PostPay

Payment Acceptance Gateway
API Specifications
Version 2.0.2

External Document Source Control

Date	Revision	Author	Remarks
7TH February 2022	1.0.0	POSTPAY	Initial Version
18TH May 2022	1.0.1	POSTPAY	Added new referral codes for PAG100
22ND September 2022	1.0.2	POSTPAY	- REMOVED MPI_CARD_HOLDER_NAME FROM HOSTED PAYMENT PAGE REQUEST FIELD - UPDATED MPI_EMAIL, MPI_MOBILE_PHONE_CC AND MPI_MOBILE_PHONE TO BE OPTIONAL REQUEST FIELDS - UPDATED MPI_ERROR_CODE FIELD SIZE
22ND February 2023	2.0.0	POSTPAY	- ADDED NEW PAYMENT METHOD: FPX AND ITS ERROR CODE - INCREASE URL VERSIONING - ADDED NEW RESPONSE FIELDS FOR HOSTED PAYMENT PAGE - ADDED SAMPLE MAC FIELDS BEFORE ENCRYPTION
21ST MARCH 2023	2.0.1	POSTPAY	- ADDED NEW REFERRAL CODE FOR PAG200
5TH JANUARY 2024	2.0.2	POSTPAY	- UPDATE REQUEST URL CONVENTION - SET THE BILLING ADDRESS FIELDS TO BE CONDITIONAL - SET THE EMAIL FIELD TO BE MANDATORY - SET THE PHONE RELATED FIELDS TO BE CONDITIONAL - UPDATE VOID/REFUND REFERENCE TABLE

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1. Introduction

1.1 Objective

The objective of this document is to describe the API that can be used as a payment gateway to provide Paydee's merchants with multiple payment methods aside from credit card and perform several actions to the payment transaction.

2   API Overview

2.1   Transport Security

The API is using HTTPS protocol to secure the communication between API gateway and merchant. A valid SSL certificate that is signed by Certificate Authority is installed on the API server.

The required request header for every API function call is as follows:

2.2   API Functions

Conventions used for field presence:

Code	Meaning
M	Field must be present.
ME	If field is present in the request, the same value has to be echoed in the response.
O	Field in optional within the request. If present, the system will take certain action on it.
C	Field in conditional within the request.
C1	Field is mandatory in countries if billing address exist
C2	Field in which at least one must be present

Data attributes

Code	Meaning
A	Alphabet
N	Numeric
AN	Alphabet and Numeric

2.2.1 Key Exchange API

This API can be used by merchant to perform key exchange request. This API should always be requested first before calling Hosted or Non Hosted Payment Page APIs.

Request method : HTTPS POST

Request URL : https://<endpoint>/mkReq

Request payload in Form Data:

Field name	Attribute (Size)	M/ME/O/C	Description
merchantId	AN(15)	M	Merchant ID. The unique identity code assigned by acquirer bank to the merchant.
purchaseId	AN(20)	M	Transaction ID. The unique transaction number generated by merchant to identify the transaction. Each unique transaction number is treated as new transaction request. This field is being used pair with merchant ID to identify a transaction. Minimum 6 digits. If a transaction received with the transaction number exists pair with the merchant ID in system, the transaction is treated as duplicate and deemed invalid.
pubKey	AN (392)	M	RSA public key, key length 2048 generated by the merchant server. Encoded in Base64Url.
mac	ANS (344)	C	Key Exchange MAC. Refer to field description for details on encryption algorithm and verification. Mandatory only if merchant enroll key exchange mac verification.
paymentMethod	A (8)	O	Selected payment method to be processed by customer CC - Credit Card EWALLETS – eWallets FPX – Online Banking Default value is customer selection. If default payment method is chosen, the server will return the payment method chosen by customer on MPI_CUST_PAYMENT_METHOD during hosted/non hosted payment page response.

Response payload in Form Data:

Field name	Attribute (Size)	M/ME/O/C	Description
merchantId	AN(15)	ME	Merchant ID. Echo value as per request. Cannot be blank.
purchaseId	AN (20)	ME	Transaction ID. Echo value as per request. Cannot be blank.
pubKey	AN (392)	C	RSA public key, key length 2048 generated by the 3DS server. Encoded in Base64Url. Present if response code is 000. Else blank.
errorCode	AN (3)	M	Response Code.

errorDesc	AN (100)	O	Response Error Description. Present if response code is not ooo. Else blank.

Sample request:

```
{
"merchantId" : "600000000000001",
"purchaseId" : "6487047256",
"pubKey": "MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAp1mHlp7EPnBY_lyO2d6O
dwg98GxZozSIpMxg8r5SxmkRrzI_6ZH0WZlai3IyXA6BIgmH6QoFK6nNHz6kVtzhT
_aPRzSo2eSstQFfYxcP2eFswO0uTDu41xlnCy77JI4GUv9joE37dA6wtru1QMiDmk
GIyp62Piszx9ertMDb2JxcD1ieRngHp5v3GKiG5W7nWo0ge3xgJGcu6JjVxjRXN4bb
xUqNbMBkxM993Yjy_wL11lBOM4xLWqMszuWMDrQiUkJwbjKeR1ssCo2IhazGyEdrPr2C94QNmhV
fYhK3lSe2c7gXXaEBzElyN59viAm0WCYNuM038uha8MIqLxsQIDAQAB",
"mac":
"qTJlUPdy5tgnEgnPFuo8m8K6ApLh-OxlxL3ZWMF3f-
z8UXPX336lE2X4ZNkjhaKPCKFd6mRa7EWSlzWEOc6wp_ZOsxuo96_ms1ekoAuzwt1b7Lo2J3HGe
spVR1wXNvew4YFK2nuhsmLnjZD4AM3erpz6MmYl_JZgbOAZJWcnFTyilO7T-
tWTUcP609_02N2pWGDeAaPYYyT8WipfmztiaS0BLyyvjJ-
1aS38atIceFayUTDtAOn3fIrbNIe3s68lNVMwH2BuxOkVSvfszxAP1VaFc6IIq9Tyv1AzjLMTAv
Glo0tHDPjqrUWiA_gFV-qq1UpnlkQy3Pp0dxTnk7TbNA==",
"paymentMethod" : "CC",
}
```

Sample response:

```
{
"merchantId" : "600000000000001",
"purchaseId" : "6487047256",
"pubKey": "MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAp1mHlp7EPnBY_lyO2d6O
dwg98GxZozSIpMxg8r5SxmkRrzI_6ZH0WZlai3IyXA6BIgmH6QoFK6nNHz6kVtzhT
_aPRzSo2eSstQFfYxcP2eFswO0uTDu41xlnCy77JI4GUv9joE37dA6wtru1QMiDmk
GIyp62Piszx9ertMDb2JxcD1ieRngHp5v3GKiG5W7nWo0ge3xgJGcu6JjVxjRXN4bb
xUqNbMBkxM993Yjy_wL11lBOM4xLWqMszuWMDrQiUkJwbjKeR1ssCo2IhazGyEdrPr2C94QNmhV
fYhK3lSe2c7gXXaEBzElyN59viAm0WC
YNuM038uha8MIqLxsQIDAQAB",
"errorCode" : "000"
}
```

2.2.2   Hosted Payment Page

This API can be used by merchant to send online transaction requests.

Request method : HTTPS POST

Request URL   : https:// <endpoint>/mercReq

Request payload in Form Data:

Field name	Attribute (Size)	M/ME/O/C	Description
MPI_TRANS_TYPE	AN (10)	M	Transaction Type. SALES : Sales / Purchase
MPI_MERC_ID	N (15)	M	Merchant ID. The unique identity code assigned by acquirer bank to the merchant.
MPI_PURCH_AMT	N (19)	M	Transaction Amount. Maximum 19 digits without decimal point appear in this field. The minor unit is implied, based on the transaction currency. For example, USD 100.23 = 10023 JPY 12345 = 12345.
MPI_PURCH_CURR	N (3)	M	Transaction currency. Format: ISO 4217 3-digits currency code. Example: MYR = 458.
MPI_TRXN_ID	N (20)	M	Transaction ID. Same value as purchaseId in Key Exchange API. Cannot be blank.
MPI_PURCH_DATE	N (14)	M	Transaction Timestamp. Timestamp when merchant send the transaction. Format: yyyyMMddHHmmss (24hr format). E.g. 20031010131522.
MPI_ADDR_MATCH	A(1)	O	Indicates whether the Cardholder cardholder shipping address and Cardholder cardholder billing address are the same. Format: Y = Match N = Not match
MPI_BILL_ADDR_CITY	AN(50)	C1	City of the cardholder billing address if any.
MPI_BILL_ADDR_STATE	AN(3)	C1	State or province of the cardholder billing address if any. Format: Country subdivision code defined in ISO 3166-2
MPI_BILL_ADDR_CNTRY	N(3)	C1	Country of the cardholder billing address if any. Format: ISO 3166-1 3-digit country code
MPI_BILL_ADDR_POSTCODE	N(16)	C1	ZIP or other postal code of the cardholder billing address if any.
MPI_BILL_ADDR_LINE1	AN(50)	C1	First line of the cardholder billing address if any.
MPI_BILL_ADDR_LINE2	AN(50)	C1	Second line of the cardholder billing address if any.
MPI_BILL_ADDR_LINE3	AN(50)	C1	Third line of the cardholder billing address if any.
MPI_SHIP_ADDR_CITY	AN(50)	O	City of the cardholder shipping address.
MPI_SHIP_ADDR_STATE	AN(3)	O	State or province of the cardholder shipping address.

MPI_SHIP_ADDR_CNTRY	AN(3)	O	Country of the cardholder shipping address. Format: ISO 3166-1 3-digit country code.
MPI_SHIP_ADDR_POSTCODE	AN(16)	O	The ZIP or other postal code of the cardholder shipping address requested by the Cardholder.
MPI_SHIP_ADDR_LINE1	AN(50)	O	First line of the cardholder shipping address.
MPI_SHIP_ADDR_LINE2	AN(50)	O	Second line of the cardholder shipping address.
MPI_SHIP_ADDR_LINE3	AN(50)	O	Third line of the cardholder shipping address.
MPI_EMAIL	AN(254)	M	Email address provided by the Cardholder.
MPI_HOME_PHONE_CC	N(3)	C2	The home phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_HOME_PHONE	AN(15)	C2	
MPI_MOBILE_PHONE_CC	N(3)	C2	The mobile phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_MOBILE_PHONE	AN(15)	C2	
MPI_WORK_PHONE_CC	N(3)	C2	The work phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_WORK_PHONE	AN(15)	C2	
MPI_MAC	AN (344)	M	Merchant Transaction MAC. Refer to Encryption Method for details on encryption algorithm and verification.
MPI_TTL_QUANTITY	N(999)	C	Total MPI_ITEM_QUANTITY inside MPI_LINE_ITEM Mandatory if MPI_LINE_ITEM is not empty
MPI_LINE_ITEM	List	O	List of line items and details. Refer to table ARRAY: MPI_LINE_ITEM for list of subfields.
MPI_ADDITIONAL_INFO_IND	A(1)	O	Indicate required additional info return by server or not, check Response payload for more details. Value: Y – Yes N – No Default - N
MPI_SERV_ORIGIN	A(2)	O	The server request origin. Value: PL – Paydee Link Default value is Merchant Direct Server

ARRAY: MPI_LINE_ITEM			
Field Id	**Attribute**	**Mandatory**	**Remarks**
MPI_ITEM_ID	AN(10)	M	Item ID.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_REMARK	AN(50)	O	Item Description.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_QUANTITY	N(10)	M	Total quantity of this line item. No decimal place is expected.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_AMOUNT	N(12)	M	Item Amount. Maximum 12 digits without decimal point appears in this field. The minor unit is implied, based on the transaction

			currency. For example: USD 100.23 = 10023 JPY 12345 = 12345
Detail Separator Field	N(1)	M	";"
MPI_ITEM_CURRENCY	N(3)	M	Transaction Currency. Format: ISO 4217 3-digit currency code.

Response payload in Form Data:

Field name	Attribute (Size)	M/ME/O/C	Description
MPI_MERC_ID	AN (15)	ME	Merchant Id. Echo value as per request. Cannot be blank.
MPI_TRXN_ID	AN (20)	ME	Transaction ID. Echo value as per request. Cannot be blank.
MPI_MAC	AN (344)	M	Server Response MAC. Refer to Encryption Method for details on encryption algorithm and verification. Cannot be blank.
MPI_ERROR_CODE	AN (10)	M	Response Code. Refer to API Responses Code.
MPI_ERROR_DESC	AN (100)	C	Response Error Description. Present if response code is not 000. Else blank.
MPI_APPR_CODE	AN (6)	C	Approval Code. Applicable only for payment method CC. Present if response code is 000. Else blank.
MPI_RRN	AN (12)	C	Retrieval Reference Number. Applicable only for payment method CC. Present if response code is 000. Else blank.
MPI_BIN	N (8)	O	First 8 digits of card number used in this transaction. Applicable only for payment method CC.
MPI_REFERRAL_CODE	ANS (100)	O	Only applicable if response code = 512-Invalid Transaction, 579- Acquirer Host Declined and PAG100-Invalid Transaction(Ewallets). Refer Response Codes section for details.
MPI_ECI_VALUE	N (2)	C	ECI value of the transaction. Applicable only for payment method CC. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_CHALLENGE_MANDATED_IND	A (1)	C	Challenge mandated indicator of the transaction. Applicable only for payment method CC. Y = challenge is mandated N = challenge is not mandated *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_CHALLENGE_IND	A (1)	C	Challenge flow indicator of the transaction to indicate this transaction challenged by ACS. Applicable only for payment method CC. Y = challenged N = not challenged *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_AUTH_STATUS	A (1)	C	Authentication status of the transaction. Applicable only for payment method CC. Refer to Gpayment Authentication Status Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS_REAS	N (2)	C	Reason of the status.

ON			Applicable only for payment method CC. Refer to Gpayment Transaction Status Reason & Desc Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS_REAS ON_DESC	AN (100)	C	Description of the reason. Applicable only for payment method CC. Refer to Gpayment Transaction Status Reason & Desc Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS	N(3)	C	Payment status. Refer to Payment Status Section for details.
MPI_CUST_PAYME NT_METHOD	A(8)	C	Merchant / Customer selected payment method.
MPI_REF_ID	AN(20)	M	Unique ID generated by payment gateway for each payment request received by merchant.
MPI_BUYER_BANK	AN(100)	C	Buyer bank name. Applicable only for payment method FPX.

Sample request:

```
MPI_TRANS_TYPE=SALES&MPI_MERC_ID=600000000000001&MPI_PURCH_AMT=20000&MPI_PU
RCH_CURR=458&MPI_TRXN_ID=6487047256&MPI_PURCH_DATE=20220405153030&MPI_ADDR_
MATCH=Y&MPI_BILL_ADDR_CITY=addrCity&MPI_BILL_ADDR_STATE=05&MPI_BILL_ADDR_CN
TRY=458&MPI_BILL_ADDR_POSTCODE=72120&MPI_BILL_ADDR_LINE1=No 6 JLN
addr&MPI_BILL_ADDR_LINE2=&MPI_BILL_ADDR_LINE3=&MPI_SHIP_ADDR_CITY=Seremban&
MPI_SHIP_ADDR_STATE=05&MPI_SHIP_ADDR_CNTRY=458&MPI_SHIP_ADDR_POSTCODE=72120
&MPI_SHIP_ADDR_LINE1=No 6 JLN addr&
MPI_SHIP_ADDR_LINE2=&MPI_SHIP_ADDR_LINE3=&MPI_EMAIL=test@email.com&MPI_HOME
_PHONE_CC=06&MPI_HOME_PHONE=6411345&MPI_MOBILE_PHONE_CC=60&MPI_MOBILE_PHONE
=1156257725&MPI_WORK_PHONE_CC=60&MPI_WORK_PHONE=1156257725&MPI_MAC=
qTJlUPdy5tgnEgnPFuo8m8K6ApLh-OxlxL3ZWMF3f-
z8UXPX336lE2X4ZNkjhaKPCKFd6mRa7EWSlzWEOc6wp_ZOsxuo96_ms1ekoAuzwt1b7Lo2J3HGe
spVR1wXNvew4YFK2nuhsmLnjZD4AM3erpz6MmYl_JZgbOAZJWcnFTyilO7T-
tWTUcP609_02N2pWGDeAaPYYyT8WipfmztiaS0BLyyvjJ-
1aS38atIceFayUTDtAOn3fIrbNIe3s68lNVMwH2BuxOkVSvfszxAP1VaFc6IIq9Tyv1AzjLMTAv
Glo0tHDPjqrUWiA_gFV-
qq1UpnlkQy3Pp0dxTnk7TbNA==&MPI_TTL_QUANTITY=1&MPI_LINE_ITEM=1;store A;1;
20000;458&MPI_ADDITIONAL_INFO_IND=Y
```

Sample response:

```
MPI_MERC_ID=600000000000001&MPI_TRXN_ID=6487047256&MPI_MAC=CEGyfrpOlMHHbIf1
1GFWbYEVKF_aNqsSfG8t5VtZYSPh6r8jioeTAXfRURDUeJbKLQXGJtOG5zVMmi9FohCHTfMqHgG
HDdMBMzmE-jRmW63sjGSvHDQRuJLgWE0MEiAl-LOOh03aaIH_DHromZRo7LR7g-
BztyQFRC3xZNVM_4fdQk68dpecUcx-HF95pdsjicCpw_C1yErBIc7PWjgRxNQRzMyXBmx4LQeq-
o7jcngTG-
oYwlVY389J3g3TVtOAyRgPg73jaEV_aVFhzNGz29h_Xu8IW1ykdwhKGmheD4srm4d7RDXeiBtBJ
as4UCB4Pu2JapT9hlBNIs1Mk8L-Lg&MPI_ERROR_CODE=000&MPI_ERROR_DESC=Transaction
Success&MPI_APPR_CODE=194705&MPI_RRN=208900055026&MPI_BIN=41000000&MPI_ECI_
VALUE=1,
MPI_CHALLENGE_MANDATED_IND=Y&MPI_CHALLENGE_IND=Y&MPI_AUTH_STATUS=Y&MPI_STAT
US=1&MPI_CUST_PAYMENT_METHOD=CC
```

2.2.3   Non-Hosted Payment Page

This API can be used by merchant to perform Inquiry, Void, and Refund.

Request method : HTTPS POST

Request URL   : https:// <endpoint>/mpReq

Request payload in Form Data:

Field name	Attribute (Size)	M/ME/O/C	Description
MPI_TRANS_TYPE	AN (10)	M	Transaction Type. INQ : Inquiry VSALES : Void Sales REFUND : Refund
MPI_MERC_ID	N (15)	M	Merchant ID. The unique identity code assigned by acquirer bank to the merchant.
MPI_PURCH_AMT	N (19)	M	Transaction Amount. Maximum 19 digits without decimal point appears in this field. The minor unit is implied, based on the transaction currency. For example, USD 100.23 = 10023 JPY 12345 = 12345.
MPI_PURCH_CURR	N (3)	M	Transaction currency. Format: ISO 4217 3-digits currency code. Example: MYR = 458.
MPI_TRXN_ID	N (20)	M	Transaction ID. Same value as per purchaseId in Key Exchange API. Cannot be blank.
MPI_ORI_TRXN_ID	N (20)	M	Original Transaction ID.
MPI_PURCH_DATE	N (14)	M	Transaction Timestamp. Timestamp when merchant send the transaction. Format: yyyyMMddHHmmss (24hr format). E.g. 20031010131522
MPI_ADDR_MATCH	A(1)	O	Indicates whether the Cardholder cardholder shipping address and Cardholder cardholder billing address are the same. Format: Y = Match N = Not match
MPI_BILL_ADDR_CITY	AN(50)	C1	City of the cardholder billing address if any.
MPI_BILL_ADDR_STATE	AN(3)	C1	State or province of the cardholder billing address if any. Format: Country subdivision code defined in ISO 3166-2
MPI_BILL_ADDR_CNTRY	N(3)	C1	Country of the cardholder billing address if any. Format: ISO 3166-1 3-digit country code
MPI_BILL_ADDR_POSTCODE	N(16)	C1	ZIP or other postal code of the cardholder billing address if any.
MPI_BILL_ADDR_LINE1	AN(50)	C1	First line of the cardholder billing address if any.
MPI_BILL_ADDR_LINE2	AN(50)	C1	Second line of the cardholder billing address if any.
MPI_BILL_ADDR_LINE3	AN(50)	C1	Third line of the cardholder billing address if any.

MPI_SHIP_ADDR_CITY	AN(50)	O	City of the cardholder shipping address.
MPI_SHIP_ADDR_STATE	AN(3)	O	State or province of the cardholder shipping address.
MPI_SHIP_ADDR_CNTRY	AN(3)	O	Country of the cardholder shipping address. Format: ISO 3166-1 3-digit country code
MPI_SHIP_ADDR_POSTCODE	AN(16)	O	The ZIP or other postal code of the cardholder shipping address requested by the Cardholder.
MPI_SHIP_ADDR_LINE1	AN(50)	O	First line of the cardholder shipping address.
MPI_SHIP_ADDR_LINE2	AN(50)	O	Second line of the cardholder shipping address.
MPI_SHIP_ADDR_LINE3	AN(50)	O	Third line of the cardholder shipping address.
MPI_EMAIL	AN(254)	M	Email address provided by the Cardholder.
MPI_HOME_PHONE_CC	N(3)	C2	The home phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_HOME_PHONE	AN(15)	C2	
MPI_MOBILE_PHONE_CC	N(3)	C2	The mobile phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_MOBILE_PHONE	AN(15)	C2	
MPI_WORK_PHONE_CC	N(3)	C2	The work phone number provided by the Cardholder. Refer to ITU-E.164 for additional information on format and length.
MPI_WORK_PHONE	AN(15)	C2	
MPI_MAC	AN (344)	M	Merchant Transaction MAC. Refer to Encryption Method for details on encryption algorithm and verification.
MPI_TTL_QUANTITY	N(999)	C	Total MPI_ITEM_QUANTITY inside MPI_LINE_ITEM Mandatory if MPI_LINE_ITEM is not empty
MPI_LINE_ITEM	List	O	List of line items and details. Refer to table ARRAY: MPI_LINE_ITEM for list of subfields.
MPI_RESPONSE_TYPE	A(10)	O	Response type return by server. Value: JSON – JSON format response, STRING – form data format response, Default value is HTML with callback URL.
MPI_ADDITIONAL_INFO_IND	A(1)	O	Indicate required additional info return by server or not, check Response payload for more details. Value: Y – Yes N – No Default - N
MPI_SERV_ORIGIN	A(2)	O	The merchant request origin. Value: PL – Paydee Link Default value is Merchant Direct Server

ARRAY: MPI_LINE_ITEM			
Field Id	Attribute	Mandatory	Remarks
MPI_ITEM_ID	AN(10)	M	Item ID.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_REMARK	AN(50)	O	Item Description.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_QUANTITY	N(10)	M	Total quantity of this line item. No decimal place is expected.
Detail Separator Field	N(1)	M	";"
MPI_ITEM_AMOUNT	N(12)	M	Item Amount. Maximum 12 digits without decimal point appears in this field. The minor unit is implied, based on the transaction currency. For example: USD 100.23 = 10023 JPY 12345 = 12345
Detail Separator Field	N(1)	M	";"
MPI_ITEM_CURRENCY	N(3)	M	Transaction Currency. Format: ISO 4217 3-digit currency code.

Response payload:

Field name	Attribute (Size)	M/ME/O/C	Description
MPI_MERC_ID	AN (15)	ME	Merchant Id. Echo value as per request. Cannot be blank.
MPI_TRXN_ID	AN (20)	ME	Transaction ID. Echo value as per request. Cannot be blank.
MPI_MAC	AN (344)	M	Merchant Transaction MAC. Refer to Encryption Method for details on encryption algorithm and verification. Cannot be blank.
MPI_ERROR_CODE	AN (10)	M	Response Code. For INQ transaction: 000 Inquiry transaction successful 001 Inquiry transaction failed 002 Inquiry transaction cancelled 003 Inquiry transaction timeout 004 Inquiry transaction in processing Other error code is inquiry message error. Unable to do inquiry. For REFUND transaction: 004 refund in progress Please do another INQ and check the MPI_STATUS code to verify if refund is success or failed.
MPI_ERROR_DESC	AN (100)	C	Response Error Description. Present if response code is not 000. Else blank.
MPI_APPR_CODE	AN (6)	C	Approval Code. Applicable only for payment method CC. Present if response code is 000. Else blank.

MPI_RRN	AN (12)	C	Retrieval Reference Number. Applicable only for payment method CC. Present if response code is 000. Else blank.
MPI_BIN	N (8)	O	First 8 digits of card number used in this transaction. Applicable only for payment method CC.
MPI_REFERRAL_CODE	ANS (100)	O	Only applicable if response code = 512-Invalid Transaction, 579- Acquirer Host Declined and PAG100-Invalid Transaction(Ewallets). Refer Response Codes section for details.
MPI_ECI_VALUE	N (2)	C	ECI value of the transaction. Applicable only for payment method CC and transaction type INQ. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_CHALLENGE_ MANDATED_IND	A (1)	C	Challenge mandated indicator of the transaction. Applicable only for payment method CC and transaction type INQ. Y = challenge is mandated N = challenge is not mandated *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_CHALLENGE_I ND	A (1)	C	Challenge flow indicator of the transaction to indicate this transaction challenged by ACS. Applicable only for payment method CC and transaction type INQ. Y = challenged N = not challenged *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_AUTH_STATU S	A (1)	C	Authentication status of the transaction. Applicable only for payment method CC and transaction type INQ. Refer to Gpayment Authentication Status Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS_REAS ON	N (2)	C	Reason of the status. Applicable only for payment method CC and transaction type INQ. Refer to Gpayment Transaction Status Reason & Desc Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS_REAS ON_DESC	AN (100)	C	Description of the reason. Applicable only for payment method CC and transaction type INQ. Refer to Gpayment Transaction Status Reason & Desc Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_STATUS	N(3)	C	Payment status. Applicable only for transaction type INQ. Refer to Payment Status Section for details. *Only return if MPI_ADDITIONAL_INFO_IND=Y
MPI_CUST_PAYME NT_METHOD	A(8)	C	Merchant / Customer selected payment method.

Sample request:

```
MPI_TRANS_TYPE=INQ&MPI_MERC_ID=600000000000001&MPI_PURCH_AMT=20000&MPI_PURC
H_CURR=458&MPI_TRXN_ID=2156290000&MPI_ORI_TRXN_ID=6487047256&MPI_PURCH_DATE
=20220405153030&
MPI_ADDR_MATCH=Y&MPI_BILL_ADDR_CITY=Seremban&MPI_BILL_ADDR_STATE=05&MPI_BIL
L_ADDR_CNTRY=458&MPI_BILL_ADDR_POSTCODE=72120&MPI_BILL_ADDR_LINE1=No 6 JLN
addr&MPI_BILL_ADDR_LINE2=&MPI_BILL_ADDR_LINE3=&MPI_SHIP_ADDR_CITY=Seremban&
MPI_SHIP_ADDR_STATE=05&MPI_SHIP_ADDR_CNTRY=458&MPI_SHIP_ADDR_POSTCODE=72120
&MPI_SHIP_ADDR_LINE1=No 6 JLN
addr&MPI_SHIP_ADDR_LINE2=&MPI_SHIP_ADDR_LINE3=&MPI_EMAIL=test@email.com&MPI
_HOME_PHONE_CC=06&MPI_HOME_PHONE=6411345&MPI_MOBILE_PHONE_CC=60&MPI_MOBILE_
PHONE=1156257725&MPI_WORK_PHONE_CC=&MPI_WORK_PHONE=&MPI_MAC=
qTJlUPdy5tgnEgnPFuo8m8K6ApLh-OxlxL3ZWMF3f-
z8UXPX336lE2X4ZNkjhaKPCKFd6mRa7EWSlzWEOc6wp_ZOsxuo96_ms1ekoAuzwt1b7Lo2J3HGe
spVR1wXNvew4YFK2nuhsmLnjZD4AM3erpz6MmYl_JZgbOAZJWcnFTyilO7T-
tWTUcP609_02N2pWGDeAaPYYyT8WipfmztiaS0BLyyvjJ-
1aS38atIceFayUTDtAOn3fIrbNIe3s68lNVMwH2BuxOkVSvfszxAP1VaFc6IIq9Tyv1AzjLMTAv
Glo0tHDPjqrUWiA_gFV-qq1UpnlkQy3Pp0dxTnk7TbNA==&MPI_TTL_QUANTITY=1&
MPI_LINE_ITEM= 1;store
A;1;20000;458&MPI_RESPONSE_TYPE=JSON&MPI_ADDITIONAL_INFO_IND=Y
```

Sample response:

JSON Response Type

```
{
"MPI_MERC_ID" : "600000000000001",
"MPI_TRXN_ID" : "2156290000",
"MPI_MAC":
"CEGyfrpOlMHHbIf11GFWbYEVKF_aNqsSfG8t5VtZYSPh6r8jioeTAXfRURDUeJbKLQXGJtOG5z
VMmi9FohCHTfMqHgGHDdMBMzmE-jRmW63sjGSvHDQRuJLgWE0MEiAl-
LOOh03aaIH_DHromZRo7LR7g-BztyQFRC3xZNVM_4fdQk68dpecUcx-
HF95pdsjicCpw_C1yErBIc7PWjgRxNQRzMyXBmx4LQeq-o7jcngTG-
oYwlVY389J3g3TVtOAyRgPg73jaEV_aVFhzNGz29h_Xu8IW1ykdwhKGmheD4srm4d7RDXeiBtBJ
as4UCB4Pu2JapT9hlBNIs1Mk8L-Lg",
"MPI_ERROR_CODE" : "000",
"MPI_ERROR_DESC" : "Success Transaction",
"MPI_APPR_CODE" : "194705",
"MPI_RRN" : "208900055026",
"MPI_BIN" : "12345678",
"MPI_ECI_VALUE" : "1",
"MPI_CHALLENGE_MANDATED_IND" : "Y",
"MPI_CHALLENGE_IND" : "Y",
"MPI_AUTH_STATUS" : "Y",
"MPI_STATUS" : "1",
"MPI_CUST_PAYMENT_METHOD" : "CC",
}
```

String Response Type

MPI_MERC_ID=600000000000001&MPI_TRXN_ID=2156290000&MPI_MAC=CEGyfrpOlMHHbIf1
1GFWbYEVKF_aNqsSfG8t5VtZYSPh6r8jioeTAXfRURDUeJbKLQXGJtOG5zVMmi9FohCHTfMqHgG
HDdMBMzmE-jRmW63sjGSvHDQRuJLgWE0MEiAl-LOOh03aaIH_DHromZRo7LR7g-
BztyQFRC3xZNVM_4fdQk68dpecUcx-HF95pdsjicCpw_C1yErBIc7PWjgRxNQRzMyXBmx4LQeq-
o7jcngTG-
oYwlVY389J3g3TVtOAyRgPg73jaEV_aVFhzNGz29h_Xu8IW1ykdwhKGmheD4srm4d7RDXeiBtBJ
as4UCB4Pu2JapT9hlBNIs1Mk8L-Lg&MPI_ERROR_CODE=000&MPI_ERROR_DESC= Success
Transaction &MPI_APPR_CODE=194705&MPI_RRN=208900055026&MPI_BIN=12345678&
MPI_ECI_VALUE=1&MPI_CHALLENGE_MANDATED_IND=Y&MPI_CHALLENGE_IND=Y&MPI_AUTH_S
TATUS=Y&MPI_STATUS=1&MPI_CUST_PAYMENT_METHOD=CC

Form Data Response Type (Default)

MPI_MERC_ID=600000000000001&MPI_TRXN_ID=2156290000&MPI_MAC=CEGyfrpOlMHHbIf1
1GFWbYEVKF_aNqsSfG8t5VtZYSPh6r8jioeTAXfRURDUeJbKLQXGJtOG5zVMmi9FohCHTfMqHgG
HDdMBMzmE-jRmW63sjGSvHDQRuJLgWE0MEiAl-LOOh03aaIH_DHromZRo7LR7g-
BztyQFRC3xZNVM_4fdQk68dpecUcx-HF95pdsjicCpw_C1yErBIc7PWjgRxNQRzMyXBmx4LQeq-
o7jcngTG-
oYwlVY389J3g3TVtOAyRgPg73jaEV_aVFhzNGz29h_Xu8IW1ykdwhKGmheD4srm4d7RDXeiBtBJ
as4UCB4Pu2JapT9hlBNIs1Mk8L-Lg&MPI_ERROR_CODE=000&MPI_ERROR_DESC= Success
Transaction &MPI_APPR_CODE=194705&MPI_RRN=208900055026&MPI_BIN=12345678&
MPI_ECI_VALUE=1&MPI_CHALLENGE_MANDATED_IND=Y&MPI_CHALLENGE_IND=Y&MPI_AUTH_S
TATUS=Y&MPI_STATUS=1&MPI_CUST_PAYMENT_METHOD=CC

2.3　Void/Refund Reference Table

Payment Channel	Void/Refund/Both	Cut-off time for void request	Credit to buyer within
Credit/Debit card	☒ Void ☒ Refund	11:30pm GMT+8	2 business day
Boost	☒ Void ☒ Refund	11:59pm GMT+8	1 business day
TnG e-Wallet	☒ Void ☒ Refund	11:59pm GMT+8	1 business day
Grab Pay	☒ Void ☒ Refund	11:59pm GMT+8	1 business day
Maybank QR Push	☐ Void ☒ Refund	-	7 business day
Alipay	☒ Void ☒ Refund	11:59pm GMT+8	1 business day
Shopee Pay	☒ Void ☒ Refund	11:59pm GMT+8	1 business day
UnionPay	☐ Void ☐ Refund	-	-
Online Banking	☐ Void ☒ Refund	-	7-14 business day

2.4　API Response Code

Sample response codes for all APIs are shown as follows:

Response Code	Description
000	Success Transaction
001	Transaction failed
002	Transaction have been void/reversal
003	Transaction timeout
004	Transaction in processing
101	Message not recognised./ Message is not AReq, ARes, CReq, CRes, PReq, PRes, RReq, or RRes.
102	Message Version Number received is not valid for the receiving component.
103	Exceeded maximum number of PReq messages sent to the DS.
201	A message element required as defined in Table A.1 is missing from the message. Element that required by not found will be populate in MPI_ERROR_DESC
202	Critical message extension not recognized.
203	Data element not in the required format or value is invalid as defined in Table A.1. Element that not in the request format / value is invalid will be populate in MPI_ERROR_DESC
204	Valid data element presents more than once in the message
301	Transaction ID received is not valid for the receiving component
302	Data could not be decrypted by the receiving system due to technical or other reason
303	Access denied, invalid endpoint
304	ISO code not valid per ISO tables (for either country or currency), or code is one of the excluded values listed in Table A.5
305	Cardholder Account Number is not in a range belonging to Issuer
306	Merchant Category Code (MCC) not valid for Payment System
307	Serial Number not valid
402	Transaction timed-out
403	Transient system failure
404	Permanent system failure
405	System connection failure
503	Invalid Merchant
512	Invalid Transaction
554	Expired Pan Expiry Entered

557	Trxn Not Permitted To Card
579	Acquirer Host Declined Response code (ISO8583 standard DE39) will be populate in MPI_REFERRAL_CODE
589	No Active Terminal
594	Duplicate Transaction
596	System malfunction
5A0	MAC verification failed
5A4	Acquirer Timeout
999	Challenge Failed
PAG01	Payment method is not available for merchant
PAG02	The chosen Ewallet channel is not supported
PAG03	Invalid security hash string from gateway
PAG04	The chosen FPX bank is not supported
PAG100	Invalid transaction (Ewallets)
PAG200	Invalid transaction (FPX)

2.5   List of Referral Code for Response Code 512

List of referral code for response code 512 are shown as follows:

Response Code	Description
01	Transaction not exist
02	Failed transaction
03	Transaction had been voided
04	Transaction had been reversed
05	Transaction had been settled
06	Transaction not allow to do void

2.6   List of Referral Code for Response Code 579

Response Code	Description
00	Transaction approved
01	Refer to card issuer
02	Refer to card issuer special condition
03	Invalid merchant
04	Pick-up card
05	Do not honour
06	Check value error
07	Pick-up card special condition
08	Honour with Identification
09	Request in progress
10	Approved partial amount
11	Approved VIP
12	Invalid transaction
13	Invalid amount
14	Invalid card number
15	No such issuer
16	Approved, update track 3
17	Customer cancellation
18	Customer dispute
19	Re-enter transaction
20	Invalid response

21	No action taken
25	Unable to locate record on file
30	Format error
31	Bank not supported by switch
32	Completed partially
33	Expired card
34	Fraud card
35	Card acceptor contact acquirer
36	Restricted card
37	Card acceptor call acquirer security
38	Allowable PIN tries exceeded
39	No credit account
40	Requested function not supported
41	Lost card
42	No universal account
43	Stolen card, pick-up
45	New inactivated card
46	Closed card account
51	Not sufficient funds
52	No cheque account
53	No savings account
54	Expired card
55	Incorrect personal identification number (PIN)
56	No card record
57	Transaction not permitted to cardholder
58	Transaction not permitted to terminal
59	Suspected fraud
61	Exceeds withdrawal amount limit
62	Restricted card
63	Security violation
64	Original amount incorrect
65	Exceeds withdrawal frequency limit
68	Response received too late
75	Allowable number of PIN tries exceeded
76	Invalid prod code
77	Reconcile error or host text if sent
78	Inactivate block car
79	Declined
80	Batch number not found
84	Validate ARQC error
86	Pin reuse
87	Pin required
89	Bad terminal Id
91	Issuer or switch is inoperative
92	Financial institution or intermediate network facility cannot be found for routing
94	Duplicate transaction
95	Reconcile error
96	System malfunction
97	Account currency error
99	Pin block error

2.7   List of Referral Code for Response Code PAG100

Ewallet	Response Code	Description
Generic	P14	Transaction amount must more than CUR XXX.XX
	P15	Transaction amount must less than CUR XXX.XX
Boost	E0005	Invalid input value mandatory parameter missing
	E0006	Message too long. Maximum length characters
	E0007	Message too short. Minimum length characters
	E0008	Invalid email format
	E0009	Invalid date format, expected format
	E0010	Invalid Double value format
	E0013	Invalid msisdn format
	E0016	Error occurred
	E0017	Invalid value format for path variable
	E0020	Merchant not found
	E0021	Merchant integration info not found
	E0022	Payment transaction token expired
	E0023	Merchant transaction not found
	E0024	Already payment done for given payment transaction token
	E0027	Customer wallet balance not sufficient
	E0032	Validation failure invalid merchant category
	E0038	Minimum bio data[image count] not found
	BOOST_11	Buyer cancel payment.
Grab Pay	99/ Invalid transaction_id	Customer did not make payment
	99/Record not found	Record not found
	currency_mismatch	Currency used in this request mismatches with merchant configuration
	init_record_not_exist	The initiate payment action is not completed.
	payment_not_found	Original payment is not found or not completed for the refund request.
	partial_refund_not_allowed	Partial refund is not allowed for this transaction.
	merchant_insufficient_balance	Merchant balance is insufficient.
	exceed_payment_amount	Refund amount exceeds payment amount
	no_record_found	No record found for this transaction
	charging	System is processing a charge request

	Refunding	System is processing a refund request
	invalid_request	The request is missing a required parameter, includes an invalid value, includes a parameter more than once, or is otherwise malformed
	unauthorized_client	The client is not authorized to request an authorization code using this method
	Access_denied	The resource owner or authorization server denied the request
	unsupported_response_type	The authorization server does not support obtaining an authorization code using this method
	invalid_scope	The requested scope is invalid, unknown, or malformed
	server_error	The authorization server encountered an unexpected condition that prevented it from fulfilling the request
	temporarily_unavailable	The authorization server is currently unable to handle the request due to a temporary overloading or maintenance of the server.
	interaction_required	The Authorization Server requires some form for end-user interaction to proceed. This error may be returned when the prompt parameter value in the Authentication Request is 'none' but cannot be completed without displaying a user interface for end-user interaction.
	login_required	The Authorization Server requires end-user authentication. This error may be returned when the prompt parameter value in Authentication Request is none but cannot be completed without displaying a user interface for end-user authentication
	account_selection_required	The end-user is required to select a session at the Authorization server. The end-user may be authenticated at the Authorization server with different associated accounts, but he did not select a session. This error may be returned when the 'prompt' parameter value in Authentication Request is 'none' but cannot be completed without displaying a user

		interface to prompt for a session to use
	consent_required	The Authorization Server requires end-user consent. This error may be returned when the prompt parameter value in the Authentication Request is 'none' but cannot be completed without displaying user interface for end user consent.
	invalid_request_uri	The request_uri in the Authorization Request returns an error or contains invalid data
	invalid_request_object	The Request parameter contains an invalid Request Object
	request_not_supported	The OP does not support the use of the Request parameter
	request_uri_not_supported	The OP does not support the use of the request_uri parameter
	registration_not_supported	The OP does not support the use of the registration parameter
Maybank QR Push	QR098	Sorry, we could not complete your request at this time. Please try again later
	QR090	Mandatory fields missing
	QR091	Invalid QR ID
	QR092	Invalid Terminal ID
	QR122	Your account has been locked or Inactive. Please call our Customer Care Hotline at 1300 888 6688 for Assistance
	QR155	Invalid Transaction
	401	Failed to verify OAuth information
	MB2U_11	Failed
	MB2U_01	Failed
Touch `n Go	00000000/INIT	Order is not paid/Paid but unfinished
	00000000/CLOSED	Order is closed
	PAYING	Order is paid but not finish(Order is paid successfully for PAY-CONFIRM)
	MERCHANT_ACCEPT	Order is accepted by merchant after order is paid for PAY-CONFIRM
	CANCELLED	Order is cancelled
Alipay	ILLEGAL_SIGN	Illegal signature
	ILLEGAL_ARGUMENT	Illegal parameters
	HASH_NO_PRIVILEGE	No sufficient rights to complete the query
	ILLEGAL_SERVICE	Service Parameter is incorrect
	ILLEGAL_PARTNER	Incorrect Partner ID
	ILLEGAL_SIGN_TYPE	sign_type parameter is incorrect
	FOREX_MERCHANT_NOT_SUPPORT_THIS_CURRENCY	Cannot support this kind of currency
	ILLEGAL_SECURITY_PROFILE	Cannot support this kind of

		encryption
	REPEAT_OUT_TRADE_NO	out_trade_no parameter is repeated
	ILLEGAL_CURRENCY	Currency parameter is incorrect
	ILLEGAL_PARTNER_EXTERFACE	Service is not activated for this account
	SYSTEM_EXCEPTION	Contact Alipay technical support for help
	ILLEGAL_TIMEOUT_RULE	Timeout_rule parameter is incorrect
	ILLEGAL_CHARSET	Illegal charset
	99/TRADE_NOT_EXIST	Customer did not make payment/Fail onboarding
UnionPay	01	Refer to card issuer.
	03	Invalid merchant.
	05	Merchant or seller account closed.
	06	Issuer card is expired.
	09	Request in progress.
	12	Invalid transaction.
	13	Invalid amount.
	14	Invalid buyer account or card information.
	17	Buyer cancel transaction.
	22	Suspected malfunction.
	25	Failure to search an original transaction.
	30	Format error or MAC error.
	31	Invalid bank.
	39	No credit account.
	51	Insufficient fund.
	53	No saving account.
	57	Transaction not permitted.
	61	Withdrawal limit exceeded.
	65	Withdrawal frequency exceeded.
	76	Transaction not found.
	77	Invalid buyer name or buyer Id.
	79	Host decline when down.
	85	Internal error at bank's system.
	87	Debit failed (exception handling).
	88	Credit failed (exception handling).
	89	Transaction not received (exception handling).
	92	Financial institution or intermediate network facility cannot be found for routing.
	93	Transaction cannot be completed.
	FE	Internal error.
	OE	Transaction rejected as not in operating hours.
	OF	Transaction timeout.
	OA	Session timeout.
	1A	Buyer session timeout at bank

		login page.
	1B	Buyer failed to provide the necessary info to login to bank login page.
	1C	Buyer choose cancel at login page.
	1D	Buyer session timeout at account selection page.
	1E	Buyer failed to provide the necessary info at account selection page.
	1F	Buyer choose cancel at account selection page.
	1G	Buyer session timeout at TAC request page.
	1H	Buyer failed to provide the necessary info at TAC request page.
	1I	Buyer choose cancel at TAC request page.
	1J	Buyer session timeout at confirmation page.
	1K	Buyer failed to provide the necessary info at confirmation page.
	1L	Buyer choose cancel at confirmation page.
	2A	Transaction amount is lower than minimum limit.
ShopeePay	SHOPEEPAY__7	Payment invalidated

2.8   List of Referral Code for Response Code PAG200

Response Code	Description
05	Invalid Seller Or Acquiring Bank Code
39	No Credit Account
48	Maximum Transaction Limit Exceeded
49	Merchant Specific Limit Exceeded
51	Insufficient Funds
53	No Buyer Account Number
57	Transaction Not Permitted
58	Transaction to Merchant Not Permitted
76	Transaction Not Found
77	Invalid Buyer Name
79	Host Decline When Down
80	Buyer Cancel Transaction
85	Internal Error At Bank System
87	Debit Failed Exception Handling
88	Credit Failed Exception Handling
89	Transaction Not Received Exception Handling
90	Bank Internet Banking Unavailable
92	Invalid Buyer Bank
99	Pending Authorization (Applicable for B2B model)
BB	Blocked Bank
BC	Transaction Cancelled by Customer

DB	Invalid Email Format
OE	Transaction Rejected As Not in FPX Operating Hours
SB	Invalid Acquiring Bank Code
XA	Invalid Source IP Address (Applicable for B2B2 model)
XE	Invalid Message
XF	Invalid Number of Orders
XW	Seller Exchange Date Difference Exceeded
1A	Buyer Session Timeout At Internet Banking Login Page
1B	Buyer Failed To Provide The Necessary Info To Login To Internet Banking Login Page
1C	Buyer Choose To Cancel At Login Page
1D	Buyer Session Timeout At Account Selection Page
1E	Buyer Failed To Provide The Necessary Info At Account Selection Page
1F	Buyer Choose Cancel At Account Selection Page
1G	Buyer Session Timeout At TAC Request Page
1H	Buyer Failed To Provide The Necessary Info At TAC Request Page
1I	Buyer Choose Cancel At TAC Request Page
1J	Buyer Session Timeout At Confirmation Page
1K	Buyer Failed To Provide The Necessary Info At Confirmation Page
1L	Buyer Choose Cancel At Confirmation Page
2A	Transaction Amount Is Lower Than Minimum Limit
2X	Transaction is Cancelled By Merchant
BO	Order list format error
B1	Invalid seller ID
B2	Seller is not allow to refund
B3	Seller is not allow to do multiple refund
B4	Requested refund amount exceed maximum allowable
B5	Original transcation ID is not found
B6	Original transcation ID status is still pending debit/credit
B7	Original transcation ID status was not successful
B8	Previous refund request still pending debit/credit
B9	Requested refund amount below minimun allowable
C1	Invalid refund transcation model
C2	Invalid refund buyer bank
C3	Invalid refund seller bank
C4	Refund request fail due to no valid order list
C5	Order list contain duplicate seller order number

2.9   Gpayment Authentication Status

Sample Gpayment authentication status is shown as follows:

Response Code	Description
Y	Authentication/ Account Verification Successful. Fully authenticated and liability shift granted, proceed with authorization
N	Not Authenticated /Account Not Verified; Transaction denied. Authentication not completed, no liability shift granted, should not proceed with authorization (or accept liability if you do proceed)
U	Authentication/ Account Verification Could Not Be Performed; Technical or other problem, as indicated in ARes or RReq. Can proceed with authorization, however liability shift not granted
A	Attempts Processing Performed; Not Authenticated/Verified, but a proof of attempted authentication/verification is provided. Liability shift granted, can proceed with authorization

C	Challenge Required; Additional authentication is required using the CReq/CRes. (For 3RI transaction, C will not be returned because cardholder is not present. If there is a need for a challenge, the only option is to request a Decoupled Authentication (Transaction Status = D) if supported by the ACS.)
R	Authentication/ Account Verification Rejected. Liability shift not granted, issuer is rejecting authentication/verification and request that authorisation not be attempted.
D	Challenge Required; Decoupled Authentication confirmed [From V2.2.0]
I	Informational Only; 3DS Requestor challenge preference acknowledged [From V2.2.0]

2.10 Gpayment Transaction Status Reason & Desc

Sample Gpayment transaction status reason and description is shown as follows:

Status Reason	Description
01	Card authentication failed
02	Unknown Device
03	Unsupported Device
04	Exceeds authentication frequency limit
05	Expired card
06	Invalid card number
07	Invalid transaction
08	No Card record
09	Security failure
10	Stolen card
11	Suspected fraud
12	Transaction not permitted to cardholder
13	Cardholder not enrolled in service
14	Transaction timed out at the ACS
15	Low confidence
16	Medium confidence
17	High confidence
18	Very High confidence
19	Exceeds ACS maximum challenges
20	Non-Payment transaction not supported
21	3RI transaction not supported
22	ACS technical issue [From V2.2.0]
23	Decoupled Authentication required by ACS but not requested by 3DS Requestor [From V2.2.0]
24	3DS Requestor Decoupled Max Expiry Time exceeded [From V2.2.0]
25	Decoupled Authentication was provided insufficient time to authenticate cardholder. ACS will not make attempt [From V2.2.0]
26	Authentication attempted but not performed by the cardholder [From V2.2.0]
80 ~ 99	Reserved for DS

2.11 Payment Status

Sample Payment status is shown as follows:

Status	Description
0	Sales Requested

1	Payment Success
2	Payment Cancelled
3	Reverse Requested
4	Reverse Success
5	Refund Requested
6	Refund Success
7	Payment Settled
-1	Payment Failed
-2	Reverse Failed
-3	Refund Failed
-4	Sales Request Failed

2.12 Encryption Method

2.12.1 Key Exchange

This field is for Acceptance Gateway server and E-commerce merchant to verify the request is from the genuine sender during key exchange message.

This field was sign using SHA256withRSA algorithm, and encoded in Base64Url. Sign using own RSA private key, verify using sender RSA public key during merchant file based public key enrollment.

For mac generated by E-commerce merchant in key exchange request, the encrypted values are expected in the order of:

1. merchantId
2. purchaseId
3. pubKey
4. paymentMethod

Below shows a sample of how a MAC looks like before the encryption takes place:

6000000000000016487047256MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAp1mHlp7EPnBY_Iy
O2d6O dwg98GxZozSIpMxg8r5SxmkRrzl_6ZH0WZlai3IyXA6BIgmH6QoFK6nNHz6kVtzhT
_aPRzSo2eSstQFfYxcP2eFswOouTDu41xlnCy77JI4GUv9j0E37dA6wtru1QMiDmk
GIyp62Piszx9ertMDb2JxcD1ieRngHp5v3GKiG5W7nWooge3xgJGcu6JjVxjRXN4bb
xUqNbMBkxM993Yjy_wL11lBOM4xLWqMszuWMDrQiUkJwbjKeR1ssCo2lhazGyEdrPr2C94QNmhV
fYhK3lSe2c7gXXaEBzElyN59viAmoWCYNuMo38uha8MIqLxsQIDAQABCC

Index	Description
0	merchantId
1	purchaseId
2	pubKey
3	paymentMethod

2.12.2 Hosted and Non-Hosted Request

This field is for Acceptance Gateway server and E-commerce merchant to verify the request is from the genuine sender.

This field was sign using SHA256withRSA algorithm, and encoded in Base64Url. Sign using own RSA private key, verify using sender RSA public key, these keys have been exchanged when transaction initial.

For MPI_MAC generated by E-commerce merchant in transaction request, the encrypted values are expected in the order of:

1. MPI_TRANS_TYPE
2. MPI_MERC_ID
3. MPI_TRXN_ID
4. MPI_ORI_TRXN_ID
5. MPI_PURCH_DATE
6. MPI_PURCH_CURR
7. MPI_PURCH_AMT
8. MPI_ADDR_MATCH
9. MPI_BILL_ADDR_CITY
10. MPI_BILL_ADDR_STATE
11. MPI_BILL_ADDR_CNTRY
12. MPI_BILL_ADDR_POSTCODE
13. MPI_BILL_ADDR_LINE1
14. MPI_BILL_ADDR_LINE2
15. MPI_BILL_ADDR_LINE3
16. MPI_SHIP_ADDR_CITY
17. MPI_SHIP_ADDR_STATE
18. MPI_SHIP_ADDR_CNTRY
19. MPI_SHIP_ADDR_POSTCODE
20. MPI_SHIP_ADDR_LINE1
21. MPI_SHIP_ADDR_LINE2
22. MPI_SHIP_ADDR_LINE3
23. MPI_EMAIL
24. MPI_HOME_PHONE
25. MPI_HOME_PHONE_CC
26. MPI_WORK_PHONE
27. MPI_WORK_PHONE_CC
28. MPI_MOBILE_PHONE
29. MPI_MOBILE_PHONE_CC
30. MPI_TTL_QUANTITY
31. MPI_LINE_ITEM (repeat subfields as necessary)
    a. MPI_ITEM_ID;
    b. MPI_ITEM_REMARK;
    c. MPI_ITEM_QUANTITY;
    d. MPI_ITEM_AMOUNT;
    e. MPI_ITEM_CURRENCY
32. MPI_RESPONSE_TYPE
33. MPI_ADDITIONAL_INFO_IND
34. MPI_SERV_ORIGIN

Below shows a sample of how a MPI_MAC looks like before the encryption took place in transaction request:

SALES6000000000000001648704725620220405153030458200 0YSeremban054587212 0No6JlnKwongTungTa manBaiduriSeremban054587212 0No6JlnKwongTungTamanBaiduritest@email.com6411345061234545063 21 565601911;storeA;1;2000;458JSONYPL

Index	Description
0	MPI_TRANS_TYPE
1	MPI_MERC_ID
2	MPI_TRXN_ID

3	MPI_TRXN_DATE
4	MPI_PURCH_DATE
5	MPI_PURCH_CURR
6	MPI_PURCH_AMT
7	MPI_ADDR_MATCH
8	MPI_BILL_ADDR_CITY
9	MPI_BILL_ADDR_STATE
10	MPI_BILL_ADDR_CNTRY
11	MPI_BILL_ADDR_POSTCODE
12	MPI_BILL_ADDR_LINE1
13	MPI_BILL_ADDR_LINE2
14	MPI_BILL_ADDR_LINE3
15	MPI_SHIP_ADDR_CITY
16	MPI_SHIP_ADDR_STATE
17	MPI_SHIP_ADDR_CNTRY
18	MPI_SHIP_ADDR_POSTCODE
19	MPI_SHIP_ADDR_LINE1
20	MPI_SHIP_ADDR_LINE2
21	MPI_SHIP_ADDR_LINE3
22	MPI_EMAIL
23	MPI_HOME_PHONE
24	MPI_HOME_PHONE_CC
25	MPI_WORK_PHONE
26	MPI_WORK_PHONE_CC
27	MPI_MOBILE_PHONE
28	MPI_MOBILE_PHONE_CC
29	MPI_TTL_QUANTITY
30	MPI_LINE_ITEM
31	MPI_ITEM_ID
32	MPI_ITEM_REMARK
33	MPI_ITEM_QUANTITY
34	MPI_ITEM_AMOUNT
35	MPI_ITEM_CURRENCY
36	MPI_RESPONSE_TYPE
37	MPI_ADDITIONAL_INFO_IND
38	MPI_SERV_ORIGIN

2.12.3 Hosted and Non-Hosted Response

For MPI_MAC generated by Acceptance Gateway Server in transaction response, the encrypted values are generated in the order of:

1. MPI_MERC_ID
2. MPI_TRXN_ID
3. MPI_ERROR_CODE
4. MPI_APPR_CODE
5. MPI_RRN
6. MPI_BIN
7. MPI_REFERRAL_CODE
8. MPI_ECI_VALUE
9. MPI_CHALLENGE_IND
10. MPI_CHALLENGE_MANDATED_IND
11. MPI_AUTH_STATUS
12. MPI_STATUS_REASON

13. MPI_STATUS_REASON_DESC
14. MPI_STATUS
15. MPI_CUST_PAYMENT_METHOD

Below shows a sample of how a MPI_MAC looks like before the encryption took place in transaction response:

600000000000001648704725600119470520890005502641000000IYYY01CardAuthenticationfailed-1CC

Index	Description
0	MPI_MERC_ID
1	MPI_TRXN_ID
2	MPI_ERROR_CODE
3	MPI_MPI_APPR_CODE
4	MPI_RRN
5	MPI_BIN
6	MPI_ECI_VALUE
7	MPI_CHALLENGE_ID
8	MPI_CHALLENGE_ MANDATED_ID
9	MPI_AUTH_STATUS
10	MPI_STATUS_REASON
11	MPI_STATUS_REASON_DESC
12	MPI_STATUS
13	MPI_CUST_PAYMENT_METHOD

2.13 Enrollment file format

In order to enroll genuine public key to server for key exchange verification, merchant required to submit enrollment file with following format:

Unique merchant ID (max length 15)	Fixed separator '|' (max length 1)	Base64 URL safe encoded public key string (max length 392) For URL safe: - Replace + to – - Replace / to _ - Omit =

Sample:
000000000000001|MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAw509nSN2BDeraeeXxpTx4c5k
Mj2kGgQsaGiBVNsZsPR5qYZywX34nOWVLnMLT_rlCDdcdNlq7ubvNyJTfFw2IhMja3pI6loBOQgcDH-
ic3J7SEEJUh4rRxBwk3UVXVQQo-N77k_Fm8NeqrSE-krCybZ7rzWm87kBwjbOK-
8BK6TmcDkk8gOvZRWapqIoo2YC6tXljkvvbjFecoiIXYeNTbaRISRVuBMBBuYvfQEP7LToAQsll1Oar9rCcWsuZ
k7yXCeGRwrQ8R5Y-
gOIiw1TlSf4Pd_ulWk7LN5sZxHosv5gbSDRYJPgGGwfzK7iuXOE54yy_xJLPiBRtilNwrwhBwIDAQAB