

JMETER BASICS



APACHE JMETER:

- 100% pure java desktop open source application
- Full swing and lightweight component.
- Designed for functional/performance/loadtesting
- Simulates heavy load(application/server/network)
- Full multithreading framework
- Different protocol types(HTTP/FTP/JDBC/SOAP/JMS,...)



COMPONENTS OF JMETER

Test Plan

ThreadGroup

Samplers

Listeners

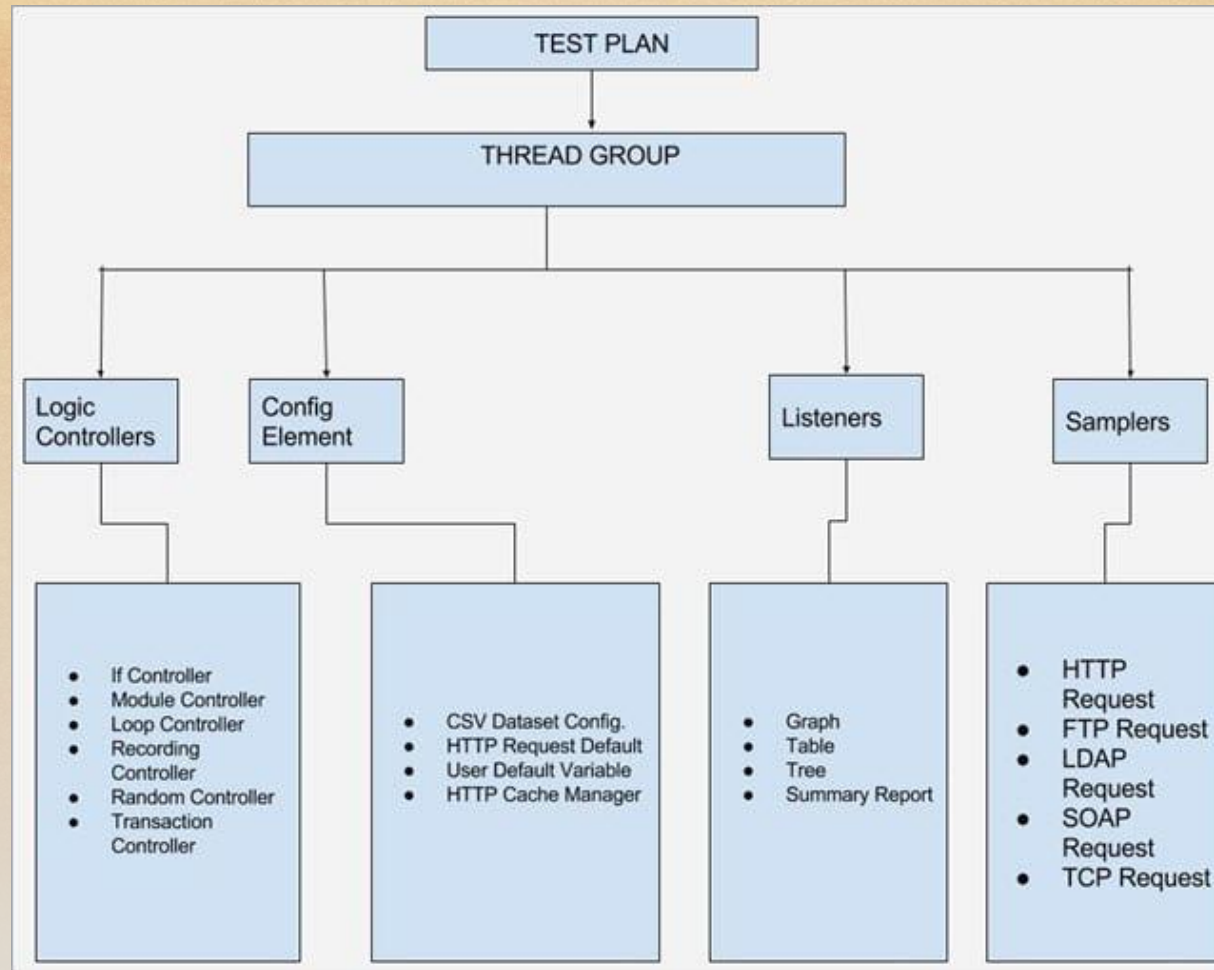
WorkBench

Assertions

Config Element

Logic Controllers

Timer



JMETER –TEST PLAN

- A test plan describes a series of steps Jmeter will execute when run.
- Test plan consist of:
 - Threadgroup
 - Samplers
 - Logical controllers
 - Listeners
 - Timers
 - Assertions
 - Config elements



THREAD GROUPS

- Thread group elements is the beginning point of any test plan(All controllers and samplers must be under a thread group)
- Each thread represents a virtual user(e.g. setting the thread group to 1000 simulates 1000users)



SAMPLERS

- Samplers tell jmeter to send requests to server and wait for a response.
- Do the actual work in jmeter and interact with the server you are loading.
- Examples for samplers: HTTP Request – FTP Request- JDBC Request-Webservice(SOAP)request,....



LISTENERS

- The information produced by samplers are consumed by listeners.
- Listeners shows details of sampler requests and responses, and can display basic HTML and XML representations of the response.
- Populer listeners:
 - Graph Results (plots the response time on a graph)
 - View results tree



LOGICAL CONTROLLERS

- Control the flow of test plan
- Customize the logic that jmeter users to decide when to send requests.
- Logic Controllers:
 - Loops
 - Conditions
 - Ordering
 - Once only controller



ASSERTIONS

- Allow you to assert facts about responses received from the server being tested for functional testing.
- You can add assertions to any samplers
- Example assertions for HTTP request sampler:
 - Response code
 - Response text
 - HTML assertion



CONFIG ELEMENTS

- Set default values for other parts of the test plan as well as configure variables.
- A configuration element works closely with a sampler
- **Examples:**
 - http request Defaults: save the time when doing lots of http samplers



TIMERS

- By default, a Jmeter thread sends requests without pausing between each request.
- The timer will cause jmeter to delay a certain amount of time before each request that a thread makes.
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EXECUTION ORDER OF THE TEST PLAN ELEMENTS

- Configuration elements.
- Pre-Processors.
- Timers.
- Sampler.
- Post-Processors (unless SampleResult is null)
- Assertions (unless SampleResult is null)
- Listeners (unless SampleResult is null)

