TP7 - Build server

1- Poniendo en funcionamiento Jenkins

Crear una imagen de Docker que se base en la imagen oficial de Jenkins y que tenga instalado .NET Core. Crear un archivo llamado Dockerfile.jenkins con el siguiente contenido:

Desde la misma ubicación donde tengas el archivo Dockerfile personalizado, ejecuta el siguiente comando para construir una nueva imagen de Docker con .NET Core y Jenkins. Esto creará una nueva imagen de Docker llamada jenkins-with-dotnetcore:
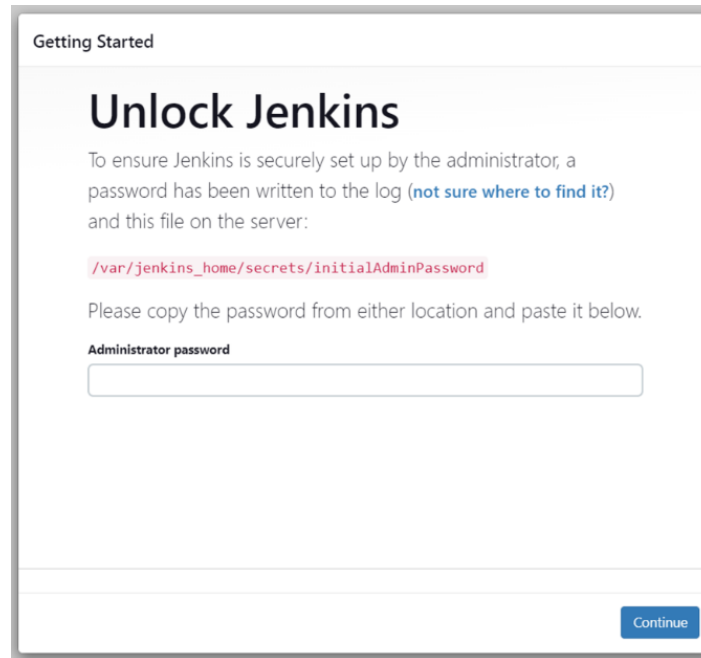
```
docker build -t jenkins-dotnet -f Dockerfile.jenkins .
```

Inicialmente deberá especificar el texto que se encuentra dentro del archivo ~/jenkins/secrets/initialAdminPassword **en el contenedor**

Instalar los plugins por defecto

Crear el usuario admin inicial. Colocar cualquier valor que considere adecuado.

2- Instalando Plugins y configurando herramientas

- En Administrar Jenkins vamos a la sección de Administrar Plugins
- De la lista de plugins disponibles instalamos .NET SDK Support
- Reiniciamos el servidor
- Abrir nuevamente página de Plugins y explorar la lista, para familiarizarse qué tipo de plugins hay disponibles.
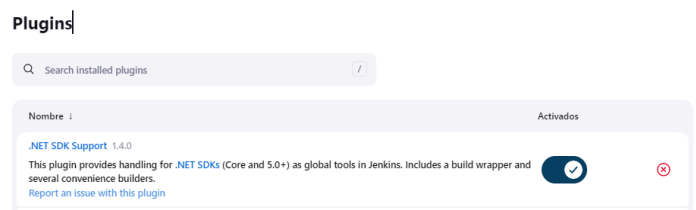
3- Creando el primer Job de estilo libre

Crear un nuevo item, del tipo estilo libre con nombre **first-job**

Salida de consola

```
Started by user Belen Aguilar
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/first-job
[first-job] $ /bin/sh -xe /tmp/jenkins5560975835309125670.sh
+ date +%Y-%m-%d %H:%M:%S
+ current_datetime=2023-10-14 21:12:03
+ echo La fecha y hora actual es: 2023-10-14 21:12:03
La fecha y hora actual es: 2023-10-14 21:12:03
Finished: SUCCESS
```

A la salida de consola obtengo la fecha y la hora actual.

4- Creando el primer Pipeline Job

5- Creando un Pipeline Job con Git

Despues de intentos fallidos, modifiqué el script que nos había dado el profe ya que tuve problemas al ejecutar el pipeline. Utilizo '*checkout*' para obtener el codigo del repo.


Este script de pipeline clona el repo Git de Github y revisa la última revisión de la rama principal (main).

```
pipeline {
    agent any

    stages {
        stage('Build') {
            steps {
                // Get some code from a GitHub repository
                script {
                    def scmVars = checkout([$class: 'GitSCM', branches: [[name: 'main']], doGenerateSubmoduleConfigurations: false, extensi
                }
            }
        }
    }
}
```

Pipeline

Definition

Pipeline script

Script ?

```
1 ▾ pipeline {
2       agent any
3
4 ▾     stages {
5 ▾         stage('Build') {
6 ▾             steps {
7                   // Get some code from a GitHub repository
8 ▾                 script {
9                       def scmVars = checkout([$class: 'GitSCM', branches: [[name: 'main']], doGenerateSubmoduleConfigurations: false, extensions: [], userRem
10                      }
11                  }
12              }
13          }
14      }
15 }
```
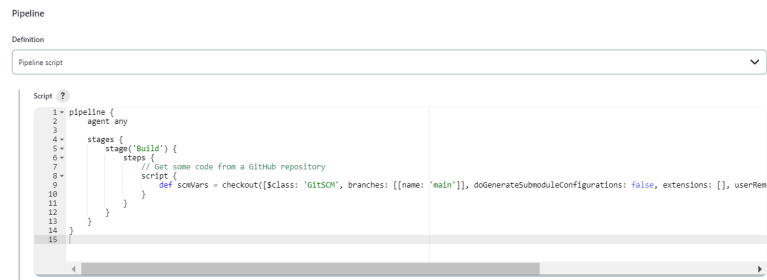
✓ Salida de consola

```
Started by user Belen Aguilar
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/jenkins_home/workspace/git
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Build)
[Pipeline] script
[Pipeline] {
[Pipeline] checkout
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/ingsoft3ucc/SimpleWebAPI.git
 > git init /var/jenkins_home/workspace/git # timeout=10
Fetching upstream changes from https://github.com/ingsoft3ucc/SimpleWebAPI.git
 > git --version # timeout=10
 > git --version # 'git version 2.39.2'
 > git fetch --tags --force --progress -- https://github.com/ingsoft3ucc/SimpleWebAPI.git +refs/heads/*:refs/remotes/origin/* # timeout=10
 > git config remote.origin.url https://github.com/ingsoft3ucc/SimpleWebAPI.git # timeout=10
 > git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > git rev-parse origin/main^{commit} # timeout=10
Checking out Revision 8726ce58a1894af134cd22fcfbc7eccb38ad9444 (origin/main)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 8726ce58a1894af134cd22fcfbc7eccb38ad9444 # timeout=10
Commit message: "Update WeatherForecastController.cs"
First time build. Skipping changelog.
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Step	Arguments	Status
Start of Pipeline - (3.5 Seg in block)		✓
node - (2.2 Seg in block)		⊡ ✓
node block - (2 Seg in block)		✓
stage - (1.9 Seg in block)	Build	⊡ ✓
stage block (Build) - (1.8 Seg in block)		✓
script - (1.7 Seg in block)		⊡ ✓
script block - (1.7 Seg in block)		✓
checkout - (1.6 Seg in self)		⊡ ✓

6- Utilizando nuestros proyectos.

6.1- .NET Core

- Crear un Job de estilo libre llamado "**git-netcore-job**" que construya el proyecto en .NET Core del ejercicio 1 del TP 05.

- Configurar el Job para obtener el código desde el repositorio de cada alumno

```
Started by user Belen Aguilar
Running as SYSTEM
Building in workspace /var/jenkins_home/workspace/git-netcore-job
The recommended git tool is: NONE
using credential a9b8e68e-46e7-4855-ae81-6a96ee6fd643d
 > git rev-parse --resolve-git-dir /var/jenkins_home/workspace/git-netcore-job/.git # timeout=10
Fetching changes from the remote Git repository
 > git config remote.origin.url https://github.com/belenaguilarv/SimpleWebAPI # timeout=10
Fetching upstream changes from https://github.com/belenaguilarv/SimpleWebAPI
 > git --version # timeout=10
 > git --version # 'git version 2.39.2'
using GIT_ASKPASS to set credentials
 > git fetch --tags --force --progress -- https://github.com/belenaguilarv/SimpleWebAPI +refs/heads/*:refs/remotes/origin/* # timeout=10
 > git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 776a32429a34ffdb0db175f3954ba48399ac80a1 (refs/remotes/origin/main)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 776a32429a34ffdb0db175f3954ba48399ac80a1 # timeout=10
Commit message: "Add files via upload"
 > git rev-list --no-walk 9884e8eee7dbbdad4d8ead00af688fc275bc5041 # timeout=10
[git-netcore-job] $ dotnet build SimpleWebAPI.sln
MSBuild version 17.7.3+8ec440e68 for .NET
  Determining projects to restore...
  Restored /var/jenkins_home/workspace/git-netcore-job/SimpleWebAPI/SimpleWebAPI.csproj (in 3.26 sec).
  SimpleWebAPI -> /var/jenkins_home/workspace/git-netcore-job/SimpleWebAPI/bin/Debug/net7.0/SimpleWebAPI.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:07.44
.NET Command Completed - Exit Code: 0

[git-netcore-job] $ dotnet publish SimpleWebAPI.sln --self-contained false
MSBuild version 17.7.3+8ec440e68 for .NET
  Determining projects to restore...
  All projects are up-to-date for restore.
  SimpleWebAPI -> /var/jenkins_home/workspace/git-netcore-job/SimpleWebAPI/bin/Debug/net7.0/SimpleWebAPI.dll
  SimpleWebAPI -> /var/jenkins_home/workspace/git-netcore-job/SimpleWebAPI/bin/Debug/net7.0/publish/
.NET Command Completed - Exit Code: 0

Finished: SUCCESS
```

6.2- Monitorear Cambios en el repo de GitHub

```
BELU@belenaguilarv MINGW64 ~/go/src/github.com/belenaguilarv/SimpleWebAPI (main)
$ git add .

BELU@belenaguilarv MINGW64 ~/go/src/github.com/belenaguilarv/SimpleWebAPI (main)
$ git commit -m "Cambios en README"
[main c39dc41] Cambios en README
 1 file changed, 3 insertions(+), 1 deletion(-)

BELU@belenaguilarv MINGW64 ~/go/src/github.com/belenaguilarv/SimpleWebAPI (main)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 307 bytes | 307.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/belenaguilarv/SimpleWebAPI.git
   776a324..c39dc41  main -> main
```

Summary

1. Cambios en README (details)

Commit c39dc411aaf5e0c0ca99f6f7f65da01d8cea305a by belenaguilarv
Cambios en README

📎 README.md (diff)

6.3- Node.js

Repetir el ejercicio 6.1 para construir el proyecto del ejercicio 2 del TP 05.

Git Build Data

Revision: 10c74f70ec246d4537f08f4cc0f28960f80cbafc
Repository: https://github.com/belenaguilarv/my-app

- refs/remotes/origin/main

Built Branches

- refs/remotes/origin/main: Build #3 of Revision 10c74f70ec246d4537f08f4cc0f28960f80cbafc (refs/remotes/origin/main)