Challenge # 1

Objective:

This challenge aims to develop a declarative pipeline in Jenkins that allows us to create users within a Linux system.

Scenario:

The security department has a team responsible for managing user creation and deletion in the company's systems. Due to the recent increase in user registrations and errors in user registration, we were tasked with generating a job in Jenkins to generate these users.

Requirements:

1. The security operator wants this input data to be entered when creating the user.

Data	Description
Login	This is a unique identifier consisting of the first and last name.
First and Last Name:	First and Last Name of the user.
Department:	This is the group that corresponds to the user's department. These groups are accounting, finance, and technology.

2. Requires the automation to generate a temporary password assigned to the user, which the end user must then change upon first login.
3. The operator requires the ability to obtain the temporary password to copy and email it to the end user.

Deliverables:

The deliverables established for this project include:

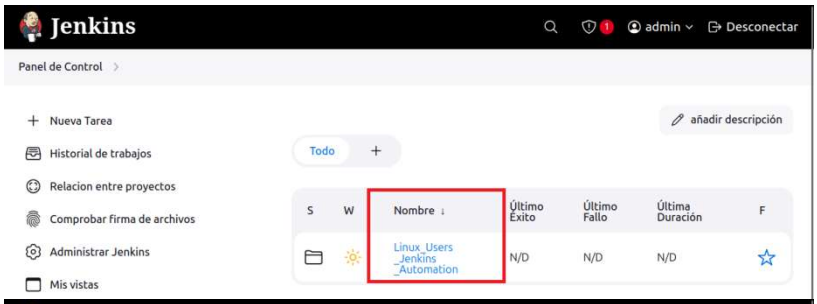
1. Jenkins pipeline source code published in a Github repository.
2. Detailed guide on how to use the job published in the repository's README.md file.
3. Evidence of successful testing.

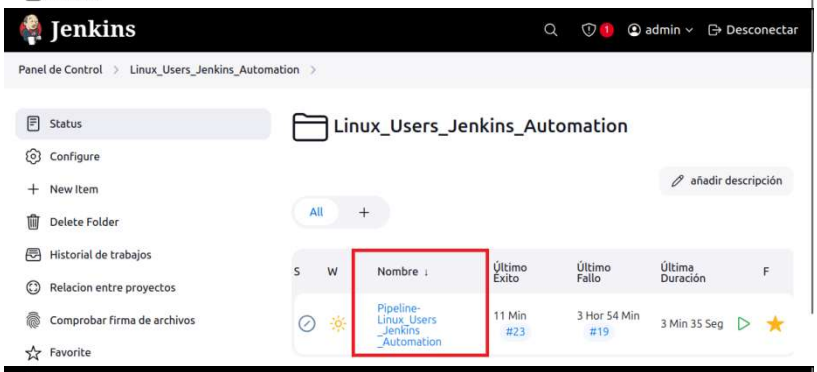
Evaluation:

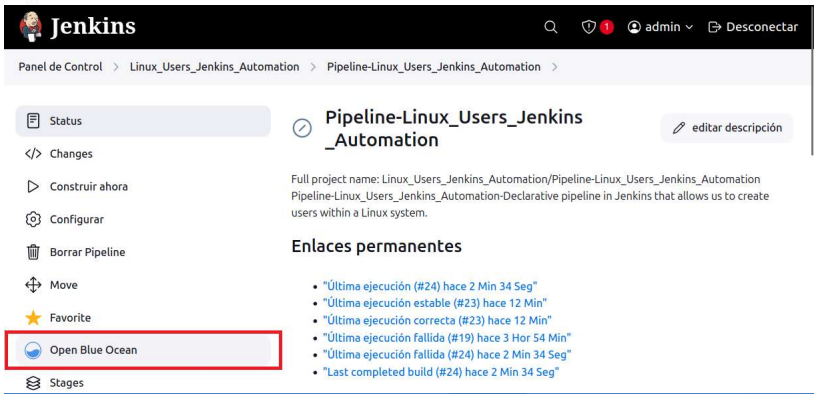
1. Delivery on time.
2. Write legible documentation that is understandable by third parties.
3. Add additional supporting material. Example: High-level diagram.
4. Meets the requested requirements.
5. The deliverable is functional. Example: The bash script runs without errors when executed and performs the requested tasks.

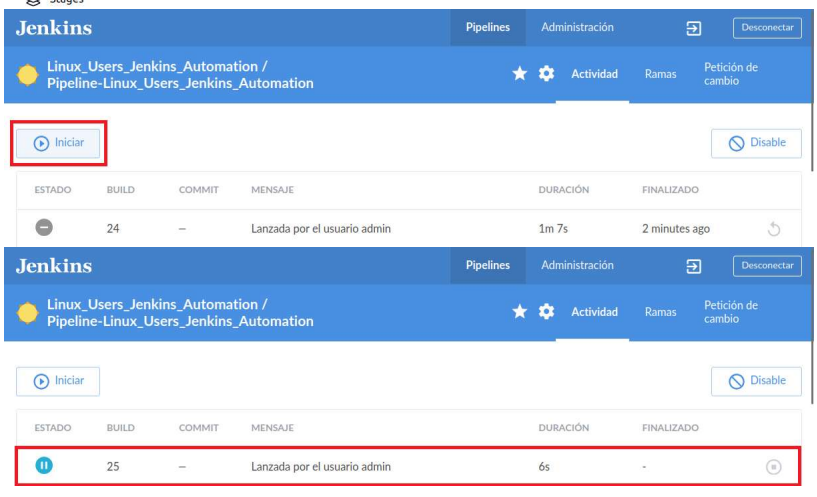
1. Jenkins pipeline source code published in a Github repository.
   https://github.com/vitale-t/Linux_Users_Jenkins_Automation.git

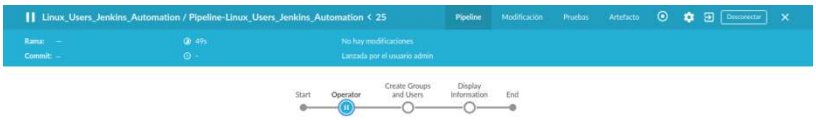
2. Detailed guide on how to use the job published.
   Assuming you have the attached repository cloned, with Jenkins installed on your device, and correctly configured, we will move on to the detailed guide on how to use the job.

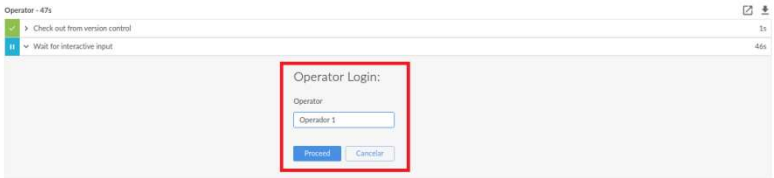




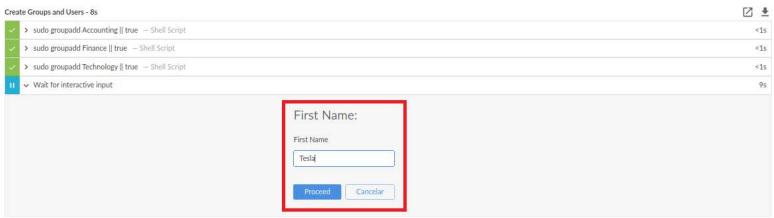




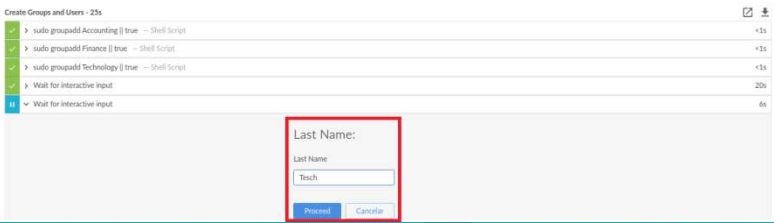

Linux_Users_Jenkins_Automation / Pipeline-Linux_Users_Jenkins_Automation < 25
Pipeline
Modificación
Pruebas
Artefacto
Desconectar
Rama: –
Commit: –
49s
No hay modificaciones
Lanzada por el usuario admin
Start
Operator
Create Groups and Users
Display Information
End

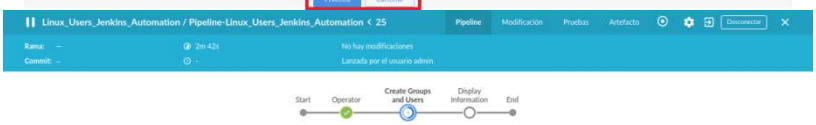

Operator - 47s
Check out from version control
1s
Wait for interactive input
46s
Operator Login:
Operator
Operador 1
Proceed
Cancelar

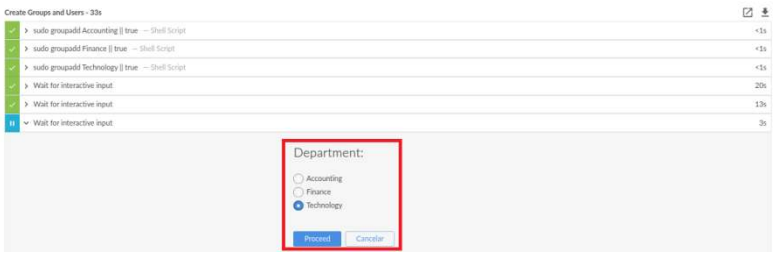

Linux_Users_Jenkins_Automation / Pipeline-Linux_Users_Jenkins_Automation < 25
Pipeline
Modificación
Pruebas
Artefacto
Desconectar
Rama: –
Commit: –
1m 43s
No hay modificaciones
Lanzada por el usuario admin
Start
Operator
Create Groups and Users
Display Information
End


Create Groups and Users - 8s
sudo groupadd Accounting || true — Shell Script
<1s
sudo groupadd Finance || true — Shell Script
<1s
sudo groupadd Technology || true — Shell Script
<1s
Wait for interactive input
9s
First Name:
First Name
Tesla
Proceed
Cancelar

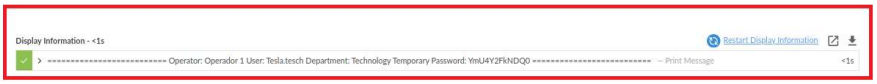

Linux_Users_Jenkins_Automation / Pipeline-Linux_Users_Jenkins_Automation < 25
Pipeline
Modificación
Pruebas
Artefacto
Desconectar
Rama: –
Commit: –
2m 26s
No hay modificaciones
Lanzada por el usuario admin
Start
Operator
Create Groups and Users
Display Information
End


Create Groups and Users - 25s
sudo groupadd Accounting || true — Shell Script
<1s
sudo groupadd Finance || true — Shell Script
<1s
sudo groupadd Technology || true — Shell Script
<1s
Wait for interactive input
20s
Wait for interactive input
6s
Last Name:
Last Name
Tesch
Proceed
Cancelar


Linux_Users_Jenkins_Automation / Pipeline-Linux_Users_Jenkins_Automation < 25
Pipeline
Modificación
Pruebas
Artefacto
Desconectar
Rama: –
Commit: –
2m 42s
No hay modificaciones
Lanzada por el usuario admin
Start
Operator
Create Groups and Users
Display Information
End

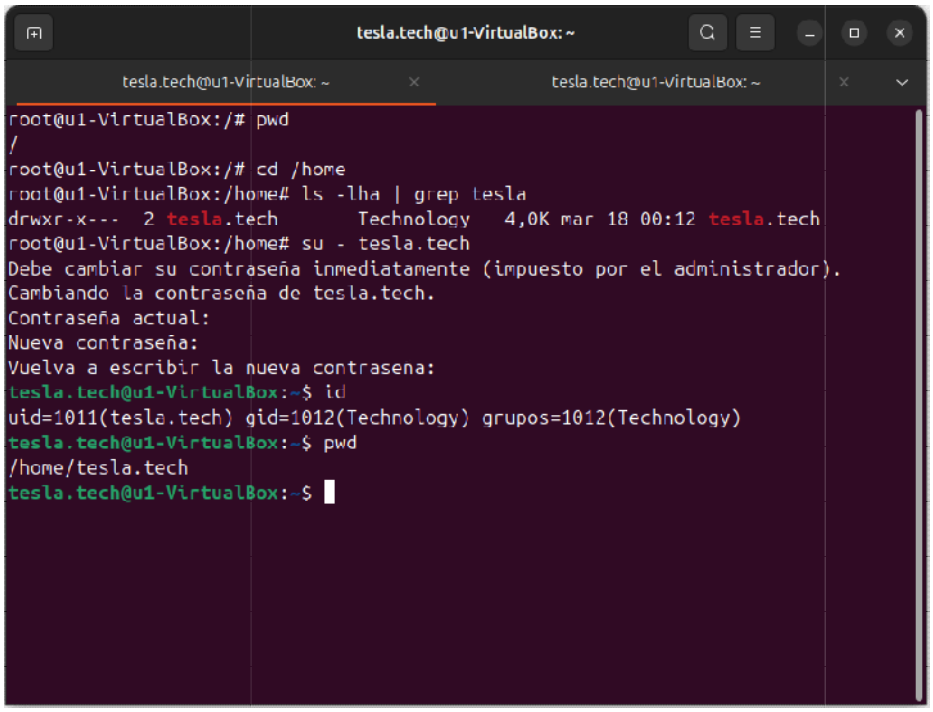

Create Groups and Users - 33s
sudo groupadd Accounting || true — Shell Script
<1s
sudo groupadd Finance || true — Shell Script
<1s
sudo groupadd Technology || true — Shell Script
<1s
Wait for interactive input
20s
Wait for interactive input
13s
Wait for interactive input
3s
Department:
Accounting
Finance
Technology
Proceed
Cancelar


Linux_Users_Jenkins_Automation / Pipeline-Linux_Users_Jenkins_Automation < 25
Pipeline
Modificación
Pruebas
Artefacto
Desconectar
Rama: –
Commit: –
2m 21s
a few seconds ago
No hay modificaciones
Lanzada por el usuario admin
Start
Operator
Create Groups and Users
Display Information
End


Display Information - <1s
Restart Display Information
========== Operator: Operador 1 User: Tesla.tesch Department: Technology Temporary Password: YmU4Y2FkNDQ0 ==========
— Print Message
<1s

3. Evidence of successful testing.

Local:



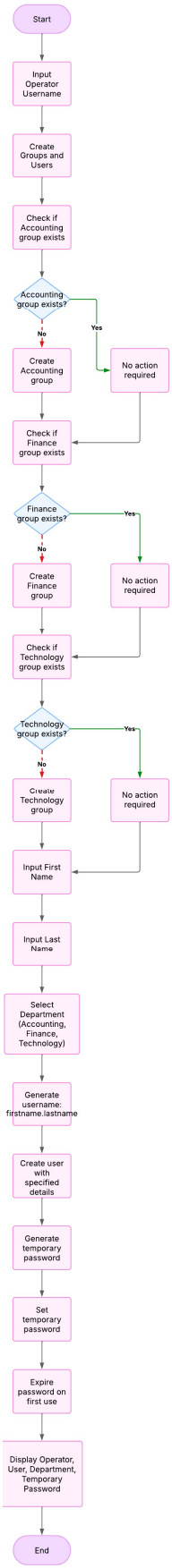
Pipeline_Execution_Log:

```
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential Linux_Users_Jenkins_Automation
> git rev-parse --resolve-git-dir
/var/lib/jenkins/workspace/Linux_Users_Jenkins_Automation/Pipeline-
Linux_Users_Jenkins_Automation@2/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/vitale-
t/Linux_Users_Jenkins_Automation.git # timeout=10
Fetching upstream changes from https://github.com/vitale-
t/Linux_Users_Jenkins_Automation.git
> git --version # timeout=10
> git --version # 'git version 2.36.1'
using GIT_ASKPASS to set credentials Token
> git fetch --tags --force --progress -- https://github.com/vitale-
t/Linux_Users_Jenkins_Automation.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 100bf2e0c2602085b6a6370cc1174551e8e44530 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 100bf2e0c2602085b6a6370cc1174551e8e44530 # timeout=10
Commit message: "README.md"
> git rev-list --no-walk 100bf2e0c2602085b6a6370cc1174551e8e44530 # timeout=10
Input requested
Approved by admin

+ sudo groupadd Accounting
groupadd: el grupo «Accounting» ya existe
+ true
+ sudo groupadd Finance
groupadd: el grupo «Finance» ya existe
+ true
+ sudo groupadd Technology
groupadd: el grupo «Technology» ya existe
+ true
Input requested
Approved by admin
Input requested
Approved by admin
Input requested
Approved by admin
+ sudo useradd -m -s /bin/bash -c Tesla Tech -g Technology tesla.tech
+ date +%s
+ sha256sum
+ head -c 12
+ base64
+ sudo chpasswd
+ echo tesla.tech:*****
+ sudo passwd -e tesla.tech
passwd: contraseña cambiada.

=========================
Operator: Operador 1
User: Tesla.tech
Department: Technology
Temporary Password: *****
=========================
```

4. Diagram:


Start
Input Operator Username
Create Groups and Users
Check if Accounting group exists
Accounting group exists?
Yes
No
Create Accounting group
No action required
Check if Finance group exists
Finance group exists?
Yes
No
Create Finance group
No action required
Check if Technology group exists
Technology group exists?
Yes
No
Create Technology group
No action required
Input First Name
Input Last Name
Select Department (Accounting, Finance, Technology)
Generate username: firstname.lastname
Create user with specified details
Generate temporary password
Set temporary password
Expire password on first use
Display Operator, User, Department, Temporary Password
End