# Installing Java & Apache JMeter on Window

Setting up **Apache JMeter** on **Windows 10/11** is easy—but it’s crucial to configure **environment variables** correctly. Here's how to get fully set up.

**✅ Prerequisites**

| **Requirement** | **Why It's Needed** |
| --- | --- |
| Windows 10 or 11 | Ensures compatibility with latest Java & JMeter |
| Administrator Access | Required to install software and edit system settings |
| Internet Connection | Needed to download Java & JMeter |
| Command Prompt (CMD) | To verify and run tools |

**☕ Step 1: Install Java (JDK)**

**🔍 Why?**

JMeter is a **Java-based** tool. It **requires a JDK** (not just a JRE). Versions **11, 17, or 21** are commonly used.

**📦 Download Java (JDK)**

**Option A: From Oracle**

* Go to: <https://www.oracle.com/java/technologies/downloads>
* Choose **Windows x64 Installer (.msi)** for the LTS version (e.g., JDK 17)

**Option B: From Eclipse Adoptium (OpenJDK - Recommended for Open Source)**

* Go to: <https://adoptium.net/temurin/releases/>
* Select:
  + Version: **17 (LTS)**
  + OS: **Windows**
  + Architecture: **x64**
  + Type: **MSI Installer**

**🧩 Install Java**

1. Run the downloaded .msi file (e.g., jdk-17\_windows-x64\_bin.msi)
2. Accept defaults (e.g., install to:  
   C:\Program Files\Java\jdk-17.0.x)
3. After installation, **copy the install path**

**🔧 Set JAVA\_HOME Environment Variable**

1. In Start Menu, search: **Environment Variables**
2. Click: **Edit the system environment variables**
3. Click: **Environment Variables**
4. Under **System Variables**, click **New…**
   * Name: JAVA\_HOME
   * Value: C:\Program Files\Java\jdk-17.0.x
5. Click OK

**➕ Add Java to Path**

1. Under **System Variables**, select **Path**, click **Edit…**
2. Click **New**
3. Add:  
   %JAVA\_HOME%\bin
4. Click OK on all windows

**🧪 Verify Java Setup**

Open **Command Prompt** (Win + R → cmd) and run:

cmd

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java -version

Expected: openjdk version "17.0.x"

cmd

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echo %JAVA\_HOME%

Expected: C:\Program Files\Java\jdk-17.0.x

**⚙️ Step 2: Install Apache JMeter**

**📦 Download JMeter**

* Visit: <https://jmeter.apache.org/download_jmeter.cgi>
* Under **Binaries**, download:  
  apache-jmeter-5.X.X.zip

**🗂️ Extract and Organize**

1. Right-click → **Extract All…**
2. Choose folder path:  
   e.g., C:\apache-jmeter-5.X.X  
   (Avoid spaces if possible)

**🧭 Launch JMeter GUI**

Navigate to:  
C:\apache-jmeter-5.X.X\bin

Double-click:  
jmeter.bat

✅ This launches the **JMeter Graphical Interface**

**🖥️ Launch from CMD (Optional)**

cmd

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cd C:\apache-jmeter-5.X.X\bin

jmeter.bat

**🧪 Verify Version**

In JMeter GUI:  
Go to Help → About Apache JMeter

You’ll see version info like:  
Apache JMeter 5.6.3

**💡 Pro Tips for Windows Users**

**⚠️ Use CLI Mode for Load Testing**

🔁 GUI = Create/Test  
CLI = Execute Full Load Test

**Run JMeter in Non-GUI (CLI) Mode:**

cmd

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cd C:\apache-jmeter-5.X.X\bin

jmeter -n -t C:\path\to\your\testplan.jmx -l C:\path\to\results.jtl -e -o C:\path\to\html\_report

| **Flag** | **Description** |
| --- | --- |
| -n | Non-GUI mode |
| -t | Path to .jmx test script |
| -l | Log results to .jtl file |
| -e -o | Generate and store HTML report |

**🔌 Install JMeter Plugins (Recommended)**

Use **JMeter Plugins Manager** for extended features:

1. Download the plugin manager .jar file from:  
   https://jmeter-plugins.org/install/Install/
2. Place it inside:  
   C:\apache-jmeter-5.X.X\lib\ext
3. Restart JMeter → Go to **Options → Plugins Manager**

**📝 Summary Table**

| **Task** | **Command / Action** | **Example Output** |
| --- | --- | --- |
| Install Java (JDK) | Download .msi and run installer | C:\Program Files\Java\jdk-17.0.x |
| Set JAVA\_HOME | System env var = JDK path | echo %JAVA\_HOME% = JDK path |
| Add Java to Path | %JAVA\_HOME%\bin | Can use java -version from anywhere |
| Extract JMeter | Extract ZIP to C:\apache-jmeter-5.X.X | Folder contains /bin/jmeter.bat |
| Launch GUI | jmeter.bat or double-click .bat file | Opens JMeter GUI |
| CLI Load Test | jmeter -n -t ... | HTML report created in output directory |