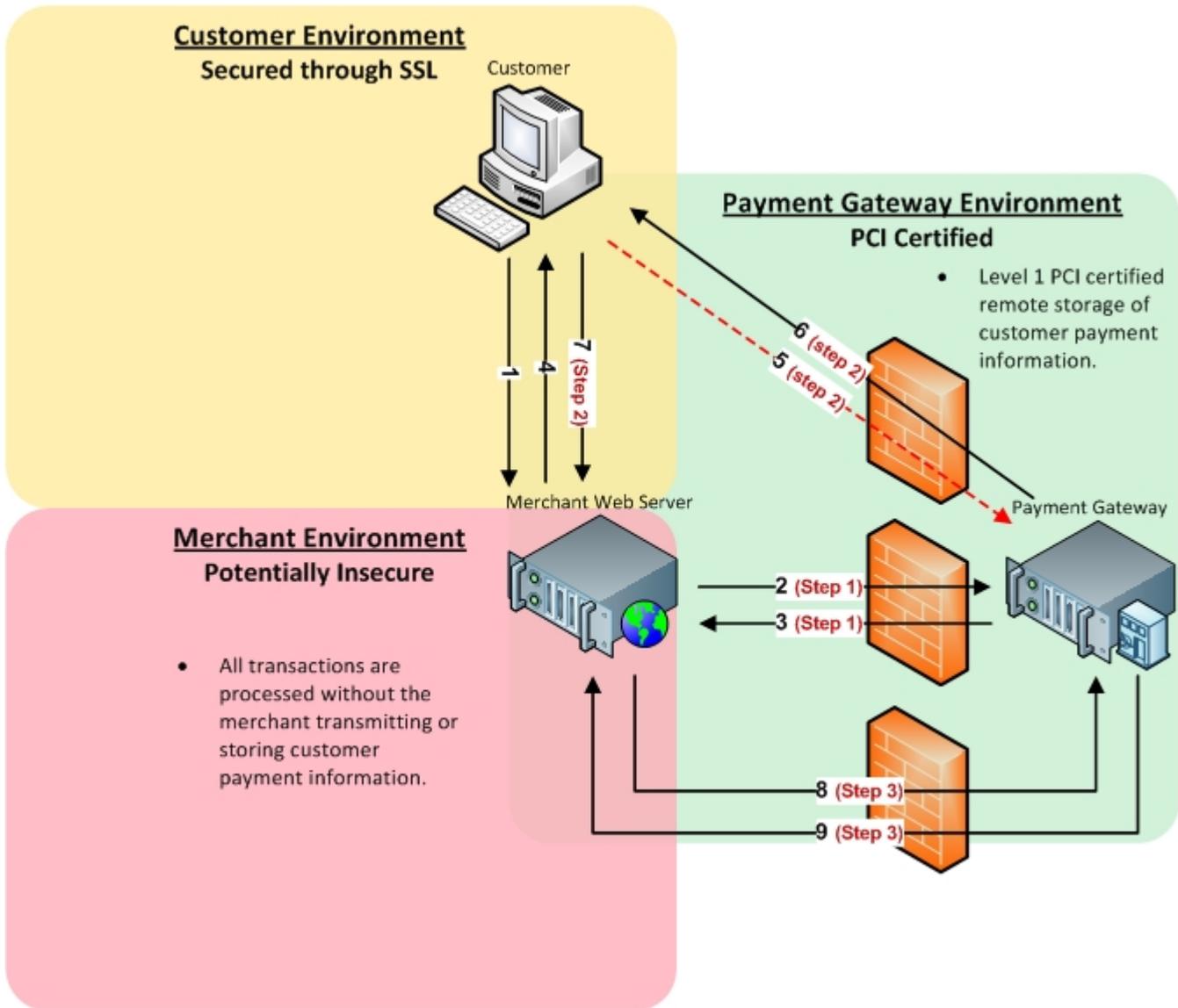# Methodology
# Three-Step

## Method Overview

- **Step One:**  Submit all transaction details to the Payment Gateway except the customer's sensitive payment information. The Payment Gateway will return a variable **form-url**.

- **Step Two:**  Create an HTML form that collects the customer's sensitive payment information and use the **form-url** that the Payment Gateway returns as the submit action in that form.

- **Step Three:**  Once the customer has been redirected, obtain the **token-id** and complete the transaction through an HTTPS POST including the **token-id** which abstracts the sensitive payment information that was collected directly by the Payment Gateway.

## Detailed Explanation

To start step one, your payment application will submit a behind-the-scenes HTTPS direct POST that includes transaction variables, including an additional variable **redirect-url**, which is a URL that must exist on your web server that handles a future browser redirect. Sensitive payment information such as **cc-number**, **cc-exp**, and **cvv** cannot be submitted during step one. The Payment Gateway will generate and return the form-url variable containing a unique URL to be used in Step 2.

Next, during step two, you must develop an HTML form that collects at least the customer's sensitive payment information such as **cc-number**, **cc-exp**, and **cvv**. You must use the **form-url** obtained in step one as the action in the HTML of your payment form. When the customer submits the form, the customer's browser will transparently POST the contents of the payment form directly to the Payment Gateway. This methodology keeps your web server and payment application from seeing or transmitting any credit card data or other sensitive data. Once the Payment Gateway has collected the customer's sensitive payment details, the customer's browser will be instructed to return to the **redirect-url** on your web server. Furthermore, the Payment Gateway will generate and append a unique variable named **token-id** to the **redirect-url** in the GET query string. This **token-id** is an abstraction of the customer's sensitive payment information that the Payment Gateway collected. Your **redirect-url** script must parse the **token-id** for use in step three.

To complete the transaction, you will submit another behind-the-scenes HTTPS direct POST including only the **token-id** and **api-key**. This **token-id** is used to "tie" together the initial customer information with the sensitive payment information that the payment gateway collected directly.

# Step One
# Three-Step: Transactions

## Sale/Auth/Credit/Validate/Offline XML Request

| XML Element | Description |
| --- | --- |
| <sale\|auth\|credit\|validate\|offline> | Type of transaction to perform. |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. |
| amount* | Total amount to be charged (For "validate" actions, amount must be 0.00 or omitted). |
| authorization-code** | Specify authorization code. For use with "offline" action only. |

| | |
|---|---|
| ip-address | Cardholder's IP address.<br>Format: xxx.xxx.xxx.xxx |
| industry | Specify industry classification of transaction.<br>Values: 'ecommerce', 'moto', or 'retail' |
| billing-method | Set additional billing indicators.<br>Values: 'recurring' or 'installment' |
| billing-number | Specify installment billing number, on supported processors. For use when "billing-method" is set to installment.<br>Values: 0-99 |
| billing-total | Specify installment billing total on supported processors. For use when "billing-method" is set to installment. |
| processor-id | If using multiple processors, route to specified processor. Obtained under Settings->Load Balancing in the merchant control panel. |
| sec-code | ACH standard entry class codes.<br>Values: 'PPD', 'WEB', 'TEL', 'CCD', 'POP', or 'ARC' |
| descriptor | Set payment descriptor on supported processors. |
| descriptor-phone | Set payment descriptor phone on supported processors. |
| descriptor-address | Set payment descriptor address on supported processors. |
| descriptor-city | Set payment descriptor city on supported processors. |
| descriptor-state | Set payment descriptor state on supported processors. |
| descriptor-postal | Set payment descriptor postal code on supported processors. |
| descriptor-country | Set payment descriptor country on supported processors. |
| descriptor-mcc | Set payment descriptor mcc on supported processors. |
| descriptor-merchant-id | Set payment descriptor merchant id on supported processors. |
| descriptor-url | Set payment descriptor url on supported processors. |
| currency | Set transaction currency.<br>Format: ISO 4217 |
| order-description | Order description. |
| customer-id | Customer identification. |
| customer-vault-id | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| merchant-receipt-email | Send merchant receipt to email |
| customer-receipt | Send receipt if billing email included.<br>Values: 'true' or 'false' |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| tracking-number | Shipping tracking number. |
| shipping-carrier | Shipping carrier.<br>Values: 'ups', 'fedex', 'dhl', or 'usps' |
| order-id*** | Order id. |
| po-number*** | Cardholder's purchase order number. |

| | |
|---|---|
| tax-amount*** | The sales tax included in the transaction amount associated with the purchase. Setting tax equal to '-1' indicates an order that is exempt from sales tax.<br>Default: '0.00'<br>Format: x.xx |
| shipping-amount*** | Total shipping amount. |
| ship-from-postal**** | Postal/ZIP code of the address from where purchased goods are being shipped. Defaults to merchant profile postal code. |
| summary-commodity-code**** | A code representing the type of commodity being purchased. The acquirer or processor will provide a list of current codes. |
| duty-amount | Amount included in the transaction amount associated with the import of the purchased goods.<br>Default: '0.00' |
| discount-amount | Amount included in the transaction amount of any discount applied to the complete order by the merchant.<br>Default: '0.00' |
| national-tax-amount | The national tax amount included in the transaction amount.<br>Default: '0.00' |
| alternate-tax-amount | Second tax amount included in the transaction amount in countries where more than one type of tax can be applied to the purchases.<br>Default: '0.00' |
| alternate-tax-id | Tax identification number of the merchant that reported the alternate tax amount. |
| vat-tax-amount | Contains the amount of any value added taxes which can be associated with the purchased item.<br>Default: '0.00' |
| vat-tax-rate | Contains the tax rate used to calculate the sales tax amount appearing. Can contain up to 2 decimal places, ie 1% = 1.00.<br>Default: '0.00' |
| vat-invoice-reference-number | Invoice number that is associated with the VAT invoice. |
| customer-vat-registration | Value added tax registration number supplied by the cardholder. |
| merchant-vat-registration | Government assigned tax identification number of the merchant from whom the goods or services were purchased. |
| order-date | Purchase order date. Defaults to the date of the transaction.<br>Format: YYMMDD |
| cardholder-auth† | Set 3D Secure condition.<br>Values: 'verified' or 'attempted' |
| eci† | E-commerce indicator.<br>Values: '2', '5', or '7' |
| cavv† | Cardholder authentication verification value.<br>Format: base64 encoded |
| xid† | Cardholder authentication transaction id.<br>Format: base64 encoded |
| dup-seconds‡ | Override duplicate transaction detection time in seconds. |

| | |
|---|---|
| avs-reject‡ | The transaction is rejected if the address verification result is a code in this list. Values are letters obtained under Settings->Address Verification in the control panel.<br>Format: x\|x\|x\|x... |
| cvv-reject‡ | The transaction is rejected if the card ID verification result is a code in this list. Values are letters obtained under Settings->Card ID Verification in the control panel.<br>Format: x\|x\|x\|x... |
| \<billing\> | The customer's billing information |
| billing-id | Specify billing id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type§ | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type§ | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| \</billing\> | |
| \<shipping\> | The customer's shipping information. |
| shipping-id | Specify shipping id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping billing address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal**** | Shipping postal code. |
| country**** | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |

| | |
|---|---|
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| </shipping> | |
| <product> | Product line item detail. Multiple product elements are allowed. |
| product-code****¶ | Merchant defined description code of the item being purchased. |
| description**** | Description of the item(s) being supplied. |
| commodity-code**** | International description code of the individual good or service being supplied. The acquirer or processor will provide a list of current codes. |
| unit-of-measure**** | Code for units of measurement as used in international trade. Default: 'EACH' |
| unit-cost**** | Unit cost of item purchased. May contain up to 4 decimal places. |
| quantity**** | Quantity of the item(s) being purchased. Default: '1' |
| total-amount**** | Purchase amount associated with the item. Default to 'unit-cost' x 'quantity' rounded to the nearest penny. |
| tax-amount**** | Amount of tax on specific item. Amount should not be included in item-total-amount. Default: '0.00' |
| tax-rate**** | Percentage representing the value-added tax applied. 1% = 1.00. Default: '0.00' |
| discount-amount | Discount amount which can have been applied by the merchant on the sale of the specific item. Amount should not be included in 'item-total-amount'. |
| discount-rate | Discount rate for the line item. 1% = 1.00. Default: '0.00' |
| tax-type | Type of value-added taxes that are being used. |
| alternate-tax-id | Tax identification number of the merchant that reported the alternate tax amount. |
| </product> | |
| <add-subscription> | Perform a simultaneous 'hybrid' recurring action while processing a transaction. |
| start-date | The first day that the customer will be charged. Format: YYYYMMDD |
| <plan> | |
| plan-id | The unique plan ID that references only this recurring plan. |
| payments | The number of payments before the recurring plan is complete. Note: Use '0' for 'until canceled' |
| amount | The plan amount to be charged each billing cycle. Format: x.xx |
| day-frequency | How often, in days, to charge the customer. Cannot be set with 'month-frequency' or 'day-of-month'. |

| | |
|---|---|
| month-frequency | How often, in months, to charge the customer. Cannot be set with 'day-frequency'. Must be set with 'day-of-month'.<br>Values: 1 through 24 |
| day-of-month | The day that the customer will be charged. Cannot be set with 'day-frequency'. Must be set with 'month-frequency'.<br>Values: 1 through 31 - for months without 29, 30, or 31 days, the charge will be on the last day |

\</plan\>
\</add-subscription\>

| | |
|---|---|
| \<add-customer\|update-customer\> | Perform a simultaneous 'hybrid' customer vault action while processing a transaction. This tag can be blank if submitting an 'add-customer' without specifying a 'customer-vault-id'. |
| customer-vault-id | Specify customer vault id. If omitted, will be auto-generated and returned in response. Required for 'update-customer'. |

\</add-customer\|update-customer\>

| | |
|---|---|
| partial-payments†† | Specify whether a partial amount or full amount of the transaction should be settled.<br>Format: 'settle_partial' or 'payment_in_full' |
| partial-payment-id†† | Specify a partial payment ID. Required to collect an additional amount associated with an existing Partial Payment Transaction. Do not use on initial transaction. |

\</sale\|auth\|credit\|validate\|offline\>

* Always required
** Required for offline transactions
*** Required for Level 2 and Level 3 transactions
**** Required for Level 3 transactions
† Required for 3D-Secure transactions
‡ Required for Override transactions
†† Required for Partial Payment Transactions
§ Required for ACH transactions
¶ Required for Line Item Reporting

# Sale/Auth/Credit/Validate/Offline XML Response

| XML Element | Description |
|---|---|
| \<response\> | |
| result | 1=Approved<br>2=Declined<br>3=Error in transaction data or system error |
| result-text | Textual response. |
| transaction-id | Payment Gateway transaction id. |
| result-code | Numeric mapping of processor responses (See Appendix 3). |
| form-url | URL used as the action of the HTML form in step two. |

</response>

# Step Two
# Three-Step: Transactions

## HTML Form Fields Request

| HTML Form Fields | Description |
| --- | --- |
| billing-cc-number* | Credit card number. |
| billing-cc-exp* | Credit card expiration.<br>Format: MMYY |
| billing-cvv | Card security code. |
| billing-account-name** | The name on the customer's ACH Account. |
| billing-account-number** | The customer's bank account number. |
| billing-routing-number** | The customer's bank routing number. |
| billing-account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| billing-entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| billing-micr† | Physical check's Magnetic ink strip, on supported check processors. For use with 'POP' or 'ARC' sec-code. |
| billing-track-1*** | Raw magnetic stripe data, track 1. |
| billing-track-2*** | Raw magnetic stripe data, track 2. |
| billing-track-3*** | Raw magnetic stripe data, track 3. |
| billing-magnesafe-track-1*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-2*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-3*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-ksn*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-magneprint*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-magneprint-status*** | Raw MagTek Magensa encrypted reader data. |
| billing-social-security-number **** | Customer's social security number, checked against bad check writers database if check verification is enabled. |
| billing-drivers-license-number **** | Driver's license number, checked against bad check writers' database if check verification is enabled. |
| billing-drivers-license-dob**** | Driver's license date of birth. |
| billing-drivers-license-state**** | Customer's driver's license state.<br>Format: CC |
| billing-first-name | Cardholder's first name. Overwrites value if passed during step one. |
| billing-last-name | Cardholder's last name. Overwrites value if passed during step one.. |
| billing-address1 | Cardholder's billing address. Overwrites value if passed during step one. |

| | |
|---|---|
| billing-city | Card billing city. Overwrites value if passed during step one. |
| billing-state | Card billing state/province. Overwrites value if passed during step one. Format: CC |
| billing-postal | Card billing postal code. Overwrites value if passed during step one. |
| billing-country | Card billing country code. Overwrites value if passed during step one. Format: CC/ISO 3166 |
| billing-phone | Billing phone number. Overwrites value if passed during step one. |
| billing-email | Billing email address. Overwrites value if passed during step one. |
| billing-company | Cardholder's company. Overwrites value if passed during step one. |
| billing-address2 | Card billing address, line 2. Overwrites value if passed during step one. |
| billing-fax | Billing fax number. Overwrites value if passed during step one. |
| shipping-first-name | Shipping first name. Overwrites value if passed during step one. |
| shipping-last-name | Shipping last name. Overwrites value if passed during step one. |
| shipping-address1 | Shipping billing address. Overwrites value if passed during step one. |
| shipping-city | Shipping city. Overwrites value if passed during step one. |
| shipping-state | Shipping state/province. Overwrites value if passed during step one. |
| shipping-postal | Shipping postal code. Overwrites value if passed during step one. |
| shipping-country | Shipping country code. Overwrites value if passed during step one. |
| shipping-phone | Shipping phone number. Overwrites value if passed during step one. |
| shipping-email | Shipping email address. Overwrites value if passed during step one. |
| shipping-company | Shipping company. Overwrites value if passed during step one. |
| shipping-address2 | Shipping address, line 2. Overwrites value if passed during step one. |
| shipping-fax | Shipping fax number. Overwrites value if passed during step one. |

\*     Required for keyed credit card transactions.
\*\*    Required for ACH transactions.
\*\*\*   Used for retail transactions. Variables used dependent on swipe device.
\*\*\*\* Required for check verification.
†     Required for check scanning.

## HTML Form Fields Response

Once the Payment Gateway has collected the customer's sensitive payment details, the customer's browser will immediately be redirected back to the **redirect-url** on your web server. A variable named **token-id** will be appended to the **redirect-url** in the GET query string as described below:

https://**redirect-url**/?**token-id**=[token]

# Step Three
# Three-Step: Transactions

# Complete Transaction XML Request

| XML Element | Description |
| --- | --- |
| <complete-action> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| token-id* | Customer payment token returned during step two. |
| </complete-action> | |

* Required

# Complete Transaction XML Response

| XML Element | Description |
| --- | --- |
| <response> | |
| result | 1=Transaction Approved<br>2=Transaction Declined<br>3=Error in transaction data or system error |
| result-text | Textual response. |
| transaction-id | Payment Gateway transaction ID |
| result-code | Numeric mapping of processor responses. (See Appendix 3) |
| authorization-code | Transaction authorization code. |
| avs-result | AVS response code. (See Appendix 1) |
| cvv-result | CVV response code. (See Appendix 2) |
| action-type | Action type that was initially specified.<br>Values: 'sale', 'auth', 'credit', 'validate', or 'offline' |
| amount | Total amount charged.<br>Format: x.xx |
| amount-authorized | Returns the amount authorized.<br>Format: x.xx |
| ip-address | Cardholder's IP address.<br>Format: xxx.xxx.xxx.xxx |
| industry | Industry classification of transaction.<br>Values: 'ecommerce', 'moto', or 'retail' |
| billing-method | Billing indicators used.<br>Values: 'recurring' or 'installment' |
| processor-id | Processor transaction was made through. |
| sec-code | ACH standard entry class codes.<br>Values: 'PPD', 'WEB', 'TEL', 'CCD', 'POP', or \ARC' |
| descriptor | Payment descriptor. |
| descriptor-phone | Payment descriptor phone. |
| descriptor-address | Set payment descriptor address on supported processors. |
| descriptor-city | Set payment descriptor city on supported processors. |
| descriptor-state | Set payment descriptor state on supported processors. |
| descriptor-postal | Set payment descriptor postal code on supported processors. |

| | |
|---|---|
| descriptor-country | Set payment descriptor country on supported processors. |
| descriptor-mcc | Set payment descriptor mcc on supported processors. |
| descriptor-merchant-id | Set payment descriptor merchant id on supported processors. |
| descriptor-url | Set payment descriptor url on supported processors. |
| currency | Transaction currency used. (Table 1.b) |
| order-description | Order description. |
| customer-id | Customer identification. |
| customer-vault-id | Customer vault id used or created during action. |
| merchant-receipt-email | Merchant receipt email. |
| customer-receipt | Customer email receipt sent.<br>Values: 'true' or 'false' |
| partial-payment-balance | Returns the payment's remaining balance. |
| partial-payment-id | Numeric identifier used to submit subsequent partial payment transactions. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| tracking-number | Shipping tracking number. |
| shipping-carrier | Shipping carrier.<br>Values: 'ups', 'fedex', 'dhl', or 'usps' |
| order-id | Order id. |
| po-number | Cardholder's purchase order number. |
| tax-amount | The sales tax included in the transaction amount associated with the purchase.<br>Format: x.xx |
| shipping-amount | Total shipping amount.<br>Format: x.xx |
| ship-from-postal | Postal/ZIP code of the address from where purchased goods are being shipped. |
| summary-commodity-code | A code representing the type of commodity being purchased. The acquirer or processor will provide a list of current codes. |
| duty-amount | Amount included in the transaction amount associated with the import of the purchased goods.<br>Format: x.xx |
| discount-amount | Amount included in the transaction amount of any discount applied to the complete order by the merchant.<br>Format: x.xx |
| national-tax-amount | The national tax amount included in the transaction amount.<br>Format: x.xx |
| alternate-tax-amount | Second tax amount included in the transaction amount in countries where more than one type of tax can be applied to the purchases.<br>Default: '0.00'<br>Format: x.xx |
| alternate-tax-id | Tax identification number of the merchant that reported the alternate tax amount. |
| vat-tax-amount | Contains the amount of any value added taxes which can be associated with the purchased item.<br>Format: x.xx |

| | |
|---|---|
| vat-tax-rate | Contains the tax rate used to calculate the sales tax amount appearing. Can contain up to 2 decimal places, ie 1% = 1.00. Format: x.xx |
| vat-invoice-reference-number | Invoice number that is associated with the VAT invoice. |
| customer-vat-registration | Value added tax registration number supplied by the cardholder. |
| merchant-vat-registration | Government assigned tax identification number of the merchant from whom the goods or services were purchased. |
| order-date | Purchase order date. Format: YYMMDD |
| cardholder-auth | 3D Secure condition. Values: 'verified' or 'attempted' |
| eci | E-commerce indicator. Values: '2', '5', or '7' |
| cavv | Cardholder authentication verification value. Format: base64 encoded |
| xid | Cardholder authentication transaction id. Format: base64 encoded |
| dup-seconds | Override duplicate transaction detection checking in seconds. |
| avs-reject | Values are letters obtained under Settings->Address Verification in the control panel. |
| cvv-reject | Values are letters obtained under Settings->Card ID Verification in the control panel. |
| <billing> | The customer's billing information |
| billing-id | Billing id used or created for this action. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province. Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code. Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| social-security-number | Customer's social security number |
| drivers-license-number | Driver's license number. |
| drivers-license-dob | Driver's license date of birth. |
| drivers-license-state | Customer's driver's license state. Format: CC |

| | |
|---|---|
| cc-number | Masked credit card number.<br>Format: XXXXXX********XXXX |
| cc-exp | Credit card expiration<br>Format: MMYY |
| account-name | The name on the customer's bank account. |
| account-number | Masked bank account number.<br>Format: X****XXXX |
| routing-number | Masked bank routing number.<br>Format: X****XXXX |
| account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| priority | Billing id priority.<br>Format: Numeric, 1-255 |
| </billing> | |
| <shipping> | The customer's shipping information. |
| shipping-id | Shipping id used or created for this action. Recommended when using customer vault hybrid action; will be ignored if no hybrid add/update-customer is done. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping billing address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| priority | Shipping id priority.<br>Format: Numeric, 1-255 |
| </shipping> | |
| <product> | Product line item detail. Multiple product elements are allowed. |
| product-code | Merchant defined description code of the item being purchased. |
| description | Description of the item(s) being supplied. |
| commodity-code | International description code of the individual good or service being supplied. The acquirer or processor will provide a list of current codes. |
| unit-of-measure | Code for unites of measurement as used in international trade. |
| unit-cost | Unit cost of item purchased. May contain up to 4 decimal places. |

| | |
|---|---|
| quantity | Quantity of the item(s) being purchased. |
| total-amount | Purchase amount associated with the item.<br>Format: x.xx |
| tax-amount | Amount of tax on specific item. Amount should not be included in item-total-amount.<br>Format: x.xx |
| tax-rate | Percentage representing the value-added tax applied. 1% = 1.00.<br>Format: x.xx |
| discount-amount | Discount amount which can have been applied by the merchant on the sale of the specific item.<br>Format: x.xx |
| discount-rate | Discount rate for the line item. 1% = 1.00<br>Format: x.xx |
| tax-type | Type of value-added taxes that are being used. |
| alternate-tax-id | Tax identification number of the merchant that reported the alternate tax amount. |

\</product\>
\</response\>

# Additional Operations
# Three-Step: Transactions

## Capture XML Request

| Element | Description |
|---|---|
| \<capture\> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| transaction-id* | Original Payment Gateway transaction id. |
| amount | Total amount to be settled, this amount may be equal to or less than the authorized amount. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: \<merchant-defined-field-1\>Value\</merchant-defined-field-1\> |
| tracking-number | Shipping tracking number. |
| shipping-carrier | Shipping carrier used.<br>Values: 'ups', 'fedex', 'dhl', or 'usps' |
| order-id | Order ID. |
| \</capture\> | |

* Required

## Void XML Request

| Element | Description |
|---|---|
| \<void\> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |

| Element | Description |
|---|---|
| transaction-id* | Original Payment Gateway transaction id. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: &lt;merchant-defined-field-1&gt;Value&lt;/merchant-defined-field-1&gt; |
| &lt;/void&gt; | |

* Required

# Refund XML Request

| Element | Description |
|---|---|
| &lt;refund&gt; | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| transaction-id* | Original Payment Gateway transaction id. |
| amount | Total amount to be settled, this amount may be equal to or less than the authorized amount. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: &lt;merchant-defined-field-1&gt;Value&lt;/merchant-defined-field-1&gt; |
| &lt;/refund&gt; | |

* Required

# Update XML Request

| Element | Description |
|---|---|
| &lt;update&gt; | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| transaction-id* | Original Payment Gateway transaction id. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: &lt;merchant-defined-field-1&gt;Value&lt;/merchant-defined-field-1&gt; |
| tracking-number | Shipping tracking number. |
| shipping-carrier | Shipping carrier used.<br>Values: 'ups', 'fedex', 'dhl', or 'usps' |
| order-id | Order ID. |
| &lt;/update&gt; | |

* Required

# Complete Partial Payment XML Request

| Element | Description |
|---|---|
| &lt;complete-partial-payment&gt; | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| partial-payment-id* | Specify a partial payment ID. Required to collect an additional amount associated with an existing Partial Payment Transaction. Do not use on initial transaction. |
| &lt;/complete-partial-payment&gt; | |

* Required

# Step One
# Three-Step: Customer Vault

## Add/Update Customer XML Request

| XML Element | Description |
| --- | --- |
| <add-customer\|update-customer> | Type of transaction to perform. |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. Value is not required for 'update-customer' requests when sensitive data is not being presented.<br>Example: Updating an address or zip code only. |
| customer-vault-id | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| <billing> | The customer's billing information |
| billing-id | Specify billing id. Required for 'update-customer' if multiple billing-ids exist, optional for 'add-billing'. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| priority | Specify priority (If omitted, will be auto-generated and returned in response).<br>Format: Numeric, 1-255 |
| </billing> | |

| | |
|---|---|
| <shipping> | The customer's shipping information. |
| shipping-id | Specify shipping id (Required for update-customer if multiple shipping-ids exist. Optional for add-billing). |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping billing address. |
| city | Shipping city. |
| state | Shipping state/province. Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code. Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| priority | Specify priority, if omitted, will be auto-generated and returned in response. Format: Numeric, 1-255 |

</shipping>
</add-customer|update-customer>

* Required

## XML Response

| XML Element | Description |
|---|---|
| <response> | |
| result | 1=Approved 2=Declined 3=Error in transaction data or system error |
| result-text | Textual response. |
| result-code | Numeric mapping of processor responses. (See Appendix 3) |
| form-url | URL used as the action of the HTML form in step two. |
| </response> | |

# Step Two
# Three-Step: Customer Vault

## HTML Form Fields Request

| HTML Form Fields | Description |
|---|---|

| | |
|---|---|
| billing-cc-number* | Credit card number. |
| billing-cc-exp* | Credit card expiration.<br>Format: MMYY |
| billing-cvv | Card security code. |
| billing-account-name** | The name on the customer's ACH Account. |
| billing-account-number** | The customer's bank account number. |
| billing-routing-number** | The customer's bank routing number. |
| billing-account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| billing-entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| billing-micr† | Physical check's Magnetic ink strip, on supported check processors. For use with 'POP' or 'ARC' sec-code. |
| billing-track-1*** | Raw magnetic stripe data, track 1. |
| billing-track-2*** | Raw magnetic stripe data, track 2. |
| billing-track-3*** | Raw magnetic stripe data, track 3. |
| billing-magnesafe-track-1*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-2*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-3*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-ksn*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-magneprint-status*** | Raw MagTek Magensa encrypted reader data. |
| billing-social-security-number**** | Customer's social security number (Checked against bad check writers database if check verification is enabled). |
| billing-drivers-license-number**** | Driver's license number (Checked against bad check writers database if check verification is enabled). |
| billing-drivers-license-dob**** | Driver's license date of birth. |
| billing-drivers-license-state**** | Customer's driver's license state.<br>Format: CC |
| billing-first-name | Cardholder's first name, overwrites value if passed during step one. |
| billing-last-name | Cardholder's last name, overwrites value if passed during step one. |
| billing-address1 | Cardholder's billing address, overwrites value if passed during step one. |
| billing-city | Card billing city, overwrites value if passed during step one. |
| billing-state | Card billing state/province, overwrites value if passed during step one.<br>Format: CC |
| billing-postal | Card billing postal code, overwrites value if passed during step one. |
| billing-country | Card billing country code, overwrites value if passed during step one.<br>Format: CC/ISO 3166 |
| billing-phone | Billing phone number, overwrites value if passed during step one. |
| billing-email | Billing email address, overwrites value if passed during step one. |
| billing-company | Cardholder's company, overwrites value if passed during step one. |
| billing-address2 | Card billing address, line 2, overwrites value if passed during step one. |
| billing-fax | Billing fax number, overwrites value if passed during step one. |

| | |
|---|---|
| shipping-first-name | Shipping first name, overwrites value if passed during step one. |
| shipping-last-name | Shipping last name, overwrites value if passed during step one. |
| shipping-address1 | Shipping billing address, overwrites value if passed during step one. |
| shipping-city | Shipping city, overwrites value if passed during step one. |
| shipping-state | Shipping state/province, overwrites value if passed during step one. Format: CC |
| shipping-postal | Shipping postal code, overwrites value if passed during step one. |
| shipping-country | Shipping country code, overwrites value if passed during step one. Format: CC/ISO 3166 |
| shipping-phone | Shipping phone number, overwrites value if passed during step one. |
| shipping-email | Shipping email address, overwrites value if passed during step one. |
| shipping-company | Shipping company, overwrites value if passed during step one. |
| shipping-address2 | Shipping address, line 2, overwrites value if passed during step one. |
| shipping-fax | Shipping fax number, overwrites value if passed during step one. |

\*      Required for keyed credit card transactions.

\*\*      Required for ACH transactions.

\*\*\*   Used for retail transactions. Variables used dependent on swipe device.

\*\*\*\* Required for check verification.

†      Required for check scanning.

## HTML Form Fields Response

Once the Payment Gateway has collected the customer's sensitive payment details, the customer's browser will immediately be redirected back to the **redirect-url** on your web server. A variable named **token-id** will be appended to the **redirect-url** in the GET query string as described below:

https://**redirect-url**/?**token-id**=[token]

# Step Three
# Three-Step: Customer Vault

## Complete Action XML Request

| XML Element | Description |
|---|---|
| <complete-action> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| token-id* | Customer payment token returned during step two. |
| </complete-action> | |

* Required

# Complete Action XML Response

| XML Element | Description |
|---|---|
| &lt;response&gt; | |
| result | 1=Transaction Approved<br>2=Transaction Declined<br>3=Error in transaction data or system error |
| result-text | Textual response. |
| result-code | Numeric mapping of processor responses. (See Appendix 3) |
| action-type | Action type that was initially specified.<br>Values: 'sale', 'auth', 'credit', 'validate', or 'offline' |
| customer-vault-id | Customer vault id used or created during action. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: &lt;merchant-defined-field-1&gt;Value&lt;/merchant-defined-field-1&gt; |
| &lt;billing&gt; | The customer's billing information. |
| billing-id | Billing id used or created for this action. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| social-security-number | Customer's social security number |
| drivers-license-number | Driver's license number. |
| drivers-license-dob | Driver's license date of birth. |
| drivers-license-state | Customer's driver's license state.<br>Format: CC |
| cc-number | Masked credit card number.<br>Format: XXXXXX********XXXX |
| cc-exp | Credit card expiration.<br>Format: MMYY |
| account-name | The name on the customer's bank account. |
| account-number | Masked bank account number.<br>Format: X****XXXX |

| | |
|---|---|
| routing-number | Masked bank routing number.<br>Format: X****XXXX |
| account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| priority | Billing id priority.<br>Format: Numeric, 1-255 |
| </billing> | |
| <shipping> | The customer's shipping information. |
| shipping-id | Shipping id used or created during action. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping billing address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| priority | Shipping id priority.<br>Format: Numeric, 1-255 |
| </shipping> | |
| </response> | |

# Additional Operations
# Three-Step: Customer Vault

## Add/Update Billing Request (Step 1)

| XML Element | Description |
|---|---|
| <add-billing\|update-billing> | Type of transaction to perform. |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |

| | |
|---|---|
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. Value is not required for 'update-billing' requests when sensitive data is not presented.<br>Example: Updating an address or zip code only. |
| customer-vault-id* | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| <billing> | The customer's billing information |
| billing-id | Specify billing id. Required for update-customer if multiple billing ids exist, optional for add-billing. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| priority | Specify priority (If omitted, will be auto-generated and returned in response.)<br>Format: Numeric, 1-255 |

</billing>

</add-billing|update-billing>

* Required

# Customer Vault initiated Sale/Auth/Credit/Offline XML Request

| Element | Description |
|---|---|
| <sale|auth|credit|offline> | Any and all optional fields described here can be appended to this request. |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| amount* | Total amount to be charged.<br>Format: x.xx |
| processor-id | If using multiple MIDs, route to this processor. The values for 'processor-id' are obtained under 'Settings'->'Load Balancing' in the Control Panel. |
| customer-vault-id* | Load Customer details from an existing Customer Vault record. |

| | |
|---|---|
| <billing> | The customer's billing information. |
| billing-id | Load Billing ID details from an existing Billing record. If not set, the billing-id with the highest priority will be used by default. |
| </billing> | |
| <shipping> | The customer's shipping information. |
| shipping-id | Load shipping id details from an existing shipping record. If unset, the billing-id with the highest priority will be used by default. |
| </shipping> | |
| </sale\|auth\|credit\|offline> | |

* Required

## Delete Customer XML Request

| Element | Description |
|---|---|
| <delete-customer> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| customer-vault-id * | Specify customer to be deleted. |
| </delete-customer> | |

* Required

## Delete Billing XML Request

| Element | Description |
|---|---|
| <delete-billing> | |
| api-key* | api-key is obtained in the security keys section of the control panel settings. |
| customer-vault-id* | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| <billing> | |
| billing-id* | Specify billing id to delete. |
| </billing> | |
| </delete-billing> | |

* Required

## Add/Update/Delete Shipping XML Request

These requests can be made the by replacing the billing section with shipping

# Step One
# Three-Step: Recurring

# Add Subscription to an Existing Plan

| Element | Description |
|---|---|
| <add-subscription> | Associate payment information with a recurring plan. |
| api-key* | api-key is obtained in the Security Keys section of the Control Panel Settings. |
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. Value is not required when sensitive data is not presented. Example: Adding a Subscription using a Customer Vault ID. |
| customer-vault-id | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| start-date | The first day that the customer will be charged. <br> Format: YYYYMMDD |
| order-id | Order id. |
| po-number | Cardholder's purchase order number. |
| order-description | Order description. |
| currency | Set transaction currency. <br> Format: ISO 4217 |
| tax-amount | The sales tax included in the transaction amount associated with the purchase. Setting tax equal to '-1' indicates an order that is exampt from sales tax. <br> Default: 0.00' <br> Format: x.xx |
| shipping-amount | Total shipping amount. |
| merchant-defined-field-# | Merchant specified custom fields. <br> Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| <plan> | |
| plan-id* | The unique plan ID that references only this recurring plan. |
| </plan> | |
| <billing> | The customer's billing information |
| billing-id | Specify billing id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province. <br> Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code. <br> Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |

| | |
|---|---|
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type** | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type** | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| </billing> | |
| <shipping> | The customer's shipping information. |
| shipping-id | Specify shipping id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| </shipping> | |
| </add-subscription> | |

\*   Always required

\*\* Required for ACH transactions

# Add Subscription to a Custom Plan

| Element | Description |
|---|---|
| <add-subscription> | Associate payment information with a recurring plan. |
| api-key* | api-key is obtained in the Security Keys section of the Control Panel Settings. |
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. Value is not required when sensitive data is not presented. Example: Adding a Subscription using a Customer Vault ID. |
| customer-vault-id | Load customer details from an existing customer vault record. If set, no payment information is required during step two. |
| start-date | The first day that the customer will be charged.<br>Format: YYYYMMDD |
| order-id | Order id. |
| po-number | Cardholder's purchase order number. |

| | |
|---|---|
| order-description | Order description. |
| currency | Set transaction currency.<br>Format: ISO 4217 |
| tax-amount | The sales tax included in the transaction amount associated with the purchase. Setting tax equal to '-1' indicates an order that is exampt from sales tax.<br>Default: '0.00'<br>Format: x.xx |
| shipping-amount | Total shipping amount. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| <plan> | |
| payments* | The number of payments before the recurring plan is complete.<br>Notes: '0' for until canceled |
| amount* | The plan amount to be charged each billing cycle.<br>Format: x.xx |
| day-frequency*** | How often, in days, to charge the customer. Cannot be set with 'month-frequency' or 'day-of-month'. |
| month-frequency**** | How often, in months, to charge the customer. Cannot be set with 'day-frequency'. Must be set with 'day-of-month'.<br>Values: 1 through 24 |
| day-of-month**** | The day that the customer will be charged. Cannot be set with 'day-frequency'. Must be set with 'month-frequency'.<br>Values: 1 through 31 - for months without 29, 30, or 31 days, the charge will be on the last day |
| </plan> | |
| <billing> | The customer's biling information |
| billing-id | Specify billing id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type** | The customer's ACH account type.<br>Values: 'checking' or 'savings' |

| entity-type** | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
|---|---|

\</billing>

| \<shipping> | The customer's shipping information. |
|---|---|
| shipping-id | Specify shipping id. Recommended when using customer vault hybrid action. Will be ignored if no hybrid add/update-customer is done. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |

\</shipping>

\</add-subscription>

\*     Always required

\*\*     Required for ACH transactions

\*\*\*   Required unless 'month-frequency' and 'day-of-month' is set.

\*\*\*\* Required unless 'day-frequency' is set.

# Update Subscription Information

| Element | Description |
|---|---|
| \<update-subscription> | Update Customer's information for a subscription. |
| api-key* | api-key is obtained in the Security Keys section of the Control Panel Settings. |
| redirect-url* | A URL on your web server that the gateway will redirect your customer to after sensitive data collection. Value is not required when sensitive data is not presented. Example: Updating a Subscription using a Customer Vault ID. |
| subscription-id* | The subscription that will be updated. |
| order-id | Order id. |
| po-number | Cardholder's purchase order number. |
| order-description | Order description. |
| currency | Set transaction currency.<br>Format: ISO 4217 |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: \<merchant-defined-field-1>Value\</merchant-defined-field-1> |

| | |
|---|---|
| <billing> | The customer's billing information |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| account-type** | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type** | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| </billing> | |
| <shipping> | The customer's shipping information. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| </shipping> | |
| </update-subscription> | |

\*   Always Required.

\*\* Required for ACH subscriptions.

# Step Two
# Three-Step: Recurring

## HTML Form Fields Request

| HTML Form Fields | Description |
| --- | --- |
| billing-cc-number* | Credit card number. |
| billing-cc-exp* | Credit card expiration. Format: MMYY |
| billing-cvv | Card security code. |
| billing-account-name** | The name on the customer's ACH Account. |
| billing-account-number** | The customer's bank account number. |
| billing-routing-number** | The customer's bank routing number. |
| billing-account-type | The customer's ACH account type. Values: 'checking' or 'savings' |
| billing-entity-type | The customer's ACH account entity. Values: 'personal' or 'business' |
| billing-micr† | Physical check's Magnetic ink strip, on supported check processors. For use with 'POP' or 'ARC' sec-code. |
| billing-track-1*** | Raw magnetic stripe data, track 1. |
| billing-track-2*** | Raw magnetic stripe data, track 2. |
| billing-track-3*** | Raw magnetic stripe data, track 3. |
| billing-magnesafe-track-1*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-2*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-track-3*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-ksn*** | Raw MagTek Magensa encrypted reader data. |
| billing-magnesafe-magneprint-status*** | Raw MagTek Magensa encrypted reader data. |
| billing-social-security-number **** | Customer's social security number, checked against bad check writers database if check verification is enabled. |
| billing-drivers-license-number **** | Drivers license number, checked against bad check writers database if check verification is enabled. |
| billing-drivers-license-dob**** | Drivers license date of birth. |
| billing-drivers-license-state**** | Customer's drivers license state. Format: CC |
| billing-first-name | Cardholder's first name. Overwrites value if passed during step one. |
| billing-last-name | Cardholder's last name. Overwrites value if passed during step one. |
| billing-address1 | Cardholder's billing address. Overwrites value if passed during step one. |
| billing-city | Card billing city. Overwrites value if passed during step one. |
| billing-state | Card billing state/province. Overwrites value if passed during step one. Format: CC |

| | |
|---|---|
| billing-postal | Card billing postal code. Overwrites value if passed during step one. |
| billing-country | Card billing country code. Overwrites value if passed during step one. Format: CC/ISO 3166 |
| billing-phone | Billing phone number. Overwrites value if passed during step one. |
| billing-email | Billing email address. Overwrites value if passed during step one. |
| billing-company | Cardholder's company. Overwrites value if passed during step one. |
| billing-address2 | Card billing address, line 2. Overwrites value if passed during step one. |
| billing-fax | Billing fax number. Overwrites value if passed during step one. |
| shipping-first-name | Shipping first name. Overwrites value if passed during step one. |
| shipping-last-name | Shipping last name. Overwrites value if passed during step one. |
| shipping-address1 | Shipping address. Overwrites value if passed during step one. |
| shipping-city | Shipping city. Overwrites value if passed during step one. |
| shipping-state | Shipping state/province. Overwrites value if passed during step one. |
| shipping-postal | Shipping postal code. Overwrites value if passed during step one. |
| shipping-country | Shipping country code. Overwrites value if passed during step one. |
| shipping-phone | Shipping phone number. Overwrites value if passed during step one. |
| shipping-email | Shipping email address. Overwrites value if passed during step one. |
| shipping-company | Shipping company. Overwrites value if passed during step one. |
| shipping-address2 | Shipping address, line 2. Overwrites value if passed during step one. |
| shipping-fax | Shipping fax number. Overwrites value if passed during step one. |

\*     Required for keyed credit card transactions.

\*\*    Required for ACH transactions.

\*\*\*   Used for retail transactions. Variables used dependant on swipe device.

\*\*\*\* Required for check verification.

†     Required for check scanning.

## HTML Form Fields Response

Once the Payment Gateway has collected the customer's sensitive payment details, the customer's browser will immediately be redirected back to the **redirect-url** on your web server. A variable named **token-id** will be appended to the **redirect-url** in the GET query string as described below:

https://**redirect-url**/?**token-id**=[token]

# Step Three
# Three-Step: Recurring

## Complete Action XML Request

| XML Element | Description |
|---|---|

<complete-action>
api-key*        api-key is obtained in the security keys section of the control panel settings.

token-id*       Customer payment token returned during step two.

</complete-action>

* Required

# Complete Action XML Response

| XML Element | Description |
|---|---|
| response | |
| result | 1=Transaction Approved<br>2=Transction Declined<br>3=Error in transaction data or system error |
| result-text | Textual response. |
| result-code | Numeric mapping of processor responses. (See Appendix 3) |
| action-type | Action type that was initially specified.<br>Values: 'sale', 'auth', 'credit', 'validate', or 'offline' |
| subscription-id | Subscription ID used or created during action. |
| merchant-defined-field-# | Merchant specified custom fields.<br>Format: <merchant-defined-field-1>Value</merchant-defined-field-1> |
| <plan> | |
| payments | The number of payments before the recurring plan is complete.<br>Notes: '0' for until canceled |
| amount | The plan amount to be charged each billing cycle.<br>Format: x.xx |
| name | The display name of the plan. |
| plan-id | The plan ID that is associated with this subscription. |
| day-frequency | How often, in days, to charge the customer. Cannot be set with 'month-frequency' or 'day-of-month'. |
| month-frequency | How often, in months, to charge the customer. Cannot be set with 'day-frequency'.<br>Must be set with 'day-of-month'.<br>Values: 1 through 24 |
| day-of-month | The day that the customer will be charged. Cannot be set with 'day-frequency'. Must be set with 'month-frequency'.<br>Values: 1 through 31 - for months without 29, 30, or 31 days, the charge will be on the last day |
| </plan> | |
| <billing> | The customer's billing information. |
| billing-id | Billing id used or created for this action. |
| first-name | Cardholder's first name. |
| last-name | Cardholder's last name. |
| address1 | Cardholder's billing address. |
| city | Card billing city. |

| | |
|---|---|
| state | Card billing state/province.<br>Format: CC |
| postal | Card billing postal code. |
| country | Card billing country code.<br>Format: CC/ISO 3166 |
| phone | Billing phone number. |
| email | Billing email address. |
| company | Cardholder's company. |
| address2 | Card billing address, line 2. |
| fax | Billing fax number. |
| social-security-number | Customer's social security number |
| drivers-license-number | Drivers license number. |
| drivers-license-dob | Drivers license date of birth. |
| drivers-license-state | Customer's drivers license state.<br>Format: CC |
| cc-number | Masked credit card number.<br>Format: XXXXXX********XXXX |
| cc-exp | Credit card expiration.<br>Format: MMYY |
| account-name | The name on the customer's bank account. |
| account-number | Masked bank account number.<br>Format: X****XXXX |
| routing-number | Masked bank routing number.<br>Format: X****XXXX |
| account-type | The customer's ACH account type.<br>Values: 'checking' or 'savings' |
| entity-type | The customer's ACH account entity.<br>Values: 'personal' or 'business' |
| priority | Billing id priority.<br>Format: Numeric, 1-255 |
| </billing> | |
| <shipping> | The customer's shipping information. |
| shipping-id | Shipping id used or created during action. |
| first-name | Shipping first name. |
| last-name | Shipping last name. |
| address1 | Shipping address. |
| city | Shipping city. |
| state | Shipping state/province.<br>Format: CC |
| postal | Shipping postal code. |
| country | Shipping country code.<br>Format: CC/ISO 3166 |
| phone | Shipping phone number. |

| | |
|---|---|
| email | Shipping email address. |
| company | Shipping company. |
| address2 | Shipping address, line 2. |
| fax | Shipping fax number. |
| priority | Shipping id priority.<br>Format: Numeric, 1-255 |

```
</shipping>
</response>
```

# Additional Operations Three-Step: Recurring

## Add Plan XML Request

| Element | Description |
|---|---|
| <add-plan> | Add a recurring plan that subscriptions can be added to in the future. |
| api-key* | api-key is obtained in the Security Keys section of the Control Panel Settings. |
| <plan> | |
| payments* | The number of payments before the recurring plan is complete.<br>Notes: '0' for until canceled |
| amount* | The plan amount to be charged each billing cycle.<br>Format: x.xx |
| name* | The display name of the plan. |
| plan-id* | The unique plan ID that references only this recurring plan. |
| day-frequency** | How often, in days, to charge the customer. Cannot be set with 'month-frequency' or 'day-of-month'. |
| month-frequency*** | How often, in months, to charge the customer. Cannot be set with 'day-frequency'.<br>Must be set with 'day-of-month'.<br>Values: 1 through 24 |
| day-of-month*** | The day that the customer will be charged. Cannot be set with 'day-frequency'. Must be set with 'month-frequency'.<br>Values: 1 through 31 - for months without 29, 30, or 31 days, the charge will be on the last day |
| </plan> | |
| </add-plan> | |

\*    Always required

\*\*   Required unless 'month-frequency' and 'day-of-month' is set.

\*\*\* Required unless 'day-frequency' is set.

## Delete a Subscription

| Element | Description |
|---|---|

&lt;delete-subscription&gt; Delete the subscription. Customer will no longer be charged.

api-key*                      api-key is obtained in the Security Keys section of the Control Panel Settings.

subscription-id*              The subscription ID that will be deleted.

&lt;/delete-subscription&gt;

* Always required

# Testing Information
# Three-Step

## Transaction Testing Credentials

Transactions can be tested using one of two methods. First, transactions can be submitted to any merchant account that is in test mode. Keep in mind that if an account is in test mode, all valid credit cards will be approved but no charges will actually be processed.

The Payment Gateway demo account can also be used for testing at any time. Please use the following api-key for testing with this account:

api-key: 2F822Rw39fx762MaV7Yy86jXGTC7sCDy

## Transaction POST URL

In step one and step three, transaction details should be POST'ed using XML to the following URL:

POST URL https://secure.planetauthorizegateway.com/api/v2/three-step

## Test Data

Transactions can be submitted using the following information:

| | |
|---|---|
| Visa: | 4111111111111111 |
| MasterCard: | 5431111111111111 |
| Discover: | 6011601160116611 |
| American Express: | 341111111111111 |
| Credit Card Expiration: | 10/25 |
| account (ACH): | 123123123 |
| routing (ACH): | 123123123 |
| amount | 1.00 (Amounts under 1.00 generate failure). |

## Triggering Errors in Test Mode

- To cause a declined message, pass an amount less than 1.00.
- To trigger a fatal error message, pass an invalid card number.
- To simulate an AVS match, pass 888 in the address1 field, 77777 for zip.

- To simulate a CVV match, pass 999 in the cvv field.

# Appendix 1
# Three-Step

## AVS Response Codes

X  Exact match, 9-character numeric ZIP

Y  Exact match, 5-character numeric ZIP

D  Exact match, 5-character numeric ZIP

M  Exact match, 5-character numeric ZIP

A  Address match only

B  Address match only

W  9-character numeric ZIP match only

Z  5-character ZIP match only

P  5-character ZIP match only

L  5-character ZIP match only

N  No address or ZIP match only

C  No address or ZIP match only

U  Address unavailable

G  Non-U.S. issuer does not participate

I  Non-U.S. issuer does not participate

R  Issuer system unavailable

E  Not a mail/phone order

S  Service not supported

O  AVS not available

B  AVS not available

# Appendix 2
# Three-Step

## CVV Response Codes

M CVV2/CVC2 match

N CVV2/CVC2 no match

P  Not processed

S  Merchant has indicated that CVV2/CVC2 is not present on card

U  Issuer is not certified and/or has not provided Visa encryption keys

# Appendix 3
# Three-Step

## Result Code Table

100 Transaction was approved.

200 Transaction was declined by processor.

201 Do not honor.

202 Insufficient funds.

203 Over limit.

204 Transaction not allowed.

220 Incorrect payment information.

221 No such card issuer.

222 No card number on file with issuer.

223 Expired card.

224 Invalid expiration date.

225 Invalid card security code.

240 Call issuer for further information.

250 Pick up card.

251 Lost card.

252 Stolen card.

253 Fraudulent card.

260 Declined with further instructions available. (See response text)

261 Declined-Stop all recurring payments.

262 Declined-Stop this recurring program.

263 Declined-Update cardholder data available.

264 Declined-Retry in a few days.

300 Transaction was rejected by gateway.

400 Transaction error returned by processor.

410 Invalid merchant configuration.

411 Merchant account is inactive.

420 Communication error.

421 Communication error with issuer.

430 Duplicate transaction at processor.

440 Processor format error.

441 Invalid transaction information.

460 Processor feature not available.

461 Unsupported card type.