5. Introduction to Jenkins: What is Jenkins?, Installing Jenkins on Local or Cloud Environment, Configuring Jenkins for First Use.

Introduction to Jenkins

What is Jenkins?

Jenkins is an open-source automation server widely used in the field of Continuous Integration (CI) and Continuous Delivery (CD). It allows developers to automate the building, testing, and deployment of software projects, making the development process more efficient and reliable.

Key features of Jenkins:

- **CI/CD**: Jenkins supports Continuous Integration and Continuous Deployment, allowing developers to integrate code changes frequently and automate the deployment of applications.
- **Plugins**: Jenkins has a vast library of plugins that can extend its capabilities. These plugins integrate Jenkins with version control systems (like Git), build tools (like Maven or Gradle), testing frameworks, deployment tools, and much more.
- **Pipeline as Code**: Jenkins allows the creation of pipelines using Groovy-based DSL scripts or YAML files, enabling version-controlled and repeatable pipelines.
- **Cross-platform**: Jenkins can run on various platforms such as Windows, Linux, macOS, and others.

Installing Jenkins

Jenkins can be installed on local machines, on a cloud environment, or even in containers. Here's how you can install Jenkins in Window local System environments:

1. **Installing Jenkins Locally**

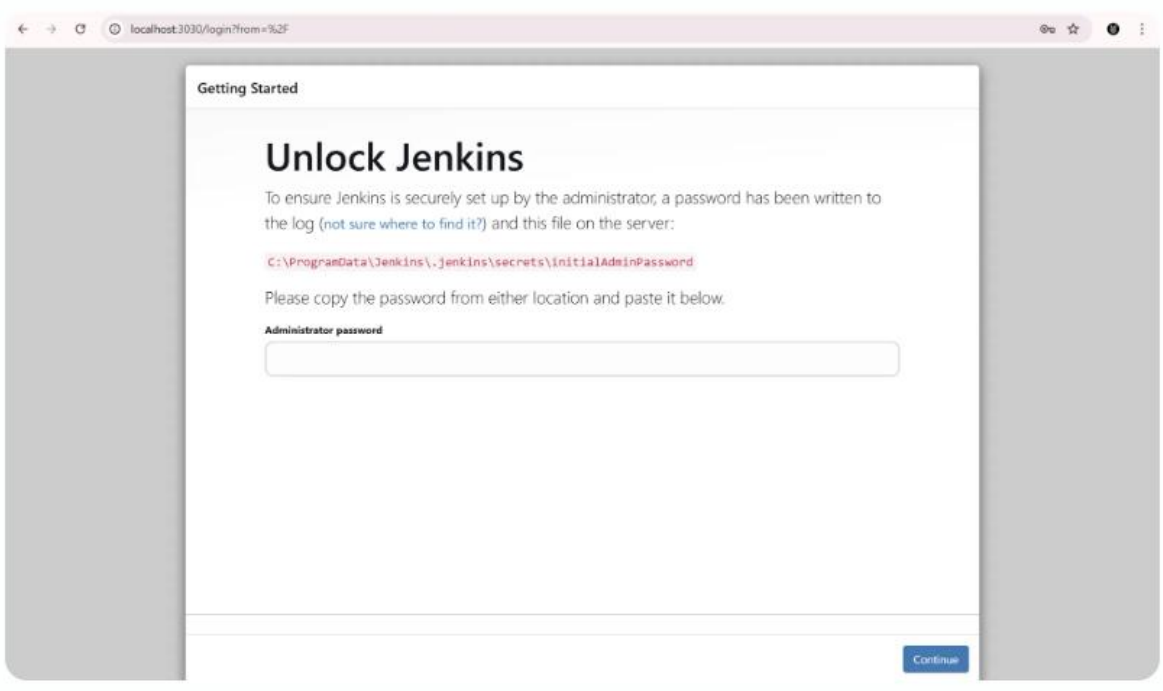
Step-by-Step Guide (Window):

1. **Prerequisites:**
    - Ensure that J**ava (JDK) is installed** on your system. **Jenkins requires Java 21**. If not then **click here**.
    - You can check if Java is installed by running **java -version** in the terminal.
2. **Install Jenkins on Window System):**
    - Download the Jenkins Windows installer from the official Jenkins website.
    - Run the installer and follow the on-screen instructions. While installing choose **login system**: **run service as LocalSystem (not recommended)**.

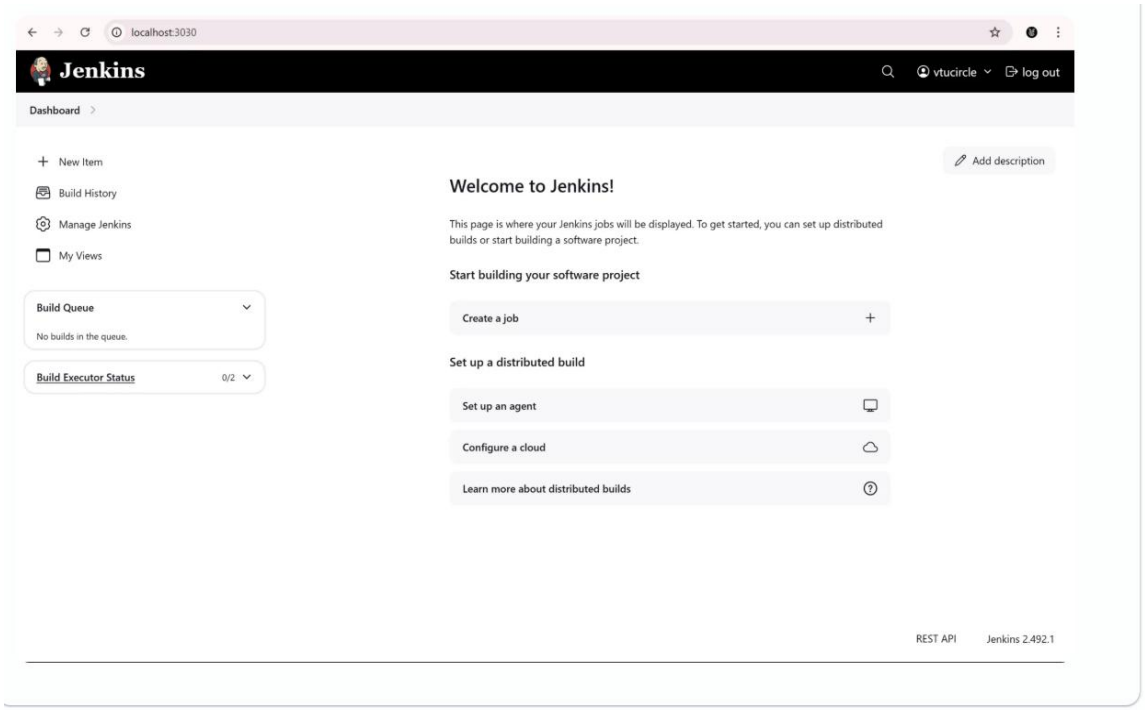
- After then use **default port** or you can **configure you own port** then **click on test** and **next**.
- After then **change the directory** and choose **java jdk-21** path look like **C:\Program Files\Java\jdk-21**.
- After then **click next, next** and then it will **ask permission click on yes** and it will start installing.
- After successfully installed, Jenkins will be **running on port either default port** or **chosen** (you can access it in your browser at **http://localhost:8080**) or **http://localhost:8080**.

2. Jenkins Setup in browser:

- After opening browser by visiting your local address the browser should look like below screenshot.



- It will ask **administrator password** so you have to **navigate the above highlighted path** and open that **initialAdminPassword in notepad** or any software to **see the password**.
- Just c**opy that password and paste** it and **click on continue**.
- It will ask to **customize Jenkins** so **click on install suggested plugin** it will **automatically install all required plugin**.
- After then **create admin profile** by **filling all details** then **click on save and continue** after then **save and finish** after then **click on start using Jenkin**.


localhost:3030
Jenkins
vtucircle
log out
Dashboard
New Item
Build History
Manage Jenkins
My Views
Build Queue
No builds in the queue.
Build Executor Status
0/2
Add description
Welcome to Jenkins!
This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.
Start building your software project
Create a job
Set up a distributed build
Set up an agent
Configure a cloud
Learn more about distributed builds
REST API
Jenkins 2.492.1