

LoadRunner interview questions

Testing, Windows interview questions

1. **What is load testing?** - Load testing is to test that if the application works fine with the loads that result from large number of simultaneous users, transactions and to determine whether it can handle peak usage periods.
 2. **What is Performance testing?** - Timing for both read and update transactions should be gathered to determine whether system functions are being performed in an acceptable timeframe. This should be done standalone and then in a multi user environment to determine the effect of multiple transactions on the timing of a single transaction.
 3. **Did u use LoadRunner? What version?** - Yes. Version 7.2.
 4. **Explain the Load testing process?** -
Step 1: Planning the test. Here, we develop a clearly defined test plan to ensure the test scenarios we develop will accomplish load-testing objectives. **Step 2: Creating Vusers.** Here, we create Vuser scripts that contain tasks performed by each Vuser, tasks performed by Vusers as a whole, and tasks measured as transactions. **Step 3: Creating the scenario.** A scenario describes the events that occur during a testing session. It includes a list of machines, scripts, and Vusers that run during the scenario. We create scenarios using LoadRunner Controller. We can create manual scenarios as well as goal-oriented scenarios. In manual scenarios, we define the number of Vusers, the load generator machines, and percentage of Vusers to be assigned to each script. For web tests, we may create a goal-oriented scenario where we define the goal that our test has to achieve. LoadRunner automatically builds a scenario for us. **Step 4: Running the scenario.**
We emulate load on the server by instructing multiple Vusers to perform tasks simultaneously. Before the testing, we set the scenario configuration and scheduling. We can run the entire scenario, Vuser groups, or individual Vusers. **Step 5: Monitoring the scenario.**
We monitor scenario execution using the LoadRunner online runtime, transaction, system resource, Web resource, Web server resource, Web application server resource, database server resource, network delay, streaming media resource, firewall server resource, ERP server resource, and Java performance monitors. **Step 6: Analyzing test results.** During scenario execution, LoadRunner records the performance of the application under different loads. We use LoadRunner's graphs and reports to analyze the application's performance.
 5. **When do you do load and performance Testing?** - We perform load testing once we are done with interface (GUI) testing. Modern system architectures are large and complex. Whereas single user testing primarily on functionality and user interface of a system component, application testing focuses on performance and reliability of an entire system. For example, a typical application-testing scenario might depict 1000 users logging in simultaneously to a system. This gives rise to issues such as what is the response time of the system, does it crash, will it go with different software applications and platforms, can it hold so many
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- hundreds and thousands of users, etc. This is when we set do load and performance testing.
6. **What are the components of LoadRunner?** - The components of LoadRunner are The Virtual User Generator, Controller, and the Agent process, LoadRunner Analysis and Monitoring, LoadRunner Books Online.
 7. **What Component of LoadRunner would you use to record a Script?** - The Virtual User Generator (VuGen) component is used to record a script. It enables you to develop Vuser scripts for a variety of application types and communication protocols.
 8. **What Component of LoadRunner would you use to play Back the script in multi user mode?** - The Controller component is used to playback the script in multi-user mode. This is done during a scenario run where a vuser script is executed by a number of vusers in a group.
 9. **What is a rendezvous point?** - You insert rendezvous points into Vuser scripts to emulate heavy user load on the server. Rendezvous points instruct Vusers to wait during test execution for multiple Vusers to arrive at a certain point, in order that they may simultaneously perform a task. For example, to emulate peak load on the bank server, you can insert a rendezvous point instructing 100 Vusers to deposit cash into their accounts at the same time.
 10. **What is a scenario?** - A scenario defines the events that occur during each testing session. For example, a scenario defines and controls the number of users to emulate, the actions to be performed, and the machines on which the virtual users run their emulations.
 11. **Explain the recording mode for web Vuser script?** - We use VuGen to develop a Vuser script by recording a user performing typical business processes on a client application. VuGen creates the script by recording the activity between the client and the server. For example, in web based applications, VuGen monitors the client end of the database and traces all the requests sent to, and received from, the database server. We use VuGen to: Monitor the communication between the application and the server; Generate the required function calls; and Insert the generated function calls into a Vuser script.
 12. **Why do you create parameters?** - Parameters are like script variables. They are used to vary input to the server and to emulate real users. Different sets of data are sent to the server each time the script is run. Better simulate the usage model for more accurate testing from the Controller; one script can emulate many different users on the system.
 13. **What is correlation? Explain the difference between automatic correlation and manual correlation?** - Correlation is used to obtain data which are unique for each run of the script and which are generated by nested queries. Correlation provides the value to avoid errors arising out of duplicate values and also optimizing the code (to avoid nested queries). Automatic correlation is where we set some rules for correlation. It can be application server specific. Here values are replaced by data which are created by these rules. In manual correlation, the value we want to correlate is scanned and create correlation is used to correlate.
 14. **How do you find out where correlation is required? Give few examples from your projects?** - Two ways: First we can scan for correlations, and see the list of
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- values which can be correlated. From this we can pick a value to be correlated. Secondly, we can record two scripts and compare them. We can look up the difference file to see for the values which needed to be correlated. In my project, there was a unique id developed for each customer, it was nothing but Insurance Number, it was generated automatically and it was sequential and this value was unique. I had to correlate this value, in order to avoid errors while running my script. I did using scan for correlation.
15. **Where do you set automatic correlation options?** - Automatic correlation from web point of view can be set in recording options and correlation tab. Here we can enable correlation for the entire script and choose either issue online messages or offline actions, where we can define rules for that correlation. Automatic correlation for database can be done using show output window and scan for correlation and picking the correlate query tab and choose which query value we want to correlate. If we know the specific value to be correlated, we just do create correlation for the value and specify how the value to be created.
16. **What is a function to capture dynamic values in the web Vuser script?** - Web_reg_save_param function saves dynamic data information to a parameter.
17. **When do you disable log in Virtual User Generator, When do you choose standard and extended logs?** - Once we debug our script and verify that it is functional, we can enable logging for errors only. When we add a script to a scenario, logging is automatically disabled. Standard Log Option: When you select Standard log, it creates a standard log of functions and messages sent during script execution to use for debugging. Disable this option for large load testing scenarios. When you copy a script to a scenario, logging is automatically disabled Extended Log Option: Select extended log to create an extended log, including warnings and other messages. Disable this option for large load testing scenarios. When you copy a script to a scenario, logging is automatically disabled. We can specify which additional information should be added to the extended log using the Extended log options.
18. **How do you debug a LoadRunner script?** - VuGen contains two options to help debug Vuser scripts-the Run Step by Step command and breakpoints. The Debug settings in the Options dialog box allow us to determine the extent of the trace to be performed during scenario execution. The debug information is written to the Output window. We can manually set the message class within your script using the lr_set_debug_message function. This is useful if we want to receive debug information about a small section of the script only.
19. **How do you write user defined functions in LR? Give me few functions you wrote in your previous project?** - Before we create the User Defined functions we need to create the external library (DLL) with the function. We add this library to VuGen bin directory. Once the library is added then we assign user defined function as a parameter. The function should have the following format: __declspec (dllexport) char* <function name>(char*, char*) Examples of user defined functions are as follows: GetVersion, GetCurrentTime, GetPlatform are some of the user defined functions used in my earlier project.
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