# Installing Java & Apache JMeter on macOS

Setting up **Apache JMeter** on **macOS** is simple, especially if you use **Homebrew**, the preferred package manager. This guide walks you through **installing Java and JMeter** using both **Homebrew (recommended)** and **manual methods** with real-world examples and explanations.

**🔧 Prerequisites**

| **Requirement** | **Why It’s Needed** |
| --- | --- |
| macOS (Latest) | Ensure OS compatibility and security patches |
| Admin Privileges | Required to install software |
| Internet Access | For downloading Homebrew, Java, JMeter |
| Terminal Access | To execute installation commands |

**✅ Step 1: Install Homebrew (if not already installed)**

**💡 Why?** Homebrew simplifies installing software like Java and JMeter.

**📌 How to Install:**

1. Open **Terminal** (Spotlight ➝ "Terminal").
2. Paste and run this command:

bash

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/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

1. After installation, verify it with:

bash

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brew doctor

**Expected Output:** "Your system is ready to brew."

**☕ Step 2: Install Java (JDK)**

**🔍 Why Needed?**

JMeter is a **Java-based** application. It requires **Java 8 or higher** (e.g., JDK 11, 17, or 21).

**✅ Method A: Install Java via Homebrew (Recommended)**

bash

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brew install openjdk@17

🔁 You can replace @17 with @11 or @21 if needed.

**🔗 Link Java (Set JAVA\_HOME)**

Add these lines to your shell config file (~/.zshrc for zsh or ~/.bash\_profile for bash):

bash

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echo 'export JAVA\_HOME="/opt/homebrew/opt/openjdk@17/libexec/openjdk.jdk/Contents/Home"' >> ~/.zshrc

echo 'export PATH="$JAVA\_HOME/bin:$PATH"' >> ~/.zshrc

Then reload the file:

bash

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source ~/.zshrc

**🧪 Verify Java:**

bash

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java -version

echo $JAVA\_HOME

**Expected:**

* Output like: openjdk version "17.0.9"
* Valid JAVA\_HOME path printed

**🛠️ Method B: Manual Java Installation (Oracle or Temurin)**

1. Visit: <https://www.oracle.com/java/technologies/downloads>
2. Download .dmg based on your Mac’s processor (Intel or Apple Silicon).
3. Run the installer.

**Set JAVA\_HOME Manually:**

bash

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echo 'export JAVA\_HOME=$(/usr/libexec/java\_home)' >> ~/.zshrc

echo 'export PATH="$JAVA\_HOME/bin:$PATH"' >> ~/.zshrc

source ~/.zshrc

**🧪 Step 3: Install Apache JMeter**

**✅ Method A: Install JMeter using Homebrew (Recommended)**

bash

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brew install jmeter

**Verify JMeter Installation:**

bash

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jmeter --version

**Expected Output:** Apache JMeter 5.X.X

**Launch JMeter GUI:**

bash

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jmeter

**📦 Method B: Manual JMeter Installation (Download .zip/.tgz)**

1. Go to: <https://jmeter.apache.org/download_jmeter.cgi>
2. Download the binary (.zip or .tgz)
3. Extract it and move to a preferred folder, e.g.:

bash

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mv ~/Downloads/apache-jmeter-5.X.X /Users/yourname/Applications/

**Run JMeter:**

bash

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cd /Users/yourname/Applications/apache-jmeter-5.X.X/bin

sh jmeter.sh

**Expected:** The **JMeter GUI** launches.

**📝 Summary Table**

| **Task** | **Recommended Command / Action** | **Example Output** |
| --- | --- | --- |
| Install Homebrew | /bin/bash -c "$(curl -fsSL...) | Ready to brew |
| Install Java (via Brew) | brew install openjdk@17 | java -version shows OpenJDK |
| Set JAVA\_HOME | export JAVA\_HOME="..." in .zshrc | echo $JAVA\_HOME prints path |
| Install JMeter (via Brew) | brew install jmeter | jmeter --version = Apache JMeter 5.X.X |
| Launch JMeter GUI | jmeter OR sh jmeter.sh | GUI opens |