

# Bank of America Gateway Hosted Payments Page

Integration Guide



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# Recent Revisions to This Document

Release	Changes
21.02	This revision contains only editorial changes and no technical updates.
21.01	Changed the name of <i>Visa Checkout</i> to <i>Visa Click to Pay</i> and removed <i>Visa Secure Remote Commerce</i> .  Updated the request field <a href="#">payer_authentication_challenge_code</a> .  Added the <b>profile_id</b> and <b>req_profile_id</b> fields. See <a href="#">Chapter 3, "Payment Transactions," on page 39</a> , and <a href="#">Appendix A, "API Fields," on page 51</a> .
20.01	Initial release.

# About This Guide

## Audience and Purpose

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This guide is written for merchants who want to accept payments using Hosted Payments Page and who do not want to handle or store sensitive payment information on their own servers.

Using Hosted Payments Page requires minimal scripting skills. You must create a security script and modify your HTML form to invoke Secure Acceptance. You will also use your Merchant Services account to review and manage orders.

## Website Requirements

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Your website must meet the following requirements:

- It must have a shopping-cart, customer order creation software, or an application for initiating disbursements to send funds to payment accounts.
- It must contain product pages in one of the supported scripting languages. See ["Sample Transaction Process Using JSP," page 37](#).
- The IT infrastructure must be Public Key Infrastructure (PKI) enabled to use SSL-based form POST submissions.
- The IT infrastructure must be capable of digitally signing customer data prior to submission to Hosted Payments Page.

## Conventions

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### Important and Warning Statements

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An *Important* statement contains information essential to successfully completing a task or learning a concept.

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A *Warning* contains information or instructions, which, if not heeded, can result in a security risk, irreversible loss of data, or significant cost in time or revenue or both.

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### Text and Command Conventions

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Convention	Usage
<b>Bold</b>	<ul style="list-style-type: none"> <li>Field and service names in text; for example: Include the <b>transaction_type</b> field.</li> <li>Items that you are instructed to act upon; for example: Click <b>Save</b>.</li> </ul>
Screen text	<ul style="list-style-type: none"> <li>Code examples and samples.</li> <li>Text that you enter in an API environment; for example: Set the <b>transaction_type</b> field to <code>create_payment_token</code>.</li> </ul>

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# Hosted Payments Page

Bank of America Hosted Payments Page is your secure hosted customer checkout experience. It consists of securely managed payment forms or as a single page payment form for capturing payment card data, processing transactions, enabling you to simplify your Payment Card Industry Data Security Standard (PCI DSS) compliance and reduce risks associated with handling and/or storing sensitive payment card information. You, the merchant, out-source capturing and managing sensitive payment card data to Secure Acceptance, which is designed to accept card payments.



Secure Acceptance is designed to process transaction requests directly from the customer browser so that sensitive payment data does not pass through your servers. Sending server-side payments using Secure Acceptance incurs unnecessary overhead and could result in the suspension of your merchant account and subsequent failure of transactions.

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To create your customer's Secure Acceptance experience, you take these steps:

- 1 Create and configure Secure Acceptance profiles.
- 2 Update the code on your website to render the Hosted Payments Page and immediately process card transactions (see "[Samples in Scripting Languages](#)," page 37). Sensitive card data bypasses your network and is accepted by Secure Acceptance directly from the customer. Bank of America processes the transaction on your behalf by sending an approval request to your payment processor in real time. See "[Secure Acceptance Transaction Flow](#)," page 11.
- 3 Use the response information to display an appropriate transaction response page to the customer. You can view and manage all orders in your Merchant Services account (see "[Viewing Transactions in Your Merchant Services Account](#)," page 50).

## Required Browsers

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You must use one of these browsers in order to ensure that the Secure Acceptance checkout flow is fast and secure:

Desktop browsers:

- IE 10 or later
- Edge 13 or later
- Firefox 42 or later
- Chrome 48 or later
- Safari 7.1 or later
- Opera 37 or later

Mobile browsers:

- iOS Safari 7.1 or later
- Android Browser 4.4 or later
- Chrome Mobile 48 or later

## Secure Acceptance Profile

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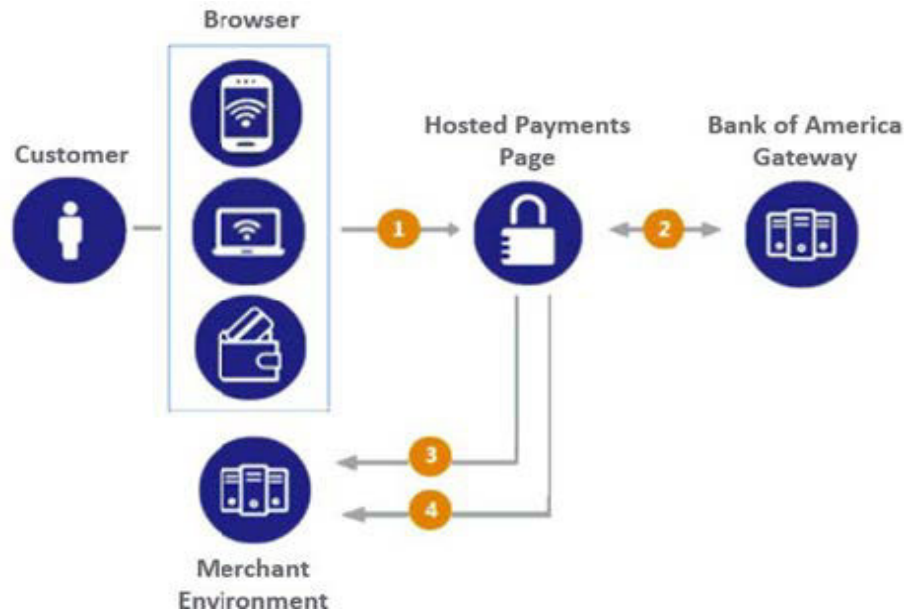
Throughout this document you will see references to Secure Acceptance. *Secure Acceptance* is the umbrella term for the Hosted Payments Page and Checkout API integration methods. Information about Secure Acceptance applies to Hosted Payments Page.

A Secure Acceptance profile consists of settings that you configure to create a customer checkout experience. You can create and edit multiple profiles, each offering a custom checkout experience (see "[Custom Checkout Appearance](#)," page 31). For example, you might need multiple profiles for localized branding of your websites. You can display a multi-step checkout process or a single page checkout (see "[Checkout Configuration](#)," page 23) to the customer as well as configure the appearance and branding, payment options, languages, and customer notifications.

## Secure Acceptance Transaction Flow

The Hosted Payments Page transaction flow is illustrated in [Figure 1](#) and described below.

**Figure 1 Hosted Payments Page Transaction Flow**



- 1 The customer clicks the checkout now button on your website, which triggers an HTTPS POST that directs the customer to the Hosted Payments Page that you configured in your Merchant Services account. The HTTPS POST includes the signature and signed data fields containing the order information.

Hosted Payments Page works best with JavaScript and cookies enabled in the customer browser.



Your system should sign only Secure Acceptance request fields. To prevent malicious actors from impersonating Bank of America, do not allow unauthorized access to the signing function.

- 2 Secure Acceptance verifies the signature to ensure that the order details were not amended or tampered with and displays the Hosted Payments Page. The customer enters and submits payment details and/or their billing and shipping information. The customer confirms the payment, and the transaction is processed.
- 3 Bank of America recommends that you configure a custom receipt page in your Merchant Services account (see "[Merchant Notifications](#)," [page 26](#)) so that the signed transaction response is sent back to your merchant server through the browser. You must validate the response signature to confirm that the response data was not amended or tampered with. Hosted Payments Page can also display a standard receipt page to your customer, and

you can verify the result of the transaction search in your Merchant Services account or the standard Bank of America reports.



If the response signature in the response field does not match the signature calculated based on the response data, treat the POST as malicious and disregard it.

Secure Acceptance signs every response field. Ignore any response fields in the POST that are not in the **signed\_fields** field.

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- 4 Bank of America recommends that you implement the merchant POST URL notification (see "[Merchant Notifications](#)," page 26) as a backup means of determining the transaction result. This method does not rely on your customer's browser. You receive the transaction result even if your customer lost connection after confirming the payment.

If the transaction type is sale, it is immediately submitted for settlement. If the transaction type is authorization, use the Bank of America Simple Order API to submit a capture request when goods are shipped.

## Payment Tokens

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Payment tokens represent the customer token in the Token Management Service (TMS). They are unique identifiers for sensitive customer and payment data that cannot be mathematically reversed. The payment token replaces the payment card, and optionally the associated billing and shipping information. No sensitive card information is stored on your servers, thereby reducing your PCI DSS obligations.

Secure Acceptance offers limited support for TMS, providing the ability to create and update a customer's default payment and shipping information. In the Secure Acceptance API, the **payment\_token** field identifies the TMS customer token.

## Tokens That Represent a Card or Bank Account Only

Instrument identifier tokens represent a payment card number or bank account number. The same card number or bank account number sent in multiple token creation calls results in the same payment token being returned.

When using Secure Acceptance with tokens that represent only the card number or bank account, you must include associated data, such as expiration dates and billing address data, in your transaction request.

## One-Click Checkout

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With *one-click checkout*, customers can buy products with a single click. Secure Acceptance is integrated to Bank of America Tokenization, so returning customers are not required to enter their payment details. Before a customer can use one-click checkout, they must create a payment token during the first transaction on the merchant website. See "[Payment Token Transactions](#)," page 44. The payment token is an identifier for the payment details; therefore, no further purchases require that you enter any information. When the payment token is included in a payment request, it retrieves the card, billing, and shipping information related to the original payment request from the payment repository.

To use one-click checkout, you must include the one-click checkout endpoint to process the transaction. See "[Endpoints and Transaction Types](#)," page 39.

## Level II Data

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Secure Acceptance supports Level II data. Level II cards, also known as *Type II cards*, provide customers with additional information on their payment card statements. Business and corporate cards along with purchase and procurement cards are considered Level II cards.

For detailed descriptions of each Level II field, see the Bank of America Integration Guide that also describes how to request sale and capture transactions.

# Payment Acceptance Configuration

## Creating a Hosted Payments Page Profile

Contact Bank of America Customer Support to enable your account for Secure Acceptance. You must activate a profile in order to use it (see ["Activating a Profile," page 37](#)).

- Step 1** Log in to **Merchant Services** inside Business Advantage 360.
- Step 2** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 3** Click **New Profile**. The Create Profile page appears.
- Step 4** Enter or verify the following profile details.

**Table 2 Profile Details**

Profile Detail	Description
Profile Name	The Secure Acceptance profile name is required and cannot exceed 40 alphanumeric characters.
Profile Description	The profile description cannot exceed 255 characters.
Integration Method	Check <b>Hosted Payments Page</b> .
Company Name	The company name is required and cannot exceed 40 alphanumeric characters.
Company Contact Name	Enter company contact information: name, email, and phone number.
Company Contact Email	
Company Phone Number	
Payment Tokenization	Check <b>Payment Tokenization</b> . For more information, see <a href="#">Chapter 3, "Payment Transactions," on page 39</a> .
Fraud Management	Check <b>Fraud Management</b> . For more information, refer to the guides in the Fraud Management section in your Merchant Services account.
Verbose Data	Check <b>Verbose Data</b> . For more information, refer to the guides in the Fraud Management section in your Merchant Services account.

**Table 2 Profile Details (Continued)**

Profile Detail	Description
Generate Device Fingerprint	Check <b>Generate Device Fingerprint</b> . For more information, refer to the guides in the Fraud Management section in your Merchant Services account.

**Step 5** Click **Submit**.

## Payment Method Configuration

You must configure at least one payment method before you can activate a profile.

A payment method selection page is displayed as part of the checkout process for any of the following scenarios:

- Multiple payment methods are enabled for the profile, and no **payment\_method** field is included in the request.
- **payment\_method=visacheckout** is included in the request.
- Visa Click to Pay is the only enabled payment method for the profile (see ["Enabling the Payment Method for Visa Click to Pay," page 19](#)).

⚠ Visa Click to Pay uses Visa Checkout services and API fields.



You can skip displaying the payment method selection page by specifying card as the only available payment method.

Customers can change the payment method during the checkout process.

## Adding Card Types and Currencies

For each card type you choose, you can also manage currencies. Choose only the types of payment cards and currencies that your merchant account provider authorizes.

The card verification number (CVN) is a three- or four-digit number that helps ensure that the customer possess the card at the time of the transaction.

**Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.

- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Settings**. The Payment Settings page appears.
- Step 5** Click **Add Card Types**. The list of card types appear.
- Step 6** Check each card type that you want to offer to the customer as a payment method. Your payment processor must support the card types.
- Step 7** Click the settings icon for each card type. The card settings and currencies lists appear.
- Step 8** Check **CVN Display** to display the CVN field on Secure Acceptance. The customer decides whether to enter the CVN. Bank of America recommends that you display the CVN to reduce fraud.
- Step 9** Check **CVN Required**. The CVN Display option must also be checked. If this option is checked, the customer is required to enter the CVN. Bank of America recommends that you require the CVN to reduce fraud.
- Step 10** Check the currencies for each card.  
By default, all currencies are listed as disabled. You must select at least one currency. Contact your merchant account provider for a list of supported currencies. If you select the Elo or Hipercard card type, only the Brazilian real currency is supported.
- Step 11** Click **Submit**. The card types are added as an accepted payment type.
- Step 12** Click **Save**.
- 

## 3D Secure Configuration

3D Secure is the Bank of America implementation of Payer Authentication. It prevents unauthorized card use and provides added protection from fraudulent chargeback activity. 3D Secure is not available to Bank of America merchants in production at this time. You will see a Payer Authentication section within the Payment Acceptance Configuration tab in the Demonstration and Certification Environment (DCE), if you choose to use the DCE.

Before you can use Bank of America 3D Secure, you must contact Bank of America Technical Support to configure your account. Your merchant ID must be enabled for 3D Secure.

Secure Acceptance supports 3D Secure 1.0 and 2.0.

For Secure Acceptance, Bank of America supports the following kinds of payer authentication:

- American Express SafeKey
- Mastercard Identity Check



- Visa Secure
- J/Secure by JCB
- Diners ProtectBuy

For each transaction, you receive detailed information in the replies and in the transaction details page of your Merchant Services account. You can store this information for 12 months. Bank of America recommends that you store the payer authentication data because you can be required to display this information as enrollment verification for any payer authentication transaction that you re-present because of a chargeback.

Your merchant account provider can require that you provide all data in human-readable format.

The language used on each payer authentication page is determined by your issuing bank and overrides the locale you have specified. If you use the test card numbers for testing purposes the default language used on the payer authentication page is English and overrides the locale you have specified. See ["Test and View Transactions," page 49](#).

## Configuring Payer Authentication

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Settings**. The Payment Settings page appears.
- Step 5** Choose a 3D Secure version. If you choose 3D Secure 2.0 and the card issuer is not 3D Secure 2.0 ready, some transactions might still authenticate over 3D Secure 1.0. The **payer\_authentication\_specification\_version** response field indicates which version was used.
- Step 6** Click **Save**. The card types that support payer authentication are:
- Amex
  - Cartes Bancaires
  - Diners Club
  - Discover
  - JCB
  - Mastercard
  - Maestro (UK Domestic or International)
  - Visa
-

## Enabling Automatic Authorization Reversals

For transactions that fail to return an Address Verification System (AVS) or a Card Verification Number (CVN) match, you can enable Secure Acceptance to perform an automatic authorization reversal. An automatic reversal releases the reserved funds held against a customer's card.

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Select a profile. The General Settings page appears.
- Step 3** Click **Payment Settings**. The Payment Settings page appears.
- Step 4** Check **Fails AVS check**. Authorization is automatically reversed on a transaction that fails an AVS check.
- Step 5** Check **Fails CVN check**. Authorization is automatically reversed on a transaction that fails a CVN check.
- Step 6** Click **Save**.



When the AVS and CVN options are disabled and the transaction fails an AVS or CVN check, the customer is notified that the transaction was accepted. You are notified to review the transaction details (see "[Types of Notifications](#)," page 103).

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## Visa Click to Pay Configuration

Visa Click to Pay is a form of Digital Payments, which are not available to Bank of America merchants at this time. You will see Digital Payments within the Demonstration and Certification Environment (DCE), if you choose to utilize the DCE.

You must enroll in Visa Click to Pay and create a Visa Click to Pay profile before you can enable it as a payment method. Only the authorization and sale transaction types are supported for Visa Click to Pay transactions.



Visa Click to Pay uses Visa Checkout services and API fields.

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The payment methods selection page is displayed as part of the checkout process for the following scenarios:

- Multiple payment methods are enabled for the profile, and no **payment\_method** field is included in the request.
- Visa Click to Pay is the only enabled payment method for the profile.
- **payment\_method=visacheckout** is included in the request.

Visa Click to Pay requires the customer to enter only a username and password to pay for goods. It eliminates the need to enter account, shipping, and billing information. The customer logs in to their Visa Click to Pay account and chooses the card with which they would like to pay. If the Secure Acceptance profile is enabled to request the payer authentication service for a specific card type, the customer is redirected to the relevant payer authentication screen before Secure Acceptance processes the transaction and redirects the customer to your website.

## Configuring Visa Click to Pay

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Digital Payment Solutions**. The Digital Payment Solutions page appears.
- Step 2** Click **Configure**. The Visa Merchant Services Agreement appears.
- Step 3** Review the Visa Click to Pay Services Agreement, then click **Agree and Create Account**. The Visa Click to Pay Configuration panel opens to the Merchant Configuration section.
- Step 4** Enter your payment details.
- Step 5** Click **Submit**.

## Enabling the Payment Method for Visa Click to Pay

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Settings**. The Payment Settings page appears.
- Step 5** Check **Enable Visa Click to Pay**.
- Step 6** Enter the name of the Visa Click to Pay profile to be used. If no profile name is entered, the default Visa Click to Pay profile is used.

- Step 7** Check the card types to request the payer authentication service for:
- Visa—the Visa Secure service is requested.
  - Mastercard—the Mastercard Identity Check service is requested.
  - American Express—the American Express SafeKey service is requested.

See "3D Secure Configuration," page 16.

- Step 8** Indicate when to reject transactions based on a certain criterion:
- Billing address details are incorrect (AVS fail).
  - Security code is incorrect (CVV/CVN fail).
  - The Visa Click to Pay risk score is above your specified score. Select the risk score to use with your fraud model. A value of 0 indicates that a risk score will not be taken into account, and a higher risk score indicates a higher perceived fraud risk.

- Step 9** Click **Save**.
- 

## Enabling PayPal Express Checkout

PayPal Express Checkout is a form of Digital Payments, which are not available to Bank of America merchants at this time. You will see Digital Payments within the Demo and Certification Environment (DCE), if you choose to use the DCE.

PayPal Express Checkout is not supported on a Secure Acceptance iframe integration.

Contact Bank of America Customer Support to have your Bank of America account configured for this feature. You must also create a PayPal business account; see the PayPal guide.


Add the PayPal Express Checkout payment method to the Hosted Payments Page payment methods selection page. Redirect the customer to their PayPal account login. When logged in to their PayPal account they can review orders and edit shipping or payment details before completing transactions.

The payment methods selection page is displayed as part of the checkout process when multiple payment methods are enabled for the profile and no **payment\_method** field is included in the request. If you include **payment\_method=paypal** in the request, the payment methods selection page is not displayed, and the customer is redirected to PayPal.

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.

- Step 4** Click **Payment Settings**. The Payment Settings page appears.
- Step 5** Check **Enable PayPal Express Checkout**.
- Step 6** Check **Allow customers to select or edit their shipping address within PayPal** to allow customers to edit the shipping address details that they provided in the transaction request to Secure Acceptance. Customers select a new address or edit the address when they are logged in to their PayPal account.
- Step 7** When the transaction type is authorization, check one of the following options:
- **Request a PayPal authorization and include the authorization response values in the response**—check this option to create and authorize the PayPal order.
 


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The customer funds are not captured using this option. You must request a PayPal capture; see the PayPal guide. If the transaction type is sale, Secure Acceptance authorizes and captures the customer funds.

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  - **Request a PayPal order setup and include the order setup response values in the response**—check this option to create the PayPal order.
 

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The customer funds are not authorized or captured using this option. You must request a PayPal authorization followed by a PayPal capture request; see the PayPal guide. If the transaction type is **sale**, Secure Acceptance authorizes and captures the customer funds.

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- Step 8** Click **Save**.

## Security Keys

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You must create a security key before you can activate a profile.

You cannot use the same security key for both test and production transactions. You must download a security key for each version of Secure Acceptance for test and production.

On the Profile Settings page, click **Security**. The Security Keys page appears. The security script signs the request fields using the secret key and the HMAC SHA256 algorithm. To verify data, the security script generates a signature to compare with the signature returned from the Secure Acceptance server. A security key expires in two years and protects each transaction from data tampering.

## Creating Security Keys

- Step 1** Log in to your Merchant Services account.
- Step 2** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 3** Find the profile, and click the more options ellipsis (...).
- Step 4** Select **Edit Profile**. The General Settings page appears.
- Step 5** Click **Security**. The security keys page appears.
- Step 6** Click **Create Key**.
- Step 7** Enter a key name (required).
- Step 8** Choose signature version **1** (default).
- Step 9** Choose signature method **HMAC-SHA256** (default).
- Step 10** Click **Create**.
- Step 11** Click **Confirm**. The Create New Key window expands and displays the new access key and secret key. This panel closes after 30 seconds.
- Step 12** Copy and save or download the access key and secret key.
  - Access key: Secure Sockets Layer (SSL) authentication with Secure Acceptance. You can have many access keys per profile. See ["Samples in Scripting Languages," page 37](#).
  - Secret key: signs the transaction data and is required for each transaction. Copy and paste this secret key into your security script. See ["Samples in Scripting Languages," page 37](#).



Remember to delete the copied keys from your clipboard or cached memory.

---

By default, the new security key is active. The other options for each security key are:

- Deactivate: deactivates the security key. The security key is inactive.
- Activate: activates an inactive security key.
- View: displays the access key and security key.

When you create a security key, it is displayed in the security keys table. You can select a table row to display the access key and the secret key for that specific security key.

# Checkout Configuration

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The payment form is the customer's checkout experience. It consists of either a series of pages or as a single checkout page in which the customer enters or reviews information before submitting a transaction. Select the fields that you want displayed on the single checkout page or on each page of the multi-step checkout process: billing, shipping, payment, and order review.

## Configuring the Payment Form

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Form**. The Payment Form page appears.
- Step 5** Choose the payment form flow:
- **Multi-step payment form**—the checkout process consists of a sequence of pages on which the customer enters or reviews information before submitting a transaction. The default sequence is payment selection (if multiple payment methods are enabled), billing, shipping, payment, review, and receipt.
  - **Single page form**—the checkout process consists of one page on which the customer enters or reviews information before submitting a transaction.

Do not click **Save** until you have selected the billing or shipping fields, or both.

- Step 6** Check **Display the total tax amount in each step of the checkout process**.

The total tax amount must be included in each transaction. Calculate and include the total tax amount in the **tax\_amount** field.

Do not click **Save** until you have selected the billing or shipping fields, or both.

- Step 7** Click **Save**.
-

## Configuring Billing Information Fields



Select the billing information fields that your merchant provider requires. If the billing country is U.S. or Canada, you can select the state code field as a required field. Bank of America recommends that if the billing country is U.S. or Canada, the state code and the postal code fields be selected as required. If the billing country is located in the rest of the world, you can also select the state code field as a required field.

Select the customer billing information fields that you want displayed on Secure Acceptance. If these fields are captured at an earlier stage of the order process (for example on your website), they can be passed into Secure Acceptance as hidden form fields (see "[Request Fields](#)," page 52). You can shorten the checkout process by not selecting billing information.

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Form**. The Payment Form page appears.
- Step 5** Check **Billing Information**. The billing information fields appear.
- Step 6** Check the billing information fields that your merchant provider requires. The options for each field are:
  - **Display**: the customer can view the information displayed in this field. Choose this option if you want to pre-populate the billing information fields when Hosted Payments Page is rendered—these fields must be passed into Secure Acceptance as hidden form fields.
  - **Edit**: the customer can view and edit the billing information on the Hosted Payments Page. When you select this option, the display option is automatically selected.
  - **Require**: the customer is required to enter the billing information on the Hosted Payments Page before they submit the transaction. When you select this option, all other options are automatically selected.

Do not click **Save** until you have selected the billing and order review fields.

- Step 7** Indicate whether to mask sensitive fields.
- Step 8** Click **Save**.



## Configuring Shipping Information Fields

Select the shipping information fields that your merchant provider requires.

Select the customer shipping information fields that you want displayed on Secure Acceptance. These fields are optional. If you do not add these fields, the shipping information step is removed from Secure Acceptance. If these fields are captured at an earlier stage of the order process (for example, on your website), they can be passed into Secure Acceptance as hidden form fields (see "[Request Fields](#)," page 52). You can shorten the checkout process by not selecting shipping information.

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Payment Form**. The Payment Form page appears.
- Step 5** Check **Shipping Information**.
- Step 6** Check the shipping information fields that your merchant provider requires. The options for each field are:
  - **Display**: the customer can view the information displayed in this field. Choose this option if you want to pre-populate the shipping information fields when the Hosted Payments Page is rendered—these fields must be passed into Secure Acceptance as hidden form fields.
  - **Edit**: the customer can view and edit the shipping information on the Hosted Payments Page. When you select this option, the display option is automatically selected.
  - **Require**: the customer is required to enter the shipping information on the Hosted Payments Page before they submit the transaction. When you select this option, all other options are automatically selected.

Do not click **Save** until you have selected the shipping and order review fields.

- Step 7** Indicate whether to mask sensitive fields.
  - Step 8** Click **Save**.
-

## Configuring Order Review Details

Select the fields that you want displayed on the Order Review page of Hosted Payments Page. The customer reviews this information before submitting a transaction.

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
  - Step 2** Find the profile, and click the more options ellipsis (...).
  - Step 3** Select **Edit Profile**. The General Settings page appears.
  - Step 4** Click **Payment Form**. The Payment Form page appears.
  - Step 5** Check the fields that you want displayed on the Order Review page of Hosted Payments Page. The options for each field are:
    - Display: the customer can view the information contained in this field. Available only for billing and shipping information.
    - Edit: the customer can view and edit the information contained in this field.
  - Step 6** Click **Save**.
- 

## Merchant Notifications

---

Secure Acceptance sends merchant and customer notifications in response to transactions. You can receive a merchant notification by email or as an HTTPS POST to a URL for each transaction processed. Both notifications contain the same transaction result data.

Ensure that your system acknowledges POST notifications (even when under load) as quickly as possible. Delays of more than 10 seconds might result in delays to future POST notifications.



Bank of America recommends that you implement the merchant POST URL to receive notification of each transaction. Parse the transaction response sent to the merchant POST URL and store the data within your order management system. This ensures the accuracy of the transactions and informs you when the transaction was successfully processed.

---

## Configuring Merchant Notifications

**Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.

**Step 2** Find the profile, and click the more options ellipsis (...).

**Step 3** Select **Edit Profile**. The General Settings page appears.

**Step 4** Click **Notifications**. The Notifications page appears.

**Step 5** Choose a merchant notification in one of two ways:

- Check **Merchant POST URL**. Enter the HTTPS URL. Bank of America sends transaction information to this URL. For more information, see "[Response Fields](#)," page 79.

Only an HTTPS URL supporting TLS 1.2 or higher should be used for the merchant POST URL. If you encounter any problems, contact Bank of America Customer Support.

- Check **Merchant POST Email**. Enter your email address.

Bank of America sends transaction response information to this email address including payment information, return codes, and all relevant order information. See "[Response Fields](#)," page 79.

**Step 6** Choose the card number digits that you want displayed in the merchant or customer receipt:

- Return payment card BIN: displays the card's Bank Identification Number (BIN), which is the first six digits of the card number. All other digits are masked: 123456xxxxxxxxxx
- Return last four digits of payment card number: displays the last four digits of the card number. All other digits are masked: xxxxxxxxxxxx1234
- Return BIN and last four digits of payment card number: displays the BIN and the last four digits of the card number. All other digits are masked: 123456xxxxxx1234

**Step 7** Continue to configure the customer notifications (see "[Customer Receipts](#)," page 28) or click **Save**.

---

## Customer Receipts

---

You can send a purchase receipt email to your customer and a copy to your own email address. Both are optional. Customers can reply with questions regarding their purchases, so use an active email account. The email format is HTML unless your customer email is rich text format (RTF).

### Configuring Customer Notifications

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Notifications**. The Notifications page appears.
- Step 5** Check **Email Receipt to Customer**.
- Step 6** Enter the sender email address to be displayed on the customer receipt. The customer will reply to this email with any queries.
- Step 7** Enter the sender name of your business. It is displayed on the customer receipt.
- Step 8** Check **Send a copy to**. This setting is optional.
- Step 9** Enter your email address to receive a copy of the customer's receipt.  
Your copy of the customer receipt will contain additional transaction response information.

---

## Customer Response Page

---

You must configure the customer response page before you can activate a profile.

You can choose to have a transaction response page displayed to the customer at the end of the checkout process, and a cancel response page displayed during the checkout process. Enter a URL for your own customer response page, or use the Bank of America hosted response pages. Depending upon the transaction result, the Bank of America hosted response pages are Accept, Decline, or Error. Review declined orders as soon as possible because you might be able to correct problems related to address or card verification, or you might be able to obtain a verbal authorization. You can also choose to display a web page to the customer after the checkout process is completed.

## Configuring a Bank of America Hosted Response Page

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
  - Step 2** Find the profile, and click the more options ellipsis (...).
  - Step 3** Select **Edit Profile**. The General Settings page appears.
  - Step 4** Click **Customer Response**. The Customer Response page appears.
  - Step 5** Under the Transaction Response Page heading, check **Hosted by Bank of America**.
  - Step 6** Under the Transaction Response Message heading, choose a number from the **Retry Limit** drop-down list. The maximum number of times a customer can retry a declined transaction is five.
  - Step 7** Under the Customer Redirect after Checkout heading, enter the redirect URL of the web page. This web page is displayed to the customer after the checkout process is completed.
  - Step 8** Click **Save**. The Profile Settings page appears.
- 

## Configuring a Custom Hosted Response Page

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Customer Response**. The Customer Response page appears.
- Step 5** Under the Transaction Response Page heading, check **Hosted by You**.
- Step 6** Enter the URL for your customer response page. Use port 80, 443, or 8080 in your URL. Only port 443 should be used with a HTTPS URL. Parse the transaction results from the URL according to the reason code (), and redirect your customer to the appropriate response page. See "[Reason Codes](#)," page 100.
- Step 7** Under the Transaction Response Message heading, choose a number from the **Retry Limit** drop-down list. The maximum number of times a customer can retry a declined transaction is 5.

- Step 8** Under the Customer Redirect after Checkout heading, enter the redirect URL of the web page. This web page is displayed to the customer after the checkout process is completed.
- Step 9** Click **Save**.
- 

## Configuring a Custom Bank of America Hosted Response Page

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Customer Response**. The Customer Response page appears.
- Step 5** Under the Custom Cancel Response Page heading, check **Hosted by Bank of America**.
- Step 6** Click **Save**.
- 

## Configuring a Custom Cancel Response Page

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 1** Find the profile, and click the more options ellipsis (...).
- Step 2** Select **Edit Profile**. The General Settings page appears.
- Step 3** Click **Customer Response**. The Customer Response page appears.
- Step 4** Under the Custom Cancel Response Page heading, check **Hosted by You**.
- Step 5** Enter the URL for your customer response page. Use port 80, 443, or 8080 in your URL. Only port 443 should be used with a HTTPS URL. Parse the transaction results from the URL according to the reason code (), and redirect your customer to the appropriate response page. See "[Reason Codes](#)," page 100.
- Step 6** Click **Save**.
-

## Custom Checkout Appearance

---

Customize the appearance and branding of the Secure Acceptance checkout pages by choosing a background color, font, and text color. Upload a logo or image, and align it within the header or footer.

Bank of America recommends that you preview your changes in the Image Preview window.

To display an image as the header banner of the payment form, the image dimensions must not exceed 840 (w) x 60 (h) pixels and the image size must not exceed 100 kB. To display a small logo within the header banner, the logo height must not exceed 60 pixels. The image file must be GIF, JPEG, or PNG.

## Changing the Header Content

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
  - Step 2** Find the profile, and click the more options ellipsis (...).
  - Step 3** Select **Edit Profile**. The General Settings page appears.
  - Step 4** Click **Branding**. The Branding page appears.
  - Step 5** Check **Display Header**.
  - Step 6** Click the header color icon.
  - Step 7** Choose a color in one of two ways:
    - Enter a hexadecimal value for the header color of the payment form.
    - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
  - Step 8** Click **Browse** to upload the image to display as the header banner or as a logo within the header banner.
  - Step 9** Choose the alignment option for the image or logo: left-aligned, centered, or right-aligned.
  - Step 10** Click **Save**.
-

## Changing the Body Color and Font Settings

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 2** Find the profile, and click the more options ellipsis (...).
- Step 3** Select **Edit Profile**. The General Settings page appears.
- Step 4** Click **Branding**. The Branding page appears.
- Step 5** Choose a background color for the main body in one of two ways:
- Enter a hexadecimal value for the background color.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 6** Select a text font from the drop-down list.
- Step 7** Choose a text color in one of two ways:
- Enter a hexadecimal value for the background color.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 8** Click **Save**.
- Step 9** Click **Set to Default** to restore all the default settings on this page.

---

## Changing the Total Amount Background and Text Color



If you are implementing the iframe embedded version of Hosted Payments Page, the total amount figure is not displayed within the iframe. Any settings you select below are ignored.

- 
- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 1** Find the profile, and click the more options ellipsis (...).
- Step 2** Select **Edit Profile**. The General Settings page appears.
- Step 3** Click **Branding**. The Branding page appears.



- Step 4** Choose a background color in one of two ways:
- Enter a hexadecimal value for the background color.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 5** Choose a text color in one of two ways:
- Enter a hexadecimal value for the text color of the total amount.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 6** Click **Save**.
- Step 7** Click **Set to Default** to restore all the default settings on this page.
- 

## Changing the Progress Bar Color

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 1** Find the profile, and click the more options ellipsis (...).
- Step 2** Select **Edit Profile**. The General Settings page appears.
- Step 3** Click **Branding**. The Branding page appears.
- Step 4** Choose a color in one of two ways:
- Enter a hexadecimal value for the color of the progress bar.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 5** Click **Save**.
- Step 6** Click **Set to Default** to restore all the default settings on this page.
- 

## Changing the Color and Text on the Pay or Finish Button

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 1** Find the profile, and click the more options ellipsis (...).

- Step 2** Select **Edit Profile**. The General Settings page appears.
- Step 3** Click **Branding**. The Branding page appears.
- Step 4** Choose a background color of the pay or the finish button in one of two ways:
- Enter a hexadecimal value for the background color.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 5** Choose a color of the pay or the finish button text in one of two ways:
- Enter a hexadecimal value for the text.
  - Click within the header color palette to choose a color. Click the icon at the bottom right to confirm your selection.
- Step 6** Check **Change Button text**. A text box appears for the pay button.
- Step 7** Enter the text you want displayed on the pay button. This button text is required.
- Step 8** Enter the text you want displayed on the finish button. This button text is required.
- Step 9** Click **Save**.
- Step 10** Click **Set to Default** to restore all the default settings on this page.
- 

## Changing the Footer Color and Uploading a Small Logo or Image

- Step 1** In the left navigation panel, choose **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.
- Step 1** Find the profile, and click the more options ellipsis (...).
- Step 2** Select **Edit Profile**. The General Settings page appears.
- Step 3** Click **Branding**. The Branding page appears.
- Step 4** Check **Display Footer**.
- Step 5** Choose a color in one of two ways:
- Enter a hexadecimal value for the footer color of the payment form.
  - Click within the header color palette to choose a color. Click the color icon to confirm your selection.
- Step 6** Click **Browse** to upload a footer logo. Upload the image that you want displayed within the footer of the payment form.

To display a small logo or image in the footer of the payment form, the file must not exceed 840 (w) x 60 (h) pixels. The image file must be GIF, JPEG, or PNG.

- Step 7** Choose the alignment option for the image: left-aligned, centered, or right-aligned.
- Step 8** Click **Save**.
- Step 9** Click **Set to Default** to restore all the default settings on this page.

---

## Checkout Language Localization

---

Secure Acceptance supports multiple languages. [Table 3](#) lists all the supported languages and the locale code that you must include in your payment form.

From the list, include the locale code in the **locale** request field on your payment form. See "[Sample Transaction Process Using JSP](#)," page 37.

### Example 1 American English

---

```
<input type="hidden" name="locale" value="en-us">
```

---

**Table 3** Locale Codes

Language	Locale Code
Arabic	ar-xn
Catalan	ca-es
Chinese—Hong Kong	zh-hk
Chinese—Macau	zh-mo
Chinese—Mainland	zh-cn
Chinese—Singapore	zh-sg
Chinese—Taiwan	zh-tw
Croatian	hr-hr
Czech	cz-cz
Danish	da-dk
Dutch	nl-nl
English—United States of America	en-us
English—Australia	en-au
English—Great Britain	en-gb
English—Canada	en-ca
English—Ireland	en-ie

**Table 3 Locale Codes (Continued)**

<b>Language</b>	<b>Locale Code</b>
English—New Zealand	en-nz
Finnish	fi-fi
French	fr-fr
French—Canada	fr-ca
German	de-de
German—Austria	de-at
Greek	el-gr
Hebrew	he-il
Hungary	hu-hu
Indonesian	id-id
Italian	it-it
Japanese	ja-jp
Korean	ko-kr
Lao People's Democratic Republic	lo-la
Malaysian Bahasa	ms-my
Norwegian (Bokmal)	nb-no
Philippines Tagalog	tl-ph
Polish	pl-pl
Portuguese—Brazil	pt-br
Russian	ru-ru
Slovakian	sk-sk
Spanish	es-es
Spanish—Argentina	es-ar
Spanish—Chile	es-cl
Spanish—Colombia	es-co
Spanish—Mexico	es-mx
Spanish—Peru	es-pe
Spanish—United States of America	es-us
Swedish	sv-se
Thai	th-th
Turkish	tr-tr
Vietnamese	vi-vn

## Activating a Profile

---

You must complete the required settings described in each of these sections before you can activate a profile:

- ["Payment Method Configuration"](#)
- ["Security Keys"](#)
- ["Customer Response Page"](#)

**Step 1** On the left navigation pane, click the **Payment Acceptance Configuration > Secure Acceptance Settings**. The Secure Acceptance Settings page appears.

**Step 2** Find the inactive profile and click the **Promote Profile** button.

**Step 3** Click **Confirm**.

---

## Additional Profile Options

- **Deactivate**—deactivates the active profile. The profile is now listed in the inactive profile list. This option is available only for an active profile.
- **Create Editable Version**—duplicates the active profile and creates an editable version. The editable version is listed in the inactive profile list. This option is available only for an active profile.
- **Promote to Active**—activates the inactive profile. This option is available only for an inactive profile.

## Samples in Scripting Languages

---

Secure Acceptance can support any dynamic scripting language that supports HMAC256 hashing algorithms.

Select to download the sample script for the scripting language that you use:

- [JSP](#)
- [ASP.NET \(C#\)](#)
- [Ruby](#)
- [PHP](#)
- [Perl](#)
- [VB](#)

## Sample Transaction Process Using JSP

- 1 ***payment\_form.jsp*** file—represents the customer's product selection on a website. Enter your access key and profile ID into their respective fields. POST the fields to your server to

sign and create the signature. All the fields must be included in the **signed\_field\_names** field as a CSV list.

- 2 **security.jsp** file—security algorithm signs fields and creates a signature using the **signed\_field\_names** field. Enter your security key in the **SECRET\_KEY** field. Modify the security script to include the Secret Key that you generated in "[Security Keys](#)," page 21.

The security algorithm in each security script sample is responsible for:

- Request authentication—the signature is generated on the merchant server by the keyed-hash message authentication code (HMAC) signing the request parameters using the shared secret key. This process is also carried out on the Secure Acceptance server, and the two signatures are compared for authenticity.
  - Response authentication—the signature is generated on the Secure Acceptance server by HMAC signing the response parameters, using the shared secret key. This process is also carried out on the merchant server, and the two signatures are compared for authenticity.
- 3 **payment\_confirmation.jsp** file—represents the customer order review page on a website, before the customer makes a payment. POST transaction to the Secure Acceptance endpoint () and render the Hosted Payments Page. See [Chapter 3, "Payment Transactions,"](#) on page 39.

# Payment Transactions

## Endpoints and Transaction Types

**Table 4 Endpoints**

<b>Create Payment Token Endpoints</b>	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/token/create">https://testsecureacceptance.merchant-services.bankofamerica.com/token/create</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/token/create">https://secureacceptance.merchant-services.bankofamerica.com/token/create</a>
Supported transaction type	create_payment_token
<b>Iframe Create Payment Token Endpoints</b> (see <a href="#">"Iframe Implementation," page 109</a> ).	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/token/create">https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/token/create</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/embedded/token/create">https://secureacceptance.merchant-services.bankofamerica.com/embedded/token/create</a>
Supported transaction type	create_payment_token
<b>Iframe Transaction Endpoints</b> (see <a href="#">"Iframe Implementation," page 109</a> ).	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/pay">https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/pay</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/embedded/pay">https://secureacceptance.merchant-services.bankofamerica.com/embedded/pay</a>
Supported transaction type	<ul style="list-style-type: none"> <li>■ authorization</li> <li>■ authorization,create_payment_token</li> <li>■ authorization,update_payment_token</li> <li>■ sale</li> <li>■ sale,create_payment_token</li> <li>■ sale,update_payment_token</li> </ul>
<b>Iframe Update Payment Token Endpoints</b> (see <a href="#">"Iframe Implementation," page 109</a> ).	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/token/update">https://testsecureacceptance.merchant-services.bankofamerica.com/embedded/token/update</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/embedded/token/update">https://secureacceptance.merchant-services.bankofamerica.com/embedded/token/update</a>
Supported transaction type	update_payment_token

Table 4 Endpoints (Continued)

<b>One-Click Endpoints</b>	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/oneclick/pay">https://testsecureacceptance.merchant-services.bankofamerica.com/oneclick/pay</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/oneclick/pay">https://secureacceptance.merchant-services.bankofamerica.com/oneclick/pay</a>
Supported transaction types	<ul style="list-style-type: none"> <li>■ authorization</li> <li>■ authorization,update_payment_token</li> <li>■ sale</li> <li>■ sale,update_payment_token</li> </ul>
<b>Process Transaction Endpoints</b>	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/pay">https://testsecureacceptance.merchant-services.bankofamerica.com/pay</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/pay">https://secureacceptance.merchant-services.bankofamerica.com/pay</a>
Supported transaction types	<ul style="list-style-type: none"> <li>■ authorization</li> <li>■ authorization,create_payment_token</li> <li>■ authorization,update_payment_token</li> <li>■ sale</li> <li>■ sale,create_payment_token</li> <li>■ sale,update_payment_token</li> </ul>
<b>Update Payment Token Endpoints</b>	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/token/update">https://testsecureacceptance.merchant-services.bankofamerica.com/token/update</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/token/update">https://secureacceptance.merchant-services.bankofamerica.com/token/update</a>
Supported transaction type	update_payment_token
<b>Visa Click to Pay Endpoints</b>	
Test Transactions	<a href="https://testsecureacceptance.merchant-services.bankofamerica.com/pay">https://testsecureacceptance.merchant-services.bankofamerica.com/pay</a>
Live Transactions	<a href="https://secureacceptance.merchant-services.bankofamerica.com/pay">https://secureacceptance.merchant-services.bankofamerica.com/pay</a>
Supported transaction types	<ul style="list-style-type: none"> <li>■ authorization</li> <li>■ sale</li> </ul>



## Required Signed Fields

---

The following signed fields are required in all Secure Acceptance requests:

- `access_key`
- `amount`
- `currency`
- `locale`
- `profile_id`
- `reference_number`
- `signed_date_time`
- `signed_field_names`
- `transaction_type`
- `transaction_uuid`

For descriptions of signed request fields, see ["Request Fields," page 52](#).

## Payment Tokens

---

### Creating a Payment Card Token



Include the appropriate endpoint that supports the **create\_payment\_token** transaction type (see ["Endpoints and Transaction Types," page 39](#)). For descriptions of all request and response fields, see ["API Fields," page 51](#).

Include all request fields in the **signed\_field\_names** field with the exception of the **card\_number** field. The **signed\_field\_names** field is used to generate a signature that is used to verify the content of the transaction in order to prevent data tampering.

**Example 2 Request: Create a Standalone Payment Token**

---

```
reference_number=123456789
transaction_type=create_payment_token
currency=usd
amount=100.00
locale=en
access_key=e2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p3
profile_id=0FFEAFFB-8171-4F34-A22D-1CD38A28A384
transaction_uuid=02815b4f08e56882751a043839b7b481
signed_date_time=2020-07-11T15:16:54Z
signed_field_names=comma separated list of signed fields
signature=WrxOhTzhBjYMZROwiCug2My3jiZHOqATimcz5EBA07M=
payment_method=card
card_type=001
card_number=4111111111111111
card_expiry_date=12-2022
card_cvn=005
bill_to_forename=Joe
bill_to_surname=Smith
bill_to_email=joesmith@example.com
bill_to_address_line1=1 My Apartment
bill_to_address_city=Mountain View
bill_to_address_postal_code=94043
bill_to_address_state=CA
bill_to_address_country=US
```

---

**Example 3     Response: Create a Standalone Payment Token**

---

```
req_reference_number=123456789
req_transaction_type=create_payment_token
req_locale=en
req_amount=100.00
req_payment_method=card
req_card_type=001
req_card_number=xxxxxxxxxxxx1111
req_card_expiry_date=12-2022
req_bill_to_forename=Joe
req_bill_to_surname=Smith
req_bill_to_email=joesmith@example.com
req_bill_to_address_line1=1 My Apartment
req_bill_to_address_city=Mountain View
req_bill_to_address_postal_code=94043
req_bill_to_address_state=CA
req_bill_to_address_country=US
payment_token_instrument_identifier_id=0000111122225555
req_access_key=e2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p3
req_profile_id=0FFEAFB-8171-4F34-A22D-1CD38A28A384
req_transaction_uuid=02815b4f08e56882751a043839b7b481
signed_date_time=2020-07-11T15:16:54Z
signed_field_names=comma separated list of signed fields
signature=WrxOhTzhBjYMZROwiCug2My3jiZHOqATimcz5EBA07M=
decision=ACCEPT
reason_code=100
transaction_id=3735553783662130706689
req_payment_token=3529893314302230706689
```

---

# Payment Token Transactions

---

## One-Click

The customer is directed to the Order Review page. Depending on the settings you configured for Hosted Payments Page (see "[Checkout Configuration](#)," page 23), the customer can view or update billing, shipping, and payment details before confirming to pay.



Include the appropriate endpoint that supports the **authorization** or **sale** transaction types (see "[Endpoints and Transaction Types](#)," page 39). For descriptions of all request and response fields, see "[API Fields](#)," page 51.

---

The **payment\_token** field identifies the card and retrieves the associated billing, shipping, and payment information.

### Example 4 Request: One-Click Transaction

---

```
access_key=a2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p2
profile_id=0FFEAFB-8171-4F34-A22D-1CD38A28A384
reference_number=1350029885978
payment_token=3427075830000181552556
consumer_id=1239874561
transaction_type=authorization
amount=100.00
currency=USD
locale=en
transaction_uuid=fcf212e92d23be881d1299ef3c3b314
signed_date_time=2020-01-17T10:46:39Z
signed_field_names=comma separated list of signed fields
signature=WrxOhTzhBjYMZROwiCug2My3jiZHOqATimcz5EBA07M=
```

---

**Example 5     Response: One-Click Transaction**


---

```

transaction_id=3500311655560181552946
decision=ACCEPT
message=Request was processed successfully.
req_access_key=a2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p2
req_transaction_uuid=55d895790bc4c8a0f4464f9426ba3b79
req_transaction_type=authorization
req_reference_number=1350029885978
req_amount=100.00
req_profile_id=0FFEAFBB-8171-4F34-A22D-1CD38A28A384
req_tax_amount=15.00
req_currency=USD
req_locale=en
req_payment_method=card
req_consumer_id=1239874561
req_bill_to_forename=Joe
req_bill_to_surname=Smith
req_bill_to_email=jsmith@example.com
req_bill_to_address_line1=1 My Apartment
req_bill_to_address_state=CA
req_bill_to_address_country=US
payment_token_instrument_identifier_id=0000111122225555
req_card_number=xxxxxxxxxxxx4242
req_card_type=001
req_card_expiry_date=11-2020
reason_code=100
auth_avs_code=U
auth_avs_code_raw=00
auth_response=0
auth_amount=100.00
auth_time==2012-08-14T134608Z
req_payment_token=3427075830000181552556
signed_field_names=comma separated list of signed fields
signed_date_time=2012-10-12T08:39:25Z
signature=jMeHnWRKwU3xtT02j2ufRibfFpbdjUSiuWGT9hnNm00=
req_amount=100.00
req_tax_amount=15.00
req_currency=USD
req_locale=en
req_payment_method=card
req_consumer_id=1239874561
req_bill_to_forename=Joe
req_bill_to_surname=Smith
req_bill_to_email=jsmith@example.com
req_bill_to_address_line1=1 My Apartment
req_bill_to_address_state=CA
req_bill_to_address_country=US
req_card_number=xxxxxxxxxxxx4242
req_card_type=001
req_card_expiry_date=11-2020
reason_code=100

```

```
auth_avs_code=U
auth_avs_code_raw=00
auth_response=0
auth_amount=100.00
auth_time==2012-08-14T134608Z
payment_token=3427075830000181552556
signed_field_names=comma separated list of signed fields
signed_date_time=2012-10-12T08:39:25Z
signature=jMeHnWRKwU3xtT02j2ufRibfFpbdjUSiuWGT9hnNm00=
```

---

## Payment Token Updates

---

### Updating a Payment Card Token

The `payment_token` field identifies the TMS customer token and its default payment instrument and shipping address. The customer is directed to the Order Review page and clicks **Edit Address** or **Edit Details** to return to the relevant checkout page. The customer clicks **Pay** to confirm the transaction.

You must configure the billing, shipping, and payment details so that a customer can edit their details on the Order Review page. See "[Configuring Order Review Details](#)," page 26.



Include the endpoint that supports `update_payment_token` or the endpoint that supports `authorization,update_payment_token` (updates the token and authorizes the transaction) or `sale,update_payment_token` (updates the token and processes the transaction). See "[Sample Transaction Process Using JSP](#)," page 37. You must include the `allow_payment_token_update` field and set it to `true`.

---

**Example 6 Request: Updating a Payment Token for a Card**

---

```
access_key=a2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p2
profile_id=0FFEAFFB-8171-4F34-A22D-1CD38A28A384
reference_number=1350029885978
payment_token=3427075830000181552556
amount=100.00
currency=USD
payment_method=card
card_type=001
card_number=4111111111111111
card_expiry_date=12-2022
card_cvn=005
bill_to_forename=Joe
bill_to_surname=Smith
bill_to_email=joesmith@example.com
bill_to_address_line1=1 My Apartment
bill_to_address_state=CA
bill_to_address_country=US
locale=en
transaction_uuid=fcf212e92d23be881d1299ef3c3b314
signed_date_time=2020-01-17T10:46:39Z
consumer_id=1239874561
signed_field_names=comma separated list of signed fields
signature=WrxOhTzhBjYMZROwiCug2My3jizHOqATimcz5EBA07M=
```

---

**Example 7     Response: Updating a Payment Token for a Card**

---

```
transaction_id=3500311655560181552946
decision=ACCEPT
message=Request was processed successfully.
req_access_key=a2b0c0d0e0f0g0h0i0j0k0l0m0n0o0p2
req_profile_id=0FFEAFFB-8171-4F34-A22D-1CD38A28A384
req_transaction_uuid=55d895790bc4c8a0f4464f9426ba3b79
req_transaction_type=authorization,update_payment_token
req_reference_number=1350029885978
req_amount=100.00
req_tax_amount=15.00
req_currency=USD
req_locale=en
req_payment_method=card
req_consumer_id=1239874561
req_bill_to_forename=Joe
req_bill_to_surname=Smith
req_bill_to_email=jsmith@example.com
req_bill_to_address_line1=1 My Apartment
req_bill_to_address_state=CA
req_bill_to_address_country=US
payment_token_instrument_identifier_id=0000111122225555
req_card_number=xxxxxxxxxxxx1111
req_card_type=001
req_card_expiry_date=12-2022
reason_code=100
auth_avs_code=U
auth_avs_code_raw=00
auth_response=0
auth_amount=100.00
auth_time==2012-08-14T134608Z
payment_token=3427075830000181552556
signed_field_names=comma separated list of signed fields
signed_date_time=2012-10-12T08:39:25Z
signature=jMeHnWRKwU3xtT02j2ufRibfFpbdjUSiuWGT9hnNm00=
```

---



# Test and View Transactions



You must create a profile in both the test and live versions of Secure Acceptance. You cannot copy a profile from the test version to the live version but must recreate the profile.

## Testing Transactions

- Step 1** Log in to the Demonstration and Certification Environment (DCE):  
<https://ebctest.cybersource.com/ebc2/>
- Step 2** Create a Secure Acceptance profile. See "Creating a Hosted Payments Page Profile," page 14.
- Step 3** Integrate with Secure Acceptance. See "Samples in Scripting Languages," page 37.



Include the test transactions endpoint in your HTML form. See "Sample Transaction Process Using JSP," page 37.

- Step 4** You can use the following test payment card numbers for transactions. Remove spaces when sending to Bank of America.

**Table 5 Test Credit Card Numbers**

Payment Card Type	Test Account Number
Visa	4111 1111 1111 1111
Mastercard	5555 5555 5555 4444
American Express	3782 8224 6310 005
Discover	6011 1111 1111 1117
JCB	3566 1111 1111 1113
Diners Club	3800 0000 0000 0006
Maestro International (16 digits)	6000 3400 0000 9859
Maestro Domestic (16 digits)	6759 1800 0000 5546

## Viewing Transactions in Your Merchant Services Account

---

- Step 1** Log in to your Merchant Services account.
- Step 2** In the left navigation panel, choose **Transaction Management > Secure Acceptance**. The Secure Acceptance Search page appears.
- Step 3** Search transactions search using your preferred methods.
- Step 4** Click the Request ID link of the transaction that you want to view. The Details page opens.



If a transaction has missing or invalid data, it is displayed in the Secure Acceptance Transaction Search Results page without a request ID link.

---

# API Fields

## Data Type Definitions



Unless otherwise noted, all fields are order and case sensitive. It is recommended that you not include URL-encoded characters in any request field prior to generating a signature.

Data Type	Permitted Characters and Formats
Alpha	Any letter from any language
AlphaNumeric	Alpha with any numeric character in any script
AlphaNumericPunctuation	Alphanumeric including !"#%&'()*+,-./:;=?@^_~
Amount	0123456789 including a decimal point (.)
ASCIIPunctuation	Any ASCII alphanumeric character including !&'()*+,-./:;@
Date (a)	MM-YYYY
Date (b)	YYYYMMDD
Date (c)	yyyy-MM-dd HH:mm z yyyy-MM-dd hh:mm a z yyyy-MM-dd hh:mma z
Email	Valid email address.
Enumerated String	Comma-separated alphanumeric string
IP	Valid IP address
ISO 8601 Date	YYYY-MM-DDThh:mm:ssZ
Locale	[a-z] including a hyphen (-)
Numeric	0123456789
Phone	( ),+,-.*#x1234567890
URL	Valid URL (http or https)

# Request Fields



To prevent data tampering, sign all request fields with the exception of the **card\_number** field, the **card\_cvn** field, and the **signature** field.

**Table 6 Request Fields**

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
access_key	Required for authentication with Secure Acceptance. See " <a href="#">Security Keys</a> ," page 21.  <b>Important</b> To prevent data tampering, sign this field.	Required by the Secure Acceptance application.	Alphanumeric String (32)
allow_payment_token_update	Indicates whether the customer can update the billing, shipping, and payment information on the order review page. Possible values: <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer can update details.</li> <li>■ <code>false</code>: Customer cannot update details.</li> </ul>	update_payment_token (R)	Enumerated String (5)
amount	Total amount for the order. Must be greater than or equal to zero and must equal the total amount of each line item including the tax amount.	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	Amount String (15)
auth_indicator	Flag that specifies the purpose of the authorization. Possible values: <ul style="list-style-type: none"> <li>■ 0: Preauthorization</li> <li>■ 1: Final authorization</li> </ul> Mastercard requires European merchants to indicate whether the authorization is a final authorization or a preauthorization.  To set the default for this field, contact customer support.	authorization (See description)	String (1)
auth_type	Authorization type. Possible values: <ul style="list-style-type: none"> <li>■ <code>AUTOCAPTURE</code>: Automatic capture.</li> <li>■ <code>STANDARDCAPTURE</code>: Standard capture.</li> <li>■ <code>verbal</code>: Forced capture.</li> </ul>	<ul style="list-style-type: none"> <li>■ authorization (See description.)</li> <li>■ capture (Required for a verbal authorization; otherwise, not used.)</li> </ul>	String (11)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
bill_to_address_city	<p>City in the billing address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>AlphaNumeric Punctuation</p> <p>String (50)</p>
bill_to_address_country	<p>Country code for the billing address. Use the two-character <a href="#">ISO country codes</a>.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>Alpha</p> <p>String (2)</p>
bill_to_address_line1	<p>First line of the billing address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization, create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>AlphaNumeric Punctuation</p> <p>String (60)</p>
bill_to_address_line2	<p>Second line of the billing address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	This field is optional.	<p>AlphaNumeric Punctuation</p> <p>String (60)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
bill_to_address_postal_code	<p>Postal code for the billing address.</p> <p>This field is required if <b>bill_to_address_country</b> is U.S. or Canada.</p> <p>When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits]</p> <p><b>Example</b> 12345-6789</p> <p>When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric]</p> <p><b>Example</b> A1B 2C3</p> <p>For the rest of the world countries, the maximum length is 10.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	See description.	<p>AlphaNumeric Punctuation</p> <p>See description.</p>
bill_to_address_state	<p>State or province in the billing address. Use the two-character <a href="#">ISO state and province code</a>.</p> <p>This field is required if <b>bill_to_address_country</b> is U.S. or Canada.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	See description.	<p>AlphaNumeric Punctuation String (2)</p>
bill_to_company_name	<p>Name of the customer's company.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	This field is optional.	<p>AlphaNumeric Punctuation String (40)</p>
bill_to_email	<p>Customer email address, including the full domain name.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Billing Information Fields</a>," page 24.</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>Email String (255)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
bill_to_forename	<p>Customer first name. This name must be the same as the name on the card.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Billing Information Fields," page 24.</a></p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>AlphaNumeric Punctuation</p> <p>String (60)</p>
bill_to_phone	<p>Customer phone number. It is recommended that you include the country code if the order is from outside the U.S.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Billing Information Fields," page 24.</a></p> <p>This field is optional for card payments.</p>	See description.	<p>Phone</p> <p>String (6 to 15)</p>
bill_to_surname	<p>Customer last name. This name must be the same as the name on the card.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Billing Information Fields," page 24.</a></p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>AlphaNumeric Punctuation</p> <p>String (60)</p>
card_cvn	<p>Card verification number.</p> <p>For American Express card types, the CVN must be 4 digits.</p> <p>This field can be configured as required or optional. See <a href="#">"Payment Method Configuration," page 15.</a></p>	See description.	<p>Numeric</p> <p>String (4)</p>
card_expiry_date	<p>Card expiration date.</p> <p>Format: MM-YYYY</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>Date (a)</p> <p>String (7)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
card_number	Card number. Use only numeric values. Be sure to include valid and well-formed data for this field.	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	Numeric String (20)
card_type	Type of card to authorize. Use one of these values: <ul style="list-style-type: none"> <li>■ 001: Visa</li> <li>■ 002: Mastercard</li> <li>■ 003: American Express</li> <li>■ 004: Discover</li> <li>■ 005: Diners Club: cards starting with 54 or 55 are rejected.</li> <li>■ 006: Carte Blanche</li> <li>■ 007: JCB</li> <li>■ 014: EnRoute</li> <li>■ 021: JAL</li> <li>■ 024: Maestro UK Domestic</li> <li>■ 031: Delta</li> <li>■ 033: Visa Electron</li> <li>■ 034: Dankort</li> <li>■ 036: Carte Bancaire</li> <li>■ 037: Carta Si</li> <li>■ 042: Maestro International</li> <li>■ 043: GE Money UK card</li> <li>■ 050: Hipercard (sale only)</li> <li>■ 054: Elo</li> </ul>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	Enumerated String String (3)



Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
complete_route	<p>Concatenation of individual travel legs in the format for example: SFO-JFK:JFK-LHR:LHR-CDG.</p> <p>For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a>.</p> <p>In your request, send either the complete route or the individual legs (<b>journey_leg#_orig</b> and <b>journey_leg#_dest</b>). If you send all the fields, the value of <b>complete_route</b> takes precedence over that of the <b>journey_leg#</b> fields.</p>	<p>This field is optional.</p> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	<p>AlphaNumeric Punctuation String (255)</p>
currency	<p>Currency used for the order. For the possible values, see the <a href="#">ISO currency codes</a>.</p> <p><b>Important</b> To prevent data tampering, sign this field.</p>	<ul style="list-style-type: none"> <li>■ create_payment_token (R)</li> <li>■ authorization or sale (R)</li> <li>■ authorization,create_payment_token (R)</li> <li>■ sale,create_payment_token (R)</li> <li>■ update_payment_token (O)</li> </ul>	<p>Alpha String (3)</p>
customer_browser_color_depth	<p>Indicates the bit depth of the color palette for displaying images, in bits per pixel. Secure Acceptance automatically populates this field, but you can override it.</p> <p>For more information, see <a href="https://en.wikipedia.org/wiki/Color_depth">https://en.wikipedia.org/wiki/Color_depth</a>.</p>	<p>This field is optional.</p>	<p>String (2)</p>
customer_browser_java_enabled	<p>Indicates the ability of the cardholder browser to execute Java. The value is returned from the <b>navigator.javaEnabled</b> property. Secure Acceptance automatically populates this field, but you can override it. Possible values:</p> <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul>	<p>This field is optional.</p>	<p>String (5)</p>
customer_browser_javascript_enabled	<p>Indicates the ability of the cardholder browser to execute JavaScript. This value is available from the fingerprint details of the cardholder's browser. Secure Acceptance automatically populates this field, but you can override it. Possible values:</p> <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul>	<p>This field is optional.</p>	<p>String (5)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
customer_browser_language	Indicates the browser language as defined in IETF BCP47. Secure Acceptance automatically populates this field, but you can override it.  For more information, see <a href="https://en.wikipedia.org/wiki/IETF_language_tag">https://en.wikipedia.org/wiki/IETF_language_tag</a> .	This field is optional.	String (8)
customer_browser_screen_height	Total height of the cardholder's screen in pixels. Secure Acceptance automatically populates this field, but you can override it.  <b>Example</b> 864	This field is optional.	String (6)
customer_browser_screen_width	Total width of the cardholder's screen in pixels. Secure Acceptance automatically populates this field, but you can override it.	This field is optional.	String (6)
customer_browser_time_difference	Difference between UTC time and the cardholder browser local time, in minutes. Secure Acceptance automatically populates this field, but you can override it.	This field is optional.	String (5)
customer_cookies_accepted	Indicates whether the customer's browser accepts cookies. This field can contain one of the following values: <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer browser accepts cookies.</li> <li>■ <code>false</code>: Customer browser does not accept cookies.</li> </ul>	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	Enumerated String  String (5)
customer_gift_wrap	Indicates whether the customer requested gift wrapping for this purchase. This field can contain one of the following values: <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer requested gift wrapping.</li> <li>■ <code>false</code>: Customer did not request gift wrapping.</li> </ul>	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	Enumerated String  String (5)
customer_ip_address	Customer's IP address reported by your web server using socket information.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	IP  IPv4: String (15) IPv6: String (39)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
departure_time	<p>Departure date and time of the first leg of the trip. Use one of the following formats:</p> <ul style="list-style-type: none"> <li>■ yyyy-MM-dd HH:mm z</li> <li>■ yyyy-MM-dd hh:mm a z</li> <li>■ yyyy-MM-dd hh:mma z</li> <li>■ HH = 24-hour format</li> <li>■ hh = 12-hour format</li> <li>■ a = am or pm (case insensitive)</li> <li>■ z = time zone of the departing flight.</li> </ul> <p><b>Examples</b></p> <ul style="list-style-type: none"> <li>■ 2020-01-20 23:30 GMT</li> <li>■ 2020-01-20 11:30 PM GMT</li> <li>■ 2020-01-20 11:30pm GMT</li> </ul>	<p>This field is optional.</p> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	<p>Date (c)</p> <p>DateTime (29)</p>
device_fingerprint_id	<p>Field that contains the session ID for the fingerprint. The string can contain uppercase and lowercase letters, digits, and these special characters: hyphen (-) and underscore (_)</p> <p>However, do not use the same uppercase and lowercase letters to indicate different session IDs.</p> <p>The session ID must be unique for each merchant ID. You can use any string that you are already generating, such as an order number or web session ID.</p> <p><b>Important</b> The Bank of America-generated device fingerprint ID overrides the merchant-generated device fingerprint ID.</p> <p>See <a href="#">skip_decision_manager, page 77</a>.</p>	<p>This field is optional.</p> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	<p>AlphaNumeric Punctuation</p> <p>String (88)</p>
health_care_#_amount	<p>Amount of the healthcare payment. # can range from 0 to 4. Send this field with a corresponding <b>health_care_#_amount_type</b> field.</p>	<p>authorization (O)</p>	<p>String (13)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
health_care_#_amount_type	<p>Type of healthcare payment. # can range from 0 to 4.</p> <p>Mastercard possible values:</p> <ul style="list-style-type: none"> <li>■ eligible-total: total amount of healthcare.</li> <li>■ prescription</li> </ul> <p>Visa possible values:</p> <ul style="list-style-type: none"> <li>■ clinic</li> <li>■ dental</li> <li>■ healthcare: total amount of healthcare.</li> <li>■ healthcare-transit</li> <li>■ prescription</li> <li>■ vision</li> </ul> <p>Send this field with a corresponding <b>health_care_#_amount</b> field.</p>	authorization (O)	String (35)
ignore_avs	<p>Ignore the results of AVS verification.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul> <p><b>Important</b> To prevent data tampering, sign this field.</p>	This field is optional.	<p>Enumerated String</p> <p>String (5)</p>
ignore_cvn	<p>Ignore the results of CVN verification.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul> <p><b>Important</b> To prevent data tampering, sign this field.</p>	This field is optional.	<p>Enumerated String</p> <p>String (5)</p>
industry_datatype	<p>Indicates whether the transaction includes industry data. For certain industries, you must set this field to an industry data value to be sent to the processor. When this field is not set to an industry value or is not included in the request, industry data does not go to the processor.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ healthcare_medical</li> <li>■ healthcare_transit</li> </ul>	authorization (O)	String (20)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_code	Type of product. # can range from 0 to 199.	This field is optional. If you include this field, you must also include the <b>line_</b> <b>item_count</b> field.	AlphaNumeric Punctuation String (255)
item_#_name	Name of the item. # can range from 0 to 199.  This field is required when the <b>item_#_</b> <b>code</b> value is not default nor related to shipping or handling.	See description. If you include this field, you must also include the <b>line_</b> <b>item_count</b> field.	AlphaNumeric Punctuation String (255)
item_#_passenger_email	Passenger's email address.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (255)
item_#_passenger_forename	Passenger's first name.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (60)
item_#_passenger_id	ID of the passenger to whom the ticket was issued. For example, you can use this field for the frequent flyer number.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (32)
item_#_passenger_phone	Passenger's phone number. If the order is from outside the U.S., include the country code.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (15)
item_#_passenger_status	Your company's passenger classification, such as with a frequent flyer number. In this case, you might use values such as standard, gold, or platinum.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (32)
item_#_passenger_surname	Passenger's last name.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	String (60)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_passenger_type	<p>Passenger classification associated with the price of the ticket. You can use one of the following values:</p> <ul style="list-style-type: none"> <li>■ ADT: Adult</li> <li>■ CNN: Child</li> <li>■ INF: Infant</li> <li>■ YTH: Youth</li> <li>■ STU: Student</li> <li>■ SCR: Senior Citizen</li> <li>■ MIL: Military</li> </ul>	<p>This field is optional.</p> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	String (32)
item_#_quantity	<p>Quantity of line items. The default value is 1.</p> <p>Required field when one of the following product codes is used:</p> <ul style="list-style-type: none"> <li>■ adult_content</li> <li>■ coupon</li> <li>■ electronic_good</li> <li>■ electronic_software</li> <li>■ gift_certificate</li> <li>■ service</li> <li>■ subscription</li> </ul> <p># can range from 1 to 199.</p> <p>This field is required when the <b>item_#_code</b> value is not default nor related to shipping or handling.</p>	<p>See description.</p> <p>If you include this field, you must also include the <b>line_item_count</b> field.</p>	<p>Numeric</p> <p>String (10)</p>
item_#_sku	<p>Identification code for the product.</p> <p>Required field when one of the following product codes is used:</p> <ul style="list-style-type: none"> <li>■ adult_content</li> <li>■ coupon</li> <li>■ electronic_good</li> <li>■ electronic_software</li> <li>■ gift_certificate</li> <li>■ service</li> <li>■ subscription</li> </ul> <p># can range from 0 to 199.</p>	<p>See description.</p> <p>If you include this field, you must also include the <b>line_item_count</b> field.</p>	<p>AlphaNumeric</p> <p>Punctuation</p> <p>String (255)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
item_#_tax_amount	Tax amount to apply to the line item. # can range from 0 to 199. This value cannot be negative. The tax amount and the offer amount must be in the same currency.	This field is optional. If you include this field, you must also include the <b>line_item_count</b> field.	Amount String (15)
item_#_unit_price	Price of the line item. # can range from 0 to 199. This value cannot be negative. <b>Important</b> You must include either this field or the <b>amount</b> field in the request.	See description. If you include this field, you must also include the <b>line_item_count</b> field.	Amount String (15)
journey_leg#_dest	Airport code for the destination leg of the trip, designated by the pound (#) symbol in the field name. A maximum of 30 legs can be included in the request. This code is usually three digits long, for example: SFO = San Francisco. Do not use the colon (: ) or the hyphen (-). For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a> .  In your request, send either the <b>complete_route</b> field or the individual legs ( <b>journey_leg#_orig</b> and <b>journey_leg#_dest</b> ). If you send all the fields, the complete route takes precedence over the individual legs.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	Alpha String (3)
journey_leg#_orig	Airport code for the origin leg of the trip, designated by the pound (#) symbol in the field name. A maximum of 30 legs can be included in the request. This code is usually three digits long, for example: SFO = San Francisco. Do not use the colon (: ) or the hyphen (-). For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a> .  In your request, send either the <b>complete_route</b> field or the individual legs ( <b>journey_leg#_orig</b> and <b>journey_leg#_dest</b> ). If you send all the fields, the complete route takes precedence over the individual legs.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	Alpha String (3)
journey_type	Type of travel, such as one way or round trip.	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	AlphaNumeric Punctuation String (32)
line_item_count	Total number of line items. Maximum number is 200.	This field is required if you include any item fields in the request.	Numeric String (2)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
locale	<p>Indicates the language to use for customer-facing content. Possible value: en-us. See <a href="#">"Activating a Profile," page 37</a>.</p> <p><b>Important</b> To prevent data tampering, sign this field.</p>	Required by the Secure Acceptance application.	Locale String (5)
merchant_defined_data#	<p>Optional fields that you can use to store information (see <a href="#">"Configuring Customer Notifications," page 28</a>). # can range from 1 to 100.</p> <p>Merchant-defined data fields 1 to 4 are stored against the payment token and are used for subsequent token based transactions. Merchant defined data fields 5 to 100 are passed through to Fraud Management as part of the initial payment request and are not stored against the payment token.</p> <p><b>Important</b> Merchant-defined data fields are not intended to and MUST NOT be used to capture personally identifying information. Accordingly, merchants are prohibited from capturing, obtaining, and/or transmitting any personally identifying information in or via the merchant-defined data fields and any Secure Acceptance field that is not specifically designed to capture personally identifying information. Personally identifying information includes, but is not limited to, card number, bank account number, social security number, driver's license number, state-issued identification number, passport number, card verification numbers (CVV, CVC2, CVV2, CID, CVN). If it is discovered that a merchant is capturing and/or transmitting personally identifying information via the merchant-defined data fields, whether or not intentionally, the merchant's account WILL immediately be suspended, which will result in a rejection of any and all transaction requests submitted by the merchant after the point of suspension.</p>	<p>This field is optional.</p> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	<p>AlphaNumeric Punctuation String (100)</p>



Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
merchant_descriptor	<p>Your business name. This name appears on the cardholder's statement. When you include more than one consecutive space, extra spaces are removed.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (23)
merchant_descriptor_alternate	<p>Alternate contact information for your business, such as an email address or URL. This value might appear on the cardholder's statement.</p> <p>When you do not include this value in your request, the merchant URL in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (13)
merchant_descriptor_city	<p>City for your business location. This value might appear on the cardholder's statement.</p> <p>When you do not include this value in your request, the merchant city in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (13)
merchant_descriptor_contact	<p>Telephone number for your business. This value might appear on the cardholder's statement. When you include more than one consecutive space, extra spaces are removed.</p> <p>When you do not include this value in your request, the merchant phone number in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (14)
merchant_descriptor_country	<p>Country code for your business location. Use the standard <i>ISO Standard Country Codes</i>. This value might appear on the cardholder's statement.</p> <p>When you do not include this value in your request, the merchant country in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (2)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
merchant_descriptor_postal_code	<p>Postal code for your business location. This value might appear on the cardholder's statement.</p> <p>If your business is domiciled in the U.S., you can use a 5-digit or 9-digit postal code. A 9-digit postal code must follow this format: [5 digits][dash][4 digits]</p> <p><b>Example</b> 12345-6789</p> <p>If your business is domiciled in Canada, you can use a 6-digit or 9-digit postal code. A 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric]</p> <p><b>Example</b> A1B 2C3</p> <p>When you do not include this value in your request, the merchant postal code in your account is sent.</p> <p><b>Example</b></p> <p><b>Important</b> This value must consist of English characters.</p> <p><b>Important</b> Mastercard requires a postal code for any country that uses postal codes. You can provide the postal code in your account or you can include this field in your request.</p>	authorization (O)	String (14)
merchant_descriptor_state	<p>State code or region code for your business location. This value might appear on the cardholder's statement.</p> <p>For the U.S. and Canada, use the standard <a href="#">State, Province, and Territory Codes for the United States and Canada</a>.</p> <p>When you do not include this value in your request, the merchant state in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (3)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
merchant_descriptor_street	<p>Street address for your business location. This value might appear on the cardholder's statement.</p> <p>When you do not include this value in your request, the merchant street in your account is sent.</p> <p><b>Important</b> This value must consist of English characters.</p>	authorization (O)	String (60)
merchant_secure_data4	Optional field that you can use to store information. The data is encrypted before it is stored in the payment repository.	This field is optional.	AlphaNumeric Punctuation String (2000)
merchant_secure_data1	Optional fields that you can use to store information. The data is encrypted before it is stored in the payment repository.	This field is optional.	AlphaNumeric Punctuation
merchant_secure_data2			String (100)
merchant_secure_data3			
override_backoffice_post_url	Overrides the backoffice post URL profile setting with your URL. URL must be HTTPS and support TLS 1.2 or later.	This field is optional.	URL String (255)
override_custom_cancel_page	Overrides the custom cancel page profile setting with your URL. URL must be HTTPS and support TLS 1.2 or later.	This field is optional.	URL String (255)
override_custom_receipt_page	<p>Overrides the custom receipt profile setting with your URL. URL must be HTTPS and support TLS 1.2 or later.</p> <p><b>Important</b> To prevent data tampering, sign this field.</p>	This field is optional.	URL String (255)
override_customer_utc_offset	<p>Overrides the transaction date and time with the number of minutes the customer is ahead of or behind UTC. Use this field to override the local browser time detected by Secure Acceptance. This time determines the date on receipt pages and emails.</p> <p>For example, if the customer is 2 hours ahead, the value is 120; if 2 hours behind, then -120; if UTC, the value is 0.</p>	This field is optional.	Integer (5)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
override_paypal_order_setup	<p>Overrides the PayPal order setup profile setting. Possible values:</p> <ul style="list-style-type: none"> <li>■ <code>include_authorization</code>: The PayPal order is created and authorized.</li> <li>■ <code>exclude_authorization</code>: The PayPal order is created but not authorized.</li> </ul>	<p>This field is optional.</p> <p>See <a href="#">"Enabling PayPal Express Checkout," page 20.</a></p>	String (21)
payer_authentication_acquirer_country	<p>Send this to tell issuers that the acquirer's country differs from the merchant country, and the acquirer is in the European Economic Area (EEA) and UK and Gibraltar.</p>	This field is optional.	String (2)
payer_authentication_acs_window_size	<p>Sets the challenge window size that displays to the cardholder. The Access Control Server (ACS) replies with content that is formatted appropriately for this window size. The sizes are width x height in pixels. Secure Acceptance calculates this value based on the size of the window in which Secure Acceptance is displayed, but you can override it.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ 01: 250 x 400</li> <li>■ 02: 390 x 400</li> <li>■ 03: 500 x 600</li> <li>■ 04: 600 x 400</li> <li>■ 05: Full page</li> </ul>	This field is optional.	Integer (2)
payer_authentication_challenge_code	<p>Possible values:</p> <ul style="list-style-type: none"> <li>■ 01: No preference</li> <li>■ 02: No challenge request</li> <li>■ 03: Challenge requested (3D Secure requestor preference)</li> <li>■ 04: Challenge requested (mandate)</li> </ul>	This field is optional.	Integer (2)
payer_authentication_customer_annual_transaction_count	<p>Number of transactions (successful and abandoned) for this cardholder account within the past year.</p> <p>Recommended for Discover ProtectBuy.</p>	This field is optional.	Integer (3)
payer_authentication_customer_daily_transaction_count	<p>Number of transaction (successful or abandoned) for this cardholder account within the past 24 hours.</p> <p>Recommended for Discover ProtectBuy.</p>	This field is optional.	Integer (3)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
payer_authentication_indicator	Indicates the type of authentication request. Secure Acceptance automatically populates this field, but you can override it.  Possible values: <ul style="list-style-type: none"> <li>■ 01: Payment transaction</li> <li>■ 04: Add card</li> <li>■ 05: Maintain card</li> <li>■ 06: Cardholder verification as part of EMV token identity and verification (ID&amp;V)</li> </ul>	This field is optional.	Integer (2)
payer_authentication_marketing_source	Indicates origin of the marketing offer.  Recommended for Discover ProtectBuy.	This field is optional.	String (40)
payer_authentication_merchant_fraud_rate	Calculated by merchants according to Payment Service Directive 2 (PSD2) and Regulatory Technical Standards (RTS). European Economic Area (EEA) and UK and Gibraltar card fraud divided by all EEA and UK and Gibraltar card volumes.  Possible Values: <ul style="list-style-type: none"> <li>■ 1: Represents fraud rate ≤1</li> <li>■ 2: Represents fraud rate &gt;1 and ≤6</li> <li>■ 3: Represents fraud rate &gt;6 and ≤13</li> <li>■ 4: Represents fraud rate &gt;13 and ≤25</li> <li>■ 5: Represents fraud rate &gt;25</li> </ul>	This field is optional.	Integer (2)
payer_authentication_merchant_name	Your company's name as you want it to appear to the customer in the issuing bank's authentication form. This value overrides the value specified by your merchant bank.	This field is optional.	String (25)
payer_authentication_merchant_score	Risk score provided by merchants. Used for Cartes Bancaires transactions.	This field is optional.	String (20)
payer_authentication_mobile_phone	Cardholder's mobile phone number.  <b>Important</b> Required for Visa Secure transactions in Brazil. Do not use this request field for any other types of transactions.	This field is optional.	Integer (25)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
payer_authentication_new_customer	Indicates whether the customer is a new or existing customer with the merchant.  Possible values: <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul>	This field is optional.	String (5)
payer_authentication_pre_order	Indicates whether cardholder is placing an order with a future availability or release date.  Possible values: <ul style="list-style-type: none"> <li>■ 01: Merchandise available</li> <li>■ 02: Future availability</li> </ul>	This field is optional.	Integer (2)
payer_authentication_pre_order_date	Expected date that a pre-ordered purchase will be available.  Format:  YYYYMMDD	This field is optional.	Integer (8)
payer_authentication_prior_authentication_data	Data that the ACS can use to verify the authentication process.	This field is optional.	String (2048)
payer_authentication_prior_authentication_method	Method the cardholder used previously to authenticate to the 3D Secure requester.  Possible values: <ul style="list-style-type: none"> <li>■ 01: Frictionless authentication through the ACS</li> <li>■ 02: Cardholder challenge through the ACS</li> <li>■ 03: AVS verified</li> <li>■ 04: Other issuer methods</li> <li>■ 05–79: Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>■ 80–99: Reserved for directory server use</li> </ul>	This field is optional.	Integer (2)
payer_authentication_prior_authentication_time	Date and time in UTC of the previous cardholder authentication.  Format: YYYYMMDDHHMM	This field is optional.	Integer (12)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
payer_authentication_product_code	<p>Specifies the product code, which designates the type of transaction. Specify one of the following values for this field:</p> <ul style="list-style-type: none"> <li>■ AIR: Airline purchase</li> </ul> <p><b>Important</b> Required for American Express SafeKey (U.S.).</p> <ul style="list-style-type: none"> <li>■ ACC: Accommodation Rental</li> <li>■ ACF: Account funding</li> <li>■ CHA: Check acceptance</li> <li>■ DIG: Digital Goods</li> <li>■ DSP: Cash Dispensing</li> <li>■ GAS: Fuel</li> <li>■ GEN: General Retail</li> <li>■ LUX: Luxury Retail</li> <li>■ PAL: Prepaid activation and load</li> <li>■ PHY: Goods or services purchase</li> <li>■ QCT: Quasi-cash transaction</li> <li>■ REN: Car Rental</li> <li>■ RES: Restaurant</li> <li>■ SVC: Services</li> <li>■ TBD: Other</li> <li>■ TRA: Travel</li> </ul> <p><b>Important</b> Required for Visa Secure transactions in Brazil. Do not use this request field for any other types of transactions.</p>	This field is optional.	String (3)
payer_authentication_reorder	<p>Indicates whether the cardholder is reordering previously purchased merchandise.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ 01: First time ordered</li> <li>■ 02: Reordered</li> </ul>	This field is optional.	Integer (2)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
payer_authentication_secure_corporate_payment	Indicates that dedicated payment processes and procedures were used. Potential secure corporate payment exemption applies.  Possible Values: <ul style="list-style-type: none"> <li>■ 0</li> <li>■ 1</li> </ul>	This field is optional.	String (1)
payer_authentication_ship_to_address_first_used	Date on which this shipping address was first used.  Possible values: <ul style="list-style-type: none"> <li>■ -1: Guest account</li> <li>■ 0: First used during this transaction</li> </ul> If neither value applies, enter the date in YYYYMMDD format.  Recommended for Discover ProtectBuy.	This field is optional.	Integer (8)
payer_authentication_transaction_mode	Transaction mode identifier. Identifies the channel from which the transaction originates.  Possible values: <ul style="list-style-type: none"> <li>■ M: MOTO (Mail Order Telephone Order)</li> <li>■ R: Retail</li> <li>■ S: E-commerce</li> <li>■ P: Mobile Device</li> <li>■ T: Tablet</li> </ul>	Required by the Secure Acceptance application.	String (1)
payer_authentication_whitelisted	Enables the communication of trusted beneficiary and whitelist status among the ACS, the directory server, and the 3D Secure requester.  Possible Values: <ul style="list-style-type: none"> <li>■ true: 3D Secure requester is whitelisted by cardholder</li> <li>■ false: 3D Secure requester is not whitelisted by cardholder</li> </ul>	This field is optional.	String (5)
payment_method	Method of payment. Possible values: <ul style="list-style-type: none"> <li>■ card</li> <li>■ paypal</li> <li>■ visacheckout</li> </ul>	This field is optional.	Enumerated String String (30)



Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
payment_token	Identifier for the TMS customer token or the instrument identifier token. Populates the request with the information stored against the token.	<ul style="list-style-type: none"> <li>■ authorization or sale (R)</li> <li>■ authorization,update_payment_token (R)</li> <li>■ sale,update_payment_token (R)</li> <li>■ update_payment_token (R)</li> </ul>	Numeric String (26)
payment_token_comments	Optional comments you can add for the customer token.	This field is optional.	AlphaNumeric Punctuation String (255)
payment_token_title	Name or title for the customer token.	This field is optional.	AlphaNumeric Punctuation String (60)
profile_id	Identifies the profile to use with each transaction.	Assigned by the Secure Acceptance application.	ASCIIAlpha Numeric Punctuation String (36)
promotion_code	Promotion code for a transaction.	This field is optional.	String (100)
recipient_account_id	Identifier for the recipient's account. Use the first six digits and last four digits of the recipient's account number.	authorization (R for recipient transactions, otherwise not used)	Numeric String (10)
recipient_date_of_birth	Recipient's date of birth. Format: YYYYMMDD.	authorization (R for recipient transactions, otherwise not used)	Date (b) String (8)
recipient_postal_code	Partial postal code for the recipient's address.  For example, if the postal code is NN5 7SG, the value for this field should be the first part of the postal code: NN5.	authorization (R for recipient transactions, otherwise not used)	Alphanumeric String (6)
recipient_surname	Recipient's last name.	authorization (R for recipient transactions, otherwise not used)	Alpha String (6)
reference_number	Unique merchant-generated order reference or tracking number for each transaction.  <b>Important</b> To prevent data tampering, sign this field.	Required by the Secure Acceptance application.	AlphaNumeric Punctuation String (50)
returns_accepted	Indicates whether product returns are accepted. This field can contain one of the following values: <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul>	This field is optional.  For more information, refer to the guides in the Fraud Management section in your Merchant Services account.	Enumerated String (5)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ship_to_address_city	<p>City of shipping address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Shipping Information Fields," page 25.</a></p>	This field is optional.	AlphaNumeric Punctuation String (50)
ship_to_address_country	<p>Country code for the shipping address. Use the two-character <a href="#">ISO country codes.</a></p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Shipping Information Fields," page 25.</a></p>	This field is optional.	Alpha String (2)
ship_to_address_line1	<p>First line of shipping address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Shipping Information Fields," page 25.</a></p>	This field is optional.	AlphaNumeric Punctuation String (60)
ship_to_address_line2	<p>Second line of shipping address.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See <a href="#">"Configuring Shipping Information Fields," page 25.</a></p>	This field is optional.	AlphaNumeric Punctuation String (60)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ship_to_address_postal_code	<p>Postal code for the shipping address.</p> <p>This field is required if <b>bill_to_address_country</b> is U.S. or Canada.</p> <p>When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits]</p> <p><b>Example</b> 12345-6789</p> <p>When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric]</p> <p><b>Example</b> A1B 2C3</p> <p>For the rest of the world countries, the maximum length is 10.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Shipping Information Fields</a>," page 25.</p>	This field is optional.	<p>AlphaNumeric Punctuation</p> <p>See description.</p>
ship_to_address_state	<p>State or province of shipping address. Use the <a href="#">two-character ISO</a> state and province codes.</p> <p>This field is required if shipping address is U.S. or Canada.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Shipping Information Fields</a>," page 25.</p>	This field is optional.	<p>AlphaNumeric Punctuation</p> <p>String (2)</p>
ship_to_company_name	<p>Name of the company receiving the product.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Shipping Information Fields</a>," page 25.</p>	This field is optional.	<p>AlphaNumeric Punctuation</p> <p>String (40)</p>
ship_to_forename	<p>First name of the person receiving the product.</p> <p>This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See "<a href="#">Configuring Shipping Information Fields</a>," page 25.</p>	This field is optional.	<p>AlphaNumeric Punctuation</p> <p>String (60)</p>

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
ship_to_phone	Phone number of the shipping address.  This value can be entered by your customer during the checkout process, or you can include this field in your request to Secure Acceptance. See " <a href="#">Configuring Shipping Information Fields</a> ," page 25.	This field is optional.	Phone  String (6 to 15)
ship_to_surname	Last name of the person receiving the product.  This can be entered by your customer during the checkout process, or you can include this in your request to Secure Acceptance. See " <a href="#">Configuring Shipping Information Fields</a> ," page 25.	This field is optional.	AlphaNumeric Punctuation  String (60)
ship_to_type	Shipping destination.  <b>Example</b> Commercial, residential, store	This field is optional.	String (25)
shipping_method	Shipping method for the product. Possible values: <ul style="list-style-type: none"> <li>■ <code>sameday</code>: Courier or same-day service</li> <li>■ <code>oneday</code>: Next day or overnight service</li> <li>■ <code>twoday</code>: Two-day service</li> <li>■ <code>threeday</code>: Three-day service</li> <li>■ <code>lowcost</code>: Lowest-cost service</li> <li>■ <code>pickup</code>: Store pick-up</li> <li>■ <code>other</code>: Other shipping method</li> <li>■ <code>none</code>: No shipping method</li> </ul>	This field is optional.	Enumerated String  String (10)
signature	Merchant-generated Base64 signature. This is generated using the signing method for the <b>access_key</b> field supplied.	Required by the Secure Acceptance application.	AlphaNumeric Punctuation

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
signed_date_time	<p>The date and time that the signature was generated. Must be in UTC Date &amp; Time format. This field is used to check for duplicate transaction attempts.</p> <p>Format: YYYY-MM-DDThh:mm:ssZ</p> <p><b>Example</b> 2020-08-11T22:47:57Z equals August 11, 2020, at 22:47:57 (10:47:57 p.m.). The T separates the date and the time. The Z indicates UTC.</p> <p>Your system time must be accurate to avoid payment processing errors related to the <b>signed_date_time</b> field.</p> <p><b>Important</b> To prevent data tampering, sign this field.</p>	Required by the Secure Acceptance application.	ISO 8601 Date String (20)
signed_field_names	<p>A comma-separated list of request fields that are signed. This field is used to generate a signature that is used to verify the content of the transaction to protect it from tampering.</p> <p><b>Important</b> All request fields should be signed to prevent data tampering, with the exception of the <b>card_number</b> field and the signature field.</p>	Required by the Secure Acceptance application.	AlphaNumeric Punctuation Variable
skip_auto_auth	<p>Indicates whether to skip or perform the preauthorization check when creating this token.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ <code>true</code> (skip the preauthorization check)</li> <li>■ <code>false</code> (perform the preauthorization check)</li> </ul>	This field is optional.	Enumerated String String (5)
skip_decision_manager	<p>Indicates whether to skip Fraud Management. This field can contain one of the following values:</p> <ul style="list-style-type: none"> <li>■ <code>true</code> (Fraud Management is not enabled for this transaction, and the device fingerprint ID will not be displayed)</li> <li>■ <code>false</code></li> </ul> <p>For more information, refer to the guides in the Fraud Management section in your Merchant Services account.</p>	This field is optional.	Enumerated String String (5)

Table 6 Request Fields (Continued)

Field	Description	Used By: Required (R) or Optional (O)	Data Type & Length
tax_amount	Total tax amount to apply to the order. This value cannot be negative.  <b>Important</b> To prevent data tampering, sign this field.	This field is optional.	Amount String (15)
transaction_type	The type of transaction. Possible values: <ul style="list-style-type: none"> <li>■ authorization</li> <li>■ authorization,create_payment_token</li> <li>■ authorization,update_payment_token</li> <li>■ sale</li> <li>■ sale,create_payment_token</li> <li>■ sale,update_payment_token</li> <li>■ create_payment_token</li> <li>■ update_payment_token</li> </ul> <p>Only authorization and sale are supported for Visa Click to Pay transactions.</p> <b>Important</b> To prevent data tampering, sign this field.	Required by the Secure Acceptance application.	Enumerated String String (60)
transaction_uuid	Unique merchant-generated identifier. Include with the <b>access_key</b> field for each transaction. This identifier must be unique for each transaction. This field is used to check for duplicate transaction attempts.  <b>Important</b> To prevent data tampering, sign this field.	Required by the Secure Acceptance application.	ASCIAlpha Numeric Punctuation String (50)

## Response Fields

Response fields are sent using the following notification methods:

- Merchant POST URL (see ["Merchant Notifications," page 26](#))
- Merchant POST Email (see ["Merchant Notifications," page 26](#))
- POST to the URL specified in the Transaction or Custom Cancel Response page (see ["Customer Response Page," page 28](#))

Notification methods are enabled on the Notifications and Customer Response pages of your Secure Acceptance profile.

To ensure the integrity of the response fields, a signature is included in the response. This signature is generated using the same **secret\_key** value that was used to generate the request signature.

To verify that the response fields have not been tampered with, create a signature using the fields listed in the **signed\_field\_names** response field. This signature must be the same value that is included in the signature response field. Refer to the receipt page that is included in the sample scripts (see ["Samples in Scripting Languages," page 37](#)).



Because response fields and reason codes can be added at any time, proceed as follows:

- Parse the response data according to the names of the fields instead of their order in the response. For more information on parsing response fields, see the documentation for your scripting language.
- The signature that you generate must be the same value that is included in the signature response field.
- Your error handler should use the **decision** field to determine the transaction result if it receives a reason code that it does not recognize.

If configured, these response fields are sent back to your Merchant POST URL or email. See ["Merchant Notifications," page 26](#). Your error handler should use the **decision** field to obtain the transaction result if it receives a reason code that it does not recognize.

**Table 7** Response Fields

Field	Description	Data Type & Length
auth_amount	Amount that was authorized.	String (15)
auth_avs_code	AVS result code. See <a href="#">"AVS Codes," page 104</a> .	String (1)
auth_avs_code_raw	AVS result code sent directly from the processor. Returned only if a value is returned by the processor.	String (10)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
auth_cavv_result	<p>Mapped response code for the Visa Secure and American Express SafeKey:</p> <ul style="list-style-type: none"> <li>■ See <a href="#">Appendix D, "Visa Secure Response Codes,"</a> on page 111.</li> <li>■ See <a href="#">Appendix B, "American Express SafeKey Response Codes,"</a> on page 108.</li> </ul>	String (3)
auth_cavv_result_raw	Raw response code sent directly from the processor for Visa Secure and American Express SafeKey.	String (3)
auth_code	Authorization code. Returned only if a value is returned by the processor.	String (7)
auth_cv_result	CVN result code. See <a href="#">"CVN Codes,"</a> page 107.	String (1)
auth_cv_result_raw	CVN result code sent directly from the processor. Returned only if a value is returned by the processor.	String (10)
auth_response	For most processors, this is the error message sent directly from the bank. Returned only if a value is returned by the processor.	String (10)
auth_time	Time of authorization in UTC.	String (20)
auth_trans_ref_no	Reference number that you use to reconcile your transaction reports with your processor reports.	AlphaNumeric (60)
bill_trans_ref_no	Reference number that you use to reconcile your transaction reports with your processor reports.	AlphaNumeric (60)
card_type_name	<p>Name of the card type.</p> <p>For security reasons, this field is returned only in merchant POST URL and email notifications (not in the receipt POST through the browser).</p>	String (50)
decision	<p>The result of your request. Possible values:</p> <ul style="list-style-type: none"> <li>■ ACCEPT</li> <li>■ DECLINE</li> <li>■ REVIEW</li> <li>■ ERROR</li> <li>■ CANCEL</li> </ul> <p>See <a href="#">"Types of Notifications,"</a> page 103.</p>	String (7)
exchange_rate	<p>Exchange rate if a currency conversion occurred.</p> <p>The 17 characters include the decimal point.</p>	Decimal (17)
invalid_fields	Indicates which request fields were invalid.	Variable
message	Response message from the payment gateway.	String (255)
payer_authentication_acs_transaction_id	Unique transaction identifier assigned by the ACS to identify a single transaction.	String (36)



Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
payer_authentication_cavv	Cardholder authentication verification value (CAVV). Transaction identifier generated by the issuing bank, Visa Click to Pay. This field is used by the payer authentication validation service.	String (50)
payer_authentication_challenge_type	The type of 3D Secure transaction flow that occurred. It can be one of the following: <ul style="list-style-type: none"> <li>■ CH: Challenge</li> <li>■ FR: Frictionless</li> <li>■ FD: Frictionless with delegation (challenge not generated by the issuer but by the scheme on behalf of the issuer).</li> </ul> Used for Cartes Bancaires transactions.	String (2)
payer_authentication_eci	Electronic commerce indicator (ECI). This field is used by payer authentication validation and enrollment services. Possible values for Visa, American Express, and JCB: <ul style="list-style-type: none"> <li>■ 05: Successful authentication.</li> <li>■ 06: Authentication attempted.</li> <li>■ 07: Failed authentication.</li> </ul> Possible values for Mastercard: <ul style="list-style-type: none"> <li>■ 01: Merchant is liable.</li> <li>■ 02: Card issuer is liable.</li> </ul>	String (3)
payer_authentication_enroll_e_commerce_indicator	Commerce indicator for cards not enrolled. This field contains one of these values: <ul style="list-style-type: none"> <li>■ internet: Card not enrolled or card type not supported by payer authentication. No liability shift.</li> <li>■ js_attempted: JCB card not enrolled, but attempt to authenticate is recorded. Liability shift.</li> <li>■ js_failure: J/Secure directory service is not available. No liability shift.</li> <li>■ spa: Mastercard card not enrolled in the Identity Check program. No liability shift.</li> <li>■ vbv_attempted: Visa card not enrolled, but attempt to authenticate is recorded. Liability shift.</li> </ul>	String (255)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
payer_authentication_enroll_veres_enrolled	<p>Result of the enrollment check. This field can contain one of these values:</p> <ul style="list-style-type: none"> <li>■ Y: Card enrolled or can be enrolled; you must authenticate. Liability shift.</li> <li>■ N: Card not enrolled; proceed with authorization. Liability shift.</li> <li>■ U: Unable to authenticate regardless of the reason. No liability shift.</li> </ul> <p>This field applies only to the Asia, Middle East, and Africa Gateway. If you are configured for this processor, you must send the value of this field in your authorization request.</p> <p>The following value can be returned if you are using rules-based payer authentication:</p> <ul style="list-style-type: none"> <li>■ B: Indicates that authentication was bypassed.</li> </ul> <p>For rules-based payer authentication information see the <i>Payer Authentication Guide</i>.</p>	String (255)
payer_authentication_network_score	The global score calculated by the Cartes Bancaires scoring platform and returned to the merchant.	Integer (2)
payer_authentication_pares_status	<p>Raw result of the authentication check. This field can contain one of these values:</p> <ul style="list-style-type: none"> <li>■ A: Proof of authentication attempt was generated.</li> <li>■ N: Customer failed or cancelled authentication. Transaction denied.</li> <li>■ U: Authentication not completed regardless of the reason.</li> <li>■ Y: Customer was successfully authenticated.</li> </ul>	String (255)
payer_authentication_pares_status_reason	Provides additional information about the PAREs status value.	Integer (2)
payer_authentication_pares_timestamp	Decrypted time stamp for the payer authentication result. Visa Click to Pay generates this value. Format: Unix time, which is also called <i>epoch time</i> .	String
payer_authentication_proof_xml	<p>XML element containing proof of enrollment checking.</p> <p>For cards not issued in the U.S. or Canada, your bank can require this data as proof of enrollment validation for any payer authentication transaction that you represent because of a chargeback.</p> <p>For cards issued in the U.S. or Canada, Visa can require this data for specific merchant category codes.</p> <p>This field is not returned for 3D Secure 2.0 transactions.</p>	String (1024)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
payer_authentication_reason_code	Numeric value corresponding to the result of the payer authentication request.  See " <a href="#">Reason Codes</a> ," page 100.	String (5)
payer_authentication_specification_version	This field contains the 3D Secure version that was used to process the transaction. For example, 1.0.2 or 2.0.0.	String (20)
payer_authentication_transaction_id	Payer authentication transaction identifier used by Secure Acceptance to link the enrollment check and validate authentication messages.	String (20)
payer_authentication_type	Indicates the type of authentication that is used to challenge the card holder.  Possible Values: <ul style="list-style-type: none"> <li>■ 01: Static</li> <li>■ 02: Dynamic</li> <li>■ 03: OOB (Out of Band)</li> </ul>	Integer (2)
payer_authentication_uad	Mastercard Identity Check UCAF authentication data. Returned only for Mastercard Identity Check transactions.	String (32)
payer_authentication_uci	Mastercard Identity Check UCAF collection indicator. This field indicates whether authentication data is collected at your website. Possible values: <ul style="list-style-type: none"> <li>■ 0: Authentication data was not collected and customer authentication not completed.</li> <li>■ 1: Authentication data was not collected because customer authentication not completed.</li> <li>■ 2: Authentication data was collected. Customer completed authentication.</li> </ul>	String (1)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
payer_authentication_validate_e_commerce_indicator	<p>Indicator that distinguishes Internet transactions from other types. The authentication failed if this field is not returned.</p> <p>The value of this field is passed automatically to the authorization service if you request the services together. This field contains one of these values:</p> <ul style="list-style-type: none"> <li>■ <code>aesk</code>: American Express SafeKey authentication verified successfully.</li> <li>■ <code>aesk_attempted</code>: Card not enrolled in American Express SafeKey, but the attempt to authenticate was recorded.</li> <li>■ <code>internet</code>: Authentication was not verified successfully.</li> <li>■ <code>js</code>: J/Secure authentication verified successfully.</li> <li>■ <code>js_attempted</code>: JCB card not enrolled in J/Secure, but the attempt to authenticate was recorded.</li> <li>■ <code>spa</code>: Mastercard Identity Check authentication verified successfully.</li> <li>■ <code>spa_failure</code>: Mastercard Identity Check failed authentication.</li> <li>■ <code>vbv</code>: Visa Secure authentication verified successfully.</li> <li>■ <code>vbv_attempted</code>: Card not enrolled in Visa Secure, but the attempt to authenticate was recorded.</li> <li>■ <code>vbv_failure</code>: Visa Secure authentication unavailable.</li> </ul>	String (255)
payer_authentication_validate_result	<p>Raw authentication data that comes from the card-issuing bank that indicates whether authentication was successful and whether liability shift occurred. This field contains one of these values:</p> <ul style="list-style-type: none"> <li>■ <code>-1</code>: Invalid PAREs.</li> <li>■ <code>0</code>: Successful validation.</li> <li>■ <code>1</code>: Cardholder is not participating, but the attempt to authenticate was recorded.</li> <li>■ <code>6</code>: Issuer unable to perform authentication.</li> <li>■ <code>9</code>: Cardholder did not complete authentication.</li> </ul>	String (255)
payer_authentication_veres_timestamp	<p>Decrypted time stamp for the verification response. Visa Click to Pay generates this value. Format: Unix time, which is also called <i>epoch time</i>.</p>	String

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
payer_authentication_white_list_status	<p>Enables the communication of trusted beneficiary and whitelist status among the ACS, the directory server, and the 3D Secure requester.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> <li>■ Y: 3D Secure requester is whitelisted by cardholder</li> <li>■ N: 3D Secure requester is not whitelisted by cardholder</li> </ul>	String (1)
payer_authentication_white_list_status_source	<p>This field is populated by the system setting whitelist status.</p> <p>Possible Values:</p> <ul style="list-style-type: none"> <li>■ 01: 3D Secure Server</li> <li>■ 02: Directory server</li> <li>■ 03: ACS</li> </ul>	Integer (2)
payer_authentication_xid	Transaction identifier generated by payer authentication. Used to match an outgoing payer authentication request with an incoming payer authentication response.	String (28)
payment_account_reference	Reference number serves as a link to the cardholder account and to all transactions for that account. The same value is returned whether the account is represented by a PAN or a network token.	String (32)
payment_token	<p>Identifier for the payment details. The payment token retrieves the card data, billing information, and shipping information from the payment repository.</p> <p>This payment token supersedes the previous payment token and is returned if:</p> <ul style="list-style-type: none"> <li>■ The merchant is configured for a 16 digit payment token which displays the last four digits of the primary account number (PAN) and passes Luhn mod-10 check. See "<a href="#">Payment Tokens</a>," page 12.</li> <li>■ The customer has updated the card number on their payment token. This payment token supersedes the previous payment token and should be used for subsequent transactions.</li> </ul> <p>You must be currently using Token Management Services.</p>	String (26)
paypal_address_status	<p>Status of the street address on file with PayPal.</p> <p>Possible values:</p> <ul style="list-style-type: none"> <li>■ None</li> <li>■ Confirmed</li> <li>■ Unconfirmed</li> </ul>	String (12)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
paypal_authorization_correlation_id	PayPal identifier that is used to investigate any issues.	String (20)
paypal_authorization_transaction_id	Unique identifier for the transaction.	String (17)
paypal_customer_email	Email address of the customer as entered during checkout. PayPal uses this value to pre-fill the PayPal membership sign-up portion of the PayPal login page.	String (127)
paypal_do_capture_correlation_id	PayPal identifier that is used to investigate any issues.	String (20)
paypal_do_capture_transaction_id	Unique identifier for the transaction.	String (17)
paypal_ec_get_details_correlation_id	PayPal identifier that is used to investigate any issues.	String (20)
paypal_ec_get_details_request_id	Value of the request ID returned from a PayPal get details service request.	String (26)
paypal_ec_get_details_transaction_id	Unique identifier for the transaction.	String (17)
paypal_ec_order_setup_correlation_id	PayPal identifier that is used to investigate any issues.	String (20)
paypal_ec_order_setup_transaction_id	Unique identifier for the transaction.	String (17)
paypal_ec_set_request_id	Value of the request ID returned from a PayPal set service request.	String (26)
paypal_fee_amount	PayPal fee charged for the transaction. This value does not exceed the equivalent of 10,000 USD in any currency and does not include a currency symbol. The decimal separator is a period (.), and the optional thousands separator is a comma (,).	String (9)
paypal_order_request_id	Value of the request ID returned from a PayPal order setup service request.	String (26)
paypal_payer_id	Customer's PayPal account identification number.	Alphanumeric String (13)
paypal_payer_status	Customer's status. Possible values: <ul style="list-style-type: none"> <li>■ verified</li> <li>■ unverified</li> </ul>	String (10)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
paypal_pending_reason	<p data-bbox="621 354 1203 411">Indicates the reason that payment is pending. Possible values:</p> <ul style="list-style-type: none"> <li data-bbox="621 432 1203 583">■ <b>address</b>: Your customer did not include a confirmed shipping address, and your Payment Receiving preferences are set to manually accept or deny such payments. To change your preferences, go to the Preferences section of your PayPal profile.</li> <li data-bbox="621 604 1203 688">■ <b>authorization</b>: The payment has been authorized but not settled. Capture the authorized amount.</li> <li data-bbox="621 709 1203 772">■ <b>echeck</b>: Payment was made by an echeck that has not yet cleared.</li> <li data-bbox="621 793 1203 909">■ <b>intl</b>: You have a non-U.S. account and do not have a withdrawal mechanism. You must manually accept or deny this payment in your PayPal Account Overview.</li> <li data-bbox="621 930 1203 1081">■ <b>multi-currency</b>: You do not have a balance in the currency sent, and your Payment Receiving preferences are not set to automatically convert and accept this payment. You must manually accept or deny this payment in your PayPal Account Overview.</li> <li data-bbox="621 1102 927 1123">■ <b>none</b>: No pending reason.</li> <li data-bbox="621 1144 1159 1207">■ <b>order</b>: The payment is part of an order that has been authorized but not settled.</li> <li data-bbox="621 1228 1179 1291">■ <b>paymentreview</b>: The payment is being reviewed by PayPal for possible fraud.</li> <li data-bbox="621 1312 1187 1375">■ <b>unilateral</b>: The payment was made to an email address that is not registered or confirmed.</li> <li data-bbox="621 1396 1187 1465">■ <b>verify</b>: Your account is not yet verified. You must verify your account before you can accept this payment.</li> </ul>	String (14)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
paypal_pending_status	<p>Status of the transaction. Possible values:</p> <ul style="list-style-type: none"> <li>■ <b>Canceled-Reversal:</b> PayPal canceled the reversal, which happens when you win a dispute, and the funds for the reversal are returned to you.</li> <li>■ <b>Completed:</b> PayPal completed the payment and added the funds to your account.</li> <li>■ <b>Denied:</b> You denied a payment, which happens only if the payment was pending for the reason indicated in the <b>reason_code</b> field.</li> <li>■ <b>Expired:</b> The authorization expired.</li> <li>■ <b>Failed:</b> The payment failed. This event can happen only when the payment is made from your customer's bank account.</li> <li>■ <b>In-Progress:</b> The transaction is not complete yet.</li> <li>■ <b>None:</b> No status.</li> <li>■ <b>Partially-Refunded:</b> The payment was partially refunded.</li> <li>■ <b>Pending:</b> The payment is pending for the reason indicated in the <b>paypal_pending_reason</b> field.</li> <li>■ <b>Processed:</b> PayPal accepted the payment.</li> <li>■ <b>ReasonCode</b></li> <li>■ <b>Refunded:</b> You refunded the payment.</li> <li>■ <b>Reversed:</b> PayPal reversed the payment for the reason specified in the <b>reason_code</b> field. The funds were transferred from your account to the customer's account.</li> <li>■ <b>Voided:</b> The authorization was voided</li> </ul>	String (20)
paypal_protection_eligibility	<p>Seller protection in force for the transaction. Possible values:</p> <ul style="list-style-type: none"> <li>■ <b>Eligible:</b> You are protected by the PayPal Seller Protection Policy for unauthorized payment and item not received.</li> <li>■ <b>PartiallyEligible:</b> You are protected by the PayPal Seller Protection Policy for item not received.</li> <li>■ <b>Ineligible:</b> You are not protected under the PayPal Seller Protection Policy.</li> </ul>	String (17)



Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
paypal_protection_eligibility_type	<p>Seller protection in force for the transaction. Possible values:</p> <ul style="list-style-type: none"> <li>■ <b>Eligible:</b> You are protected by the PayPal Seller Protection Policy for unauthorized payment and item not received.</li> <li>■ <b>ItemNotReceivedEligible:</b> You are protected by the PayPal Seller Protection Policy for item not received.</li> <li>■ <b>UnauthorizedPaymentEligible:</b> You are protected by the PayPal Seller Protection Policy for unauthorized payment.</li> <li>■ <b>Ineligible:</b> You are not protected under the PayPal Seller Protection Policy.</li> </ul> <p>To enable the <b>paypal_protection_eligibility_type</b> field, contact customer support to have your account configured for this feature.</p>	String (32)
paypal_request_id	Identifier for the request generated by the client.	String (26)
paypal_token	Timestamped PayPal token which identifies that PayPal Express Checkout is processing the transaction. Save this value to send in future request messages.	String (20)
paypal_transaction_type	<p>Indicates the PayPal transaction type.</p> <p>Possible value: <code>expresscheckout</code></p>	String (16)
reason_code	<p>Numeric value corresponding to the result of the payment card transaction request.</p> <p>See "<a href="#">Reason Codes</a>," page 100.</p>	String (5)
req_access_key	Authenticates the merchant with the application.	String (32)
req_allow_payment_token_update	<p>Indicates whether the customer can update the billing, shipping, and payment information on the order review page. This field can contain one of the following values:</p> <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer can update details.</li> <li>■ <code>false</code>: Customer cannot update details.</li> </ul>	String (5)
req_amount	Total amount for the order. Must be greater than or equal to zero.	String (15)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_auth_indicator	<p>Flag that specifies the purpose of the authorization. Possible values:</p> <ul style="list-style-type: none"> <li>■ 0: Preauthorization</li> <li>■ 1: Final authorization</li> </ul> <p>Mastercard requires European merchants to indicate whether the authorization is a final authorization or a preauthorization.</p> <p>To set the default for this field, contact customer support.</p>	String (1)
req_auth_type	<p>Authorization type. Possible values:</p> <ul style="list-style-type: none"> <li>■ <code>AUTOCAPTURE</code>: Automatic capture.</li> <li>■ <code>STANDARDCAPTURE</code>: Standard capture.</li> <li>■ <code>verbal</code>: Forced capture.</li> </ul> <p><b>Forced Capture</b> Set this field to <code>verbal</code> and include it in the authorization request to indicate that you are performing a forced capture; therefore, you receive the authorization code outside the transaction processing system.</p> <p><b>Verbal Authorization</b> Set this field to <code>verbal</code> and include it in the capture request to indicate that the request is for a verbal authorization.</p>	String (11)
req_bill_to_address_city	City in the billing address.	String (50) Visa Click to Pay: String (100)
req_bill_to_address_country	Country code for the billing address. Use the two-character <a href="#">ISO country codes</a> .	String (2)
req_bill_to_address_line1	First line of the street address in the billing address.	String (60) Visa Click to Pay: String (100)
req_bill_to_address_line2	Second line of the street address in the billing address.	String (60) Visa Click to Pay: String (100)
req_bill_to_address_postal_code	<p>Postal code for the billing address.</p> <p>This field is returned if <code>bill_to_address_country</code> is U.S. or Canada.</p>	String (10) Visa Click to Pay: String (100)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_bill_to_address_state	State or province in the billing address. The two-character <a href="#">ISO state and province code</a> .  This field is returned for U.S and Canada.	String (2)
req_bill_to_company_name	Name of the customer's company.	String (40)
req_bill_to_email	Customer email address.	String (255)  Visa Click to Pay: String (256)
req_bill_to_forename	Customer first name.	String (60)  Visa Click to Pay: String (256)
req_bill_to_phone	Customer phone number.	String (15)  Visa Click to Pay: String (30)
req_bill_to_surname	Customer last name.	String (60)  Visa Click to Pay: String (265)
req_card_expiry_date	Card expiration date.	String (7)
req_card_number	Card number.	String (20)
req_card_type	Type of card.	String (3)
req_company_tax_id	Company's tax identifier. The the last four digits are not masked.	String (9)
req_complete_route	Concatenation of individual travel legs in the format:  SFO-JFK:JFK-LHR:LHR-CDG.  For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a> .  In your request, send either the complete route field or the individual legs ( <b>journey_leg#_orig</b> and <b>journey_leg#_dest</b> ). If you send all the fields, the value of <b>complete_route</b> takes precedence over that of the <b>journey_leg#</b> fields.	String (255)
req_currency	Currency used for the order. See <a href="#">ISO currency codes</a> .	String (3)
req_customer_cookies_accepted	Indicates whether the customer's browser accepts cookies. This field can contain one of the following values:  <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer browser accepts cookies.</li> <li>■ <code>false</code>: Customer browser does not accept cookies.</li> </ul>	String (5)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_customer_gift_wrap	Indicates whether the customer requested gift wrapping for this purchase. This field can contain one of the following values: <ul style="list-style-type: none"> <li>■ <code>true</code>: Customer requested gift wrapping.</li> <li>■ <code>false</code>: Customer did not request gift wrapping.</li> </ul>	String (5)
req_customer_ip_address	Customer's IP address reported by your web server using socket information.	
req_date_of_birth	Date of birth of the customer. Format: YYYYMMDD.	String (8)
req_departure_time	Departure date and time of the first leg of the trip. Use one of the following formats: <ul style="list-style-type: none"> <li>■ <code>yyyy-MM-dd HH:mm z</code></li> <li>■ <code>yyyy-MM-dd hh:mm a z</code></li> <li>■ <code>yyyy-MM-dd hh:mma z</code></li> <li>■ <code>HH</code> = 24-hour format</li> <li>■ <code>hh</code> = 12-hour format</li> <li>■ <code>a</code> = am or pm (case insensitive)</li> <li>■ <code>z</code> = time zone of the departing flight.</li> </ul>	String (29)
req_device_fingerprint_id	Field that contains the session ID for the fingerprint. The string can contain uppercase and lowercase letters, digits, and these special characters: hyphen (-) and underscore (_).  However, do not use the same uppercase and lowercase letters to indicate different sessions IDs.  The session ID must be unique for each merchant ID. You can use any string that you are already generating, such as an order number or web session ID.	String (88)
req_driver_license_number	Driver's license number of the customer. The last four digits are not masked.	String (30)
req_driver_license_state	State or province from which the customer's driver's license was issued. Use the two-character <a href="#">State, Province, and Territory Codes for the United States and Canada</a> .	String (2)
req_ignore_avs	Ignore the results of AVS verification. Possible values: <ul style="list-style-type: none"> <li>■ <code>true</code></li> <li>■ <code>false</code></li> </ul>	String (5)
req_ignore_cvn	Ignore the results of CVN verification. Possible values: <ul style="list-style-type: none"> <li>■ <code>true</code></li> <li>■ <code>false</code></li> </ul>	String (5)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_item_#_code	Type of product. # can range from 0 to 199.	String (255)
req_item_#_description	Description of the item. # can range from 0 to 199.	String (255)
req_item_#_name	Name of the item. # can range from 0 to 199.	String (255)
req_item_#_passenger_email	Passenger's email address.	String (255)
req_item_#_passenger_forename	Passenger's first name.	String (60)
req_item_#_passenger_id	ID of the passenger to whom the ticket was issued. For example, you can use this field for the frequent flyer number.	String (32)
req_item_#_passenger_phone	Passenger's phone number. If the order is from outside the U.S., it is recommended that you include the country code.	String (15)
req_item_#_passenger_status	Your company's passenger classification, such as with a frequent flyer classification. In this case, you might use values such as standard, gold, or platinum.	String (32)
req_item_#_passenger_surname	Passenger's last name.	String (60)
req_item_#_passenger_type	Passenger classification associated with the price of the ticket. You can use one of the following values: <ul style="list-style-type: none"> <li>■ ADT: Adult</li> <li>■ CNN: Child</li> <li>■ INF: Infant</li> <li>■ YTH: Youth</li> <li>■ STU: Student</li> <li>■ SCR: Senior Citizen</li> <li>■ MIL: Military</li> </ul>	String (32)
req_item_#_quantity	Quantity of line items. # can range from 0 to 199.	String (10)
req_item_#_sku	Identification code for the product. # can range from 0 to 199.	String (255)
req_item_#_tax_amount	Tax amount to apply to the line item. # can range from 0 to 199. This value cannot be negative. The tax amount and the offer amount must be in the same currency.	String (15)
req_item_#_unit_price	Price of the line item. # can range from 0 to 199. This value cannot be negative.	String (15)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_journey_leg#_dest	<p>Airport code for the origin of the leg of the trip, designated by the pound (#) symbol in the field name. A maximum of 30 legs can be included in the request. This code is usually three digits long; for example: SFO = San Francisco. Do not use the colon (:), or the hyphen (-). For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a>.</p> <p>In your request, send either the <b>complete_route</b> field or the individual legs (<b>journey_leg#_orig</b> and <b>journey_leg#_dest</b>). If you send all the fields, the complete route takes precedence over the individual legs.</p>	String (3)
req_journey_leg#_orig	<p>Airport code for the origin of the leg of the trip, designated by the pound (#) symbol in the field name. A maximum of 30 legs can be included in the request. This code is usually three digits long; for example: SFO = San Francisco. Do not use the colon (:), or the hyphen (-). For a complete list of airport codes, see <a href="#">IATA's City Code Directory</a>.</p> <p>In your request, send the <b>complete_route</b> field or the individual legs (<b>journey_leg#_orig</b> and <b>journey_leg#_dest</b>). If you send all the fields, the complete route takes precedence over the individual legs.</p>	String (3)
req_journey_type	Type of travel, such as one way or round trip.	String (32)
req_line_item_count	Total number of line items. Maximum amount is 200.	String (2)
req_locale	Indicates the language to use for customer content. See " <a href="#">Activating a Profile</a> ," page 37.	String (5)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_merchant_defined_data#	<p>Optional fields that you can use to store information. # can range from 1 to 100.</p> <p>Merchant-defined data fields 1 to 4 are stored against the payment token and are used for subsequent token-based transactions. Merchant-defined data fields 5 to 100 are passed through to Fraud Management as part of the initial payment request and are not stored against the payment token.</p> <p><b>Warning</b> Merchant-defined data fields are not intended to and MUST NOT be used to capture personally identifying information. Accordingly, merchants are prohibited from capturing, obtaining, and/or transmitting any personally identifying information in or via the merchant-defined data fields and any Secure Acceptance field that is not specifically designed to capture personally identifying information.</p> <p>Personally identifying information includes, but is not limited to, card number, bank account number, social security number, driver's license number, state-issued identification number, passport number, card verification numbers (CVV, CVC2, CVV2, CID, CVN). If it is discovered that a merchant is capturing and/or transmitting personally identifying information via the merchant-defined data fields, whether or not intentionally, the merchant's account WILL immediately be suspended, which will result in a rejection of any and all transaction requests submitted by the merchant after the point of suspension.</p>	String (100)
req_merchant_descriptor	Your business name. This name appears on the cardholder's statement.	String (23)
req_merchant_descriptor_alterate	Alternate contact information for your business, such as an email address or URL. This value might appear on the cardholder's statement.	String (13)
req_merchant_descriptor_city	City for your business location. This value might appear on the cardholder's statement.	String (13)
req_merchant_descriptor_contact	Telephone number for your business. This value might appear on the cardholder's statement.	String (14)
req_merchant_descriptor_country	Country code for your business location. This value might appear on the cardholder's statement.	String (2)
req_merchant_descriptor_postal_code	Postal code for your business location. This value might appear on the cardholder's statement.	String (14)
req_merchant_descriptor_state	State code or region code for your business location. This value might appear on the cardholder's statement.	String (3)

Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_merchant_descriptor_street	Street address for your business location. This value might appear on the cardholder's statement.	String (60)
req_merchant_secure_data1 req_merchant_secure_data2 req_merchant_secure_data3	Optional fields that you can use to store information. The data is encrypted before it is stored in the payment repository.	String (100)
req_merchant_secure_data4	Optional field that you can use to store information. The data is encrypted before it is stored in the payment repository.	String (2000)
req_override_backoffice_post_url	Overrides the backoffice post URL profile setting with your own URL.	URL (255)
req_override_custom_cancel_page	Overrides the custom cancel page profile setting with your own URL.	URL (255)
req_override_custom_receipt_page	Overrides the custom receipt profile setting with your own URL.	URL (255)
req_payment_method	Method of payment. Possible values: <ul style="list-style-type: none"> <li>■ card</li> <li>■ paypal</li> <li>■ visacheckout</li> </ul>	String (30)
req_payment_token	Identifier for the payment details. The payment token retrieves the card data, billing information, and shipping information from the payment repository. When this field is included in the request, the card data and billing and shipping information are optional.  You must be currently using Token Management Services. Populate this field with the customer token ID.	String (26)
req_payment_token_comments	Optional comments about the customer token.	String (255)
req_payment_token_title	Name of the customer token.	String (60)
req_profile_id	Identifies the profile to use with each transaction.	String (36)
req_promotion_code	Promotion code included in the transaction.	String (100)
req_recipient_account_id	Identifier for the recipient's account. Use the first six digits and last four digits of the recipient's account number.	Numeric String (10)
req_recipient_date_of_birth	Recipient's date of birth. Format: YYYYMMDD.	Date (b) String (8)
req_recipient_postal_code	Partial postal code for the recipient's address.  For example, if the postal code is NN5 7SG, the value for this field should be the first part of the postal code: NN5.	Alphanumeric String (6)



Table 7 Response Fields (Continued)

Field	Description	Data Type & Length
req_recipient_surname	Recipient's last name.	Alpha String (6)
req_reference_number	Unique merchant-generated order reference or tracking number for each transaction.	String (50)
req_returns_accepted	Indicates whether product returns are accepted. This field can contain one of the following values: <ul style="list-style-type: none"> <li>■ true</li> <li>■ false</li> </ul>	String (5)
req_ship_to_address_city	City of shipping address.	String (50) Visa Click to Pay: String (100)
req_ship_to_address_country	The two-character country code.	String (2)
req_ship_to_address_line1	First line of shipping address.	String (60) Visa Click to Pay: String (100)
req_ship_to_address_line2	Second line of shipping address.	String (60) Visa Click to Pay: String (100)
req_ship_to_address_postal_code	Postal code for the shipping address.	String (10) Visa Click to Pay: String (100)
req_ship_to_address_state	The two-character <a href="#">ISO state and province code</a> .	String (2)
req_ship_to_company_name	Name of the company receiving the product.	String (40)
req_ship_to_forename	First name of person receiving the product.	String (60) Visa Click to Pay: String (256)
req_ship_to_phone	Phone number for the shipping address.	String (15) Visa Click to Pay: String (30)
req_ship_to_surname	Last name of person receiving the product.	String (60) Visa Click to Pay: String (256)



**Table 7 Response Fields (Continued)**

<b>Field</b>	<b>Description</b>	<b>Data Type &amp; Length</b>
signed_field_names	A comma-separated list of response data that was signed by the server. All fields within this list should be used to generate a signature that can then be compared to the response signature to verify the response.	Variable
transaction_id	The transaction identifier returned from the payment gateway.	String (26)
utf8	Indicates whether the unicode characters are encoded. Possible value: ✓	String (3)
vc_avs_code_raw	Decrypted raw (unmapped) AVS code provided by Visa Click to Pay.	String (10)
vc_risk_score	Decrypted risk score used with your fraud model. See <a href="#">"Configuring Visa Click to Pay," page 19.</a>	Positive Integer (2)
vc_wallet_reference_id	Decrypted order identifier generated by Visa Click to Pay.	String (100)

## Reason Codes

The **reason\_code** field contains additional data regarding the decision response of the transaction. Depending on the decision of a transaction request, the default receipt page or your receipt page is displayed to the customer. Both you and your customer can also receive an email receipt. See "[Merchant Notifications](#)," page 26.

**Table 8 Reason Codes**

Reason Code	Description
100	Successful transaction.
102	One or more fields in the request contain invalid data.  Possible action: see the response field <b>invalid_fields</b> to ascertain which fields are invalid. Resend the request with the correct information.
104	The <b>access_key</b> and <b>transaction_uuid</b> fields for this authorization request match the <b>access_key</b> and <b>transaction_uuid</b> fields of another authorization request that you sent within the past 15 minutes.  Possible action: resend the request with unique <b>access_key</b> and <b>transaction_uuid</b> fields.  A duplicate transaction was detected. The transaction might have already been processed.  Possible action: before resubmitting the transaction, use the single transaction query or search for the transaction using your Merchant Services account (see " <a href="#">Viewing Transactions in Your Merchant Services Account</a> ," page 50) to confirm that the transaction has not yet been processed.
110	Only a partial amount was approved.
150	General system failure.  Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status either directly in your Merchant Services account or programmatically through the single transaction query.
151	The request was received but a server timeout occurred. This error does not include timeouts between the client and the server.  Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status either directly in your Merchant Services account or programmatically through the single transaction query.
152	The request was received, but a service timeout occurred.  Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status either directly in your Merchant Services account or programmatically through the single transaction query.
200	The authorization request was approved by the issuing bank but declined because it did not pass the Address Verification System (AVS) check.  Possible action: you can capture the authorization, but consider reviewing the order for fraud.

**Table 8 Reason Codes (Continued)**

<b>Reason Code</b>	<b>Description</b>
201	<p>The issuing bank has questions about the request. You do not receive an authorization code programmatically, but you might receive one verbally by calling the processor.</p> <p>Possible action: call your processor to possibly receive a verbal authorization. For contact phone numbers, refer to your merchant bank information.</p>
202	<p>Expired card. You might also receive this value if the expiration date you provided does not match the date the issuing bank has on file.</p> <p>Possible action: request a different card or other form of payment.</p>
203	<p>General decline of the card. No other information was provided by the issuing bank.</p> <p>Possible action: request a different card or other form of payment.</p>
204	<p>Insufficient funds in the account.</p> <p>Possible action: request a different card or other form of payment.</p>
205	<p>Stolen or lost card.</p> <p>Possible action: review this transaction manually to ensure that you submitted the correct information.</p>
207	<p>Issuing bank unavailable.</p> <p>Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status either directly in your Merchant Services account or programmatically through the single transaction query.</p>
208	<p>Inactive card or card not authorized for card-not-present transactions.</p> <p>Possible action: request a different card or other form of payment.</p>
210	<p>The card has reached the credit limit.</p> <p>Possible action: request a different card or other form of payment.</p>
211	<p>Invalid CVN.</p> <p>Possible action: request a different card or other form of payment.</p>
221	<p>The customer matched an entry on the processor's negative file.</p> <p>Possible action: review the order and contact the payment processor.</p>
222	<p>Account frozen.</p>
230	<p>The authorization request was approved by the issuing bank but declined because it did not pass the CVN check.</p> <p>Possible action: you can capture the authorization, but consider reviewing the order for the possibility of fraud.</p>
231	<p>Invalid account number.</p> <p>Possible action: request a different card or other form of payment.</p>

**Table 8 Reason Codes (Continued)**

<b>Reason Code</b>	<b>Description</b>
232	The card type is not accepted by the payment processor. Possible action: contact your merchant bank to confirm that your account is set up to receive the card in question.
233	General decline by the processor. Possible action: request a different card or other form of payment.
234	There is a problem with the information in your account. Possible action: do not resend the request. Contact customer support to correct the information in your account.
236	Processor failure. Possible action: To avoid duplicating the transaction, do not resend the request until you have reviewed the transaction status either directly in your Merchant Services account or programmatically through the single transaction query.
240	The card type sent is invalid or does not correlate with the payment card number. Possible action: confirm that the card type correlates with the payment card number specified in the request; then resend the request.
475	The cardholder is enrolled for payer authentication. Possible action: authenticate cardholder before proceeding.
476	Payer authentication could not be authenticated.
481	Transaction declined based on your payment settings for the profile. Possible action: review the risk score settings for the profile.
520	The authorization request was approved by the issuing bank but declined based on your legacy Smart Authorization settings. Possible action: review the authorization request.

# Types of Notifications

**Table 9** Types of Notifications

Decision	Description	Type of Notification	Hosted Page
ACCEPT	Successful transaction. Reason codes 100 and 110.	<ul style="list-style-type: none"> <li>■ Custom receipt page</li> <li>■ Customer receipt email</li> <li>■ Merchant POST URL</li> <li>■ Merchant receipt email</li> </ul>	Accept
REVIEW	Authorization was declined; however, a capture might still be possible. Review payment details. See reason codes 200, 201, 230, and 520.	<ul style="list-style-type: none"> <li>■ Custom receipt page</li> <li>■ Customer receipt email</li> <li>■ Merchant POST URL</li> <li>■ Merchant receipt email</li> </ul>	Accept
DECLINE	Transaction was declined. See reason codes 102, 200, 202, 203, 204, 205, 207, 208, 210, 211, 221, 222, 230, 231, 232, 233, 234, 236, 240, 475, 476, and 481.	<ul style="list-style-type: none"> <li>■ Custom receipt page <sup>1</sup></li> <li>■ Merchant POST URL <sup>1</sup></li> <li>■ Merchant receipt email <sup>1</sup></li> </ul>	Decline
ERROR	Access denied, page not found, or internal server error. See reason codes 102, 104, 150, 151 and 152.	<ul style="list-style-type: none"> <li>■ Custom receipt page</li> <li>■ Merchant POST URL</li> </ul>	Error
CANCEL	<ul style="list-style-type: none"> <li>■ The customer did not accept the service fee conditions.</li> <li>■ The customer cancelled the transaction.</li> </ul>	<ul style="list-style-type: none"> <li>■ Custom receipt page</li> <li>■ Merchant POST URL</li> </ul>	Cancel

<sup>1</sup> If the retry limit is set to 0, the customer receives the decline message, *Your order was declined. Please verify your information.* before the merchant receives it. The decline message relates to either the processor declining the transaction or a payment processing error, or the customer entered their 3D Secure credentials incorrectly.

## AVS Codes

An issuing bank uses the AVS code to confirm that your customer is providing the correct billing address. If the customer provides incorrect data, the transaction might be fraudulent. The international and U.S. domestic Address Verification Service (AVS) codes are the Visa standard AVS codes, except for codes 1 and 2, which are Bank of America AVS codes. The standard AVS return codes for other types of payment cards (including American Express cards) are mapped to the Visa standard codes. You receive the code in the `auth_avs_code` response field. See ["Response Fields," page 79](#).



When you populate billing street address 1 and billing street address 2, Bank of America concatenates the two values. If the concatenated value exceeds 40 characters, Bank of America truncates the value at 40 characters before sending it to Visa and the issuing bank. Truncating this value affects AVS results and therefore might also affect risk decisions and chargebacks.

## International AVS Codes

These codes are returned only for Visa cards issued outside the U.S.

**Table 10 International AVS Codes**

Code	Response	Description
B	Partial match	Street address matches, but postal code is not verified.
C	No match	Street address and postal code do not match.
D & M	Match	Street address and postal code match.
I	No match	Address not verified.
P	Partial match	Postal code matches, but street address not verified.



## U.S. Domestic AVS Codes

**Table 11 U.S. Domestic AVS Codes**

Code	Response	Description
A	Partial match	Street address matches, but five-digit and nine-digit postal codes do not match.
B	Partial match	Street address matches, but postal code is not verified.
C	No match	Street address and postal code do not match.
D & M	Match	Street address and postal code match.
E	Invalid	AVS data is invalid or AVS is not allowed for this card type.
F	Partial match	Card member's name does not match, but billing postal code matches. Returned only for the American Express card type.
H	Partial match	Card member's name does not match, but street address and postal code match. Returned only for the American Express card type.
I	No match	Address not verified.
J	Match	Card member's name, billing address, and postal code match. Shipping information verified and chargeback protection guaranteed through the Fraud Protection Program. Returned only if you are signed up to use AAV+ with the American Express Phoenix processor.
K	Partial match	Card member's name matches, but billing address and billing postal code do not match. Returned only for the American Express card type.
L	Partial match	Card member's name and billing postal code match, but billing address does not match. Returned only for the American Express card type.
M	Match	Street address and postal code match.
N	No match	One of the following: <ul style="list-style-type: none"> <li>■ Street address and postal code do not match.</li> <li>■ Card member's name, street address, and postal code do not match. Returned only for the American Express card type.</li> </ul>
O	Partial match	Card member's name and billing address match, but billing postal code does not match. Returned only for the American Express card type.
P	Partial match	Postal code matches, but street address not verified.
Q	Match	Card member's name, billing address, and postal code match. Shipping information verified but chargeback protection not guaranteed (Standard program). Returned only if you are signed to use AAV+ with the American Express Phoenix processor.
R	System unavailable	System unavailable.
S	Not supported	U.S.-issuing bank does not support AVS.

**Table 11 U.S. Domestic AVS Codes (Continued)**

<b>Code</b>	<b>Response</b>	<b>Description</b>
T	Partial match	Card member's name does not match, but street address matches. Returned only for the American Express card type.
U	System unavailable	Address information unavailable for one of these reasons: <ul style="list-style-type: none"> <li>■ The U.S. bank does not support non-U.S. AVS.</li> <li>■ The AVS in a U.S. bank is not functioning properly.</li> </ul>
V	Match	Card member's name, billing address, and billing postal code match. Returned only for the American Express card type.
W	Partial match	Street address does not match, but nine-digit postal code matches.
X	Match	Street address and nine-digit postal code match.
Y	Match	Street address and five-digit postal code match.
Z	Partial match	Street address does not match, but five-digit postal code matches.
1	Not supported	AVS is not supported for this processor or card type.
2	Unrecognized	The processor returned an unrecognized value for the AVS response.
3	Match	Address is confirmed. Returned only for PayPal Express Checkout.
4	No match	Address is not confirmed. Returned only for PayPal Express Checkout.

## CVN Codes

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**Table 12 CVN Codes**

<b>Code</b>	<b>Description</b>
D	The transaction was considered to be suspicious by the issuing bank.
I	The CVN failed the processor's data validation.
M	The CVN matched.
N	The CVN did not match.
P	The CVN was not processed by the processor for an unspecified reason.
S	The CVN is on the card but was not included in the request.
U	Card verification is not supported by the issuing bank.
X	Card verification is not supported by the card association.
1	Card verification is not supported for this processor or card type.
2	An unrecognized result code was returned by the processor for the card verification response.
3	No result code was returned by the processor.

# American Express SafeKey Response Codes

The American Express SafeKey response code is returned in the **auth\_cavv\_result** field in the response message for an authorization request.

**Table 13 American Express SafeKey Response Codes**

Response Code	Description
1	CAVV failed validation and authentication.
2	CAVV passed validation and authentication.
3	CAVV passed the validation attempt.
4	CAVV failed the validation attempt.
7	CAVV failed the validation attempt and the issuer is available.
8	CAVV passed the validation attempt and the issuer is available.
9	CAVV failed the validation attempt and the issuer is not available.
A	CAVV passed the validation attempt and the issuer is not available.
U	Issuer does not participate or 3D Secure data was not used.
99	An unknown value was returned from the processor.

# Iframe Implementation



If you plan to embed Secure Acceptance in an iframe, ensure that you follow the steps in this appendix. PayPal Express Checkout is not supported on a Secure Acceptance iframe integration.

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For the payer authentication 3D Secure 2.x process, ensure that the iframe is large enough to display the issuer's access control server (ACS) challenge content (at least 390 x 400 pixels). For more information about ACS, see the Payer Authentication guide.

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You must select the single page checkout option for the Hosted Payments Page iframe implementation. See ["Checkout Configuration," page 23](#).

The total amount value and the transaction cancel button are not displayed within the iframe. Any settings that you configured for the total amount figure are ignored (see ["Custom Checkout Appearance," page 31](#)).

Bank of America recommends that you manage the total amount value on your website containing the inline frame. You must also provide customers a cancel order functionality on your website containing the inline frame.

# Clickjacking Prevention

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Clickjacking (also known as *user-interface redress attack* and *iframe overlay*) is used by attackers to trick users into clicking on a transparent layer (with malicious code) above legitimate buttons or clickable content for a site. To prevent clickjacking, you must prevent third-party sites from including your website within an iframe.

While no security remediation can prevent every clickjacking, these are the minimum measures you must use for modern web browsers:

- Set HTTP response header X-FRAME\_OPTIONS to either "DENY" or "SAMEORIGIN".
- Provide frame-busting scripts to ensure that your page is always the top level window or disabling code for older browsers that do not support X-FRAME\_OPTIONS.

Do not use double framing on the same page where the Hosted Payments Page iframe implementation is used.

You are required to implement the recommended prevention techniques in your website. See the [OWASP Clickjacking Defense](#) page and the [Cross Site Scripting](#) page for up-to-date information.

Web application protections for Cross-site Scripting (XSS), [Cross-site Request Forgery \(CSRF\)](#), etc. must also be incorporated.

- For XSS protection, you must implement comprehensive input validation and the OWASP-recommended security encoding library to do output encoding on your website.
- For CSRF protection, you are strongly encouraged to use a synchronized token pattern. This measure requires generating a randomized token associated with the user session. The token will be inserted whenever an HTTP request is sent to the server. Your server application will verify that the token from the request is the same as the one associated with the user session.

## Endpoints

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For iframe transaction endpoints and supported transaction types for each endpoint, see "[Endpoints and Transaction Types](#)," page 39.

# Visa Secure Response Codes

The Visa Secure response code is returned in the **auth\_cavv\_result** field in the response message for an authorization request.

**Table 14 Visa Secure Response Codes**

Response Code	Description
0	CAVV not validated because erroneous data was submitted.
1	CAVV failed validation and authentication.
2	CAVV passed validation and authentication.
3	CAVV passed the validation attempt.
4	CAVV failed the validation attempt.
6	CAVV not validated because the issuer does not participate.
7	CAVV failed the validation attempt and the issuer is available.
8	CAVV passed the validation attempt and the issuer is available.
9	CAVV failed the validation attempt and the issuer is not available.
A	CAVV passed the validation attempt and the issuer is not available.
B	CAVV passed the validation with information only; no liability shift.
C	CAVV attempted but not validated; issuer did not return CAVV code.
D	CAVV not validated or authenticated; issuer did not return CAVV code.
I	Invalid security data.
U	Issuer does not participate or 3D Secure data was not used.
99	An unknown value was returned from the processor.