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Subject – DevOps Lab
TE IT A | Batch B

Experiment No. 4

Aim – Install Jenkins on Windows.

Theory –

What is Jenkins?

Jenkins is an open-source automation server that facilitates continuous integration and continuous delivery (CI/CD) in software development. It allows developers to automate various stages of the software development lifecycle, including building, testing, and deploying applications.

Key Features of Jenkins:

- **Automation:** Automates repetitive tasks in the development process.
- **Plugin Architecture:** Extensible through a rich ecosystem of plugins.
- **Cross-Platform:** Runs on various operating systems including Windows, macOS, and Linux.
- **Web Interface:** Provides a web-based user interface to configure and monitor jobs.

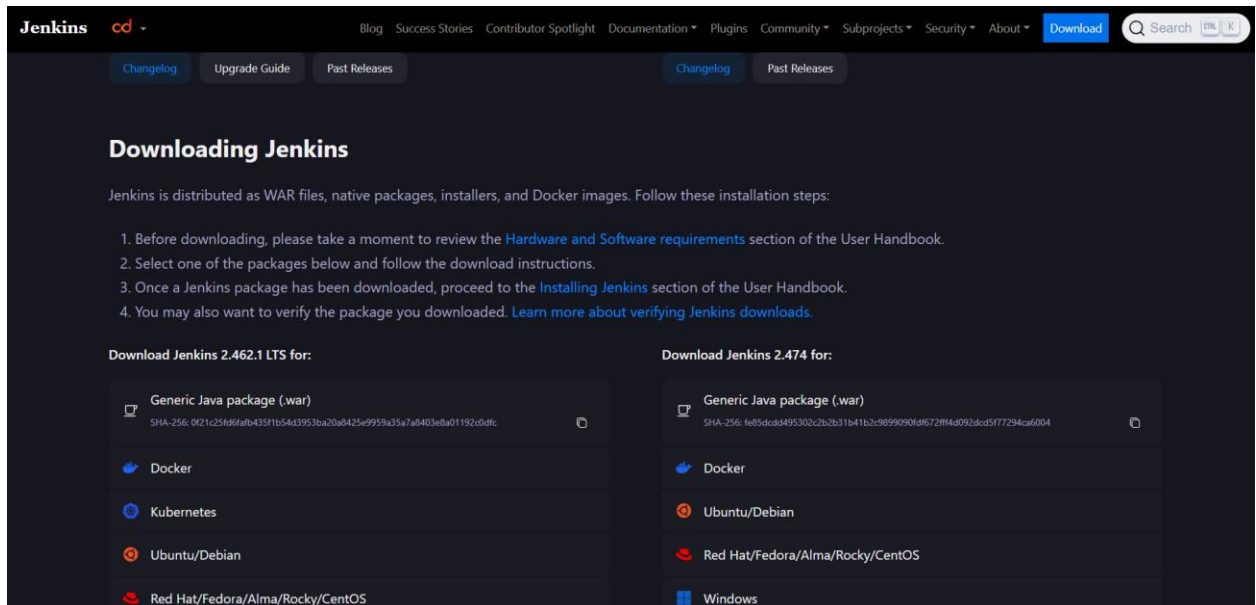
Steps –

1. Install Java Development Kit (JDK). Download it from Oracle JDK Download Page and verify it installation using the command “java --version”. JDK 17 or 21 is recommended.

The screenshot shows the Oracle JDK Download Page. The header includes the Oracle logo and navigation links: Products, Industries, Resources, Customers, Partners, Developers, and Company. There are also search, language (India), and account links. The main navigation bar highlights 'Java downloads', 'Tools and resources', and 'Java archive'. Below this, there are tabs for JDK 22, JDK 21, JDK 17, GraalVM for JDK 22, GraalVM for JDK 21, and GraalVM for JDK 17. The 'JDK 21' tab is selected, showing 'JDK Development Kit 21.0.4 downloads'. A notice states that JDK 21 binaries are free to use in production and free to redistribute under the Oracle No-Fee Terms and Conditions (NFTC). Another notice mentions that JDK 21 will receive updates under the NFTC until September 2026, after which updates will be licensed under the Java SE OTN License (OTN) and production use beyond the limited free grants of the OTN license will require a fee. Below the notices, there are tabs for Linux, macOS, and Windows. The 'Windows' tab is selected, displaying a table with download links for x64 Compressed Archive, x64 Installer, and x64 MSI Installer.

Product/file description	File size	Download
x64 Compressed Archive	185.84 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.zip (sha256)
x64 Installer	164.23 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.exe (sha256)
x64 MSI Installer	162.97 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.msi (sha256)

2. Visit the Jenkins Download Page. Under the "Generic Java package (.war)" section, click on the link to download the Jenkins WAR file.



3. Move to the directory where "jenkins.war" file is installed.
4. Open a Command Prompt and run Jenkins using the following command "java -jar jenkins.war".

```
Microsoft Windows [Version 10.0.22631.4112]
(c) Microsoft Corporation. All rights reserved.

D:\Jenkins>java -jar jenkins.war
```

5. Open a web browser and navigate to "http://localhost:8080".
6. On first access, Jenkins will prompt you to unlock it. Retrieve the unlock key from the file secrets/initialAdminPassword. This file is located in the Jenkins home directory, which defaults to C:\Users\<YourUsername>\.jenkins if not specified otherwise.



7. Paste the copied password into the Jenkins setup page to unlock Jenkins.
8. Follow the setup wizard to install suggested plugins and create the first admin user.

Getting Started

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding	<div>Build Timeout<ul style="list-style-type: none">** bouncycastle API** Credentials** Plain Credentials** Variant** SSH CredentialsCredentials Binding<ul style="list-style-type: none">** SCM API** Pipeline: API** Commons-lang3 v3.x Jenkins APITimestamper<ul style="list-style-type: none">** Caffeine API** Script Security** JavaBeans Activation Framework (JAF) API** JAXB** SnakeYAML API** JSON API** Jackson 2 API** commons-text API** Pipeline: Supporting APIs** Plugin Utilities API** Font Awesome API** Bootstrap 5 API** - required dependency</div>
✓ Timestamper	Workspace Cleanup	Ant	Gradle	
Pipeline	GitHub Branch Source	Pipeline: GitHub Groovy Libraries	Pipeline Graph View	
Git	SSH Build Agents	Matrix Authorization Strategy	PAM Authentication	
LDAP	Email Extension	Mailer	Dark Theme	

Jenkins 2.462.1

9. Create first Admin User for future use.

Getting Started

Create First Admin User

Username

Password

Confirm password

Full name


E-mail address

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Skip and continue as admin

Save and Continue


10. Use Jenkins.


**Jenkins**


Search (CTRL+K) ? ? 1 Anurag Tiwari log out

Dashboard >

+ New Item

 Build History

 Manage Jenkins

 My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle


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 ?

localhost:8080/newJob

REST API Jenkins 2.462.1