

**CONTINUOUS INTEGRATION**

**&**

**CONTINUOUS DELIVERY**

**LAB REPORT**

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**OFFICIAL DOCUMENTATIONS**

|  |  |  |
| --- | --- | --- |
| S. NO. | TOOL/PLUGIN | LINK |
|  | JENKINS | <https://www.jenkins.io/doc/> |
|  | JENKINS + GITHUB |  |
|  | SONARQUBE |  |
|  | JENKINS + BLUEOCEAN |  |
|  | NEXUS |  |

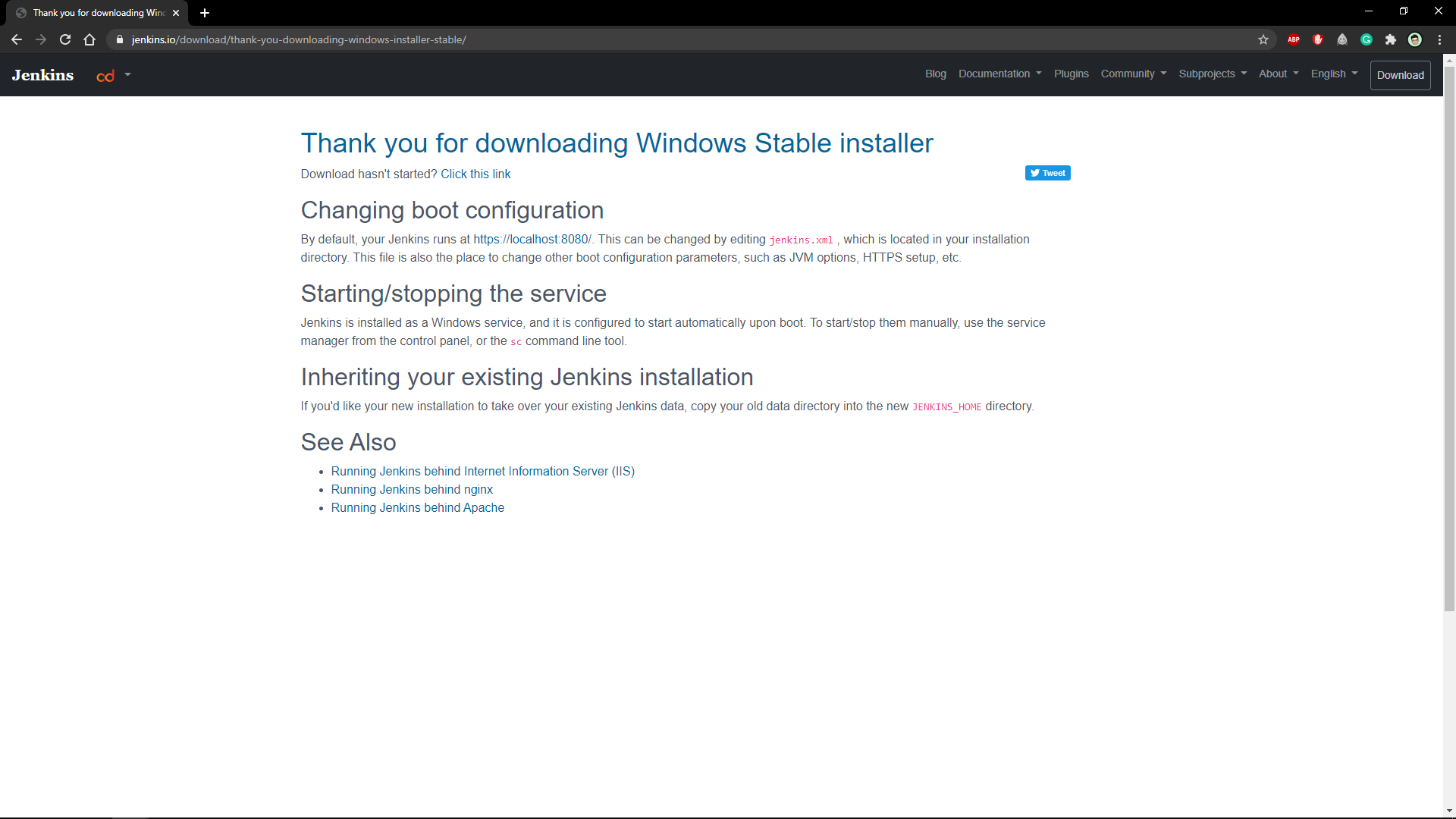
1. **Installation of Jenkins and executing a simple Job**
2. INSTALLATION
   1. Windows

**To install Jenkins as a local service on your Windows machine, follow along the following steps.**

**Requirements: JDK**

* + 1. **Download Jenkins**

Head to <https://www.jenkins.io/download/> and choose Windows as your OS, and download Jenkins Stable Installer.



* + 1. **Install Jenkins**

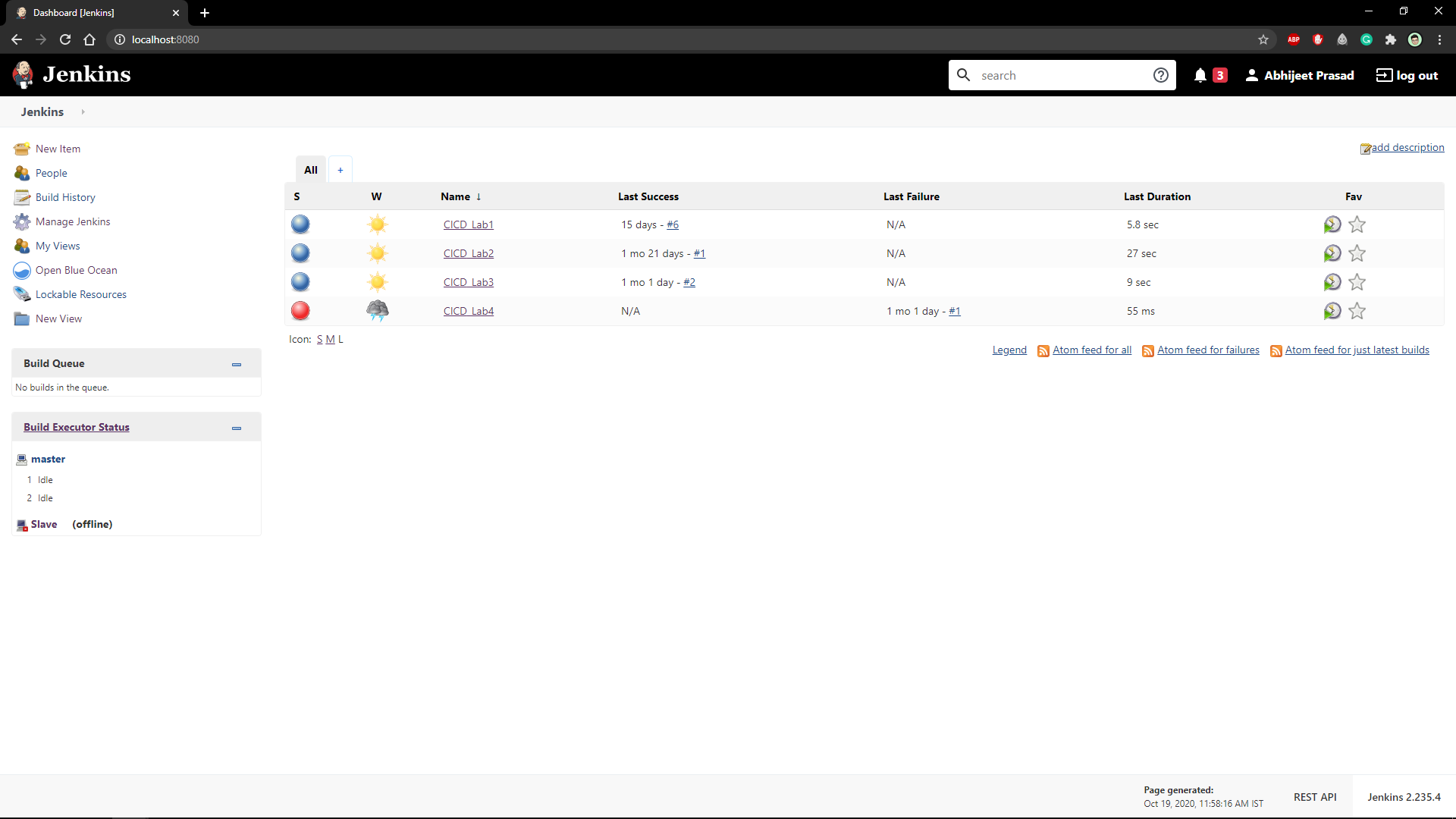
Run the downloaded installer and follow the on-screen instructions. You will see a success page once it is done.

Move to the next step.

* + 1. **Test run**

Head to you web browser and navigate to <http://localhost:8080/> , you will be redirected to Jenkins login page. It’ll prompt you with the location of the default password. Find the file and paste your default password.

**DONE! We have successfully installed Jenkins on our Windows Machine.**



* 1. Linux/Debian

**To install Jenkins service as localhost on your Debian based Linus Distribution, follow along the following steps.**

**Requirements: JDK**

* + 1. **Install Jenkins**

Run the following commands to install Jenkins on Debian/Ubuntu Machine.

wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo apt-key add -

sudo sh -c 'echo deb https://pkg.jenkins.io/debian-stable binary/ > \

/etc/apt/sources.list.d/jenkins.list'

sudo apt-get update

sudo apt-get install Jenkins

* + 1. **Run Jenkins**

Start your Jenkins service with the following command.

sudo systemctl start jenkins

1. EXECUTING A SIMPLE JOB

**To execute a simple job in Jenkins, we need a Maven Project that can perform Maven Goals. We will be executing a simple build through Jenkins.**

Graphical user interface, text, application

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Graphical user interface, text, application, email

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A screenshot of a computer screen

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A screenshot of a computer screen

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1. **Jenkins integration with Github**

A screenshot of a computer

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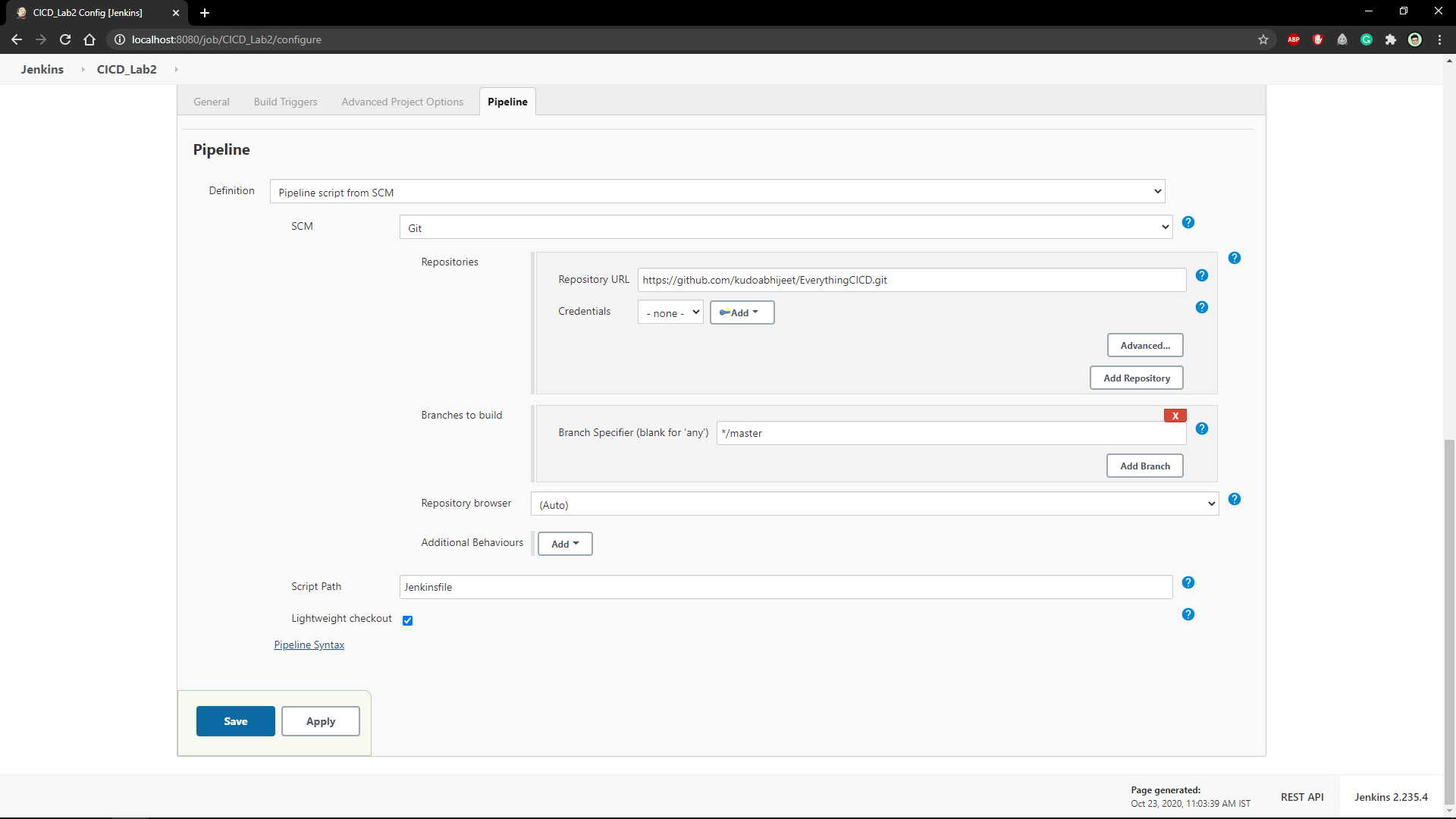
1. **Jenkins Integration with Github and Maven**

**Graphical user interface, application

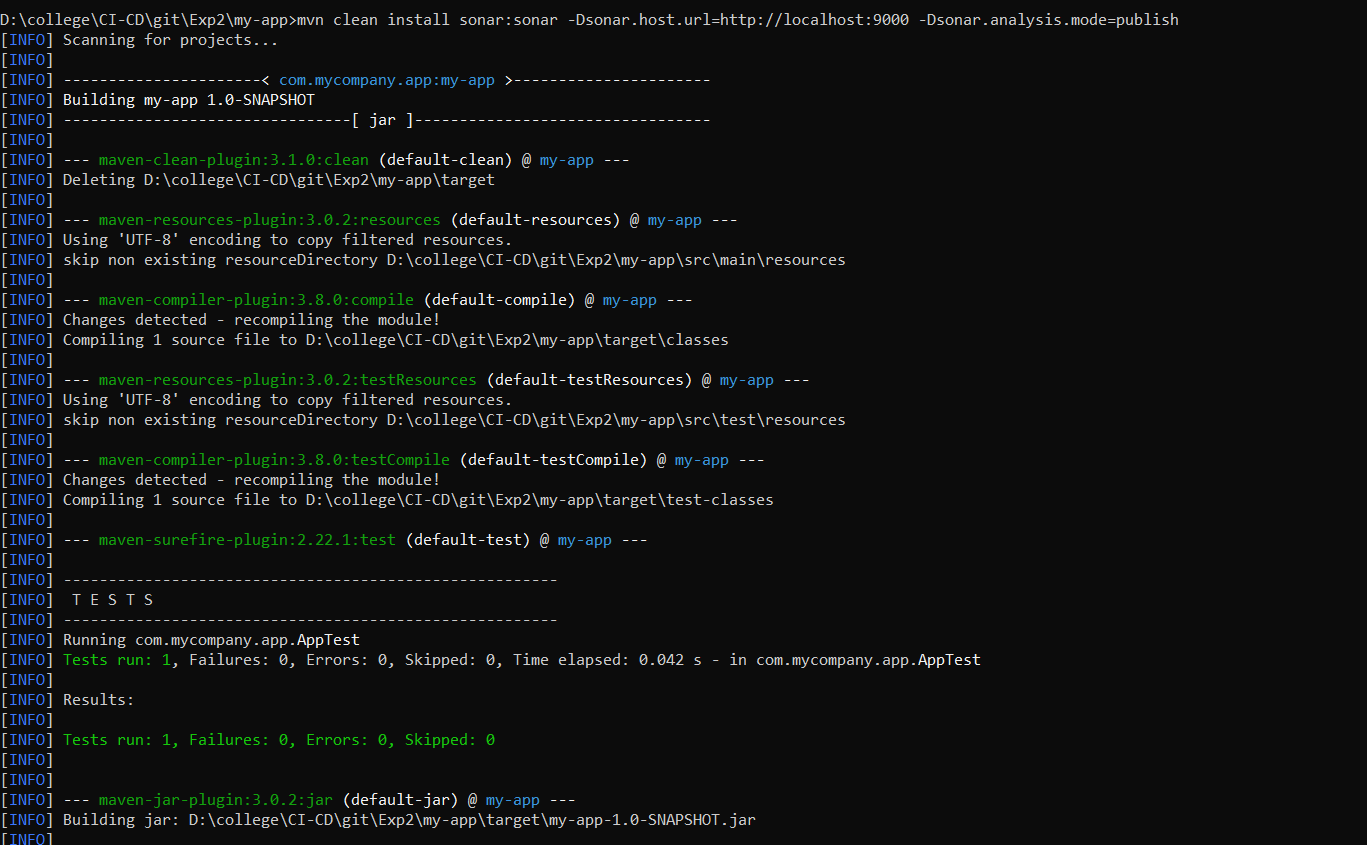
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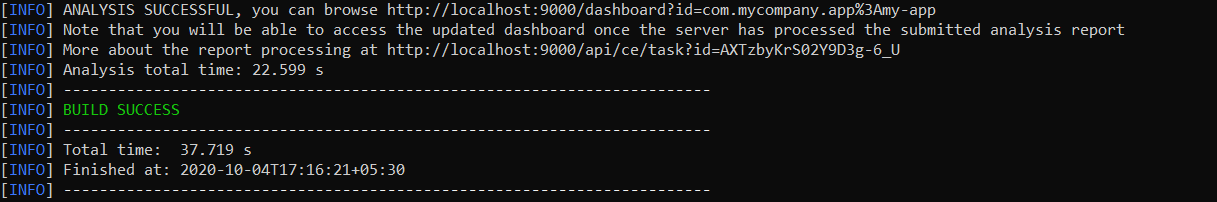
A screenshot of a computer screen

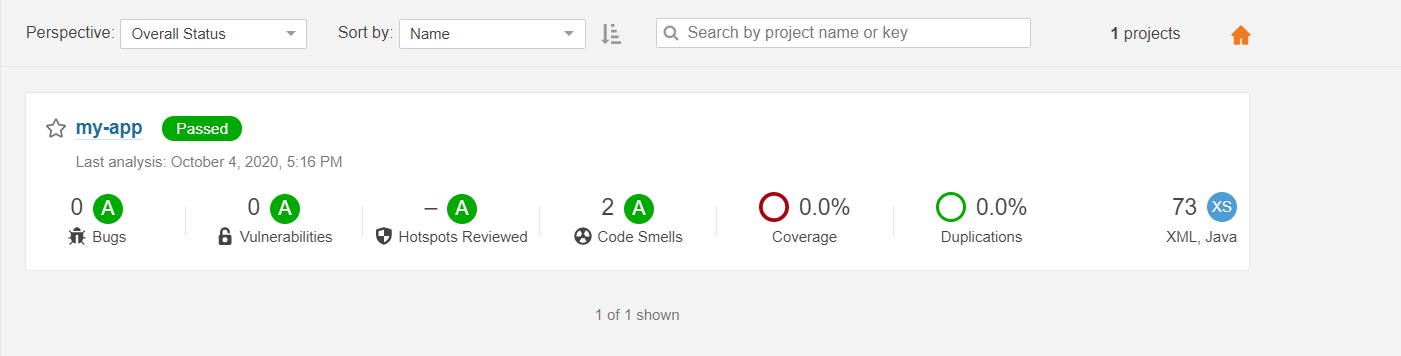
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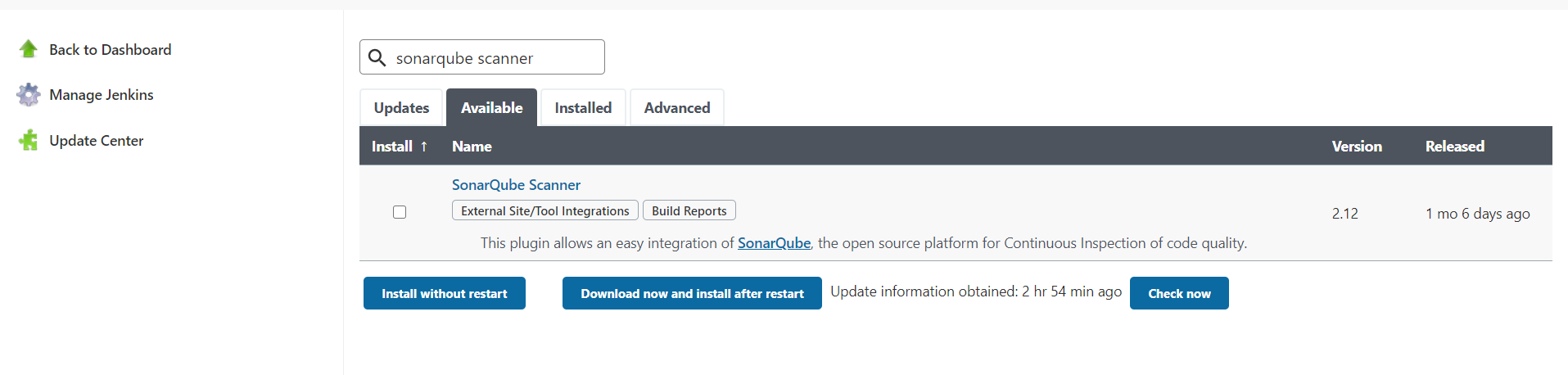
1. **Static Code Analysis using SonarQube**

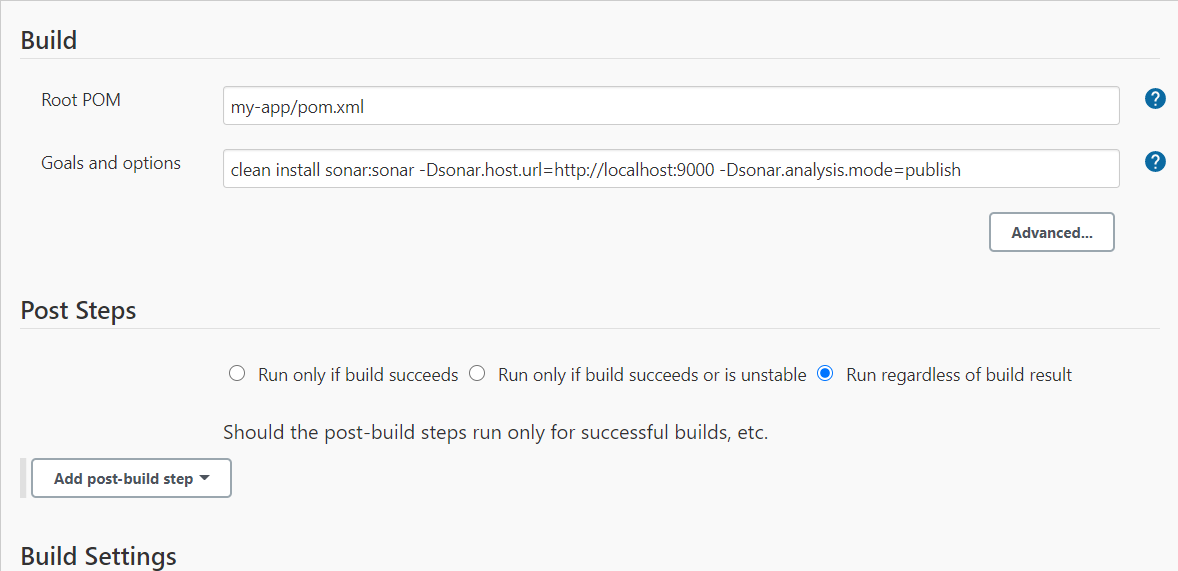




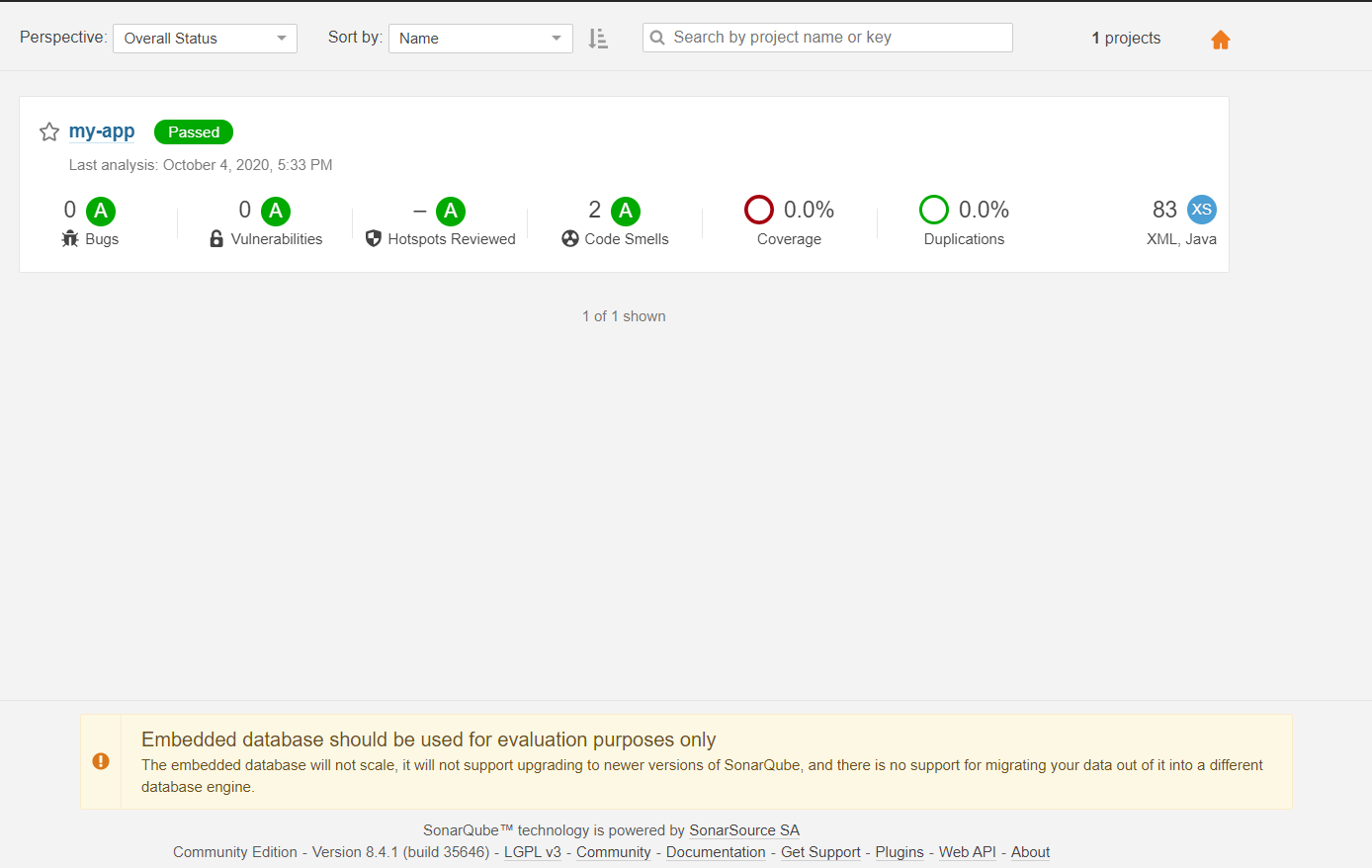


1. **Jenkins Integration with SonarQube**









1. **Creating a Pipeline with Jenkinsfile**

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**Graphical user interface, text, application, email

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**Graphical user interface, application

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1. **Creating a Pipeline with BlueOcean**

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**Graphical user interface, text, application, email

Description automatically generated**

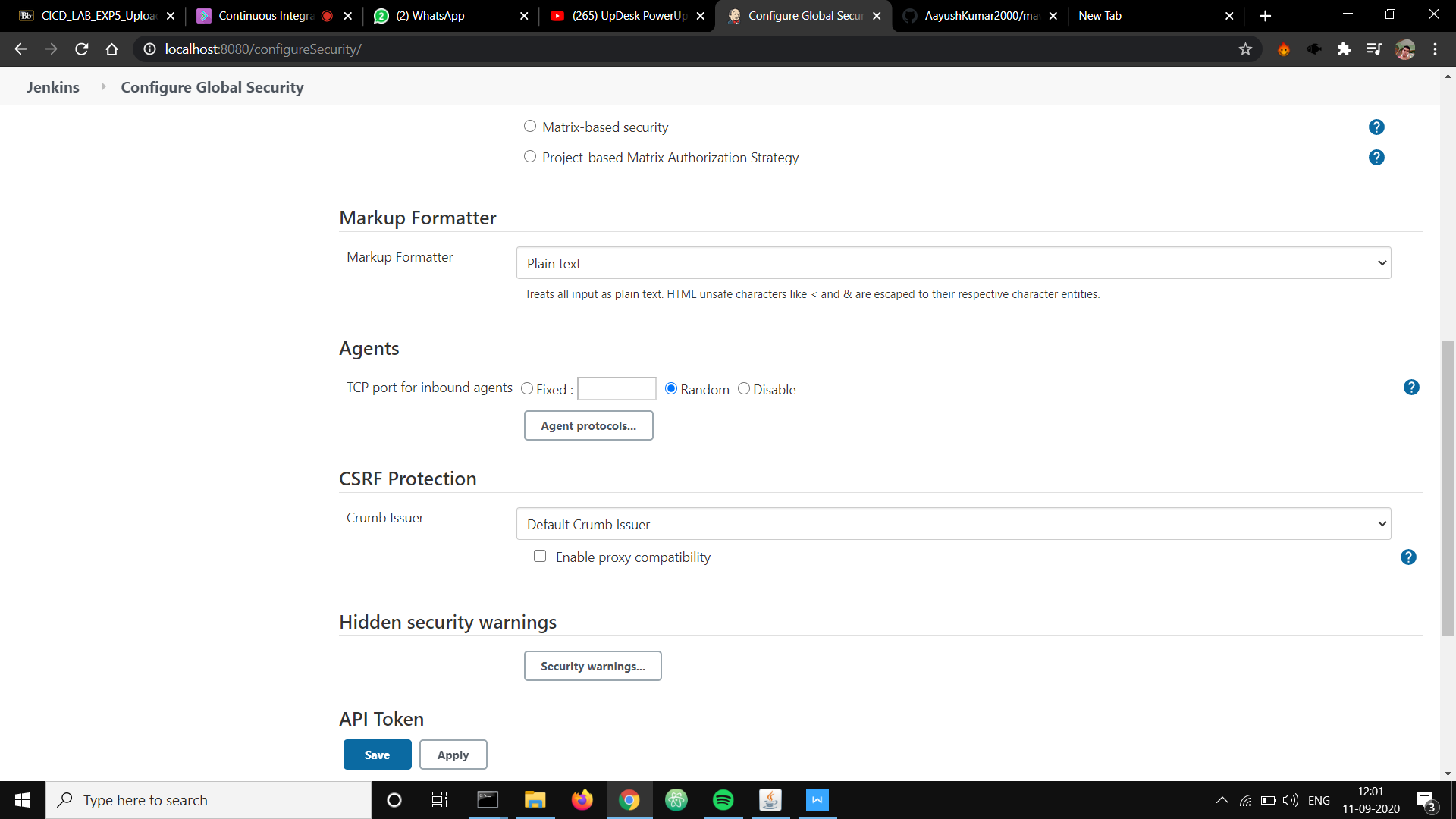
**Graphical user interface, application, table, Excel

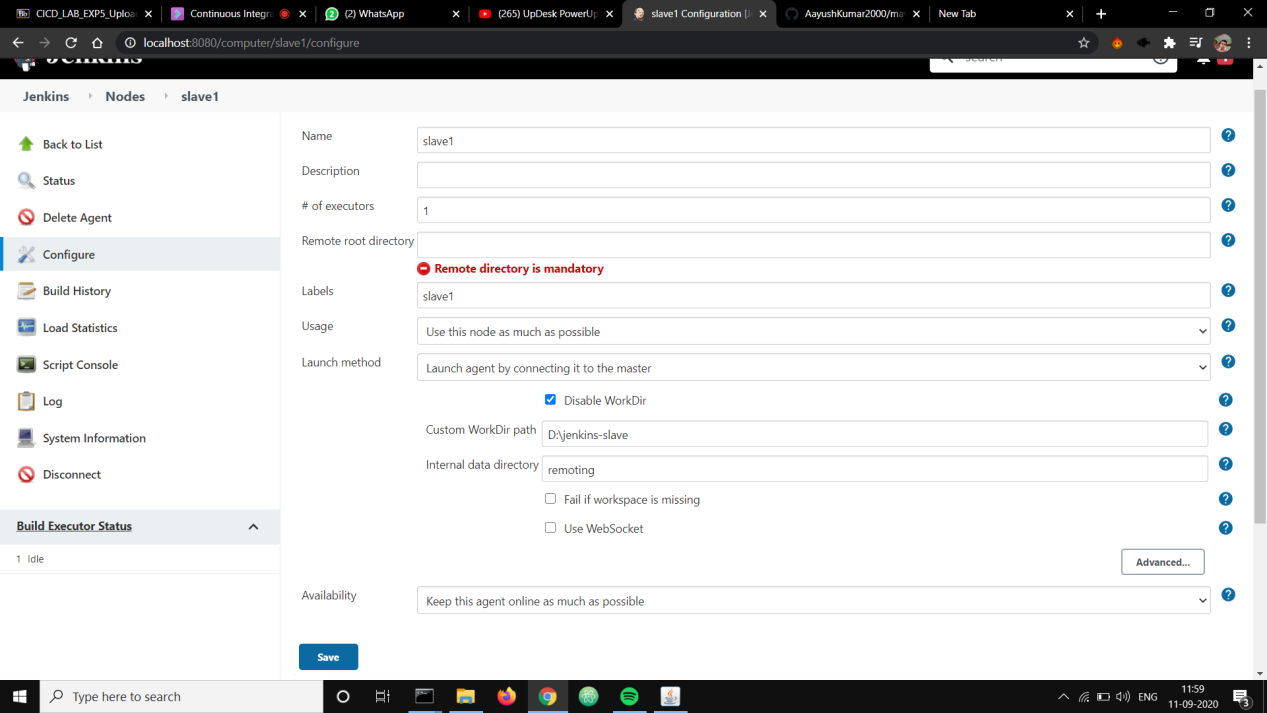
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**A screenshot of a computer screen

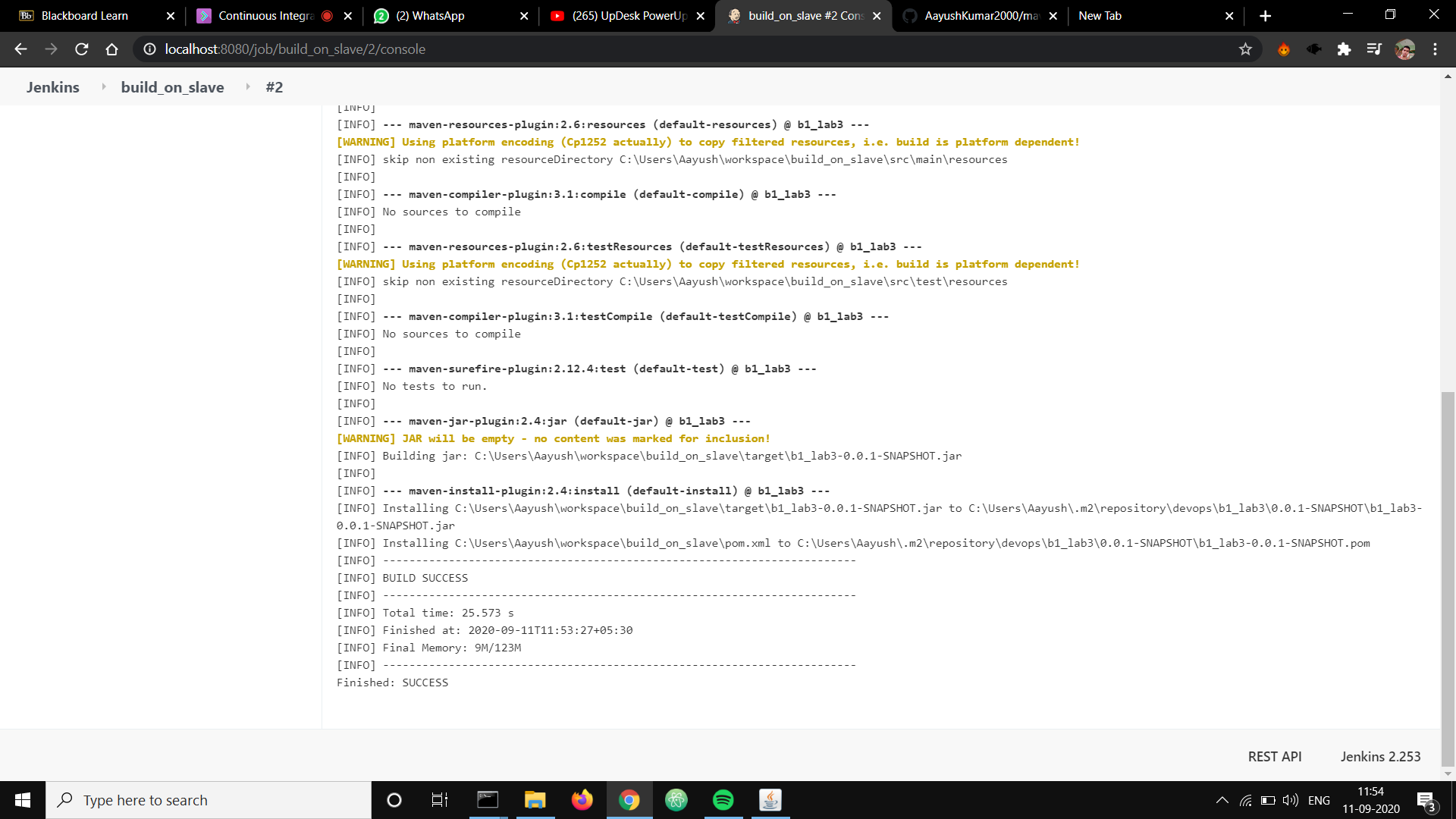
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1. **Implementing Master/Slave architecture in Jenkins**









1. **Uploading artifacts onto Nexus Server using CLI**
2. **Jenkins Integration with Nexus**