



Enhanced Authorisation Data Service **merchant implementation guide**

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Amendment History

Version	Status	Date Issued	Comment	Originator	Reviewed By
1.0	New	03/04/2017	Issued By Global Payments	Core Product	Marketing Operations
1.1	Update	24/10/2017	Revision Of American Express - Issuer Response Codes	Core Product	Marketing Operations
1.2	Update	16/05/2019	Updated List of Response Codes from Mastercard, Visa and Amex. Addition of Discover Global Network Auth Responses Updated Appendix C	Core Product	Marketing Operations
1.3	Update	17/09/2019	VISA - 1A, Additional Customer Authentication Required	Core Product	Marketing Operations
1.4	Update	23/03/2021	Appendix B – Issuer Response Codes: up to date scheme ISO response tables. Appendix C – Acquirer Response Codes: table removed, referenced to source document.	Core Product	Marketing Operations
1.5	Update	1 October 2021	New Visa codes 46, 6P and Z1 Amended Visa description for code 78 New Mastercard Decline Reason Code Service, including new codes 79,82 and 83 New Amex codes 116 and 121 Payment Decline Reason Code (PDRC) details added	Core Product	Marketing Operations

Enhanced Authorisation Data Service – merchant implementation guide

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1. Introduction

When a transaction is authorised, the card issuer provides a detailed authorisation response code, known as an 'issuer' or a 'raw auth' response code to us. We map these codes to a simplified list, known as an 'acquirer' response code, which you receive in the authorisation message we send you. By signing up for our Enhanced Authorisation Data Service you'll receive the 'issuer' response code as extra real-time data as part of the authorisation message, in addition to the 'acquirer' response code.

2. Benefits Of Using The Service

If you carry out ecommerce and/or card on file transactions (for example, recurring transactions) Enhanced Authorisation Data provides you with a richer, more detailed set of authorisation responses, particularly for declined transactions.

Our service provides you with:

- Improved analytics, to help you pinpoint why transactions are declined
- Assistance in identifying when you can attempt to re-authorise a transaction, or the actions that you need to take before trying to authorise the transaction again
- The opportunity to focus and streamline operational processes
- The ability to increase the number of successful authorisations.

3. Requirements For Using The Service

Issuer response codes will be provided to you as additional data in the authorisation response message we send you, see Appendix A for more details. To ensure you can receive this, please refer to our Authorisation and Settlement Technical Specification Guide, which is available from your Relationship Manager.

4. Customer Set up Process

Before implementing the service, we recommend that you complete testing with us. Please contact your Relationship Manager to arrange this.

5. Issuer Response Code Tables

See Appendix B for a list of the issuer response codes.

See Appendix E for details of the Mastercard Decline Reason Code Service for CNP transactions.

6. Frequently Asked Questions

What's the Enhanced Authorisation Data Service?

Our Enhanced Authorisation Data Service provides you with 'issuer' response codes in the authorisation response message, in addition to the 'acquirer' response codes you already receive.

What are the benefits of using the service?

You can use 'issuer' response codes to identify when you can retry to authorise a declined transaction and increase successful transaction volumes.

Which Card Schemes will I receive an issuer response code for?

Issuer response codes are provided for Mastercard, Visa and American Express transactions.

How will I receive the issuer response codes?

The codes will be provided in the authorisation response message, in addition to the acquirer response codes (see Appendix C for further details of these).

Will I receive an issuer response code for every authorisation I process?

You'll receive an issuer response code for the majority of transactions. However, there are some instances where one won't be provided. For example, if there's a problem with the format of the message or if the card issuer's authorisation system is down.

In these circumstances we'll still provide you with the 'acquirer' response code but the 'issuer' response code will be blank.

Do card issuers always provide a detailed response?

We're only able to pass on the response codes we receive from the card issuer. Some only send back a generic 'do not honour' response for declines (005 for Mastercard and Visa, 100 for American Express) rather than using the full set of responses.

How do I get set up for the service?

Please speak to your Relationship Manager for more details. As part of the set-up process we recommend you firstly test your systems to ensure that you can receive the issuer response codes before proceeding.

How long does testing take?

There isn't a standard timescale for testing as this depends on the availability of IT resource at both your offices and ours.

As a guide, once testing has been scheduled and no issues are encountered, it should take around two weeks to complete the testing, analysis and sign off.

I have a Global Payments terminal can I use the service?

The service is only available to customers who submit authorisation requests to us through their own equipment or via a Payment Service Provider.

Are there any costs involved?

There's an initial fee payable prior to you starting testing and once you're set-up there's also a regular ongoing charge.

Your Relationship Manager will advise you of the cost of both of these.

What are Payment Decline Reason Codes (PDRC)?

The PDRC value is included in the authorisation response, to provide guidance on decline retries. It is mapped from the Mastercard MAC (Merchant Advice Code) and Visa Auth Code Category, to provide one value back. Values and descriptions are shown in Appendix D.

For details of how the PDRC is provided in the auth response message, refer to the ASTS Guide.

What is the Mastercard Decline Reason Code Service?

A service introduced on 2 November 2021, to provide more meaningful decline information to help optimize authorization retry strategies. This could lead to higher sales and reduced costs involving unsuccessful authorization attempts.

The Decline Reason Code Service:

- is limited to card-not-present declines
- excludes mail and telephone order and ATM transactions
- only pertains to authorizations processed on the Mastercard Network.

It involves:

- Mastercard map a subset of sensitive decline reasons on behalf of the issuer into categories and provide them as authorisation decline codes:
 - Life cycle (79)
 - Policy (82), and
 - Fraud/Security (83)

These codes are received back instead of some original decline codes such as 54 - Expired card

- The codes need to be analysed in conjunction with the Mastercard Merchant Advice Code (MAC), which is provided back to you as the GPUK Payment Decline Reason Code (PDRC).

See Appendix E for details of how the Mastercard Category Codes and PDRC needs to be used for decline retries.

Do Visa provide guidance on how to manage authorisation declines?

Visa provide a Category Code for each of their authorisation response codes. This is shown in the Visa table in Appendix B - Issuer Response Codes.

GPUK also map this Category Code and provide it back to you as a PDRC. This is shown in Appendix D - Visa PDRC Mapping Logic.

7. Appendix A – Auxiliary Data Record

TYPE Z1: ISSUER RESPONSE CODE

Num	Name	F/V	Type	Len	M/O/C	Comment
31.3	Auxiliary Data Record					
31.3.1	Record Separator	F	RS	1	M	1E (HEX)
31.3.2	Auxiliary Data Record Type	F	A	2	M	'Z1'
31.3.3	Auxiliary Data Record Sub-Type	F	N	2	M	'01'
31.3.4	Group Separator	F	GS	1	M	1D (HEX)
31.3.5	Issuer Response Code	F	A	3	M	
31.3.6	Group Separator	F	GS	1	M	1D (HEX)
31.3.7	Reserved For Future Use	F	A	20	O	
31.3.8	Group Separator	F	GS	1	M	1D (HEX)

The above Auxiliary Data Record should be used in conjunction our Authorisation and Settlement Technical Specification Guide, which is available from your Relationship Manager.

8. Appendix B – Issuer Response Codes

The following tables detail the issuer response codes that may be returned for each Card Scheme.

Visa

Code	Definition	Category
00	Approved And Completed Successfully	Approval
01	Refer To Card Issuer	4
02	Refer To Card Issuer, Special Condition	4
03	Invalid Merchant	2
04	Pick up card (no fraud)	1
05	Do not honour	4
06	Error	4
07	Pick up card, special condition (fraud account)	1
10	Partial approval	Approval
11	Approved (V.I.P.)	Approval
12	Invalid transaction	1
13	Either: Invalid amount / Currency conversion field overflow	4
14	Invalid account number (no such number): No modulus 10 check / Not a valid length for issuer / Not in positive PIN Verification file / Separator in wrong position	1,3

Visa

Code	Definition	Category
15	No such issuer (first 8 digits of account number do not relate to an issuing identifier)	1
19	Re-enter transaction	2
21	No action taken	n/a
25	Unable to locate record in file	n/a
28	File is temporarily unavailable for update or inquiry	n/a
39	No credit account	4
41	Lost card, pick up card (fraud account)	1
43	Stolen card, pick up (fraud account)	1
46	Closed account	1
51	Not sufficient funds	2
52	No checking account	4
53	No savings account	
54	Expired card or expiration date missing	3
55	PIN incorrect or missing	3
57	Transaction not permitted to cardholder Used by switch when function requested is not allowed for product or card type	1
58	Transaction not allowed at terminal	4
59	Suspected fraud	2
61	Exceeds approval amount limit	2

Visa

Code	Definition	Category
62	Restricted card (card invalid in region or country)	2
63	Security violation (source not correct issuer)	n/a
64	Transaction does not fulfill AML requirement	4
65	Exceeds withdrawal frequency limit	2
70	PIN data required	3
74	Different value than that used for PIN encryption errors	4
75	Allowable number of PIN entry tries exceeded	2
76	Unsolicited reversal—reversal with no original transaction in history. V.I.P. unable to match reversal request to an original message	n/a
78	Blocked, first used or special condition—new cardholder not activated or card is temporarily blocked	2
79	Reversed (by switch)	4
80	No financial impact (used in reversal responses to declined originals)	4
81	Cryptographic error found in PIN (used for cryptographic error condition found by security module during PIN decryption)	4
82	Negative Online CAM, dCVV, iCVV, or CVV results Or Offline PIN authentication inte	3

Visa

Code	Definition	Category
85	No reason to decline a request for address verification, CVV2 verification, or credit voucher or merchandise return	4
86	Cannot verify PIN; for instance, no PVV	2
91	Issuer unavailable or switch inoperative (STIP not applicable or available for this transaction) - Time-out when no STIP - Credit voucher and merchandise return authorizations: V.I.P. sent transaction to issuer, but issuer unavailable. Acquirers receiving code must send transaction again. Advices not created. - Issuers can respond with this code, which V.I.P. passes to acquirer without invoking STIP. Issuers use code to indicate they cannot perform authorization on issuer's behalf. Causes decline at POS.	2
92	Financial institution or intermediate network facility cannot be found for routing (receiving institution ID invalid)	n/a
93	Transaction cannot be completed - violation of law	2
94	Duplicate transmission. Transaction submitted containing values in tracing data fields that duplicate values in a previously submitted transaction.	n/a
96	System malfunction	2
1A	Additional customer authentication required	3

Visa

Code	Definition	Category
B1	Surcharge amount not permitted on Visa cards or EBT food stamps (U.S. acquirers only)	n/a
N0	Force STIP. Issuers can respond with this, which routes transaction to STIP. Issuers use code when they cannot perform authorization but want STIP to perform it.	4
N3	Cash service not available	2
N4	Cash request exceeds issuer or approved limit	2
N7	Decline for CVV2 failure	3
N8	Transaction amount exceeds pre-authorized approval amount	n/a
P5	Denied PIN unblock-PIN change or unblock request declined by issuer	n/a
P6	Denied PIN change-requested PIN unsafe	n/a
6P	Verification data failed	3
Q1	Card authentication failed Or Offline PIN authentication interrupted	n/a
R0	Stop payment order	1
R1	Revocation of authorization order	1
R2	Transaction does not qualify for Visa PIN	n/a
R3	Revocation of all authorizations order	1
Z1	Offline-declined	4

Visa

Code	Definition	Category
Z3	Unable to go online; offline-declined	4

Response Code Category

- 1: Issuer never approves: Reattempt not permitted.
- 2: Issuer cannot approve at this time: Reattempt up to 15 times over 30 days.
- 3: Data quality/revalidate payment information: Revalidate payment information prior to reattempt / Reattempt up to 15 times over 30 days.
- 4: Generic response codes: Reattempt up to 15 times over 30 days.

Mastercard

Value	Description	Action
00	Approved or completed successfully	Approve
01	Refer to card issuer	Call issuer
03	Invalid merchant	Decline
04	Capture card	Capture
05	Do not honor16	Decline
08	Honor with ID	Approve
10	Partial approval	Approve
12	Invalid transaction	Decline
13	Invalid amount	Decline
14	Invalid card number	Decline
15	Invalid issuer	Decline
30	Format error	Decline
41	Lost card	Capture
43	Stolen card	Capture
51	Insufficient funds/over credit limit	Decline
54	Expired card decline	Decline
055	Invalid PIN decline	Decline
57	Transaction not permitted to issuer/cardholder	Decline
58	Transaction not permitted to acquirer/terminal	Decline
61	Exceeds withdrawal amount limit	Decline

Mastercard

Value	Description	Action
62	Restricted card	Decline
63	Security violation	Decline
65	Exceeds withdrawal count limit OR Identity Check Soft-Decline of EMV 3DS Authentication (merchant should resubmit authentication with 3DSv1)	Decline
70	Contact card issuer	Call Issuer
71	PIN not changed	Decline
75	Allowable number of PIN tries exceeded	Decline
76	Invalid/non-existent 'To Account' specified	Decline
77	Invalid/non-existent 'From Account' specified	Decline
78	Invalid/non-existent account specified (general)	Decline
79	Lifecycle Mastercard use only	Decline
81	Domestic debit transaction not allowed (regional use only)	Decline
82	Policy Mastercard use only	Decline
83	Security Mastercard use only	Decline
84	Invalid authorisation life cycle	Decline
85	Not declined. Valid for all zero amount transactions	Valid
87	Purchase amount only. No cashback allowed	Approved
88	Cryptographic failure	Decline
89	Unacceptable PIN – Transaction declined – Retry	Decline

Mastercard

Value	Description	Action
91	Authorization System or issuer system inoperative issuer system inoperative	Decline
92	Unable to route transaction	Decline
94	Duplicate transmission detected	Decline
96	System error	Decline

American Express

Valid Action Codes:

000	Approved
001	Approve with ID
002	Partial approval (prepaid cards only)
100	Deny
101	Expired card/Invalid expiration date
106	Exceeded PIN attempts
109	Invalid merchant
110	Invalid amount
111	Invalid account/Invalid MICR (Travelers Cheque)
115	Requested function not supported
116	Not Sufficient Funds
117	Invalid PIN
119	Cardmember not enrolled/not permitted
121	Limit Exceeded
122	Invalid card security code (a.k.a., CID, 4DBC, 4CSC)
125	Invalid effective date
130	Additional customer identification required
181	Format error
183	Invalid currency code
187	Deny – New card issued

American Express

Valid Action Codes:

189	Deny – Cancelled or closed merchant/SE
200	Deny – Pick up card
900	Accepted – ATC synchronization
909	System malfunction (cryptographic error)
912	Issuer not available

Note - Amex do not define category / action to be taken

Discover Global Network

Action Codes:

904	format error	Error
905	Acquirer not supported by Xpress	Error
909	system malfunction	Error
916	MAC key invalid	Error
923	request in progress	Error
000	pin change successful (EMV only)	Approved
001	honor with identification	Approved
081	approved by Issuer (For a successful balance inquiry response)	Approved
082	approved by Xpress (stand-in)	Approved
083	approved by Acquirer (stand-in)	Approved
084	off-line approved (EMV only)	Approved
085	off-line approved—unable to go online (EMV only)	Approved
086	card verification successful	Approved
100	do not honor	Declined
101	expired card	Declined
102	suspected fraud (account not on Positive File)	Declined
103	Customer Authentication Required	Declined
104	restricted card	Declined
106	allowable PIN tries exceeded	Declined

Discover Global Network

Action Codes:

109	invalid merchant	Declined
110	invalid amount	Declined
111	invalid card number	Declined
115	requested function not supported	Declined
117	incorrect PIN	Declined
118	cycle range suspended	Declined
119	Transaction not permitted to cardholder	Declined
120	Transaction not permitted to Originator (For Merchant Presented Mode (MPM) QR Code transactions)	Declined
122	card validity period exceeded	Declined
124	violation of law	Declined
125	card not effective	Declined
129	suspected counterfeit card	Declined
140	off-line declined—Merchant Forced Acceptance	Declined
141	unable to go on line, off-line declined—Merchant Forced Acceptance	Declined
163	security violations	Declined
181	decline given by POS Participant (adjustment)	Declined
182	decline given by Issuer	Declined
183	Domain Restriction Control Failure	Declined

Discover Global Network

Action Codes:

184	decline given by Xpress, no communication with Issuer	Declined
185	decline given by Xpress, card is local use only	Declined
188	Xpress unable to forward request to Issuer X	Declined
192	Restricted Merchant	Declined
194	PIN change or unblock failed (EMV only)	Declined
195	new PIN not accepted (EMV only)	Declined
196	chip information advice (EMV only)	Declined
197	card verification failed	Declined
198	TVR or CVR validation failed	Declined
200	do not honor	Declined
201	expired card	Declined
202	suspected fraud	Declined
203	card acceptor contact Acquirer	Declined
204	restricted card	Declined
205	card acceptor call Acquirers security department	Declined
206	allowable PIN tries exceeded	Declined
207	special conditions	Declined
208	lost card	Declined
209	stolen card	Declined

Discover Global Network

Action Codes:

210	suspected counterfeit card	Declined
280	temporary status lost card	Declined
281	temporary status stolen card	Declined

JCB

Code	Message	Action
00	Approved or completed successfully	Approve
01	Refer to Issuer	Referral
03	Invalid merchant	Referral
04	Pick-up	Pick-up
05	Do not honor	Decline
06	Error	Referral
07	Pick-up card, special condition, counterfeit	Pick-up
09	Request in progress	Referral
10	Partial Approval (Not Applicable to GP UK)	Approve
12	Invalid transaction (Duplicate transaction)	Referral
13	Invalid amount	Referral
14	Invalid card number (no such number)	Decline
15	No such Issuer	Decline
20	Invalid response	Referral
30	Format error	Referral
31	Bank not supported by switch	Decline
33	Expired card	Pick-up
34	Suspended fraud	Pick-up
36	Restricted card	Pick-up
40	Requested function not supported	Decline

JCB

Code	Message	Action
41	Lost card	Pick-up
42	No universal account	Decline
43	Stolen card, pick-up	Pick-up
51	Not sufficient funds	Decline
54	Expired card, or expiry date error	Decline
55	Incorrect personal identification number	Decline
56	No card record	Referral
57	Transaction not permitted to cardholder	Decline
58	Transaction not permitted to terminal	Decline
59	Suspected fraud	Decline
61	Exceeds withdrawal amount limit	Decline
62	Restricted card	Decline
63	Security violation	Referral
65	Exceeds withdrawal frequency limit	Decline
75	Allowable number of PIN tries exceeded	Decline
76	Incorrect reversal (Auth-ID, STAN, AMNT)	Referral
77	Lost, stolen, pick-up	Pick-up
78	Shop in black list	Decline
79	Account status flag false	Decline

JCB

Code	Message	Action
81	PIN cryptographic error found (This is set only by JCB, Licensees cannot use this code)	Decline
85	Not Declined (only used for Balance Inquiry and Address Verification with zero amount) (Not Applicable to GP UK)	Valid
87	Incorrect passport number	Decline
88	Incorrect date of birth	Decline
89	(Not approved: free message)	Decline
90	Cutoff is in progress	Referral
91	Issuer or switch is inoperative	Referral
92	Financial institution cannot be found for routing	Decline
94	Duplicate transmission	Referral
96	System malfunction	Referral

9. Appendix C - Acquirer Response Codes

For up to date Acquirer Response Codes, see the latest Authorisation and Settlement Technical Specifications (ASTS Guide),

Authorisation Response Codes and Message Text Table.

10. Appendix D - Payment Decline Reason Code

PAYMENT DECLINE REASON CODE (PDR)

1	New account information available
2	Cannot approve at this time; try again later
4	Do not try again
8	Payment blocked by card scheme
0	NONE

For details of how this is provided in the auth response message, refer to the ASTS Guide.

Visa PDR Mapping Logic

Visa Auth Response Category	GPUK Payment Decline Reason Code (PDR)
1 Issuer will never approve	4 Do not try again
2 Issuer cannot approve at this time	2 Cannot approve at this time; try again later
3 Data quality issues	1 New account information available
4 Generic response codes	0 None

11. Appendix E - Mastercard Decline Reason Code Service

MC Response Code	PDR	Merchant Action	Merchant Advice Description
79 or 82	1	updated information was found in the Mastercard ABU database. Check for new information before reattempting.	Updated information needed
79 or 82	4	updated credentials are not found to be available in the Mastercard ABU database. Do not retry.	Do not try again
83	1	authentication may improve the likelihood of an approval. Retry using authentication (such as EMV® 3DS).	Additional information needed
83	4	suspected fraud. Do not retry.	Do not try again
79 or 82 or 83	2	retry the transaction later.	Try again later

79 - Lifecycle

82 - Policy

83 - Security



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