<u>Prerequisites for Apache JMeter(™) Workshop</u>

4th and 5th May'2024 - 11:00 AM IST onwards

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Minimum Requirements:

This is a hands-on workshop covering simple load simulations and hence let's focus on minimum requirement as Per https://jmeter.apache.org/usermanual/get-started.html

1.1 Requirements

JMeter requires that your computing environment meets some minimum requirements.

1.1.1 Java Version

> JMeter is compatible with Java 8 or higher. We highly advise you to install latest minor version of your major version for security and performance reasons.

Because JMeter uses only standard Java APIs, please do not file bug reports if your JRE fails to run JMeter because of JRE implementation issues.

> Although you can use a JRE, it is better to install a JDK as for recording of HTTPS, JMeter needs `keytool` utility from JDK.

1.1.2 Operating Systems

JMeter is a 100% Java application and should run correctly on any system that has a compliant Java implementation.

Operating systems tested with JMeter can be viewed on this page on JMeter wiki.

Even if your OS is not listed on the wiki page, JMeter should run on it provided that the JVM is compliant.

Check Java Version:

Please ensure that Java JDK is already installed. Use this link to install if not installed already. When you open this link the landing page should show you options to choose the JDK versions to install from,

Java 22, Java 21, and Java 17 available now

JDK 21 is the latest long-term support release of Java SE Platform.

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JDK 22 **JDK 21** **JDK 17** **GraalVM for JDK 22** **GraalVM for JDK 21** **GraalVM for JDK 17**

JDK Development Kit 21.0.3 downloads

JDK 21 binaries are free to use in production and free to redistribute, at no cost, under the Oracle No-Fee Terms and Conditions (NFTC).

JDK 21 will receive updates under the NFTC, until September 2026, a year after the release of the next LTS. Subsequent JDK 21 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.

Linux **macOS** **Windows**

Product/file description	File size	Download
x64 Compressed Archive	185.78 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.zip (sha256)
x64 Installer	164.16 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.exe (sha256)
x64 MSI Installer	162.91 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.msi (sha256)

I chosen the latest LTS https://www.oracle.com/java/technologies/downloads/#java21

Linux	macOS	Windows

Product/file description	File size	Download
x64 Compressed Archive	185.52 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.zip (sha256)
x64 Installer	163.91 MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.exe (sha256)
x64 MSI Installer	162.07MB	https://download.oracle.com/java/21/latest/jdk-21_windows-x64_bin.msi (sha256)

JMeter's recent versions are compatible with Java 8+. To check if Java is installed, running a command-line is necessary.

OS	TASK	COMMAND
Windows	Open Command Console	C:>java -version
Linux	Open Command Terminal	$:~java -version
Mac	Open Terminal	machine:~$ java -version

e.g. running C:>java -version on Windows gives me a result(s) something like below.

```
C:\            java -version
java version "21.0.1" 2023-10-17 LTS
Java(TM) SE Runtime Environment (build 21.0.1+12-LTS-29)
Java HotSpot(TM) 64-Bit Server VM (build 21.0.1+12-LTS-29, mixed mode, sharing)
```

JMeter 5.6.3 Download (Must)

Windows and Mac

https://jmeter.apache.org/download_jmeter.cgi >
https://dlcdn.apache.org//jmeter/binaries/apache-jmeter-5.6.3.zip
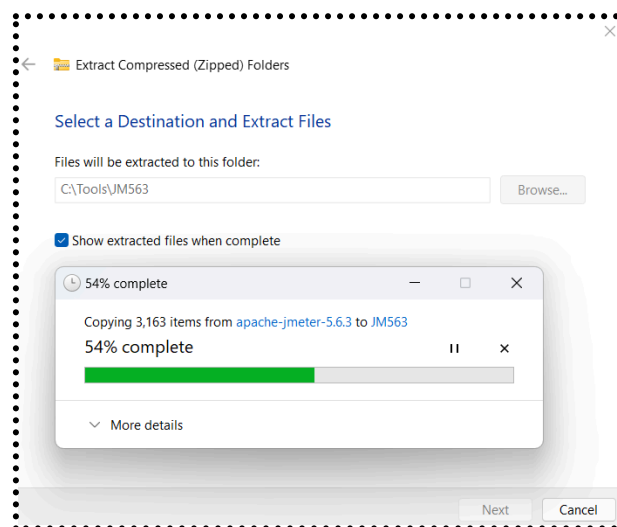
Apache JMeter 5.6.3 (Requires Java 8+)

Binaries

apache-jmeter-5.6.3.tgz sha512 pgp
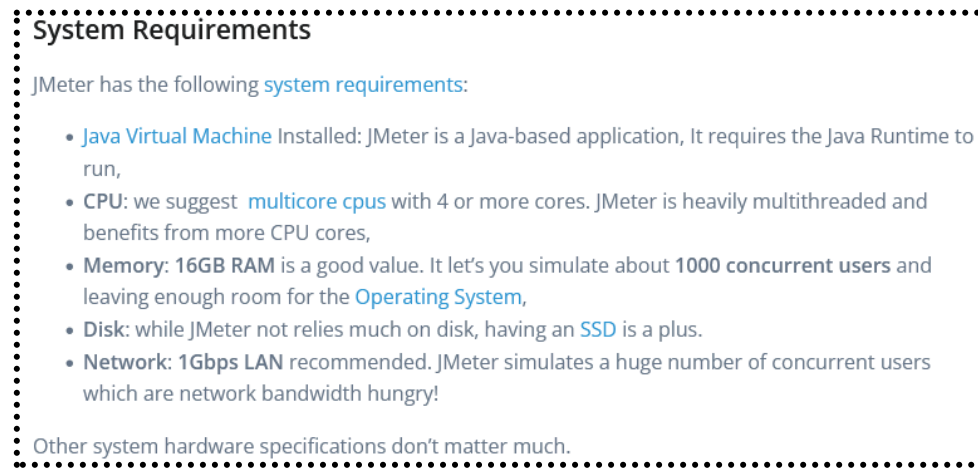apache-jmeter-5.6.3.zip sha512 pgp

Extract JMeter - .zip to a local and FULLY accessible directory

Note: You should have full R/W/X (Read, Write and Execute) access to this directory

System Requirements (Check)

Please refer to below screenshot (The below instructions are captured directly from this source and shown w/o any modifications)

System Requirements

JMeter has the following system requirements:

- Java Virtual Machine Installed: JMeter is a Java-based application, It requires the Java Runtime to run,
- CPU: we suggest multicore cpus with 4 or more cores. JMeter is heavily multithreaded and benefits from more CPU cores,
- Memory: 16GB RAM is a good value. It let's you simulate about **1000 concurrent users** and leaving enough room for the Operating System,
- Disk: while JMeter not relies much on disk, having an SSD is a plus.
- Network: **1Gbps LAN** recommended. JMeter simulates a huge number of concurrent users which are network bandwidth hungry!

Other system hardware specifications don't matter much.

But don't worry if your machine configurations (on which JMeter is extracted and ready to use) don't exactly match the configurations as it is except for the JVM. As I mentioned that this is a hands-on workshop covering fundamentals, basic building blocks and simple load simulations and hence minimum requirements should work without issues.

1. I shall use a Windows 11 or 10 machine | 16 GB RAM | Multicore CPU with 4 cores and **Apache JMeter 5.6.3** for the necessary demonstrations and hands-on for this workshop.
2. Please have a running internet connection [15-20 MBPS to the least as it should be sufficient for a smooth communication].
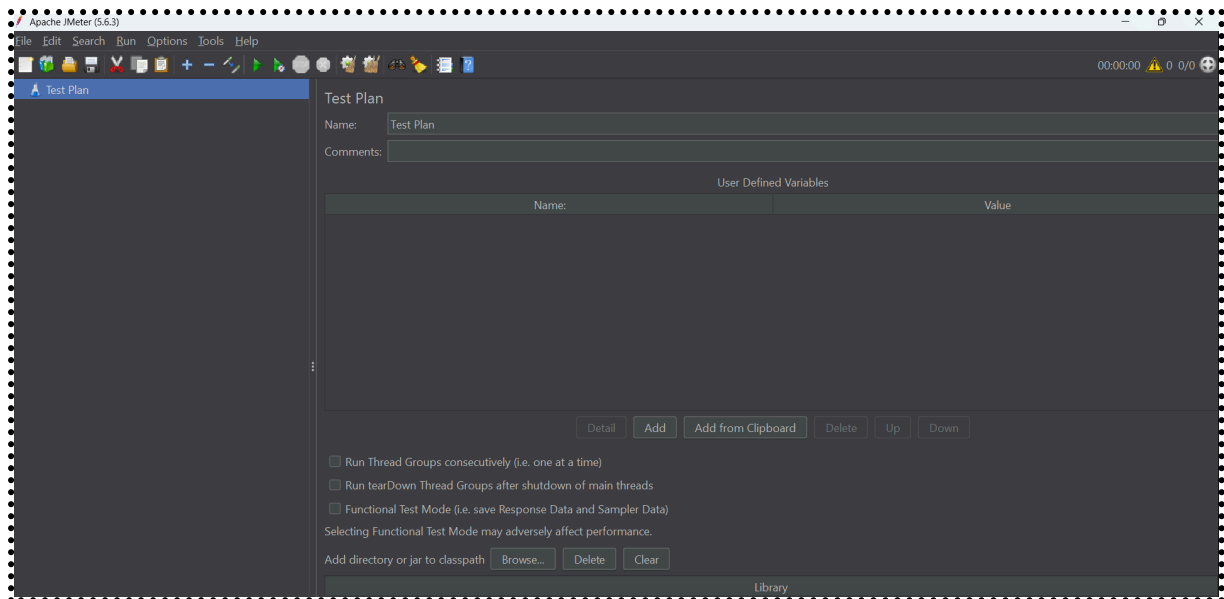
Running JMeter (Must)

Go to the ***bin*** *subdirectory* in the main directory where JMeter 5.6.3 is extracted.

e.g. **C:\Users\TestUser\Workshop\Apache_JMeter_5.6.3\bin**

Assuming that you are running on Windows machine, you shall run the ***jmeter.bat*** file

C:\Users\TestUser\Workshop\Apache_JMeter_5.6.3\bin\jmeter.bat

*If everything goes well, you should see a screen like below showing JMeter running in GUI mode.

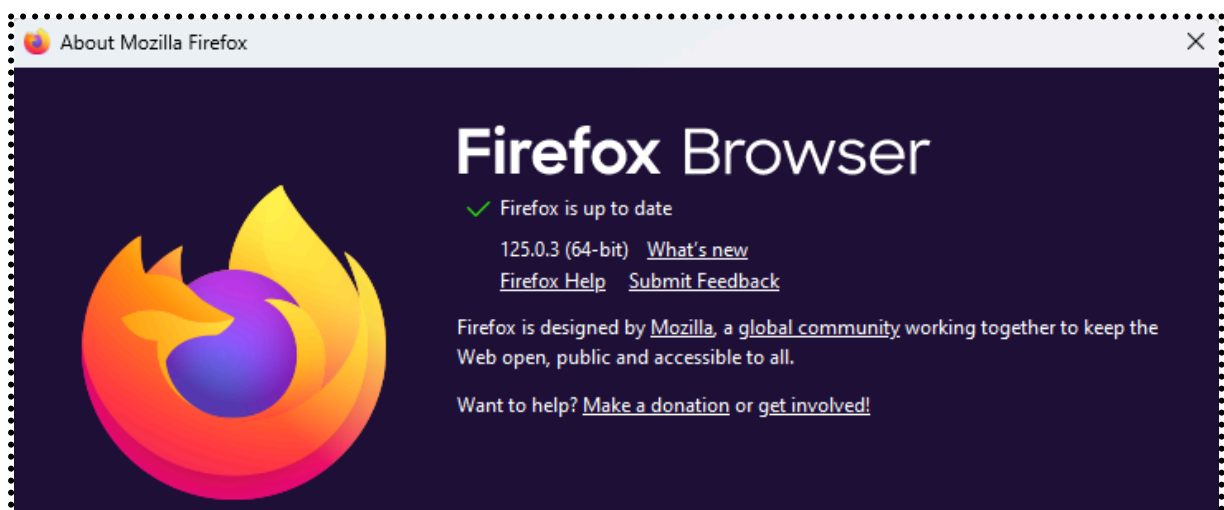**For Mac users: Please refer this https://bit.ly/JMeter_Mac**

BlazeMeter Chrome Extension:

Install from here [Optional]

Web Browsers (Must)

- Mozilla Firefox [Must Have] - We will extensively use firefox because of its out of the box support for
    - Quickly configuring proxies for recording scripts
    - Edit and Resend Payloads for HTTP Requests

e.g. At the time of completing this documentation, I am using 👇

- Chrome *[Most updated versions]*

Postman:

https://www.postman.com/downloads/ [Optional]

References:

https://jmeter.apache.org/usermanual/get-started.html

https://octoperf.com/blog/2018/03/29/jmeter-tutorial/#system-requirements

Java Downloads for All Operating Systems

https://cwiki.apache.org/confluence/display/JMETER/JMeterAndOperatingSystemsTested