

Lab Exercise 7

Integrating Maven with Jenkins

Objective: To install the Maven plugin in Jenkins for smooth integration and automation of Maven-based build processes within the Jenkins environment

Tools required: Git, GitHub, and Jenkins

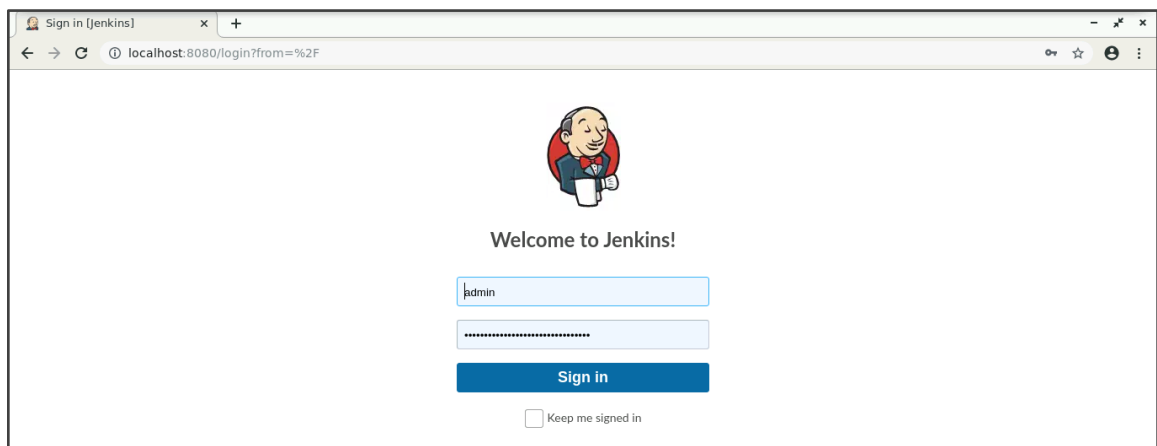
Prerequisites: None

Steps to be followed:

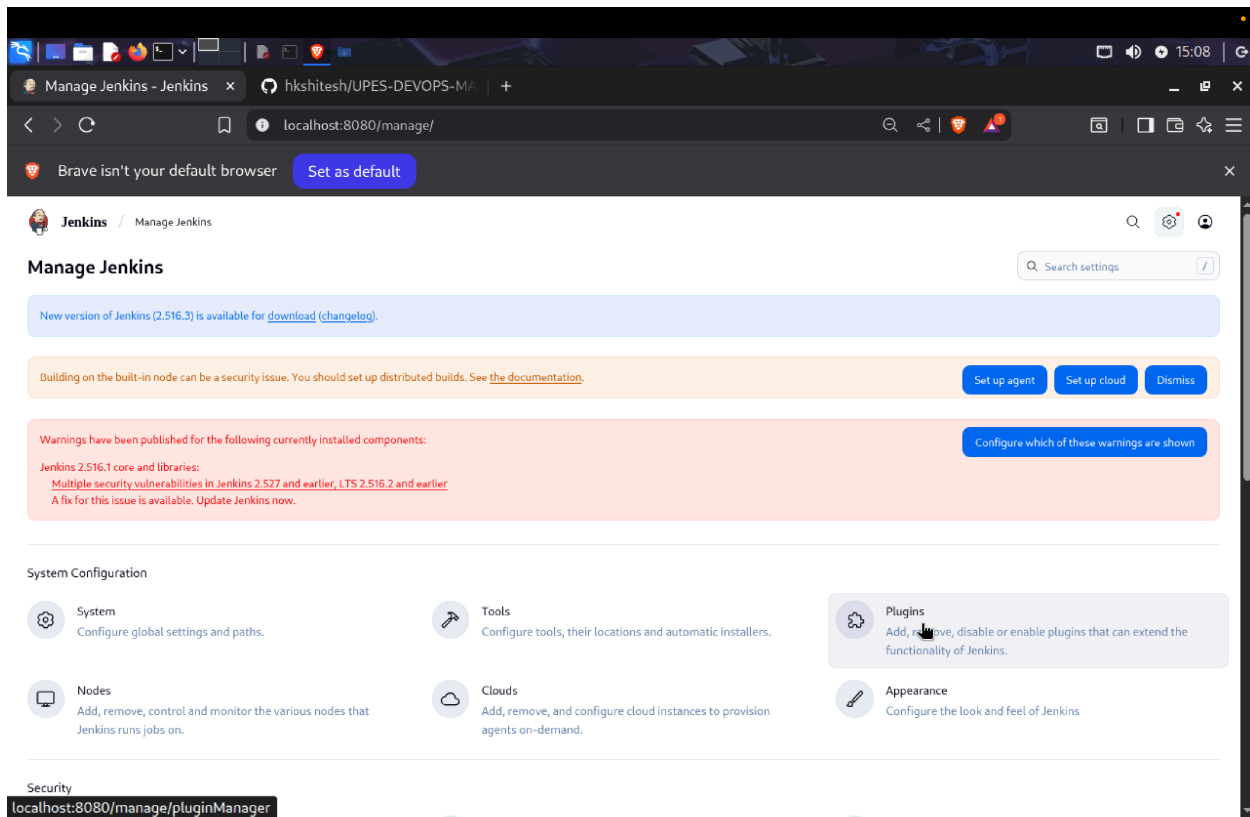
1. Install the Maven plugin
2. Set up Global Tool Configuration
3. Fork a sample repository
4. Integrate Maven with Jenkins

Step 1: Install the Maven plugin

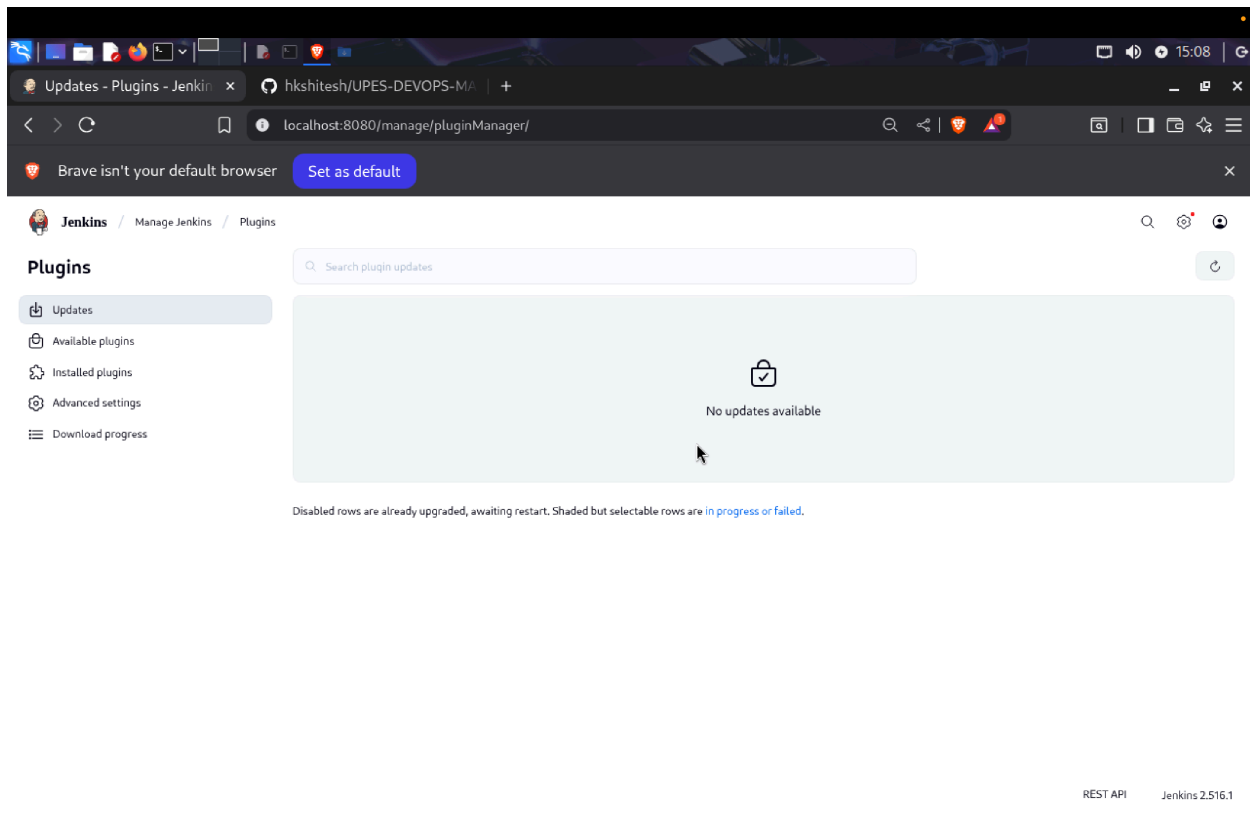
1. Open the browser, go to the Jenkins Dashboard by typing **localhost:8080** in your browser, provide the credentials, and click the **Sign in** button



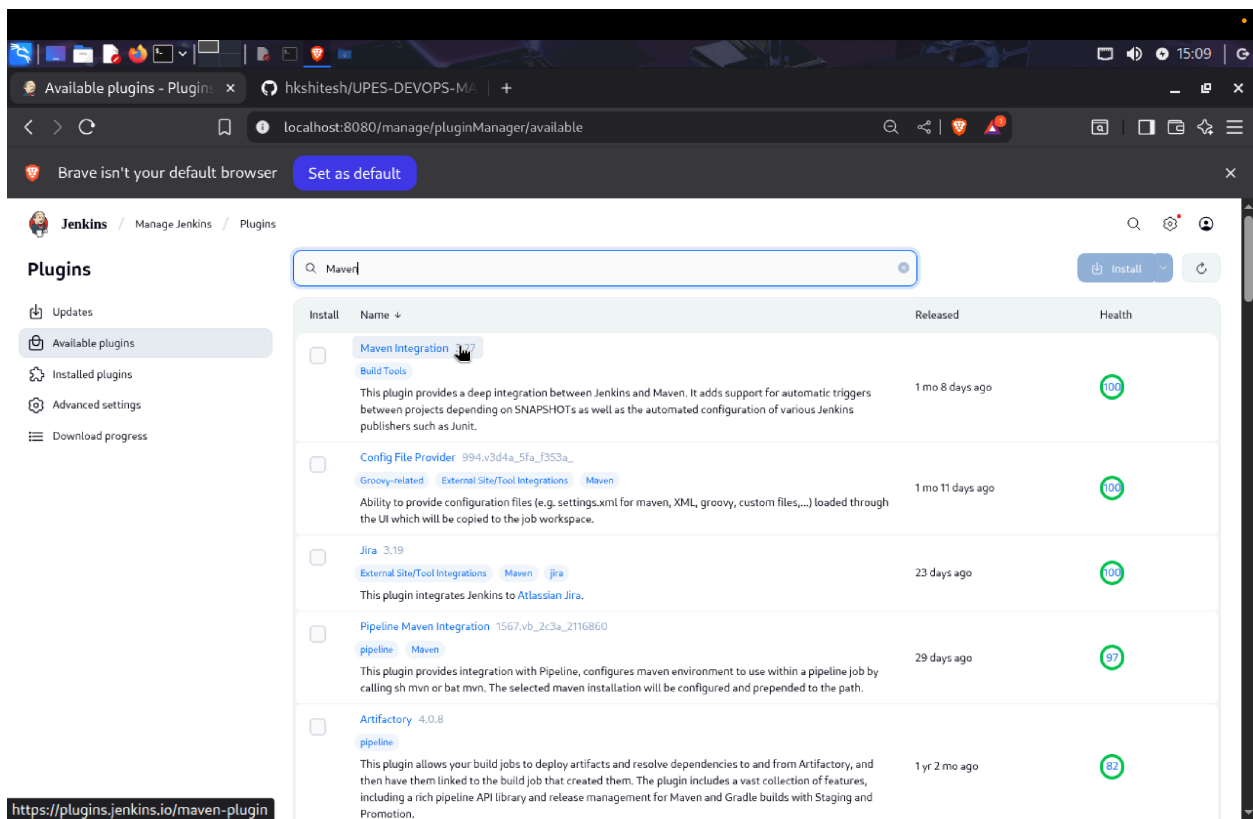
2. Click on the **Manage Jenkins** option as shown in the screenshot below:



3. Click on the **Plugins** option as shown in the screenshot below:



- Click on **Installed plugins** to verify whether the **Maven Integration plugin** has been installed



Note: Maven is already installed in your practice lab environment. If not, click on **Available plugins**, search for the **Maven Integration plugin**, and install it.

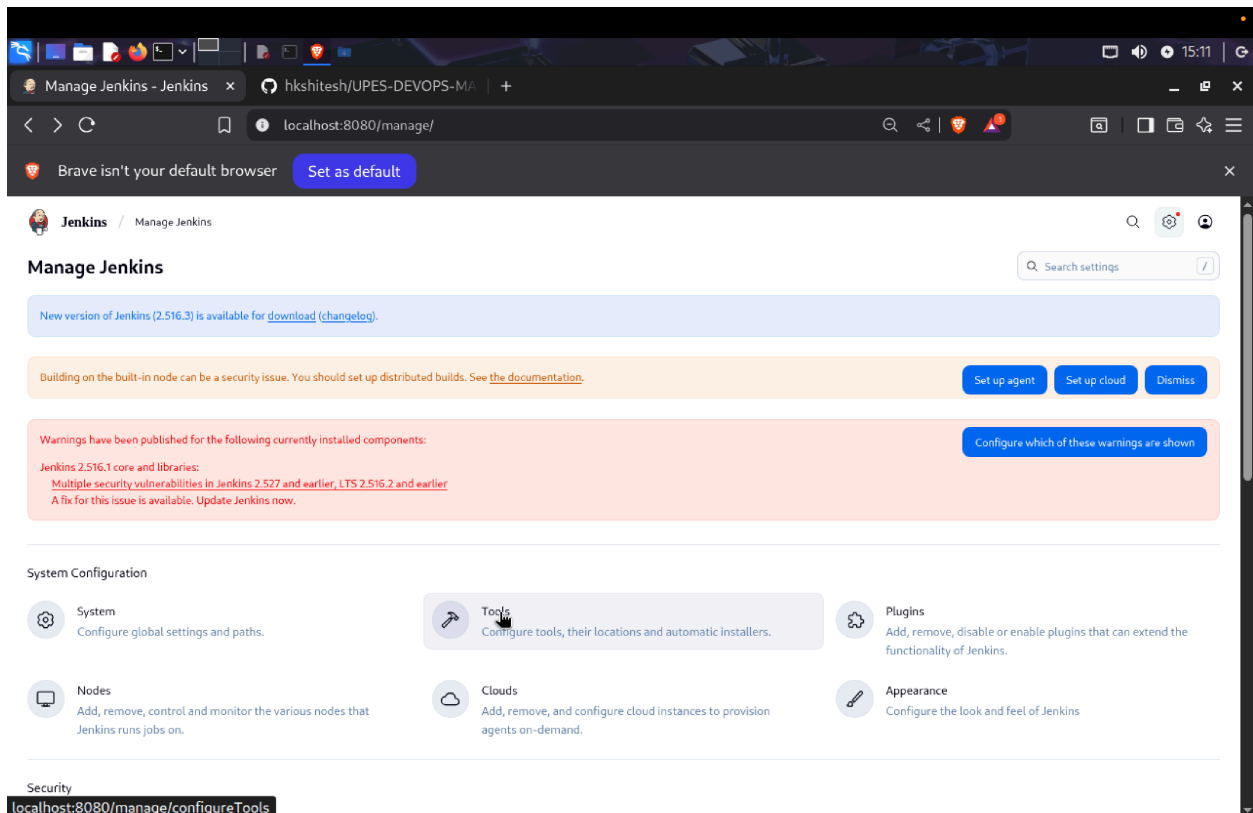
- Use the following command to check the Maven version:

mvn -version

```
labsuser@ip-172-31-39-225:~$ mvn -version
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 11.0.21, vendor: Ubuntu, runtime: /usr/lib/jvm/java-11-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.2.0-1018-aws", arch: "amd64", family: "unix"
labsuser@ip-172-31-39-225:~$
```

Step 2: Set up Global Tool Configuration

Go to the Jenkins Dashboard, click on Manage Jenkins, and then select Tools from the list of options



The screenshot shows the Jenkins Manage Jenkins page in a Brave browser. The page has a dark theme. At the top, there's a navigation bar with the Jenkins logo and the text "Manage Jenkins". Below this, there's a search bar and a notification banner stating "New version of Jenkins (2.516.3) is available for download (changelog)". A warning banner below that says "Building on the built-in node can be a security issue. You should set up distributed builds. See the documentation." with buttons for "Set up agent", "Set up cloud", and "Dismiss". Another warning banner mentions security vulnerabilities in Jenkins 2.527 and earlier, with a button to "Configure which of these warnings are shown". The main content area is titled "System Configuration" and contains several tiles: "System" (Configure global settings and paths), "Tools" (Configure tools, their locations and automatic installers), "Plugins" (Add, remove, disable or enable plugins that can extend the functionality of Jenkins), "Nodes" (Add, remove, control and monitor the various nodes that Jenkins runs jobs on), "Clouds" (Add, remove, and configure cloud instances to provision agents on-demand), and "Appearance" (Configure the look and feel of Jenkins). The "Tools" tile is highlighted with a mouse cursor. At the bottom, there's a "Security" section with a link to "localhost:8080/manage/configureTools".

1. To configure Maven, click on the **Maven installations** button in the Maven section and enter a **Name** and **MAVEN_HOME** path

