To install Jenkins and the Java Development Kit (JDK) on an Ubuntu 22.04 server, follow these steps:

**1. Update the System**

sudo apt-get update -y && sudo apt-get upgrade -y

If prompted during the upgrade process, confirm by pressing 'Enter' or 'Y' as required.

**2. Install Necessary Utilities**

Install essential utilities such as wget and unzip:

sudo apt-get install -y wget unzip

**3. Install OpenJDK 17**

Jenkins requires Java to run. Install OpenJDK 17 using:

sudo apt-get install -y openjdk-17-jdk

Verify the installation by checking the Java version:

java -version

You should see output indicating that Java 17 is installed.

**4. Add Jenkins Repository**

To install the latest stable version of Jenkins, add its official repository:

* **Import the GPG Key:**

sudo wget -O /usr/share/keyrings/jenkins-keyring.asc https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key

* **Add the Jenkins Repository:**

echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] https://pkg.jenkins.io/debian-stable binary/" | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null

**5. Install Jenkins**

Update your package index and install Jenkins:

sudo apt-get update

sudo apt-get install -y jenkins

**6. Start and Enable Jenkins Service**

Start Jenkins and enable it to run on system boot:

sudo systemctl start jenkins

sudo systemctl enable jenkins

Check the status to ensure it's running:

sudo systemctl status jenkins

**7. Access Jenkins Web Interface**

Jenkins runs on port 8080 by default. Access it by navigating to:

http://<your-server-ip>:8080

Retrieve the initial administrator password required for setup:

sudo cat /var/lib/jenkins/secrets/initialAdminPassword

Use this password to unlock Jenkins and follow the on-screen instructions to complete the setup.