ElasTest: a cloud-based testing service platform for testing complex distributed large software systems

Madrid, June 1st 2017. The ElasTest project, with an € 5M of EU funding under the Research and Innovation action from the Horizon 2020 program kicked-off in January 2017. Partners from academia, research institutions and IT companies are working together with the overall aim to offer an elastic platform for testing complex distributed large software systems to help end-to-end testing.

The goal of the ElasTest project is to increase software quality by reducing the complexity of software testing on large distributed systems in the Cloud. The project aims to reduce the time-to-market of software projects, increasing the quality of the resulting software product, reducing the possibility of failures and improving the perception of the software both by the end user and the developers who can perform more complex tests in less time.

The ElasTest project aims to offer a flexible open source testing platform for rapid and accurate end-to-end testing to significantly improve the efficiency and effectiveness of the testing process and the overall quality of large software systems. The demand for larger and more interconnected software systems is constantly increasing, but the ability of developers to satisfy this demand is not evolving accordingly.

Discovering the design defects in any software, is equally difficult, for the samecomplexity reasons. In fact, the most limiting factor in delivering complex software timely is software validation, which typically requires very costly and complex testing processes to ensure the software is free of errors.

Therefore, **to overcome these limitations, the platform will operate in different environments and will be tested on both: development and in production systems**. In doing so, ElasTest will offer a flexible open source testing platform aimed to simplify the end-to-end testing processes for different types of applications, including web, mobile, real-time video communications, and Internet-of-Things.

As it will provide advance testing capabilities aimed to increase the scalability, robustness, security and quality of experience of large distributed systems. All in one, **ElasTest will make any software development team capable of delivering software faster and with fewer defects**. Companies with large testing groups need to increase the quality provided without increasing costs and execution time. For these companies the ElasTest project will simplify their current testing process of complex distributed large software systems.

The **ElasTest cloud platform will be released as Free Open Source Software** and will create a **Community of users and contributors** who can help us in our endeavor for transforming

ElasTest into a worldwide reference in the area of large software systems testing and guaranteeing the long term platform sustainability.

To overcome the challenges mentioned before, ElasTest will develop two innovative and unique technologies: an instrumentalized browser service and a system for tests orchestration that allows increasing the reusability of tests.

The coordinator, Patxi Gortázar from the *Universidad Rey Juan Carlos* in Spain, says:

> *"The motivation behind ElasTest is the huge effort needed to build end-to-end tests for large distributed applications under real conditions. We want to reduce this effort and provide new tools to aid developers and testers by building a tool that is specifically focused on end-to-end testing. We are going to leverage the partner's testing experience in areas like telecommunication networks, real-time video processing, Internet of Things, or Web and Mobile development to build something that will ease the testing process for complex applications."*

ElasTest Consortium – The ElasTest project is led by the Spanish University Rey Juan Carlos and involves the Technische Universität Berlin, the research Centre Consiglio Nazionale delle Ricerche, Zurich University of Applied Sciences, Fraunhofer FOKUS and the IMDEA Software Institute. The consortium also includes the following industrial partners: Atos Spain, IBM, NAEVATEC and RELATIONAL.

The project is funded by the Horizon 2020 program, within the ICT-10 "Software Technologies" topic.

For more information on ElasTest contact the coordinator Patxi Gortázar
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