

AN 3825 Introducing PSD2 Testing Programs in the EEA Countries

Type:

Bulletin Announcement

Category:Operations
Security**Audience:**Acquirer
Issuer
Processor
Engage Partner**Country:**

EEA countries

Brand:Mastercard®
Debit Mastercard®**Action Indicator:**Program or service requirement
Critical action needed
Registration required
Testing recommended**System:**

Authorization

Published:

13 August 2020

Effective:28 February 2020
17 August 2020**Executive Overview**

Mastercard previously announced the addition of another layer to the multi-layered testing strategy in support of EMV 3-D Secure® (EMV 3DS), and is now providing more details about the Payment Services Directive Version 2 (PSD2) issuer and merchant testing programs for customers in the European Economic Area (EEA) countries.

Effective Date Details

Date	Details
28 February 2020	Introduced a new testing strategy, allowing EMV ¹ 3DS and Mastercard Identity Check testing to be conducted by issuers
17 August 2020	PSD2 testing offered to merchants in the EEA countries through the new Mastercard PSD2 Merchant Testing capability

Customer Benefit

The testing offering was revisited to close testing gaps. With the hard enforcement of the PSD2 Strong Customer Authentication (SCA) requirements by 31 December 2020 for most of the EEA countries, this new testing strategy will allow EMV 3DS and Mastercard Identity Check testing to be conducted by issuers and merchants.

What Mastercard Is Doing

The rollout of the EMV 3DS (3DS 2.x) authentication protocol and the Mastercard Identity Check program encompasses mandated certification with the EMVCo and mandated compliance testing with Mastercard. Refer to the *Mastercard Identity Check Onboarding Guide for 3-D Secure Acquirers, Merchants, and Service Providers* and the *Mastercard Identity Check Onboarding Guide for ACS Service Providers, Operators, Issuers, and Processors* on Mastercard Connect™ for a thorough description of the onboarding processes.

Most of the onboarding process is managed by different entities: Access control servers (ACSs) are used for issuing, and 3D servers are used for acceptance. ACSs and 3D servers must go through certification and compliance testing once. All issuers, acquirers, and merchants serviced by

¹ EMV is a registered trademark or trademark of EMVCo LLC in the United States and other countries.

these entities will then need to go through the Mastercard Identity Check registration process.

At the end of onboarding, only a limited number of the EMV 3DS features have been tested (essentially the frictionless flow). Acquirers, merchants, and issuers therefore have not been able to test their systems after EMV 3DS and Mastercard Identity Check integration.

Despite the various testing options offered to issuers, acquirers, and merchants, EMV 3DS customers still reach error rates (in the series 1xx, 2xx, 3xx, and 4xx as defined in Table A.4 of the EMV 3DS specifications) above the one percent threshold (typically between 10 percent and 50 percent, initially). The errors erode the readiness of the authentication and payment ecosystem. Close monitoring and error resolution by the customer, with the help of Mastercard, decrease error levels below the one percent threshold after typically two to three months.

In addition to the high error rates, the authorization approval rate of fully authenticated EMV 3DS transactions is still two to three percentage points lower than the approval rate for 3DS1 transactions.

The testing offering was revisited to close testing gaps. With the hard enforcement of the PSD2 SCA requirements by 31 December 2020 for most of the EEA countries, it is crucial that EMV 3DS and Mastercard Identity Check testing is also conducted by issuers and merchants.

Version History

Date	Description of Change
13 August 2020	<ul style="list-style-type: none">Updated the language throughout to reflect the past effective datesAmended the PSD2 issuer test scenarios and introduced PSD2 Merchant TestingRemoved obsolete or outdated sections where appropriateUpdated the attached user guide
28 February 2020	Initial publication date

Testing Strategy Overview

Since March 2020, issuers and their ACSs and merchants and their 3D servers must support EMV 3D servers with error rates below one percent. Refer to the following bulletin announcements for details:

- ["AN 2401 Data Integrity Monitoring Program—New Edits for EMV 3-D Secure and New Alerts and Notifications Feature"](#)
- ["AN 2853 Data Integrity Monitoring Program—Updates to Existing Programs and New Edits to Monitor 3DS Activity"](#)

To reach this objective, Mastercard introduced the PSD2 Issuer Testing strategy in February 2020. A new PSD2 Merchant Testing capability is now being introduced to close the existing testing gap.

PSD2 Issuer Testing

The testing strategy for issuers includes testing PSD2 flags in authentication and EMV 3DS 2.1 with message extension (EMV 3DS 2.1+). Refer to [AN 2758—Announcing the New EMV 3DS 2.1 Mastercard Message Extension in EEA Countries](#) for more information on this message extension. EMV 3DS 2.2 is not supported at this point. A separate announcement will be issued when this version is supported.

The testing strategy also includes testing PSD2 flags in authorization (Release 19.Q4, including the merchant low-risk indicator). Refer to [AN 2609—Enhancements to Low-Risk Transaction Indicator to Support EEA Customers Compliance to PSD2 RTS](#) and [AN 2645—Enhancement to Low-Risk Transaction Indicator for more information on this indicator](#).

The testing approach is as follows.

As of 15 February 2020, all issuers in the EEA countries have the option to perform this authentication and authorization testing with Mastercard to ensure PSD2-related messages are properly handled in the issuers' systems before the PSD2 SCA legislation starts to be strongly enforced (for almost all EEA countries on 31 December 2020). The end date of 31 August 2020 accounts for the estimated time required to fix errors (typically from one to three months) before the date of the hard enforcement mentioned above. The options are:

- **Self-Testing.** Issuers can use the Wirecard platform (by enrolling at <https://validation.wirecard.ro/login.php>), or any platform they choose, and perform their own test cases listed below. Access to the Wirecard testing platform is already granted for EEA issuers. If not, contact IdentityCheckEurope@mastercard.com. Upon completing the tests, issuers are requested to inform Mastercard of the test results by emailing IdentityCheckEurope@mastercard.com.
- **Mastercard Validation.** If issuers want Mastercard to validate the test transactions, they can open a Mastercard Customer Implementation Services (CIS) project, which will consist of the following activities. As test slots are limited, priority will be given to projects mandated by Mastercard. Thereafter, test slots will be granted on a first come, first served basis.
 - Mastercard will assign an implementation specialist.
 - Tests will be performed in production using test or live cards provided by the issuer.
 - Test cases (see the "PSD2 Issuer Test Cases" section of this announcement) will be provided by Mastercard.
 - The issuer will generate transactions using the test platform provided by Mastercard (see the "PSD2 Issuer Testing Platform" section of this announcement) or a platform selected by the issuer.
 - The issuer will provide the following transaction details for the implementation specialist to trace the transactions:
 - For Authorization transactions: Network Data (Data Element [DE] 63 [Network Data] and transaction date
 - For Authentication transactions: DS Transaction ID (DE 48 [Additional Data—Private Use], Subelement [SE] 66 [Authentication Data], Subfield [SF] 2 [Directory Server Transaction ID])
 - Upon successful(*) completion of the testing, Mastercard will provide a Production Test Acknowledgment Notification.

As of August 2020, PSD2 Issuer Testing will be mandated for issuers that have not had successful EMV 3DS transactions by June 2020 or that have an error rate above one percent in June 2020. These issuers will be required to successfully(*) complete PSD2 Issuer Testing (all test cases listed below must be completed without errors) by 31 October 2020 or face non-compliance penalties of USD 25,000. While Mastercard may reach out to customers that have not yet scheduled a project within a reasonable time frame, it is the customer's responsibility to initiate and complete the project in the specified time frame.

(*) The successful completion of the testing in authentication means that, in test cases in the next section that are related to No 3DS, Data Only (ID Check Insights), and 3DS types, transactions are performed without message errors and with approvals unless business rules require a decline, e.g. if PSD2 dynamic linking requirements are not met. The deadline for opening a mandated CIS project is 30 August 2020.

PSD2 Issuer Test Cases

The test cases provided in the attached Excel file must be performed by issuers in the PSD2 Issuer Testing. Refer to the *Issuer Test Result Matrix* attachment for testing details.

At the time of opening the CIS project, it is required that the customer is able to support all test cases above.

PSD2 Issuer Testing Platform

Mastercard has selected a testing platform that supports the above-mentioned test cases.

The *EMV 3DS Testing Platform - User Guide for Issuers* attached to this announcement describes the initiative and test cases. It also explains:

- How to sign up and access the application
- How to initiate a test
- How to monitor logs
- How test transactions can be reversed to avoid financial impacts of test cases

PSD2 Merchant Testing

Due to the availability of a very limited set of issuer cards set up to operate in full production, the current authentication production environment is not prepared to run an extensive series of tests with these issuer test cards at all merchants in the EEA countries.

Mastercard is introducing the PSD2 Merchant Testing capability available 17 August 2020 to allow all merchants in the EEA countries to go through authentication and authorization testing of their PSD2 SCA capabilities:

- The testing capability is open for EMV 3DS 2.1+ testing first.
- Mastercard will expand the testing capability to cover future EMV 3DS versions (starting with EMV 3DS 2.2) and other regions during 2021.

Access to the PSD2 Merchant Testing will require a prior registration process as explained in the "PSD2 Merchant Testing Registration" section of this announcement.

Beginning 17 August 2020 and after service registration, all merchants in the EEA countries have the option to perform authentication and authorization testing with Mastercard to ensure PSD2-related messages are properly handled in the merchant and acquirer systems before the PSD2 SCA legislation starts to be strongly enforced (31 December 2020, except for the United Kingdom on 14 September 2021).

A comprehensive list of 19 test cases was built to help ensure PSD2 SCA readiness. Refer to the "PSD2 Merchant Test Cases" section of this announcement for details. One Mastercard test card number was assigned to each test case, making it a total of 19 test card numbers to be used. These test cards were picked from the official list of Mastercard test card ranges defined in Table B1 of the *Test BINs and Card Data* document.

The Mastercard test cards will be used by merchants to prepare authentication requests (AReq) that will be sent using the production channel. The Mastercard Directory Server (DS) will route these Mastercard test cards to the Mastercard test ACS system, developed and hosted by Netcetera.

As the production channel will be used, test transactions will be added to the production volume. Unless the PVPA flag is used (refer to "[AN 3773 Mastercard Identity Check EMV 3DS 2.20 Implementation Strategy](#)" for more information about this topic), these transactions could impact Data Integrity Monitoring Program edits.

The following options are offered to merchants for the testing:

- **Leverage Self-Testing.** Merchants can start testing on their systems with a prior notification to Mastercard.
- **Be Subject to a Mandate by Mastercard.** As of August 2020, the PSD2 MerchantTesting will be mandated for merchants that have not had successful EMV 3DS transactions by July 2020 or that have an EMV 3DS error rate above one percent or have other EMV 3DS performance issues (for example, authentication success rate below average) in July 2020. Mastercard will notify acquirers with such merchants. These merchants must successfully complete PSD2 Merchant Testing by 31 October 2020 or their acquirers will face noncompliance penalties of USD 25,000.

For the testing to be considered successful, the merchant and its gateway/3DS server should process these EMV 3DS authentication flows without errors for all 19 test cases.

For final status="Y" in the ARes or RReq (or where applicable "N"), the merchant and its gateway can trigger authorization requests, which can be sent to test environments (Mastercard Authorisation Simulator-MAS or

Mastercard Testing Facility-MTF) where a response code (RC) "00" will be returned. Refer to the acquirer test case 0400719 in the *Acquirer Credit and Debit - Test Cases* document for more information about authorization testing for test cases and test cards. This test case 04000719 also encompasses the testing of acquirer exemptions in authorization and the processing of soft declines (Response code-RC 65).

PSD2 Merchant Test Cases

The test cases provided in the attached Excel file must be performed by merchants in the PSD2 Merchant Testing. For each test case, the scenario description and flagging, test card number, and PASS criteria are provided. Refer to the *Merchant Test Result Matrix* attachment for testing details.

Authentications with challenge flow should be initiated using straightforward authentication methods, such as SMS OTP (on-time passcode sent by Short Message Service).

There will be no financial impacts of these tests as related bank identification numbers (BINs) are closed in production and only open for authorization testing.

PSD2 Merchant Testing Registration

Each merchant willing to take advantage of the PSD2 Merchant Testing capability must register first. The registration process is simple and fast:

1. Self-register by visiting the Mastercard PSD2 Merchant Testing site at <https://3dss.netcetera.com/mastercard-psd2-testing/>.
2. Enter the required information (all fields are mandatory):

Registration

First name	Last name
<input type="text"/>	<input type="text"/>
E-mail	Confirm E-mail
<input type="text"/>	<input type="text"/>
Password	Confirm password
<input type="text"/>	<input type="text"/>
MerchantId	AcquirerBin
<input type="text"/>	<input type="text"/>
Country	Address
<input type="text"/>	<input type="text"/>
Phone Number	Company
<input type="text"/>	<input type="text"/>
<input type="checkbox"/> I agree to receive updates on products and events from Netcetera.	
<input type="checkbox"/> I have read, understood and agreed to the Privacy Policy	

Register

3. Confirm your registration by clicking the link sent to your email address.
4. Start testing.

Questions

Customers with questions about the information in this announcement should contact IdentityCheckEurope@mastercard.com.