

Helping merchants automate testing practices.

Meet deadlines, facilitate certifications and overcome complexities.



www.fisglobal.com

FIS

As a merchant, you are in the middle of the shift from traditional cash transactions to mobile payments, EMV-based transactions and new e-commerce channels. You need to act swiftly and make sure that your payment solutions meet the demands of today's customers. Compromising on quality is simply not an option.

A few typical challenges that can negatively impact your reputation:

- Your Point-of-Sale terminal isn't reacting as expected
- Your system is not working as planned after a POS device fault
- Your payment host doesn't identify fraudulent transactions correctly
- An incorrect amount is debited from a customer's account

How can we help you? What's in it for you?

Testing is a critical process in any enterprise environment. Especially in the payments industry, your brand reputation needs to be pristine. Moreover, going to market fast with the right EMV payment solution can be challenging.

Our Open Test Solutions help you to save time and implement payment solutions that are adapted for the profound changes that the payment landscape is undergoing. We help you to virtualize your test environment and do more with less by implementing automated, continuous testing.

We are passionate about testing, but we find that the main reason our customers choose us — and keep coming back — is because we strive to establish a genuine long-term partner relationship. In 2015, 86% of our customers indicated that our test solutions bring a positive contribution to their daily job.

We listen to our customers, which enables us to generate the insights that we use to develop solutions that fit your business perfectly.

Contact us:
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Rely on our
25 years of expertise...
more than
600 companies
already do.

Host Test Solutions

FIS' automated test solutions help you to save time and be cost-efficient. We support you in providing standardized and convenient payment solutions to your customers.

Our test solutions enable you to validate your host system implementation through existing authorization interfaces. We provide you dedicated solutions, depending on your role in the card payment ecosystem.

FIS test technology enables you to test your host implementation through the authorization interface for the different actors in the card payment ecosystem.

Functional Testing

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

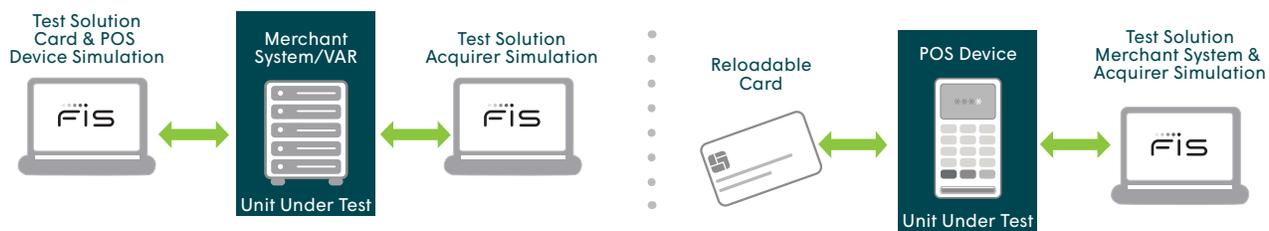
Our Host Test Solutions suite of products helps you ensure that these specifications are correctly implemented and omit any major disorders in your payment infrastructure.

Using 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.

Advanced automation features enable you to run your tests over and over again with minimal effort. Moreover, your test coverage can be expanded far beyond the limits of manual testing. Imagine the increase of productivity, cost-reduction and tester-fatigue prevention.

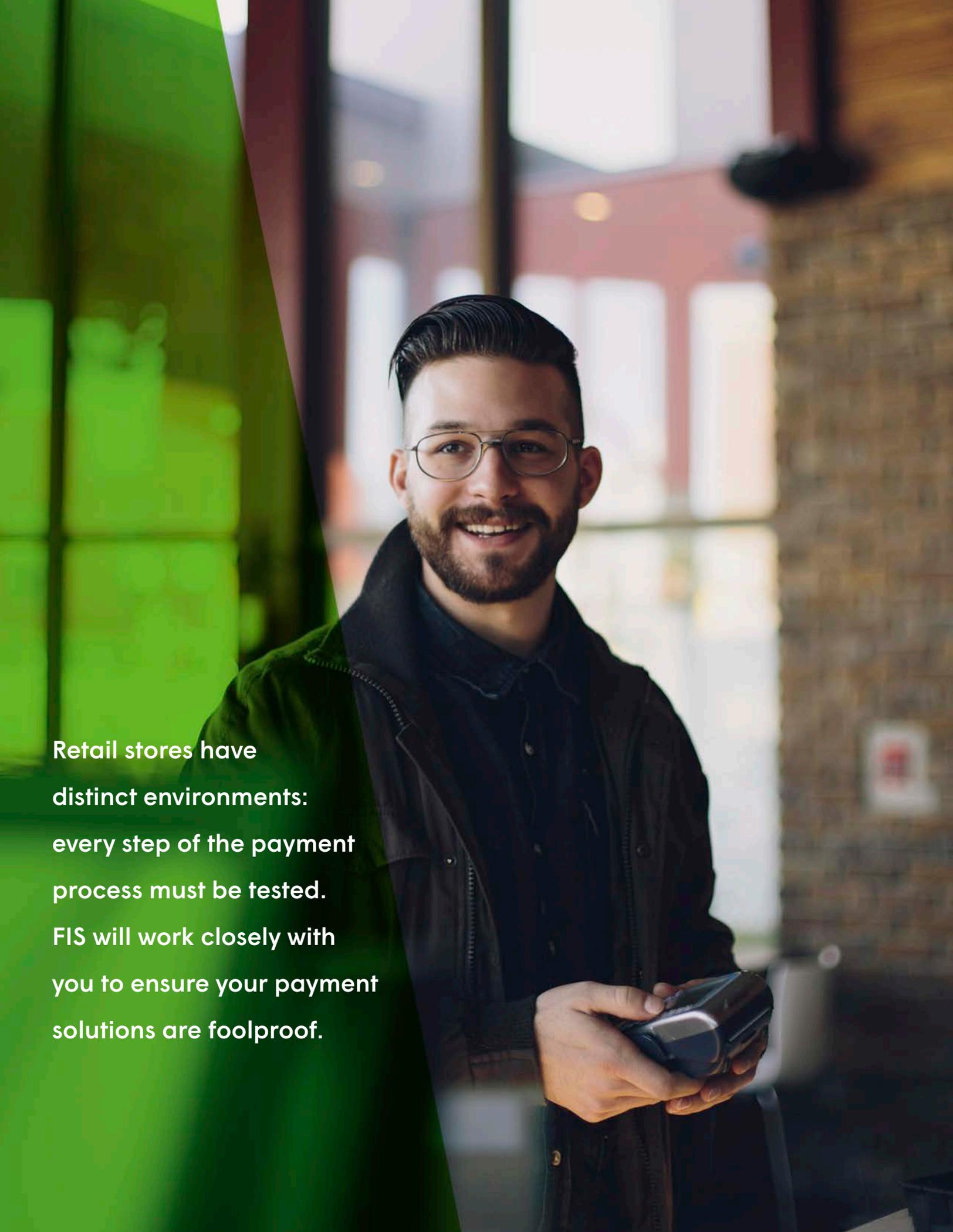
The FIS suite of automated test solutions include simulators for each of the different components in a payment system, predefined test scenarios, comprehensive log and report features and detailed error analysis capabilities.

Example host test configurations:



Your key benefits:

- > Essential: ensure your host implementation complies to governing specifications
- > High quality payment solutions: ensure a continuous high service level 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

A man with a beard and glasses, wearing a dark jacket, is smiling and holding a payment device. He is standing in a retail environment with large windows and a brick wall in the background. A large green graphic element is on the left side of the image.

Retail stores have
distinct environments:
every step of the payment
process must be tested.
FIS will work closely with
you to ensure your payment
solutions are foolproof.

Host Test Solutions continued

Capacity Testing

Imagine a payment system that fails during peak shopping times. This will cause revenue loss and damage your brand reputation. Our stress test solution enables you to analyse specific areas of your payment system and identify and solve potential system bottlenecks or application overloads...for a reliable system and a satisfying customer experience.

Clearly, if your payment system fails, this significantly impacts your earnings and brand reputation. Capacity testing will:

- Verify the performance of your system
 - How your system reacts when confronted with a high number of (parallel) transactions
 - How your system reacts when confronted with constant activity during a long period
- Capacity testing can be done during different phases:
- **New implementations:** initial testing of early software deployments and scaled down hardware environments for forecasting of the completed system
 - **Maintenance:** periodic testing of business rule enhancements or bi-annual payment association rule updates as well as minor software and hardware upgrades.
 - **Mergers and acquisition:** test existing implementations under combined workloads of multiple organizations.
 - **Major upgrades:** when upgrading between major versions of switch software or responding to mandates, such as the US EMV migration, capacity testing is a requirement to ensure production updates without costly downtime or breaking Service Level Agreements.
 - **Implementation of fraud systems:** fraud systems should be tested at maximum performance and not just with one at a time functional tools.

Your key benefits:

- › **Scalable**
- › **Complete**
- › **Easy to use:** can be configured across multiple PC's and data centers to achieve high TPS rates and drive traffic from the same entry points as production
- › **Controllable:** real time control of capacity simulators to easily adjust transactions-per-second rate
- › **Real time graphing and reporting** of transaction statistics
- › **Excel compatible output data** summarized in one second test bins for post-test analysis and graphing
- › **Field-proven technology:** faithfully mimics production systems by stressing the same software, hardware and encryption components

EMV Test Solutions for Terminal-Acquirer Integration

Flexible, field-proven solutions for fast certification and cost-efficiency

Payment Brand Accredited
Service Provider

Introducing chip cards brings new functionalities and added security, but also increases the complexity of a payment transaction. When deploying new payment devices, you need to ensure these are tested and certified according to payment brand rules and EMVCo specifications.

This can be a complex and time-consuming task, especially if you test manually. Open Test Solutions (formerly Clear2Pay) for Terminal-Acquirer Integration ensure the correct integration of terminal and acquirer and all parties in between, Merchants, VARs, Gateways, ... The tools can be used during pre-certification and brand certification processes. Automation makes certain that you and your staff's valuable time is being utilized in the most optimal way.

FIS is an active contributor to the Payments Security Taskforce (PST) and an experienced service provider helping you to navigate through the complexities, remain compliant and optimize your investment in EMV. We work closely with industry organizations such as EMVCo and both domestic and international payment brands.

Test Solutions

Building on expertise gathered by working with customers in mature EMV markets such as Europe and Asia Pacific, we created a set of Test Solutions specifically for the US market. We help you make sure that payment networks' test requirements and acquirer test requirements are being met for both contact and contactless EMV terminals.

Used during both the pre-certification and brand certification processes, these test solutions are the essential toolkit to ensure a successful integration of EMV terminals in the acceptance environment.

Available test solutions:

- Visa ADVT (contact)
- Visa CDET (contactless)
- Visa US Debit (contact & contactless)
- MasterCard MTIP (contact and contactless)
- Discover DPAS (contact and contactless)
- American Express AEIPS (contact)
- American Express ExpressPay (contactless)
- Host Simulation Tools

Test Services

Compliance to the governing regulations is a challenge and getting it wrong is not an option; this could have serious repercussions. Without adequate competencies and specialized solutions, how can you and your customers have confidence?

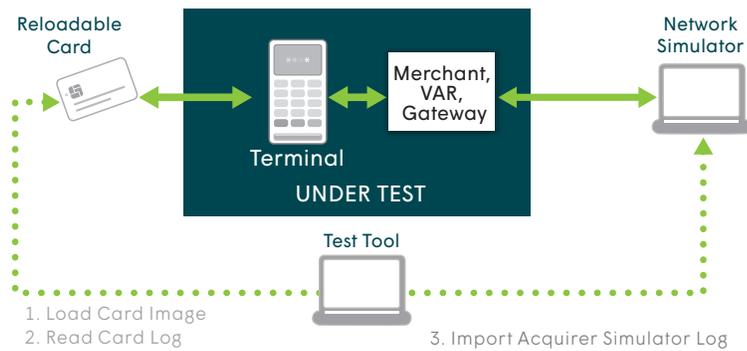
We are an experienced service provider who can help you navigate through the complexities, become compliant and maximize your investment in EMV. We work closely with industry organizations such as EMVCo, EMV Migration Forum and both domestic and international payment brands.

Our long history in payments and EMV technology allows us to help you define your unique route to EMV, ensuring that you and your customers reach the end point fully prepared for the new reality of a migrated market.

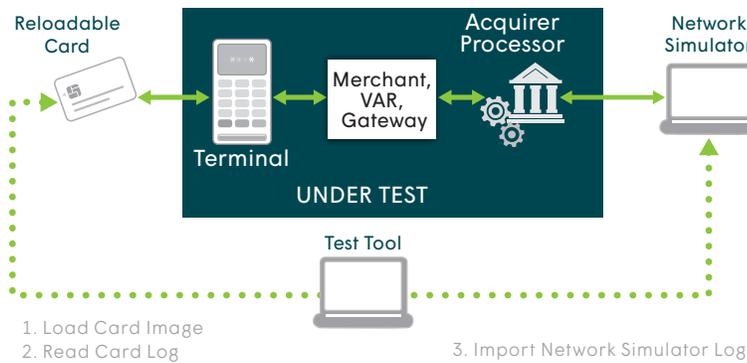
Our training and advisory team guides you through the business and technical complexities, providing guidelines for every EMV step you have to take. We help you streamline your EMV project from end-to-end. It's fast, reliable and cost-efficient.

Test environment components

Pre-certification



Brand certification



Ensure a
successful
integration of
EMV terminals in
the acceptance
environment.

Your key benefits:

- > User Friendly Designed for the US market
- > Save time with automated solutions
- > Cost-efficient
- > Field-proven: test tools built on 20+ years of EMV expertise
- > Qualified solutions
- > Holistic approach: solutions and services, from end-to-end

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

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