Token Management Service

Using the SCMP API

October 2018

CyberSource®

the power of payment

CyberSource Contact Information

For general information about our company, products, and services, go to
http://www.cybersource.com.

For sales questions about any CyberSource Service, email sales@cybersource.com or
call 650-432-7350 or 888-330-2300 (toll free in the United States).

For support information about any CyberSource Service, visit the Support Center:
http://www.cybersource.com/support

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Contents

Recent Revisions to This Document

Release	Changes
October 2018	Updated information about the payment identifier token and formats for all token types. See Table 2, "Token Types and Formats," on page 10.
	Added information about merchant-initiated transactions. See "Merchant-Initiated Transactions," page 15.
	Added notifications for COF network tokens. See "COF Network Token Notifications," page 25.
September 2018	Updated the token descriptions and added support for electronic checks. See Table 2, "Token Types and Formats," on page 10.
	Added COF network tokens. See Chapter 3, "Credentials-on-File Network Token," on page 23.
	Added the following request fields. See "Request Fields," page 28.
	■ bill_company_tax_id
	■ customer_cc_cv_number
	■ driver_license_no
	■ driver_license_state
	■ ecp_account_no
	■ ecp_account_type
	■ ecp_check_no
	■ ecp_rdfi
	■ ecp_sec_code
	Added the **payment_account_reference** reply field. See "Reply Fields," page 38.
	Updated descriptions for the following reply fields. See "Reply Fields," page 38.
	■ pay_subscription_create_instrument_identifier_new
	■ pay_subscription_create_instrument_identifier_successor_id
	■ pay_subscription_retrieve_instrument_identifier_successor_id
	■ pay_subscription_update_instrument_identifier_new
	■ pay_subscription_update_instrument_identifier_successor_id

Release	Changes
June 2018	Changed the name of *Carte Bleue* to *Cartes Bancaires*.
	Added the following supported processors. See Table 3, "Supported Processors and Payment Methods," on page 13.
	■ Credit Mutuel-CIC
	■ Elavon Americas
	Litle: changed processor name to *Worldpay VAP*.
March 2018	Updated Table 2, "Token Types and Formats," on page 10:
	■ Updated token format for Instrument Identifier and Customer.
	■ Added Payouts to the description for all three token types.
	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.
	Updated **card_type** with value for China UnionPay. See Table 6, "Request Fields," on page 28.
	Updated the Required/Optional value for **subscription_payment_method**. See Table 6, "Request Fields," on page 28.
	Updated definition for **pay_subscription_create_subscription_id**. See Table 7, "Reply Fields," on page 38.
September 2017	Added support for the new China UnionPay card for FDC Nashville Global processor. See Table 3, "Supported Processors and Payment Methods," on page 13.
	Added support for the Maestro International card for FDC Nashville Global. See Table 3, "Supported Processors and Payment Methods," on page 13.
August 2017	Draft version.
	Added the "Customer" chapter. See Chapter 2, "Customer Token," on page 16.

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	■ Field and service names in text; for example: Include the **ics_pay_subscription_create** field. ■ Items that you are instructed to act upon; for example: Click **Save**.
`Screen text`	■ XML elements. ■ Code examples and samples. ■ Text that you enter in an API environment; for example: Set the **ics_applications** field to `ics_pay_subscription_create`.

Related Documents

Table 1   Related Documents

Subject	Description
Account Updater	*Account Updater User Guide* (PDF | HTML)—describes how to automatically incorporate changes made to a customer's payment card data.
Business Center	*Business Center Overview* (PDF | HTML)—describes the features and options available within the Business Center.
Credit Card	*Credit Card Services Using the SCMP API* (PDF | HTML)—describes how to integrate credit card processing into your order management system.
eCheck	*Electronic Check Services Using the SCMP API* (PDF | HTML)—describes how to integrate eCheck processing into your order management system.
Payouts	*Payouts Using the SCMP API* (PDF | HTML)—describes how to integrate Payouts processing into your order management system.
PINless Debit	*PINless Debit Card Services Using the SCMP API* (PDF | HTML)—describes how to integrate PINless debit processing using the SCMP API into your order management system.
SCMP API	■ *Getting Started with CyberSource Advanced for the SCMP API* (PDF | HTML)—describes how to get started using the SCMP API. ■ SCMP API Documentation and Downloads 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

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

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.	***Payment Card Transactions and Payouts*** Represents the tokenized: ■ Payment card PAN ■ Card expiration date ■ Billing information ■ Shipping information ■ Merchant-defined data	■ 32 character hexadecimal (default) ■ 19 digits, Luhn check passing ■ 16 digits, last 4 digits of card preserving, Luhn check passing[1] ■ 16 digits, Luhn check passing[1] ■ 22 digits[2] (Request ID)
	Electronic Checks Represents the tokenized: ■ 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	■ 32 character hexadecimal (default) ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing[1] ■ 22 digits[2]

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.	
	Payment Card Transactions and Payouts Represents the tokenized: ■ Payment card PAN ■ Card expiration date ■ Billing information ■ Merchant-defined data	■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing
	Electronic Checks Represents the tokenized: ■ Bank account and routing numbers ■ Billing information ■ Driver license information ■ Account type ■ Company tax ID ■ SEC code ■ Alternate merchant descriptor ■ Merchant-defined data	■ 22 digits[2]
Instrument identifier token	This token helps you identify when the same card or bank account is used, while keeping sensitive customer data secure.	
	Payment Card Transactions and Payouts Represents the tokenized payment card PAN.	■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 19 digits, last 4 digits of card preserving (default) ■ 16 digits, Luhn check passing ■ 22 digits[2]
	Electronic Checks Represents the tokenized bank account and routing numbers.	■ 32 character hexadecimal ■ 19 digits, Luhn check passing ■ 16 digits, Luhn check passing ■ 22 digits[2]

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.

> **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 the CyberSource SCMP API client or connect directly to the SCMP API.

Transaction Endpoints

For live transactions, send requests to the production server:

http://ics2a.ic3.com

For test transactions, send requests to the test server:

http://ics2testa.ic3.com

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	■ 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	■ 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	■ 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	■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. ■ Payouts.
FDC Nashville Global	■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card.
FDMS Nashville	■ Credit card—supports 0.00 preauthorizations for Visa. ■ Debit card and prepaid card.
FDMS South	■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card.
Ingenico ePayments	Credit card.
GPN	■ Credit card—supports 0.00 preauthorizations for Visa and Mastercard. ■ Debit card and prepaid card. ■ PINless debit.
HSBC	Credit card—supports 0.00 preauthorizations for Visa and Mastercard. **Important** Does not support automatic preauthorization reversals.
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	■ 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	■ 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 *Litle*.	■ 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 **pay_subscription_create_subscription_id** field. The instrument identifier token is also returned in the **pay_subscription_create_instrument_identifier_id** 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 **ics_applications** service field to `ics_pay_subscription_create`.

Step 2 Include the following fields in the request:

- bill_address1
- bill_city
- bill_country
- bill_state
- bill_zip
- card_type
- currency
- customer_cc_expmo
- customer_cc_expyr

- customer_cc_number
- customer_email
- customer_firstname
- customer_lastname
- customer_phone
- merchant_id
- merchant_defined_data#
- merchant_ref_number
- merchant_secure_data#
- recurring_frequency—set to on-demand
- ship_to_address1
- ship_to_city
- ship_to_country
- ship_to_firstname
- ship_to_lastname
- ship_to_state
- ship_to_zip

For detailed descriptions of request and reply fields, see Appendix A, "API Fields," on page 27. For examples, see Appendix B, "Examples," on page 45.

Authorize and Create a Customer Token for a Payment Card

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

To verify and create a payment card customer token:

Step 1   Set the **ics_applications** field to ics_auth,ics_pay_subscription_create.

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 45.

Creating a Customer Token for an Electronic Check

To request an electronic check customer token:

Step 1   Set the **ics_applications** service field to `ics_pay_subscription_create`.

Step 2   Include the following fields in the request:

- bill_address1

- bill_city

- bill_company_tax_id—contact your TeleCheck representative to learn whether this field is required or optional.

- bill_country

- bill_state

- bill_zip

- currency

- customer_email

- customer_firstname

- customer_lastname

- customer_phone—contact your payment processor representative to learn whether this field is required or optional.

- date_of_birth

- driver_license_no—contact your TeleCheck representative to learn whether this field is required or optional.

- driver_license_state—contact your TeleCheck representative to learn whether this field is required or optional.

- ecp_account_no

- ecp_account_type

- ecp_check_no—contact your payment processor representative to learn whether this field is required or optional.

- ecp_rdfi

- ecp_sec_code—required field if your processor is TeleCheck.

- merchant_id

- merchant_ref_number

- recurring_frequency—set to `on-demand`.

- subscription_payment_method—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 **ics_applications** service field to `ics_pay_subscription_retrieve`.

Step 2 Include the following fields in the request:
- merchant_id
- merchant_ref_number
- subscription_id

For detailed descriptions of request and reply fields, see Appendix A, "API Fields," on page 27. For examples, see Appendix B, "Examples," on page 45.

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 **ics_applications** service field to `ics_pay_subscription_update`.

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

- bill_address1
- bill_city
- bill_country
- bill_state
- bill_zip
- card_type
- currency
- customer_cc_number
- customer_cc_expmo
- customer_cc_expyr
- customer_email
- customer_firstname
- customer_lastname
- customer_phone
- merchant_defined_data#
- merchant_secure_data#
- merchant_id
- merchant_ref_number
- recurring_frequency—set to `on-demand`
- ship_to_address1
- ship_to_city
- ship_to_country
- ship_to_firstname
- ship_to_lastname
- ship_to_state
- ship_to_zip

For detailed descriptions of request and reply fields, see Appendix A, "API Fields," on page 27. For examples, see Appendix B, "Examples," on page 45.

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 **ics_applications** service field to `ics_pay_subscription_delete`.

Step 2   Include the following fields in the request:

- merchant_id
- merchant_ref_number
- subscription_id

For detailed descriptions of request and reply fields, see Appendix A, "API Fields," on page 27. For examples, see Appendix B, "Examples," on page 45.

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 **ics_applications** service field to `ics_auth,ics_bill`.

Step 2 Include the following fields in the request:

- currency
- grand_total_amount
- merchant_id
- merchant_ref_number
- subscription_id—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 45.

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 45. 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 **pay_subscription_create_subscription_id** field.

■   Instrument identifier token in the **pay_subscription_create_instrument_identifier_id** field that can be used to analyze customer PAN usage across multiple customer tokens.

■   Payment account reference in the **payment_account_reference** 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.

!
Important   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.

> ⚠️ **Important**
>
> 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

Table 5   Data Type Definitions

Data Type	Description
Date and time	Format is YYYY-MM-DDThhmmssZ, where: ■ T separates the date and the time ■ Z indicates Coordinated Universal Time (UTC), also known as Greenwich Mean Time (GMT) **Example** 2018-08-11T224757Z equals August 11, 2018, at 22:47:57 (10:47:57 p.m.)
Decimal	Number that includes a decimal point **Example** 23.45, -0.1, 4.0, 90809.0468
Integer	Whole number {..., -3, -2, -1, 0, 1, 2, 3, ...}
Nonnegative integer	Whole number greater than or equal to zero {0, 1, 2, 3, ...}
Positive integer	Whole number greater than zero {1, 2, 3, ...}
String	Sequence of letters, numbers, spaces, and special characters

Request Fields

Table 6   Request Fields

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
bill_address1	First line 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]	CyberSource through VisaNet: String (40) Worldpay VAP: String (35) Moneris: String (50) All other processors: String (60)
bill_address2	Additional address information. **Example** Attention: Accounts Payable	Create (O)	CyberSource through VisaNet: String (40) Worldpay VAP: String (35) Moneris: String (50) All other processors: String (60)
bill_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)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
bill_company_tax_id	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 with numbers only (9)
bill_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)
bill_payment	Indicates that the payments for this customer profile are for the Bill Payment program. Possible values: ▪ N (default): Not a Visa Bill Payment. ▪ Y: Visa Bill Payment.	Create (O)	String (1)
bill_state	State or province in the billing address. Use the two-character *State, Province, and Territory Codes for the United States and Canada.* **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.	Create (R)[1]	String (2)
bill_zip	Postal code for the billing address. The postal code must consist of 5 to 9 digits. When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space][numeric][alpha][numeric] **Example** A1B 2C3 **Important** It is your responsibility to determine whether a field is required for the transaction you are requesting.	Create (R)[1]	CyberSource through VisaNet: String (9) All other processors: String (10)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
card_type	Type of card. Possible values: ■ `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)
comments	Optional comments you have for the customer profile. **Warning** Do not use this field to store sensitive customer information.	Create (O)	String (255)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
company_name	Name of the customer's company. ***CyberSource through VisaNet*** Credit card networks cannot process transactions that contain non-ASCII characters. CyberSource through VisaNet accepts and stores non-ASCII characters correctly and displays them correctly in reports. However, the limitations of the credit card networks prevent CyberSource through VisaNet from transmitting non-ASCII characters to the credit card networks. Therefore, CyberSource through VisaNet replaces non-ASCII characters with meaningless ASCII characters for transmission to the credit card networks.	Create (O)	String (60)
currency	Currency used by the customer.	Create (R)	String (5)
customer_account_id	Your identifier for the customer.	Create (O)	String (100)
customer_cc_cv_number	Card verification number.	Create (O) Update (O)	String with numbers only (4)
customer_cc_expmo	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)
customer_cc_expyr	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)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
customer_cc_issue_ number	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)
customer_cc_number	Customer's credit card number.	Create (R)	String (20)
customer_cc_startmo	Month of the start of the Maestro (UK Domestic) card validity period. Format: MM. Possible values: 01 to 12.	Create (O)	String (2)
customer_cc_startyr	Year of the start of the Maestro (UK Domestic) card validity period. Format: YYYY. Possible values: 01 to 12.	Create (O)	Nonnegative integer (4)
customer_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)
customer_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)
customer_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)
date_of_birth	Date of birth of the customer. Format: YYYY-MM-DD or YYYYMMDD	Create (R for eCheck payments)	String (10)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
driver_license_no	Customer driver's license number. **Important** Contact your TeleCheck representative to learn whether this field is required or optional.	Create (see description) Update (see description)	String (30)
driver_license_state	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 learn whether this field is required or optional.	Create (see description) Update (see description)	String (2)
ecp_account_no	Checking account number.	Create (R for eCheck payments) Update (O)	Integer (17)
ecp_account_type	Checking account type. Possible values: ■ C: checking ■ S: savings (USD only) ■ X: corporate checking (USD only) ■ G: general ledger	Create (R for eCheck payments) Update (O)	String (1)
ecp_check_no	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)
ecp_rdfi	Bank routing number. This value is also known as the *transit number*.	Create (R for eCheck payments) Update (O)	Integer (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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
ecp_sec_code	**Important** This field is required if your processor is TeleCheck. Code that specifies the authorization method for the transaction. Possible values: ■ CCD: corporate cash disbursement—charge or credit against a business checking account. You can use one-time or recurring CCD transactions to transfer funds to or from a corporate entity. A standing authorization is required for recurring transactions. ■ PPD: prearranged payment and deposit entry—charge or credit against 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 and a written standing authorization is required for recurring transactions. ■ TEL: telephone-initiated entry—one-time charge against 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. There is no recurring billing option for TEL. ■ WEB: internet-initiated entry—charge against 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.	Create (R for eCheck payments) Update (O)	String (3)
grand_total_amount	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)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
ics_applications	Comma-separated list of CyberSource services to process. Possible values: ■ `ics_auth` ■ `ics_pay_subscription_create` ■ `ics_pay_subscription_retrieve` ■ `ics_pay_subscription_update` ■ `ics_pay_subscription_delete`	Required for each service.	String (255)
merchant_defined_data1 merchant_defined_data2 merchant_defined_data3 merchant_defined_data4	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 (256)
merchant_descriptor_ alternate	For the description, used-by information, data type, and length, see Merchant Descriptors in *Credit Card Services Using the SCMP API* (PDF | HTML).	Create (O) Retrieve (O) Delete (O)	
merchant_id	Your CyberSource merchant ID. Use the same merchant ID for evaluation, testing, and production.	Required for all services.	String (30)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
merchant_ref_number	Merchant-generated order reference or tracking number. CyberSource recommends that you send a unique value for each transaction so that you can perform meaningful searches for the transaction. For information about tracking orders, see *Getting Started with CyberSource Advanced for the SCMP API*.	Required for all services.	Asia, Middle East, and Africa Gateway: String (40) Atos: String (32) All other processors: String (50)
merchant_secure_data1 merchant_secure_data2 merchant_secure_data3 merchant_secure_data4	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)
recurring_disable_auto_auth	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: ■ N: No, go ahead and perform the preauthorization. ■ Y: Yes, turn off the preauthorization check.	Create (O)	String (5)
recurring_frequency	Frequency of payments for the customer profile. Value: on-demand	Create (R)	String (20)
ship_to_address1	First line of the shipping address.	Create (O)	String (60)
ship_to_address2	Second line of the shipping address.	Create (O)	String (60)
ship_to_city	City of the shipping address.	Create (O)	String (50)
ship_to_company	The company name receiving the product.	Create (O)	String (60)
ship_to_country	Country of the shipping address. Use the two-character *ISO Standard Country Codes*.	Create (O)	String (2)

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 6   Request Fields (Continued)

Field Name	Description	Used By & Required (R)/ Optional (O)	Data Type & Length
ship_to_firstname	First name of the recipient.	Create (O)	String (60)
ship_to_lastname	First name of the recipient.	Create (O)	String (60)
ship_to_state	State or province of the shipping address. Use the *State, Province, and Territory Codes for the United States and Canada*.	Create (O)	String (2)
ship_to_zip	Postal code for the shipping address. The postal code must consist of 5 to 9 digits. When the shipping country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the shipping country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3	Create (O)	String (10)
subscription_id	Value that identifies the token.	Delete (R) Retrieve (R) Update (R)	String (32)
subscription_payment_ method	Method of payment. Possible values: ■ credit card ■ echeck	Create (O)	String (20)
subscription_title	Name or title for the token.	Create (O)	String (60)

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.

Reply Fields

Table 7   Reply Fields

Field Name	Description	Returned by	Data Type & Length
auth_auth_amount	Amount that was authorized.	Authorization	Decimal (15)
auth_auth_avs	AVS result code. See *Credit Card Services Using the SCMP API*.	Authorization	String (1)
auth_auth_code	Authorization code. Returned only when the processor returns this value. See *Credit Card Services Using the SCMP API*.	Authorization	String
auth_auth_response	The error message sent directly from the bank. Returned only when the processor returns the value. See *Credit Card Services Using the SCMP API*.	Authorization	String (10)
auth_avs_raw	AVS result code sent directly from the processor. Returned only when the processor returns this value. See *Credit Card Services Using the SCMP API*.	Authorization	String (10)
auth_rcode	Indicates whether the service request was successful. Possible values: ■ `-1`: An error occurred ■ `0`: The request was declined ■ `1`: The request was successful	Authorization	Integer (1)
auth_rflag	One-word description of the result of the entire request.	Authorization	String (50)
auth_rmsg	Message that explains the reply flag **auth_rflag**.	Authorization	String (255)
auth_trans_ref_no	Reference number for the transaction. This value is not returned for all processors. See *Credit Card Services Using the SCMP API*.	Authorization	
ics_rcode	One-digit code that indicates whether the entire request was successful. Possible values: ■ `-1`: An error occurred ■ `0`: The request was declined ■ `1`: The request was successful	Create Retrieve Delete	Integer (1)
ics_rflag	One-word description of the result of the entire request. See "Reply Flags," page 52.	Create Retrieve Delete	String (50)
ics_rmsg	Message that explains the reply flag **ics_rflag**. See "Reply Flags," page 52.	Create Retrieve Delete	String (255)

Table 7   Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
merchant_ref_number	Order reference or tracking number that you provided in the request.	Create Retrieve Delete	String (50)
pay_subscription_create_ instrument_identifier_id	Value for the instrument identifier token assigned to the tokenized PAN.	Create	String (32)
pay_subscription_create_ instrument_identifier_new	Indicates whether this is the first time the customer's PAN has been tokenized for the merchant. Possible values: ■ Y: This is the first time CyberSource has tokenized the PAN and assigned an instrument identifier. ■ N: CyberSource had previously tokenized the PAN 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 (1)
pay_subscription_create_ instrument_identifier_ status	Current status of the tokenized PAN. Possible values: ■ 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)
pay_subscription_create_ instrument_identifier_ successor_id	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)
pay_subscription_create_ rcode	One-digit code that indicates whether the create service request was successful. Possible values: ■ -1: An error occurred ■ 0: The request was declined ■ 1: The request was successful	Create	Integer (1)
pay_subscription_create_ rflag	One-word description of the result of the specific service request. See "Reply Flags," page 52.	Create	String (50)
pay_subscription_create_ rmsg	Message that explains the reply flag **pay_ subscription_create_rflag**. See "Reply Flags," page 52.	Create	String (255)

Table 7   Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
pay_subscription_create_ subscription_id	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)
pay_subscription_create_ time	Date and time the token was created. Example: 2015-08-11T224757Z equals 10:47:57 P.M. on August 11, 2015.	Create	String (20)
pay_subscription_delete_ instrument_identifier_id	Value for the deleted instrument identifier token assigned to the tokenized PAN.	Delete	String (32)
pay_subscription_delete_ rcode	One-digit code that indicates whether the delete service request was successful. Possible values: ■ `-1`: An error occurred ■ `0`: The request was declined ■ `1`: The request was successful See "Reply Flags," page 52.	Delete	Integer (1)
pay_subscription_delete_ rflag	One-word description of the result of the specific service request. See "Reply Flags," page 52.	Delete	String (50)
pay_subscription_delete_ rmsg	Message that explains the reply flag **pay_ subscription_delete_rflag**. See "Reply Flags," page 52.	Delete	String (255)
pay_subscription_delete_ subscription_id	Identifier for the deleted token.	Delete	String (32)
pay_subscription_ retrieve_bill_address1	First line of the billing address.	Retrieve	CyberSource through VisaNet: String (40) Worldpay VAP: String (35) Moneris: String (50) All other processors: String (60)

Table 7   Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
pay_subscription_ retrieve_bill_address2	Second line of the billing address.	Retrieve	CyberSource through VisaNet: String (40)
			Worldpay VAP: String (35)
			Moneris: String (50)
			All other processors: String (60)
pay_subscription_ retrieve_bill_city	City of the billing address.	Retrieve	String (50)
pay_subscription_ retrieve_bill_state	State or province in the billing address. Use the two-character ISO state and province code.	Retrieve	String (2)
pay_subscription_ retrieve_bill_zip	Postal code for the billing address. The postal code must consist of 5 to 9 digits. When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3	Retrieve	CyberSource through VisaNet: String (9) All other processors: String (10)
pay_subscription_ retrieve_customer_cc_ number	Card account number.	Retrieve	String (20)
pay_subscription_ retrieve_customer_email	Customer email address.	Retrieve	String (255)
pay_subscription_ retrieve_customer_ firstname	Customer first name.	Retrieve	String (60)
pay_subscription_ retrieve_customer_ lastname	Customer last name.	Retrieve	String (60)

Table 7   Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
pay_subscription_ retrieve_instrument_ identifier_id	Value for the retrieved instrument identifier token assigned to the tokenized PAN.	Retrieve	String (32)
pay_subscription_ retrieve_instrument_ identifier_status	Current status of the tokenized PAN. Possible values: ■ `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)
pay_subscription_ retrieve_instrument_ identifier_successor_id	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)
pay_subscription_ retrieve_rcode	One-digit code that indicates whether the retrieve service request was successful. Possible values: ■ `-1`: An error occurred ■ `0`: The request was declined ■ `1`: The request was successful	Retrieve	Integer (1)
pay_subscription_ retrieve_rflag	One-word description of the result of the specific service request. See "Reply Flags," page 52.	Retrieve	String (50)
pay_subscription_ retrieve_rmsg	Message that explains the reply flag **pay_ subscription_retrieve_rflag**. See "Reply Flags," page 52.	Retrieve	String (255)
pay_subscription_ retrieve_ship_to_address1	First line of the shipping address.	Retrieve	String (60)
pay_subscription_ retrieve_ship_to_address2	Second line of the shipping address.	Retrieve	String (60)
pay_subscription_ retrieve_ship_to_city	City of the shipping address.	Retrieve	String (50)
pay_subscription_ retrieve_ship_to_ company_name	Name of the company that is receiving the product.	Retrieve	String (60)
pay_subscription_ retrieve_ship_to_country	Country code for the shipping address. Use the two-character ISO codes.	Retrieve	String (2)
pay_subscription_ retrieve_ship_to_firstname	First name of the person receiving the product.	Retrieve	String (60)
pay_subscription_ retrieve_ship_to_lastname	Last name of the person receiving the product.	Retrieve	String (60)

Table 7   Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
pay_subscription_ retrieve_ship_to_state	State or province of shipping address. Use the two-character ISO state and province codes.	Retrieve	String (2)
pay_subscription_ retrieve_ship_to_zip	Postal code for the billing address. The postal code must consist of 5 to 9 digits. When the billing country is the U.S., the 9-digit postal code must follow this format: [5 digits][dash][4 digits] **Example** 12345-6789 When the billing country is Canada, the 6-digit postal code must follow this format: [alpha][numeric][alpha][space] [numeric][alpha][numeric] **Example** A1B 2C3	Retrieve	String (10)
pay_subscription_ retrieve_subscription_id	Identifier for the retrieved token.	Retrieve	String (32)
pay_subscription_update_ identifier_successor_id	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)
pay_subscription_update_ instrument_identifier_id	Value for the instrument identifier token assigned to the tokenized PAN.	Update	String (32)
pay_subscription_update_ instrument_identifier_new	Indicates whether this is the first time the customer's PAN has been tokenized for the merchant. Possible values: ■ Y: This is the first time CyberSource has tokenized the PAN and assigned an instrument identifier. ■ N: CyberSource had previously tokenized the PAN 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 (1)

Table 7 Reply Fields (Continued)

Field Name	Description	Returned by	Data Type & Length
pay_subscription_update_ instrument_identifier_ status	Current status of the tokenized PAN. Possible values: ■ `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)
pay_subscription_update_ rcode	One-digit code that indicates whether the specific service request is successful. Possible values: ■ -1: An error occurred ■ 0: The request was declined ■ 1: The request was successful	Update	Integer (1)
pay_subscription_update_ rflag	One-word description of the result of the specific service request. See "Reply Flags," page 52.	Update	String (50)
pay_subscription_update_ rmsg	Message that explains the reply flag **pay_ subscription_update_rflag**. Do not display this message to the customer, and do not use this field to write an error handler.	Update	String (255)
pay_subscription_update_ subscription_id	Identifier for the updated token.	Update	String (32)
payment_account_ reference	Reference number serves as a link to the cardholder account and to all transactions for that account. The same value is returned whether the account is represented by a PAN or a network token.	All services (For COF network token only.)	String (32)
request_token	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

```
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_city=Small Town
bill_state=ca
bill_zip=98765
bill_country=us
customer_phone=987-654-3210
customer_email=jsmith@example.com
ship_to_firstname=Jane
ship_to_lastname=Smith
ship_to_address1=123 Main Street
ship_to_city=Small Town
ship_to_state=CA
ship_to_zip=98765
ship_to_country=US
ship_to_company=Small Business
currency=USD
customer_cc_number=411111111111xxxx
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
merchant_defined_data1=defined data text 1
merchant_defined_data2=defined data text 2
merchant_defined_data3=defined data text 3
merchant_defined_data3=defined data text 4
merchant_secure_data1=secure data text 1
merchant_secure_data2=secure data text 2
merchant_secure_data3=secure data text 3
merchant_secure_data3=secure data text 4
merchant_id=mid1234
merchant_ref_number=ref9876
recurring_frequency=on-demand
ics_applications=ics_pay_subscription_create
```

Example 2   Reply: Create a Customer Token

```
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ics_rcode=1
request_id=4889877812726625901540
pay_subscription_create_rmsg=Request was processed successfully.
pay_subscription_create_rcode=1
pay_subscription_create_rflag=SOK
pay_subscription_create_instrument_identifier_new=Y
pay_subscription_create_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
pay_subscription_create_instrument_identifier_id=7040000000000181111
pay_subscription_create_instrument_identifier_status=Active
merchant_ref_number=ref9876
```

Example 3   Request: Authorize and Create Customer Token

```
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_city=Small Town
bill_state=CA
bill_zip=98765
bill_country=US
customer_phone=987-654-3210
customer_email=jsmith@example.com
ship_to_firstname=Jane
ship_to_lastname=Smith
ship_to_address1=123 Main Street
ship_to_city=Small Town
ship_to_state=ca
ship_to_zip=98765
ship_to_country=us
currency=usd
customer_cc_number=411111111111xxxx
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
merchant_defined_data1=defined data text 1
merchant_defined_data2=defined data text 2
merchant_defined_data3=defined data text 3
merchant_defined_data4=defined data text 4
merchant_secure_data1=secure data text 1
merchant_secure_data2=secure data text 2
merchant_secure_data3=secure data text 3
merchant_secure_data4=secure data text 4
merchant_id=mid1234
merchant_ref_number=ref9876
recurring_frequency=on-demand
grand_total_amount=10.00
ics_applications=ics_auth,ics_pay_subscription_create
```

Example 4   Reply: Authorize and Create a Customer Token

```
auth_auth_amount=10.00
auth_auth_avs=1
auth_auth_code=831000
auth_auth_response=00
auth_rcode=1
auth_rflag=SOK
auth_rmsg=Request was processed successfully.
currency=usd
ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=ref9876
pay_subscription_create_instrument_identifier_id=7040000000000181111
pay_subscription_create_instrument_identifier_status=active
pay_subscription_create_instrument_identifier_new=Y
pay_subscription_create_rcode=1
pay_subscription_create_rflag=SOK
pay_subscription_create_rmsg=Request was processed successfully.
pay_subscription_create_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
request_id=4733322354176707701545
```

Example 5   Request: Create a COF Network Token

```
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_city=Small Town
bill_state=ca
bill_zip=98765
bill_country=us
customer_phone=987-654-3210
customer_email=jsmith@example.com
ship_to_firstname=Jane
ship_to_lastname=Smith
ship_to_address1=123 Main Street
ship_to_city=Small Town
ship_to_state=CA
ship_to_zip=98765
ship_to_country=US
ship_to_company=Small Business
currency=USD
customer_cc_number=411111111111xxxx
customer_cc_cv_number=999
customer_cc_expmo=07
customer_cc_expyr=2020
card_type=001
merchant_id=mid1234
merchant_ref_number=ref9876
recurring_frequency=on-demand
ics_applications=ics_pay_subscription_create
```

Example 6   Reply: Create a COF Network Token

```
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
ics_rcode=1
request_id=4889877812726625901540
pay_subscription_create_rmsg=Request was processed successfully.
pay_subscription_create_rcode=1
pay_subscription_create_rflag=SOK
pay_subscription_create_instrument_identifier_new=Y
pay_subscription_create_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
pay_subscription_create_instrument_identifier_id=7040000000000181111
pay_subscription_create_instrument_identifier_status=Active
payment_account_reference=987654321234567890987654321234567
merchant_ref_number=ref9876
```

Example 7   Request: Retrieve a Customer Token

```
merchant_id=mid1234
merchant_ref_number=ref123
subscription_id=554FDB92B1DAD8F9E0539599D30A3100
ics_applications=ics_pay_subscription_retrieve
```

Example 8   **Reply: Retrieve a Customer Token**

```
ics_rcode=1
ics_rflag=SOK
ics_rmsg=Request was processed successfully.
merchant_ref_number=ref9876
pay_subscription_retrieve_bill_address1=123 Main Street
pay_subscription_retrieve_bill_city=Small Town
pay_subscription_retrieve_bill_country=US
pay_subscription_retrieve_bill_payment=N
pay_subscription_retrieve_bill_state=CA
pay_subscription_retrieve_bill_zip=98765
pay_subscription_retrieve_card_type=003
pay_subscription_retrieve_comments=test comments
pay_subscription_retrieve_company_name=test company
pay_subscription_retrieve_currency=usd
pay_subscription_retrieve_customer_cc_expmo=02
pay_subscription_retrieve_customer_cc_expyr=2021
pay_subscription_retrieve_customer_cc_issue_number=1
pay_subscription_retrieve_customer_cc_number=411111111111xxxx
pay_subscription_retrieve_customer_cc_startmo=02
pay_subscription_retrieve_customer_cc_startyr=2016
pay_subscription_retrieve_customer_email=jsmith@example.com
pay_subscription_retrieve_customer_firstname=Jane
pay_subscription_retrieve_customer_lastname=Smith
pay_subscription_retrieve_customer_phone=987-654-3210
pay_subscription_retrieve_frequency=on-demand
pay_subscription_retrieve_instrument_identifier_id=7040000000000181111
pay_subscription_retrieve_instrument_identifier_status=ACTIVE
pay_subscription_retrieve_merchant_defined_data1=defined data text 1
pay_subscription_retrieve_merchant_defined_data2=defined data text 2
pay_subscription_retrieve_merchant_defined_data3=defined data text 3
pay_subscription_retrieve_merchant_defined_data4=defined data text 4
pay_subscription_retrieve_merchant_secure_data1=secure data text 1
pay_subscription_retrieve_merchant_secure_data2=secure data text 2
pay_subscription_retrieve_merchant_secure_data3=secure data text 3
pay_subscription_retrieve_merchant_secure_data4=secure data text 4
pay_subscription_retrieve_payment_method=credit card
pay_subscription_retrieve_rcode=1
pay_subscription_retrieve_ship_to_address1=123 Main Street
pay_subscription_retrieve_ship_to_city=Small Town
pay_subscription_retrieve_ship_to_company_name=TestCompany
pay_subscription_retrieve_ship_to_country=US
pay_subscription_retrieve_ship_to_firstname=Jane
pay_subscription_retrieve_ship_to_lastname=Smith
pay_subscription_retrieve_ship_to_state=CA
pay_subscription_retrieve_ship_to_zip=98765
pay_subscription_retrieve_status=CURRENT
pay_subscription_retrieve_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
pay_subscription_retrieve_title=test title
request_id=5011721988216895701540
```

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

```
customer_firstname=Jane
customer_lastname=Smith
bill_address1=123 Main Street
bill_city=Small Town
bill_state=CA
bill_zip=98765
bill_country=US
customer_phone=987-654-3210
customer_email=jsmith@example.com
ship_to_firstname=Jane
ship_to_lastname=Smith
ship_to_address1=123 Main Street
ship_to_city=Small Town
ship_to_state=CA
ship_to_zip=98765
ship_to_country=US
ship_to_company=Small Business
currency=usd
customer_cc_number=411111111111xxxx
customer_cc_expmo=01
customer_cc_expyr=20
card_type=001
merchant_defined_data1=updated defined data text 1
merchant_defined_data2=updated defined data text 2
merchant_defined_data3=updated defined data text 3
merchant_defined_data4=updated defined data text 4
merchant_secure_data1=updated secure data text 1
merchant_secure_data2=updated secure data text 2
merchant_secure_data3=updated secure data text 3
merchant_secure_data4=updated secure data text 4
merchant_id=mid1234
merchant_ref_number=ref9876
subscription_id=554FDB92B1DAD8F9E0539599D30A3100
ics_applications=ics_pay_subscription_update
```

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

```
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
request_id=4889882115236626401540
pay_subscription_update_instrument_identifier_id=7040000000000181112
pay_subscription_update_instrument_identifier_new=Y
pay_subscription_update_instrument_identifier_status=ACTIVE
pay_subscription_update_rcode=1
pay_subscription_update_rflag=SOK
pay_subscription_update_rmsg=Request was processed successfully.
pay_subscription_update_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
merchant_ref_number=ref9876
```

Example 11   Request: Delete a Customer Token

```
merchant_id=mid1234
merchant_ref_number=ref9876
subscription_id=554FDB92B1DAD8F9E0539599D30A3100
ics_applications=ics_pay_subscription_delete
```

Example 12   Reply: Delete a Customer Token

```
ics_rcode=1
ics_rmsg=Request was processed successfully.
ics_rflag=SOK
request_id=4889882505146626501540
pay_subscription_delete_rcode=1
pay_subscription_delete_rflag=SOK
pay_subscription_delete_rmsg=Request was processed successfully.
pay_subscription_delete_subscription_id=554FDB92B1DAD8F9E0539599D30A3100
merchant_ref_number=ref9876
```

Reply Flags

The following table describes the reply flags returned by the SCMP API for TMS. See *Getting Started with CyberSource Advanced for the SCMP API* for a discussion of replies and reply flags.

⚠ Important	Because CyberSource can add reply fields, reply codes, and reply flags 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 reply codes and reply flags without problems.

- Your error handler should use the **ics_rcode** field to determine the result if it receives a reply flag that it does not recognize.

Table 8   Reply Flags

Reply Flag	Description
DINVALIDCARD	The credit card number is either missing or invalid.
DINVALIDDATA	The request data did not pass the required fields check for this application: *<field name>* Possible reason: Invalid field included in the service request.
DMISSINGFIELD	Required field is null: *<field name>* Possible reason: Missing value in the required API field.
DMISSINGFIELD	The request data did not pass the required fields check for this application: *<field name>* Possible reason: Invalid field included in the service request.
ESYSTEM	A system error has been encountered: Requested service is forbidden. Please contact customer support. Possible reason: The Token Management Service (TMS) profile is not enabled.

Table 8   Reply Flags (Continued)

Reply Flag	Description
ESYSTEM	A system error has been encountered. This field is invalid or missing: <*field name*>. Please contact Customer Support. Possible reasons: ■ 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.
ESYSTEM	Error occurred during communication with token service. Please contact customer support. Possible reason: The TMS system is not responding.
SOK	Transaction was successful.