

How Inland Revenue assures consistent user experiences in a transformed business



CASE STUDY

As it rolls out the \$1.8-billion business transformation programme, Inland Revenue is leaving no stone unturned in the quest to deliver positive experiences for every user of its systems and services. A key component of its quality assurance program is being delivered by Assurity Consulting, which is providing a range of services including performance testing, fully stress testing all systems before rollout to production.

Inland Revenue (IR) plays a crucial role in improving the economic and social wellbeing of New Zealanders, collecting 80% of Crown revenue, as well as collecting and disbursing social support programme payments and providing the government with policy advice. Since 2014, IR has embarked on business transformation project to make it simpler and faster for New Zealanders to pay their taxes and receive their entitlements.



Situation

Assessing the performance of IR’s newly introduced and upgraded services presented a technical testing challenge which sought to understand performance impacts and customer experience expectations of its new hardware and software solutions.

Chris Hourigan, Business Transformation - Testing Lead at IR, points out the extent of the services offered by the organisation and the multiple touchpoints customers encounter. “There are multiple touchpoints to IR systems from individual taxpayers, business partners and the tax agents who interact with IR. Combined, there can be hundreds of thousands of accounts interactions with our systems on a daily basis, generally at key calendar dates.”

This is why performance testing is an essential component of quality assurance. “By simulating the full loads expected at those overlapping events, IR has a clear view on how its systems will cope before they go live,” he adds.

The purpose of the business transformation, notes Patrick O’ Doherty, Enterprise Architecture & Business Design Lead - Business Transformation, is the delivery of a digital real-time interaction replacing traditionally paper-based activities.

The scale of performance testing these interactions is amplified through the range of IR products available to specific customers, while the underlying structure of the systems presents a further complication.

“The underlying technology solution has many moving parts, all of which were newly delivered as part of the business transformation programme. Couple this with the massive shift we are seeing to digital services, and we had a real risk of being overwhelmed if we were not adequately prepared.”

Solution

Assurity created a testing solution that provides ‘Performance as a Service’ to all delivery activities under the program. By adopting a performance risk assessment approach, actual and perceived risks were ascertained across the full gamut of IR products within scope of each phase of the programme delivery cycle.

O’ Doherty says the risk assessment approach to performance testing is not your typical risk assessment approach. “We had to consider ‘anticipated’ usage as we were delivering a range of new digital services, and in some cases fundamentally changing underlying processes. We had to estimate how we expected customers to use the new services and risk assess each one against a set of performance targets. Performance testing was then coupled with customer experience monitoring so we could show what was actually happening and adjust our approach if required.”

In fact, the information which resulted from performance and customer experience monitoring was made so accessible that monitors were installed on the IR campus. This allowed anyone to view the results – “It effectively replaced the water cooler for office conversations. We had real up to the minute facts, not hearsay,” says O’ Doherty.

Through the creation of an enduring suite of performance artefacts, IR has ready access to proven performance testing assets in future, accelerating the delivery, and reducing the risk of new products while driving down the cost of assurance.

Results

Thanks to the performance testing strategy and assets, multiple potential issues were identified and resolved prior to reaching production. “The performance testing on the business transformation programme has supported IR in achieving significant gains in system performance for our customers,” says Hourigan.

“On peak days IR can support over 500,000 logins to myIR – that’s more than 3 times above the peaks prior to transformation - while the stability and certainty provides a better experience for our customers and our business,” he adds.

While there were issues identified post-production, the assets and approach in place ensured these were quickly identified and dealt with.

Another significant result which flows from Assurity’s approach is an increased understanding of the customer experience of IR products over its existing network. “Performance testing goes beyond ‘speeds and feeds’ and extends to customer experience,” explains Hourigan.

Internally, he says performance testing tends to be understood in terms of what happens when everyone tries to get through the front door at the same time. “It’s all peak volumes, soak tests, memory and scalability, break points and throughputs.

“But what we’re getting closer towards is the customer viewpoint into IR; a piece of information on what their experience is going to be, what happens to the system when people behave in certain ways. And not always in ways that we were expecting. It has to be 24/7, now, with digital systems, so performance testing must span it all.”

Hourigan says Assurity’s delivery of innovative performance testing has changed perspectives on the possible. “Any failure in any of the new systems and services we’re rolling out will taint public confidence. There’s a substantial reputational risk every time a new service is introduced – and performance testing as a component of a broader range of assurance services is the insurance policy addressing that risk.”

At a glance



Inland Revenue
Te Tari Taake

Company:
Inland Revenue

Industry:
Public Sector

Requirements:

The purpose of Inland Revenue’s (IR) business transformation is the delivery of real-time interaction to replace traditionally paper-based activities. With over 500,000 logins to myIR on peak days, and hundreds of thousands of accounts interactions with IR systems on a daily basis, IR needed to ensure it has a clear view on how its systems will cope before they go live.

Solution:

To provide a quality assurance program that includes a range of services including performance testing, fully stress testing all systems before rollout to production.

Assurity created a testing solution that provides ‘Performance as a Service’ to all delivery activities under the program. A performance risk assessment approach was adopted, and actual and perceived risks ascertained across the full gamut of IR products within scope of each phase of the programme delivery cycle.

Services provided and outcomes achieved:

- Creation of an enduring suite of performance artefacts to provide IR with ready access to proven performance testing assets in future to help accelerate the delivery and reduce the risk of new products while driving down cost of assurance
- Developed and implemented the performance testing strategy, approach and assets and enabled prompt identification and resolution of issues in post-production
- Displayed the information and results related to performance and customer experience monitoring on monitors installed on IR campus
- Provided assurance and helped protect IR’s reputation