LOAD AND PERFORMANCE TESTING
Eggplant Performance

eggplant
Test Automation Software

KEYSIGHT
TECHNOLOGIES

Testing testing…

Complexity abounds

Systems are increasingly software-reliant and interconnected—making design, analysis, and evaluation harder than ever before.

Though consumers value these innovations, software authors grapple with the challenges of deploying rigorous validation to verify systems function as expected and do not break under the load. Teams need smarter testing solutions that cut through the noise.

Eggplant Performance provides sophisticated performance and load testing tools that can test the widest range of technology and can scale up to simulate any load you need, but are still easy-to-use.

Our performance test typically involves four steps:

Create or auto generate test scripts which simulate the user journey.

Define the overall test 'workflow': how many virtual users they want to simulate; the usage pattern; the distribution.

Execute the test. Monitor the performance and potentially change the parameters of the test dynamically in real-time.

Analyse the results.

This is how we do #IT

Optical character recognition

Eggplant Performance provides sophisticated protocol recording and data correlation to automatically generate user scripts.

This means that to create a typical Eggplant Performance script you simply execute the scenario once manually (e.g. by opening a browser and navigating the target website), and Eggplant Performance will record the network traffic and create a script. This sounds simple, but sessions, cookies, dynamic forms, asynchronous communications, mobile devices,and security all make it difficult to create a reliable repeatable test from a recording. Fortunately, Eggplant Performance includes sophisticated algorithms fine-tuned over more than 10 years to handle these situations. This ensures that scripts are quick and easy to create and maintain.

Broad technical coverage and customizable virtual users

Eggplant Performance has deep support for testing websites, but it also has in-built support for other common client-server technologies such as Java, .NET, and Citrix.

For protocols and technologies that are not supported 'out of-the-box', Eggplant Performance provides 'customizable virtual users'. This enables you to create new virtual user types that understand your protocols and technologies.

Scalable and distributable

Eggplant Performance allows testers to partition virtual users any way they like across injectors. This means you can choose to run 100 virtual users from one injector, 200 from another injector, and so on. This delivers two major benefits.

- It means that Eggplant Performance is scalable to any number of virtual users.Testers can execute 100,000 virtual users or more. If an injector does not have the capacity to simulate any more clients, then simply add a new injector.

- By putting injectors in different geographical regions, testers can analyze the impact of the client's location on the user experience. For example, users in the UK see response times of less than 1 second, but this means 3 second response times for people in Australia.

Application-level virtual users and Eggplant Functional

Eggplant Performance can execute Eggplant scripts and other application-level test tools just like any other virtual user script. This has two huge benefits:

- First, traditional protocol-level client simulation is an effective and highly efficient way of putting a server under stress. But in terms of verification, it can only ensure that the client is receiving the correct messages from the server. It cannot verify that the user is getting the expected behaviour or verify the user experience.

Eggplant, however, interacts with the client machine exactly how a user does. So it can verify the user experience

Eggplant performance is the only tool that allows you to easily combine these two approaches. It uses protocol level client simulation to place controlled stress on the server and verify network traffic, and Eggplant to verify both the correctness and performance of the user experience. For example, placing a load of 10,000 users on a server via protocol-level simulation, and simultaneously validating the user-experience on a mobile device, a tablet, and a PC (in several different browsers).

- Second, web technologies are becoming increasingly complex.

While Eggplant performance can handle almost any situation, there are always niche situations which are difficult to handle at the protocol level. Using application level virtual users provides a reliable back-up in these situations, since these virtual users are isolated from the details of the network.

Dynamic run control

Eggplant Performance allows testers to modify the test parameters at runtime, e.g. increase the number of virtual users. Combined with real-time monitoring of the server and client, this allows the tester to efficiently perform exploratory testing.

Data gathering, analysis, and presentation

The Eggplant Performance analyzer is all about looking at the results of your test, deciding whether the performance was adequate, and identifying how performance can be improved. In a functional test the results of the test is either pass or fail; but in a performance test you get a large set of data and decide whether it is sufficient.

Eggplant Performance gathers comprehensive diagnostic information from the server and the client, and gives testers tools to analyze this information. For example, statistical analysis of response times (including mean, max, min, and percentiles), ability to correlate factors, ability to compare test runs, ability to quickly aggregate and drill down into data, and the ability to import data from external monitoring tools and include this in analyses.

Information about application errors is also gathered, exposing errors that might not normally be seen when the system isn't under load.

Integrations

Eggplant Performance can integrate with several other test-related tools including Jenkins/Hudson for continuous integration and DynaTrace for application monitoring. Open APIs mean that Eggplant Performance can integrate with JMeter auto-generates code from both SOAP (WSDL) and REST (OpenAPI/Swagger) Web Services.

Eggplant Performance license model

Since customers have very different needs in terms of the number and type of virtual users required, Eggplant Performance is separated into Base and Virtual Users.

- Base includes all the standard elements required to create, run, and analyze tests. This means the Studio, the Test Controller, the Analyzer, and limited number of virtual users.

- Virtual Users are additional virtual users. The Base is sold on a 12 month term basis.

This includes:

- Full use of the latest version of Eggplant Performance.

- Full support and maintenance.

- Free access to all new product releases.

- Full access to our online guides and training material.

Virtual Users (VUs) are sold on a 1 week term basis to give customers maximum flexibility in dealing with the inherent variation in performance testing. The price depends on the number of VUs and duration of the term.

Learn more at: www.keysight.com/find/eggplant

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