



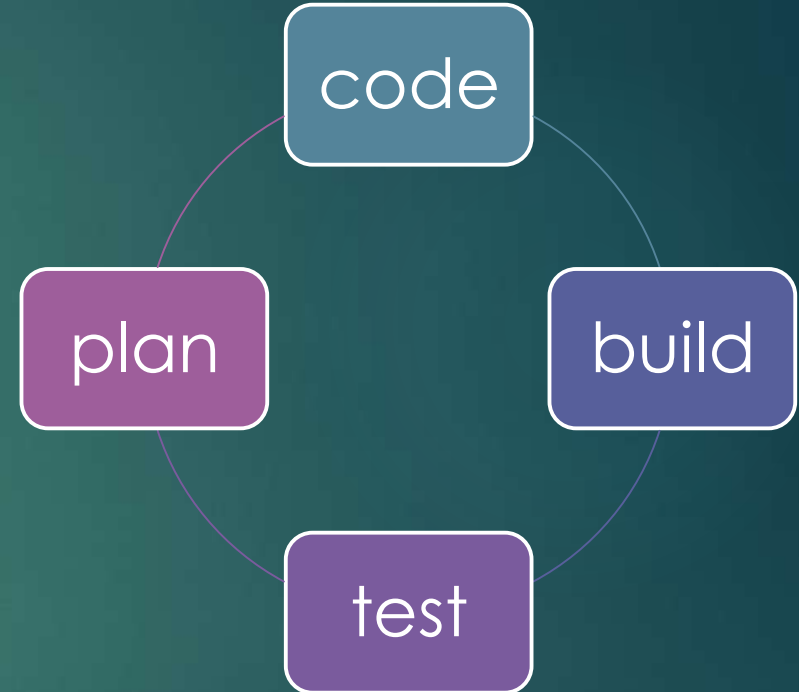
jenkins

INTRODUCTION

Continuous Integration?

- ▶ Developers when they work
- ▶ Code
- ▶ Build
- ▶ test
- ▶ Push


- ▶ All developers push it in the same way to the central server

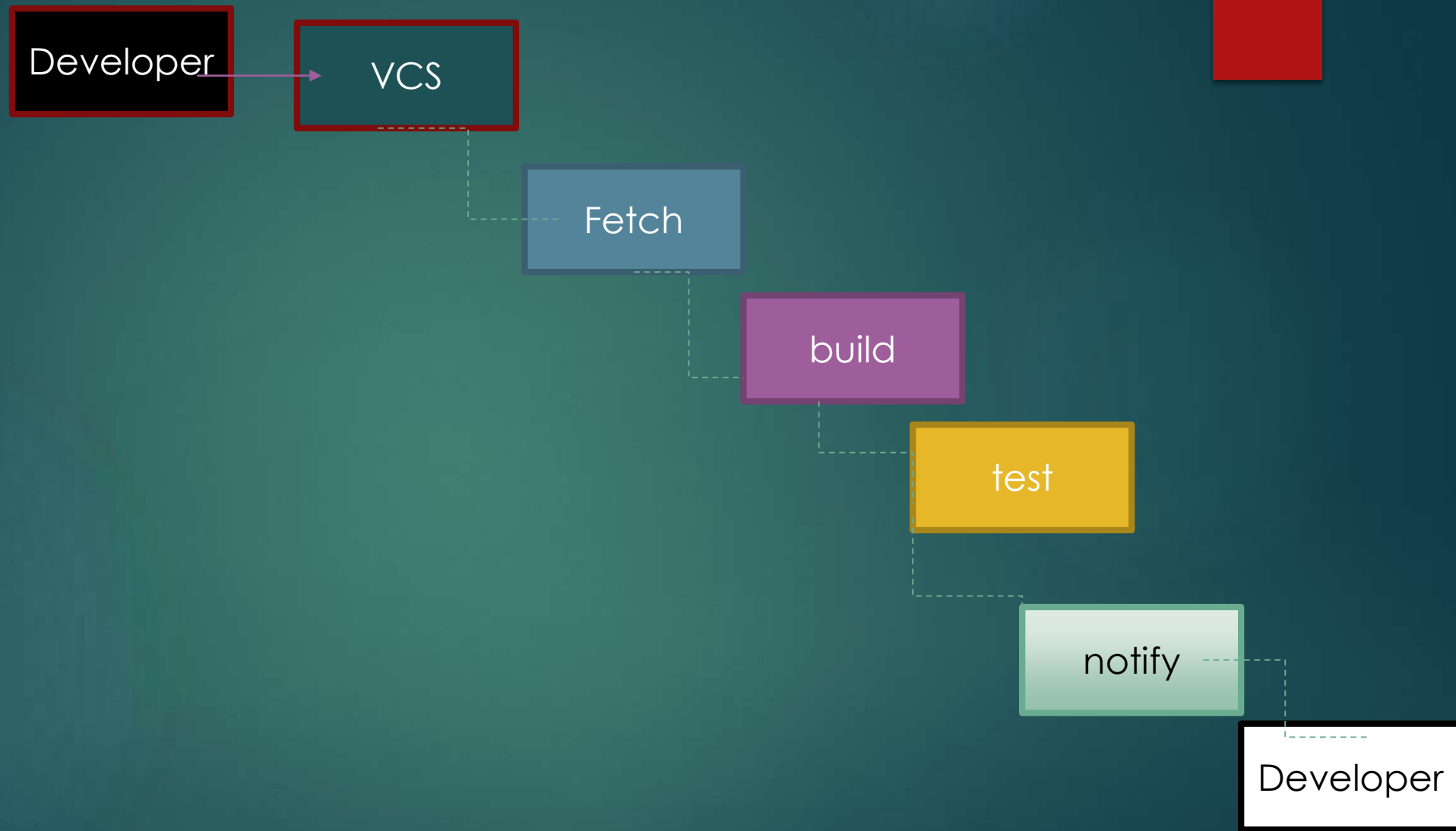


Problem?

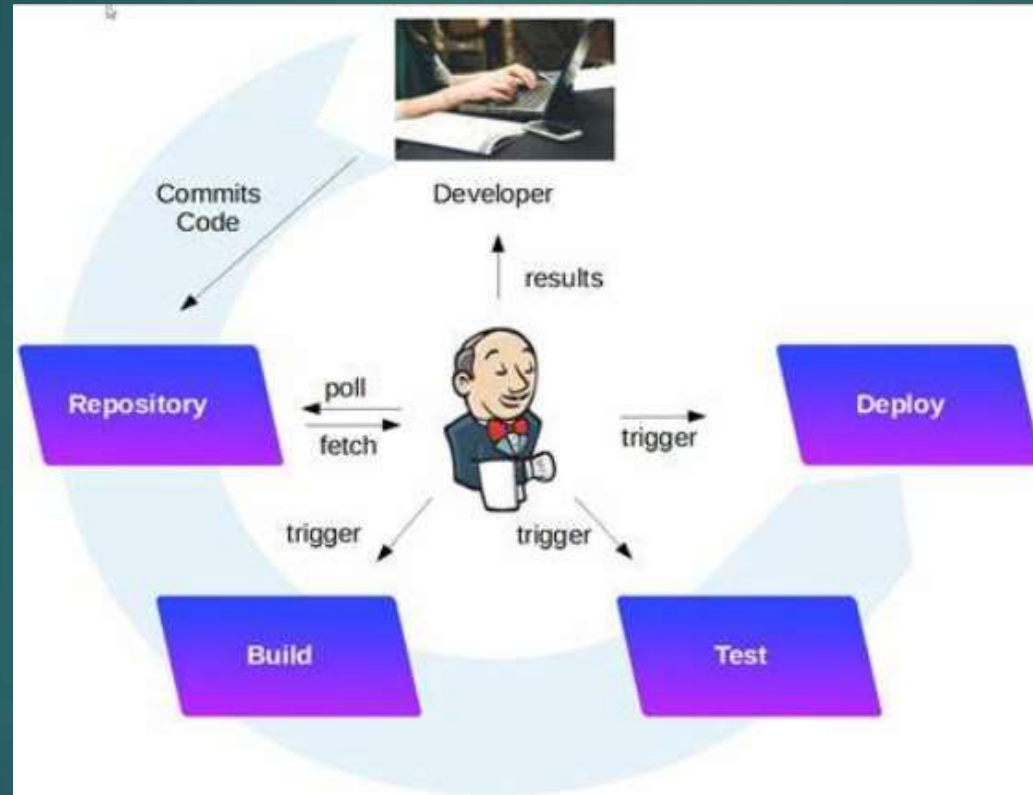
What's the problem

- ▶ Code gets merged into centralized repository (many times in a day or weeks) and code keeps getting merged.
- ▶ But after some days when code gets tested and deployed then it leads to several bugs, issues and conflicts.
- ▶ Reason:
- ▶ Coz code is getting merged rather than getting integrated.
- ▶ Solution:
- ▶ You have to build the code for every commit in version control system.

- 
- ▶ Building of the code should be automated.
 - ▶ If there are any error then the developer gets notified and he gets in the code modifies and rebuild it.
 - ▶ If we automate this process then its known as Continuous Integrations
 - ▶ And Jenkins is one of the famous tool for continuous integration.



CI with jenkins



Jenkins Features

- ▶ Easy Configuration
- ▶ Available Plugins


eg:

VCS plugin,build plugin,cloud plugin.testing pluginsetc

- ▶ Extensible
- ▶ Open source
- ▶ Easy Installation

Jenkins Installations

- ▶ Prerequisite
- ▶ JAVA,JRE,JDK
- ▶ Any Os
- ▶ JDK 11 or JDK 17 is required.
- ▶ Install Java from oracle website

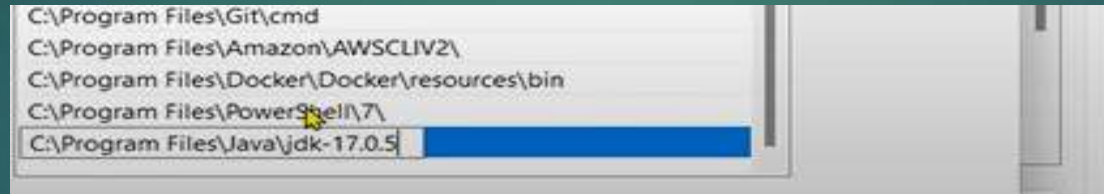


Linux x64 RPM Package	172.94 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_linux-x64_bin.rpm (sha256)
macOS Arm 64 Compressed Archive	167.52 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_macos-aarch64_bin.tar.gz (sha256)
macOS Arm 64 DMG Installer	166.93 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_macos-aarch64_bin.dmg (sha256)
macOS x64 Compressed Archive	170.11 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_macos-x64_bin.tar.gz (sha256)
macOS x64 DMG Installer	169.53 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_macos-x64_bin.dmg (sha256)
Windows x64 Compressed Archive	172.11 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_windows-x64_bin.zip (sha256)
Windows x64 Installer	153.22 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_windows-x64_bin.exe (sha256)
Windows x64 MSI Installer	152.01 MB	https://download.oracle.com/java/17/archive/jdk-17.0.6_windows-x64_bin.msi (sha256)

Activate Windows

Update the java path

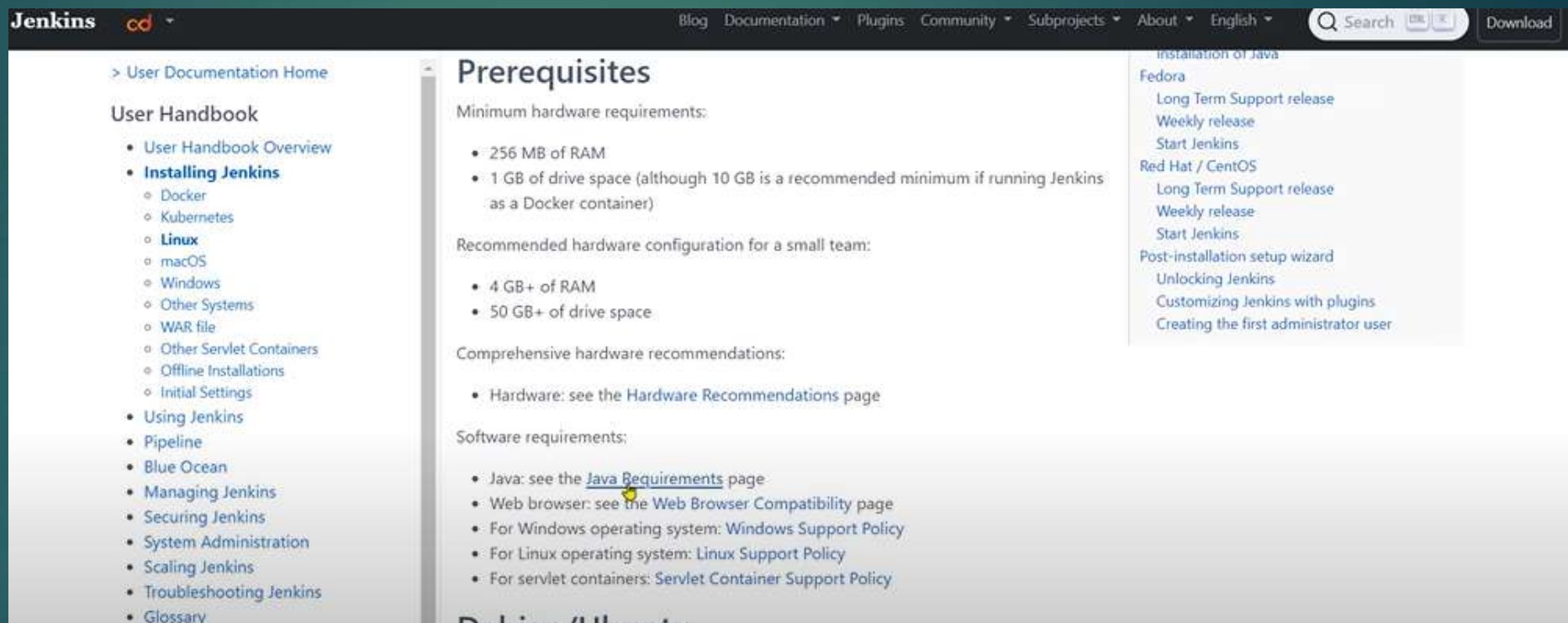
- ▶ Set environmental variables
- ▶ Path=




Check the java version

```
C:\Windows\System32>java -version
java version "11.0.17" 2022-10-18 LTS
Java(TM) SE Runtime Environment 18.9 (build 11.0.17+10-LTS-269)
Java HotSpot(TM) 64-Bit Server VM 18.9 (build 11.0.17+10-LTS-269, mixed mode)
```

Download jenkins



The screenshot shows the Jenkins documentation website. The top navigation bar includes links for Blog, Documentation, Plugins, Community, Subprojects, About, and English. A search bar and a Download button are also present. The left sidebar contains a 'User Handbook' menu with links to Overview, Installing Jenkins (highlighted), Docker, Kubernetes, Linux, macOS, Windows, Other Systems, WAR file, Other Servlet Containers, Offline Installations, Initial Settings, Using Jenkins, Pipeline, Blue Ocean, Managing Jenkins, Securing Jenkins, System Administration, Scaling Jenkins, Troubleshooting Jenkins, and Glossary. The main content area is titled 'Prerequisites' and lists minimum hardware requirements (256 MB of RAM, 1 GB of drive space), recommended hardware configuration for a small team (4 GB+ of RAM, 50 GB+ of drive space), comprehensive hardware recommendations (Hardware: see the Hardware Recommendations page), and software requirements (Java: see the Java Requirements page, Web browser: see the Web Browser Compatibility page, For Windows operating system: Windows Support Policy, For Linux operating system: Linux Support Policy, For servlet containers: Servlet Container Support Policy). A right sidebar lists installation guides for various operating systems and post-installation steps.

Jenkins  [Blog](#) [Documentation](#) [Plugins](#) [Community](#) [Subprojects](#) [About](#) [English](#) [Download](#)

[> User Documentation Home](#)

User Handbook

- [User Handbook Overview](#)
- **[Installing Jenkins](#)**
 - [Docker](#)
 - [Kubernetes](#)
 - **[Linux](#)**
 - [macOS](#)
 - [Windows](#)
 - [Other Systems](#)
 - [WAR file](#)
 - [Other Servlet Containers](#)
 - [Offline Installations](#)
 - [Initial Settings](#)
- [Using Jenkins](#)
- [Pipeline](#)
- [Blue Ocean](#)
- [Managing Jenkins](#)
- [Securing Jenkins](#)
- [System Administration](#)
- [Scaling Jenkins](#)
- [Troubleshooting Jenkins](#)
- [Glossary](#)

Prerequisites

Minimum hardware requirements:

- 256 MB of RAM
- 1 GB of drive space (although 10 GB is a recommended minimum if running Jenkins as a Docker container)

Recommended hardware configuration for a small team:

- 4 GB+ of RAM
- 50 GB+ of drive space

Comprehensive hardware recommendations:

- Hardware: see the [Hardware Recommendations](#) page

Software requirements:

- Java: see the [Java Requirements](#) page
- Web browser: see the [Web Browser Compatibility](#) page
- For Windows operating system: [Windows Support Policy](#)
- For Linux operating system: [Linux Support Policy](#)
- For servlet containers: [Servlet Container Support Policy](#)

Installation of Java

Fedora

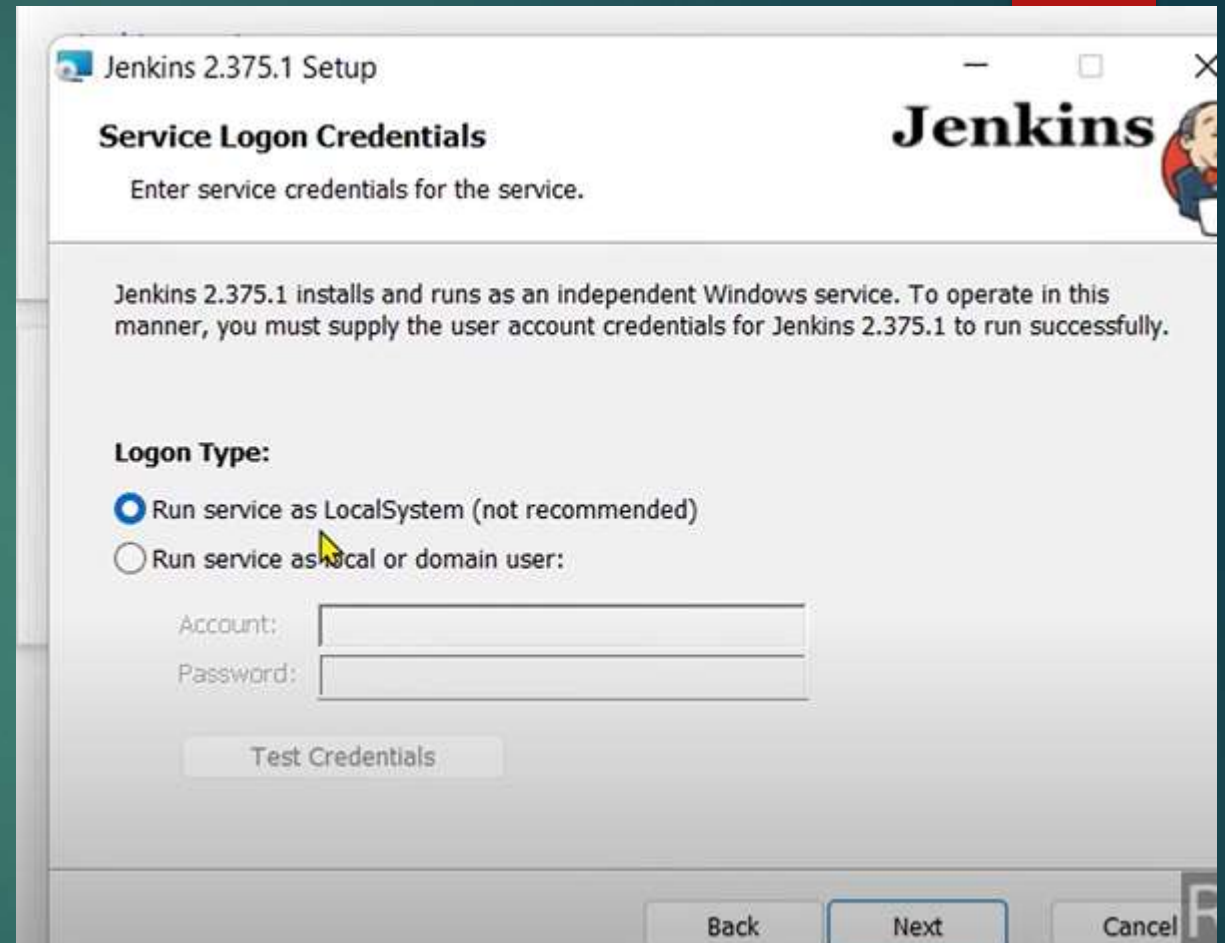
- [Long Term Support release](#)
- [Weekly release](#)
- [Start Jenkins](#)

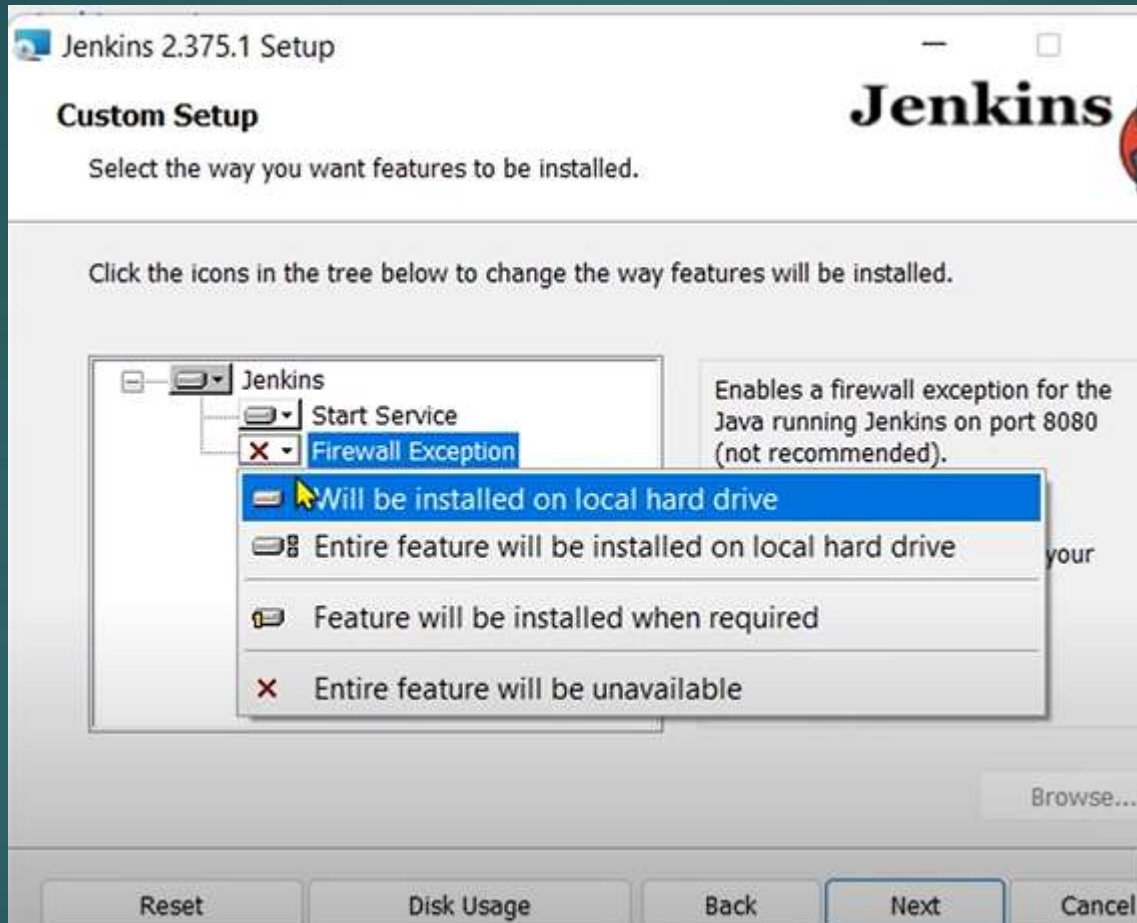
Red Hat / CentOS

- [Long Term Support release](#)
- [Weekly release](#)
- [Start Jenkins](#)

Post-installation setup wizard

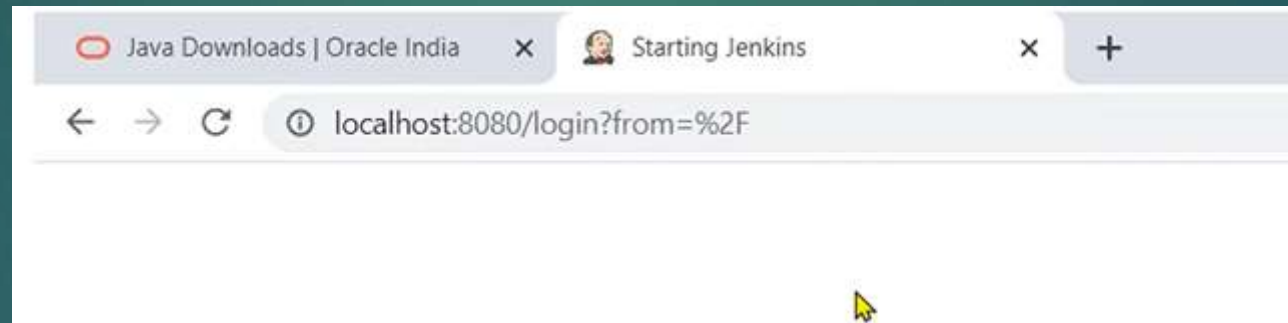
- [Unlocking Jenkins](#)
- [Customizing Jenkins with plugins](#)
- [Creating the first administrator user](#)







- ▶ Type
- ▶ Localhost:8080 in Jenkins and wait for the jenkins to start.



Now copy paste the ipconfig address on the Ethernet Adapter VMWARE


```
Ethernet adapter VMware Network Adapter VMnet1:
```

```
Connection-specific DNS Suffix  . :  
Link-local IPv6 Address . . . . . : fe80::debc:5d26:5f1:859%8  
IPv4 Address. . . . . : 192.168.26.1  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . :
```

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

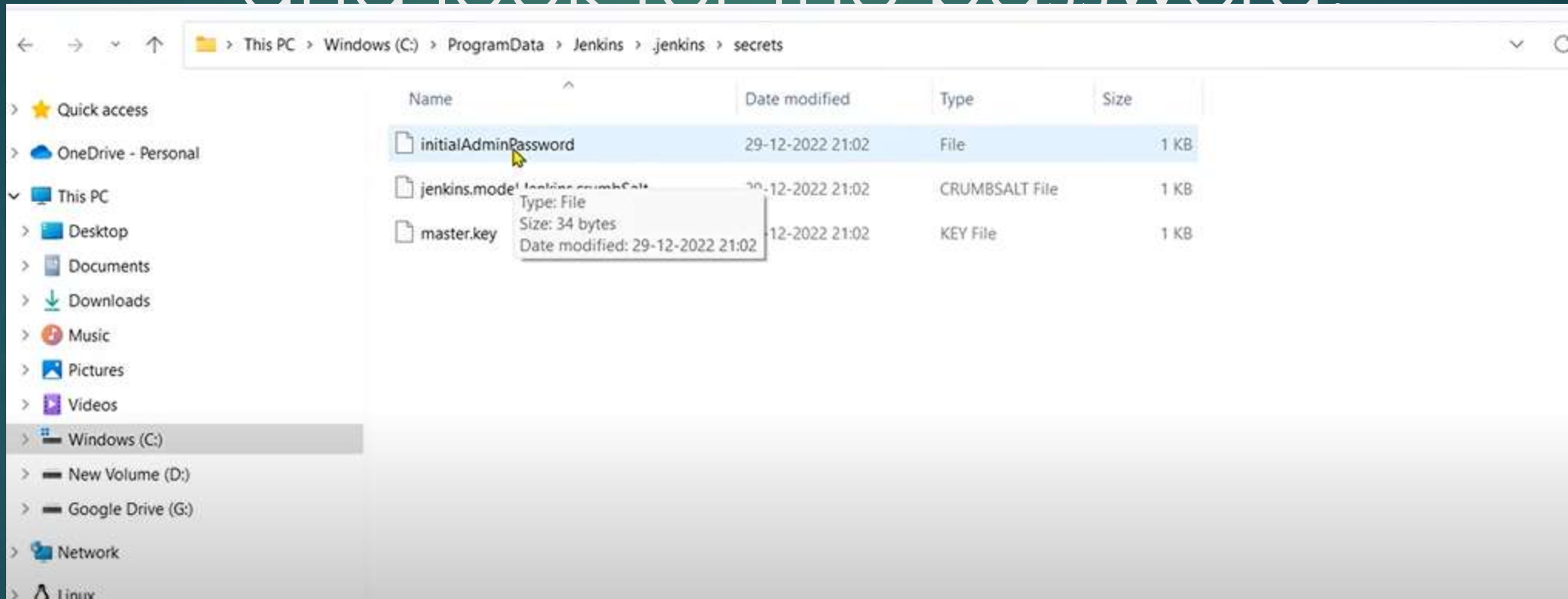
```
C:\ProgramData\Jenkins\.jenkins\secrets\initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

C:\ProgramData\Jenkins\.jenkins\secrets\initialAdminPassword

copy the path till secrets in my pc
and look for the password



- ▶ Open with notepad and finally unlock Jenkins and give the username and password.
- ▶ And login with localhost:8080



Welcome to Jenkins!

Username:

Password:

☐ Keep me signed in

Create a first job

- ▶ **Job name:FirstJob**
- ▶ **Type:freestyle job**
- ▶ Click ok
- ▶ Now fill the remaining configuration of the job
- ▶ Inside builds select windows batch shell
- ▶ And write **java -version**
- ▶ And go **back and build**