1)Which components have you used in Load Runner?

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Load Runner has 4 Components: Virtual Generator,

Analyzer, Controller and

Load Generator.

2) How can you set the number of Vusers in Load Runner?

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You can set the number of Vusers in the controller section while creating your scenarios.

LoadRunner Controller is used to create the virtual users who replace the human users to test the performance of the application. By default, it creates 10 virtual users who will access the application simultaneously and tests the load on the application. It is also possible to increase the number of virtual users. Let us now create virtual users for the web-based application for which we have already generated the test script using the LoadRunner Virtual User Generator.

Steps:

1. Open vuser generator
2. Click on new file
3. Enter name of file
4. Enter chrome path
5. Enter link of hp website
6. Click on recording
7. Check options & close recording
8. After recording click on corelate
9. When your recording is passed then click on tool
10. Click on create controller scenario & then create vuser

3)What is Correlation?

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Correlation is used in test scripts to cope with changeable variables. The dynamic values may vary based on each user activity (value changes when the same User performs the action again) or for other users (value changes when action is replayed with different users). In all cases, these variables are kept by correlation, guaranteeing that they do not degrade throughout execution.

Or if the execution of script depends upon a value returned by the server, it means you need to find a mechanism where you can “catch” the server response and attach to those requests which server expects. This is typically called Correlation in LoadRunner.

In simple words, the solution by using Correlation is:

Capture output value from a step

Use above captured value to serve as input to all subsequent steps

Correlation is classified into 2 categories in VUGen/LoadRunner:

Automatic correlation

Manual correlation

4) What is the process for developing a Vuser Script?

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vuser script may be created in four steps.

Step 1- Record the Vuser Script.

Step 2- Playback and improve the recorded vuser script.

Step 3- Define and test the different run-time parameters.

Step 4- Use the script in a LoadRunner scenario.

5) How Load Runner interacts with the application?

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Load Runner interacts with the application in the following ways:

#Recording: Load Runner records the user actions on the application to create a script. The script captures the HTTP/HTTPS requests and responses exchanged between the client and server.

#Parameterization: Load Runner replaces the hard-coded values in the script with dynamic values to simulate real-world scenarios. For example, it can replace a user ID with a parameter that takes input from a data file.

#Correlation: Load Runner identifies dynamic values that need to be correlated and replaces them with unique values during playback. For example, it can correlate session IDs or transaction IDs.

#Scripting: Load Runner allows users to manually script complex scenarios that cannot be recorded, such as multiple user sessions or complex business workflows.

#Playback: Load Runner simulates multiple virtual users that interact with the application simultaneously. It measures the response time of each transaction and captures errors and exceptions.

#Analysis: Load Runner provides detailed reports and graphs that help identify performance bottlenecks and areas for improvement. It also provides recommendations for optimizing the application's performance.

6) How many VUsers are required for load testing ?

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The number of VUsers required for load testing depends on various factors such as the application's complexity, expected user load, and the performance goals. It is recommended to start with a small number of VUsers and gradually increase them until the desired load is achieved. It is also important to consider the hardware and network resources available for conducting the load test. A load testing expert can help determine the appropriate number of VUsers for a specific application.

For example, if you run a load test with 10,000 virtual users, each making a request every 20 seconds (3 requests per minute), then you're making 30,000 requests per minute, which equals 500 requests per second.

7) What isthe relationship between Response Time and Throughput?

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The Throughput graph shows the amount of data in bytes that the Vusers received from the server in a second. When we compare this with the transaction response time, we will notice that as throughput decreased, the response time also decreased. Similarly, the peak throughput and highest response time would occur approximately at the same time.