

# Independent Health

Reduce mobile test maintenance by 35% while rapidly managing application changes with Micro Focus UFT One's AI-based capabilities



## Who is Independent Health?

Independent Health is a not-for-profit health plan that continually aims to provide the community with innovative health-related products and services, which enable affordable access to quality health care. It is consistently recognized as one of the highest-ranked USA health insurance plans.

## Mobile App Poses Many Testing Challenges

When Independent Health announced a new mobile app as an easy way for members to track their deductibles, review benefits, and

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### CHRIS TRIMPER

Enterprise QA Architect  
Independent Health

view claims, most people were excited, including Chris Trimper, Enterprise QA Architect for Independent Health. However, along with the launch of this new mobile app came an exponential increase in new test maintenance responsibilities. "Don't get me wrong, I thought it was a great idea and could absolutely see how it would benefit our members. But, from my application testing perspective, it posed a big challenge. Testing for two operating systems, Android and iOS, with different implementations, locators, and object identifiers had the potential to significantly increase our test maintenance cost and effort. I was also worried that we would not be able to keep up with the fast pace of change in a mobile app. Our UX and UI colleagues were planning a regular release schedule of small changes, often stylistic, amounting to an overwhelming amount of test automation work.

"People don't realize that something simple such as changing the color of a button, moving it to a different location on the page, or giving it rounded edges, requires lots of 'underground' code changes and therefore test changes. I'm all for innovation and helping our members, but I just wasn't sure how best to ensure it meets our quality standards within the required timeframe."



## At a Glance

- **Industry**  
Health & Life Sciences
- **Location**  
United States
- **Challenge**  
Supporting automated testing in a diverse application landscape using effective multi-platform, multi-device testing to maintain quality standards while keeping up with the fast pace of change including development framework modification
- **Products and Services**  
Micro Focus UFT One AI  
Micro Focus UFT Mobile
- **Success Highlights**
  - + Reduced mobile test maintenance by at least 35%
  - + Faster, easier, and earlier test script creation
  - + Reduced time-to-market to enable fast enhancements to mobile app
  - + Faced easily drastic changes to the flow of the application by rescripting only
  - + Increased focus on business requirements and user workflows

## **Increased Test Automation Efficiency with AI Capability**

A long-time Micro Focus user, Independent Health already leverages Micro Focus ALM/Quality Center for all manual and automated test management. This is used in conjunction with ALM Lab Manager and seamlessly integrates with Azure DevOps. All application tests are triggered from ALM/Quality Center and processed through Micro Focus UFT One. The team uses Micro Focus LoadRunner Professional for all web, REST, and SOA protocol performance testing.

Once Trimper found out that Micro Focus has also been implementing Artificial Intelligence (AI) test capabilities within UFT One, he had to learn more about it. UFT One's new AI-based capabilities increase automation efficiency by simplifying and improving test creation, execution, and maintenance. By infusing AI in the process, objects are identified in the same way a human does. Because AI understands each object and the contextual interaction, a single test script can execute tests on multiple platforms.

"We were skeptical at first, but after a demonstration, it was like Micro Focus had handed us



an 'easy' button," says Trimper. "We could see straight away how this would save us an immense amount of time. Automated back-end code-based testing and AI user level testing can complement each other perfectly. With a growing AI icon library, UFT One experiences the application just like a user would. We save time by testing only the actual components that a user interacts with on the screen, and our tests look more like a user story, focusing on workflow and business requirements."

## **UFT One AI Capability Unifies Test Automation in Diverse Application Landscape**

Following the successful launch of the first mobile app, Independent Health continues to leverage UFT One for its automated testing effort in all business-critical mobile and web applications, web services, and databases such as Oracle, Postgres, and Microsoft SQL Server. Most web applications are responsive and integrate with other solutions, so business workflows start in one system and move to a different one, while ensuring a backend database record is updated. End-to-end testing is of vital importance. A test scenario could simulate the life of an Independent Health member through enrollment, accessing the customer portal, making changes to their benefit plan, submitting a claim, following the claim processing, and receiving claim payment.

"Our application landscape has developed over a number of years," explains Trimper. "Under the cover of each of the applications we use different programming languages. For instance, we have a major .NET application that we UI test with UFT One. We use lengthy or short tests depending on the scenario we're working in, but we drive the interface in exactly the same way an end user would. We only need to modify the UI test scripts when the developers change the flow of the application to alter the user experience, or when they add new

features. This is a huge time saver for us. We also work a lot with hybrid applications, for instance a Java application that uses a browser for display. When you look at it, it's a website, but it has different underlying technology and some controls that aren't common in a web browser. No problem at all for UFT One, the Web add-in ensures that objects from different technology worlds can live side by side. We test our database connections using UFT One API tests which give us user-friendly drag-and-drop capabilities and a defined test workflow."

## **UFT Mobile Reduces Test Maintenance by 35%**

The team uses Micro Focus UFT Mobile for Android and iOS application testing, as Trimper explains: "We realized AI adoption could really revolutionize our mobile testing effort. Instead of having to write and maintain two sets of test scripts and two sets of object repositories, we can develop these against just one device. With UFT Mobile's AI-based testing capabilities, we can leverage a single set of multi-platform scripts across iOS and Android and reduce mobile test maintenance by at least 35 percent. This makes us much more responsive to the fast-changing nature of mobile apps. We don't need to use a costly device to run all our testing either; instead, we use device emulators and save costs."

Independent Health also realized it could introduce test creation earlier. Even if the lay-out development isn't quite finished yet, the team can create an AI test case based on a mock-up or screenshots; ready to execute when the code is finished. AI-based location and app interaction means that nearly all locator fails disappear. As much of test maintenance is centered around locator issues, this significantly reduces maintenance efforts. The underlying platform really doesn't matter as the test automation acts like a user.

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### The Way Forward with 'Automagic' AI-Based Test Creation

The team has enjoyed AI in the context of UFT One add-on capabilities too. The PDF add-on with UFT One wasn't working great with Independent Health's systems as they used letters generated by 3rd party template engines, which weren't recognized by the add-on. However, AI came to the rescue and now UFT One can read a PDF file exactly like a user would. This supports the compliance effort as PDF files can now be tested to ensure they contain the correct fonts and icons.

"You need to make the mental shift from assuming that test automation needs to be complicated, when with AI it is just simple and easy, completely focused on the user experience," says Trimper. "AI can teach us about the application too. Sometimes we run the AI component to determine how a user interacts with the app and give us ideas for further enhancements. UFT One's AI-based capabilities simplify the tough bits from test creation. I've known testers struggle for hours to interface with a particular visual element. AI takes all this away, and I can't imagine spending more than a few minutes on the same thing. I call it 'automagic' as it really is!"

When the AI-plugin in for UFT One is activated, there is a 'screenshot always on' option that

Trimper encourages his development team to use: "This gives you a visual narrative of everything that you're doing. Because sometimes the problem is not what's on the screen right now, but it's the screen before or the interface interaction you just did. Having the visual history gives you an easy tool to go back and check without having to rerun everything."

### Reduce Stress and Workload for Specialized Testing Teams

Trimper can see how AI can support a DevOps testing environment more effectively: "This is still such a growth area. We're getting closer to natural language testing which will offer up testing to a wider audience and reduce the stress on specialized testing teams. Every new UFT One release gives me something exciting to help reduce our time-to-market and fully support the evolution of our new mobile app."

He concludes: "We collaborated in a spectacular partnership with Micro Focus on the development of the UFT One's AI-based capabilities. UFT One and UFT Mobile combined now support our automated testing efforts across mobile, and web applications, covering the core of our application infrastructure. Having multi-platform and multi-device test ability, without needing platform development expertise, has revolutionized the way in which we support our members."

#### Integrated 3rd party solutions

- Oracle
- PostGres
- Microsoft SQL Server

#### Deployment environment

- Desktop—.NET using Java through API
- Mobile—Android + iOS
- Web applications—customer portal (transactional)
- Web services (REST + SOA)
- On-premises
- Azure DevOps