📊 Generating HTML Test Report in Apache JMeter

JMeter doesn’t *directly* generate HTML reports in real-time like some specialized reporting tools. Instead, it captures test execution data into a results file (.jtl or .csv) which is later processed to create a detailed **HTML dashboard report**.

This guide walks you through both phases:

**✅ Step 1: Run the JMeter Test to Generate Results File**

**Recommended Mode:** Always run performance/load tests in **Non-GUI mode** for better accuracy and reduced resource usage.

**🛠 Prerequisites:**

* A configured .jmx Test Plan.
* JMeter installed and set in the system path (or navigate to /bin directory manually).

**🖥 Run Command:**

bash

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jmeter -n -t [path\_to\_test\_plan.jmx] -l [path\_to\_results\_file.jtl]

**Replace:**

* [path\_to\_test\_plan.jmx] → Your test plan file
* [path\_to\_results\_file.jtl] → Desired location for result output

**📌 Example:**

bash

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jmeter -n -t C:\JMeter\Tests\MyTestPlan.jmx -l C:\JMeter\Results\results.jtl

🔄 Once execution finishes, you’ll have a results.jtl or .csv file with all request/response data.

**✅ Step 2: Generate HTML Report from Results File**

JMeter includes a **Dashboard Generator** to convert result data into an interactive HTML report.

**🖥 Run Command:**

bash

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jmeter -g [path\_to\_results\_file.jtl] -o [output\_directory\_path]

**Important:**

* The output directory must be **empty** or **non-existent**. Otherwise, JMeter will throw an error.

**📌 Example:**

bash

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jmeter -g C:\JMeter\Results\results.jtl -o C:\JMeter\Reports\TestReport

📂 Navigate to the report folder and open index.html in your browser.

**📈 What’s Inside the HTML Dashboard Report?**

The dashboard gives a visual and statistical breakdown of test execution:

**Key Components:**

* **Response Time Graphs:** Trends over time (min, max, average, percentiles)
* **Throughput & Latency Charts**
* **Error Summary Table**
* **Top 5 Errors by Sampler**
* **Active Threads Over Time**
* **Bytes Sent/Received Over Time**
* **Detailed Statistics Table**

**⚙️ Best Practices & Tips**

* 🗂 **Clean Output Directory:** Always use an empty or new folder for report output.
* 🧠 **Large Tests = Heavy Reports:** Processing big .jtl files may take time and memory.
* 🔧 **Custom Reports:** Tweak report options via reportgenerator.properties or jmeter.properties in /bin.
* 🕓 **Time Format:** Use compatible timestamp format in results; default generally works well.
* 🧪 **Non-GUI Mode is Crucial:** Use -n for all real test runs. GUI is only for debugging or test plan creation.
* 🔄 **Version Check:** Some reporting features may differ slightly across JMeter versions. Always consult the [official JMeter documentation](https://jmeter.apache.org/usermanual/generating-dashboard.html) for updates.

**📌 Summary**

| **Task** | **Command / Action** |
| --- | --- |
| Run test in Non-GUI mode | jmeter -n -t testplan.jmx -l results.jtl |
| Generate HTML dashboard | jmeter -g results.jtl -o TestReport/ |
| Open report | Navigate to TestReport/index.html and open in a browser |