

WatchMouse self-service scripting guide

Last revision: 5. January 2011
©2007-2010 WatchMouse

Table of Contents

1	Introduction.....	3
1.1	Assertions.....	3
2	Recording a script.....	4
2.1	Using BadBoy.....	4
2.2	Using jMeter.....	9
3	Uploading the script to WatchMouse.....	10
4	Verifying the check results.....	12
5	References.....	13

1 Introduction

This tutorial describes how to record a custom HTTP session script for use with WatchMouse.

There are two tools which can be used to record a script:

1. On Microsoft Windows, you can use [BadBoy](#) from BadBoy Software. This is recommended, as the software from BadBoy is easy to use and very intuitive. BadBoy is available from: <http://www.badboy.com.au/>.
2. For advanced scripting, it is also possible to use [JMeter](#) to record or compose a script session. JMeter is written in Java and runs on many platforms, including Windows, MacOS and Linux. JMeter is available from: <http://jakarta.apache.org/jmeter/>.

1.1 Assertions

Within a script, it is possible to define assertions to verify that a specific condition has been met. For example, *time* assertions check whether the requested page was loaded within a given time. On the other hand, *content* assertions can check for a string or a regular expression in the page body.

The table below lists the assertions supported by BadBoy and JMeter:

Assertion type	BadBoy	JMeter
Time	Yes	Yes
Size	Yes	Yes
Content	Yes	Yes
XML	No	Yes
Xpath	No	Yes
HTTP response code	No	Yes
HTTP response headers	No	Yes

If your scripting needs are covered by the first three types of assertions, you are using Windows, and you are not familiar with Jmeter already, we recommend to use BadBoy to record scripts. In other cases (e.g. for fine-grained control on HTTP headers, or API testing) it is recommended to use JMeter.

2 Recording a script

2.1 Using BadBoy

We will record a session in which we enter a query in Google and verify that the resulting page is correct.

- If you already have BadBoy, please verify that you also have the WatchMouse plug-in: You should see an option *Export to WatchMouse* in the toolbar.
- Otherwise, download and install BadBoy (with the plug-in included) from http://www.badboy.com.au/versions/BadboyInstaller-latest_wm.exe
- As recording is enabled automatically when starting the program, you can immediately enter an URL in the address bar:



- Enter your search term and press Search:



- On the results page, select some text, for instance:



Web

Results 1 - 10

Tip: Save time by hitting the return key instead of clicking on "search"

[WatchMouse web site monitoring service - Performance management ...](#)

Sign up for our 30 days [free web site monitoring trial](#). **WatchMouse**, the reliable web site monitoring service for server performance measurement.

[www.watchmouse.com/](#) - 29k - [Cached](#) - [Similar pages](#)

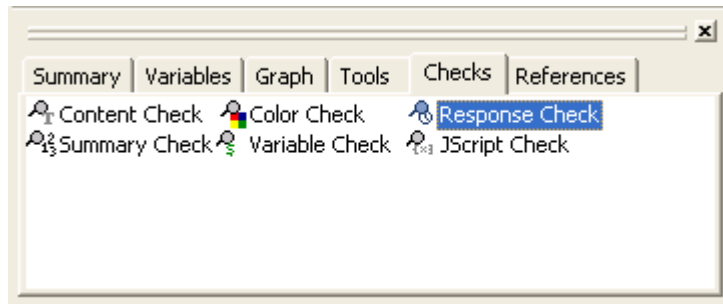
- and press the Easy assertion button in the tool bar:



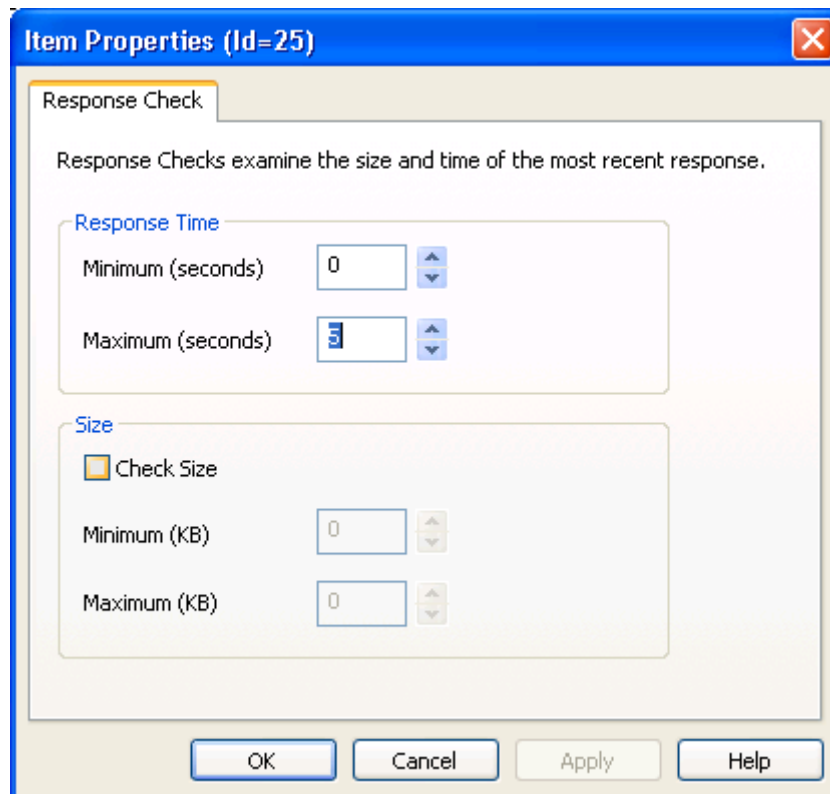
- This will insert an assertion for this page in the script tree:



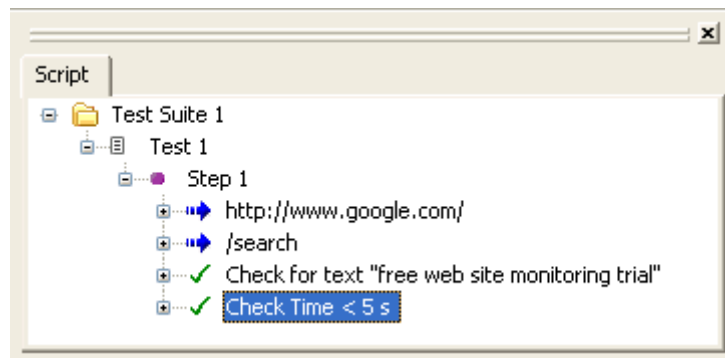
- Now you might also want to make sure that the search results were displayed fast enough.
- In the lower left area, select the Checks tab and then drag the Response check to the desired position in the script tree:



Enter a maximum loading time of 5 seconds and confirm.

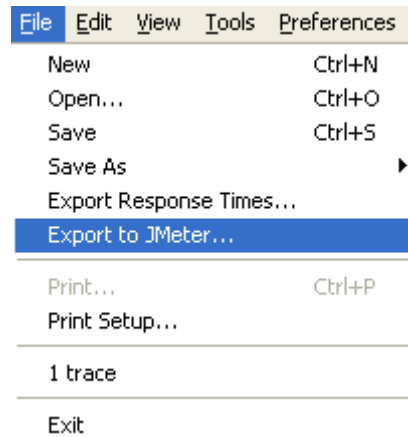


- The script tree now shows the extra assertion:



- Stop the recording by pressing the recording button in the tool bar. Rewind and playback the script to test it.

- Save the script as a JMeter (.jmx) file by selecting File->Export to JMeter:



2.2 Using JMeter

As JMeter is a comprehensive but complex tool, discussing it in detail is largely outside the scope of this tutorial. If you are unfamiliar with JMeter, we recommend to read some introductory material on:

<http://jakarta.apache.org/jmeter/usermanual/index.html>. However, there are a few tricks that should be mentioned here.

Using monitor parameters inside your script

You can use standard WatchMouse monitor parameters (click expert mode in the monitoring settings) inside JMeter scripts. This way you are able to use the same script multiple times with different parameters in order to monitor different hosts. The table below shows the available field mappings:

Monitor parameter	JMeter property
Host	<code>\${__property(WMhost)}</code>
Port	<code>\${__property(WMport)}</code>
Path	<code>\${__property(WMpath)}</code>
User name	<code>\${__property(WMaccount)}</code>
Password	<code>\${__property(WMpasswd)}</code>

Additionally, user-defined parameters can be given in the monitor's Parameters field like this:

Parameters string	JMeter property
foo1=bar1&foo2=bar2&foo3=bar3	<code>\${__property(foo1)}</code>
	<code>\${__property(foo2)}</code>
	<code>\${__property(foo3)}</code>

User-defined parameters can be used to make generic scripts that can be executed for more than one host.

3 Uploading the script to WatchMouse

Uploading a script to WatchMouse requires a valid .jmx script file and a spare monitor in your account.

- Log in to your WatchMouse account and go to the monitor settings page on: <http://www.watchmouse.com/settings.php>
- Click on the `add monitor` button.
- Select `script` (or `scriptx1`) as the monitor type. This will make a file upload button appear in the form:

Home » Settings » Website Performance Monitoring » Rules » Add rule

Create rule

Required expert mode

Name

Type

Script file

Warn me

Alert contact

- Click `Browse`, and select a .jmx file on your computer.

- WatchMouse will now verify some aspects of the uploaded script and report about this:

Home » Instellingen » Website prestatie-monitoring » Regels

Script modification overview

The script file you uploaded has been verified by WatchMouse. Please review the script details and any changes that we have made.

Your script file is valid.

Script base domain: watchmouse.com

Number of script entries found: 7

Script entries outside of rule host or base domain:

None

Truncated script entries above limit: 0

Modified script variables:

ThreadGroup.scheduler = true

Self-service scripting is an advanced WatchMouse feature. Please [contact us](#) in case you have any questions about this part of our product range.

annuleer ok

- A script can only run for one domain using a single thread, and there is a maximum script length of 20 (HTTP) requests. Press `ok` to agree.
- Save the monitor.

You're done now and you can check the execution of the script in the log viewer as described in the next section.

4 Verifying the check results

- To verify the execution of the script, go to the log viewer: <http://www.watchmouse.com/logviewer.php>
- Select the correct monitor in the selection box and press `show`:

Home » Reports » Website Performance Monitoring » Log files

Log Files

Display: Records of rule: of:

▼ now ◀◀ week ◀◀ day ◀◀ page ◀◀ error | error ▶▶ page ▶▶ day ▶▶ week ▶▶

Date	Time	Repeat	Rule	Description	Code	Checkpoint
Dec 6th	13:57		Test Script	OK	0	Florida, FL
	13:52		Test Script	OK	0	Florida, FL
	13:47		Test Script	OK	0	Amsterdam3, N3
	13:42		Test Script	OK	0	London, UK
	13:42		Test Script	Assertion 'Faster than 1000millisec' failed with message: The operation lasted too long: It took 1,775 milliseconds, but should not have lasted longer than 1,000 milliseconds.	7001	Amsterdam3, N3
	13:37		Test Script	OK	0	Copenhagen, DK

- You can see that this script monitor is executed every five minutes from different monitoring stations. Also on a single occasion at 13:42, one of the script's response time assertions was triggered.

There is no limit to the number of assertions that can be defined in a script. However, it is important to remember, that when any one of them fails, this will be seen as a monitor failure by the WatchMouse monitoring station. One of the most difficult tasks with self-service scripting is to choose appropriate assertions. Without any assertions defined, the script will only report time-outs for the whole script and standard HTTP errors.

5 FAQ

1. **What are the limitations of a single script monitor?**

A single script monitor is limited to 20 (HTTP) requests and a total of 1MB per check on a single domain (*.domain.com). An extended 'scriptxl' type monitor (for purchase separately) allows for a maximum of 40 requests and a limit of 2MB of traffic per check.

6 References

1. <http://www.badboy.com.au/>
2. <http://jakarta.apache.org/jmeter/>
3. <http://www.watchmouse.com/>