

# Accelerating Regression Testing

**TEN** TECHNOLOGY  
NETWORK  
**CYS** CONSULTANCY  
SERVICE

# Client Overview



Client is a global leader in patent analytic solutions. Patent research platform that is poised to change how patent professionals collaborate on patent projects with internal and external stakeholders.



Industry



Location

Legal and Intellectual  
Property (IP)

INDIA



# Objectives



Speed is crucial for expanding companies, and our client's application is rapidly evolving. To keep pace with the frequent updates and ensure seamless integration, a comprehensive regression test suite was necessary to maintain an excellent customer experience. The primary challenges includes:

1

## Time Constraints

Limited time available to complete the extensive automation task.

2

## Limited Automation Expertise

Lack of sufficient experience and skills in automation within the team.

3

## Incomplete Regression Test Suite

Potential gaps in test coverage and reliability, requiring manual testing to fill the void



# Solutions



Tencys technical team recommended to implement BDD Framework with Playwright tool. The steps taken included:

1

## Selection of Framework and Tool

- **BDD Framework:** Selected a Hybrid Behavior-Driven Development (BDD) framework for its clarity and reusability.
- **Model Versioning:** Utilized MLflow for tracking and versioning models, ensuring seamless rollbacks and updates.

2

## Efficient Test Automation Process

- **Record and Code Generator:** Implemented tools to facilitate effortless test automation, enhancing efficiency.
- **Reusability:** Focused on maximizing the reusability of test scripts to streamline the process.

3

## Immediate Start on Critical Flows

- **Day One Automation:** Engineers began automating critical user flows from the very first day of the project.
- **Priority:** Prioritized the most critical functionalities to ensure comprehensive coverage.





4

### Daily Execution on Cloud Platform

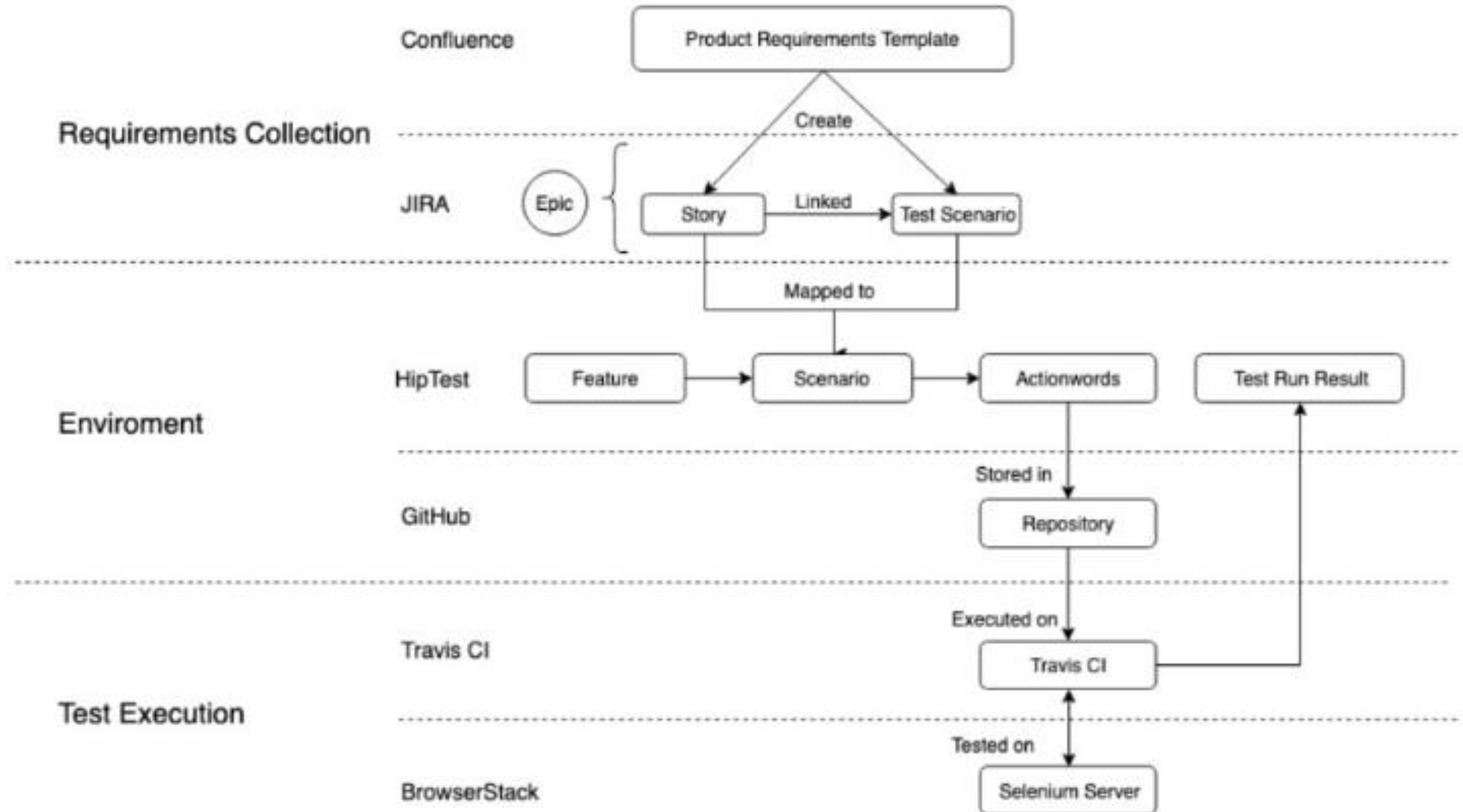
- **Cloud Execution:** Deployed automated test cases on a cloud platform for daily execution.
- **Consistency:** Maintained a consistent testing schedule to ensure ongoing reliability.

5

### Daily Notifications and Rapid Issue Identification

- **Daily Results:** Sent daily notifications to the team with detailed test results..
- **Quick Identification:** Enabled rapid identification and resolution of software issues.

# WorkFlow



# Results



After implementing, they have observed a dramatic improvement in testing coverage. Key outcomes included:

1

## **Comprehensive Test Suite Creation**

Created 1,000 test cases in just 16 weeks. Delivered a complete regression test suite.

2

## **Simplified Maintenance**

Client avoids the need to learn and maintain a test automation framework. Simplifies ongoing test automation processes for the client.

3

## **Confidence in Updates**

Ensures all critical workflows of the application are covered. Enables the client to deliver updates confidently.

4

## **High Passing Rate**

The regression test suite has maintained a passing rate above 90% over several months. Demonstrates the reliability and effectiveness of the test suite.

5

## **Defect Detection**

The test suite has identified multiple defects that customers would have otherwise encountered. Enhances the overall quality and user experience of the application.





# Conclusion



This approach not only met the project's goals but also provided the client with a durable and efficient solution, enhancing their development process and product quality.

