

Custom Automation Frameworks

Redefining Test Automation for a Fortune 500 Insurance Company

Objective

To implement an automation first strategy using open-source tools and frameworks for a leading supplemental insurance company to reduce testing costs, improve maintenance, increase flexibility, and achieve better integration with third-party tools and applications.

Client Context & Situation

As a leading US-based supplemental insurance company, our client provides critical health coverage to millions of people across the country. With a complex system of applications and platforms, our client needed a robust and reliable testing solution that could keep up with the demands of their business. However, their licensed test automation tool was expensive, difficult to maintain, and lacked the flexibility to handle complex testing scenarios. To address these challenges, our team was brought in to implement an automation first strategy using open-source tools and frameworks.

Key Business Challenge

The client's existing licensed test automation tool was causing significant challenges in several areas, including:

Excessive Cost of Testing: The licensing cost for the tool was high, and the license was procured for a substantial number of users, resulting in a considerable cost burden for the client.

Maintenance: Maintaining scripts on the tool was time-consuming and challenging, especially when the application under test underwent frequent changes. This led to delays and increased costs.

Limited Integration: The tool did not integrate well with all third-party tools and applications, which limited its usability in some environments like DevOps Pipeline. This caused difficulties in automating testing in these areas.

Performance Issues: The tool was slow and resource-intensive, which caused performance issues on VMs, especially when running large test suites. This resulted in delays and impacted the overall efficiency of the testing process.

Limited Flexibility: The tool was not flexible enough to handle complex testing scenarios, which required more customization than it allowed. This made it challenging to test complex applications and led to delays in the testing process.

Scope of Services

To address these challenges, the client engaged our team to design and develop customized automation frameworks using open-source tools and technologies. The scope of services included:

- Design and development of customized automation frameworks utilizing only open-source tools and technologies.
- Development of several customized automated solutions using Selenium, Rest-Assured, Robot framework for SAP applications, WinAppDriver, and pywinauto for desktop applications.
- Development of a customized automation solution for mainframes automation using Python and pytest.
- Development of a customized automation solution in Python for Data Testing.
- Integration of the Web Automation Framework with the AXE tool to provide accessibility testing capabilities.
- Migration of all existing scripts (3000+) developed on licensed tools to the above-mentioned custom automation frameworks.





Key Outcomes:

By implementing the automation first strategy and using the customized automation frameworks, the client achieved significant outcomes, including:

- **Cost Savings:** The client achieved cost savings of \$587K per year in tools licensing and maintenance contract costs by using open-source tools and technologies.
- **Regression Coverage:** The client achieved 90%+ automated regression coverage across most areas, which significantly reduced manual testing efforts and increased testing efficiency.
- **In-Sprint Automation:** The client achieved 60%+ in-sprint automation for various scrum teams, which enabled faster testing cycles and more efficient use of resources.
- **Integration with DevOps Pipelines:** The customized automation frameworks enabled integration with DevOps pipelines, which significantly improved the overall efficiency of the testing process.
- **Implementation of Automation First Strategy:** By using open-source tools and technologies, the client implemented an automation-first strategy that increased testing efficiency and reduced costs.

Conclusion:

By implementing an automation-first strategy and using customized automation frameworks, our team enabled a leading US-based supplemental insurance company to achieve significant cost savings, increased testing efficiency, and faster testing cycles. The use of open-source tools and technologies enabled the client to overcome significant challenges in their existing testing process and implement a more efficient and cost-effective approach to testing.

About Coforge

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