

## Case Study



With Test Automation, financial services major accelerates deployment time of investment management system by 32%

---

### Summary

A client replaced its legacy investment management system with a new, advanced investment management system. Infosys used ACCORD — a functional, scriptless, and automated testing solution, to accelerate deployment of the new investment management system resulting in 32% savings in time and effort as compared to conventional test automation systems.

## The Client

The client is a leading financial planning, asset management and insurance company. Using a comprehensive financial planning approach, it delivers solutions through a nationwide network of financial advisors.

## Business Need

The client decided to upgrade its investment management platform by rolling out a third party product (CRIMS – Charles River Investment Management System) to cater to increased volumes, reduce maintenance costs and to ensure connectivity to brokers and Electronic Communication Networks (ECNs). Its existing system, developed on legacy technology, was difficult to maintain. Addition of new functional features such as derivatives technology and standard industry enhancements such as FIX were getting increasingly challenging, given the size and scale of the organization.

## The Challenges

Since the CRIMS rollout necessitated upgrading several other system components, testing the entire set of systems was critical. However,

- a. Data flow was complex and involved multiple applications and systems — end-to-end data flow originated from a legacy system (mainframe) and passed through Middleware (MQ) interface data adapters to CRIMS
- b. The heterogeneous system necessitated multiple checkpoints, and it was not feasible to simultaneously make available all systems for integration testing.

Conventional test automation approaches were not a good fit as:

1. There was limited UI exposure to the components that needed to be tested, for instance, middleware / interfaces
2. Dependence on interfacing systems for testing would lead to delays
3. A centralized repository of test cases was not available — test cases were stored in Lotus Notes and excel files in non-standard formats
4. ‘Mocking up’ of input test data files was labor intensive
5. The comparison of output test results and database updates was not automated

## The Solution

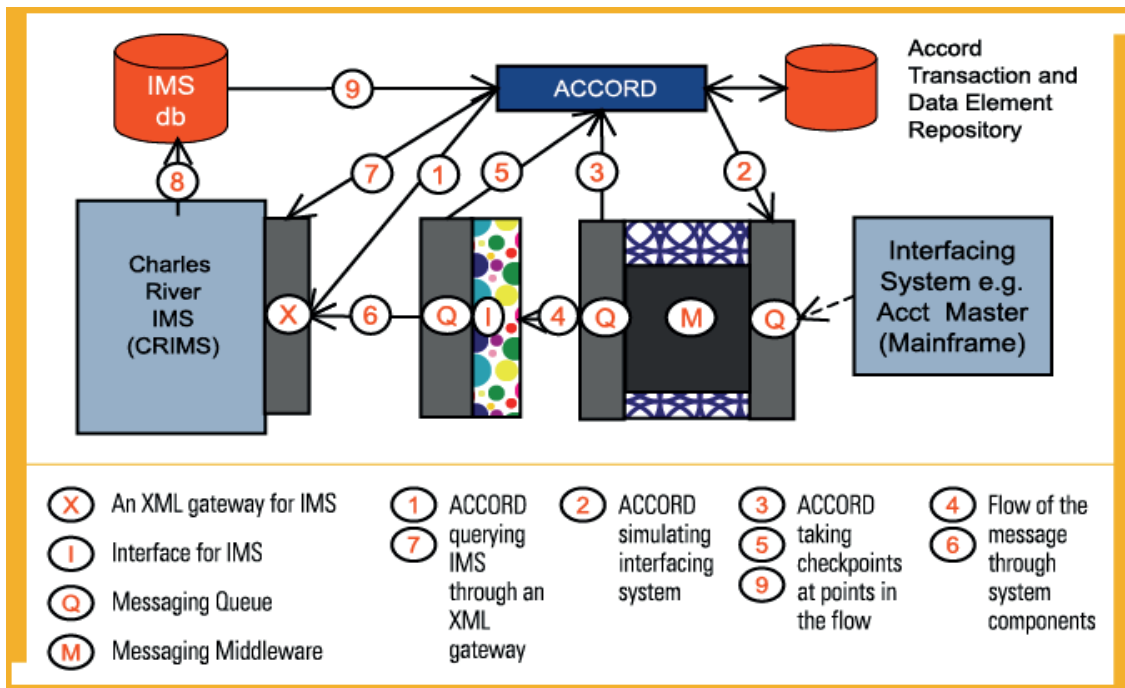
The client selected ACCORD (Accelerated Deployment Of Order Management Solutions), a regression testing solution from Infosys with a proven track record, to provide complete automation for its server-side testing. With in-built adapters for common data types (FIX, XML, and Mainframe data types), ACCORD's automated test case generation and execution abilities accelerated deployment significantly.

The client selected ACCORD because:

1. It provided an integrated, automated approach to test the CRIMS interfaces and other associated components
2. Its user interface to define test cases and scenarios with full re-use capabilities were easy to use and quick to run.
3. The in-built adapters handled IBM MQ series middleware and databases and could speed up deployment
4. It could ‘mock up’ test data or messages from interfacing systems such as mainframe systems, and thereby reduce dependence on the availability of these systems. ACCORD posed as an upstream system and sent corresponding acknowledgement messages for requests
5. It could simulate CRIMS actions by using XML APIs, and thus tested its functionality comprehensively

A cross-functional team comprising client members and Infosys' core solutions and testing team deployed ACCORD to test the new system extensively. ACCORD enabled them to:

1. Deploy a scalable and robust testing mechanism in just 10-12 weeks
2. Configure a critical mass of test cases for around 20 business flows and execute them in time for the roll out
3. Take an ‘application level’ testing approach that ensured that system components such as middleware were tested and interfacing systems were simulated to provide adequate coverage
4. Configure and execute complex scenarios involving multiple steps and interventions with ease



## Benefits and Results

Accelerated deployment of investment management systems cut time and effort by 32% for the client. ACCORD tested 18 different interfacing systems with CRIMS with over 2500 test cases. Moreover, maximum test case coverage ensured delivery of a comprehensively tested system.

## About ACCORD

ACCORD is an automated testing solution which encapsulates Infosys' test automation experiences. ACCORD accelerates the deployment of applications by automating test case generation and test case execution. ACCORD is based on:

- Functional decomposition of system transactions and workflows, which ensure that all test scenarios are covered
- Intelligent combinatorial algorithm, which ensures that test cases are optimized
- Execution of test cases against the core server-side application logic, which ensures that the underlying application functionality is tested comprehensively

ACCORD's application level testing approach makes it suitable for situations limited by conventional UI-based automation approaches or as a complement to such approaches to enhance test coverage.

ACCORD has been successfully deployed to automate testing in applications that require multiple touch points in their disparate components, e.g.; real-time transaction processing systems, messaging middleware, databases, scripts, etc. ACCORD has out-of-the-box adapters for common data formats (FIX, XML, and some mainframe data types), several messaging systems, J2EE-based systems, web services, databases, etc, and can integrate with commercially available Test Management tools.



For more information, contact [askus@infosys.com](mailto:askus@infosys.com)

#### About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit [www.infosys.com](http://www.infosys.com).