



Optimized regression testing for a complex airline reservation system



KEY CHALLENGE

Testing the *dynamic* ancillary services of the airline reservations, spanning multiple backend and external systems.



Context

The customer is a premier airline in the US and has several business processes around passenger reservations. The functionality of booking, canceling or changing involves multi-staged transactions that must achieve atomicity, consistency, isolation, and durability (ACID) in the Omnichannel interfaces (website, mobile app, and the calling desk). Their ancillary services are a vital business aspect that enables more fabulous customer experiences.

Kairos is engaged in providing them regression testing services while they innovate and implement new features and applications.

Customer expectations

- Continued availability of old functionality alongside new features.
- 30% reduction in time and cost for regression testing in 6 months (or 6 QA releases).
- Similar and consistent experiences across web, mobile and call desk interactions.

Key challenges

- All new features in each release become a part of regression for the next, making it really difficult to achieve the 30% reduction in 6 months.
- As it is a stable set of legacy applications, justifying the business case for regression testing was tough initially.
- The ancillary services are dynamic and can be changed by our customer's marketing team, post-release. In such cases rapid rounds of regression are expected.
- Collaboration with multiple vendors in multiple time zones.

Value delivered

- ✓ Usage of behavior-driven testing (with JBehave) for acceptance of new functionality ensuring the old requirements are intact.
- ✓ Reducing the scope for regression testing by analyzing the code change-logs (mapped to the respective test modules).
- ✓ Using burn-up charts to keep the team motivated as well as track the optimization goals.
- ✓ Evidence based bug reporting using the ALM tools, both for manual and automated tests, reducing the need for defect triage meetings.
- ✓ Parallel development of UFT based automation scripts using a customized framework from Kairos TCoE.

Futuristic lesson learnt

Test automation is not the only way to reduce the time for regression testing, and it is the scope that has to be dynamically tailored to increase the value from testing.