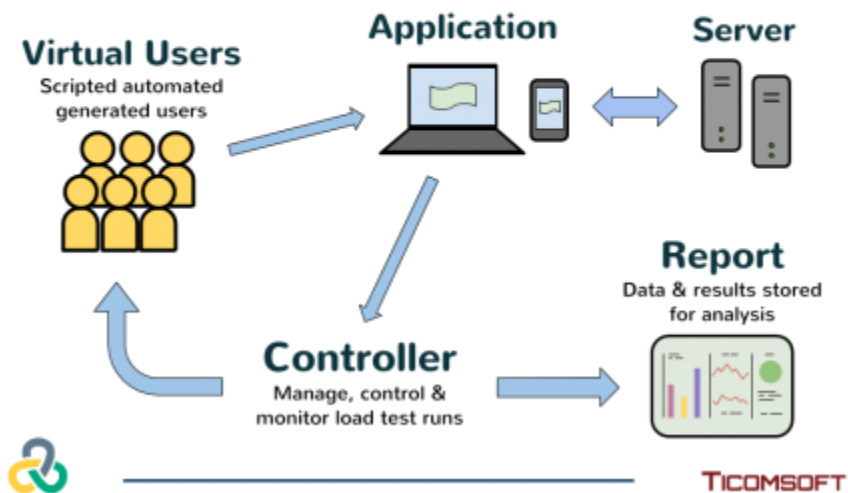


Software Testing Assignment –4

1] Which components have you used in Load Runner?

LoadRunner consists of three main components: 1) **Virtual User Generator (VuGen)**, 2) **Controller**, and 3) **Analysis**.

How LoadRunner Works?



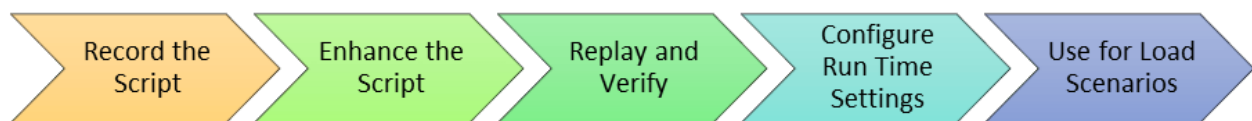
2] What is Correlation?

Correlation plays a crucial role in the success of a LoadRunner script. It handles dynamic values that change with each run of the script. These values, such as

session IDs or server timestamps, are generated by the server and can't be predicted

3] What is the process for developing a Vuser Script? How can you set the number of Vusers in Load Runner? How many VUsers are required for load testing?

The script development process in VUGen



- 1. Record the Script:** Usually, this is the first step of scripting where every user action is recorded into a script.
- 2. Replay and Verify:** Once the script is recorded, replay the script to ensure it's working right. Verify any impact through application frontend or database.
- 3. Enhance the Script:** Once recording has been verified, enhance script by adding checkpoints, validating data, adding transactions and rendezvous points.
- 4. Replay and Verify:** As earlier, re-play your script and verify that everything is working as intended.
- 5. Configure Runtime Settings:** Configure and control pacing duration, think time variation, proxy settings and whether you wish to ignore any external resources.
- 6. Use for Load Scenarios:** Formulate load scenarios based on test objectives. Use load distribution and geo-wide agents to make real like scenarios.
 - If you already added your script, you will find an entry for it in the "Groups" grid. In that grid there's also a column for "Vusers". For your script the value will be set to 1 by default. If you want to increase that number, just double-click on the grid to edit the value.
 - In VuGen, it's allowed to run only **one VUser**.

4] What is the relationship between Response Time and Throughput?

Response time and throughput are related. The response time for an average transaction tends to decrease as you increase overall throughput. However, you can decrease the response time for a specific query, at the expense of overall throughput, by allocating a disproportionate amount of resources to that query.

5] What is Automation Testing?

Automated Testing is a technique where the Tester writes scripts on their own and uses suitable Software or Automation Tool to test the software. It is an Automation Process of a Manual Process. It allows for executing repetitive tasks without the intervention of a Manual Tester.

Advantages of Automation Testing

- **Simplifies Test Case Execution:** Automation testing can be left virtually unattended and thus it allows monitoring of the results at the end of the process. Thus, simplifying the overall test execution and increasing the efficiency of the application.
- **Improves Reliability of Tests:** Automation testing ensures that there is equal focus on all the areas of the testing, thus ensuring the best quality end product.
- **Increases amount of test coverage:** Using automation testing, more test cases can be created and executed for the application under test. Thus, resulting in higher test coverage and the detection of more bugs. This allows for the testing of more complex applications and more features can be tested.
- **Minimizing Human Interaction:** In automation testing, everything is automated from test case creation to execution thus there are no changes for human error due to neglect. This reduces the necessity for fixing glitches in the post-release phase.
- **Saves Time and Money:** The initial investment for automation testing is on the higher side but it is cost-efficient and time-efficient in the long run. This is due to the reduction in the amount of time required for test case creation and execution which contributes to the high quality of work.

- **Earlier detection of defects:** Automation testing documents the defects, thus making it easier for the development team to fix the defect and give a faster output. The earlier the defect is identified, the more easier and cost-efficient it is to fix the defects.

6] What is Benefits of Selenium IDE?

Benefits of Using Selenium IDE

Selenium Integrated Development Environment also gives the feature to use more than one locator to identify elements which make it an easy choice tool for automating tests. Selenium Integrated Development Environment is based on the Selenese commands with which it comprehends what activities it needs to perform for the purpose of testing.

Because of the ease of use, the Selenium Integrated Development Environment can be used by any one to develop automated test cases without requiring any technical expertise.