# REQUISITOS

## Crear clúster Kubernetes

$env:KUBECONFIG = "C:\Users\0020360\.kube\kubeconfig.yaml"

## Cuenta DockerHub

jvicmar95 / America\*\*\*\*\*1@

## Cuenta Github

jvicmar95 / America\*\*\*\*\*1@

# Aplicar ServiceAccount

# jenkins-rbac.yaml

apiVersion: rbac.authorization.k8s.io/v1

kind: Role

metadata:

name: jenkins-role

namespace: jenkins

rules:

- apiGroups: ["apps"]

resources: ["deployments"]

verbs: ["get", "list", "create", "update", "delete"]

- apiGroups: [""]

resources: ["services"]

verbs: ["get", "list", "create", "update", "delete"]

---

apiVersion: rbac.authorization.k8s.io/v1

kind: RoleBinding

metadata:

name: jenkins-rolebinding

namespace: jenkins

subjects:

- kind: ServiceAccount

name: default

namespace: jenkins

roleRef:

kind: Role

name: jenkins-role

apiGroup: rbac.authorization.k8s.io

bash

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kubectl apply -f jenkins-rbac.yaml

# Desplegar Jenkins

Para ello crearemos una imagen custom de base oficial Jenkins pero instalando Docker y Git.

Dockerfile

FROM jenkins/jenkins:lts

USER root

# Instalar Docker y Git

RUN apt-get update && \

    apt-get install -y docker.io git && \

    apt-get clean

# Agregar al usuario Jenkins al grupo docker

RUN usermod -aG docker jenkins

USER jenkins

Para crear la imagen utilizamos nuestro WSL

C:\Users\0020360>**wsl --list --verbose**

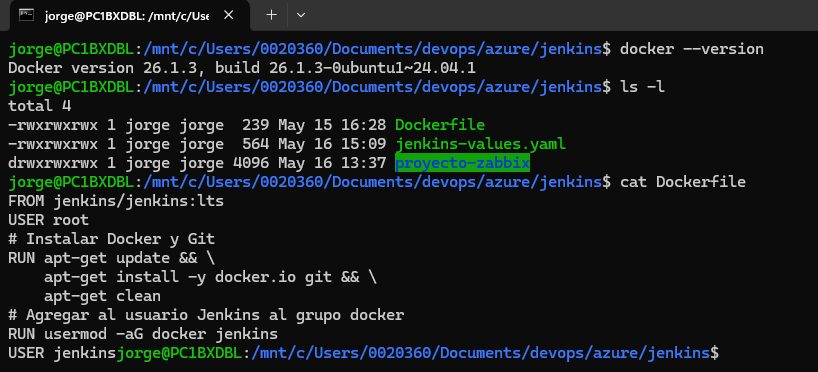
NAME STATE VERSION

\* docker-desktop Stopped 2

Ubuntu Stopped 2

C:\Users\0020360>**wsl -d Ubuntu**

jorge@PC1BXDBL:/mnt/c/Users/0020360$



jorge@PC1BXDBL:/mnt/c/Users/0020360/Documents/devops/azure/jenkins$ **docker --version**

Docker version 26.1.3, build 26.1.3-0ubuntu1~24.04.1

jorge@PC1BXDBL:/mnt/c/Users/0020360/Documents/devops/azure/jenkins$ **ls -l**

total 4

-rwxrwxrwx 1 jorge jorge 239 May 15 16:28 Dockerfile

-rwxrwxrwx 1 jorge jorge 564 May 16 15:09 jenkins-values.yaml

drwxrwxrwx 1 jorge jorge 4096 May 16 13:37 proyecto-zabbix

jorge@PC1BXDBL:/mnt/c/Users/0020360/Documents/devops/azure/jenkins$ **cat Dockerfile**

FROM jenkins/jenkins:lts

USER root

# Instalar Docker y Git

RUN apt-get update && \

apt-get install -y docker.io git && \

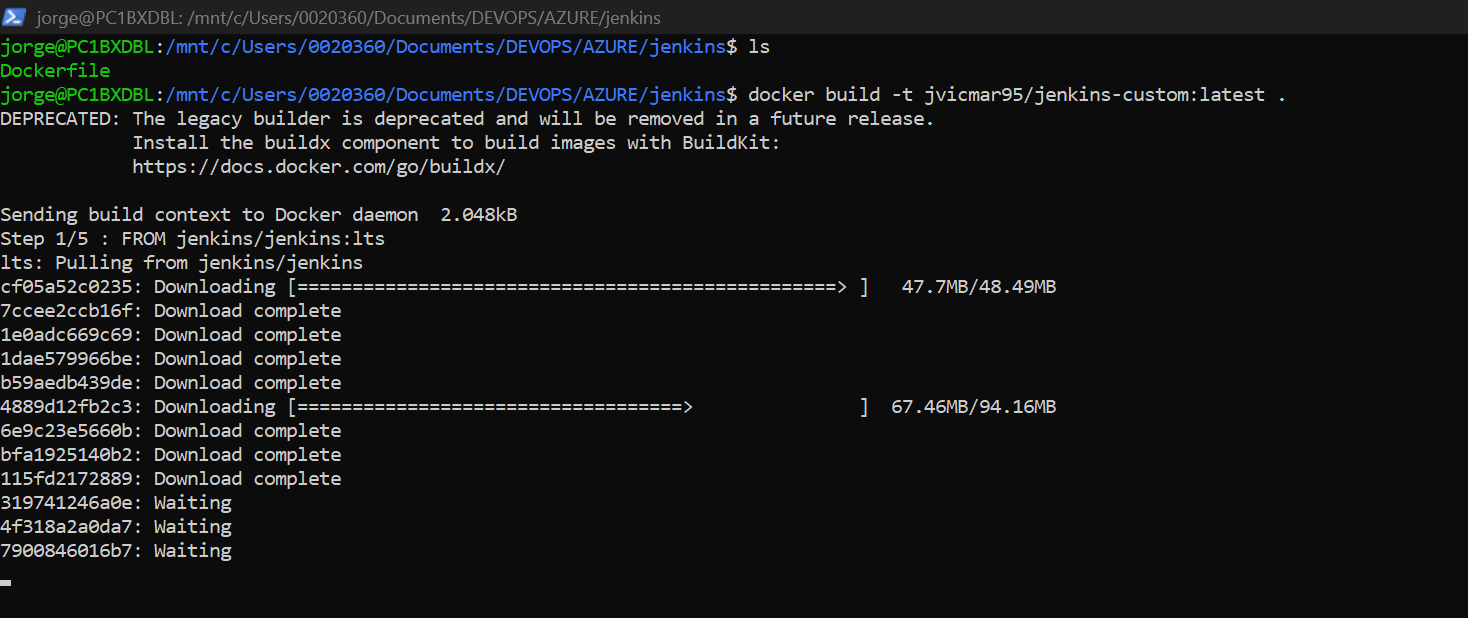
apt-get clean

# Agregar al usuario Jenkins al grupo docker

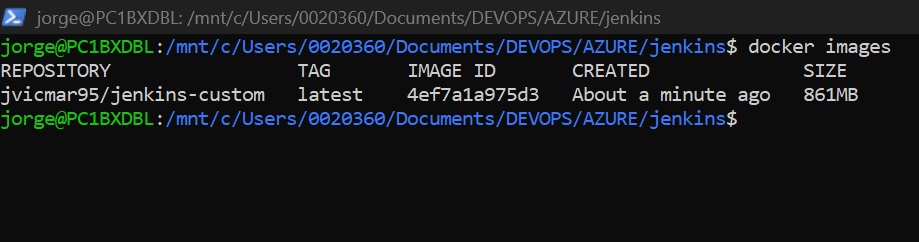
RUN usermod -aG docker jenkins

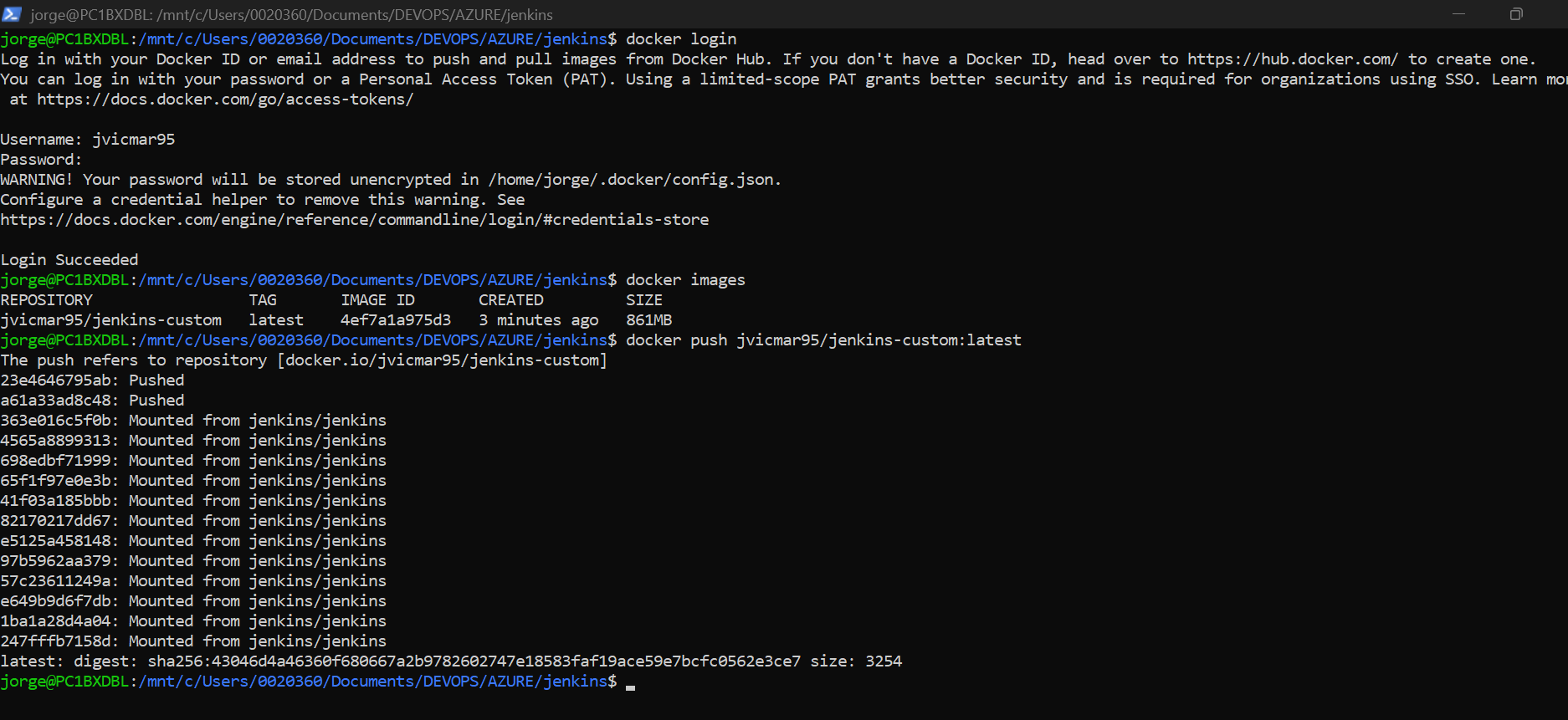
USER jenkinsjorge@PC1BXDBL:/mnt/c/Users/0020360/Documents/devops/azure/jenkins$

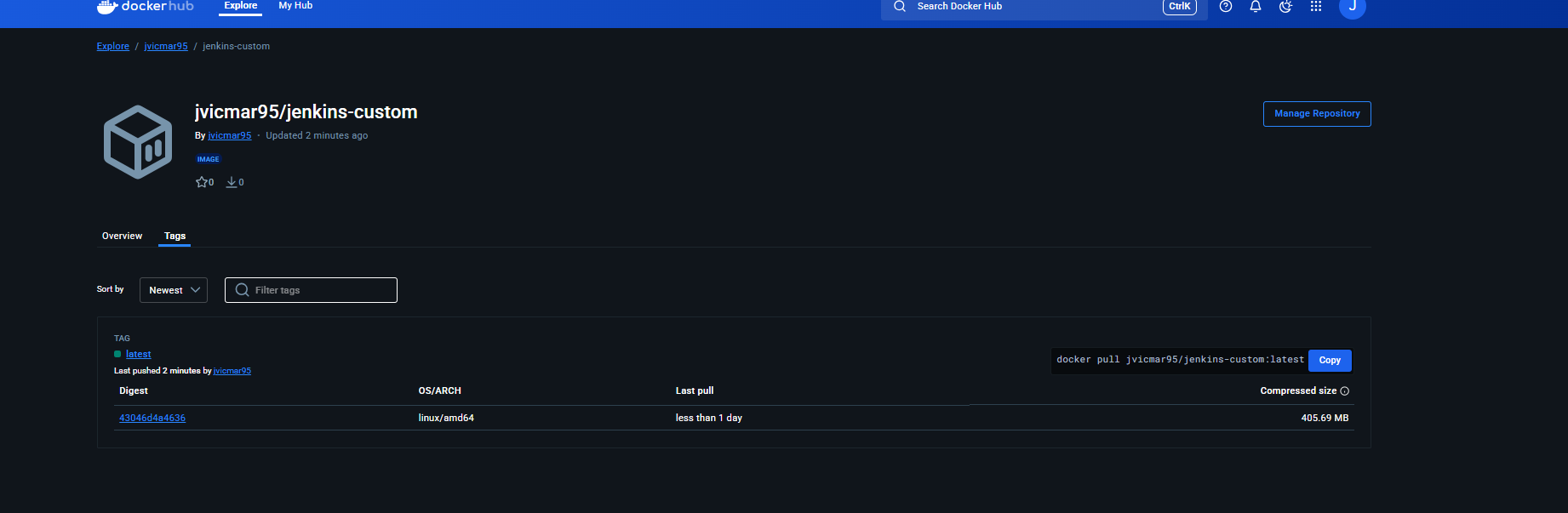
Hacemos Build de la imagen con **docker build -t jvicmar95/jenkins-custom:latest .**



Y hacemos un Push al repositorio haciendo primero un Docker Login.







Ahora ya podemos desplegar esta imagen custom de nuestro Jenkins.

* Añadimos repositorio

helm repo add jenkins <https://charts.jenkins.io>

* Creamos nuestro jenkins-values.yaml

controller:

  image:

    repository: jvicmar95/jenkins-custom

    tag: latest

    pullPolicy: IfNotPresent

  installPlugins:

    - kubernetes:latest

    - workflow-aggregator:latest

    - git:latest

    - docker-workflow:latest

  serviceType: ClusterIP

  admin:

    username: admin

    password: admin

  persistence:

    enabled: false

  resources:

    requests:

      cpu: "100m"

      memory: "512Mi"

    limits:

      cpu: "500m"

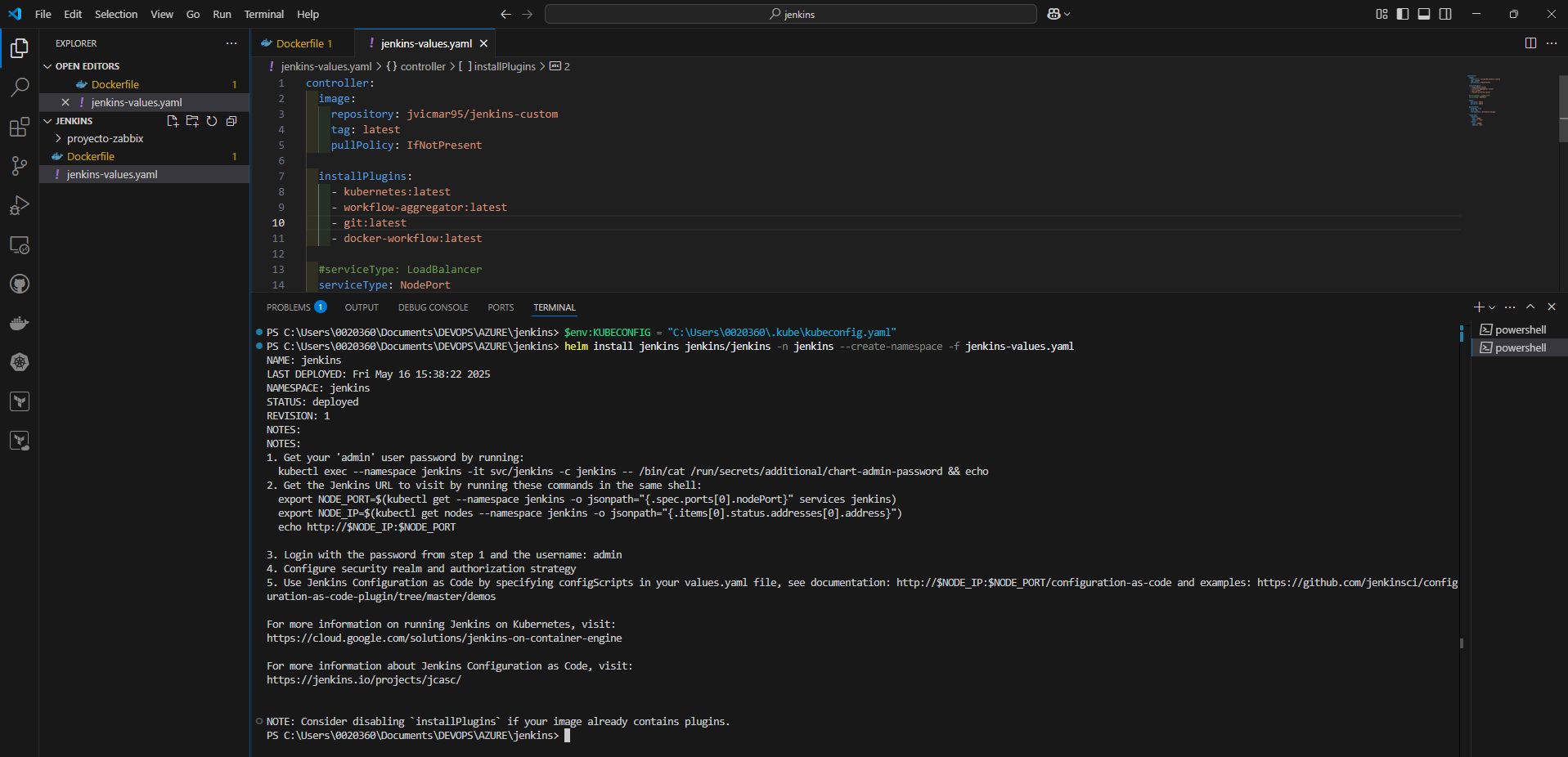
      memory: "1Gi"

* Upgradeamos los repositorios

helm repo update

* Instalamos Jenkins

helm install jenkins jenkins/jenkins -n jenkins --create-namespace -f jenkins-values.yaml



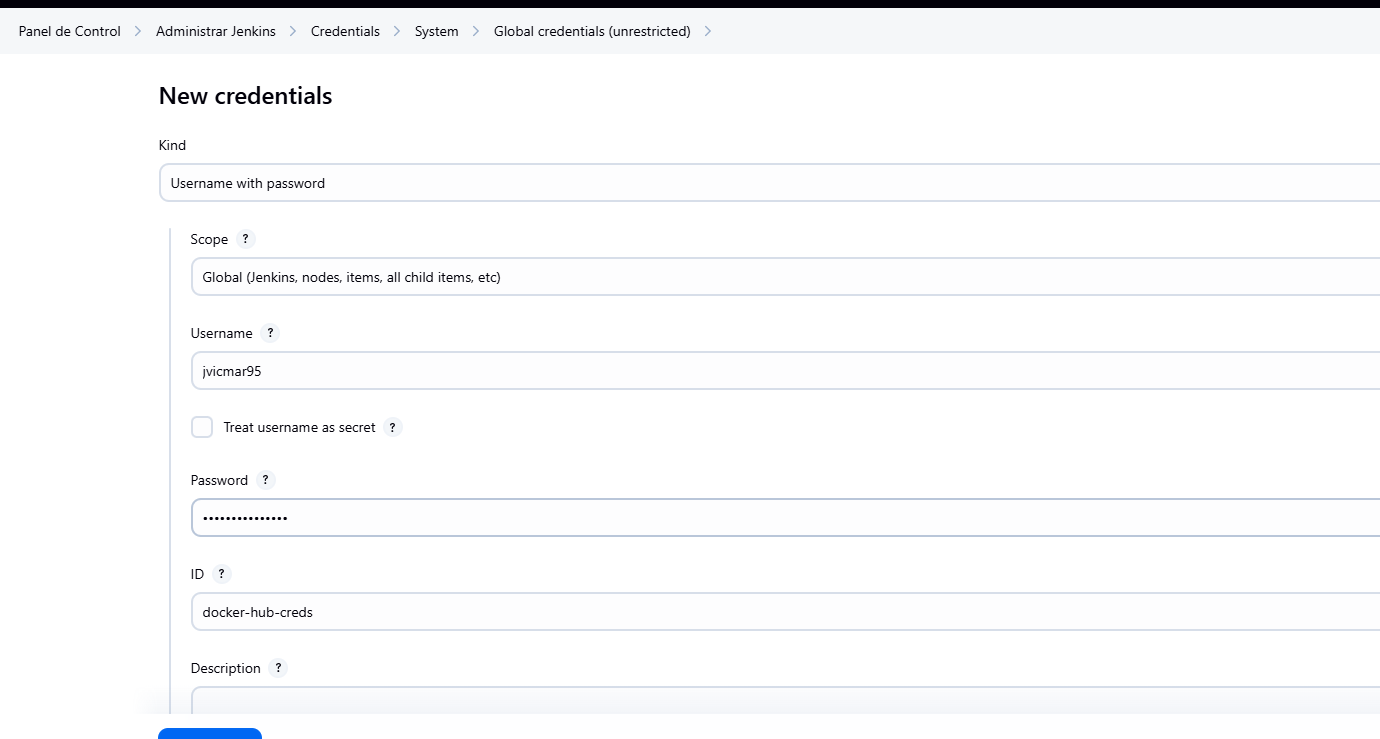
* **Conectarnos al frontal de Jenkins**

**kubectl port-forward svc/jenkins 8080:8080 -n jenkins**

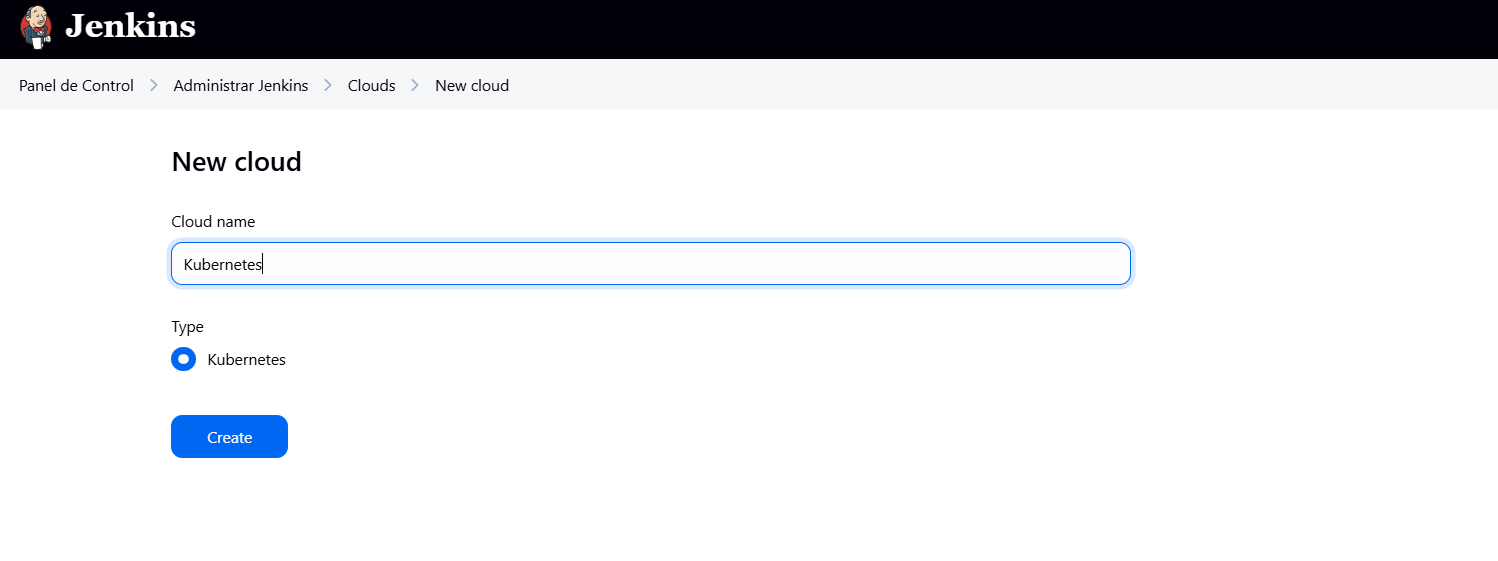
* **Accederemos con** [**http://localhost:8080/**](http://localhost:8080/)

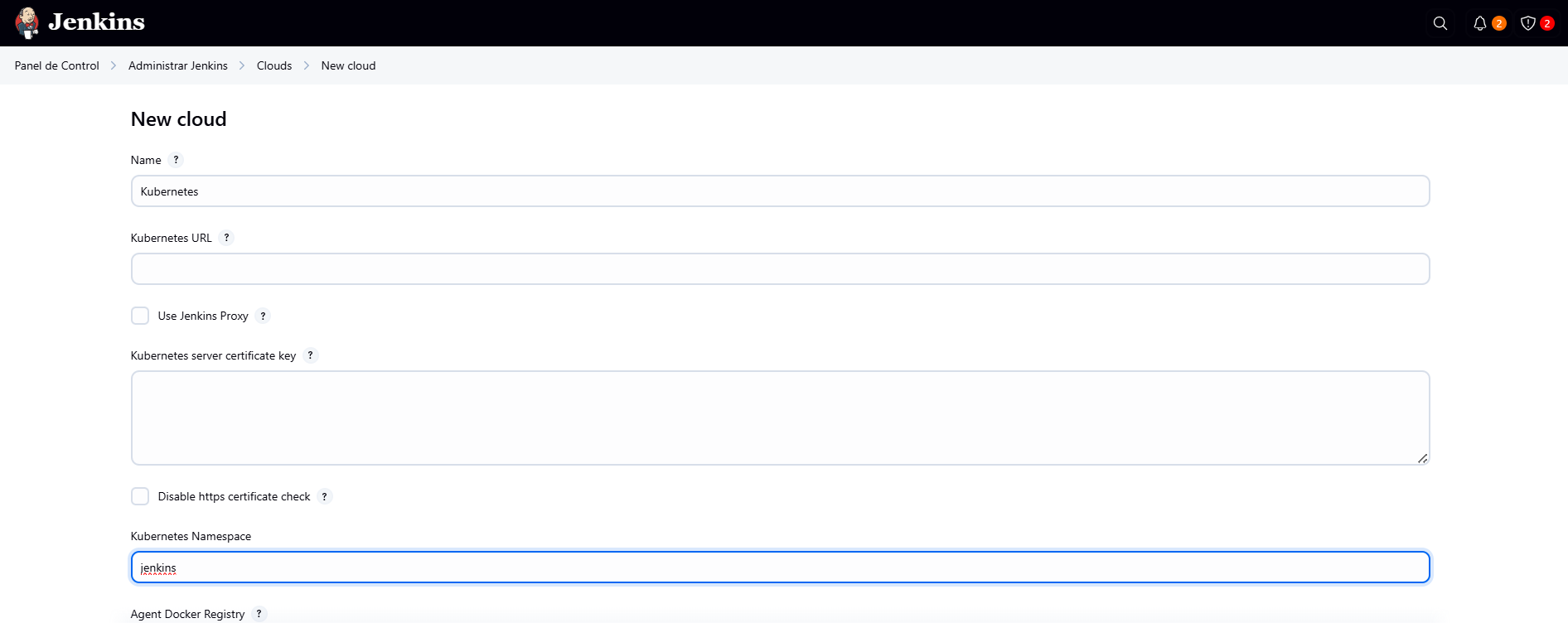
# Configurar Jenkins

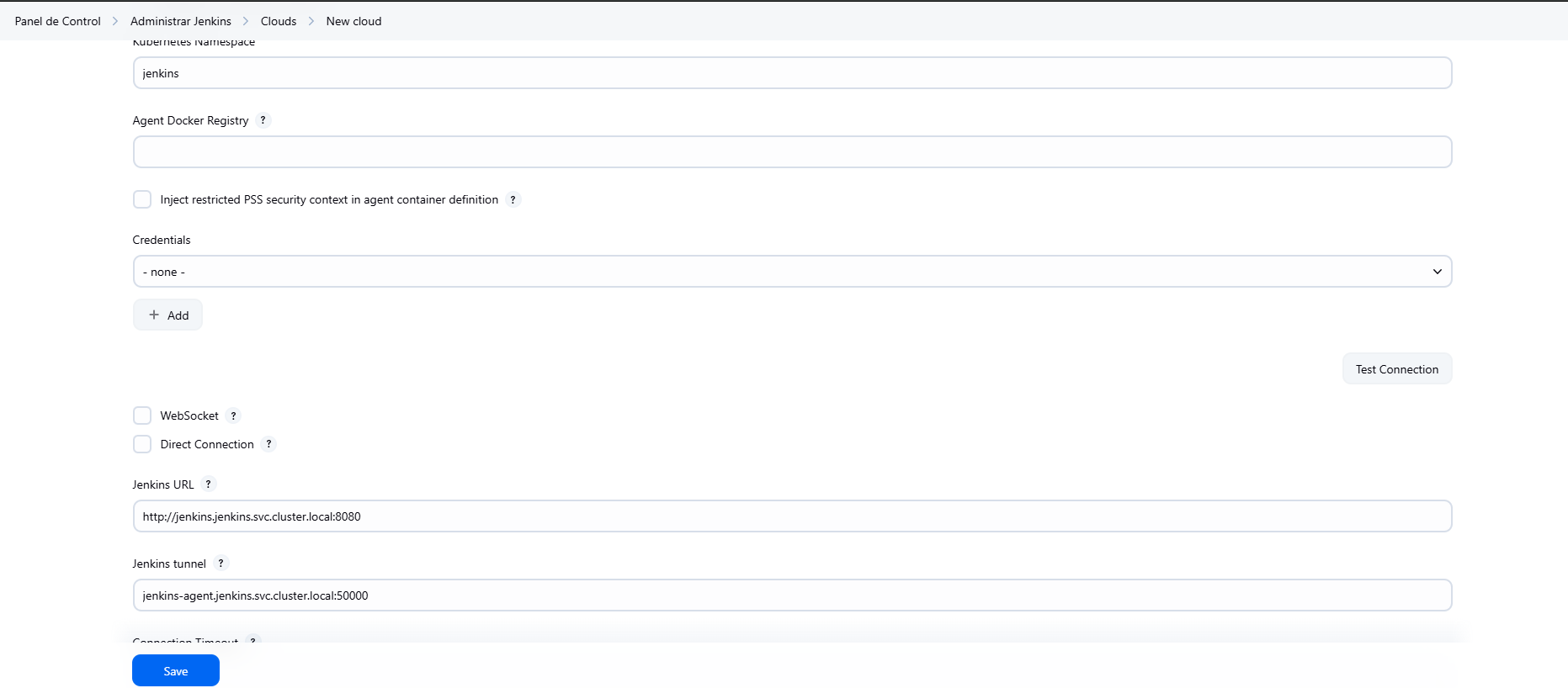
## Credenciales DockerHub



## Cloud

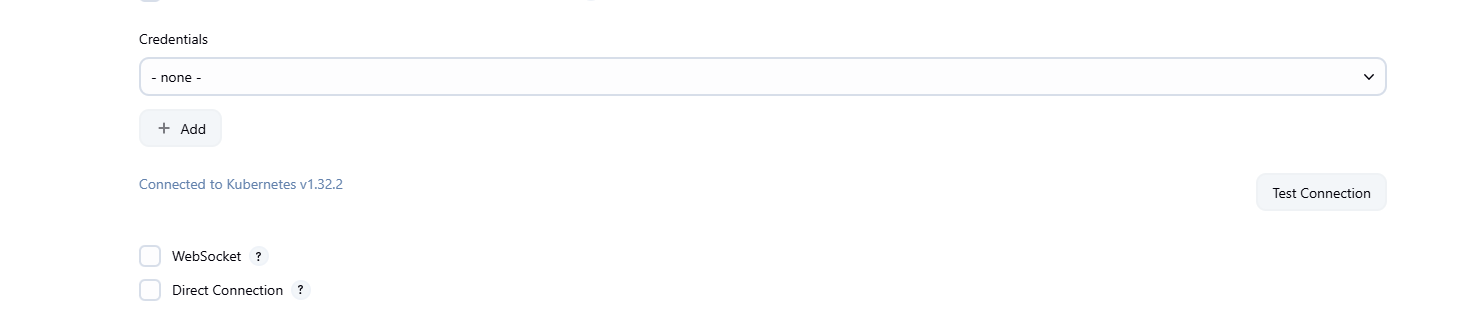




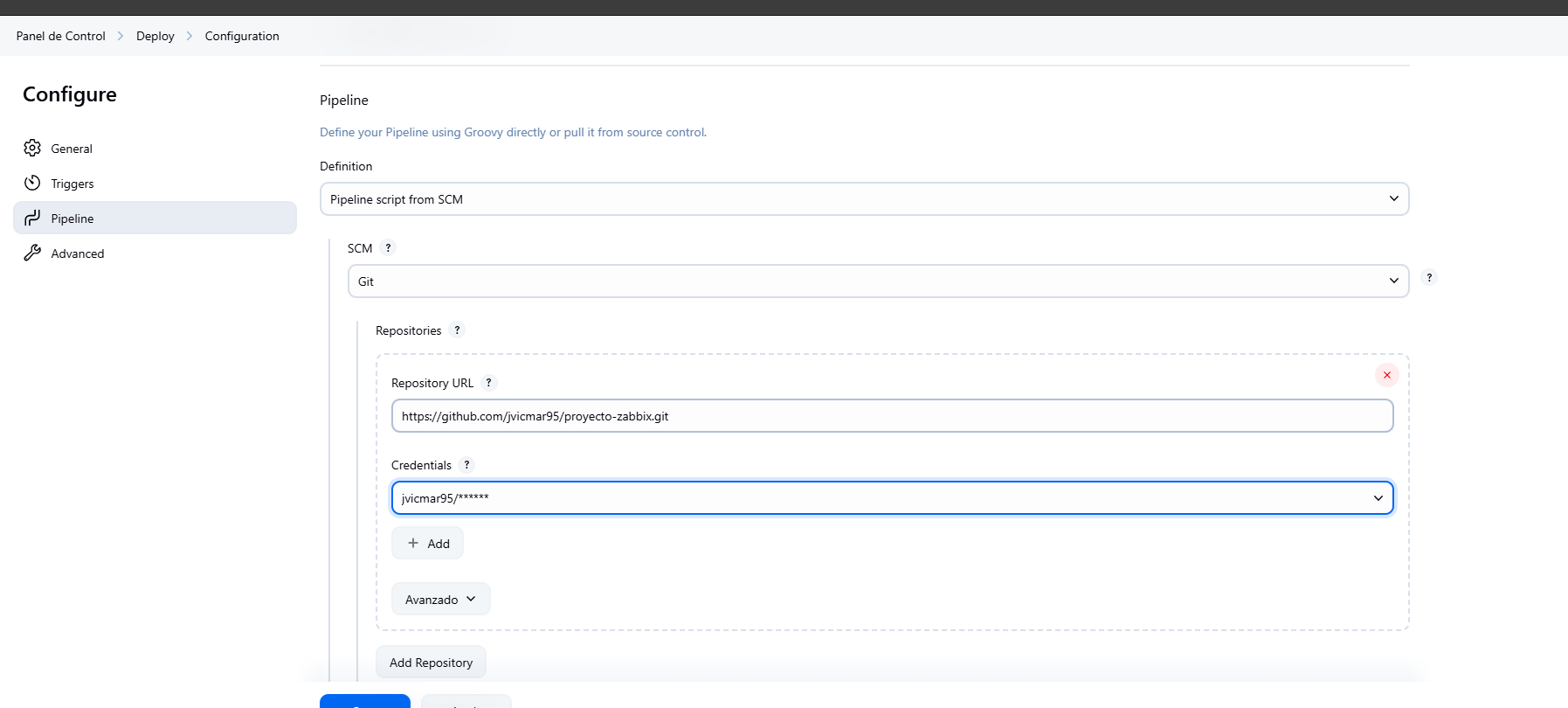


Jenkins URL: http://jenkins.jenkins.svc.cluster.local:8080

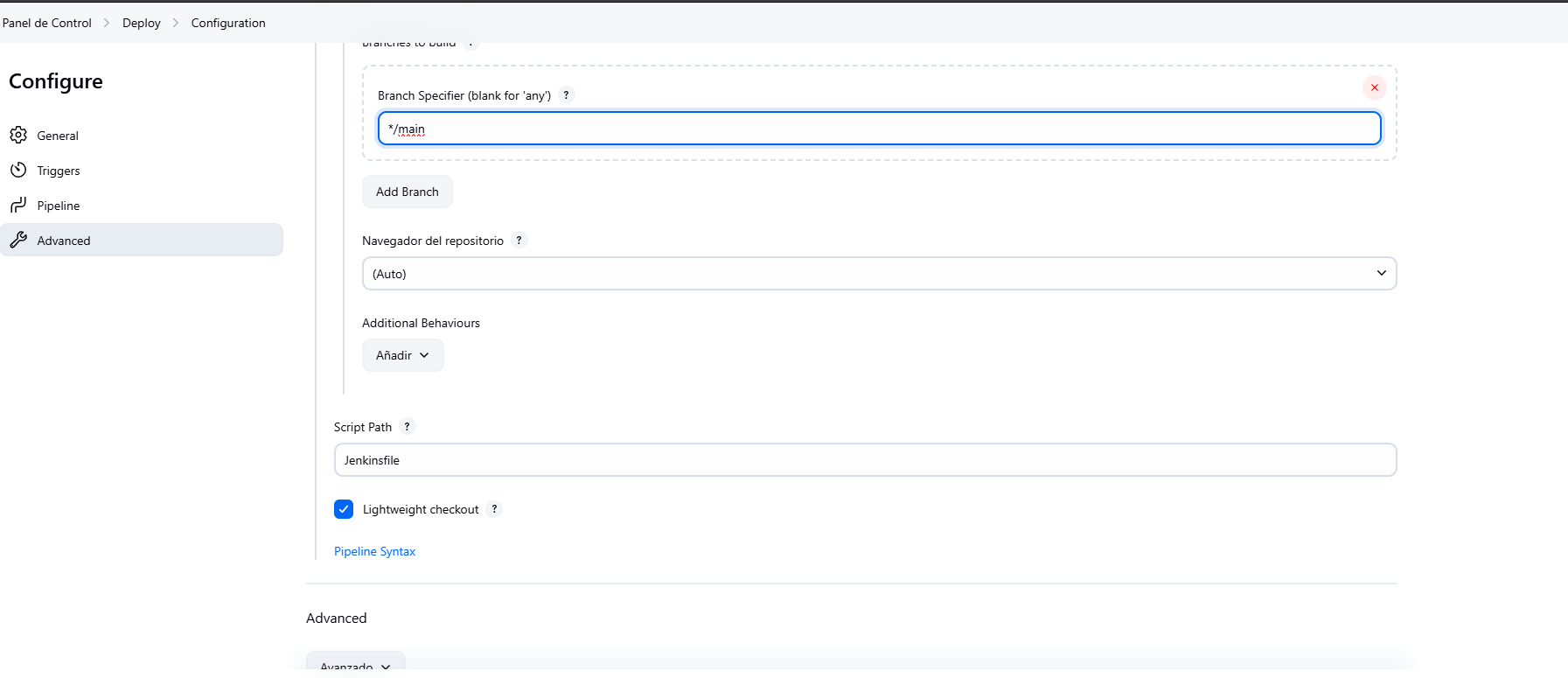
Jenkins tunnel: jenkins-agent.jenkins.svc.cluster.local:50000



# Crear Pipeline



https://github.com/jvicmar95/proyecto-zabbix.git



# Acceder

PS C:\Users\0020360\Documents\DEVOPS\AZURE\jenkins\proyecto-zabbix> kubectl get svc -n jenkins

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE

jenkins ClusterIP 10.108.74.142 <none> 8080/TCP 13m

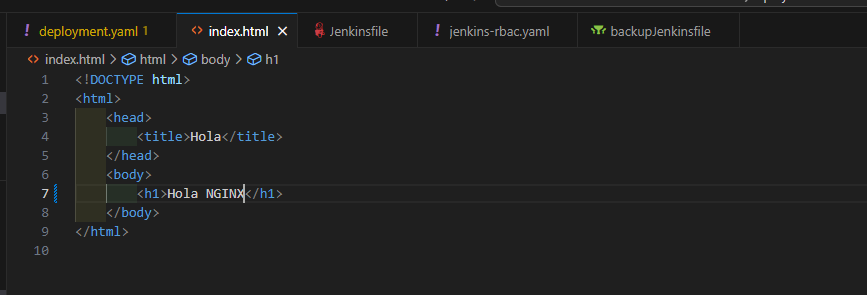
jenkins-agent ClusterIP 10.108.71.53 <none> 50000/TCP 13m

web-nginx LoadBalancer 10.108.91.169 139.59.48.31,2400:6180:100:d0::7e72:a001 80:30403/TCP 4m42s

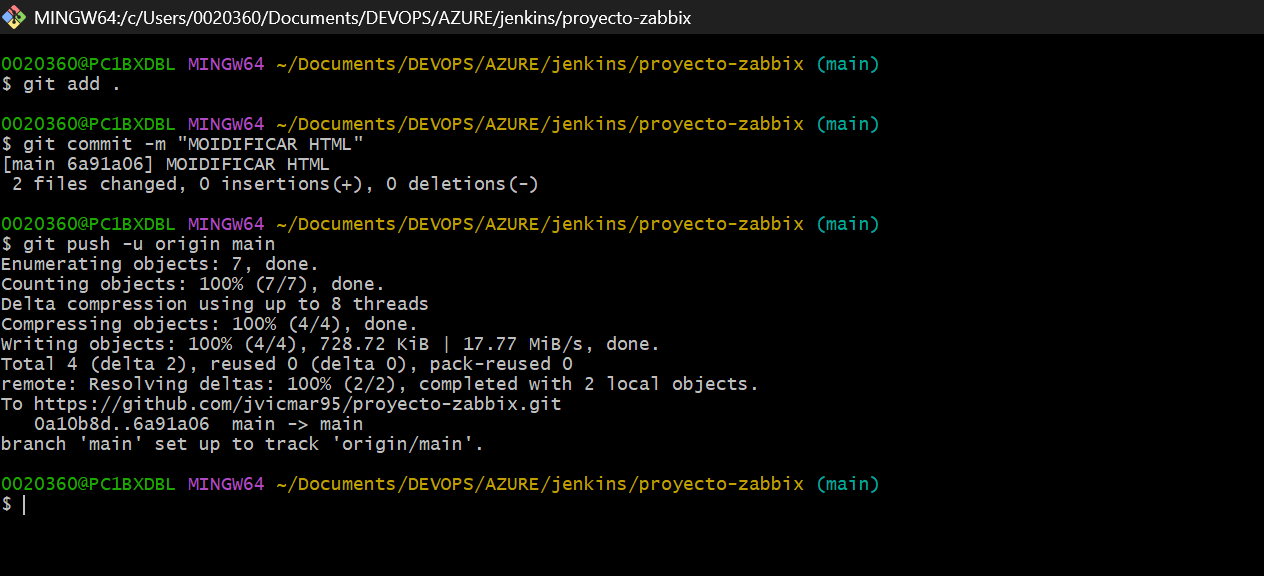
PS C:\Users\0020360\Documents\DEVOPS\AZURE\jenkins\proyecto-zabbix>

# Modificar código y desplegar

Modificamos nuestros ficheros



Lo subimos a Dockerhub



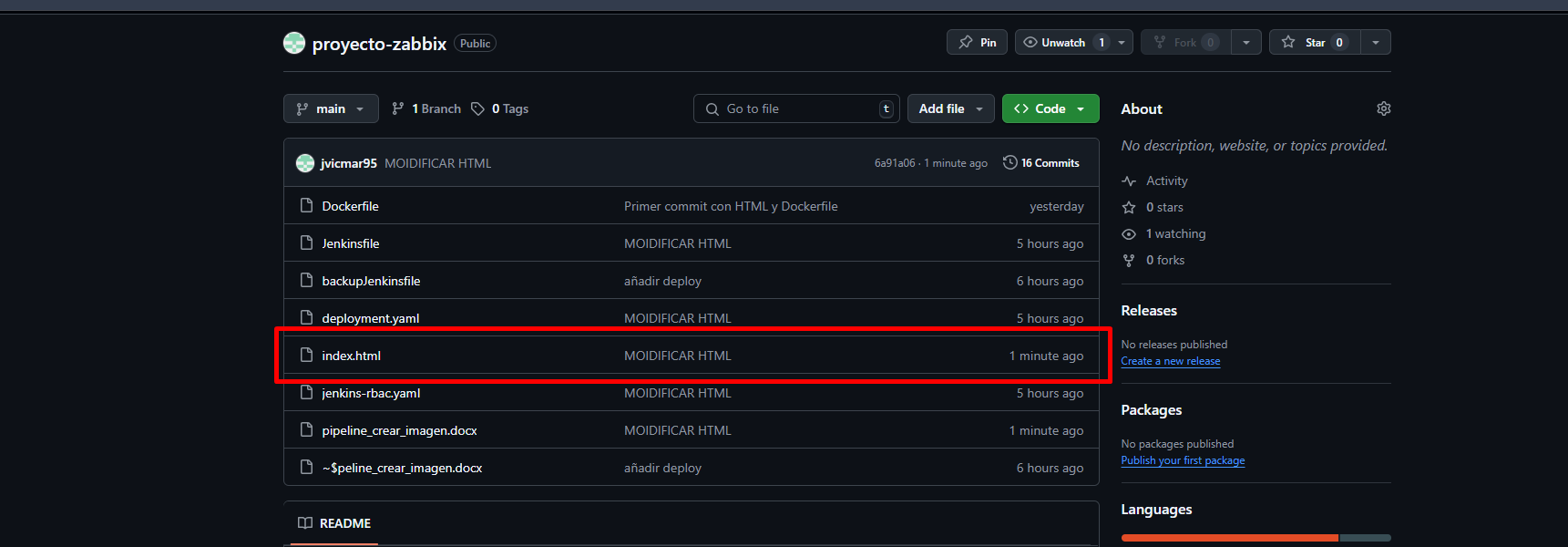
0020360@PC1BXDBL MINGW64 ~/Documents/DEVOPS/AZURE/jenkins/proyecto-zabbix (main)

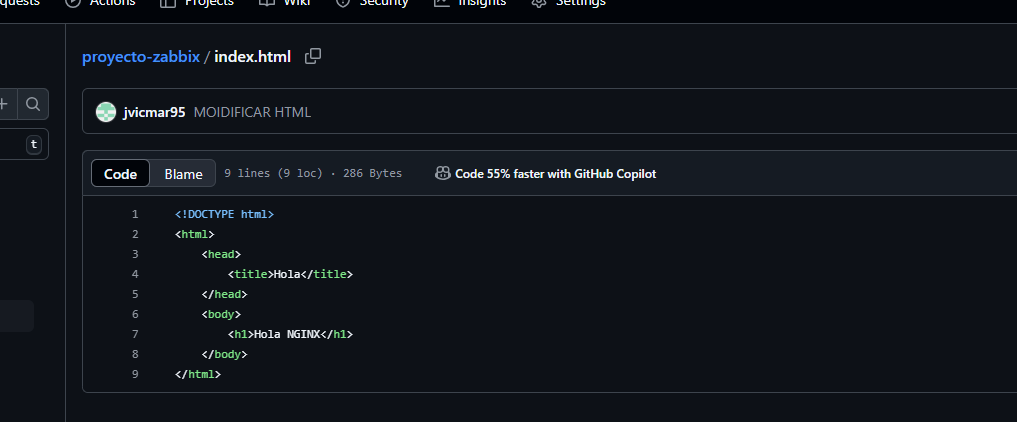
git add .

git commit -m "MOIDIFICAR HTML"

git push -u origin main

Ver que ha subido el código





Desplegamos con la Pipeline y comprobar

