

End-to-End Host Test Solutions

An acquirer or issuer payment host implementation is complex and requires many updates during its life cycle.

FIS helps you test the generation and processing of payment messages for speedy acceptance and a performant payment environment.



End-to-End Host Test Solutions

For: Acquiring and Issuing banks, Processors, Independent Service Organizations (ISOs), Payment networks, Merchants

Almost every card payment transaction using a debit or credit card at a Point-of-Sale terminal, ATM or via e-commerce results in a real-time authorization request message that travels through the payment network to the Issuer. The Issuer accepts or declines the transaction — based on its risk analysis and account information — and sends the verdict back in a response message. Most payment network owners require acquirers and issuers to pass certification tests before connecting. The ISO 8583-based format specifications created and owned by payment brands are constantly evolving with changes in business requirements and technological evolutions. With each update, your system needs to be retested on the new functionalities and regression. Typically, this happens once or twice per year.

The Host Test Solutions validate your system through existing authorization interfaces. We provide you dedicated solutions, depending on your role in the card payment ecosystem.

Functional Testing

Payment network specifications cover many aspects, including the format of exchanged messages, transaction behavior, and authorization rules.

Our Host Test Solutions suite of products help you ensure that these specifications are correctly implemented and exclude any major disorders in your payment infrastructure.

Clearing and Settlement Testing

The Clearing and Settlement mechanism is difficult to test and necessitates a wide test scope. Manual testing takes several days. Issues or events that show up in the final stages of testing can necessitate starting your test cycle all over again.

Our Clearing and Settlement Test Solutions helps you verify the behavior of an issuer or an acquirer on the clearing and settlement interface.

Test Case Management, Virtualization and Automation

The automation features of the tools allow you to quickly react to unexpected issues or events that turn up in the final stages of testing.

By utilizing our virtualization capabilities, you can simulate any component of the payment chain that interfaces with your system. This approach avoids working with live systems which can be time consuming, expensive or simply not available to you.

If available from the specification owner, the test solutions come with pre-defined test scripts. Moreover, we can create custom solutions for proprietary or specific regional formats, as well as more extended suites of test cases.

Advanced automation features enable you to run tests over and over again with minimal effort — this would take days to do manually. Moreover, your test coverage can be expanded far beyond the limits of manual testing: imagine the increase of productivity, cost-reduction and elimination of tester-fatigue.

The FIS suite of automated test solutions include simulators for each of the different components in a payment system, pre-defined test scenarios, a comprehensive log and report features and detailed error analysis capabilities.

Your key benefits:

- > **Essential:** ensure your host implementation complies to governing specifications
- > **High quality payment solutions:** ensure a continuous high level of service to your customers
- > **Speed up time-to-market:** reduce your test times from days to hours, weeks to days
- > **Complete:** covers major international formats
- > **Flexible:** runs on our modular and scalable platform enabling easy customization
- > **Test environment always available:** simulation of all components of the payment chain
- > **EMV-ready:** (pre)certification test scripts for terminal testing
- > **Supports Cloud-based payments** implementations
- > **Reduce your costs**

Why choose Open Test Solutions

FIS is the world's #1 financial technology company serving more than 20,000 institutions in over 130 countries.

Empowering the financial industry, our test solutions are acknowledged by the most reputed companies worldwide. Building on 25 years of payment testing expertise, we help the industry save time and efficiently launch reliable ePayment solutions. We aim to establish a true partner relationship to gain knowledge and insights that we can use to develop the solution that fits your business perfectly.

Technical details

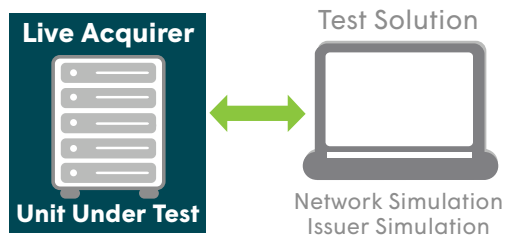
At the core of efficient testing lies our virtualization capabilities. By emulating the behavior of specific components, obstacles that normally slow you down during development and testing are removed. When used with our payment-specific test case management software, all the tools for a modern and efficient test approach are at your fingertips.

Virtualization (simulation)

- Simulator acts as acquirer, payment network or issuer, sending financial messages or responding
- Automatic validation determines if a message is properly formatted and if the cryptographic fields are correct
- Automatic validations on returned responses
 - Mandatory echo
 - Inter and intra message checks
 - Valid value lists per field
 - Format
- ISO 8583, POS (field simulators)
- Cryptography
 - Single, double and triple key length DES
 - DUKPT
 - Message MACing
 - EMV Calculation at runtime (fully simulated, physical card, virtual card & terminal simulator, ARPC & issuer scripting)

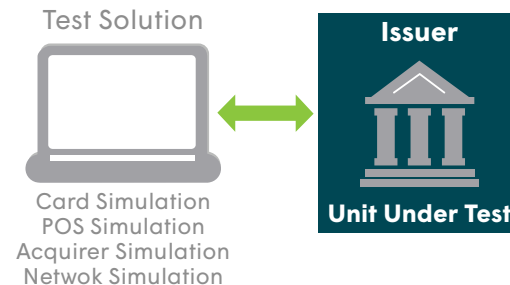
Some examples of Host Testing Configurations:

Acquirer Test Environment



Acquirer is connected to the host test solution which simulates all possible issuer responses to the requests, including invalid requests.

Issuer Test Environment



Issuer testing is carried out using card data retrieved from either a simulated card(s) or a physical card connected to a card reader.

Acquirer Test Environment | End-to-End Testing



This configuration extends the test environment by enabling simulated messages coming from a payment terminal.

End-to-End Host Test Solutions continued

- EMV validation at runtime (ARQC validation for requests, ARPC validation for responses, Issuer script sent to cards)
- Supports transaction tokenization fields and network-to-network callouts
- Linked messages: advice/reversal can be linked to a previous authorization/pre-authorization

Test Case Management

- Extends the performance of virtualization
- Fully integrated Graphical User Interface and Test Case Management

- User created test cases:
 - Test request message, response message or both
 - Tests include present, not-present, specific value, wildcard values, length, EMV tags and others
 - Test cases can include a single financial request/response or multiple
 - Automated reporting of test results
- Negative testing
- Override default responses
 - Match incoming messages on message type and any incoming test case specific field data
 - Changing individual fields
 - Add optional response fields
 - Delay response
 - Do not respond

Open Test Solutions (formerly Clear2Pay) is an expert provider of test solutions and test services for all electronic payment transactions.

We help our customers save time and efficiently launch payment innovations that meet the highest quality standards. From a leadership position, we aim to build a true partner relationship to build engagement and generate insights that we use to develop the solution that fits your business perfectly.

FIS is the world's largest global provider dedicated to banking and payments technologies. FIS serves more than 20,000 institutions in over 130 countries.

**Your
Quality
Confirmed.**

OPEN TEST SOLUTIONS

Headquarters

De Kleetlaan 6A | B-1831 Diegem (Brussels) | Belgium
T: +32 2 402 52 00 | F: +32 2 402 52 01

Phoenix

3050 South 35th Street, Suite C | Phoenix, Arizona 85034
T: 800 931 0777 | F: 480 629 7701

E: opentestsolutions@fisglobal.com | www.fisglobal.com

