MCN Healthcare, Denver, CO

"Rhoynar's team went above and beyond our original needs for automation and a CI/CD system. Their solutions were neat, readable and maintainable. They made use of the latest technologies and did an excellent handover of the project deliverables. After over a year of delivery, we still got a robust automation and CI/CD system helping our developers"

- Eric Gebers, MCN Healthcare, Denver, CO

Business Challenges:

MCN Healthcare, Inc. is the leading provider of custom policy content, workflow management software and compliance expertise for healthcare providers. Their products include healthcare policy management software (Policy Manager), a fully customizable policy library (Policy Library), and a regulatory compliance notification system (StayAlert)

When MCN Healthcare approached Rhoynar, they faced challenges of manually testing the multitude of features, paths and roles of the Policy Manager suite. A manual regression round would take about a week to complete - hindering their aggressive software release schedule.

Results:

A 3 month project with Rhoynar provided MCN with a robust test automation framework using Selenium WebDriver, BDD, Cucumber, Page Objects and TestNG. Rhoynar also setup an end-to-end CI/CD system for MCN and migrated their old testing infrastructure to open-source Jenkins platform.

The CI/CD platform supported branch-specific CI automation and deployment on multiple test-platforms. The QA Automation Framework included comprehensive UI Automation as well REST APIs testing.

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Project Details:

MCN has a team of 12 developers who needed a way to implement thorough automation on every code check-in. MCN wanted to deploy different environments to production vs internal testing. Apart of these high level goals, there were several product specific challenges.

- **Support for Site Specific Configurations**: MCN's Policy Management Suite is a single Software as a Service (SaaS) offering - but allows for configuration specific to a client's needs. This meant that automation framework had to be designed to be flexible to support multiple different configurations.

- **Integration with other products of the Policy Manager Suite**: Some MCN customers held additional licenses to Policy Library and StayAlert systems - which unlocked different features in Policy Manager to support seamless integration. The automation framework was designed to be modular to allow testing for add-on behaviors.

- **Web Services (REST APIs) Automation**: Because we were testing for a micro-services architecture, one of the building blocks of this test framework was to support testing for REST APIs directly. Our solution provided integrated support for testing UI Automation as well as REST APIs.

- **Working with Multiple Datasets**: Each healthcare provider is unique in terms of their processes and policies associated with their documents. Documenting how different customers use this product and tailoring the test framework to be representative of the end-user behavior was key to the success of this project.

- **Ease of adding new test cases and modules**: One of the key requirements for this project was development of a QA Automation framework that would remain extensible. Rhoynar Software implemented reusability of test code through the concepts of Behavior Driven Development, Modular Test Framework Architecture and a strong test framework middleware.

- **Support for testing email notifications**: Policy Manager suite provides notifications for regulatory and compliance updates. The test framework supports validating whether these notifications were received by the intended recipient.

Before:

- QA Release Cycle: 1 week
- QA Team: 3 manual testers
- Test Cases: ~150
- Compatibility: Major Browsers
- Licensing Fees: None
- Automation/CI: None for QA.

After:

- QA Release Cycle: Nightly (3hrs)
- QA Team: 1 manual and 1 automation eng
- Test Cases: ~1000
- Compatibility: All Browsers
- Licensing Fees: None
- Automation/CI: Jenkins

Technologies Used:

Our Guarantee:

At Rhoynar, we believe in providing honest and exemplary customer service to our clients. We understand that the client may have hesitations in employing any consulting company for any internal project. *Will the solution meet all our needs? Do they really have the expertise and experience in delivering this solution? What if it is not extensible and requires constant upkeep? Will adequate training be provided to our staff after the project is over? What if the technologies they use become obsolete? Will they consultant have enough expertise in the said domains?*

We are confident that you would be absolutely delighted by our experienced team: they will use the latest technologies and come up with a robust and extendible solution in record time. They will perform a graceful handover of the project with ample continuous training sessions, documents and specifications and training videos. Our team will respond immediately if there are any questions, issues or bugs found during and after the project.

Conclusions:

Now after 6 months of MCN's move to QA Automation and Continuous Integration, their QA and test cycle times have reduced drastically. Their trained QA staff are able to manage and enhance the automation framework on their own. Rhoynar has become MCN's trusted partner for all of their development and QA needs - and has provided staffing services to MCN for Testing and Product Owner roles.

Ph: (855) 574-6962   www.rhoynar.com   www.facebook.com/rhoynar
Cell: (303) 408-9848   contact@rhoynar.com   www.twitter.com/rhoynarsoft

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