

# Blockchain-based Identity Management Test Automation

## PROJECT SPECS

**PROJECT TYPE:** Test Automation

**TECHNOLOGIES:** Javascript, Karate  
DSL, JUnit, Java and Maven

**SERVICES PROVIDED:** API Testing,  
Performance Testing, UI Testing &  
Regression Testing

## TEAM:

Test Automation Engineers  
Manual Tester  
Project Manager/ Business Analyst

**DURATION:** 2+ years

## TESTIMONIAL

"Riverstone is a professional business partner of exceptional quality. They provided several talents over the course of a few years and each one of them were a great fit for our needs. I would look to Riverstone to raise the bar in any QA organization, no matter how big or small."

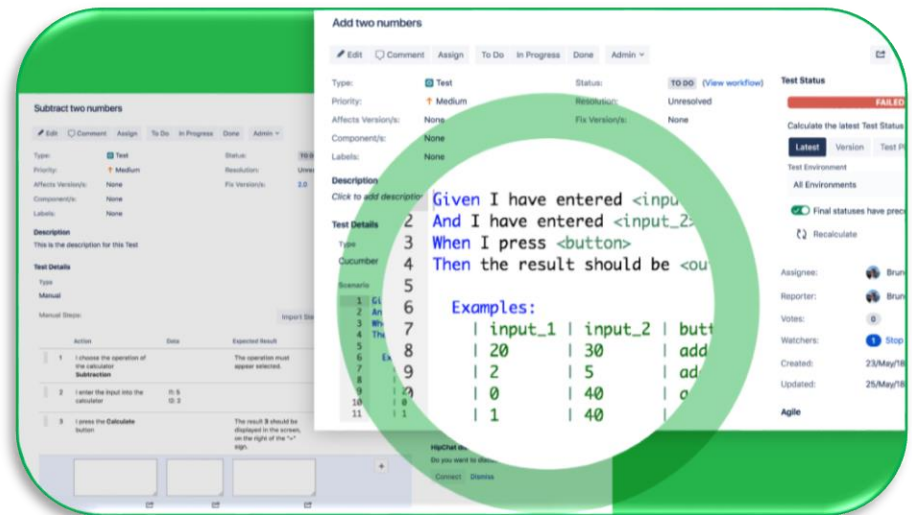


**Muthu Arumugam**  
VP of Engineering  
Cambridge Blockchain

**Customer:** Cambridge Blockchain

**Industry:** Financial Institutions

**Website:** <https://www.cambridge-blockchain.com/>



## OVERVIEW

Cambridge Blockchain develops blockchain-based identity management and compliance software solutions that put the user in control of personal identity. In other words they return control of personal data back to users while delivering the benefits of trusted, distributed identity to consumers and organizations.

## REQUIREMENT

Customer has built micro services to support their users through the Application Programming Interface (APIs) and required an automation solution to test the developed API functions effectively.

## BUSINESS CHALLENGE

To create a platform for their product team to write test cases that supports readable plain text and provision to run it in a DevOps environment.

To develop an automation test suite to reduce the regression testing time and support continuous integration/deployment.

## KEY ACHIEVEMENTS

- Test Automation Framework & fully automated regression in 8 sprints
- 575 tests created in less than 2 sprints
- Weekly 5-6 test runs, Identified 10% failure rate
- Regression testing reduced from 16 hours to under 10 mins
- Approx. 60% reduction in release time (from 5 to 2 weeks)
- 85% automation of testing & deployment efforts
- Deployment time reduced from 90 to 10 mins

## SOLUTION

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Riverstone team has developed a flexible automation framework that connected with Xray, an online test management tool to automatically download the test cases and run them as part of the CI/CD pipeline.

Created unique users with Token Authentication access to all actions in API with an encrypted private key

Generated test results in HTML format

### Our solution included the following stack:

- Karate DSL (Domain Specific Language) for the BDD (Behavioral Driven Development) type test creation without creating step definitions
- Java classes to authenticate and download the test from Xray using the curl API
- UUID (Universally Unique Identifiers) package to generate the unique codes for user creation
- JWT (JSON Web Token) generator package and method to generate tokens & to authenticate application by automated test cases
- Generated HTML type test reports