



Enhance the performance of mobile games with automation testing

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The competition in the mobile game industry has significantly increased over the years. In 2018, there were only 1.7 billion downloads. This number shot up to a whopping 11.5 billion downloads in 2021 from Google Playstore alone.

This indicates that a mobile game must appeal to the user and stand out in the competition among the million other mobile gaming apps. When billions of users log onto a single app, the app must show high performance and speed with the high loads.

A single bug in the mobile gaming apps could lead to a massive crash on a global level, leading to a severe hit to the company's reputation. Such incidents can be fatal to a newcomer in the industry, especially for gaming startups.

Previously, [game testing](#) was limited to only manual testing to evaluate game stability and performance. With recent advancements, automation testing has created a new horizon for testing teams to create apps with higher performance and flawless interface, product developers. Automated testing facilitates a cost-effective and time-saving QA process compared to manual testing.

This article brings insights into how automation testing for mobile gaming apps is a game changer.

Perks of Automation Testing

- Requires less time and effort on QA. [Automation scripts](#) can be run on large codes faster than manual testing which results in timely delivery of clients' products.
- Automated testing is far more efficiently than manual testing in finding game errors. For instance, automation scripts running on large data units can identify more errors and bugs that sometimes could be neglected due to human errors.
- An automated tool can run the tests 24 x 7 without any human intervention. This reduces the burden on testing teams who can now focus on other core activities or manual testing requirements.
- Test automation reduces the possibility of errors due to human intervention and negligence.
- Test reports created after running test suites or scripts may be used to quickly assess the evaluation of executed test results.
- Automated tests enable testing across several platforms concurrently, accelerating test execution and significantly enhancing the value of game testing.
- Reduces corporate expenses and aids in optimised workforce utilisation for core duties associated with game production.
- Increases test coverage for complicated and complex cases by using automated testing.

Strategies used for Automation Game Testing

QA Experts can design test strategies based on the requirements at hand. Some popularly used automated game testing tools are Unity, Unreal Engine, Appium, Selenium, and LumberYard and LY Test. These tools are used for both [video game testing](#) and [web app game testing](#). Irrespective of the tools used, test automation for mobile gaming apps involves these common strategies.

Hand-written Scripts

Using a programming language (Java, C#, or Python), competent test engineers build, maintain, and run test scripts to create and implement testing frameworks from scratch. The key benefit of this strategy is that the engineers are free to create a well-organized framework using scripts that aid in giving the game full QA coverage.

Record-Playback

This method is less prone to errors because it executes without writing handwritten code, but its usefulness is often more constrained. This method enables easy recording and playback of tests against various OS versions and device setups.

Some Challenges with Automation Testing for Mobile Gaming Apps

Despite having several advantages, test automation has some [challenges in evaluating mobile gaming apps](#). Read further to know the challenges to ways to tackle them.

The fact that games are inherently unpredictable and might have an endless number of gaming scenarios and permutations presents automation engineers with their toughest hurdle when automating game test scripts. As a result, one cannot simply depend on the framework.

Lack of qualified personnel with experience in creating and implementing proper frameworks.

The game's performance may change depending on the hardware and software configuration.

Only testing on actual mobile devices makes the game reliable. Emulators and simulators cannot be used to anticipate the degree of accuracy in game code.

For certain web-based games, locator techniques such as "Xpath," "id," "class name," etc. cannot always be evaluated using automation testing.

The fast-paced user interface (UI) and responsiveness of games make it often challenging to synchronise gameplay with test scripts. Automating software and data complications, including audio, cinematic effects, massive data, and localisation, is complicated.

Scenarios involving the control of a device's rotation or movement mechanism are challenging to automate without extra resources.

Automating the game-play mode of AR/VR-related games, graphical user interface (UI) (graphics that blink or change position), and arbitrary animation that appears in-game is challenging.

Tackle Automation Hurdles Skillful QA Experts

The only way to successfully automate a gaming product is if the scope is planned from the beginning. Businesses require qualified teams enrolled for the task with industry knowledge and subject matter expertise. QA Experts must also be aware of their duties and responsibilities, followed by the skills to employ a standardised testing method with the correct selection of tools for successful project execution and delivery.

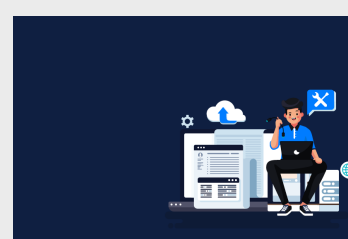
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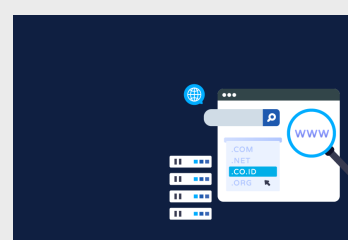
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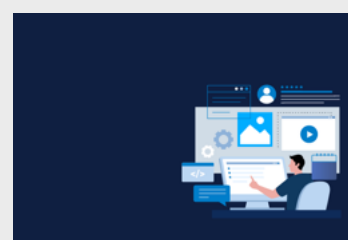
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