

Game Performance Testing



Client Overview

- Game developer of strategy genre of games in the industry



Business Requirements

- Mobile game with strategy themes in building cities, farming using tools and completing levels progressively
- Stress Test the application for 10000 userbase
- Conduct Performance Tests for User Engagement metrics
- Monitor app stability and resource drain through the game assets while performing stress tests on concurrent user access
- Verify and validate Game launch and pick up speeds, response times during Game Play
- Simulate real scenarios and generate Test Results with performance optimizing recommendations



Our Solutions

- Analyzed the Game Play with all elements and level complexity to identify test entry points for conducting performance tests
- Test Coverage Index: Created a Performance metrics list with possible Game User Engagement weak links (for instance: Game launch response time, mobile resource usage, game interrupt scenarios due to device interferences, network performance etc.)
- Custom Test Approach to simulate user load in tolerant stress levels – tests in progressive load sprints with 100, 250, 500 10000 users
- Generated virtual load using AWS cloud and Jmeter test scripts to monitor response times, record timestamps for Game crash incidents, system dynamics / memory utilization monitoring
- Reported recurring deadlock issues after 4 levels of Game Play
- Reported frequent Page Reload requests on Launch and sustained low performance through first levels



Technologies

- **AWS Cloud** (Virtual Load Generation)
- **JMeter, JIRA** (Defect Management)



Business Impact

- QA for Performance Compliance as well as User Engagement focused approach
- Detailed Test Artefacts with Root-cause matrix and Recommendations to Performance Issues
- Achieved industry standard response times for Game Launch:< 2 Seconds and Zero crash incident reported



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