

IOT PERFORMANCE ASSURANCE

Enabling High Performance IoT Platform

Effective performance testing of IoT applications and platforms towards providing "Business Assurance"

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Connected World.
Connected Solutions.



Business Scenario

Gartner estimates \$300 billion IoT product and services market and Cisco estimates to have 50 billion “Connected Devices” by 2020. In this connected world, around 60% of the Cloud based IoT applications are facing critical performance issues. This leads to the need of cost effective performance testing solution for IoT applications.

Business Challenges

- Green field implementations - No previous SLAs available for IoT platforms
- Crazy Interfaces and Complex networks
- Data Integrity across different platforms
- Choosing right cloud platform & evaluating cloud plans to cater exponential Volumes
- Complex real world scenarios to emulate, test and assure

“This can be addressed by developing high performing, scalable and reliable IoT applications which can be achieved by having right performance assurance solution”

Solution & Approach

Tech Mahindra’s comprehensive performance testing solution sets right process & procedures by effectively using the tools & technology mix and execution strategy.

- Cost effective solution with right combination of open source framework & licensed tools
- In-house NF Service Simulator to effectively test individual components
- Performance testing as a service (PTaaS) for IoT platforms
- Test data management framework to generate huge data required for IoT PA
- Re-usable script templates for IoT specific protocols
- Compatible to assure IoT platforms comprising of modern digital technology (Mobile, Cloud, Bigdata, Device emulation) across domains

Business Benefits

- Ability to simulate the real-life like load from multiple geographic locations (35+) with 80% improved test suite provisioning time
- Upfront visibility on SLAs, CAPEX and OPEX utilisation towards timely business decisions
- Improves End user experience which leads to better RoI
- Win-Win Benefit: Client can be benefited by having the PT as a service comprising of needed hardware platforms, industry-leading software licenses only for the time window they need.

Tech Mahindra Edge

- In-house developed cost effective frameworks to simulate higher loads from cloud and monitor the user experience
- Ability to effectively test individual components using NF Service Simulator
- Compatibility to assure IoT projects comprising of modern digital technology (Mobile, Cloud, Bigdata, device emulation) applications
- This solution won “Emerging Technology in Testing of the year” award in Unicom’s APAC testing awards and it’s selected as a best technical publication by STeP-IN forum

Success Stories

Success stories include PTA for US Tier-1 Telematics connected cars platform and Europe based Digital Personal Healthcare platform

- Most of IoT platforms are green field implementations – PT gives right insights into the CAPEX and SLAs
- Implementing multiple techniques to emulate realistic production like load from all the different devices, geos, CRM units, B2B and B2C vendor systems is the key
- The benefits are more in terms of:
 - In a connected cars platform
 - The number of cars supported by a server increased by 50%
 - Evaluated systems processing “car health report status update” - 655,000 per/ hour
 - The response times for automatic crash reporting and door unlock improved from 25 seconds to 5 seconds
 - Performance tested near real time synchronisation between Car- Mobile- Portal & CRM systems
 - In Personal health solution platform
 - 10 different manufacturer personal health device emulation
 - “Regular health API” response times improvement from 8 seconds to 2 seconds
 - User experience monitoring for users across multiple geographic locations and different wearable devices

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