



Automated regression testing accelerates complex migration projects.



About the COMPANY

The client is a wholly owned Swiss reinsurance subsidiary serving business-to-business clients. It offers life insurance products that cover the financial consequences of illness and accidents. The company is headquartered in Vaduz (Liechtenstein), with branches in Switzerland, Netherlands, Ireland, Germany, and Italy.



Challenge

The client had expanded its business over the last several years but faced challenges when its legacy platform needed to scale to accommodate this growth. Another concern was ensuring the platform's compliance with standards in the various regions where it was being used. The legacy applications took a long time to generate output documents (PDFs); hence the client wanted to prioritize efficiency and user-friendliness in their updated application. To successfully migrate the documents, approximately two hundred templates in four different languages (German, French, Italian, and English) had to be converted from the old application to the new one within 12-14 months.



Solution

BelWo's team developed an automated tool to address the client's growing requirement for regression testing. Along with manual testing, the automated tool was also used for this project and proved very useful for migration and version upgradation.

This solution was developed using a combination of technologies including .Net, Scaler, Quadient tools, and Java. After selecting the input file from the directory, it automatically picked WFD and created a specified folder structure to compare the expected with the actual. The comparison then resulted in a compelling report that takes the form of images.

The steps below followed.

STEP 1

Understanding the Requirements

The testing team developed an understanding of the client's needs in the following ways:

- Communicating with the clients via email, phone calls and document review
- Discussing the project with the project lead and developers
- Analyzing the previous version already implemented into the system and the domain or industry knowledge that the team is trying to implement

STEP 2

Preparing the Test Cases

The testing team wrote high-quality test cases in a spreadsheet with a template designed by BelWo:

- To verify the "Logo" on every page
- To verify barcodes.
- To verify a content one-to-one match.
- To verify spacing between the lines/ paragraphs.
- To check whether the dynamic variables are implemented correctly.
- To check that footer is as per the languages required.

Testers prepared positive and negative test cases to discovering bugs after the release.

STEP 3

Preparing Test Data

The data file provided by the customer needed to include all the scenarios and business rules. The BelWo team created a test data file with all the business rules to ensure the developers covered them.

STEP 4

Executing the Test Cases

We used automated regression testing to complete the test cases efficiently, resulting in many documents. Each document required verification of thousands of pages, a lengthy and complex process that was difficult to complete within a set delivery timeline. Automated regression testing made the process more efficient without compromising the output file. After the test cases were developed and the output was ready for review, the testing team began executing the test cases using the data that had been prepared. The goal was to get an accurate result as per the requirements.



Bug Tracking

While executing the test cases where the expected result did not match the actual results, the testers logged it as a bug in the Bug Tracking Tool (Jira). The tester then assigned the bug to the appropriate developer to fix.



Generating the Reports

The same spreadsheet was used to track the number of test cases being executed and the status of each. In addition, the spreadsheet made it possible to verify the final output before releasing it to the client.

STEP 5

Security Process Employed

The BelWo team then tested the machines/remote desktop provided by the customers to ensure no data was brought down on the local device. Furthermore, the team was advised not to bring any data to our local machines and strictly adhered to security norms to avoid data breaches.

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Result

With our regression tool, the effort required to compare the files from the client with our in-house output was reduced.

With the help of this regression tool,

1. The time taken to test was reduced by 50% across.
2. The project was completed within a year.
3. The manual effort was reduced significantly.
4. A scalable testing framework was created.
5. Easy error handling was accomplished.

About Us

BelWo develops, deploys, and manages Customer Communications Management (CCM) solutions for enterprises and print service providers worldwide. As a solutions-focused partner with deep expertise in CCM, enterprises turn to us to support complex CCM initiatives that range from smaller-scale document applications to full-scale omnichannel digital experiences. Our mission is to help our clients meet strategic CCM goals, add value to every customer communication, reduce costs and improve the workflows of mission-critical CCM processes.

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