFO][m] [1:32mTests run: [0:1;32m2][m, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 7.535 s - in com.ironhack.Jenkins.demo.[1mJenkinsDemoApplicationTests][m
[1:34mINFO][m] Results:
[1:34mINFO][m] [1:31mFailures: [m
[1:31mERROR][m] [1:31m helloworldControllerImplTest.helloWorld:41 expected: <true> but was: <false>[m
[1:34mINFO][m] [1:31mINFO][m]
[1:31mERROR][m] [1:31mTests run: 3, Failures: 1, Errors: 0, Skipped: 0][m
[1:34mINFO][m] [1:31mBUILD FAILURE][m
[1:34mINFO][m] [1:31mTotal time: 58.686 s
[1:34mINFO][m] Finished at: 2021-11-09T23:47:43+01:00
[1:34mINFO][m] [1:31mFailed to execute goal [32morg.apache.maven.plugins:maven-surefire-plugin:2.22.2:test][m [1m(default-test)][m on project [36mJenkins-demo][m: [1:31mThere are
test failures.[m
[1:31mERROR][m] [1:31mPlease refer to /var/lib/jenkins/workspace/pipelineBlueOcean_master/target/surefire-reports for the individual test results.[m
[1:31mERROR][m] [1:31mPlease refer to dump files (if any exist) [date].dump, [date]-jvmRun[N].dump and [date].dumpstream.[m
[1:31mERROR][m] -> [1m[Help 1][m
[1:31mERROR][m] To see the full stack trace of the errors, re-run Maven with the [1m-e][m switch.
[1:31mERROR][m] Re-run Maven using the [1m-X][m switch to enable full debug logging.
[1:31mERROR][m] For more information about the errors and possible solutions, please read the following articles:
[1:31mERROR][m] [1m[Help 1][m http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Build)
Stage "Build" skipped due to earlier failure(s)
[Pipeline] }
[Pipeline] // stage
```

Fix the error:

```
10 public class helloworldControllerImpl implements helloworldController {
11
12     @Override
13     @GetMapping("/helloworld")
14     @ResponseStatus(HttpStatus.OK)
15     public String helloWorld() {
16
17         return "hello world";
18     }
19 }
20
```



Commit changes

return hello world

Add an optional extended description...

And do new Pipeline execution that finish ok:

The screenshot shows the Jenkins web interface for a pipeline named 'pipelineBlueOcean' on the 'master' branch. The left sidebar contains navigation links: Up, Status, Changes, Construir ahora (highlighted), Ver Configuración, Full Stage View, Open Blue Ocean, GitHub, and Pipeline Syntax. The main area displays the 'Branch master' view with the full project name 'pipelineBlueOcean/master'. Below this is the 'Stage View' table, which shows the execution times for four stages: Declarative: Checkout SCM, Init, Test, and Build. The table also includes a 'Recent Changes' section and a 'Tendencia' (Trend) section showing the history of tasks.

	Declarative: Checkout SCM	Init	Test	Build
Average stage times: (Average full run time: ~2min 1s)	2s	349ms	1min 14s	29s
#5 Nov 09 23:50 1 commit	1s	204ms	1min 7s	31s
#4 Nov 09 23:46 1 commit	1s	513ms	1min 15s failed	608ms failed
#3 Nov 09 23:42 No Changes	3s	427ms	1min 22s	40s

Historia de tareas: Tendencia ^

find X

#5 9 nov. 2021 23:50
#4 9 nov. 2021 23:46
#3 9 nov. 2021 23:42

If you want more information and deep into Jenkins, you can go to website:

<https://www.jenkins.io/doc/>