Aeroplan Web Services Quality
Soars to New Heights with Parasoft SOAtest

Aeroplan is a loyalty marketing program. Originally created by Air Canada as an incentive program for its frequent flyer customers, Aeroplan has morphed into the world's first publicly-traded loyalty marketing company. Aeroplan members can earn Aeroplan Miles with over 60 different commercial Aeroplan partners that represent more than 100 brands.

When Aeroplan's Web service team was slated to write more than 50 outward facing Web services in seven different environments. Under a strict deadline with limited QA resources, Phase 1 of the Enterprise Service Bus (ESB) project was required to be completed in six months with multiple milestones along the way. By implementing Parasoft SOAtest, Aeroplan not only met all of their target dates, but also attained higher quality Web services.

Testing Quickly — with Confidence

Aeroplan works closely with a vendor on its development projects. This particular project, ESB, was not any different. Victor Tsemko, Aeroplan's Technical Analyst, knew that the vendor had some ways to test the new Web services of this largescale project, but realized that those processes were slow and did not properly test all of the use cases and sequences that Aeroplan wanted to test. He started a search for an automated solution and found Parasoft SOAtest.

Tsemko says, "In view of the strict deadlines, we didn't have much time to code and test. We needed the ability to quickly build a set of tests that would provide us with an acceptable level of confidence that the services that worked before any development changes took place would continue to work afterward; and, not just as units, but as part of the sequences of the Web services in multiple scenarios."

Aeroplan's Web services are used in complex chains of calls and often parameters have to be passed from one service to another. Réjean Hurtubise, Aeroplan's Team Lead of Web services, explains it in simple terms. "Let's say, for example, that an Aeroplan member wants to book a flight. There are Web services for that, but before booking, there is another Web service that verifies that the member has been authenticated."

Hurtubise stresses, "Not only is it important that we test each Web service as a unit, but it's also really important to test the sequences of the Web services."

Delivering Thoroughly Tested Code to QA

Aeroplan knew that they needed an automated solution, but wanted something that would satisfy beyond their immediate needs. Aeroplan's strict criteria included finding a reliable solution that would allow for efficient, automated functional and regression testing of Web services and sequences. Tsemko describes why Aeroplan selected Parasoft SOAtest, "Parasoft SOAtest provided all the functionality that we needed in the scope of the project. And, even though the ability to script was provided, we didn't have to use it because the functionality we needed was available through the GUI of the tool. Thus, all of the tests for this project were created without coding.

Aeroplan recognizes the importance of proper testing. However, thorough QA testing usually consumes great quantities of time and resources. For this project, we were very limited in QA resources. Therefore, one of the priorities for the project was reducing the workload from the QA team as much as possible without jeopardizing the quality of the tests.

Using SOAtest allowed us to achieve a significant improvement in this area. We were able to pass services through the series of tests designed to catch errors coming from the back-end prior to letting the Aeroplan QA team proceed with their testing. This way, members of the QA team were able to concentrate their efforts on the functional testing."

Prior to Parasoft SOAtest, Aeroplan's QA team was often dependent on the Web services team to analyze the coding logic behind unexpected testresults. QA would run a test, get a result, but not know the cause of that result and what was happening on the back end; thus, creating a need to consult with a technical analyst on the Web services team. Parasoft SOAtest alleviates this time-intensive research step and enables QA to concentrate their efforts on the Web interface. With Parasoft SOAtest, the QA team receives code that is already back-end tested.

Seeing Results: Saving Time, Money, Resources and Improving Quality

Taking into consideration all of the managing that goes along with testing scripts, Sophie Lemire, Aeroplan's QA Manager, states that Aeroplan testers are typically able to run about 12 manual tests per day. She says that with Parasoft SOAtest, Aeroplan was able to run 282 automated tests in a day. That's 220 unit test cases and 42 use cases, to be exact.

Lemire explains, "For our team, 282 cases is equivalent to the manual effort of 20 people — or 20 days of manual testing performed by one tester." She goes on to say, "The estimated cost savings varies based on the individual performing the work, but it is around $10,000."

Reflecting on the number of automated tests that Parasoft SOAtest ran for Aeroplan's Web services, Hurtubise states, "If we had to do that all manually for every deployment, it would be horrific." Tsemko confirms, "Another perk that allowed us to achieve the goals of our test plan is that the learning curve is fast with Parasoft SOAtest."

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Parasoft SOAtest enforces the coding standards that Aeroplan established. Beyond time savings, Parasoft SOAtest improves quality. Tsemko says, "Without Parasoft SOAtest, the quality of testing for our project would suffer because there's no way we would be able to do all those tests in the time frame that we had. We would have had to make some compromises."

Moving Forward with SOAtest

Aeroplan has established that development of future phases of the ESB project will require similar testing. That means that Parasoft SOAtest will be used by Aeroplan's development team, which includes both the Web services team and Aeroplan's vendors, to complete the entire ESB project. With new team members coming on board, the development team is anxious to introduce them to Parasoft SOAtest and expand its usage.

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