



Moneris Checkout Integration Guide

Version: 1.0.12

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## Getting Help

Moneris has help for you at every stage of the integration process.

| Getting Started   | During Development   | Production   |
|---|--|--|
| Contact our Client Integration Specialists:<br><br>clientintegrations@moneris.com | If you are already working with an integration specialist and need technical development assistance, contact our eProducts Technical Consultants:<br><br>1-866-319-7450<br><br>eproducts@moneris.com | If your application is already live and you need production support, contact Moneris Customer Service:<br><br>onlinepayments@moneris.com<br><br>1-866-319-7450<br><br>Available 24/7 |

For additional support resources, you can also make use of our community forums at

<http://community.moneris.com/product-forums/>

## System and Skills Requirements

In order to integrate with Moneris Checkout as a merchant, you must have:

- An e-commerce website with a back-end server

For development, you should have some understanding of the following:

- JavaScript
- JSON
- Server-side programming

Additionally, for Google Pay™ integration, all your front-end web pages must use the HTTPS protocol.

## Changes in v1.0.12

- Added **allow\_edit** field to the optional pre-load request objects Customer Details, Shipping Details, and Billing Details
- Added topic on Allowing Edits for Customer, Shipping, and Billing Details that covers the Moneris Checkout behavior when using different combinations of pre-load optional objects and the MRC configuration adding the fields to the MCO page itself.
- Added **shipping amount** field to the pre-load request as a general optional field
- Added Callback Response 2004 to "Callback Response Codes – Moneris Checkout" on page 93

### Changes in v1.0.11

- Added fields for 3DS 2.2 to the Response to Receipt Request: **ThreeDSVersion**, **AuthenticationType**, **ThreeDSACSTransID**, **ThreeDSAuthTimeStamp**, **DSTransID**

### Changes in v1.0.10

- Clarified limits for request field **request type**
- Amended JSON sample code for Preload request and Response to Receipt Request

### Changes in v1.0.8

- Added new array object **token** to the Preload request, which contains one to three pairs of **data key** and **issuer ID** request fields; each pair within token represents an instance of a payment card stored in the Moneris Vault
- Added new topic for the optional Token object
- Added new request field **prompt for CVV** in Preload request
- Added new topic about Pay by Token: Tokens and Pay By Token
- Added new response field **pay by token** in Response to Receipt Request

- Amended data structure diagrams in Preload Request
- Corrected value for INTERAC® in response field **card type**
- Added topic about Installments

#### Changes in v1.0.7

- Added convenience fee response field information to Definition of Response Fields - Response to Receipt Request and the sample JSON response
- Added information to Tokenization of Credentials in Moneris Checkout to indicate that Moneris Checkout now supports updating of tokens
- Added explication about adding and updating tokens to the description of the tokenization message response field in the Definition of Response Fields - Response to Receipt Request
- Added topic about test cards
- Changed name of convenience fee response fields to reflect service fee name change
- Corrected human name and description for the details field in the CVD sub-object in the Fraud object in Response to Receipt Request
- New data object in the Response to Receipt Request, **vault data** object, with two new response fields **data key** and **is data key valid**
- Updated sample code for Example Preload Request and Example Response to Receipt Request
- Amended data structure diagrams in Response to Receipt Request topics
- Added note about billing-related fields and 3-D Secure in the Billing Fields Object topic
- Added new request URLs for testing and production in Implementing Preload Server-to-Server Logic, Implementing Receipt Request Server-to-Server Logic, Testing Your Moneris Checkout Solution and Moving to Production with Moneris Checkout topics
- Added new Checkout JS path URLs for testing and production in Preparing Your Client-Side Checkout Page, Testing Your Moneris Checkout Integration and Moving to Production with Moneris

### Checkout topics

- Added API token for testing Convenience Fee in Test Cards for Moneris Checkout

### Changes in v1.0.6

- Changed limits for request fields **shipping province** and **billing province** to 2 characters

### Changes in v1.0.5

- Corrected limit for the request field **start date**

### Changes in v1.0.4

- Added new callback types Page Closed and Payment Submitted
- Changed references to the **monerisCheckout** object to **myCheckout**
- Added information about restricted special character " in some request fields
- Removed reference to restricted special characters in **items.description** in the Shopping Cart object, as they are now supported for that field

### Changes in v1.0.3

- Added new response field **isDebit** to Response to Receipt Request
- Added support for Apple Pay and Google Pay™ wallet transactions

### Changes in v1.0.2

- Corrected the limit of **order number** response field to 45 characters

### Changes in v1.0.1

- Added information about 3-D Secure 2.0, including a new response field, **transaction status**
- Added information about Multi-Currency Pricing
- Updated diagrams and sample code to reflect 3-D Secure 2.0 and Multi-Currency Pricing



- Corrected limits of request fields in the Preload request: order number, customer ID, dynamic descriptor
- Corrected limits of request fields in the Recurring Billing object: number of recurs
- Corrected limits of request fields in the Shopping Cart object: item description, item product code, tax description
- Corrected limits of request fields in the Shipping Details object: shipping address line 1 and 2, shipping city, shipping province, shipping country, shipping postal code
- Corrected limits of request fields in the Billing Details object: billing address line and 2, billing city, billing province, billing postal code
- Added additional information about the behaviour of callbacks in the topics Payment Receipt and Payment Complete
- In the Definition of Response Fields - Response to Receipt Request, corrected description of the response field **3-D Secure code**
- In Callback Response Codes topic, corrected the description of code 2001 and added new codes 2002 and 2003



# 1 About Moneris Checkout

Moneris Checkout gives e-commerce merchants a simple and secure way to process payments by integrating a Moneris-hosted payment module into the merchant checkout page.

## 2 Building Your Moneris Checkout Integration

- 2.1 Configuring Moneris Checkout in Merchant Resource Center
- 2.2 Moneris Checkout Transaction Process Flow
- 2.3 Preparing Your Client-Side Checkout Page
- 2.4 Implementing Preload Server-to-Server Logic
- 2.5 Displaying the Moneris Checkout Page in the Browser
- 2.6 Handling Callbacks
- 2.7 Implementing Receipt Request Server-to-Server Logic
- 2.8 Terminating the Moneris Checkout Instance

### 2.1 Configuring Moneris Checkout in Merchant Resource Center

The first step is to configure your Moneris Checkout page in the Moneris Merchant Resource Center (MRC).

In the initial stage of development, you create a test configuration in the testing MRC. Once the solution is ready to be deployed to production, you must create a new, separate configuration for the production environment in the production MRC.

The **checkout ID** is the key value that is generated after the configuration is completed and used within the Preload Request in order to identify the specific Moneris Checkout configuration.

To get the checkout ID and start configuring your page, do the following:

1. Log into the Merchant Resource Center at one of the following URLs (according to your stage of development)  
Testing: <https://esqa.moneris.com/mpg>  
Production: <https://www3.moneris.com/mpg>
2. In the Admin menu, select **Moneris Checkout Config**
3. Click the **Create Profile** button
4. Follow the on-screen steps to complete the configuration

For more information, see the Merchant Resource Center documentation available for download on the Moneris developer portal at:

[developer.moneris.com](https://developer.moneris.com)

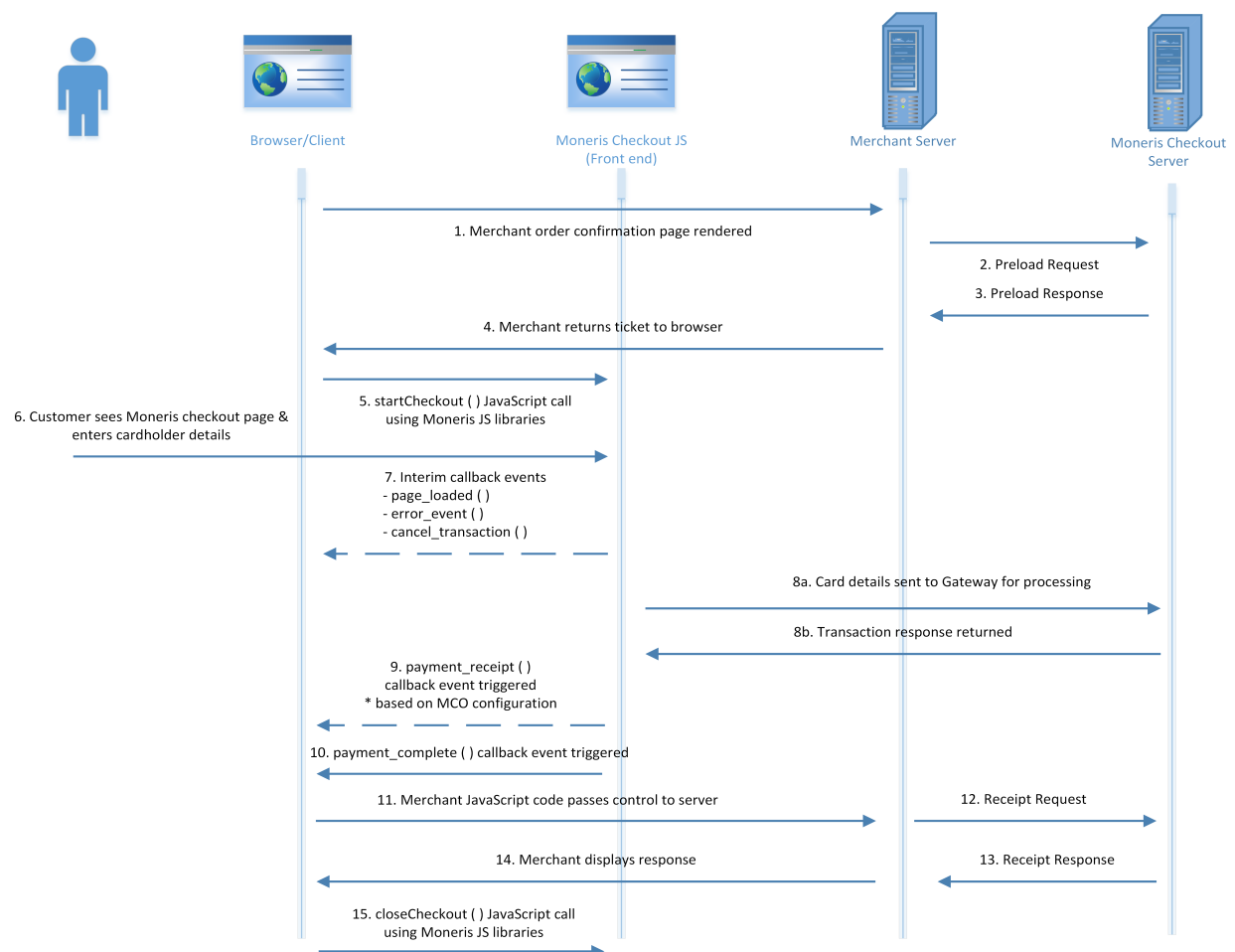
## 2.1.1 Additional Features to Configure in the MRC

There are other features of the Moneris Checkout page that you can enable using the configurator in the Merchant Resource Center. They include:

- Tokenization of credentials
- Fraud tool behaviour
- Window sizing
- Multi-Currency Pricing

For more on configuring these features, see 3 Additional Features in Moneris Checkout.

## 2.2 Moneris Checkout Transaction Process Flow



## 2.3 Preparing Your Client-Side Checkout Page

In order to prepare your client-side checkout page for interacting with Moneris Checkout, you need to do a few tasks first:

1. Add a call to the Moneris Checkout JavaScript library in a `<script>` tag:

**Testing:**

```
<script src="https://gatewayt.moneris.com/chktv2/js/chkt_v2.00.js"></script>
```

**Production:**

```
<script src="https://gateway.moneris.com/chktv2/js/chkt_v2.00.js"></script>
```

2. Create a `<div>` in the HTML:

```
<div id="monerisCheckout"></div>
```

- a. (optional): If you are not using the "Full screen" window sizing option, you will need to define the size of your window by creating another `<div>` around this one, for example:

```
<div id="outerDiv" style="width:400px"; height"300px">
```

```
<div id="monerisCheckout"></div>
```

```
</div>
```

3. Instantiate the **monerisCheckout** object and set it up:

```
var myCheckout = new monerisCheckout();  
  
myCheckout.setMode("qa");  
  
myCheckout.setCheckoutDiv("monerisCheckout");
```

4. Set callbacks in JavaScript:

```
myCheckout.setCallback("page_loaded", myPageLoad);  
  
myCheckout.setCallback("cancel_transaction", myCancelTransaction);  
  
myCheckout.setCallback("payment_receipt", myPaymentReceipt);  
  
myCheckout.setCallback("payment_complete", myPaymentComplete);
```

For more information about callbacks in Moneris Checkout, see 2.6 Handling Callbacks.

## 2.4 Implementing Preload Server-to-Server Logic

The Preload request is the means by which a Moneris Checkout instance is securely generated at transaction time. It involves a server-to-server post using the JSON format documented in 2.4.1 Preload Request .

The response to the Preload request returns a ticket number which uniquely identifies the instance and must be passed in the JavaScript `myCheckout.startCheckout (ticket #)` request in order to display the Moneris Checkout page in the browser.

**NOTE:** The ticket number expiration time is set to 30 minutes.

In your server implementation, use the following Moneris Checkout URLs to post to, depending on the development stage:

### Testing:

<https://gatewayt.moneris.com/chktv2/request/request.php>

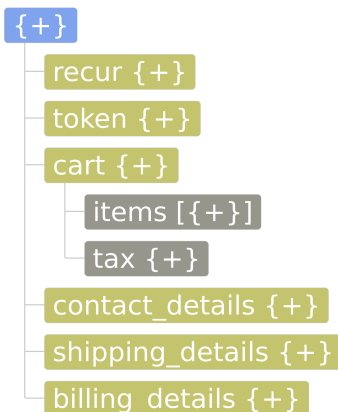
### Production:

<https://gateway.moneris.com/chktv2/request/request.php>

### 2.4.1 Preload Request

Transaction requests are sent to the Moneris Checkout server using JSON.

#### JSON structure overview for Preload request



**Request fields for Preload request – Required**

| Variable Name                         | Type and Limits   | Description   |
|---------------------------------------|---|---|
| store ID<br>store_id                  | String<br>N/A   | Unique identifier provided by Moneris upon merchant account setup   |
| API token<br>api_token                | String<br>N/A   | Unique alphanumeric string assigned upon merchant account activation  |
| checkout ID<br>checkout_id            | String<br>30-character alphanumeric   | Identifies your Moneris Checkout configuration; this is given to you when you configure your page in the Merchant Resource Center |
| transaction total amount<br>txn_total | String<br>10-character decimal<br><br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point<br><br><b>EXAMPLE: 1234567.89</b> | The total dollar amount of the transaction  |
| developmental mode<br>environment     | String<br>alphabetic  | Indicates the stage of development you are sending the request for:<br><br>testing = qa<br><br>production = prod                  |
| request type<br>action                | String<br>alphabetic<br><br>case-sensitive, lowercase only  | Type of request being made to Moneris Checkout server<br><br>Allowable values:<br>preload or receipt                              |

**Request fields for Preload request – Optional**

| Variable Name            | Type and Limits                     | Description   |
|--------------------------|-------------------------------------|---|
| order number<br>order_no | String<br>50-character alphanumeric | The order number is a unique identifier appended to every financial transaction |



| Variable Name   | Type and Limits   | Description  |
|---|---|--|
|   | <b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \  |  |
| customer ID<br><code>cust_id</code>                   | <i>String</i><br>50-character alphanumeric<br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \  | Merchant-defined field that can be used as an identifier<br>Searchable from the Moneris Merchant Resource Center   |
| dynamic descriptor<br><code>dynamic_descriptor</code> | <i>String</i><br>20-character alphanumeric<br>total of 22 characters including your merchant name and separator<br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Merchant-defined description sent on a per-transaction basis that will appear on the credit card statement appended to the merchant's business name<br>Dependent on the card issuer, the statement will typically show the dynamic descriptor appended to the merchant's existing business name separated by the "/" character; additional characters will be truncated<br><b>NOTE:</b> The 22-character maximum limit must take the "/" into account as one of the characters |
| language<br><code>language</code>                     | <i>String</i><br>2-character alphabetic   | Determines which language Moneris Checkout will display information in<br>Allowable values:<br>en – English<br>fr – French   |
| shipping amount<br><code>shipping_amount</code>       | <i>String</i><br>10-character decimal   | Shipping cost of the items to be shipped   |
| data key  | <i>String</i>   | Unique identifier for a Vault profile,   |

| Variable Name                                     | Type and Limits  | Description  |
|---|--|--|
| <code>data_key</code>                             | 25-character alphanumeric  | <p>and used in future Vault financial transactions to associate a transaction with that profile</p> <p>Data key is generated by Moneris and returned to you in the Receipt object when the profile is first registered</p> <div> <b>NOTE:</b> Only send this field with Vault Card Update, or else the Preload request will be rejected; this feature is only available when the Preload transaction type sent is a Card Verification </div> |
| <p>prompt for CVV</p> <p><code>ask_cvv</code></p> | <p><i>String</i></p> <p>1-character alphabetic</p> <p>Y or N</p> | <p>When set to Y, Moneris Checkout will prompt the cardholder to enter their CVV when they select a payment card that has been stored as a token</p> <div> <b>NOTE:</b> This field is only applicable when sending the Token object </div>   |

### Additional request objects in Preload request – Optional

| Variable Name  | Type and Limits                 | Description  |
|--|---------------------------------|--|
| <p>Recurring Billing</p> <p><code>recur</code></p>           | <p><i>Object</i></p> <p>N/A</p> | Contains fields related to Recurring Billing   |
| <p>Shopping Cart</p> <p><code>cart</code></p>                | <p><i>Object</i></p> <p>N/A</p> | The virtual shopping cart and its contents   |
| <p>Contact Details</p> <p><code>contact_details</code></p>   | <p><i>Object</i></p> <p>N/A</p> | <p>Customer contact information</p> <p>This object is returned in the Response to Receipt Request as the Customer Information response object (<code>cust_info</code>)</p> |
| <p>Shipping Details</p> <p><code>shipping_details</code></p> | <p><i>Object</i></p> <p>N/A</p> | Customer shipping information  |

| Variable Name                | Type and Limits     | Description  |
|------------------------------|---------------------|--|
| Billing Details              | <i>Object</i>       | Customer billing information   |
| <code>billing_details</code> | N/A                 |  |
| <code>token</code>           | <i>Array Object</i> | Array object containing between 1 to 3 pairs of a unique data key and an associated issuer ID, each pair representing an instance of a payment card stored in the Moneris Vault; used for Pay By Token transactions. |
| <code>token</code>           | N/A                 |  |

#### 2.4.1.1 Optional Preload Request Objects

Moneris Checkout also allows you to send optional objects in the Preload request that reflect additional information entered by the customer at checkout, enable additional features, or meet transaction processing requirements.

Optional objects you can use include:

- Recurring Billing Object
- Shopping Cart Object
- Contact Details Object
- Shipping Details Object
- Billing Details Object

If you have configured Moneris Checkout to handle these additional items, you do not need to send the corresponding object in the Preload request.

- For Recurring Billing, Shopping Cart, and Token objects, only send these optional objects if you are using your own e-commerce page to collect them separately from Moneris Checkout.
- For Customer, Shipping, and Billing Details objects, you may configure Moneris Checkout to handle collecting information AND send it in the Preload request as well. Moneris Checkout behavior around this functionality is covered below in Allowing Edits for Contact, Shipping, and Billing Details

The following screenshot shows what you select in the Merchant Resource Center if you are collecting additional items on your own e-commerce page:

## Checkout Type

☐ Use Moneris for the complete end to end order process  
 Use Moneris for the complete order process from the order summary, shipping and payment.

---

☒ I have my custom order form and want to use Moneris simply for payment processing.  
 Select this option if you want to embed Moneris payment details within your own order form.

## Allowing Edits for Contact, Shipping, and Billing Details

Moneris Checkout allows submitting Contact, Shipping, and Billing Details optional objects in the Preload request and enabling those items within the Checkout page itself. Moneris Checkout takes the information from the Preload and pre-fills each item on the Checkout page. This is used to simplify the checkout process, allowing the customer to review the information collected elsewhere.

Use the `allow_edit` field within each pre-load object to control the behavior of the Checkout page; if you want the customer to have the option to edit the contact, shipping, or billing details, enable it in the Preload.

**NOTE:** By default, `allow_edit` is disabled for these optional objects if not submitted or passed as an empty field. If the Merchant Resource Center is configured to use Contact, Shipping, and Billing details, the information is displayed to the customer but edits are not allowed.

| MRO Configuration (Cust Info) | Info in Preload? | Preload Allows Edit? | Checkout Behavior   |
|-------------------------------|------------------|----------------------|---|
| No                            | -                | -                    | MRC configuration of Contact, Shipping, and Billing is required for their fields to display on the Checkout page, regardless if the information is sent in the pre-load or not. |

| MRO Configuration (Cust Info)  | Info in Preload?  | Preload Allows Edit?        | Checkout Behavior  |
|--|---|-----------------------------|--|
| No   | Y   | N                           | MRC configuration of Contact, Shipping, and Billing is required for their fields to display on the Checkout page, regardless if the information is sent in the pre-load or not.  |
| Yes  | Yes   | Y                           | Information in the pre-load is pre-populated within the Checkout page, but the customer can edit fields.   |
| Yes  | Yes   | N                           | Information in the pre-load is pre-populated within the Checkout page, but the customer can only review the information. They may need to go back to the merchant website to edit information, allowing the merchant additional validation outside the scope of the MCO. |
| Yes  | Yes, Partial  | N                           | Partial Information in the pre-load is pre-populated within the Checkout page, but the customer can only review the fields.<br><b>This prevents the customer from completing checkout.</b>   |
| <div> <b>NOTE:</b> It is highly recommended that you validate all required information is provided in the pre-load. </div> |   |                             |  |
| Yes  | Yes   | N (Billing)<br>Y (Shipping) | Billing information is visible to the customer, but read-only. The shipping fields are pre-populated from the pre-load information and editable. The 'Same as shipping address' checkbox does not display for the customer.  |
| Yes  | No  | -                           | Moneris Checkout displays empty fields for the customer to manually enter their information.   |
| Yes  | Yes, but missing required data, such as phone number or billing-postal code | N                           | Preload validation error. Returns an error message, such as indicating that the postal code is missing from the pre-load.<br><br>The Checkout page is not generated and no ticket is returned.   |

## Recurring Billing Object

Optional object

Include this object in Preload request to indicate the start of a series of Recurring Billing transactions that will be managed by Moneris.

**NOTE:** Recurring Billing is not allowed when using Multi-Currency Pricing or Gift Cards.

### Top level object field

recur

### Request fields for Recurring Billing object

| Variable Name                        | Type and Limits   | Description   |
|--------------------------------------|---|---|
| number of recurs<br>number_of_recurs | String<br>numeric<br>1-999  | The number of times that the transaction must recur   |
| period<br>recur_period               | String<br>numeric<br>1-999  | Number of recur unit intervals that must pass between recurring billings  |
| recurring amount<br>recur_amount     | String<br>10-character decimal, minimum three digits<br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point<br><b>EXAMPLE:</b> 1234567.89 | Dollar amount of the recurring transaction<br><br>This amount will be billed on the start date, and then billed repeatedly based on the interval defined by period and recur unit |
| recur unit<br>recur_unit             | String<br>day, week, month or eom   | Unit to be used as a basis for the interval<br><br>Works in conjunction with the period variable to define the billing frequency  |

| Variable Name            | Type and Limits           | Description   |
|--------------------------|---------------------------|---|
| start date<br>start_date | String<br>YYYYMMDD format | Date of the first future recurring billing transaction; this must be a date in the future<br><br>If an additional charge will be made immediately, the start now variable must be set to true |
| bill now<br>bill_now     | String<br>true or false   | Set to true if a charge will be made against the card immediately; otherwise set to false   |

### Shopping Cart Object

Optional object

The shopping cart object can contain multiple items (each item is represented as its own array within the Shopping Cart object).

#### Top level object field

cart

#### Request fields for Shopping Cart object

| Variable Name  | Type and Limits   | Description  |
|--|---|--|
| shopping cart items<br>items                         | Object<br>sub-object containing arrays, nested within <code>cart</code><br><br>contains following items in <a href="#">blue</a> | Encapsulates the entire array of items in the shopping cart                  |
| item URL<br><code>items.url</code>                   | String<br>alphanumeric  | URL that corresponds to the image of the Moneris Checkout shopping cart item |
| item description<br><code>items.description</code>   | String<br>200-character alphanumeric  | Describes the item in the shopping cart                                      |
| item product code<br><code>items.product_code</code> | String<br>50-character alphanumeric   | The SKU for the item   |

| Variable Name   | Type and Limits   | Description   |
|---|---|---|
| <div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> |   |   |
| item unit cost<br><code>items.unit_cost</code>  | <i>String</i><br><br>10-character decimal<br><br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point<br><br><div> <b>EXAMPLE:</b> 1234567.89         </div> | Per-unit cost of the item   |
| item quantity<br><code>items.quantity</code>  | <i>String</i><br><br>numeric<br><br>6 characters maximum  | Number of individual instances of the given item in the shopping cart           |
| subtotal<br><code>subtotal</code>   | <i>String</i><br><br>10-character decimal<br><br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point<br><br><div> <b>EXAMPLE:</b> 1234567.89         </div> | Total dollar amount of the shopping cart, before taxes                          |
| tax<br><code>tax</code>   | <i>Object</i><br><br>sub-object nested within <code>cart</code><br><br>contains following items in <code>blue</code>  | Contains information related to taxes charged on the items in the shopping cart |
| tax amount<br><code>tax.amount</code>   | <i>String</i><br><br>10-character decimal<br><br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal  | Dollar amount of taxes  |



| Variable Name                      | Type and Limits  | Description                         |
|------------------------------------|--|-------------------------------------|
|                                    | point<br><div>EXAMPLE: 1234567.89</div>  |                                     |
| tax description<br>tax.description | String<br>50-character alphanumeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> | Describes type of tax being applied |
| tax rate<br>tax.rate               | String<br>Must be a number with up to 3 decimal places<br><div>EXAMPLE: xx or xx.x or xx.xx or xx.xxx</div>  | Percentage tax rate charged         |

### Contact Details Object

Optional object

#### Top level object field

contact\_details

#### Request fields for Contact Details object

| Variable Name            | Type and Limits                     | Description         |
|--------------------------|-------------------------------------|---------------------|
| first name<br>first_name | String<br>30-character alphanumeric | Customer first name |
| last name<br>last_name   | String<br>30-character alphanumeric | Customer last name  |
| email<br>email           | String<br>255-character alpha-      | Customer email      |

| Variable Name | Type and Limits                  | Description  |
|---------------|----------------------------------|--|
|               | numeric                          |  |
| phone number  | <i>String</i>                    | Customer phone number  |
| phone         | 30-character alphanumeric        |  |
| allow edit    | <i>String</i>                    | Controls customer edits of customer detail fields displayed within the Checkout frame. Optional field, default is N. |
| allow_edit    | 1-character alphabetic<br>Y or N |  |

### Shipping Details Object

Optional object

#### Top level object field

shipping\_details

#### Request fields for Shipping Details object

| Variable Name                        | Type and Limits  | Description                    |
|--------------------------------------|--|--------------------------------|
| shipping address line 1<br>address_1 | <i>String</i><br>50-character alphanumeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Customer shipping address      |
| shipping address line 2<br>address_2 | <i>String</i><br>50-character alphanumeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Customer shipping address      |
| shipping city<br>city                | <i>String</i><br>50-character alphanumeric<br><br><b>NOTE:</b>   | Customer shipping address city |

| Variable Name        | Type and Limits   | Description  |
|----------------------|---|--|
|                      | <div>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div>                   |  |
| shipping province    | <i>String</i>   | Customer shipping address province   |
| province             | 2-character alphanumeric  | Country subdivision ISO 3166-2   |
| shipping country     | <i>String</i>   | Customer shipping address country  |
| country              | 2-character alphanumeric  | ISO 3166-1 alpha-2   |
| shipping postal code | <i>String</i>   | Customer shipping address postal code  |
| postal code          | 20-character alphanumeric   |  |
|                      | <div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> |  |
| allow edit           | <i>String</i>   | Controls customer edits of shipping detail fields displayed within the Checkout frame. Optional field, default is N. |
| allow_edit           | 1-character alphabetic<br>Y or N  |  |

### Billing Details Object

Optional object

**NOTE:** Billing-related fields are required when sending 3-D Secure authentication transactions, or else the authentication process may fail.

### Top level object field

billing\_details

## Request fields for Billing Details object

| Variable Name                       | Type and Limits   | Description   |
|-------------------------------------|---|---|
| billing address line 1<br>address_1 | String<br>50 character alphanumeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Customer billing address  |
| billing address line 2<br>address_2 | String<br>50 character alphanumeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Customer billing address  |
| billing city<br>city                | String<br>50-character alphanumeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \ | Customer billing address city   |
| billing province<br>province        | String<br>2-character alphanumeric  | Customer billing address province<br>Country subdivision ISO 3166-2   |
| billing country<br>country          | String<br>2-character alphabetic  | Customer billing address country<br>ISO 3166-1 alpha-2  |
| billing postal code<br>postal_code  | String<br>20-character alphanumeric   | Customer billing address postal code  |
| allow edit<br>allow_edit            | String<br>1-character alphabetic<br>Y or N  | Controls customer edits of billing detail fields displayed within the Checkout frame. Optional field, default is N. |

## Token Object

### Optional array object

Array object containing between 1 to 3 pairs of a unique data key and an associated issuer ID, each pair representing an instance of a payment card stored in the Moneris Vault. Used for Pay By Token transactions.

Moneris Checkout will accept a maximum three token pairs of data key and issuer ID for each customer

### Top level object field

token

### Request fields for Token object

| Variable Name          | Type and Limits  | Description  |
|------------------------|--|--|
| data key<br>data_key   | String<br>25-character alphanumeric                    | Unique identifier for a Vault profile, and used in future Vault financial transactions to associate a transaction with that profile<br><br>Data key is generated by Moneris and returned to you in the Receipt object when the profile is first registered   |
| issuer ID<br>issuer_id | String<br>15-character alphanumeric<br>variable length | Unique identifier for the cardholder's stored credentials<br><br>Sent back in the response from the card brand when processing a Credential on File transaction<br><br>If the cardholder's credentials are being stored for the first time, and the issuer ID was returned in the response, you must save the issuer ID on your system to use in subsequent Credential on File transactions (applies to merchant-initiated transactions only)<br><br>The issuer ID must be saved to your systems when returned from Moneris Gateway in the response data, regardless if the value was received or not<br><br>As a best practice, if the issuer ID is not returned and you received a value of NULL instead, store that value and send it in the subsequent transaction |

### 2.4.1.2 Example Preload Request JSON

**NOTE:** This example reflects a Preload request with all optional objects; the code is for illustrative purposes only and is not executable.

```
{
  "store_id": "moneris",
  "api_token": "hurgle",
  "checkout_id": "chkt5BF66neris",
  "txn_total": "452.00",
  "environment": "qa",
  "action": "preload",
  "token": [
    {
      "data_key": "abc123datakey1",
      "issuer_id": "645sddfvdrt4tefd"
    },
    {
      "data_key": "abc123datakey2",
      "issuer_id": "645sddfvdrt4tefd"
    },
    {
      "data_key": "abc123datakey3",
      "issuer_id": "645sddfvdrt4tefd"
    }
  ],
  "ask_cvv": "Y",
  "order_no": "",
  "cust_id": "chkt - cust - 0303",
  "dynamic_descriptor": "dyndesc",
  "language": "en",
  "shipping_amount": "200.00",
  "recur": {
    "bill_now": "true",
    "recur_amount": "1.00",
    "start_date": "2021-11-21",
    "recur_unit": "month",
    "recur_period": "1",
    "number_of_recurs": "10"
  },
}
```

```
"cart":{
  "items":[
    {
      "url":"https:\\\\example.com\\examples\\item1.jpg",
      "description":"One item",
      "product_code":"one_item",
      "unit_cost":"100.00",
      "quantity":"1"
    },
    {
      "url":"https:\\\\example.com\\examples\\item2.jpg",
      "description":"Two item",
      "product_code":"two_item",
      "unit_cost":"200.00",
      "quantity":"1"
    },
    {
      "url":"https:\\\\example.com\\examples\\item3.jpg",
      "description":"Three item",
      "product_code":"three_item",
      "unit_cost":"100.00",
      "quantity":"1"
    }
  ],
  "subtotal":"400.00",
  "tax":{
    "amount":"52.00",
    "description":"Taxes",
    "rate":"13.00"
  }
},
"contact_details":{
  "first_name":"bill",
  "last_name":"smith",
  "email":"test@moneris.com",
  "phone":"4165551234",
  "allow_edit":Y
},
"shipping_details":{
  "address_1":"1 main st",
  "address_2":"Unit 2012",
  "city":"Toronto",
  "province":"ON",
```

```

    "country": "CA",
    "postal_code": "M1M1M1",
    "allow_edit": Y
  },
  "billing_details": {
    "address_1": "1 main st",
    "address_2": "Unit 2000",
    "city": "Toronto",
    "province": "ON",
    "country": "CA",
    "postal_code": "M1M1M1",
    "allow_edit": Y
  }
}

```

## 2.4.2 Response to Preload Request

### Response Fields – Response to Preload Request

| Variable Name                                 | Description  |
|---|--|
| <b>response</b><br><code>"response": {</code> | Top level response object  |
| <b>success</b><br><code>"success":</code>     | Denotes whether the Preload request was successful   |
| <b>ticket</b><br><code>"ticket":</code>       | Identifies the specific Moneris Checkout instance<br><br>Only returned if success = true   |
| <b>error</b><br><code>"error": {</code>       | Sub-object that encapsulates all errors that occurred as a result of the Preload request<br><br>Only returned if success = false |
| <b>data</b><br><code>"data":</code>           | Describes the specific type of error that occurred as a result of some aspect of the Preload request                             |



#### 2.4.2.1 Example Preload Response – Successful Preload

```
{
  "response": {
    "success": "true",
    "ticket": "1585G9G9GIKKGGGIGIOG09G9OGKGJFKFJFNjuit8g9"
  }
}
```

#### 2.4.2.2 Example Preload Response – Failed Preload

```
{
  "response": {
    "success": "false",
    "error": {
      "billing_details": {
        "data": "billing address must be set when AVS is enabled"
      }
    }
  }
}
```

## 2.5 Displaying the Moneris Checkout Page in the Browser

When a customer goes to check out their items for purchase, the Moneris Checkout page is displayed in the <div> tag you created on your web site

To insert the Moneris Checkout instance into the <div>, you call the JavaScript function:

```
myCheckout.startCheckout([ticket #])
```

## 2.6 Handling Callbacks

Callbacks are the means by which Moneris Checkout communicates with your merchant checkout page. All callbacks include a single parameter defined as a JSON-formatted string.

In order to handle callbacks, you need to create JavaScript functions that receive the callbacks being sent by Moneris Checkout when the events occur. These are the functions being referred to as part of the callback set methods, as described in 2.3 Preparing Your Client-Side Checkout Page.

## 2.6.1 Callback Types

These callbacks are required to be included in the JavaScript of your page:

- Page Loaded
- Cancel Transaction
- Payment Receipt
- Payment Complete
- Page Closed
- Payment Submitted

### 2.6.1.1 Callback Response Fields

| Variable Name                               | Type and Limits               | Description   |
|---|-------------------------------|---|
| handler<br><code>handler</code>             | <i>String</i><br>alphanumeric | Describes the type of callback being used<br><br>Possible values:<br><code>cancel_transaction</code><br><code>page_loaded</code><br><code>payment_complete</code><br><code>payment_receipt</code> |
| ticket<br><code>ticket</code>               | <i>String</i><br>alphanumeric | Identifies the specific Moneris Checkout instance<br><br>This is also returned in the response to the original Preload  |
| response code<br><code>response_code</code> | <i>String</i><br>alphanumeric | Identifies the result of the callback<br><br>For information on response codes, see <a href="#">Callback Response Codes – Moneris Checkout</a>  |

### 2.6.1.2 Page Loaded

#### Callback Use

To get the page loaded status of the Moneris Checkout page.

This callback is called once the Moneris Checkout is loaded.

#### JavaScript Set Method for Callback

```
myCheckout.setCallback("page_loaded",myPageLoad);
```

#### JSON Response Message Format

```
{
  "handler": "page_loaded",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

### 2.6.1.3 Cancel Transaction

#### Callback Use

This callback is called in the event the cardholder presses the cancel button in Moneris Checkout.

Standard is to call the `closeCheckout()` method to close the Moneris Checkout `<div>`.

The `closeCheckout()` method will need to be called and a new Preload request will be required in order to initiate a new Moneris Checkout instance.

#### JavaScript Set Method for Callback

```
myCheckout.setCallback("cancel_transaction",myCancelTransaction);
```

#### JSON Response Message Format

```
{
  "handler": "cancel_transaction",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

### 2.6.1.4 Payment Receipt

#### Callback Use

Transaction is complete and receipt is ready to be collected.

If you have chosen to have Moneris Checkout generate the receipt, this callback is called once the Moneris Checkout displays the transaction receipt.

If you have chosen Moneris Checkout not to generate a receipt, this callback will not be called. For information on when to obtain the receipt response for the transaction, refer to the Payment Complete callback.

### JavaScript Set Method for Callback

```
myCheckout.setCallback("payment_receipt", myPaymentReceipt);
```

### JSON Response Message Format

```
{
  "handler": "payment_receipt",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

#### 2.6.1.5 Payment Complete

### Callback Use

This callback is called once Moneris Checkout has completed payment.

If you have chosen Moneris Checkout to generate a receipt, the cardholder has to return to your Checkout page in order for the callback to be called. For information on obtaining the receipt response for the transaction, refer to the Payment Receipt callback .

Moneris Checkout should be closed by calling the `closeCheckout()` method

### JavaScript Set Method for Callback

```
myCheckout.setCallback("payment_complete", myPaymentComplete);
```

### JSON Response Message Format

```
{
  "handler": "payment_complete",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

### 2.6.1.6 Page Closed

#### Callback Use

Called when the user is on the payment page and has submitted payment, but tries to close the window, clicks the back button in the browser or reloads the page before the payment has been confirmed, causing a JavaScript error to occur.

Moneris Checkout should be closed by calling the `closeCheckout()` method. The payment proceeds, with no changes to the payment flow.

#### JavaScript Set Method for Callback

```
myCheckout.setCallback("page_closed", myPageClosed);
```

#### JSON Response Message Format

When the user closes the window, clicks back or reload in the browser:

```
{"handler": "page_closed", "response_code": "001"}
```

When a JavaScript error occurs:

```
{
  "handler": "page_closed",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

### 2.6.1.7 Payment Submitted

#### Callback Use

This callback is called will be triggered when cardholder clicks Checkout button and payment processing is started.

#### JavaScript Set Method for Callback

```
myCheckout.setCallback("payment_submitted", myPaymentSubmitted);
```

#### JSON Response Message Format

```
{
  "handler": "payment_submitted",
  "ticket": "1539961059DdrvGG3Yj7rxvMAgvRlc4nqKXF7YjT",
  "response_code": "001"
}
```

## 2.7 Implementing Receipt Request Server-to-Server Logic

Once the Payment Complete callback has been called, your merchant website can make the server-to-server Receipt Request call in order to obtain the details of the transaction for the receipt and to determine whether the transaction was approved or declined.

In your server implementation, use the following Moneris Checkout URLs to post to, depending on the development stage:

### Testing:

<https://gatewayt.moneris.com/chktv2/request/request.php>

### Production:

<https://gateway.moneris.com/chktv2/request/request.php>

### 2.7.1 Receipt Request

Once the transaction is finished, you can request the receipt details from the Moneris Checkout server.

#### Request fields for Receipt Request – Required

| Variable Name                                  | Type and Limits                                      | Description   |
|--|--|---|
| store ID<br><code>store_id</code>              | <i>String</i><br>N/A                                 | Unique identifier provided by Moneris upon merchant account set up  |
| API token<br><code>api_token</code>            | <i>String</i><br>N/A                                 | Unique alphanumeric string assigned upon merchant account activation  |
| checkout ID<br><code>checkout_id</code>        | <i>String</i><br>30-character alphanumeric (maximum) | Identifies your Moneris Checkout configuration; this is given to you when you configure your page in the Merchant Resource Center |
| ticket number<br><code>ticket</code>           | <i>String</i><br>maximum 40-character alphanumeric   | The unique ticket number that identifies a particular transaction; this returned in the response to the Pre-load request          |
| developmental mode<br><code>environment</code> | <i>String</i><br>alphabetic                          | Indicates the stage of development you are sending the request for:<br><br>testing = qa<br><br>production = prod                  |
| request type                                   | <i>String</i>  | Type of request being made to Mon-  |

| Variable Name | Type and Limits                                  | Description   |
|---------------|--|---|
| action        | alphabetic<br><br>case-sensitive, lowercase only | eris Checkout server<br><br>Allowable values:<br><br>preload or receipt |

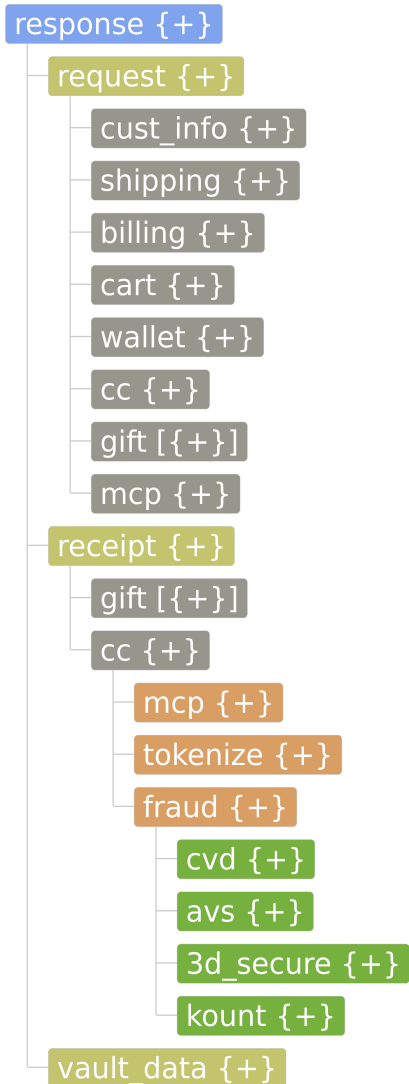
#### 2.7.1.1 Example Receipt Request JSON

```
{  
  "store_id": "example_storeId",  
  "api_token": "example_apiToken",  
  "checkout_id": "example_checkoutId",  
  "ticket": "1539966660vfTyEASfnwNrsQqFE8VkMAOcN169zt",  
  "environment": "qa",  
  "action": "receipt"  
}
```

#### 2.7.2 Response to Receipt Request

Responses to Receipt Requests can contain multiple, nested response objects.

### JSON structure for Response to Receipt Request



#### 2.7.2.1 Definition of Response Fields - Response to Receipt Request Top Level Fields

| Response Field Name and Key        | Type and Limits             | Description  |
|------------------------------------|-----------------------------|--|
| response                           | <i>Object</i>               | Top level response object  |
| <code>{"response": {</code>        | N/A                         |  |
| success<br><code>"success":</code> | <i>String</i><br>true/false | Contains information relating to the Preload request and other information that Moneris Checkout sends to the Moneris Gateway when processing the financial transaction. |



| Response Field Name and Key | Type and Limits | Description                    |
|-----------------------------|-----------------|--------------------------------|
|                             |                 | Possible values: true or false |

### 2.7.2.2 Definition of Response Fields - Response to Receipt Request - Request Within

#### Response Object Fields

The following are fields that may be returned in the Response to Receipt Request Request object within the response, shown with nesting

| Response Field Name and Key              | Type and Limits  | Description   |
|--|--|---|
| request                                  | <i>Object</i>  | Contains information relating to the Preload request and other information that Moneris Checkout sends to the Moneris Gateway when processing the financial transaction   |
| "request": {                             | N/A  |   |
| transaction total amount<br>"txn_total": | <i>String</i><br>10-character decimal<br><br>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point<br><br><b>EXAMPLE:</b> 1234567.89 | The total dollar amount of the transaction  |
| Customer Information<br>"cust_info": {   | <i>Object</i><br>N/A   | Customer contact information<br><br>The information presented in this response object will reflect one of three scenarios: <ul style="list-style-type: none"> <li>If sent in the Pre-load request, this object will echo the</li> </ul> |

| Response Field Name and Key            | Type and Limits   | Description  |
|--|---|--|
|  |   | <p>Contact Details object</p> <ul style="list-style-type: none"> <li>if Moneris Checkout is set to handle the customer contact information, it will reflect what the customer entered in the web form</li> <li>If Moneris Checkout was set to not ask for this information, the response object will be empty</li> </ul> |
| <p>first name</p> <p>"first_name":</p> | <p><i>String</i></p> <p>30-character alpha-numeric</p>  | Customer first name  |
| <p>last name</p> <p>"last_name":</p>   | <p><i>String</i></p> <p>30-character alpha-numeric</p>  | Customer last name   |
| <p>phone number</p> <p>"phone":</p>    | <p><i>String</i></p> <p>30-character alpha-numeric</p>  | Customer phone number  |
| <p>email</p> <p>"email":</p>           | <p><i>String</i></p> <p>255-character alpha-numeric</p> | Customer email   |
| <p>Shipping</p> <p>"shipping": {</p>   | <p><i>Object</i></p> <p>N/A</p>                         | <p>Contains customer shipping information</p> <p>The information</p>   |

| Response Field Name and Key                        | Type and Limits   | Description   |
|--|---|---|
|  |   | <p>presented in this response object will reflect one of three scenarios:</p> <ul style="list-style-type: none"> <li>• If sent in the Pre-load request, this object will echo the Shipping Details object</li> <li>• if Moneris Checkout is set to handle the customer shipping information, it will reflect what the customer entered in the web form</li> <li>• If Moneris Checkout was set to not ask for this information, the response object will be empty</li> </ul> |
| <p>shipping address line 1</p> <p>"address_1":</p> | <p><i>String</i></p> <p>50-character alpha-numeric</p> <div> <p><b>NOTE:</b><br/>Some special characters are not allowed:<br/>&lt; &gt; \$ % = ? ^ " { } [ ] \</p> </div> | Customer shipping address   |
| <p>shipping address line 2</p> <p>"address_2":</p> | <p><i>String</i></p> <p>50-character alpha-numeric</p>  | Customer shipping address   |

| Response Field Name and Key                         | Type and Limits   | Description   |
|---|---|---|
|   | <b>NOTE:</b><br>Some special characters are not allowed:<br><code>&lt;&gt;\$%=?"{}[]\</code>  |   |
| shipping city<br><code>"city":</code>               | <i>String</i><br>50-character alpha-numeric<br><b>NOTE:</b><br>Some special characters are not allowed:<br><code>&lt;&gt;\$%=?"{}[]\</code> | Customer shipping address city  |
| shipping country<br><code>"country":</code>         | <i>String</i><br>2-character alpha-numeric  | Customer shipping address country<br>ISO 3166-1 alpha-2   |
| shipping province<br><code>"province":</code>       | <i>String</i><br>2-character alpha-numeric  | Customer shipping address province<br>Country subdivision<br>ISO 3166-2   |
| shipping postal code<br><code>"postal_code":</code> | <i>String</i><br>20-character alpha-numeric<br><b>NOTE:</b><br>Some special characters are not allowed:<br><code>&lt;&gt;\$%=?"{}[]\</code> | Customer shipping address postal code   |
| Billing<br><code>"billing":{</code>                 | <i>Object</i><br>N/A  | Contains customer billing information<br>The information presented in this response object will reflect one of three scenarios: <ul style="list-style-type: none"> <li>• If sent in the Pre-</li> </ul> |

| Response Field Name and Key            | Type and Limits  | Description  |
|--|--|--|
|  |  | <p>load request, this object will echo the Billing Details object</p> <ul style="list-style-type: none"> <li>if Moneris Check-out is set to handle the customer billing information, it will reflect what the customer entered in the web form</li> <li>If Moneris Check-out was set to not ask for this information, the response object will be empty</li> </ul> |
| billing address line 1<br>"address_1": | <i>String</i><br>50 character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> | Customer billing address   |
| billing address line 2<br>"address_2": | <i>String</i><br>50 character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> | Customer billing address   |
| billing city                           | <i>String</i>  | Customer billing   |

| Response Field Name and Key             | Type and Limits   | Description   |
|---|---|---|
| "city":                                 | 50-character alpha-numeric<br><br><b>NOTE:</b><br>Some special characters are not allowed:<br><>\$%=?"{}[]\ | address city  |
| billing country<br>"country":           | String<br>2-character alphabetic  | Customer billing address country<br>ISO 3166-1 alpha-2  |
| billing province<br>"province":         | String<br>2-character alpha-numeric   | Customer billing address province<br>Country subdivision<br>ISO 3166-2  |
| billing postal code<br>"postal_code":   | String<br>20-character alpha-numeric  | Customer billing address postal code  |
| same as shipping<br>"same_as_shipping": | String<br>true/false  | Indicates whether the shipping address is the same as the billing address<br><br>Possible values: true or false |
| Recurring Billing<br>"recur":{          | Object<br>N/A   | Contains fields related to Recurring Billing  |
| number of recurs<br>"number_of_recurs": | String<br>numeric<br>1-999  | The number of times that the transaction must recur   |
| period<br>"recur_period":               | String<br>numeric<br>1-999  | Number of recur unit intervals that must pass between recurring billings  |
| recurring amount                        | String  | Dollar amount of the recurring transaction  |

| Response Field Name and Key                        | Type and Limits  | Description  |
|--|--|--|
| <code>"recur_amount":</code>                       | <p>10-character decimal, minimum three digits</p> <p>Up to 7 digits (dollars) + decimal point (.) + 2 digits (cents) after the decimal point</p> <p><b>EXAMPLE:</b> 1234567.89</p> | <p>This amount will be billed on the start date, and then billed repeatedly based on the interval defined by period and recur unit</p>   |
| <p>recur unit</p> <code>"recur_unit":</code>       | <p><i>String</i></p> <p>day, week, month or eom</p>  | <p>Unit to be used as a basis for the interval</p> <p>Works in conjunction with the period variable to define the billing frequency</p>  |
| <p>start date</p> <code>"start_date":</code>       | <p><i>String</i></p> <p>YYYYMMDD format</p>  | <p>Date of the first future recurring billing transaction; this must be a date in the future</p> <p>If an additional charge will be made immediately, the start now variable must be set to true</p> |
| <p>bill now</p> <code>"bill_now":</code>           | <p><i>String</i></p> <p>true or false</p>  | <p>Set to true if a charge will be made against the card immediately; otherwise set to false</p>   |
| <p>Shopping Cart</p> <code>"cart":{</code>         | <p><i>Object</i></p> <p>N/A</p>  | <p>The virtual shopping cart and its contents</p> <p>This echos the information contained in the Shopping Cart request object</p>  |
| <p>shopping cart items</p> <code>"items":[{</code> | <p><i>Object</i></p> <p>N/A</p>  | <p>Encapsulates the entire array of items in the shopping cart</p>   |

| Response Field Name and Key          | Type and Limits  | Description   |
|--------------------------------------|--|---|
| item URL<br>"url":                   | <i>String</i><br>alphanumeric  | URL that corresponds to the image of the Moneris Checkout shopping cart item    |
| item description<br>"description":   | <i>String</i><br>200-character alphanumeric  | Describes the item in the shopping cart   |
| item product code<br>"product_code": | <i>String</i><br>50-character alphanumeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt;&gt;\$%=?"^"{}[]\         </div> | The SKU for the item  |
| item unit cost<br>"unit_cost":       | <i>String</i><br>10-character decimal  | Per-unit cost of the item   |
| item quantity<br>"quantity":         | <i>String</i><br>numeric<br>6 characters maximum   | Number of individual instances of the given item in the shopping cart           |
| subtotal<br>"subtotal":              | <i>String</i><br>10-character decimal  | Total dollar amount of the shopping cart, before taxes                          |
| tax<br>"tax":                        | <i>Object</i><br>N/A   | Contains information related to taxes charged on the items in the shopping cart |
| tax amount<br>"amount":              | <i>String</i><br>10-character decimal  | Dollar amount of taxes  |
| tax description<br>"description":    | <i>String</i><br>50-character alphanumeric   | Describes type of tax being applied   |



| Response Field Name and Key      | Type and Limits  | Description  |
|----------------------------------|--|--|
|                                  | <b>NOTE:</b><br>Some special characters are not allowed:<br>< > \$ % = ? ^ " { } [ ] \                                 |  |
| tax rate<br>"rate":              | <i>String</i><br><br>Must be a number with up to 3 decimal places<br><br><b>EXAMPLE:</b> xx or xx.x or xx.xx or xx.xxx | Percentage tax rate charged  |
| credit card total<br>"cc_total": | <i>String</i><br><br>10-character decimal  | Total amount being charged to the credit card  |
| token<br>"token":                | <i>Object</i><br><br>N/A   | Top level object containing details about token/data key selected by customer for payment.   |
| data key<br>"data key":          | <i>String</i><br><br>25-character alphanumeric   | Unique identifier for a Vault profile, and used in future Vault financial transactions to associate a transaction with that profile  |
| issuer ID<br>"issuer_id":        | <i>String</i><br><br>15-character alphanumeric<br><br>variable length  | Unique identifier for the cardholder's stored credentials<br><br>Sent back in the response from the card brand when processing a Credential on File transaction<br><br>If the cardholder's credentials are being stored for the first time, and the issuer ID was returned in the response, you must save the issuer ID on |

| Response Field Name and Key             | Type and Limits                             | Description  |
|---|---|--|
|   |   | <p>your system to use in subsequent Credential on File transactions (applies to merchant-initiated transactions only)</p> <p>The issuer ID must be saved to your systems when returned from Moneris Gateway in the response data, regardless if the value was received or not</p> <p>As a best practice, if the issuer ID is not returned and you received a value of NULL instead, store that value and send it in the subsequent transaction</p> |
| <b>vault</b><br>"vault":                | <i>Object</i><br>N/A                        | Object containing info on if the token is valid or not   |
| <b>success (tokenize)</b><br>"success": | <i>String</i><br>true/false                 | <p>Indicates whether the card was successfully tokenized</p> <p>Possible values: <code>true</code> or <code>false</code></p>   |
| <b>first 4 last 4</b><br>"first4last4": | <i>String</i><br>11-character numeric       | The first 4 and last 4 digits of the card  |
| <b>data key</b><br>"datakey":           | <i>String</i><br>25-character alpha-numeric | <p>Unique identifier for a Vault profile, and used in future Vault financial transactions to associate a transaction with that profile</p> <p>Data key is generated by Moneris and returned to you in the</p>  |

| Response Field Name and Key        | Type and Limits   | Description  |
|------------------------------------|---|--|
|                                    |   | Receipt object when the profile is first registered  |
| expiry date<br>"exp_date":         | <i>String</i><br>4-character numeric                                | Card expiry date   |
| tokenization status<br>"status":   | <i>String</i><br>3-character numeric                                | Specifies what type of failure, if any, occurred during the tokenization request<br><br>Possible values:<br><br>001 = Successful creation of a temporary token<br><br>940 = Invalid profile id (on tokenization request)<br><br>941 = Error generating token<br><br>942 = Invalid Profile ID, or source URL<br><br>943 = Card data is invalid (not numeric, fails mod10, we will remove spaces)<br><br>944 = Invalid expiration date (mmyy, must be current month or in the future)<br><br>945 = Invalid CVD data (not 3-4 digits) |
| tokenization message<br>"message": | <i>String</i><br>alphabetic   | Provides additional details about the success or failure of the tokenization<br><br>Message will reflect whether details have been added or updated  |
| customer ID<br>"cust_id":          | <i>String</i><br>50-character alpha-numeric<br><br><div>NOTE:</div> | Merchant-defined field that can be used as an identifier<br><br>Searchable from the Moneris Merchant   |

| Response Field Name and Key                    | Type and Limits   | Description   |
|--|---|---|
|  | <div>Some special characters are not allowed:<br/>&lt;&gt;\$%=?"{}[]\</div> | Resource Center   |
| <b>phone number</b><br>"phone":                | <i>String</i><br>30-character alpha-numeric                                 | Customer's phone number<br><br>Can be sent in when creating or updating a Vault profile   |
| <b>email address</b><br>"email":               | <i>String</i><br>30-character alpha-numeric                                 | Customer's email address<br><br>Can be sent in when creating or updating a Vault profile  |
| <b>pan</b><br>"pan":                           | <i>String</i><br>null   | Credit card number - always null  |
| <b>expiry date</b><br>"exp_date":              | <i>String</i><br>4-character numeric  | Card expiry date  |
| <b>electronic commerce indicator</b><br>"eci": | <i>String</i><br>1-character numeric  | The e-commerce indicator or crypt type that was used to process the transaction<br><br>Possible values are:<br><br>5 - Authenticated e-commerce transaction (3-D Secure)<br><br>6 - Non-authenticated e-commerce transaction (3-D Secure)<br><br>7 - SSL-enabled merchant |
| <b>Credit Card (request)</b><br>"cc":{         | <i>Object</i><br>N/A  | Contains cardholder information   |
| <b>first 6 last 4</b><br>"first6last4":        | <i>String</i><br>10-character numeric                                       | First 6 and last 4 digits of card number  |

| Response Field Name and Key                                 | Type and Limits   | Description  |
|---|---|--|
| expiry date<br>"expiry":                                    | String<br>4-character numeric   | Card expiry date   |
| cardholder<br>"cardholder":                                 | String<br>50-character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> | Cardholder name  |
| Multi-Currency Pricing in the Preload<br>"mcp": {           | Object<br>N/A   | Contains fields related to Multi-Currency Pricing sent in the transaction    |
| merchant settlement amount<br>"merchant_settlement_amount": | String<br>12-character decimal  | The amount the merchant will receive in the transaction, in Canadian dollars |
| cardholder currency code<br>"cardholder_currency_code":     | String<br>3-character numeric   | ISO code representing the foreign currency of the cardholder                 |
| Gift (request)<br>"gift": [{                                | Object<br>N/A   | Object containing information about a gift card                              |
| balance remaining<br>"balance_remaining":                   | String<br>10-character decimal  | The remaining balance on the gift card                                       |
| gift card description<br>"description":                     | String  | Description of the gift card used for the transaction                        |
| first 4 last 4<br>"first4last4":                            | String  | The first 4 and last 4 digits of the card                                    |
| gift card number<br>"pan":                                  | String  | The account number of the gift card  |

| Response Field Name and Key                  | Type and Limits                         | Description   |
|--|---|---|
| gift card CVD<br>"cvd":                      | <i>String</i>                           | Card validation digits on the gift card   |
| balance used<br>"balance_used":              | <i>String</i><br>10-character decimal   | The amount that was removed from the card's balance as part of the transaction            |
| Wallet<br>"wallet":                          | <i>Object</i><br>N/A                    | Contains information from the digital wallet that was used in the transaction             |
| wallet type<br>"type":                       | <i>String</i><br>applepay or google-pay | Contains information from the digital wallet that was used in the transaction             |
| payment data<br>"paymentData":{              | <i>Object</i><br>N/A                    | Object containing various information related to the payment sent from the digital wallet |
| API version (minor)<br>"apiVersionMinor":    | <i>String</i>                           | Minor version of the API  |
| API version<br>"apiVersion":                 | <i>String</i>                           | Version of the digital wallet's payment API   |
| payment method data<br>"paymentMethodData":{ | <i>Object</i><br>N/A                    | Object containing information about the payment method used in the transaction            |
| payment method description<br>"description": | <i>String</i>                           | User-facing message to describe the payment method that funds this transaction            |
| tokenization data<br>"tokenizationData":{    | <i>Object</i><br>N/A                    | Object containing information related to tokenization and the digital wallet              |

| Response Field Name and Key                          | Type and Limits | Description  |
|--|-----------------|--|
| tokenization type<br>"type":                         | String          | The type of tokenization to be applied to the selected payment method<br><br>Possible values:<br>PAYMENT_GATEWAY or DIRECT |
| token<br>"token":                                    | String          | The generated payment method token   |
| payment method type<br>"type":                       | String          | A short identifier for the supported payment method<br><br>Possible values:<br>CARD<br>PAYPAL                              |
| info<br>"info":{                                     | Object<br>N/A   | Object that echoes information about the cardholder, the card and the card network from the digital wallet                 |
| card network<br>"cardNetwork":                       | String          | The payment card network   |
| card details<br>"cardDetails":                       | String          | The details about the card; this value is commonly the last four digits of the selected payment account number             |
| digital wallet billing address<br>"billingAddress":{ | Object<br>N/A   | Object that echoes the cardholder's billing information from the digital wallet  |
| address 3<br>"address3":                             | String          | Third line of the address  |

| Response Field Name and Key                            | Type and Limits | Description  |
|--|-----------------|--|
| sorting code<br>"sortingCode":                         | String          | The sorting code   |
| address 2<br>"address2":                               | String          | Second line of the address   |
| country code<br>"countryCode":                         | String          | ISO 3166-1 alpha-2 country code  |
| address 1<br>"address1":                               | String          | First line of the address  |
| postal code<br>"postalCode":                           | String          | Address postal code or ZIP   |
| name<br>"name":  | String          | Name of the addressee  |
| locality<br>"locality":                                | String          | City, town, neighbourhood, or suburb   |
| administrative area<br>"administrativeArea":           | String          | A country subdivision, such as a state or province   |
| digital wallet shipping address<br>"shippingAddress":{ | Object<br>N/A   | Object containing the cardholder's default shipping address information stored in the digital wallet |
| address 3<br>"address3":                               | String          | Third line of the address  |
| sorting code<br>"sortingCode":                         | String          | The sorting code   |
| address 2<br>"address2":                               | String          | Second line of the address   |



| Response Field Name and Key                  | Type and Limits                | Description   |
|--|--------------------------------|---|
| country code<br>"countryCode":               | String                         | ISO 3166-1 alpha-2 country code   |
| address 1<br>"address1":                     | String                         | First line of the address   |
| postal code<br>"postalCode":                 | String                         | Address postal code or ZIP  |
| name<br>"name":                              | String                         | Name of the addressee   |
| locality<br>"locality":                      | String                         | City, town, neighbourhood, or suburb  |
| administrative area<br>"administrativeArea": | String                         | A country subdivision, such as a state or province  |
| pay by token<br>"pay_by_token":              | String                         | <p>For a pay by token transaction, indicates whether the customer used an existing tokenized payment card or added a new card in order to pay for the transaction</p> <p>Possible values:</p> <p>1 – indicates that the cardholder used an existing tokenized card to pay</p> <p>0 – indicates that cardholder added a new card in order to pay, and the merchant sent a new corresponding data key</p> |
| ticket number<br>"ticket":                   | String<br>maximum 40-character | The unique ticket number that identifies a par-   |

| Response Field Name and Key                 | Type and Limits   | Description   |
|---|---|---|
|   | alphanumeric  | ticular transaction; this returned in the response to the Pre-load request  |
| customer ID<br>"cust_id":                   | <i>String</i><br>50-character alphanumeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt;&gt;\$%=?"^"{}[]\         </div>  | Merchant-defined field that can be used as an identifier<br><br>Searchable from the Moneris Merchant Resource Center  |
| dynamic descriptor<br>"dynamic_descriptor": | <i>String</i><br>20-character alphanumeric<br><br>total of 22 characters including your merchant name and separator<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt;&gt;\$%=?"^"{}[]\         </div> | Merchant-defined description sent on a per-transaction basis that will appear on the credit card statement appended to the merchant's business name<br><br>Dependent on the card issuer, the statement will typically show the dynamic descriptor appended to the merchant's existing business name separated by the "/" character; additional characters will be truncated<br><br><div> <b>NOTE:</b> The 22-character maximum limit must take the "/" into account as one of the characters         </div> |
| order number<br>"order_no":                 | <i>String</i><br>50-character alphanumeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:         </div>   | The order number is a unique identifier appended to every financial transaction   |

| Response Field Name and Key             | Type and Limits                      | Description   |
|---|--------------------------------------|---|
|   | <div>&lt;&gt;\$%=?^"{}[]\</div>      |   |
| electronic commerce indicator<br>"eci": | <i>String</i><br>1-character numeric | The e-commerce indicator or crypt type that was used to process the transaction<br><br>Possible values are:<br><br>5 - Authenticated e-commerce transaction (3-D Secure)<br><br>6 - Non-authenticated e-commerce transaction (3-D Secure)<br><br>7 - SSL-enabled merchant |

### 2.7.2.3 Definition of Response Fields – Response to Receipt Request Receipt Object Fields

The following are fields that may be returned in the Response to Receipt Request Receipt object, shown with nesting

| Response Field Name and Key                 | Type and Limits  | Description   |
|---|--|---|
| Receipt<br>"receipt":{                      | <i>Object</i><br>N/A   | Object containing the receipt information   |
| result (financial transaction)<br>"result": | <i>String</i><br>1-character alphabetic<br><br>a or d              | Indicates the result of the financial transaction<br><br>Possible values are:<br><br>a = Accepted<br><br>d = Declined |
| Gift (receipt)<br>"gift":[{                 | <i>Object</i><br>N/A   | Contains information related to gift card   |
| order number<br>"order_no":                 | <i>String</i><br>50-character alphanumeric<br><br><div>NOTE:</div> | The order number is a unique identifier appended to every financial transaction                                       |

| Response Field Name and Key             | Type and Limits   | Description   |
|---|---|---|
|   | <div>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ " { } [ ] \         </div> |   |
| transaction number<br>"transaction_no": | <i>String</i><br><br>20-character alpha-numeric   | Moneris Gateway-specific transaction identifier<br><br>This field is required for any future follow-on transaction requests, such as Refund, Purchase Correction and Pre-Authorization Completion transactions  |
| reference number<br>"reference_no":     | <i>String</i><br><br>18-character alpha-numeric   | Terminal used to process the transaction, followed by the shift, batch and sequence number<br><br>This data is typically used to reference transactions on the host systems, and must be displayed on any receipt presented to the customer<br><br>This information should be stored by the merchant<br><br><div> <b>EXAMPLE</b><br/>           660123450010690030<br/><br/>           66012345: Terminal ID<br/><br/>           001: Shift number<br/><br/>           069: Batch number<br/><br/>           003: Transaction number within the batch.         </div> |
| response code<br>"response_code":       | <i>String</i><br><br>3-character numeric or null  | Transaction response code<br><br>Possible values are:<br><br><50 – transaction approved<br><br>>=50 – transaction declined  |

| Response Field Name and Key               | Type and Limits   | Description  |
|---|---|--|
|   |   | <p>NULL – transaction was not sent for authorization</p> <p>For more details on specific response, please see the Response Codes reference topic</p>   |
| benefit amount<br>"benefit_amount":       | String<br>10-character decimal  | This is the benefit that was generated for the transaction; the amount that was removed from the card as part of the transaction   |
| benefit remaining<br>"benefit_remaining": | String<br>10-character decimal  | The remaining balance on the gift card   |
| first 6 last 4<br>"first6last4":          | String<br>10-character numeric  | First 6 and last 4 digits of card number   |
| Credit Card (receipt)<br>"cc": {          | Object<br>N/A   | Contains fields describing the response to the credit card transaction   |
| order number<br>"order_no":               | String<br>50-character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ { } [ ] \           MCP orders have a "_mcp" suffix<br/>           Card verification orders have a "_veri" suffix         </div> | The order number is a unique identifier appended to every financial transaction  |
| customer ID<br>"cust_id":                 | String<br>50-character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ { } [ ] \         </div>   | <p>Merchant-defined field that can be used as an identifier</p> <p>Searchable from the Moneris Merchant Resource Center</p> <p>This is the echo of the same customer ID sent in the Pre-load request</p> |

| Response Field Name and Key             | Type and Limits                                 | Description   |
|---|---|---|
| transaction number<br>"transaction_no": | <i>String</i><br><br>20-character alpha-numeric | <p>Used to reference the original transaction when performing a follow-on transaction (i.e., Pre-Authorization Completion, Purchase Correction or Refund)</p> <p>This value is returned in the response of the original transaction</p> <p>Pre-Authorization Completion: references a Pre-Authorization</p> <p>Refund/Purchase Correction: references a Purchase or Pre-Authorization Completion</p>  |
| reference number<br>"reference_no":     | <i>String</i><br><br>18-character alpha-numeric | <p>Terminal used to process the transaction, followed by the shift, batch and sequence number</p> <p>This data is typically used to reference transactions on the host systems, and must be displayed on any receipt presented to the customer</p> <p>This information should be stored by the merchant</p> <div> <b>EXAMPLE</b><br/>           660123450010690030<br/><br/>           66012345: Terminal ID<br/><br/>           001: Shift number<br/><br/>           069: Batch number<br/><br/>           003: Transaction number within the batch.         </div> |
| transaction code<br>"transaction_code": | <i>String</i>                                   | Type of financial transaction that was performed  |

| Response Field Name and Key                           | Type and Limits                       | Description   |
|---|---------------------------------------|---|
|   | 2-character alpha-numeric             | Possible values:<br>00 – Purchase<br>01 – Pre-Authorization   |
| transaction type<br>"transaction_type":               | String<br>2-character numeric         | ISO transaction code for financial transaction  |
| transaction date and time<br>"transaction_date_time": | String<br>YYYY-MM-DD<br>HH:MM:SS      | Processing host date and time stamp<br>Format: YYYY-MM-DD<br>HH:MM:SS   |
| corporate card<br>"corporateCard":                    | String<br>true/false                  | Indicates whether the payment card is a corporate card  |
| credit card amount<br>"amount":                       | String<br>10-character decimal        | The total dollar amount that was charged to the credit card   |
| response code<br>"response_code":                     | String<br>3-character numeric or null | Transaction response code<br>Possible values are:<br><50 – transaction approved<br>>=50 – transaction declined<br>NULL – transaction was not sent for authorization<br>For more details on specific response, please see the Response Codes reference topic |
| ISO response code<br>"iso_response_code":             | String<br>2-character numeric         | ISO response code returned from issuing institution<br>For more details on specific ISO codes returned, see the Response Codes reference topic  |
| approval code   | String                                | Authorization code  |

| Response Field Name and Key                 | Type and Limits  | Description   |
|---|--|---|
| "approval_code":                            | 8-character alpha-numeric  | returned from the issuing institution   |
| card type<br>"card_type":                   | String<br>2-character alpha-numeric  | Type of payment card used to process the transaction<br><br>Allowable values:<br><br>V = Visa<br><br>M = Mastercard<br><br>AX = American Express<br><br>DC = Diner's Card<br><br>NO = Novus/Discover<br><br>SE = Sears<br><br>P = INTERAC® Debit<br><br>C1 = JCB  |
| wallet type<br>"wallet_type":               | String<br><br>applepay or googlepay  | Type of digital wallet used in this transaction<br><br>Possible values: applepay or googlepay   |
| dynamic descriptor<br>"dynamic_descriptor": | String<br><br>20-character alpha-numeric<br><br>total of 22 characters including your merchant name and separator<br><br><div><b>NOTE:</b><br/>Some special characters are not allowed:<br/>&lt; &gt; \$ % = ? ^ { } [ ] \</div> | Merchant-defined description sent on a per-transaction basis that will appear on the credit card statement appended to the merchant's business name<br><br>Dependent on the card issuer, the statement will typically show the dynamic descriptor appended to the merchant's existing business name separated by the "/" character; additional characters will be truncated<br><br><div><b>NOTE:</b> The 22-character maximum limit must take the "/" into account as one of the characters</div> |



| Response Field Name and Key             | Type and Limits  | Description   |
|---|--|---|
| invoice number<br>"invoice_number":     | <i>String</i><br>50-character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ { } [ ] \         </div> | Identifies an invoice number associated with the transaction  |
| customer code<br>"customer_code":       | <i>String</i><br>50-character alpha-numeric<br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ { } [ ] \         </div> | User-defined identifier   |
| electronic commerce indicator<br>"eci": | <i>String</i><br>1-character numeric   | The e-commerce indicator or crypt type that was used to process the transaction<br><br>Possible values:<br><br>5 - Authenticated e-commerce transaction (3D-Secure)<br><br>6 - Non-authenticated e-commerce transaction (3D-Secure)<br><br>7 - SSL-enabled merchant |
| CVD result code<br>"cvd_result_code":   | <i>String</i><br>2-character alpha-numeric   | Indicates the CVD validation result<br><br>The first byte is the numeric CVD indicator sent in the request; the second byte is the response code<br><br>Possible response codes are shown in the CVD Response Codes reference                                       |
| AVS result code<br>"avs_result_code":   | <i>String</i><br>1-character alpha-numeric   | Indicates the address verification result<br><br>For a full list of possible  |

| Response Field Name and Key             | Type and Limits  | Description   |
|---|--|---|
|   |  | response codes refer to the AVS Response Codes reference  |
| CAVV result code<br>"cavv_result_code": | <i>String</i><br>1-character alpha-numeric                     | Indicates the 3-D Secure CAVV result<br><br>Possible response codes are shown in the tables in 6.4 CAVV Result Codes  |
| first 6 last 4<br>"first6last4":        | <i>String</i><br>10-character numeric                          | First 6 and last 4 digits of card number  |
| expiry date<br>"expiry_date":           | <i>String</i><br>4-character alpha-numeric                     | Expiry date of the card<br><br>MMY format   |
| recur success<br>"recur_success":       | <i>String</i><br>true/false                                    | Indicates whether the recurring billing transaction has been successfully set up for future billing<br><br>Possible values: <code>true</code> or <code>false</code>   |
| issuer ID<br>"issuer_id":               | <i>String</i><br>15-character alpha-numeric<br>variable length | Unique identifier for the cardholder's stored credentials<br><br>Sent back in the response from the card brand when processing a Credential on File transaction<br><br>If the cardholder's credentials are being stored for the first time, and the issuer ID was returned in the response, you must save the issuer ID on your system to use in subsequent Credential on File transactions (applies to merchant-initiated transactions only) |

| Response Field Name and Key                                     | Type and Limits                                | Description  |
|---|--|--|
|   |  | <p>The issuer ID must be saved to your systems when returned from Moneris Gateway in the response data, regardless if the value was received or not</p> <p>As a best practice, if the issuer ID is not returned and you received a value of NULL instead, store that value and send it in the subsequent transaction</p> |
| <p>is debit</p> <p>"is_debit":</p>                              | <p>String</p> <p>true/false</p>                | Indicates whether a debit card was used in the transaction   |
| <p>ECR (electronic cash register) number</p> <p>"ecr_no":</p>   | <p>String</p> <p>8-character numeric</p>       | Terminal ID/ECR Number from the request  |
| <p>batch number</p> <p>"batch_no":</p>                          | <p>String</p> <p>3-character numeric</p>       | Batch number; also presented as a component of the reference number  |
| <p>sequence number</p> <p>"sequence_no":</p>                    | <p>String</p> <p>3-character numeric</p>       | Transaction number within the batch; also presented as a component of reference number   |
| <p>result (financial transaction)</p> <p>"result":</p>          | <p>String</p> <p>1-character alpha-numeric</p> | <p>Indicates the result of the financial transaction</p> <p>Possible values are:</p> <p>a = Accepted</p> <p>d = Declined</p>   |
| <p>convenience fee/service fee success</p> <p>"cf_success":</p> | <p>String</p> <p>true/false</p>                | <p>Indicates whether the Convenience Fee transaction processed successfully</p> <div> <p><b>NOTE:</b> Convenience fee is not supported for MCP, recurring billing, tokenization or digital wallets</p> </div>  |

| Response Field Name and Key                         | Type and Limits   | Description   |
|---|---|---|
| convenience fee/service fee amount<br>"cf_fee_amt": | String<br>9-character decimal                                       | The Convenience Fee amount<br><br><div> <b>NOTE:</b> Convenience fee is not supported for MCP, recurring billing, tokenization or digital wallets </div>  |
| convenience fee/service fee rate<br>"cf_fee_rate":  | String<br>9-character decimal                                       | The convenience fee rate that has been defined on the merchant's profile<br><br><div> <b>EXAMPLE</b><br/>           1.00 – a fixed amount<br/>           or<br/>           10.0 - a percentage amount </div> <div> <b>NOTE:</b> Convenience fee is not supported for MCP, recurring billing, tokenization or digital wallets </div> |
| convenience fee/service fee type<br>"cf_fee_type":  | String<br>3-character alphabetic<br><br>Possible values:<br>AMT/PCT | The type of convenience fee that has been defined on the merchant's profile<br><br>Possible values:<br>AMT – fixed amount<br>PCT – percentage<br><br><div> <b>NOTE:</b> Convenience fee is not supported for MCP, recurring billing, tokenization or digital wallets </div>   |
| convenience fee/service fee status<br>"cf_status":  | String<br>2-character alphanumeric                                  | Indicates the status of the merchant and convenience fee transactions<br><br>The convenience fee status field provides details about the transaction behaviour and should be referenced   |

| Response Field Name and Key             | Type and Limits                             | Description  |
|---|---|--|
|   |   | <p>when contacting Moneris Customer Support</p> <p>Possible values:</p> <p>1 or 1F – Completed 1st purchase transaction</p> <p>2 or 2F – Completed 2nd purchase transaction</p> <p>3 – Completed void transaction</p> <p>9 or 9F – Completed 1st void transaction</p> <p>10 or 10F – Completed 2nd void transaction</p> <div> <b>NOTE:</b> Convenience fee is not supported for MCP, recurring billing, tokenization or digital wallets </div> |
| <b>Tokenize</b><br>"tokenize":{         | <i>Object</i><br>N/A                        | Contains information related to the tokenization of cardholder credentials   |
| <b>success (tokenize)</b><br>"success": | <i>String</i><br>true/false                 | Indicates whether the card was successfully tokenized<br><br>Possible values: <code>true</code> or <code>false</code>  |
| <b>first 4 last 4</b><br>"first4last4": | <i>String</i><br>11-character numeric       | The first 4 and last 4 digits of the card  |
| <b>data key</b><br>"data_key":          | <i>String</i><br>25-character alpha-numeric | Unique identifier for a Vault profile, and used in future Vault financial transactions to associate a transaction with that profile  |
| <b>tokenization status</b><br>"status": | <i>String</i><br>3-character numeric        | Specifies what type of failure, if any, occurred during the tokenization request<br><br>Possible values:<br><br>001 = Successful creation of a temporary token   |

| Response Field Name and Key  | Type and Limits  | Description   |
|--|--|---|
|  |  | <p>940 = Invalid profile id (on tokenization request)</p> <p>941 = Error generating token</p> <p>942 = Invalid Profile ID, or source URL</p> <p>943 = Card data is invalid (not numeric, fails mod10, we will remove spaces)</p> <p>944 = Invalid expiration date (mmyy, must be current month or in the future)</p> <p>945 = Invalid CVD data (not 3-4 digits)</p> |
| <p>tokenization message</p> <p>"message":</p>                          | <p>String</p> <p>alphabetic</p>  | <p>Provides additional details about the success or failure of the tokenization</p> <p>Message will reflect whether details have been added or updated</p>  |
| <p>Multi-Currency Pricing in the Response</p> <p>"mcp": {</p>          | <p>Object</p> <p>N/A</p>   | <p>Contains fields related to Multi-Currency Pricing received in the response</p>   |
| <p>merchant settlement amount</p> <p>"merchant_settlement_amount":</p> | <p>String</p> <p>12-character decimal</p>                                    | <p>The amount the merchant will receive in the transaction, in Canadian dollars</p>   |
| <p>cardholder currency code</p> <p>"cardholder_currency_code":</p>     | <p>String</p> <p>3-character numeric</p>                                     | <p>ISO code representing the foreign currency of the cardholder</p>   |
| <p>multi-currency pricing rate</p> <p>"mcp_rate":</p>                  | <p>String</p>  | <p>The foreign exchange rate (foreign currency to CAD) that was used for the transaction</p>  |
| <p>decimal precision</p> <p>"decimal_precision":</p>                   | <p>String</p> <p>1-character numeric</p> <p>Possible values:<br/>0/1/2/3</p> | <p>Decimal precision of the amount</p>  |

| Response Field Name and Key                                    | Type and Limits   | Description   |
|--|---|---|
| cardholder amount<br>"cardholder_amount":                      | String<br>12-character numeric                              | Amount, in units of foreign currency, the cardholder will be charged on the transaction   |
| cardholder currency description<br>"cardholder_currency_desc": | String<br>3-character alphanumeric                          | Describes the foreign currency being used in the transaction  |
| Fraud<br>"fraud": {  | Object<br>N/A   | Contains sub-objects that describe information related to fraud tool inquiries  |
| CVD<br>"cvd": {  | Object<br>N/A   | Contains information related to the CVD fraud tool  |
| decision origin<br>"decision_origin":                          | String<br>alphanumeric, see description for possible values | Possible values: Moneris or Merchant  |
| CVD result<br>"result":  | String<br>1-character numeric                               | Possible values:<br>1 = Success<br>2 = Failed<br>3 = Not performed<br>4 = Card not eligible   |
| condition<br>"condition":                                      | String<br>1-character numeric                               | Indicates whether this fraud tool was set as a factor for Moneris to use when making an automatic decision on a transaction<br><br>Possible values are as follows:<br>0 = Optional<br>1 = Mandatory |
| status   | String  | Indicates whether the fraud   |

| Response Field Name and Key           | Type and Limits  | Description  |
|---------------------------------------|--|--|
| "status":                             | alphabetic, see description for possible values                    | <p>tool inquiry was performed, and if it was used for auto-decisioning purposes</p> <p>Possible values:</p> <p>success = Fraud tool successful</p> <p>failed = Fraud tool failed (non-auto decision)</p> <p>disabled = Fraud tool not performed</p> <p>ineligible = Fraud tool was selected but card is not a credit card or card not eligible</p> <p>failed_optional = Fraud tool failed and auto decision is optional</p> <p>failed_mandatory = Fraud tool failed auto decision is mandatory</p> |
| CVD code<br>"code":                   | <i>String</i><br>2-character alphanumeric                          | CVD result code; for a list of possible codes see the CVD Response Codes reference   |
| details<br>"details":                 | <i>String</i><br>N/A - details is not used for this fraud tool     | <p>Provides detailed information about the fraud tool query</p> <p>Only populated for Kount and 3-D Secure</p>   |
| AVS<br>"avs":{                        | <i>Object</i><br>N/A   | Contains information related to the AVS fraud tool   |
| decision origin<br>"decision_origin": | <i>String</i><br>alphanumeric, see description for possible values | Possible values: Moneris or Merchant   |
| AVS result<br>"result":               | <i>String</i><br>1-character numeric                               | <p>Possible values:</p> <p>1 = Success</p> <p>2 = Failed</p> <p>3 = Not performed</p>  |



| Response Field Name and Key | Type and Limits  | Description   |
|-----------------------------|--|---|
|                             |  | 4 = Card not eligible   |
| condition<br>"condition":   | <i>String</i><br>1-character numeric                             | Indicates whether this fraud tool was set as a factor for Moneris to use when making an automatic decision on a transaction<br><br>Possible values are as follows:<br><br>0 = Optional<br>1 = Mandatory   |
| status<br>"status":         | <i>String</i><br>alphabetic, see description for possible values | Indicates whether the fraud tool inquiry was performed, and if it was used for auto-decisioning purposes<br><br>Possible values:<br><br>success = Fraud tool successful<br><br>failed = Fraud tool failed (non-auto decision)<br><br>disabled = Fraud tool not performed<br><br>ineligible = Fraud tool was selected but card is not a credit card or card not eligible<br><br>failed_optional = Fraud tool failed and auto decision is optional<br><br>failed_mandatory = Fraud tool failed auto decision is mandatory |
| AVS code<br>"code":         | <i>String</i><br>1-character alphanumeric                        | AVS result code; for a list of potential codes, see the AVS Response Codes reference  |
| details<br>"details":       | <i>String</i><br>N/A - details is not used for this fraud tool   | Provides detailed information about the fraud tool query<br><br>Only populated for Kount and 3-D Secure   |
| 3-D Secure                  | <i>Object</i>  | Contains information  |

| Response Field Name and Key           | Type and Limits  | Description   |
|---------------------------------------|--|---|
| "3d_secure":{                         | N/A  | related to the 3-D Secure fraud tool  |
| decision origin<br>"decision_origin": | <i>String</i><br><br>alphanumeric, see description for possible values | Possible values: <i>Moneris</i> or <i>Merchant</i>  |
| 3-D Secure result<br>"result":        | <i>String</i><br><br>1-character numeric                               | Possible values:<br><br>1 = Success<br><br>2 = Failed<br><br>3 = Not performed<br><br>4 = Card not eligible   |
| condition<br>"condition":             | <i>String</i><br><br>1-character numeric                               | Indicates whether this fraud tool was set as a factor for Moneris to use when making an automatic decision on a transaction<br><br>Possible values are as follows:<br><br>0 = Optional<br><br>1 = Mandatory   |
| status<br>"status":                   | <i>String</i><br><br>alphabetic, see description for possible values   | Indicates whether the fraud tool inquiry was performed, and if it was used for auto-decisioning purposes<br><br>Possible values:<br><br>success = Fraud tool successful<br><br>failed = Fraud tool failed (non-auto decision)<br><br>disabled = Fraud tool not performed<br><br>ineligible = Fraud tool was selected but card is not a credit card or card not eligible<br><br>failed_optional = Fraud tool failed and auto decision is optional<br><br>failed_mandatory = Fraud tool |

| Response Field Name and Key                       | Type and Limits  | Description  |
|---|--|--|
|   |  | failed auto decision is mandatory  |
| 3-D Secure code<br>"code":                        | <i>String</i><br>1-character numeric   | The crypt type that was used to process the transaction<br><br>Possible values:<br><br>5 = Authenticated e-commerce transaction (3-D Secure)<br><br>6 = Non-authenticated e-commerce transaction (3-D Secure)<br><br>7 = SSL-enabled merchant  |
| details<br>"details":{                            | <i>Object</i><br>N/A - details is not used for this fraud tool   | Provides detailed information about the fraud tool query<br><br>Only populated for Kount and 3-D Secure  |
| Cardholder Authentication Value (CAVV)<br>"cavv": | <i>String</i><br>50-character alpha-numeric<br><br><div> <b>NOTE:</b><br/>           Some special characters are not allowed:<br/>           &lt; &gt; \$ % = ? ^ { } [ ] \         </div> | Value provided by the Moneris MPI or by a third-party MPI<br><br>Returned by Visa Secure, Mastercard Identity Check or American Express SafeKey transactions   |
| 3-D Secure message<br>"message":                  | <i>String</i><br>alphabetic  | Describes the reasoning for the outcome of the 3-D Secure inquiry<br><br>Possible values:<br><br>"Authentication Not Available"<br><br>"Unable to Verify Enrollment"<br><br>"Successful Payer Authentication"<br><br>"Cardholder Not Participating"<br><br>"failed 3-D Secure authentication"<br><br>"Successful Merchant Attempt" |
| VERes   | <i>String</i>  | Verification response code   |

| Response Field Name and Key          | Type and Limits                          | Description  |
|--------------------------------------|--|--|
| "VERes":                             | 1-character alpha-betic                  | <p>Possible values:</p> <p>N = The card/issuer is not enrolled</p> <p>U = The card type is not participating</p> <p>Y = The card is enrolled</p> <p><b>NOTE:</b> Only returned for 3-D Secure1.0 transactions</p>  |
| PAREs<br>"PAREs":                    | <i>String</i><br>true/false              | <p>Payer authentication response code</p> <p>Possible values:</p> <p>true = Fully authenticated or attempted to verify PIN</p> <p>false = Failed to authenticate</p> <p><b>NOTE:</b> Only returned for 3-D Secure 1.0 transactions</p>   |
| transaction status<br>"transStatus": | <i>String</i><br>1-character alpha-betic | <p>Indicates whether a transaction qualifies as an authenticated transaction or account verification</p> <p>Possible values:</p> <p>Y = Cardholder has been fully authenticated</p> <p>A = A proof of authentication attempt was generated</p> <p>U = Authentication could not be performed due to technical or other issues</p> <p>N = Not authenticated</p> <p>R = Not authenticated because the Issuer is rejecting authentication and requesting that authorization not be attempted</p> <p><b>NOTE:</b> Only returned for 3-D Secure2.0</p> |

| Response Field Name and Key                              | Type and Limits   | Description  |
|--|---|--|
| load 3-D Secure<br>"loadvby":                            | <i>String</i><br>true   | Only present with value "true" if page was successfully redirected from the 3-D Secure site.   |
| 3-D Message Version<br>"threeDSVersion":                 | <i>String</i><br>3-character numeric; middle character is a decimal point | Contains the message protocol for the 3-D Secure authentication.   |
| 3DS Authentication Type<br>"authenticationType":         | <i>String</i><br>This is a snippet  | 3-D Secure Authentication method the issuer will use to challenge the cardholder.<br><br>01 = Static<br>02 = Dynamic<br>03 = OOB<br>04 = Decoupled |
| 3DS ACS Transaction ID<br>"ThreeDSACSTransID":           | <i>String</i><br>36-character alphanumeric                                | Universally Unique transaction identifier assigned by the issuer Access Control Server (ACS) to identify a single transaction.                     |
| 3DS Authentication Time Stamp<br>"ThreeDSAuthTimeStamp": | <i>String</i><br>12-character numeric, format = YYYYMMDDHHMM              | Date and time in UTC of the cardholder 3DS authentication.   |
| 3DS Directory Server Transaction ID<br>"DSTransID":      | <i>String</i><br>36-character alphanumeric                                | Universally unique transaction identifier assigned by the 3DS Directory Server (DS) to identify a single transaction.                              |
| Kount<br>"kount": {                                      | <i>Object</i><br>N/A  | Contains information related to the Kount fraud tool   |
| decision origin<br>"decision_origin":                    | <i>String</i><br>alphanumeric, see  | Possible values: Moneris or Merchant   |

| Response Field Name and Key | Type and Limits  | Description   |
|-----------------------------|--|---|
|                             | description for possible values                                  |   |
| Kount result<br>"result":   | <i>String</i><br>1-character numeric                             | Possible values are as follows:<br>1 = Success<br>2 = Failed<br>3 = Not performed<br>4 = Card not eligible  |
| condition<br>"condition":   | <i>String</i><br>1-character numeric                             | Indicates whether this fraud tool was set as a factor for Moneris to use when making an automatic decision on a transaction<br>Possible values are as follows:<br>0 = Optional<br>1 = Mandatory   |
| status<br>"status":         | <i>String</i><br>alphabetic, see description for possible values | Indicates whether the fraud tool inquiry was performed, and if it was used for auto-decisioning purposes<br>Possible values:<br>success = Fraud tool successful<br>failed = Fraud tool failed (non-auto decision)<br>disabled = Fraud tool not performed<br>ineligible = Fraud tool was selected but card is not a credit card or card not eligible<br>failed_optional = Fraud tool failed and auto decision is optional<br>failed_mandatory = Fraud tool failed auto decision is mandatory |
| Kount code<br>"code":       | <i>String</i><br>1-character alpha-                              | Possible values:<br>A = Approve   |

| Response Field Name and Key            | Type and Limits                       | Description  |
|--|---------------------------------------|--|
|  | betic                                 | D = Decline<br>R = Review  |
| details<br>"details":{                 | Object                                | Provides detailed information about the fraud tool query<br><br>Only populated for Kount and 3-D Secure  |
| Kount response code<br>"responseCode": | String<br>3-character numeric         | Final risk score returned from Kount system<br><br>Possible values:<br><br>001 = Success<br><br>973 = Unable to locate merchant Kount details<br><br>984 = Data error<br><br>987 = Invalid transaction |
| message (Kount)<br>"message":          | String<br>255-character alpha-numeric | Brief description message about the Kount inquiry  |
| receipt ID<br>"receiptID":             | String<br>64-character alpha-numeric  | The order ID echoed from the original financial transaction  |
| Kount code<br>"code":                  | String<br>1-character alphabetic      | Possible values:<br><br>A = Approve<br><br>D = Decline<br><br>R = Review   |
| Kount score<br>"score":                | String<br>3-character numeric         | Final risk score returned from Kount system  |
| Kount error<br>"error":                | String<br>alphabetic                  | List of errors the Kount request generated   |
| vault data                             | Object                                | Object containing information related to Moneris   |

| Response Field Name and Key      | Type and Limits                      | Description  |
|----------------------------------|--------------------------------------|--|
| "vault_data":                    | N/A                                  | Vault  |
| data key<br>"data_key":          | String<br>25-character alpha-numeric | Unique identifier for a Vault profile, and used in future Vault financial transactions to associate a transaction with that profile<br><br>Data key is generated by Moneris and returned to you in the Receipt object when the profile is first registered |
| is data key valid<br>"is_valid": | String<br>true/false                 | Indicates whether the data key is valid<br><br>Possible values: true or false  |

#### 2.7.2.4 Example JSON Response to Receipt Request

**NOTE:** Not all features in Moneris Checkout are supported simultaneously, and therefore some objects would not actually appear in the response at the same time in a real-world scenario; response code below is provided for illustrative purposes only.

```
{
  "response":{
    "success":"true",
    "request":{
      "txn_total":"6.00",
      "cust_info":{
        "first_name":"bill",
        "last_name":"smith",
        "phone":"4165551234",
        "email":"test@moneris.com"
      },
      "shipping":{
        "address_1":"1 main st",
        "address_2":"Unit 2012",
        "city":"Toronto",
        "country":"Ca",
```



```
    "province": "On",
    "postal_code": "M1M1M1"
  },
  "billing": {
    "address_1": "1 main st",
    "address_2": "Unit 2000",
    "city": "Toronto",
    "province": "ON",
    "country": "CA",
    "postal_code": "M1M1M1"
  },
  "recur": {
    "number_of_recur": "3",
    "recur_period": "1",
    "recur_amount": "15.00",
    "recur_unit": "month",
    "start_date": "20220902",
    "bill_now": "false"
  },
  "cart": {
    "items": [
      {
        "url": "https:\\\\\\esqa.moneris.com\\cr\\checkout\\item3.jpg",
        "description": "Three item",
        "product_code": "two_item",
        "unit_cost": "11.00",
        "quantity": "1"
      }
    ],
    "subtotal": "10.24",
    "tax": {
      "amount": "0.00",
      "description": "Tax",
      "rate": "0"
    }
  },
  "cc_total": "6.00",
  "cc": {
    "first6last4": "4242424242",
    "expiry": "1221",
    "cardholder": "test"
  },
  "mcp": {
```

```

    "merchant_settlement_amount":"452.00",
    "cardholder_currency_code":"978"
  },
  "gift":[
    {
      "balance_remaining":"0.00",
      "Description":"Gift Fixed Reload",
      "first4last4":"*****0214",
      "pan":"0211020000001000214",
      "cvd":"123",
      "balance_used":"200.00"
    }
  ],
  "wallet":{
    "type":"applepay",
    "paymentData":{
      "token":{
        "paymentData":{
          "data":"0YJMuivQ6+xILNQyDfwO+kzKWZ//TkNa5nxBzHI7fw==",
          "signature":"MIAGCSqGSIB3DJ7mrwhISSB+Ic6kAAAAAAAAA=",
          "header":{
            "publicKeyHash":"18hkrHSrxiDbZs5qKY4US8bFqEk6bBGXde14yQrwr8=",
            "ephemeralPublicKey":"MFkwEwYHKoZIzj0h6ilzF+Z4dseqHDjsdYA==",
            "transactionId":"4c0d6ae158aa0322b1f5baf6467195e0238ca48f"
          },
          "version":"EC_v1"
        },
        "paymentMethod":{
          "displayName":"Discover 2780",
          "network":"Discover",
          "type":"credit"
        },
        "transactionIdentifier":"4C0D6AE158AA03CC4BAF6467195E0238CA48F"
      }
    }
  },
  "pay_by_token":1,
  "ticket":"1635780027iwm4IczLl02LqHQ6xHmvDJ1xFIS2vT",
  "cust_id":"chkt- cust -1101",
  "dynamic_descriptor":"dyndesc",
  "order_no":"20211101152026",
  "eci":"7"
},

```

```
"receipt":{
  "result":"a",
  "gift":[
    {
      "order_no":"1583250405Ad1BmCSsfHHDeu4_g1",
      "transaction_no":"6198-1583250435590-00157838_15",
      "reference_no":"3276071",
      "response_code":"000",
      "benefit_amount":"200.00",
      "benefit_remaining":"0.00",
      "first6last4":"0211020214"
    }
  ],
  "cc":{
    "order_no":"20211101152026",
    "cust_id":"chkt- cust -1101",
    "transaction_no":"8291-0_20",
    "reference_no":"660115340017373030",
    "transaction_code":"00",
    "transaction_type":"200",
    "transaction_date_time":"2021-11-01 11:20:53",
    "corporate_card":null,
    "amount":"6.00",
    "response_code":"027",
    "iso_response_code":"01",
    "approval_code":"489642",
    "card_type":"V",
    "dynamic_descriptor":"dyndesc",
    "invoice_number":null,
    "customer_code":null,
    "eci":"7",
    "cvd_result_code":"1M",
    "avs_result_code":"null",
    "cavv_result_code":null,
    "first6last4":"4242424242",
    "expiry_date":"1221",
    "recur_success":"null",
    "issuer_id":null,
    "is_debit":null,
    "ecr_no":"66011534",
    "batch_no":"737",
    "sequence_no":"303",
    "result":"a",
```

```
"cf_success":"true",
"cf_fee_amt":"0.11",
"cf_fee_rate":"1.75",
"cf_fee_type":"PCT",
"cf_status":"2",
"tokenize":{
  "success":"true",
  "first4last4":"2222***0011",
  "datakey":"4sbe08wFMEEpj4632EVIbWNL2",
  "status":"001",
  "message":"Successfully updated CC details."
},
"mcp":{
  "merchant_settlement_amount":"452.00",
  "cardholder_currency_code":"978",
  "mcp_rate":"1.508",
  "decimal_precision":"2",
  "cardholder_amount":"299.73",
  "cardholder_currency_desc":"EUR"
},
"fraud":{
  "3d_secure":{
    "decision_origin":"Merchant",
    "result":"3",
    "condition":"1",
    "status":"disabled",
    "code":"",
    "details":""
  },
  "kount":{
    "decision_origin":"Merchant",
    "result":"3",
    "condition":null,
    "status":"disabled",
    "code":"",
    "details":""
  },
  "avs":{
    "decision_origin":"Merchant",
    "result":"3",
    "condition":"0",
    "status":"disabled",
    "code":""
  }
```

```
        "details":""
    },
    "cvd":{
        "decision_origin":"Merchant",
        "result":"1",
        "condition":"0",
        "status":"success",
        "code":"1M",
        "details":""
    }
},
"vault_data":[
    {
        "data_key":"JNDSFQKD8iRsCQM5TcBObz9V7",
        "is_valid":"true"
    },
    {
        "data_key":"4jZb8X1gCpWfC4f4KKh6Fizf2",
        "is_valid":"true"
    },
    {
        "data_key":"jjq6xx5cUQsS1AhwaQhNYpKG8",
        "is_valid":"true"
    }
]
}
}
}
```

## 2.8 Terminating the Moneris Checkout Instance

To terminate the Moneris Checkout instance, call `myCheckout.closeCheckout()`, for example:

```
myCheckout.closeCheckout([ticket #]);
```

## 3 Additional Features in Moneris Checkout

- 3.1 Tokenization of Credentials With Moneris Checkout
- 3.2 Fraud Tools in Moneris Checkout
- 3.3 Window Size in Moneris Checkout
- 3.4 Multi-Currency Pricing in Moneris Checkout

### 3.1 Tokenization of Credentials With Moneris Checkout

You can use Moneris Checkout to store a cardholder's credentials in the Moneris Vault and receive a token that represents those credentials for use in future transactions. You can also use Moneris Checkout to update the credentials associated with the token.

If you want to tokenize credentials in Moneris Checkout transactions, you select the **Tokenize Card** option in the Merchant Resource Center. For updating existing tokens, select **Vault Update Card**.

For more information, see the Merchant Resource Center documentation available for download on the Moneris developer portal at:

[developer.moneris.com](https://developer.moneris.com)

#### 3.1.1 Tokens and Pay by Token

With tokenization enabled, Moneris Checkout also enables you to allow returning customers to select stored payment cards on the payment page. The customer's payment cards need to be already tokenized and stored in the Moneris Vault to be referenced in the Preload request and displayed to the customer when they get to the payment page.

In the Preload request, Moneris Checkout will accept a token composed of up to three pairs of **data key** and **issuer ID**, each one representing the cardholder's payment card stored in the Moneris Vault.

For more information about these fields in the Preload, see 2.4.1 Preload Request

### 3.2 Fraud Tools in Moneris Checkout

- 3.2.1 About Fraud Tools in Moneris Checkout
- 3.2.2 Kount as a Fraud Tool in Moneris Checkout
- 3.2.3 Fraud Tools and Auto Decision-Making

### 3.2.1 About Fraud Tools in Moneris Checkout

Several tools to mitigate the risk of fraud are available for transactions in Moneris Checkout, including:

- AVS
- CVD
- 3-D Secure
- Kount

To select which of these tools to use when performing transactions with Moneris Checkout, go to your Moneris Checkout configurator in the Moneris Merchant Resource Center under the Payment Security section.

For more information, see the Merchant Resource Center documentation available for download on the Moneris developer portal at:

[developer.moneris.com](https://developer.moneris.com)

**NOTE:** CVD is always enabled as a fraud tool and will be performed on each transaction request in Moneris Checkout, but you can choose whether Moneris will treat the CVD result as a mandatory or optional factor to approve or deny the transaction.

### 3.2.2 Kount as a Fraud Tool in Moneris Checkout

If you select Kount as a fraud tool in Moneris Checkout and your company has its own Enterprise service account from Kount, you will need to include your Kount Merchant ID, Kount API Key and Kount Website ID when you configure your Moneris Checkoutstore in the Merchant Resource Center.

If you are using Moneris's basic fraud service package and do not have your own Kount enterprise account, you do not require this information.

### 3.2.3 Fraud Tools and Auto Decision-Making

Moneris Checkout can be configured to automatically proceed with or deny transactions as a result of a risk assessment it makes based on the responses it receives from the selected fraud tools.

When you check the box for auto decision-making, you also can choose whether each fraud tool's analysis will be treated by Moneris as an optional or mandatory factor in the decision to approve or deny the transaction.

This information applies to all fraud tools with the following exception:

- 3-D Secure, which is always mandatory *if* enabled

### 3.3 Window Size in Moneris Checkout

You can customize the appearance of the Moneris Checkout window presented to the customer on their web browser, including how much of the browser window will be taken up by Moneris Checkout.

The default sizing behaviour of the Moneris Checkout window is full-screen, i.e., Moneris Checkout fills the entire web page. You can alter this behaviour to present the customer with a windowed view instead. If you do not use the full-screen option, you must define the size of the `<div>` for the windowed view. For more information, see 2.3 Preparing Your Client-Side Checkout Page.

You configure the sizing along with other aspects of the Moneris Checkout window in the Merchant Resource Center.

### 3.4 Multi-Currency Pricing in Moneris Checkout

You can configure Moneris Checkout to price goods and services in a variety of foreign currencies, while continuing to receive settlement and reporting in Canadian dollars.

If you want to use Multi-Currency Pricing (MCP) in Moneris Checkout transactions, you can enable the Multi-Currency Pricing option in the Merchant Resource Center. MCP is only available for Visa and Mastercard.

If Multi-Currency Pricing is enabled, the following features are not supported:

- Recurring Billing
- Gift Cards
- 3-D Secure 1.0
- Google Pay™

For more information, see the Merchant Resource Center documentation available for download on the Moneris developer portal at:

[developer.moneris.com](https://developer.moneris.com)

### 3.5 Installments by Visa in Moneris Checkout

You can configure Moneris Checkout to display installment plan offerings to cardholders. These offers allow you to receive full funding for the transaction in a single payment, while the cardholder gains the convenience of paying their issuing bank in a series of installments.



For transactions with a minimum amount of \$100, Moneris Checkout confirms eligibility on card data entry by the customer via a lookup to the Installments by Visa server. The checkout iframe displays up to three installment plan offerings for an eligible card with the monthly payment amount, the number of months, and the Annual Percentage Rate (APR) charged by the issuing bank. The cardholder can read terms and conditions for the plans and agree to them.

Installments by Visa is only available for select issuers within the Visa, Mastercard, and Amex associations.

If Installments by Visa are utilized on a transaction by the customer, the following features are automatically disabled:

- Gift Cards
- Digital wallets such as Google Pay™ or Apple Pay

If you want to use Installments by Visa in Moneris Checkout transactions, you can enable the Installments by Visa option in the Merchant Resource Center. For more information, see the Merchant Resource Center documentation available for download on the Moneris developer portal at:

[developer.moneris.com](https://developer.moneris.com)

## 4 Testing Your Moneris Checkout Integration

In the testing stage of development:

1. Use the testing Merchant Resource Center at <https://esqa.moneris.com/mpg> to configure your Moneris Checkout page for testing purposes
2. Use the testing URL for server to server requests:  
`https://gatewayt.moneris.com/chktv2/request/request.php`
3. Reference the testing JavaScript library:  
`<script src="https://gatewayt.moneris.com/chktv2/js/chkt_v2.00.js"></script>`
4. Set your **myCheckout** object to the testing mode:  
`myCheckout.setMode("qa");`
5. In all Preload requests use the value "qa" for the **environment** variable
6. In all Preload requests, make sure that you are using the testing version of your credentials for **store ID**, **API token** and **checkout ID**
7. In all Receipt requests use the value "qa" for the **environment** variable
8. In all Receipt requests, make sure that you are using the testing version of your credentials for **store ID**, **API token** and **checkout ID**

### 4.1 Test Cards for Moneris Checkout

Test card numbers are available for testing your Moneris Checkout integration. For the most current test card information, see the Moneris developer portal at:

<https://developer.moneris.com/en/More/Testing/Testing%20a%20Solution>

#### Special information for testing convenience fee/service fee:

For testing transactions with convenience fee/service fee in Moneris Checkout, you must use the specific test credentials:

Store ID: monca00392

API token: qYdISUhHiOdfTr1CLNpN

Username: DemoUser

Password: password

## 5 Moving to Production with Moneris Checkout

Once you have finished testing your Moneris Checkout integration, do the following to move the integration into production:

1. Ensure that you have duplicated your final testing configuration in your Moneris Checkout production configuration in the production Merchant Resource Center at <https://esqa.moneris.com/mpg> to configure your Moneris Checkout page for testing purposes

2. Use the production URL for server to server requests:  
`https://gateway.moneris.com/chktv2/request/request.php`

3. Reference the production JavaScript library:  
`<script src="https://gateway.moneris.com/chktv2/js/chkt_v2.00.js"></script>`

4. Set your **myCheckout** object to the production mode:  
`myCheckout.setMode("prod");`

5. In all Preload requests use the value "prod" for the **environment** variable

6. In all Preload requests, make sure that you are using the production version of your credentials for **store ID**, **API token** and **checkout ID**

7. In all Receipt requests use the value "prod" for the **environment** variable

8. In all Receipt requests, make sure that you are using the production version of your credentials for **store ID**, **API token** and **checkout ID**

## 6 Reference

- 6.1 Callback Response Codes – Moneris Checkout
- 6.2 AVS Response Codes – Moneris Checkout
- 6.3 CVD Response Codes – Moneris Checkout
- 6.4 CAVV Result Codes

### 6.1 Callback Response Codes – Moneris Checkout

| Response Code | Reason                                      |
|---------------|---|
| 001           | Success                                     |
| 902           | 3-D Secure failed on response               |
| 2001          | Invalid ticket                              |
| 2002          | Ticket re-use                               |
| 2003          | Ticket expired                              |
| 2004          | Network request on initial page load failed |

### 6.2 AVS Response Codes – Moneris Checkout

| Code | Visa  | Mastercard/Discover                       | American Express/ JCB                             |
|------|---|---|---|
| A    | Street address matches, zip/postal code does not; acquirer rights not implied   | Address matches, zip/postal code does not | Billing address matches, zip/postal code does not |
| B    | Street address matches; zip/postal code not verified due to incompatible formats<br><br>(acquirer sent both street address and zip/postal code) | N/A                                       | N/A   |

| Code | Visa  | Mastercard/Discover | American Express/ JCB  |
|------|---|---------------------|--|
| C    | Street address not verified due to incompatible formats<br><br>(acquirer sent both street address and zip/postal code)  | N/A                 | N/A  |
| D    | Street address and zip/- postal code match  | N/A                 | Customer name incorrect; zip/postal code matches                     |
| E    | N/A   | N/A                 | Customer name incorrect, billing address and zip/- postal code match |
| F    | <i>Applies to UK only:</i> Street address and zip/postal code match   | N/A                 | Customer name incorrect; billing address matches                     |
| G    | Address information not verified for international transaction<br><br>Any of following may be true: <ul style="list-style-type: none"> <li>• Issuer is not an AVS participant, or</li> <li>• AVS data was present in the request but issuer did not return an AVS result, or</li> <li>• Visa performs AVS on behalf of the issuer and there was no address record on file for this account</li> </ul> | N/A                 | N/A  |
| I    | Address information not verified  | N/A                 | N/A  |

| Code | Visa   | Mastercard/Discover                          | American Express/ JCB                                     |
|------|--|--|---|
| K    | N/A  | N/A  | Customer name matches                                     |
| L    | N/A  | N/A  | Customer name and zip/-postal code match                  |
| M    | Street address and zip/-postal code match  | N/A  | Customer name, billing address, and zip/postal code match |
| N    | <p>No match; acquirer sent:</p> <ul style="list-style-type: none"> <li>• postal/ZIP code only, or</li> <li>• street address only, or</li> <li>• both postal code and street address</li> </ul> <p>Also used when acquirer requests AVS but sends no AVS data</p> | Neither address nor zip/-postal code matches | Billing address and zip/-postal code do not match         |
| O    | N/A  | N/A  | Customer name and billing address match                   |
| P    | Zip/postal code match; acquirer sent both zip/-postal code and street address, but street address not verified due to incompatible formats   | N/A  | N/A   |
| R    | <p>Retry; system unavailable or timed out</p> <p>Issuer ordinarily performs AVS, but was unavailable</p> <div> <b>NOTE:</b> Code R is used by Visa when issuers are unavailable; issuers should refrain from using this code.         </div>                     | Retry; system unable to process              | System unavailable; retry                                 |

| Code | Visa  | Mastercard/Discover  | American Express/ JCB   |
|------|---|--|---|
| S    | N/A   | AVS currently not supported  | AVS currently not supported   |
| T    | N/A   | Nine-digit zip code matches; address does not match  | N/A   |
| U    | <p>Address not verified for domestic transaction, for any of the following reasons:</p> <ul style="list-style-type: none"> <li>• Issuer is not an AVS participant, or</li> <li>• AVS data was present in the request but issuer did not return an AVS result, or</li> <li>• Visa performs AVS on behalf of the issuer and there was no address record on file for this account</li> </ul> | No data from issuer-authorization system   | Information is unavailable  |
| W    | <p>Not applicable; if present, replaced with Z by Visa</p> <p><i>Available for U.S. issuers only</i></p>  | <p>For U.S. addresses, nine-digit postal code matches, address does not</p> <p>For addresses outside the U.S., postal code matches, address does not</p> | Customer name, billing address, and zip/postal code are all correct matches |
| X    | N/A   | <p>For U.S. addresses, nine-digit postal code and address match</p> <p>For addresses outside the U.S., postal code and address match</p>                 | N/A   |



| Code | Visa  | Mastercard/Discover   | American Express/ JCB                             |
|------|---|---|---|
| Y    | Street address and zip/-postal code match   | Billing address and zip/-postal code both match                         | Billing address and zip/-postal code both match   |
| Z    | Zip/postal code matches; street address does not match, or street address not included in request | For U.S. addresses, five-digit zip code matches, address does not match | Zip/postal code matches, billing address does not |

### 6.3 CVD Response Codes – Moneris Checkout

CVD verification is available for Visa, Mastercard, Discover, American Express, JCB and UnionPay transactions.

| Code  | Description   |
|-------|---|
| M     | Match   |
| N     | No match  |
| P     | Not processed   |
| S     | CVD should be on the card, but Merchant has indicated that CVD is not present |
| U     | Issuer is not a CVD participant   |
| Y     | Match for American Express/JCB only   |
| D     | Invalid security code for American Express or JCB only                        |
| Other | Invalid response code   |

### 6.4 CAVV Result Codes

The Cardholder Authentication Verification Value (CAVV), the Accountholder Authentication Value (AAV), and the American Express Verification Value (AEVV), are the values that allows Visa, Mastercard and American Express to validate the integrity of the Visa Secure, Mastercard Identity Check and American Express SafeKey transaction data. These values are passed back from the issuer to the merchant after the authentication has taken place.

The merchant then integrates the CAVV/AAV/AEVB value into the authorization request using the Purchase with 3-D Secure or Pre-Authorization with 3-D Secure transaction type, described below:

1. Merchant conducts 3D-Secure authentication request and receives CAVV/AAV/AEVV value in response.
2. Merchant sends the CAVV/AAV/AEVV value to Moneris using the Purchase or Pre-Authorization with 3-D Secure transaction type and receives the CAVV result code in the response.

### Visa CAVV result codes

| Result Code | Message                                       | Significance to Merchants  |
|-------------|---|--|
| Blank       | CAVV not present or not verified              | Not a Visa Secure transaction. No liability shift and merchant is not protected from chargebacks   |
| 0           | CAVV authentication results invalid           | Not a Visa Secure transaction. No liability shift and merchant is not protected from chargebacks   |
| 1           | CAVV failed validation (authentication)       | Provided that you have implemented the Visa Secure process correctly, the liability for this transaction should remain with the Issuer for chargeback reason codes covered by Visa Secure. |
| 2           | CAVV passed validation (authentication)       | Fully authenticated transaction. There is a liability shift and the merchant is protected from chargebacks.  |
| 3, 8, A     | CAVV passed validation (attempt)              | Visa Secure has been attempted. There is a liability shift and the merchant is protected from certain card fraud-related chargebacks.  |
| 4, 7, 9     | CAVV failed validation (attempt)              | Visa Secure has been attempted. There is a liability shift and the merchant is protected from certain card fraud-related chargebacks.  |
| 6           | CAVV not validated - Issuer not participating | Visa Secure has been attempted. There is a liability shift and the merchant is protected from certain card fraud-related chargebacks.  |
| B           | CAVV passed validation; information only      | Not a Visa Secure transaction. No liability shift and merchant is not protected from chargebacks   |
| C           | CAVV was not validated (attempt)              | Visa Secure has been attempted. There is a liability shift and the merchant is protected from certain card fraud-related chargebacks.  |
| D           | CAVV was not validated (authentication)       | Visa Secure has been attempted. There is a liability shift and the merchant is protected from cer-   |

| Result Code | Message | Significance to Merchants |
|-------------|---------|---------------------------|
|-------------|---------|---------------------------|

tain card fraud-related chargebacks.

### Mastercard CAVV result codes

| Result Code | Message                   | Significance to Merchants   |
|-------------|---------------------------|---|
| 0           | Authentication failed     | Not a Mastercard Identity Check transaction. No liability shift and merchant is not protected from chargebacks  |
| 1           | Authentication attempted  | Mastercard Identity Check has been attempted. There is a liability shift and the merchant is protected from certain card fraud-related chargebacks (international commercial cards excluded). |
| 2           | Authentication successful | Fully authenticated transaction. There is a liability shift and the merchant is protected from chargebacks.   |

### American Express CAVV result codes

**NOTE:** American Express SafeKey is only available to American Express direct acquired merchants (i.e., not OptBlue merchants). Any questions pertaining to chargebacks, liability and disputes should be addressed to your American Express representative given that American Express is the acquirer of record for these merchants.

| Result Code | Description  |
|-------------|--|
| 1           | AEVV Failed - Authentication, Issuer Key                     |
| 2           | AEVV Passed - Authentication, Issuer Key                     |
| 3           | AEVV Passed - Attempt, Issuer Key                            |
| 4           | AEVV Failed - Attempt, Issuer Key                            |
| 7           | AEVV Failed - Attempt, Issuer not participating, Network Key |
| 8           | AEVV Passed - Attempt, Issuer not participating, Network Key |

| Result Code | Description  |
|-------------|--|
| 9           | AEVV Failed - Attempt, Participating, Access Control Server (ACS) not available, Network Key |
| A           | AEVV Passed - Attempt, Participating, Access Control Server (ACS) not available, Network Key |
| U           | AEVV Unchecked   |