



Solve multi-nodal simulations through effective automation

Last Mile helps PTT provider implement a comprehensive test automation solution across its releases and PTT platforms (web/mobile) enabling a nimble approach to its QA lifecycle. The effects have been a thorough coverage of E2E scenarios with multiple originating and terminating platforms and a significant reduction in test execution cycle time.

Case Summary	Business Challenges	Business Benefits
The client needed a partner with domain led test automation capability to address the immediate need of automating high priority E2E test cases for their PTT solution for a leading telco. Last Mile took the overall E2E responsibility to adapt the in-house framework based on open source toolsets to provide custom solutions that addressed the need of the customer.	<ul style="list-style-type: none"> • Need to reduce the release window • Need to ensure operational stability during product & functional enhancements due to continuously changing requirements • Time critical releases impacting end customer satisfaction 	<ul style="list-style-type: none"> • Reduced time to market of new services and features • Realized optimization and substantial cost savings • Reduced cost of quality by offloading automation requirement • Achievement of increased automation • Delivery focussed on mitigating release risks by ensuring coverage of critical paths in the application.

Background

The current in-house solution that had been deployed did not address the coverage needs and was difficult to keep pace with the rapid development cycles.

Business driven automation was one of the areas focused on to speedily automate tests, and reduce the time to bring a new release to the end customer. A surfeit of business changes, required a solution that could support rapid automation, cover key business functions, and ensure that the committed release timelines were not compromised. In addition, reusability of automation scripts was a key requirement to meet the reduced timelines and the acceptance criteria of end users. Automation had to cover the functionality of the PTT integrated dispatch control that covered GPS-based location mapping, call recording, and PTT user status (presence).

Key requirements for functionality to be automated included :

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| <ul style="list-style-type: none"> • PTT calling by the dispatcher and simulation of responses from terminator (mobile / web based dispatcher) • Dispatcher override for PTT calls • Real-time presence • Instant call-me alerts • Group monitoring | <ul style="list-style-type: none"> • Geo-Fencing • Video Recording • Call recording • History and logging • Support for multiple dispatchers • GPS-based location mapping |
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Our Solution

Last Mile's automation experts, worked closely with the customer team, to nail down and prioritize key end-to-end business scenarios. The existing Last Mile Automation framework was extended to cover specific customer requirements. Last Mile took complete ownership of test automation of the test cases for the multiple functionalities of the product as per the priorities determined.

We successfully automated the complete E2E synchronized testing between multiple webDispatcher instances and across a webDispatcher and a connected device. The E2E Automation testing suite integrated seamlessly across multiple web Dispatchers and connected Android instances to ensure a smooth call flow / instant message flow for 1-1 calls, Group Calls and calls across TalkGroups. GeoFence scenarios and breadcrumb comparisons for the route taken by the group members were also covered through our automation solution.

Last Mile's solution/test automation framework included the usage of

- Test NG – for controlling script execution
- Selenium/Selenium Grid – for web based part of the E2E scenarios
- Appium – for the mobile related parts of the E2E scenarios
- Sikuli/AutoIT etc for providing support for customer specific functional requirements
- Packaging the solution for zero touch execution – starting from installation of plugins to emailing of execution reports

Key benefits delivered to the client were:

- Opensource based - Easy to Use framework, that reduced the dependence on coding expertise
- Easy to understand reports with drill down capability to identify points-of-failure (Html based reports and excel reports with data stored in MS-SQL for further analysis)
- Scripting with an aim to increase reusability – thus customizing the scripts so as to use them across different implementations

About Last Mile

Last Mile is a domain led Quality Assurance Consulting and Training services company. Our engagements are focused on helping customers build a strong foundation to scale their testing organisation to meet the challenges of end to end **process alignment**; reduced **time to market**; improved **quality**; at the same time **improving the costs**. Last Mile delivers through independence of thought and action by working as partners to help **transform** overall testing services.