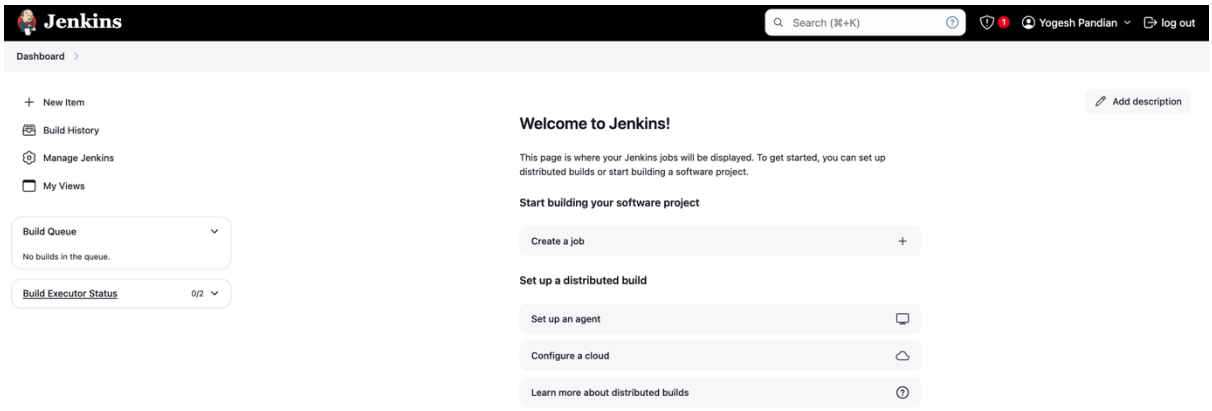
Jenkins Configuration Guide for Testers

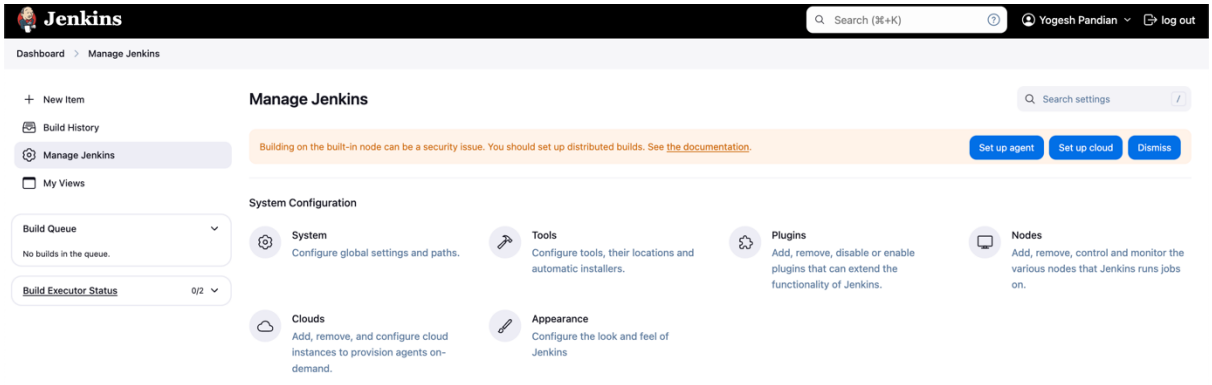
One-Time Configuration

After installing Jenkins, open the Jenkins dashboard and ensure Jenkins is running. To begin, access **Manage Jenkins** from the main dashboard.



Manage Jenkins

Within **Manage Jenkins**, you'll find various configuration options. Select **System Configuration** to access important settings. From here, go to **Plugins** to configure the necessary tools and integrations.



Installing Necessary Plugins

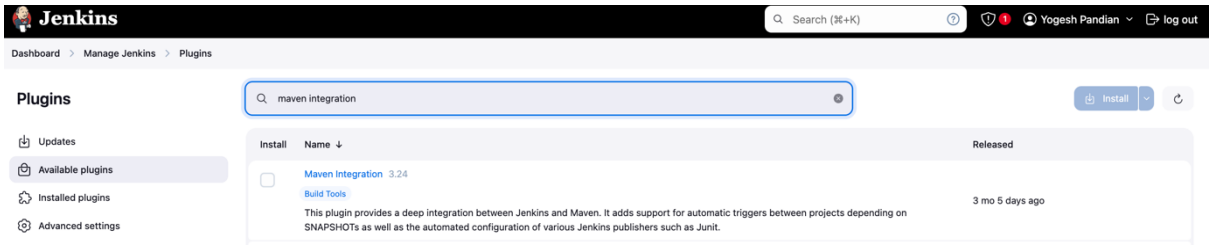
In Jenkins, plugins are essential for integrating third-party tools such as **Maven, Git, and JDK**. These tools are crucial for managing your build process and connecting Jenkins to external systems like **GitHub**.

Key Plugins for Test Automation:

- **Maven**: Manages the build lifecycle of your project.
- **Git**: Handles version control.
- **GitHub**: Integrates with GitHub repositories for source code management.
- **JDK**: Configures Java for running your build and automation tasks.

To install plugins:

1. Go to **Manage Jenkins > Plugins**.
2. Under the **Available** tab, search for the **Maven Integration Plugin**.
3. Select the plugin and click **Install**.



Same way install all mentioned key plugins. Once the plugins are installed, ensure you've set the correct paths for **Maven, Git, and JDK**. These paths are necessary for running your automation scripts in Jenkins.

Configuring Tool Paths

Now that the necessary plugins are installed, you need to set the paths for **Maven, Git, and JDK.** This step is essential for Jenkins to recognize these tools.

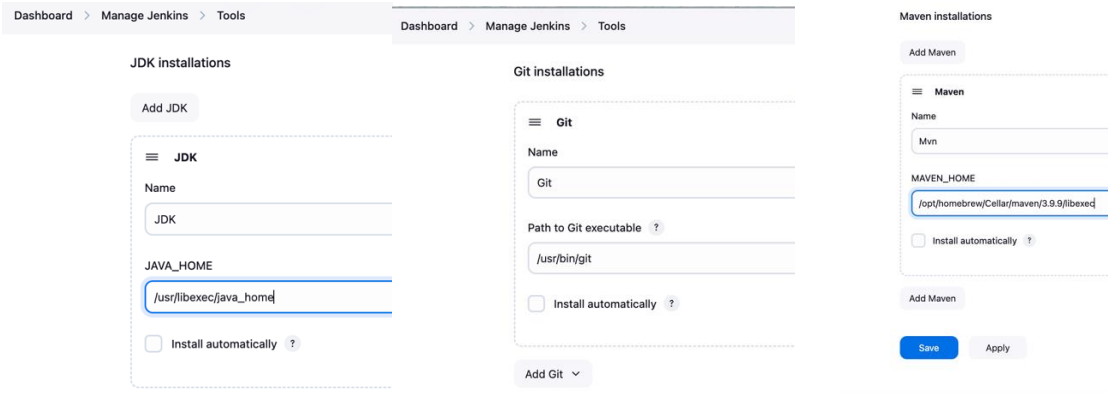
To do this, navigate to **Manage Jenkins > System Configuration** and click on **Tools**. Here, you can configure the locations for each tool.

Example Paths:

- **JDK Path**:
  /opt/homebrew/opt/openjdk@17/libexec/openjdk.jdk/Contents/Home
- **Maven Path**:
  /opt/homebrew/Cellar/maven/3.9.9/libexec
- **Git Path**:
  /usr/bin/git

These paths are essential for Jenkins to locate the tools required to run your automation.

JDK Path **Git Path** **Maven Path**



Summary of One-Time Setup

So far, completed the following setup steps:

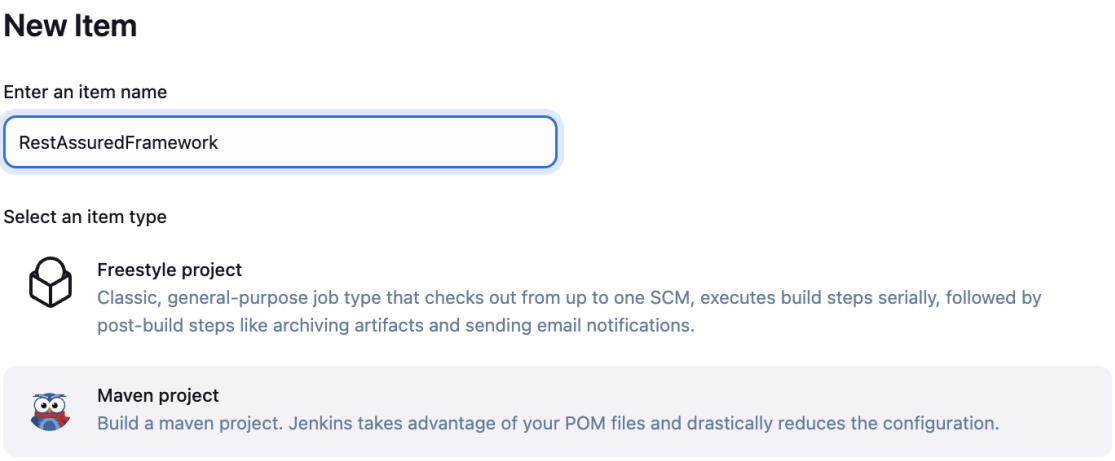
- Installed Jenkins and configured the initial setup.
- Installed key plugins, including Maven, Git, GitHub, and JDK.
- Set the paths for Jdk, Maven, and Git in **System Configuration > Tools**.

Running a Maven Project from GitHub

Now that Jenkins is set up, let's configure it to run a Maven project from GitHub.

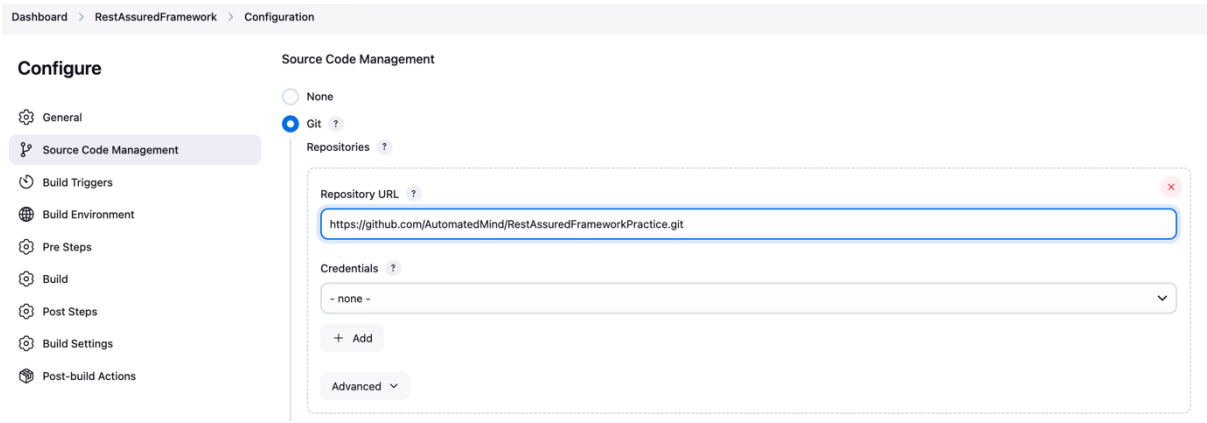
Creating a New Jenkins Job

1. On the **Jenkins Dashboard**, click **New Item**.
2. Select **Maven Project** and provide a name for your project.



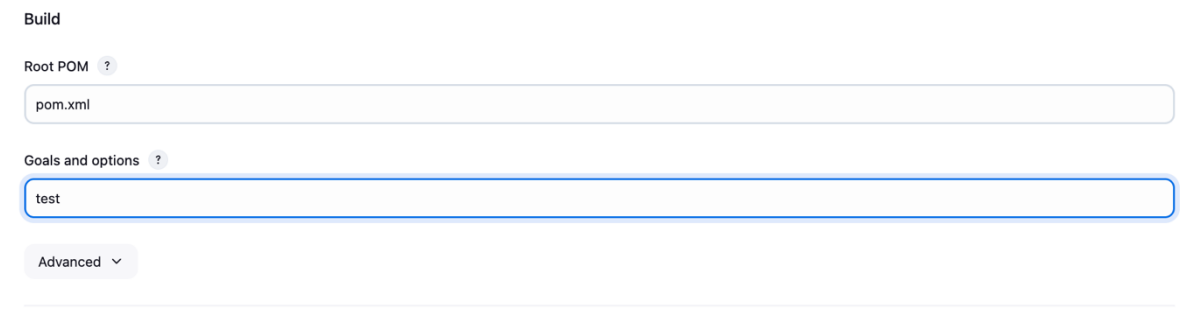
Configuring Source Code Management

1. In the project configuration page, scroll down to **Source Code Management**.
2. Select the **Git** option.
3. Enter the **GitHub repository URL** for your project:
   https://github.com/AutomatedMind/RestAssuredFrameworkPractice.git



Setting Up the Build Command

1. Scroll to the **Build** section.
2. Under **Goals and Options**, enter the following command:
   `test`
   This tells Maven to run the `mvn test` command, which will execute the tests defined in the `pom.xml` file.
3. Save the configuration.



Project Configuration Summary

Here's a quick recap of the steps to configure the project:

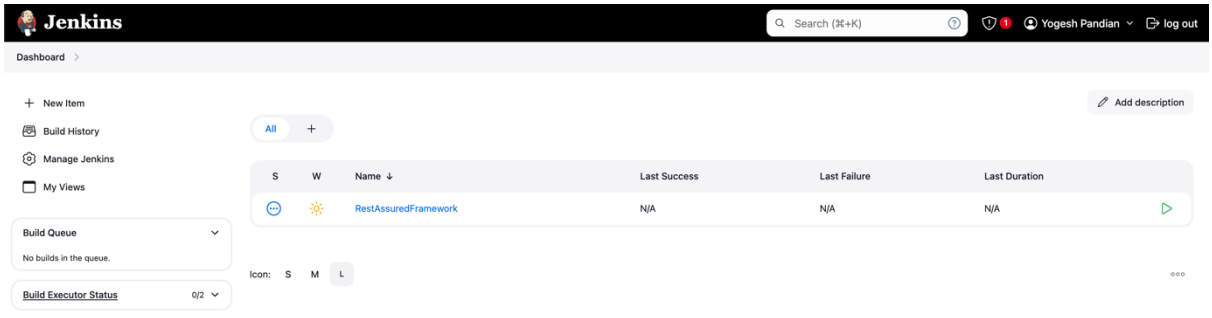
- Create a new **Maven Project** and provide a name.
- In **Source Code Management**, select **Git** and provide the GitHub project URL.
- Under **Build**, add the Maven command `test` in the **Goals and Options** field.
- Click **Save** to complete the configuration.

Running the Project

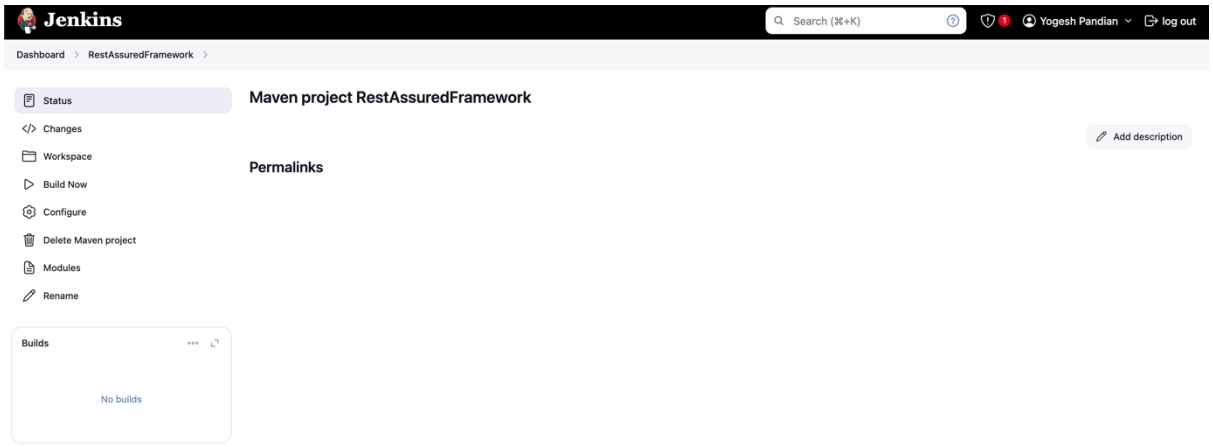
After configuring your project, it will appear on the **Jenkins Dashboard**. To trigger a build:

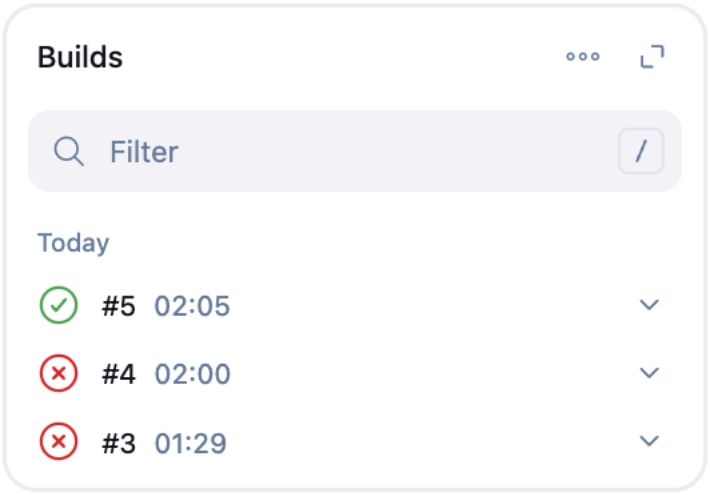
1. Click on the project name to open the project's specific dashboard.
2. From there, click **Build Now** to run the project.

Project Dashboard



Project Specific Dashboard





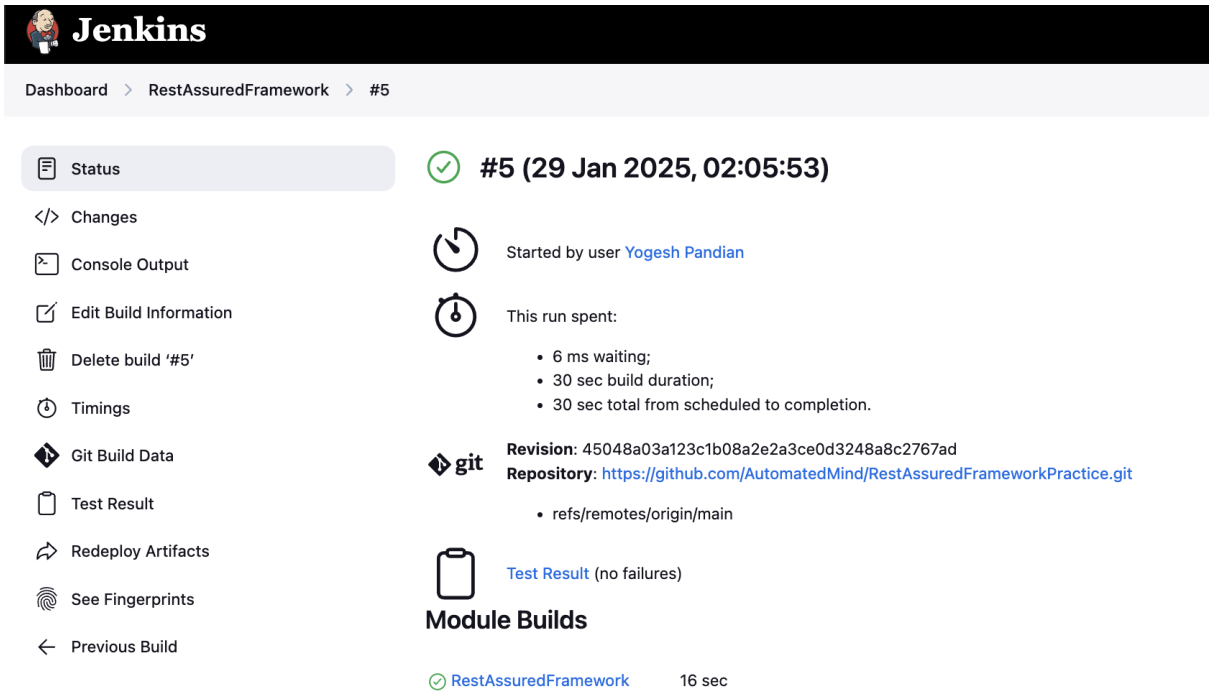
Viewing Build Details

After triggering the build, you can view important details about the build process, such as:

- Who executed the build
- When the build was executed
- The time it took to complete
- The overall build status

Click on the **Console Output** to see the detailed logs and any errors that occurred during the build.

Build Details

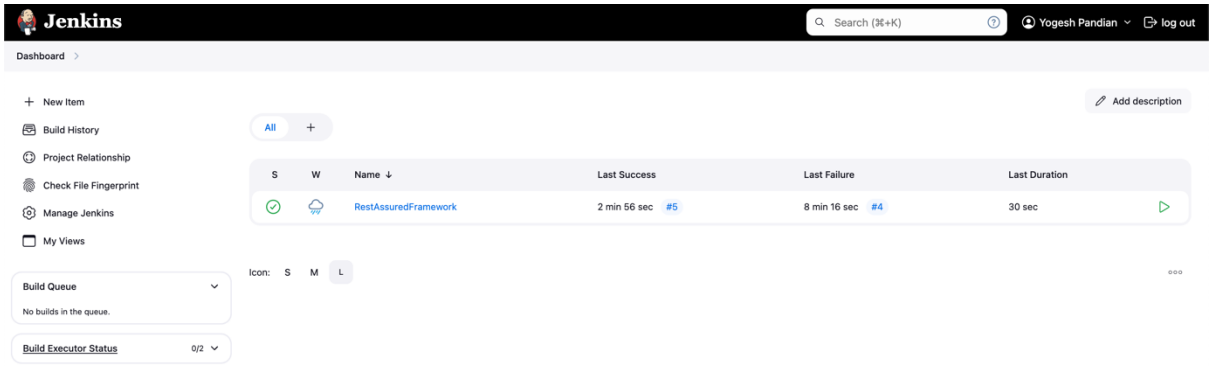


Console Output

```
[INFO] Tests run: 4, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 14.10 s -- in TestSuite
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 4, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[JENKINS] Recording test results
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  16.375 s
[INFO] Finished at: 2025-01-29T02:06:20+05:30
[INFO] ------------------------------------------------------------------------
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving /Users/apple/.jenkins/workspace/RestAssuredFramework/pom.xml to org.example/RestAssuredFramework/1.0-SNAPSHOT/RestAssuredFramework-1.0
SNAPSHOT.pom
channel stopped
Finished: SUCCESS
```

Checking Build Status

Once the build completes, you'll see a green checkmark if the build passed. If it fails, you can find detailed error messages in the **Console Output** to help diagnose the issue.



With these steps, we can successfully set up Jenkins to run Maven projects from GitHub. Now we know how to **configure Jenkins, install necessary plugins, link your GitHub repository,** and **run** your **automation tests** using **Maven commands**.