Performance Testing Course : JMeter - Pre Processor

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Agenda

- Introduction about several popular post pre-processor.
- Showcases.
- Exercises.

Definition

As the word 'Pre' denotes 'Prior' that is something which is executed before. JMeter has some of the elements which execute before sending the request to the server. These elements help to fetch data from a database, set a timeout between sampler execution, modify the settings of a sampler request just before it runs, or to update variables that aren't extracted from response etc. In the simple word, you can tell the elements which are executed before a sampler are called as PreProcessors.

JSR223 Pre-processor

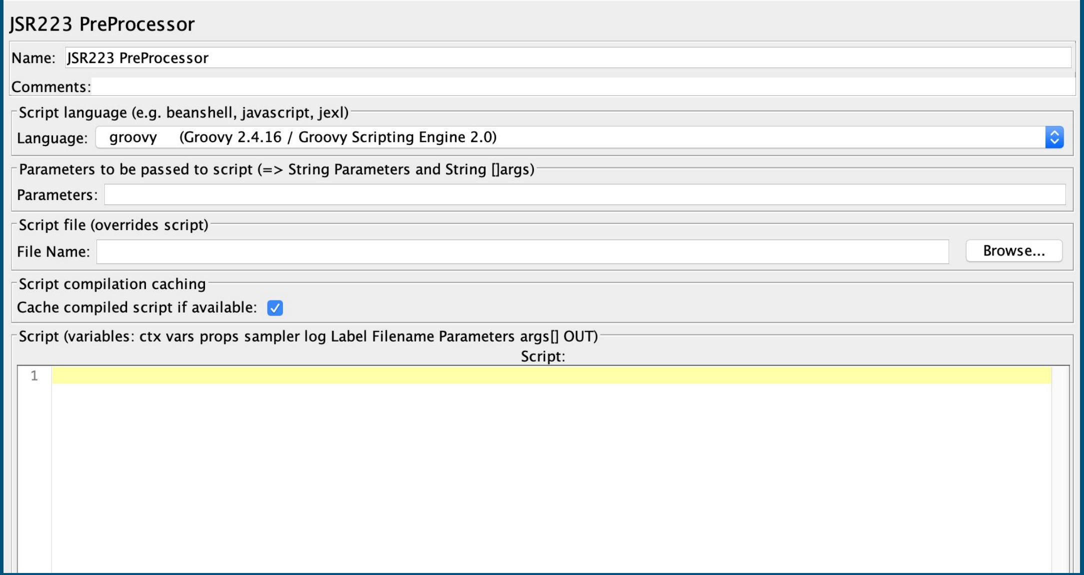
Attribute:

- Name: Name of pre-processor.
- Comments: Any description.
- Language: Propose list of language.
- Parameters: If we import script file

from outside then pass the parameters

here.

- File name: Name of script file.
- Script: Where you paste your script here.



JSR223 PreProcessor

Name: JSR223 PreProcessor

Comments:

Script language (e.g. beanshell, javascript, jexl)

Language: groovy (Groovy 2.4.16 / Groovy Scripting Engine 2.0)

Parameters to be passed to script (=> String Parameters and String []args)

Parameters:

Script file (overrides script)

File Name:

Script compilation caching

Cache compiled script if available: ☑

Script (variables: ctx vars props sampler log Label Filename Parameters args[] OUT)

Script:

JSR223 Pre-processor (Demo)

Showcase:

- Use JSR223 Pre-processor to put token to Blazemeter confirmation.

Exercise:

- Use JSR223 Pre-processor to put character name to search page of restool.

User Parameters

Description:

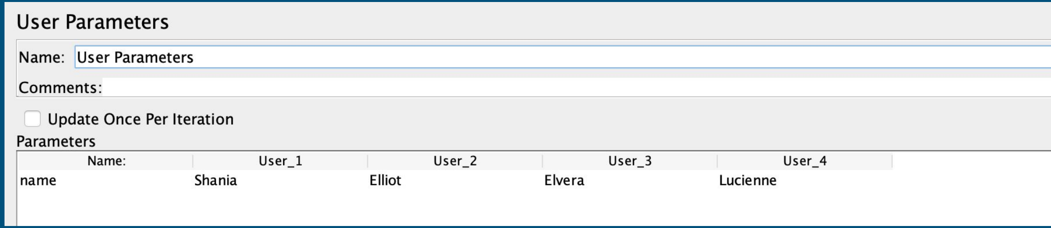
This element is used to define the user (thread) specific parameters, although CSV Data Set Config is very easy and flexible method for parameterization. "User Parameters" preprocessor can be used when you have less number of test data which can be used in a repetitive manner and shared by all the thread. As I mentioned, when you have less number of test data then you can easily insert the values in the User Parameter field and allow threads to share the test data. A set of parameters get reused in case less number of data than the number of threads. User Variables can also be defined in the Test Plan using "User Defined Variables" but those are not specific to individual threads.

User Parameters

Comparison:

	User Parameter	User Defined Variable	CSV Data Set Config
Type	Pre-processor	Config Elements	Config Elements
Value assignment	Multiple values can be defined for a variable	Only one value could be assigned to variable.	Multiple values can be defined for a variable
External file linking	Test data can not be added via external file	Test data can not be added via external file	Test data could be added via external file.

User Parameters



User Parameters

Name: User Parameters

Comments:

□ Update Once Per Iteration

Parameters

Name:	User_1	User_2	User_3	User_4
name	Shania	Elliot	Elvera	Lucienne

Attribute:

- Name: Name of pre-processor.
- Comments: Any description.
- Update Once Per Iteration: If you want to update variables using only one iteration and to make sure the values are updated each time based on the execution of the parent controller, you need to check the “Update Once Per Iteration” checkbox.
- Parameters: In this section variables, number of users and variable's value are added.
- Name: Declare the name of the variable.
- User_<n>: The variable value used by User_<n> thread where n is thread index.
- Add Variable: Click this button to add a new row.
- Add User: Click this button to add a new column.
- Delete Variable: To delete the row.
- Delete User: To delete the user.

User Parameters

Showcase:

- Use User Parameters to define userId and password for login.

Exercise:

- Use User Parameters to define information of user to be created for restool.

HTML Link Parser

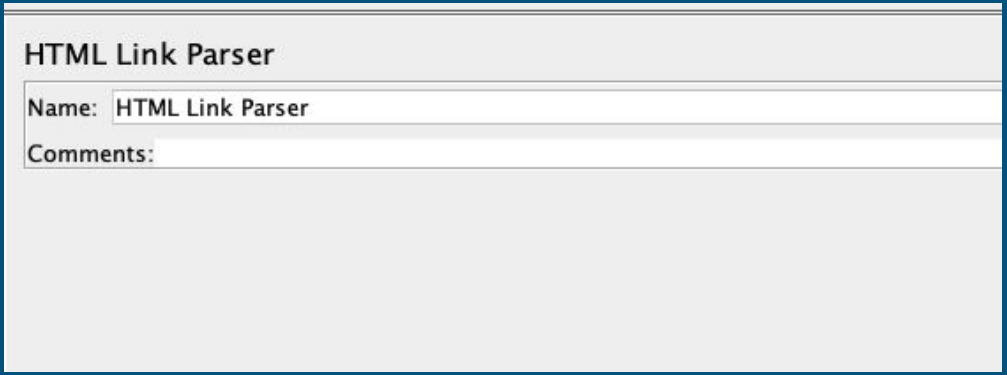
Description:

- The HTML Link Parser PreProcessor can be used to parse a response, extract all the found links and request them further. This can be useful when the main goal of your script is to simulate web crawling.

HTML Link Parser

Attribute:

- Name: Name of pre-processor.
- Comments: Any description.



HTML Link Parser

Name: HTML Link Parser

Comments:

HTML Link Parser

Demo:

- Use HTML Link Parser to crawl data from Blazedemo.

Exercise:

- Use HTML Link Parser to crawl data from any site.

JDBC PreProcessor

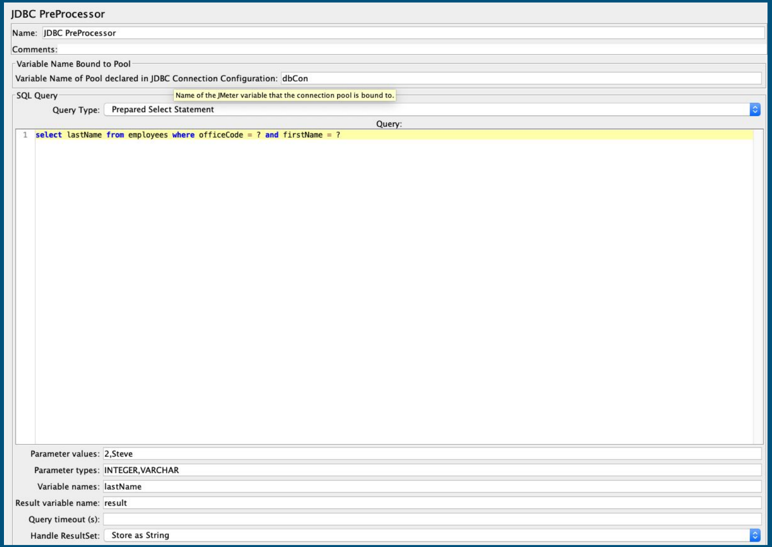
Attribute:

- Name : Name of the request.
- Variable Name of Pool declared in JDBC Connection Configuration: Name of the database connection specified in JDBC Connection Configuration.
- SQL Query Type: We have Select statement,

Update Statement, Callable Statement,

Prepared Select Statement,Prepare Update Statement, Commit,Rollback,AutoCommit(false).

- Query: Where to define the query



JDBC PreProcessor

Name: JDBC PreProcessor

Comments:

Variable Name Bound to Pool

Variable Name of Pool declared in JDBC Connection Configuration: dbCon

Name of the JMeter variable that the connection pool is bound to.

SQL Query

Query Type: Prepared Select Statement

Query:

```sql
select lastName from employees where officeCode = ? and firstName = ?
```

Parameter values: 2,Steve

Parameter types: INTEGER,VARCHAR

Variable names: lastName

Result variable name: result

Query timeout (s):

Handle ResultSet: Store as String

JDBC PreProcessor

Attribute:

- Parameter values : Comma-separated list of parameter values(required in case of prepared or callable)
- Parameters type: Comma-separated list of parameter type(INTEGER,DATE,VARCHAR,DOUBLE,etc...)[required in case of prepared or callable statement)
- Variable Names: Comma-separated list of variables name that hold values returned by Select Statements.[be careful of the sequence in case of prepared or callable statement]
- Result Variable Name: If specified then JMeter will create Object variable containing a list of row maps. Each map contains the column name as the key and the column data as the value.
- Query timeout: Set a timeout in seconds for query, empty value means 0 which is infinite. **-1** means don't set any query timeout which might be needed for use case or when certain drivers don't support timeout. Defaults to 0.

JDBC PreProcessor

Demo:

- Use JDBC Processor to get result from query and search it with Google.

Exercise:

- Do your own example with JDBC Processor.

JDBC PreProcessor

Demo:

- Use JDBC Processor to get result from query and search it with Google.

Exercise:

- Do your own example with JDBC Processor.

JDBC PreProcessor

Demo:

- Use JDBC Processor to get result from query and search it with Google.

Exercise:

- Do your own example with JDBC Processor.

Sample Timeout

Description:

Let's consider, you are running a load test and hitting the server with the max of its capacity. The server responding the to the request with its strength but most of the request are piled-up and the server takes a long time to respond. What will happen at the JMeter end in this situation?

Definitely, JMeter waits to fire the next request until the response of the previous request comes. This will impact the test TPS/RPS and you can not achieve the desired throughput.

To overcome this situation, "Sample Timeout" preprocessor is added under those samples where threads may get stuck. Sample Timeout sets a maximum timeout for a particular sampler and executes when the response time exceeds the given timeout value and instruct JMeter to fire the next request.

Sample Timeout

Description:

One point to be noted here, the timeout should be set sufficiently long so that it is not triggered in normal tests, but short enough that it interrupts samples that are stuck. Also, it is recommended not to use sample timeout for all the samplers. You can use this preprocessor for those pages where DB queries are executed, long calculative logics are written in the code etc.

Sample Timeout preprocessor can be used with AJP, BeanShell, FTP, HTTP, Soap, AccessLog, MailReader, JMS Subscriber, TCP Sampler, TestAction, JavaSampler.

Sample Timeout

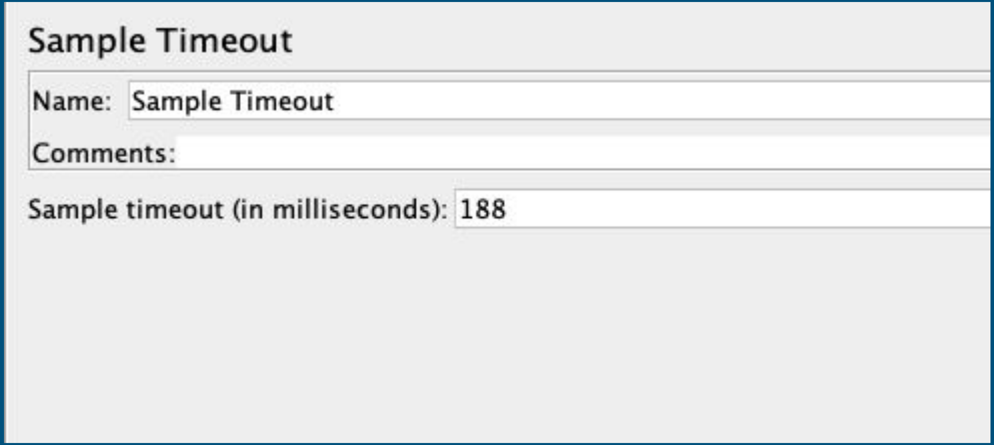
Attribute:

- Name : Name of the request.
- Comments: Description for this

pre-processor.

- Sample timeout(in ms):

To input the timeout value in milliseconds.



Sample Timeout

Name: Sample Timeout

Comments:

Sample timeout (in milliseconds): 188

Sample Timeout

Showcase:

- Use it with Google page

Exercise:

- Do with your website.