Ecommerce API Guide v2.6

Simplified 3DS Integration

September 15, 2022

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Change Log

Document Version	Description	Release Date
1.0	Initial Version	September 25, 2021
2.0	Final Draft	December 10, 2021
2.1	Added PowerTranz-GatewayKey to section 4 Added numbering throughout document Removed PowerTranzId and PowerTranzPassword from section 7.3	December 24, 2021
2.2	- Added clarification to allowed values for CardholderName , FirstName ,LastName, Line1, Line2 ,City, State, PhoneNumber, PostalCode in section 5 - Removed address reference in section 9.4 - Removed Token from section 6 and added to section 5 - Replaced token with SpiToken in section 2.2 and 2.3 - Added format to PanToken in section 6 - Added Tokenize to section 5	January 20, 2022
2.3	Minor corrections, grammar and contents	January 28,2022
2.4	-Added clarification on Tokenize flag in section 5 -Added TokenType flag in section 5 -Added 5 minutes timeout to SPiToken in section 2.2 , point 1.7 -added clarification to Payment Completion Header in section 7.3 -added clarification to Approved flag in section 6 -added clarification to IsoResponseCode of SP4 in section 2.2 -Added TBD clarification to section 2.3 -Added clarification to partial captures in section 7.4 -Added Amex testcases in section 10	March 14, 2022
2.5	-Updated Powertranz Response Code and Error information including note on allowed format. -Enhanced section 9.1 in preparation for 3DS1 decommissioning by Visa, MC and Amex -Added AuthenticationIndicator and MessageCategory fields to section 5 -Added section 9.5 Tokenization -Added tokenization samples 7.7, 7.8 and 7.9 -Added TaxAmount to section 5	August 30,2022

	-Added note to section 8.3 regarding AutheticationStatus -Added section 5.2 -removed externalIdentifier from samples - M1-01-YA authentication result updated -Updated section 8.4 -Updated section 8.5	
2.6	-added ThreeDSecure.ResponseCode to section 6 -added FraudCheck to section 6 -added Appendix 3 for FraudCheck -added section 7.10, 7.11 (Fraud check samples) -added Fraud Check section 9.6 -Updated Appendix 1 -Response Codes with Fraud Check Response Codes	September 15

1. Introduction

This document is a developer's guide for integrating PowerTranz payment processing within a merchant's website. This integration guide covers the simplified 3DS integration method for 3DS e-commerce transactions with or without utilizing a hosted payment page.

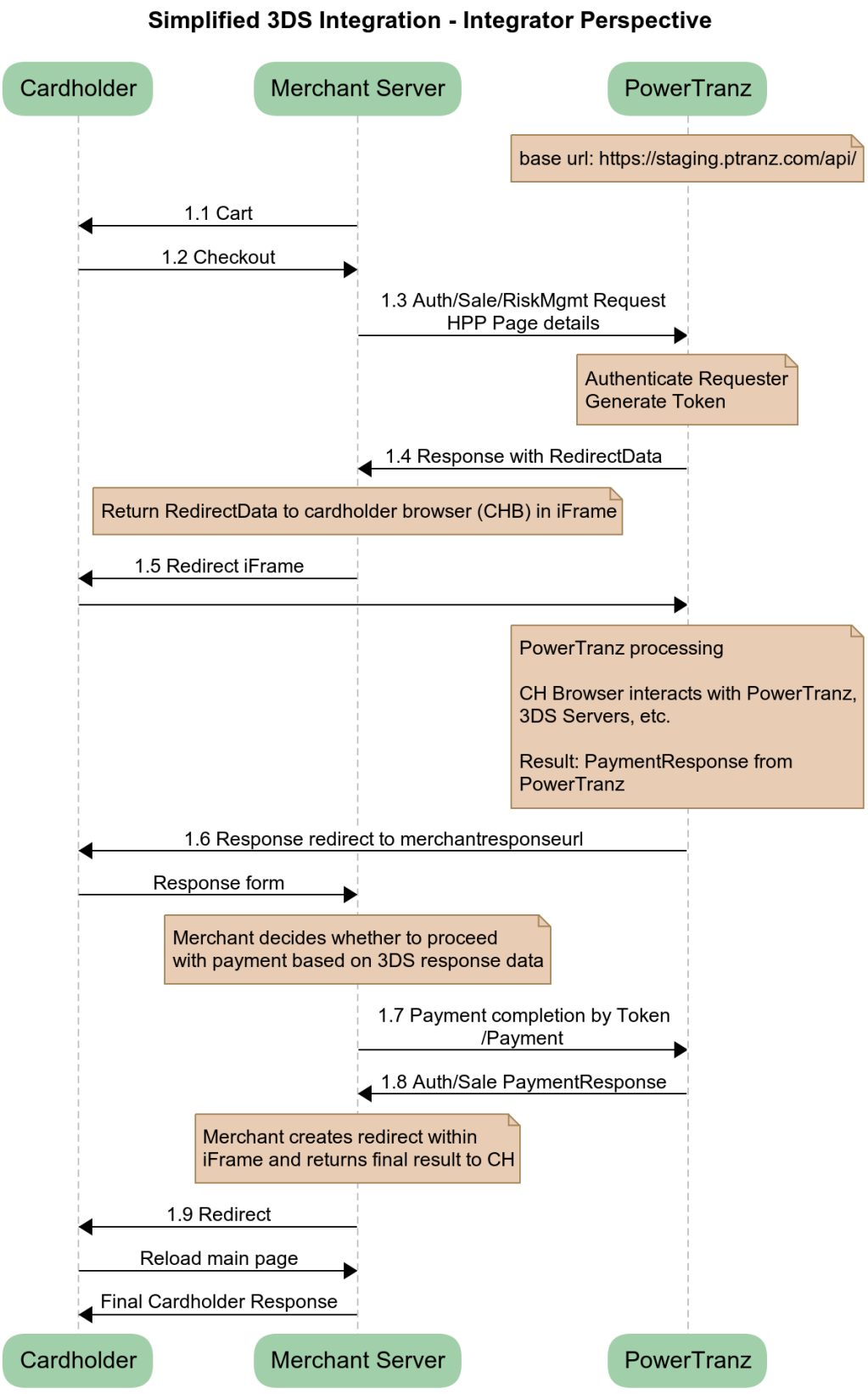
2. E-Commerce with 3D-Secure Overview

The PowerTranz gateway supports EMV 3D-Secure versions 2.x with fallback to 3DS version 1.0 for cardholder authentication and sends financial requests (authorization, sale, refund or void) to the payment networks for cardholder authorization.

A 3D-Secure Request is initiated by using the Auth, Sale or RiskMgmt API methods with the 3D-Secure flag enabled. PowerTranz will query the supported version of 3D-Secure based on the provided card number and the issuing bank's capabilities. The simplified 3DS integration method will handle the required interactions for a 3DS 2.0 authentication which may be frictionless, include device fingerprinting, a challenge flow or if 3DS 2.0 is not supported then a fallback attempt to 3DS version 1.0

Using this integration method, there will be a pre-authentication followed by a payment completion depending on the pre-authentication result. Payment information is submitted directly from the merchant's payment page or the PowerTranz hosted payment page (HPP). The transaction is processed transparently by the PowerTranz server which will notify the merchant with the 3D-Secure authentication result and the merchant will then decide whether or not to proceed with the financial request.

2.1 Simplified 3DS Integration Diagram



2.2 Simplified 3DS Integration High Level Process Flow

1.1 The merchant webserver displays the finalized shopping cart to the cardholder.
1.2 The cardholder checks out.
1.3 Depending on the integration method used:
    a. The merchant collects the cardholder payment information and sends an Auth, Sale or RiskMgmt request (that includes the relevant cardholder and payment details) with the 3DS flag enabled to the PowerTranz server; or
    b. The merchant sends an Auth, Sale or RiskMgmt request to the PowerTranz server which includes a hosted page set and name where the relevant cardholder and payment details will be collected on the hosted page.
1.4 PowerTranz authenticates the request coming from the merchant, generates a SpiToken and replies to the merchant server with Redirect Data. An IsoResponseCode of SP4 is returned if the request passes basic validation.
1.5 The Redirect Data is contained in the response from the Auth/Sale/RiskMgmt endpoint. It contains an HTML form with JavaScript that, when injected into an iFrame, will display the hosted page (HPP) if being used or a challenge flow if required by the issuing bank. During this stage the iFrame in the cardholder browser interacts with PowerTranz and the required 3DS servers depending on the type of 3DS authentication required. This could be a fully frictionless flow or the cardholder could be presented with a challenge during this time. When complete, the iFrame is redirected to the MerchantResponseUrl and the Merchant application resumes control of the flow. See code sample in Appendix.
1.6 PowerTranz responds with the 3DS authentication result to the merchant server via the cardholder browser. Note that this is not a financial transaction and is the result of the 3DS authentication only.
1.7 Based on the 3DS authentication result, the merchant determines if they want to proceed with payment Completion. If the merchant chooses to proceed with the transaction, a payment completion is sent using the SpiToken and sending a Payment request. The payment completion needs to be sent within 5 minutes. After 5 minutes the SpiToken will be unavailable. The authorization request is then sent from the PowerTranz server to the processor and on the issuing bank.
1.8 PowerTranz returns the Auth/Sale payment response to the merchant server.
1.9 The merchant server then displays the final results to the cardholder browser. If the merchant originally called a Sale, the financial transaction is now complete and then, following settlement (controlled by PowerTranz), the cardholder will be billed and the merchant account will be credited. If the merchant called an Auth, there will be a hold on funds but a Capture must be sent when the merchant is ready to finalize the transaction and bill the cardholder.

2.3 Merchant API Calls – Additional Details

Within the simplified 3DS implementation, the merchant will make multiple calls to endpoints in the PowerTranz API. The first request (Auth, Sale or RiskMgmt) will initiate the authentication process and return an authorization SpiToken to be used in subsequent requests. Subsequent, optional, requests can then be made to the "Payment", "Capture", "Void" and "Refund" endpoints to either cancel or complete the transaction as required.

A 3D-Secure **authentication** request is initiated by merchant using "Auth/Sale/RiskMgmt" REST endpoints with the 3DS flag enabled

- "/Auth" or "/Sale" financial request endpoint is called when merchant is intending to perform an online financial request after 3DS authentication. If the Payment completion is successful, an Auth requires a follow up capture to be sent to complete the transactions. A Sale will both Authorize and flag the transaction to be captured without an additional call.

- "/RiskMgmt" non-financial request endpoint is called only when merchant intends to authenticate card holder (3DS2 Authentication only).

If merchant decides to proceed with an online **authorization** (for financial requests) payment transaction is initiated by calling "/Payment".

Notes:

- During Auth/Sale/RiskMgmt call, merchant should pass "MerchantResponseURL" which is the merchant server endpoint that PowerTranz will send final transaction result.
- Calls to the PowerTranz API are performed by using REST with JSON over HTTPS as the transport protocol.
- Externally accessible BASE URLs for the PowerTranz SPI/HPP endpoints are:

  Staging: https://staging.ptranz.com/api/spi/<endpoint>

  Prod: https://*TBD*.ptranz.com/api/spi/<endpoint>

- Merchants can call "/Capture", "/Void" or "/Refund" for a successfully authorized transaction. External base URLs for these endpoints are:

  Staging: https://staging.ptranz.com/api/<endpoint>

  Prod: https://*TBD*.ptranz.com/api/<endpoint>

  TBD - production URL will be provided to merchant once staging tests are validated

3. PowerTranz Gateway Endpoints and Operations

PowerTranz exposes a set of financial and nonfinancial endpoints for merchant transaction processing. The table below shows endpoints with a brief description of their usage and their URL.

Endpoint	Description	Type	Method	URL
Alive	Gateway status	Non-financial	GET	<API Root>/api/alive
Auth	Performs an SPI authorization securing funds for later capture.	Financial	POST	<API Root>/api/spi/auth
Sale	Performs an SPI authorization with capture.	Financial		<API Root>/api/spi/sale
RiskMgmt	Non-financial transaction. Use this to pre-authenticate a 3DS only transaction.	Non-financial	POST	<API Root>/api/spi/riskmgmt
Payment	Payment Completion for 3DS pre-authenticated sale or authorization transactions.	Financial	POST	<API Root>/api/spi/payment
Capture	Capture a previously authorized transaction.	Financial	POST	<API Root>/api/capture
Refund	Refund a previously authorized transaction.	Financial	POST	<API Root>/api/refund
Void	Void an authorization.	Financial	POST	<API Root>/api/void

The Swagger page for PowerTranz API provides parameter information in JSON format.

https://staging.ptranz.com/api/swagger/index.html

4. PowerTranz Request Header Requirements

All requests to endpoints are HTTP POST requests over TLS with JSON payloads in the body. It is mandatory that the http header includes merchant authentication parameters (e.g. PowerTranzId and Password). Merchants should call PowerTranz API endpoints using a HTTP POST and send request parameters in JSON format.

Field Name	Req	Format	Length Max/Value	Notes
PowerTranz-PowerTranzId	M	AN	25	Merchant identifier for the merchant's account with PowerTranz. Example : 99901066
PowerTranz-PowerTranzPassword	M	AN	100	This is the merchant's unique processing password. Example : m9mOPK@vpUM
PowerTranz-GatewayKey	C	GUID (string)	36	Additional token assigned by Powertranz Do not send until value is provided by PowerTranz

5. Request parameters

5.1Request Parameters details– Auth, Sale, RiskMgmt

(M)andatory, (O)ptional, (C)onditional

Parameter Name	Req	Format	Length Max/Value	Description
TransactionIdentifier	M	GUID (string)	36	Unique identifier assigned by merchant application . If a unique identifier is not received by Powertranz , Powertranz wil create one and return it in the response. It is recommended that the request contains a unique identifier since this identifier is required to be sent in voids/refunds/captures if response is not received from Powertranz Example : f62c3e58-1983-4165-8535-fe5bb6ba6127
TotalAmount	M	DEC	18,3	Total authentication amount
TaxAmount	O	DEC	18,3	Tax Amount (if sent in auth request , this amount must be sent in capture request as well)
CurrencyCode	M	N	4	Must use numeric currency code (ISO 4217)
ThreeDSecure	M	BOOL		
Tokenize	C	BOOL		This flag is required for RiskMgmt only. PanToken will be returned if Tokenize is set to true .
FraudCheck	C	BOOL		This flag is only required if your Powertranz account is configured for Kount. If flag is set to true FraudCheck will be returned in response
Source				Mandatory nested object within message body (see Data Subset below)
CardPan	M	N	19	Card number
CardCvv	O	N	4	Card verification value
CardExpiration	M	N	4	Expiry date in YYMM format
CardholderName	M	AN	2-45	Cardholder name – required for 3DS transactions -see section 9.4 for allowed characters
Token	O	AN	100	PanToken returned in previous response
TokenType	O	AN		Type of token to be used. “PG2” to be sent for FAC tokens only.
OrderIdentifier	M	AN	2**55**	Order ID assigned by the merchant
BillingAddress				Mandatory nested object within message body (see Data Subset below)
FirstName	O	AN	30	First Name (note for 3DS authentication, CardholderName in Source object must be populated) -see section 9.4 for allowed characters
LastName	O	AN	30	Last Name (note for 3DS authentication, CardholderName in Source object must be populated) -see section 9.4 for allowed characters
Line1	O	AN	30	Address line 1 (required for AVS) No special characters, no accents, no special symbols (Example: æ é à ñ * + & : ;) and best to

				avoid all symbols but basic punctuation is acceptable such as periods and dashes (. and -)
Line2	O	AN	50	Address line 2 No special characters, no accents, no special symbols (Example: æ é à ñ * + & : ;) and best to avoid all symbols but basic punctuation is acceptable such as periods and dashes (. and -)
City	O	AN	25	City No special characters, no accents, no special symbols (Example: æ é à ñ * + & : ;) and best to avoid all symbols but basic punctuation is acceptable such as periods and dashes (. and -)
County	O	AN	25	County
State	O	AN	25	State – if supplied must be the country subdivision code defined in ISO 3166-2. For US addresses only correct abbreviations are allowed valid samples :FL ,CA
PostalCode	O	AN	10	Postal or Zip code (required for AVS) Strictly Alphanumeric only - No special characters, no accents, no spaces, no dashes…etc.
CountryCode	C	AN	3	Must contain valid numeric country code (ISO 3166) Must be supplied if State is populated.
EmailAddress	O	AN	50	Email address
PhoneNumber	O	AN	20	Valid phone number including country code Valid examples: 35301176543210 35301176543210 01176543210 (must include CountryCode)
PhoneNumber2	O	AN	20	Mobile phone (see above validations)
PhoneNumber3	O	AN	20	Work phone (see above validation)
ShippingAddress				Optional nested object within message body (see Data Subset below) Note the same validations for BillingAddress apply)
FirstName	O	AN	30	First Name (note for 3DS authentication, CardholderName in Source object must be populated) -see section 9.4 for allowed characters
LastName	O	AN	30	Last Name (note for 3DS authentication, CardholderName in Source object must be populated) -see section 9.4 for allowed characters
Line1	O	AN	30	Address line 1 (required for AVS) No special characters, no accents, no special symbols (Example: æ é à ñ * + & : ;) and best to avoid all symbols but basic punctuation is acceptable such as periods and dashes (. and -)
Line2	O	AN	50	Address line 2 No special characters, no accents, no special symbols (Example: æ é à ñ * + & : ;) and best to avoid all symbols but basic punctuation is acceptable such as periods and dashes (. and -)
City	O	AN	25	City
County	O	AN	25	County
State	O	AN	25	State
PostalCode	O	AN	10	Postal or Zip code (required for AVS)

				Strictly Alphanumeric only - No special characters, no accents, no spaces, no dashes…etc.
CountryCode	O	AN	3	Must contain valid numeric country code (ISO 4217)
EmailAddress	O	AN	50	Email address
PhoneNumber	O	AN	20	Home phone
PhoneNumber2	O	AN	20	Mobile phone
PhoneNumber3	O	AN	20	Work phone
AddressMatch	O	BOOL		If 'true' shipping address and billing address match
ExtendedData				Mandatory nested object within message body
ThreeDSecure				Mandatory nested object within ExtendedData (see Data Subset below)
ChallengeWindowSize	M	AN	1	Merchants preferred sized of challenge window presented to cardholder 1 – 250 x 400 2 – 390x400 3 – 500x600 4 – 600x400 5 – 100%
MerchantResponseURL	M	AN	255	Response URL for merchant
ChallengeIndicator	O	N	2	Conditional value – if supported 01 = No preference 02 = No challenge requested 03 = Challenge requested: 3DS Requestor Preference 04 = Challenge requested: Mandate Default value if not provided is that ACS would interpret as: 01 = No preference.
AuthenticationIndicator	O	N	2	01 = Payment transaction 04 = Add card 05 = Maintain card
MessageCategory	O	N	2	01 = PA payment authentication) 02 = NPA (Non-Payment Authentication)
HostedPage				Nested object within ExtendedData (see Data Subset below) if using HPP
PageSet	O	AN	50	HPP PageSet
PageName	O	AN	50	HPP PageName

5.2 Request Parameters details– Capture, Refund, Void

(M)andatory, (O)ptional, (C)onditional

Note: partial voids are not supported. Only partial captures are supported.

For certain acquirers a void is required after the partial capture to close the transaction. Please check with the support team for details on how to process partial captures.

Parameter Name	Req	Format	Length Max/Value	Description
TransactionIdentifier	M	GUID (string)	36	TransactionIdentifier of the Original Transaction of which is to be captured/refunded or voided
TotalAmount	C	DEC	18,3	Total amount Required for Capture and Refund only
TaxAmount	O	DEC	18,3	Tax Amount Required for Capture if tax sent in authorization
Refund	C	BOOL		Mandatory for refunds: Set to true

6. Response Parameters – All Transaction Types

(P)resent, (C)onditional

Parameter Name	Req	Format	Length Max/ Value	Description
TransactionType	P	numeric	2	Transaction type indicator is returned (1-Auth, 2-Sale, 3-Capture, 4-Void, 5-Refund)
Approved	P	BOOL		Status of the transaction False is the expected flag returned during the authentication portion of the transaction. For payment completion this flag will be the actual result of the authorization, either True or False
AuthorizationCode	C	AN	6	Authorization code of the authorization or sale transaction
TransactionIdentifier	P	GUID (string)	36	Unique identifier assigned by merchant application Example : f62c3e58-1983-4165-8535-fe5bb6ba6127
TotalAmount	P	DEC	18,3	Amount of the transaction processed
CurrencyCode	P	N	3	Currency of the transaction
CardBrand	P	AN	255	Brand of the card for informational purposes
IsoResponseCode	P	AN	3	Main response code to indicate approval, decline or failure
ResponseMessage	P	AN	255	Descriptive response of IsoResponseCode
RRN	P	string	12	Retrieval reference number
OriginalTrxnIdentifier	C	GUID (string)	36	Transaction Identifier of the original transaction returned in Capture, Refund or Void response
RiskManagement				
CvvResponseCode	C			CVV2 result

ThreeDSecure	P	BOOL		
Eci	C	AN	2	Provided if AuthenticationStatus is Y or A
Cavv	C	AN	100	Provided if AuthenticationStatus is Y or A
Xid	P	AN	100	3DS transaction ID
AuthenticationStatus	P	AN	1	See possible responses here: 3DS Authentication Results
RedirectData	C	HTML Form		Contains the redirect form to send to the cardholder's browser in the case of response codes 3D4,3D5,3D6
AuthenticateUrl	C	AN	100	Required for 3DS2/Authenticate with device fingerprinting
CardEnrolled	P	AN	1	Status of card enrolment
ProtocolVersion	P	AN	8	3DS protocol version supported by the issuer
FingerprintIndicator	C	AN	1	Status of fingerprinting. Possible values U, Y or N
StatusReason	C	AN	2	Provides information on why the Transaction Status field has the specified value for N, U or R AuthenticationStatus. See possible responses here: StatusReason
DsTransID	P	AN	36	Universally unique transaction identifier assigned by the directory server to identify a single transaction.
ResponseCode	P	AN	3	3DS response code showing the status of the 3DS request
CardholderInfo	C	AN	255	Additional information optionally provided to the cardholder from the issuer bank ACS
FraudCheck	C			
FcProvider	C	AN	255	Fraud control provider: eg Kount
ResponseCode	C	AN	3	Fraud Check Response Code showing the status of the Kount request
FcResponseCode	C	AN	1	Kount Result • A - Approve • D - Decline • R - Review • E - Escalate
FcScore	C	N		Kount score
FcTransId	C	AN	12	Kount transaction ID number
FcDetails	C			Data received directly from Kount. See Appendix 3 for details
PanToken	C	AN	100	PAN token
OrderIdentifier	P	AN	255	OrderIdentifier from request
SpiToken	C			SPI token
Errors	C			
Code	C	AN	2	Error code
Message	C	AN	255	Descriptive text of error code
BillingAddress	C	AN		Nested object with billing information from request

7. PowerTranz 3DS2 Auth, Sale and RiskMgmt Request Examples

The Auth, Sale and RiskMgmt requests all inherit from the same base and they share the same parameters.

Note: Some parameters can/must be excluded depending on the nature of the request.

Below is a Json sample of the Auth-Payment-Capture flow that a Merchant might implement using their own payment page or the hosted payment page (HPP).

7.1 Auth Request – Merchant Payment Page

Auth Request

```
POST #AuthUrl# HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "ThreeDSecure": true,
  "Source": {
    "CardPan": "5115010000000001",
    "CardCvv": "",
    "CardExpiration": "2512",
    "CardholderName": "John Doe"
  },
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
  "MerchantResponseUrl":
"https://localhost:5001/Final"
  }
}
```

Auth Response

```
{
  "TransactionType": 1,
  "Approved": false,
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.

iFrame	**Authentication Response**

iFrame
 	
iFrame – Redirect From Server to MerchantResponseURL
	{
	"TransactionType": 1,
	"Approved": false,
	"TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-abb280822b73",
	"TotalAmount": 1.00,
	"CurrencyCode": "978",
	"CardBrand": "MasterCard",
	"IsoResponseCode": "3D0",
	"ResponseMessage": "3D-Secure complete",
	"RiskManagement": {
	"ThreeDSecure": {
	"Eci": "02",
	"Cavv": " kBMAAAAAnEYBUwH06nACcJeBRfOZ",
	"Xid": " 7cac2981-3732-4ae9-a7c9-8d07ec6726f7",
	"AuthenticationStatus": "Y",
	"CardEnrolled": "Y",
	"ProtocolVersion": "2.1.0",
	"ResponseCode": "3D0"
	}
	},
	"PanToken": "1ra0yl1pp1uo9b98fqkf16d93rgw629x01rm2cpq58s82e8u03",
	"OrderIdentifier": "INT-95e75078-7d58-40e8-8053-c3d488f05f59-Orc 3569",
	"SpiToken": "vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-iseenw5eb",
	"BillingAddress": {
	"FirstName": "John",
	"LastName": "Smith",
	"Line1": "1200 Whitewall Blvd.",
	"Line2": "Unit 15",
	"City": "Boston",
	"State": "NY",
	"PostalCode": "200341",
	"CountryCode": "840",
	"EmailAddress": "john.smith@gmail.com",
	"PhoneNumber": "211-345-6790"
	}
	}

7.2 Auth Request – Hosted Payment Page (HPP)

Auth Request

```
POST #AuthUrl# HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "89876ff5-a44a-4e1f-bf71-
8f224823c439",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "ThreeDSecure": true,
  "Source": {
     },
  "OrderIdentifier": "INT-245d0301-5170-406c-abb7-
750aadce9173-Orc 3570",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
    "MerchantResponseUrl":
"https://localhost:5001/Final",
    "HostedPage": {
      "PageSet": "GFRHPP",
      "PageName": "HPPBilling1"
    }
  }
}
```

Auth Response

```
{
  "TransactionType": 1,
  "Approved": false,
  "TransactionIdentifier": "89876ff5-a44a-4e1f-bf71-
8f224823c439",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
  "OrderIdentifier": "INT-245d0301-5170-406c-abb7-
750aadce9173-Orc 3570",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"cq8gqlirt6ce2tmmphf09x5kxhndvh2zi25y7owm3m60fhy2l-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.
- If the merchant is using a hosted page (HPP) the Hosted Page node will need to be included. If HPP is not being used, exclude the Hosted Page node.

7.3 Payment Completion

To complete the payment portion of the transaction, merchants should call "/payment" and pass the SpiToken in an HTTP Post request. PowerTranz will send the transaction to the relevant payment network and will reply back to merchant. Please see below sample JSON in response body data from PowerTranz. Note until the payment completion is sent there has been no financial authorization and no funds have been held. The result of the payment completion can be an issuer approval or decline or an error.

Note that the payment Completion request does not require PowerTranzPasswordId and PowerTranzPassword in the header.

Payment Request	**Payment Response**

POST https://staging.ptranz.com/Api/spi/Payment HTTP/1.1
Host: staging.ptranz.com
Accept: text/plain
Request-Id: |8f9d8e1f-482cd3595d7a08db.
Content-Type: application/json-patch+json
Content-Length: TBD
 	
"vftpo8xbb4l36v9d63wx74uejlsfui5btkjw4yv6v4ojbcw8k-iseenw5eb"
 	
Notes:
 	
For the Payment Request, the body of the request is simply the SpiToken value and not Json.
	{
	"TransactionType": 1,
	"Approved": true,
	"AuthorizationCode": "123456",
	"TransactionIdentifier": "12c37d56-07fe-4941-be69-026981fc1dc3",
	"TotalAmount": 1,
	"CurrencyCode": "978",
	"RRN": "125315159423",
	"CardBrand": "Visa",
	"IsoResponseCode": "00",
	"ResponseMessage": "Transaction is approved.",
	"PanToken": "1d3qljq1yt4dk6vagncxd07usvjr6p6sqeo78b36bed9ebh7u8",
	"OrderIdentifier": " 912b-43ef-a2ee-2c83d4bd59d4"
	}

7.4 Capture Request

If the initial request was sent to the Sale endpoint and the Payment Completion returned an approval (IsoResponseCode: “00”) then the transaction will be submitted for settlement. If it was sent to the Auth endpoint the transaction must be captured to complete the sale and bill the cardholder. Note there are additional transaction modification endpoints that can be used when required for refunds and voids.

To process a partial capture (a capture amount smaller than the initial auth amount) after the capture request is completed successfully a void request must be sent. The void request does not require an amount to be passed.

Capture Request

```
POST https://staging.ptranz.com/Api/capture HTTP/1.1
Host: staging.ptranz.com
Accept: text/plain
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Request-Id: |8f9d8e1f-482cd3595d7a08db.
Content-Type: application/json-patch+json
Content-Length: TBD

{
  "TransactionIdentifier": "4f3fae73-b43a-4016-ae93-
24f88d98e079",
  "TotalAmount": 1
}
```

Capture Response

```
{
  "OriginalTrxnIdentifier": "4f3fae73-b43a-4016-
ae93-24f88d98e079",
  "TransactionType": 3,
  "Approved": true,
  "TransactionIdentifier": "4f3fae73-b43a-4016-ae93-
24f88d98e079",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "RRN": "127011162582",
  "IsoResponseCode": "00",
  "ResponseMessage": "Transaction is approved"}
```

7.5 Refund Request

Refund Request

```
POST https://staging.ptranz.com/Api/refund HTTP/1.1
Host: dev.ptranz.com
Accept: text/plain
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Request-Id: |8f9d8e1f-482cd3595d7a08db.
Content-Type: application/json-patch+json
Content-Length: TBD

{
  "Refund": true,
  "TransactionIdentifier": "cab173a7-f75e-444b-ac42-
cc6a367b8b6b",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "Source": {
    "CardPresent": false,
    "CardEmvFallback": false,
    "ManualEntry": false,
    "Debit": false,
    "Contactless": false,
    "CardPan": "",
    "MaskedPan": ""
  },
  "TerminalCode": "",
  "TerminalSerialNumber": "",
  "AddressMatch": false
}
```

Refund Response

```
{
  "OriginalTrxnIdentifier": "cab173a7-f75e-444b-
ac42-cc6a367b8b6b",
  "TransactionType": 5,
  "Approved": true,
  "TransactionIdentifier": "0446a902-311d-4868-8247-
e9dfbd8ea0a6",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "RRN": "127013162598",
  "IsoResponseCode": "00",
  "ResponseMessage": "Transaction is approved"
```

7.6 Void Request

Note: partial voids are not supported

Void Request	**Void Response**

POST https://staging.ptranz.com/Api/void HTTP/1.1
Host: dev.ptranz.com
Accept: text/plain
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Request-Id: |8f9d8e1f-482cd3595d7a08db.
Content-Type: application/json-patch+json
Content-Length: TBD
 	
{
"TransactionIdentifier": "67a7689d-efe0-4a21-a3c3-cd8b55d7825f",
 	
"TerminalCode": "",
"TerminalSerialNumber": "",
"AutoReversal": false
}
	{
	"OriginalTrxnIdentifier": "67a7689d-efe0-4a21-a3c3-cd8b55d7825f",
	"TransactionType": 4,
	"Approved": true,
	"TransactionIdentifier": "67a7689d-efe0-4a21-a3c3-cd8b55d7825f",
	"TotalAmount": 1,
	"CurrencyCode": "978",
	"RRN": "127011162583",
	"IsoResponseCode": "00",
	"ResponseMessage": "Transaction is approved"}

7.7 Tokenize Request

Tokenize Request	**Tokenize Response**

POST https://staging.ptranz.com/Api/RiskMgmt HTTP/1.1
Accept: text/plain
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Request-Id: |8f9d8e1f-482cd3595d7a08db.
Content-Type: application/json-patch+json
Content-Length: TBD
 	
{
"TransactionIdentifier": "7b689a53-cc82-4456-98d6-5eb9faa1b0f0",
"TotalAmount": 0,
"CurrencyCode": "840",
"Tokenize": true,
"ThreeDSecure": false,
"Source": {
"CardPan": "5115010000000001",
"CardCvv": "123",
"CardExpiration": "2512",
"CardholderName": "John Doe"
},
"OrderIdentifier": "INT-95e75078-7d58-40e8-8053-c3d488f05f59-Orc 3569"
}
	{
	"TransactionType": 8,
	"Approved": false,
	"TransactionIdentifier": "7b689a53-cc82-4456-98d6-5eb9faa1b0f0”,
	"TotalAmount": 0.0,
	"CurrencyCode": "840",
	"CardBrand": " MasterCard",
	"IsoResponseCode": "TK0",
	"ResponseMessage": "Tokenize complete",
	"PanToken": "28zezcdudowtoepj685759opnt96g6eavzkgjetrg6czcl8ywn",
	"OrderIdentifier": "INT-95e75078-7d58-40e8-8053-c3d488f05f59-Orc 3569"
	
	}

7.8 Auth Request – with Powertranz token

Auth Request

```
POST #AuthUrl# HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "ThreeDSecure": true,
  "Source": {
      "Token":
"28zezcdudowtoepj685759opnt96g6eavzkgjetrg6czcl8ywn"
,
      "CardCvv": "123",
    "CardExpiration": "2512",
    "CardholderName": "John Doe"
  },
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
  "MerchantResponseUrl":
"https://localhost:5001/Final"
  }
}
```

Auth Response

```
{
  "TransactionType": 1,
  "Approved": false,
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.

7.9 Auth Request – with Sentry token

Auth Request

```
POST #AuthUrl# HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
```

Auth Response

```
{
  "TransactionType": 1,
  "Approved": false,
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
```

<table>
<tr>
<td>

```
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "TotalAmount": 1,
  "CurrencyCode": "978",
  "ThreeDSecure": true,
  "Source": {
      "Token": "411111_000021111",
      "TokenType": "PG2",
      "CardCvv": "123",
    "CardExpiration": "2512",
    "CardholderName": "John Doe"
  },
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
  "MerchantResponseUrl":
"https://localhost:5001/Final"
  }
}
```

</td>
<td>

```
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.

</td>
</tr>
</table>

7.10 Auth Request/Response – FraudCheck and 3DS

Auth Request

```
POST #AuthUrl# HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "TotalAmount": 1.05,
  "CurrencyCode": "978",
  "ThreeDSecure": true,
  "FraudCheck": true,
  "Source": {
    "CardPan": "5115010000000001",
    "CardCvv": "",
    "CardExpiration": "2512",
    "CardholderName": "John Doe"
  },
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
  "MerchantResponseUrl":
"https://localhost:5001/Final"
  }
}
```

Auth initial Response

```
{
  "TransactionType": 1,
  "Approved": false,
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.

Auth Final response – FraudCheck and 3DS

Auth Request	**Auth Final Response**

	{
	"TransactionType": 1,
	"Approved": false,
	"TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-abb280822b73",
	"TotalAmount": 1.05,
	"CurrencyCode": "978",
	"CardBrand": "MasterCard",
	"IsoResponseCode": "3D0",
	"ResponseMessage": "3DS complete",
	"RiskManagement": {
	"ThreeDSecure": {
	"Eci": "02",
	"Xid": "f6e851ee-b3d8-4d7d-98cb-62f0eec39e42",
	"Cavv": "AJkBCQIGiIYplVGQaQaIAAAAAAA=",
	"AuthenticationStatus": "Y",
	"ProtocolVersion": "2.1.0",
	"FingerprintIndicator": "U",
	"DsTransId": "94c7d18b-b18a-4fdb-810f-bcbe513d9b25",
	"ResponseCode": "3D0"
	},
	"FraudCheck": {
	"FcProvider": "Kount",
	"ResponseCode": "FC0",
	"FcResponseCode": "A",
	"FcScore": "33",
	"FcTransId": "K9WC08BB7J9W",
	"FcDetails": {
	"ErrorCode": "0",
	"Version": "0695",
	"Mode": "Q",
	"TransactionId": "K9WC08BB7J9W",
	"MerchantId": "240000",
	"SessionId": "bccd03e020704e5fbda6f8d4abb29aeb",
	"OrderNumber": "INT-95e75078-7d58-40e8-8053-c3d4",
	"Auto": "R",
	"Score": "33",
	"Geox": "US",
	"Brand": "MSTR",
	"Velo": "0",
	"Vmax": "0",
	"Network": "A",
	"Kaptcha": "Y",
	"Proxy": "N",
	"Emails": "1",
	"HttpCountry": "US",
	"TimeZone": "180",
	"Cards": "1",
	"PcRemote": "N",
	"Devices": "1",
	"DeviceLayers": "2D5332442A..23EA1C3E4B.88292C253E.DB16B1D428",
	"MobileForwarder": "N",
	"VoiceDevice": "N",
	"LocalTime": "2022-09-16 10:48",
	"FingerPrint": "89E3933F0D384718B1FE447AD311E34B",

	"Flash": "N",
	"Language": "EN",
	"Country": "BM",
	"Cookies": "Y",
	"MobileDevice": "N",
	"Site": "DEFAULT",
	"IPAddress": "199.172.239.242",
	"IPAddressLatitude": "32.3201",
	"IPAddressLongitude": "-64.7376",
	"IPAddressCountry": "BM",
	"IPAddressRegion": "Hamilton",
	"IPAddressCity": "Hamilton",
	"IPAddressOrganization": "Internet Bermuda Limited",
	"DateDeviceFirstSeen": "2022-09-15",
	"UserAgentString": "Mozilla/5.0 (Windows NT 6.2; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/99.0.4844.84 Safari/537.36",
	"DeviceScreenResolution": "1080x1920",
	"OS": "Windows 8"
	}
	}
	},
	"PanToken": "140k2o9m2rztv8hw61vi43qxqc6nccn0fnaazi78fvmtsukliv",
	"OrderIdentifier": "INT-95e75078-7d58-40e8-8053-c3d488f05f59-Orc 3569",
	"SpiToken": "23rawin3ot3w882np3wdlafzrlykgigs8dq20xskhyo1d47v0e-iseenw5eb"
	};

7.11 Fraud Check only Request/Response

RiskMgmt Request

```
POST https://staging.ptranz.com/Api/RiskMgmt
HTTP/1.1
Accept: application/json
PowerTranz-PowerTranzId: #PowerTranzPasswordId#
PowerTranz-PowerTranzPassword: #PowerTranzPassword#
Content-Type: application/json; charset=utf-8
Host: staging.ptranz.com
Content-Length: TBD
Expect: 100-continue
Connection: Keep-Alive

{
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "TotalAmount": 10.50,
  "CurrencyCode": "978",
  "ThreeDSecure": false,
  "FraudCheck": true,
  "Source": {
    "CardPan": "5115010000000001",
    "CardCvv": "",
    "CardExpiration": "2512",
    "CardholderName": "John Doe"
  },
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "BillingAddress": {
    "FirstName": "John",
    "LastName": "Smith",
    "Line1": "1200 Whitewall Blvd.",
    "Line2": "Unit 15",
    "City": "Boston",
    "State": "NY",
    "PostalCode": "200341",
    "CountryCode": "840",
    "EmailAddress": "john.smith@gmail.com",
    "PhoneNumber": "211-345-6790"
  },
  "AddressMatch": false,
  "ExtendedData": {
    "ThreeDSecure": {
      "ChallengeWindowSize": 4,
      "ChallengeIndicator": "01"
    },
  "MerchantResponseUrl":
"https://localhost:5001/Final"
  }
}
```

RiskMgmt initial Response

```
{
  "TransactionType": 8,
  "Approved": false,
  "TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-
abb280822b73",
  "IsoResponseCode": "SP4",
  "ResponseMessage": "SPI Preprocessing complete",
  "OrderIdentifier": "INT-95e75078-7d58-40e8-8053-
c3d488f05f59-Orc 3569",
  "RedirectData": "[HTML FORM DATA TRUNCATED FOR
BREVITY]",
  "SpiToken":
"vlf80fset61e73ml9toqu2kqtn5sddelqk9r7kao51kut6h3o-
iseenw5eb"
   }
```

Notes:

The highlighted script is a self posting script, it is returned in the **RiskMgmt, Auth and Sale** response.

- The highlighted script will have to be rendered in the Card Holder Browser.
- It is recomended to include the above mentioned script in an iFrame.

Fraud Check only Response

RiskMgmt Request	RiskMgmt Final Response

	{
	"TransactionType": 8,
	"Approved": false,
	"TransactionIdentifier": "5ee7d7c1-af78-4d7e-9386-abb280822b73",
	"TotalAmount": 10.50,
	"CurrencyCode": "978",
	"CardBrand": "MasterCard",
	"IsoResponseCode": "FC0",
	"ResponseMessage": "Fraud check complete",
	"RiskManagement": {
	"FraudCheck": {
	"FcProvider": "Kount",
	"ResponseCode": "FC0",
	"FcResponseCode": "R",
	"FcScore": "31",
	"FcTransId": "K9WC0LWXW0K1",
	"FcDetails": {
	"ErrorCode": "0",
	"Version": "0695",
	"Mode": "Q",
	"TransactionId": "K9WC0LWXW0K1",
	"MerchantId": "240000",
	"SessionId": "7b475c5776ad43fab448046d1c712a05",
	"OrderNumber": "INT-95e75078-7d58-40e8-8053-c3d4)",
	"Auto": "R",
	"Score": "31",
	"Geox": "US",
	"Brand": "MSTR",
	"Velo": "0",
	"Vmax": "0",
	"Network": "A",
	"Kaptcha": "Y",
	"Proxy": "N",
	"Emails": "1",
	"HttpCountry": "US",
	"TimeZone": "180",
	"Cards": "1",
	"PcRemote": "N",
	"Devices": "1",
	"DeviceLayers": "2D5332442A..23EA1C3E4B.88292C253E.DB16B1D428",
	"MobileForwarder": "N",
	"VoiceDevice": "N",
	"LocalTime": "2022-09-16 10:57",
	"FingerPrint": "89E3933F0D384718B1FE447AD311E34B",
	"Flash": "N",
	"Language": "EN",
	"Country": "BM",
	"Cookies": "Y",
	"MobileDevice": "N",
	"Site": "DEFAULT",
	"IPAddress": "199.172.239.242",
	"IPAddressLatitude": "32.3201",
	"IPAddressLongitude": "-64.7376",

	"IPAddressCountry": "BM",
	"IPAddressRegion": "Hamilton",
	"IPAddressCity": "Hamilton",
	"IPAddressOrganization": "Internet Bermuda Limited",
	"DateDeviceFirstSeen": "2022-09-15",
	"UserAgentString": "Mozilla/5.0 (Windows NT 6.2; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/99.0.4844.84 Safari/537.36",
	"DeviceScreenResolution": "1080x1920",
	"OS": "Windows 8"
	}
	}
	}
	"OrderIdentifier": " INT-95e75078-7d58-40e8-8053-c3d488f05f59-Orc 3569)",
	"SpiToken": "2t2jkdww6vzpxed77wbnxqrufvigxuyuyfu8ightt7cjit0qeh-iseenw5eb"
	};

8. PowerTranz Response Parameters

As shown in the previous code samples, there are two distinct set of response codes that the merchant needs to analyze and determine next steps.

The initial response to the Auth, Sale or RiskMgmt request will return the 3DS authentication result.

8.1 3DS Authentication Response Code

The 3DS ResponseCode is generated by PowerTranz that shows the status of the 3DS authentication.

Note 3D0 means the process completed successfully but the detailed results still need to be interpreted and a decision made before determining whether or not to send a payment completion. There are also rules that may be set on a per merchant basis that determines if a payment completion will be allowed depending on the 3DS Authentication result.

ResponseCode	3DS Response	Description	Notes
3D0	Authentication Complete	3DS Complete	3DS1 and 3DS2 process complete
3D1	Authentication not available	3DS not supported for card type	Pre-authentication process complete
3D3	Authentication Error	3DS Error	Either 3DS1 or 3DS2 error

Sample in authentication response:

```
"IsoResponseCode": "3D0",
  "ResponseMessage": "3D-Secure complete",
```

8.2 3DS Authentication Result

The nested object ThreeDSecure in the authentication response shows the 3DS authentication result. Merchants should be able to interpret important field values and decide to proceed or not proceed with payment completion based on the result.

8.3 3DS Authentication Status

The table below shows possible authentication status values and their meanings. If the authentication status is N or R (not authenticated) the payment completion will not be permitted.

Note: Authentication Status determines the result of the authentication along with the ECI Indicator and the IsoResponseCode

Value	Description
Y	Authentication/account verification successful
A	Attempts processing performed
N	Not authenticated/account not verified; transaction denied
U	Authentication/account verification could not be performed due to a technical or other problem
R	Authentication/account verification rejected. Issuer is rejecting and requests that authorization not be attempted.

**Note that a challenge response will only return a result of Y or N

8.4 ECI value

The Electronic Commerce Indicator (ECI) is a value returned the card associations indicating the outcome of authentication attempted on transactions enforced by 3DS.

A) Possible values returned by **Visa and American Express** are:

- ECI 05: 3DS authentication was successful.
- ECI 06: 3DS authentication was attempted.
- ECI 07: 3DS authentication failed or not available. Considered non-3DS.

B) Possible value returned by **MasterCard** and its interpretation:

- ECI 02: 3DS authentication is successful.
- ECI 01: 3DS authentication was attempted.
- ECI 00: 3DS authentication failed or not available. Considered non-3DS.
- ECI N2: 3DS authentication was successful for NPA transactions
- ECI N0: 3DS authentication failed for NPA transactions

Note that an ECI value will not be returned in all cases depending on the authentication result.

8.5 Transaction Status Reason Results (StatusReason)

In the case of a failed 3DS authentication (status N) you may also get additional information from StatusReason.

Value	Description	Value	Description
01	Card authentication failed	**12**	Transaction not permitted to cardholder
02	Unknown Device	**13**	Cardholder not enrolled in service
03	Unsupported Device	**14**	Transaction timed out at the ACS
04	Exceeds authentication frequency limit	**15**	Low confidence
05	Expired card	**16**	Medium confidence
06	Invalid card number	**17**	High confidence
07	Invalid transaction	**18**	Very high confidence
08	No Card record	**19**	Exceeds ACS maximum challenges
09	Security failure	**20**	Non-Payment transaction not supported
10	Stolen card	**21**	3RI transaction not supported
11	Suspected fraud	**22-79**	Reserved for EMVCo future use (values invalid until defined by EMVCo)

9. Special Considerations

9.1 Unsupported card Types – non3DS

Cards that do not currently support 3DS (eg :JCB, Discover, Diners and Amex in certain conditions) can still be sent in the same way 3DS enabled cards are sent via the Simplified Integration Method with or without HPP. Instead of receiving a 3DS result, you will receive a 3D1 response which means 3DS is not supported and you can choose whether to continue with the payment completion. Alternatively, these can be sent as non-3DS using the full (non-simplified) Auth or Sale financial endpoint at:

https://TBD.ptranz.com/api/<endpoint>

Note: 3D1 will also be returned in the following cases:

- Acquirer does not support 3DS2 for Card brand

- 3DS1 not supported for card

9.2 Transaction and Order Identifiers

PowerTranz requires a unique ***TransactionIdentifier*** **and** ***OrderIdentifier*** for all transactions that should be generated by the merchant.

The TransactonIdentifier is a GUID format and is the unique ID within PowerTranz.

The OrderIdentifier is one of the values used in the Merchant Portal and reports and must be unique for each approved transaction.

9.3 3DS 2 and Cardholder Information

While only cardholder name is mandatory for 3DS2 transactions it is recommended to include as many of the Billing Address fields as possible. The ACS server (issuing bank's authentication server) will decide on the frictionless versus challenge flow based on several factors and any information provided up front can assist in a smooth authentication flow. Note that for 3DS 2 the merchant name used in the authentication must match exactly the merchant name being used in the authorization. If a 3DS authentication only transaction is being performed and the authorization is being done separately, it is the merchant's responsibility to ensure these values are being submitted correctly.

9.4 Data Validation

The EMV 3DS protocol uses the ISO 8859 common character set for allowed values. If a 3DS authentication request parameters (such as cardholder name) sent in an unsupported character set, authentication will fail.

Annex B Common Character Set

Table 36 shows the character set common to all parts of ISO/IEC 8859:

				b8	0	0	0	0	0	0	0	0
				b7	0	0	0	0	1	1	1	1
				b6	0	0	1	1	0	0	1	1
				b5	0	1	0	1	0	1	0	1
b4	b3	b2	b1		00	01	02	03	04	05	06	07
0	0	0	0	00			SP	0	@	P	`	p
0	0	0	1	01			!	1	A	Q	a	q
0	0	1	0	02			"	2	B	R	b	r
0	0	1	1	03			#	3	C	S	c	s
0	1	0	0	04			$	4	D	T	d	t
0	1	0	1	05			%	5	E	U	e	u
0	1	1	0	06			&	6	F	V	f	v
0	1	1	1	07			'	7	G	W	g	w
1	0	0	0	08			(	8	H	X	h	x
1	0	0	1	09			)	9	I	Y	i	y
1	0	1	0	10			*	:	J	Z	j	z
1	0	1	1	11			+	;	K	[	k	{
1	1	0	0	12			,	<	L	\	l	|
1	1	0	1	13			-	=	M	]	m	}
1	1	1	0	14			.	>	N	^	n	~
1	1	1	1	15			/	?	O	_	o	

Table 36: Common Character Set

9.5 Tokenization

Use the RiskMgmt endpoint to tokenize a card and return a PanToken. This token can be used subsequently to make financial transactions.

If the card is expired a tokenize request is required to update the expiry date.

TokenType is only required if a legacy Sentry Token is used in the transaction request. In this case send TokenType with value “PG2”. Otherwise, don’t send TokenType field.

A PanToken will also be returned for financial transactions if desired. Please check with the support team for details on how to enable the return of PanToken on financial transactions.

You can also perform a 3DS authentication on the initial tokenization request (using the RiskMgmt endpoint) by setting the ThreeDSecure flag to true: for example, when you are adding a card to the wallet.

The following fields will be required when adding a card to the wallet and performing 3DS:

```
"TotalAmount": 0.0,
"ChallengeIndicator": "04",
"AuthenticationIndicator": "04",
 "MessageCategory": "02" (MessageCategory  will default to 02 if TotalAmount is 0 or not sent)
```

MessageCategory with value 02 is used for a NPA transaction NPA= non payment authentication)

This is not considered a payment transaction. It will only validate the status of the card.

9.6 Fraud Check

Powertranz's Fraud Check service main component uses Kount™ (third-party solution & partner) which is a highly rated fraud scoring engine.

To use this service a Kount account is required. Please contact Powertranz support if you are interested in this service.

The following combinations are available for FraudCheck:

- A Kount request can a be a standalone request initiated to the spi/RiskMgmt endpoint or it can be part of a financial transaction (initiated to the spi/auth or spi/sale endpoint).
- A Kount request can be combined with a 3DS request by setting the ThreeDSecure flag to true and the FraudCheck flag to true in the same request either to the RiskMgmt endpoint or as part of a financial transaction (initiated to the spi/auth or spi/sale endpoint).
- A Kount request can be used with a HPP page with or without 3DS authentication

The FraudCheck response object will contain the score (FCScore) and the Kount result (FCResponseCode).

The ResponseCode in the FraudCheck object will showcase the result of the Kount request. A completed Kount request will carry a response of FC0. A timeout or error during the Kount process will be reflected in the FraudCheck .ResponseCode as well as in the Errors detailed array.

A 3DS authentication will be performed if the FCResponseCode in not a Decline (D) and the ThreeDSecure flag is set to true in the initial request. The result of the authentication will determine the ability to do a payment completion (if the initial request was sent to spi/auth or spi/sale endpoints). The possible outcomes of the authentication are detailed in section 8.

If the Kount request was combined with a 3DS request and the Kount process timed/errored out, the 3DS authentication will be processed and an authentication response will be returned in the ThreeDSecure object.

Please note that it is possible to receive timed out/error messages in both the ThreeDSecure response and the FraudCheck response.

If a Kount assessment was completed the FcDetails object will return more detailed information related to the transaction. This information is also present in the Kount portal.

10. Test Cards and Cases

There are two main process flows for 3DS - frictionless and challenge. Frictionless occurs when no cardholder interaction is required during the authentication process. Challenge flow involves a redirection of the cardholder browser to the issuer bank ACS server to complete one or more 'challenges' before the authentication result is returned. Support for fingerprinting is determined by the issuer bank ACS server and this can be included in both frictionless and challenge flows. The test cards will determine the 3DS authentication and authorization results.

Test Case	Card Number	3DS Version	PW	Notes
Authorizations will approve for the following test cases				
V2-01-YA	4012000000020071	2.1.0		Frictionless, Status=Y
V2-02-AA	4012000000020089	2.1.0		Frictionless, Status=A
M2-01-YA	5100270000000023	2.1.0		Frictionless, Status=Y
M2-02-RA	5100270000000072	2.1.0		Frictionless, Status=R
V2-03-YA	4012000000020006	2.1.0	3ds2	Challenge, Status=Y
M2-03-YA	5100270000000031	2.1.0	3ds2	Challenge, Status=Y
V2-04-YA	4012010000020070	2.1.0		Frictionless, Fingerprinting, Status=Y
V2-05-AA	4012010000020088	2.1.0		Frictionless, Fingerprinting, Status=A
M2-04-YA	5100271000000120	2.1.0		Frictionless, Fingerprinting, Status=Y
V2-06-YA	4012010000020005	2.1.0	3ds2	Challenge, Fingerprinting, Status=Y
V2-07-YA	4012000000020071	2.1.0	3ds2	Challenge, include ChallengeIndicator = 03
A2-01-YA *	341111000000009	2.1.0		Frictionless, Status=Y
A2-02-AA	341111000000011	2.1.0		Frictionless, Status=A
A2-03-YA	341112000000001	2.1.0	3ds2	Challenge, Fingerprinting, Status=Y
A2-04-YA	341111000000037	2.1.0	3ds2	Challenge, Status=Y
A2-05-YA	341112000008012	2.1.0		Frictionless, Fingerprinting, Status=Y
DS-01-0A	6011111111111111	n/a		Discover
JC-01-0A	3528111111111108	n/a		JCB
M1-01-YA	5115010000000018	1.0.2		Status=Y, 3DS1 fallback
Authorizations will decline or not be available for the following test cases				
V2-01-ND	4012000000020121	2.1.0		Frictionless, Status=N, Payment Completion not permitted (response code 12)
M2-01-ND	5100270000000098	2.1.0		Frictionless, Status=N, Payment Completion not permitted (response code 12)
M2-02-ND	5100270000000056	2.1.0		Challenge, Status=N, Payment Completion not permitted (response code 12)
V2-02-AD	4666666666662222	2.1.0		Frictionless, Status = A, ISO Response Code = 05, CVV Response = N
M2-03-UD	5555666666662222	2.1.0		Frictionless, Status=U, ISO Response Code = 05
V2-03-AD	4111111111119999	2.1.0		Frictionless, Status = A, ISO Response Code = 98
M2-04-AD	5111111111113333	2.1.0		Frictionless, Status = A, ISO Response Code = 05
V2-04-YD	4111111111110000	2.1.0	3ds2	Challenge, Status =Y, ISO Response Code = 91

Test Case	Card Number	3DS Version	PW	Notes
M2-05-YD	5111111111110000	2.10	3ds2	Challenge, Status=Y, ISO Response Code = 91
A2-01-ND	341111000000029	2.1.0		Frictionless, Status=N
DS-01-0D	6011111111111152	n/a		Discover
JC-01-0D	3528111111111157	n/a		JCB

* Validate with the Powertranz team if AMEX 3DS is supported for your account at this time

Appendix 1 – Response Codes

PowerTranz Response Code and Error Information

Approved or completed transactions

ISO Response Code	Response Message	Details
00	Transaction is approved.	Returned for financial transactions
3D0	3D-Secure complete	3DS authentication completed without errors
3D1	3DS not supported	3DS2 or 3DS1 is not supported for this card. You can proceed with Payment completion
HP0	HPP preprocessing complete	
TK0	Tokenize complete	
SP4	SPI Preprocessing complete	
FC0	Fraud Check complete	Fraud check completed without errors

Error messages

Note: Please note that when a response is returned with invalid field you must revisit section 5 for allowed format on that field. For example “CardholderName” only allows characters displayed in section 9.4

ISO Response Code	Response Code	Response Message	Error Detail
FC3		Fraud check error	Fraud check error
34		Suspected Fraud	Suspected Fraud
03	310	Invalid merchant	
05	22	Transaction is declined	Default decline
12	315	Invalid card/currency	Invalid card/currency
12	321	Processing errors	Processing errors
12	326	Invalid transaction	Host plugin field invalid: {field name}
12	330	Invalid transaction	Not permitted {field name}
12	343	Invalid transaction	Invalid merchant
12	386	Invalid transaction	Trxn is closed
12	384	Invalid transaction	Invalid refund
12	387	Duplicate transaction	Duplicate TransactionIdentifier
12	354	Invalid transaction	Crypto error
12	380	Invalid transaction	Original auth invalid
12	381	Invalid transaction	Original auth not found
12	382	Invalid transaction	Original auth invalid
12	383	Invalid transaction	Invalid amount
12	344	Invalid transaction	Merchant closed
12	345	Invalid transaction	Payment setting disabled
12	370	Transaction mismatch	Simulator transaction mismatch
12	320	Invalid transaction	Invalid test transaction
12	426	Invalid transaction	Host plugin field invalid: {field name}
12	76	Invalid transaction	Invalid SPI transaction
12	757	Invalid transaction	Hosted page not found
12	546	3DS1 error	3DS1 fallback not allowed
12	362	Invalid transaction	Invalid transaction
12	361	Invalid transaction	Invalid transaction
12	75	SPI error	SPI error
12	758	HPP error	Invalid HPP page
3D3	519	3DS1 error	3DS1 verify result error: {field name}

3D3	611	3DS system error	Preauthentication failed
3D3	618	3DS1 system error	3DS1 verify enrollment error
3D3	619	3DS1 system error	3DS1 verify result error
3D3	540	3DS2 error	3DS2 authenticate error
3D3	640	3DS2 system error	3DS2 authenticate error
3D3	518	3DS1 error	3DS1 verify enrollment error: {field name}
3D3	520	3DS1 error	Cannot build PAReq
3D3	511	3DS error	Preauthentication failed
3D3	532	3DS error	Authentication failed
3D3	444	3DS2 system error	General 3DS error
3D3	541	3DS2 error	3DS2 challenge error
3D3	641	3DS2 system error	3DS2 challenge error
3D3	542	3DS2 error	3DS2 result error
3D3	642	3DS2 system error	3DS2 result error
3D3	543	3DS2 error	3DS2 notify error
3D3	643	3DS2 system error	3DS2 notify error
3D3	544	3DS2 system error	3DS2 fingerprint error
3D3	550	3DS2 error	DS error
3D3	548	3DS error	DS comms error
3D3	551	3DS2 error	3DS Server unreachable
3D3	549	3DS error	Cache error
3D3	649	3DS2 system error	Cache error
3D3	510	3DS error	3DS invalid parameter: {field name}
57	316	Invalid card type	Invalid card type
89	312	Failed authentication	Invalid credentials
91	391	Host timeout	Host timeout
91	392	Host comms error	Host comms error
91	329	Host comms error	Host not available
96	424	System error	Internal communication error
96	44	System error	General GateApi error
96	432	System error	Missing action: {field name}
96	459	System error	Persistence error
96	460	System error	Card mapping error
96	85	System error	SPI system error
96	850	System error	HPP system error
96	325	Host processing error	Host processing error
96	332	System error	Missing route
96	317	System error	Internal timeout
96	353	System error	TLV parse failure
96	332	System error	Missing route.
96	49	System error	Indeterminate: {field name}
96	610	3DS system error	Missing 3DS parameter: {field name}
96	456	System error	RiskMgmt not operational
96	457	System error	General RiskMgmt error
96	458	System error	Invalid route
96	45	System error	General api error
96	450	System error	General gate error
96	451	System error	General processor error
96	452	System error	General processor error
96	453	System error	TLV parse failure
96	455	System error	Api not operational
96	417	System error	Internal timeout
96	42	System error	Gate not available
96	421	System errors	Multiple errors detected
96	422	Host processing error	Host plugin error

96	425	Host processing error	Host processing error
96	43	System error	Internal routing error
96	431	System error	Rule error
96	433	System error	Invalid route
97	36	Request failed validation	Invalid request
97	37	Request failed validation	Missing field(s): {field name}
97	38	Request failed validation	Field is invalid: {field name}
97	57	Request failed validation	Missing 3DS field: {field name}
97	58	Request failed validation	Invalid 3DS field: {field name}
98	428	System error	Host plugin error
99	441	System error	Response code error
99	490	General error	General error
99	390	General error	General error
99	327	Host comms error	PL error

Payment ISO Response Codes

Response Code & Description		Response Code & Description	
00	Approved	53	No savings account
01	Refer to issuer	54	Expired card
02	Refer to issuer (special)	55	Incorrect PIN
03	Invalid merchant	56	No card record
04	Pick-up card	57	Transaction not permitted to card
05	Do not honor	58	Transaction not permitted to card
06	Error	59	Suspected fraud
07	Pick-up card (special)	60	Card acceptor contact acquirer
08	Honor with identification	61	Exceeds withdrawal limit
09	Request in progress	62	Restricted card
10	Approved for partial amount	63	Security violation
11	VIP Approval	64	Original amount incorrect
12	Invalid transaction	65	Activity count exceeded
13	Invalid amount	66	Card acceptor call acquirer
14	Card number does not exist	67	Card pick up at ATM
15	No such issuer	68	Response received too late
16	Approved, update track 3	75	Too many wrong PIN tries
17	Customer cancellation	76	Previous message not found
18	Customer dispute	77	Data does not match original message
19	Re-enter transaction	80	Invalid date
20	Invalid response	81	Cryptographic error in PIN
21	No action taken (no match)	82	Incorrect CVV
22	Suspected malfunction	83	Unable to verify PIN
23	Unacceptable transaction fee	84	Invalid authorization life cycle
24	File update not supported by receiver	85	No reason to decline
25	Unable to locate record	86	PIN validation not possible
26	Duplicate file update record	88	Cryptographic failure
27	File update field edit error	89	Authentication failure
28	File temporarily unavailable	90	Cutoff is in process
29	File update not successful	91	Issuer or switch inoperative
30	Format error	92	No routing path
31	Issuer sign-off	93	Violation of law
32	Completed partially	94	Duplicate transmission
33	Expired card	95	Reconcile error
34	Suspected fraud	96	System malfunction
35	Card acceptor contact acquirer	97	Format Error
36	Restricted card	98	Host Unreachable
37	Card acceptor call acquirer	99	Errored Transaction
38	Allowable PIN tries exceeded	N0	Force STIP
39	No credit account	N3	Cash Service Not Available
40	Function not supported	N4	Cash request exceeds issuer limit
41	Pick-up card (lost card)	N7	Decline for CVV2 failure
42	No universal account	P2	Invalid biller information
43	Pick-up card (stolen card)	P5	PIN Change Unblock Declined
44	No investment account	P6	Unsafe PIN
51	Not sufficient funds	XA	Forward to issuer
52	No checking account	XD	Forward to issuer

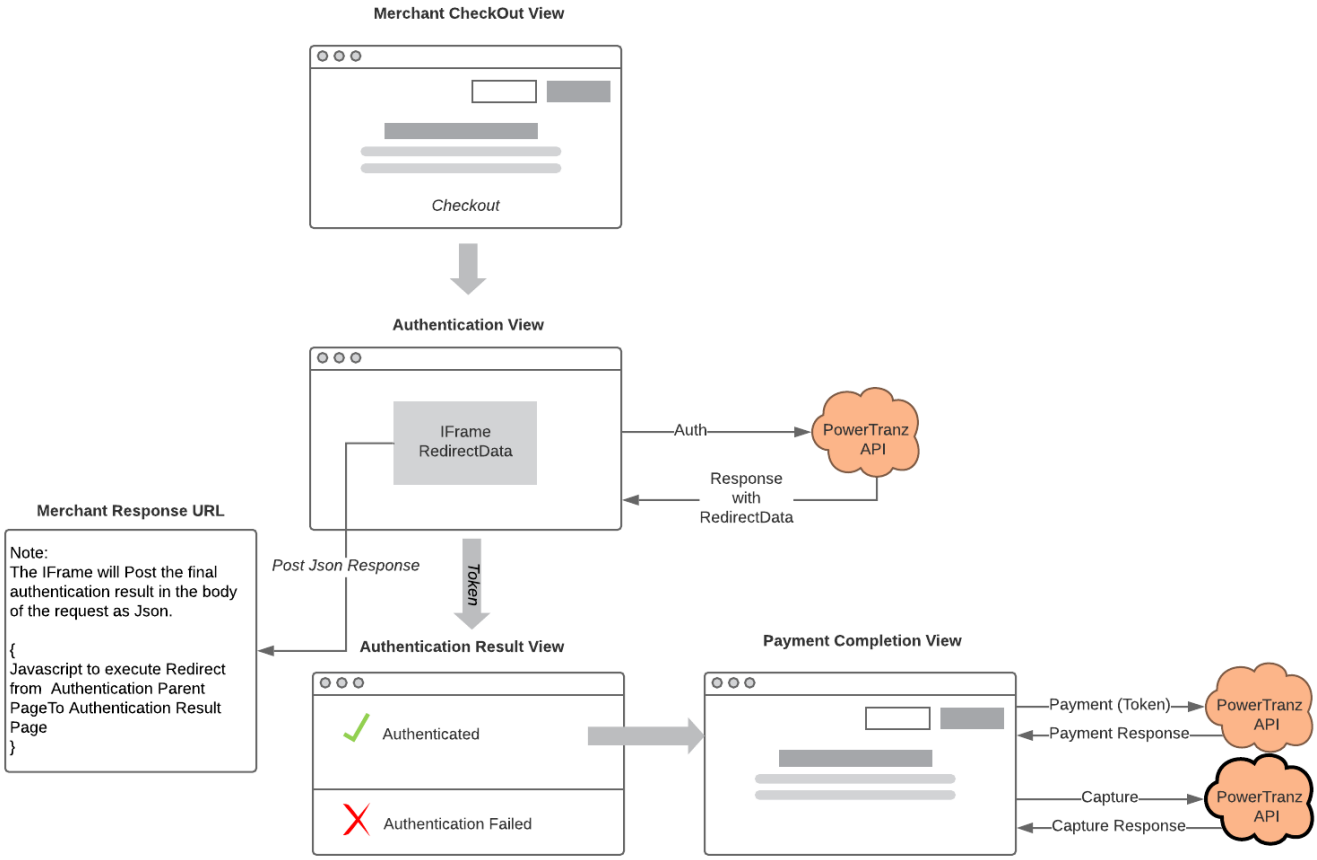
CVV2 Response Codes

Code	Definition
M	Match
N	No match.
P	Not Processed
S	Should be on card but was not provided. (Visa only)
U	Issuer not participating or certified.

Appendix 2 – Code Samples

Merchant Sample Implementation

Given the variety of possible implementations (e.g. SPA Web App, MVC Application, etc.) it's not possible in this document to capture every possible implementation. Below is a sample integration of the PowerTranz API into a merchant web application using a simplified MVC (Model, View, Controller) architecture using OpenAPI to generate a HTTP Client and Model.



1) Merchant Check Out View
   Merchant application gathers Card Holder data and posts data to Authentication View.
2) Authentication View with iFrame
   The Merchant application submits Auth Request to the Auth Endpoint and returns Auth Response to the Authentication View. This view will contain an Iframe to which the RedirectData will be bound.
   - PowerTranz End Point: {PowerTranz Root URL}/api/spi/auth
   - Request Body: Auth Request
   - The AuthRequest.ExtendedData.MerchantResponseUrl attribute must contain a URI in the Merchant Application domain to which the Iframe will Post the final Authentication Response.
   - Response: Auth Response containing IsoResponseCode and RedirectData – an HTML form that will execute within the context of the Iframe.
   - AuthResponse.RedirectData is injected or bound to the Iframe. For example:

```
<div class="text-center">
    <h4 class="display-4">IFrame</h4>
    <iframe id="threedsIframe" ref="threedsIframe" srcdoc="@Model.RedirectData">
    </iframe>
</div>
```

-

3) The Iframe
   Once the RedirectData has been bound to the Iframe, the process will continue in the context of the Iframe.
   - The Card Holder may then be challenged (Challenge) to add further authentication at which point a form will appear in the iFrame and the Card Holder will enter additional information. Once the Card Holder enters the required information the Iframe context will post the Authentication result directly to the Merchant Response URL.
   - Alternatively, if no additional Card Holder input is required (Frictionless), the iFrame context will post the Authentication result directly to the Merchant Response URL.
   - In both examples (Challenge and Frictionless) the Authentication Result is posted to the Merchant Response URL.

4) Merchant Response URL and iFrame Removal
   - The Merchant Response URL is a page that exists within the Merchant Application's domain.
   - It is the iFrame context that will post the final Authentication result to this page and its lifespan is intended to be very short lived and transparent to the cardholder browser.
   - This page will contain JavaScript that will redirect the iFrame's parent container to the Authentication Result View effectively removing the Iframe and returning control to the Merchant Application. For example:

```
<script>

    window.onload = redirectParent;

    function redirectParent() {
        window.parent.location = './AuthenticationResult';
    }

</script>
```

5) Authentication Result View
   This view will process the final authentication result. If successful, the Merchant App will continue through to Payment Completion.
6) Payment Completion View
   The Merchant App can now call subsequent end points such as Payment, Capture and/or Void.

Appendix 3 – FcDetails

Parameter Name	Req	Format	Length Max/ Value	Description
FcDetails	C			Data received directly from Kount
Version	C	AN	4	Version of Kount
Mode	C	AN	1	Fixed value U
TransactionId	C	AN	12	Kount transaction ID number
MerchantId	C	N		Kount Merchant ID
SessionId	C	AN	32	Unique Session ID
OrderNumber	C	AN	32	Merchant's Order Number
Auto	C	AN	1	Auto-decision response code: • A - Approve • D - Decline • R - Review • E – Escalate Same as value FcResponseCode
Score	C	N		Kount Score
Geox	C	AN	2	Persona related country with highest probability of fraud
Brand	C	AN	4	Brand of credit card used : Amex, MSTR
Velo	C	N		Quantity of orders seen from persona within last 14 days
Vmax	C	N		Quantity of orders from persona within the most active 6 hour window in last 14 days.
Network	C	AN	1	Riskiest network type associated with persona within the last 14 days • A - Anonymous • H - High School • L - Library • N - Normal • O - Open Proxy • P - Prison • S - Satellite
Kaptcha	C	BOOL		Whether or not device data was collected by the Data Collector process
Proxy	C	BOOL		Was a proxy server detected with this order
Emails	C	N		Total number of unique email addresses associated to persona as seen by Kount
HttpCountry	C	AN	2	User Home country the device owner has set in the device's Control Panel
TimeZone	C	AN	6	The timezone the device owner has set in the device's Control Panel. The value listed represents the number of minutes from Greenwich Meantime. Divide by 60 to get number of hours.
Cards	C	N		Total number of credit cards associated to persona as seen by Kount
PcRemote	C	BOOL		Is the device enabled to use PC Remote software
Devices	C	N		Total number of unique devices associated to the persona as seen by Kount
DeviceLayers	C	AN	55	5 device layers representing the operating system, browser,

				javascript settings, cookie setting and flash settings. Device layers are used to create the device fingerprint.
MobileForwarder	C	BOOL		If device is mobile, is it using a forwarder to process the carrier's service
VoiceDevice	C	BOOL		Is the device voice activated
LocalTime	C	AN	20	The local time the device owner has set in the device's Control Panel
FingerPrint	C	AN	32	The unique fingerprint of the device placing the order
Flash	C	BOOL		A flag to indicate if the device placing order has 'flash' enabled or not
Language	C	AN	2	The language the device owner has set in the device's Control Panel
Country	C	AN	2	Two-character ISO country code associated with the physical device
Cookies	C	BOOL		Flag to indicate if the device placing order has 'cookies' enabled or not
MobileDevice	C	BOOL		Is the device placing the order of a mobile nature (iPhone. Android; Blackberry; iPad, etc.)
Site	C	AN	8	Website or Merchant ID (processor) identifier of where the order orginated
IPAddress	C	N		Proxy IP address
IPAddressLatitude	C	N		Latitude of proxy IP address
IPAddressLongitude	C	N		Longitude of proxy IP address
IPAddressCountry	C	AN	2	Country of proxy IP address (2, US)
IPAddressRegion	C	AN	2	State/Region of proxy IP address
IPAddressCity	C	AN	255	City of proxy IP address
IPAddressOrganization	C	AN	64	Owner of IP address or address block
DateDeviceFirstSeen	C	AN	10	Date Device First Seen
UserAgentString	C	AN	1024	User Agent String
DeviceScreenResolution	C	AN	10	Device screen resolution
OS	C	AN	64	Operating System
ErrorCode	C	AN		Error code returned from Kount
Browser	C	AN	64	Web Browser
Javascript	C	BOOL		Flag to indicate if the device placing order has 'javascript' enabled or not
MobileType	C	AN	32	iPhone; Android; iPad, etc.
PiercedIPAddress		N		Pierced IP address
PiercedIPAddressLatitude	C	N		Latitude of pierced IP address
PiercedIPAddressLongitude	C	N		Longitude of pierced IP address
PiercedIPAddressCountry	C	AN	2	Country of pierced IP address
PiercedIPAddressRegion	C	AN	2	State/Region of pierced IP address
PiercedIPAddressCity	C	AN	255	City of pierced IP address
PiercedIPAddressOrganization	C	AN	64	Owner of pierced IP address or address block
ReasonCode	C	AN	16	Custom Reason Code associated with Rule Action
Region	C	AN	2	Region associated to the device location