Pick n Pay

Micro Focus automated testing solutions cover 100% business-critical application testing while improving collaboration and time-to-market

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Who is Pick n Pay?

Pick n Pay is a leading retailer in South Africa. Headquartered in Cape Town, Pick n Pay operates over 1,650 stores in 7 countries on the African continent. While new stores are opened every month, online shopping is an increasingly popular channel for Pick n Pay customers.

Siloed Approach with Disparate Testing Tools

To run its core business, Pick n Pay relies on a diverse application landscape. A SAP environment manages CRM, ERP, Enterprise Warehouse Management (EWM), and Point-of-Sale Data Management (POSDM) systems. Back-office systems deal with POS devices and POS web transactions. In the mobile area,

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SQA Manager
Pick n Pay

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a set of solutions needs to support Android, iOS, and Windows, and for its online business, Pick n Pay needs Chrome, Firefox, IE, Safari, and hybrid platform support. JIRA is used to track issues and defects.

All different environments regularly issue new releases that require extensive application testing. Historically, the organization adopted a siloed approach with disparate testing tools for the different environments. Leon van Niekerk, SQA Manager for Pick n Pay, explains the challenges with this approach: "As our business grew and became more integrated, especially with the surge of mobile and online transactions, there was a need to share data between the siloes. Complex integration points became difficult to replicate in separate test environments, and we really needed an end-to-end test automation solution. We were also very aware that teams were working in isolation, when a collaborative test environment could really boost productivity across the board."

Test Automation to Support Agile and DevOps Processes

An overall drive towards more Agile and DevOps development processes means that a current release cycle of every five weeks for Pick n Pay's main retail solutions will be

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At a Glance

■ **Industry**
Retail

■ **Location**
South Africa

■ **Challenge**
Increase release velocity in a siloed application landscape, while supporting testing for back-office, mobile, web, and POS solutions

■ **Products and Services**
Micro Focus ALM/QC
Micro Focus UFT One
Micro Focus UFT Mobile
Micro Focus Service Virtualization

■ **Critical Success Factors**
+ 100% of business-critical process covered by automated testing
+ Uniting developers and testers in a collaborative end-to-end test solution
+ Increased visibility provides the data management needs to make informed decisions
+ Accelerated application time-to-market

reduced to a new release every two weeks. Test automation is the only way this release schedule can be supported in a structured way. Pick n Pay needed an enterprise-ready solution and market research showed only one vendor that could cover the entire suite of solutions in an automated test environment: Micro Focus.

A full end-to-end automated testing framework was introduced, with Micro Focus ALM/QC at its center, designed to build integration across application lifecycles. ALM/QC integrates with Micro Focus UFT One to accelerate test automation and help testers and developers collaborate more effectively. Micro Focus UFT Mobile enables Pick n Pay to create a device lab so that mobile applications can be tested against real-life conditions.

The most recent addition to the test automation suite is Micro Focus Service Virtualization, which is proving very useful, as explained by van Niekerk: "In South Africa, most stores provide a number of value added services, such as purchasing flight tickets, depositing money into a bank account, posting parcels, and more. We work with these 3rd party vendors to provide an integrated service. Previously, we needed to ensure these applications were up and running when we were testing, so that we could test the full process properly. Some processes involve 10 or more service providers, and trying to get them all live at the same time was near-impossible, as our Service Level Agreement (SLA) with them did not cover our test environment. Service Virtualization leverages pre-packaged wizards and protocols to simulate the full environment, including 3rd party services, so that we can now run the test at our own convenience."

ALM/QC Manages 3,000 Weekly Tests

ALM/QC houses all test scripts, activity, and results for Pick n Pay, with tests executed through either UFT One or UFT Mobile, depending on the target environment. Across 9 main solution areas nearly 3,000 test scripts have been built to run every week. These cover 100% of business-critical processes, including all Disaster Recovery (DR) procedures. A flexible Virtual Machine (VM) set-up means that tests for different environments can run in parallel to save time. Tests are easily started, executed, and shut down again, with a cost-effective execution-only license.

End-to-End Testing with UFT One

The ease-of-use of the automated test solution got Pick n Pay thinking of another application. To test an in-store payment process, the team needed a physical tester to simulate the payment actions, like picking up a credit card, swiping it, and entering a PIN code on a specified device. Working with a robotics manufacturer, they created a robotic arm, able to receive instructions via TCP/IP with plain text input. Once the physical action has been completed, the arm will indicate the test status with return response codes that are automatically read into UFT One using Optical Character Recognition (OCR).

Van Niekerk comments on this unique capability: "We are the first retailer in Africa to use a robotic device for application testing. The advantage is that we can run the tests whenever convenient in our schedule, for instance in the middle of night, so as not to disrupt any other processes. We love that we didn't need any different tools to interact with the tests conducted by the robotic arm; the entire end-to-end process is managed through Micro Focus automated testing solutions."

Unifying Siloed Environments and Disparate Teams with Visibility and Collaboration

ALM/QC live analysis is leveraged to build a report as test scripts are executed to give a live status of each test, together with relevant screenshots. This is not only a great management tool to make informed go/no go decisions for a new application release, it is also very helpful in audit situations. In the last three years, since the end-to-end automated testing framework was fully implemented, Pick n Pay has passed all external audits without any queries.

"To keep pace with our company's rapid growth, Micro Focus helped us move from siloed environments managed with disparate test teams, to full visibility and end-to-end integrated test automation. Services that go across the pillars, such as our loyalty card scheme, which is used for in-store, online, and mobile purchases, are now fully integrated into our test environment." says van Niekerk. "We have increased team collaboration with one central solution, and testers directly allocated to development teams. Management now has the data at its fingertips

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to make informed decisions. Our test coverage has improved, which helps support a more frequent release schedule, and we were able to include the very innovative robotic arm solution in our test processes. Overall, we are delighted with the progress we made, and the opportunities we can still see for further test automation."

Integrated 3rd party solutions
- SAP (CRM, ERP, EWM, and POSDM)
- OCR
- JIRA

Deployment environment
- On-premises

Development methodology
- Agile
- SCRUM

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