Install & configure Maven build tool on Jenkins

In this page, we will describe the installation and configuration process of Maven in our Jenkins server

- **Vagrant, Centos 7 OS & Jenkins Server**.
- **Also Works for : AWS EC2, Red Hat, Jenkins Server**

step 1 : connect to the Jenkins server and install Maven

as a reminder, we have our jenkins server installed with vagrant which contains the following characteristics :

- **IP Address : 192.168.56.117**
- **user : vagrant**
- **password : vagrant**

the process is as follows:

1- Open the terminal,

2- connect to the server with **ssh**

3- use the **yum** package manager to **install git**

```
ssh vagrant@192.168.56.177
```

---

step 2 : Copy the maven latest version of binary source

Maven is a **code build tool which used to convert your code to an artifact**. this is a widely used **plugin** to **build in continuous integration.**

I- Process for copy the maven link

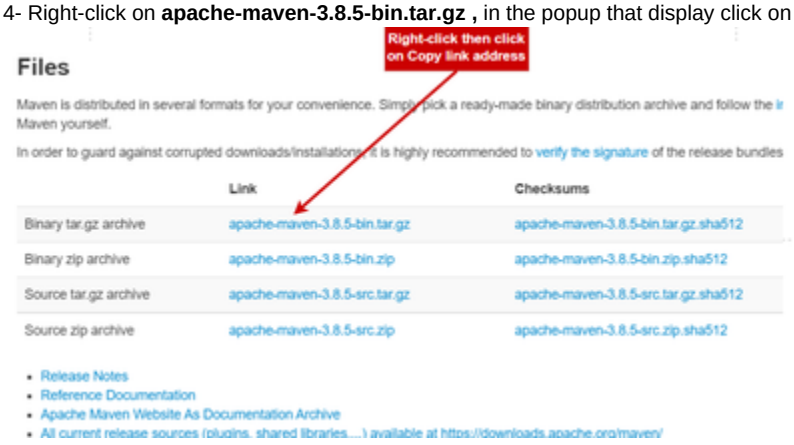
1- Open a new tab in the browser

2- Open the link: https://maven.apache.org/download.cgi

> **Note :** the page that opens is the page of the **official site of Maven**. the last version of the tool is there. to obtain it go in the section File of this page, make a right click on the link **apache-maven-3.8.5-src.tar.gz** then copy the address of this link.

3- Scroll down in the **Files** section of this page. the line that is marked **Binary tar.gz archive** is the one we will use

4- Right-click on **apache-maven-3.8.5-bin.tar.gz ,** in the popup that display click on **Copy link address**



II- Downlead the binary using wget

in the terminal, when you are connected to the Jenkins server, execute these commands :

 # cd /opt then **# ls**

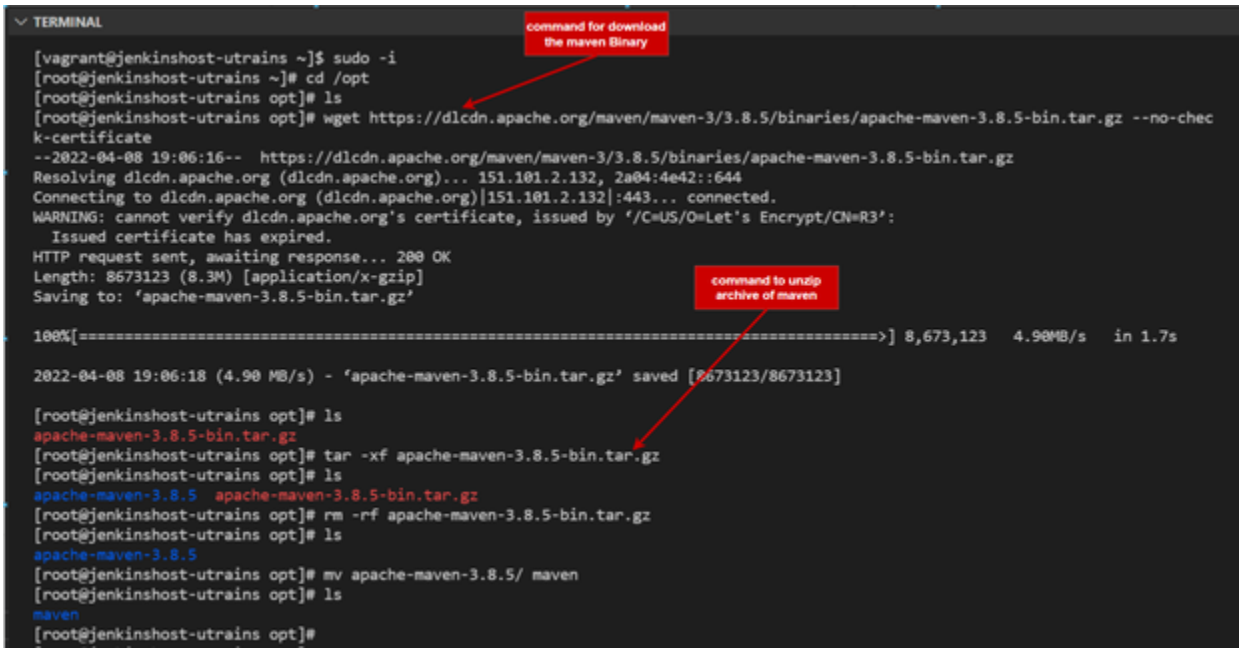
 # wget paste the link and let it download (**# ls** to make sure it downloaded successfully)

 # tar -xf apache-maven-3.8.5-bin.tar.gz then **# ls**

- Remove the tar file: **# rm -rf apache-maven-3.8.5-bin.tar.gz**
- Let's change the directory name to simply **maven**:

 # mv apache-maven-3.8.5/ maven then **# ls**

```
sudo -i
cd /opt
ls
wget https://dlcdn.apache.org/maven/maven-3/3.8.5/binaries/apache-maven-3.8.5-bin.tar.gz --no-check-certificate
tar -xf apache-maven-3.8.5-bin.tar.gz
ls
rm -rf apache-maven-3.8.5-bin.tar.gz
mv apache-maven-3.8.5/ maven
ls
```



III- Setup M2_HOME and M2 paths in .bash_profile of the user and add these to the path variable

 # cd (to go back to the root directory)

 # vim .bash_profile then go to the Insert mode

M2_HOME=/opt/maven

M2=/opt/maven/bin

- Modify the **PATH** variable by adding the new variable created : **PATH=$PATH:$HOME/bin:$JAVA_HOME:$M2-HOME:$M2**
- **Save and Quit**

```
cd
vim ~/.bash_profile
M2_HOME=/opt/maven
M2=$M2_HOME/bin
PAHT=<Existing_PATH>:$M2_HOME:$M2
```

- **.bash_profile file content**

```
TERMINAL
# .bash_profile

# Get the aliases and functions
if [ -f ~/.bashrc ]; then
        . ~/.bashrc
fi

# User specific environment and startup programs

# Maven Path conf:
M2_HOME=/opt/maven
M2=/opt/maven/bin

# Java path conf :
JAVA_HOME=/usr/lib/jvm/java-1.8.0-openjdk-1.8.0.322.b06-2.el8_5.x86_64


PATH=$PATH:$HOME/bin:$JAVA_HOME:$M2_HOME:$M2

export PATH
~
```

- make the final command for apply path changes : **source .bash_profile**
- **mvn command :** check if all is correctly configured

```
source .bash_profile
echo $M2
mvn -version
```

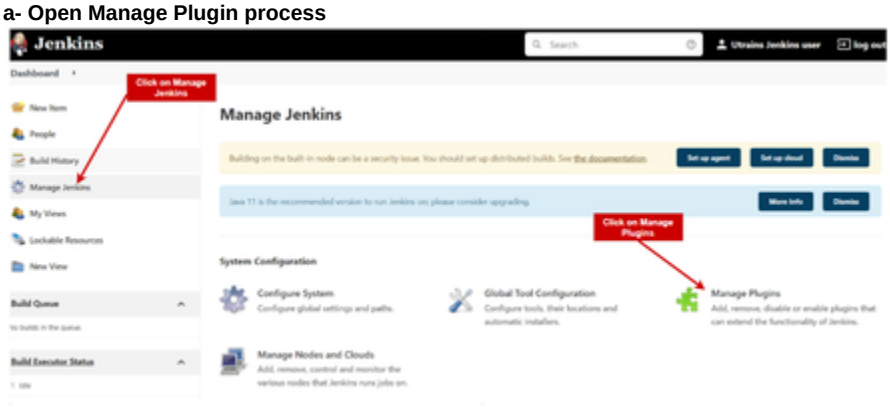
So far we have completed the installation of maven software to support maven plugin on the jenkins console. Let's jump onto Jenkins to complete the remaining steps.

IV- Setup maven on Jenkins console

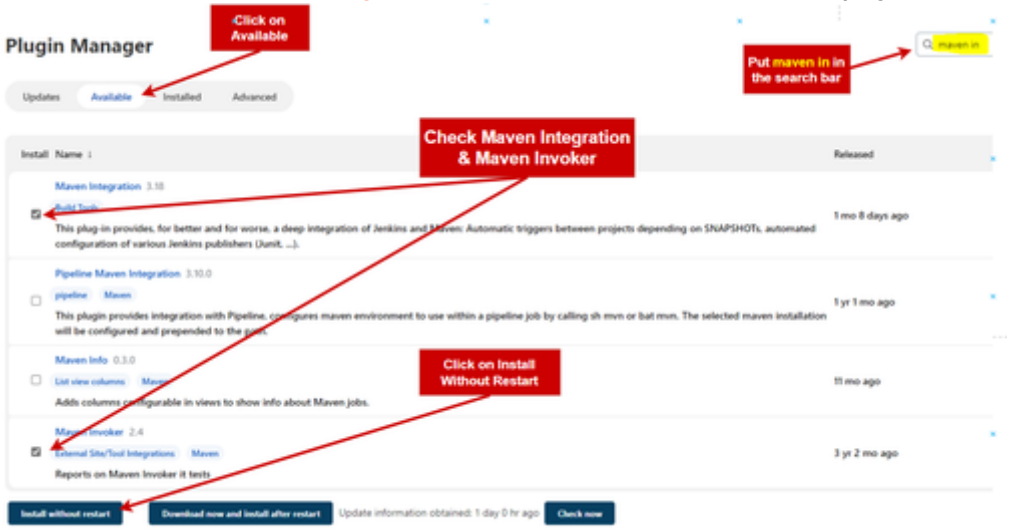
1. Install maven plugin without restart

- `Manage Jenkins` > `Jenkins Plugins` > `available` > `Maven Invoker`
- `Manage Jenkins` > `Jenkins Plugins` > `available` > `Maven Integration`]

a- Open Manage Plugin process



a- Search Maven In check Maven Integration & Maven Invocation then install these 2 plugins



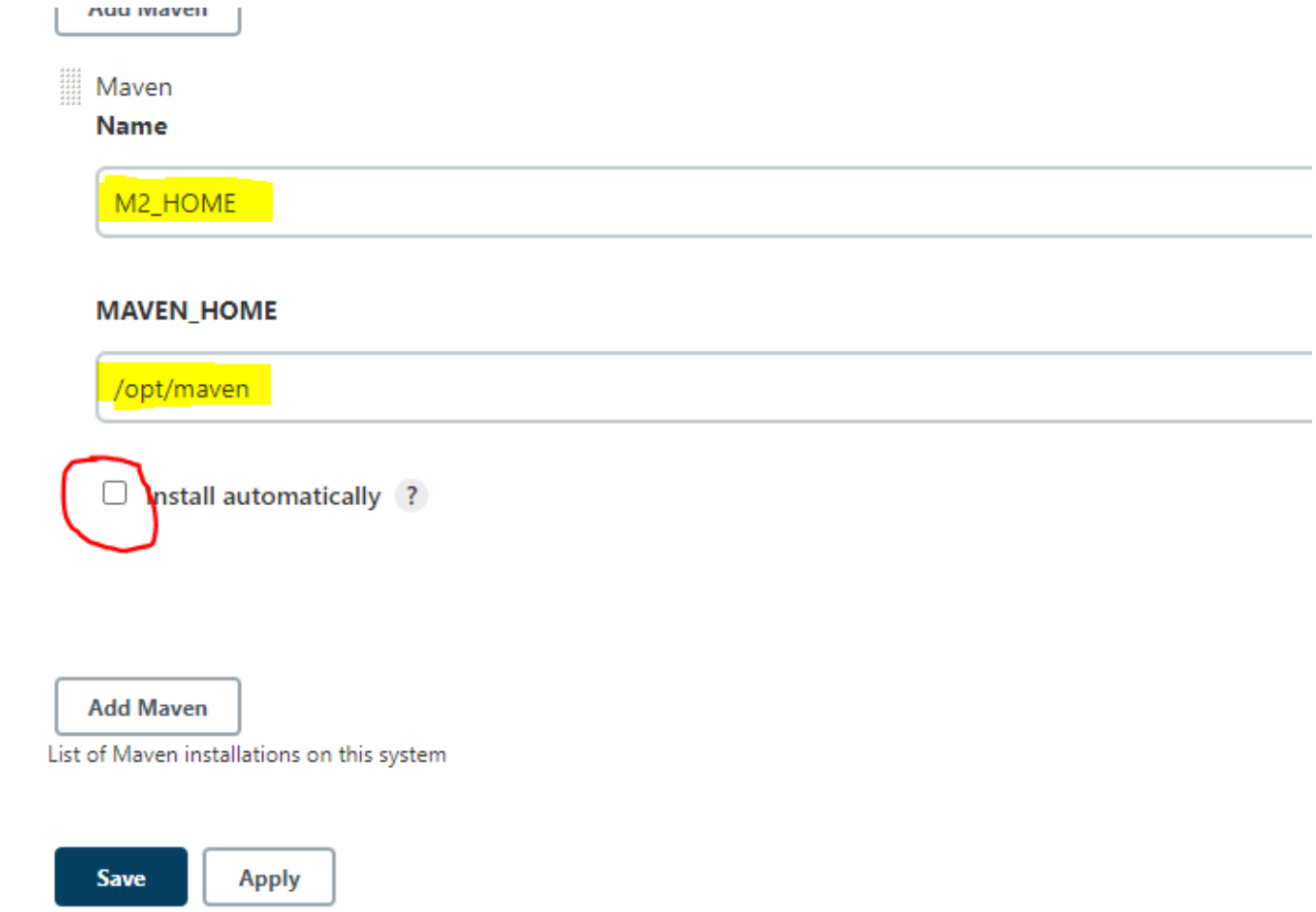
2. Configure maven path

- `Manage Jenkins` > `Global Tool Configuration` > `Maven`

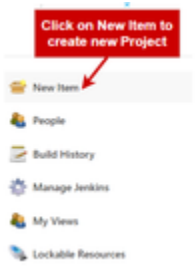
click on **Add Maven**, Uncheck **Install Automatically** then put these configuration :
Name: **M2_HOME**

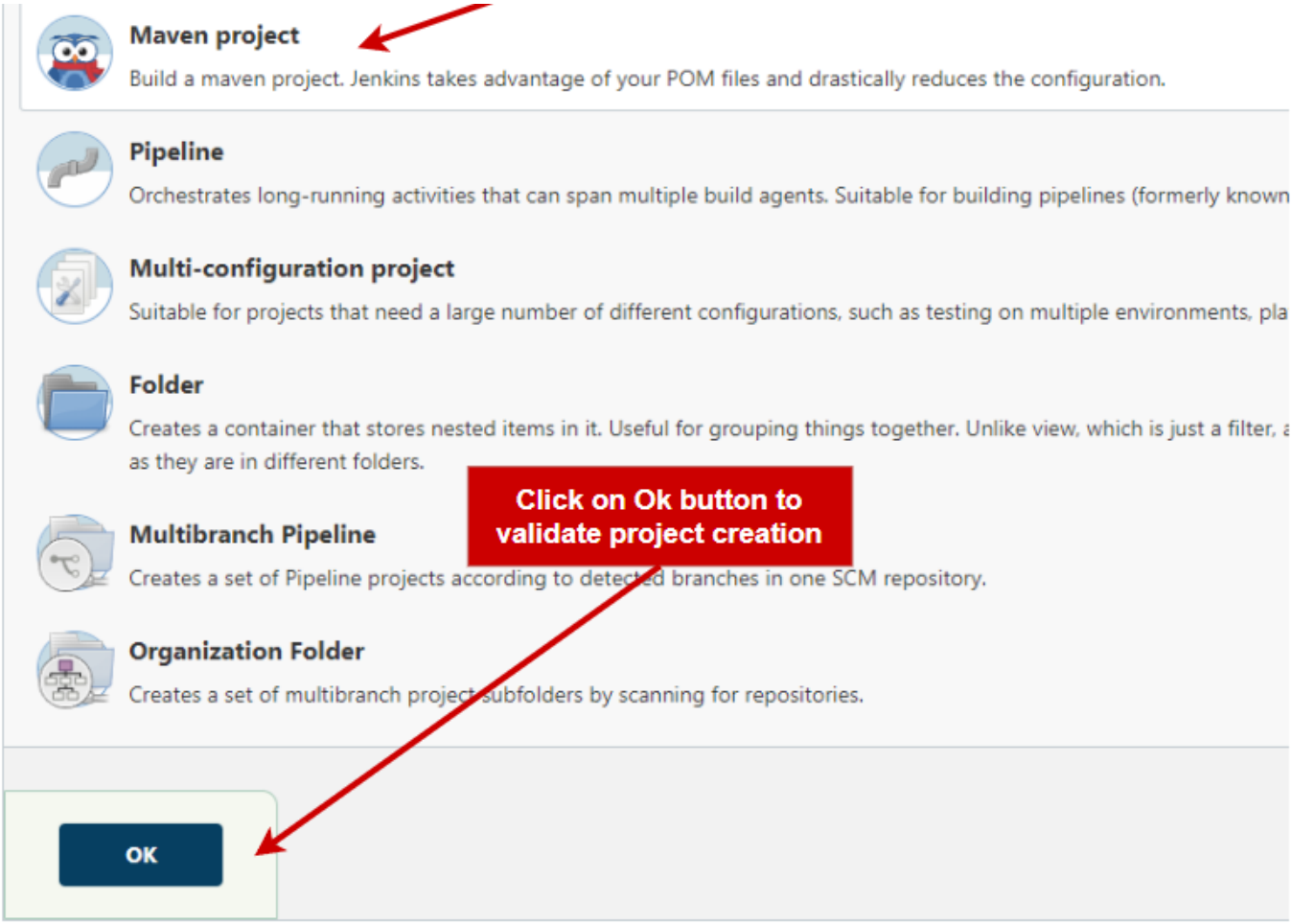
MAVEN_HOME: **/opt/maven**

Click on **Apply** then **Save** to save the maven path in our Jenkins web interface



V- Maven First Project creation





📅 Releases

- **1.0 :** build for Utrains Student

📅 Date : 01/04/2022

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📈 Link for similar document

- 🔗 **Create EC2 in AWS using Red Hat Enterprise image**