

Endava tests Immediate Payments' UK Faster Payments Service infrastructure



With the UK's Faster Payments Service due to be live in May 2008, Immediate Payments uses Endava's financial services experience and VersaTest expertise for the testing of the FPS switch and member self-certification.

The UK's new Faster Payments Service (FPS) will enable internet, phone and standing order payments to be processed within just a few hours. This will revolutionise the payments infrastructure of the UK at a time when internet and phone payment volumes are increasing rapidly.

Due for launch in May 2008, Immediate Payments Limited (IPL) is responsible for the FPS Central Infrastructure which is the platform that provides connectivity between the FPS members' banking systems. IPL was a joint venture between LINK, providers of the UK ATM service, and Voca, whose services include the BACS service, who have subsequently joined to form VocaLink.

Immediate Payments selected eFunds' Advantage switch platform for the FPS central infrastructure, which connects to the member banks' own payments gateways. While eFunds has been responsible for developing additional bespoke functionality to suit the demands of FPS, Immediate Payments' testing strategy was to ensure that both the Advantage platform met the original FPS business requirements and that the member banks could exchange messages and test the integrity of their payment gateways.

Continuous testing

Beginning in September 2006, the FPS project comprises a series of overlapping test phases:

- Central infrastructure testing – confirmation of the integrity of the central infrastructure using simulators to take the place of the member banks.
- Self-certification simulator testing – member banks linking to a self-certification simulator which mimics the final central infrastructure.
- Connectivity testing – testing and confirmation that the member banks can connect to the central infrastructure, log on and exchange security keys.
- Connection testing – testing and confirmation that the member banks' messages to and from the central infrastructure are correct and that they are ready to work with other member banks in the integration test environment.
- Integration testing – member banks sending and receiving simulated data to and from other member banks across the central infrastructure.

Stephen Waites, Faster Payments Service Central Infrastructure Programme Manager, Immediate Payments, says, "The launch of faster payments in the UK will be one of the most revolutionary services that the banking industry has seen in 20 years. While Immediate Payments has overall responsibility for management of this exciting project, Endava has acted as the engine room for our test strategy since the start of the project, driven the testing forwards and ensured that everything has been executed correctly."

Endava were selected to join the project at its inception during early 2006. Considering the scale and complexity of the FPS project, its importance to the UK banking industry, and the ownership and reputational risks, Immediate Payments decided to augment its in-house team with testing professionals from outside the organisation, rather than outsource the testing process.

Stephen Waites says, "Having considered the skills needed for the testing, it was clear that we needed people who had a good understanding of financial transactions, in particular the ISO8583 message standard used for FPS, and long-term experience of using VersaTest – Endava met those requirements."

Testing strategy

At the start of the FPS project, Endava were used as consultants in writing the overall test strategy in conjunction with the Immediate Payments test manager, resulting in a blue-print for all testing activities throughout the project's lifecycle. Stephen Waites says, "The test strategy was a key deliverable for us and Endava's role in this was very useful and gave us a solid foundation for all of our testing."

Recognising the importance of testing to the FPS project's success and based on Endava's advice, Immediate Payments selected VersaTest for transactional testing and Mercury's TestDirector/Quality Center for its test management, reporting and automation functionality.

Endava was responsible for rolling out and commissioning the VersaTest automation component for Quality Centre and for integrating the verification of settlement information into the switch test conditions. Stephen Waites says, "We knew the infrastructure for the Faster Payments Services would be similar to the LINK card scheme infrastructure so we were confident about the types of tools we would need and the types of approaches we would have to take."

Defining the test cases

For the member self-certification, Endava was involved in much of the original planning and responsible for creating many of the early test cases. Beginning in November 2006, Endava stabilised these test cases and developed the necessary VersaTest scripts, based on its previous work on the ISO8583 standard with a leading European payments provider, and managed the infrastructure for the overall test harness.

Following the ongoing success of the member self-certification phase, Endava continues to be closely involved during the Connectivity and Connection phases, where it is responsible for checking that the connection between member banks and the central infrastructure is working correctly and providing the analysis to ensure that the member banks' messages are correctly executed against the Endava-defined test scripts.

"Our long-term experience of testing switch systems was important for Immediate Payments. It enabled Endava to implement our continuous testing framework and allocate staff to be immediately effective at Immediate Payments"

**Nick Tarling
Head of Testing
Endava**

Project on track

The internal FPS Switch testing was completed to plan at the end of March 2007. Stephen Waites says "The key consideration from our perspective is that we made the correct decision to bring in specialist testers rather than simply developers with some testing experience. We completed the scope of what we needed to achieve by the end of March 2007 and while it was a challenge, with a lot of additional work going on, the test team performed admirably, the key to which was the flexibility and experience of the Endava team."

Next steps

Further information on Endava's systems testing strategies and services for banks, financial institutions and payment providers is available in the Testing Strategy and Implementation briefing paper (published April 2007).

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Faster Payments Service Central Infrastructure
Programme Manager
Immediate Payments

The importance of testing

Testing plays a critical role in improving the software development process, but it also has the potential to be a major point of failure. Endava's methodology is based on well-proven RUP principles and extends the widely accepted V-model of testing to ensure that requirements analysis is closely aligned to the testing and defect management lifecycle.

Managed as a sequential process, this has the effect of only promoting code when it is ready for the next testing phase, improving the quality of the code base during each of the development phases. This significantly improves the chance of project success.



Please email fps@endava.com to request a copy of Endava's Testing Strategy and Implementation briefing paper.



About Endava

Endava is a UK-headquartered, privately-owned company with over 400 employees and development and support centres in Romania and Moldova.

Endava has established a strong track record in designing, testing and delivering high transaction volume systems to a number of the world's leading banks, clearing houses and credit card companies across payments, clearing, settlement, financial messaging and trading platforms.

By blending local expert domain knowledge and experience in IT architecture, systems integration, testing and application management, with a delivery capability in Eastern Europe, we are able to achieve the optimum balance between cost and risk when implementing and managing mission critical platforms.

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