UserManual BuildFtpTest

Building an FTP Test Plan

In this section, you will learn how to create a basic Test Plan to test an FTP site. You will create four users that send requests for two files on the O'Reilly FTP site. Also, you will tell the users to run their tests twice. So, the total number of requests is (4 users) x (2 requests) x (repeat 2 times) = 16 FTP requests. To construct the Test Plan, you will use the following elements: Thread Group , FTP Request , FTP Request Defaults , and Spline Visualizer .

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This example uses the O'Reilly FTP site, www.oro.com. Please be considerate when running this example, and (if
possible) consider running against another FTP site.
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Adding Users

The first step you want to do with every JMeter Test Plan is to add a Thread Group element. The Thread Group tells JMeter the number of users you want to simulate, how often the users should send requests, and the how many requests they should send.

Go ahead and add the ThreadGroup element by first selecting the Test Plan, clicking your right mouse button to get the Add menu, and then select Add --> ThreadGroup.

You should now see the Thread Group element under Test Plan. If you do not see the element, then "expand" the Test Plan tree by clicking on the Test Plan element.

Next, you need to modify the default properties. Select the Thread Group element in the tree, if you have not already selected it. You should now see the Thread Group Control Panel in the right section of the JMeter window (see Figure 8.1 below)

http://jakarta.apache.org/jmeter/images/screenshots/webtest/threadgroup.png

Figure 8.1. Thread Group with Default Values

Start by providing a more descriptive name for our Thread Group. In the name field, enter O'Reilly Users.

Next, increase the number of users (called threads) to 4.

In the next field, the Ramp-Up Period, leave the the default value of 0 seconds. This property tells JMeter how long to delay between starting each user. For example, if you enter a Ramp-Up Period of 5 seconds, JMeter will finish starting all of your users by the end of the 5 seconds. So, if we have 5 users and a 5 second Ramp-Up Period, then the delay between starting users would be 1 second (5 users / 5 seconds = 1 user per second). If you set the value to 0, then JMeter will immediately start all of your users.

Finally, clear the checkbox labeled "Forever", and enter a value of 2 in the Loop Count field. This property tells JMeter how many times to repeat your test. If you enter a loop count value of 0, then JMeter will run your test only once. To have JMeter repeatedly run your Test Plan, select the Forever checkbox.

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In most applications, you have to manually accept changes you make in a Control Panel. However, in JMeter, the
Control Panel automatically accepts your changes as you make them. If you change the name of an element, the
tree will be updated with the new text after you leave the Control Panel (for example, when selecting another
tree element).
```

See Figure 8.2 for the completed O'Reilly Users Thread Group.

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/threadgroup2.png

Figure 8.2. O'Reilly Users Thread Group

Adding Default FTP Request Properties

Now that we have defined our users, it is time define the tasks that they will be performing. In this section, you will specify the default settings for your FTP requests. And then, in section 8.3, you will add FTP Request elements which use some of the default settings you specified here.

Begin by selecting the O'Reilly Users element. Click your right mouse button to get the Add menu, and then select Add --> Config Element --> FTP Request Defaults. Then, select this new element to view its Control Panel (see Figure 8.3).

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/ftp-defaults.png

Figure 8.3. FTP Request Defaults

Like most JMeter elements, the FTP Request Defaults Control Panel has a name field that you can modify. In this example, leave this field with the default value.

Skip to the next field, which is the FTP Server's Server Name/IP. For the Test Plan that you are building, all FTP requests will be sent to the same FTP server, ftp.oro.com. Enter this domain name into the field. This is the only field that we will specify a default, so leave the remaining fields with their default values.

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The FTP Request Defaults element does not tell JMeter to send an FTP request. It simply defines the default
values that the FTP Request elements use.
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See Figure 8.4 for the completed FTP Request Defaults element

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/ftp-defaults2.png

Figure 8.4. FTP Defaults for our Test Plan

Adding FTP Requests

In our Test Plan, we need to make two FTP requests. The first one is for the O'Reilly mSQL Java README file (ftp://ftp.oro.com/pub/msql/java/README), and the second is for the tutorial file (ftp://ftp.oro.com/pub/msql/java/tutorial.txt).

```
JMeter sends requests in the order that they appear in the tree.
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Start by adding the first FTP Request to the O'Reilly Users element (Add --> Sampler --> FTP Request). Then, select the FTP Request element in the tree and edit the following properties (see Figure 8.5):

1. Change the Name to "README".
2. Change the File to Retrieve From Server field to "pub/msql/java/README".
3. Change the Username field to "anonymous".
4. Change the Password field to "anonymous".

```
You do not have to set the Server Name field because you already specified this value in the FTP Request
Defaults element.
```

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/ftp-request.png

Figure 8.5. FTP Request for O'Reilly mSQL Java README file

Next, add the second FTP Request and edit the following properties (see Figure 8.6:

1. Change the Name to "tutorial".
2. Change the File to Retrieve From Server field to "pub/msql/java/tutorial.txt".
3. Change the Username field to "anonymous".
4. Change the Password field to "anonymous".

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/ftp-request2.png

Figure 8.6. FTP Request for O'Reilly mSQL Java tutorial file

Adding a Listener to View/Store the Test Results

The final element you need to add to your Test Plan is a Listener . This element is responsible for storing all of the results of your FTP requests in a file and presenting a visual model of the data.

Select the O'Reilly Users element and add a Spline Visualizer listener (Add --> Listener --> Spline Visualizer).

http://jakarta.apache.org/jmeter/images/screenshots/ftptest/spline-results.png

Figure 8.7. Spline Visualizer Listener

Saving the Test Plan

Although it is not required, we recommend that you save the Test Plan to a file before running it. To save the Test Plan, select Save Test Plan from the File menu (with the latest release, it is no longer necessary to select the Test Plan element first).

JMeter allows you to save the entire Test Plan tree or only a portion of it. To save only the elements located in a particular "branch" of the Test Plan tree, select the Test Plan element in the tree from which to start the "branch", and then click your right mouse button to access the Save As menu item. Alternatively, select the appropriate Test Plan element and then select Save As from the Edit menu.

Running the Test Plan

From the Run menu, select Run.

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JMeter lights up a green square in the upper-right-hand corner to indicate if a test is currently running. The
square is turned gray when all tests stop. Even after you select "stop", the green light will stay on until all
test threads have exited.
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