

Token Management Service

Using the Simple Order API

October 2018



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Recent Revisions to This Document

| Release | Changes |
|----------------|--|
| October 2018 | <p>Updated information about the payment identifier token and formats for all token types. See Table 2, "Token Types and Formats," on page 10.</p> <p>Added information about merchant-initiated transactions. See "Merchant-Initiated Transactions," page 15.</p> <p>Added notifications for COF network tokens. See "COF Network Token Notifications," page 25.</p> |
| September 2018 | <p>Updated the token descriptions and added support for electronic checks. See Table 2, "Token Types and Formats," on page 10.</p> <p>Added COF network tokens. See Chapter 3, "Credentials-on-File Network Token," on page 23.</p> <p>Added the following request fields. See "Request Fields," page 27.</p> <ul style="list-style-type: none"> ■ billTo_companyTaxID ■ billTo_driversLicenseNumber ■ billTo_driversLicenseState ■ card_cvNumber ■ check_accountNumber ■ check_accountType ■ check_bankTransitNumber ■ check_checkNumber ■ check_secCode <p>Added the paymentAccountReference reply field. See "Reply Fields," page 38.</p> <p>Updated descriptions for the following reply fields. See "Reply Fields," page 38.</p> <ul style="list-style-type: none"> ■ paySubscriptionCreateReply_instrumentIdentifierNew ■ paySubscriptionCreateReply_instrumentIdentifierSuccessorID ■ paySubscriptionRetrieveReply_instrumentIdentifierSuccessorID ■ paySubscriptionUpdateReply_instrumentIdentifierNew ■ paySubscriptionUpdateReply_instrumentIdentifierSuccessorID |

| Release | Changes |
|----------------|---|
| June 2018 | <p>Changed the name of <i>Carte Bleue</i> to <i>Cartes Bancaires</i>.</p> <p>Added the following supported processors. See Table 3, "Supported Processors and Payment Methods," on page 13.</p> <ul style="list-style-type: none"> ■ Credit Mutuel-CIC ■ Elavon Americas <p>Title: changed processor name to <i>Worldpay VAP</i>.</p> |
| March 2018 | <p>Updated Table 2, "Token Types and Formats," on page 10:</p> <ul style="list-style-type: none"> ■ Updated token format for Instrument Identifier and Customer. ■ Added Payouts to the description for all three token types. <p>Added the Payouts payment method to the rows for CyberSource through VisaNet and FDC Compass in Table 3, "Supported Processors and Payment Methods," on page 13.</p> <p>Updated card_cardType with value for China UnionPay. See Table 5, "Request Fields," on page 27.</p> <p>Updated the possible values for paySubscriptionCreateReply_instrumentIdentifierNew and paySubscriptionUpdateReply_instrumentIdentifierNew. See Table 6, "Reply Fields," on page 38.</p> <p>Updated the Required/Optional value for subscription_paymentMethod. See Table 5, "Request Fields," on page 27.</p> <p>Removed paySubscriptionRetrieveReply_instrumentIdentifierNew.</p> <p>Updated definition for paySubscriptionCreateReply_subscriptionID. See Table 6, "Reply Fields," on page 38.</p> <p>Updated several examples:</p> <ul style="list-style-type: none"> ■ Example 3, "Authorize and Create a Customer Token," on page 45. ■ Example 10, "Reply: Update Merchant Defined Data for a Customer Token," on page 51. |
| September 2017 | <p>Added support for the new China UnionPay card for FDC Nashville Global processor. See Table 3, "Supported Processors and Payment Methods," on page 13.</p> <p>Added support for the Maestro International card for FDC Nashville Global. See Table 3, "Supported Processors and Payment Methods," on page 13.</p> |
| August 2017 | <p>Draft version.</p> <p>Added the "Customer" chapter. See Chapter 2, "Customer Token," on page 16.</p> |

About This Guide

Audience and Purpose

This guide is written for merchants who want to tokenize customers' sensitive personal information and eliminate payment data from their networks to ensure that it is not compromised during a security breach.

The purpose of this guide is to help you create and manage tokens.

Conventions



Note

A *Note* contains helpful suggestions or references to material not contained in the document.



Important

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

Text and Command Conventions

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

Related Documents

Table 1 Related Documents

| Subject | Description |
|------------------|--|
| Account Updater | <i>Account Updater User Guide</i> (PDF HTML)—describes how to automatically incorporate changes made to a customer's payment card data. |
| Business Center | <i>Business Center Overview</i> (PDF HTML)—describes the features and options available within the Business Center. |
| Credit Card | <i>Credit Card Services Using the Simple Order API</i> (PDF HTML)—describes how to integrate credit card processing into your order management system. |
| eCheck | <i>Electronic Check Services Using the Simple Order API</i> (PDF HTML)—describes how to integrate eCheck processing into your order management system. |
| Payouts | <i>Payouts Using the Simple Order API</i> (PDF HTML)—describes how to integrate Payouts processing into your order management system. |
| PINless Debit | <i>PINless Debit Card Services Using the Simple Order API</i> (PDF HTML)—describes how to integrate PINless debit processing using the Simple Order API into your order management system. |
| Simple Order API | <ul style="list-style-type: none"> ■ <i>Getting Started with CyberSource Advanced for the Simple Order API</i> (PDF HTML)—describes how to get started using the Simple Order API. ■ Simple Order API and SOAP Toolkit API Testing Information page. |

Refer to the Support Center for complete CyberSource technical documentation:

http://www.cybersource.com/support_center/support_documentation

Customer Support

For support information about any CyberSource service, visit the Support Center:

<http://www.cybersource.com/support>

Introduction

**Important**

Contact CyberSource Customer Support to configure your account for the Token Management Service.

The CyberSource Token Management Service (TMS) tokenizes, securely stores, and manages:

- Payment card PAN
- Payment card expiration date
- Customer data
- Electronic check data

TMS is compatible with the CyberSource Account Updater service for Visa and Mastercard payment cards, except with credentials-on-file (COF) network tokens. All payment information stored with CyberSource can be automatically updated by participating banks, thereby reducing payment failures. For more information, see *Account Updater User Guide* ([PDF](#) | [HTML](#)).

Token Types and Formats

All token types are also available using the TMS RESTful services. For more information on RESTful services, see [CyberSource Payments REST API](#).

Table 2 Token Types and Formats

| Token Type | Description | Format |
|--|---|---|
| Customer token For more information, see Chapter 2, "Customer Token," on page 16. | <p><i>Payment Card Transactions and Payouts</i></p> <p>Represents the tokenized:</p> <ul style="list-style-type: none"> ■ Payment card PAN ■ Card expiration date ■ Billing information ■ Shipping information ■ Merchant-defined data | <ul style="list-style-type: none"> ■ 32 character hexadecimal (default) ■ 19 digits, Luhn check passing ■ 16 digits, last 4 digits of card preserving, Luhn check passing¹ ■ 16 digits, Luhn check passing¹ ■ 22 digits² (Request ID) |
| | <p><i>Electronic Checks</i></p> <p>Represents the tokenized:</p> <ul style="list-style-type: none"> ■ Bank account and routing numbers ■ Billing information ■ Shipping information ■ Driver license information ■ Account type ■ Company tax ID ■ SEC code ■ Alternate merchant descriptor ■ Merchant-defined data | <ul style="list-style-type: none"> ■ 32 character hexadecimal (default) ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing¹ ■ 22 digits² |

1 Token format for existing merchants who implemented CyberSource services prior to 2019.

2 Can only be used for one token type—customer, payment instrument, or instrument identifier. For instrument identifier tokens, you may use 22 digit format for payment cards and electronic checks.

Table 2 Token Types and Formats (Continued)

| Token Type | Description | Format |
|--|---|--|
| Payment instrument token | This token is available using only TMS RESTful services. For more information on creating this token using TMS RESTful services, see CyberSource Payments REST API . | |
| | <p>Payment Card Transactions and Payouts Represents the tokenized:</p> <ul style="list-style-type: none"> ■ Payment card PAN ■ Card expiration date ■ Billing information ■ Merchant-defined data | <ul style="list-style-type: none"> ■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing |
| | <p>Electronic Checks Represents the tokenized:</p> <ul style="list-style-type: none"> ■ Bank account and routing numbers ■ Billing information ■ Driver license information ■ Account type ■ Company tax ID ■ SEC code ■ Alternate merchant descriptor ■ Merchant-defined data | <ul style="list-style-type: none"> ■ 22 digits² |
| Instrument identifier token | This token helps you identify when the same card or bank account is used, while keeping sensitive customer data secure. | |
| | <p>Payment Card Transactions and Payouts Represents the tokenized payment card PAN.</p> | <ul style="list-style-type: none"> ■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 19 digits, last 4 digits of card preserving (default) ■ 16 digits, Luhn check passing ■ 22 digits² |
| | <p>Electronic Checks Represents the tokenized bank account and routing numbers.</p> | <ul style="list-style-type: none"> ■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing ■ 22 digits² |
| <p>1 Token format for existing merchants who implemented CyberSource services prior to 2019.</p> <p>2 Can only be used for one token type—customer, payment instrument, or instrument identifier. For instrument identifier tokens, you may use 22 digit format for payment cards and electronic checks.</p> | | |

**Note**

Multiple merchant IDs can be configured for different token types. You receive the instrument identifier token regardless of the token type your account is configured for. Reasons for multiple merchant IDs include:

- You have multiple processors.
- Point-of-sale terminals have unique merchant IDs, which are usually configured for the PAN-only instrument identifier token.

When you have multiple merchant IDs, you can set up one token vault to which all of your merchant IDs have access or set up multiple vaults to segregate access to tokens. See "[Token Types and Formats](#)," page 10.

Requirements

You must:

- Have a merchant account with a supported processor.
- Create a CyberSource account:
<https://www.cybersource.com/register/>
- Contact CyberSource Customer Support to enable your account for the Token Management Service and if you want relaxed requirements for address data and expiration date settings enabled. You must confirm the token type and format that you want to use, as described in [Table 2, "Token Types and Formats."](#)
- Install a CyberSource [Simple Order API client](#) or the [SOAP Toolkit](#). Use the Simple Order API version 1.135 or later.

Transaction Endpoints

For live transactions, send requests to the production server:

<https://ics2wsa.ic3.com/commerce/1.x/transactionProcessor>

For test transactions, send requests to the test server:

<https://ics2wstesta.ic3.com/commerce/1.x/transactionProcessor>

Supported Processors and Payment Methods

The processors listed in [Table 3](#) support all token types, unless noted otherwise.

Table 3 Supported Processors and Payment Methods

| Processor | Payment Methods |
|-----------------------------|---|
| AIBMS | Credit card. |
| American Express Brighton | Credit card. Important Does not support automatic preauthorization reversals. |
| American Express Direct | Debit card and prepaid card. |
| Asia-Mideast Processing | Credit card. |
| Barclays | Credit card—supports 0.00 preauthorizations for Visa and Mastercard. |
| CCS (CAFIS) | Credit card. |
| Chase Paymentech Solutions | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card—supports partial authorizations for Visa, Mastercard, American Express, Discover, and Diners Club. ■ Electronic check. |
| Citibank | Credit card—supports 0.00 preauthorizations for Visa and Mastercard. |
| Comercio Latino | Credit card—supports 1.00 preauthorizations using Visa, Mastercard, American Express, Discover, Diners Club, JCB, Hipercard, Aura, and Elo. |
| Credit Mutuel-CIC | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations using Visa, Mastercard, and Cartes Bancaires. ■ Debit card and prepaid card. |
| CyberSource ACH Service | Electronic check. |
| CyberSource through VisaNet | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Credit card—supports 1.00 preauthorizations for American Express, Discover, Diners Club, and JCB. ■ Debit card and prepaid card. ■ Payouts. |
| Elavon Americas | Credit card—supports 0.00 preauthorizations using Visa, Mastercard, American Express, Discover, Diners Club, and China UnionPay. |

Table 3 Supported Processors and Payment Methods (Continued)

| Processor | Payment Methods |
|--------------------------|--|
| FDC Compass | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. ■ Payouts. |
| FDC Nashville Global | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. |
| FDMS Nashville | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa. ■ Debit card and prepaid card. |
| FDMS South | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. |
| Ingenico ePayments | Credit card. |
| GPN | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. ■ PINless debit. |
| HSBC | <p>Credit card—supports 0.00 preauthorizations for Visa and Mastercard.</p> <p>Important Does not support automatic preauthorization reversals.</p> |
| LloydsTSB Cardnet | Credit card. |
| Moneris | Credit card—supports 0.00 preauthorizations for Visa and Mastercard. |
| OmniPay Direct | Credit card—supports 0.00 preauthorizations using Visa, Mastercard, Maestro (International), and Maestro (UK Domestic). |
| OmniPay-Ireland | Credit card—supports 0.00 preauthorizations using Visa and Mastercard. |
| RBS WorldPay Atlanta | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Electronic check. |
| Streamline | Credit card—supports 0.00 preauthorizations for Visa and Mastercard. |
| SIX | Credit card. |
| TeleCheck | Electronic check—supports 1.00 preauthorizations. |
| TSYS Acquiring Solutions | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard cards and 1.00 preauthorizations using American Express, Discover, Diners Club, and JCB. ■ Debit card and prepaid card. |

Table 3 Supported Processors and Payment Methods (Continued)

| Processor | Payment Methods |
|--|---|
| Worldpay VAP Worldpay VAP was previously called <i>Little</i> . | <ul style="list-style-type: none"> ■ Credit card—supports 0.00 preauthorizations for American Express, Diners Club, Discover, JCB, Mastercard, and Visa. ■ Debit card and prepaid card. |

Relaxed Requirements for Address Data and Expiration Date

To enable relaxed requirements for address data and expiration date, contact CyberSource Customer Support to have your account configured for this feature. For details about relaxed requirements, see the [Relaxed Requirements for Address Data and Expiration Date](#) page.

Merchant-Initiated Transactions

TMS simplifies compliance with mandates for merchant-initiated transactions and credentials-on-file. This helps you to achieve higher authorization success rates. For information about merchant-initiated transactions, see:

[Merchant-Initiated Transactions FAQ](#)

Customer Token

The customer token represents customer-related information including details for a payment card or electronic check, billing address, shipping address, and merchant-defined data. For a description of all token types, see ["Token Types and Formats," page 10](#).

You can configure your merchant ID to request an automatic account verification (also known as a 0.0 or 1.00 preauthorization) when you create a token. If the verification fails, the token is not created. Contact CyberSource Customer Support to enable this for your merchant ID. See ["Authorize and Create a Customer Token for a Payment Card," page 17](#).

The customer token is returned in the **paySubscriptionCreateReply_subscriptionID** field. The instrument identifier token is also returned in the **paySubscriptionCreateReply_instrumentIdentifierID** field and can be used to analyze customer PAN and electronic check usage across multiple customer tokens.

Creating a Customer Token for a Payment Card

To request a payment card customer token:

Step 1 Set the **paySubscriptionCreateService_run** service field to `true`.

Step 2 Include the following fields in the request:

- `billTo_city`
- `billTo_country`
- `billTo_email`
- `billTo_firstName`
- `billTo_lastName`
- `billTo_phoneNumber`
- `billTo_postalCode`
- `billTo_state`
- `billTo_street1`

- card_accountNumber
- card_cardType
- card_expirationMonth
- card_expirationYear
- merchantID
- merchantReferenceCode
- purchaseTotals_currency
- merchantDefinedData_field#
- merchantSecureData_field#
- recurringSubscriptionInfo_frequency—set to on-demand
- shipTo_city
- shipTo_country
- shipTo_firstName
- shipTo_lastName
- shipTo_postalCode
- shipTo_state
- shipTo_street1

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields,"](#) on page 27. For examples, see [Appendix B, "Examples,"](#) on page 43.

Authorize and Create a Customer Token for a Payment Card



Important

You can use this option to verify card details. The token is not created if the authorization fails.

To verify and create a payment card customer token:

- Step 1** Set the `paySubscriptionCreateService_run` field to `true`.
- Step 2** Include the same fields that are in the request to create a payment card customer token. See ["Creating a Customer Token for a Payment Card,"](#) page 16.

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields,"](#) on page 27. For examples, see [Appendix B, "Examples,"](#) on page 43.

Creating a Customer Token for an Electronic Check

To request an electronic check customer token:

- Step 1** Set the `paySubscriptionCreateService_run` service field to `true`.
- Step 2** Include the following fields in the request:
- `billTo_city`
 - `billTo_companyTaxID`—contact your TeleCheck representative to learn whether this field is required or optional.
 - `billTo_country`
 - `billTo_dateOfBirth`
 - `billTo_driversLicenseNumber`—contact your TeleCheck representative to learn whether this field is required or optional.
 - `billTo_driversLicenseState`—contact your TeleCheck representative to learn whether this field is required or optional.
 - `billTo_email`
 - `billTo_firstName`
 - `billTo_lastName`
 - `billTo_phoneNumber`—contact your payment processor representative to learn whether this field is required or optional.
 - `billTo_postalCode`
 - `billTo_state`
 - `billTo_street1`
 - `check_accountNumber`
 - `check_accountType`
 - `check_bankTransitNumber`
 - `check_checkNumber`—contact your payment processor representative to learn whether this field is required or optional.

- `check_secCode`—required field if your processor is TeleCheck.
- `merchantID`
- `merchantReferenceCode`
- `purchaseTotals_currency`
- `recurringSubscriptionInfo_frequency`—set to `on-demand`.
- `subscription_paymentMethod`—set to `check`.

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields,"](#) on [page 27](#).

Retrieving a Customer Token

You can retrieve the data that is represented by the customer token.

To retrieve a customer token:

Step 1 Set the `paySubscriptionRetrieveService_run` service field to `true`.

Step 2 Include the following fields in the request:

- `merchantID`
- `merchantReferenceCode`
- `recurringSubscriptionInfo_subscriptionID`

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields,"](#) on [page 27](#). For examples, see [Appendix B, "Examples,"](#) on [page 43](#).

Updating a Customer Token

You can update the data that is represented by the customer token.

To update a payment card customer token:

Step 1 Set the `paySubscriptionUpdateService_run` service field to `true`.

Step 2 Include the fields you want to update, such as:

- `billTo_city`
- `billTo_country`
- `billTo_email`
- `billTo_firstName`
- `billTo_lastName`
- `billTo_phoneNumber`
- `billTo_postalCode`
- `billTo_state`
- `billTo_street1`
- `card_accountNumber`
- `card_cardType`
- `card_expirationMonth`
- `card_expirationYear`
- `merchantID`
- `merchantReferenceCode`
- `purchaseTotals_currency`
- `merchantDefinedData_field#`
- `merchantSecureData_field#`
- `recurringSubscriptionInfo_frequency`—set to `on-demand`
- `shipTo_city`
- `shipTo_country`
- `shipTo_firstName`
- `shipTo_lastName`
- `shipTo_postalCode`
- `shipTo_state`
- `shipTo_street1`

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields," on page 27](#). For examples, see [Appendix B, "Examples," on page 43](#).

Deleting a Customer Token



Note

Instrument Identifiers can be associated with more than one payment instrument and/or customer token. You cannot delete an instrument identifier token unless you have deleted all payment instruments and customer tokens associated with it.

When you delete an instrument identifier token, then create a new token of any type containing the same PAN or bank account details, the original instrument identifier token will be returned.

To delete a customer token:

Step 1 Set the `paySubscriptionDeleteService_run` service field to `true`.

Step 2 Include the following fields in the request:

- `merchantID`
- `merchantReferenceCode`
- `recurringSubscriptionInfo_subscriptionID`

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields," on page 27](#). For examples, see [Appendix B, "Examples," on page 43](#).

Requesting an On-Demand Transaction

An on-demand transaction is a real-time transaction using the details represented by a token. The on-demand transactions that you can request are:

- Credit cards—authorization, sale (authorization and capture combined), and credit.
- Electronic checks—debit and credit.
- PINless debits—debit.

To request an on-demand sale transaction:

Step 1 Set the `ccAuthService_run` service field to `true`.

Step 2 Set the `ccCaptureService_run` service field to `true`.

Step 3 Include the following fields in the request:

- `merchantID`
- `merchantReferenceCode`

- purchaseTotals_currency
- purchaseTotals_grandTotalAmount
- recurringSubscriptionInfo_subscriptionID—set to the token value.

For detailed descriptions of request and reply fields, see [Appendix A, "API Fields,"](#) on [page 27](#). For examples, see [Appendix B, "Examples,"](#) on [page 43](#).

Credentials-on-File Network Token

Card type:

- Visa

Processors:

- American Express Direct
- Barclays
- Comercio Latino
- Chase Paymentech Solutions
- CyberSource through VisaNet
- FDC Compass
- FDC Nashville Global
- GPN
- OmniPay Direct
- Streamline
- SIX
- TSYS Acquiring Solutions

Enabling credentials-on-file (COF) network tokens allows you to improve your authorization success rates.

COF network tokens represent the following tokenized data:

- Payment card PAN
- Payment card expiration date

To help reduce the risk of fraud, you can also include:

- Billing address
- Card verification number

TMS converts the PAN and authentication data that you provide in a token create or update request into a COF network token. See ["Creating a Customer Token for a Payment Card," page 16](#), and ["Updating a Customer Token," page 20](#).

The token is stored in your token vault with the original payment data. You receive the standard response described when you create or update a token. See [Appendix B](#),

"Examples," on page 43. When you use the customer, payment instrument, or instrument identifier token for an authorization, TMS uses the COF network token. TMS automatically creates a cryptogram (TAVV) for the transaction, if required.

COF network tokens can be used for payments, even when the PAN that was used to create the token expires or is reported lost. This results in fewer authorization declines.

In order to provide an optimal customer experience, you can subscribe to real time notifications that inform you when a PAN is replaced or the expiration dates are extended. See "COF Network Token Notifications," page 25.

Requirements

Contact CyberSource Customer Support to have your account configured to create COF network tokens. Once your account is configured to create tokens from a PAN, TMS will attempt to create a COF network token for each PAN presented in the token create or update request.

Creating a COF Network Token

The procedure for creating a COF network token is the same as "Creating a Customer Token for a Payment Card," page 16.

If successful, the COF network token is stored in your TMS token vault, alongside the PAN. You receive:

- Customer token in the **paySubscriptionCreateReply_subscriptionID** field.
- Instrument identifier token in the **paySubscriptionCreateReply_instrumentIdentifierID** field that can be used to analyze customer PAN usage across multiple customer tokens.
- Payment account reference in the **paymentAccountReference** field that can be used to analyze customer PAN usage across multiple customer tokens.

If your processor does not support network tokens, or the PAN cannot be enrolled as a COF network token, TMS uses the PAN associated with the token and creates an instrument identifier token. Eligibility is determined by the card type, the issuer, and your acquirer support.



Network tokens are automatically updated through the card schemes.

Testing

To test your account for support for network tokens, use the test card numbers in [Table 4](#).

Table 4 COF Test Cards

| Card Number (Remove spaces when sending to CyberSource.) | CVV | Expiration Date |
|--|-----|--------------------|
| 4622 9431 2701 3705 | 838 | 12/22 |
| 4622 9431 2701 3713 | 043 | 12/22 |
| 4622 9431 2701 3721 | 258 | 12/22 |
| 4622 9431 2701 3739 | 942 | 12/22 |
| 4622 9431 2701 3747 | 370 | 12/22 |

COF Network Token Notifications

TMS notifies you in real time when updates are made to a card represented by the COF network token in your vault. Contact CyberSource Customer Support with your webhook address for notifications of these updates.



Only an HTTPS URL supporting TLS 1.2 or higher should be used for the merchant POST URL.

Each notification response contains all customer, payment instrument, and instrument identifier tokens that are affected by an individual update. More than one customer token can have the same COF network token; therefore, there may be multiple results. Use the retrieve token service to retrieve the updated details. See ["Retrieving a Customer Token," page 19](#).

The notification looks similar to this example:

```
{
  "version": "1.0",
  "id": "3213123123123",
  "type": "tokenizedCardUpdates",
  "_links": {
    "customers": [
      {
        "href": "https://api.cybersource.com/tms/v1/customers/8040000230021321234"
      },
      {
        "href": "https://api.cybersource.com/tms/v1/customers/8040000530021326588"
      }
    ]
  }
}
```

```
    }
  ],
  "paymentInstruments": [
    {
      "href": "https://api.cybersource.com/tms/v1/paymentinstruments/
8040002500021325821"
    },
    {
      "href": "https://api.cybersource.com/tms/v1/paymentinstruments/
8040007500021321699"
    }
  ],
  "instrumentIdentifiers": [
    {
      "href": "https://api.cybersource.com/tms/v1/instrumentidentifiers/
8040034500021321111"
    }
  ]
}
}
```

API Fields

Data Type Definitions

For more information about these data types, see the [World Wide Web Consortium \(W3C\) XML Schema Part 2: Datatypes specification](#).

| Data Type | Description |
|-----------|--|
| Integer | Whole number {..., -3, -2, -1, 0, 1, 2, 3, ...} |
| String | Sequence of letters, numbers, spaces, and special characters |

Request Fields

Table 5 Request Fields

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|---------------------|---|--|--------------------|
| billTo_city | City of the billing address. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (50) |
| billTo_country | Country of the billing address. Use the two-character ISO Standard Country Codes . Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (2) |
| billTo_companyTaxID | Tax identifier for the customer's company. Important Contact your TeleCheck representative to find out whether this field is required or optional. | Create (see description) Update (see description) | String (9) |

¹ This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|-----------------------------|--|--|--------------------|
| billTo_dateOfBirth | Customer date of birth. Format: YYYY-MM-DD or YYYYMMDD | Create (O for eCheck payments) | String (10) |
| billTo_driversLicenseNumber | Customer's driver's license number. Important Contact your TeleCheck representative to find out whether this field is required or optional. | Create (see description) Update (see description) | String (30) |
| billTo_driversLicenseState | State or province in which the customer's driver's license was issued. Use the two-character ISO state and province code . Important Contact your TeleCheck representative to find out whether this field is required or optional. | Create (see description) Update (see description) | String (2) |
| billTo_email | Customer email address. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (255) |
| billTo_firstName | Customer first name. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (60) |
| billTo_lastName | Customer last name. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (60) |
| billTo_phoneNumber | Customer phone number. | Create (O) | String (15) |

¹ This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|---|--|--------------------------------------|---|
| billTo_postalCode | <p>Postal code for the billing address. The postal code must consist of 5 to 9 digits.</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>Example 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>Example A1B 2C3</p> <p>Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | Create (R) ¹ | <p>CyberSource through VisaNet: String (9)</p> <p>All other processors: String (10)</p> <p>String (10)</p> |
| billTo_state | <p>State or province in the billing address. Use the two-character <i>State, Province, and Territory Codes for the United States and Canada</i>.</p> <p>Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | Create (R) ¹ | String (2) |
| billTo_street1 | <p>First line of the billing address.</p> <p>Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | Create (R) ¹ | <p>CyberSource through VisaNet: String (40)</p> <p>Worldpay VAP: String (35)</p> <p>Moneris: String (50)</p> <p>All other processors: String (60)</p> |
| <p>¹ This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|--|-------------------------------------|--------------------------------------|--|
| billTo_street2 | Second line of the billing address. | Create (O) | CyberSource through VisaNet: String (40) Worldpay VAP: String (35) Moneris: String (50) All other processors: String (60) |
| card_accountNumber | Card account number. | Create (R) | String (20) |
| <p>1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|---------------|---|--------------------------------------|------------------------------|
| card_cardType | Type of card. Possible values: <ul style="list-style-type: none"> ■ 001: Visa ■ 002: Mastercard, Eurocard—European regional brand of Mastercard. ■ 003: American Express ■ 004: Discover ■ 005: Diners Club ■ 006: Carte Blanche ■ 007: JCB ■ 014: EnRoute ■ 021: JAL ■ 024: Maestro (UK Domestic) ■ 031: Delta—use this value only for Global Collect. For other processors, use 001 for all Visa card types. ■ 033: Visa Electron ■ 034: Dankort ■ 036: Cartes Bancaires ■ 037: Carta Si ■ 040: UATP ■ 042: Maestro (International) ■ 050: Hipercard—supported only by the Comercio Latino processor. ■ 051: Aura—supported only by the Comercio Latino processor. ■ 053: ORICO ■ 054: Elo—supported only by the Comercio Latino processor. ■ 062: China UnionPay | Create (R) | String (3) |
| card_cvNumber | Card verification number. | Create (O) Update (O) | String with numbers only (4) |

1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|---|---|--|---|
| card_expirationMonth | Expiration month. Format: MM Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | String (2) |
| card_expirationYear | Expiration year. Format: YYYY FDC Nashville Global and FDMS South You can send in 2 digits or 4 digits. When you send in 2 digits, they must be the last 2 digits of the year. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | Create (R) ¹ | FDC Nashville Global and FDMS South: String (See description) All other processors: String (4) |
| card_issueNumber | Number of times a Maestro (UK Domestic) card has been issued to the account holder. When you include this value in your request, include exactly what is printed on the card. A value of 2 is different than a value of 02. Do not include the field if the card is not a Maestro (UK Domestic) card. | Create (O) | String (5) |
| card_startMonth | Month of the start of the Maestro (UK Domestic) card validity period. Format: MM. Possible values: 01 to 12. | Create (O) | String (2) |
| card_startYear | Year of the start of the Maestro (UK Domestic) card validity period. Format: YYYY. Possible values: 01 to 12. | Create (O) | Nonnegative integer (4) |
| check_accountNumber | Checking account number. | Create (R for eCheck payments) Update (O) | String (17) |
| <p>¹ This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|---|--|--|------------------------------|
| check_accountType | Checking account type. Possible values: <ul style="list-style-type: none"> ■ C: checking ■ S: savings (USD only) ■ X: corporate checking (USD only) ■ G: general ledger | Create (R for eCheck payments) Update (O) | String (1) |
| check_bankTransitNumber | Bank routing number. This value is also known as the <i>transit number</i> . | Create (R for eCheck payments) Update (O) | String (9) |
| check_checkNumber | Check number. Chase Paymentech Solutions Optional. CyberSource ACH Service Not used. RBS WorldPay Atlanta Optional on debits. Required on credits. TeleCheck Strongly recommended on debit requests. Optional on credits. | Create (R for eCheck payments) Update (O) | String with numbers only (8) |
| 1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting. | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|--|---|---|--------------------|
| check_secCode | <p>Important This field is required if your processor is TeleCheck.</p> <p>Code that specifies the authorization method for the transaction. Possible values:</p> <ul style="list-style-type: none"> ■ CCD: Corporate cash disbursement—charge or credit to a business checking account. You can use one-time or recurring CCD transactions to transfer funds to or from a corporate entity. ■ PPD: Prearranged payment and deposit entry—charge or credit to a personal checking or savings account. You can originate a PPD entry only when the payment and deposit terms between you and the customer are prearranged. A written authorization from the customer is required for one-time transactions. ■ TEL: Telephone-initiated entry—one-time charge to a personal checking or savings account. You can originate a TEL entry only when there is a business relationship between you and the customer or when the customer initiates a telephone call to you. For a TEL entry, you must obtain a payment authorization from the customer over the telephone. ■ WEB: Internet-initiated entry—charge to a personal checking or savings account. You can originate a one-time or recurring WEB entry when the customer initiates the transaction over the Internet. For a WEB entry, you must obtain payment authorization from the customer over the Internet. | <p>Create (R)</p> <p>Update (O)</p> | String (3) |
| invoiceHeader_ merchantDescriptorAlternate | For the description, used-by information, data type, and length, see the information about merchant descriptors in <i>Credit Card Services Using the Simple Order API</i> (PDF HTML). | <p>Create (O)</p> <p>Retrieve (O)</p> <p>Delete (O)</p> | |
| <p>1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|--|--|--------------------------------------|--|
| merchantDefinedData_field1 merchantDefinedData_field2 merchantDefinedData_field3 merchantDefinedData_field4 | Four fields that you can use to store information in the customer token. Warning 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. 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, and card verification numbers (CVV, CVC2, CVV2, CID, CVN). In the event CyberSource discovers that a merchant is capturing and/or transmitting personally identifying information via the merchant-defined data fields, whether or not intentionally, CyberSource WILL immediately suspend the merchant's account, which will result in a rejection of any and all transaction requests submitted by the merchant after the point of suspension. | Create (O) | String (255) |
| merchantID | Your CyberSource merchant ID. | Required for all services. | String (30) |
| merchantReferenceCode | Merchant-generated order reference or tracking number. | Required for all services. | Asia, Middle East, and Africa Gateway: String (40) Atos: String (32) All other processors: String (50) |
| <p>1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|--|--|--|--------------------|
| merchantSecureData_field1 merchantSecureData_field2 merchantSecureData_field3 merchantSecureData_field4 | Storage field for any data type in the customer token. The only validation performed on this field is a size check. The data is encrypted before it is stored in the database. | Create (O) | String (2071) |
| paySubscriptionCreateService_disableAutoAuth | Indicates whether to turn off the preauthorization check when creating this token. Use this field if your CyberSource account is configured for automatic preauthorizations but for this specific token you want to override that setting. Possible values: <ul style="list-style-type: none"> ■ <code>false</code>: No, go ahead and perform the preauthorization. ■ <code>true</code>: Yes, turn off the preauthorization check. | Create (O) | String (5) |
| purchaseTotals_currency | Currency used by the customer. | Create (R) | String (5) |
| purchaseTotals_grandTotalAmount | Grand total for the order. This value cannot be negative. You can include a decimal point (.), but you cannot include any other special characters. CyberSource truncates the amount to the correct number of decimal places. | Authorization (R) Create (R) | Decimal (60) |
| recurringSubscriptionInfo_billPayment | Flag that indicates that this is a payment for a bill or for an existing contractual loan. This value is case sensitive. Possible values: <ul style="list-style-type: none"> ■ <code>false</code> (default): Not a bill payment or loan payment. ■ <code>true</code>: Bill payment or loan payment. | Create (O) | String (1) |
| recurringSubscriptionInfo_frequency | Frequency of payments for the customer profile. Value: <code>on-demand</code> | Create (R) | String (20) |
| recurringSubscriptionInfo_subscriptionID | Identifier for the token. | Delete (R) Retrieve (R) Update (R) | String (32) |
| shipTo_city | City of the shipping address. | Create (O) Update (O) | String (50) |
| <p>1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Table 5 Request Fields (Continued)

| Field Name | Description | Used By & Required (R)/ Optional (O) | Data Type & Length |
|--|--|--------------------------------------|--------------------|
| shipTo_company | Name of the company receiving the product. | Create (O) | String (60) |
| shipTo_country | Country code for the shipping address. Use the two-character <i>ISO Standard Country Codes</i> . | Create (O) | String (2) |
| shipTo_firstName | First name of recipient. | Create (O) | String (60) |
| shipTo_lastName | Last name of recipient. | Create (O) | String (60) |
| shipTo_postalCode | <p>Postal code for the shipping address. The postal code must consist of 5 to 9 digits.</p> <p>If the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits]</p> <p>Example 12345-6789</p> <p>If the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric]</p> <p>Example A1B 2C3</p> <p>If the postal code for the shipping address is not included in the request message, CyberSource uses the postal code for the billing address. If the postal code for the billing address is not included in the request message, the postal code for the shipping address is required.</p> | Create (O) | String (10) |
| shipTo_state | State or province in the shipping address. Use the two-character <i>State, Province, and Territory Codes for the United States and Canada</i> . | Create (O) | String (2) |
| shipTo_street1 | First line of the street address in the shipping address. | Create (O) | String (60) |
| shipTo_street2 | Second line of the street address in the shipping address. | Create (O) | String (60) |
| subscription_paymentMethod | <p>Method of payment. Possible values:</p> <ul style="list-style-type: none"> ■ credit card ■ echeck | Create (O) | String (20) |
| <p>1 This field is optional if your CyberSource account is configured for relaxed requirements for address data and expiration date. See "Relaxed Requirements for Address Data and Expiration Date," page 15. Important It is your responsibility to determine whether a field is required for the transaction you are requesting.</p> | | | |

Reply Fields

Table 6 Reply Fields

| Field Name | Description | Returned by | Data Type & Length |
|---|--|--|--------------------|
| ccAuthReply_amount | Amount that was authorized. | Authorization | String (15) |
| ccAuthReply_authorizationCode | Authorization code. Returned only when the processor returns this value. | Authorization | String (7) |
| ccAuthReply_authorizationDateTime | Time of authorization. | Authorization | String (20) |
| ccAuthReply_avsCode | AVS results. | Authorization | String (1) |
| ccAuthReply_reasonCode | Numeric value corresponding to the result of the authorization request. See " Reason Codes ," page 52. | Authorization | Integer (5) |
| ccAuthReply_reconciliationID | Reference number for the transaction. This value is not returned for all processors. See <i>Getting Started with CyberSource Advanced for the Simple Order API</i> (PDF HTML) for information about order tracking and reconciliation. See <i>Getting Started with CyberSource Essentials</i> (PDF HTML) for information about order tracking and reconciliation. | Authorization | String (60) |
| decision | Summarizes the overall results for the request. Possible values: <ul style="list-style-type: none"> ■ ACCEPT ■ ERROR ■ REJECT | Create Retrieve Delete | String (6) |
| merchantReferenceCode | Order reference or tracking number that you provided in the request. | Create Retrieve Delete | String (50) |
| paymentAccountReference | 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. | All services (For COF network token only.) | String (32) |
| paySubscriptionCreateReply_instrumentIdentifierID | Value for the instrument identifier token assigned to the tokenized PAN. | Create | String (32) |

Table 6 Reply Fields (Continued)

| Field Name | Description | Returned by | Data Type & Length |
|--|---|-------------|--------------------|
| paySubscriptionCreateReply_instrumentIdentifierNew | Indicates whether this is the first time the customer's PAN has been tokenized for you. Possible values: <ul style="list-style-type: none"> ■ Y: This is the first time the PAN has been tokenized and assigned an instrument identifier. ■ N: The PAN has previously been tokenized and assigned an instrument identifier. This value is also returned if a token has been deleted and the PAN is used again in a token create request. | Create | String (5) |
| paySubscriptionCreateReply_instrumentIdentifierStatus | Current status of the tokenized PAN. Possible values: <ul style="list-style-type: none"> ■ Active ■ Closed: Account Updater assigns this status when informed by the card association that the account has closed or there is a new PAN. | Create | String (10) |
| paySubscriptionCreateReply_instrumentIdentifierSuccessorID | Value for the new instrument identifier token assigned to the customer's new tokenized PAN. You receive this value in the create token reply when the customer's PAN included in the create token request was previously tokenized and the PAN has been updated by a card association. | Create | String (32) |
| paySubscriptionCreateReply_reasonCode | Numeric value corresponding to the result of the service request. See " Reason Codes ," page 52. | Create | Integer (5) |
| paySubscriptionCreateReply_subscriptionID | Identifier of the token. This value is dependent on the token type for which your MID is configured. See " Token Types and Formats ," page 10. | Create | String (32) |
| paySubscriptionDeleteReply_instrumentIdentifierID | Value for the deleted instrument identifier token assigned to the tokenized PAN. | Delete | String (32) |
| paySubscriptionDeleteReply_reasonCode | Numeric value corresponding to the result of the service request. See " Reason Codes ," page 52. | Delete | Integer (5) |
| paySubscriptionDeleteReply_subscriptionID | Identifier for the token. | Delete | String (32) |

Table 6 Reply Fields (Continued)

| Field Name | Description | Returned by | Data Type & Length |
|--|---|-------------|--------------------|
| paySubscriptionRetrieveReply_cardAccountNumber | Card account number. | Retrieve | String (20) |
| paySubscriptionRetrieveReply_city | City of the customer address. | Retrieve | String (50) |
| paySubscriptionRetrieveReply_country | Country code for the billing address. Use the two-character <i>ISO Standard Currency Codes</i> . | Retrieve | String (2) |
| paySubscriptionRetrieveReply_firstName | Customer first name. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_instrumentIdentifierID | Value for the retrieved instrument identifier token assigned to the tokenized PAN. | Retrieve | String (32) |
| paySubscriptionRetrieveReply_instrumentIdentifierStatus | Current status of the tokenized PAN. Possible values: <ul style="list-style-type: none"> ■ Active ■ Closed: Account Updater assigns this status when informed by the card association that the account has closed or there is a new PAN. | Retrieve | String (10) |
| paySubscriptionRetrieveReply_instrumentIdentifierSuccessorID | Value for the new instrument identifier token assigned to the customer's new tokenized PAN. You receive this value in the retrieve token reply when the customer's PAN included in the create token request was previously tokenized and the PAN has been updated by a card association. | Retrieve | String (32) |
| paySubscriptionRetrieveReply_lastName | Customer last name. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_merchantReferenceCode | Merchant-generated order reference or tracking number. | Retrieve | String (50) |
| paySubscriptionRetrieveReply_postalCode | Postal code of the billing address. | Retrieve | String (10) |
| paySubscriptionRetrieveReply_reasonCode | Numeric value corresponding to the result of the service request. See " Reason Codes ," page 52. | Retrieve | Integer (5) |
| paySubscriptionRetrieveReply_shipToCity | City of the shipping address. | Retrieve | String (50) |
| paySubscriptionRetrieveReply_shipToCountry | Country code for the shipping address. Use the two-character <i>ISO Standard Currency Codes</i> . | Retrieve | String (2) |

Table 6 Reply Fields (Continued)

| Field Name | Description | Returned by | Data Type & Length |
|---|--|-------------|--------------------|
| paySubscriptionRetrieveReply_shipToFirstName | First name of recipient. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_shipToLastName | Last name of recipient. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_shipToPostalCode | Postal code in the shipping address. | Retrieve | String (10) |
| paySubscriptionRetrieveReply_shipToState | State or province of shipping address. Use the <i>ISO Standard Currency Codes</i> and <i>State, Province, and Territory Codes for the United States and Canada</i> . | Retrieve | String (2) |
| paySubscriptionRetrieveReply_shipToStreet1 | First line of the shipping address. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_shipToStreet2 | Second line of the shipping address. | Retrieve | String (60) |
| paySubscriptionRetrieveReply_startDate | Start date for an installment or recurring subscription. | Retrieve | String (8) |
| paySubscriptionRetrieveReply_state | State or province of billing address. Use the <i>ISO Standard Currency Codes</i> and <i>State, Province, and Territory Codes for the United States and Canada</i> . | Retrieve | String (2) |
| paySubscriptionRetrieveReply_subscriptionID | Identifier for the customer profile. | Retrieve | String (32) |
| paySubscriptionUpdateReply_IdentifierSuccessorID | Value for the updated instrument identifier token assigned to the tokenized PAN. You receive this value in the update token reply when the customer's PAN included in the create token request was previously tokenized and the PAN has been updated by a card association. | Update | String (32) |
| paySubscriptionUpdateReply_instrumentIdentifierID | Value for the updated instrument identifier token assigned to the tokenized PAN. | Update | String (32) |

Table 6 Reply Fields (Continued)

| Field Name | Description | Returned by | Data Type & Length |
|---|--|------------------------------|--------------------|
| paySubscriptionUpdateReply_instrumentIdentifierNew | Indicates whether this is the first time the customer's PAN has been tokenized for the merchant. Possible values: <ul style="list-style-type: none"> Y: This is the first time the PAN has been tokenized and assigned an instrument identifier. N: The PAN has previously been tokenized and assigned an instrument identifier. This value is also returned if a token has been deleted and the PAN is used again in a token create request. | Update | String (5) |
| paySubscriptionUpdateReply_instrumentIdentifierStatus | Current status of the tokenized PAN. Possible values: <ul style="list-style-type: none"> Active Closed—Account Updater assigns this status when informed by the card association that the account has closed or there is a new PAN. | Update | String (10) |
| paySubscriptionUpdateReply_subscriptionID | Identifier for the customer profile. | Update | String (32) |
| reasonCode | Numeric value corresponding to the result of the entire request. See " Reason Codes ," page 52. | Create Retrieve Delete | Integer (5) |
| requestID | Identifier for the request. | Create Retrieve Delete | String (26) |
| requestToken | Request token data created by CyberSource for each reply. The field is an encoded string that contains no confidential information, such as an account or card verification number. | All services | String (256) |

Examples

Example 1 Request: Create a Customer Token

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid1234</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <billTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
    <phoneNumber>987-654-3210</phoneNumber>
    <email>jsmith@example.com</email>
  </billTo>
  <shipTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
  </purchaseTotals>
  <merchantDefinedData>
    <field1>defined data text 1</field1>
    <field2>defined data text 2</field2>
    <field3>defined data text 3</field3>
    <field4>defined data text 4</field4>
  </merchantDefinedData>
  <merchantSecureData>
    <field1>secure data text 1</field1>
    <field2>secure data text 2</field2>
    <field3>secure data text 3</field3>
    <field4>secure data text 4</field4>
  </merchantSecureData>
</requestMessage>
```

```

<card>
  <accountNumber>411111111111xxxx</accountNumber>
  <expirationMonth>12</expirationMonth>
  <expirationYear>2020</expirationYear>
  <cardType>001</cardType>
</card>
<recurringSubscriptionInfo>
  <frequency>on-demand</frequency>
</recurringSubscriptionInfo>
<paySubscriptionCreateService run="true"/>
</requestMessage>

```

Example 2 Reply: Create a Customer Token

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.138">
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
  <c:requestID>4992578986976129904008</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:paySubscriptionCreateReply>
    <c:reasonCode>100</c:reasonCode>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
    <c:instrumentIdentifierID>704000000000181111</c:instrumentIdentifierID>
    <c:instrumentIdentifierStatus>ACTIVE</c:instrumentIdentifierStatus>
    <c:instrumentIdentifierNew>Y</c:instrumentIdentifierNew>
  </c:paySubscriptionCreateReply>
</c:replyMessage>

```

Example 3 Authorize and Create a Customer Token

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid1234</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <billTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
    <phoneNumber>987-654-3210</phoneNumber>
    <email>jsmith@example.com</email>
  </billTo>
  <shipTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
    <grandTotalAmount>10.00</grandTotalAmount>
  </purchaseTotals>
  <merchantDefinedData>
    <field1>defined data text 1</field1>
    <field2>defined data text 2</field2>
    <field3>defined data text 3</field3>
    <field4>defined data text 4</field4>
  </merchantDefinedData>
  <merchantSecureData>
    <field1>secure data text 1</field1>
    <field2>secure data text 2</field2>
    <field3>secure data text 3</field3>
    <field4>secure data text 4</field4>
  </merchantSecureData>
  <card>
    <accountNumber>4111111111111xxxx</accountNumber>
    <expirationMonth>12</expirationMonth>
    <expirationYear>2020</expirationYear>
    <cardType>001</cardType>
  </card>
  <recurringSubscriptionInfo>
    <frequency>on-demand</frequency>
  </recurringSubscriptionInfo>
  <paySubscriptionCreateService run="true"/>
  <ccAuthService run="true"/>
</requestMessage>

```

Example 4 Reply: Authorize and Create a Customer Token

```
<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.135">
  <c:ccAuthReply>
    <c:amount>10.00</c:amount>
    <c:authorizationCode>888888</c:authorizationCode>
    <c:avsCode>X</c:avsCode>
    <c:reasonCode>100</c:reasonCode>
    <c:reconciliationID>40368790XuwiG0mX</c:reconciliationID>
  </c:ccAuthReply>
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
  <c:requestID>3790672461500176726470</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:paySubscriptionCreateReply>
    <c:reasonCode>100</c:reasonCode>
    <c:instrumentIdentifierID>7040000000000181111</c:instrumentIdentifierID>
    <c:instrumentIdentifierStatus>active</c:instrumentIdentifierStatus>
    <c:instrumentIdentifierNew>Y</c:instrumentIdentifierNew>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
  </c:paySubscriptionCreateReply>
  <c:purchaseTotals>
    <c:currency>USD</c:currency>
  </c:purchaseTotals>
</c:replyMessage>
```

Example 5 Request: Create a COF Network Token

```
<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid1234</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <billTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
    <phoneNumber>987-654-3210</phoneNumber>
    <email>jsmith@example.com</email>
  </billTo>
  <shipTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
  </purchaseTotals>
  <card>
    <accountNumber>411111111111xxxx</accountNumber>
    <expirationMonth>07</expirationMonth>
    <expirationYear>2020</expirationYear>
    <cvNumber>999</cvNumber>
    <cardType>001</cardType>
  </card>
  <recurringSubscriptionInfo>
    <frequency>on-demand</frequency>
  </recurringSubscriptionInfo>
  <paySubscriptionCreateService run="true"/>
</requestMessage>
```

Example 6 Reply: Create a COF Network Token

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.138">
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
  <c:requestID>4992578986976129904008</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:paySubscriptionCreateReply>
    <c:reasonCode>100</c:reasonCode>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
    <c:instrumentIdentifierID>704000000000181111</c:instrumentIdentifierID>
    <c:instrumentIdentifierStatus>ACTIVE</c:instrumentIdentifierStatus>
    <c:instrumentIdentifierNew>Y</c:instrumentIdentifierNew>
  </c:paySubscriptionCreateReply>
  <c:paymentAccountReference>987654321234567890987654321234567
  </c:paymentAccountReference>
</c:replyMessage>

```

Example 7 Request: Retrieve a Customer Token

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid1234</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <recurringSubscriptionInfo>
    <subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</subscriptionID>
  </recurringSubscriptionInfo>
  <paySubscriptionRetrieveService run="true"/>
</requestMessage>

```

Example 8 Reply: Retrieve a Customer Token

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.138">
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
  <c:requestID>4992597963906457904010</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:paySubscriptionRetrieveReply>
    <c:reasonCode>100</c:reasonCode>
    <c:cardAccountNumber>411111111111xxxx</c:cardAccountNumber>
    <c:cardExpirationMonth>11</c:cardExpirationMonth>
    <c:cardExpirationYear>2029</c:cardExpirationYear>
    <c:cardType>005</c:cardType>
    <c:city>Small Town</c:city>
    <c:country>US</c:country>
    <c:currency>USD</c:currency>
    <c:email>jsmith@example.com</c:email>
    <c:firstName>Jane</c:firstName>
    <c:frequency>on-demand</c:frequency>
    <c:lastName>Smith</c:lastName>
    <c:paymentMethod>credit card</c:paymentMethod>
    <c:postalCode>98765</c:postalCode>
    <c:state>CA</c:state>
    <c:status>CURRENT</c:status>
    <c:street1>123 Main Street</c:street1>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
    <c:instrumentIdentifierID>704000000000181111</c:instrumentIdentifierID>
    <c:instrumentIdentifierStatus>ACTIVE</c:instrumentIdentifierStatus>
    <c:shipToCity>Small Town</c:shipToCity>
    <c:shipToCountry>US</c:shipToCountry>
    <c:shipToFirstName>Jane</c:shipToFirstName>
    <c:shipToLastName>Smith</c:shipToLastName>
    <c:shipToPostalCode>98765</c:shipToPostalCode>
    <c:shipToState>CA</c:shipToState>
    <c:shipToStreet1>123 Main Street</c:shipToStreet1>
    <c:merchantDefinedDataField1>defined data text 1</c:merchantDefinedDataField1>
    <c:merchantDefinedDataField2>defined data text 2</c:merchantDefinedDataField2>
    <c:merchantDefinedDataField3>defined data text 3</c:merchantDefinedDataField3>
    <c:merchantDefinedDataField4>defined data text 4</c:merchantDefinedDataField4>
    <c:merchantSecureDataField1>secure data text 1</c:merchantSecureDataField1>
    <c:merchantSecureDataField2>secure data text 2</c:merchantSecureDataField2>
    <c:merchantSecureDataField3>secure data text 3</c:merchantSecureDataField3>
    <c:merchantSecureDataField4>secure data text 4</c:merchantSecureDataField4>
  </c:paySubscriptionRetrieveReply>
</c:replyMessage>

```

Example 9 Request: Update Merchant Defined Data for a Customer Token

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid123</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <billTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
    <phoneNumber>987-654-3210</phoneNumber>
    <email>jsmith@example.com</email>
  </billTo>
  <shipTo>
    <firstName>Jane</firstName>
    <lastName>Smith</lastName>
    <street1>123 Main Street</street1>
    <city>Small Town</city>
    <state>CA</state>
    <postalCode>98765</postalCode>
    <country>US</country>
  </shipTo>
  <purchaseTotals>
    <currency>USD</currency>
  </purchaseTotals>
  <merchantDefinedData>
    <field1>updated defined data text 1</field1>
    <field2>updated defined data text 2</field2>
    <field3>updated defined data text 3</field3>
    <field4>updated defined data text 4</field4>
  </merchantDefinedData>
  <merchantSecureData>
    <field1>updated secure data text 1</field1>
    <field2>updated secure data text 2</field2>
    <field3>updated secure data text 3</field3>
    <field4>updated secure data text 4</field4>
  </merchantSecureData>
  <card>
    <accountNumber>411111111111xxxx</accountNumber>
    <expirationMonth>12</expirationMonth>
    <expirationYear>2020</expirationYear>
    <cardType>001</cardType>
  </card>
  <recurringSubscriptionInfo>
    <subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</subscriptionID>
  </recurringSubscriptionInfo>
  <paySubscriptionUpdateService run="true"/>
</requestMessage>

```

Example 10 Reply: Update Merchant Defined Data for a Customer Token

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.138">
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
  <c:requestID>4992604216066941804008</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:paySubscriptionUpdateReply>
    <c:instrumentIdentifierStatus>active</c:instrumentIdentifierStatus>
    <c:instrumentIdentifierID>704000000000181112</c:instrumentIdentifierID>
    <c:instrumentIdentifierNew>Y</c:instrumentIdentifierID>
    <c:cardAccountNumber>411111111111xxxx</c:cardAccountNumber>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
  </c:paySubscriptionUpdateReply>
</c:replyMessage>

```

Example 11 Request: Delete a Customer Token

```

<requestMessage xmlns="urn:schemas-cybersource-com:transaction-data-1.138">
  <merchantID>mid1234</merchantID>
  <merchantReferenceCode>ref9876</merchantReferenceCode>
  <recurringSubscriptionInfo>
    <subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</subscriptionID>
  </recurringSubscriptionInfo>
  <paySubscriptionDeleteService run="true"/>
</requestMessage>

```

Example 12 Reply: Delete a Customer Token

```

<c:replyMessage xmlns:c="urn:schemas-cybersource-com:transaction-data-1.135">
  <c:paySubscriptionDeleteReply>
    <c:reasonCode>100</c:reasonCode>
    <c:subscriptionID>554FDB92B1DAD8F9E0539599D30A3100</c:subscriptionID>
    <c:instrumentIdentifierID>704000000000181112</c:instrumentIdentifierID>
  </c:paySubscriptionDeleteReply>
  <c:requestID>3790672461500176056470</c:requestID>
  <c:decision>ACCEPT</c:decision>
  <c:reasonCode>100</c:reasonCode>
  <c:merchantReferenceCode>ref9876</c:merchantReferenceCode>
</c:replyMessage>

```

Reason Codes

[Table 7](#) describes the reason codes returned by the Simple Order API for TMS. For a description of replies, decisions, and reason codes, see the information about handling replies in [Getting Started with CyberSource Advanced for the Simple Order API](#).



Important

Because CyberSource can add reply fields and reason codes at any time:

- You must parse the reply data according to the names of the fields instead of the field order in the reply. For more information about parsing reply fields, see the documentation for your client.
- Your error handler should be able to process new reason codes without problems.
- Your error handler should use the **decision** field to determine the result if it receives a reason code that it does not recognize.

Table 7 Reason Codes

| Reason Code | Description |
|-------------|---|
| 100 | Transaction was successful. |
| 101 | Required field is null: <i><field name></i> Reason: Missing value in the required API field. |
| 101 | The request data did not pass the required fields check for this application: <i><field name></i> Reason: Invalid field included in the service request. |
| 102 | The request data did not pass the required fields check for this application: <i><field name></i> Reason: Invalid field included in the service request. |
| 150 | A system error has been encountered: Requested service is forbidden. Please contact customer support. Reason: The Token Management Service (TMS) profile is not enabled. |

Table 7 Reason Codes (Continued)

| Reason Code | Description |
|-------------|--|
| 150 | <p>A system error has been encountered. This field is invalid or missing. Please contact Customer Support.</p> <p>Possible reasons:</p> <ul style="list-style-type: none"> ■ You are requesting a service using a draft TMS profile. ■ The profile is non-transactable. ■ Invalid Profile ID. ■ Profile does not exist. ■ Vault does not exist. |
| 150 | <p>Error occurred during communication with token service. Please contact customer support.</p> <p>Reason: The TMS system is not responding.</p> |
| 231 | <p>The credit card number is either missing or invalid.</p> |