AGL Energy Transforms SAP Testing for Agile

Drawing on more than 180 years of experience, AGL Energy (agl.com.au) is a leading provider of gas, electricity, and solar Photo Voltaic [PV] solutions to more than 3.6 million customer accounts across Australia.

Recognizing that today's customers expect faster and more personalised ways to interact with their utility providers, AGL invested $300 million in a Customer Experience Transformation (CXT) program. The program underscores their commitment to continuously deploy and evolve innovative products and services that give customers a high degree of control over their energy.

To support the program, AGL's management launched an *Idea to Production in five days* initiative for AGL's SAP delivery units. However, the teams responsible for these units quickly realised that achieving this goal would require them to accelerate their quarterly SAP IS-U and SAP CRM backend delivery cycles. One key hurdle to this acceleration was their lengthy regression test cycles. How could they move from idea to production in five days when their regression test cycle took more than a week?

Challenges

On average, there are about 35 initiatives released into production every month at AGL. About 50% of their time and 30% of their budget was spent on testing. They identified two primary culprits for this: (1) low automation rates and (2) manual preparation of test data.

Solution

Transforming their testing process was essential for getting the changes to production on the new highly-compressed timeline. They needed to automate end-to-end regression tests that spanned SAP IS-Utilities (SAP GUI), SAP CRM (WordPro), AGL Online (a web application) and file processing. Additionally, they needed an appropriate test data management strategy, as well as integration into AGL's SAP delivery toolsets.

Testing Objectives

AGL's SAP testing transformation focused on the following key business goals:

- Accelerating time to market by reducing regression time for SAP initiatives from over a week to 1 day
- Increasing automation rates to reduce the testing time required for SAP initiatives
- Shifting their QA focus from completing the expected array of tests to thoroughly assessing release quality—helping IT leaders better understand (and minimize) the risks associated with each release.
- Maximizing system quality by adopting Continuous Testing to expose defects as soon as they are introduced

Test Automation Tool Requirements

After an extensive evaluation of test automation solutions, AGL selected Tricentis Tosca for the following reasons:

End to end test automation support – Tricentis Tosca automates testing of SAP, web, mobile, interface layers [SAP iDoc, PI, etc.] and legacy technologies

Tool architecture and automation approach – They appreciated Tricentis' ease of adoption, intuitive test creation and maintenance, robust test automation methodology, integration with tools in their DevOps pipeline, and vendor support through the lifecycle of tool usage

Tool rollout and management – Standout features cited included ease of setup and licensing, scalability of resources/ projects, and flexible reporting

The Solution

1. Implement Model-based Test Automation

The team identified a core regression test suite that was ideal for automation. Tricentis SAP accelerator package accelerated the creation of reusable models for SAP ISU. Further, Tricentis Tosca's Model-based Test Automation allowed AGL's existing team members to upskill rapidly, supported by a two member Tricentis mentor team.

2. Apply risk coverage optimization in test suites

AGL implemented a risk-based approach to test data combinations used within the
SAP test suites. Tricentis Tosca's Test Case Design helped design an optimized set of test cases prioritized based on business risk. This optimized data set was used to run automated regression tests.

3. Use Distributed Execution to streamline execution

Tosca Distributed Execution (DEX) was set up to streamline automated regression test execution. This enabled the distributed execution of the regression test suite across 10 virtual machines, significantly reducing the execution time. The test suite that used to require 360 hours to execute (manually) could now run in just 15 hours.

4. Automate test data preparation/generation

Tricentis Tosca's test data management and synthetic test data generation features combined to provide AGL the test data for the regression test suite—further reducing the manual effort.

Benefits

Test data preparation / generation		
Manually for ~100 test cases per cycle	9	hours
Automated for ~100 test cases	3	hours
Total hours saved	6	hours
Savings	66.7	%

66.7%

Test Data Management

Regression test execution		
Manually	45	person days
With **Tricentis Tosca**	2	person days
No. regression test cases automated	309	#
Savings	95.5	%

95.5%

Test Automation

Overall time savings [309 test cases]		
Manually (1 day test data setup +5 days)	6	days
With **Tricentis Tosca** (3 hours test data setup +15 hours)	<1	day (18 hours)
Total **time saved**	5	days
Overall **Savings**	83	%

83%

Overall Time Savings